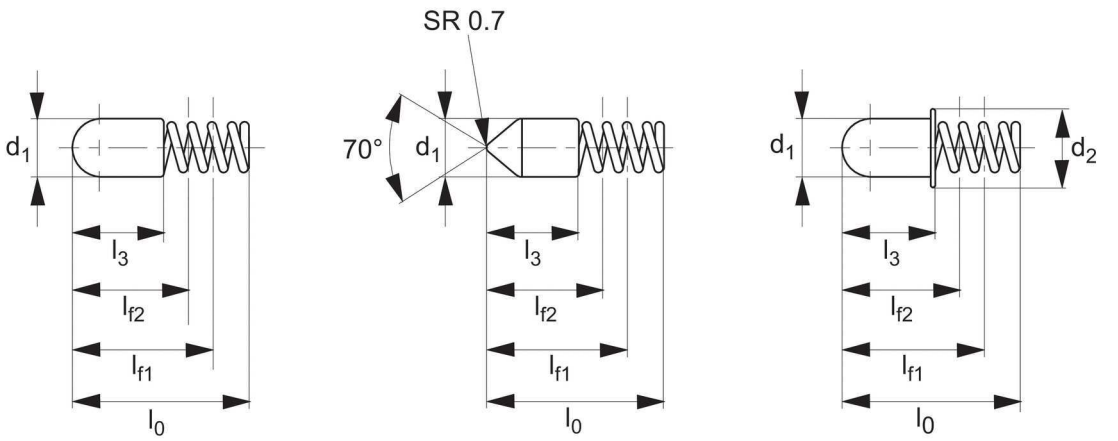
Spring Bodies

steel or stainless steel

31000



round tipped round, with collar



Order No.	Type	Finish	d_1 ±0.05	l_0	d_2	l_3	l_{f1}	l_{f2}	Spring load* f_1 N≈	Spring load* f_2 N≈	R N/mm	g
31000.W0012	Round	Steel	2,2	16	-	7,8	12,0	10,5	2,2	3,0	0,53	0,13
31000.W0016	Round	Steel	2,6	8	-	3,8	6,5	5,2	1,1	2,0	0,70	0,07
31000.W0022	Round	Steel	3,0	12	-	6,0	9,0	8,7	6,2	6,8	2,00	0,18
31000.W0024	Round	Steel	3,0	16	-	8,5	13,0	10,7	4,8	8,4	1,60	0,23
31000.W0034	Round	Steel	3,4	12	-	6,0	9,0	7,8	5,0	7,0	1,69	0,18
31000.W0036	Round	Steel	3,4	15	-	7,3	12,0	8,2	5,9	13,3	1,95	0,22
31000.W0042	Round	Steel	4,0	14	-	8,0	12,0	9,0	5,0	12,3	2,45	0,41
31000.W0052	Round	Steel	5,0	16	-	8,0	13,0	10,4	8,0	15,0	2,70	0,59
31000.W0124	Round	Stainless	3,0	16	-	8,0	13,0	10,6	4,8	8,6	1,60	0,22
31000.W0137	Round	Stainless	3,6	18	-	9,0	15,0	11,5	6,7	14,5	2,24	0,36
31000.W0144	Round	Stainless	4,0	16	-	7,5	13,0	11,4	8,0	12,3	2,70	0,37
31000.W0212	Tipped	Steel	2,2	16	-	7,8	12,0	10,5	2,2	3,0	0,53	0,12
31000.W0222	Tipped	Steel	3,0	11	-	5,0	9,0	6,7	1,6	3,4	0,78	0,11
31000.W0224	Tipped	Steel	3,0	16	-	8,5	13,0	10,7	4,8	8,4	1,60	0,23
31000.W0373	Round, with Collar	Stainless	3,0	13	4,1	7,0	10,0	8,9	5,3	7,2	1,75	0,19

Material

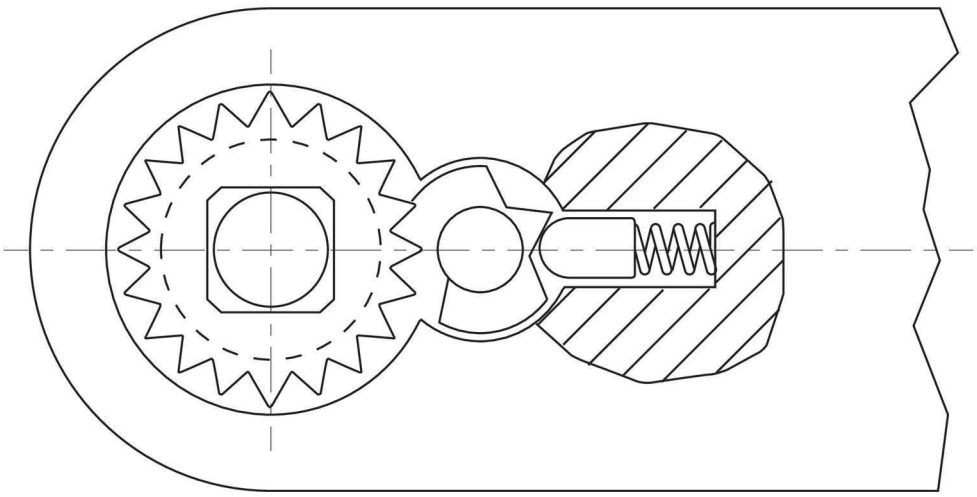
Body: steel, nickel-plated.
Stainless steel 1.4303 (AISI 305).
Brass, nickel-plated.
Spring: stainless steel 1,4310 (AISI 301).

Technical Notes

Max. temperature 250°C. Spring load * = statistical average.

Tips

To be used for locating or as a detent.
Special springs available on request.

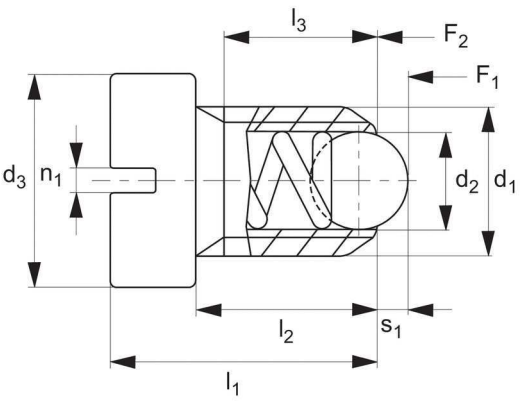


Spring Plungers

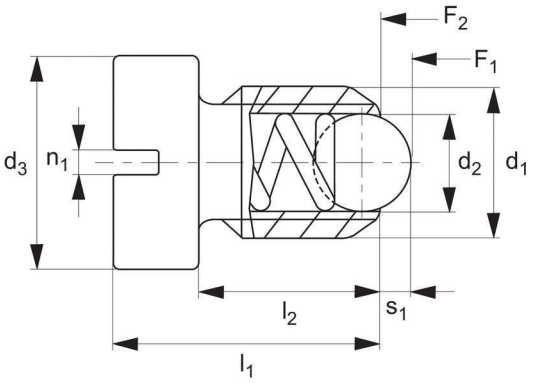
with ball & slot, headed - stainless steel



31400

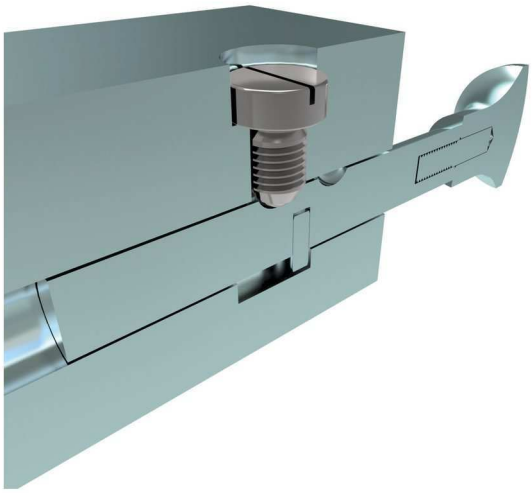


size M4 and M5



size M6 to M12

Order No. Steel	Order No. Stainless	d_1	d_2	d_3	l_1	l_2	l_3 **	s_1	n_1	Spring load* F_1 N≈	Spring load* F_2 N≈	g
31400.W0930	31400.W0940	M 4	2,5	6	9,5	6,5	5,0	0,8	0,6	8	14	1,2
31400.W0931	31400.W0941	M 5	3,0	8	12,5	8,5	6,7	0,9	0,8	8	14	2,4
31400.W0932	31400.W0942	M 6	3,5	10	14,0	9,0	-	1,0	1,0	11	18	3,9
31400.W0933	31400.W0943	M 8	4,5	13	16,5	11,0	-	1,5	1,2	18	31	7,9
31400.W0934	31400.W0944	M10	6,0	16	20,0	14,0	-	2,0	1,5	24	45	14,0
31400.W0935	31400.W0945	M12	8,0	18	22,0	15,0	-	2,5	2,0	26	49	20,0







Material

Free cutting steel type-
Body: free cutting steel, blackened.
Ball: ball bearing steel 1.3505 (100Cr6), hardened.
Spring: stainless steel.
Stainless steel type-
Body: stainless steel 1.4305 (AISI 303).
Ball: stainless steel 1.3505 (100Cr6), hardened.
Spring: stainless steel.
For calculation of indexing resistance please refer to appendix - Technical Data.

Technical Notes

Max. temperature 250°C. Spring loads * = statistical average.
** For M4 and M5 threads dimension l_3 is max. screw in depth, i.e. there is no undercut.
For calculation of indexing resistance please refer to spring plunger technical pages.

Important Notes

All metric Wixroyd spring plungers have a coarse thread, see appendix five for thread details.

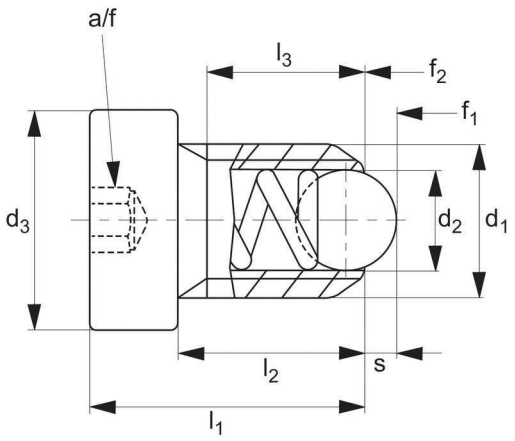




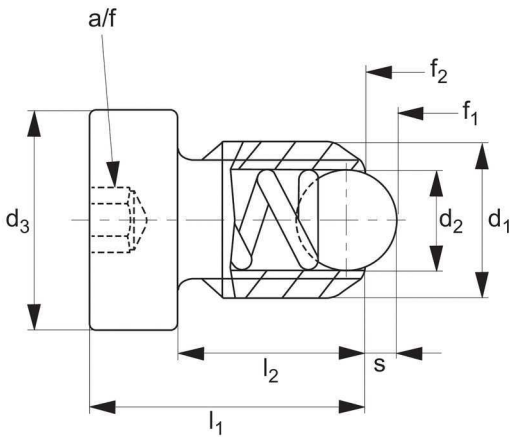
Spring Plungers

with ball end & hex. socket, headed - stainless steel

31420



size M4 and M5



size M6 and M12

Order No. Steel	Order No. Stainless	d_1	d_2	d_3	l_1	l_2	l_3 **	s	a/f	Spring load* f_1 N≈	Spring load* f_2 N≈	g
31420.W0930	31420.W0940	M 4	2,5	6	12	9,0	7,5	0,8	2,0	8	14	1,1
31420.W0931	31420.W0941	M 5	3,0	8	14	10,0	8,2	0,9	2,5	8	14	2,3
31420.W0932	31420.W0942	M 6	3,5	10	15	10,0	-	1,0	3,0	11	18	3,9
31420.W0933	31420.W0943	M 8	4,5	13	18	12,5	-	1,5	4,0	18	31	7,8
31420.W0934	31420.W0944	M10	6,0	16	23	17,0	-	2,0	5,0	24	45	14,0
31420.W0935	31420.W0945	M12	8,0	18	26	19,0	-	2,5	6,0	26	49	21,0



Material

Free cutting steel type-
Body: free cutting steel, blackened.
Ball: ball bearing steel 1.3505 (100Cr6) hardened.
Spring: stainless steel.
Stainless steel type-
Body: stainless steel 1.4305 (AISI 303).
Ball: stainless steel 1.3505 (100Cr6), hardened.
Spring: stainless steel.

Technical Notes

Max. temperature 250°C. Spring loads * = statistical average. ** For M4 and M5 threads dimension l_3 is max. screw in depth, i.e. there is no undercut.
For calculation of indexing resistance please refer to spring plunger technical pages.

Tips

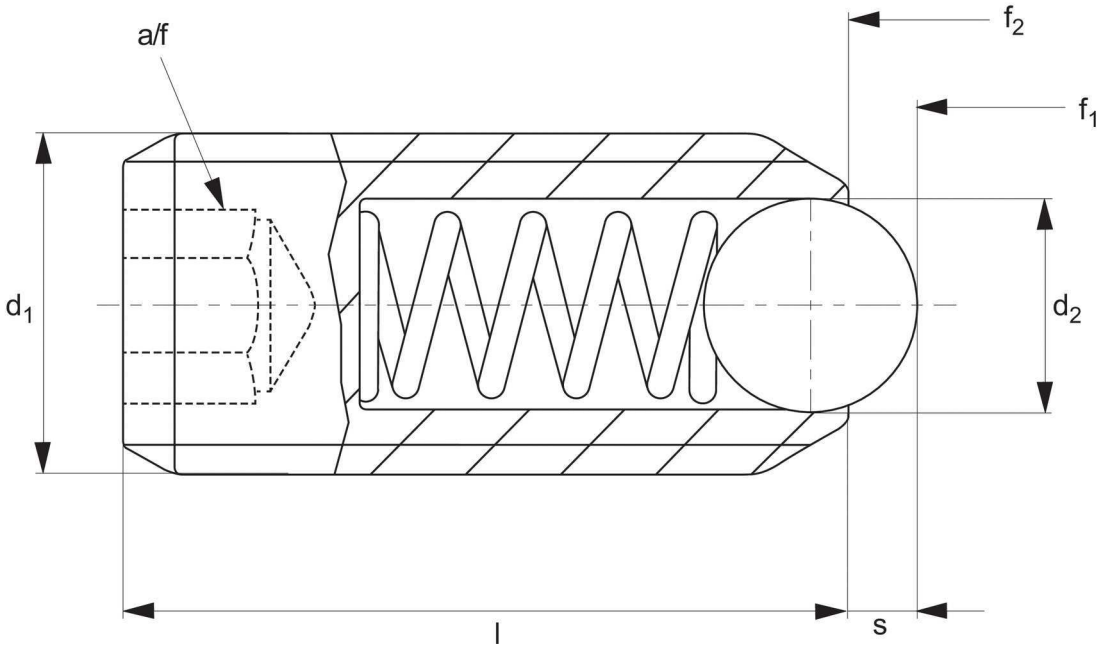
Used for locating, applying pressure or lifting off. Special types available on request.

Important Notes

All metric Wixroyd spring plungers have a coarse thread, see appendix five for thread details.

Spring Plungers

with ball end & hex. socket - stainless steel





Order No. Steel	Order No. Stainless	Spring load	d_1	d_2	l	s	a/f	Spring load* f_1 N≈	Spring load* f_2 N≈	g
31500.W0004	31500.W0204	Normal	M 4	2,5	12	0,8	2,0	8,5	14,0	0,7
31500.W0003	31500.W0203	Normal	M 3	1,5	8	0,4	1,5	3,0	4,5	0,3
31500.W0005	31500.W0205	Normal	M 5	3,0	14	0,9	2,5	8,0	14,0	1,2
31500.W0006	31500.W0206	Normal	M 6	3,5	15	1,0	3,0	11,0	18,0	1,8
31500.W0008	31500.W0208	Normal	M 8	4,5	18	1,5	4,0	18,0	31,0	3,9
31500.W0010	31500.W0210	Normal	M10	6,0	23	2,0	5,0	24,0	45,0	8,1
31500.W0012	31500.W0212	Normal	M12	8,0	26	2,5	6,0	26,0	49,0	13,0
31500.W0016	31500.W0216	Normal	M16	10,0	33	3,5	8,0	41,0	86,0	32,0
31500.W0020	31500.W0220	Normal	M20	12,0	43	4,5	10,0	56,0	111,0	66,0
31500.W0024	31500.W0224	Normal	M24	15,0	48	5,5	12,0	81,0	151,0	106,0
31500.W0045	31500.W0245	Increased	M 5	3,0	14	0,9	2,5	15,0	22,0	1,2
31500.W0046	31500.W0246	Increased	M 6	3,5	15	1,0	3,0	19,0	28,0	1,9
31500.W0048	31500.W0248	Increased	M 8	4,5	18	1,5	4,0	36,0	62,0	4,2
31500.W0050	31500.W0250	Increased	M10	6,0	23	2,0	5,0	57,0	104,0	8,2
31500.W0052	31500.W0252	Increased	M12	8,0	26	2,5	6,0	61,0	110,0	13,0
31500.W0056	31500.W0256	Increased	M16	10,0	33	3,5	8,0	68,0	142,0	33,0
31500.W0060	31500.W0260	Increased	M20	12,0	43	4,5	10,0	84,0	166,0	66,0
31500.W0064	31500.W0264	Increased	M24	15,0	48	5,5	12,0	127,0	237,0	107,0

Material

Free cutting steel type-
Body: free cutting steel, blackened.
Ball: ball bearing steel 1.3505 (100Cr6) hardened. Spring: stainless steel.
Stainless steel type-
Body: stainless steel 1.4305 (AISI 303).
Ball: stainless steel 1.3505 (100Cr6), hardened.
Spring: stainless steel.

Technical Notes

These spring plungers may be used for location, for applying pressure or lifting off.
Temperature range max. 250° C.
Spring load * = statistical average value.
For calculation of indexing resistance please refer to spring plunger technical pages.

Tips

Spring load identifier:
Normal spring load - no marking.
Increased spring load - body marked with two lines.
Special types available on request.

Important Notes

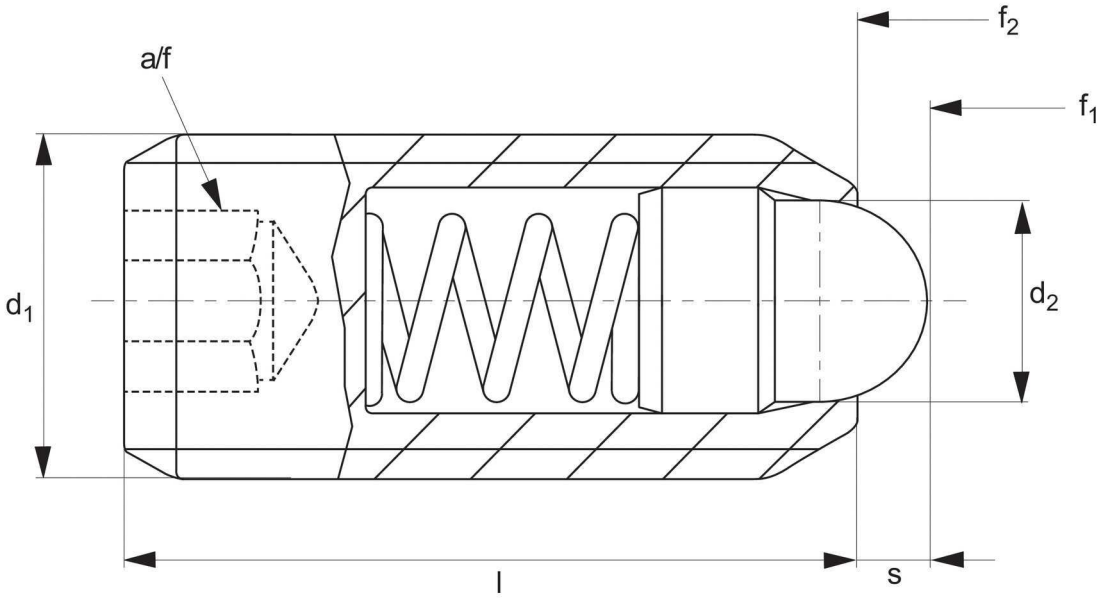
All metric Wixroyd spring plungers have a coarse thread, see appendix five for thread details.

Spring Plungers

with round-ended pin & hex. socket - stainless steel

31600





Order No. Steel	Order No. Stainless	Spring load	d_1	d_2	l	s	a/f	Spring load* f_1 N≈	Spring load* f_2 N≈	g
31600.W0104	31600.W0304	Normal	M 4	1,8	12	1,5	2,0	4,5	12,5	0,6
31600.W0105	31600.W0305	Normal	M 5	2,4	14	2,0	2,5	5,0	13,0	1,3
31600.W0106	31600.W0306	Normal	M 6	2,7	15	2,0	3,0	6,0	17,0	1,9
31600.W0108	31600.W0308	Normal	M 8	3,8	18	2,0	4,0	16,0	33,0	4,2
31600.W0110	31600.W0310	Normal	M10	4,5	23	2,5	5,0	19,0	42,0	8,5
31600.W0112	31600.W0312	Normal	M12	6,2	26	3,5	6,0	22,0	57,0	13,0
31600.W0116	31600.W0316	Normal	M16	8,5	33	4,5	8,0	38,0	78,0	32,0
31600.W0120	31600.W0320	Normal	M20	10,0	43	6,5	10,0	39,0	81,0	67,0
31600.W0124	31600.W0324	Normal	M24	13,0	48	8,0	12,0	72,0	155,0	106,0
31600.W0146	31600.W0346	Increased	M 6	2,7	15	2,0	3,0	11,0	25,0	2,0
31600.W0148	31600.W0348	Increased	M 8	3,8	18	2,0	4,0	23,0	59,0	4,2
31600.W0150	31600.W0350	Increased	M10	4,5	23	2,5	5,0	20,0	54,0	8,5
31600.W0152	31600.W0352	Increased	M12	6,2	26	3,5	6,0	38,0	96,0	13,0
31600.W0156	31600.W0356	Increased	M16	8,5	33	4,5	8,0	50,0	100,0	32,0
31600.W0160	31600.W0360	Increased	M20	10,0	43	6,5	10,0	52,0	133,0	67,0
31600.W0164	31600.W0364	Increased	M24	13,0	48	8,0	12,0	91,0	223,0	106,0

Material

Free cutting steel type-
Body: free cutting steel, blackened.
Pin: free cutting steel, hardened, blackened.
Spring: stainless steel.
Stainless steel type-
Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel 1.4305 (AISI 303).
Spring: stainless steel.

Technical Notes

These spring plungers may be used for locating, for applying pressure or lifting off.
Temperature range max. 250° C.
Spring load * = statistical average value.

Tips

Spring load identifier:
Normal spring load - no marking.
Increased spring load - body marked with two lines.
Special types available on request.

Important Notes

All metric Wixroyd spring plungers have a coarse thread, see appendix five for thread details.

Referral

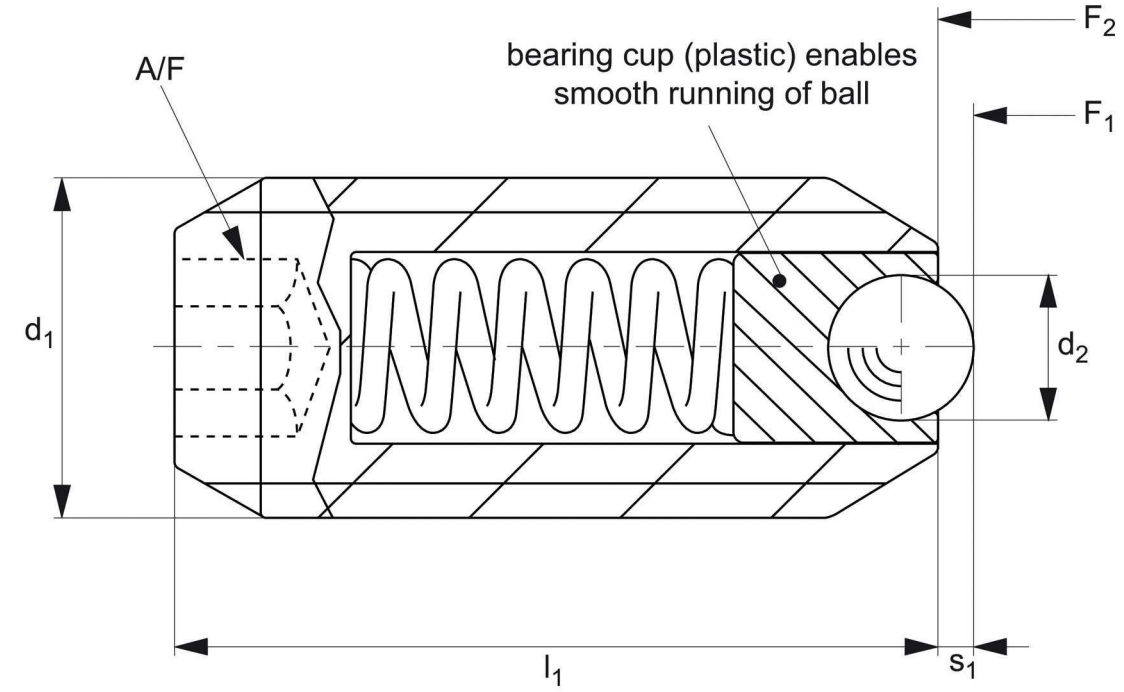
For imperial version of this plunger see 3B200.



Smooth Running - Spring Plungers

with ball and a hex. socket - stainless steel

31610







Material

Free cutting steel type-
Body: free cutting steel, blackened.
Ball: ball bearing steel 1.3505(100Crb), hardened.
Spring: stainless steel.
Bearing cup: plastic.

Stainless steel type-
Body: stainless steel, 1.4305(AISI 303).
Ball: ball bearing steel 1.3505(100Crb), hardened.
Spring: stainless steel.
Bearing cup: plastic.

Technical Notes

Plunger's ball bearing is mounted in a unique plastic "bearing cup", angling the smooth running of the ball.
This offers a solution with less friction, for reduced surface damage to mounting parts.
In addition the plastic cup offers electrical insulation.

Temperature range -30°C to +90°C.

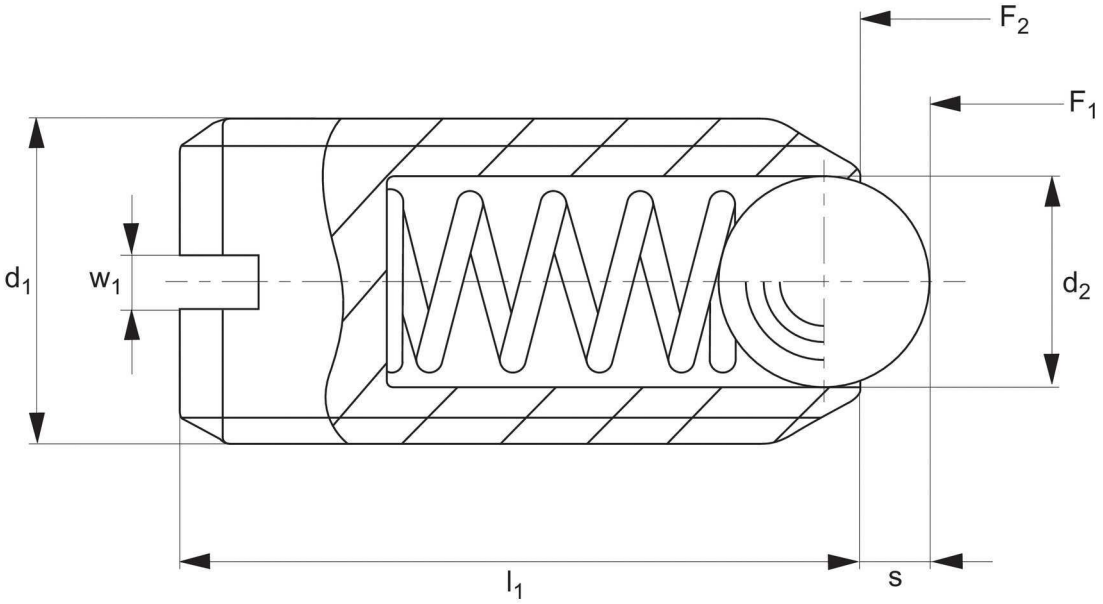
Order No.	Material	Spring load	d_1	d_2	l_1	A/F	s_1	Spring load F_1 N≈	Spring load F_2 N≈	g
31610.W0005	Steel	Normal	M 5	2,0	14	2,5	0,50	4,8	6,8	1,1
31610.W0006	Steel	Normal	M 6	2,5	15	3,0	0,70	6,3	10,0	2,1
31610.W0008	Steel	Normal	M 8	3,5	18	4,0	0,95	16,0	24,0	4,8
31610.W0010	Steel	Normal	M10	4,5	23	5,0	1,40	18,8	31,7	10,0
31610.W0012	Steel	Normal	M12	6,5	26	6,0	2,30	26,0	49,0	15,0
31610.W0016	Steel	Normal	M16	8,5	33	8,0	3,10	38,0	68,0	37,0
31610.W0045	Steel	Increased	M 5	2,0	14	2,5	0,50	10,0	14,0	1,2
31610.W0046	Steel	Increased	M 6	2,5	15	3,0	0,70	11,0	16,0	2,2
31610.W0048	Steel	Increased	M 8	3,5	18	4,0	0,95	23,0	40,0	5,0
31610.W0050	Steel	Increased	M10	4,5	23	5,0	1,40	54,3	54,3	10,0
31610.W0052	Steel	Increased	M12	6,5	26	6,0	2,30	39,5	77,3	15,0
31610.W0056	Steel	Increased	M16	8,5	33	8,0	3,10	50,0	88,7	37,0
31610.W0205	Stainless	Normal	M 5	2,0	14	2,5	0,50	4,8	6,8	1,1
31610.W0206	Stainless	Normal	M 6	2,5	15	3,0	0,70	6,3	10,0	2,1
31610.W0208	Stainless	Normal	M 8	3,5	18	4,0	0,95	16,0	24,0	4,8
31610.W0210	Stainless	Normal	M10	4,5	23	5,0	1,40	18,8	31,7	10,0
31610.W0212	Stainless	Normal	M12	6,5	26	6,0	2,30	26,0	49,0	15,0
31610.W0216	Stainless	Normal	M16	8,5	33	8,0	3,10	38,0	68,0	37,0
31610.W0245	Stainless	Increased	M 5	2,0	14	2,5	0,50	10,0	14,0	1,2
31610.W0246	Stainless	Increased	M 6	2,5	15	3,0	0,70	11,0	16,0	2,2
31610.W0248	Stainless	Increased	M 8	3,5	18	4,0	0,95	23,0	40,0	5,0
31610.W0250	Stainless	Increased	M10	4,5	23	5,0	1,40	28,0	54,3	10,0
31610.W0252	Stainless	Increased	M12	6,5	26	6,0	2,30	39,5	77,3	15,0
31610.W0256	Stainless	Increased	M16	8,5	33	8,0	3,10	50,0	88,7	37,0

Spring Plungers

plastic version



32000





Material

Body: thermoplastic POM, blue.
Ball: hardened stainless steel 1.3541 or white thermoplastic POM.
Spring: stainless steel.

Technical Notes

Used for locating, applying pressure or lifting off.
Temperature range -30°C to +50°C.
Spring loads * = statistical average value.
For calculation of indexing resistance please refer to spring plunger technical pages.

Tips

May be used where electrical conductivity is not required.
Special types available on request.

Important Notes

All metric Wixroyd spring plungers have a coarse thread, see appendix five for thread details.

Order No.	Ball finish	d_1	d_2	l_1	s	w_1	Spring load* F_1 N≈	Spring load* F_2 N≈	g
32000.W0006	Stainless	M 6	3,5	14	0,9	1,0	12	17	0,6
32000.W0008	Stainless	M 8	5,0	16	1,5	1,2	20	35	1,3
32000.W0010	Stainless	M10	6,0	19	1,9	1,5	25	45	2,6
32000.W0406	Thermo	M 6	3,5	14	0,9	1,0	12	17	0,5
32000.W0408	Thermo	M 8	5,0	16	1,5	1,2	20	35	1,0
32000.W0410	Thermo	M10	6,0	19	1,9	1,5	25	45	1,8

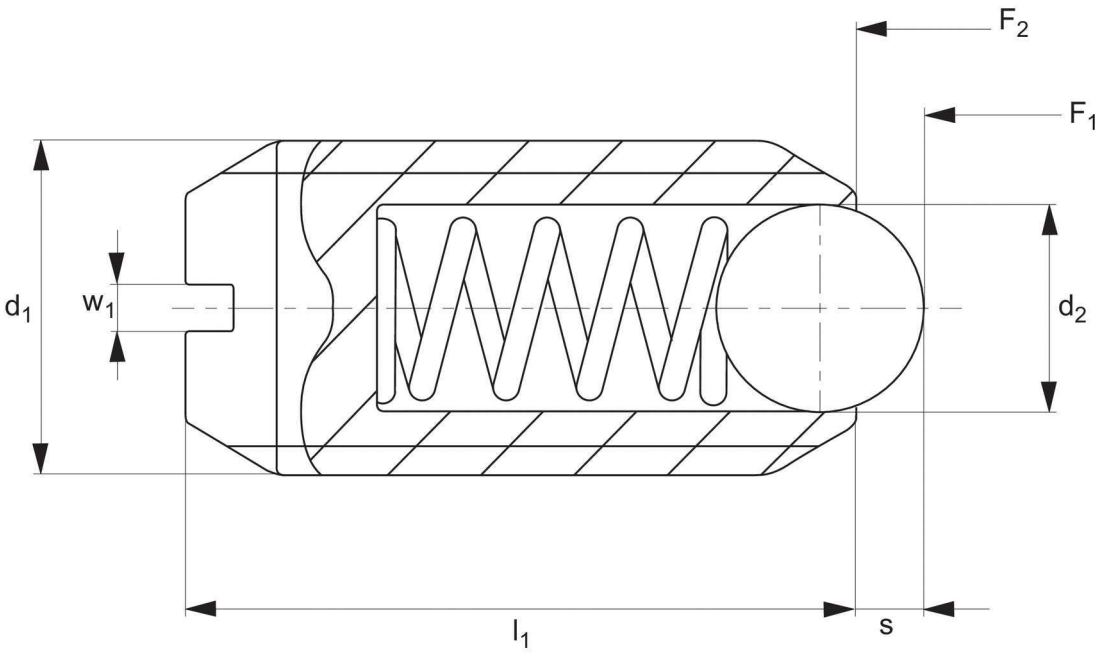
Spring Plungers

with ball & slot - stainless steel

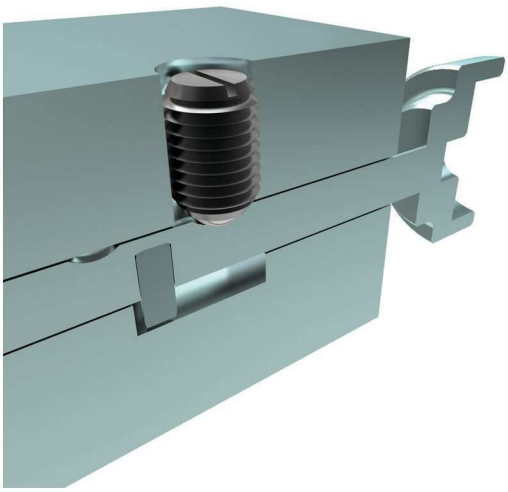
32100







Order No. Steel	Order No. Stainless	Spring load	d_1	d_2	l_1	s	w_1	Spring load* F_1 N≈	Spring load* F_2 N≈	g
-	32100.W0402	Normal	M 2	1,0	4	0,3	0,25	0,8	1,5	0,1
32100.W0003	32100.W0403	Normal	M 3	1,5	7	0,4	0,40	3,0	4,5	0,2
32100.W0004	32100.W0404	Normal	M 4	2,5	9	0,8	0,60	8,5	14,0	0,4
32100.W0005	32100.W0405	Normal	M 5	3,0	12	0,9	0,80	8,0	14,0	1,0
32100.W0006	32100.W0406	Normal	M 6	3,5	14	1,0	1,00	11,0	18,0	1,7
32100.W0008	32100.W0408	Normal	M 8	4,5	16	1,5	1,20	18,0	31,0	3,5
32100.W0010	32100.W0410	Normal	M10	6,0	19	2,0	1,50	24,0	45,0	6,6
32100.W0012	32100.W0412	Normal	M12	8,0	22	2,5	2,00	26,0	49,0	11,0
32100.W0016	32100.W0416	Normal	M16	10,0	24	3,5	2,00	41,0	86,0	23,0
32100.W0020	32100.W0420	Normal	M20	12,0	30	4,5	2,50	56,0	111,0	45,0
32100.W0024	32100.W0424	Normal	M24	15,0	34	5,5	3,00	81,0	151,0	72,0
32100.W0205	32100.W0605	Increased	M 5	3,0	12	0,9	0,80	15,0	22,0	1,0
32100.W0206	32100.W0606	Increased	M 6	3,5	14	1,0	1,00	19,0	28,0	1,7
32100.W0208	32100.W0608	Increased	M 8	4,5	16	1,5	1,20	36,0	62,0	3,6
32100.W0210	32100.W0610	Increased	M10	6,0	19	2,0	1,50	57,0	104,0	6,6
32100.W0212	32100.W0612	Increased	M12	8,0	22	2,5	2,00	61,0	110,0	11,0
32100.W0216	32100.W0616	Increased	M16	10,0	24	3,5	2,00	68,0	142,0	23,0
32100.W0220	32100.W0620	Increased	M20	12,0	30	4,5	2,50	84,0	166,0	43,0
32100.W0224	32100.W0624	Increased	M24	15,0	34	5,5	3,00	127,0	237,0	72,0



Material

Free cutting steel type-
Body: free cutting steel, blackened.
Ball: ball bearing steel 1.3505 (100Cr6) hardened.
Spring: stainless steel.
Stainless steel type-
Body: stainless steel 1.4305 (AISI 303).
Ball: stainless steel 1.3505 (100Cr6), hardened.
Spring: stainless steel.

Technical Notes

These spring plungers may be used for location, for applying pressure or lifting off.
Temperature range up to 250°C.
Spring load * = statistical average value.
For calculation of indexing resistance please refer to spring plunger technical pages.

Tips

Spring load identifier:
Normal spring load - no marking.
Increased spring load - body marked with two lines.
Special types available on request.

Important Notes

All metric Wixroyd spring plungers have a coarse thread, see appendix five for thread details.

Referral

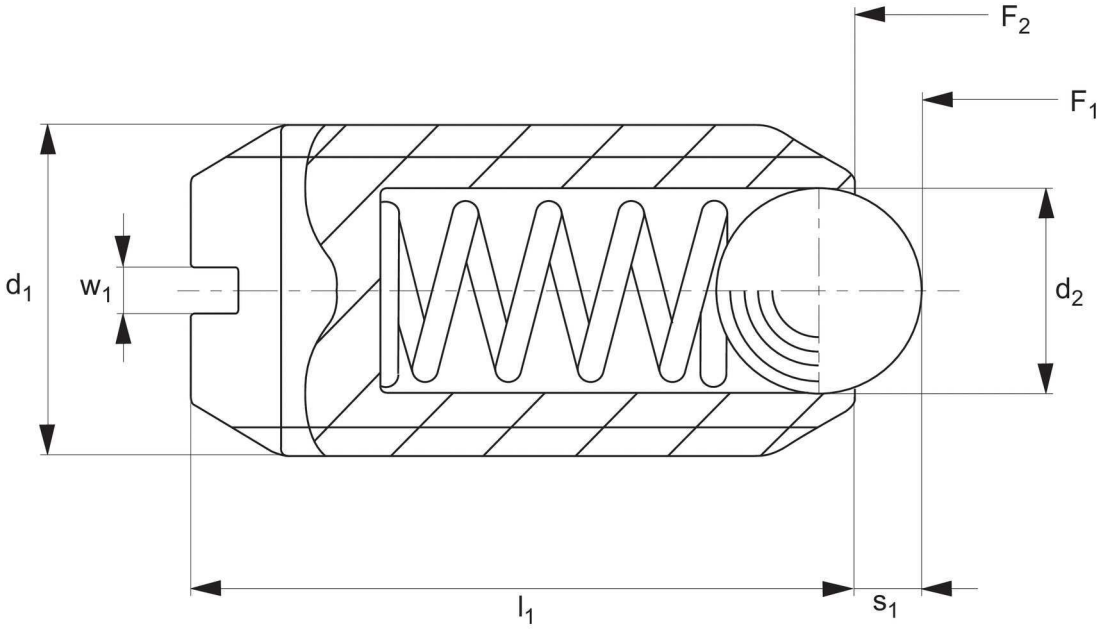
For imperial version of this plunger see 3B100.

Spring Plunger

with ceramic ball and slot - stainless steel

32102





Order No.	Spring Load	d_1	d_2	l_1	s_1	w_1	Spring load F_1 N≈*	Spring load F2 N≈*	g
32102.W1404	Normal	M 4	2,5	9	0,8	0,6	8,5	14	0,4
32102.W1405	Normal	M 5	3,0	12	0,9	0,8	8,0	14	0,9
32102.W1406	Normal	M 6	3,5	14	1,0	1,0	11,0	18	1,6
32102.W1408	Normal	M 8	4,5	16	1,5	1,2	18,0	31	3,5
32102.W1410	Normal	M10	6,0	19	2,0	1,5	24,0	45	6,2
32102.W1412	Normal	M12	8,0	22	2,5	2,0	26,0	49	9,8
32102.W1416	Normal	M16	10,0	24	3,5	2,0	41,0	86	19,8
32102.W1605	Increased	M 5	3,0	12	0,9	0,8	15,0	22	1,1
32102.W1606	Increased	M 6	3,5	14	1,0	1,0	19,0	28	1,8
32102.W1608	Increased	M 8	4,5	16	1,5	1,2	36,0	62	3,4
32102.W1610	Increased	M10	6,0	19	2,0	1,5	57,0	104	6,1
32102.W1612	Increased	M12	8,0	22	2,5	2,0	61,0	110	9,8
32102.W1616	Increased	M16	10,0	24	3,5	2,0	68,0	142	19,8

Material

Body: stainless steel A4, passivated.
Ball: ceramic (silicone nitride), black.
Spring: stainless steel A4, passivated

Technical Notes

To be used for locating or for applying pressure, as a detent or for ejection. The version from stainless steel A4 guarantees the highest corrosion protection.
Ceramic ball: abrasion resistant, antimagnetic, electically isolating.
Temperature range up to max. 250°C.
Spring load * = Statistical average value.
For calculation of indexing resistance please refer to spring plunger technical pages.

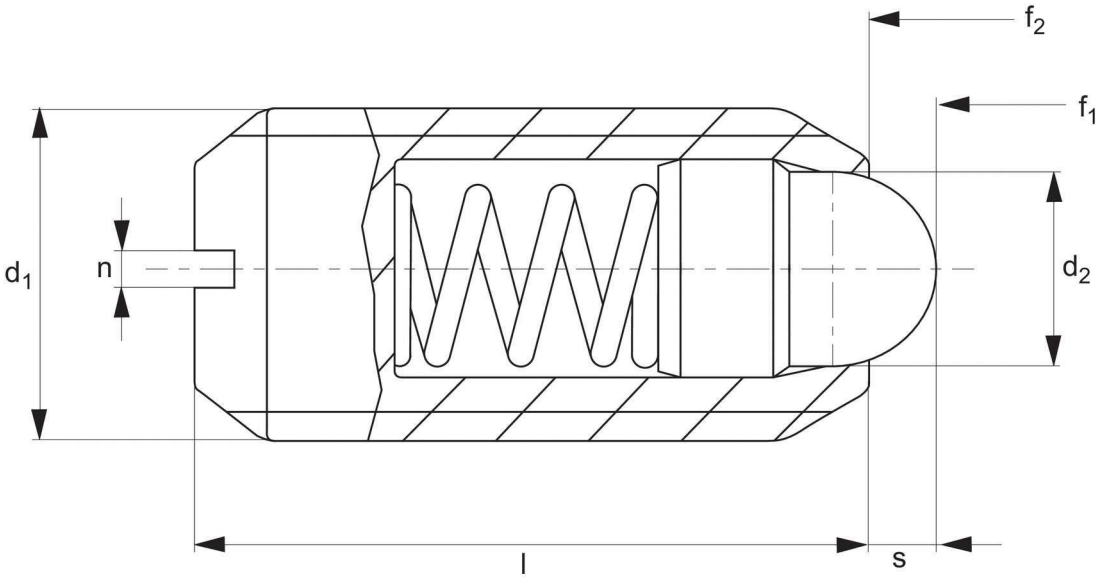
Tips

Spring load identifier:
Normal spring load - no marking.
Increased spring load - body marked with two lines.
Special types available on request.

Spring Plungers

with round-ended pin & slot - stainless steel

32150





Order No. Steel	Order No. Stainless	Spring load	d_1	d_2	l	s	n	Spring load* f_1 N≈	Spring load* f_2 N≈	g
32150.W0104	32150.W0504	Normal	M 4	1,8	9	1,5	0,6	4,5	12,5	0,4
32150.W0105	32150.W0505	Normal	M 5	2,4	12	2,0	0,8	5,0	13,0	1,1
32150.W0106	32150.W0506	Normal	M 6	2,7	14	2,0	1,0	6,0	17,0	1,8
32150.W0108	32150.W0508	Normal	M 8	3,8	16	2,0	1,2	16,0	33,0	3,7
32150.W0110	32150.W0510	Normal	M10	4,5	19	2,5	1,5	19,0	42,0	7,1
32150.W0112	32150.W0512	Normal	M12	6,2	22	3,5	2,0	22,0	57,0	11,0
32150.W0116	32150.W0516	Normal	M16	8,5	24	4,5	2,0	38,0	78,0	23,0
32150.W0120	32150.W0520	Normal	M20	10,0	30	6,5	2,5	39,0	81,0	46,0
32150.W0124	32150.W0524	Normal	M24	13,0	34	8,0	3,0	72,0	155,0	73,0
32150.W0306	32150.W0706	Increased	M 6	2,7	14	2,0	1,0	11,0	25,0	1,8
32150.W0308	32150.W0708	Increased	M 8	3,8	16	2,0	1,2	23,0	59,0	3,8
32150.W0310	32150.W0710	Increased	M10	4,5	19	2,5	1,5	20,0	54,0	7,0
32150.W0312	32150.W0712	Increased	M12	6,2	22	3,5	2,0	38,0	96,0	11,0
32150.W0116	32150.W0516	Normal	M16	8,5	24	4,5	2,0	38,0	78,0	23,0
32150.W0320	32150.W0720	Increased	M20	10,0	30	6,5	2,5	52,0	133,0	46,0
32150.W0324	32150.W0724	Increased	M24	13,0	34	8,0	3,0	91,0	223,0	74,0

Material

Free cutting steel type-
Body: free cutting steel, blackened.
Pin: free cutting steel, hardened, blackened.
Spring: stainless steel.
Stainless steel type-
Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel, 1.4305 (AISI 303).
Spring: stainless steel.

Technical Notes

These spring plungers may be used for location, for applying pressure or lifting off.
Temperature range up to 250°C.
Spring load * = statistical average value.

Tips

Spring load identifier:
Normal spring load - no marking.
Increased spring load - body marked with two lines.
Special types available on request.

Important Notes

All metric Wixroyd spring plungers have a coarse thread, see appendix five for thread details.

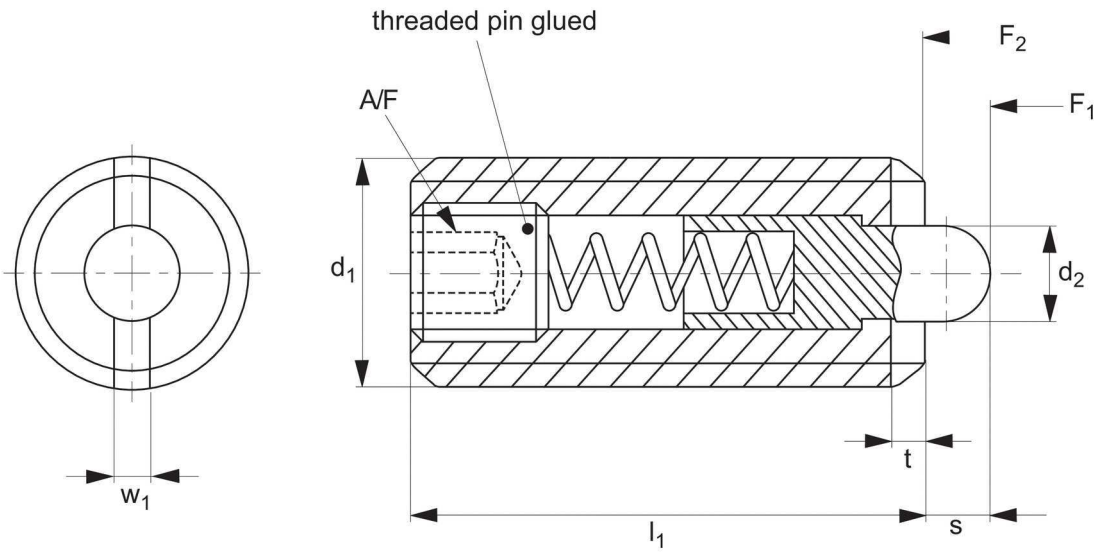
Referral

For imperial version of this plunger see 3B150.

Spring Plungers

with pin end & hex. socket - stainless steel

32200





Order No.	Finish	Spring load	d_1	d_2	l_1	w_1	s	t	A/F	Spring load* F_1 N≈	Spring load* F_2 N≈	g
32200.W0003	All Steel	Normal	M 3	1,0	12	0,4	1,0	0,5	0,7	2,0	4	0,40
32200.W0004	All Steel	Normal	M 4	1,5	15	0,6	1,5	0,6	1,3	4,5	16	0,93
32200.W0005	All Steel	Normal	M 5	2,4	18	1,2	2,3	0,8	1,5	6,0	19	1,70
32200.W0006	All Steel	Normal	M 6	2,7	20	1,3	2,5	0,9	2,0	6,0	19	2,80
32200.W0008	All Steel	Normal	M 8	3,5	22	1,5	3,0	1,4	2,5	10,0	39	5,80
32200.W0010	All Steel	Normal	M10	4,0	22	1,5	3,0	1,4	3,0	10,0	39	9,20
32200.W0012	All Steel	Normal	M12	6,0	28	2,7	4,0	2,0	4,0	12,0	53	16,00
32200.W0016	All Steel	Normal	M16	7,5	32	3,2	5,0	2,5	5,0	45,0	100	35,00
32200.W0020	All Steel	Normal	M20	10,0	40	3,7	7,0	3,0	6,0	52,0	125	68,00
32200.W0024	All Steel	Normal	M24	12,0	52	3,7	10,0	3,0	8,0	70,0	170	131,00
32200.W0105	All Steel	Increased	M 5	2,4	18	1,2	2,3	0,8	1,5	11,0	40	1,60
32200.W0106	All Steel	Increased	M 6	2,7	20	1,3	2,5	0,9	2,0	15,0	43	2,80
32200.W0108	All Steel	Increased	M 8	3,5	22	1,5	3,0	1,4	2,5	20,0	75	5,80
32200.W0110	All Steel	Increased	M10	4,0	22	1,5	3,0	1,4	3,0	20,0	75	9,30
32200.W0112	All Steel	Increased	M12	6,0	28	2,7	4,0	2,0	4,0	45,0	120	16,00
32200.W0116	All Steel	Increased	M16	7,5	32	3,2	5,0	2,5	5,0	64,0	160	33,00
32200.W0120	All Steel	Increased	M20	10,0	40	3,7	7,0	3,0	6,0	75,0	195	67,00
32200.W0124	All Steel	Increased	M24	12,0	52	3,7	10,0	3,0	8,0	75,0	245	129,00
32200.W0204	Steel, Thermo Pin	Normal	M 4	1,5	15	0,6	1,5	0,6	1,3	4,5	16	0,86
32200.W0205	Steel, Thermo Pin	Normal	M 5	2,4	18	1,2	2,3	0,8	1,5	6,0	19	1,50
32200.W0206	Steel, Thermo Pin	Normal	M 6	2,7	20	1,3	2,5	0,9	2,0	6,0	19	2,30
32200.W0208	Steel, Thermo Pin	Normal	M 8	3,5	22	1,5	3,0	1,4	2,5	10,0	39	5,10
32200.W0210	Steel, Thermo Pin	Normal	M10	4,0	22	1,5	3,0	1,4	3,0	10,0	39	8,10
32200.W0212	Steel, Thermo Pin	Normal	M12	6,0	28	2,7	4,0	2,0	4,0	12,0	53	14,00
32200.W0216	Steel, Thermo Pin	Normal	M16	7,5	32	3,2	5,0	2,5	5,0	45,0	100	31,00
32200.W0404	All Stainless	Normal	M 4	1,5	15	0,6	1,5	0,6	1,3	4,5	16	1,10
32200.W0405	All Stainless	Normal	M 5	2,4	18	1,2	2,3	0,8	1,5	6,0	19	1,70
32200.W0406	All Stainless	Normal	M 6	2,7	20	1,3	2,5	0,9	2,0	6,0	19	2,80
32200.W0408	All Stainless	Normal	M 8	3,5	22	1,5	3,0	1,4	2,5	10,0	39	5,90
32200.W0410	All Stainless	Normal	M10	4,0	22	1,5	3,0	1,4	3,0	10,0	39	9,50
32200.W0412	All Stainless	Normal	M12	6,0	28	2,7	4,0	2,0	4,0	12,0	53	17,00
32200.W0416	All Stainless	Normal	M16	7,5	32	3,2	5,0	2,5	5,0	45,0	100	35,00
32200.W0420	All Stainless	Normal	M20	10,0	40	3,7	7,0	3,0	6,0	52,0	125	68,00
32200.W0604	S/S, Thermo Pin	Normal	M 4	1,5	15	0,6	1,5	0,6	1,3	4,5	16	0,93
32200.W0605	S/S, Thermo Pin	Normal	M 5	2,4	18	1,2	2,3	0,8	1,5	6,0	19	1,60
32200.W0606	S/S, Thermo Pin	Normal	M 6	2,7	20	1,3	2,5	0,9	2,0	6,0	19	2,50
32200.W0608	S/S, Thermo Pin	Normal	M 8	3,5	22	1,5	3,0	1,4	2,5	10,0	39	5,10
32200.W0610	S/S, Thermo Pin	Normal	M10	4,0	22	1,5	3,0	1,4	3,0	10,0	39	8,50
32200.W0612	S/S, Thermo Pin	Normal	M12	6,0	28	2,7	4,0	2,0	4,0	12,0	53	14,00
32200.W0616	S/S, Thermo Pin	Normal	M16	7,5	32	3,2	5,0	2,5	5,0	45,0	100	32,00
32200.W0803	Screwdriver	Head ø2,5	M 3	-	-	-	-	-	-	-	-	13,00
32200.W0804	Screwdriver	Head ø4,0	M 4	-	-	-	-	-	-	-	-	29,00
32200.W0805	Screwdriver	Head ø5,0	M 5	-	-	-	-	-	-	-	-	61,00
32200.W0806	Screwdriver	Head ø5,5	M 6	-	-	-	-	-	-	-	-	65,00
32200.W0808	Screwdriver	Head ø7,0	M 8	-	-	-	-	-	-	-	-	108,00
32200.W0810	Screwdriver	Head ø8,0	M10	-	-	-	-	-	-	-	-	124,00

Material

Free cutting steel type-
Body: free cutting steel, blackened.
Pin: free cutting steel, hardened, blackened, or thermoplastic POM, white.
Spring: stainless steel.
Stainless steel type-
Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel 1.4305 (AISI 303), or thermoplastic POM, white.
Spring: stainless steel.

Technical Notes

These spring plungers may be used for location, for applying pressure or lifting off.
Temperature range: all steel or stainless, up to 250ºC.
Steel or stainless with thermoplastic pin, -30ºC to +50ºC.
Spring load * = statistical average value.

Tips

Spring load identifier:
Normal spring load - no marking.
Increased spring load - body marked with two lines.
These spring plungers can be assembled by use of a hexagon key at the rear, or from the front with special slotted screwdrivers, see 32200.W0803 to .W0824.
Special types available on request.

Important Notes

All metric Wixroyd spring plungers have a coarse thread, see appendix five for thread details.

Spring Plungers

with pin end & hex. socket - stainless steel



32200

Order No.	Finish	Spring load	d_1	d_2	l_1	w_1	s	t	A/F	Spring load* F_1 N≈	Spring load* F_2 N≈	g
32200.W0812	Screwdriver	Head ø11,0	M12	-	-	-	-	-	-	-	-	112,00
32200.W0816	Screwdriver	Head ø14,0	M16	-	-	-	-	-	-	-	-	173,00
32200.W0820	Screwdriver	Head ø18,0	M20	-	-	-	-	-	-	-	-	226,00
32200.W0824	Screwdriver	Head ø19,9	M24	-	-	-	-	-	-	-	-	258,00





Material

Free cutting steel type-
Body: free cutting steel, blackened.
Pin: free cutting steel, hardened, blackened, or thermoplastic POM, white.
Spring: stainless steel.
Stainless steel type-
Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel 1.4305 (AISI 303), or thermoplastic POM, white.
Spring: stainless steel.

Technical Notes

These spring plungers may be used for location, for applying pressure or lifting off.
Temperature range: all steel or stainless, up to 250ºC.
Steel or stainless with thermoplastic pin, -30ºC to +50ºC.
Spring load * = statistical average value.

Tips

Spring load identifier:
Normal spring load - no marking.
Increased spring load - body marked with two lines.
These spring plungers can be assembled by use of a hexagon key at the rear, or from the front with special slotted screwdrivers, see 32200.W0803 to .W0824.
Special types available on request.

Important Notes

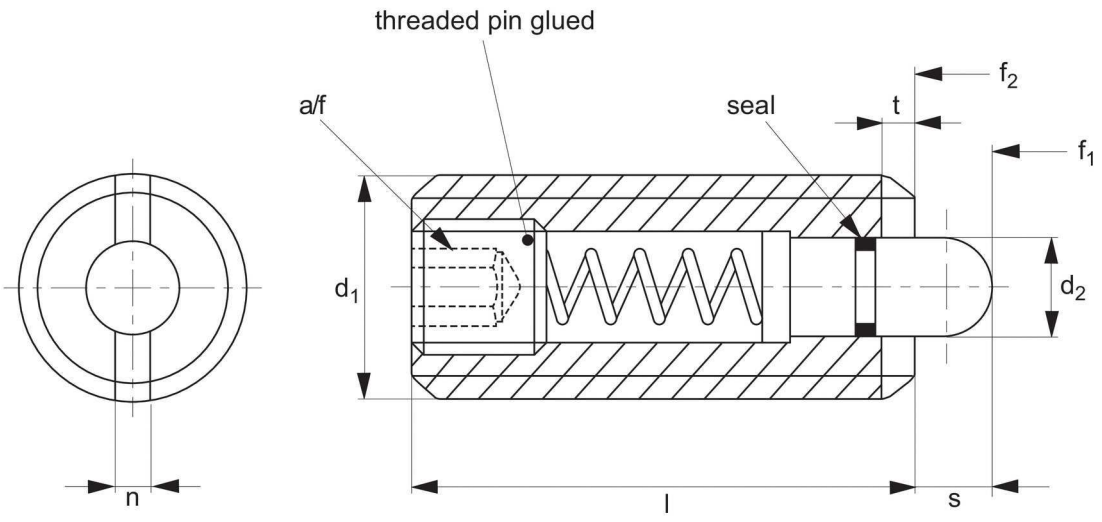
All metric Wixroyd spring plungers have a coarse thread, see appendix five for thread details.

Spring Plungers

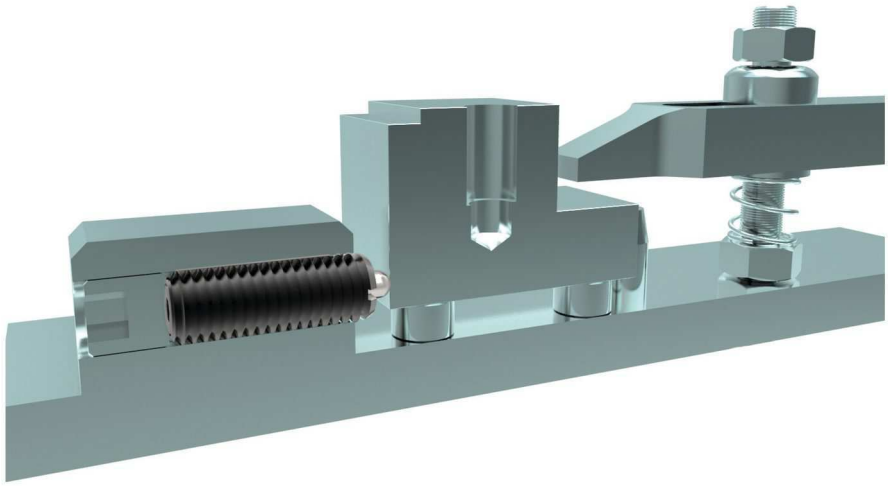
with pin end & hex socket and seal - stainless steel

32220





Order No.	Finish	Spring load	d_1	d_2	l	n	s	t	a/f	Spring load* f_1 N	Spring load* f_2 N	g
32220.W0048	All Steel	Normal	M 8	3,8	26	1,5	3,0	1,4	2,5	9	24	6,9
32220.W0050	All Steel	Normal	M10	4,0	28	1,5	3,5	1,4	3,0	15	30	11,0
32220.W0052	All Steel	Normal	M12	6,0	35	2,7	4,0	2,0	4,0	24	50	20,0
32220.W0056	All Steel	Normal	M16	7,5	40	3,2	5,0	2,5	5,0	36	58	43,0
32220.W0148	All Steel	Increased	M 8	3,8	26	1,5	3,0	1,4	2,5	17	39	6,6
32220.W0150	All Steel	Increased	M10	4,0	28	1,5	3,5	1,4	3,0	22	43	12,0
32220.W0152	All Steel	Increased	M12	6,0	35	2,7	4,0	2,0	4,0	40	80	20,0
32220.W0156	All Steel	Increased	M16	7,5	40	3,2	5,0	2,5	5,0	44	113	45,0
32220.W0448	All Stainless	Normal	M 8	3,8	26	1,5	3,0	1,4	2,5	9	24	7,2
32220.W0450	All Stainless	Normal	M10	4,0	28	1,5	3,5	1,4	3,0	15	30	12,0
32220.W0452	All Stainless	Normal	M12	6,0	35	2,7	4,0	2,0	4,0	24	50	20,0
32220.W0456	All Stainless	Normal	M16	7,5	40	3,2	5,0	2,5	5,0	36	58	44,0



Material

Free cutting steel type-
Body: free cutting steel, blackened.
Pin: free cutting steel, blackened.
Spring: stainless steel. Seal NBR plastic.
Stainless steel type-
Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel 1.4305 (AISI 303).
Spring: stainless steel.
Seal: NBR plastic.

Technical Notes

These spring plungers may be used for location, for applying pressure or lifting off. Incorporation of a seal into the design prevents liquid penetrating into the spring plunger. Temperature range -30°C to +80°C. Spring load * = statistical average value.

Tips

Spring load identifier:
Normal spring load - no marking.
Increased spring load - body marked with two lines.
Please note these items vary in dimension l, spring load and temperature range in comparison to no-sealed item 32200. Spring plungers can be assembled by use of a hexagon key at the rear, or from the front with special slotted screwdrivers, see 32200.W0808 to .W0816.
Special types available on request.

Important Notes

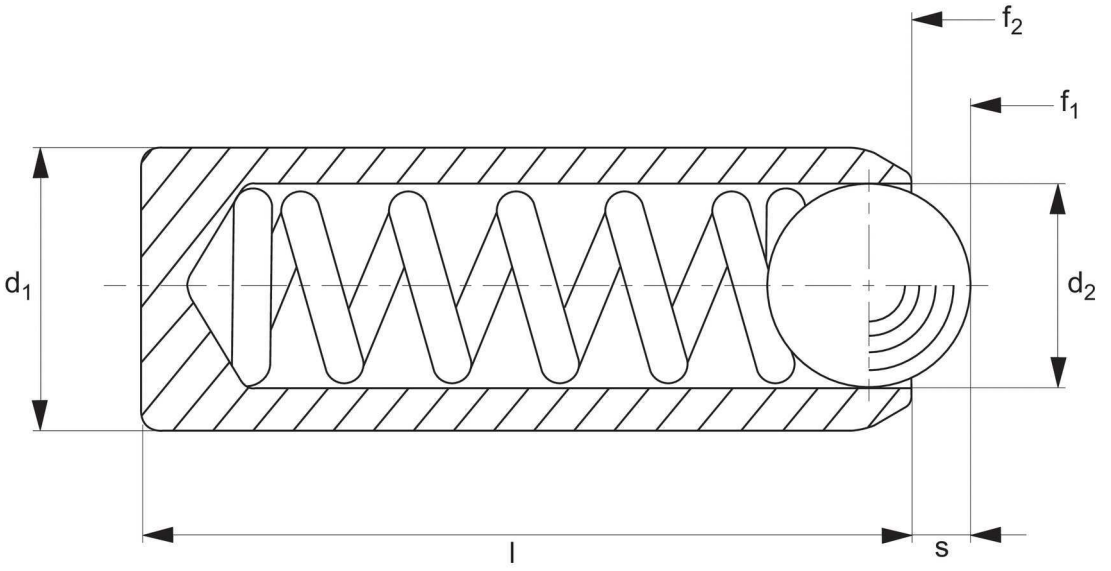
All metric Wixroyd spring plungers have a coarse thread, see appendix five for thread details.

Spring Plungers

smooth model, without collar - stainless steel

32280





Material
Body: stainless steel 1.4305 (AISI 303).
Ball: ball bearing steel 1.3505 (100Cr6) hardened.
Spring: stainless steel

Technical Notes
Used for locating, applying pressure or lifting off.
Temperature range up to +250°C.
Spring load * = statistical average value.

Tips
These are press fit spring plungers, use tolerance of F8 for easy fit, or H9 when tight fit required. These tolerances vary with material type, hence a trial hole is recommended. Special types available on request.

Order No.	Pressure	d_1 ±0,04	d_2	l_1	s_1	Spring load* f_1 N≈	Spring load* f_2 N≈	g
32280.W0306	Standard pressure	2,0	1,0	3,5	0,3	0,8	1,5	0,1
32280.W0308	Standard pressure	2,5	1,5	5,0	0,40	2,8	4,7	0,2
32280.W0310	Standard pressure	3,0	2,0	7,0	0,7	4,5	7,5	0,4
32280.W0312	Standard pressure	3,5	2,5	9,0	0,8	6,0	14,5	0,6
32280.W0315	Standard pressure	4,0	3,0	11,0	0,9	8,0	14,0	0,8
32280.W0317	Standard pressure	4,5	3,2	12,0	1,0	9,5	16,5	1,1
32280.W0320	Standard pressure	5,0	3,5	13,0	1,0	11,0	18,0	1,5
32280.W0322	Standard pressure	5,5	4,0	14,0	1,2	15,5	25,0	1,9
32280.W0325	Standard pressure	6,0	4,5	15,0	1,5	18,0	31,0	2,3
32280.W0327	Standard pressure	8,0	6,0	18,0	2,0	24,0	45,0	5,0
32280.W0330	Standard pressure	10,0	8,0	20,0	2,5	26,0	49,0	8,3
32280.W0332	Standard pressure	12,0	10,0	22,0	3,5	41,0	86,0	12
32280.W0356	High pressure	2,0	1,0	3,5	0,3	1,3	2,2	0,1
32280.W0358	High pressure	2,5	1,5	5,0	2,5	4,7	7,1	0,2
32280.W0360	High pressure	3,0	2,0	7,0	0,7	7,8	11,6	0,3
32280.W0362	High pressure	3,5	2,5	9,0	0,8	12,0	18,0	0,5
32280.W0365	High pressure	4,0	3,0	11,0	0,9	15,0	22,0	0,7
32280.W0367	High pressure	4,5	3,2	12,0	1,0	18,7	25,1	1,0
32280.W0370	High pressure	5,0	3,5	13,0	1,0	19,3	26,6	1,4
32280.W0372	High pressure	5,5	4,0	14,0	1,2	25,1	39,2	1,8
32280.W0375	High pressure	6,0	4,5	15,0	1,5	36,0	60,5	2,3
32280.W0377	High pressure	8,0	6,0	18,0	2,0	57,0	103,5	5,2
32280.W0380	High pressure	10,0	8,0	20,0	2,5	61,0	110,0	8,5
32280.W0382	High pressure	12,0	10,0	22,0	3,5	68,0	143,0	13

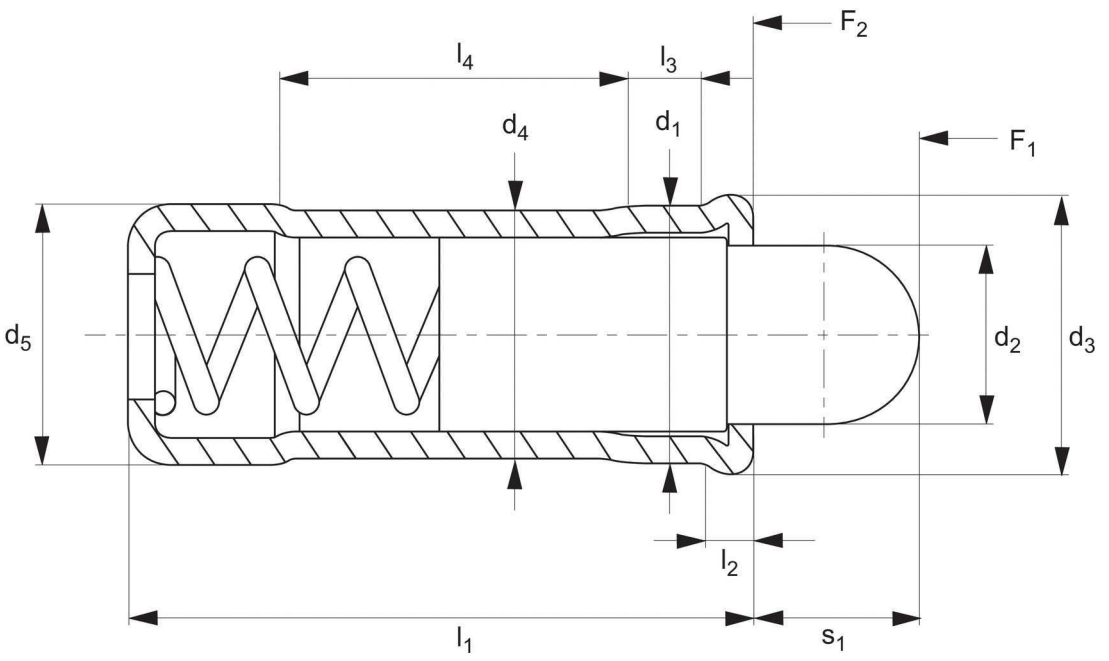


Spring Plunger - Pin End - Smooth

stainless steel - with collar



32282







Order No.	Pin type	d_1 +0,1 +0,04	d_2	d_3	d_4	d_5 ±0,04	l_1	l_2 ≈	l_3 ≈	l_4 ≈	s_1	max. °C	Spring load* F_1 N≈	Spring load* F_2 N≈	g
32282.W0104	Stainless	4	2,8	4,6	3,85	4	10,7	0,9	1,8	5,6	2,7	+250	3,0	8,2	0,7
32282.W0105	Stainless	5	3,8	5,6	4,85	5	12,0	0,9	2,1	6,0	4,0	+250	3,3	9,0	1,2
32282.W0106	Stainless	6	4,8	6,5	5,85	6	15,0	1,0	2,3	8,2	5,5	+250	6,1	12,0	2,2
32282.W0108	Stainless	8	6,2	8,5	7,55	8	18,0	1,1	2,9	9,5	6,5	+250	9,0	20,1	4,2
32282.W0110	Stainless	10	8,1	11,0	9,55	10	26,0	1,5	4,2	14,3	8,0	+250	16,2	29,0	9,0
32282.W0124	Plastic	4	2,8	4,6	3,85	4	10,7	0,9	1,8	5,6	2,7	-30/+50	3,0	8,2	0,5
32282.W0125	Plastic	5	3,8	5,6	4,85	5	12,0	0,9	2,1	6,0	4,0	-30/+50	3,3	9,0	0,8
32282.W0126	Plastic	6	4,8	6,5	5,85	6	15,0	1,0	2,3	8,2	5,5	-30/+50	6,1	12,0	1,3
32282.W0128	Plastic	8	6,2	8,5	7,55	8	18,0	1,1	2,9	9,5	6,5	-30/+50	9,0	20,1	2,5
32282.W0130	Plastic	10	8,1	11,0	9,55	10	26,0	1,5	4,2	15,0	8,0	-30/+50	16,2	29,0	5,0

Material

Body: stainless steel 1.4303 (AISI 305).
Pin: stainless steel 1.4305 (AISI 303), or thermoplastic POM white.
Spring: stainless steel

Technical Notes

Used for locating, applying pressure or lifting off.
Thermoplastic type temperature range -30°C to +50°C.
Stainless type, temperature range max. 250°C.
Spring load * = statistical average value.

Tips

Special types available on request.
A tolerance of H7 is recommended for the locating hole of d_1.



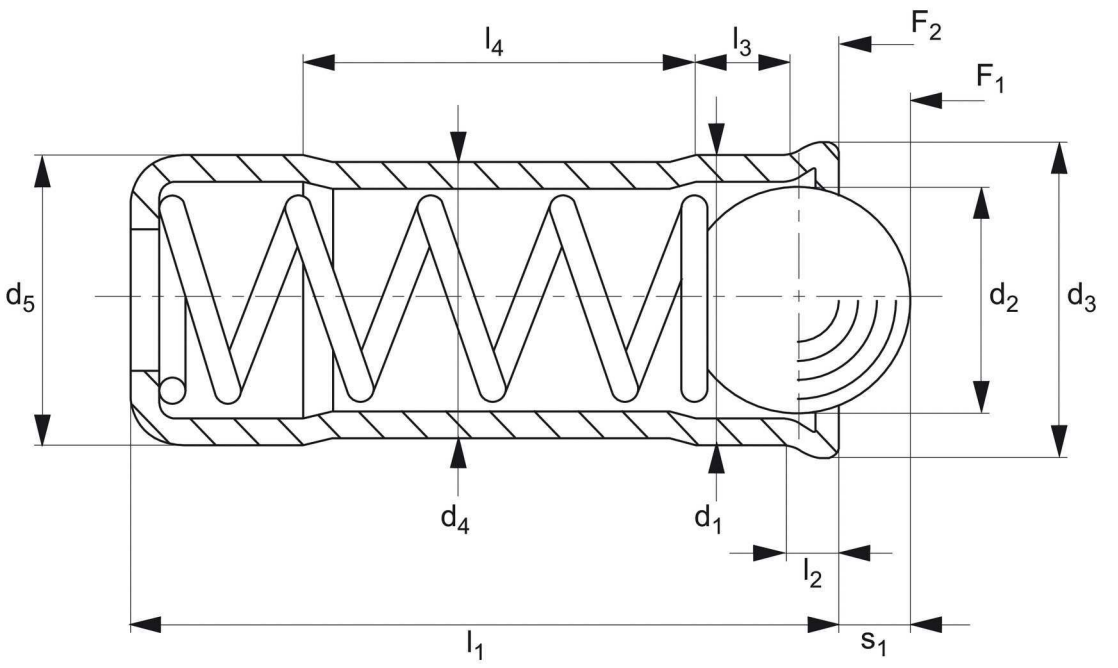


Spring Plunger - Ball End - Smooth

stainless steel - with collar

32284





Order No.	d_1 +0,10 +0,04	d_2	d_3	d_4	d_5 ±0,04	l_1	l_2 ≈	l_3 ≈	l_4 ≈	Stroke s_1	Spring Load* F_1 N≈	Spring Load* F_2 N≈	g
32284.W1104	4	3,0	4,6	3,85	4	10,7	0,9	1,8	5,6	0,9	12,9	19,0	0,6
32284.W1105	5	4,0	5,6	4,85	5	12,0	0,9	2,1	6,0	1,3	19,3	29,2	1,0
32284.W1106	6	5,0	6,5	5,85	6	15,0	1,0	2,3	8,2	1,7	28,0	47,5	2,0
32284.W1108	8	6,5	8,5	7,55	8	18,0	1,1	2,9	9,5	2,3	40,0	67,3	4,0
32284.W1110	10	8,5	11,0	9,55	10	26,0	1,5	4,2	14,3	3,1	66,0	105,0	8,0

Material

Body: stainless steel 1.4303 (AISI 303).
Pin: stainless steel 1.4303 (AISI 303),
Spring: stainless steel.

Technical Notes

Used for locating, applying pressure or lifting off.
Temperature range max. 250°C.
Spring load * = statistical average value.

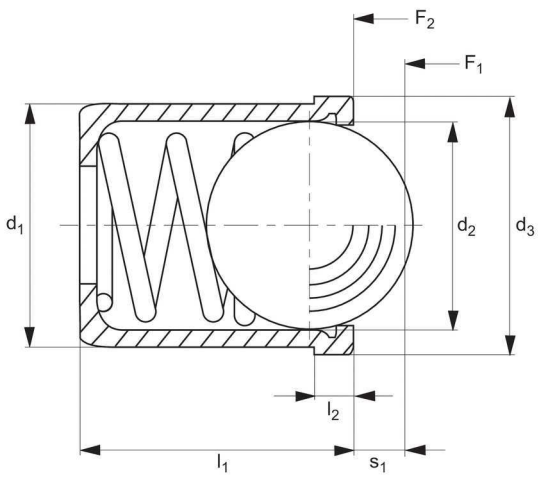
Tips

Special types available on request.
A tolerance of H7 is recommended for the locating hole of d_1.

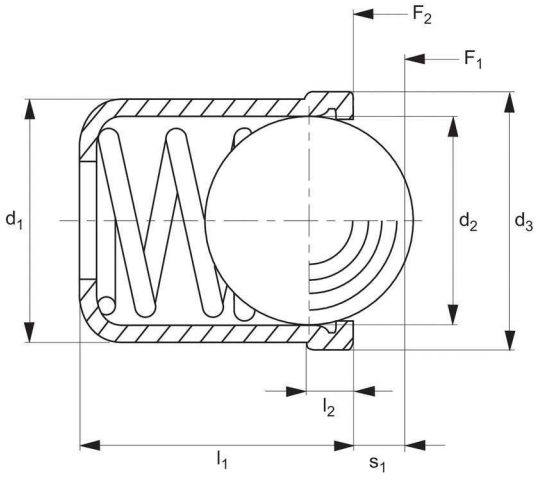
Spring Plungers

smooth model, with collar and ball- stainless steel

32300



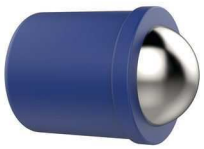
brass or thermoplastic bodies



stainless steel bodies









Order No.	Spring load	Finish	d_1 -0 +0,1	d_2	d_3	l_1	l_2 ≈	s_1	Spring load* F_1 N ≈	Spring load* F_2 N ≈	max. °C	g
32300.W1004	Light	Body & Ball Stainless	4	3,00	4,6	5,0	0,90	1,00	0,4	1,0	250	0,30
32300.W1005	Light	Body & Ball Stainless	5	4,00	5,6	6,0	0,90	1,40	0,5	4,7	250	0,60
32300.W1006	Light	Body & Ball Stainless	6	5,00	6,5	7,0	1,00	1,80	2,3	6,5	250	1,00
32300.W1008	Light	Body & Ball Stainless	8	6,50	8,5	9,0	1,10	2,40	4,0	9,0	250	2,10
32300.W1010	Light	Body & Ball Stainless	10	8,50	11,0	13,0	1,50	3,30	3,9	10,0	250	4,40
32300.W1012	Light	Body & Ball Stainless	12	10,00	13,0	16,0	2,30	4,00	6,2	14,6	250	7,30
32300.W0003	Standard	Body & Ball Stainless	3	2,38	3,5	4,0	0,60	0,70	1,8	3,5	+250	0,20
32300.W0004	Standard	Body & Ball Stainless	4	3,00	4,6	5,0	0,90	1,00	2,5	6,0	+250	0,30
32300.W0005	Standard	Body & Ball Stainless	5	4,00	5,6	6,0	0,90	1,40	3,0	6,5	+250	0,60
32300.W0006	Standard	Body & Ball Stainless	6	5,00	6,5	7,0	1,00	1,80	5,5	11,5	+250	1,00
32300.W0008	Standard	Body & Ball Stainless	8	6,50	8,5	9,0	1,10	2,40	7,0	12,5	+250	2,10
32300.W0010	Standard	Body & Ball Stainless	10	8,50	11,0	13,0	1,50	3,30	8,5	18,5	+250	4,40
32300.W0012	Standard	Body & Ball Stainless	12	10,00	13,0	16,0	2,30	4,00	12,0	26,5	+250	7,30
32300.W0203	Standard	Body Brass, Ball Stainless	3	2,38	3,6	4,0	0,60	0,60	1,8	3,5	+250	0,20
32300.W0204	Standard	Body Brass, Ball Stainless	4	3,00	4,5	5,0	1,00	0,80	3,0	6,0	+250	0,50
32300.W0205	Standard	Body Brass, Ball Stainless	5	4,00	5,5	6,0	1,00	1,00	4,0	6,5	+250	0,80
32300.W0206	Standard	Body Brass, Ball Stainless	6	5,00	6,5	7,0	1,00	1,60	6,0	11,5	+250	1,30
32300.W0208	Standard	Body Brass, Ball Stainless	8	6,50	8,5	9,0	1,00	1,90	8,0	12,5	+250	2,80
32300.W0403	Standard	Body Thermo, Ball S/S	3	2,00	3,6	4,0	0,60	0,55	1,7	3,5	-30/+50	0,09
32300.W0404	Standard	Body Thermo, Ball S/S	4	3,00	4,6	5,0	1,00	0,80	3,0	6,5	-30/+50	0,20
32300.W0405	Standard	Body Thermo, Ball S/S	5	4,00	5,6	6,0	1,00	1,00	6,0	9,4	-30/+50	0,40
32300.W0406	Standard	Body Thermo, Ball S/S	6	5,00	6,5	7,0	1,00	1,60	6,2	12,6	-30/+50	0,70
32300.W0408	Standard	Body Thermo, Ball S/S	8	6,50	8,5	9,0	1,00	1,90	10,0	20,4	-30/+50	1,50
32300.W0410	Standard	Body Thermo, Ball S/S	10	8,00	11,0	13,5	1,50	2,40	11,9	22,3	-30/+50	3,20
32300.W0412	Standard	Body Thermo, Ball S/S	12	10,00	13,0	16,0	1,50	3,30	14,0	25,0	-30/+50	5,80
32300.W0604	Standard	Body & Ball Thermoplast	4	3,00	4,6	5,0	1,00	0,80	3,0	6,5	-30/+50	0,10
32300.W0605	Standard	Body & Ball Thermoplast	5	4,00	5,6	6,0	1,00	1,00	6,0	9,4	-30/+50	0,20
32300.W0606	Standard	Body & Ball Thermoplast	6	5,00	6,5	7,0	1,00	1,60	6,2	12,6	-30/+50	0,30
32300.W0608	Standard	Body & Ball Thermoplast	8	6,50	8,5	9,0	1,00	1,90	10,0	20,4	-30/+50	0,60
32300.W0610	Standard	Body & Ball Thermoplast	10	8,00	11,0	13,5	1,50	2,40	11,9	22,3	-30/+50	1,50
32300.W0612	Standard	Body & Ball Thermoplast	12	10,00	13,0	16,0	1,50	3,30	14,0	25,0	-30/+50	2,50
32300.W2004	Heavy	Body & Ball Stainless	4	3,00	4,6	5,0	0,90	1,00	5,0	10,4	+250	0,30
32300.W2005	Heavy	Body & Ball Stainless	5	4,00	5,6	6,0	0,90	1,40	6,0	12,0	+250	0,60
32300.W2006	Heavy	Body & Ball Stainless	6	5,00	6,5	7,0	1,00	1,80	7,3	19,0	+250	1,00
32300.W2008	Heavy	Body & Ball Stainless	8	6,50	8,5	9,0	1,10	2,40	11,0	25,0	+250	2,10
32300.W2010	Heavy	Body & Ball Stainless	10	8,50	11,0	13,0	1,50	3,30	17,0	37,0	+250	4,40
32300.W2012	Heavy	Body & Ball Stainless	12	10,00	13,0	16,0	2,30	4,00	30,0	54,0	+250	7,30

Material

Body: stainless steel 1.4303 (AISI 305), brass, or thermoplastic POM, blue.
Ball: ball bearing steel 1.3505 (100Cr6) hardened or thermoplastic POM, white.
Spring: stainless steel 1.4568 (X7CrNiAl17-7).

Technical Notes

Used for locating, applying pressure or lifting off.
Spring loads * = statistical average values.
Thermo type temperature range -30°C to +50°C.
Stainless and brass type, temperature range max. 250°C.
For calculation of indexing resistance please refer to spring plunger technical pages.

Tips

These are press fit spring plungers.
Typical hole tolerance is H7 for manual assembly.
These fit tolerances vary with type of material so a trial hole is recommended.
Light spring load- marked with one line.
Standard spring load- no marking.
Heavy spring load- marked with two lines.
Special types available on request.

Spring Plungers

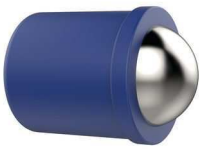
smooth model, with collar and ball- stainless steel

32300











Material

Body: stainless steel 1.4303 (AISI 305), brass, or thermoplastic POM, blue.
Ball: ball bearing steel 1.3505 (100Cr6) hardened or thermoplastic POM, white.
Spring: stainless steel 1.4568 (X7CrNiAl17-7).

Technical Notes

Used for locating, applying pressure or lifting off.
Spring loads * = statistical average values.
Thermo type temperature range -30°C to +50°C.
Stainless and brass type, temperature range max. 250°C.
For calculation of indexing resistance please refer to spring plunger technical pages.

Tips

These are press fit spring plungers.
Typical hole tolerance is H7 for manual assembly.
These fit tolerances vary with type of material so a trial hole is recommended.
Light spring load- marked with one line.
Standard spring load- no marking.
Heavy spring load- marked with two lines.
Special types available on request.

STAINLESS STEEL 305 POM

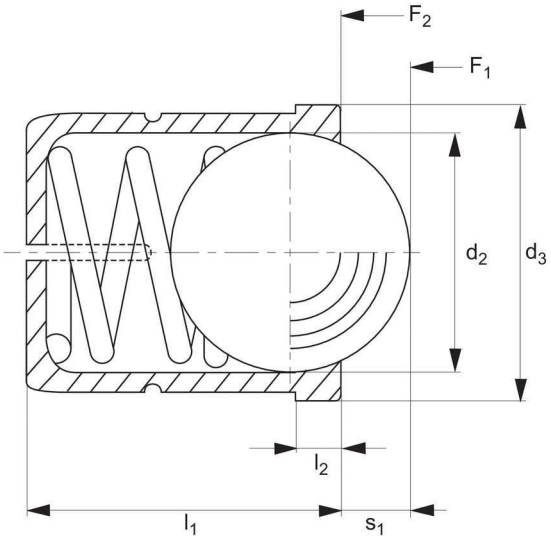
Expander Fit Spring Plunger

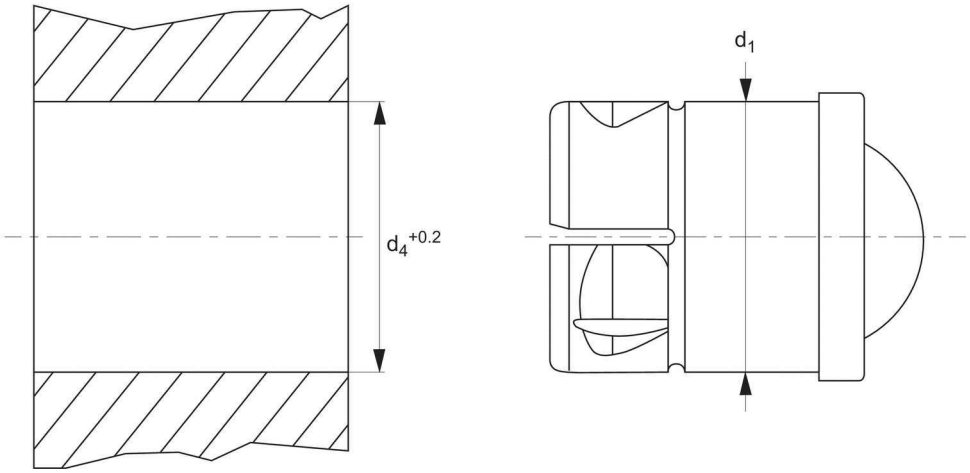
smooth body - thermoplastic

32302









Order No.	Finish	d_1 +0,1	d_2	d_3	d_4 +0,2	l_1 ±0,2	l_2 ≈	s_1	Spring load F_1 N≈*	Spring load F_2 N≈*	Max. °C	g
32302.W0704	Body Thermo & Ball Stainless	4	3,0	4,6	4	5,0	1,0	0,8	3,0	6,5	-30/+50	0,12
32302.W0705	Body Thermo & Ball Stainless	5	4,0	5,6	5	6,0	1,0	1,0	6,0	9,4	-30/+50	0,34
32302.W0706	Body Thermo & Ball Stainless	6	5,0	6,5	6	7,0	1,0	1,6	6,2	12,6	-30/+50	0,63
32302.W0708	Body Thermo & Ball Stainless	8	6,5	8,5	8	9,0	1,0	1,9	10,0	20,4	-30/+50	1,40
32302.W0710	Body Thermo & Ball Stainless	10	8,0	11,0	10	13,5	1,5	2,4	11,9	22,3	-30/+50	2,90
32302.W0804	Body & Ball Thermo	4	3,0	4,6	4	5,0	1,0	0,8	3,0	6,5	-30/+50	0,06
32302.W0805	Body & Ball Thermo	5	4,0	5,6	5	6,0	1,0	1,0	6,0	9,4	-30/+50	0,17
32302.W0806	Body & Ball Thermo	6	5,0	6,5	6	7,0	1,0	1,6	6,2	12,6	-30/+50	0,23
32302.W0808	Body & Ball Thermo	8	6,5	8,5	8	9,0	1,0	1,9	10,0	20,4	-30/+50	0,57
32302.W0810	Body & Ball Thermo	10	8,0	11,0	10	13,5	1,5	2,4	11,9	22,3	-30/+50	1,21

Material

Body: thermoplastic POM, black.
Ball: ball bearing steel 1.3505 (100Cr6) hardened or thermoplastic POM, white.
Spring: stainless steel.

Technical Notes

Unique body design flexes to expand and contract to fit in location bore tolerances as wide as + 0,2mm of d_4. Especially suited to installation in plastic moulded components where hole and bore precision is not high.
Guarantees a secure overhead installation. Simple push fit design, no special tooling necessary.
For calculation of indexing resistance please refer to spring plunger technical pages.

Tips

Spring load* - statistical average value.
Temperature range -30°C to +50°C

See Wixroyd.com for:
32305 - Spring plungers - INCH

32302

Wixroyd Expander Fit Spring Plunger

smooth body

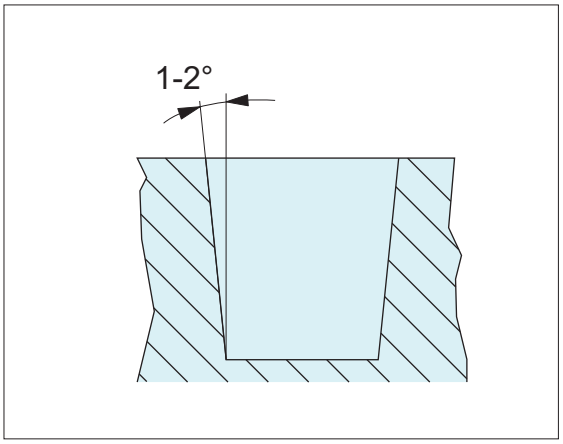
Struggle with inconsistent location bore tolerances and wide material variation?

Looking to reduce machining costs?

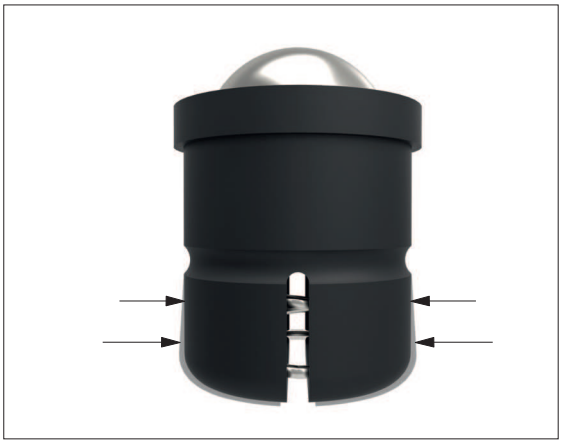
Our smooth body expander fit spring plunger offers a simple and accommodating solution - with the capacity to accommodate location bore tolerances as wide as +0.2mm.



Unique expander fit design

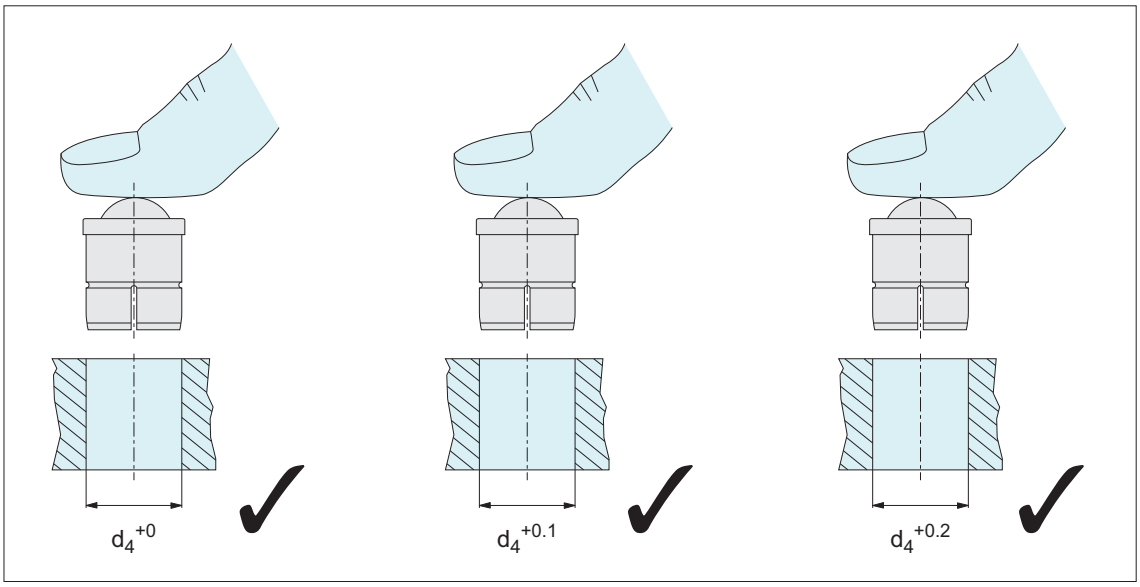


Typically, unmachined plastic injection moulded holes can vary widely in accuracy, with sidewall variation of ± 1 to 2°.



Unique body design flexes to expand and contract to fit in location bore tolerances as wide as +0,2mm.

Especially suited to installation in plastic moulded components where hole and bore precision is not high.



Expands/contracts to fit a range of hole tolerances from +0 to +0,2.

Unique advantages

- Speed and flexibility in production and assembly.
- Removes need and cost of high tolerance machining and workpiece preparation.
- Easy push fit installation, no special tools or punches required.

Important note

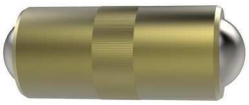
Important Note: It is not recommended to repeatedly install and uninstall expander fit spring plungers between locating bores of different tolerances, as such repeated action can lead to reduction of its capacity to expand into holes of wider tolerances (due to slight plastic fatigue).

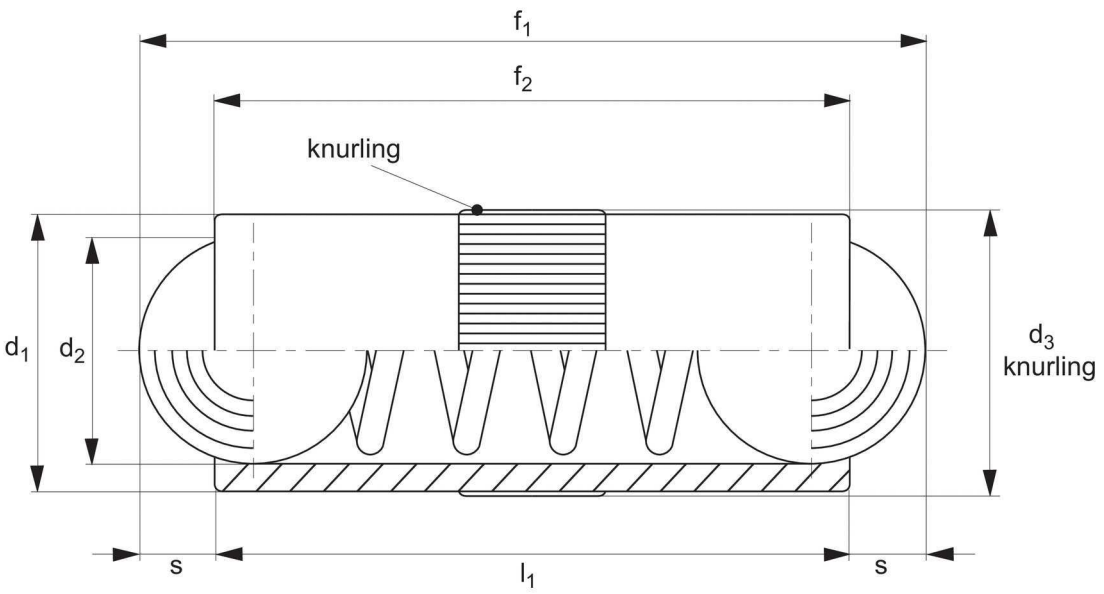
As with all our smooth bodied spring plungers, best results are achieved when used as a single one-off installation.

Spring Plungers

double ended

32350





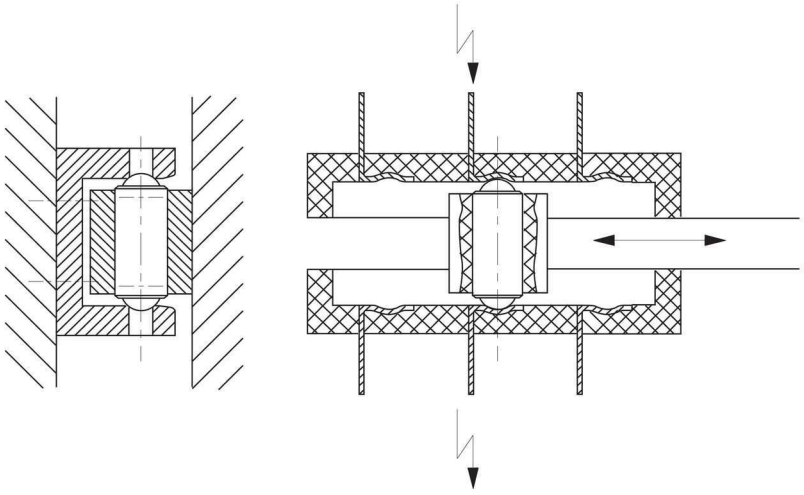
Material
Body: brass.
Ball: stainless steel, hardened.
Spring: stainless steel.

Technical Notes
Double ended spring plungers are used for axial locations and securing of bolts, as well as a means of electrical contact (see diagram).
Spring loads * = statistical average value.
For calculation of indexing resistance please refer to spring plunger technical pages.

Temperature resistance up to 250°C

Tips
Suggested hole tolerance for these spring plungers is H8.
Special types available on request.

Order No.	d_1 h10	d_2	d_3 +0,05	l_1	s	Spring load* f_1 N≈	Spring load* f_2 N≈	g
32350.W0025	2,5	2,0	2,52	5,3	0,65	1,3	2,5	0,22
32350.W0030	3,0	2,5	3,02	7,3	0,80	2,0	4,5	0,34
32350.W0040	4,0	3,0	4,03	9,0	0,90	2,5	7,5	0,65
32350.W0050	5,0	4,0	5,03	10,8	1,20	3,5	8,0	1,27
32350.W0060	6,0	5,0	6,03	12,6	1,60	3,5	10,5	1,99
32350.W0070	7,0	6,0	7,03	14,0	2,00	4,0	12,0	3,00
32350.W0080	8,0	6,5	8,03	18,0	2,10	6,0	15,0	5,10

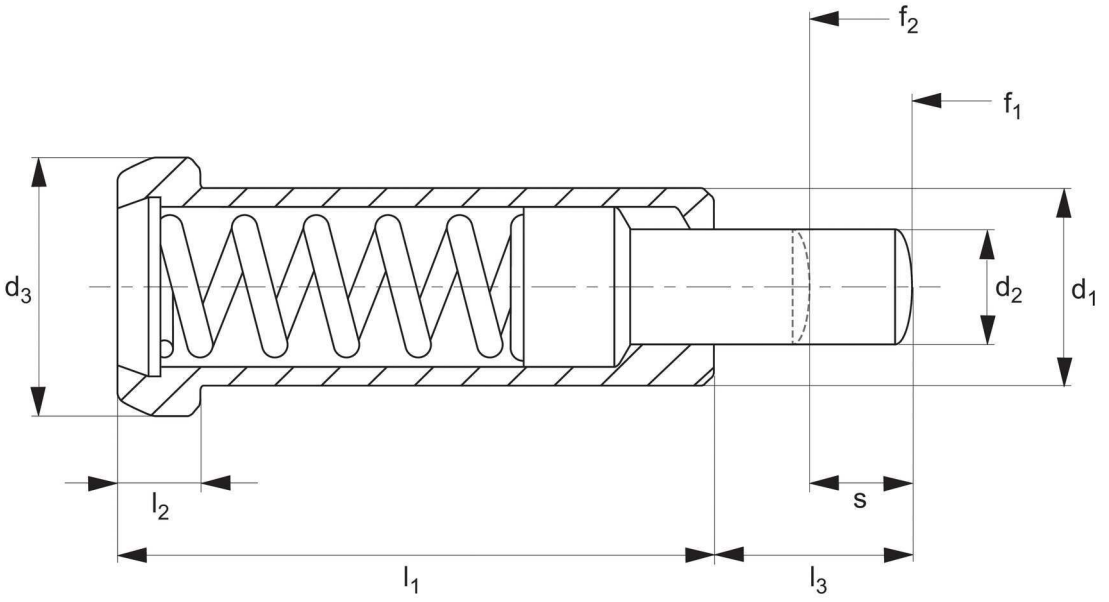


Spring Plungers

smooth model, long

32400





Material

Body: free cutting steel, blackened.
Pin: case hardened steel, blackened.
Spring: stainless steel.

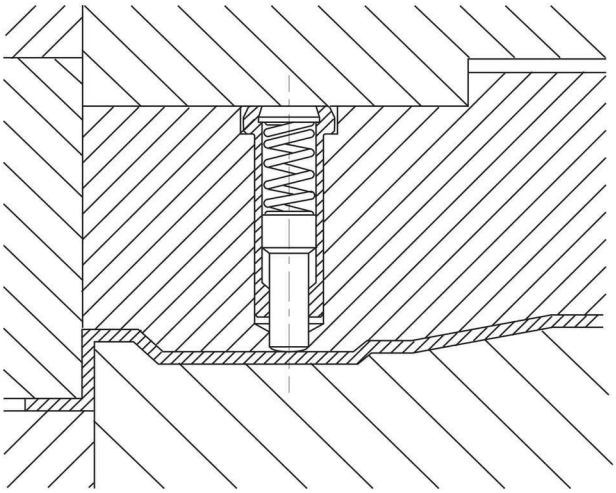
Technical Notes

Used as pulling off pins and spring stops in tool making. No part of the spring plunger can come out of the retaining bore. Recommended installation hole tolerance H7. Temperature range up to 250°C. Spring load * = statistical average values.

Tips

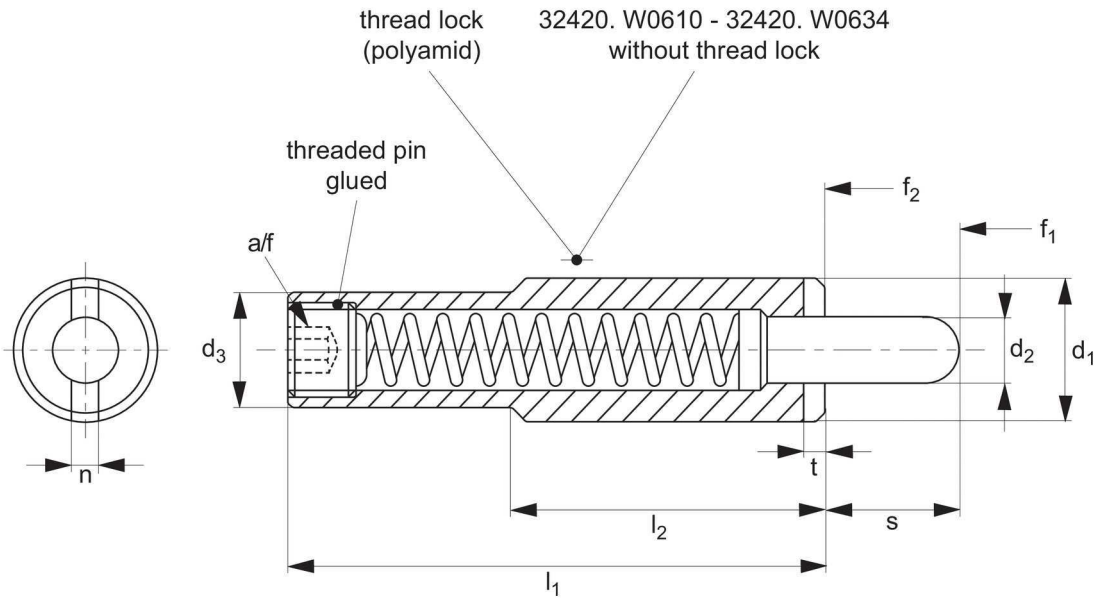
Do not push pin beyond spring range 's', as this will damage spring and result in reduction of spring load.
Special types available on request.

Order No.	d_1 0 -0,05	d_2	d_3	l_1	l_2	l_3	s Spring-range	Spring load* f_1 N≈	Spring load* f_2 N≈	g
32400.W0010	10	5,9	13	30	4,0	10	5,5	42	110	16,0
32400.W0006	6	2,7	8	20	3,2	6	3,5	10	22	4,2
32400.W0008	8	3,9	10	24	3,2	8	4,5	30	88	7,7
32400.W0012	12	7,9	16	36	5,0	12	6,5	50	130	27,0



Spring Plungers

long version





Order No.	Spring Load	d_1	s	d_2	d_3	l_1	l_2	n	t	a/f	Spring Load* f_1 N≈	Spring Load* f_2 N≈	g
32420.W0408	Normal	M10	8	4,0	7,8	35	25	1,5	1,4	3	6	16	13
32420.W0412	Normal	M12	10	5,5	9,5	43	35	2,7	2,0	4	4	18	22
32420.W0430	Normal	M16	10	8,0	13,4	48	35	3,2	3,0	6	7	24	47
32420.W0432	Normal	M16	10	8,0	13,4	58	35	3,2	3,0	6	15	42	52
32420.W0436	Normal	M16	15	8,0	13,4	58	35	3,2	3,0	6	9	33	54
32420.W0440	Normal	M16	20	8,0	13,4	58	35	3,2	3,0	6	4	23	55
32420.W0442	Normal	M16	20	8,0	13,4	83	35	3,2	3,0	6	11	43	71
32420.W0444	Normal	M16	25	8,0	13,4	98	35	3,2	3,0	6	13	41	81
32420.W0450	Normal	M16	30	8,0	13,4	98	35	3,2	3,0	6	13	47	83
32420.W0452	Normal	M16	30	8,0	13,4	118	35	3,2	3,0	6	24	110	97
32420.W0455	Normal	M16	40	8,0	13,4	148	35	3,2	3,0	6	13	63	117
32420.W0460	Normal	M16	50	8,0	13,4	148	35	3,2	3,0	6	7	43	117
32420.W0480	Normal	M24	15	10,0	19,6	60	45	3,7	3,0	8	14	87	132
32420.W0512	Increased	M12	10	5,5	9,5	43	35	2,7	2,0	4	7	46	23
32420.W0530	Increased	M16	10	8,0	13,4	48	35	3,2	3,0	6	10	43	47
32420.W0532	Increased	M16	10	8,0	13,4	58	35	3,2	3,0	6	14	84	54
32420.W0536	Increased	M16	15	8,0	13,4	58	35	3,2	3,0	6	10	57	55
32420.W0542	Increased	M16	20	8,0	13,4	83	35	3,2	3,0	6	18	72	72
32420.W0544	Increased	M16	25	8,0	13,4	98	35	3,2	3,0	6	20	70	82
32420.W0550	Increased	M16	30	8,0	13,4	98	35	3,2	3,0	6	20	80	83
32420.W0555	Increased	M16	40	8,0	13,4	148	35	3,2	3,0	6	21	113	121
32420.W0560	Increased	M16	50	8,0	13,4	148	35	3,2	3,0	6	13	75	121
32420.W0580	Increased	M24	15	10,0	19,6	60	45	3,7	3,0	8	24	192	134
32420.W0610	Normal, Heat-Treated	M16	11	7,3	13,4	80	35	3,2	3,0	8	17	74	69
32420.W0612	Normal, Heat-Treated	M16	21	7,3	13,4	120	35	3,2	3,0	8	21	81	96
32420.W0614	Normal, Heat-Treated	M16	31	7,3	13,4	150	35	3,2	3,0	8	21	89	117
32420.W0616	Normal, Heat-Treated	M16	41	7,3	13,4	200	35	3,2	3,0	8	16	80	149
32420.W0630	Normal, Heat-Treated	M22	21	9,0	19,0	130	50	3,5	4,0	8	80	214	211
32420.W0632	Normal, Heat-Treated	M22	31	9,0	19,0	168	50	3,5	4,0	8	70	210	278
32420.W0634	Normal, Heat-Treated	M22	41	9,0	19,0	226	50	3,5	4,0	8	76	208	358
32420.W0830	Screwdriver	for M10	-	-	-	-	-	-	-	-	-	-	87
32420.W0832	Screwdriver	for M12	-	-	-	-	-	-	-	-	-	-	88
32420.W0834	Screwdriver	for M16	-	-	-	-	-	-	-	-	-	-	110
32420.W0836	Screwdriver	for M22	-	-	-	-	-	-	-	-	-	-	245
32420.W0838	Screwdriver	for M24	-	-	-	-	-	-	-	-	-	-	258

Material

Body: free cutting steel, blackened or heat-treated steel tempered blackened.
Part nos. 32420.W0512 to 32420.W0580 - threaded body bright finish.
Pin: case hardened steel, blackened.
Spring: stainless steel.

Technical Notes

Used for ejecting parts (particularly in press tools), and applying pressure. They are fitted/removed by means of the slot or internal hexagon.
Spring load* = statistical average value.

Tips

Spring Load Identifier:
Normal spring load - no marking.
Increased spring load - body marked with two lines.
Parts 32420.W0408 to 32420.W0580 with thread-lock.

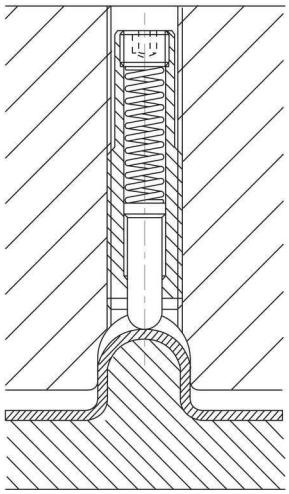
Important Notes

All metric Wixroyd spring plungers have a coarse thread, see appendix five for thread details.

Spring Plungers

long version

32420







Material

Body: free cutting steel, blackened or heat-treated steel tempered blackened.
Part nos. 32420.W0512 to 32420.W0580 - threaded body bright finish.
Pin: case hardened steel, blackened.
Spring: stainless steel.

Technical Notes

Used for ejecting parts (particularly in press tools), and applying pressure. They are fitted/removed by means of the slot or internal hexagon.
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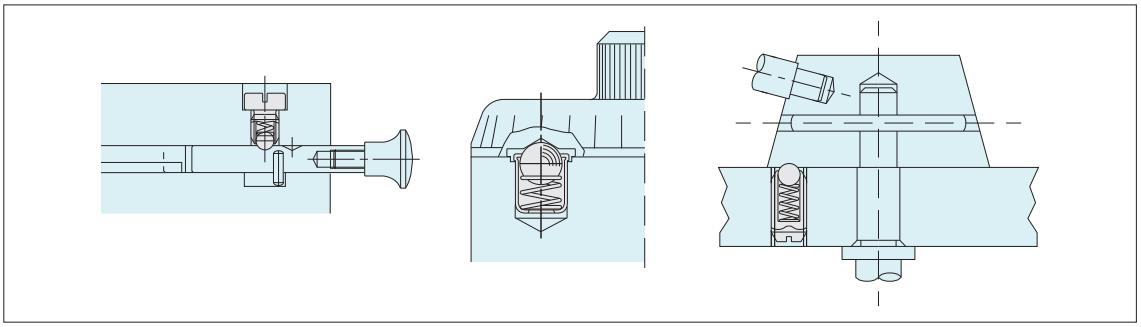
Important Notes

All metric Wixroyd spring plungers have a coarse thread, see appendix five for thread details.

Wixroyd Spring Plungers

Wixroyd Spring Plungers - A Range of Endless Possibilities

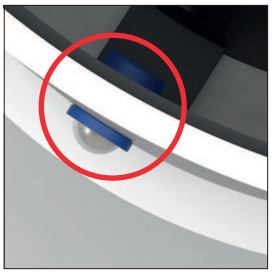
Made of high quality steel and stainless steel, Wixroyd's Spring Plunger range is proven to be reliable for millions of repetitions in securing, positioning, positive locking, indexing and quick release. Their application is limited only by the imagination!



Commercial lighting

Three push-fit spring plungers no. 32000 have been added to the design of this recessed commercial light fitting. The push-fit design of the plunger makes for easy assembly during production. Their use greatly simplifies the mounting and servicing of the units, reducing handling costs and saving valuable operator time.

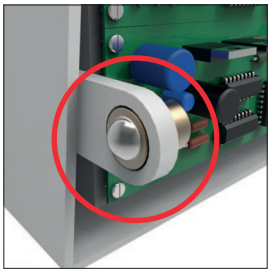




Medical applications

Used in conjunction with a simple hinge, Wixroyd spring plunger 32300 provides an easy and secure means to positively position and secure the back panel of a blood gas analysis machine. With both brass and stainless steel varieties, our spring plungers have a wide range of application in the medical, pharmaceutical, food and drink processing industries.





Applications

Uses

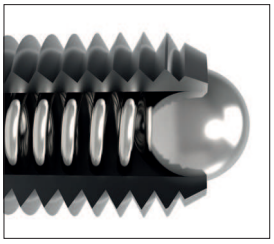
- For location, applying pressure and "lifting off".
- Securing and positioning.
- Positive locking and indexing.
- Quick release.

Industry Sectors

- Machine and fixture design.
- Measuring equipment.
- Electronic components.
- Lighting equipment.
- Medical, optics and orthopaedics.

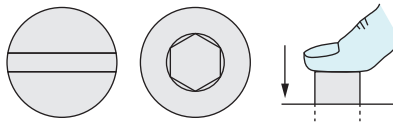
Wixroyd Spring Plungers - Uses and Mounting Options

Ball Type

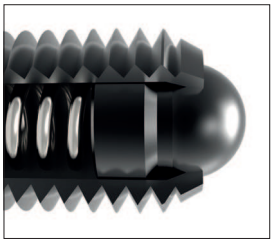


- 31400
- 31420
- 31500
- 32000
- 32100
- 32102
- 32280
- 32300
- 32302
- 32350

Mounting Options

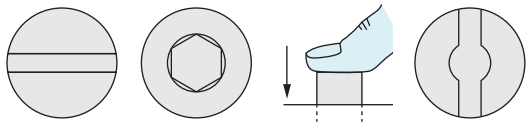


Pin Head Type



- 31000
- 31600
- 32150
- 32200
- 32220
- 32282
- 32400
- 32420

Mounting Options



Quality products every time

100% testing

- Every spring plunger that is produced on the Wixroyd assembly line is individually tested. That is how we guarantee the quality of our products.
- A Wixroyd spring plunger is tested against four key criteria during manufacture.

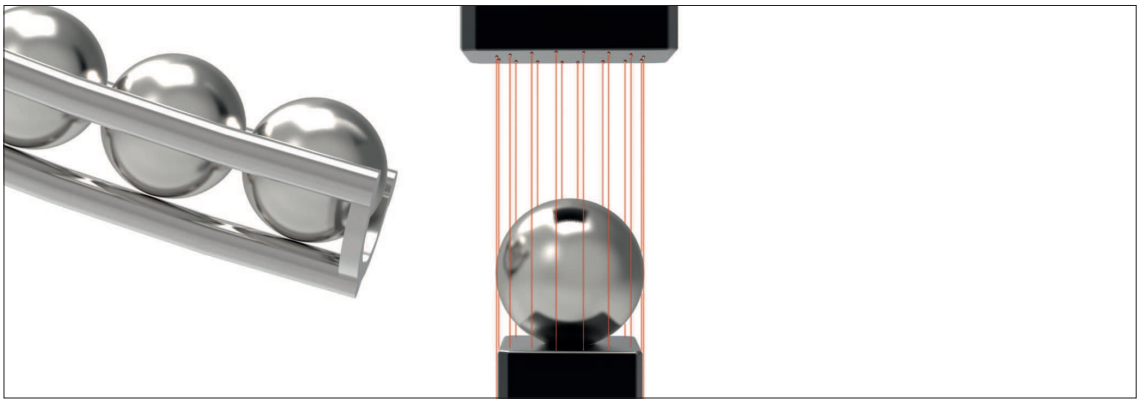
Accuracy of 'S' stroke/ spring range



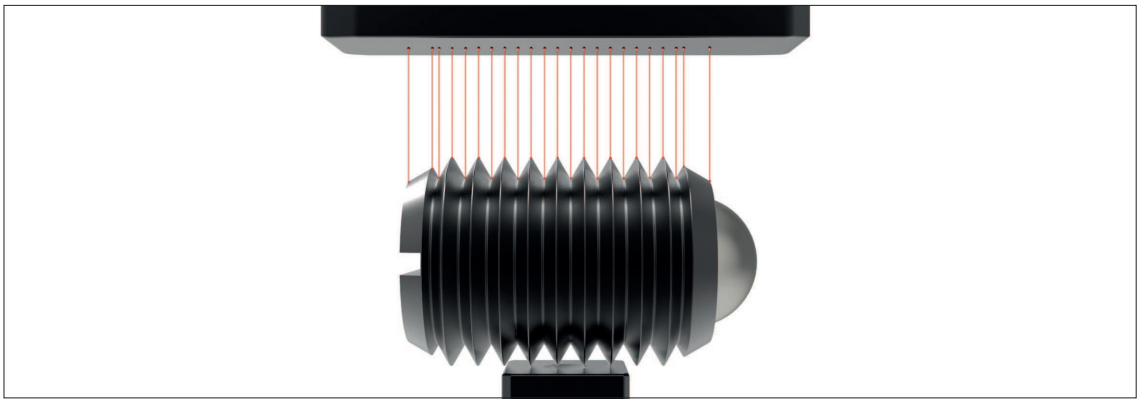
Accuracy of f_1 and f_2 spring forces



Accuracy of ball diameter



Accuracy of thread



Wixroyd 0845 26 66 577 info@wixroyd.com

Wixroyd Spring Plungers

metric thread

31000 -32420

Thread details

All Wixroyd metric spring plungers have a course thread.

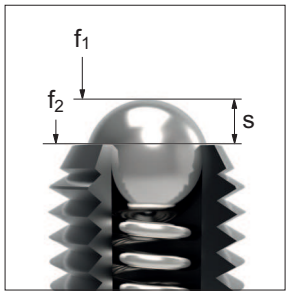
ISO metric coarse threads (mm)																
O. dia. (D)	3	3,5	4	4,5	5	6	7	8	10	12	14	16	18	20	22	24
Pitch	0,50	0,60	0,70	0,75	0,80	1,00	1,00	1,25	1,50	1,75	2,00	2,00	2,50	2,50	2,50	3,00

Spring loads

s Stroke, or movement of plunger's ball or pin.

f_1 The force required in Newtons (N) to over come the static strength of the spring and achieve initial movement of the plunger's ball or pin.

f_2 The force required in Newtons (N) to fully compress the spring until the ball or pin is fully depressed against the plunger's body.

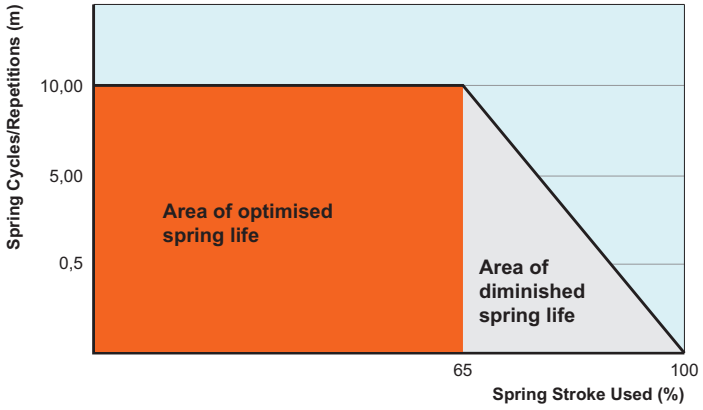




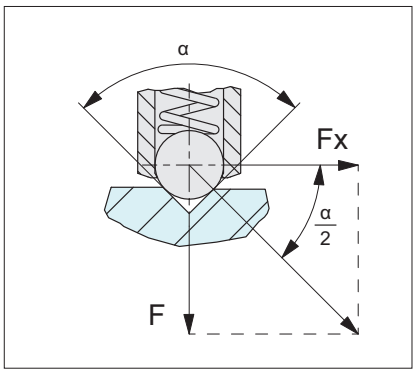
Typical spring repetitions

Although dependent upon a number of application specific factors, we are able to give the following guide relating to the maximum number of spring repetitions or cycles of our spring plungers.

- 100% or full stroke "s" used: approx. 300,000 cycles.
- 65% of stroke "s" used: approx 10,000,000 cycles.



Calculating indexing resistance



We are able to provide the following formula as an approximation of the pull or push force (N) required to 'release' a ball plunger from its indexing counterpart.

$$Fx = \frac{F}{\tan\frac{\alpha}{2}}$$

Fx = pull or push force (N)

F = plungers spring force (see relevant product table)

α = angle of the indexing counter part face

For example:

For Spring plunger 31500.W0010;

F = 24N (see product table)

If α = 90°

$$Fx = \frac{24}{\tan\frac{90}{2}} = 24N$$

If α = 60°

$$Fx = \frac{24}{\tan\frac{60}{2}} = 41,5N$$

If α = 120°

$$Fx = \frac{24}{\tan\frac{120}{2}} = 13,8N$$

Important Note: This is only an approximation formula. For more accurate calculation the roughness of the counterpart surface as well as any variation in the plungers spring force (due to age or high repetitions) should be considered.

Electrical conductivity

We are often asked the electrical conductivity of our spring plungers, unfortunately we are unable to provide any reliable information related to this as there are many factors in an application. We recommend you study the specific material properties of the spring plunger's component parts to make your own calculations, alternatively if in doubt make a test application.

Specials to your own design

Manufacturing exactly to your specific requirements is also our strength. If you need a variation in spring pressure, plunger body or pin design we can assist with a special design item for volumes as low as 1,000 units.

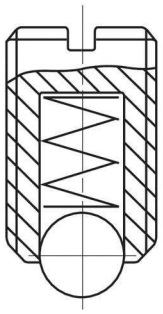
For further information, or to request a quotation, please call our sales office on 0845 26 66 577.

Striker Bushes

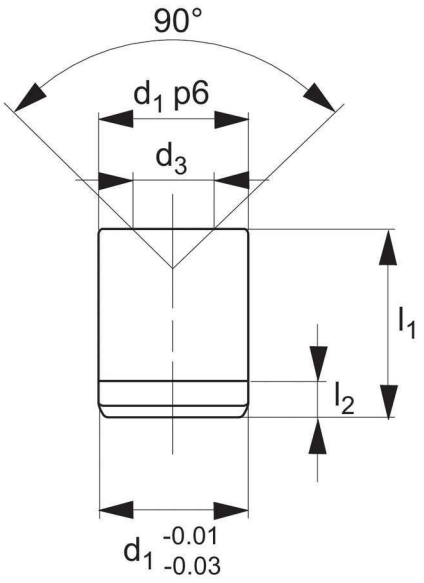
for spring plungers

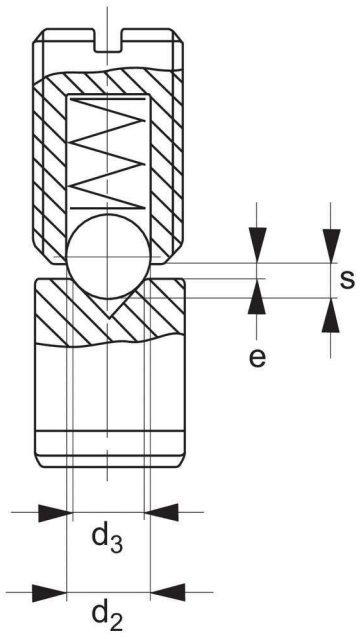
32440





$$e = s - \left(\frac{d_2 + d_3}{2} - \frac{\sqrt{2}}{2} d_2 \right)$$





Material

Burnished, ground, hardened steel.

Technical Notes

Striker bushings are used together with spring plungers when a contact surface is required with high resistance. In particular they are recommended for use with spring plungers equipped with high load value and those with increased spring loads.

Tips

For dimensions d2 and s, please see corresponding spring plunger. Striker bushes are for use with Wixroyd nos. 31500, 32100, 32150, 32200 & 32300 see stated 'e' values for each type.

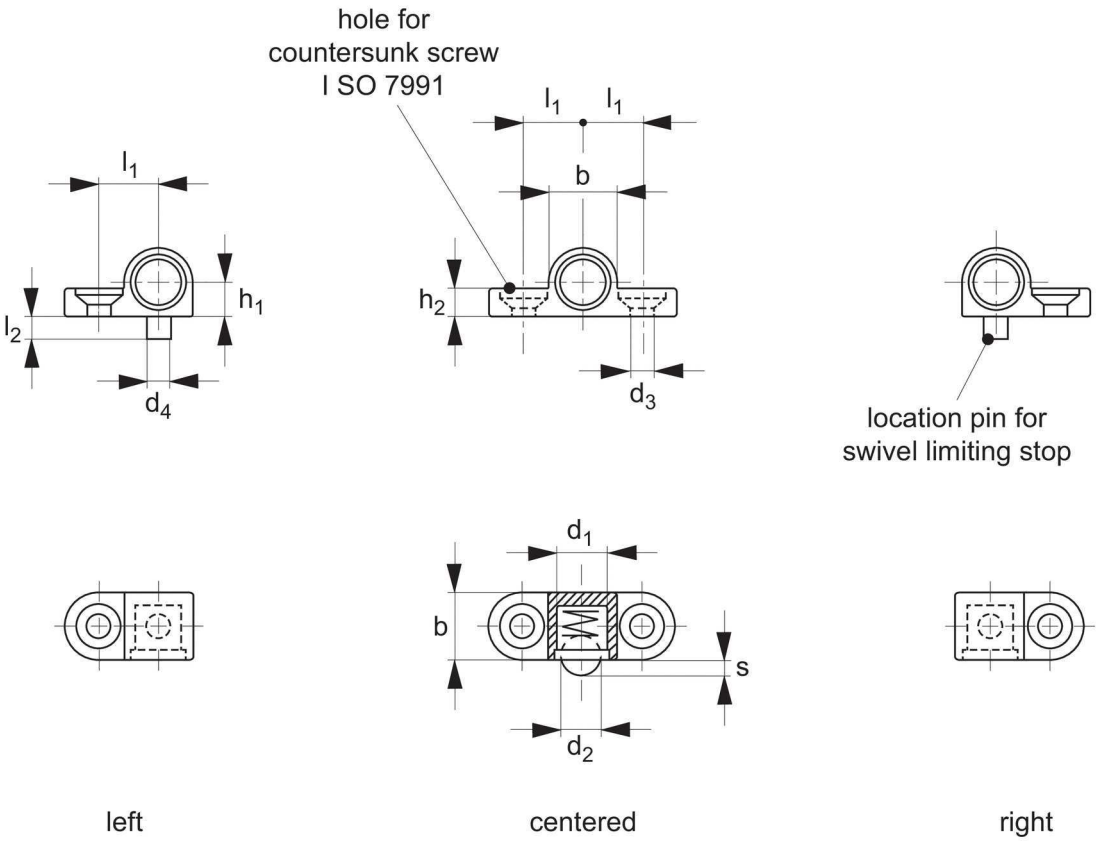
Order No.	d_1 p6	d_2	d_3	l_1 ± 0,05	l_2	s	For 32300 e =	For 32100 e =	For 32150 e =	For 32200 e =	g
32440.W0004	4		1,5	5	2		-	M 4 = 0,6	M 4 = 1,1	M 4 = 1,1	1
32440.W0005	5		2,0	6	2		Ø 4 mm = 0,4	M 5 = 0,4	M 5 = 1,5	M 5 = 1,8	1
32440.W0006	6		2,0	8	2		Ø 5 mm = 0,8	M 6 = 0,6	M 6 = 1,6	M 6 = 2,1	2
32440.W0008	8		3,0	10	2		Ø 6 mm = 1,1	M 8 = 0,9	M 8 = 1,3	M 8 = 2,2	4
32440.W0010	10		4,0	12	3		Ø 8 mm = 1,2	M10 = 1,2	M10 = 1,4	M10 = 1,8	7
32440.W0012	12		6,0	14	3		Ø 10 mm = 1,9	M12 = 1,2	M12 = 1,7	M12 = 2,2	12
32440.W0016	16		8,0	18	3		Ø 12 mm = 1,9	M16 = 1,6	M16 = 2,3	M16 = 2,5	26

Spring Plunger Holder

for part no. 32300

32450





Material
Die-cast zinc, nickel plated.

Technical Notes
Left, right and centre mounting options available.

Tips
Assist in the easy mounting of smooth bodied spring plunger 32300, their small dimensions make them ideal for confined spaces.

Order No.	Type	Body Ø plunger 32300 d_1 -0,05	Ball Ø plunger 32300 d_2	d_3 for countersunk screw ISO 7991	d_4 -0,05	b	h_1 ±0.05	h_2	l_1 ±0.05	l_2	w -0,1 stroke
32450.W0006	Left	6	5,0	M 3-3,2	3	8,5	4,25	3,2	7,5	3	1,5
32450.W0008	Left	8	6,5	M 4-4,3	4	10,5	5,25	4,2	9,5	4	1,8
32450.W0016	Right	6	5,0	M 3-3,2	3	8,5	4,25	3,2	7,5	3	1,5
32450.W0018	Right	8	6,5	M 4-4,3	4	10,5	5,25	4,2	9,5	4	1,8
32450.W0026	Centered	6	5,0	M 3-3,2	3	8,5	4,25	3,2	7,5	3	1,5
32450.W0028	Centered	8	6,5	M 4-4,3	4	10,5	5,25	4,2	9,5	4	1,8

Index Plungers - Precision

cylindrical pin

32460

Order No.	Type	d_1 -0,005 -0,01	d_2	d_3 n6	d_4	d_5	l_1 min.	l_2	l_3	l_4	l_5	l_6	Sprin g load* f_1 N≈	Sprin g load* f_2 N≈	g
32460.W0010	Non Locking	10	19	16	25	M 6	10	2,5	31	13	25,0	-	15	30	79
32460.W0012	Non Locking	12	23	20	32	M 8	10	3,0	35	13	33,0	-	15	35	138
32460.W0016	Non Locking	16	28	25	40	M10	10	3,0	42	13	41,5	-	20	50	226
32460.W0020	Non Locking	20	33	30	40	M10	10	3,0	50	13	41,5	-	36	63	350
32460.W0025	Non Locking	25	42	38	50	M10	10	3,0	60	13	51,0	-	20	73	649
32460.W0060	Locking	10	19	16	25	M 6	10	2,5	31	13	25,0	36,5	15	30	79
32460.W0062	Locking	12	23	20	32	M 8	10	3,0	35	13	33,0	44,5	15	35	136
32460.W0066	Locking	16	28	25	40	M10	10	3,0	42	13	41,5	53,0	20	50	228
32460.W0070	Locking	20	33	30	40	M10	10	3,0	50	13	41,5	53,0	36	63	350
32460.W0075	Locking	25	42	38	50	M10	10	3,0	60	13	51,0	62,5	20	73	649
32460.W0090	Bush	10	19	16	-	-	11	8,5	-	-	-	-	-	-	11
32460.W0092	Bush	12	23	20	-	-	13	10,0	-	-	-	-	-	-	22
32460.W0093	Bush	16	28	25	-	-	17	14,0	-	-	-	-	-	-	40
32460.W0094	Bush	20	33	30	-	-	16	13,0	-	-	-	-	-	-	51
32460.W0096	Bush	25	42	38	-	-	19	16,0	-	-	-	-	-	-	99





Material
Pin, Body & Bush: case-hardened steel, blackened and ground.
Grip: thermoplastic, black.

Technical Notes
Supplied part assembled to enable precise setting, grip and body must be glued after mounting. Non removable once installed.

"Locking" type - enable pin to be held in retracted/non-projecting position; pull back grip, turn 90 to engage 'locking' on a notched catch.
"Non Locking" type - pin simply springs back when grip released.

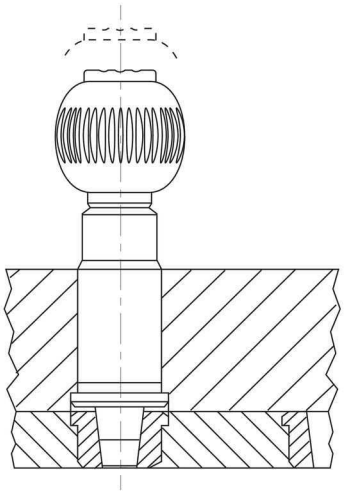
Tips
When used for alignment of two sub-plates, the plunger's precise finish guarantees high repetition accuracy.
Spring loads * = statistical average.

Index Plungers - Precision

tapered pin

32480

Order No.	Type	Nom. dia.	d_1	d_2	d_3 n6	d_4	d_5	l_1 min.	l_2	l_3	l_4	l_5	l_6	Spring load * f_1 N≈	Spring load * f_2 N≈	g
32480.W0110	Non Locking	10	10,00	19	16	25	M 6	6	2,5	31	13	25,0	-	19	29	78
32480.W0112	Non Locking	12	12,00	23	20	32	M 8	6	3,0	35	13	33,0	-	22	35	135
32480.W0116	Non Locking	16	16,00	28	25	40	M10	6	3,0	42	13	41,5	-	30	50	227
32480.W0120	Non Locking	20	20,00	33	30	40	M10	6	3,0	50	13	41,5	-	46	63	348
32480.W0125	Non Locking	25	25,00	42	38	50	M10	6	3,0	60	13	51,0	-	39	73	654
32480.W0160	Locking	10	10,00	19	16	25	M 6	6	2,5	31	13	25,0	32,5	19	29	78
32480.W0162	Locking	12	12,00	23	20	32	M 8	6	3,0	35	13	33,0	40,5	22	35	135
32480.W0166	Locking	16	16,00	28	25	40	M10	6	3,0	42	13	41,5	49,0	30	50	228
32480.W0170	Locking	20	20,00	33	30	40	M10	6	3,0	50	13	41,5	49,0	46	63	348
32480.W0175	Locking	25	25,00	42	38	50	M10	6	3,0	60	13	51,0	58,5	39	73	651
32480.W0190	Tapered Bush	10	7,10	19	16	-	-	11	8,5	-	-	-	-	-	-	13
32480.W0192	Tapered Bush	12	8,28	23	20	-	-	13	10,0	-	-	-	-	-	-	25
32480.W0193	Tapered Bush	16	11,52	28	25	-	-	17	14,0	-	-	-	-	-	-	47
32480.W0194	Tapered Bush	20	15,49	33	30	-	-	16	13,0	-	-	-	-	-	-	60
32480.W0196	Tapered Bush	25	19,70	42	38	-	-	19	16,0	-	-	-	-	-	-	114





Material
Pin, body & bush: case hardened steel, blackened and ground.
Grip: thermoplastic, black.

Technical Notes
Supplied part assembled to enable precise setting, grip and body must be glued after mounting. Non removable once installed.

"Locking" type - enable pin to be held in retracted/non-projecting position; pull back grip, turn 90° to engage 'locking' on a notched catch.
"Non Locking" type - pin simply springs back when grip released.

Tips
When used for alignment of two sub-plates, the plunger's precise finish on pin allows easier alignment of pin and bushing.
Spring loads * = statistical average.

Index Plungers - Lever Grip

pin protruding at start

32491

Order No.	Type	d_1	d_2	d_3	l_1 ≈	l_2	l_3 min.	l_4	Spring load* f_1 N≈	Spring load* f_2 N≈
32491.W0006	W/o Rest Position - Spring Back	6	M16x1,5	16	51	8	35	32	6,5	20
32491.W0007	W/o Rest Position - Spring Back	8	M16x1,5	16	51	8	35	32	6,5	20
32491.W0009	W/o Rest Position - Spring Back	10	M16x1,5	16	51	8	35	32	6,5	20
32491.W0356	With Rest Position	6	M16x1,5	16	51	8	35	32	6,5	20
32491.W0357	With Rest Position	8	M16x1,5	16	51	8	35	32	6,5	20
32491.W0359	With Rest Position	10	M16x1,5	16	51	8	35	32	6,5	20
32491.W0456	With Safety Rest Position	6	M16x1,5	16	51	8	35	32	6,5	20
32491.W0457	With Safety Rest Position	8	M16x1,5	16	51	8	35	32	6,5	20
32491.W0459	With Safety Rest Position	10	M16x1,5	16	51	8	35	32	6,5	20
32700.W0118	Locknut	-	M16x1,5	-	-	-	-	-	-	-



Material

Body: steel zinc plated, blue passivated.
Pin: stainless steel 1.4305 (AISI 303).
Grip/Lever: thermoplastic, black.

Technical Notes

At start position locking pin is protruding, when lever is actuated locking pin retracts.
The lever can be turned anti-clockwise by 90° or 120°, over a cam guide, to retract the pin.
Three different types available;
1) without rest position- sprung loaded pin which springs back to start position whenever released.
2) with rest position- pin held in retracted position via indexed notch on cam.
3) with safety rest position- pin held in retracted position via deep notch, to avoid accidental actuation, lever must first be pulled out of notch prior to release.

Tips

Spring Loads* = statistical average.

Index Plungers - Lever Grip

pin retracted at start

32492

Order No.	Type	d_1	d_2	d_3	l_1 ≈	l_2	l_3 min.	l_4	Spring load* f_1 N≈	Spring load* f_2 N≈
32492.W0326	W/o Rest Position - Spring Back	6	M16x1,5	16	60	8	35	32	7	16,5
32492.W0327	W/o Rest Position - Spring Back	8	M16x1,5	16	60	8	35	32	7	16,5
32492.W0366	With Rest Position	6	M16x1,5	16	60	8	35	32	7	16,5
32492.W0367	With Rest Position	8	M16x1,5	16	60	8	35	32	7	16,5
32492.W0466	With Safety Rest Position	6	M16x1,5	16	60	6	35	32	7	16,5
32492.W0467	With Safety Rest Position	8	M16x1,5	16	60	6	35	32	7	16,5
32700.W0118	Locknut	-	M16x1,5	-	-	-	-	-	-	-



Material

Body: steel, zinc plated, blue passivated.
Pin: stainless steel, 1.4305 (AISI 303).
Grip/Lever: thermoplastic, black.

Technical Notes

At start position locking pin is retracted, when lever is actuated locking pin protrudes.
The lever can be turned anti-clockwise by 90° or 120°, over a cam guide, to extend the pin.
Three different types available;
1) without rest position- sprung loaded pin which springs back to start position whenever released.
2) with rest position- pin held in protruding position via indexed notch on cam,
3) with safety rest position- pin held in protruding position via deep notch, to avoid accidental actuation, lever must first be pulled out of notch prior to release.

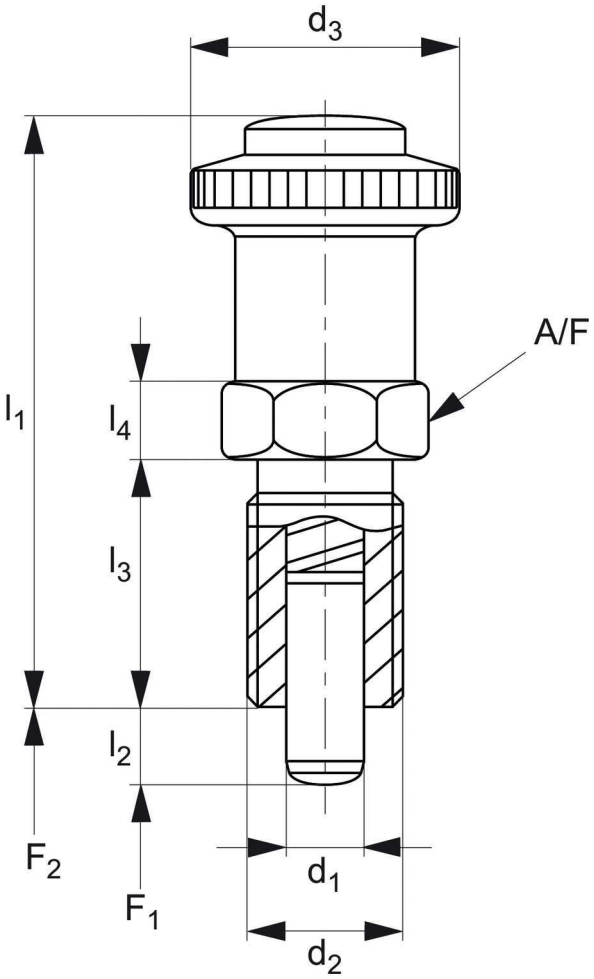
Tips

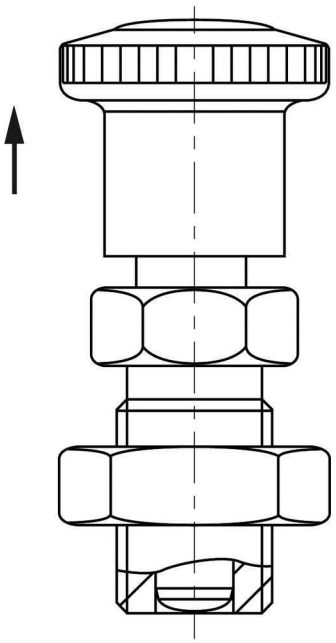
Spring Loads* = statistical average.

Index Plungers - Pull Grip

release lock

32494







Material

Body:steel, blackened or stainless steel 1.4305.
Knob: thermoplastic,black-grey, matt.
Button: thermoplastic POM, red.
Locking pin:steel, hardened or stainless steel, nickel-plated.

Technical Notes

Press red button and hold whilst pulling knob to release pin.
Temperature range -30 to +80°C.

Tips

Knob is non removable.
Lock nuts available separately.

Used with:
32510 Mounting blocks.
32700 Lock nut .
32750 Distance collars.
32752 Locating bushes.
32753 Locating bushes.

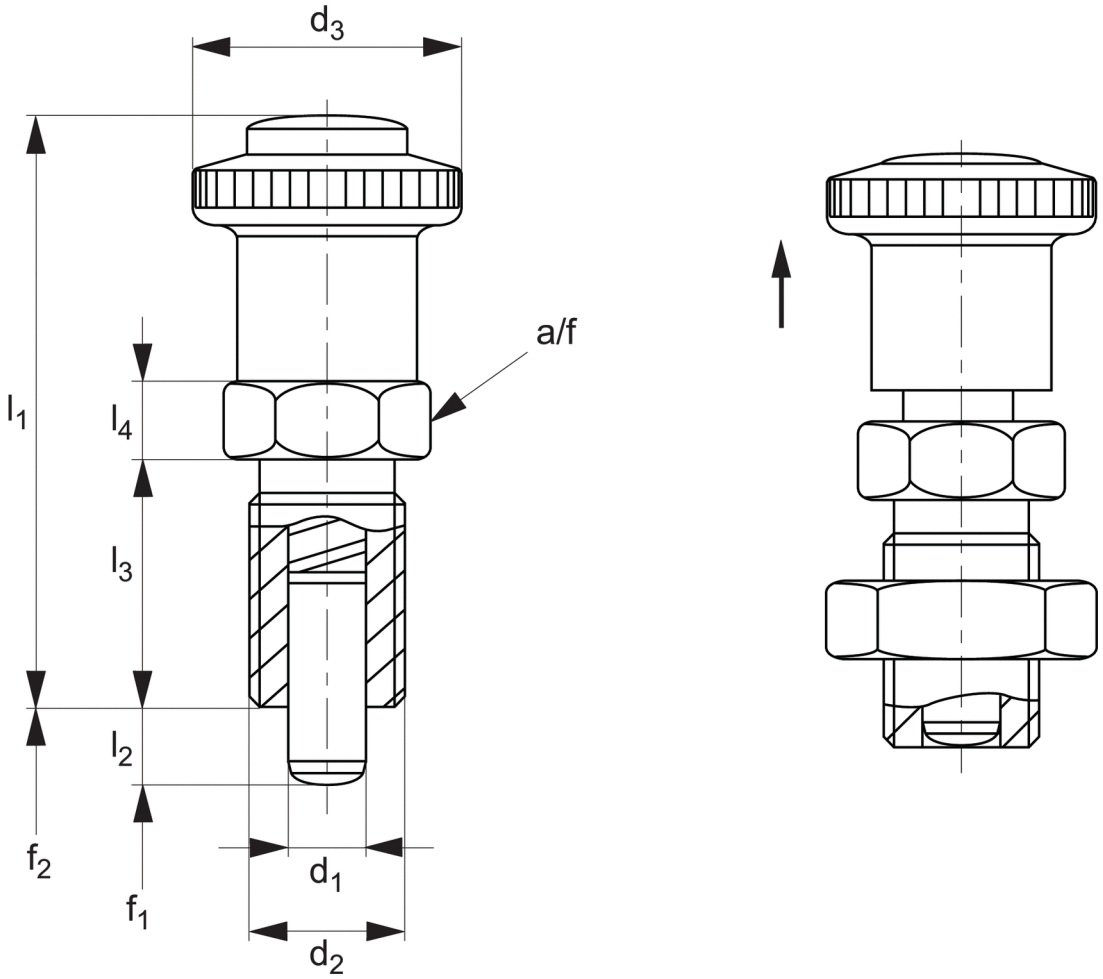
Order No.	Type	d_1 -0,02 -0,04	d_2	l_2 min.	d_3	l_1 ≈	l_3	l_4	A/F	Spring load F_1N ≈	Spring load F_2N ≈	g
32494.W0005	Steel	6	M12x1,5	6	28	56	22	6	19	6,5	19	44
32494.W0010	Steel	6	M12x1,5	9	28	56	22	6	19	6,0	25	45
32494.W0015	Steel	8	M16x1,5	8	28	62	26	8	19	8,5	26	70
32494.W0020	Steel	8	M16x1,5	12	28	62	26	8	19	8,5	28	72
32494.W0025	Steel	10	M16x1,5	12	28	62	26	8	19	9,5	38	74
32494.W0105	Stainless	6	M12x1,5	6	28	56	22	6	19	6,5	19	44
32494.W0110	Stainless	6	M12x1,5	9	28	56	22	6	19	6,0	25	45
32494.W0115	Stainless	8	M16x1,5	8	28	62	26	8	19	8,5	26	70
32494.W0120	Stainless	8	M16x1,5	12	28	62	26	8	19	8,5	28	72
32494.W0125	Stainless	10	M16x1,5	12	28	62	26	8	19	9,5	38	74

Index Plungers -Pull Grip

Rapid locking head

32495





Material

Body:
Steel: Steel,blackened.
Stainless: Stainless steel 1.4305.
Knob: thermoplastic,black-grey, matt.
Button: thermoplastic POM, red.
Locking pin. Steel: hardened.
Stainless: stainless steel 1.4305, nickel-plated.

Technical Notes

Pull knob up, red button flush = pin locked.
Press red button, red button out = pin unlocked.
Temperature range -30 to +80 °C.

Tips

Knob is non removable.
Lock nuts available separately.

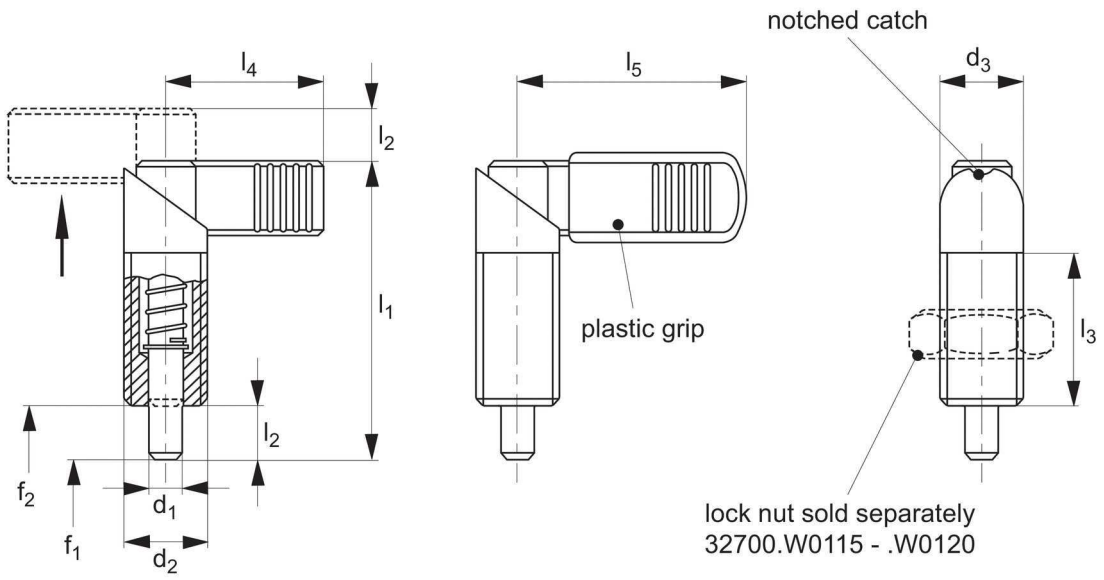
Used with:
32510 Mounting blocks.
32700 Lock nut .
32750 Distance collars.
32752 Locating bushes.
32753 Locating bushes.

Order No.	Type	d_1 -0.02 -0.04	d_2	l_2 min	d_3	l_1 ≈	l_3	l_4	a/f	Spring load F_1N ≈	Spring load F_2N ≈	g
32495.W0205	Steel	6	M12x1,5	6	30	53,5	22	6	19	6,5	19	47
32495.W0210	Steel	6	M12x1,5	9	30	53,5	22	6	19	6,0	25	48
32495.W0215	Steel	8	M16x1,5	8	30	59,5	26	8	19	8,5	26	74
32495.W0220	Steel	8	M16x1,5	12	30	59,5	26	8	19	8,5	28	77
32495.W0225	Steel	10	M16x1,5	12	30	59,5	26	8	19	9,5	38	78
32495.W0305	Stainless	6	M12x1,5	6	30	53,5	22	6	19	6,5	19	47
32495.W0310	Stainless	6	M12x1,5	9	30	53,5	22	6	19	6,0	25	48
32495.W0315	Stainless	8	M16x1,5	8	30	59,5	26	8	19	8,5	26	74
32495.W0320	Stainless	8	M16x1,5	12	30	59,5	26	8	19	8,5	28	77
32495.W0325	Stainless	10	M16x1,5	12	30	59,5	26	8	19	9,5	38	78

Index Plungers - Lever Grip

locking - steel

32500



without grip

with grip



Order No.	Type	d_1 -0,02 -0,04	d_2	d_3	l_1 ≈	l_2 min.	l_3 +1,5	l_4	l_5	Spring Load* f_1 ≈	Spring Load* f_2 ≈	g
32500.W0000	Without Grip	4	M10x1,0	10	37,5	6	19	21	-	8,5	25,0	17,0
32500.W0001	Without Grip	5	M10x1,0	10	37,5	6	19	21	-	8,5	25,0	18,0
32500.W0002	Without Grip	6	M10x1,0	10	37,5	6	19	21	-	8,5	25,0	18,0
32500.W0003	Without Grip	5	M12x1,5	12	47,0	8	26	26	-	8,5	19,5	29,0
32500.W0004	Without Grip	6	M12x1,5	12	47,0	8	26	26	-	8,5	19,5	29,0
32500.W0006	Without Grip	6	M16x1,5	16	56,0	10	30	32	-	11,5	30,5	59,0
32500.W0005	Without Grip	8	M12x1,5	12	47,0	8	26	26	-	8,5	19,5	30,0
32500.W0007	Without Grip	8	M16x1,5	16	56,0	10	30	32	-	11,5	30,5	61,0
32500.W0008	Without Grip	8	M20x1,5	20	69,0	12	36	37	-	21,0	57,5	121,0
32500.W0009	Without Grip	10	M16x1,5	16	56,0	10	30	32	-	11,5	30,5	64,0
32500.W0010	Without Grip	10	M20x1,5	20	69,0	12	36	37	-	21,0	57,5	123,0
32500.W0012	Without Grip	12	M20x1,5	20	69,0	12	36	37	-	21,0	57,5	127,0
32500.W0353	With Grip	5	M12x1,5	12	47,0	8	26	-	32	8,5	19,5	30,0
32500.W0354	With Grip	6	M12x1,5	12	47,0	8	26	-	32	8,5	19,5	30,0
32500.W0356	With Grip	6	M16x1,5	16	56,0	10	30	-	42	11,5	30,5	61,0
32500.W0355	With Grip	8	M12x1,5	12	47,0	8	26	-	32	8,5	19,5	32,0
32500.W0357	With Grip	8	M16x1,5	16	56,0	10	30	-	42	11,5	30,5	63,0
32500.W0358	With Grip	8	M20x1,5	20	69,0	12	36	-	52	21,0	57,5	124,0
32500.W0359	With Grip	10	M16x1,5	16	56,0	10	30	-	42	11,5	30,5	66,0
32500.W0360	With Grip	10	M20x1,5	20	69,0	12	36	-	52	21,0	57,5	128,0
32500.W0362	With Grip	12	M20x1,5	20	69,0	12	36	-	52	21,0	57,5	131,0
32700.W0115	Locknut	-	M10x1,0	-	-	-	-	-	-	-	-	5,2
32700.W0116	Locknut	-	M12x1,5	-	-	-	-	-	-	-	-	7,4
32700.W0118	Locknut	-	M16x1,5	-	-	-	-	-	-	-	-	18,0
32700.W0120	Locknut	-	M20x1,5	-	-	-	-	-	-	-		32,0

Material

Body: free-cutting steel, blackened.
Pin: hardened steel.
Plastic grip: thermoplastic, black, dull.

Technical Notes

Turn lever 180° to retract pin. To enable pin to be held in retracted position, secure lever in notched catch on plunger body.

Plastic grip type, improves handling. Temperature resistance of type with plastic grip is -30°C to +80°Ca

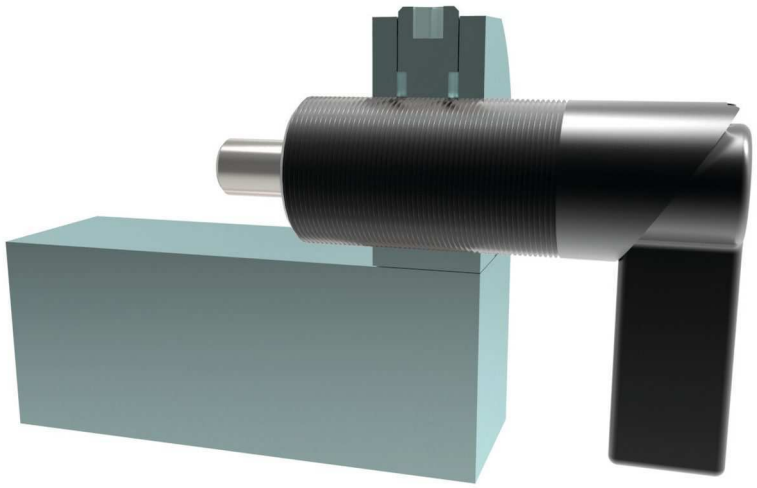
Tips

Spring loads * = statistical average.

Index Plungers - Lever Grip

locking - steel

32500







Material

Body: free-cutting steel, blackened.
Pin: hardened steel.
Plastic grip: thermoplastic, black, dull.

Technical Notes

Turn lever 180° to retract pin. To enable pin to be held in retracted position, secure lever in notched catch on plunger body.

Plastic grip type, improves handling. Temperature resistance of type with plastic grip is -30°C to +80°Ca

Tips

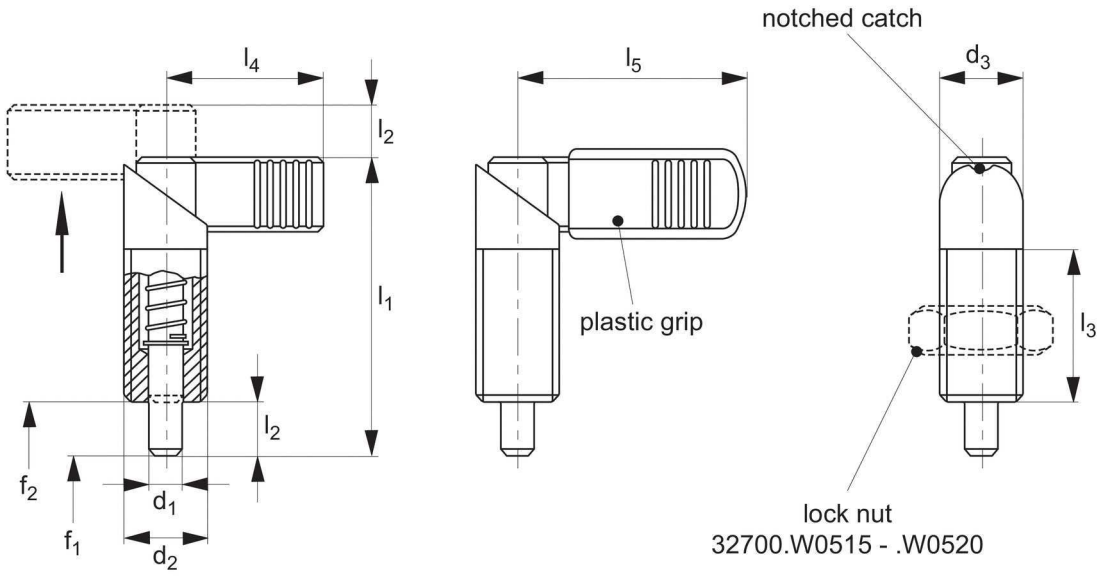
Spring loads * = statistical average.

Index Plungers - Lever Grip

locking - stainless



32501



without grip

with grip





Order No.	Type	d_1 -0,02 -0,04	d_2	d_3	l_1 ≈	l_2 min.	l_3 +1,5	l_4	l_5	Spring load* f_1 ≈	Spring load* f_2 ≈	g
32501.W0308	Without Grip	4	M10x1,0	10	37,5	6	19	21	-	8,5	25,0	17
32501.W0310	Without Grip	5	M10x1,0	10	37,5	6	19	21	-	8,5	25,0	18
32501.W0312	Without Grip	6	M10x1,0	10	37,5	6	19	21	-	8,5	25,0	18
32501.W0323	Without Grip	5	M12x1,5	12	47	8	26	26	-	8,5	19,5	29,0
32501.W0324	Without Grip	6	M12x1,5	12	47	8	26	26	-	8,5	19,5	29,0
32501.W0326	Without Grip	6	M16x1,5	16	56	10	30	32	-	11,5	30,5	59,0
32501.W0325	Without Grip	8	M12x1,5	12	47	8	26	26	-	8,5	19,5	30,0
32501.W0327	Without Grip	8	M16x1,5	16	56	10	30	32	-	11,5	30,5	61,0
32501.W0328	Without Grip	8	M20x1,5	20	69	12	36	37	-	21,0	57,5	121,0
32501.W0329	Without Grip	10	M16x1,5	16	56	10	30	32	-	11,5	30,5	64,0
32501.W0330	Without Grip	10	M20x1,5	20	69	12	36	37	-	21,0	57,5	123,0
32501.W0332	Without Grip	12	M20x1,5	20	69	12	36	37	-	21,0	57,5	127,0
32501.W0363	With Grip	5	M12x1,5	12	47	8	26	-	32	8,5	19,5	30,0
32501.W0364	With Grip	6	M12x1,5	12	47	8	26	-	32	8,5	19,5	30,0
32501.W0366	With Grip	6	M16x1,5	16	56	10	30	-	42	11,5	30,5	61,0
32501.W0365	With Grip	8	M12x1,5	12	47	8	26	-	32	8,5	19,5	32,0
32501.W0367	With Grip	8	M16x1,5	16	56	10	30	-	42	11,5	30,5	63,0
32501.W0368	With Grip	8	M20x1,5	20	69	12	36	-	52	21,0	57,5	124,0
32501.W0369	With Grip	10	M16x1,5	16	56	10	30	-	42	11,5	30,5	66,0
32501.W0370	With Grip	10	M20x1,5	20	69	12	36	-	52	21,0	57,5	128,0
32501.W0372	With Grip	12	M20x1,5	20	69	12	36	-	52	21,0	57,5	131,0
32700.W0515	Locknut	-	M10x1,0	-	-	-	-	-	-	-	-	5,2
32700.W0516	Locknut	-	M12x1,5	-	-	-	-	-	-	-	-	7,4
32700.W0518	Locknut	-	M16x1,5	-	-	-	-	-	-	-	-	18,0
32700.W0520	Locknut	-	M20x1,5	-	-	-	-	-	-	-		32,0

Material

Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel 1.4305 (AISI 303).
Plastic Grip: thermoplastic, black, dull.

Technical Notes

Turn lever 180° to retract pin. To enable pin to be held in retracted position, secure lever in notched catch on plunger body.

Plastic grip type, improves handling. Temperature resistance of type with plastic grip is -30°C to +80°C

Tips

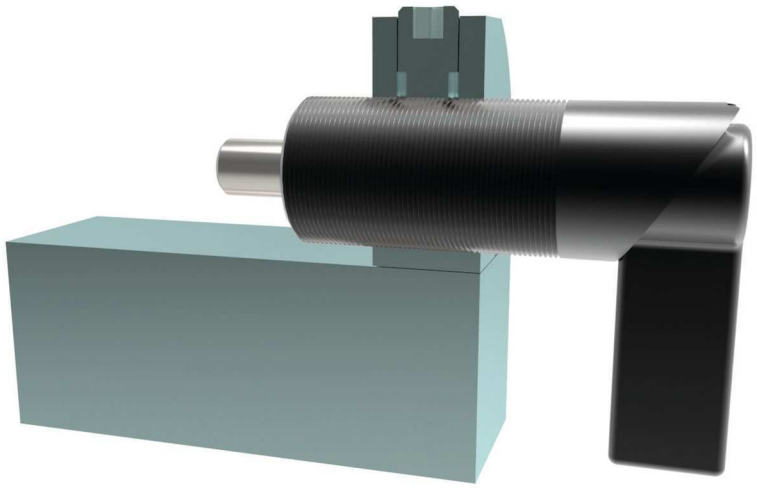
Spring loads * = statistical average.

STAINLESS STEEL 303

Index Plungers - Lever Grip

locking - stainless

32501







Material

Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel 1.4305 (AISI 303).
Plastic Grip: thermoplastic, black, dull.

Technical Notes

Turn lever 180° to retract pin. To enable pin to be held in retracted position, secure lever in notched catch on plunger body.

Plastic grip type, improves handling. Temperature resistance of type with plastic grip is -30°C to +80°C

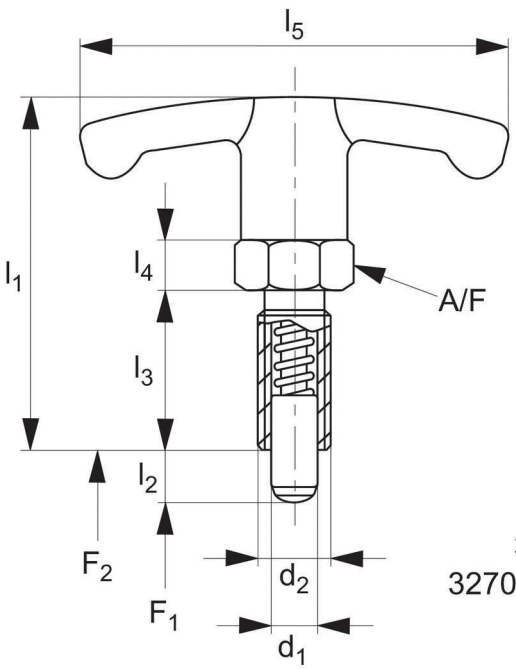
Tips

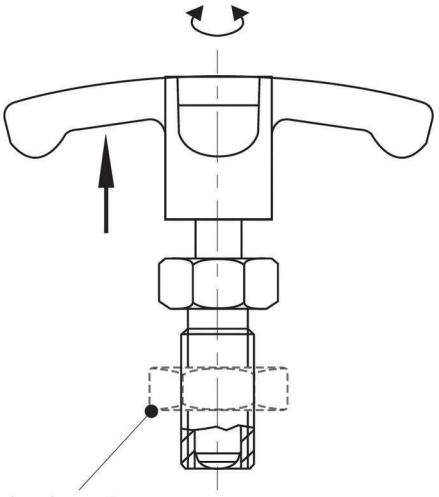
Spring loads * = statistical average.

Index Plungers - T-handle Grip

compact - non locking

32502





lock nut
32700.W0116 - .W0120 (steel)
32700.W0516 - .W0520 (stainless steel)





Order No.	Type	Material	d_1 -0,02 -0,04	l_2	d_2	l_1	l_3	l_4	l_5	A/F	Spring load F_1 N≈*	g
32502.W0820	Non Locking	Steel	6	6	M12x1,5	48	22	6	54	14	6,5	31,0
32502.W0822	Non Locking	Steel	6	9	M12x1,5	48	22	6	54	14	6,0	32,0
32502.W0824	Non Locking	Steel	8	8	M16x1,5	59	26	8	59	17	8,5	64,0
32502.W0826	Non Locking	Steel	8	12	M16x1,5	59	26	8	59	17	8,5	65,0
32502.W0828	Non Locking	Steel	10	12	M16x1,5	59	26	8	59	17	9,5	66,0
32502.W0830	Non Locking	Steel	12	15	M20x1,5	68	33	10	59	22	11,5	120,0
32700.W0116	Lock Nuts	Steel	-	-	M12x1,5	-	-	-	-	-	-	7,4
32700.W0118	Lock Nuts	Steel	-	-	M16x1,5	-	-	-	-	-	-	18,0
32700.W0120	Lock Nuts	Steel	-	-	M20x1,5	-	-	-	-	-	-	32,0
32502.W0920	Non Locking	Stainless steel	6	6	M12x1,5	48	22	6	54	14	6,5	31,0
32502.W0922	Non Locking	Stainless steel	6	9	M12x1,5	48	22	6	54	14	6,0	32,0
32502.W0924	Non Locking	Stainless steel	8	8	M16x1,5	59	26	8	59	17	8,5	64,0
32502.W0926	Non Locking	Stainless steel	8	12	M16x1,5	59	26	8	59	17	8,5	65,0
32502.W0928	Non Locking	Stainless steel	10	12	M16x1,5	59	26	8	59	17	9,5	66,0
32502.W0930	Non Locking	Stainless steel	12	15	M20x1,5	68	33	10	59	22	11,5	120,0
32700.W0516	Lock Nuts	Stainless steel	-	-	M12x1,5	-	-	-	-	-	-	7,4
32700.W0518	Lock Nuts	Stainless steel	-	-	M16x1,5	-	-	-	-	-	-	18,0
32700.W0520	Lock Nuts	Stainless steel	-	-	M20x1,5	-	-	-	-	-	-	32,0

Material

Free cutting Steel Type-
Body: Free cutting steel, blackened.
Pin: Steel, hardened.
Grip: Thermoplastic PA6, black, dull.
Stainless Steel Type-
Body: Stainless steel 1.4305 (AISI 303).
Pin: Stainless steel 1.4305 (AISI 303), nickel plated.
Grip: Thermosplastic PA6, black, dull.

Technical Notes

T-handle grip makes for improved handling, especially when operator is using safety gloves etc.

Thread recess on body allows full engagement of thread length.
Hexagon collar improves leverage for secure installation.

"Non Locking" type- pin simply springs back when grip released.

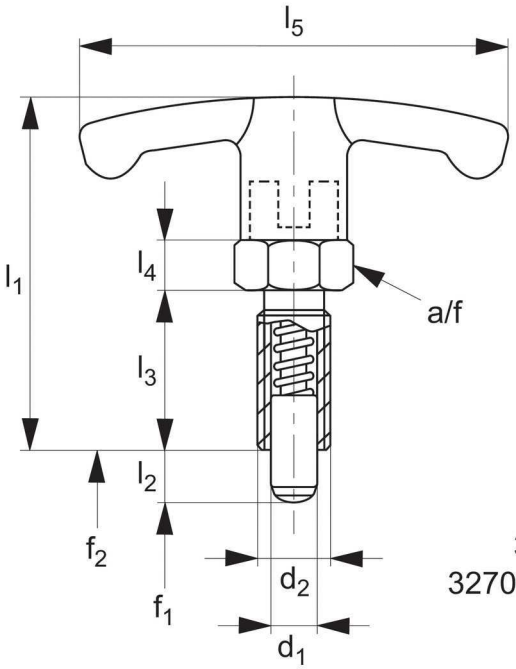
Tips

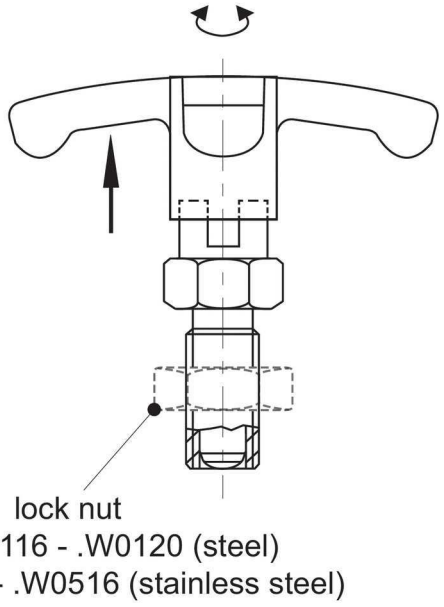
Distance collars no. 32750 can be used to adapt screw length.
Grip non-removable.
Spring loads* = statistical average.

Index Plungers - T-handle Grip

compact - locking

32504







Order No. Steel	Order No. Stainless Steel	Type	d_1	d_2	l_1	l_3	l_4	l_5	a/f	l_2	Spring load f_1 N≈*	Spring load f_2 N≈*	g
32504.W0832	32504.W0932	Locking	6	M12x1,5	48	22	6	54	14	6	6,5	19	33,0
32504.W0834	32504.W0934	Locking	6	M12x1,5	48	22	6	54	14	9	6,0	25	34,0
32504.W0836	32504.W0936	Locking	8	M16x1,5	59	26	8	59	17	8	8,5	26	68,0
32504.W0838	32504.W0938	Locking	8	M16x1,5	59	26	8	59	17	12	8,5	28	71,0
32504.W0840	32504.W0940	Locking	10	M16x1,5	59	26	8	59	17	12	9,5	38	72,0
32504.W0842	32504.W0942	Locking	12	M20x1,5	68	33	10	59	22	15	11,5	40	127,0
32700.W0116	32700.W0516	Locknuts	-	M12x1,5	-	-	-	-	-	-	-	-	7,4
32700.W0118	32700.W0518	Locknuts	-	M16x1,5	-	-	-	-	-	-	-	-	18,0
32700.W0120	32700.W0520	Locknuts	-	M20x1,5	-	-	-	-	-	-	-	-	32,0

Material

Free cutting Steel Type-
Body: free cutting steel, blackened.
Pin: steel, hardened.
Grip: thermplastic PA6, black, dull.
Stainless Steel Type-
Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel 1.4305 (AISI 303), nickel plated.
Grip: thermosplastic PA6, black, dull.

Technical Notes

T-handle grip makes for improved handling, especialy when operator is using safety gloves etc.

Thread recess on body allows full engagement of thread length.
Hexagon collar improves leverage for secure installation.

"Locking" type- enable pin to be held in retracted/non-projecting position; pull back grip, turn 90° to engage 'locking' on a notched catch.

Tips

Distance collars no. 32750 can be used to adapt screw length.
Grip non-removable.
Spring loads* = statistical average.

Mounting Blocks

for index plungers - fine thread



32510

Order No. Steel	Order No. Stainless	Type	d_1	d_2	d_3	d_4	k ± 0,1	l_1	l_2 ≈	l_3	s	g
32510.W0345	32510.W0545	Parallel	M12x1,5	32	M 5	4,5	21	22	26,5	9	12	43
32510.W0346	32510.W0546	Parallel	M16x1,5	46	M 8	5,5	32	33	38,0	13	15	122
32510.W0350	32510.W0550	Parallel	M20x1,5	46	M 8	5,5	32	33	37,0	13	15	109
32510.W0347	32510.W0547	Vertical	M12x1,5	32	M 5	4,5	21	22	26,5	9	12	37
32510.W0348	32510.W0548	Vertical	M16x1,5	46	M 8	5,5	32	33	38,0	13	15	106
32510.W0352	32510.W0552	Vertical	M20x1,5	46	M 8	5,5	32	33	38,0	13	15	94









Material

Steel type-
Body: Steel, blackened.
Grub Screw: M8 with brass tip.
Stainless steel type-
Body: Stainless steel 1.4305 (AISI 303).

Technical Notes

Mounting blocks provide assembly support for mounting of index plungers. **(Not suitable for index plungers with coarse thread)**.

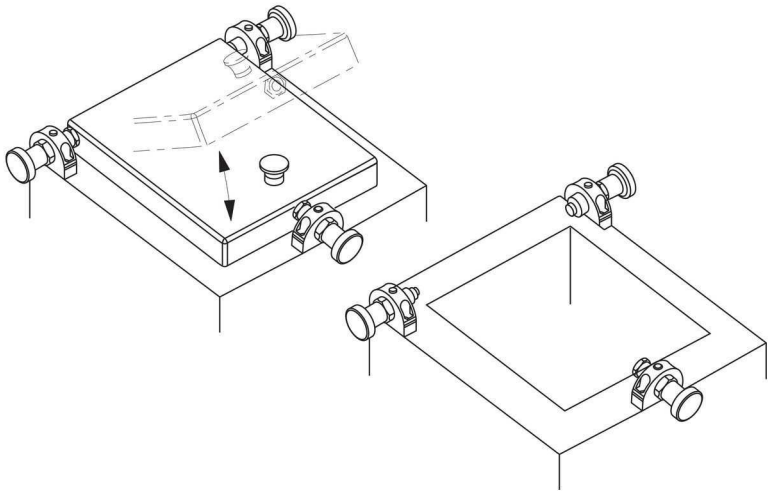


Mounting Blocks

for index plungers - fine thread

32512

Order No.	Type	d_1	d_2	d_3	k	l_1	l_2	l_3 - 0,2	l_4	g
32512.W0408	Vertical	M 8x1,0	4,3	M 4	25	35	26	11,5	14	39
32512.W0410	Vertical	M10x1,0	4,3	M 4	25	35	26	11,5	14	36
32512.W0412	Vertical	M12x1,5	4,3	M 4	25	35	26	11,5	14	41
32512.W0416	Vertical	M16x1,5	5,3	M 5	35	47	34	15,5	18	77
32512.W0420	Vertical	M20x1,5	5,3	M 5	35	47	34	15,5	18	68





Material

Body: die-cast zinc, black plastic coated.
Grub screw: M8 with brass tip.

Technical Notes

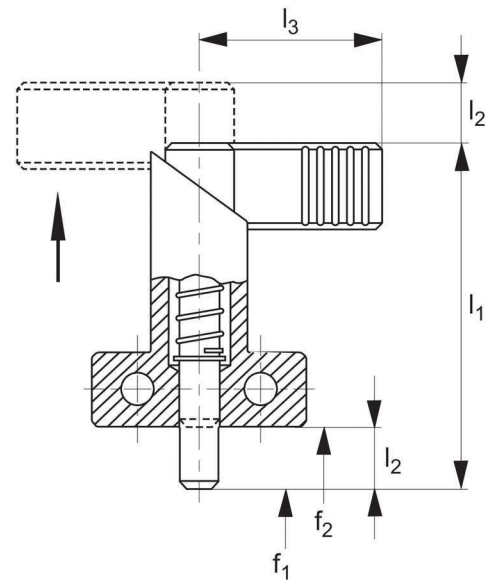
Mounting blocks provide assembly support for mounting of index plungers. **(Not suitable for index plungers with coarse thread)**.

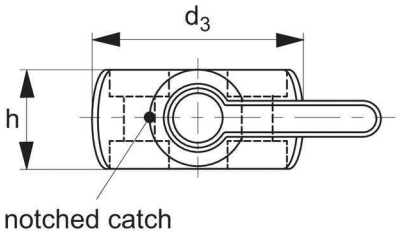
Index plunger must be assembled in hole d_1 on countersunk side.

Index Plungers - Lever Grip

flange mounting - locking

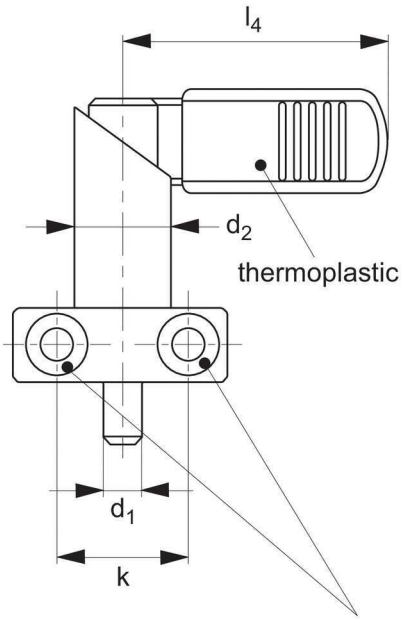
32520





notched catch

without grip



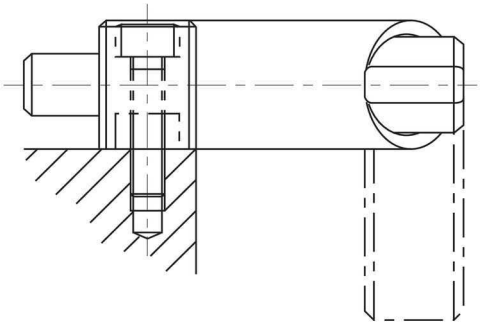
counterbored on both sides for DIN 912 cap screw M5

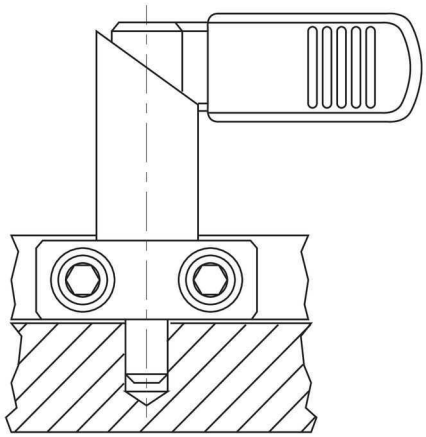
with grip





Order No.	Type	d_1 0 -0,05	l_2	d_2	d_3	h	k	l_1	l_3	l_4	s	Spring load* f_1 N≈	Spring load* f_2 N≈	g
32520.W0376	Without Grip	6	10	16	35	16	20	56	32	-	12	12	32	82
32520.W0378	Without Grip	8	10	16	35	16	20	56	32	-	12	12	32	85
32520.W0379	Without Grip	8	12	20	40	20	22	69	37	-	15	21	58	163
32520.W0381	Without Grip	10	10	16	35	16	20	56	32	-	12	12	32	85
32520.W0382	Without Grip	10	12	20	40	20	22	69	37	-	15	21	58	167
32520.W0384	Without Grip	12	12	20	40	20	22	69	37	-	15	21	58	168
32520.W0386	With Grip	6	10	16	35	16	20	56	-	42	12	12	32	83
32520.W0388	With Grip	8	10	16	35	16	20	56	-	42	12	12	32	85
32520.W0389	With Grip	8	12	20	40	20	22	69	-	52	15	21	58	169
32520.W0391	With Grip	10	10	16	35	16	20	56	-	42	12	12	32	86
32520.W0392	With Grip	10	12	20	40	20	22	69	-	52	15	21	58	171
32520.W0394	With Grip	12	12	20	40	20	22	69	-	52	15	21	58	171





Material

Body & Lever: free cutting steel, blackened.
Pin: steel, nitrided, black.
Plastic Grip: thermoplastic, black, dull.

Technical Notes

Turn lever 180° to retract pin. To enable pin to be held in retracted position, secure lever in notched catch on plunger body.
Countersunk holes on both sides of mounting flange enable both right or left mounting.
Plastic grip type, improves handling. Temperature resistance of type with plastic grip is -30°C to +80°C.

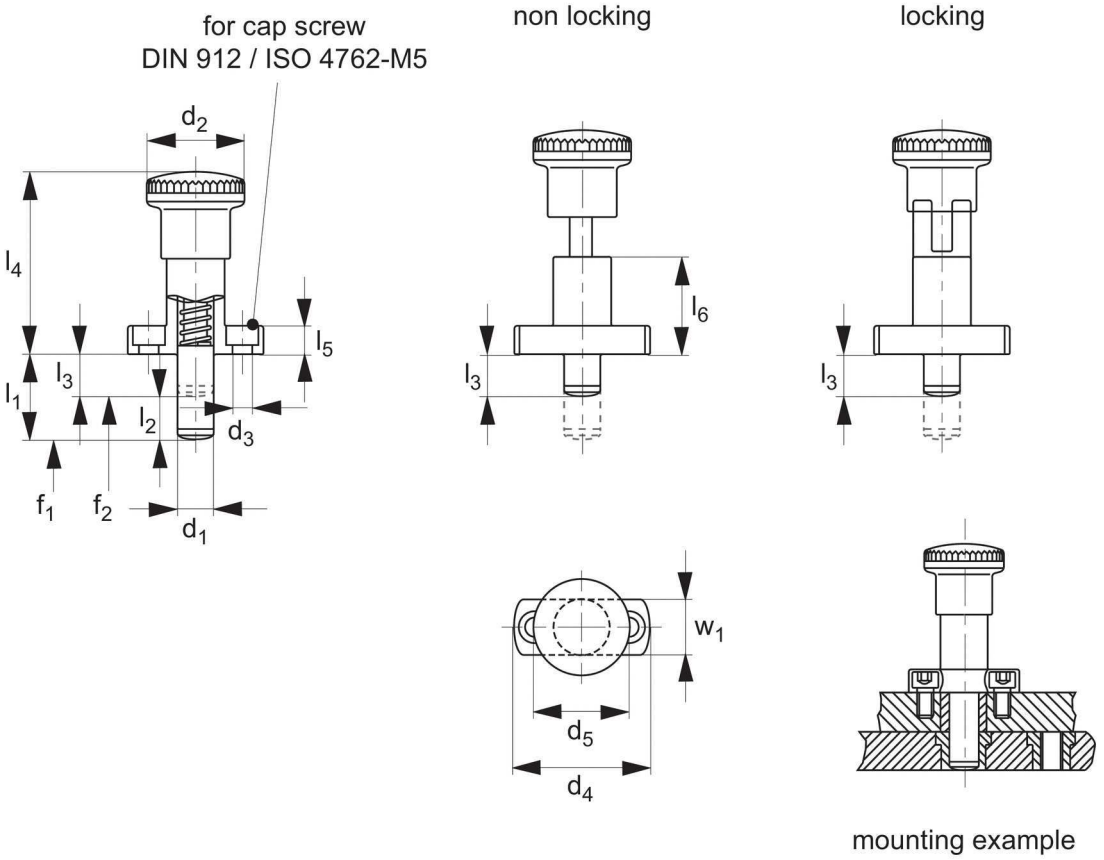
Tips

Spring loads * = statistical average.

Index Plungers - Pull Grip

flange mounting - extended pin

32530





Order No.	Type	l_1	Stroke l_2	l_3	l_4	l_5	l_6	w_1	d_1 tol. h7	d_2	d_3	d_4	d_5	Spring load $*f_1$ N ≈	Spring load $*f_2$ N ≈	g
32530.W0081	Non Locking	20	10	10	51	8	27	16	8	28	5,5	38	26	8,5	28	74
32530.W0083	Non Locking	26	10	16	51	8	27	16	8	28	5,5	38	26	8,5	28	77
32530.W0101	Non Locking	24	12	12	51	8	27	16	10	28	5,5	38	26	9,5	38	77
32530.W0102	Non Locking	24	12	12	51	8	27	16	10	28	5,5	38	26	9,5	38	77
32530.W0104	Non Locking	32	12	20	51	8	27	16	10	28	5,5	38	26	9,5	38	80
32530.W0281	Locking	20	10	10	51	8	27	16	8	28	5,5	38	26	8,5	28	80
32530.W0282	Locking	22	10	12	51	8	27	16	8	28	5,5	38	26	8,5	28	80
32530.W0283	Locking	26	10	16	51	8	27	16	8	28	5,5	38	26	8,5	28	83
32530.W0202	Locking	24	12	12	51	8	27	16	10	28	5,5	38	26	9,5	38	83
32530.W0204	Locking	32	12	20	51	8	27	16	10	28	5,5	38	26	9,5	38	100

Material

Body: steel, blackened.
Pin: steel, hardened and ground.
Grip: thermoplastic PA6, black.

Technical Notes

"Locking" type- enable pin to be held in retracted position; pull back grip, turn 90° to engage 'locking' on a notched catch.
"Non Locking" type- pin simply springs back when grip is released.
Due to extended length pin does not fully retreat into plunger body when grip activated - note dimension l_3 for length pin remains exposed.
Extended pin assists locating and indexing of components. Due to its extended length the pin does not fully retract flush to the plunber body - please note dimensions l_1 for extended pin length and l_3 for retracted pin length. Pin is toleranced to h7 for improved location accuracy. Accuracy dependant upon suitable tolerance of bush, we suggest H7, with min. pin engagement to dim. l_3.

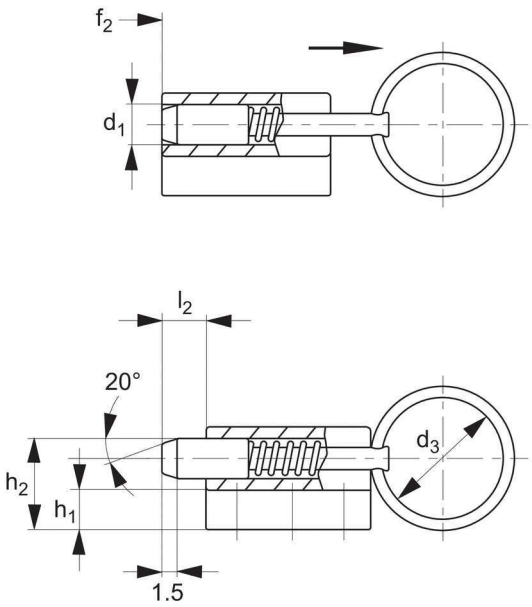
Tips

Grip non-removable.
Spring Loads* = statistical average.

Index Plungers - Pull Grip & Pull Ring

flange mounting - non-locking

32540





Material

Body: die cast zinc, black.
Pin: stainless steel 1.4305 (AISI 303).
Pull ring: stainless steel 1.4305 (AISI 303).

Technical Notes

"Non Locking" type- pin simply srings back when pull ring relased.

Integral mounting flange simplifies installation on flat surfaces.
Temperature resistant to 100°C.

Tips

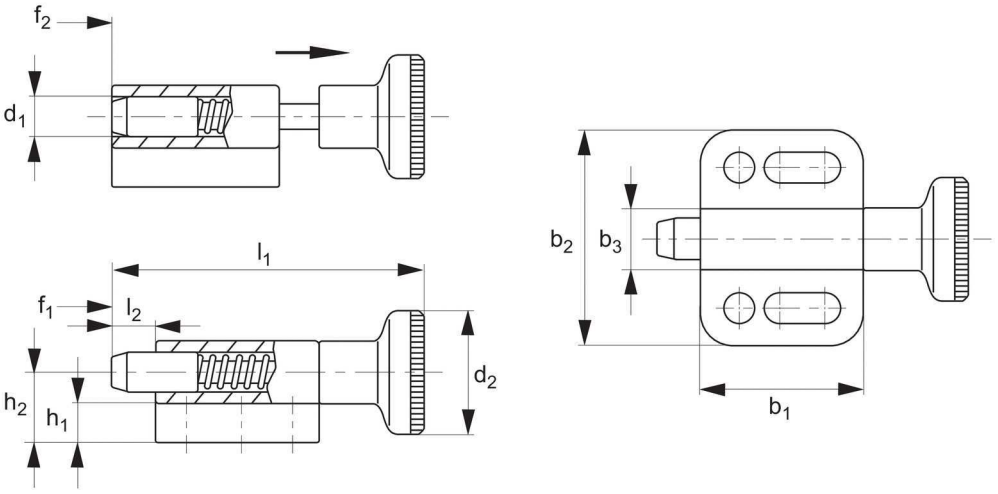
Spring loads * = statistical average.

Order No.	Type	d_1 h9	d_3	b_1	b_2	b_3	b_4 -0,2	h_1	h_2	k_1 ±0,05	k_2	k_3	k_4	l_1	l_2 min.	Spring load* f_1 N ≈	Spring load* f_2 N ≈	g
32540.W0304	Non Locking	4	14	16,5	22	6	3,3	4,0	7,0	14	4,0	8	4,5	34,5	4	3	12	10
32540.W0305	Non Locking	5	18	22,0	28	8	4,3	4,5	9,5	18	5,0	10	7,0	45,0	5	5	24	20
32540.W0306	Non Locking	6	24	27,5	32	10	5,4	5,0	10,5	21	5,5	12	10,0	57,5	6	5	21	40
32540.W0308	Non Locking	8	30	33,0	34	12	5,4	6,0	12,5	23	5,5	12	15,5	71,0	8	6	22	58
32540.W0310	Non Locking	10	30	35,0	39	14,5	6,5	6,0	14,5	27	6,0	15	13,5	75,0	10	4	25	83

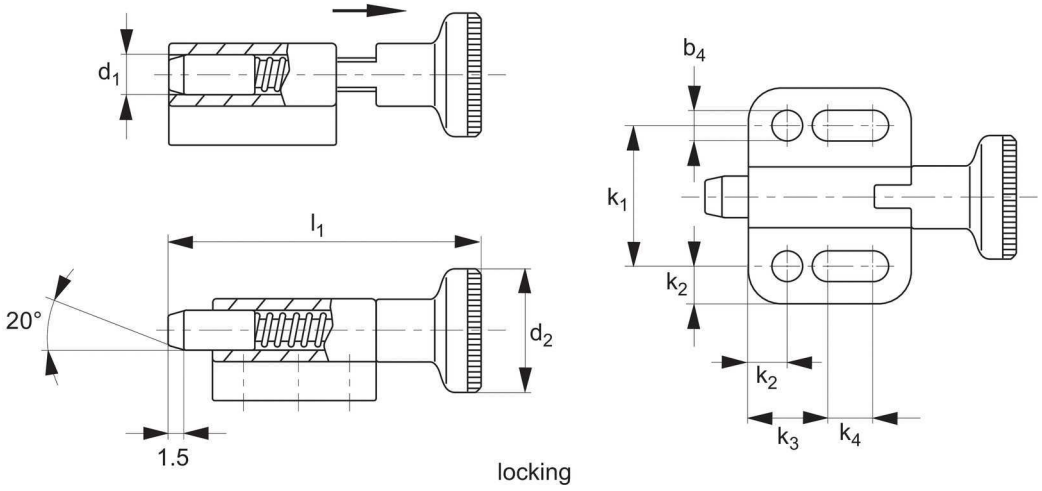
Index Plungers - Pull Grip

flange mounting - locking

32542



non locking



locking



Material

Body: die cast zinc, black.
Pin: stainless steel 1.4305 (AIAI 303).
Grip: thermoplastic PA6, black.

Technical Notes

"Locking" type- enable pin to be held in retracted/non-projecting position; pull back grip, turn 90° to engage 'locking' on a notched catch.
"Non Locking" type- pin simply springs back when grip released.

Integral mounting flange simplifies installation of index plunger on horizontal surfaces.
Temperature resistance from -30°C up to +80°C.

Tips

Grip non-removable.
Spring loads * = statistical average.

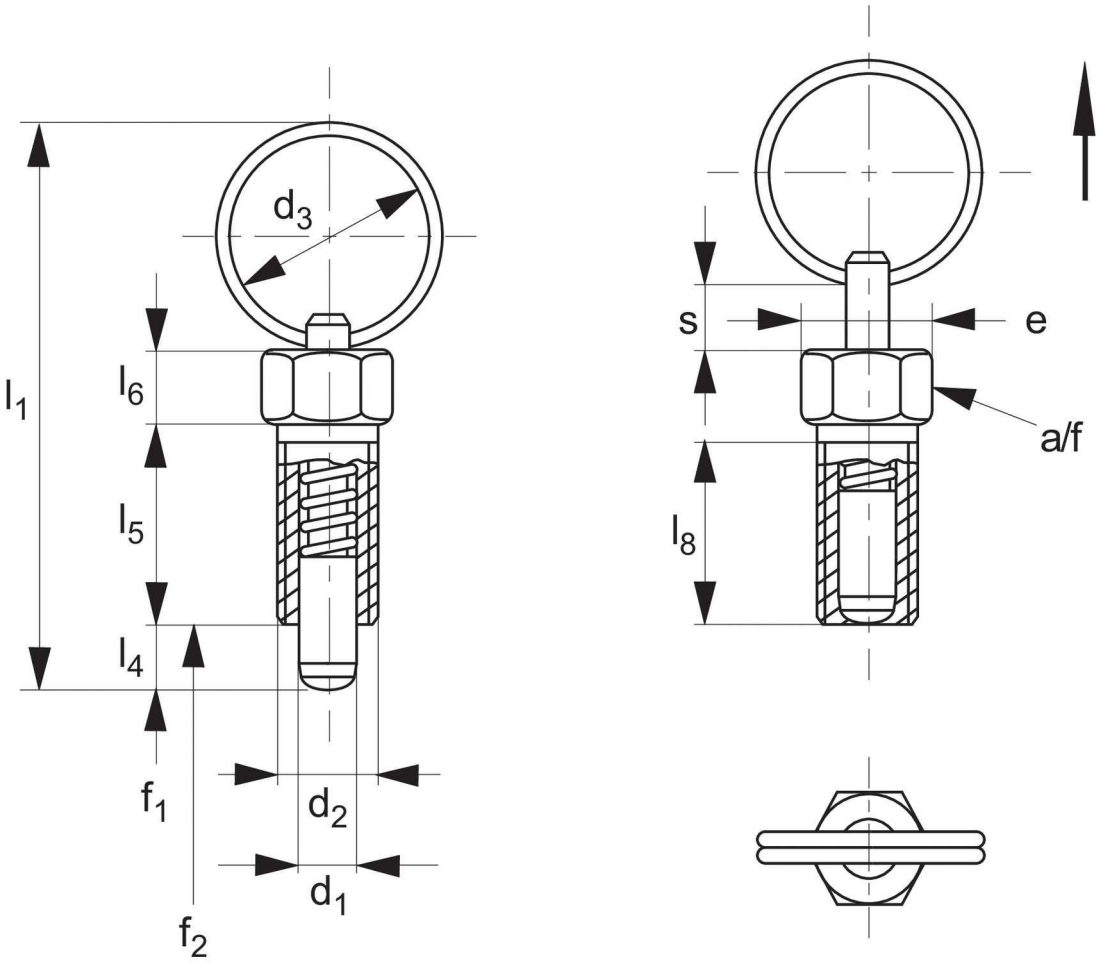


Order No.	Type	d_1 h9	d_2	b_1	b_2	b_3	b_4 -0,2	h_1	h_2	k_1 ±0,05	k_2	k_3	k_4	l_1	l_2 min.	Spring load* f_1 N ≈	Spring load* f_2 N ≈	g
32542.W0324	Non Locking	4	12	16,5	22	6	3,3	4,0	7,0	14	4,0	8	4,5	30,5	4	3	12	11
32542.W0325	Non Locking	5	16	22,0	28	8	4,3	4,5	9,5	18	5,0	10	7,0	40,0	5	5	24	20
32542.W0326	Non Locking	6	18	27,5	32	10	5,4	5,0	10,5	21	5,5	12	10,0	49,0	6	5	21	37
32542.W0328	Non Locking	8	21	33,0	34	12	5,4	6,0	12,5	23	5,5	12	15,5	59,0	8	6	22	61
32542.W0330	Non Locking	10	25	35,0	39	14,5	6,5	6,0	14,5	27	6,0	15	13,5	67,5	10	4	25	90
32542.W0344	Locking	4	12	19,0	22	6	3,3	4,0	7,0	14	4,0	8	7,0	33,0	4	3	12	10
32542.W0345	Locking	5	16	25,5	28	8	4,3	4,5	9,5	18	5,0	10	10,5	43,5	5	5	24	26
32542.W0346	Locking	6	18	30,5	32	10	5,4	5,0	10,5	21	5,5	12	13,0	52,0	6	5	21	40
32542.W0348	Locking	8	21	37,5	34	12	5,4	6,0	12,5	23	5,5	12	20,0	63,5	8	6	22	67
32542.W0350	Locking	10	25	40,0	39	14,5	27	6,0	14,5	27	6,0	15	18,5	72,5	10	4	25	98

Index Plungers - Pull Ring

non-locking - coarse thread

32550





Material

Body: free cutting steel, galvanized.
Pin: stainless steel 1.4305 (AISI 303).
Pull Ring: stainless steel 1.4310 (AISI 301).

Technical Notes

For applications where high precision is not required.
Coarse thread.
Temperature resistance up to 250ºC

Tips

Spring loads * = statistical average

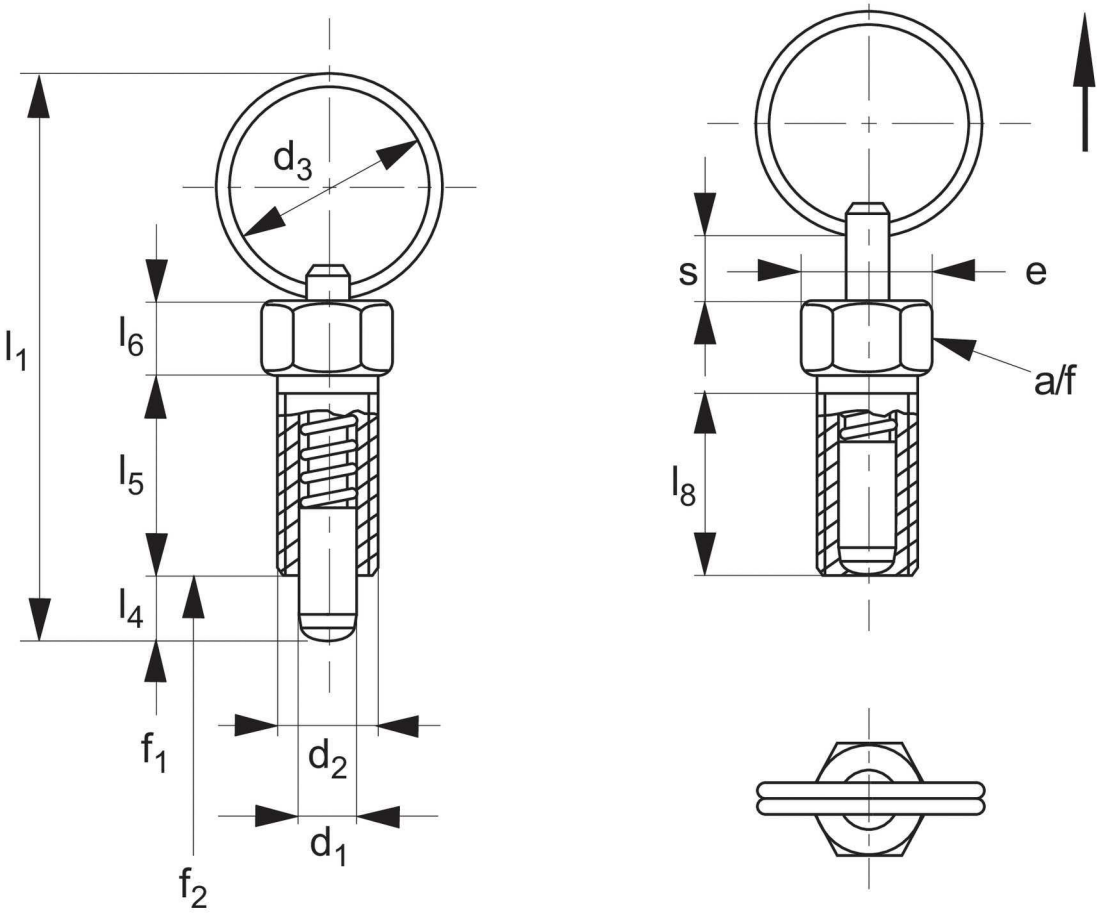
Order No.	Type	d_1 h9	d_2	d_3	e	l_1	l_4=s min	l_5	l_6	l_8	a/f	Spring load* f_1 N	Spring load* f_2 N	Tightening torque max. Nm	g
32550.W0723	Non Locking	3	M 6x1,00	14	6,9	34,0	3,5	12	4,5	10,0	6	3	12	2	3,2
32550.W0724	Non Locking	4	M 6x1,00	14	6,9	34,5	4	12	4,5	10,0	6	3	12	2	3,6
32550.W0725	Non Locking	5	M 8x1,25	18	9,2	45,0	5	15	6,0	13,5	8	5	24	7	8,4
32550.W0726	Non Locking	6	M10x1,50	24	11,5	57,5	6	20	7,5	17,0	10	5	21	15	17,0
32550.W0728	Non Locking	8	M12x1,75	30	13,8	71,0	8	24	9,0	20,5	12	6	22	20	31,0
32550.W0704	Locknut	-	M 6x1,00	-	-	-	-	-	-	-	-	-	-	-	1,3
32550.W0705	Locknut	-	M 8x1,25	-	-	-	-	-	-	-	-	-	-	-	2,8
32550.W0706	Locknut	-	M10x1,5	-	-	-	-	-	-	-	-	-	-	-	5,3
32550.W0708	Locknut	-	M12x1,75	-	-	-	-	-	-	-	-	-	-	-	7,6



Index Plungers - Pull Ring

non-locking - coarse thread - stainless steel

32551





Material

Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel 1.4305 (AISI 303).
Pull ring: stainless steel 1.4310 (AISI 301).

Technical Notes

For applications where high precision is not required.
Coarse thread.
Temperature resistance up to 250°C

Tips

Spring loads * = statistical average.

Order No.	Type	d_1 h9	d_2	d_3	e	l_1	l_4=s min	l_5	l_6	l_8	a/f	Spring load* f_1 N	Spring load* f_2 N	Tightening torque max. Nm	g
32551.W0773	Non Locking	3	M 6x1,00	14	6,9	34,0	3,5	12	4,5	10,0	6	3	12	2	3,2
32551.W0774	Non Locking	4	M 6x1,00	14	6,9	34,5	4	12	4,5	10,0	6	3	12	2	3,6
32551.W0775	Non Locking	5	M 8x1,25	18	92	45,0	5	15	6,0	13,5	8	5	24	7	8,4
32551.W0776	Non Locking	6	M10x1,50	24	11,5	57,5	6	20	7,5	17,0	10	5	21	15	17,0
32551.W0778	Non Locking	8	M12x1,75	30	13,8	71,0	8	24	9,0	20,5	12	6	22	30	31,0
32550.W0714	Lock Nut	-	M 6x1,00	-	-	-	-	-	-	-	-	-	-	-	1,3
32550.W0715	Lock Nut	-	M 8x1,25	-	-	-	-	-	-	-	-	-	-	-	2,8
32550.W0716	Lock Nut	-	M10x1,50	-	-	-	-	-	-	-	-	-	-	-	5,3
32550.W0718	Lock Nut	-	M12x1,75	-	-	-	-	-	-	-	-	-	-	-	7,6

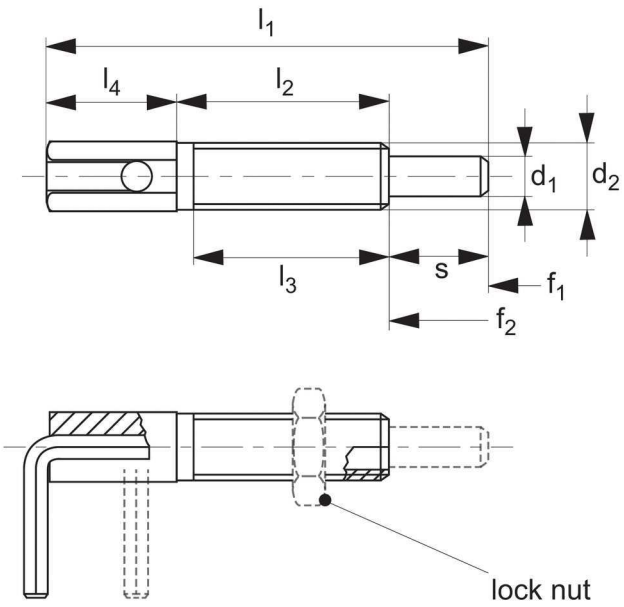


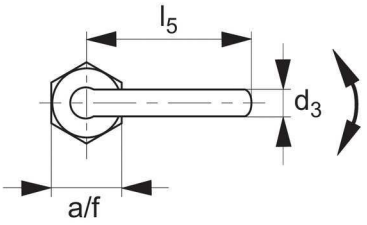
Index Plungers - Lever Grip

locking - coarse thread



32555







Order No.	Type	d_1	d_2	d_3	l_1	l_2	l_3	l_4	l_5	s	a/f	Spring load f_1 N≈*	g
32555.W0105	Locking	4	M 6x1,00	2,3	41,5	20,0	17,0	12,0	15,5	9,5	6	3,0	6
32555.W0110	Locking	5	M 8x1,25	3,0	54,0	27,0	24,0	15,0	19,2	12,0	8	3,5	14
32555.W0115	Locking	6	M10x1,50	3,5	65,0	33,5	30,0	17,5	22,9	14,0	10	4,0	26
32555.W0120	Locking	8	M12x1,75	4,7	73,0	31,8	28,0	22,2	31,2	19,0	12	4,0	55
32555.W0125	Locking	10	M16x2,00	4,7	102,5	50,5	44,5	27,0	32,7	25,0	16	4,0	103
32550.W0704	Lock Nut	-	M 6x1,00	-	-	-	-	-	-	-	-	-	1,3
32550.W0705	Lock Nut	-	M 8x1,00	-	-	-	-	-	-	-	-	-	2,8
32550.W0706	Lock Nut	-	M10x1,50	-	-	-	-	-	-	-	-	-	5,3
32550.W0708	Lock Nut	-	M12x1,75	-	-	-	-	-	-	-	-	-	7,6
32550.W0710	Lock Nut	-	M16x2,00	-	-	-	-	-	-	-	-	-	18,0

Material

Body: free cutting steel, zinc plated.
Pin: steel, galvanised.
Lever: steel, galvanised.

Technical Notes

Pull back and turn lever 180° to retract pin. To enable pin to be held in retracted position, secure lever in notched catch on plunger body.
For applications where high precision is not requried.
Coarse thread.
Temperature resistance up to 250°C

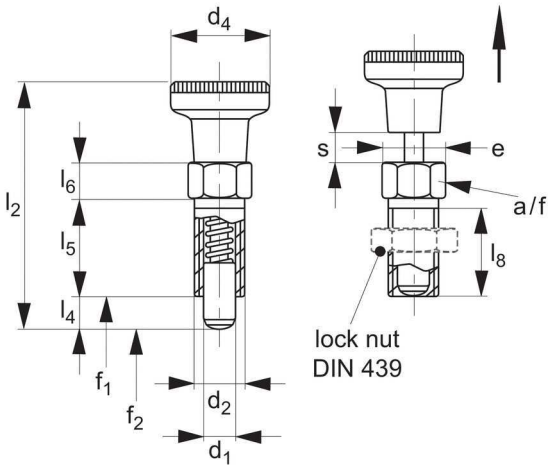
Tips

Spring loads* = statistical average.

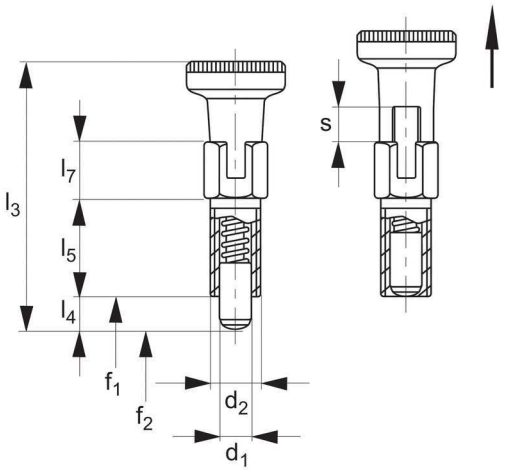
Index Plungers - Pull Grip

steel - coarse thread

32570



non locking



locking





Order No.	Type	d_1 h9	d_2	d_4	e	l_2	l_3	l_4=s min.	l_5	l_6	l_7	l_8	a/f	Spring load* f_1 N ≈	Spring load* f_2 N ≈	Tightening torque max. Nm	g
32570.W0743	Non Lock	3	M 6x1,00	12	6,9	30,0	-	3,5	12	4,5	-	10,0	6	3	12	2	3,6
32570.W0744	Non Lock	4	M 6x1,00	12	6,9	30,5	-	4	12	4,5	-	10,0	6	3	12	2	4,0
32570.W0745	Non Lock	5	M 8x1,25	16	9,2	40,0	-	5	16	6,0	-	13,5	8	5	24	7	9,2
32570.W0746	Non Lock	6	M10x1,50	18	11,5	49,0	-	6	20	7,5	-	17,0	10	5	21	15	18,0
32570.W0748	Non Lock	8	M12x1,75	21	13,8	59,0	-	8	24	9,0	-	20,5	12	6	22	20	32,0
32570.W0763	Lock	3	M 6x1,00	12	6,9	-	32,5	3,5	12	-	7,0	10,0	6	3	12	2	3,8
32570.W0764	Lock	4	M 6x1,00	12	6,9	-	33,0	4	12	-	7,0	10,0	6	3	12	2	4,2
32570.W0765	Lock	5	M 8x1,25	16	9,2	-	43,5	5	16	-	9,5	13,5	8	5	24	7	9,8
32570.W0766	Lock	6	M10x1,50	18	11,5	-	52,0	6	20	-	10,5	17,0	10	5	21	15	18,0
32570.W0768	Lock	8	M12x1,75	21	13,8	-	63,5	8	24	-	13,5	20,5	12	6	22	20	32,0
32550.W0704	Nut	-	M 6x1,00	-	-	-	-	-	-	-	-	-	-	-	-		1,3
32550.W0705	Nut	-	M 8x1,25	-	-	-	-	-	-	-	-	-	-	-	-		2,8
32550.W0706	Nut	-	M10x1,50	-	-	-	-	-	-	-	-	-	-	-	-		5,3
32550.W0708	Nut	-	M12x1,75	-	-	-	-	-	-	-	-	-	-	-	-		7,6

Material

Body: steel, galvanized.
Pin: stainless steel 1.4305 (AISI 303).
Grip: thermoplastic PA 6, black.

Technical Notes

"Locking" type- enable pin to be held in retracted/non-projecting position; pull back grip, turn 90° to engage 'locking' on a notched catch.
"Non Locking" type- pin simply springs back when grip relased.

For applications where high precision is not required.
Coarse thread.
Temperature resistance -30° C to +80° C.

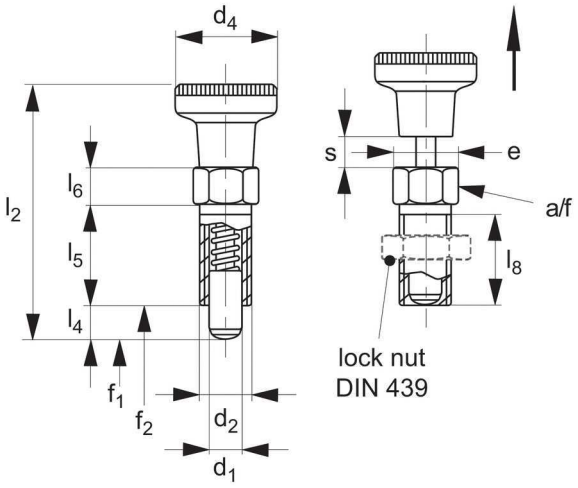
Tips

Grip non-removable.
Spring loads * = statistical average.

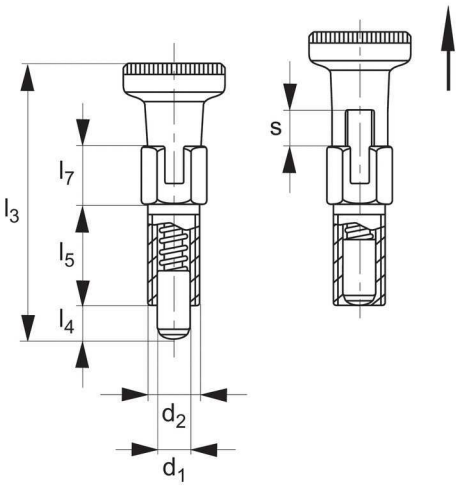
Index Plungers - Pull Grip

stainless - coarse thread

32571



non locking



locking





Order No.	Type	d_1 h9	d_2	d_4	e	l_2	l_3	l_4=s min.	l_5	l_6	l_7	l_8	a/f	Spring load* f_1 N ≈	Spring load* f_2 N ≈	Tightening torque max. Nm	g
32571.W0783	Non Lock	3	M 6x1,00	12	6,9	30,0	-	3,5	12	4,5	-	10,0	6	3	12	2	3,2
32571.W0784	Non Lock	4	M 6x1,00	12	6,9	30,5	-	4,0	12	4,5	-	10,0	6	3	12	2	4,0
32571.W0785	Non Lock	5	M 8x1,25	16	9,2	40,0	-	5,0	16	6,0	-	13,5	8	5	24	7	9,2
32571.W0786	Non Lock	6	M10x1,50	18	11,5	49,0	-	6,0	20	7,5	-	17,0	10	5	21	15	18,0
32571.W0788	Non Lock	8	M12x1,75	21	13,8	59,0	-	8,0	24	9,0	-	20,5	12	6	22	20	32,0
32571.W0793	Lock	3	M 6x1,00	12	6,9	-	32,5	3,5	12	-	7,0	10,0	6	3	12	2	3,8
32571.W0794	Lock	4	M 6x1,00	12	6,9	-	33,0	4,0	12	-	7,0	10,0	6	3	12	2	4,2
32571.W0795	Lock	5	M 8x1,25	16	9,2	-	43,5	5,0	16	-	9,5	13,5	8	5	24	7	9,8
32571.W0796	Lock	6	M10x1,50	18	11,5	-	52,0	6,0	20	-	10,5	17,0	10	5	21	15	18,0
32571.W0798	Lock	8	M12x1,75	21	13,8	-	63,5	8,0	24	-	13,5	20,5	12	6	22	20	32,0
32550.W0714	Nut	-	M 6x1,00	-	-	-	-	-	-	-	-	-	-	-	-		1,3
32550.W0715	Nut	-	M 8x1,25	-	-	-	-	-	-	-	-	-	-	-	-		2,8
32550.W0716	Nut	-	M10x1,50	-	-	-	-	-	-	-	-	-	-	-	-		5,3
32550.W0718	Nut	-	M12x1,75	-	-	-	-	-	-	-	-	-	-	-	-		7,6

Material

Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel 1.4305 (AISI 303).
Grip: thermoplastic PA 6, black.

Technical Notes

"Locking" type- enable pin to be held in retracted/non-projecting position; pull back grip, turn 90° to engage 'locking' on a notched catch.
"Non Locking" type- pin simply springs back when grip relased. For applications where high precision is not required.
Coarse thread.
Temperature resistance -30° C to +80° C.

Tips

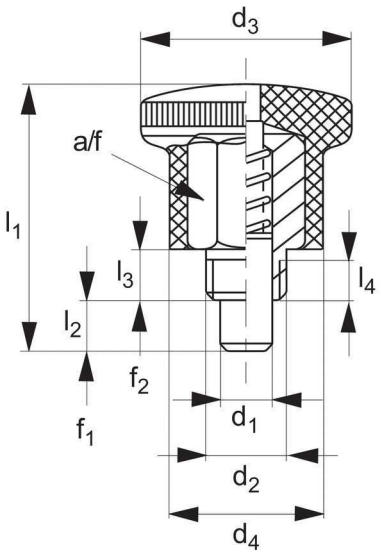
Grip non-removable.
Spring loads * = statistical average.

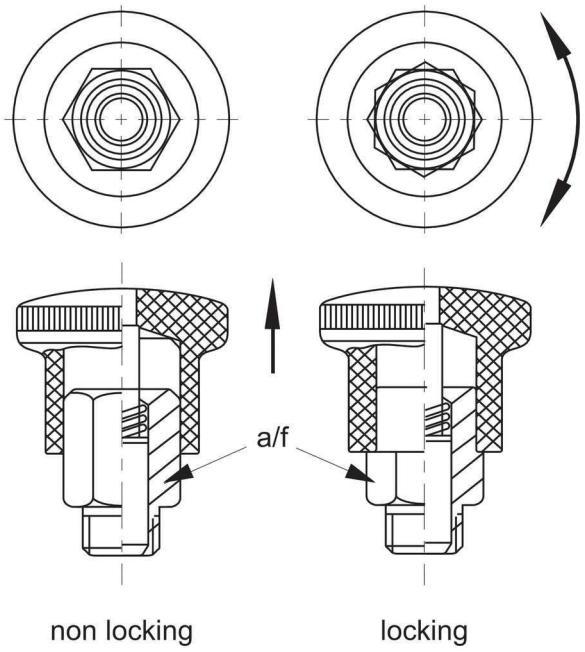
STAINLESS STEEL 303

Index Plungers - Pull Grip

mini - for thin walled parts - extra fine thread

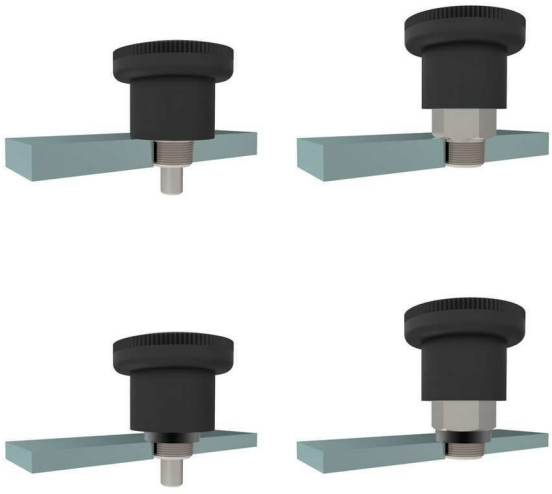
32600







Order No. Steel	Order No. Stainless	Type	d_1 0 -0,06	d_2	d_3	d_4	l_1	l_2 min	l_3	l_4 min	a/f	Spring load* f_1 N≈	Spring load* f_2 N≈	g
32600.W0024	32600.W0224	Non Locking	4	M 8x0,75	21	15	26,5	5	5	3,5	10	4,5	12	14
32600.W0026	32600.W0226	Non Locking	5	M 8x0,75	21	15	26,5	5	5	3,5	10	4,5	12	14
32600.W0028	32600.W0228	Non Locking	6	M10x1,00	25	18	34,0	7	7	4,5	12	5,0	18	25
32600.W0030	32600.W0230	Non Locking	7	M10x1,00	25	18	34,0	7	7	4,5	12	5,0	18	26
32600.W0034	32600.W0234	Locking	4	M 8x0,75	21	15	26,5	5	5	3,5	10	4,5	12	13
32600.W0036	32600.W0236	Locking	5	M 8x0,75	21	15	26,5	5	5	3,5	10	4,5	12	14
32600.W0038	32600.W0238	Locking	6	M10x1,00	25	18	34,0	7	7	4,5	12	5,0	18	24
32600.W0040	32600.W0240	Locking	7	M10x1,00	25	18	34,0	7	7	4,5	12	5,0	18	25



Material

Free cutting steel type-
Body: free cutting steel, galvanized.
Pin: stainless steel 1.4305 (AISI 303).
Grip: thermoplastic PA 6, black.
Stainless steel type-
Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel 1.4305 (AISI 303).
Grip: thermoplastic PA 6, black.

Technical Notes

"Locking" type- enable pin to be held in retracted/non-projecting position; pull back grip, turn 90° to engage 'locking' on a notched catch.
"Non Locking" type- pin simply springs back when grip relased.

For positioning and indexing in the smallest of spaces. Particularly suited for use on sheet metal assemblies; e.g shopfitting displays, electrical cabinets and enclosures etc.
Extra fine thread
Temperature resistance from -30° to +80°C.
Distance collars no. 32750 can be used to adapt screw length.

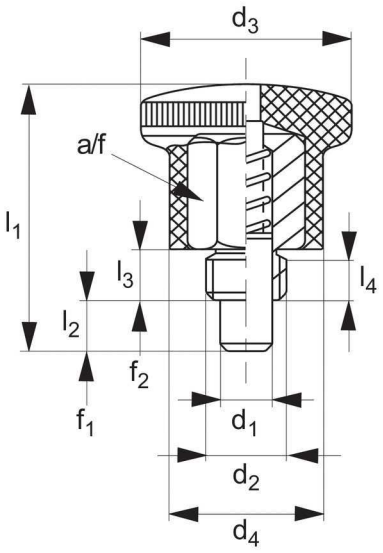
Tips

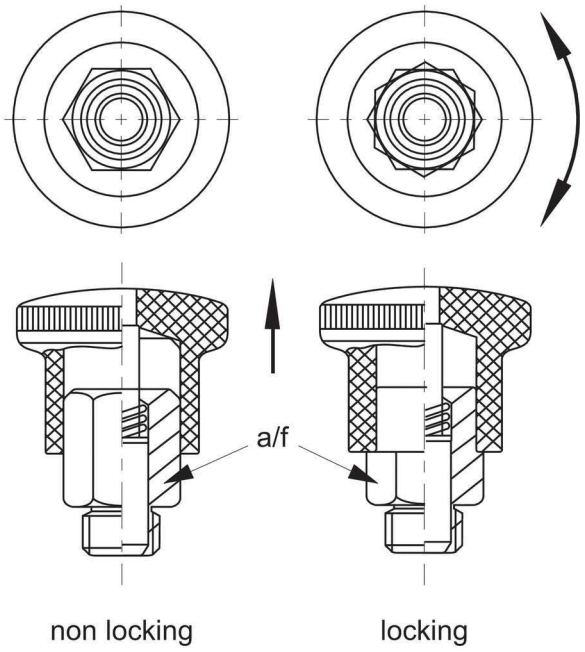
Grip non-removable.
Spring loads * = statistical average.

Index Plungers - Pull Grip

mini - for thin walled parts - fine thread

32602







Order No. Steel	Order No. Stainless Steel	Finish	d_1	d_2	d_3	d_4	l_1	l_2	l_3	a/f	Sprin g load f_1 N≈*	Sprin g load f_2 N≈*	g
32602.W0604	32602.W0704	Non Locking	4	M 8x1,00	21	15	27,5	5	6	10	4	12	14
32602.W0608	32602.W0708	Non Locking	5	M10x1,00	25	18	34,0	6	8	12	6	16	25
32602.W0612	32602.W0712	Non Locking	6	M10x1,00	25	18	34,0	6	8	12	6	16	25
32602.W0616	32602.W0716	Non Locking	6	M12x1,50	28	20	40,5	7	10	14	10	23	40
32602.W0620	32602.W0720	Non Locking	7	M12x1,50	28	20	40,5	7	10	14	10	23	41
32602.W0624	32602.W0724	Non Locking	8	M16x1,50	33	23	47,5	10	12	17	11	35	67
32602.W0628	32602.W0728	Non Locking	10	M16x1,50	33	23	47,5	10	12	17	11	35	69
32602.W0632	32602.W0732	Locking	4	M 8x1,00	21	15	27,5	5	6	10	4	12	13
32602.W0636	32602.W0736	Locking	5	M10x1,00	25	18	34,0	6	8	12	6	16	23
32602.W0640	32602.W0740	Locking	6	M10x1,00	25	18	34,0	6	8	12	6	16	25
32602.W0644	32602.W0744	Locking	6	M12x1,50	28	20	40,5	7	10	14	10	23	39
32602.W0648	32602.W0748	Locking	7	M12x1,50	28	20	40,5	7	10	14	10	23	39
32602.W0652	32602.W0752	Locking	8	M16x1,50	33	23	47,5	10	12	17	11	35	65
32602.W0656	32602.W0756	Locking	10	M16x1,50	33	23	47,5	10	12	17	11	35	67

Material

Free cutting steel type-
Body: free cutting steel, galvanized.
Pin: stainless steel 1.4305 (AISI 303).
Grip: thermoplastic PA 6, black.
Stainless steel type-
Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel 1.4305 (AISI 303).
Grip: thermoplastic PA 6, black.

Technical Notes

"Locking" type- enable pin to be held in retracted/non-projecting position; pull back grip, turn 90° to engage 'locking' on a notched catch.
"Non Locking" type- pin simply springs back when grip relased.
For positioning and indexing in the smallest of spaces. Particularly suited for use on sheet metal assemblies; e.g shopfitting displays, electrical cabinets and enclosures etc.
Temperature resistance from -30° to +80°C.
Distance collars no. 32750 can be used to adapt screw length.
Fine Thread

Tips

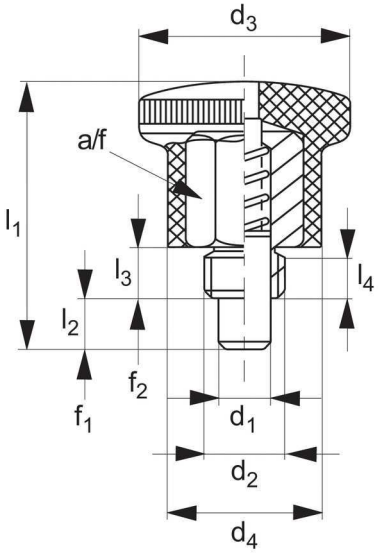
Grip non-removable.
Spring loads * = statistical average.

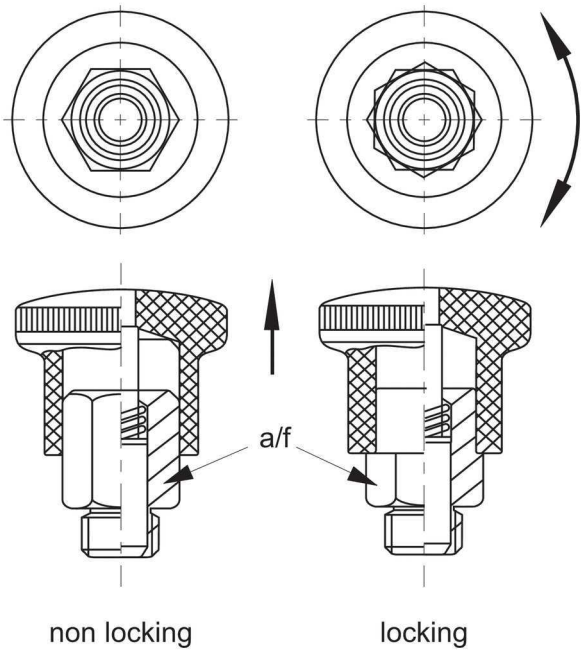
Index Plungers - Pull Grip

mini - for thin walled parts - coarse thread



32604







Order No. Steel	Order No. Stainless Steel	Finish	d_1	d_2	d_3	d_4	l_1	l_2	l_3	a/f	Sprin g load f_1 N≈*	Sprin g load f_2 N≈*	g
32604.W0602	32604.W0702	Non Locking	4	M 8x1,25	21	15	27,5	5	6	10	4	12	14
32604.W0606	32604.W0706	Non Locking	5	M10x1,50	25	18	34,0	6	8	12	6	16	25
32604.W0610	32604.W0710	Non Locking	6	M10x1,50	25	18	34,0	6	8	12	6	16	25
32604.W0614	32604.W0714	Non Locking	6	M12x1,75	28	20	40,5	7	10	14	10	23	40
32604.W0618	32604.W0718	Non Locking	7	M12x1,75	28	20	40,5	7	10	14	10	23	41
32604.W0622	32604.W0722	Non Locking	8	M16x2,00	33	23	47,5	10	12	17	11	35	66
32604.W0626	32604.W0726	Non Locking	10	M16x2,00	33	23	47,5	10	12	17	11	35	68
32604.W0630	32604.W0730	Locking	4	M 8x1,25	21	15	27,5	5	6	10	4	12	13
32604.W0634	32604.W0734	Locking	5	M10x1,50	23	18	34,0	6	8	12	6	16	23
32604.W0638	32604.W0738	Locking	6	M10x1,50	25	18	34,0	6	8	12	6	16	24
32604.W0642	32604.W0742	Locking	6	M12x1,75	28	20	40,5	7	10	14	10	23	38
32604.W0646	32604.W0746	Locking	7	M12x1,75	28	20	40,5	7	10	14	10	23	39
32604.W0650	32604.W0750	Locking	8	M16x2,00	33	23	47,5	10	12	17	11	35	64
32604.W0654	32604.W0754	Locking	10	M16x2,00	33	23	47,5	10	12	17	11	35	66

Material

Free cutting steel type-
Body: free cutting steel, galvanized.
Pin: stainless steel 1.4305 (AISI 303).
Grip: thermoplastic PA 6, black.
Stainless steel type-
Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel 1.4305 (AISI 303).
Grip: thermoplastic PA 6, black.

Technical Notes

"Locking" type- enable pin to be held in retracted/non-projecting position; pull back grip, turn 90° to engage 'locking' on a notched catch.
"Non Locking" type- pin simply springs back when grip relased.
For positioning and indexing in the smallest of spaces. Particularly suited for use on sheet metal assemblies; e.g shopfitting displays, electrical cabinets and enclosures etc.
Temperature resistance from -30° to +80°C.
Distance collars no. 32750 can be used to adapt screw length.
Coarse thread.

Tips

Grip non-removable.
Spring loads * = statistical average

Index Plungers - Pull Grip

mini - for thin walled parts - extra fine thread



32606

Order No.	Type	d_1 0 -0,06	d_2	d_3	d_4	l_1	l_2 min	l_3	a/f	Spring load* f_1 N≈	Spring load* f_2 N≈	g
32606.W1102	Non-Locking	4	M 8	21	15	27,5	5	6	10	4	12	28
32606.W1104	Non-Locking	4	M 8x1	21	15	27,5	5	6	10	4	12	28
32606.W1106	Non-Locking	5	M10	25	18	34,0	6	8	12	6	16	49
32606.W1108	Non-Locking	5	M10x1	25	18	34,0	6	8	12	6	16	50
32606.W1110	Non-Locking	6	M10	25	18	34,0	6	8	12	6	16	50
32606.W1112	Non-Locking	6	M10x1	25	18	34,0	6	8	12	6	16	50
32606.W1114	Non-Locking	6	M12	28	20	40,5	7	10	14	10	23	74
32606.W1116	Non-Locking	6	M12x1,5	28	20	40,5	7	10	14	10	23	75
32606.W1118	Non-Locking	7	M12	28	20	40,5	7	10	14	10	23	75
32606.W1120	Non-Locking	7	M12x1,5	28	20	40,5	7	10	14	10	23	75
32606.W1122	Non-Locking	8	M16	33	23	47,5	10	12	17	11	34	110
32606.W1124	Non-Locking	8	M16x1,5	33	23	47,5	10	12	17	11	35	113
32606.W1126	Non-Locking	10	M16	33	23	47,5	10	12	17	11	35	113
32606.W1128	Non-Locking	10	M16x1,5	33	23	47,5	10	12	17	11	35	113
32606.W1130	Locking	4	M 8	21	15	27,5	5	6	10	4	12	28
32606.W1132	Locking	4	M 8x1	21	15	27,5	5	6	10	4	12	28
32606.W1134	Locking	5	M10	25	18	34,0	6	8	12	6	16	49
32606.W1136	Locking	5	M10x1	25	18	34,0	6	8	12	6	16	50
32606.W1138	Locking	6	M10	25	18	34,0	6	8	12	6	16	50
32606.W1140	Locking	6	M10x1	25	18	34,0	6	8	12	6	16	50
32606.W1142	Locking	6	M12	28	20	40,5	7	10	14	10	23	74
32606.W1144	Locking	6	M12x1,5	28	20	40,5	7	10	14	10	23	75
32606.W1146	Locking	7	M12	28	20	40,5	7	10	14	10	23	75
32606.W1148	Locking	7	M12x1,5	28	20	40,5	7	10	14	10	23	75
32606.W1150	Locking	8	M16	33	23	47,5	10	12	17	11	35	110
32606.W1152	Locking	8	M16x1,5	33	23	47,5	10	12	17	11	35	113
32606.W1154	Locking	10	M16	33	23	47,5	10	12	17	11	35	113
32606.W1156	Locking	10	M16x1,5	33	23	47,5	10	12	17	11	35	113



Material

Stainless steel type-
Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel 1.4305 (AISI 303).
Grip: stainless steel 1.4308 (AISI 304).

Technical Notes

"Locking" type- enable pin to be held in retracted/non-projecting position; pull back grip, turn 90° to engage 'locking' on a notched catch.
"Non Locking" type- pin simply springs back when grip relased.

For positioning and indexing in the smallest of spaces. Particularly suited for use on sheet metal assemblies; e.g shopfitting displays, electrical cabinets and enclosures etc.
Extra fine thread
Temperature resistance up to 250°C.
Distance collars no. 32750 can be used to adapt screw length.

Tips

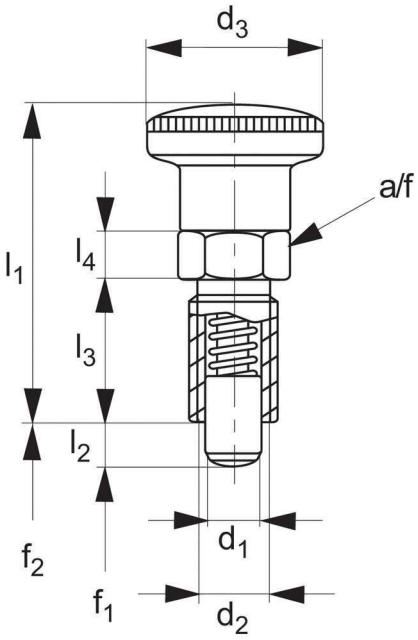
Grip non-removable.
Spring loads * = statistical average.

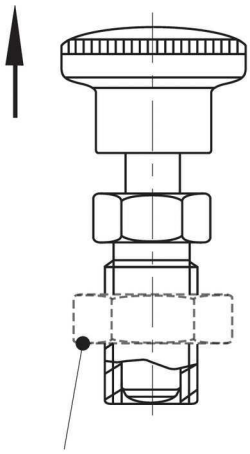


Index Plungers - Pull Grip

compact - non-locking

32680





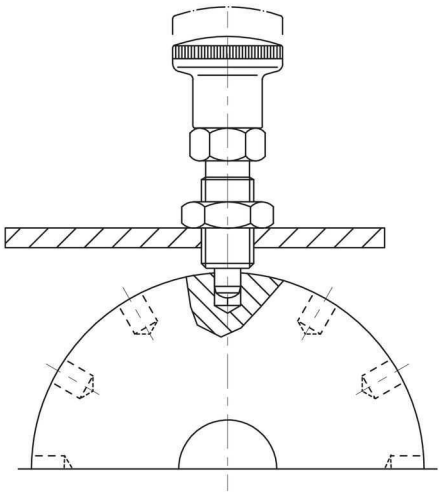
lock nut
32700.W0114 - .W0120 (steel)
32700.W0514 - .W0520 (stainless)

with grip





Order No. Steel	Order No. Stainless	Type	d_1 -0,02 -0,04	l_2 min.	d_2	d_3	l_1	l_3	l_4	a/f	Spring load* f_1 N≈	Spring load* f_2 N≈	g
32680.W0103	32680.W0203	No Lock	4	4	M 8x1,0	16	35,0	16	5	10	4,5	12,0	10
32680.W0104	32680.W0204	No Lock	4	6	M 8x1,0	16	35,0	16	5	10	4,0	12,5	10
32680.W0106	32680.W0206	No Lock	5	5	M10x1,0	19	40,0	18	6	12	5,0	15,5	18
32680.W0107	32680.W0207	No Lock	5	8	M10x1,0	19	40,0	18	6	12	5,0	18,0	18
32680.W0109	32680.W0209	No Lock	6	6	M12x1,5	23	48,0	22	6	14	6,5	19,0	29
32680.W0110	32680.W0210	No Lock	6	9	M12x1,5	23	48,0	22	6	14	6,0	25,0	29
32680.W0112	32680.W0212	No Lock	8	8	M16x1,5	28	58,0	26	8	17	8,5	26,0	62
32680.W0113	32680.W0213	No Lock	8	12	M16x1,5	28	58,0	26	8	17	8,5	28,0	62
32680.W0115	32680.W0215	No Lock	10	12	M16x1,5	28	58,0	26	8	17	9,5	38,0	63
32680.W0116	32680.W0216	No Lock	12	15	M20x1,5	33	67,0	33	10	22	11,5	40,0	117
32680.W0117	32680.W0217	No Lock	16	20	M24x 2	33	78,5	38	12	27	13,0	54,0	204
32700.W0114	32700.W0514	Lock Nuts	-	-	M 8x1,0	-	-	-	-	-	-	-	3
32700.W0115	32700.W0515	Lock Nuts	-	-	M10x1,0	-	-	-	-	-	-	-	5
32700.W0116	32700.W0516	Lock Nuts	-	-	M12x1,5	-	-	-	-	-	-	-	7
32700.W0118	32700.W0518	Lock Nuts	-	-	M16x1,5	-	-	-	-	-	-	-	18
32700.W0120	32700.W0520	Lock Nuts	-	-	M20x1,5	-	-	-	-	-	-	-	32
32700.W0122	32700.W0522	Lock Nut	-	-	M24 x 2	-	-	-	-	-	-	-	58



Material

Free cutting steel type-
Body: free cutting steel, blackened.
Pin: steel, hardened.
Grip:thermoplastic PA6, black.
Stainless steel type -
Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel 1.4305 (AISI 303), nickel plated.
Grip: thermoplastic PA6, black.

Technical Notes

"Non Locking" type- pin simply springs back when grip relased.
Thread recess on body allows full engagement of thread length.
Hexagon collar improves leverage for secure installation. Benefits from a more compact design and hence shorter overall length.
Temperature resistance from -30° to +80°C.
Distance collars no. 32750 can be used to adapt screw length.

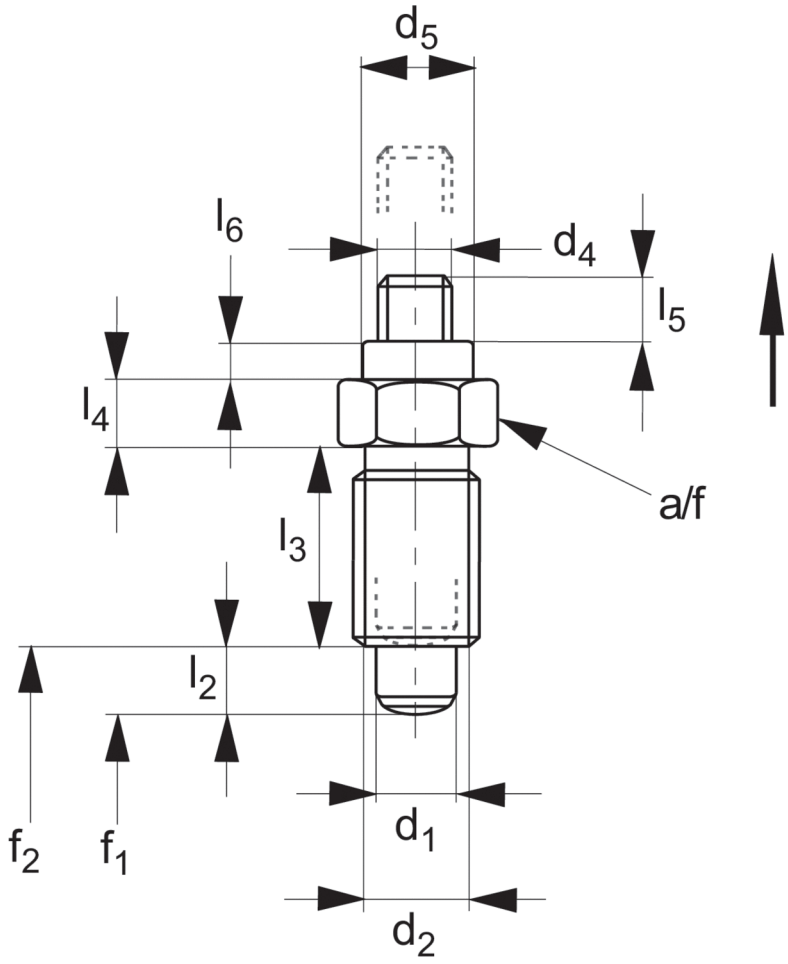
Tips

Grip non-removable.
Spring loads * = statistical average.

Index Plungers - No Grip

compact - non-locking

32681



No grip





Order No. Steel	Order No. Stainless	Type	d_1 -0,02 -0,04	l_2 min.	d_2	d_4	d_5	l_3	l_4	l_5	l_6	a/f	g
32681.W0143	32681.W0243	No Grip	4	4	M 8x1,0	M 3	7	16	5	4,5	2,5	10	9
32681.W0144	32681.W0244	No Grip	4	6	M 8x1,0	M 3	7	16	5	4,5	2,5	10	9
32681.W0146	32681.W0246	No Grip	5	5	M10x1,0	M 4	8	18	6	5,5	3,0	12	16
32681.W0147	32681.W0247	No Grip	5	8	M10x1,0	M 4	8	18	6	5,5	3,0	12	16
32681.W0149	32681.W0249	No Grip	6	6	M12x1,5	M 5	9	22	6	7,0	3,5	14	25
32681.W0150	32681.W0250	No Grip	6	9	M12x1,5	M 5	9	22	6	7,0	3,5	14	25
32681.W0152	32681.W0252	No Grip	8	8	M16x1,5	M 6	10	26	8	8,5	4,0	17	55
32681.W0153	32681.W0253	No Grip	8	12	M16x1,5	M 6	10	26	8	8,5	4,0	17	55
32681.W0155	32681.W0255	No Grip	10	12	M16x1,5	M 6	10	26	8	8,5	4,0	17	56
32681.W0156	32681.W0256	No Grip	12	15	M20x1,5	M 6	12	33	10	8,5	4,0	22	111
32681.W0157	32681.W0257	No Grip	16	20	M24 x 2	M8	15	38	12	11,5	5,0	27	194
32700.W0114	32700.W0514	Lock Nuts	-	-	M 8x1,0	-	-	-	-	-	-	-	3
32700.W0115	32700.W0515	Lock Nuts	-	-	M10x1,0	-	-	-	-	-	-	-	5
32700.W0116	32700.W0516	Lock Nuts	-	-	M12x1,5	-	-	-	-	-	-	-	7
32700.W0118	32700.W0518	Lock Nuts	-	-	M16x1,5	-	-	-	-	-	-	-	18
32700.W0120	32700.W0520	Lock Nuts	-	-	M20x1,5	-	-	-	-	-	-	-	32
32700.W0122	32700.W0522	Lock Nut	-	-	M24 x 2	-	-	-	-	-	-	-	58,0

Material

Free cutting steel type-
Body: free cutting steel, blackened.
Pin: steel, hardened.
Stainless steel type -
Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel 1.4305 (AISI 303), nickel plated.

Technical Notes

"Non Locking" type- pin simply springs back when grip relased. Thread recess on body allows full engagement of thread length. Hexagon collar improves leverage for secure installation. Benefits from a more compact design and hence shorter overall length. Temperature resistance up to 250°C Distance collars no. 32750 can be used to adapt screw length.

Tips

Spring loads * = statistical average. Threaded head of d_4 enables use of larger handle or grip better suited to your application. See palm grip no. 70000, or similar.

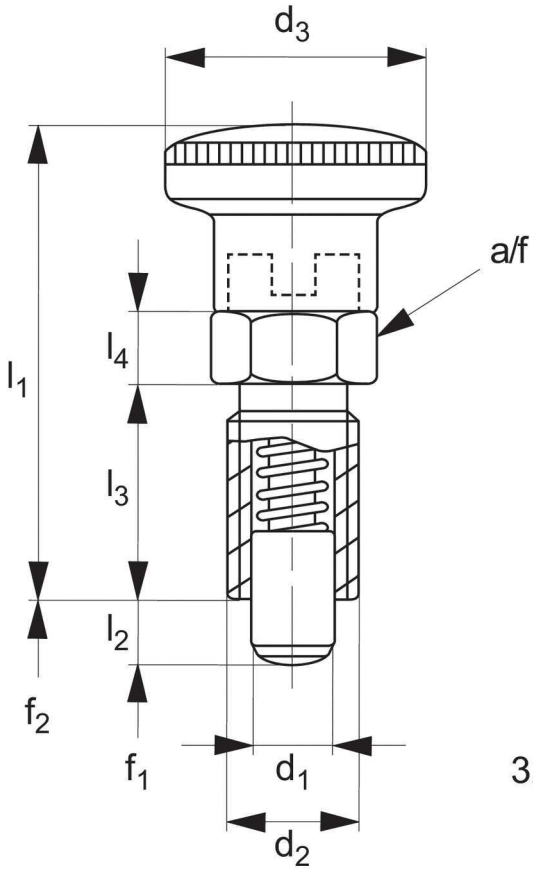


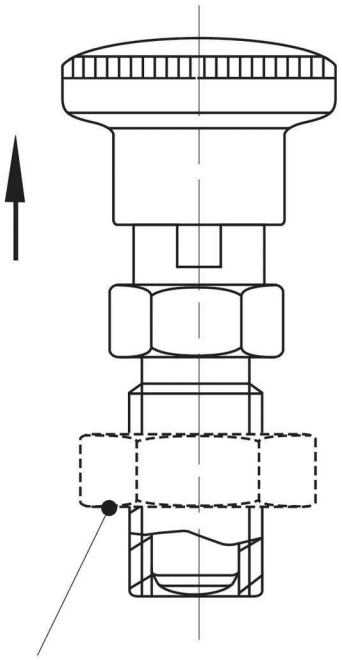
Index Plungers - Compact

compact -locking



32690





lock nut sold separately
32700.W0114 - .W0120 (steel)
32700.W0514 - .W0520 (stainless)





Order No. Steel	Order No. Stainless	Type	d_1 -0,02 -0,04	l_2 min.	d_2	d_3	l_1	l_3	l_4	a/f	Spring load* f_1 N≈	Spring load* f_2 N≈	g
32690.W0123	32690.W0223	Locking	4	4	M 8x1,0	16	35	16	5	10	4,5	12,0	12,0
32690.W0124	32690.W0224	Locking	4	6	M 8x1,0	16	35	16	5	10	4,0	12,5	12,0
32690.W0126	32690.W0226	Locking	5	5	M10x1,0	19	40	18	6	12	5,0	15,0	20,0
32690.W0127	32690.W0227	Locking	5	8	M10x1,0	19	40	18	6	12	5,0	18,0	20,0
32690.W0129	32690.W0229	Locking	6	6	M12x1,5	23	48	22	6	14	6,5	19,0	31,0
32690.W0130	32690.W0230	Locking	6	9	M12x1,5	23	48	22	6	14	6,0	25,0	33,0
32690.W0132	32690.W0232	Locking	8	8	M16x1,5	28	58	26	8	17	8,5	26,0	65,0
32690.W0133	32690.W0233	Locking	8	12	M16x1,5	28	58	26	8	17	8,5	28,0	68,0
32690.W0135	32690.W0235	Locking	10	12	M16x1,5	28	58	26	8	17	9,5	38,0	69,0
32690.W0136	32690.W0236	Locking	12	15	M20x1,5	33	67	33	10	22	11,5	40,0	125,0
32690.W0137	32690.W0237	Locking	16	20	M24 x 2	33	78,5	38	12	27	13,0	54,0	220
32700.W0114	32700.W0514	Lock Nut	-	-	M 8x1,0	-	-	-	-	-	-	-	2,7
32700.W0115	32700.W0515	Lock Nut	-	-	M10x1,0	-	-	-	-	-	-	-	5,2
32700.W0116	32700.W0516	Lock Nut	-	-	M12x1,5	-	-	-	-	-	-	-	7,4
32700.W0118	32700.W0518	Lock Nut	-	-	M16x1,5	-	-	-	-	-	-	-	18,0
32700.W0120	32700.W0520	Lock Nut	-	-	M20x1,5	-	-	-	-	-	-	-	32,0
32700.W0122	32700.W0522	Lock Nut	-	-	M24 x 2	-	-	-	-	-	-	-	58,0

Material

Free cutting steel type-
Body: free cutting steel, blackened.
Pin: steel, hardened.
Grip: thermoplastic PA6, black.
Stainless steel type -
Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel 1.4305 (AISI 303), nickel plated.
Grip: thermoplastic PA6, black.

Technical Notes

"Locking" type- enable pin to be held in retracted/non-projecting position; pull back grip, turn 90° to engage 'locking' on a notched catch.
Thread recess on body allows full engagement of thread length.
Hexagon collar improves leverage for secure installation. Benefits from a more compact design and hence shorter overall length.
Temperature resistance from -30° to +80°C.
Distance collars no. 32750 can be used to adapt screw length.

Tips

Grip non-removable.
Spring loads * = statistical average.



Index Plungers - Compact

compact -locking

32690







Material

Free cutting steel type-
Body: free cutting steel, blackened.
Pin: steel, hardened.
Grip: thermoplastic PA6, black.
Stainless steel type -
Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel 1.4305 (AISI 303), nickel plated.
Grip: thermoplastic PA6, black.

Technical Notes

"Locking" type- enable pin to be held in retracted/non-projecting position; pull back grip, turn 90º to engage 'locking' on a notched catch.
Thread recess on body allows full engagement of thread length.
Hexagon collar improves leverage for secure installation. Benefits from a more compact design and hence shorter overall length.
Temperature resistance from -30° to +80°C.
Distance collars no. 32750 can be used to adapt screw length.

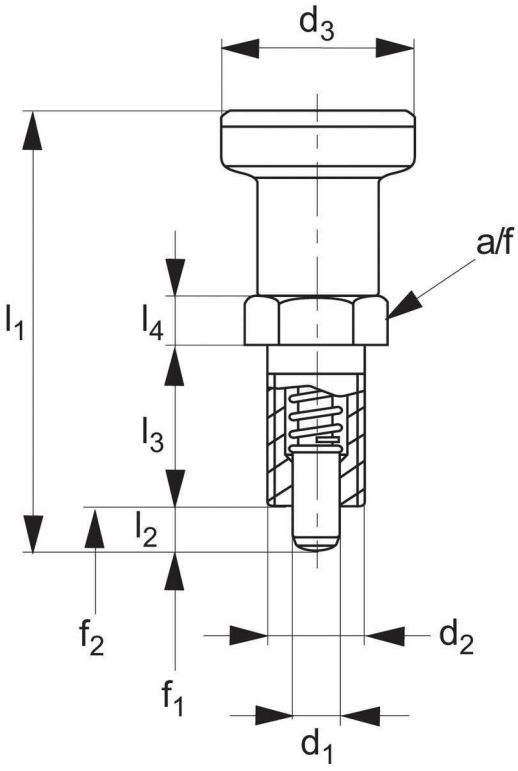
Tips

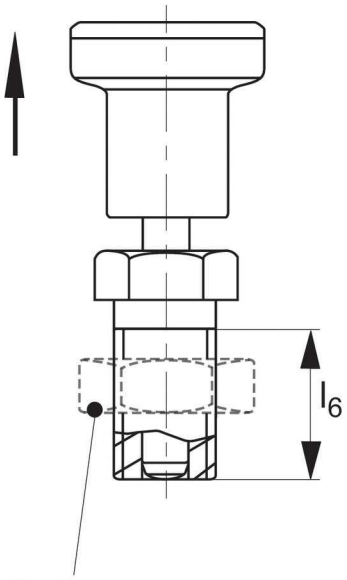
Grip non-removable.
Spring loads * = statistical average.

Index Plungers - Pull Grip

non-locking - ALL stainless

32702





lock nut
32700.W0515 - .W0520



Order No.	Type	d_1 - 0,02 - 0,04	d_2	d_3	l_1 ≈	l_2 min.	l_3	l_4	l_6 min.	a/f	Spring load* f_1 N≈	Spring load* f_2 N≈	g
32702.W0705	Non locking	5	M10x1,0	21	45,0	5	17	5	15	12	6,0	14	39,0
32702.W0706	Non locking	6	M12x1,5	25	54,5	6	20	6	17	14	5,5	13	65,0
32702.W0707	Non locking	8	M16x1,5	31	69,0	8	26	8	23	19	11,5	28	132,0
32702.W0710	Non locking	10	M20x1,5	31	80,0	10	33	10	30	22	23,0	54	175,0
32700.W0515	Lock Nut	-	M10x1,0	-	-	-	-	-	-	-	-	-	5,2
32700.W0516	Lock Nut	-	M12x1,5	-	-	-	-	-	-	-	-	-	7,4
32700.W0518	Lock Nut	-	M16x1,5	-	-	-	-	-	-	-	-	-	18,0
32700.W0520	Lock Nut	-	M20x1,5	-	-	-	-	-	-	-	-	-	32,0

Material

All Stainless Steel Type-
Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel 1.4305 (AISI 303), nickel plated.
Grip: stainless steel 1.4305 (AISI 303).
Spring: stainless steel 1.4310 (AISI 301).

Technical Notes

"Non Locking" type- pin simply springs back when pull ring relased.
Thread recess on body allows full engagement of thread length.
Hexagon collar improves leverage for secure installation.
Temperature resistance from -30° to +80°C.
Distance collars no. 32750 can be used to adapt screw length.

Tips

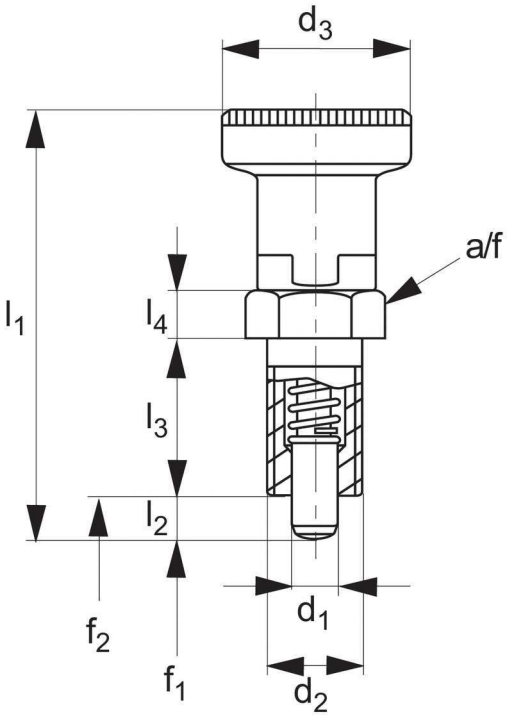
Complete stainless steel construction designed with specific demands of food processing, pharmaceutical and water treatment industries in mind. Grip non-removable.
Spring Loads* = statistical average.

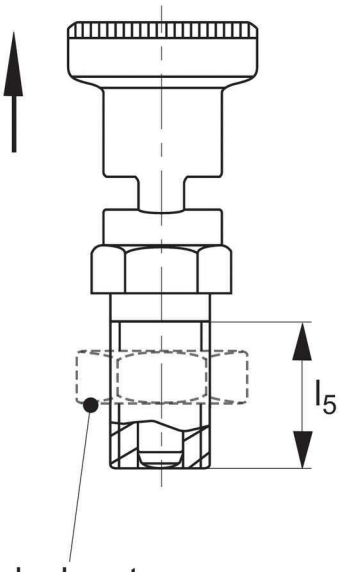
STAINLESS STEEL 303

Index Plunger - Pull Grip

locking

32710



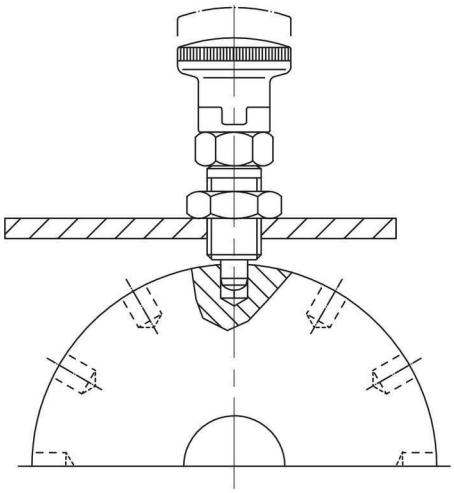


lock nut
32700.W0115 - .W0120 (steel)
32700.W0515 - .W0520 (stainless)





Order No. Steel	Order No. Stainless	Type	d_1 -0,02 -0,04	d_2	d_3	l_1 ≈	l_2 min.	l_3	l_4	l_5 min	a/f	Spring load* f_1 N≈	Spring load* f_1 N≈	g
32700.W0115	32700.W0515	Lock Nut	-	M10x1,0	-	-	-	-	-	-	-	-		5
32700.W0116	32700.W0516	Lock Nut	-	M12x1,5	-	-	-	-	-	-	-	-		7
32700.W0118	32700.W0518	Lock Nut	-	M16x1,5	-	-	-	-	-	-	-	-		18
32700.W0120	32700.W0520	Lock Nut	-	M20x1,5	-	-	-	-	-	-	-	-		32
32710.W0208	32710.W0608	Locking	8	M16x1,5	31	75,5	8	26	8	23	19	1,5	28	79
32710.W0210	32710.W0610	Locking	10	M20x1,5	31	91,0	10	33	10	30	22	28,0	54	134
32710.W0206	32710.W0606	Locking	6	M12x1,5	25	61,0	6	20	6	17	14	5,5	13	36
32710.W0205	32710.W0605	Locking	5	M10x1,0	21	51,0	5	17	5	15	12	6,0	14	22



Material

Free cutting steel type-
Body: free cutting steel, blackened.
Pin: hardened steel.
Grip: thermoplastic PA6, black.
Stainless steel type -
Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel 1.4305 (AISI 303), nickel plated.
Grip: thermoplastic PA6, black.

Technical Notes

"Locking" type- enable pin to be held in retracted/non-projecting position; pull back grip, turn 90° to engage 'locking' on a notched catch.
Thread recess on body allows full engagement of thread length.
Hexagon collar improves leverage for secure installation.
Temperature resistance from -30° to +80°C.
Distance collars no. 32750 can be used to adapt screw length.

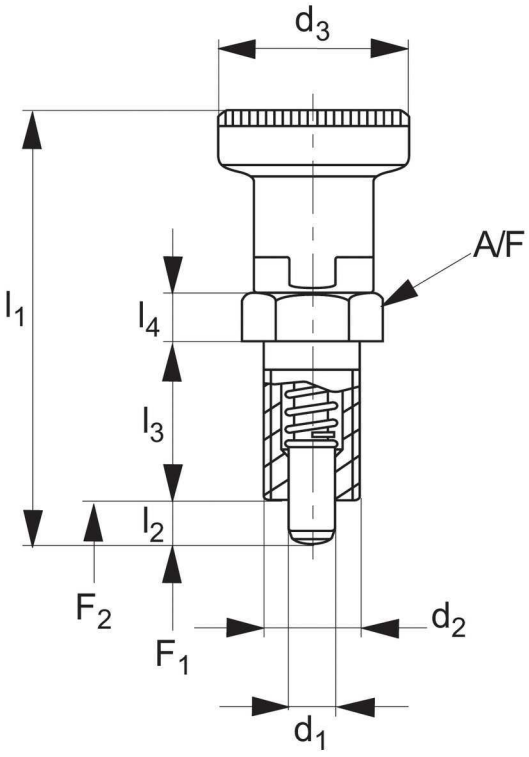
Tips

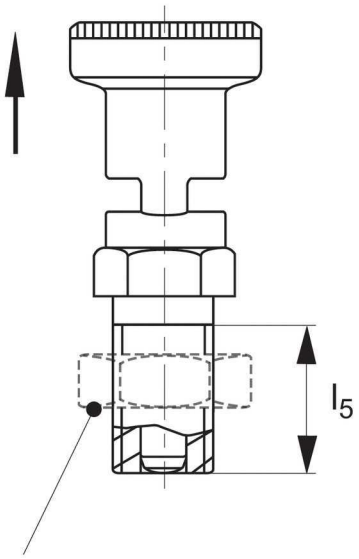
Grip non-removable.
Spring loads * = statistical average.

Index Plunger - Pull Grip

locking - all stainless

32712





lock nut
32700.W0515 - W0520



Order No.	Type	d_1 -0,02 -0,04	d_2	d_3	l_1 ≈	l_2 min.	l_3	l_4	l_5	A/F	Spring load* F_1 N ≈	Spring load* F_2 N ≈	g
32712.W0705	Locking	5	M10x1,0	21	51,0	5	17	5	15	12	6,0	14	43
32712.W0706	Locking	6	M12x1,5	25	61,0	6	20	6	17	14	5,5	13	71
32712.W0708	Locking	8	M16x1,5	31	75,5	7	26	8	23	19	11,5	28	144
32712.W0710	Locking	10	M20x1,5	31	91,0	10	33	10	30	22	28,0	54	202
32700.W0515	Lock Nut	-	M10x1,0	-	-	-	-	-	-	-	-	-	5
32700.W0516	Lock Nut	-	M12x1,5	-	-	-	-	-	-	-	-	-	7
32700.W0518	Lock Nut	-	M16x1,5	-	-	-	-	-	-	-	-	-	18
32700.W0520	Lock Nut	-	M20x1,5	-	-	-	-	-	-	-	-	-	32

Material

All Stainless Steel Type-
Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel 1.4305, nickel plated.
Grip: stainless steel 1.4305 (AISI 303).
Spring: stainless steel 1.4310 (AISI 301).

Technical Notes

"Locking" type- enable pin to be held in retracted/non-projecting position; pull back grip, turn 90° to engage 'locking' on a notched catch.
Thread recess on body allows full engagement of thread length.
Hexagon collar improves leverage for secure installation.
Temperature resistance from -30° to +80°C.
Distance collars no. 32750 can be used to adapt screw length.

Tips

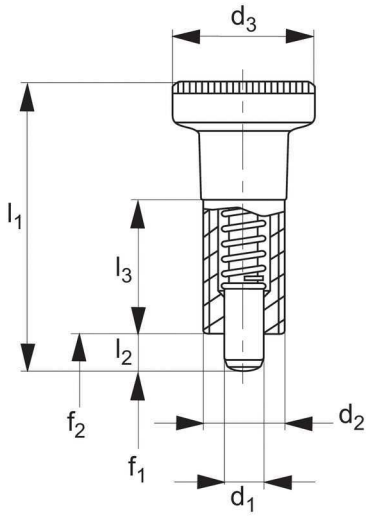
Complete stainless steel construction designed with specific demands of food processing, pharmaceutical and water treatment industries in mind. Grip non-removable.
Spring Loads* = statistical average.

STAINLESS STEEL 303

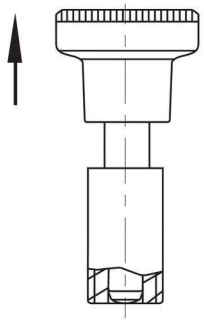
Index Plunger - Pull Grip

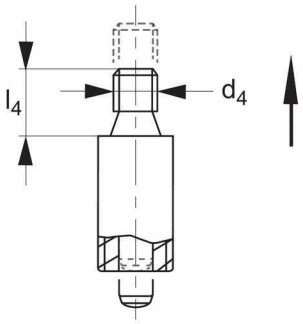
weldable - non-locking

32720



with grip



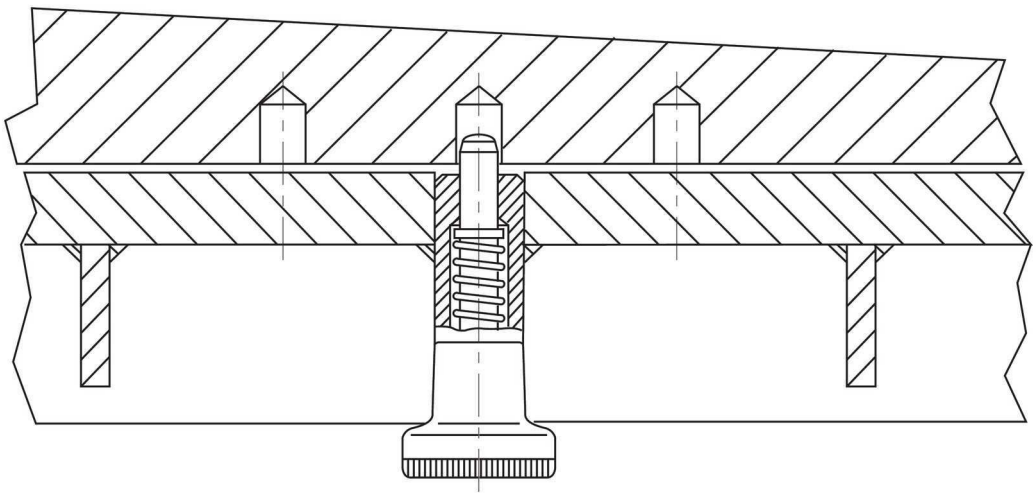


no grip





Order No.	Type	d_1 -0,02 -0,04	d_2 h9	d_3	d_4	l_1 ≈	l_2 min.	l_3	l_4	Spring load* f_1 N ≈	Spring load* f_2 N ≈	g
32720.W0805	With Grip	5	12	21	-	45,0	5	22	-	7,0	16	25
32720.W0806	With Grip	6	14	25	-	54,5	6	26	-	6,5	15	40
32720.W0808	With Grip	8	18	31	-	69,0	8	34	-	12,0	31	84
32720.W0825	No Grip	5	12	-	M 5	-	5	22	6	7,0	16	19
32720.W0826	No Grip	6	14	-	M 6	-	6	26	10	6,5	15	32
32720.W0828	No Grip	8	18	-	M 8	-	8	34	12	12,0	31	67



Material

Body: free cutting steel, blackened, weldable.
Pin: hardened steel.
Grip: plastic (PA 6), black, non-removable.

Technical Notes

"Non Locking" type- pin simply springs back when pull ring released.
Designed specifically for installation via welding or use of glues. Plungers without grip enable your own adaptation with actuation grip/lever to your own design.
Without grip temperature resistance up to 250°C .

Tips

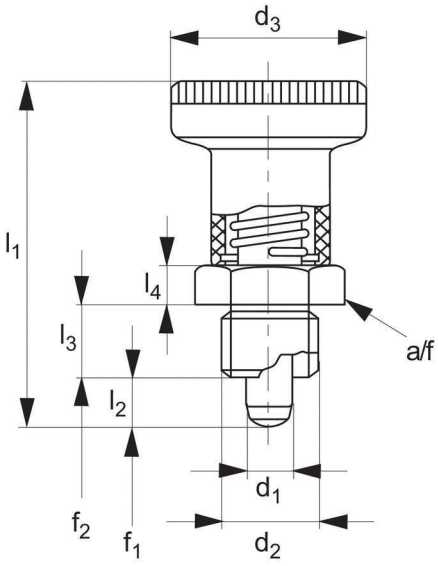
Grip non-removable.
Spring loads * = statistical average.



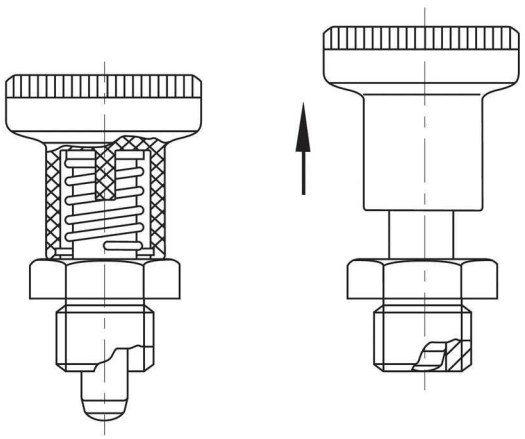
Index Plungers - Pull Grip

for thin walled parts

32730



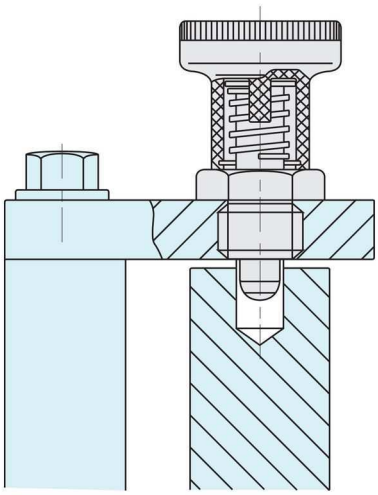
non locking



locking



Order No. Steel	Order No. Stainless	Type	d_1 -0,02 -0,04	d_2	d_3	l_1 ≈	l_2 min.	l_3 -0,15	l_4	a/f	Spring load* f_1 N≈	Spring load* f_2 N≈	g
32730.W0226	32730.W0246	Non Locking	6	M12x1,5	25	45	6	10	5	17	7	19	35,0
32730.W0228	32730.W0248	Non Locking	8	M16x1,5	31	54	8	12	6	19	14	24	62,0
32730.W0236	32730.W0256	Locking	6	M12x1,5	25	45	6	10	5	17	7	19	35,0
32730.W0238	32730.W0258	Locking	8	M16x1,5	31	54	8	12	6	19	14	24	61,0
32700.W0116	32700.W0516	Lock Nut	-	M12x1,5	-	-	-	-	-	-	-	-	7,4
32700.W0118	32700.W0518	Lock Nut	-	M16x1,5	-	-	-	-	-	-	-	-	18,0



Material

Free Cutting Steel type-
Body: free cutting steel, blackened.
Pin: steel, hardened.
Grip: thermoplastic PA6, black.
Stainless steel type -
Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel 1.4305 (AISI 303), nickel plated.
Grip: thermoplastic PA6, black.

Technical Notes

"Locking" type- enable pin to be held in retracted/non-projecting position; pull back grip, turn 90° to engage 'locking' on a notched catch.
"Non Locking" type- pin simply springs back when grip released.
Short bodied index plungers for compact applications. Hexagon collar improves leverage for secure installation.
Temperature resistance from -30° to +80°C.

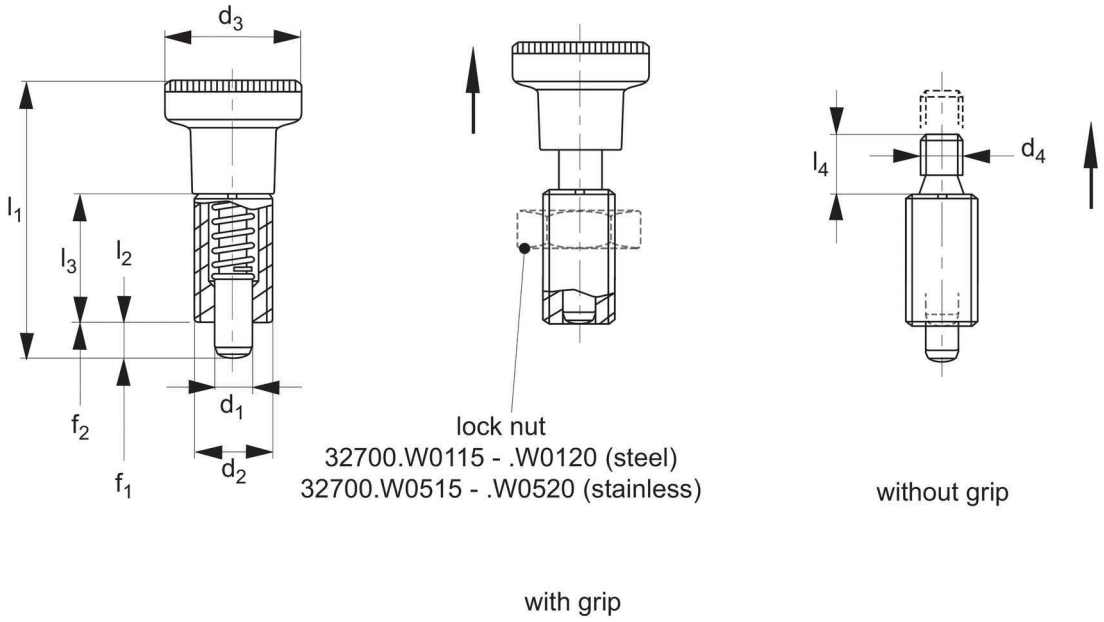
Tips

Distance collars no. 32750 can be used to adapt screw length.
Spring loads * = statistical average.

Index Plunger - Pull Grip

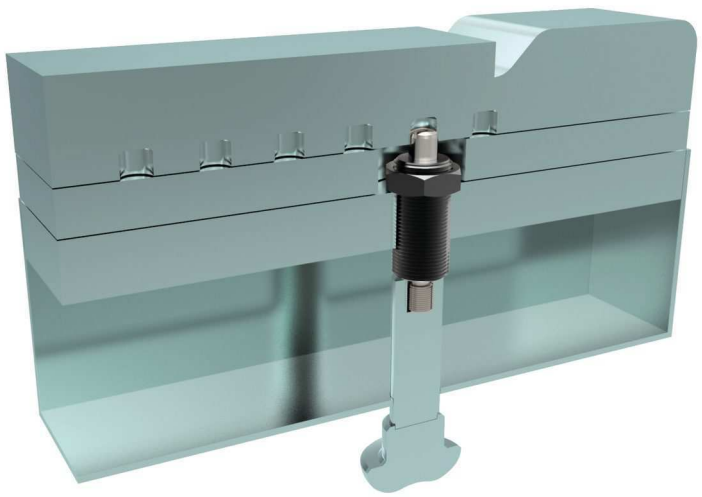
non-locking

32740





Order No. Steel	Order No. Stainless	Type	d_1 -0,02 -0,04	d_2	d_3	d_4	l_1 ≈	l_2 min	l_3	l_4	Spring load* f_1 N≈	Spring load* f_2 N≈	g
32700.W0115	32700.W0515	Lock Nut	-	M10x1,0	-	-	-	-	-	-	-	-	5
32700.W0116	32700.W0516	Lock Nut	-	M12x1,5	-	-	-	-	-	-	-	-	7
32700.W0118	32700.W0518	Lock Nut	-	M16x1,5	-	-	-	-	-	-	-	-	18
32700.W0120	32700.W0520	Lock Nut	-	M20x1,5	-	-	-	-	-	-	-	-	32
32740.W0045	32740.W0445	With Grip	5	M10x1,0	21	-	45,0	5	22	-	6,0	14	17
32740.W0046	32740.W0446	With Grip	6	M12x1,5	25	-	54,5	6	26	-	5,5	13	27
32740.W0048	32740.W0448	With Grip	8	M16x1,5	31	-	69,0	8	34	-	11,5	28	63
32740.W0050	32740.W0450	With Grip	10	M20x1,5	31	-	80,0	10	41	-	23,0	54	104
32740.W0955	-	Assembly Tool	-	for M10x1,0	-	-	-	-	-	-	-	-	10
32740.W0956	-	Assembly Tool	-	for M12x1,5	-	-	-	-	-	-	-	-	14
32740.W0958	-	Assembly Tool	-	for M16x1,5	-	-	-	-	-	-	-	-	25
32740.W0960	-	Assembly Tool	-	for M20x1,5	-	-	-	-	-	-	-	-	27
32740.W0065	32740.W0465	No Grip	5	M10x1,0	-	M 5	-	5	22	6	6,0	14	12
32740.W0066	32740.W0466	No Grip	6	M12x1,5	-	M 6	-	6	26	10	5,5	13	12
32740.W0068	32740.W0468	No Grip	8	M16x1,5	-	M 8	-	8	34	12	11,5	28	46
32740.W0070	32740.W0470	No Grip	10	M20x1,5	-	M 8	-	10	43	12	23,0	54	87



Material

Free Cutting Steel Type-
Body: free cutting steel, blackened.
Pin: steel, hardened.
Grip: thermoplastic PA6, black.
Stainless steel type -
Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel 1.4305 (AISI 303), nickel plated.
Grip: thermoplastic PA6, black.

Technical Notes

"Non Locking" type- pin simply springs back when pull ring released.
Plungers without grip enable your own adaptation with actuation grip/lever to your own design.
Installation requires use of specific assembly tool, see data table.
Without grip temperature resistance up to 250°C.

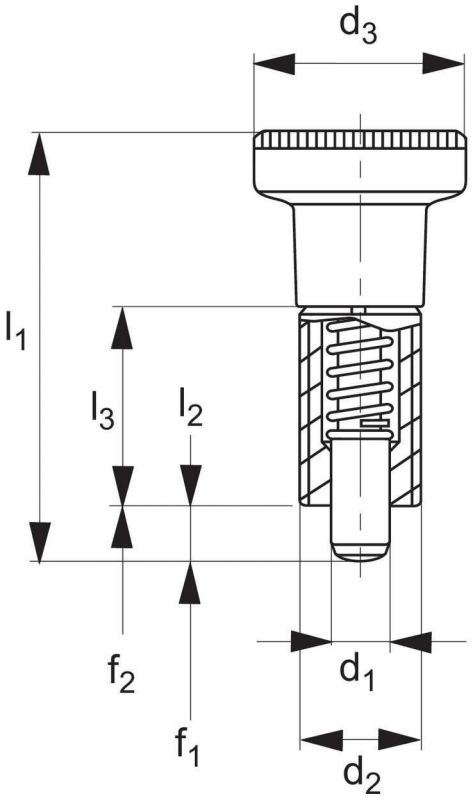
Tips

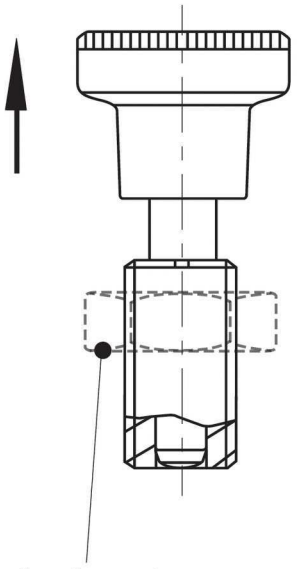
Grip non-removable.
Spring loads * = statistical average.

Index Plunger - Pull Grip

non-locking - ALL stainless

32742







Order No.	Type	d_1 -0,02 -0,04	d_2	d_3	l_1 ≈	l_2 min.	l_3	Spring load* f_1 N≈	Spring load* f_2 N≈	g
32742.W0705	Non Locking	5	M10x1,0	21	45,0	5	22	6,0	14	37,0
32742.W0706	Non Locking	6	M12x1,5	25	54,5	6	26	5,5	13	62,0
32742.W0707	Non Locking	8	M16x1,5	31	69,0	8	34	11,5	28	124,0
32742.W0710	Non Locking	10	M20x1,5	31	80,0	10	43	23,0	54	165,0
32700.W0515	Lock Nut	-	M10x1,0	-	-	-	-	-	-	5,2
32700.W0516	Lock Nut	-	M12x1,5	-	-	-	-	-	-	7,4
32700.W0518	Lock Nut	-	M16x1,5	-	-	-	-	-	-	18,0
32700.W0520	Lock Nut	-	M20x1,5	-	-	-	-	-	-	32,0

Material

All Stainless Steel Type-
Body: stainless steel 1.4305 (AISI 303).
Locking pin: stainless steel 1.4305 (AISI 303), nickel plated.
Grip: stainless steel 1.4305 (AISI 303).
Spring: stainless steel 1.4310 (AISI 301).

Technical Notes

"Non Locking" type- pin simply springs back when pull ring released.
Temperature resistance -30°C to +80°C
Installation requires use of specific assembly tool, see part nos. 32740.W0955 to .W0960.

Tips

Complete stainless steel construction designed with specific demands of food processing, pharmaceutical an water treatment industries in mind. Grip non-removable.
Spring Load* = statistical average.

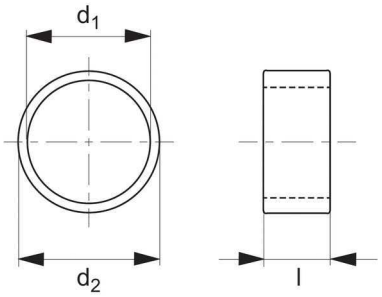
STAINLESS STEEL 303

Distance Collars

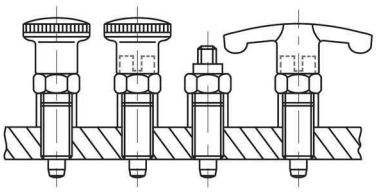
for index plungers

32750

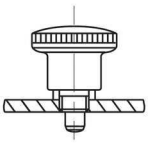




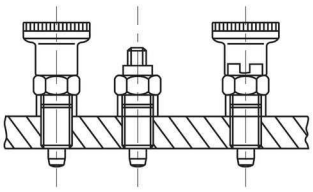
plunger types



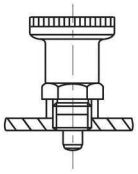
type 1 - 32502, 32504 32680, 32681, 32690, 32781, 32782



type 2 - 32600, 32602, 32604



type 3 - 32700, 32702, 32710, 32712



type 4 - 32730

Material
Stainless steel 1.4305 (AISI 303).

Technical Notes
Distance collars adapt the thread length of index plungers to enable different thread reaches. Order while stocks last.

Order No.	d_1 tol. H12	l_1 ±0,1	d_2 -0,1	For index plungers size d_1	Suitable for plunger type	g
32750.W0993	8	2	10	M 8	1/2	0,5
32750.W0933	8	3	10	M 8	1	0,8
32750.W0934	8	4	10	M 8	1	0,9
32750.W0936	8	6	10	M 8	1	1,2
32750.W0938	8	8	10	M 8	1	1,6
32750.W0940	8	10	10	M 8	1	2,0
32750.W0942	10	2	12	M10	1/2/3	0,6
32750.W0944	10	4	12	M10	1/2/3	1,1
32750.W0946	10	6	12	M10	1/3	1,6
32750.W0948	10	8	12	M10	1/3	2,1
32750.W0950	10	10	12	M10	1/3	2,7
32750.W0952	10	12	12	M10	1/3	3,0
32750.W0962	12	2	14	M12	1	0,6
32750.W0964	12	4	14	M12	1	2,5
32750.W0966	12	6	14	M12	1	1,9
32750.W0968	12	8	14	M12	1	2,4
32750.W0972	12	2	17	M12	3/4	2,0
32750.W0974	12	4	17	M12	3/4	3,4
32750.W0975	12	5	17	M12	3/4	4,4
32750.W0976	16	4	17	M16	1	0,7
32750.W0977	16	6	17	M16	1	1,2
32750.W0978	16	8	17	M16	1	1,4
32750.W0979	16	10	17	M16	1	2,0
32750.W0980	16	12	17	M16	1	2,1
32750.W0982	16	2	19	M16	3/4	1,3
32750.W0984	16	4	19	M16	3/4	2,8
32750.W0986	16	6	19	M16	3/4	3,8
32750.W0988	16	8	19	M16	3/4	4,8
32750.W0990	16	10	19	M16	3	6,1
32750.W0992	16	12	19	M16	3	9,2
32750.W0993	20	6	22	M20	1/3	3,0
32750.W0994	20	8	22	M20	1/3	4,0
32750.W0995	20	10	22	M20	1/3	4,9
32750.W0996	20	12	22	M20	1/3	5,9
32750.W0997	20	14	22	M20	1/3	6,9
32750.W0998	20	16	22	M20	1/3	9,3
32750.W0999	20	18	22	M20	1/3	9,0

Distance Collars

for index plungers

32750





Material

Stainless steel 1.4305 (AISI 303).

Technical Notes

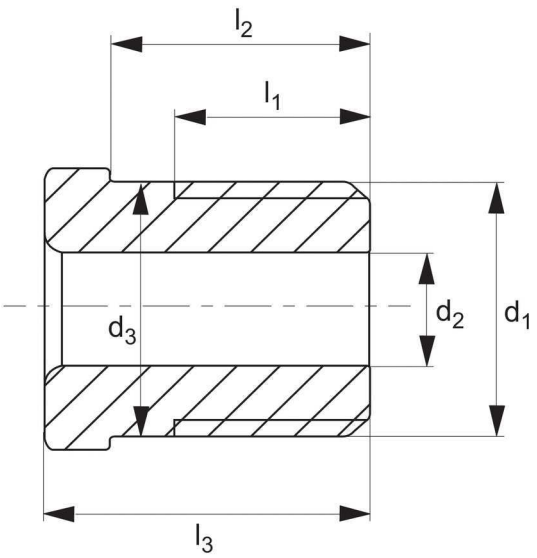
Distance collars adapt the thread length of index plungers to enable different thread reaches. Order while stocks last.

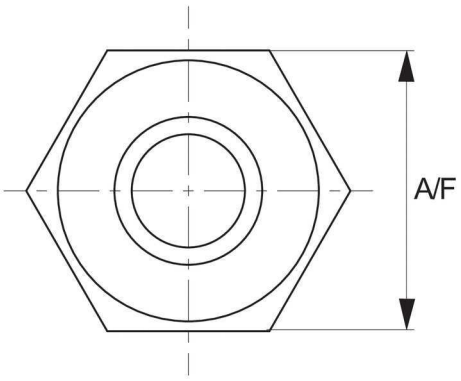
Locating Bushes

for index plungers

32752



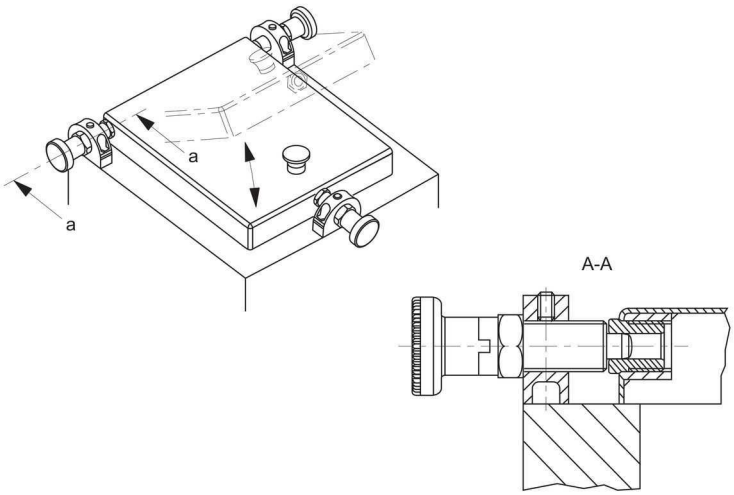




Material
Steel, nitrided.

Technical Notes
For use with our wide range of index plungers. Provide a durable location bush for index plunger pins of diameter d_2. See "for pin dia." column in data table and refer to individual index plunger production information for matching pin diameters.

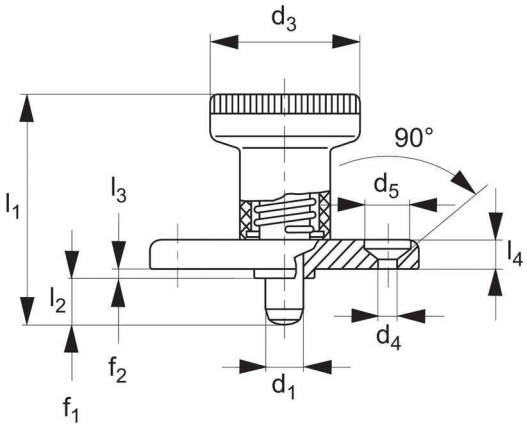
Order No.	d_1	For pin dia.	d_2 +0,1	d_3 ±0,3	l_1 min.	l_2 -0,3	l_3	a/f	g
32752.W0454	M12x1,5	4	4,2	12,1	9	10	13	13	10
32752.W0455	M12x1,5	5	5,2	12,1	9	10	13	13	10
32752.W0456	M12x1,5	6	6,2	12,1	9	10	13	13	9
32752.W0458	M16x1,5	8	8,2	16,1	11	12	15	17	18
32752.W0460	M16x1,5	10	10,2	16,1	11	12	15	17	14
32752.W0462	M16x1,5	12	12,2	16,1	11	12	15	17	9



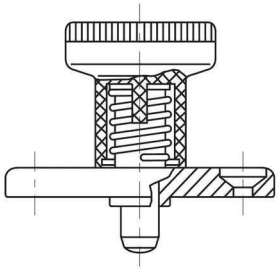
Index Plunger - Pull Grip

flange mounting

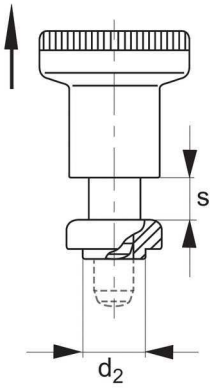
32760

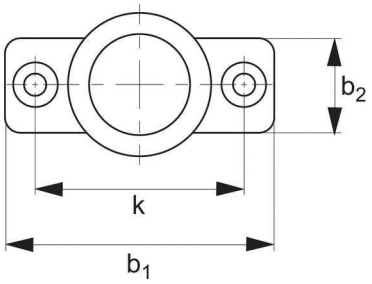


non-locking



locking





note: plunger fully retracts if l_2 = s





Order No. Steel	Order No. Stainless	Type	d_1 -0,02 -0,04	l_2	b_1	b_2	d_2 -0,02 -0,1	d_3	d_4	d_5	k	l_1	l_3 -0,15	l_4	s	Spring load* f_1 N≈	Spring load* f_2 N≈	g
32760.W0926	32760.W0966	Non Locking	6	6	40	18	10	25	4,3	8,3	30	37	2,5	4,5	6	8,5	22	26
32760.W0927	32760.W0967	Non Locking	6	14	40	18	10	25	4,3	8,3	30	45	2,5	4,5	6	8,5	22	38
32760.W0928	32760.W0968	Non Locking	8	8	46	20	12	31	5,3	10,4	34	44	2,5	5,5	8	15,5	28	59
32760.W0929	32760.W0969	Non Locking	8	18	46	20	12	31	5,3	10,4	34	54	2,5	5,5	8	15,5	28	63
32760.W0936	32760.W0976	Locking	6	6	40	18	10	25	4,3	8,3	30	37	2,5	4,5	6	8,5	22	36
32760.W0937	32760.W0977	Locking	6	14	40	18	10	25	4,3	8,3	30	45	2,5	4,5	6	8,5	22	38
32760.W0938	32760.W0978	Locking	8	8	46	20	12	31	5,3	10,4	34	44	2,5	5,5	8	15,5	28	60
32760.W0939	32760.W0979	Locking	8	18	46	20	12	31	5,3	10,4	34	54	2,5	5,5	8	15,5	28	63



Material

Free Cutting Steel Type-
Body: die cast zinc, galvanised.
Pin: steel, hardened.
Grip: thermoplastic PA6, black
Stainless Steel Type-
Body: die-cast zinc, galvanised.
Pin: stainless steel, 1.4305 (AISI 303), nickel plated.
Grip: thermoplastic PA6, black

Technical Notes

"Locking" type- enable pin to be held in retracted position; pull back grip, turn 90° to engage 'locking' on a notched catch.
"Non Locking" type- pin simply springs back when grip released.
Integeral mounting flange simplifies installation on flat surfaces.
Pin does not fully retract in all cases - note dimension 's' the stroke of the pin, i.e. the amount by which the pin retracts when actuated.
Temperature resistance -30°C to +80°C

Tips

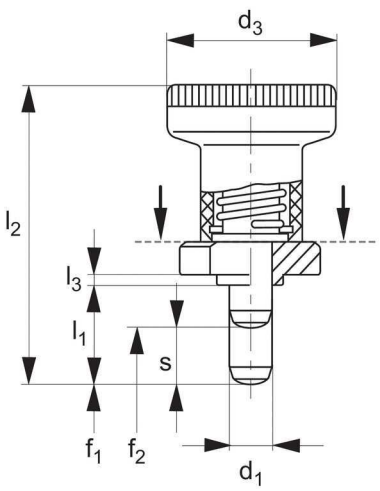
Grip non-removable.
Spring loads * = statistical average.

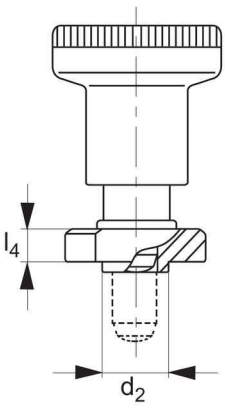


Index Plungers - Pull Grip

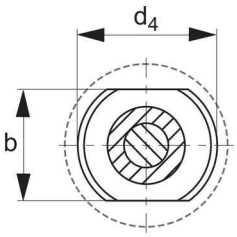
weldable - flange mounting - compact

32762

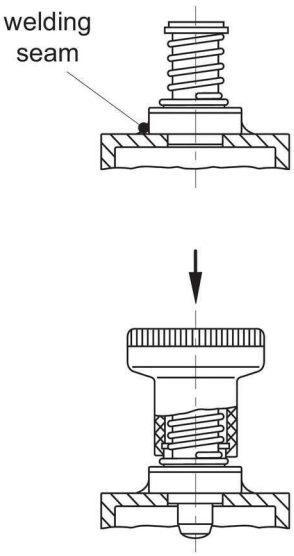




note: plunger fully retracts if l_1 = s



assembly instruction



to prevent damage to grip, first weld index body in place, then install grip using soft faced mallet



Order No.	Type	d_1 -0,02 -0,1	l_1	b	d_2 -0,02 -0,04	d_3	d_4	l_2	l_3	l_4	s	Spring load* f_1 N≈	Spring load* f_2 N≈	Axial Load [N]	g
32762.W0826	Non Locking	6	6	18	10	25	22	37	1,5	5,5	6	8,5	22	400	35
32762.W0827	Non Locking	6	14	18	10	25	22	37	1,5	5,5	6	8,5	22	400	36
32762.W0828	Non Locking	8	8	20	12	31	25	44	2,0	6,5	8	15,5	28	500	55
32762.W0829	Non Locking	8	18	20	12	31	25	44	2,0	6,5	8	15,5	28	500	60
32762.W0836	Locking	6	6	18	10	25	22	37	1,5	5,5	6	8,5	22	400	35
32762.W0837	Locking	6	14	18	10	25	22	37	1,5	5,5	6	8,5	22	400	36
32762.W0838	Locking	8	8	20	12	31	25	44	2,0	6,5	8	15,5	28	500	55
32762.W0839	Locking	8	18	20	12	31	25	44	2,0	6,5	8	15,5	28	500	60

Material

Body: steel blackened.
Locking Pin: hardened.
Grip: black matte finish, not removable.

Technical Notes

"Locking" type- enable pin to be held in retracted position; pull back grip, turn 90° to engage 'locking' on a notched catch.
"Non Locking" type- pin simply springs back when grip released. Installation requires welding of plunger doby to component. To avoid damage to plastic grip, item is supplied part assembled. Grip is driven in indexing mechanism with a light mallet. Non removable once installed.
Pin does not fully retract in all cases - note dimension 's' the stroke of the pin, i.e. the amount by which the pin retracts when actuated.
Temperature resistance -30°C to +80°C

Tips

Spring load* = statistical average.

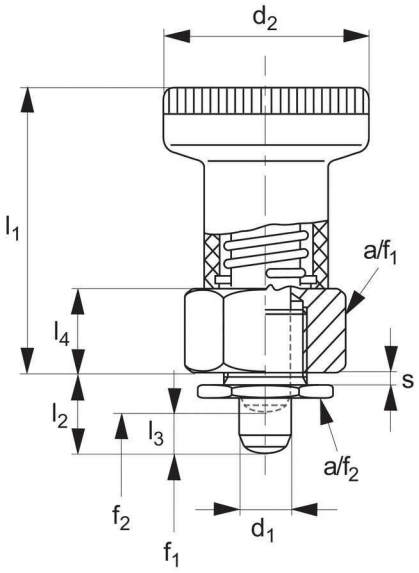
Important Notes

Only parts 32762.W0826,W0828,W0836 and W0838 have fully retractable index bolt. Bolt of other parts do not fully retract into body, instead bolt will protrude by l_1-s when grip actuated.

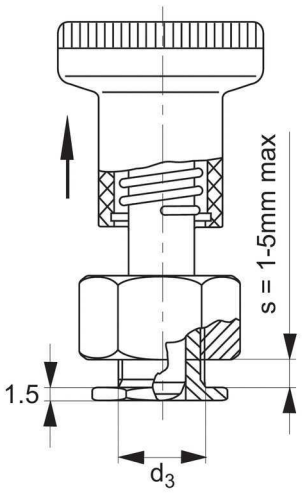
Index plungers - Pull Grip

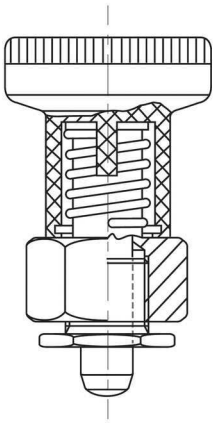
compact

32770



non-locking





locking



Order No.	Type	d_1 -0,02 -0,04	l_2	d_2	d_3	l_1	l_3	l_4	s min.-max.	a/f_1	a/f_2	Spring load* f_1 N≈	Spring load* f_2 N≈	g
32770.W0266	Locking	6	8,5	25	10	34	6,0	10	1-5	17	14	8,5	22	39
32770.W0267	Locking	6	10,5	25	10	34	6,0	10	1-5	17	14	8,5	22	40
32770.W0268	Locking	8	10,0	31	12	40	7,5	12	1-5	19	16	15,5	28	63
32770.W0269	Locking	8	12,0	31	12	40	7,5	12	1-5	19	16	15,5	28	63
32770.W0286	Non Locking	6	8,5	25	10	34	6,0	10	1-5	17	14	8,5	22	39
32770.W0287	Non Locking	6	10,5	25	10	34	6,0	10	1-5	17	14	8,5	22	39
32770.W0288	Non Locking	8	10,0	31	12	40	7,5	12	1-5	19	16	15,5	28	61
32770.W0289	Non Locking	8	12,0	31	12	40	7,5	12	1-5	19	16	15,5	28	62
32770.W0299	Spanner = a/f2	-	-	-	-	-	-	-	-	-	-	-	-	27

Material

Body:steel galvanised.
Pin: stainless steel 1.4305, nickel plated.
Grip: thermoplastic PA6, black.

Technical Notes

"Locking" type- enable pin to be held in retracted position; pull back grip, turn 90° to engage 'locking' on a notched catch.
"Non Locking" type- pin simply springs back when grip released.
For installation on thin walled panels/sheet metal of thickness 1 to 5mm.
Pin does not fully retract in all cases - protrusion of pin 'l_3' dependant upon panel thickness of installation 's'
Temperature resistance -30°C to +80°C

Tips

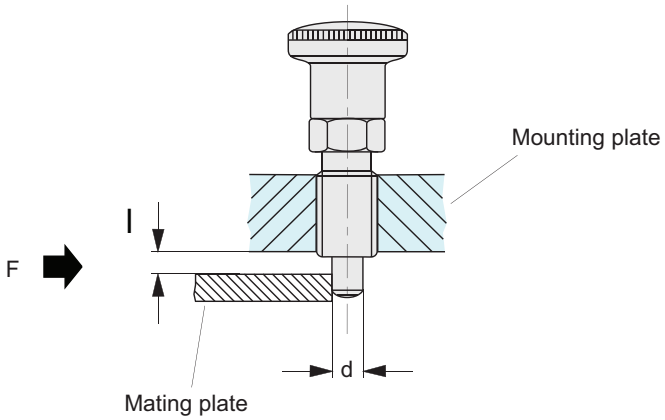
Grip non-removable.
Spring loads* = statistical average.

Computing the strength of index plungers

for shear loads / flexure loads of the plunger pin

Flexure loads

As soon as a gap l exists between the mounting plate in which the index plunger is installed, and the mating or base plate, the load must be considered to be as per a flexure load, with rod clamped at one side.
With this approach, the calculation is made against the bending of the index plunger.



Formulas for computation

Resistance torque	Flexural stress	Flexural strength
$W = \frac{\pi \times d^3}{32}$	$M_b = \sigma_b \times W$	$F = \frac{M_b}{l} = \frac{\sigma_b \times \pi \times d^3}{l \times 32}$

Material characteristics

The yield or substitute yield limit (Re / Rp 0,2) shown in the table opposite has been determine in tension tests involving tension specimen in accordance with DIN 50125-B6-30.
These tests constitute the basis for the load bearing details given.

Material Description	Material no.	Re in N/mm²(≈ per. flexural tension σ_b)
C45Pb	1.0504	560
X 10 CrNiS 18 9A	ISI 303	580

Calculation example, load values

Example:
Index plungers with a bolt diameter of 5 mm made of steel with a yield limit of Re = 560 N/mm², calculation against permanent deformation, the maximum permissible flexural strength is calculated as:

$$F_{per} = \frac{560\ N/mm^2 \times \pi \times (5mm)^3}{2mm \times 32} = 3430\ N$$

	max. flexural strength F in N, acc. to material and gap l differentiated			
d Bolt diameter	C45Pb/1.0504 l = 2 mm	l = 3 mm	X 10 CrNiS 18 9/1.4305 l = 2 mm	l = 3 mm
3	740	490	760	510
4	1750	1170	1820	1210
5	3430	2290	3550	2370
65	930	3950	6140	4100
8	14070	9380	14570	9710
10	27480	18320	28470	18980
12	47490	31660	49190	32790
16	90070	102940	93290	119020

Safety information

On principle, the design also needs an adequate safety coefficient to be taken into account. The usual safety coefficients under static load 1.2 to 1.5; pulsating 1.8 to 2.4 and alternating 3 to 4.

Disclaimer:
You should carry out your own test series to verify whether a certain product is suitable for your specific applications.

Computing the strength of index plungers

for shear loads / flexure loads of the plunger pin

Shear loads

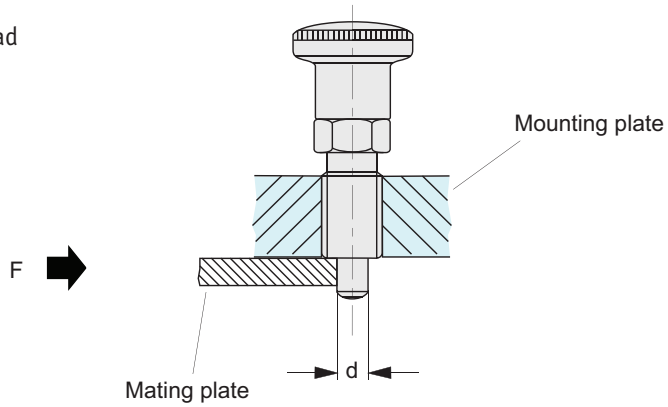
Providing only a very small gap exists between the mounting plate in which the index plunger is installed, and the mounting plate or base plate, the load can be calculated as a clean shear action.

As this is normally not the case, the “flexure” load should be used - see following page.

Approximately 80 % of the bolt’s tensile strength is assumed for the shear strength. This approach calculates against the tensile strength Rm, i.e. against the index pin shearing off.

To ensure the permanent and proper function of the index plunger, the yield limit Re must be considered in place of the tensile strength Rm.

Stop using the index plunger if the pin is damaged or deformed.



Formulas for computation

Bolt cross-section	Limit tension	Shear force
$S = \frac{d^2 \times \pi}{4}$	$\tau_a = 0{,}8 \times R_m$	$F = S \times \tau_a = \frac{d^2 \times \pi}{4} \times 0{,}8 \times R_m$

Material characteristics

The tensile strength shown in the table opposite (Rm) and the yield or substitute yield limit (Re / Rp 0,2) have been determine in tension tests involving tension specimen in accordance with DIN 50125- B6-30

These tests constitute the basis for the load bearing details given.

Material Description	Material no.	Re in N/mm²	Rm in N/mm²
C45Pb	1.0504	560	640
X 10 CrNiS 18 9A	ISI 303	580	740

Calculation example, load values

Example:

Index plungers with a bolt diameter of 6 mm made of Stainless Steel with a yield limit of Re = 580 N/mm², calculation against permanent deformation, the maximum permissible shear stress is calculated as:

$$F_{per} = \frac{(6\ mm)^2 \times \pi}{4} \times 0.8 \times 580\ N/mm^2 = 13120\ N$$

d Bolt diametre	max. force F in N, acc. to material and strength value differs C45Pb/1.05045 at Re	C45Pb/1.05045 at Rm	X 10 CrNiS 18 9/1.4305 at Re	X 10 CrNiS 18 9/1.4305 at Rm
3	3160	3610	3270	4180
4	5620	6430	5830	7430
58	790	10050	9110	11620
6	12660	14470	13120	16730
8	22510	25730	23320	29750
10	35180	40210	36440	46490
12	50660	57900	52470	66950
16	90070	102940	93290	119020

Safety information

On principle, the design also needs an adequate safety coefficient to be taken into account. The usual safety coefficients under static load 1.2 to 1,5; pulsating 1.8 to 2.4 and alternating 3 to 4.

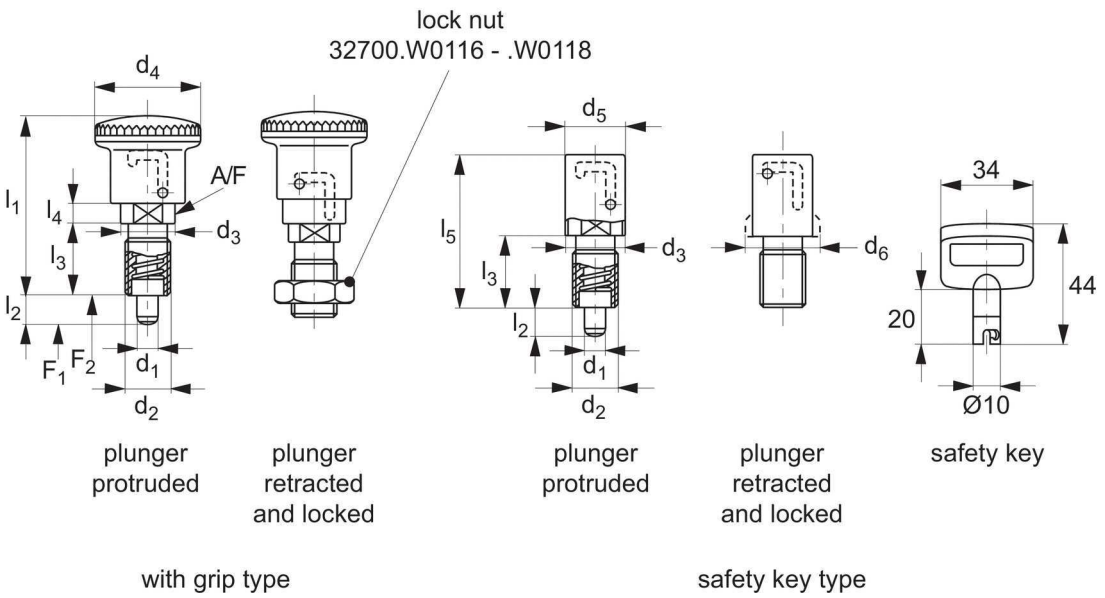
Disclaimer:

You should carry out your own test series to verify whether a certain product is suitable for your specific applications.

Index plungers - Pull Grip

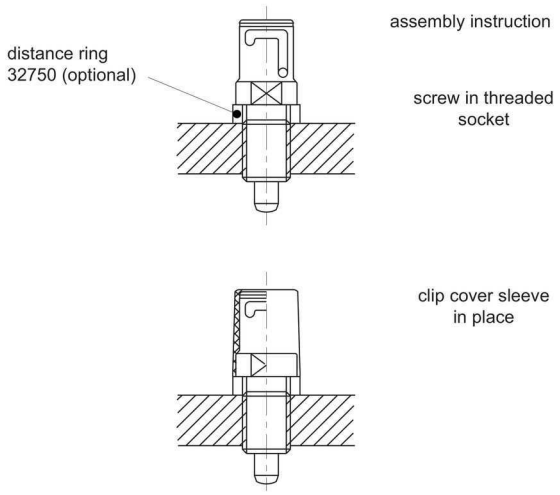
locking - tamper resistant - pin protruding at start

32781





Order No.	Type	d_1 0 -0,05	d_2	d_3	d_4	d_5	d_6	l_1 ≈	l_2	l_3	l_4 ≈	l_5	A/F	Spring load* F_1 N≈	Spring load* F_2 N≈	Kg
32781.W0006	With Grip	6	M12x1,5	16	28	17	-	50	8	20	6	43	14	13	28	0,05
32781.W0008	With Grip	8	M16x1,5	18	28	17	20	52	10	22	6	48	16	14	38	0,05
32781.W0026	For Safety key	6	M12x1,5	16	28	17	-	50	8	20	6	43	14	13	28	0,03
32781.W0028	For Safety key	8	M16x1,5	18	28	17	20	52	10	22	6	48	16	14	38	0,05
32700.W0116	Lock Nut	-	M12x1,5	-	-	-	-	-	-	-	-	-	-	-	-	
32700.W0118	Lock Nut	-	M16x1,5	-	-	-	-	-	-	-	-	-	-	-	-	
32781.W0998	Safety key	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Material

Body: free cutting steel, zinc plated, blue passivated.
Pin: stainless steel, 1.4305 (AISI 303).
Spring: stainless steel, 1.4310 (AISI 301).
Grip: thermoplastic PA6, black.

Technical Notes

Tamper resistant against unauthorised or accidental actuation.

At start position pin is protruding, when lever is actuated pin retracts.
Two different types available;
with grip - enables pin to be held in retracted/non projecting position; pull back grip, turn 90° to engage 'locking' via a deep notch in plunger body.
with safety key - use key to hold pin in retracted/non-projecting position; acuate key (please order seperately) turn 90° to engage 'locking via a deep notch in plunger body.

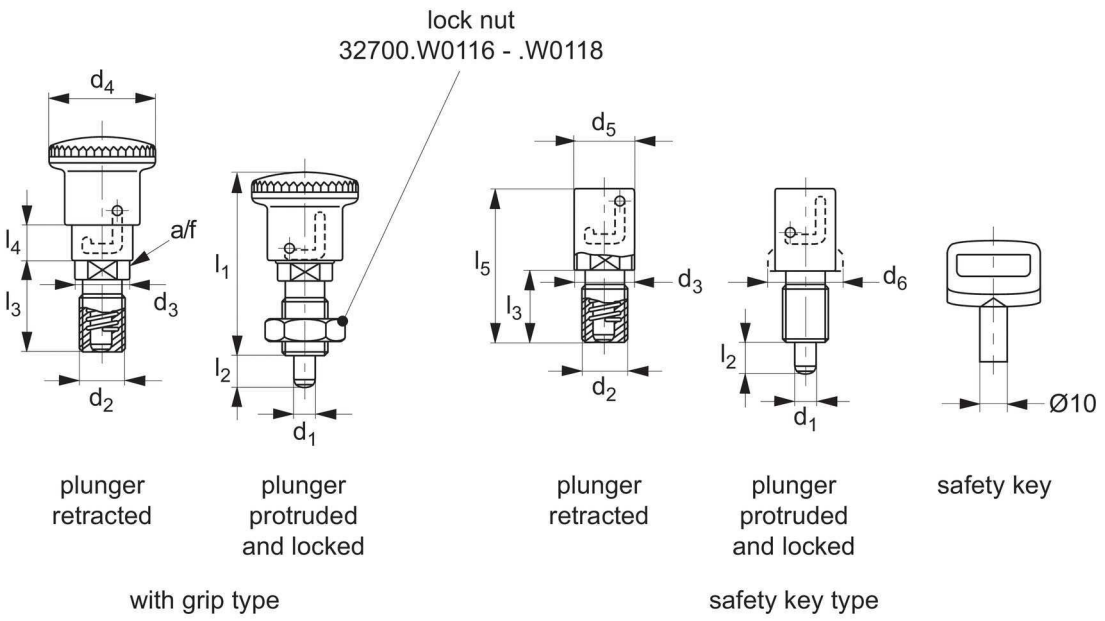
Tips

Grip non-removable.
Spring loads* = statisical average.

Index plungers - Pull Grip

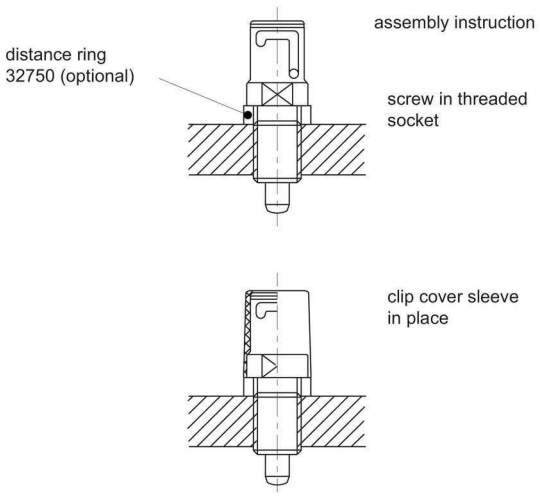
locking - tamper resistant - pin retracted at start

32782





Order No.	Type	d_1 0 -0,05	d_2	d_3	d_4	d_5	d_6	l_1 ≈	l_2	l_3	l_4 ≈	l_5	a/f	Spring load* F_1 N ≈	Spring load* F_2 N ≈	Kg
32782.W0356	With Grip	6	M12x1,5	16	28	17	-	51,5	8	20	6	43	14	12	27	0,05
32782.W0358	With Grip	8	M16x1,5	18	28	17	20	54,5	10	22	6	48	16	12	35	0,05
32782.W0366	For Safety Key	6	M12x1,5	16	28	17	-	51,5	8	20	6	43	14	12	27	0,05
32782.W0368	For Safety Key	8	M16x1,5	18	28	17	20	54,5	10	22	6	48	16	12	35	0,05
32700.W0116	Lock Nut	-	M12x1,5	-	-	-	-	-	-	-	-	-	-	-	-	-
32700.W0118	Lock Nut	-	M16x1,5	-	-	-	-	-	-	-	-	-	-	-	-	-
32782.W0999	Key	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Material

Body: free cutting steel, zinc plated, blue passivated.
Pin: stainless steel, 1.4305 (AISI 303).
Spring: stainless steel, 1.4301 (AISI301).
Grip: thermoplastic PA6, black.

Technical Notes

Tamper resistant against unauthorised or accidental actuation.

At start position pin is retracted, when lever is actuated pin protrudes.
Two different types available;
with grip - use key to hold pin in protruding position; pull back grip, turn 90° to engage 'locking' via a deep notch in plunger body.
with safety key - use key to hold pin in protruding position; acuate key (please order seperately) turn 90° to engage 'locking via a deep notch in plunger body.

Tips

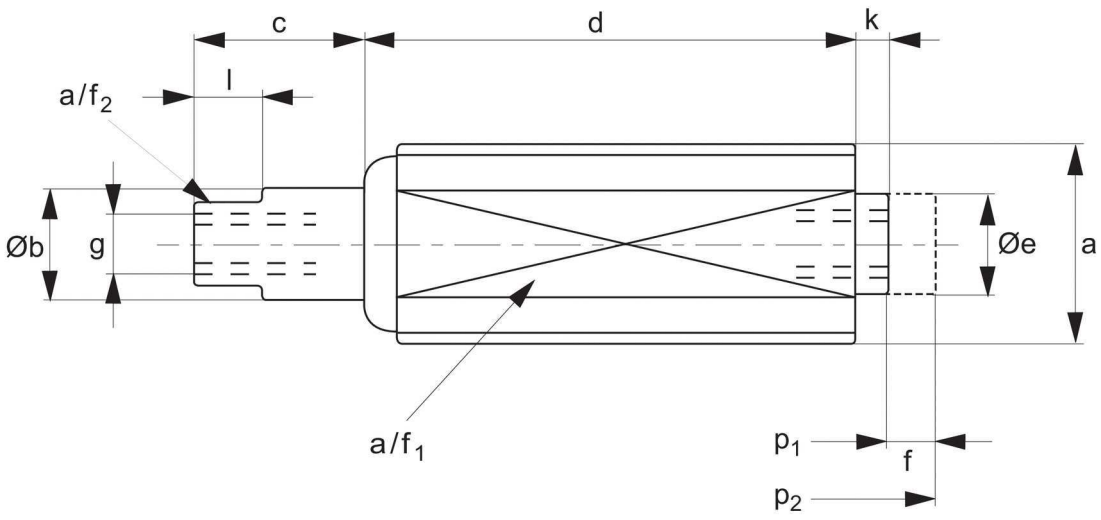
Grip non-removable.
Spring loads* = statistical average.

Index plungers - Push-Pull

non-locking



32790





Order No.	a	Øb	c	d -1	Øe	f	g	a/f1	k	l	p1 N	p2 N	a/f2	g
32790.W0120	M12	7	4,5	11,0	6	3,5	M 4x8	10	1,5	5	5	20	6	5
32790.W0121	M12	7	7,0	18,5	6	6,0	M 4x8	10	1,5	5	5	20	6	8
32790.W0122	M12	7	11,0	26,0	6	10,0	M 4x8	10	1,5	5	5	20	6	12
32790.W0130	M12	7	4,5	11,0	6	3,0	M 4x8	10	1,5	5	15	80	6	5
32790.W0131	M12	7	7,0	18,5	6	5,0	M 4x8	10	1,5	5	15	80	6	8
32790.W0132	M12	7	11,0	26,0	6	8,0	M 4x8	10	1,5	5	15	80	6	12
32790.W0140	M12	7	4,5	11,0	6	3,0	M 4x8	10	1,5	5	30	125	6	5
32790.W0141	M12	7	7,0	18,5	6	5,0	M 4x8	10	1,5	5	30	125	6	8
32790.W0142	M12	7	11,0	26,0	6	8,0	M 4x8	10	1,5	5	30	125	6	13
32790.W0180	M18x1,5	11	6,0	17,0	10	4,0	M 6x12	16	2,0	6	50	150	9	22
32790.W0181	M18x1,5	11	11,5	29,5	10	7,0	M 6x12	16	2,0	6	50	150	9	43
32790.W0182	M18x1,5	11	16,0	45,5	10	12,5	M 6x12	16	2,0	6	50	150	9	66



Material

Body: steel, blue galvanised.
Pins: steel, burnished.

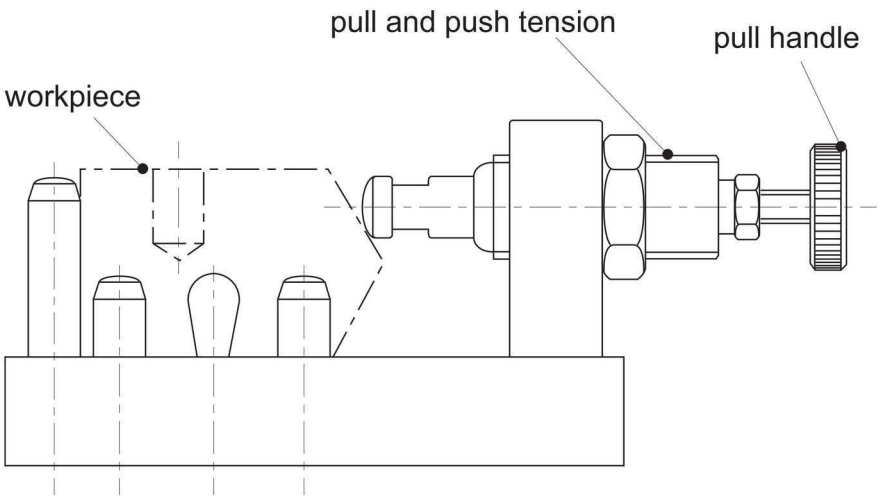
Technical Notes

Ideal for either pressure (push) and tension (pull) applications, due to the unique designs spring loaded pin with threads at both ends to allow installation of your own adaptor or handle.
A wide range of application: pressure bolts, holding or magnets etc.
Requires very small space requirements.

Index plungers - Push-Pull

non-locking

32790





Material

Body: steel, blue galvanised.
Pins: steel, burnished.

Technical Notes

Ideal for either pressure (push) and tension (pull) applications, due to the unique designs spring loaded pin with threads at both ends to allow installation of your own adaptor or handle.
A wide range of application: pressure bolts, holding or magnets etc.
Requires very small space requirements.

Wixroyd Index Plungers



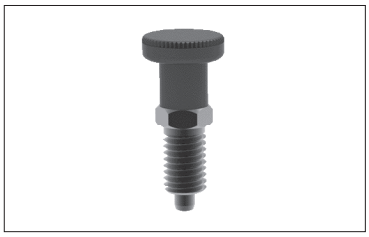
32460 -32790

A wide selection of solutions

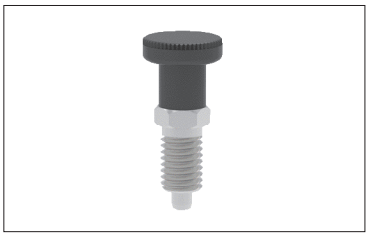
Applications

- Locating and positioning.
- Indexing.
- Securing.
- Positive locking.
- Rapid adjustment of all kinds of tables, platforms and fixtures.
- Machine and fixture design.
- OEM products.
- Sports equipment.
- Medical aides (wheelchairs etc.).
- Aerospace.
- Machine cabinets.

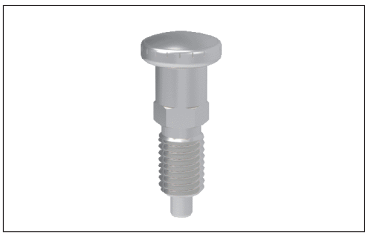
Materials



Steel with plastic grip

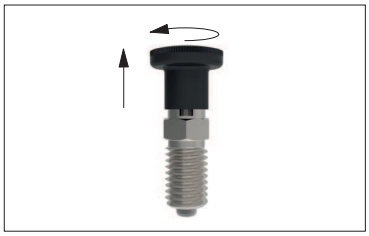


Stainless with plastic grip

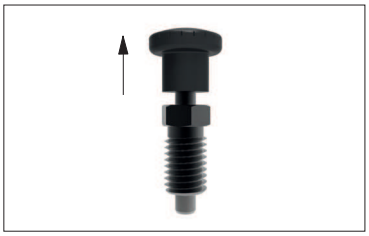


Stainless body and grip

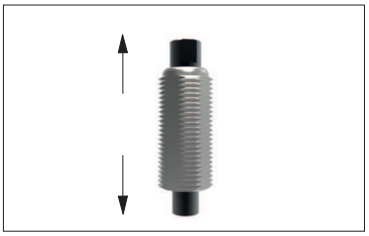
Locking or non locking



Locking (park)



Non locking (spring back)



Push pull

Handling and actuation methods



Standard grip



Lever grip



T-handle



Pull ring



Threaded for bespoke handle

Mounting options



Fine threaded (standard)



Coarse thread



Flange mount



Thin wall mount



Weldable

Additional technical notes

- Unless otherwise stated, grips on index plungers are not removeable.
- Many of the pins on index plungers are toleranced to either the pin or the hole. Please refer to the specific product table.
- Index plungers are not recommended for shear load applications.

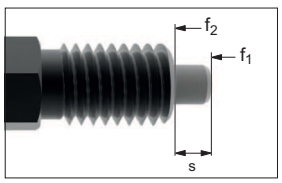
	Pin Tol.	Hole Tol.
1	h_9	+0,03 +0,08
2	-0,02 -0,04	H_7

Spring loads

s Stroke, or movement of plunger's pin.

f_1 The force required in Newtons (N) to over come the static strength of the spring and achieve initial movement of the plunger's pin.

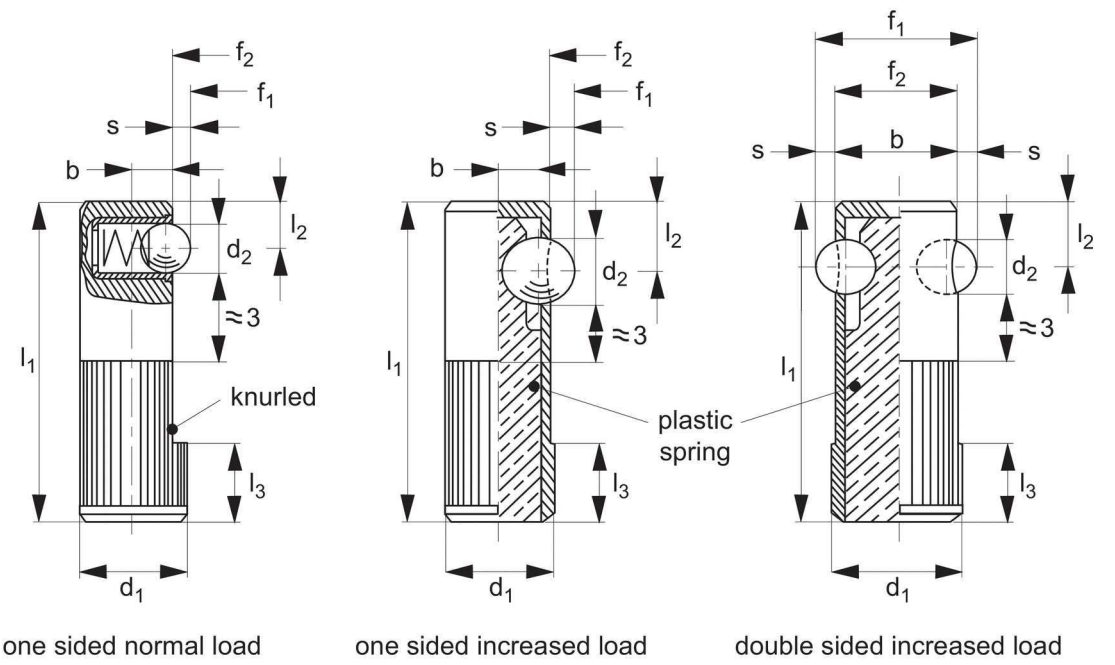
f_2 The force required in Newtons (N) to fully compress the spring until the pin is fully depressed against the plunger's body.



Lateral Spring Plungers



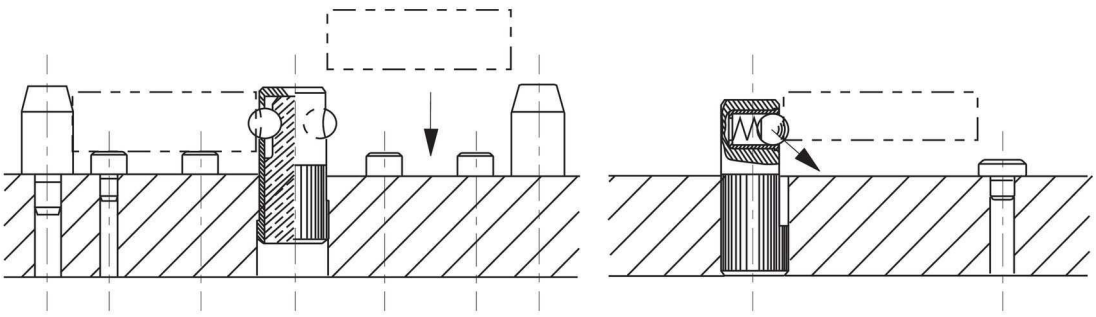
32800



one sided normal load | one sided increased load | double sided increased load



Order No.	Ball type	Spring load	d_1 +0,1	d_2	l_1	l_2	l_3	b	s	Location hole H8	Spring load* f_1 N≈	Spring load* f_2 N≈	max. °C	g
32800.W0008	Stainless, One	Normal	8	3,0	25	3,6	6	3,2	0,8	8	2,5	6,5	-30/+50	9
32800.W0010	Stainless, One	Normal	10	4,0	30	4,2	7	4,0	1,0	10	4,5	9,0	-30/+50	17
32800.W0012	Stainless, One	Normal	12	5,0	35	4,8	9	5,0	1,6	12	6,5	13,0	-30/+50	29
32800.W0014	Stainless, One	Normal	14	6,5	40	5,8	10	5,4	1,9	14	8,0	18,0	-30/+50	43
32800.W0108	Thermo, One	Normal	8	3,0	25	3,6	6	3,2	0,8	8	2,5	6,5	-30/+50	9
32800.W0110	Thermo, One	Normal	10	4,0	30	4,2	7	4,0	1,0	10	4,5	9,0	-30/+50	17
32800.W0112	Thermo, One	Normal	12	5,0	35	4,8	9	5,0	1,6	12	6,5	13,0	-30/+50	28
32800.W0114	Thermo, One	Normal	14	6,5	40	5,8	10	5,4	1,9	14	8,0	18,0	-30/+50	42
32800.W0410	Steel, One	Increased	10	5,5	30	7,0	8	4,5	1,0	10	60,0	170,0	-40/+80	9
32800.W0412	Steel, One	Increased	12	6,5	35	8,0	9	5,5	1,5	12	80,0	260,0	-40/+80	14
32800.W0414	Steel, One	Increased	14	8,0	40	9,0	10	6,5	2,0	14	120,0	480,0	-40/+80	20
32800.W0616	Steel, Double	Increased	16	5,5	35	7,0	11	15,0	1,5	16	110,0	220,0	-40/+80	21
32800.W0618	Steel, Double	Increased	18	6,5	40	8,0	12	17,0	1,8	18	120,0	330,0	-40/+80	27
32800.W0622	Steel, Double	Increased	22	8,0	45	9,0	15	21,0	2,5	22	130,0	540,0	-40/+80	45



Material
Body: free cutting steel, blackened.
Ball: ball bearing steel 1.3505 (100Cr6) hardened, stainless steel, hardened or Thermoplastic white (POM).
Spring: stainless steel or plastic (PU).

Technical Notes
The lateral spring plunger must be inserted into a bore to measure at least l3. Positions and applies pressure. Spring loads * = statistical average values.

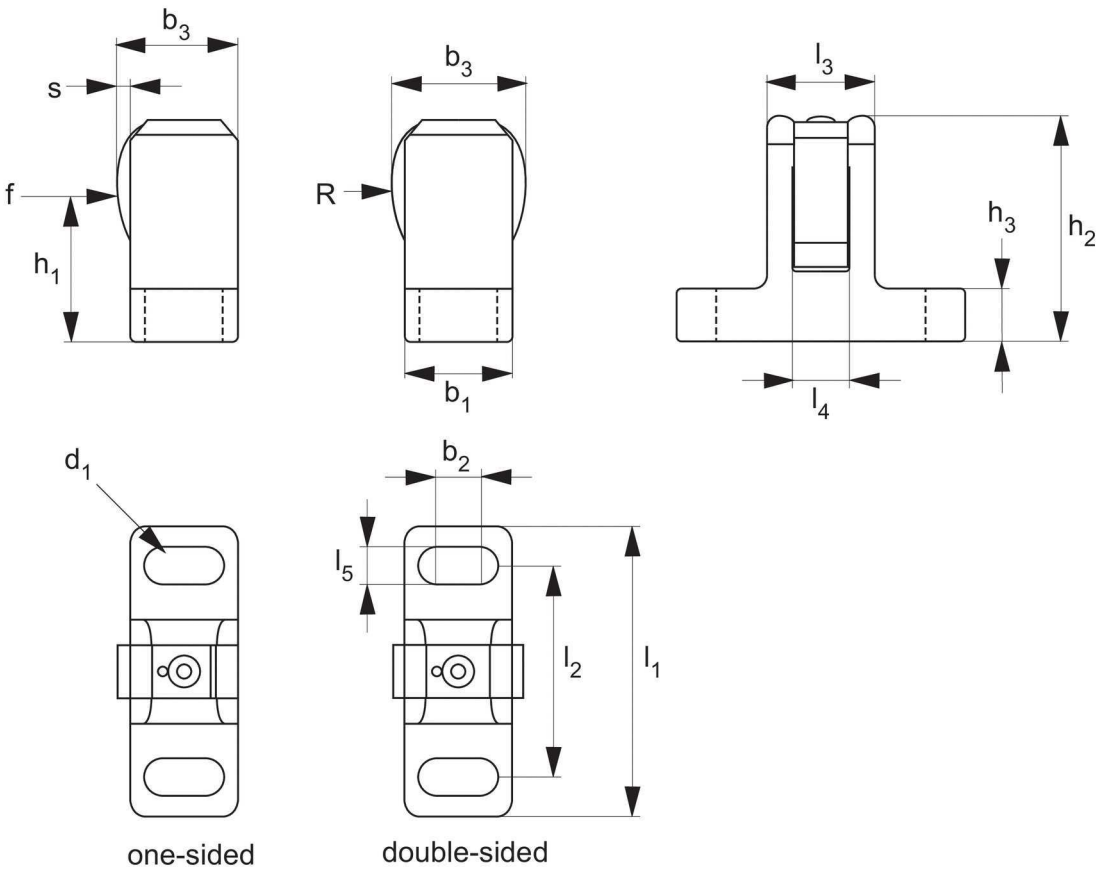
Tips
When storing the fixtures, no pressure should be applied to the plastic spring.

Lateral Spring Plungers

with sheet steel spring

32802





Material
Body: steel, blackened.
Spring element: stainless steel.

Technical Notes
Simple and secure positioning of work pieces or components. If component is mounted below height h_1, a down hold clamping effect is present. Double sided version, ideal for multi-component clamping.
Max. temperature resistance 250°C

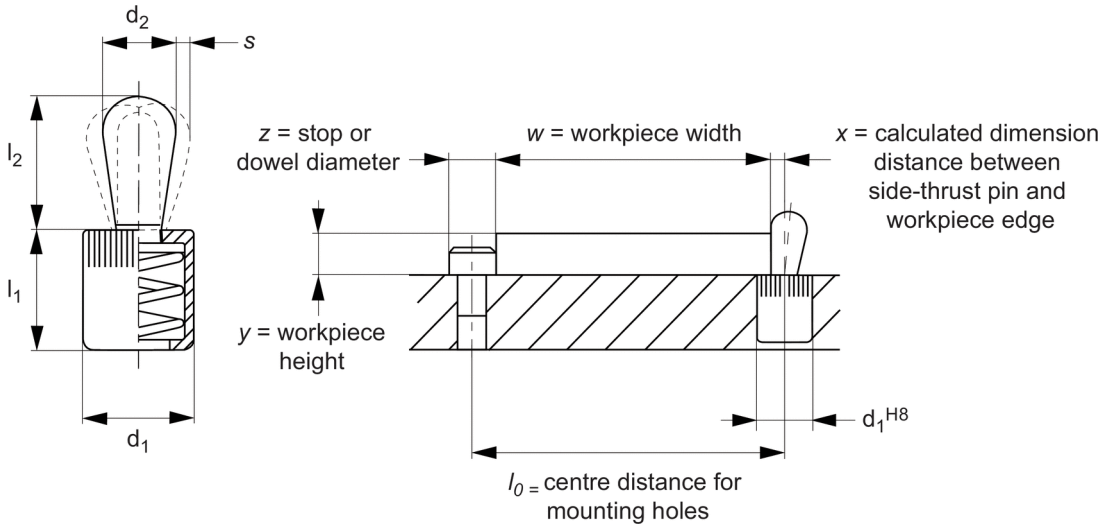
Order No.	Finish	d_1 for screw	l_1 ±1	l_2	l_3	l_4	l_5	b_1 ±0,5	b_2	b_3	h_1	h_2 ±1	h_3	s	Spring load f ≈*	R	g
32802.W0006	One-Sided	M 6	55	40	20	10	6,6	20	8	22,5	28,5	43,0	10	1,5	55	22,5	130
32802.W0012	One-Sided	M12	72	50	23	12	13,5	25	6	29,0	40,5	61,5	15	1,5	170	32,8	255
32802.W0206	Double-Sided	M 6	55	40	20	10	6,6	20	8	25,0	28,5	42,5	10	1,5	55	22,5	135
32802.W0212	Double-Sided	M12	72	50	23	12	13,5	25	6	33,5	40,5	61,5	15	1,5	170	32,8	260

Side-Thrust Pins

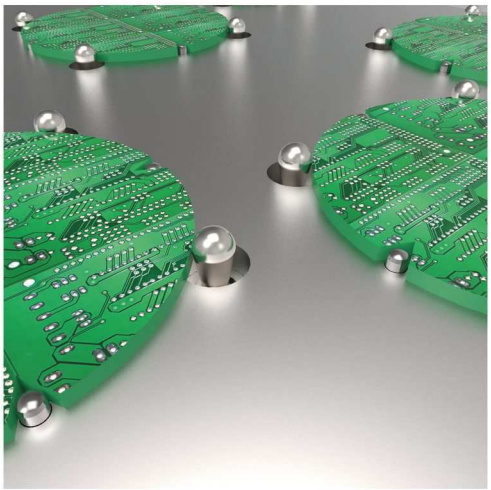
without seal

32810





Order No.	Pin material	Spring load	d_1	d_2	l_1 -1	l_2 ±0,5	Location hole d_1 tol. H8	Stroke s	Spring pressure N	Spring colour	Temp. resistance max. °C	Fitting tool 32810	g
32810.W0001	Steel Pin	Light	6	3	7	4,0	6	0,5	10	S/S	250	.W0830	1
32810.W0002	Steel Pin	Standard	6	3	7	4,0	6	0,5	20	Black	250	.W0830	1
32810.W0003	Steel Pin	Heavy	6	3	7	4,0	6	0,5	40	Blue	250	.W0830	1
32810.W0004	Steel Pin	Light	10	5	11	6,7	10	0,8	20	S/S	250	.W0831	3
32810.W0005	Steel Pin	Standard	10	5	11	6,7	10	0,8	50	Black	250	.W0831	3
32810.W0006	Steel Pin	Heavy	10	5	11	6,7	10	0,8	100	Blue	250	.W0831	3
32810.W0007	Steel Pin	Light	10	6	11	10,7	10	1,0	40	S/S	250	.W0831	4
32810.W0008	Steel Pin	Standard	10	6	11	10,7	10	1,0	75	Black	250	.W0831	4
32810.W0009	Steel Pin	Heavy	10	6	11	10,7	10	1,0	150	Blue	250	.W0831	4
32810.W0010	Steel Pin	Light	12	8	13	13,9	12	1,3	50	S/S	250	.W0832	7
32810.W0011	Steel Pin	Standard	12	8	13	13,9	12	1,3	100	Black	250	.W0832	7
32810.W0012	Steel Pin	Heavy	12	8	13	13,9	12	1,3	200	Blue	250	.W0832	7
32810.W0013	Steel Pin	Light	16	10	17	16,7	16	1,6	100	S/S	250	.W0833	15
32810.W0014	Steel Pin	Standard	16	10	17	16,7	16	1,6	200	Black	250	.W0833	15
32810.W0015	Plastic Pin	Heavy	16	10	17	16,7	16	1,6	300	Blue	80	.W0833	15
32810.W0404	Plastic Pin	Heavy	10	5	11	6,7	10	0,8	20	S/S	80	.W0831	1
32810.W0407	Plastic Pin	Standard	10	6	11	10,7	10	1,0	40	S/S	80	.W0831	2
32810.W0410	Plastic Pin	Light	12	8	13	13,9	12	1,3	50	S/S	80	.W0832	3
32810.W0413	Plastic Pin	Heavy	16	10	17	16,7	16	1,6	100	S/S	80	.W0833	7
32810.W0830	Fitting tool	-	6	-	-	-	-	-	-	-	-	-	19
32810.W0831	Fitting tool	-	10	-	-	-	-	-	-	-	-	-	49
32810.W0832	Fitting tool	-	12	-	-	-	-	-	-	-	-	-	65
32810.W0833	Fitting tool	-	16	-	-	-	-	-	-	-	-	-	105



Material

Body: aluminium.
Pin: steel, case hardened and galvanized, or thermoplastic (POM) white.
Spring: steel (blackened or blue galvanized), or stainless steel.

Technical Notes

Press fit installation into hole d_1 to tol. H8, using fitting tool (order separately).
Installation calculations;
A) Calculating centre distance for mounting holes (l_0);
$l_0=(z/2)+w+x$
B) Calculating pin location (x);

When workpiece height (y) is greater than or equal to $l_2-(d_2/2)$ then (x) is calculated as; $x=(d_2/2)-s$

When workpiece height (y) is less than

$l_2-(d_2/2)$ then (x) is calculated as;
$x=(d_2/2)-s-\{[l_2-(d_2/2)-y]*0.123\}$
l_0 = centre distance for mounting holes
y = workpiece height
w = workpiece width
x = distance between side-thrust pin and workpiece edge
s = stroke
z =stop or dowel stop diameter

Tips

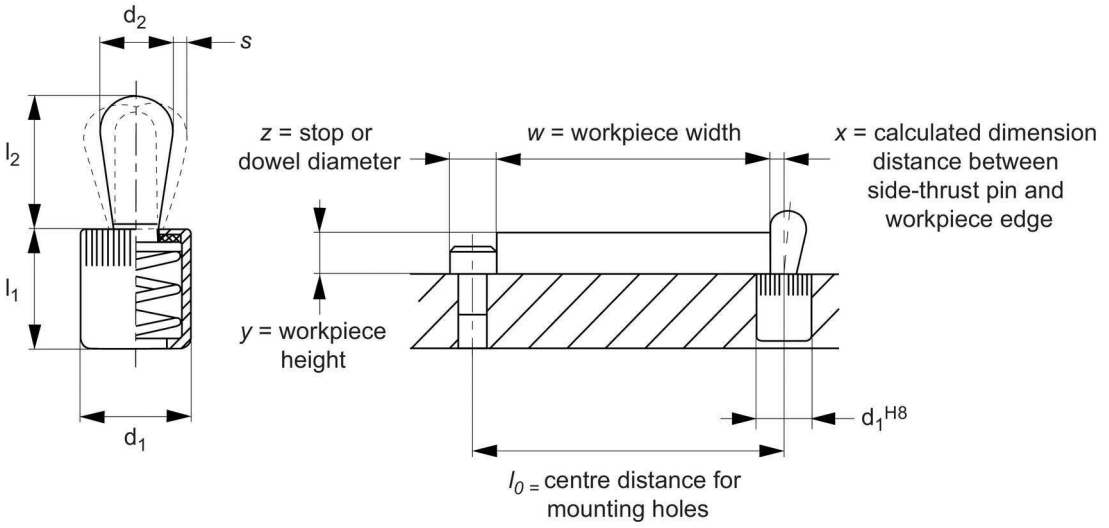
Side-thrust pins are ideal for holding, clamping and positioning parts.
Spring colour gives visual indication of spring pressure (N).
Light spring load = natural stainless spring.
Standard spring load = steel spring, blackened.
Heavy spring load = steel spring, blue galvanized.

Side-Thrust Pins

with seal

32820





Order No.	Pin material	Spring load	d_1	d_2	l_1 -1	l_2 ±0,5	Location hole d_1 tol. H8	Stroke *s*	Spring pressure N	Temp. resistance max. °C	Spring colour	Fitting tool 32810	g
32820.W0001	Steel Pin	Light	6	3	7	4	6	0,5	10	110	S/S	.W0830	1
32820.W0002	Steel Pin	Standard	6	3	7	4	6	0,5	20	110	Black	.W0830	1
32820.W0003	Steel Pin	Heavy	6	3	7	4	6	0,5	40	110	Blue	.W0830	1
32820.W0004	Steel Pin	Light	10	5	12	6	10	0,8	20	110	S/S	.W0831	3
32820.W0005	Steel Pin	Standard	10	5	12	6	10	0,8	50	110	Black	.W0831	3
32820.W0006	Steel Pin	Heavy	10	5	12	6	10	0,8	100	110	Blue	.W0831	3
32820.W0007	Steel Pin	Light	10	6	12	10	10	1,0	40	110	S/S	.W0831	4
32820.W0008	Steel Pin	Standard	10	6	12	10	10	1,0	75	110	Black	.W0831	4
32820.W0009	Steel Pin	Heavy	10	6	12	10	10	1,0	150	110	Blue	.W0831	4
32820.W0010	Steel Pin	Light	12	8	14	13	12	1,3	50	110	S/S	.W0832	7
32820.W0011	Steel Pin	Standard	12	8	14	13	12	1,3	100	110	Black	.W0832	7
32820.W0012	Steel Pin	Heavy	12	8	14	13	12	1,3	200	110	Blue	.W0832	8
32820.W0013	Steel Pin	Light	16	10	18	16	16	1,6	100	110	S/S	.W0833	15
32820.W0014	Steel Pin	Standard	16	10	18	16	16	1,6	200	110	Black	.W0833	15
32820.W0015	Steel Pin	Heavy	16	10	18	16	16	1,6	300	110	Blue	.W0833	16
32820.W0401	Plastic Pin	Light	6	3	7	4	6	0,5	10	80	S/S	.W0830	1
32820.W0404	Plastic Pin	Light	10	5	12	6	10	0,8	20	80	S/S	.W0831	1
32820.W0407	Plastic Pin	Light	10	6	12	10	10	1,0	40	80	S/S	.W0831	2
32820.W0410	Plastic Pin	Light	12	8	14	13	12	1,3	50	80	S/S	.W0832	3
32820.W0413	Plastic Pin	Light	16	10	18	16	16	1,6	100	80	S/S	.W0833	7
32810.W0830	Fitting tool	-	6	-	-	-	-	-	-	-	-	-	19
32810.W0831	Fitting tool	-	10	-	-	-	-	-	-	-	-	-	49
32810.W0832	Fitting tool	-	12	-	-	-	-	-	-	-	-	-	65
32810.W0833	Fitting tool	-	16	-	-	-	-	-	-	-	-	-	105

Material

Body: aluminium.
Pin: steel, case hardened and galvanized, or thermoplastic (POM) white.
Spring: steel (blackened or blue galvanized), or stainless steel.
Seal: rubber (CR), 60 shore.

Technical Notes

Press fit installation into hole d_1 to tol. H8, using fitting tool (order separately).
Installation calculations;
A) Calculating centre distance for mounting holes (l_0);
$l_0=(z/2)+w+x$

B) Calculating pin location (x);
When workpiece height (y) is greater than or equal to $l_2-(d_2/2)$ then (x) is calculated as; $x=(d_2/2)-s$

When workpiece height (y) is less than
$l_2-(d_2/2)$ then (x) is calculated as;
$x=(d_2/2)-s-\{[l_2-(d_2/2)-y]*0.123\}$

l_0 = centre distance for mounting holes
y = workpiece height
w = workpiece width
x = distance between side-thrust pin and workpiece edge
s = stroke
z =stop or dowel stop diameter

Tips

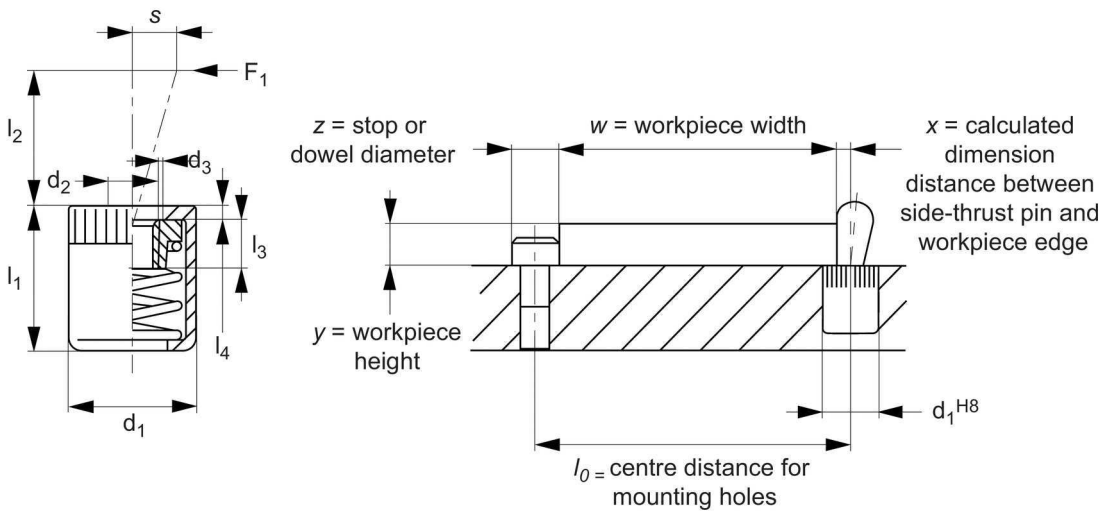
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Side-Thrust Pins - Without Seal

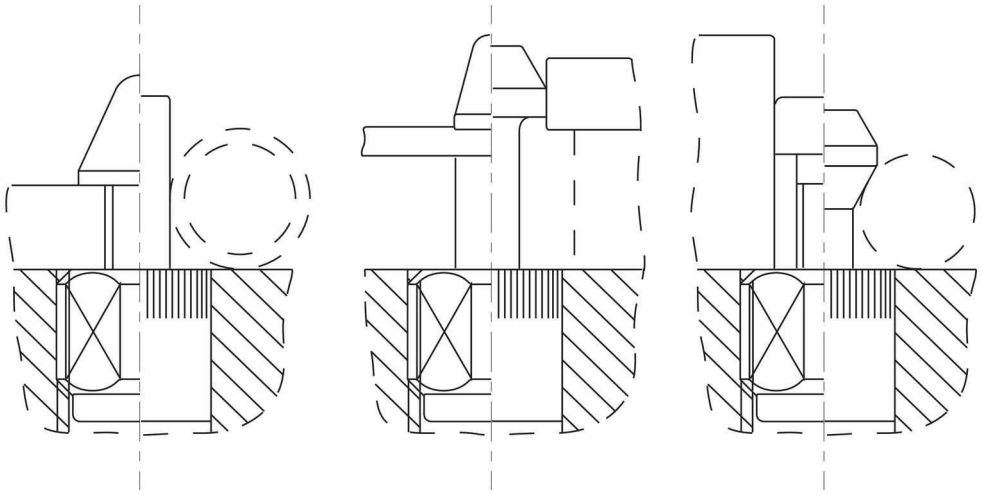
for use with pins of your own design

32830





Order No.	Spring load	d_1	d_2	d_3	l_1 -1	l_2	l_3	l_4	Location hole d_1 tol. H8	Stroke *s*	Spring pressure N	Spring colour	Temp. resistance max. °C	Fitting tool 32810	g
32830.W0001	Light	10	M 4	6,3	11	2,5	4,5	1,2	10	1,6	20	S/S	250	.W0831	2
32830.W0002	Standard	10	M 4	6,3	11	2,5	4,5	1,2	10	1,6	50	Black	250	.W0831	2
32830.W0003	Heavy	10	M 4	6,3	11	2,5	4,5	1,2	10	1,6	100	Blue	250	.W0831	2
32830.W0004	Light	10	M 4	6,3	11	7,5	4,5	1,2	10	2,0	40	S/S	250	.W0831	2
32830.W0005	Standard	10	M 4	6,3	11	7,5	4,5	1,2	10	2,0	75	Black	250	.W0831	2
32830.W0006	Heavy	10	M 4	6,3	11	7,5	4,5	1,2	10	2,0	100	Blue	250	.W0831	3
32830.W0007	Light	16	M 6	10,3	18	11,5	7,5	1,7	16	3,2	100	S/S	250	.W0833	9
32830.W0008	Standard	16	M 6	10,3	18	11,5	7,5	1,7	16	3,2	150	Black	250	.W0833	9
32830.W0009	Heavy	16	M 6	10,3	18	11,5	7,5	1,7	16	3,2	200	Blue	250	.W0833	9
32810.W0831	Fitting tool	10	-	-	-	-	-	-	-	-	-	-	-	-	49
32810.W0833	Fitting tool	16	-	-	-	-	-	-	-	-	-	-	-	-	105



Material

Body: aluminium.
Threaded Washer: steel, blackened.
Spring: steel (blackened or blue galvanized), or stainless steel.

Technical Notes

Press fit installation into hole d_1 to tol. H8, using fitting tool (order separately).
Installation calculations;
A) Calculating centre distance for mounting holes (l_0);
$l_0=(z/2)+w+x$

B) Calculating pin location (x);

When workpiece height (y) is greater than or equal to $l_2-(d_2/2)$ then (x) is calculated as; $x=(d_2/2)-s$

When workpiece height (y) is less than
$l_2-(d_2/2)$ then (x) is calculated as;
$x=(d_2/2)-s-\{[l_2-(d_2/2)-y]*0.123\}$

l_0 = centre distance for mounting holes
y = workpiece height
w = workpiece width
x = distance between side-thrust pin and workpiece edge
s = stroke
z =stop or dowel stop diameter

Tips

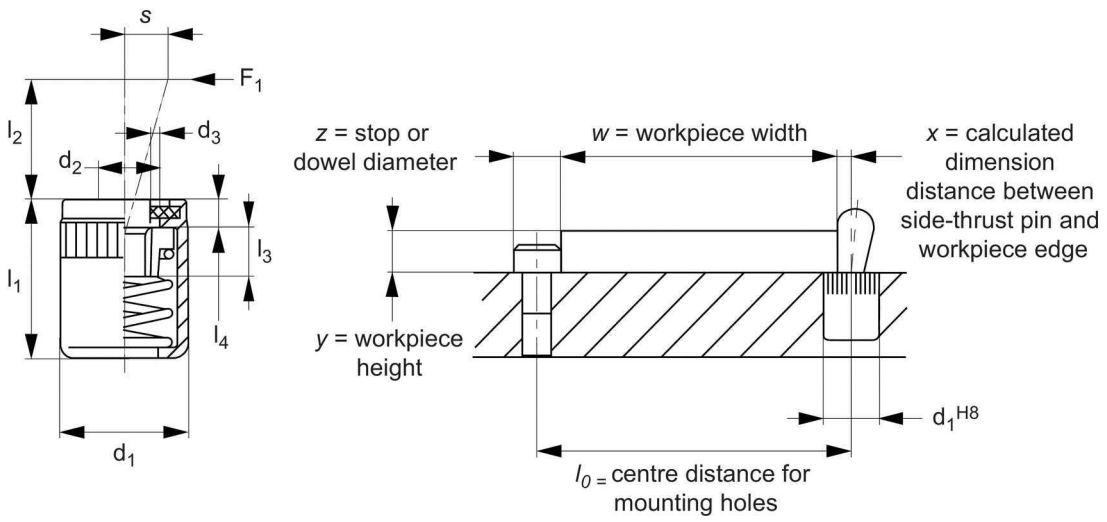
Side-thrust pins are ideal for holding, clamping and positioning parts.
Spring colour gives visual indication of spring pressure (N).
Light spring load = natural stainless spring.
Standard spring load = steel spring, blackened.
Heavy spring load = steel spring, blue galvanized.

Side-Thrust Pins - With Seal

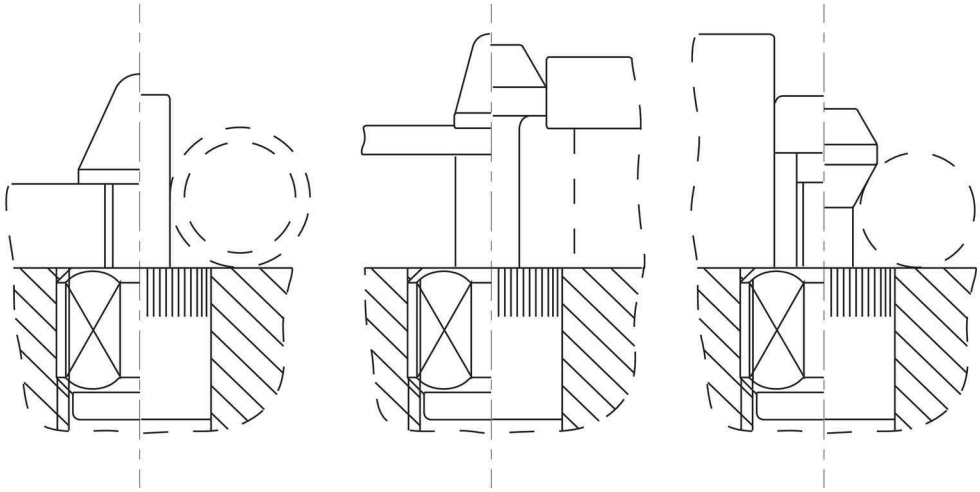
for use with pins of your own design

32830





Order No.	Spring load	d_1	d_2	d_3	l_1 -2	l_2	l_3	l_4	Location hole d_1 tol. H8	Stroke s	Spring pressure N	Spring colour	Temp. resistance max. °C	Fitting tool 32810	g
32830.W0401	Light	10	M 4	6,3	11	2,5	4,5	1,8	10	1,6	20	S/S	110	.W0831	2
32830.W0402	Standard	10	M 4	6,3	11	2,5	4,5	1,8	10	1,6	50	Black	110	.W0831	2
32830.W0403	Heavy	10	M 4	6,3	11	2,5	4,5	1,8	10	1,6	100	Blue	110	.W0831	2
32830.W0404	Light	10	M 4	6,3	11	7,5	4,5	1,8	10	2,0	40	S/S	110	.W0831	2
32830.W0405	Standard	10	M 4	6,3	11	7,5	4,5	1,8	10	2,0	75	Black	110	.W0831	2
32830.W0406	Heavy	10	M 4	6,3	11	7,5	4,5	1,8	10	2,0	100	Blue	110	.W0831	3
32830.W0407	Light	16	M 6	10,3	18	11,5	7,5	2,0	16	3,2	100	S/S	110	.W0833	9
32830.W0408	Standard	16	M 6	10,3	18	11,5	7,5	2,0	16	3,2	150	Black	110	.W0833	9
32830.W0409	Heavy	16	M 6	10,3	18	11,5	7,5	2,0	16	3,2	200	Blue	110	.W0833	9
32810.W0831	Fitting tool	10	-	-	-	-	-	-	-	-	-	-	-	-	49
32810.W0833	Fitting tool	16	-	-	-	-	-	-	-	-	-	-	-	-	105



Material

Body: aluminium.
Threaded Washer: steel, blackened.
Spring: steel (blackened or blue galvanized), or stainless steel.
Seal: rubber (CR), 60 shore.

Technical Notes

Press fit installation into hole d_1 to tol. H8, using fitting tool (order separately).
Installation calculations;
A) Calculating centre distance for mounting holes (l_0);
$l_0=(z/2)+w+x$

B) Calculating pin location (x);

When workpiece height (y) is greater than or equal to $l_2-(d_2/2)$ then (x) is calculated as; $x=(d_2/2)-s$

When workpiece height (y) is less than $l_2-(d_2/2)$ then (x) is calculated as; $x=(d_2/2)-s-\{[l_2-(d_2/2)-y]*0.123\}$

l_0 = centre distance for mounting holes
y = workpiece height
w = workpiece width
x = distance between side-thrust pin and workpiece edge
s = stroke
z =stop or dowel stop diameter

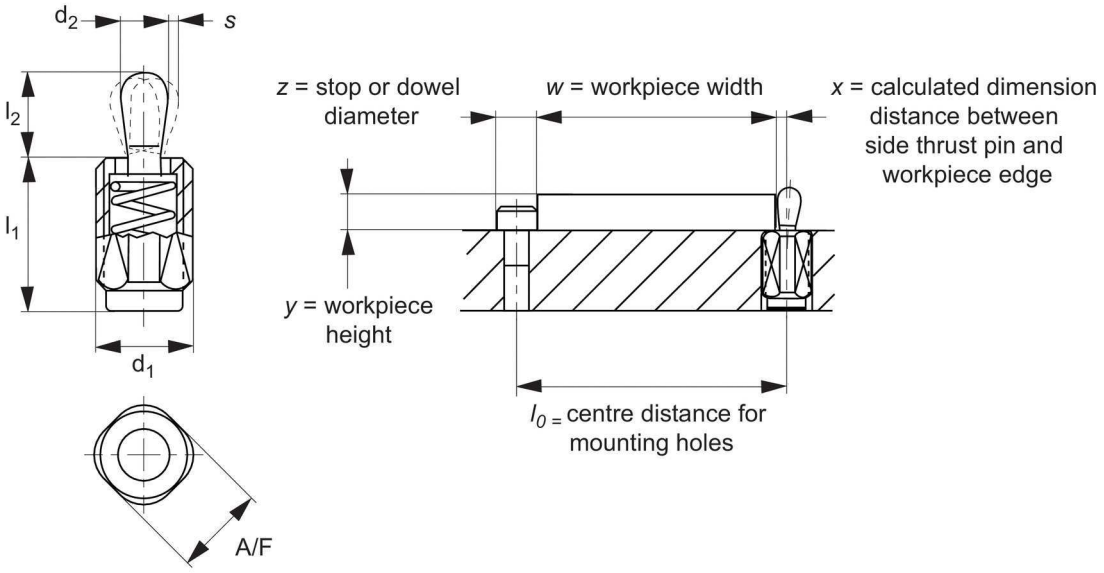
Tips

Side-thrust pins are ideal for holding, clamping and positioning parts.
Spring colour gives visual indication of spring pressure (N).
Light spring load = natural stainless spring.
Standard spring load = steel spring, blackened.
Heavy spring load = steel spring, blue galvanized.

Side-Thrust Pins - Threaded

without seal

32840





Order No.	Pin material	Spring load	d_1	d_2	l_1 -2	l_2	A/F	Stroke s	Spring pressure N	Spring colour	Temp. resistance max. °C	Fitting tool 32840	g
32840.W0001	Steel pin	Light	M12	5	11,5	6,4	10	1,6	20	S/S	250	.W0820	4
32840.W0002	Steel pin	Light	M12	5	19,0	6,4	10	1,6	20	S/S	250	.W0820	6
32840.W0003	Steel pin	Light	M12	5	26,5	6,4	10	1,6	20	S/S	250	.W0820	8
32840.W0004	Steel pin	Standard	M12	5	11,5	6,4	10	1,6	50	Black	250	.W0820	4
32840.W0005	Steel pin	Standard	M12	5	19,0	6,4	10	1,6	50	Black	250	.W0820	6
32840.W0006	Steel pin	Standard	M12	5	26,5	6,4	10	1,6	50	Black	250	.W0820	8
32840.W0007	Steel pin	Heavy	M12	5	11,5	6,4	10	1,6	100	Blue	250	.W0820	4
32840.W0008	Steel pin	Heavy	M12	5	19,0	6,4	10	1,6	100	Blue	250	.W0820	7
32840.W0009	Steel pin	Heavy	M12	5	26,5	6,4	10	1,6	100	Blue	250	.W0820	9
32840.W0010	Steel pin	Light	M12	6	11,5	10,4	10	2,0	40	S/S	250	.W0820	5
32840.W0011	Steel pin	Light	M12	6	19,0	10,4	10	2,0	40	S/S	250	.W0820	6
32840.W0012	Steel pin	Light	M12	6	26,5	10,4	10	2,0	40	S/S	250	.W0820	8
32840.W0013	Steel pin	Standard	M12	6	11,5	10,4	10	2,0	75	Black	250	.W0820	5
32840.W0014	Steel pin	Standard	M12	6	19,0	10,4	10	2,0	75	Black	250	.W0820	7
32840.W0015	Steel pin	Standard	M12	6	26,5	10,4	10	2,0	75	Black	250	.W0820	10
32840.W0016	Steel pin	Heavy	M12	6	11,5	10,4	10	2,0	100	Blue	250	.W0820	5
32840.W0017	Steel pin	Heavy	M12	6	19,0	10,4	10	2,0	100	Blue	250	.W0820	8
32840.W0018	Steel pin	Heavy	M12	6	26,5	10,4	10	2,0	100	Blue	250	.W0820	10
32840.W0019	Steel pin	Light	M18x1,5	10	18,0	16,9	16	3,2	100	S/S	250	.W0822	19
32840.W0020	Steel pin	Light	M18x1,5	10	31,5	16,9	16	3,2	100	S/S	250	.W0822	28
32840.W0021	Steel pin	Light	M18x1,5	10	45,0	16,9	16	3,2	100	S/S	250	.W0822	36
32840.W0022	Steel pin	Standard	M18x1,5	10	18,0	16,9	16	3,2	150	Black	250	.W0822	20
32840.W0023	Steel pin	Standard	M18x1,5	10	31,5	16,9	16	3,2	150	Black	250	.W0822	29
32840.W0024	Steel pin	Standard	M18x1,5	10	45,0	16,9	16	3,2	150	Black	250	.W0822	39
32840.W0025	Steel pin	Heavy	M18x1,5	10	18,0	16,9	16	3,2	200	Blue	250	.W0822	21
32840.W0026	Steel pin	Heavy	M18x1,5	10	31,5	16,9	16	3,2	200	Blue	250	.W0822	30
32840.W0027	Steel pin	Heavy	M18x1,5	10	45,0	16,9	16	3,2	200	Blue	250	.W0822	40
32840.W0401	Plastic pin	Light	M12	5	11,5	6,4	10	1,6	20	S/S	80	.W0820	3
32840.W0402	Plastic pin	Light	M12	5	19,0	6,4	10	1,6	20	S/S	80	.W0820	4
32840.W0403	Plastic pin	Light	M12	5	26,5	6,4	10	1,6	20	S/S	80	.W0820	6
32840.W0410	Plastic pin	Light	M12	6	11,5	10,4	10	2,0	40	Black	80	.W0820	3
32840.W0411	Plastic pin	Light	M12	6	19,0	10,4	10	2,0	40	Black	80	.W0820	5
32840.W0412	Plastic pin	Light	M12	6	26,5	10,4	10	2,0	40	Black	80	.W0820	7
32840.W0419	Plastic pin	Light	M18x1,5	10	18,0	16,9	16	3,2	100	Blue	80	.W0822	12
32840.W0420	Plastic pin	Light	M18x1,5	10	31,5	16,9	16	3,2	100	Blue	80	.W0822	20
32840.W0421	Plastic pin	Light	M18x1,5	10	45,0	16,9	16	3,2	100	Blue	80	.W0822	30
32840.W0820	Fitting tool	-	M12	-	-	-	-	-	-	-	-	-	76
32840.W0822	Fitting tool	-	M18x1,5	-	-	-	-	-	-	-	-	-	137

Material

Body: aluminium.
Pin: steel, case hardened and galvanized, or thermoplastic (POM) white.
Spring: steel (blackened or blue galvanized), or stainless steel.

Technical Notes

Press fit installation into hole d_1 to tol. H8, using fitting tool (order separately).
Installation calculations;
A) Calculating centre distance for mounting holes (l_0);
$l_0=(z/2)+w+x$
B) Calculating pin location (x);
When workpiece height (y) is greater than or equal to $l_2-(d_2/2)$ then (x) is calculated as; $x=(d_2/2)-s$
When workpiece height (y) is less than $l_2-(d_2/2)$ then (x) is calculated as; $x=(d_2/2)-s-\{[l_2-(d_2/2)-y]*0.123\}$

l_0 = centre distance for mounting holes
y = workpiece height
w = workpiece width
x = distance between side-thrust pin and workpiece edge
s = stroke
z =stop or dowel stop diameter

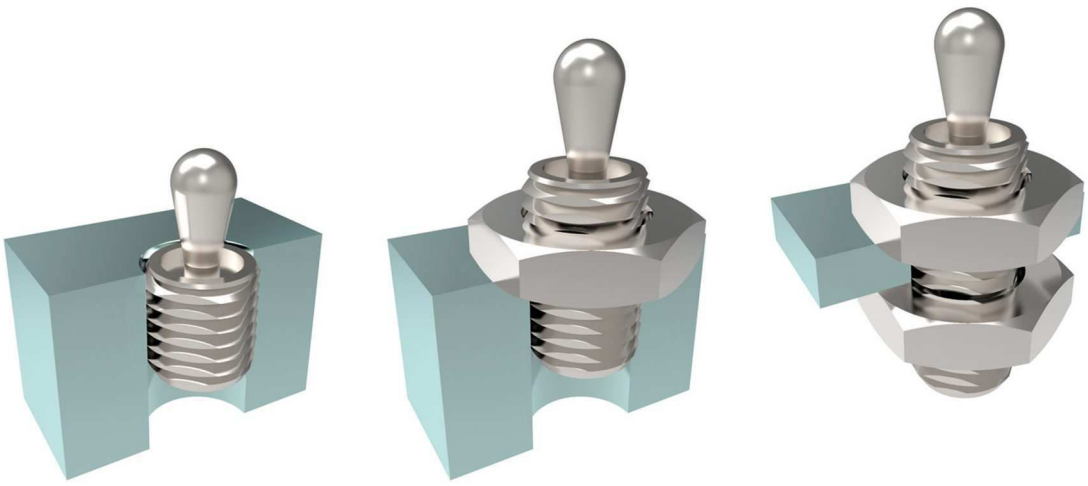
Tips

Side-thrust pins are ideal for holding, clamping and positioning parts.
Spring colour gives visual indication of spring pressure (N).
Light spring load = natural stainless spring.
Standard spring load = steel spring, blackened.
Heavy spring load = steel spring, blue galvanized.

Side-Thrust Pins - Threaded

without seal

32840





Material

Body: aluminium.
Pin: steel, case hardened and galvanized, or thermoplastic (POM) white.
Spring: steel (blackened or blue galvanized), or stainless steel.

Technical Notes

Press fit installation into hole d_1 to tol. H8, using fitting tool (order separately).
Installation calculations;
A) Calculating centre distance for mounting holes (l_0);
$l_0=(z/2)+w+x$
B) Calculating pin location (x);
When workpiece height (y) is greater than or equal to $l_2-(d_2/2)$ then (x) is calculated as; $x=(d_2/2)-s$
When workpiece height (y) is less than
$l_2-(d_2/2)$ then (x) is calculated as;
$x=(d_2/2)-s-\{[l_2-(d_2/2)-y]*0.123\}$

l_0 = centre distance for mounting holes
y = workpiece height
w = workpiece width
x = distance between side-thrust pin and workpiece edge
s = stroke
z =stop or dowel stop diameter

Tips

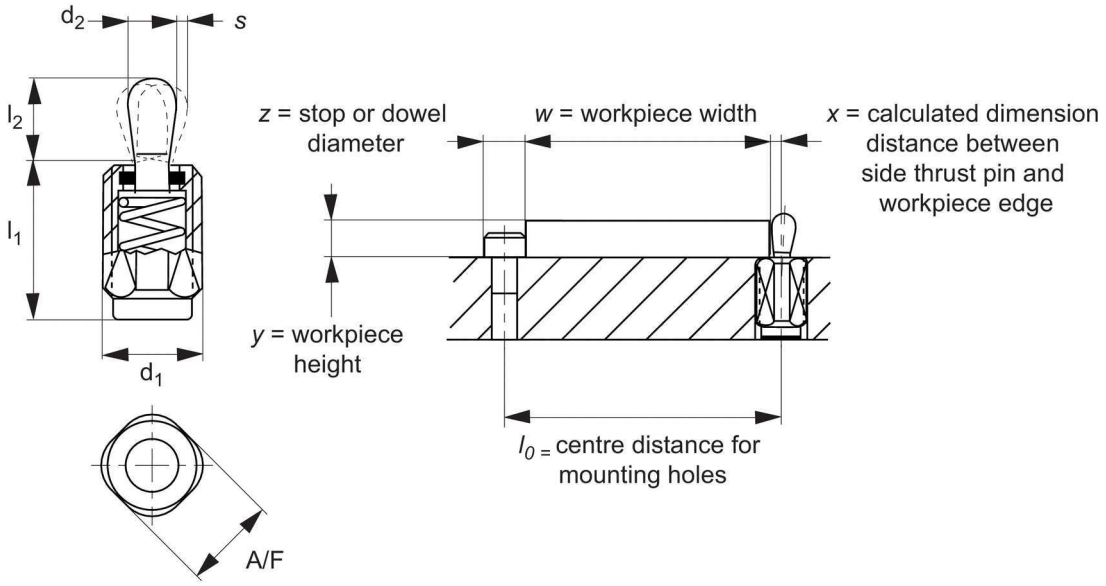
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Spring colour gives visual indication of spring pressure (N).
Light spring load = natural stainless spring.
Standard spring load = steel spring, blackened.
Heavy spring load = steel spring, blue galvanized.

Side-Thrust Pins - Threaded

with seal

32850





Order No.	Pin material	Spring load	d_1	d_2	l_1 -2	l_2	A/F	Stroke s	Spring pressure N	Spring colour	Temp. resistance max. °C	Fitting tool 32840	g
32850.W0001	Steel pin	Light	M12	5	11,5	6	10	0,8	20	S/S	250	.W0820	4
32850.W0002	Steel pin	Light	M12	5	19,0	6	10	0,8	20	S/S	250	.W0820	6
32850.W0003	Steel pin	Light	M12	5	26,5	6	10	0,8	20	S/S	250	.W0820	8
32850.W0004	Steel pin	Standard	M12	5	11,5	6	10	0,8	50	Black	250	.W0820	4
32850.W0005	Steel pin	Standard	M12	5	19,0	6	10	0,8	50	Black	250	.W0820	6
32850.W0006	Steel pin	Standard	M12	5	26,5	6	10	0,8	50	Black	250	.W0820	8
32850.W0007	Steel pin	Heavy	M12	5	11,5	6	10	0,8	100	Blue	250	.W0820	4
32850.W0008	Steel pin	Heavy	M12	5	19,0	6	10	0,8	100	Blue	250	.W0820	7
32850.W0009	Steel pin	Heavy	M12	5	26,5	6	10	0,8	100	Blue	250	.W0820	9
32850.W0010	Steel pin	Light	M12	6	11,5	10	10	1,0	40	S/S	250	.W0820	5
32850.W0011	Steel pin	Light	M12	6	19,0	10	10	1,0	40	S/S	250	.W0820	6
32850.W0012	Steel pin	Light	M12	6	26,5	10	10	1,0	40	S/S	250	.W0820	8
32850.W0013	Steel pin	Standard	M12	6	11,5	10	10	1,0	75	Black	250	.W0820	5
32850.W0014	Steel pin	Standard	M12	6	19,0	10	10	1,0	75	Black	250	.W0820	7
32850.W0015	Steel pin	Standard	M12	6	26,5	10	10	1,0	75	Black	250	.W0820	10
32850.W0016	Steel pin	Heavy	M12	6	11,5	10	10	1,0	100	Blue	250	.W0820	5
32850.W0017	Steel pin	Heavy	M12	6	19,0	10	10	1,0	100	Blue	250	.W0820	8
32850.W0018	Steel pin	Heavy	M12	6	26,5	10	10	1,0	100	Blue	250	.W0820	10
32850.W0019	Steel pin	Light	M18x1,5	10	18,0	16	16	1,6	100	S/S	250	.W0822	19
32850.W0020	Steel pin	Light	M18x1,5	10	31,5	16	16	1,6	100	S/S	250	.W0822	28
32850.W0021	Steel pin	Light	M18x1,5	10	45,0	16	16	1,6	100	S/S	250	.W0822	36
32850.W0022	Steel pin	Standard	M18x1,5	10	18,0	16	16	1,6	150	Black	250	.W0822	20
32850.W0023	Steel pin	Standard	M18x1,5	10	31,5	16	16	1,6	150	Black	250	.W0822	29
32850.W0024	Steel pin	Standard	M18x1,5	10	45,0	16	16	1,6	150	Black	250	.W0822	39
32850.W0025	Steel pin	Heavy	M18x1,5	10	18,0	16	16	1,6	200	Blue	250	.W0822	21
32850.W0026	Steel pin	Heavy	M18x1,5	10	31,5	16	16	1,6	200	Blue	250	.W0822	30
32850.W0027	Steel pin	Heavy	M18x1,5	10	45,0	16	16	1,6	200	Blue	250	.W0822	40
32850.W0401	Plastic pin	Light	M12	5	11,5	6	10	0,8	20	S/S	80	.W0820	3
32850.W0402	Plastic pin	Light	M12	5	19,0	6	10	0,8	20	S/S	80	.W0820	4
32850.W0403	Plastic pin	Light	M12	5	26,5	6	10	0,8	20	S/S	80	.W0820	6
32850.W0410	Plastic pin	Light	M12	6	11,5	10	10	1,0	40	Black	80	.W0820	3
32850.W0411	Plastic pin	Light	M12	6	19,0	10	10	1,0	40	Black	80	.W0820	5
32850.W0412	Plastic pin	Light	M12	6	26,5	10	10	1,0	40	Black	80	.W0820	7
32850.W0419	Plastic pin	Light	M18x1,5	10	18,0	16	16	1,6	100	Blue	80	.W0822	12
32850.W0420	Plastic pin	Light	M18x1,5	10	31,5	16	16	1,6	100	Blue	80	.W0822	20
32850.W0421	Plastic pin	Light	M18x1,5	10	45,0	16	16	1,6	100	Blue	80	.W0822	30
32840.W0820	Fitting tool	-	M12	-	-	-	-	-	-	-	-	-	76
32840.W0822	Fitting tool	-	M18x1,5	-	-	-	-	-	-	-	-	-	137

Material

Body: aluminium.
Pin: steel, case hardened and galvanized, or thermoplastic (POM) white.
Spring: steel (blackened or blue galvanized), or stainless steel.
Seal: rubber (CR), 60 shore.

Technical Notes

Press fit installation into hole d_1 to tol. H8, using fitting tool (order separately).
Installation calculations;
A) Calculating centre distance for mounting holes (l_0);
$l_0=(z/2)+w+x$

B) Calculating pin location (x);

When workpiece height (y) is greater than or equal to $l_2-(d_2/2)$ then (x) is calculated as; $x=(d_2/2)-s$

When workpiece height (y) is less than $l_2-(d_2/2)$ then (x) is calculated as; $x=(d_2/2)-s-\{[l_2-(d_2/2)-y]*0.123\}$

l_0 = centre distance for mounting holes
y = workpiece height
w = workpiece width
x = distance between side-thrust pin and workpiece edge
s = stroke
z =stop or dowel stop diameter

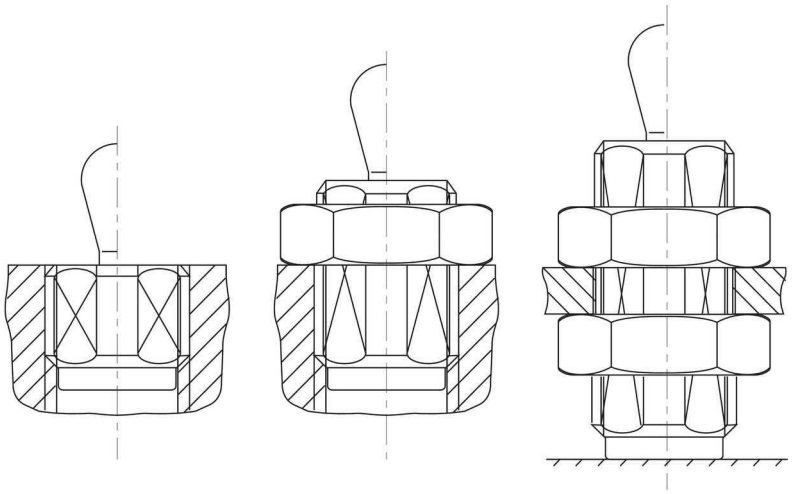
Tips

Side-thrust pins are ideal for holding, clamping and positioning parts.
Spring colour gives visual indication of spring pressure (N).
Light spring load = natural stainless spring.
Standard spring load = steel spring, blackened.
Heavy spring load = steel spring, blue galvanized.

Side-Thrust Pins - Threaded

with seal

32850





Material

Body: aluminium.
Pin: steel, case hardened and galvanized, or thermoplastic (POM) white.
Spring: steel (blackened or blue galvanized), or stainless steel.
Seal: rubber (CR), 60 shore.

Technical Notes

Press fit installation into hole d_1 to tol. H8, using fitting tool (order separately).
Installation calculations;
A) Calculating centre distance for mounting holes (l_0);
$l_0=(z/2)+w+x$

B) Calculating pin location (x);

When workpiece height (y) is greater than or equal to $l_2-(d_2/2)$ then (x) is calculated as; $x=(d_2/2)-s$

When workpiece height (y) is less than
$l_2-(d_2/2)$ then (x) is calculated as;
$x=(d_2/2)-s-\{[l_2-(d_2/2)-y]*0.123\}$

l_0 = centre distance for mounting holes
y = workpiece height
w = workpiece width
x = distance between side-thrust pin and workpiece edge
s = stroke
z =stop or dowel stop diameter

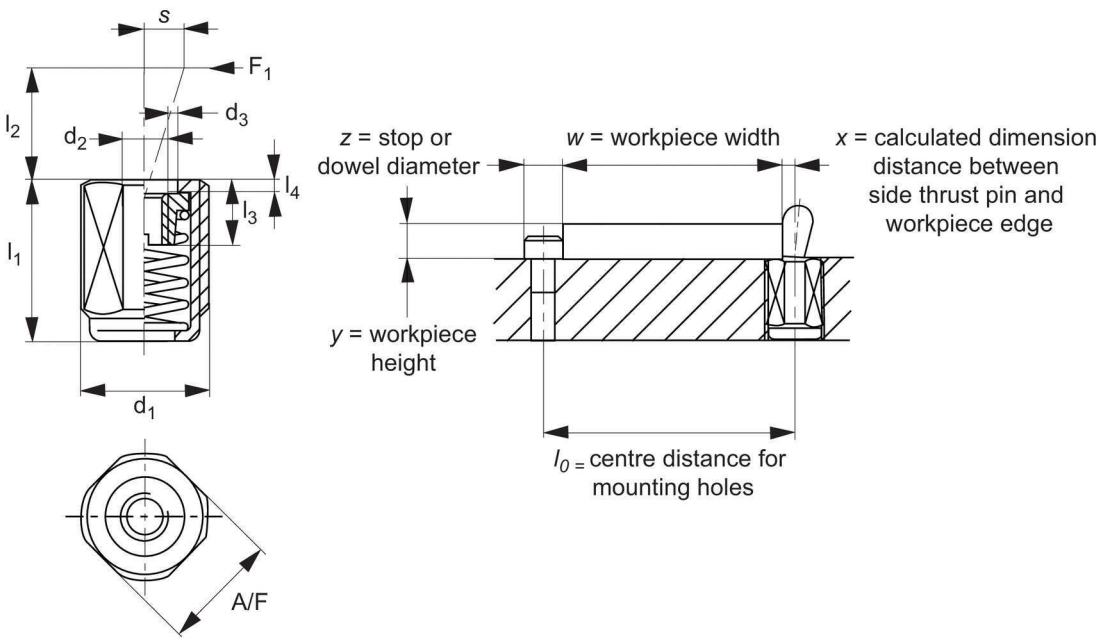
Tips

Side-thrust pins are ideal for holding, clamping and positioning parts.
Spring colour gives visual indication of spring pressure (N).
Light spring load = natural stainless spring.
Standard spring load = steel spring, blackened.
Heavy spring load = steel spring, blue galvanized.

Side-Thrust Pins - Threaded

without seal - for use with pins of your own design

32860





Order No.	Spring load	d_1	d_2	d_3	l_1 -2	l_2	l_3	l_4	A/F	Strokes	Spring pressure N	Spring colour	Temp. resistance max. °C	Fitting tool 32840	g
32860.W0001	Light	M12	M4	6,1	11,5	4,0	4,5	1,5	10	1,6	20	S/S	250	.W0820	3
32860.W0002	Light	M12	M4	6,1	19,0	4,0	4,5	1,5	10	1,6	20	S/S	250	.W0820	5
32860.W0003	Light	M12	M4	6,1	26,5	4,0	4,5	1,5	10	1,6	20	S/S	250	.W0820	7
32860.W0004	Standard	M12	M4	6,1	11,5	4,0	4,5	1,5	10	1,6	50	Black	250	.W0820	3
32860.W0005	Standard	M12	M4	6,1	19,0	4,0	4,5	1,5	10	1,6	50	Black	250	.W0820	6
32860.W0006	Standard	M12	M4	6,1	26,5	4,0	4,5	1,5	10	1,6	50	Black	250	.W0820	8
32860.W0007	Heavy	M12	M4	6,1	11,5	4,0	4,5	1,5	10	1,6	100	Blue	250	.W0820	4
32860.W0008	Heavy	M12	M4	6,1	19,0	4,0	4,5	1,5	10	1,6	100	Blue	250	.W0820	6
32860.W0009	Heavy	M12	M4	6,1	26,5	4,0	4,5	1,5	10	1,6	100	Blue	250	.W0820	8
32860.W0010	Light	M12	M4	6,1	11,5	7,5	4,5	1,5	10	2,0	40	S/S	250	.W0820	3
32860.W0011	Light	M12	M4	6,1	19,0	7,5	4,5	1,5	10	2,0	40	S/S	250	.W0820	5
32860.W0012	Light	M12	M4	6,1	26,5	7,5	4,5	1,5	10	2,0	40	S/S	250	.W0820	7
32860.W0013	Standard	M12	M4	6,1	11,5	7,5	4,5	1,5	10	2,0	75	Black	250	.W0820	3
32860.W0014	Standard	M12	M4	6,1	19,0	7,5	4,5	1,5	10	2,0	75	Black	250	.W0820	6
32860.W0015	Standard	M12	M4	6,1	26,5	7,5	4,5	1,5	10	2,0	75	Black	250	.W0820	8
32860.W0016	Heavy	M12	M4	6,1	11,5	7,5	4,5	1,5	10	2,0	100	Blue	250	.W0820	4
32860.W0017	Heavy	M12	M4	6,1	19,0	7,5	4,5	1,5	10	2,0	100	Blue	250	.W0820	6
32860.W0018	Heavy	M12	M4	6,1	26,5	7,5	4,5	1,5	10	2,0	100	Blue	250	.W0820	9
32860.W0019	Light	M18x1,5	M6	10,1	18,0	11,5	7,5	1,5	16	3,2	100	S/S	250	.W0822	15
32860.W0020	Light	M18x1,5	M6	10,1	31,5	11,5	7,5	1,5	16	3,2	100	S/S	250	.W0822	23
32860.W0021	Light	M18x1,5	M6	10,1	45,0	11,5	7,5	1,5	16	3,2	100	S/S	250	.W0822	32
32860.W0022	Standard	M18x1,5	M6	10,1	18,0	11,5	7,5	1,5	16	3,2	150	Black	250	.W0822	14
32860.W0023	Standard	M18x1,5	M6	10,1	31,5	11,5	7,5	1,5	16	3,2	150	Black	250	.W0822	23
32860.W0024	Standard	M18x1,5	M6	10,1	45,0	11,5	7,5	1,5	16	3,2	150	Black	250	.W0822	32
32860.W0025	Heavy	M18x1,5	M6	10,1	18,0	11,5	7,5	1,5	16	3,2	200	Blue	250	.W0822	14
32860.W0026	Heavy	M18x1,5	M6	10,1	31,5	11,5	7,5	1,5	16	3,2	200	Blue	250	.W0822	23
32860.W0027	Heavy	M18x1,5	M6	10,1	45,0	11,5	7,5	1,5	16	3,2	200	Blue	250	.W0822	32
32840.W0820	Fitting tool	M12	-	-	-	-	-	-	-	-	-	-	-	-	76
32840.W0822	Fitting tool	M18x1,5	-	-	-	-	-	-	-	-	-	-	-	-	137

Material

Body: aluminium.
Threaded washer: steel, blackened.
Spring: steel (blackened or blue galvanized), or stainless steel.

Technical Notes

Press fit installation into hole d_1 to tol. H8, using fitting tool (order separately).
Installation calculations;
A) Calculating centre distance for mounting holes (l_0);
$l_0=(z/2)+w+x$

B) Calculating pin location (x);

When workpiece height (y) is greater than or equal to $l_2-(d_2/2)$ then (x) is calculated as; $x=(d_2/2)-s$

When workpiece height (y) is less than $l_2-(d_2/2)$ then (x) is calculated as;
$x=(d_2/2)-s-\{[l_2-(d_2/2)-y]*0.123\}$

l_0 = centre distance for mounting holes
y = workpiece height
w = workpiece width
x = distance between side-thrust pin and workpiece edge
s = stroke
z =stop or dowel stop diameter

Tips

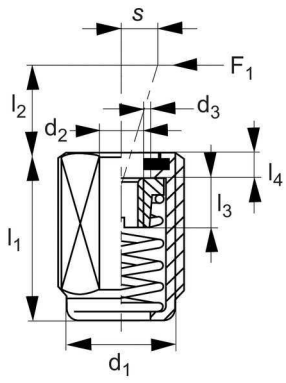
Side-thrust pins are ideal for holding, clamping and positioning parts.
Spring colour gives visual indication of spring pressure (N).
Light spring load = natural stainless spring.
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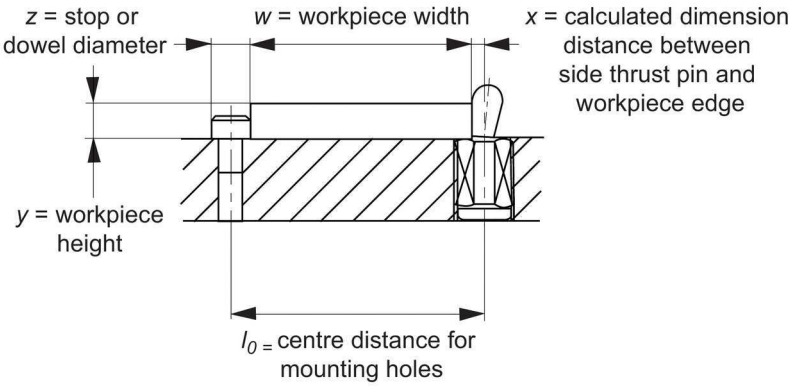
Side-Thrust Pins - Threaded

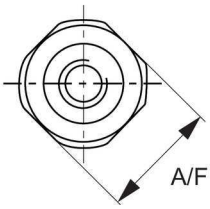
with seal - for use with pins of your own design



32860









Order No.	Spring load	d_1	d_2	d_3	l_1 -2	l_2	l_3	l_4	A/F	Strokes	Spring pressure N	Spring colour	Temp. resistance max. °C	Fitting tool 32840	g
32860.W0401	Light	M12	M4	6,1	11,5	4,0	4,5	2,0	10	1,6	20	S/S	110	.W0820	3
32860.W0402	Light	M12	M4	6,1	19,0	4,0	4,5	2,0	10	1,6	20	S/S	110	.W0820	5
32860.W0403	Light	M12	M4	6,1	26,5	4,0	4,5	2,0	10	1,6	20	S/S	110	.W0820	7
32860.W0404	Standard	M12	M4	6,1	11,5	4,0	4,5	2,0	10	1,6	50	Black	110	.W0820	3
32860.W0405	Standard	M12	M4	6,1	19,0	4,0	4,5	2,0	10	1,6	50	Black	110	.W0820	6
32860.W0406	Standard	M12	M4	6,1	26,5	4,0	4,5	2,0	10	1,6	50	Black	110	.W0820	8
32860.W0407	Heavy	M12	M4	6,1	11,5	4,0	4,5	2,0	10	1,6	100	Blue	110	.W0820	4
32860.W0408	Heavy	M12	M4	6,1	19,0	4,0	4,5	2,0	10	1,6	100	Blue	110	.W0820	6
32860.W0409	Heavy	M12	M4	6,1	26,5	4,0	4,5	2,0	10	1,6	100	Blue	110	.W0820	8
32860.W0410	Light	M12	M4	6,1	11,5	7,5	4,5	2,0	10	2,0	40	S/S	110	.W0820	3
32860.W0411	Light	M12	M4	6,1	19,0	7,5	4,5	2,0	10	2,0	40	S/S	110	.W0820	5
32860.W0412	Light	M12	M4	6,1	26,5	7,5	4,5	2,0	10	2,0	40	S/S	110	.W0820	7
32860.W0413	Standard	M12	M4	6,1	11,5	7,5	4,5	2,0	10	2,0	75	Black	110	.W0820	3
32860.W0414	Standard	M12	M4	6,1	19,0	7,5	4,5	2,0	10	2,0	75	Black	110	.W0820	6
32860.W0415	Standard	M12	M4	6,1	26,5	7,5	4,5	2,0	10	2,0	75	Black	110	.W0820	8
32860.W0416	Heavy	M12	M4	6,1	11,5	7,5	4,5	2,0	10	2,0	100	Blue	110	.W0820	4
32860.W0417	Heavy	M12	M4	6,1	19,0	7,5	4,5	2,0	10	2,0	100	Blue	110	.W0820	6
32860.W0418	Heavy	M12	M4	6,1	26,5	7,5	4,5	2,0	10	2,0	100	Blue	110	.W0820	9
32860.W0419	Light	M18x1,5	M6	10,1	18,0	11,5	7,5	2,3	16	3,2	100	S/S	110	.W0822	15
32860.W0420	Light	M18x1,5	M6	10,1	31,5	11,5	7,5	2,3	16	3,2	100	S/S	110	.W0822	23
32860.W0421	Light	M18x1,5	M6	10,1	45,0	11,5	7,5	2,3	16	3,2	100	S/S	110	.W0822	32
32860.W0422	Standard	M18x1,5	M6	10,1	18,0	11,5	7,5	2,3	16	3,2	150	Black	110	.W0822	14
32860.W0423	Standard	M18x1,5	M6	10,1	31,5	11,5	7,5	2,3	16	3,2	150	Black	110	.W0822	23
32860.W0424	Standard	M18x1,5	M6	10,1	45,0	11,5	7,5	2,3	16	3,2	150	Black	110	.W0822	32
32860.W0425	Heavy	M18x1,5	M6	10,1	18,0	11,5	7,5	2,3	16	3,2	200	Blue	110	.W0822	14
32860.W0426	Heavy	M18x1,5	M6	10,1	31,5	11,5	7,5	2,3	16	3,2	200	Blue	110	.W0822	23
32860.W0427	Heavy	M18x1,5	M6	10,1	45,0	11,5	7,5	2,3	16	3,2	200	Blue	110	.W0822	32
32840.W0820	Fitting tool	M12	-	-	-	-	-	-	-	-	-	-	-	-	76
32840.W0822	Fitting tool	M18x1,5	-	-	-	-	-	-	-	-	-	-	-	-	137

Material

Body: aluminium.
Threaded washer: steel, blackened
Spring: steel (blackened or blue galvanized), or stainless steel.
Seal: rubber (CR), 60 shore.

Technical Notes

Press fit installation into hole d_1 to tol. H8, using fitting tool (order separately).
Installation calculations;
A) Calculating centre distance for mounting holes (l_0);
$l_0=(z/2)+w+x$

B) Calculating pin location (x);

When workpiece height (y) is greater than or equal to $l_2-(d_2/2)$ then (x) is calculated as; $x=(d_2/2)-s$

When workpiece height (y) is less than $l_2-(d_2/2)$ then (x) is calculated as;
$x=(d_2/2)-s-\{[l_2-(d_2/2)-y]*0.123\}$

l_0 = centre distance for mounting holes
y = workpiece height
w = workpiece width
x = distance between side-thrust pin and workpiece edge
s = stroke
z =stop or dowel stop diameter

Tips

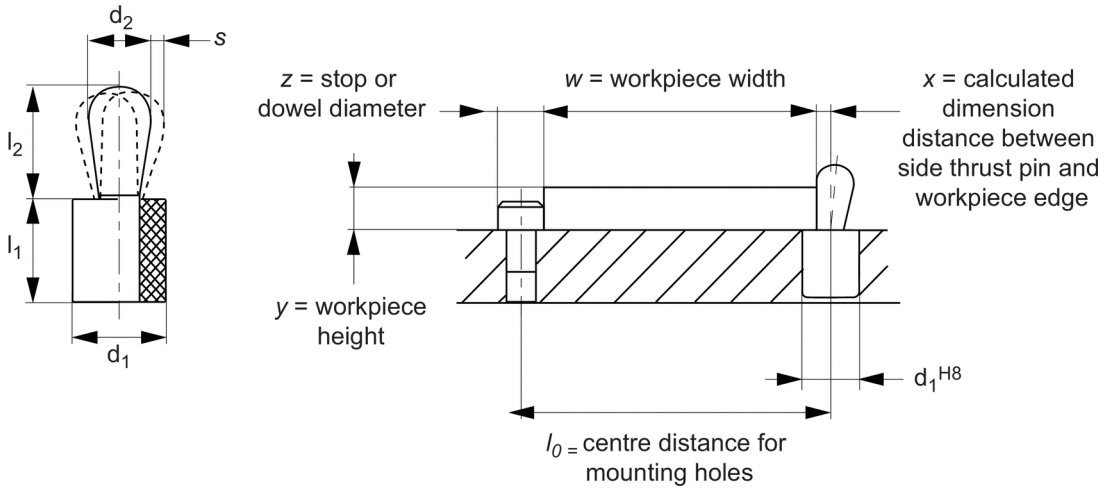
Side-thrust pins are ideal for holding, clamping and positioning parts.
Spring colour gives visual indication of spring pressure (N).
Light spring load = natural stainless spring.
Standard spring load = steel spring, blackened.
Heavy spring load = steel spring, blue galvanized.

Side-Thrust Pins

with plastic spring

32870





Order No.	Pin material	Spring load	d_1	d_2	l_1 -1	l_2 ±0,5	Location hole d_1 tol. H8	Stroke s	Spring pressure N	Spring colour	Temp. resistance max. °C	Fitting tool 32870	g
32870.W0001	Steel Pin	Light	6	3	7	3,7	5,9	0,4	10	Blue	100	.W0840	1
32870.W0002	Steel Pin	Standard	6	3	7	3,7	5,9	0,4	20	Red	100	.W0840	1
32870.W0003	Steel Pin	Light	8	4	9	5,2	7,9	0,6	15	Blue	100	.W0841	1
32870.W0004	Steel Pin	Standard	8	4	9	5,2	7,9	0,6	30	Red	100	.W0841	1
32870.W0005	Steel Pin	Light	10	5	9	7,3	9,9	0,8	30	Blue	100	.W0842	2
32870.W0006	Steel Pin	Standard	10	5	9	7,3	9,9	0,8	60	Red	100	.W0842	2
32870.W0007	Steel Pin	Heavy	10	5	9	7,3	9,9	0,8	90	Green	100	.W0842	2
32870.W0008	Steel Pin	Light	10	6	9	10,3	9,9	1,0	20	Blue	100	.W0842	3
32870.W0009	Steel Pin	Standard	10	6	9	10,3	9,9	1,0	30	Red	100	.W0842	3
32870.W0010	Steel Pin	Heavy	10	6	9	10,3	9,9	1,0	60	Green	100	.W0842	3
32870.W0012	Steel Pin	Standard	12	8	13	13,3	11,6	1,2	50	Red	100	.W0843	7
32870.W0013	Steel Pin	Heavy	12	8	13	13,3	11,9	1,2	100	Green	100	.W0843	7
32870.W0014	Steel Pin	Standard	16	10	16	16,9	15,9	1,6	60	Red	100	.W0844	15
32870.W0015	Steel Pin	Heavy	16	10	16	16,9	15,9	1,6	160	Green	100	.W0844	15
32870.W0401	Plastic Pin	Light	6	3	7	3,7	5,9	0,4	10	Blue	100	.W0840	1
32870.W0402	Plastic Pin	Standard	6	3	7	3,7	5,9	0,4	20	Red	100	.W0840	1
32870.W0403	Plastic Pin	Light	8	4	9	5,2	7,9	0,6	15	Blue	100	.W0841	1
32870.W0404	Plastic Pin	Standard	8	4	9	5,2	7,9	0,6	30	Red	100	.W0841	1
32870.W0405	Plastic Pin	Light	10	5	9	7,3	9,9	0,8	30	Blue	100	.W0842	2
32870.W0406	Plastic Pin	Standard	10	5	9	7,3	9,9	0,8	60	Red	100	.W0842	2
32870.W0407	Plastic Pin	Heavy	10	5	9	7,3	9,9	0,8	90	Green	100	.W0842	2
32870.W0408	Plastic Pin	Light	10	6	9	10,3	9,9	1,0	20	Blue	100	.W0842	3
32870.W0409	Plastic Pin	Standard	10	6	9	10,3	9,9	1,0	30	Red	100	.W0842	3
32870.W0410	Plastic Pin	Heavy	10	6	9	10,3	9,9	1,0	60	Green	100	.W0842	3
32870.W0412	Plastic Pin	Standard	12	8	13	13,3	11,6	1,2	50	Red	100	.W0843	7
32870.W0413	Plastic Pin	Heavy	12	8	13	13,3	11,9	1,2	100	Green	100	.W0843	7
32870.W0414	Plastic Pin	Standard	16	10	16	16,9	15,9	1,6	60	Red	100	.W0844	15
32870.W0415	Plastic Pin	Heavy	16	10	16	16,9	15,9	1,6	160	Green	100	.W0844	15
32870.W0601	Stainless Pin	Light	6	3	7	3,7	5,9	0,4	10	Blue	100	.W0840	1
32870.W0602	Stainless Pin	Standard	6	3	7	3,7	5,9	0,4	20	Red	100	.W0840	1
32870.W0603	Stainless Pin	Light	8	4	9	5,2	7,9	0,6	15	Blue	100	.W0841	1
32870.W0604	Stainless Pin	Standard	8	4	9	5,2	7,9	0,6	30	Red	100	.W0841	1
32870.W0605	Stainless Pin	Light	10	5	9	7,3	9,9	0,8	30	Blue	100	.W0842	2
32870.W0606	Stainless Pin	Standard	10	5	9	7,3	9,9	0,8	60	Red	100	.W0842	2
32870.W0607	Stainless Pin	Heavy	10	5	9	7,3	9,9	0,8	90	Green	100	.W0842	2
32870.W0608	Stainless Pin	Light	10	6	9	10,3	9,9	1,0	20	Blue	100	.W0842	3
32870.W0609	Stainless Pin	Standard	10	6	9	10,3	9,9	1,0	30	Red	100	.W0842	3
32870.W0610	Stainless Pin	Heavy	10	6	9	10,3	9,9	1,0	60	Green	100	.W0842	3
32870.W0612	Stainless Pin	Standard	12	8	13	13,3	11,6	1,2	50	Red	100	.W0843	7
32870.W0613	Stainless Pin	Heavy	12	8	13	13,3	11,9	1,2	100	Green	100	.W0843	7
32870.W0614	Stainless Pin	Standard	16	10	16	16,9	15,9	1,6	60	Red	100	.W0844	15
32870.W0615	Stainless Pin	Heavy	16	10	16	16,9	15,9	1,6	160	Green	100	.W0844	15
32870.W0840	Fitting Tool	-	-	-	-	-	-	-	-	-	-	-	23
32870.W0841	Fitting Tool	-	-	-	-	-	-	-	-	-	-	-	47
32870.W0842	Fitting Tool	-	-	-	-	-	-	-	-	-	-	-	46
32870.W0843	Fitting Tool	-	-	-	-	-	-	-	-	-	-	-	98
32870.W0844	Fitting Tool	-	-	-	-	-	-	-	-	-	-	-	145

Material

Spring Body: plastic.
Pin: steel, case hardened and galvanized, stainless steel or thermoplastic (POM) white.

Technical Notes

Press fit installation into hole d_1 to tol. H8, using fitting tool (order separately).
Installation calculations;
A) Calculating centre distance for mounting holes (l_0);
$l_0=(z/2)+w+x$

B) Calculating pin location (x);

When workpiece height (y) is greater than or equal to $l_2-(d_2/2)$ then (x) is calculated as; $x=(d_2/2)-s$

When workpiece height (y) is less than $l_2-(d_2/2)$ then (x) is calculated as; $x=(d_2/2)-s-\{[l_2-(d_2/2)-y]*0.123\}$

l_0 = centre distance for mounting holes
y = workpiece height
w = workpiece width
x = distance between side-thrust pin and workpiece edge
s = stroke
z =stop or dowel stop diameter

Tips

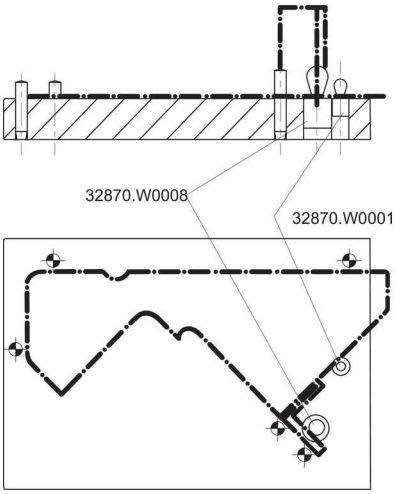
Side-thrust pins are ideal for holding, clamping and positioning parts.
Spring colour gives visual indication of spring pressure (N).
Light spring load = blue plastic.
Standard spring load = red plastic.
Heavy spring load = green plastic.

Side-Thrust Pins

with plastic spring

32870





Material

Spring Body: plastic.
Pin: steel, case hardened and galvanized, stainless steel or thermoplastic (POM) white.

Technical Notes

Press fit installation into hole d_1 to tol. H8, using fitting tool (order separately).
Installation calculations;
A) Calculating centre distance for mounting holes (l_0);
$l_0=(z/2)+w+x$

B) Calculating pin location (x);

When workpiece height (y) is greater than or equal to $l_2-(d_2/2)$ then (x) is calculated as; $x=(d_2/2)-s$

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$l_2-(d_2/2)$ then (x) is calculated as;
$x=(d_2/2)-s-\{[l_2-(d_2/2)-y]*0.123\}$

l_0 = centre distance for mounting holes
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w = workpiece width
x = distance between side-thrust pin and workpiece edge
s = stroke
z =stop or dowel stop diameter

Tips

Side-thrust pins are ideal for holding, clamping and positioning parts.
Spring colour gives visual indication of spring pressure (N).
Light spring load = blue plastic.
Standard spring load = red plastic.
Heavy spring load = green plastic.

32810 -32890

Wixroyd Side-Thrust Pins

for clamping, positioning and holding components

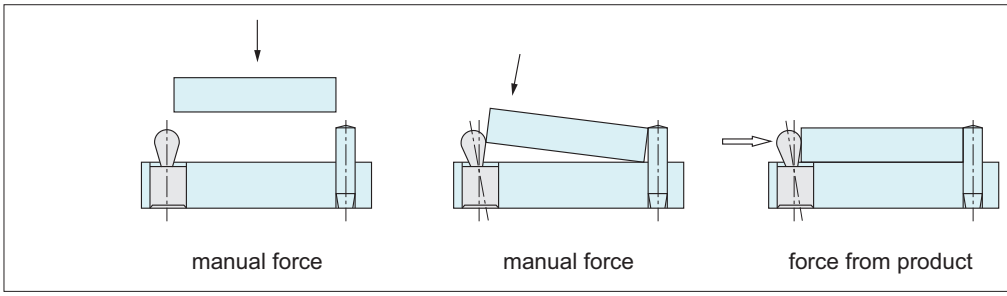


Wixroyd side thrust pins are an economical way to clamp, hold and position components – from low height PCB's to relatively large castings.



Easy to use

Simple to mount, easy to use and space saving.

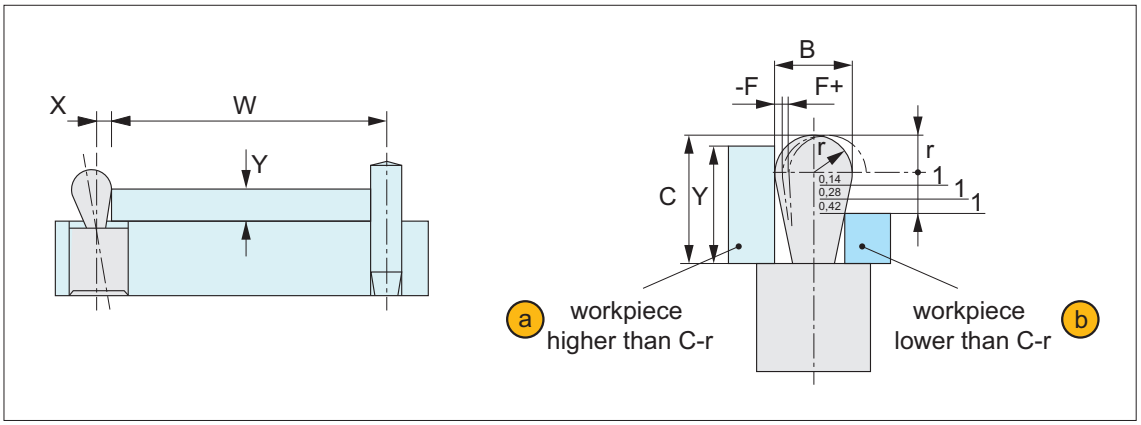


- Easy handling.
- Minimum mounting space.
- Easy and rapid changeover.
- Ideal for flat pieces.
- Reduced clamping times.
- Constant clamping pressure.

Calculating formulae for pin location (x) and pin positioning (k)

Pin location (x)

Please refer to the part tables for dimension x, or use the following formulae.



(1) When work piece height is **higher than** C-r, x is calculated by:

i) For side thrust pin no. **32870**: $X = \frac{B - (F-) - (F+)}{2}$

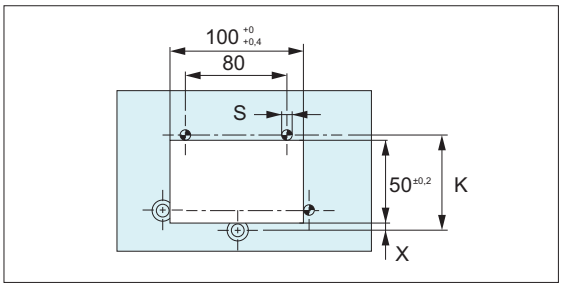
ii) For side thrust pin nos. **32810** to **32850**: $X = \frac{B - (F-)}{2}$

(2) When work piece height is **lower than** C-r, x is calculated by:

i) For all side thrust pins: $X = \frac{B - (F-) - [(C-r-Y) \times 0{,}123]}{2}$

Pin positioning (k)

For positioning co-ordinates:



$K = \frac{W - T}{2} + \frac{X + S}{2}$

Formula key:

- W = Workpiece width (± tolerance)
- F- = Prestressing
- F+ = Stress (range of spring tolerance)
- F = [(F-) + (F+)] - Nett of prestress and stress
- T = Workpiece Tolerance
- Y = Workpiece height
- B = Diameter of selected side thrust pin
- C = Height of selected side thrust pin
- r = Radius of selected side thrust pin
- X = Distance between side thrust pin and workpiece edge
- S = Diameter of positioning dowel or stop
- K = Hole centre distance between positioning dowel/stop and side thrust pin

Wixroyd Side-Thrust Pins

factors to consider in pin selection



32810 -32890

The best selection of side thrust pins is made with consideration to the following four factors:

a) Pin size Ø
b) Pin material
c) Sealed or non-sealed pin
d) Required pin force

Pin size Ø

Pin size Ø	Application
3 mm	Circuit boards, thin metals
4 mm	Electronics, measuring equipment, small precise parts
5 mm	Drilling jigs, sheet metal, measuring devices, welding fixtures
6 mm	Fixtures for light machine parts and castings
8 mm	Fixtures for medium machine parts and castings
10 mm	Fixtures for heavy machine parts and castings

Pin material

Plastic pins for sensitive parts. Steel pins for other parts. Stainless steel pins in corrosive environments.

Sealed or non-sealed pin

With/without seal	Application	Operation
Use side-thrust pins with seal e.g. 32820, 32850 etc	Milling, drilling, reaming, broaching, honing, engraving	Machining
	Washing, polishing, painting, sand blasting	After machining
Use side-thrust pins without seal e.g. 32810, 32840 etc	Gluing, welding, hard soldering	Prior to machining
	Gripping, inserting, fitting	Final mounting
	Measuring, controling, loading	Quality assurance
	Soft soldering, checking	Processing circuit boards

Pinforce - guide only

Positioning applications 30 - 60 N. Clamping applications 90 - 150 N.

Compression spring type

Available in an aluminium body, and in various spring pressures (P) from 10 to 300N. Each pin size is usually available in 3 spring pressures (P).

Pressure	Low	Medium	High
Spring Colour	Stainless	Black	Blue

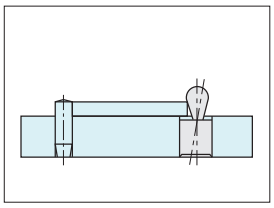
Elastomer spring type

Available in elastomer body and in various spring pressures (P) from 10 to 160N.

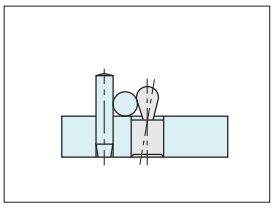
Typical applications

Side-thrust pins find applications in the following industries and more:

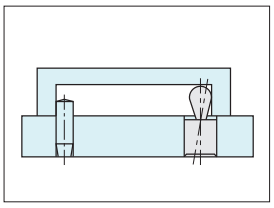
- Automotive.
- Aviation.
- Electronics.
- Computing.
- Plastics.
- Medical.
- Precision engineering.
- Tool manufacturing.



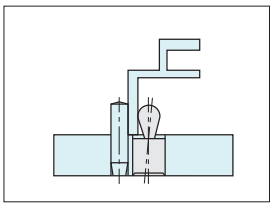
Positioning and clamping even extremely flat parts (e.g. metal sheets and printed circuit boards).



Positioning and clamping round metal using the deep drawing effect.



Space saving positioning and clamping from the inside to the outside.

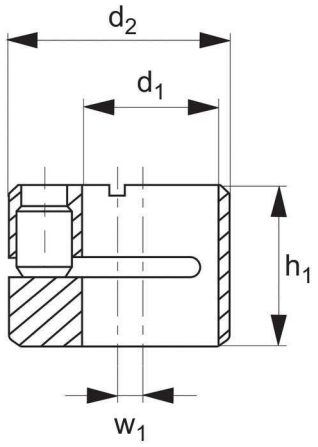


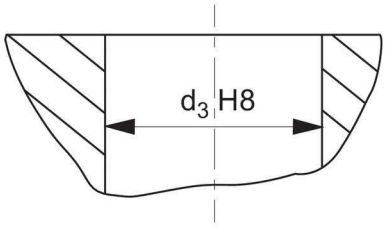
Positioning and clamping different profiles when welding. Material expansions compensated for by flexibility of the side-thrust pin.

Eccentric Bushings Mounting

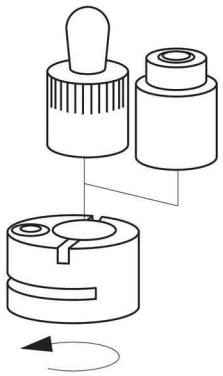
smooth - for lateral plungers

32900





Installation
= d_3 at H8

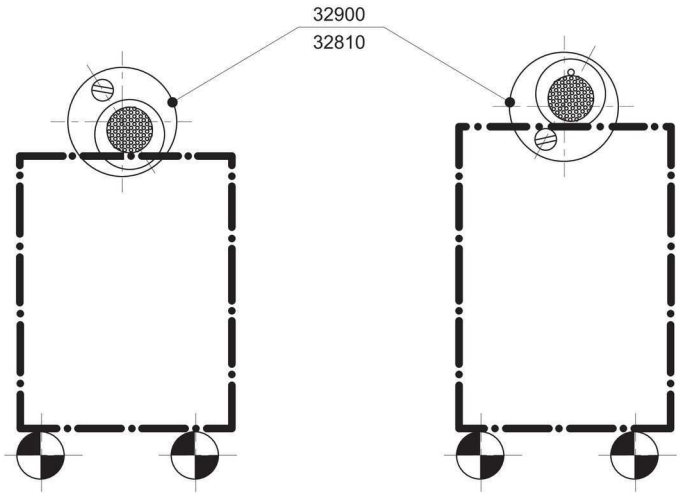




Material
Steel, blackend.

Technical Notes
The eccentric bushings are used to position side-thrust pins nos. 32810, 32820 and side-thrust roller bearing no. 32880 when workpieces have large tolerances.

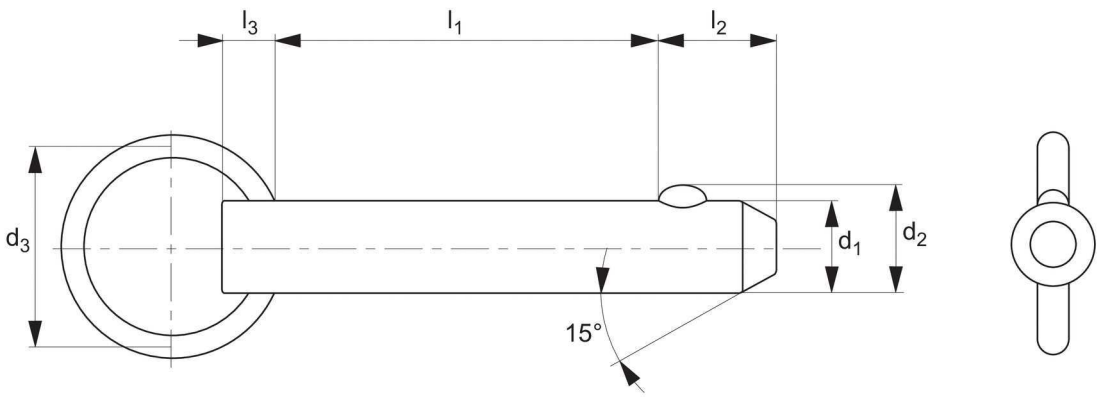
Order No.	d_1 tol. H8	d_2 tol. h9	d_3 tol. H8	h_1	w_1	g
32900.W0001	6	12	12	9,9	2	6
32900.W0003	10	16	16	11,9	2	10
32900.W0004	12	18	18	13,9	2	13
32900.W0005	16	25	25	17,9	3	35



Detent Pin - Ring Handle - No shoulder

steel

33010





Material

Shaft: Carbon steel (C1144), zinc plated.
Ball & spring: Stainless steel AISI 316.

Technical Notes

Detent pins are very economical for use in commercial and military equipment.
The solid body with direct spring loaded ball ensures reliable operation.
Can be used for locking telescopic tubing, securing bracket assemblies, as anchor clevis fittings, hinge pins and as replacement for cotter pins where frequent removal is necessary.
Hole sizes - commercial drills provide clearance for our standard pins.
Inch dimensions in brackets ( ).

Tips

Also available in stainless steel see part no. 33012.

Order No.	d_1 +0.00 -0.08	l_1 grip +1,50 -0,00	d_2	d_3	l_2	l_3	Pull out strength kg	Min. single shear strength kN
33010.W1183	4,76 (3/16")	7,62 (0,3")	5,18	25,4	5,08	4,75	1, 9 - 2, 3	10,8
33010.W1805	4,76 (3/16")	12,7 (0,5")	5,18	25,4	5,08	4,75	1, 9 - 2, 3	10,8
33010.W1810	4,76 (3/16")	25,4 (1")	5,18	25,4	5,08	4,75	1, 9 - 2, 3	10,8
33010.W1815	4,76 (3/16")	38,1 (1,5")	5,18	25,4	5,08	4,75	1, 9 - 2, 3	10,8
33010.W1820	4,76 (3/16")	50,8 (2")	5,18	25,4	5,08	4,75	1, 9 - 2, 3	10,8
33010.W1825	4,76 (3/16")	63,5 (2,5")	5,18	25,4	5,08	4,75	1, 9 - 2, 3	10,8
33010.W1830	4,76 (3/16")	76,2 (3")	5,18	25,4	5,08	4,75	1, 9 - 2, 3	10,8
33010.W1835	4,76 (3/16")	88,9 (3,5")	5,18	25,4	5,08	4,75	1, 9 - 2, 3	10,8
33010.W1840	4,76 (3/16")	101,6 (4")	5,18	25,4	5,08	4,75	1, 9 - 2, 3	10,8
33010.W2505	6,35 (1/4")	12,7 (0,5")	7,26	25,4	7,92	5,59	2,27 - 2,73	19,3
33010.W2510	6,35 (1/4")	25,4 (1")	7,26	25,4	7,92	5,59	2,27 - 2,73	19,3
33010.W2515	6,35 (1/4")	38,1 (1,5")	7,26	25,4	7,92	5,59	2,27 - 2,73	19,3
33010.W2520	6,35 (1/4")	50,8 (2")	7,26	25,4	7,92	5,59	2,27 - 2,73	19,3
33010.W2525	6,35 (1/4")	63,5 (2,5")	7,26	25,4	7,92	5,59	2,27 - 2,73	19,3
33010.W2530	6,35 (1/4")	76,2 (3")	7,26	25,4	7,92	5,59	2,27 - 2,73	19,3
33010.W2535	6,35 (1/4")	88,9 (3,5")	7,26	25,4	7,92	5,59	2,27 - 2,73	19,3
33010.W2540	6,35 (1/4")	101,6 (4")	7,26	25,4	7,92	5,59	2,27 - 2,73	19,3
33010.W3105	7,94 (5/16")	12,7 (0,5")	9,09	25,4	9,53	6,35	2,27 - 2,73	30,0
33010.W3110	7,94 (5/16")	25,4 (1")	9,09	25,4	9,53	6,35	2,27 - 2,73	30,0
33010.W3115	7,94 (5/16")	38,1 (1,5")	9,09	25,4	9,53	6,35	2,27 - 2,73	30,0
33010.W3120	7,94 (5/16")	50,8 (2")	9,09	25,4	9,53	6,35	2,27 - 2,73	30,0
33010.W3125	7,94 (5/16")	63,5 (2,5")	9,09	25,4	9,53	6,35	2,27 - 2,73	30,0
33010.W3130	7,94 (5/16")	76,2 (3")	9,09	25,4	9,53	6,35	2,27 - 2,73	30,0
33010.W3135	7,94 (5/16")	88,9 (3,5")	9,09	25,4	9,53	6,35	2,27 - 2,73	30,0
33010.W3140	7,94 (5/16")	101,6 (4")	9,09	25,4	9,53	6,35	2,27 - 2,73	30,0
33010.W3145	7,94 (5/16")	114,3 (4,5")	9,09	25,4	9,53	6,35	2,27 - 2,73	30,0
33010.W3150	7,94 (5/16")	127 (5")	9,09	25,4	9,53	6,35	2,27 - 2,73	30,0
33010.W3705	9,52 (3/8")	12,7 (0,5")	10,82	25,4	12,7	6,35	3,63 - 4,54	43,3
33010.W3710	9,52 (3/8")	25,4 (1")	10,82	25,4	12,7	6,35	3,63 - 4,54	43,3
33010.W3715	9,52 (3/8")	38,1 (1,5")	10,82	25,4	12,7	6,35	3,63 - 4,54	43,3
33010.W3720	9,52 (3/8")	50,8 (2")	10,82	25,4	12,7	6,35	3,63 - 4,54	43,3
33010.W3725	9,52 (3/8")	63,5 (2,5")	10,82	25,4	12,7	6,35	3,63 - 4,54	43,3
33010.W3730	9,52 (3/8")	76,2 (3")	10,82	25,4	12,7	6,35	3,63 - 4,54	43,3
33010.W3735	9,52 (3/8")	88,9 (3,5")	10,82	25,4	12,7	6,35	3,63 - 4,54	43,3
33010.W3740	9,52 (3/8")	101,6 (4")	10,82	25,4	12,7	6,35	3,63 - 4,54	43,3
33010.W3745	9,52 (3/8")	114,3 (4,5")	10,82	25,4	12,7	6,35	3,63 - 4,54	43,3
33010.W3750	9,52 (3/8")	127 (5")	10,82	25,4	12,7	6,35	3,63 - 4,54	43,3
33010.W3755	9,52 (3/8")	139,7 (5,5")	10,82	25,4	12,7	6,35	3,63 - 4,54	43,3
33010.W3760	9,52 (3/8")	152,4 (6")	10,82	25,4	12,7	6,35	3,63 - 4,54	43,3
33010.W4305	11,11 (7/16")	12,7 (0,5")	12,6	25,4	14,27	6,35	4,09 - 5,45	58,9
33010.W4310	11,11 (7/16")	25,4 (1")	12,6	25,4	14,27	6,35	4,09 - 5,45	58,9
33010.W4315	11,11 (7/16")	38,1 (1,5")	12,6	25,4	14,27	6,35	4,09 - 5,45	58,9
33010.W4320	11,11 (7/16")	50,8 (2")	12,6	25,4	14,27	6,35	4,09 - 5,45	58,9
33010.W4325	11,11 (7/16")	63,5 (2,5")	12,6	25,4	14,27	6,35	4,09 - 5,45	58,9
33010.W4330	11,11 (7/16")	76,2 (3")	12,6	25,4	14,27	6,35	4,09 - 5,45	58,9
33010.W4335	11,11 (7/16")	88,9 (3,5")	12,6	25,4	14,27	6,35	4,09 - 5,45	58,9
33010.W4340	11,11 (7/16")	101,6 (4")	12,6	25,4	14,27	6,35	4,09 - 5,45	58,9
33010.W4345	11,11 (7/16")	114,3 (4,5")	12,6	25,4	14,27	6,35	4,09 - 5,45	58,9

Detent Pin - Ring Handle - No shoulder

steel

33010

Order No.	d_1 +0.00 -0.08	l_1 grip +1,50 -0,00	d_2	d_3	l_2	l_3	Pull out strength kg	Min. single shear strength kN
33010.W4350	11,11 (7/16")	127 (5")	12,6	25,4	14,27	6,35	4,09 - 5,45	58,9
33010.W4355	11,11 (7/16")	139,7 (5,5")	12,6	25,4	14,27	6,35	4,09 - 5,45	58,9
33010.W4360	11,11 (7/16")	152,4 (6")	12,6	25,4	14,27	6,35	4,09 - 5,45	58,9
33010.W5005	12,70 (1/2")	12,7 (0,5")	14,48	31,75	15,88	7,92	4,54 - 5,45	77,0
33010.W5010	12,70 (1/2")	25,4 (1")	14,48	31,75	15,88	7,92	4,54 - 5,45	77,0
33010.W5015	12,70 (1/2")	38,1 (1,5")	14,48	31,75	15,88	7,92	4,54 - 5,45	77,0
33010.W5020	12,70 (1/2")	50,8 (2")	14,48	31,75	15,88	7,92	4,54 - 5,45	77,0
33010.W5025	12,70 (1/2")	63,5 (2,5")	14,48	31,75	15,88	7,92	4,54 - 5,45	77,0
33010.W5030	12,70 (1/2")	76,2 (3")	14,48	31,75	15,88	7,92	4,54 - 5,45	77,0
33010.W5035	12,70 (1/2")	88,9 (3,5")	14,48	31,75	15,88	7,92	4,54 - 5,45	77,0
33010.W5040	12,70 (1/2")	101,6 (4")	14,48	31,75	15,88	7,92	4,54 - 5,45	77,0
33010.W5045	12,70 (1/2")	114,3 (4,5")	14,48	31,75	15,88	7,92	4,54 - 5,45	77,0
33010.W5050	12,70 (1/2")	127 (5")	14,48	31,75	15,88	7,92	4,54 - 5,45	77,0
33010.W5055	12,70 (1/2")	139,7 (5,5")	14,48	31,75	15,88	7,92	4,54 - 5,45	77,0
33010.W5060	12,70 (1/2")	152,4 (6")	14,48	31,75	15,88	7,92	4,54 - 5,45	77,0
33010.W5065	12,70 (1/2")	165,1 (6,5")	14,48	31,75	15,88	7,92	4,54 - 5,45	77,0
33010.W5070	12,70 (1/2")	177,8 (7")	14,48	31,75	15,88	7,92	4,54 - 5,45	77,0
33010.W5610	14,22 (9/16")	25,4 (1")	16,31	31,75	17,45	7,92	5,45 - 6,81	97,6
33010.W5615	14,22 (9/16")	38,1 (1,5")	16,31	31,75	17,45	7,92	5,45 - 6,81	97,6
33010.W5620	14,22 (9/16")	50,8 (2")	16,31	31,75	17,45	7,92	5,45 - 6,81	97,6
33010.W5625	14,22 (9/16")	63,5 (2,5")	16,31	31,75	17,45	7,92	5,45 - 6,81	97,6
33010.W5630	14,22 (9/16")	76,2 (3")	16,31	31,75	17,45	7,92	5,45 - 6,81	97,6
33010.W5635	14,22 (9/16")	88,9 (3,5")	16,31	31,75	17,45	7,92	5,45 - 6,81	97,6
33010.W5640	14,22 (9/16")	101,6 (4")	16,31	31,75	17,45	7,92	5,45 - 6,81	97,6
33010.W5645	14,22 (9/16")	114,3 (4,5")	16,31	31,75	17,45	7,92	5,45 - 6,81	97,6
33010.W5650	14,22 (9/16")	127 (5")	16,31	31,75	17,45	7,92	5,45 - 6,81	97,6
33010.W5655	14,22 (9/16")	139,7 (5,5")	16,31	31,75	17,45	7,92	5,45 - 6,81	97,6
33010.W5660	14,22 (9/16")	152,4 (6")	16,31	31,75	17,45	7,92	5,45 - 6,81	97,6
33010.W5670	14,22 (9/16")	177,8 (7")	16,31	31,75	17,45	7,92	5,45 - 6,81	97,6
33010.W6210	15,88 (5/8")	25,4 (1")	18,03	31,75	19,05	9,53	6,36 - 7,26	121,6
33010.W6215	15,88 (5/8")	38,1 (1,5")	18,03	31,75	19,05	9,53	6,36 - 7,26	121,6
33010.W6220	15,88 (5/8")	50,8 (2")	18,03	31,75	19,05	9,53	6,36 - 7,26	121,6
33010.W6225	15,88 (5/8")	63,5 (2,5")	18,03	31,75	19,05	9,53	6,36 - 7,26	121,6
33010.W6230	15,88 (5/8")	76,2 (3")	18,03	31,75	19,05	9,53	6,36 - 7,26	121,6
33010.W6235	15,88 (5/8")	88,9 (3,5")	18,03	31,75	19,05	9,53	6,36 - 7,26	121,6
33010.W6240	15,88 (5/8")	101,6 (4")	18,03	31,75	19,05	9,53	6,36 - 7,26	121,6
33010.W6245	15,88 (5/8")	114,3 (4,5")	18,03	31,75	19,05	9,53	6,36 - 7,26	121,6
33010.W6250	15,88 (5/8")	127 (5")	18,03	31,75	19,05	9,53	6,36 - 7,26	121,6
33010.W6255	15,88 (5/8")	139,7 (5,5")	18,03	31,75	19,05	9,53	6,36 - 7,26	121,6
33010.W6260	15,88 (5/8")	152,4 (6")	18,03	31,75	19,05	9,53	6,36 - 7,26	121,6
33010.W6265	15,88 (5/8")	165,1 (6,5")	18,03	31,75	19,05	9,53	6,36 - 7,26	121,6
33010.W6270	15,88 (5/8")	177,8 (7")	18,03	31,75	19,05	9,53	6,36 - 7,26	121,6
33010.W6280	15,88 (5/8")	203,2 (8")	18,03	31,75	19,05	9,53	6,36 - 7,26	121,6
33010.W7510	19,05 (3/4")	25,4 (1")	21,74	38,1	23,8	9,53	8,17 - 9,98	173,6
33010.W7515	19,05 (3/4")	38,1 (1,5")	21,74	38,1	23,8	9,53	8,17 - 9,98	173,6
33010.W7520	19,05 (3/4")	50,8 (2")	21,74	38,1	23,8	9,53	8,17 - 9,98	173,6
33010.W7525	19,05 (3/4")	63,5 (2,5")	21,74	38,1	23,8	9,53	8,17 - 9,98	173,6
33010.W7530	19,05 (3/4")	76,2 (3")	21,74	38,1	23,8	9,53	8,17 - 9,98	173,6
33010.W7535	19,05 (3/4")	88,9 (3,5")	21,74	38,1	23,8	9,53	8,17 - 9,98	173,6
33010.W7540	19,05 (3/4")	101,6 (4")	21,74	38,1	23,8	9,53	8,17 - 9,98	173,6
33010.W7545	19,05 (3/4")	114,3 (4,5")	21,74	38,1	23,8	9,53	8,17 - 9,98	173,6
33010.W7550	19,05 (3/4")	127 (5")	21,74	38,1	23,8	9,53	8,17 - 9,98	173,6
33010.W7555	19,05 (3/4")	139,7 (5,5")	21,74	38,1	23,8	9,53	8,17 - 9,98	173,6
33010.W7560	19,05 (3/4")	152,4 (6")	21,74	38,1	23,8	9,53	8,17 - 9,98	173,6
33010.W7570	19,05 (3/4")	177,8 (7")	21,74	38,1	23,8	9,53	8,17 - 9,98	173,6
33010.W7580	19,05 (3/4")	203,2 (8")	21,74	38,1	23,8	9,53	8,17 - 9,98	173,6
33010.W8810	22,23 (7/8")	25,4 (1")	25,3	38,1	25,4	12,7	12,71 - 14,07	239,4
33010.W8815	22,23 (7/8")	38,1 (1,5")	25,3	38,1	25,4	12,7	12,71 - 14,07	239,4
33010.W8820	22,23 (7/8")	50,8 (2")	25,3	38,1	25,4	12,7	12,71 - 14,07	239,4
33010.W8825	22,23 (7/8")	63,5 (2,5")	25,3	38,1	25,4	12,7	12,71 - 14,07	239,4
33010.W8830	22,23 (7/8")	76,2 (3")	25,3	38,1	25,4	12,7	12,71 - 14,07	239,4
33010.W8835	22,23 (7/8")	88,9 (3,5")	25,3	38,1	25,4	12,7	12,71 - 14,07	239,4
33010.W8840	22,23 (7/8")	101,6 (4")	25,3	38,1	25,4	12,7	12,71 - 14,07	239,4



Material

Shaft: Carbon steel (C1144), zinc plated.
Ball & spring: Stainless steel AISI 316.

Technical Notes

Detent pins are very economical for use in commercial and military equipment.
The solid body with direct spring loaded ball ensures reliable operation.
Can be used for locking telescopic tubing, securing bracket assemblies, as anchor clevis fittings, hinge pins and as replacement for cotter pins where frequent removal is necessary.
Hole sizes - commercial drills provide clearance for our standard pins.
Inch dimensions in brackets ( ).

Tips

Also available in stainless steel see part no. 33012.

Detent Pin - Ring Handle - No shoulder

steel

33010

Order No.	d_1 +0.00 -0.08	l_1 grip +1,50 -0,00	d_2	d_3	l_2	l_3	Pull out strength kg	Min. single shear strength kN
33010.W8845	22,23 (7/8")	114,3 (4,5")	25,3	38,1	25,4	12,7	12,71 - 14,07	239,4
33010.W8850	22,23 (7/8")	127 (5")	25,3	38,1	25,4	12,7	12,71 - 14,07	239,4
33010.W8855	22,23 (7/8")	139,7 (5,5")	25,3	38,1	25,4	12,7	12,71 - 14,07	239,4
33010.W8860	22,23 (7/8")	152,4 (6")	25,3	38,1	25,4	12,7	12,71 - 14,07	239,4
33010.W8865	22,23 (7/8")	165,1 (6,5")	25,3	38,1	25,4	12,7	12,71 - 14,07	239,4
33010.W8870	22,23 (7/8")	177,8 (7")	25,3	38,1	25,4	12,7	12,71 - 14,07	239,4
33010.W8880	22,23 (7/8")	203,2 (8")	25,3	38,1	25,4	12,7	12,71 - 14,07	239,4
33010.W1010	25,4 (1")	25,4 (1")	28,96	38,1	31,75	12,7	15,88 - 18,15	312,3
33010.W1015	25,4 (1")	38,1 (1,5")	28,96	38,1	31,75	12,7	15,88 - 18,15	312,3
33010.W1020	25,4 (1")	50,8 (2")	28,96	38,1	31,75	12,7	15,88 - 18,15	312,3
33010.W1025	25,4 (1")	63,5 (2,5")	28,96	38,1	31,75	12,7	15,88 - 18,15	312,3
33010.W1030	25,4 (1")	76,2 (3")	28,96	38,1	31,75	12,7	15,88 - 18,15	312,3
33010.W1035	25,4 (1")	88,9 (3,5")	28,96	38,1	31,75	12,7	15,88 - 18,15	312,3
33010.W1040	25,4 (1")	101,6 (4")	28,96	38,1	31,75	12,7	15,88 - 18,15	312,3
33010.W1045	25,4 (1")	114,3 (4,5")	28,96	38,1	31,75	12,7	15,88 - 18,15	312,3
33010.W1050	25,4 (1")	127 (5")	28,96	38,1	31,75	12,7	15,88 - 18,15	312,3
33010.W1055	25,4 (1")	139,7 (5,5")	28,96	38,1	31,75	12,7	15,88 - 18,15	312,3
33010.W1060	25,4 (1")	152,4 (6")	28,96	38,1	31,75	12,7	15,88 - 18,15	312,3
33010.W1070	25,4 (1")	177,8 (7")	28,96	38,1	31,75	12,7	15,88 - 18,15	312,3
33010.W1080	25,4 (1")	203,2 (8")	28,96	38,1	31,75	12,7	15,88 - 18,15	312,3



Material

Shaft: Carbon steel (C1144), zinc plated.
Ball & spring: Stainless steel AISI 316.

Technical Notes

Detent pins are very economical for use in commercial and military equipment.
The solid body with direct spring loaded ball ensures reliable operation.
Can be used for locking telescopic tubing, securing bracket assemblies, as anchor clevis fittings, hinge pins and as replacement for cotter pins where frequent removal is necessary.
Hole sizes - commercial drills provide clearance for our standard pins.
Inch dimensions in brackets ( ).

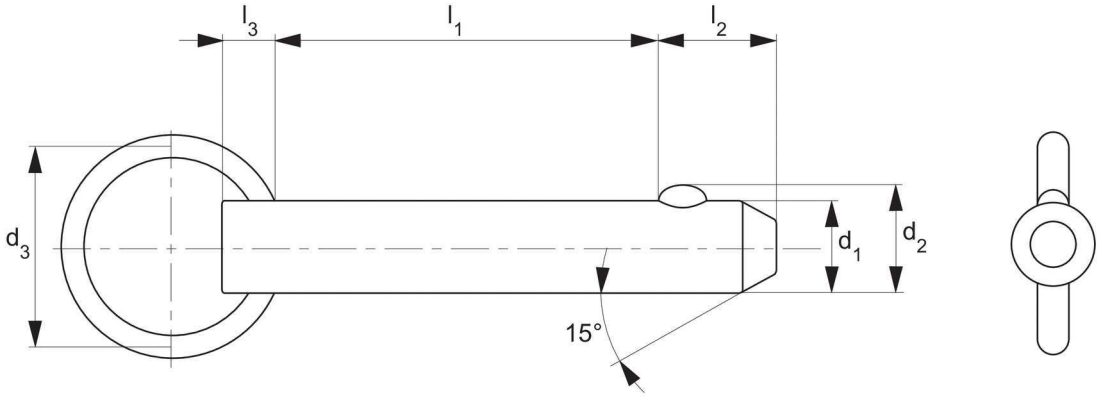
Tips

Also available in stainless steel see part no. 33012.

Detent Pin - Ring Handle - No shoulder

stainless steel

33012





Order No.	d_1 +0,00-0,08	d_2	d_3	l_1 grip$_{+1,5-0,00}$	l_2	l_3	Pull out strength kg	Min. single shear strength kN.
33012.W1803	4,76 (3/16")	5,18	25,4	7,62 (0,3")	5,08	4,74	1,9 - 2,3	12,2
33012.W1805	4,76 (3/16")	5,18	25,4	12,7 (0,5")	5,08	4,74	1,9 - 2,3	12,2
33012.W1810	4,76 (3/16")	5,18	25,4	25,4 (1,0")	5,08	4,74	1,9 - 2,3	12,2
33012.W1815	4,76 (3/16")	5,18	25,4	38,1 (1,5")	5,08	4,74	1,9 - 2,3	12,2
33012.W1820	4,76 (3/16")	5,18	25,4	50,8 (2,0")	5,08	4,74	1,9 - 2,3	12,2
33012.W1825	4,76 (3/16")	5,18	25,4	63,5 (2,5")	5,08	4,74	1,9 - 2,3	12,2
33012.W1830	4,76 (3/16")	5,18	25,4	76,2 (3,0")	5,08	4,74	1,9 - 2,3	12,2
33012.W1835	4,76 (3/16")	5,18	25,4	88,9 (3,5")	5,08	4,74	1,9 - 2,3	12,2
33012.W1840	4,76 (3/16")	5,18	25,4	101,6 (4,0")	5,08	4,74	1,9 - 2,3	12,2
33012.W2505	6,35 (1/4")	7,26	25,4	12,7 (0,5")	7,92	5,58	2,27 - 2,73	21,7
33012.W2510	6,35 (1/4")	7,26	25,4	25,4 (1,0")	7,92	5,58	2,27 - 2,73	21,7
33012.W2515	6,35 (1/4")	7,26	25,4	38,1 (1,5")	7,92	5,58	2,27 - 2,73	21,7
33012.W2520	6,35 (1/4")	7,26	25,4	50,8 (2,0")	7,92	5,58	2,27 - 2,73	21,7
33012.W2525	6,35 (1/4")	7,26	25,4	63,5 (2,5")	7,92	5,58	2,27 - 2,73	21,7
33012.W2530	6,35 (1/4")	7,26	25,4	76,2 (3,0")	7,92	5,58	2,27 - 2,73	21,7
33012.W2535	6,35 (1/4")	7,26	25,4	88,9 (3,5")	7,92	5,58	2,27 - 2,73	21,7
33012.W2540	6,35 (1/4")	7,26	25,4	101,6 (4,0")	7,92	5,58	2,27 - 2,73	21,7
33012.W3105	7,93 (5/16")	9,09	25,4	12,7 (0,5")	9,52	6,35	2,27 - 2,73	33,8
33012.W3110	7,93 (5/16")	9,09	25,4	25,4 (1,0")	9,52	6,35	2,27 - 2,73	33,8
33012.W3115	7,93 (5/16")	9,09	25,4	38,1 (1,5")	9,52	6,35	2,27 - 2,73	33,8
33012.W3120	7,93 (5/16")	9,09	25,4	50,8 (2,0")	9,52	6,35	2,27 - 2,73	33,8
33012.W3125	7,93 (5/16")	9,09	25,4	63,5 (2,5")	9,52	6,35	2,27 - 2,73	33,8
33012.W3130	7,93 (5/16")	9,09	25,4	76,2 (3,0")	9,52	6,35	2,27 - 2,73	33,8
33012.W3135	7,93 (5/16")	9,09	25,4	88,9 (3,5")	9,52	6,35	2,27 - 2,73	33,8
33012.W3140	7,93 (5/16")	9,09	25,4	101,6 (4,0")	9,52	6,35	2,27 - 2,73	33,8
33012.W3145	7,93 (5/16")	9,09	25,4	114,3 (4,5")	9,52	6,35	2,27 - 2,73	33,8
33012.W3150	7,93 (5/16")	9,09	25,4	127,0 (5,0")	9,52	6,35	2,27 - 2,73	33,8
33012.W3705	9,52 (3/8")	10,8	25,4	12,7 (0,5")	12,7	6,35	3,63 - 4,54	49,1
33012.W3710	9,52 (3/8")	10,8	25,4	25,4 (1,0")	12,7	6,35	3,63 - 4,54	49,1
33012.W3715	9,52 (3/8")	10,8	25,4	38,1 (1,5")	12,7	6,35	3,63 - 4,54	49,1
33012.W3720	9,52 (3/8")	10,8	25,4	50,8 (2,0")	12,7	6,35	3,63 - 4,54	49,1
33012.W3725	9,52 (3/8")	10,8	25,4	63,5 (2,5")	12,7	6,35	3,63 - 4,54	49,1
33012.W3730	9,52 (3/8")	10,8	25,4	76,2 (3,0")	12,7	6,35	3,63 - 4,54	49,1
33012.W3735	9,52 (3/8")	10,8	25,4	88,9 (3,5")	12,7	6,35	3,63 - 4,54	49,1
33012.W3740	9,52 (3/8")	10,8	25,4	101,6 (4,0")	12,7	6,35	3,63 - 4,54	49,1
33012.W3745	9,52 (3/8")	10,8	25,4	114,3 (4,5")	12,7	6,35	3,63 - 4,54	49,1
33012.W3750	9,52 (3/8")	10,8	25,4	127,0 (5,0")	12,7	6,35	3,63 - 4,54	49,1
33012.W3755	9,52 (3/8")	10,8	25,4	139,7 (5,5")	12,7	6,35	3,63 - 4,54	49,1
33012.W3760	9,52 (3/8")	10,8	25,4	152,4 (6")	12,7	6,35	3,63 - 4,54	49,1
33012.W4305	11,1 (7/16")	12,5	25,4	12,7 (0,5")	14,2	6,35	4,09 - 5,45	66,5
33012.W4310	11,1 (7/16")	12,5	25,4	25,4 (1,0")	14,2	6,35	4,09 - 5,45	66,5
33012.W4315	11,1 (7/16")	12,5	25,4	38,1 (1,5")	14,2	6,35	4,09 - 5,45	66,5
33012.W4320	11,1 (7/16")	12,5	25,4	50,8 (2,0")	14,2	6,35	4,09 - 5,45	66,5
33012.W4325	11,1 (7/16")	12,5	25,4	63,5 (2,5")	14,2	6,35	4,09 - 5,45	66,5
33012.W4330	11,1 (7/16")	12,5	25,4	76,2 (3,0")	14,2	6,35	4,09 - 5,45	66,5
33012.W4335	11,1 (7/16")	12,5	25,4	88,9 (3,5")	14,2	6,35	4,09 - 5,45	66,5
33012.W4340	11,1 (7/16")	12,5	25,4	101,6 (4,0")	14,2	6,35	4,09 - 5,45	66,5
33012.W4345	11,1 (7/16")	12,5	25,4	114,3 (4,5")	14,2	6,35	4,09 - 5,45	66,5
33012.W4350	11,1 (7/16")	12,5	25,4	127,0 (5,0")	14,2	6,35	4,09 - 5,45	66,5
33012.W4355	11,1 (7/16")	12,5	25,4	139,7 (5,5")	14,2	6,35	4,09 - 5,45	66,5
33012.W4360	11,1 (7/16")	12,5	25,4	152,4 (6")	14,2	6,35	4,09 - 5,45	66,5
33012.W5005	12,7 (1/2")	14,4	31,7	12,7 (0,5")	15,8	7,92	4,54 - 5,45	87,1
33012.W5010	12,7 (1/2")	14,4	31,7	25,4 (1,0")	15,8	7,92	4,54 - 5,45	87,1

Material

Shaft: Stainless steel, AISI 303.
Ball & Spring: Stainless steel, AISI 316.

Technical Notes

Detent pins are very economical for use in commercial and military equipment.
The solid body with direct spring loaded ball ensures reliable operation.
For locking telescopic tubing, securing bracket assemblies, as anchor clevis fittings, hinge pins etc where frequent removal is necessary.
Hole sizes - commercial drills provide clearance for our standard pins.
Inch dimensions in brackets ( ).

Tips

Also available on request in A4 (AISI 316) stainless steel, subject to min. quantity.

Referral

Also available in steel, see part no. 33010.

Detent Pin - Ring Handle - No shoulder

stainless steel

33012

Order No.	d_1 +0,00-0,08	d_2	d_3	l_1 grip$_{+1,5-0,00}$	l_2	l_3	Pull out strength kg	Min. single shear strength kN.
33012.W5015	12,7 (1/2")	14,4	31,7	38,1 (1,5")	15,8	7,92	4,54 - 5,45	87,1
33012.W5020	12,7 (1/2")	14,4	31,7	50,8 (2,0")	15,8	7,92	4,54 - 5,45	87,1
33012.W5025	12,7 (1/2")	14,4	31,7	63,5 (2,5")	15,8	7,92	4,54 - 5,45	87,1
33012.W5030	12,7 (1/2")	14,4	31,7	76,2 (3,0")	15,8	7,92	4,54 - 5,45	87,1
33012.W5035	12,7 (1/2")	14,4	31,7	88,9 (3,5")	15,8	7,92	4,54 - 5,45	87,1
33012.W5040	12,7 (1/2")	14,4	31,7	101,6 (4,0")	15,8	7,92	4,54 - 5,45	87,1
33012.W5045	12,7 (1/2")	14,4	31,7	114,3 (4,5")	15,8	7,92	4,54 - 5,45	87,1
33012.W5050	12,7 (1/2")	14,4	31,7	127,0 (5,0")	15,8	7,92	4,54 - 5,45	87,1
33012.W5055	12,7 (1/2")	14,4	31,7	139,7 (5,5")	15,8	7,92	4,54 - 5,45	87,1
33012.W5060	12,7 (1/2")	14,4	31,7	152,4 (6")	15,8	7,92	4,54 - 5,45	87,1
33012.W5065	12,7 (1/2")	14,4	31,7	165,1 (6,5")	15,8	7,92	4,54 - 5,45	87,1
33012.W5070	12,7 (1/2")	14,4	31,7	177,8 (7,0")	15,8	7,92	4,54 - 5,45	87,1
33012.W5610	14,2 (9/16")	16,3	31,7	25,4 (1,0")	17,4	7,92	5,45 - 6,81	110,3
33012.W5615	14,2 (9/16")	16,3	31,7	38,1 (1,5")	17,4	7,92	5,45 - 6,81	110,3
33012.W5620	14,2 (9/16")	16,3	31,7	50,8 (2,0")	17,4	7,92	5,45 - 6,81	110,3
33012.W5625	14,2 (9/16")	16,3	31,7	63,5 (2,5")	17,4	7,92	5,45 - 6,81	110,3
33012.W5630	14,2 (9/16")	16,3	31,7	76,2 (3,0")	17,4	7,92	5,45 - 6,81	110,3
33012.W5635	14,2 (9/16")	16,3	31,7	88,9 (3,5")	17,4	7,92	5,45 - 6,81	110,3
33012.W5640	14,2 (9/16")	16,3	31,7	101,6 (4,0")	17,4	7,92	5,45 - 6,81	110,3
33012.W5645	14,2 (9/16")	16,3	31,7	114,3 (4,5")	17,4	7,92	5,45 - 6,81	110,3
33012.W5650	14,2 (9/16")	16,3	31,7	127,0 (5,0")	17,4	7,92	5,45 - 6,81	110,3
33012.W5655	14,2 (9/16")	16,3	31,7	139,7 (5,5")	17,4	7,92	5,45 - 6,81	110,3
33012.W5660	14,2 (9/16")	16,3	31,7	152,4 (6,0")	17,4	7,92	5,45 - 6,81	110,3
33012.W5670	14,2 (9/16")	16,3	31,7	177,8 (7,0")	17,4	7,92	5,45 - 6,81	110,3
33012.W6210	15,8 (5/8")	18,0	31,7	25,4 (1,0")	19,0	9,52	6,36 - 7,26	137,3
33012.W6215	15,8 (5/8")	18,0	31,7	38,1 (1,5")	19,0	9,52	6,36 - 7,26	137,3
33012.W6220	15,8 (5/8")	18,0	31,7	50,8 (2,0")	19,0	9,52	6,36 - 7,26	137,3
33012.W6225	15,8 (5/8")	18,0	31,7	63,5 (2,5")	19,0	9,52	6,36 - 7,26	137,3
33012.W6230	15,8 (5/8")	18,0	31,7	76,2 (3,0")	19,0	9,52	6,36 - 7,26	137,3
33012.W6235	15,8 (5/8")	18,0	31,7	88,9 (3,5")	19,0	9,52	6,36 - 7,26	137,3
33012.W6240	15,8 (5/8")	18,0	31,7	101,6 (4,0")	19,0	9,52	6,36 - 7,26	137,3
33012.W6245	15,8 (5/8")	18,0	31,7	114,3 (4,5")	19,0	9,52	6,36 - 7,26	137,3
33012.W6250	15,8 (5/8")	18,0	31,7	127,0 (5,0")	19,0	9,52	6,36 - 7,26	137,3
33012.W6255	15,8 (5/8")	18,0	31,7	139,7 (5,5")	19,0	9,52	6,36 - 7,26	137,3
33012.W6260	15,8 (5/8")	18,0	31,7	152,4 (6,0")	19,0	9,52	6,36 - 7,26	137,3
33012.W6265	15,8 (5/8")	18,0	31,7	165,1 (6,5")	19,0	9,52	6,36 - 7,26	137,3
33012.W6270	15,8 (5/8")	18,0	31,7	177,8 (7,0")	19,0	9,52	6,36 - 7,26	137,3
33012.W6280	15,8 (5/8")	18,0	31,7	203,2 (8,0")	19,0	9,52	6,36 - 7,26	137,3
33012.W7510	19,0 (3/4")	21,7	38,1	25,4 (1,0")	23,7	9,52	8,17 - 9,98	195,9
33012.W7515	19,0 (3/4")	21,7	38,1	38,1 (1,5")	23,7	9,52	8,17 - 9,98	195,9
33012.W7520	19,0 (3/4")	21,7	38,1	50,8 (2,0")	23,7	9,52	8,17 - 9,98	195,9
33012.W7525	19,0 (3/4")	21,7	38,1	63,5 (2,5")	23,7	9,52	8,17 - 9,98	195,9
33012.W7530	19,0 (3/4")	21,7	38,1	76,2 (3,0")	23,7	9,52	8,17 - 9,98	195,9
33012.W7535	19,0 (3/4")	21,7	38,1	88,9 (3,5")	23,7	9,52	8,17 - 9,98	195,9
33012.W7540	19,0 (3/4")	21,7	38,1	101,6 (4,0")	23,7	9,52	8,17 - 9,98	195,9
33012.W7545	19,0 (3/4")	21,7	38,1	114,3 (4,5")	23,7	9,52	8,17 - 9,98	195,9
33012.W7550	19,0 (3/4")	21,7	38,1	127,0 (5,0")	23,7	9,52	8,17 - 9,98	195,9
33012.W7555	19,0 (3/4")	21,7	38,1	139,7 (5,5")	23,7	9,52	8,17 - 9,98	195,9
33012.W7560	19,0 (3/4")	21,7	38,1	152,4 (6,0")	23,7	9,52	8,17 - 9,98	195,9
33012.W7570	19,0 (3/4")	21,7	38,1	177,8 (7,0")	23,7	9,52	8,17 - 9,98	195,9
33012.W7580	19,0 (3/4")	21,7	38,1	203,2 (8,0")	23,7	9,52	8,17 - 9,98	195,9
33012.W8810	22,2 (7/8")	25,2	38,1	25,4 (1,0")	25,4	12,7	12,71 - 14,07	262,4
33012.W8815	22,2 (7/8")	25,2	38,1	38,1 (1,5")	25,4	12,7	12,71 - 14,07	262,4
33012.W8820	22,2 (7/8")	25,2	38,1	50,8 (2,0")	25,4	12,7	12,71 - 14,07	262,4
33012.W8825	22,2 (7/8")	25,2	38,1	63,5 (2,5")	25,4	12,7	12,71 - 14,07	262,4
33012.W8830	22,2 (7/8")	25,2	38,1	76,2 (3,0")	25,4	12,7	12,71 - 14,07	262,4
33012.W8835	22,2 (7/8")	25,2	38,1	88,9 (3,5")	25,4	12,7	12,71 - 14,07	262,4
33012.W8840	22,2 (7/8")	25,2	38,1	101,6 (4,0")	25,4	12,7	12,71 - 14,07	262,4
33012.W8845	22,2 (7/8")	25,2	38,1	114,3 (4,5")	25,4	12,7	12,71 - 14,07	262,4
33012.W8850	22,2 (7/8")	25,2	38,1	127,0 (5,0")	25,4	12,7	12,71 - 14,07	262,4
33012.W8855	22,2 (7/8")	25,2	38,1	139,7 (5,5")	25,4	12,7	12,71 - 14,07	262,4
33012.W8860	22,2 (7/8")	25,2	38,1	152,4 (6,0")	25,4	12,7	12,71 - 14,07	262,4
33012.W8865	22,2 (7/8")	25,2	38,1	165,1 (6,5")	25,4	12,7	12,71 - 14,07	262,4
33012.W8870	22,2 (7/8")	25,2	38,1	177,8 (7,0")	25,4	12,7	12,71 - 14,07	262,4
33012.W8880	22,2 (7/8")	25,2	38,1	203,2 (8,0")	25,4	12,7	12,71 - 14,07	262,4
33012.W1010	25,4 (1,0")	28,9	38,1	25,4 (1,0")	31,7	12,7	15,88 - 18,15	353,0
33012.W1015	25,4 (1,0")	28,9	38,1	38,1 (1,5")	31,7	12,7	15,88 - 18,15	353,0
33012.W1020	25,4 (1,0")	28,9	38,1	50,8 (2,0")	31,7	12,7	15,88 - 18,15	353,0
33012.W1025	25,4 (1,0")	28,9	38,1	63,5 (2,5")	31,7	12,7	15,88 - 18,15	353,0



Material

Shaft: Stainless steel, AISI 303.
Ball & Spring: Stainless steel, AISI 316.

Technical Notes

Detent pins are very economical for use in commercial and military equipment.
The solid body with direct spring loaded ball ensures reliable operation.
For locking telescopic tubing, securing bracket assemblies, as anchor clevis fittings, hinge pins etc where frequent removal is necessary.
Hole sizes - commercial drills provide clearance for our standard pins.
Inch dimensions in brackets ( ).

Tips

Also available on request in A4 (AISI 316) stainless steel, subject to min. quantity.

Referral

Also available in steel, see part no. 33010.

Detent Pin - Ring Handle - No shoulder

stainless steel

33012

Order No.	d_1 +0,00-0,08	d_2	d_3	l_1 grip$_{+1,5-0,00}$	l_2	l_3	Pull out strength kg	Min. single shear strength kN.
33012.W1030	25,4 (1,0")	28,9	38,1	76,2 (3,0")	31,7	12,7	15,88 - 18,15	353,0
33012.W1035	25,4 (1,0")	28,9	38,1	88,9 (3,5")	31,7	12,7	15,88 - 18,15	353,0
33012.W1040	25,4 (1,0")	28,9	38,1	101,6 (4,0")	31,7	12,7	15,88 - 18,15	353,0
33012.W1045	25,4 (1,0")	28,9	38,1	114,3 (4,5")	31,7	12,7	15,88 - 18,15	353,0
33012.W1050	25,4 (1,0")	28,9	38,1	127,0 (5,0")	31,7	12,7	15,88 - 18,15	353,0
33012.W1055	25,4 (1,0")	28,9	38,1	139,7 (5,5")	31,7	12,7	15,88 - 18,15	353,0
33012.W1060	25,4 (1,0")	28,9	38,1	152,4 (6,0")	31,7	12,7	15,88 - 18,15	353,0
33012.W1070	25,4 (1,0")	28,9	38,1	177,8 (7,0")	31,7	12,7	15,88 - 18,15	353,0
33012.W1080	25,4 (1,0")	28,9	38,1	203,2 (8,0")	31,7	12,7	15,88 - 18,15	353,0



Material

Shaft: Stainless steel, AISI 303.
Ball & Spring: Stainless steel, AISI 316.

Technical Notes

Detent pins are very economical for use in commercial and military equipment.
The solid body with direct spring loaded ball ensures reliable operation.
For locking telescopic tubing, securing bracket assemblies, as anchor clevis fittings, hinge pins etc where frequent removal is necessary.
Hole sizes - commercial drills provide clearance for our standard pins.
Inch dimensions in brackets ( ).

Tips

Also available on request in A4 (AISI 316) stainless steel, subject to min. quantity.

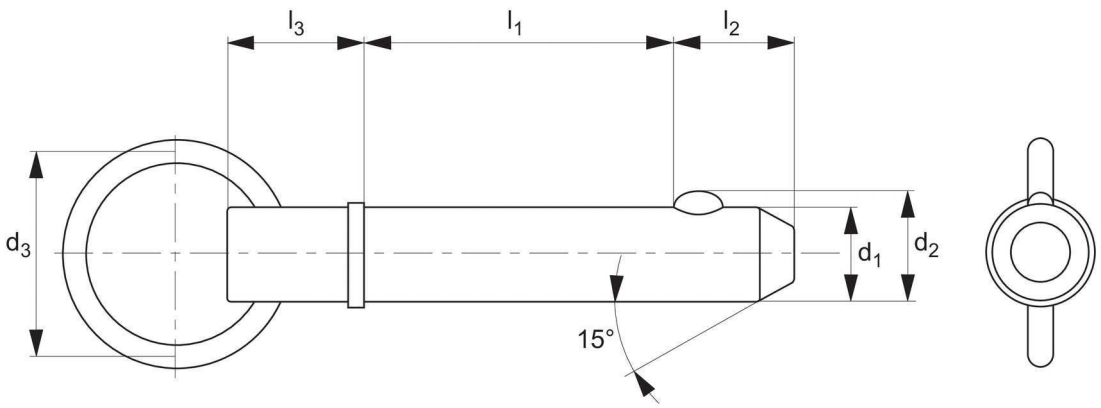
Referral

Also available in steel, see part no. 33010.

Detent Pin - Ring Handle - Shoulder

steel

33014





Order No.	d_1 +0.00 -0.08	l_1 grip +1,50 -0,00	d_2	d_3	l_2	l_3	Pull out strength kg	Min. single shear strength kN
33014.W1803	4,76 (3/16")	7,62 (0,3")	5,18	25,4	5,08	17,45	1, 9 - 2, 3	10,8
33014.W1805	4,76 (3/16")	12,7 (0,5")	5,18	25,4	5,08	17,45	1, 9 - 2, 3	10,8
33014.W1810	4,76 (3/16")	25,4 (1")	5,18	25,4	5,08	17,45	1, 9 - 2, 3	10,8
33014.W1815	4,76 (3/16")	38,1 (1,5")	5,18	25,4	5,08	17,45	1, 9 - 2, 3	10,8
33014.W1820	4,76 (3/16")	50,8 (2")	5,18	25,4	5,08	17,45	1, 9 - 2, 3	10,8
33014.W1825	4,76 (3/16")	63,5 (2,5")	5,18	25,4	5,08	17,45	1, 9 - 2, 3	10,8
33014.W1830	4,76 (3/16")	76,2 (3")	5,18	25,4	5,08	17,45	1, 9 - 2, 3	10,8
33014.W1835	4,76 (3/16")	88,9 (3,5")	5,18	25,4	5,08	17,45	1, 9 - 2, 3	10,8
33014.W1840	4,76 (3/16")	101,6 (4")	5,18	25,4	5,08	17,45	1, 9 - 2, 3	10,8
33014.W2505	6,35 (1/4")	12,7 (0,5")	7,26	31,75	7,92	18,29	2,27 - 2,73	19,3
33014.W2506	6,35 (1/4")	15,24 (0,6")	7,26	31,75	7,92	18,29	2,27 - 2,73	19,3
33014.W2510	6,35 (1/4")	25,4 (1")	7,26	31,75	7,92	18,29	2,27 - 2,73	19,3
33014.W2515	6,35 (1/4")	38,1 (1,5")	7,26	31,75	7,92	18,29	2,27 - 2,73	19,3
33014.W2520	6,35 (1/4")	50,8 (2")	7,26	31,75	7,92	18,29	2,27 - 2,73	19,3
33014.W2525	6,35 (1/4")	63,5 (2,5")	7,26	31,75	7,92	18,29	2,27 - 2,73	19,3
33014.W2530	6,35 (1/4")	76,2 (3")	7,26	31,75	7,92	18,29	2,27 - 2,73	19,3
33014.W2535	6,35 (1/4")	88,9 (3,5")	7,26	31,75	7,92	18,29	2,27 - 2,73	19,3
33014.W2540	6,35 (1/4")	101,6 (4")	7,26	31,75	7,92	18,29	2,27 - 2,73	19,3
33014.W3105	7,94 (5/16")	12,7 (0,5")	9,09	31,75	9,53	19,05	2,27 - 2,73	30,0
33014.W3110	7,94 (5/16")	25,4 (1")	9,09	31,75	9,53	19,05	2,27 - 2,73	30,0
33014.W3115	7,94 (5/16")	38,1 (1,5")	9,09	31,75	9,53	19,05	2,27 - 2,73	30,0
33014.W3120	7,94 (5/16")	50,8 (2")	9,09	31,75	9,53	19,05	2,27 - 2,73	30,0
33014.W3125	7,94 (5/16")	63,5 (2,5")	9,09	31,75	9,53	19,05	2,27 - 2,73	30,0
33014.W3130	7,94 (5/16")	76,2 (3")	9,09	31,75	9,53	19,05	2,27 - 2,73	30,0
33014.W3135	7,94 (5/16")	88,9 (3,5")	9,09	31,75	9,53	19,05	2,27 - 2,73	30,0
33014.W3140	7,94 (5/16")	101,6 (4")	9,09	31,75	9,53	19,05	2,27 - 2,73	30,0
33014.W3145	7,94 (5/16")	114,3 (4,5")	9,09	31,75	9,53	19,05	2,27 - 2,73	30,0
33014.W3150	7,94 (5/16")	127 (5")	9,09	31,75	9,53	19,05	2,27 - 2,73	30,0
33014.W3705	9,53 (3,8")	12,7 (0,5")	10,82	44,45	12,7	19,05	3,63 - 4,54	43,3
33014.W3706	9,53 (3,8")	15,24 (0,6")	10,82	44,45	12,7	19,05	3,63 - 4,54	43,3
33014.W3710	9,53 (3,8")	25,4 (1")	10,82	44,45	12,7	19,05	3,63 - 4,54	43,3
33014.W3715	9,53 (3,8")	38,1 (1,5")	10,82	44,45	12,7	19,05	3,63 - 4,54	43,3
33014.W3718	9,53 (3,8")	45,72 (1,8")	10,82	44,45	12,7	19,05	3,63 - 4,54	43,3
33014.W3720	9,53 (3,8")	50,8 (2")	10,82	44,45	12,7	19,05	3,63 - 4,54	43,3
33014.W3725	9,53 (3,8")	63,5 (2,5")	10,82	44,45	12,7	19,05	3,63 - 4,54	43,3
33014.W3730	9,53 (3,8")	76,2 (3")	10,82	44,45	12,7	19,05	3,63 - 4,54	43,3
33014.W3735	9,53 (3,8")	88,9 (3,5")	10,82	44,45	12,7	19,05	3,63 - 4,54	43,3
33014.W3740	9,53 (3,8")	101,6 (4")	10,82	44,45	12,7	19,05	3,63 - 4,54	43,3
33014.W3745	9,53 (3,8")	114,3 (4,5")	10,82	44,45	12,7	19,05	3,63 - 4,54	43,3
33014.W3750	9,53 (3,8")	127 (5")	10,82	44,45	12,7	19,05	3,63 - 4,54	43,3
33014.W3755	9,53 (3,8")	139,7 (5,5")	10,82	44,45	12,7	19,05	3,63 - 4,54	43,3
33014.W3760	9,53 (3,8")	152,4 (6")	10,82	44,45	12,7	19,05	3,63 - 4,54	43,3
33014.W4305	11,11(7,16")	12,7 (0,5")	12,6	44,45	14,27	24,13	4,09 - 5,45	58,9
33014.W4310	11,11(7,16")	25,4 (1")	12,6	44,45	14,27	24,13	4,09 - 5,45	58,9
33014.W4315	11,11(7,16")	38,1 (1,5")	12,6	44,45	14,27	24,13	4,09 - 5,45	58,9
33014.W4320	11,11(7,16")	50,8 (2")	12,6	44,45	14,27	24,13	4,09 - 5,45	58,9
33014.W4325	11,11(7,16")	63,5 (2,5")	12,6	44,45	14,27	24,13	4,09 - 5,45	58,9

Material

Shaft: Carbon steel (C1144), zinc plated.
Ball & spring: Stainless steel AISI 316.

Technical Notes

Detent pins are very economical for use in commercial and military equipment.
The solid body with direct spring loaded ball ensures reliable operation.
Can be used for locking telescopic tubing, securing bracket assemblies, as anchor clevis fittings, hinge pins and as replacement for cotter pins where frequent removal is necessary.
Hole sizes - commercial drills provide clearance for our standard pins.
Inch dimensions in brackets ( ).

Tips

Also available in stainless steel see part no. 33016.

Detent Pin - Ring Handle - Shoulder

steel

33014

Order No.	d_1 +0.00 -0.08	l_1 grip +1,50 -0,00	d_2	d_3	l_2	l_3	Pull out strength kg	Min. single shear strength kN
33014.W4330	11,11(7,16")	76,2 (3")	12,6	44,45	14,27	24,13	4,09 - 5,45	58,9
33014.W4335	11,11(7,16")	88,9 (3,5")	12,6	44,45	14,27	24,13	4,09 - 5,45	58,9
33014.W4340	11,11(7,16")	101,6 (4")	12,6	44,45	14,27	24,13	4,09 - 5,45	58,9
33014.W4345	11,11(7,16")	114,3 (4,5")	12,6	44,45	14,27	24,13	4,09 - 5,45	58,9
33014.W4350	11,11(7,16")	127 (5")	12,6	44,45	14,27	24,13	4,09 - 5,45	58,9
33014.W4355	11,11(7,16")	139,7 (5,5")	12,6	44,45	14,27	24,13	4,09 - 5,45	58,9
33014.W4360	11,11(7,16")	152,4 (6")	12,6	44,45	14,27	24,13	4,09 - 5,45	58,9
33014.W5005	12,7 (1/2")	12,7 (0,5")	14,48	50,8	15,88	25,7	4,54 - 5,45	77,0
33014.W5010	12,7 (1/2")	25,4 (1")	14,48	50,8	15,88	25,7	4,54 - 5,45	77,0
33014.W5013	12,7 (1/2")	33,02 (1,3")	14,48	50,8	15,88	25,7	4,54 - 5,45	77,0
33014.W5015	12,7 (1/2")	38,1 (1,5")	14,48	50,8	15,88	25,7	4,54 - 5,45	77,0
33014.W5020	12,7 (1/2")	50,8 (2")	14,48	50,8	15,88	25,7	4,54 - 5,45	77,0
33014.W5025	12,7 (1/2")	63,5 (2,5")	14,48	50,8	15,88	25,7	4,54 - 5,45	77,0
33014.W5035	12,7 (1/2")	88,9 (3,5")	14,48	50,8	15,88	25,7	4,54 - 5,45	77,0
33014.W5040	12,7 (1/2")	101,6 (4")	14,48	50,8	15,88	25,7	4,54 - 5,45	77,0
33014.W5045	12,7 (1/2")	114,3 (4,5")	14,48	50,8	15,88	25,7	4,54 - 5,45	77,0
33014.W5050	12,7 (1/2")	127 (5")	14,48	50,8	15,88	25,7	4,54 - 5,45	77,0
33014.W5055	12,7 (1/2")	139,7 (5,5")	14,48	50,8	15,88	25,7	4,54 - 5,45	77,0
33014.W5060	12,7 (1/2")	152,4 (6")	14,48	50,8	15,88	25,7	4,54 - 5,45	77,0
33014.W5065	12,7 (1/2")	165,1 (6,5")	14,48	50,8	15,88	25,7	4,54 - 5,45	77,0
33014.W5070	12,7 (1/2")	177,8 (7")	14,48	50,8	15,88	25,7	4,54 - 5,45	77,0
33014.W5610	14,29 (9/16")	25,4 (1")	16,31	50,8	17,45	25,7	5,45 - 6,81	97,6
33014.W5615	14,29 (9/16")	38,1 (1,5")	16,31	50,8	17,45	25,7	5,45 - 6,81	97,6
33014.W5620	14,29 (9/16")	50,8 (2")	16,31	50,8	17,45	25,7	5,45 - 6,81	97,6
33014.W5625	14,29 (9/16")	63,5 (2,5")	16,31	50,8	17,45	25,7	5,45 - 6,81	97,6
33014.W5630	14,29 (9/16")	76,2 (3")	16,31	50,8	17,45	25,7	5,45 - 6,81	97,6
33014.W5635	14,29 (9/16")	88,9 (3,5")	16,31	50,8	17,45	25,7	5,45 - 6,81	97,6
33014.W5640	14,29 (9/16")	101,6 (4")	16,31	50,8	17,45	25,7	5,45 - 6,81	97,6
33014.W5645	14,29 (9/16")	114,3 (4,5")	16,31	50,8	17,45	25,7	5,45 - 6,81	97,6
33014.W5650	14,29 (9/16")	127 (5")	16,31	50,8	17,45	25,7	5,45 - 6,81	97,6
33014.W5655	14,29 (9/16")	139,7 (5,5")	16,31	50,8	17,45	25,7	5,45 - 6,81	97,6
33014.W5660	14,29 (9/16")	152,4 (6")	16,31	50,8	17,45	25,7	5,45 - 6,81	97,6
33014.W5670	14,29 (9/16")	177,8 (7")	16,31	50,8	17,45	25,7	5,45 - 6,81	97,6
33014.W6210	15,88 (5/8")	25,4 (1")	18,03	57,15	19,05	27,31	6,36 - 7,26	121,6
33014.W6215	15,88 (5/8")	38,1 (1,5")	18,03	57,15	19,05	27,31	6,36 - 7,26	121,6
33014.W6220	15,88 (5/8")	50,8 (2")	18,03	57,15	19,05	27,31	6,36 - 7,26	121,6
33014.W6225	15,88 (5/8")	63,5 (2,5")	18,03	57,15	19,05	27,31	6,36 - 7,26	121,6
33014.W6230	15,88 (5/8")	76,2 (3")	18,03	57,15	19,05	27,31	6,36 - 7,26	121,6
33014.W6235	15,88 (5/8")	88,9 (3,5")	18,03	57,15	19,05	27,31	6,36 - 7,26	121,6
33014.W6240	15,88 (5/8")	101,6 (4")	18,03	57,15	19,05	27,31	6,36 - 7,26	121,6
33014.W6245	15,88 (5/8")	114,3 (4,5")	18,03	57,15	19,05	27,31	6,36 - 7,26	121,6
33014.W6250	15,88 (5/8")	127 (5")	18,03	57,15	19,05	27,31	6,36 - 7,26	121,6
33014.W6255	15,88 (5/8")	139,7 (5,5")	18,03	57,15	19,05	27,31	6,36 - 7,26	121,6
33014.W6260	15,88 (5/8")	152,4 (6")	18,03	57,15	19,05	27,31	6,36 - 7,26	121,6
33014.W6270	15,88 (5/8")	177,8 (7")	18,03	57,15	19,05	27,31	6,36 - 7,26	121,6
33014.W6280	15,88 (5/8")	203,2 (8")	18,03	57,15	19,05	27,31	6,36 - 7,26	121,6
33014.W7510	19,05 (3/4")	25,4 (1")	21,74	57,15	23,8	34,93	8,17 - 9,98	173,6
33014.W7515	19,05 (3/4")	38,1 (1,5")	21,74	57,15	23,8	34,93	8,17 - 9,98	173,6
33014.W7520	19,05 (3/4")	50,8 (2")	21,74	57,15	23,8	34,93	8,17 - 9,98	173,6
33014.W7525	19,05 (3/4")	63,5 (2,5")	21,74	57,15	23,8	34,93	8,17 - 9,98	173,6
33014.W7530	19,05 (3/4")	76,2 (3")	21,74	57,15	23,8	34,93	8,17 - 9,98	173,6
33014.W7535	19,05 (3/4")	88,9 (3,5")	21,74	57,15	23,8	34,93	8,17 - 9,98	173,6
33014.W7540	19,05 (3/4")	101,6 (4")	21,74	57,15	23,8	34,93	8,17 - 9,98	173,6
33014.W7545	19,05 (3/4")	114,3 (4,5")	21,74	57,15	23,8	34,93	8,17 - 9,98	173,6
33014.W7550	19,05 (3/4")	127 (5")	21,74	57,15	23,8	34,93	8,17 - 9,98	173,6
33014.W7555	19,05 (3/4")	139,7 (5,5")	21,74	57,15	23,8	34,93	8,17 - 9,98	173,6
33014.W7560	19,05 (3/4")	152,4 (6")	21,74	57,15	23,8	34,93	8,17 - 9,98	173,6
33014.W7570	19,05 (3/4")	177,8 (7")	21,74	57,15	23,8	34,93	8,17 - 9,98	173,6
33014.W7580	19,05 (3/4")	203,2 (8")	21,74	57,15	23,8	34,93	8,17 - 9,98	173,6
33014.W8810	22,23 (7/8")	25,4 (1")	25,3	63,5	25,4	38,1	12,71 - 14,07	239,4
33014.W8815	22,23 (7/8")	38,1 (1,5")	25,3	63,5	25,4	38,1	12,71 - 14,07	239,4
33014.W8820	22,23 (7/8")	50,8 (2")	25,3	63,5	25,4	38,1	12,71 - 14,07	239,4
33014.W8825	22,23 (7/8")	63,5 (2,5")	25,3	63,5	25,4	38,1	12,71 - 14,07	239,4



Material

Shaft: Carbon steel (C1144), zinc plated.
Ball & spring: Stainless steel AISI 316.

Technical Notes

Detent pins are very economical for use in commercial and military equipment.
The solid body with direct spring loaded ball ensures reliable operation.
Can be used for locking telescopic tubing, securing bracket assemblies, as anchor clevis fittings, hinge pins and as replacement for cotter pins where frequent removal is necessary.
Hole sizes - commercial drills provide clearance for our standard pins.
Inch dimensions in brackets ( ).

Tips

Also available in stainless steel see part no. 33016.

Detent Pin - Ring Handle - Shoulder

steel

33014

Order No.	d_1 +0.00 -0.08	l_1 grip +1,50 -0,00	d_2	d_3	l_2	l_3	Pull out strength kg	Min. single shear strength kN
33014.W8830	22,23 (7/8")	76,2 (3")	25,3	63,5	25,4	38,1	12,71 - 14,07	239,4
33014.W8835	22,23 (7/8")	88,9 (3,5")	25,3	63,5	25,4	38,1	12,71 - 14,07	239,4
33014.W8840	22,23 (7/8")	101,6 (4")	25,3	63,5	25,4	38,1	12,71 - 14,07	239,4
33014.W8845	22,23 (7/8")	114,3 (4,5")	25,3	63,5	25,4	38,1	12,71 - 14,07	239,4
33014.W8850	22,23 (7/8")	127 (5")	25,3	63,5	25,4	38,1	12,71 - 14,07	239,4
33014.W8855	22,23 (7/8")	139,7 (5,5")	25,3	63,5	25,4	38,1	12,71 - 14,07	239,4
33014.W8860	22,23 (7/8")	152,4 (6")	25,3	63,5	25,4	38,1	12,71 - 14,07	239,4
33014.W8865	22,23 (7/8")	165,1 (6,5")	25,3	63,5	25,4	38,1	12,71 - 14,07	239,4
33014.W8870	22,23 (7/8")	177,8 (7")	25,3	63,5	25,4	38,1	12,71 - 14,07	239,4
33014.W8880	22,23 (7/8")	203,2 (8")	25,3	63,5	25,4	38,1	12,71 - 14,07	239,4
33014.W1010	25,4 (1")	25,4 (1")	28,96	63,5	31,75	38,1	15,88 - 18,15	312,3
33014.W1015	25,4 (1")	38,1 (1,5")	28,96	63,5	31,75	38,1	15,88 - 18,15	312,3
33014.W1020	25,4 (1")	50,8 (2")	28,96	63,5	31,75	38,1	15,88 - 18,15	312,3
33014.W1025	25,4 (1")	63,5 (2,5")	28,96	63,5	31,75	38,1	15,88 - 18,15	312,3
33014.W1030	25,4 (1")	76,2 (3")	28,96	63,5	31,75	38,1	15,88 - 18,15	312,3
33014.W1035	25,4 (1")	88,9 (3,5")	28,96	63,5	31,75	38,1	15,88 - 18,15	312,3
33014.W1040	25,4 (1")	101,6 (4")	28,96	63,5	31,75	38,1	15,88 - 18,15	312,3
33014.W1045	25,4 (1")	114,3 (4,5")	28,96	63,5	31,75	38,1	15,88 - 18,15	312,3
33014.W1050	25,4 (1")	127 (5")	28,96	63,5	31,75	38,1	15,88 - 18,15	312,3
33014.W1055	25,4 (1")	139,7 (5,5")	28,96	63,5	31,75	38,1	15,88 - 18,15	312,3
33014.W1060	25,4 (1")	152,4 (6")	28,96	63,5	31,75	38,1	15,88 - 18,15	312,3
33014.W1070	25,4 (1")	177,8 (7")	28,96	63,5	31,75	38,1	15,88 - 18,15	312,3
33014.W1080	25,4 (1")	203,2 (8")	28,96	63,5	31,75	38,1	15,88 - 18,15	312,3



Material

Shaft: Carbon steel (C1144), zinc plated.
Ball & spring: Stainless steel AISI 316.

Technical Notes

Detent pins are very economical for use in commercial and military equipment.
The solid body with direct spring loaded ball ensures reliable operation.
Can be used for locking telescopic tubing, securing bracket assemblies, as anchor clevis fittings, hinge pins and as replacement for cotter pins where frequent removal is necessary.
Hole sizes - commercial drills provide clearance for our standard pins.
Inch dimensions in brackets ( ).

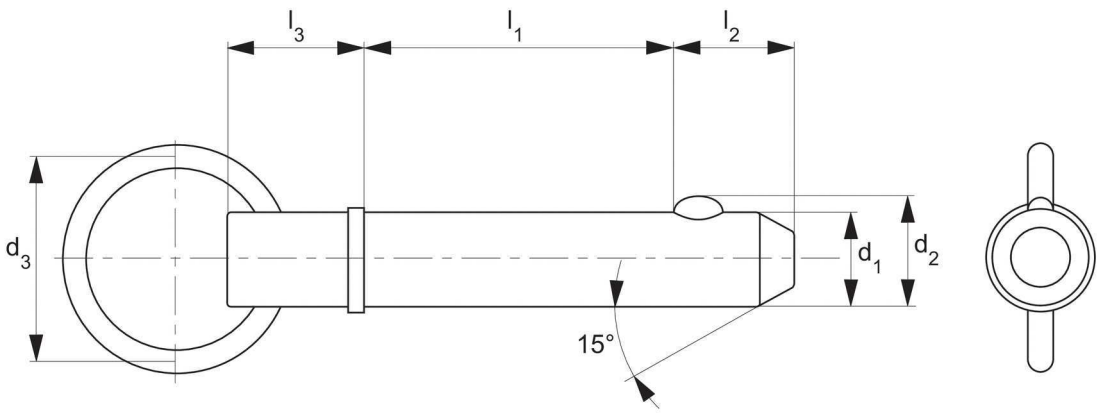
Tips

Also available in stainless steel see part no. 33016.

Detent Pin - Ring Handle - Shoulder

stainless steel

33016





Order No.	d_1 +0.00 -0.08	l_1 grip +1,50 -0,00	d_2	d_3	l_2	l_3	Pull out strength kg	Min. single shear strength kN
33016.W1803	4,76 (3/16")	7,62 (0,3")	5,18	25,4	5,08	17,45	1, 9 - 2, 3	12,2
33016.W1805	4,76 (3/16")	12,7 (0,5")	5,18	25,4	5,08	17,45	1, 9 - 2, 3	12,2
33016.W1810	4,76 (3/16")	25,4 (1")	5,18	25,4	5,08	17,45	1, 9 - 2, 3	12,2
33016.W1815	4,76 (3/16")	38,1 (1,5")	5,18	25,4	5,08	17,45	1, 9 - 2, 3	12,2
33016.W1820	4,76 (3/16")	50,8 (2")	5,18	25,4	5,08	17,45	1, 9 - 2, 3	12,2
33016.W1825	4,76 (3/16")	63,5 (2,5")	5,18	25,4	5,08	17,45	1, 9 - 2, 3	12,2
33016.W1830	4,76 (3/16")	76,2 (3")	5,18	25,4	5,08	17,45	1, 9 - 2, 3	12,2
33016.W1835	4,76 (3/16")	88,9 (3,5")	5,18	25,4	5,08	17,45	1, 9 - 2, 3	12,2
33016.W1840	4,76 (3/16")	101,6 (4")	5,18	25,4	5,08	17,45	1, 9 - 2, 3	12,2
33016.W2505	6,35 (1/4")	12,7 (0,5")	7,26	25,4	7,92	18,29	2,27 - 2,73	21,7
33016.W2506	6,35 (1/4")	15,24 (0,6")	7,26	25,4	7,92	18,29	2,27 - 2,73	21,7
33016.W2510	6,35 (1/4")	25,4 (1")	7,26	25,4	7,92	18,29	2,27 - 2,73	21,7
33016.W2515	6,35 (1/4")	38,1 (1,5")	7,26	25,4	7,92	18,29	2,27 - 2,73	21,7
33016.W2520	6,35 (1/4")	50,8 (2")	7,26	25,4	7,92	18,29	2,27 - 2,73	21,7
33016.W2525	6,35 (1/4")	63,5 (2,5")	7,26	25,4	7,92	18,29	2,27 - 2,73	21,7
33016.W2530	6,35 (1/4")	76,2 (3")	7,26	25,4	7,92	18,29	2,27 - 2,73	21,7
33016.W2535	6,35 (1/4")	88,9 (3,5")	7,26	25,4	7,92	18,29	2,27 - 2,73	21,7
33016.W2540	6,35 (1/4")	101,6 (4")	7,26	25,4	7,92	18,29	2,27 - 2,73	21,7
33016.W3105	7,94 (5/16")	12,7 (0,5")	9,09	25,4	9,53	19,05	2,27 - 2,73	33,8
33016.W3110	7,94 (5/16")	25,4 (1")	9,09	25,4	9,53	19,05	2,27 - 2,73	33,8
33016.W3115	7,94 (5/16")	38,1 (1,5")	9,09	25,4	9,53	19,05	2,27 - 2,73	33,8
33016.W3120	7,94 (5/16")	50,8 (2")	9,09	25,4	9,53	19,05	2,27 - 2,73	33,8
33016.W3125	7,94 (5/16")	63,5 (2,5")	9,09	25,4	9,53	19,05	2,27 - 2,73	33,8
33016.W3130	7,94 (5/16")	76,2 (3")	9,09	25,4	9,53	19,05	2,27 - 2,73	33,8
33016.W3135	7,94 (5/16")	88,9 (3,5")	9,09	25,4	9,53	19,05	2,27 - 2,73	33,8
33016.W3140	7,94 (5/16")	101,6 (4")	9,09	25,4	9,53	19,05	2,27 - 2,73	33,8
33016.W3145	7,94 (5/16")	114,3 (4,5")	9,09	25,4	9,53	19,05	2,27 - 2,73	33,8
33016.W3150	7,94 (5/16")	127 (5")	9,09	25,4	9,53	19,05	2,27 - 2,73	33,8
33016.W3705	9,53 (3,8")	12,7 (0,5")	10,82	25,4	12,7	19,05	3,63 - 4,54	49,1
33016.W3706	9,53 (3,8")	15,24 (0,6")	10,82	25,4	12,7	19,05	3,63 - 4,54	49,1
33016.W3710	9,53 (3,8")	25,4 (1")	10,82	25,4	12,7	19,05	3,63 - 4,54	49,1
33016.W3715	9,53 (3,8")	38,1 (1,5")	10,82	25,4	12,7	19,05	3,63 - 4,54	49,1
33016.W3718	9,53 (3,8")	45,72 (1,8")	10,82	25,4	12,7	19,05	3,63 - 4,54	49,1
33016.W3720	9,53 (3,8")	50,8 (2")	10,82	25,4	12,7	19,05	3,63 - 4,54	49,1
33016.W3725	9,53 (3,8")	63,5 (2,5")	10,82	25,4	12,7	19,05	3,63 - 4,54	49,1
33016.W3730	9,53 (3,8")	76,2 (3")	10,82	25,4	12,7	19,05	3,63 - 4,54	49,1
33016.W3735	9,53 (3,8")	88,9 (3,5")	10,82	25,4	12,7	19,05	3,63 - 4,54	49,1
33016.W3740	9,53 (3,8")	101,6 (4")	10,82	25,4	12,7	19,05	3,63 - 4,54	49,1
33016.W3745	9,53 (3,8")	114,3 (4,5")	10,82	25,4	12,7	19,05	3,63 - 4,54	49,1
33016.W3750	9,53 (3,8")	127 (5")	10,82	25,4	12,7	19,05	3,63 - 4,54	49,1
33016.W3755	9,53 (3,8")	139,7 (5,5")	10,82	25,4	12,7	19,05	3,63 - 4,54	49,1
33016.W3760	9,53 (3,8")	152,4 (6")	10,82	25,4	12,7	19,05	3,63 - 4,54	49,1
33016.W4305	11,11(7,16")	12,7 (0,5")	12,6	25,4	14,27	24,13	4,09 - 5,45	66,5
33016.W4310	11,11(7,16")	25,4 (1")	12,6	25,4	14,27	24,13	4,09 - 5,45	66,5
33016.W4315	11,11(7,16")	38,1 (1,5")	12,6	25,4	14,27	24,13	4,09 - 5,45	66,5
33016.W4320	11,11(7,16")	50,8 (2")	12,6	25,4	14,27	24,13	4,09 - 5,45	66,5
33016.W4325	11,11(7,16")	63,5 (2,5")	12,6	25,4	14,27	24,13	4,09 - 5,45	66,5

Material

Shaft: Stainless steel, AISI 303.
Ball & Spring: Stainless steel, AISI 316.

Technical Notes

Detent pins are very economical for use in commercial and military equipment.
The solid body with direct spring loaded ball ensures reliable operation.
For locking telescopic tubing, securing bracket assemblies, as anchor clevis fittings, hinge pins etc where frequent removal is necessary.
Hole sizes - commercial drills provide clearance for our standard pins. H7 tolerance recommended.
Inch dimensions in brackets ( ).

Tips

Also available on request in A4 (AISI 316) stainless steel, subject to min. quantity.

Referral

Also available in steel, see part no. 33014.

Detent Pin - Ring Handle - Shoulder

stainless steel

33016

Order No.	d_1 +0.00 -0.08	l_1 grip +1,50 -0,00	d_2	d_3	l_2	l_3	Pull out strength kg	Min. single shear strength kN
33016.W4330	11,11(7,16")	76,2 (3")	12,6	25,4	14,27	24,13	4,09 - 5,45	66,5
33016.W4335	11,11(7,16")	88,9 (3,5")	12,6	25,4	14,27	24,13	4,09 - 5,45	66,5
33016.W4340	11,11(7,16")	101,6 (4")	12,6	25,4	14,27	24,13	4,09 - 5,45	66,5
33016.W4345	11,11(7,16")	114,3 (4,5")	12,6	25,4	14,27	24,13	4,09 - 5,45	66,5
33016.W4350	11,11(7,16")	127 (5")	12,6	25,4	14,27	24,13	4,09 - 5,45	66,5
33016.W4355	11,11(7,16")	139,7 (5,5")	12,6	25,4	14,27	24,13	4,09 - 5,45	66,5
33016.W4360	11,11(7,16")	152,4 (6")	12,6	25,4	14,27	24,13	4,09 - 5,45	66,5
33016.W5005	12,7 (1/2")	12,7 (0,5")	14,48	31,75	15,88	25,7	4,54 - 5,45	87,1
33016.W5010	12,7 (1/2")	25,4 (1")	14,48	31,75	15,88	25,7	4,54 - 5,45	87,1
33016.W5013	12,7 (1/2")	33,02 (1,3")	14,48	31,75	15,88	25,7	4,54 - 5,45	87,1
33016.W5015	12,7 (1/2")	38,1 (1,5")	14,48	31,75	15,88	25,7	4,54 - 5,45	87,1
33016.W5020	12,7 (1/2")	50,8 (2")	14,48	31,75	15,88	25,7	4,54 - 5,45	87,1
33016.W5025	12,7 (1/2")	63,5 (2,5")	14,48	31,75	15,88	25,7	4,54 - 5,45	87,1
33016.W5035	12,7 (1/2")	88,9 (3,5")	14,48	31,75	15,88	25,7	4,54 - 5,45	87,1
33016.W5040	12,7 (1/2")	101,6 (4")	14,48	31,75	15,88	25,7	4,54 - 5,45	87,1
33016.W5045	12,7 (1/2")	114,3 (4,5")	14,48	31,75	15,88	25,7	4,54 - 5,45	87,1
33016.W5050	12,7 (1/2")	127 (5")	14,48	31,75	15,88	25,7	4,54 - 5,45	87,1
33016.W5055	12,7 (1/2")	139,7 (5,5")	14,48	31,75	15,88	25,7	4,54 - 5,45	87,1
33016.W5060	12,7 (1/2")	152,4 (6")	14,48	31,75	15,88	25,7	4,54 - 5,45	87,1
33016.W5065	12,7 (1/2")	165,1 (6,5")	14,48	31,75	15,88	25,7	4,54 - 5,45	87,1
33016.W5070	12,7 (1/2")	177,8 (7")	14,48	31,75	15,88	25,7	4,54 - 5,45	87,1
33016.W5610	14,29 (9/16")	25,4 (1")	16,31	31,75	17,45	25,7	5,45 - 6,81	110,3
33016.W5615	14,29 (9/16")	38,1 (1,5")	16,31	31,75	17,45	25,7	5,45 - 6,81	110,3
33016.W5620	14,29 (9/16")	50,8 (2")	16,31	31,75	17,45	25,7	5,45 - 6,81	110,3
33016.W5625	14,29 (9/16")	63,5 (2,5")	16,31	31,75	17,45	25,7	5,45 - 6,81	110,3
33016.W5630	14,29 (9/16")	76,2 (3")	16,31	31,75	17,45	25,7	5,45 - 6,81	110,3
33016.W5635	14,29 (9/16")	88,9 (3,5")	16,31	31,75	17,45	25,7	5,45 - 6,81	110,3
33016.W5640	14,29 (9/16")	101,6 (4")	16,31	31,75	17,45	25,7	5,45 - 6,81	110,3
33016.W5645	14,29 (9/16")	114,3 (4,5")	16,31	31,75	17,45	25,7	5,45 - 6,81	110,3
33016.W5650	14,29 (9/16")	127 (5")	16,31	31,75	17,45	25,7	5,45 - 6,81	110,3
33016.W5655	14,29 (9/16")	139,7 (5,5")	16,31	31,75	17,45	25,7	5,45 - 6,81	110,3
33016.W5660	14,29 (9/16")	152,4 (6")	16,31	31,75	17,45	25,7	5,45 - 6,81	110,3
33016.W5670	14,29 (9/16")	177,8 (7")	16,31	31,75	17,45	25,7	5,45 - 6,81	110,3
33016.W6210	15,88 (5/8")	25,4 (1")	18,03	31,75	19,05	27,31	6,36 - 7,26	137,3
33016.W6215	15,88 (5/8")	38,1 (1,5")	18,03	31,75	19,05	27,31	6,36 - 7,26	137,3
33016.W6220	15,88 (5/8")	50,8 (2")	18,03	31,75	19,05	27,31	6,36 - 7,26	137,3
33016.W6225	15,88 (5/8")	63,5 (2,5")	18,03	31,75	19,05	27,31	6,36 - 7,26	137,3
33016.W6230	15,88 (5/8")	76,2 (3")	18,03	31,75	19,05	27,31	6,36 - 7,26	137,3
33016.W6235	15,88 (5/8")	88,9 (3,5")	18,03	31,75	19,05	27,31	6,36 - 7,26	137,3
33016.W6240	15,88 (5/8")	101,6 (4")	18,03	31,75	19,05	27,31	6,36 - 7,26	137,3
33016.W6245	15,88 (5/8")	114,3 (4,5")	18,03	31,75	19,05	27,31	6,36 - 7,26	137,3
33016.W6250	15,88 (5/8")	127 (5")	18,03	31,75	19,05	27,31	6,36 - 7,26	137,3
33016.W6255	15,88 (5/8")	139,7 (5,5")	18,03	31,75	19,05	27,31	6,36 - 7,26	137,3
33016.W6260	15,88 (5/8")	152,4 (6")	18,03	31,75	19,05	27,31	6,36 - 7,26	137,3
33016.W6270	15,88 (5/8")	177,8 (7")	18,03	31,75	19,05	27,31	6,36 - 7,26	137,3
33016.W6280	15,88 (5/8")	203,2 (8")	18,03	31,75	19,05	27,31	6,36 - 7,26	137,3
33016.W7510	19,05 (3/4")	25,4 (1")	21,74	38,1	23,8	34,93	8,17 - 9,98	195,9
33016.W7515	19,05 (3/4")	38,1 (1,5")	21,74	38,1	23,8	34,93	8,17 - 9,98	195,9
33016.W7520	19,05 (3/4")	50,8 (2")	21,74	38,1	23,8	34,93	8,17 - 9,98	195,9
33016.W7525	19,05 (3/4")	63,5 (2,5")	21,74	38,1	23,8	34,93	8,17 - 9,98	195,9
33016.W7530	19,05 (3/4")	76,2 (3")	21,74	38,1	23,8	34,93	8,17 - 9,98	195,9
33016.W7535	19,05 (3/4")	88,9 (3,5")	21,74	38,1	23,8	34,93	8,17 - 9,98	195,9
33016.W7540	19,05 (3/4")	101,6 (4")	21,74	38,1	23,8	34,93	8,17 - 9,98	195,9
33016.W7545	19,05 (3/4")	114,3 (4,5")	21,74	38,1	23,8	34,93	8,17 - 9,98	195,9
33016.W7550	19,05 (3/4")	127 (5")	21,74	38,1	23,8	34,93	8,17 - 9,98	195,9
33016.W7555	19,05 (3/4")	139,7 (5,5")	21,74	38,1	23,8	34,93	8,17 - 9,98	195,9
33016.W7560	19,05 (3/4")	152,4 (6")	21,74	38,1	23,8	34,93	8,17 - 9,98	195,9
33016.W7570	19,05 (3/4")	177,8 (7")	21,74	38,1	23,8	34,93	8,17 - 9,98	195,9
33016.W7580	19,05 (3/4")	203,2 (8")	21,74	38,1	23,8	34,93	8,17 - 9,98	195,9
33016.W8810	22,23 (7/8")	25,4 (1")	25,3	38,1	25,4	38,1	12,71 - 14,07	262,4
33016.W8815	22,23 (7/8")	38,1 (1,5")	25,3	38,1	25,4	38,1	12,71 - 14,07	262,4
33016.W8820	22,23 (7/8")	50,8 (2")	25,3	38,1	25,4	38,1	12,71 - 14,07	262,4
33016.W8825	22,23 (7/8")	63,5 (2,5")	25,3	38,1	25,4	38,1	12,71 - 14,07	262,4



Material

Shaft: Stainless steel, AISI 303.
Ball & Spring: Stainless steel, AISI 316.

Technical Notes

Detent pins are very economical for use in commercial and military equipment.
The solid body with direct spring loaded ball ensures reliable operation.
For locking telescopic tubing, securing bracket assemblies, as anchor clevis fittings, hinge pins etc where frequent removal is necessary.
Hole sizes - commercial drills provide clearance for our standard pins. H7 tolerance recommended.
Inch dimensions in brackets ( ).

Tips

Also available on request in A4 (AISI 316) stainless steel, subject to min. quantity.

Referral

Also available in steel, see part no. 33014.

Detent Pin - Ring Handle - Shoulder

stainless steel

33016

Order No.	d_1 +0.00 -0.08	l_1 grip +1,50 -0,00	d_2	d_3	l_2	l_3	Pull out strength kg	Min. single shear strength kN
33016.W8830	22,23 (7/8")	76,2 (3")	25,3	38,1	25,4	38,1	12,71 - 14,07	262,4
33016.W8835	22,23 (7/8")	88,9 (3,5")	25,3	38,1	25,4	38,1	12,71 - 14,07	262,4
33016.W8840	22,23 (7/8")	101,6 (4")	25,3	38,1	25,4	38,1	12,71 - 14,07	262,4
33016.W8845	22,23 (7/8")	114,3 (4,5")	25,3	38,1	25,4	38,1	12,71 - 14,07	262,4
33016.W8850	22,23 (7/8")	127 (5")	25,3	38,1	25,4	38,1	12,71 - 14,07	262,4
33016.W8855	22,23 (7/8")	139,7 (5,5")	25,3	38,1	25,4	38,1	12,71 - 14,07	262,4
33016.W8860	22,23 (7/8")	152,4 (6")	25,3	38,1	25,4	38,1	12,71 - 14,07	262,4
33016.W8865	22,23 (7/8")	165,1 (6,5")	25,3	38,1	25,4	38,1	12,71 - 14,07	262,4
33016.W8870	22,23 (7/8")	177,8 (7")	25,3	38,1	25,4	38,1	12,71 - 14,07	262,4
33016.W8880	22,23 (7/8")	203,2 (8")	25,3	38,1	25,4	38,1	12,71 - 14,07	262,4
33016.W1010	25,4 (1")	25,4 (1")	28,96	39	31,75	38,1	15,88 - 18,15	353,0
33016.W1015	25,4 (1")	38,1 (1,5")	28,96	39	31,75	38,1	15,88 - 18,15	353,0
33016.W1020	25,4 (1")	50,8 (2")	28,96	39	31,75	38,1	15,88 - 18,15	353,0
33016.W1025	25,4 (1")	63,5 (2,5")	28,96	39	31,75	38,1	15,88 - 18,15	353,0
33016.W1030	25,4 (1")	76,2 (3")	28,96	39	31,75	38,1	15,88 - 18,15	353,0
33016.W1035	25,4 (1")	88,9 (3,5")	28,96	39	31,75	38,1	15,88 - 18,15	353,0
33016.W1040	25,4 (1")	101,6 (4")	28,96	39	31,75	38,1	15,88 - 18,15	353,0
33016.W1045	25,4 (1")	114,3 (4,5")	28,96	39	31,75	38,1	15,88 - 18,15	353,0
33016.W1050	25,4 (1")	127 (5")	28,96	39	31,75	38,1	15,88 - 18,15	353,0
33016.W1055	25,4 (1")	139,7 (5,5")	28,96	39	31,75	38,1	15,88 - 18,15	353,0
33016.W1060	25,4 (1")	152,4 (6")	28,96	39	31,75	38,1	15,88 - 18,15	353,0
33016.W1070	25,4 (1")	177,8 (7")	28,96	39	31,75	38,1	15,88 - 18,15	353,0
33016.W1080	25,4 (1")	203,2 (8")	28,96	39	31,75	38,1	15,88 - 18,15	353,0



Material

Shaft: Stainless steel, AISI 303.
Ball & Spring: Stainless steel, AISI 316.

Technical Notes

Detent pins are very economical for use in commercial and military equipment.
The solid body with direct spring loaded ball ensures reliable operation.
For locking telescopic tubing, securing bracket assemblies, as anchor clevis fittings, hinge pins etc where frequent removal is necessary.
Hole sizes - commercial drills provide clearance for our standard pins. H7 tolerance recommended.
Inch dimensions in brackets ( ).

Tips

Also available on request in A4 (AISI 316) stainless steel, subject to min. quantity.

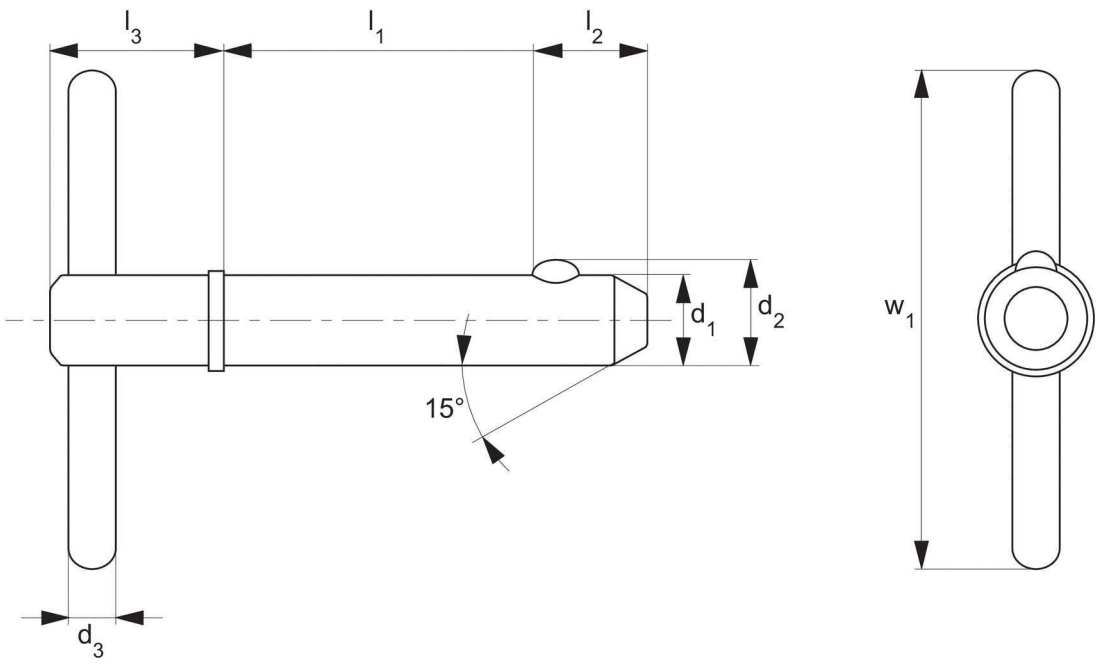
Referral

Also available in steel, see part no. 33014.

Detent Pin - T Handle - Shoulder

steel

33018





Material

Shaft: Carbon steel (C1144), zinc plated.
Ball & spring: Stainless steel AISI 316.

Technical Notes

Detent pins are very economical for use in commercial and military equipment.
The solid body with direct spring loaded ball ensures reliable operation.
Can be used for locking telescopic tubing, securing bracket assemblies, as anchor clevis fittings, hinge pins and as replacement for cotter pins where frequent removal is necessary.
Hole sizes - commercial drills provide clearance for our standard pins.
Inch dimensions in brackets ( ).

Tips

Also available in stainless steel see part no. 33020.

Order No.	d_1 +0.00 -0.08	l_1 grip +1,50 -0,00	d_2	d_3	l_2	l_3	w_1	Pull out strength kg	Min. single shear strength kN
33018.W1803	4,76 (3/16")	7,62 (0,3")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	10,8
33018.W1805	4,76 (3/16")	12,7 (0,5")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	10,8
33018.W1810	4,76 (3/16")	25,4 (1")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	10,8
33018.W1815	4,76 (3/16")	38,1 (1,5")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	10,8
33018.W1820	4,76 (3/16")	50,8 (2")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	10,8
33018.W1825	4,76 (3/16")	63,5 (2,5")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	10,8
33018.W1830	4,76 (3/16")	76,2 (3")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	10,8
33018.W1835	4,76 (3/16")	88,9 (3,5")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	10,8
33018.W1840	4,76 (3/16")	101,6 (4")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	10,8
33018.W2505	6,35 (1/4")	12,7 (0,5")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	19,3
33018.W2506	6,35 (1/4")	15,24 (0,6")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	19,3
33018.W2510	6,35 (1/4")	25,4 (1")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	19,3
33018.W2515	6,35 (1/4")	38,1 (1,5")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	19,3
33018.W2520	6,35 (1/4")	50,8 (2")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	19,3
33018.W2525	6,35 (1/4")	63,5 (2,5")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	19,3
33018.W2530	6,35 (1/4")	76,2 (3")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	19,3
33018.W2535	6,35 (1/4")	88,9 (3,5")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	19,3
33018.W2540	6,35 (1/4")	101,6 (4")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	19,3
33018.W3105	7,94 (5/16")	12,7 (0,5")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	30,0
33018.W3110	7,94 (5/16")	25,4 (1")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	30,0
33018.W3115	7,94 (5/16")	38,1 (1,5")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	30,0
33018.W3120	7,94 (5/16")	50,8 (2")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	30,0
33018.W3125	7,94 (5/16")	63,5 (2,5")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	30,0
33018.W3130	7,94 (5/16")	76,2 (3")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	30,0
33018.W3135	7,94 (5/16")	88,9 (3,5")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	30,0
33018.W3140	7,94 (5/16")	101,6 (4")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	30,0
33018.W3145	7,94 (5/16")	114,3 (4,5")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	30,0
33018.W3150	7,94 (5/16")	127 (5")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	30,0
33018.W3705	9,53 (3,8")	12,7 (0,5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33018.W3706	9,53 (3,8")	15,24 (0,6")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33018.W3710	9,53 (3,8")	25,4 (1")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33018.W3715	9,53 (3,8")	38,1 (1,5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33018.W3718	9,53 (3,8")	45,72 (1,8")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33018.W3720	9,53 (3,8")	50,8 (2")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33018.W3725	9,53 (3,8")	63,5 (2,5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33018.W3730	9,53 (3,8")	76,2 (3")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33018.W3735	9,53 (3,8")	88,9 (3,5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33018.W3740	9,53 (3,8")	101,6 (4")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33018.W3745	9,53 (3,8")	114,3 (4,5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3

Detent Pin - T Handle - Shoulder

steel

33018

Order No.	d_1 +0.00 -0.08	l_1 grip +1,50 -0,00	d_2	d_3	l_2	l_3	w_1	Pull out strength kg	Min. single shear strength kN
33018.W3750	9,53 (3,8")	127 (5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33018.W3755	9,53 (3,8")	139,7 (5,5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33018.W3760	9,53 (3,8")	152,4 (6")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33018.W4305	11,11(7/16")	12,7 (0,5")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	58,9
33018.W4310	11,11(7/16")	25,4 (1")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	58,9
33018.W4315	11,11(7/16")	38,1 (1,5")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	58,9
33018.W4320	11,11(7/16")	50,8 (2")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	58,9
33018.W4325	11,11(7/16")	63,5 (2,5")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	58,9
33018.W4330	11,11(7/16")	76,2 (3")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	58,9



Material

Shaft: Carbon steel (C1144), zinc plated.
Ball & spring: Stainless steel AISI 316.

Technical Notes

Detent pins are very economical for use in commercial and military equipment.
The solid body with direct spring loaded ball ensures reliable operation.
Can be used for locking telescopic tubing, securing bracket assemblies, as anchor clevis fittings, hinge pins and as replacement for cotter pins where frequent removal is necessary.
Hole sizes - commercial drills provide clearance for our standard pins.
Inch dimensions in brackets ( ).

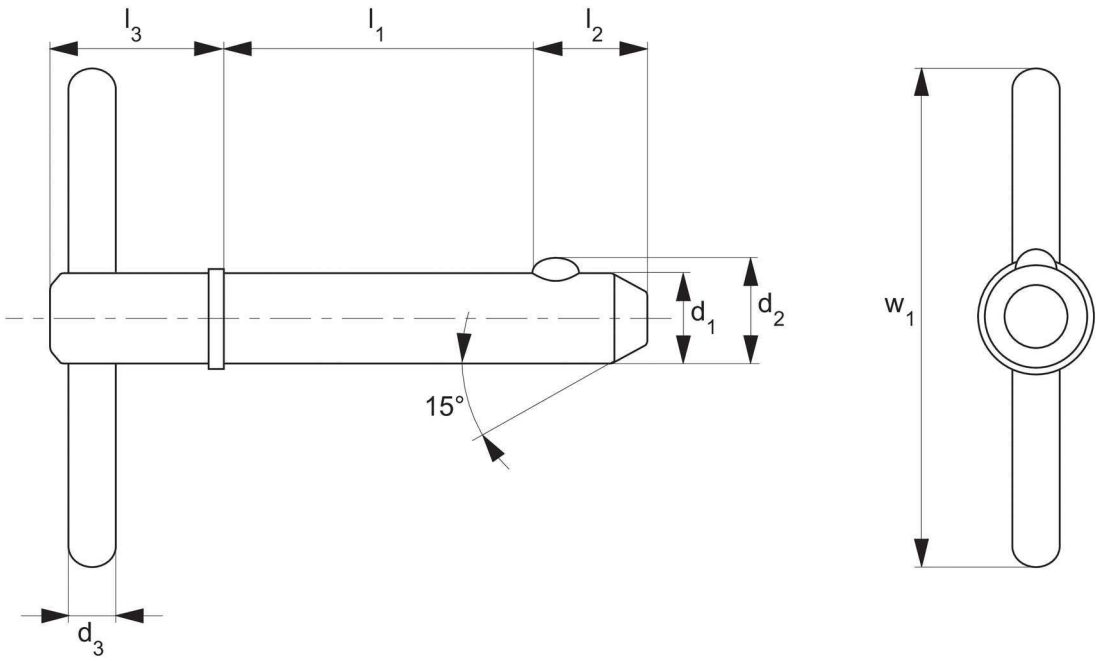
Tips

Also available in stainless steel see part no. 33020.

Detent Pin - T Handle - Shoulder

stainless steel

33020





Order No.	d_1 +0.00 -0.08	l_1 grip +1,50 -0,00	d_2	d_3	l_2	l_3	w_1	Pull out strength kg	Min. single shear strength kN
33020.W1803	4,76 (3/16")	7,62 (0,3")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	12,2
33020.W1805	4,76 (3/16")	12,7 (0,5")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	12,2
33020.W1810	4,76 (3/16")	25,4 (1")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	12,2
33020.W1815	4,76 (3/16")	38,1 (1,5")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	12,2
33020.W1820	4,76 (3/16")	50,8 (2")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	12,2
33020.W1825	4,76 (3/16")	63,5 (2,5")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	12,2
33020.W1830	4,76 (3/16")	76,2 (3")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	12,2
33020.W1835	4,76 (3/16")	88,9 (3,5")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	12,2
33020.W1840	4,76 (3/16")	101,6 (4")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	12,2
33020.W2505	6,35 (1/4")	12,7 (0,5")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	21,7
33020.W2506	6,35 (1/4")	15,24 (0,6")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	21,7
33020.W2510	6,35 (1/4")	25,4 (1")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	21,7
33020.W2515	6,35 (1/4")	38,1 (1,5")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	21,7
33020.W2520	6,35 (1/4")	50,8 (2")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	21,7
33020.W2525	6,35 (1/4")	63,5 (2,5")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	21,7
33020.W2530	6,35 (1/4")	76,2 (3")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	21,7
33020.W2535	6,35 (1/4")	88,9 (3,5")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	21,7
33020.W2540	6,35 (1/4")	101,6 (4")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	21,7
33020.W3105	7,94 (5/16")	12,7 (0,5")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	33,8
33020.W3110	7,94 (5/16")	25,4 (1")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	33,8
33020.W3115	7,94 (5/16")	38,1 (1,5")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	33,8
33020.W3120	7,94 (5/16")	50,8 (2")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	33,8
33020.W3125	7,94 (5/16")	63,5 (2,5")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	33,8
33020.W3130	7,94 (5/16")	76,2 (3")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	33,8
33020.W3135	7,94 (5/16")	88,9 (3,5")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	33,8
33020.W3140	7,94 (5/16")	101,6 (4")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	33,8
33020.W3145	7,94 (5/16")	114,3 (4,5")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	33,8
33020.W3150	7,94 (5/16")	127 (5")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	33,8
33020.W3705	9,53 (3,8")	12,7 (0,5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33020.W3706	9,53 (3,8")	15,24 (0,6")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33020.W3710	9,53 (3,8")	25,4 (1")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33020.W3715	9,53 (3,8")	38,1 (1,5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33020.W3718	9,53 (3,8")	45,72 (1,8")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33020.W3720	9,53 (3,8")	50,8 (2")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33020.W3725	9,53 (3,8")	63,5 (2,5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33020.W3730	9,53 (3,8")	76,2 (3")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33020.W3735	9,53 (3,8")	88,9 (3,5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33020.W3740	9,53 (3,8")	101,6 (4")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33020.W3745	9,53 (3,8")	114,3 (4,5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1

Material

Shaft: Stainless steel, AISI 303.
Ball & Spring: Stainless steel, AISI 316.

Technical Notes

Detent pins are very economical for use in commercial and military equipment.
The solid body with direct spring loaded ball ensures reliable operation.
For locking telescopic tubing, securing bracket assemblies, as anchor clevis fittings, hinge pins etc where frequent removal is necessary.
Hole sizes - commercial drills provide clearance for our standard pins.
Inch dimensions in brackets ( ).

Tips

Also available on request in A4 (AISI 316) stainless steel, subject to min. quantity.

Referral

Also available in steel, see part no. 33018.

Detent Pin - T Handle - Shoulder

stainless steel

33020

Order No.	d_1 +0.00 -0.08	l_1 grip +1,50 -0,00	d_2	d_3	l_2	l_3	w_1	Pull out strength kg	Min. single shear strength kN
33020.W3750	9,53 (3,8")	127 (5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33020.W3755	9,53 (3,8")	139,7 (5,5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33020.W3760	9,53 (3,8")	152,4 (6")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33020.W4305	11,11(7,16")	12,7 (0,5")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	66,5
33020.W4310	11,11(7,16")	25,4 (1")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	66,5
33020.W4315	11,11(7,16")	38,1 (1,5")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	66,5
33020.W4320	11,11(7,16")	50,8 (2")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	66,5
33020.W4325	11,11(7,16")	63,5 (2,5")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	66,5
33020.W4330	11,11(7,16")	76,2 (3")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	66,5
33020.W4335	11,11(7,16")	88,9 (3,5")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	66,5
33020.W4340	11,11(7,16")	101,6 (4")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	66,5
33020.W4345	11,11(7,16")	114,3 (4,5")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	66,5
33020.W4350	11,11(7,16")	127 (5")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	66,5
33020.W4355	11,11(7,16")	139,7 (5,5")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	66,5
33020.W4360	11,11(7,16")	152,4 (6")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	66,5
33020.W5005	12,7 (1/2")	12,7 (0,5")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33020.W5010	12,7 (1/2")	25,4 (1")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33020.W5013	12,7 (1/2")	33,02 (1,3")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33020.W5015	12,7 (1/2")	38,1 (1,5")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33020.W5020	12,7 (1/2")	50,8 (2")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33020.W5025	12,7 (1/2")	63,5 (2,5")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33020.W5035	12,7 (1/2")	88,9 (3,5")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33020.W5040	12,7 (1/2")	101,6 (4")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33020.W5045	12,7 (1/2")	114,3 (4,5")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33020.W5050	12,7 (1/2")	127 (5")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33020.W5055	12,7 (1/2")	139,7 (5,5")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33020.W5060	12,7 (1/2")	152,4 (6")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33020.W5065	12,7 (1/2")	165,1 (6,5")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33020.W5070	12,7 (1/2")	177,8 (7")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33020.W5610	14,29 (9/16")	25,4 (1")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	110,3
33020.W5615	14,29 (9/16")	38,1 (1,5")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	110,3
33020.W5620	14,29 (9/16")	50,8 (2")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	110,3
33020.W5625	14,29 (9/16")	63,5 (2,5")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	110,3
33020.W5630	14,29 (9/16")	76,2 (3")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	110,3
33020.W5635	14,29 (9/16")	88,9 (3,5")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	110,3
33020.W5640	14,29 (9/16")	101,6 (4")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	110,3
33020.W5645	14,29 (9/16")	114,3 (4,5")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	110,3
33020.W5650	14,29 (9/16")	127 (5")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	110,3
33020.W5655	14,29 (9/16")	139,7 (5,5")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	110,3
33020.W5660	14,29 (9/16")	152,4 (6")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	110,3
33020.W5670	14,29 (9/16")	177,8 (7")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	110,3
33020.W6210	15,88 (5/8")	25,4 (1")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33020.W6215	15,88 (5/8")	38,1 (1,5")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33020.W6220	15,88 (5/8")	50,8 (2")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33020.W6225	15,88 (5/8")	63,5 (2,5")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33020.W6230	15,88 (5/8")	76,2 (3")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33020.W6235	15,88 (5/8")	88,9 (3,5")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33020.W6240	15,88 (5/8")	101,6 (4")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33020.W6245	15,88 (5/8")	114,3 (4,5")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33020.W6250	15,88 (5/8")	127 (5")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33020.W6255	15,88 (5/8")	139,7 (5,5")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33020.W6260	15,88 (5/8")	152,4 (6")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33020.W6270	15,88 (5/8")	177,8 (7")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33020.W6280	15,88 (5/8")	203,2 (8")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33020.W7510	19,05 (3/4")	25,4 (1")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9
33020.W7515	19,05 (3/4")	38,1 (1,5")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9
33020.W7520	19,05 (3/4")	50,8 (2")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9
33020.W7525	19,05 (3/4")	63,5 (2,5")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9
33020.W7530	19,05 (3/4")	76,2 (3")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9
33020.W7535	19,05 (3/4")	88,9 (3,5")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9
33020.W7540	19,05 (3/4")	101,6 (4")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9
33020.W7545	19,05 (3/4")	114,3 (4,5")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9
33020.W7550	19,05 (3/4")	127 (5")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9



Material

Shaft: Stainless steel, AISI 303.
Ball & Spring: Stainless steel, AISI 316.

Technical Notes

Detent pins are very economical for use in commercial and military equipment.
The solid body with direct spring loaded ball ensures reliable operation.
For locking telescopic tubing, securing bracket assemblies, as anchor clevis fittings, hinge pins etc where frequent removal is necessary.
Hole sizes - commercial drills provide clearance for our standard pins.
Inch dimensions in brackets ( ).

Tips

Also available on request in A4 (AISI 316) stainless steel, subject to min. quantity.

Referral

Also available in steel, see part no. 33018.

Detent Pin - T Handle - Shoulder

stainless steel

33020

Order No.	d_1 +0.00 -0.08	l_1 grip +1,50 -0,00	d_2	d_3	l_2	l_3	w_1	Pull out strength kg	Min. single shear strength kN
33020.W7555	19,05 (3/4")	139,7 (5,5")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9
33020.W7560	19,05 (3/4")	152,4 (6")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9
33020.W7570	19,05 (3/4")	177,8 (7")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9
33020.W7580	19,05 (3/4")	203,2 (8")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9
33020.W8810	22,23 (7/8")	25,4 (1")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33020.W8815	22,23 (7/8")	38,1 (1,5")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33020.W8820	22,23 (7/8")	50,8 (2")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33020.W8825	22,23 (7/8")	63,5 (2,5")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33020.W8830	22,23 (7/8")	76,2 (3")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33020.W8835	22,23 (7/8")	88,9 (3,5")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33020.W8840	22,23 (7/8")	101,6 (4")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33020.W8845	22,23 (7/8")	114,3 (4,5")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33020.W8850	22,23 (7/8")	127 (5")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33020.W8855	22,23 (7/8")	139,7 (5,5")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33020.W8860	22,23 (7/8")	152,4 (6")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33020.W8865	22,23 (7/8")	165,1 (6,5")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33020.W8870	22,23 (7/8")	177,8 (7")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33020.W8880	22,23 (7/8")	203,2 (8")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33020.W1010	25,4 (1")	25,4 (1")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0
33020.W1015	25,4 (1")	38,1 (1,5")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0
33020.W1020	25,4 (1")	50,8 (2")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0
33020.W1025	25,4 (1")	63,5 (2,5")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0
33020.W1030	25,4 (1")	76,2 (3")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0
33020.W1035	25,4 (1")	88,9 (3,5")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0
33020.W1040	25,4 (1")	101,6 (4")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0
33020.W1045	25,4 (1")	114,3 (4,5")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0
33020.W1050	25,4 (1")	127 (5")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0
33020.W1055	25,4 (1")	139,7 (5,5")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0
33020.W1060	25,4 (1")	152,4 (6")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0
33020.W1070	25,4 (1")	177,8 (7")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0
33020.W1080	25,4 (1")	203,2 (8")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0



Material

Shaft: Stainless steel, AISI 303.
Ball & Spring: Stainless steel, AISI 316.

Technical Notes

Detent pins are very economical for use in commercial and military equipment.
The solid body with direct spring loaded ball ensures reliable operation.
For locking telescopic tubing, securing bracket assemblies, as anchor clevis fittings, hinge pins etc where frequent removal is necessary.
Hole sizes - commercial drills provide clearance for our standard pins.
Inch dimensions in brackets ( ).

Tips

Also available on request in A4 (AISI 316) stainless steel, subject to min. quantity.

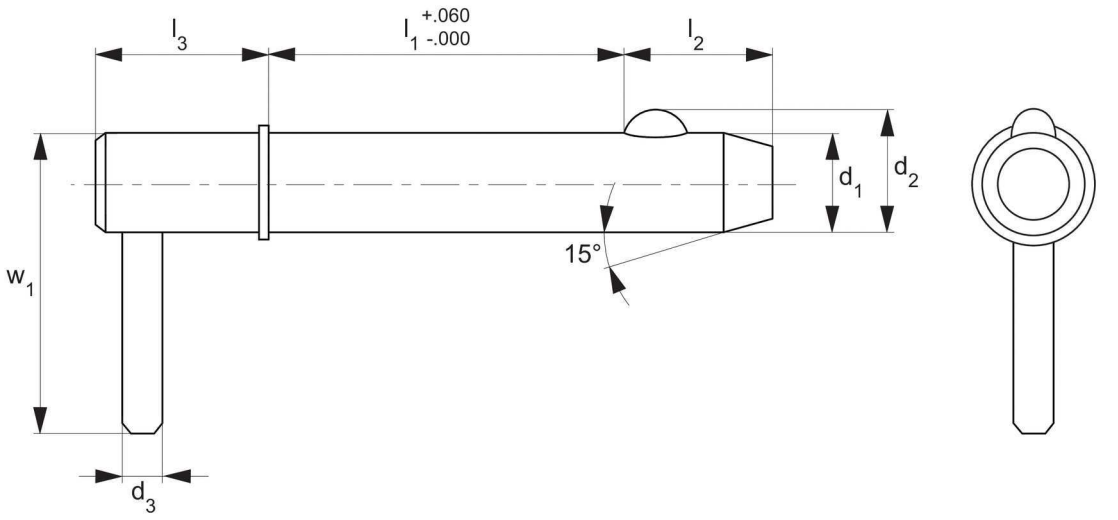
Referral

Also available in steel, see part no. 33018.

Detent Pin - L Handle - Shoulder

steel

33022





Order No.	d_1 +0.00 -0.08	l_1 grip +1,50 -0,00	d_2	d_3	l_2	l_3	w_1	Pull out strength kg	Min. single shear strength kN
33022.W1803	4,76 (3/16")	7,62 (0,3")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	10,8
33022.W1805	4,76 (3/16")	12,7 (0,5")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	10,8
33022.W1810	4,76 (3/16")	25,4 (1")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	10,8
33022.W1815	4,76 (3/16")	38,1 (1,5")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	10,8
33022.W1820	4,76 (3/16")	50,8 (2")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	10,8
33022.W1825	4,76 (3/16")	63,5 (2,5")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	10,8
33022.W1830	4,76 (3/16")	76,2 (3")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	10,8
33022.W1835	4,76 (3/16")	88,9 (3,5")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	10,8
33022.W1840	4,76 (3/16")	101,6 (4")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	10,8
33022.W2505	6,35 (1/4")	12,7 (0,5")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	19,3
33022.W2506	6,35 (1/4")	15,24 (0,6")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	19,3
33022.W2510	6,35 (1/4")	25,4 (1")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	19,3
33022.W2515	6,35 (1/4")	38,1 (1,5")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	19,3
33022.W2520	6,35 (1/4")	50,8 (2")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	19,3
33022.W2525	6,35 (1/4")	63,5 (2,5")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	19,3
33022.W2530	6,35 (1/4")	76,2 (3")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	19,3
33022.W2535	6,35 (1/4")	88,9 (3,5")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	19,3
33022.W2540	6,35 (1/4")	101,6 (4")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	19,3
33022.W3105	7,94 (5/16")	12,7 (0,5")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	30,0
33022.W3110	7,94 (5/16")	25,4 (1")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	30,0
33022.W3115	7,94 (5/16")	38,1 (1,5")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	30,0
33022.W3120	7,94 (5/16")	50,8 (2")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	30,0
33022.W3125	7,94 (5/16")	63,5 (2,5")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	30,0
33022.W3130	7,94 (5/16")	76,2 (3")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	30,0
33022.W3135	7,94 (5/16")	88,9 (3,5")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	30,0
33022.W3140	7,94 (5/16")	101,6 (4")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	30,0
33022.W3145	7,94 (5/16")	114,3 (4,5")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	30,0
33022.W3150	7,94 (5/16")	127 (5")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	30,0
33022.W3705	9,53 (3,8")	12,7 (0,5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33022.W3706	9,53 (3,8")	15,24 (0,6")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33022.W3710	9,53 (3,8")	25,4 (1")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33022.W3715	9,53 (3,8")	38,1 (1,5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33022.W3718	9,53 (3,8")	45,72 (1,8")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33022.W3720	9,53 (3,8")	50,8 (2")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33022.W3725	9,53 (3,8")	63,5 (2,5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33022.W3730	9,53 (3,8")	76,2 (3")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33022.W3735	9,53 (3,8")	88,9 (3,5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33022.W3740	9,53 (3,8")	101,6 (4")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33022.W3745	9,53 (3,8")	114,3 (4,5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33022.W3750	9,53 (3,8")	127 (5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33022.W3755	9,53 (3,8")	139,7 (5,5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33022.W3760	9,53 (3,8")	152,4 (6")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	43,3
33022.W4305	11,11(7,16")	12,7 (0,5")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	58,9

Material

Shaft: Carbon steel (C1144), zinc plated.
Ball & spring: Stainless steel AISI 316.

Technical Notes

Detent Pins are very economical for use in commercial and military equipment.
The solid body with direct spring loaded ball ensures reliable operation.
Can be used for locking telescopic tubing, securing bracket assemblies, as anchor clevis fittings, hinge pins and as replacement for cotter pins where frequent removal is necessary.
Hole sizes - commercial drills provide clearance for our standard pins.
Inch dimensions in brackets ( ).

Tips

Also available in stainless steel see part no. 33024.

Detent Pin - L Handle - Shoulder

steel

33022

Order No.	d_1 +0.00 -0.08	l_1 grip +1,50 -0,00	d_2	d_3	l_2	l_3	w_1	Pull out strength kg	Min. single shear strength kN
33022.W4310	11,11(7,16")	25,4 (1")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	58,9
33022.W4315	11,11(7,16")	38,1 (1,5")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	58,9
33022.W4320	11,11(7,16")	50,8 (2")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	58,9
33022.W4325	11,11(7,16")	63,5 (2,5")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	58,9
33022.W4330	11,11(7,16")	76,2 (3")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	58,9
33022.W4335	11,11(7,16")	88,9 (3,5")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	58,9
33022.W4340	11,11(7,16")	101,6 (4")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	58,9
33022.W4345	11,11(7,16")	114,3 (4,5")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	58,9
33022.W4350	11,11(7,16")	127 (5")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	58,9
33022.W4355	11,11(7,16")	139,7 (5,5")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	58,9
33022.W4360	11,11(7,16")	152,4 (6")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	58,9
33022.W5005	12,7 (1/2")	12,7 (0,5")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	77,0
33022.W5010	12,7 (1/2")	25,4 (1")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	77,0
33022.W5013	12,7 (1/2")	33,02 (1,3")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	77,0
33022.W5015	12,7 (1/2")	38,1 (1,5")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	77,0
33022.W5020	12,7 (1/2")	50,8 (2")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	77,0
33022.W5025	12,7 (1/2")	63,5 (2,5")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	77,0
33022.W5035	12,7 (1/2")	88,9 (3,5")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	77,0
33022.W5040	12,7 (1/2")	101,6 (4")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	77,0
33022.W5045	12,7 (1/2")	114,3 (4,5")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	77,0
33022.W5050	12,7 (1/2")	127 (5")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	77,0
33022.W5055	12,7 (1/2")	139,7 (5,5")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	77,0
33022.W5060	12,7 (1/2")	152,4 (6")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	77,0
33022.W5065	12,7 (1/2")	165,1 (6,5")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	77,0
33022.W5070	12,7 (1/2")	177,8 (7")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	77,0
33022.W5610	14,29 (9/16")	25,4 (1")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	97,6
33022.W5615	14,29 (9/16")	38,1 (1,5")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	97,6
33022.W5620	14,29 (9/16")	50,8 (2")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	97,6
33022.W5625	14,29 (9/16")	63,5 (2,5")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	97,6
33022.W5630	14,29 (9/16")	76,2 (3")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	97,6
33022.W5635	14,29 (9/16")	88,9 (3,5")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	97,6
33022.W5640	14,29 (9/16")	101,6 (4")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	97,6
33022.W5645	14,29 (9/16")	114,3 (4,5")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	97,6
33022.W5650	14,29 (9/16")	127 (5")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	97,6
33022.W5655	14,29 (9/16")	139,7 (5,5")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	97,6
33022.W5660	14,29 (9/16")	152,4 (6")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	97,6
33022.W5670	14,29 (9/16")	177,8 (7")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	97,6
33022.W6210	15,88 (5/8")	25,4 (1")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	121,6
33022.W6215	15,88 (5/8")	38,1 (1,5")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	121,6
33022.W6220	15,88 (5/8")	50,8 (2")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	121,6
33022.W6225	15,88 (5/8")	63,5 (2,5")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	121,6
33022.W6230	15,88 (5/8")	76,2 (3")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	121,6
33022.W6235	15,88 (5/8")	88,9 (3,5")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	121,6
33022.W6240	15,88 (5/8")	101,6 (4")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	121,6
33022.W6245	15,88 (5/8")	114,3 (4,5")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	121,6
33022.W6250	15,88 (5/8")	127 (5")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	121,6
33022.W6255	15,88 (5/8")	139,7 (5,5")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	121,6
33022.W6260	15,88 (5/8")	152,4 (6")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	121,6
33022.W6270	15,88 (5/8")	177,8 (7")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	121,6
33022.W6280	15,88 (5/8")	203,2 (8")	18,03	57,15	19,05	27,31	31,75	6,36 - 7,26	121,6
33022.W7510	19,05 (3/4")	25,4 (1")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	173,6
33022.W7515	19,05 (3/4")	38,1 (1,5")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	173,6
33022.W7520	19,05 (3/4")	50,8 (2")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	173,6
33022.W7525	19,05 (3/4")	63,5 (2,5")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	173,6
33022.W7530	19,05 (3/4")	76,2 (3")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	173,6
33022.W7535	19,05 (3/4")	88,9 (3,5")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	173,6
33022.W7540	19,05 (3/4")	101,6 (4")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	173,6
33022.W7545	19,05 (3/4")	114,3 (4,5")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	173,6
33022.W7550	19,05 (3/4")	127 (5")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	173,6
33022.W7555	19,05 (3/4")	139,7 (5,5")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	173,6
33022.W7560	19,05 (3/4")	152,4 (6")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	173,6
33022.W7570	19,05 (3/4")	177,8 (7")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	173,6
33022.W7580	19,05 (3/4")	203,2 (8")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	173,6



Material

Shaft: Carbon steel (C1144), zinc plated.
Ball & spring: Stainless steel AISI 316.

Technical Notes

Detent Pins are very economical for use in commercial and military equipment.
The solid body with direct spring loaded ball ensures reliable operation.
Can be used for locking telescopic tubing, securing bracket assemblies, as anchor clevis fittings, hinge pins and as replacement for cotter pins where frequent removal is necessary.
Hole sizes - commercial drills provide clearance for our standard pins.
Inch dimensions in brackets ( ).

Tips

Also available in stainless steel see part no. 33024.

Detent Pin - L Handle - Shoulder

steel

33022

Order No.	d_1 +0.00 -0.08	l_1 grip +1,50 -0,00	d_2	d_3	l_2	l_3	w_1	Pull out strength kg	Min. single shear strength kN
33022.W8810	22,23 (7/8")	25,4 (1")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	239,4
33022.W8815	22,23 (7/8")	38,1 (1,5")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	239,4
33022.W8820	22,23 (7/8")	50,8 (2")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	239,4
33022.W8825	22,23 (7/8")	63,5 (2,5")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	239,4
33022.W8830	22,23 (7/8")	76,2 (3")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	239,4
33022.W8835	22,23 (7/8")	88,9 (3,5")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	239,4
33022.W8840	22,23 (7/8")	101,6 (4")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	239,4
33022.W8845	22,23 (7/8")	114,3 (4,5")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	239,4
33022.W8850	22,23 (7/8")	127 (5")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	239,4
33022.W8855	22,23 (7/8")	139,7 (5,5")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	239,4
33022.W8860	22,23 (7/8")	152,4 (6")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	239,4
33022.W8865	22,23 (7/8")	165,1 (6,5")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	239,4
33022.W8870	22,23 (7/8")	177,8 (7")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	239,4
33022.W8880	22,23 (7/8")	203,2 (8")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	239,4
33022.W1010	25,4 (1")	25,4 (1")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	312,3
33022.W1015	25,4 (1")	38,1 (1,5")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	312,3
33022.W1020	25,4 (1")	50,8 (2")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	312,3
33022.W1025	25,4 (1")	63,5 (2,5")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	312,3
33022.W1030	25,4 (1")	76,2 (3")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	312,3
33022.W1035	25,4 (1")	88,9 (3,5")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	312,3
33022.W1040	25,4 (1")	101,6 (4")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	312,3
33022.W1045	25,4 (1")	114,3 (4,5")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	312,3
33022.W1050	25,4 (1")	127 (5")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	312,3
33022.W1055	25,4 (1")	139,7 (5,5")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	312,3
33022.W1060	25,4 (1")	152,4 (6")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	312,3
33022.W1070	25,4 (1")	177,8 (7")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	312,3
33022.W1080	25,4 (1")	203,2 (8")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	312,3



Material

Shaft: Carbon steel (C1144), zinc plated.
Ball & spring: Stainless steel AISI 316.

Technical Notes

Detent Pins are very economical for use in commercial and military equipment.
The solid body with direct spring loaded ball ensures reliable operation.
Can be used for locking telescopic tubing, securing bracket assemblies, as anchor clevis fittings, hinge pins and as replacement for cotter pins where frequent removal is necessary.
Hole sizes - commercial drills provide clearance for our standard pins.
Inch dimensions in brackets ( ).

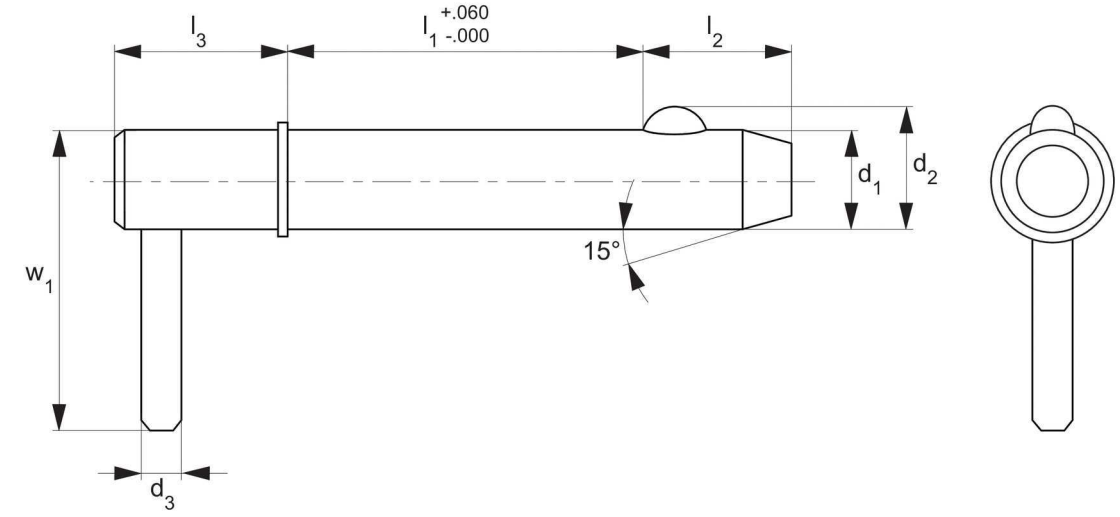
Tips

Also available in stainless steel see part no. 33024.

Detent Pin - L Handle - Shoulder

stainless steel

33024





Order No.	d_1 +0.00, -0.08	l_1 +1.5, -0.0	d_2	d_3	l_2	l_3	w_1	Pull out strength kg	Min. single shear strength kN
33024.W1803	4,76 (3/16")	7,62 (0,3")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	12,2
33024.W1805	4,76 (3/16")	12,7 (0,5")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	12,2
33024.W1810	4,76 (3/16")	25,4 (1")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	12,2
33024.W1815	4,76 (3/16")	38,1 (1,5")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	12,2
33024.W1820	4,76 (3/16")	50,8 (2")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	12,2
33024.W1825	4,76 (3/16")	63,5 (2,5")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	12,2
33024.W1830	4,76 (3/16")	76,2 (3")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	12,2
33024.W1835	4,76 (3/16")	88,9 (3,5")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	12,2
33024.W1840	4,76 (3/16")	101,6 (4")	5,18	2,38	5,08	17,45	25,4	1, 9 - 2, 3	12,2
33024.W2505	6,35 (1/4")	12,7 (0,5")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	21,7
33024.W2506	6,35 (1/4")	15,24 (0,6")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	21,7
33024.W2510	6,35 (1/4")	25,4 (1")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	21,7
33024.W2515	6,35 (1/4")	38,1 (1,5")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	21,7
33024.W2520	6,35 (1/4")	50,8 (2")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	21,7
33024.W2525	6,35 (1/4")	63,5 (2,5")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	21,7
33024.W2530	6,35 (1/4")	76,2 (3")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	21,7
33024.W2535	6,35 (1/4")	88,9 (3,5")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	21,7
33024.W2540	6,35 (1/4")	101,6 (4")	7,26	3,17	7,92	18,29	25,4	2,27 - 2,73	21,7
33024.W3105	7,94 (5/16")	12,7 (0,5")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	33,8
33024.W3110	7,94 (5/16")	25,4 (1")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	33,8
33024.W3115	7,94 (5/16")	38,1 (1,5")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	33,8
33024.W3120	7,94 (5/16")	50,8 (2")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	33,8
33024.W3125	7,94 (5/16")	63,5 (2,5")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	33,8
33024.W3130	7,94 (5/16")	76,2 (3")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	33,8
33024.W3135	7,94 (5/16")	88,9 (3,5")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	33,8
33024.W3140	7,94 (5/16")	101,6 (4")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	33,8
33024.W3145	7,94 (5/16")	114,3 (4,5")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	33,8
33024.W3150	7,94 (5/16")	127 (5")	9,09	3,96	9,53	19,05	25,4	2,27 - 2,73	33,8
33024.W3705	9,53 (3,8")	12,7 (0,5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33024.W3706	9,53 (3,8")	15,24 (0,6")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33024.W3710	9,53 (3,8")	25,4 (1")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33024.W3715	9,53 (3,8")	38,1 (1,5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33024.W3718	9,53 (3,8")	45,72 (1,8")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33024.W3720	9,53 (3,8")	50,8 (2")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33024.W3725	9,53 (3,8")	63,5 (2,5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33024.W3730	9,53 (3,8")	76,2 (3")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33024.W3735	9,53 (3,8")	88,9 (3,5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33024.W3740	9,53 (3,8")	101,6 (4")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33024.W3745	9,53 (3,8")	114,3 (4,5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33024.W3750	9,53 (3,8")	127 (5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33024.W3755	9,53 (3,8")	139,7 (5,5")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33024.W3760	9,53 (3,8")	152,4 (6")	10,82	3,96	12,7	19,05	25,4	3,63 - 4,54	49,1
33024.W4305	11,11(7/16")	12,7 (0,5")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	66,5

Material

Shaft: Stainless steel, AISI 303.
Ball & Spring: Stainless steel, AISI 316.

Technical Notes

Detent pins are very economical for use in commercial and military equipment.
The solid body with direct spring loaded ball ensures reliable operation.
For locking telescopic tubing, securing bracket assemblies, as anchor clevis fittings, hinge pins etc where frequent removal is necessary.
Hole sizes - commercial drills provide clearance for our standard pins.
Inch dimensions in brackets ( ).

Tips

Also available on request in A4 (AISI 316) stainless steel, subject to min. quantity.

Referral

Also available in steel, see part no. 33022.

Detent Pin - L Handle - Shoulder

stainless steel

33024

Order No.	d_1 +0.00, -0.08	l_1 +1.5, -0.0	d_2	d_3	l_2	l_3	w_1	Pull out strength kg	Min. single shear strength kN
33024.W4310	11,11(7/16")	25,4 (1")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	66,5
33024.W4315	11,11(7/16")	38,1 (1,5")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	66,5
33024.W4320	11,11(7/16")	50,8 (2")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	66,5
33024.W4325	11,11(7/16")	63,5 (2,5")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	66,5
33024.W4330	11,11(7/16")	76,2 (3")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	66,5
33024.W4335	11,11(7/16")	88,9 (3,5")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	66,5
33024.W4340	11,11(7/16")	101,6 (4")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	66,5
33024.W4345	11,11(7/16")	114,3 (4,5")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	66,5
33024.W4350	11,11(7/16")	127 (5")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	66,5
33024.W4355	11,11(7/16")	139,7 (5,5")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	66,5
33024.W4360	11,11(7/16")	152,4 (6")	12,6	3,96	14,27	24,13	25,4	4,09 - 5,45	66,5
33024.W5005	12,7 (1/2")	12,7 (0,5")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33024.W5010	12,7 (1/2")	25,4 (1")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33024.W5013	12,7 (1/2")	33,02 (1,3")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33024.W5015	12,7 (1/2")	38,1 (1,5")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33024.W5020	12,7 (1/2")	50,8 (2")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33024.W5025	12,7 (1/2")	63,5 (2,5")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33024.W5035	12,7 (1/2")	88,9 (3,5")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33024.W5040	12,7 (1/2")	101,6 (4")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33024.W5045	12,7 (1/2")	114,3 (4,5")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33024.W5050	12,7 (1/2")	127 (5")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33024.W5055	12,7 (1/2")	139,7 (5,5")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33024.W5060	12,7 (1/2")	152,4 (6")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33024.W5065	12,7 (1/2")	165,1 (6,5")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33024.W5070	12,7 (1/2")	177,8 (7")	14,48	4,76	15,88	25,7	31,75	4,54 - 5,45	87,1
33024.W5610	14,29 (9/16")	25,4 (1")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	110,3
33024.W5615	14,29 (9/16")	38,1 (1,5")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	110,3
33024.W5620	14,29 (9/16")	50,8 (2")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	110,3
33024.W5625	14,29 (9/16")	63,5 (2,5")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	110,3
33024.W5630	14,29 (9/16")	76,2 (3")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	110,3
33024.W5635	14,29 (9/16")	88,9 (3,5")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	110,3
33024.W5640	14,29 (9/16")	101,6 (4")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	110,3
33024.W5645	14,29 (9/16")	114,3 (4,5")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	110,3
33024.W5650	14,29 (9/16")	127 (5")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	110,3
33024.W5655	14,29 (9/16")	139,7 (5,5")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	110,3
33024.W5660	14,29 (9/16")	152,4 (6")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	110,3
33024.W5670	14,29 (9/16")	177,8 (7")	16,31	4,76	17,45	25,7	31,75	5,45 - 6,81	110,3
33024.W6210	15,88 (5/8")	25,4 (1")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33024.W6215	15,88 (5/8")	38,1 (1,5")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33024.W6220	15,88 (5/8")	50,8 (2")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33024.W6225	15,88 (5/8")	63,5 (2,5")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33024.W6230	15,88 (5/8")	76,2 (3")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33024.W6235	15,88 (5/8")	88,9 (3,5")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33024.W6240	15,88 (5/8")	101,6 (4")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33024.W6245	15,88 (5/8")	114,3 (4,5")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33024.W6250	15,88 (5/8")	127 (5")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33024.W6255	15,88 (5/8")	139,7 (5,5")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33024.W6260	15,88 (5/8")	152,4 (6")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33024.W6270	15,88 (5/8")	177,8 (7")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33024.W6280	15,88 (5/8")	203,2 (8")	18,03	6,35	19,05	27,31	31,75	6,36 - 7,26	137,3
33024.W7510	19,05 (3/4")	25,4 (1")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9
33024.W7515	19,05 (3/4")	38,1 (1,5")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9
33024.W7520	19,05 (3/4")	50,8 (2")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9
33024.W7525	19,05 (3/4")	63,5 (2,5")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9
33024.W7530	19,05 (3/4")	76,2 (3")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9
33024.W7535	19,05 (3/4")	88,9 (3,5")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9
33024.W7540	19,05 (3/4")	101,6 (4")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9
33024.W7545	19,05 (3/4")	114,3 (4,5")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9
33024.W7550	19,05 (3/4")	127 (5")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9
33024.W7555	19,05 (3/4")	139,7 (5,5")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9
33024.W7560	19,05 (3/4")	152,4 (6")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9
33024.W7570	19,05 (3/4")	177,8 (7")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9
33024.W7580	19,05 (3/4")	203,2 (8")	21,74	6,35	23,8	34,93	38,1	8,17 - 9,98	195,9



Material

Shaft: Stainless steel, AISI 303.
Ball & Spring: Stainless steel, AISI 316.

Technical Notes

Detent pins are very economical for use in commercial and military equipment.
The solid body with direct spring loaded ball ensures reliable operation.
For locking telescopic tubing, securing bracket assemblies, as anchor clevis fittings, hinge pins etc where frequent removal is necessary.
Hole sizes - commercial drills provide clearance for our standard pins.
Inch dimensions in brackets ( ).

Tips

Also available on request in A4 (AISI 316) stainless steel, subject to min. quantity.

Referral

Also available in steel, see part no. 33022.

Detent Pin - L Handle - Shoulder

stainless steel

33024

Order No.	d_1 +0.00, -0.08	l_1 +1.5, -0.0	d_2	d_3	l_2	l_3	w_1	Pull out strength kg	Min. single shear strength kN
33024.W8810	22,23 (7/8")	25,4 (1")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33024.W8815	22,23 (7/8")	38,1 (1,5")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33024.W8820	22,23 (7/8")	50,8 (2")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33024.W8825	22,23 (7/8")	63,5 (2,5")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33024.W8830	22,23 (7/8")	76,2 (3")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33024.W8835	22,23 (7/8")	88,9 (3,5")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33024.W8840	22,23 (7/8")	101,6 (4")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33024.W8845	22,23 (7/8")	114,3 (4,5")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33024.W8850	22,23 (7/8")	127 (5")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33024.W8855	22,23 (7/8")	139,7 (5,5")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33024.W8860	22,23 (7/8")	152,4 (6")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33024.W8865	22,23 (7/8")	165,1 (6,5")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33024.W8870	22,23 (7/8")	177,8 (7")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33024.W8880	22,23 (7/8")	203,2 (8")	25,3	9,52	25,4	38,1	38,1	12,71 - 14,07	262,4
33024.W1010	25,4 (1")	25,4 (1")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0
33024.W1015	25,4 (1")	38,1 (1,5")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0
33024.W1020	25,4 (1")	50,8 (2")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0
33024.W1025	25,4 (1")	63,5 (2,5")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0
33024.W1030	25,4 (1")	76,2 (3")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0
33024.W1035	25,4 (1")	88,9 (3,5")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0
33024.W1040	25,4 (1")	101,6 (4")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0
33024.W1045	25,4 (1")	114,3 (4,5")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0
33024.W1050	25,4 (1")	127 (5")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0
33024.W1055	25,4 (1")	139,7 (5,5")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0
33024.W1060	25,4 (1")	152,4 (6")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0
33024.W1070	25,4 (1")	177,8 (7")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0
33024.W1080	25,4 (1")	203,2 (8")	28,96	9,52	31,75	38,1	38,1	15,88 - 18,15	353,0



Material

Shaft: Stainless steel, AISI 303.
Ball & Spring: Stainless steel, AISI 316.

Technical Notes

Detent pins are very economical for use in commercial and military equipment.
The solid body with direct spring loaded ball ensures reliable operation.
For locking telescopic tubing, securing bracket assemblies, as anchor clevis fittings, hinge pins etc where frequent removal is necessary.
Hole sizes - commercial drills provide clearance for our standard pins.
Inch dimensions in brackets ( ).

Tips

Also available on request in A4 (AISI 316) stainless steel, subject to min. quantity.

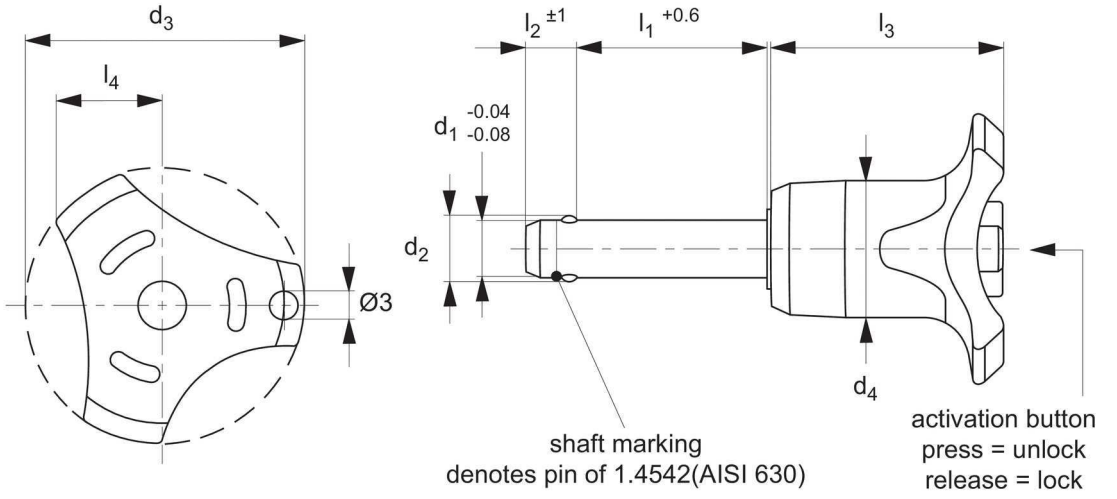
Referral

Also available in steel, see part no. 33022.

Handle

self-locking - stainless steel 1.4542 (AISI 630)

33060





Order No.	d_1	l_1	d_2	d_3	d_4	l_2	l_3	l_4	Loc'n hole H11	Shearing resistance, double kN min.*	g
33060.W0812	5	10	5,5	33,2	14,5	6,0	26,7	10,8	5	24	15
33060.W0813	5	15	5,5	33,2	14,5	6,0	26,7	10,8	5	24	15
33060.W0814	5	20	5,5	33,2	14,5	6,0	26,7	10,8	5	24	16
33060.W0815	5	25	5,5	33,2	14,5	6,0	26,7	10,8	5	24	17
33060.W0816	5	30	5,5	33,2	14,5	6,0	26,7	10,8	5	24	18
33060.W0817	6	60	7,0	33,2	14,5	7,0	26,7	10,8	6	21	26
33060.W0818	6	70	7,0	33,2	14,5	7,0	26,7	10,8	6	21	28
33060.W0819	6	80	7,0	33,2	14,5	7,0	26,7	10,8	6	21	30
33060.W0805	5	35	5,5	33,2	14,5	6,0	26,7	10,8	5	14	19
33060.W0806	5	40	5,5	33,2	14,5	6,0	26,7	10,8	5	14	20
33060.W0807	5	45	5,5	33,2	14,5	6,0	26,7	10,8	5	14	21
33060.W0808	5	50	5,5	33,2	14,5	6,0	26,7	10,8	5	14	23
33060.W0809	5	60	5,5	33,2	14,5	6,0	26,7	10,8	5	14	24
33060.W0810	5	70	5,5	33,2	14,5	6,0	26,7	10,8	5	14	18
33060.W0811	5	80	5,5	33,2	14,5	6,0	26,7	10,8	5	14	19
33060.W0821	8	100	9,6	39,2	18,4	8,2	33,3	13,4	8	38	54
33060.W0822	6	10	7,0	33,2	14,5	7,0	26,7	10,8	6	35	16
33060.W0823	6	15	7,0	33,2	14,5	7,0	26,7	10,8	6	35	17
33060.W0824	6	20	7,0	33,2	14,5	7,0	26,7	10,8	6	35	18
33060.W0825	6	25	7,0	33,2	14,5	7,0	26,7	10,8	6	35	19
33060.W0826	6	30	7,0	33,2	14,5	7,0	26,7	10,8	6	35	20
33060.W0827	6	35	7,0	33,2	14,5	7,0	26,7	10,8	6	35	21
33060.W0828	6	40	7,0	33,2	14,5	7,0	26,7	10,8	6	35	22
33060.W0829	6	45	7,0	33,2	14,5	7,0	26,7	10,8	6	35	23
33060.W0830	6	50	7,0	33,2	14,5	7,0	26,7	10,8	6	35	24
33060.W0831	8	90	9,6	39,2	18,4	8,2	33,3	13,4	8	38	36
33060.W0832	8	10	9,6	39,2	18,4	8,2	33,3	13,4	8	38	38
33060.W0833	8	15	9,6	39,2	18,4	8,2	33,3	13,4	8	38	58
33060.W0834	8	20	9,6	39,2	19,3	8,2	33,3	13,4	8	63	40
33060.W0835	8	25	9,6	39,2	19,3	8,2	33,3	13,4	8	63	40
33060.W0836	8	30	9,6	39,2	19,3	8,2	33,3	13,4	8	63	44
33060.W0837	8	35	9,6	39,2	19,3	8,2	33,3	13,4	8	63	44
33060.W0838	8	40	9,6	39,2	19,3	8,2	33,3	13,4	8	63	47
33060.W0839	8	45	9,6	39,2	19,3	8,2	33,3	13,4	8	63	47
33060.W0840	8	50	9,6	39,2	19,3	8,2	33,3	13,4	8	63	47
33060.W0841	8	60	9,6	39,2	18,4	8,2	33,3	13,4	8	38	62
33060.W0842	8	70	9,6	39,2	18,4	8,2	33,3	13,4	8	38	65
33060.W0843	8	80	9,6	39,2	18,4	8,2	33,3	13,4	8	38	69
33060.W0844	10	20	12,0	39,2	19,3	9,6	33,3	13,4	10	100	47
33060.W0845	10	25	12,0	39,2	19,3	9,6	33,3	13,4	10	100	49
33060.W0846	10	30	12,0	39,2	19,3	9,6	33,3	13,4	10	100	53
33060.W0847	10	35	12,0	39,2	19,3	9,6	33,3	13,4	10	100	55
33060.W0848	10	40	12,0	39,2	19,3	9,6	33,3	13,4	10	100	58
33060.W0849	10	45	12,0	39,2	19,3	9,6	33,3	13,4	10	100	61
33060.W0850	10	50	12,0	39,2	19,3	9,6	33,3	13,4	10	100	61
33060.W0851	10	15	12,0	39,2	18,4	9,6	33,3	13,4	10	60	86
33060.W0852	10	60	12,0	39,2	19,3	9,6	33,3	13,4	10	100	70
33060.W0853	10	70	12,0	39,2	18,4	9,6	33,3	13,4	10	60	91

Material

Pin: stainless steel 1,4542 (AISI 630), precipitation hardened, blast finish. (marked at end of shaft to denote 1.4542 material).
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: thermoplastic PA 6.
Available colours: grey/orange, grey/blue, grey/grey, black/black.

Technical Notes

Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections.

Tips

For lanyards & retaining cables see part no.33250. Easy install locating bushes available see part no.33248.

Important Notes

Extreme load capacity due to high material grade.
*Shearing resistance similar to DIN 50141.
Also available in stainless grade 1.4305 (AISI 303), see part no.33080.

STAINLESS STEEL 630 HIGH SHEAR FORCES

Handle

self-locking - stainless steel 1.4542 (AISI 630)

33060

Order No.	d_1	l_1	d_2	d_3	d_4	l_2	l_3	l_4	Loc'n hole H11	Shearing resistance, double kN min.*	g
33060.W0854	10	80	12,0	39,2	18,4	9,6	33,3	13,4	10	60	97
33060.W0855	10	90	12,0	39,2	18,4	9,6	33,3	13,4	10	60	103
33060.W0856	10	100	12,0	39,2	18,4	9,6	33,3	13,4	10	60	109
33060.W0857	10	110	12,0	39,2	18,4	9,6	33,3	13,4	10	60	115
33060.W0858	10	120	12,0	39,2	18,4	9,6	33,3	13,4	10	60	53
33060.W0864	12	20	14,5	47,6	25,2	10,6	39,7	16,7	12	87	156
33060.W0865	10	25	12,0	39,2	19,3	9,6	33,3	13,4	10	100	70
33060.W0866	12	30	14,5	47,6	26,3	10,6	39,7	16,7	12	144	100
33060.W0867	12	35	14,5	47,6	26,3	10,6	39,7	16,7	12	144	105
33060.W0868	12	40	14,5	47,6	26,3	10,6	39,7	16,7	12	144	105
33060.W0869	12	45	14,5	47,6	26,3	10,6	39,7	16,7	12	144	113
33060.W0870	12	50	14,5	47,6	26,3	10,6	39,7	16,7	12	144	117
33060.W0872	12	60	14,5	47,6	26,3	10,6	39,7	16,7	12	144	126
33060.W0874	12	70	14,5	47,6	26,3	10,6	39,7	16,7	12	144	134
33060.W0876	12	80	14,5	47,6	26,3	10,6	39,7	16,7	12	144	143
33060.W0877	12	90	14,5	47,6	25,2	10,6	39,7	16,7	12	87	165
33060.W0878	12	100	14,5	47,6	25,2	10,6	39,7	16,7	12	87	173
33060.W0879	12	110	14,5	47,6	25,2	10,6	39,7	16,7	12	87	182
33060.W0880	12	120	14,5	47,6	25,2	10,6	39,7	16,7	12	87	96
33060.W0886	16	30	19,0	47,6	26,3	14,0	39,7	16,7	16	257	132
33060.W0887	16	35	19,0	47,6	26,3	14,0	39,7	16,7	16	257	140
33060.W0888	16	40	19,0	47,6	26,3	14,0	39,7	16,7	16	257	148
33060.W0889	16	45	19,0	47,6	26,3	14,0	39,7	16,7	16	257	155
33060.W0890	16	45	19,0	47,6	26,3	14,0	39,7	16,7	16	257	155
33060.W0892	16	60	19,0	47,6	26,3	14,0	39,7	16,7	16	257	178
33060.W0894	16	70	19,0	47,6	26,3	14,0	39,7	16,7	16	257	194
33060.W0896	16	80	19,0	47,6	26,3	14,0	39,7	16,7	16	257	208
33060.W0897	16	90	19,0	47,6	25,2	14,0	39,7	16,7	16	155	234
33060.W0898	16	10	19,0	47,6	25,2	14,0	39,7	16,7	16	155	251
33060.W0899	16	110	19,0	47,6	25,2	14,0	39,7	16,7	16	155	266
33060.W0900	16	120	19,0	47,6	25,2	14,0	39,7	16,7	16	155	281
33060.W0901	16	130	19,0	47,6	25,2	14,0	39,7	16,7	16	155	297
33060.W0902	16	140	19,0	47,6	25,2	14,0	39,7	16,7	16	155	313
33060.W0903	16	150	19,0	47,6	25,2	14,0	39,7	16,7	16	155	328
33060.W0904	20	60	25,0	57,1	35,4	20,5	50,7	21,5	20	403	343
33060.W0905	20	50	25,0	57,1	33,8	20,5	50,7	21,5	20	403	329
33060.W0906	20	70	25,0	57,1	33,8	20,5	50,7	21,5	20	403	377
33060.W0907	20	90	25,0	57,1	33,8	20,5	50,7	21,5	20	403	426
33060.W0908	20	80	25,0	57,1	35,4	20,5	50,7	21,5	20	403	392
33060.W0912	20	100	25,0	57,1	35,4	20,5	50,7	21,5	20	403	440
33060.W0913	20	110	25,0	57,1	33,8	20,5	50,7	21,5	20	403	474
33060.W0916	20	120	25,0	57,1	33,8	20,5	50,7	21,5	20	403	488
33060.W0917	20	130	25,0	57,1	33,8	20,5	50,7	21,5	20	403	523
33060.W0918	20	140	25,0	57,1	33,8	20,5	50,7	21,5	20	403	546
33060.W0919	20	150	25,0	57,1	33,8	20,5	50,7	21,5	20	403	571
33060.W0921	25	50	30,8	57,1	33,8	22,0	50,7	21,5	25	631	415
33060.W0922	25	60	30,8	57,1	33,8	22,0	50,7	21,5	25	631	453
33060.W0923	25	70	30,8	57,1	33,8	22,0	50,7	21,5	25	631	490
33060.W0924	25	80	30,8	57,1	33,8	22,0	50,7	21,5	25	631	528
33060.W0925	25	90	30,8	57,1	33,8	22,0	50,7	21,5	25	631	565
33060.W0926	25	100	30,8	57,1	33,8	22,0	50,7	21,5	25	631	603
33060.W0927	25	110	30,8	57,1	33,8	22,0	50,7	21,5	25	631	640
33060.W0928	25	120	30,8	57,1	33,8	22,0	50,7	21,5	25	631	678
33060.W0929	25	130	30,8	57,1	33,8	22,0	50,7	21,5	25	631	715
33060.W0930	25	140	30,8	57,1	33,8	22,0	50,7	21,5	25	631	753
33060.W0931	25	150	30,8	57,1	33,8	22,0	50,7	21,5	25	631	790



Material

Pin: stainless steel 1,4542 (AISI 630), precipitation hardened, blast finish. (marked at end of shaft to denote 1.4542 material).
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: thermoplastic PA 6.
Available colours: grey/orange, grey/blue, grey/grey, black/black.

Technical Notes

Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections.

Tips

For lanyards & retaining cables see part no.33250. Easy install locating bushes available see part no.33248.

Important Notes

Extreme load capacity due to high material grade.
*Shearing resistance similar to DIN 50141.
Also available in stainless grade 1.4305 (AISI 303), see part no.33080.

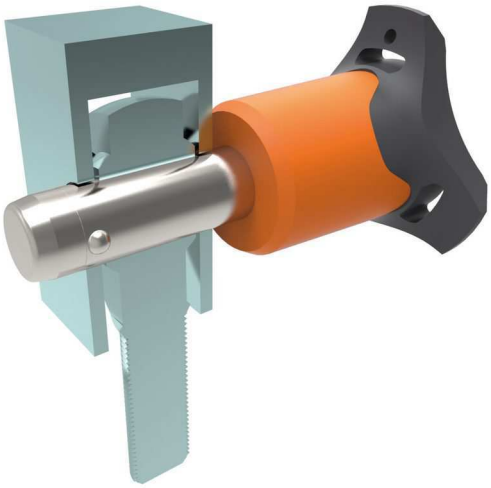
STAINLESS STEEL 630

HIGH SHEAR FORCES

Handle

self-locking - stainless steel 1.4542 (AISI 630)

33060





Material
Pin: stainless steel 1,4542 (AISI 630), precipitation hardened, blast finish. (marked at end of shaft to denote 1.4542 material).
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: thermoplastic PA 6.
Available colours: grey/orange, grey/blue, grey/grey, black/black.

Technical Notes
Pressing = unlocking.
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Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections.

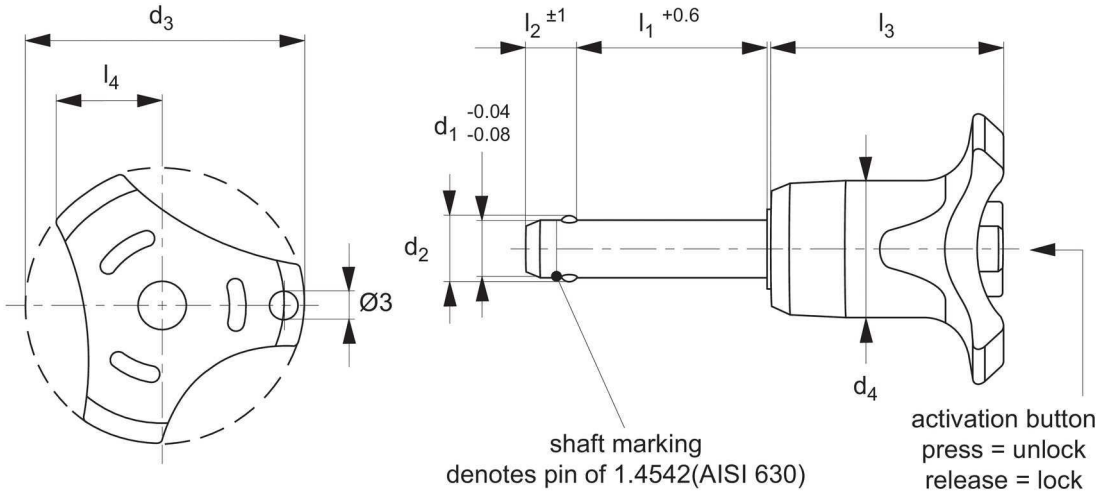
Tips
For lanyards & retaining cables see part no.33250. Easy install locating bushes available see part no.33248.

Important Notes
Extreme load capacity due to high material grade.
*Shearing resistance similar to DIN 50141.
Also available in stainless grade 1.4305 (AISI 303), see part no.33080.

Handle

self-locking - stainless steel 1.4542 (AISI 630)

33060





Order No.	d_1	l_1	d_2	d_3	d_4	l_2	l_3	l_4	Loc'n hole H11	Shearing resistance, double @kN min.*	g
33060.W0432	5	10	5,5	33,2	14,5	6,0	26,7	10,8	5	24	15
33060.W0433	5	15	5,5	33,2	14,5	6,0	26,7	10,8	5	24	15
33060.W0434	5	20	5,5	33,2	14,5	6,0	26,7	10,8	5	24	16
33060.W0435	5	25	5,5	33,2	14,5	6,0	26,7	10,8	5	24	17
33060.W0436	5	30	5,5	33,2	14,5	6,0	26,7	10,8	5	24	18
33060.W0437	6	60	7,0	33,2	14,5	7,0	26,7	10,8	6	21	26
33060.W0438	6	70	7,0	33,2	14,5	7,0	26,7	10,8	6	21	28
33060.W0439	6	80	7,0	33,2	14,5	7,0	26,7	10,8	6	21	30
33060.W0425	5	35	5,5	33,2	14,5	6,0	26,7	10,8	5	14	19
33060.W0426	5	40	5,5	33,2	14,5	6,0	26,7	10,8	5	14	20
33060.W0427	5	45	5,5	33,2	14,5	6,0	26,7	10,8	5	14	21
33060.W0428	5	50	5,5	33,2	14,5	6,0	26,7	10,8	5	14	23
33060.W0429	5	60	5,5	33,2	14,5	6,0	26,7	10,8	5	14	24
33060.W0430	5	70	5,5	33,2	14,5	6,0	26,7	10,8	5	14	18
33060.W0431	5	80	5,5	33,2	14,5	6,0	26,7	10,8	5	14	19
33060.W0441	8	100	9,6	39,2	18,4	8,2	33,3	10,813,4	8	38	54
33060.W0442	6	10	7,0	33,2	14,5	7,0	26,7	10,8	6	35	16
33060.W0443	6	15	7,0	33,2	14,5	7,0	26,7	10,8	6	35	17
33060.W0444	6	20	7,0	33,2	14,5	7,0	26,7	10,8	6	35	18
33060.W0445	6	25	7,0	33,2	14,5	7,0	26,7	10,8	6	35	19
33060.W0446	6	30	7,0	33,2	14,5	7,0	26,7	10,8	6	35	20
33060.W0447	6	35	7,0	33,2	14,5	7,0	26,7	10,8	6	35	21
33060.W0448	6	40	7,0	33,2	14,5	7,0	26,7	10,8	6	35	22
33060.W0449	6	45	7,0	33,2	14,5	7,0	26,7	10,8	6	35	23
33060.W0450	6	50	7,0	33,2	14,5	7,0	26,7	10,8	6	35	24
33060.W0451	8	90	9,6	39,2	18,4	8,2	33,3	13,4	8	38	36
33060.W0452	8	10	9,6	39,2	18,4	8,2	33,3	13,4	8	38	24
33060.W0453	8	15	9,6	39,2	18,4	8,2	33,3	13,4	8	38	58
33060.W0454	8	20	9,6	39,2	19,3	8,2	33,3	13,4	8	63	40
33060.W0455	8	25	9,6	39,2	19,3	8,2	33,3	13,4	8	63	42
33060.W0456	8	30	9,6	39,2	19,3	8,2	33,3	13,4	8	63	44
33060.W0457	8	35	9,6	39,2	19,3	8,2	33,3	13,4	8	63	46
33060.W0458	8	40	9,6	39,2	19,3	8,2	33,3	13,4	8	63	47
33060.W0459	8	45	9,6	39,2	19,3	8,2	33,3	13,4	8	63	49
33060.W0460	8	50	9,6	39,2	18,4	8,2	33,3	13,4	8	63	51
33060.W0461	8	60	9,6	39,2	18,4	8,2	33,3	13,4	8	38	62
33060.W0462	8	70	9,6	39,2	18,4	8,2	33,3	13,4	8	38	65
33060.W0463	8	80	9,6	39,2	18,4	8,2	33,3	13,4	8	38	69
33060.W0464	10	20	12,0	39,2	19,3	9,6	33,3	13,4	10	100	47
33060.W0465	10	25	12,0	39,2	19,3	9,6	33,3	13,4	10	100	49
33060.W0466	10	30	12,0	39,2	19,3	9,6	33,3	13,4	10	100	53
33060.W0467	10	35	12,0	39,2	19,3	9,6	33,3	13,4	10	100	55
33060.W0468	10	40	12,0	39,2	19,3	9,6	33,3	13,4	10	100	58
33060.W0469	10	45	12,0	39,2	19,3	9,6	33,3	13,4	10	100	61
33060.W0470	10	50	12,0	39,2	19,3	9,6	33,3	13,4	10	100	64
33060.W0471	10	15	12,0	39,2	18,4	9,6	33,3	13,4	10	60	86

Material

Pin: stainless steel 1,4542 (AISI 630), precipitation hardened, blast finish. (marked at end of shaft to denote 1.4542 material).
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: thermoplastic PA 6.
Available colours: grey/orange, grey/blue, grey/grey, black/black.

Technical Notes

Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections.

Tips

For lanyards & retaining cables see part no.33250. Easy install locating bushes available see part no.33248.

Important Notes

Extreme load capacity due to high material grade.
*Shearing resistance similar to DIN 50141.
Also available in stainless grade 1.4305 (AISI 303), see part no.33080.

STAINLESS STEEL 630

HIGH SHEAR FORCES

Handle

self-locking - stainless steel 1.4542 (AISI 630)

33060

Order No.	d_1	l_1	d_2	d_3	d_4	l_2	l_3	l_4	Loc'n hole H11	Shearing resistance, double @kN min.*	g
33060.W0472	10	60	12,0	39,2	19,3	9,6	33,3	13,4	10	100	70
33060.W0473	10	70	12,0	39,2	18,4	9,6	33,3	13,4	10	60	91
33060.W0474	10	80	12,0	39,2	18,4	9,6	33,3	13,4	10	60	97
33060.W0475	10	90	12,0	39,2	18,4	9,6	33,3	13,4	10	60	103
33060.W0476	10	100	12,0	39,2	18,4	9,6	33,3	13,4	10	60	109
33060.W0477	10	110	12,0	39,2	18,4	9,6	33,3	13,4	10	60	115
33060.W0478	10	120	12,0	39,2	18,4	9,6	33,3	13,4	10	60	53
33060.W0484	12	20	14,5	47,6	25,2	10,6	39,7	16,7	12	87	156
33060.W0485	12	25	14,5	47,6	26,3	10,6	39,7	16,7	12	144	96
33060.W0486	12	30	14,5	47,6	26,3	10,6	39,7	16,7	12	144	100
33060.W0487	12	35	14,5	47,6	26,3	10,6	39,7	16,7	12	144	105
33060.W0488	12	40	14,5	47,6	26,3	10,6	39,7	16,7	12	144	109
33060.W0489	12	45	14,5	47,6	26,3	10,6	39,7	16,7	12	144	113
33060.W0490	12	50	14,5	47,6	26,3	10,6	39,7	16,7	12	144	117
33060.W0492	12	60	14,5	47,6	26,3	10,6	39,7	16,7	12	144	126
33060.W0494	12	70	14,5	47,6	26,3	10,6	39,7	16,7	12	144	134
33060.W0496	12	80	14,5	47,6	26,3	10,6	39,7	16,7	12	144	143
33060.W0497	12	90	14,5	47,6	25,2	10,6	39,7	16,7	12	87	165
33060.W0498	12	100	14,5	47,6	25,2	10,6	39,7	16,7	12	87	173
33060.W0499	12	110	14,5	47,6	25,2	10,6	39,7	16,7	12	87	182
33060.W0500	12	120	14,5	47,6	25,2	10,6	39,7	16,7	12	87	96
33060.W0506	16	30	19,0	47,6	26,3	14,0	39,7	16,7	16	257	132
33060.W0507	16	35	19,0	47,6	26,3	14,0	39,7	16,7	16	257	140
33060.W0508	16	40	19,0	47,6	26,3	14,0	39,7	16,7	16	257	148
33060.W0509	16	45	19,0	47,6	26,3	14,0	39,7	16,7	16	257	155
33060.W0510	16	50	19,0	47,6	26,3	14,0	39,7	16,7	16	257	168
33060.W0512	16	60	19,0	47,6	26,3	14,0	39,7	16,7	16	257	178
33060.W0514	16	70	19,0	47,6	26,3	14,0	39,7	16,7	16	257	194
33060.W0516	16	80	19,0	47,6	26,3	14,0	39,7	16,7	16	257	208
33060.W0517	16	90	19,0	47,6	25,2	14,0	39,7	16,7	16	155	234
33060.W0518	16	100	19,0	47,6	25,2	14,0	39,7	16,7	16	155	251
33060.W0519	16	110	19,0	47,6	25,2	14,0	39,7	16,7	16	155	266
33060.W0520	16	120	19,0	47,6	25,2	14,0	39,7	16,7	16	155	281
33060.W0521	16	130	19,0	47,6	25,2	14,0	39,7	16,7	16	155	297
33060.W0522	16	140	19,0	47,6	25,2	14,0	39,7	16,7	16	155	313
33060.W0523	16	150	19,0	47,6	25,2	14,0	39,7	16,7	16	155	328
33060.W0531	20	50	25,0	57,1	33,8	20,5	50,7	21,5	20	403	329
33060.W0532	20	60	25,0	57,1	35,4	20,5	50,7	21,5	20	403	343
33060.W0533	20	70	25,0	57,1	33,8	20,5	50,7	21,5	20	403	377
33060.W0536	20	80	25,0	57,1	35,4	20,5	50,7	21,5	20	403	392
33060.W0537	20	90	25,0	57,1	33,8	20,5	50,7	21,5	20	403	426
33060.W0540	20	100	25,0	57,1	35,4	20,5	50,7	21,5	20	403	440
33060.W0541	20	110	25,0	57,1	33,8	20,5	50,7	21,5	20	403	474
33060.W0544	20	120	25,0	57,1	33,8	20,5	50,7	21,5	20	403	488
33060.W0545	20	130	25,0	57,1	33,8	20,5	50,7	21,5	20	403	523
33060.W0546	20	140	25,0	57,1	33,8	20,5	50,7	21,5	20	403	546
33060.W0547	20	150	25,0	57,1	33,8	20,5	50,7	21,5	20	403	571
33060.W0549	25	50	30,8	57,1	33,8	22,0	50,7	21,5	25	631	415
33060.W0550	25	60	30,8	57,1	33,8	22,0	50,7	21,5	25	631	453
33060.W0551	25	70	30,8	57,1	33,8	22,0	50,7	21,5	25	631	490
33060.W0552	25	80	30,8	57,1	33,8	22,0	50,7	21,5	25	631	528
33060.W0553	25	90	30,8	57,1	33,8	22,0	50,7	21,5	25	631	565
33060.W0554	25	100	30,8	57,1	33,8	22,0	50,7	21,5	25	631	603
33060.W0555	25	110	30,8	57,1	33,8	22,0	50,7	21,5	25	631	640
33060.W0556	25	120	30,8	57,1	33,8	22,0	50,7	21,5	25	631	678
33060.W0557	25	130	30,8	57,1	33,8	22,0	50,7	21,5	25	631	715
33060.W0558	25	140	30,8	57,1	33,8	22,0	50,7	21,5	25	631	753
33060.W0559	25	150	30,8	57,1	33,8	22,0	50,7	21,5	25	631	790



Material

Pin: stainless steel 1,4542 (AISI 630), precipitation hardened, blast finish. (marked at end of shaft to denote 1.4542 material).
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: thermoplastic PA 6.
Available colours: grey/orange, grey/blue, grey/grey, black/black.

Technical Notes

Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections.

Tips

For lanyards & retaining cables see part no.33250. Easy install locating bushes available see part no.33248.

Important Notes

Extreme load capacity due to high material grade.
*Shearing resistance similar to DIN 50141.
Also available in stainless grade 1.4305 (AISI 303), see part no.33080.

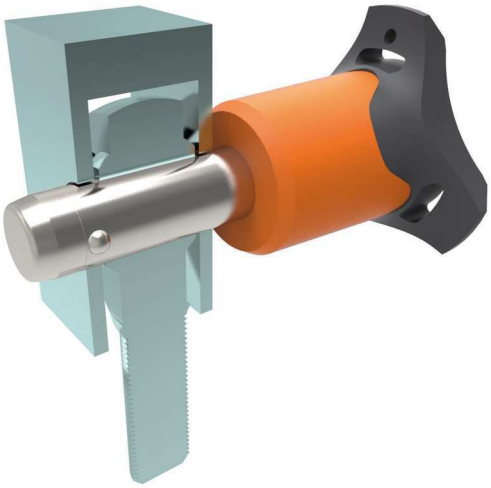
STAINLESS STEEL 630

HIGH SHEAR FORCES

Handle

self-locking - stainless steel 1.4542 (AISI 630)

33060





Material

Pin: stainless steel 1,4542 (AISI 630), precipitation hardened, blast finish. (marked at end of shaft to denote 1.4542 material).
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: thermoplastic PA 6.
Available colours: grey/orange, grey/blue, grey/grey, black/black.

Technical Notes

Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections.

Tips

For lanyards & retaining cables see part no.33250. Easy install locating bushes available see part no.33248.

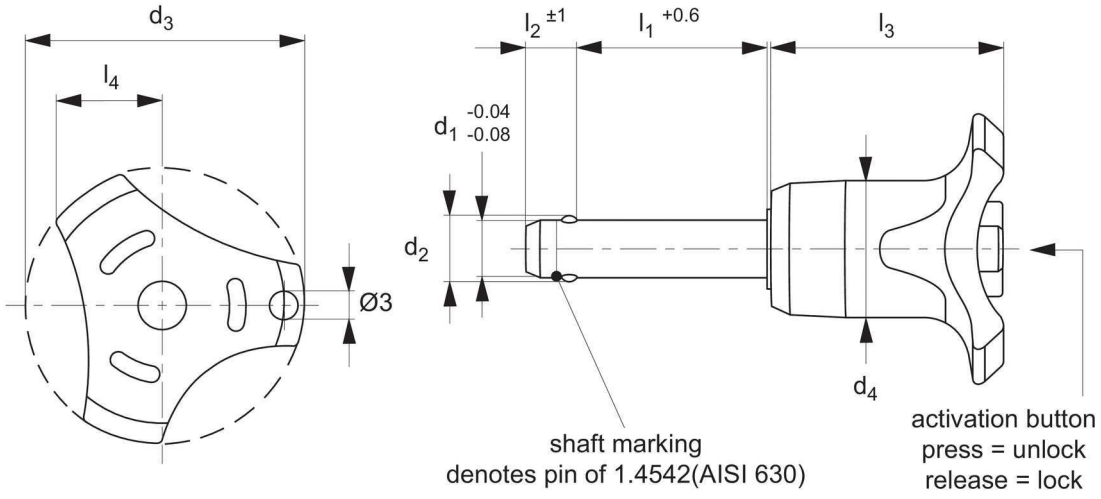
Important Notes

Extreme load capacity due to high material grade.
*Shearing resistance similar to DIN 50141.
Also available in stainless grade 1.4305 (AISI 303), see part no.33080.

Handle

self-locking - stainless steel 1.4542 (AISI 630)

33060





Order No.	d_1	l_1	d_2	d_3	d_4	l_2	l_3	l_4	Loc'n hole H11	Shearing resistance, double kN min.*	g
33060.W0292	5	10	5,5	33,2	14,5	6,0	26,7	10,8	5	24	15
33060.W0293	5	15	5,5	33,2	14,5	6,0	26,7	10,8	5	24	15
33060.W0294	5	20	5,5	33,2	14,5	6,0	26,7	10,8	5	24	16
33060.W0295	5	25	5,5	33,2	14,5	6,0	26,7	10,8	5	24	17
33060.W0296	5	30	5,5	33,2	14,5	6,0	26,7	10,8	5	24	18
33060.W0297	6	60	7,0	33,2	14,5	7,0	26,7	10,8	6	21	26
33060.W0298	6	70	7,0	33,2	14,5	7,0	26,7	10,8	6	21	28
33060.W0299	6	80	7,0	33,2	14,5	7,0	26,7	10,8	6	21	30
33060.W0285	5	35	5,5	33,3	14,5	6,0	26,7	10,8	5	14	19
33060.W0286	5	40	5,5	33,4	14,5	6,0	26,7	10,8	5	14	20
33060.W0287	5	45	5,5	33,5	14,5	6,0	26,7	10,8	5	14	21
33060.W0288	5	50	5,5	33,6	14,5	6,0	26,7	10,8	5	14	23
33060.W0289	5	60	5,5	33,7	14,5	6,0	26,7	10,8	5	14	24
33060.W0290	5	70	5,5	33,8	14,5	6,0	26,7	10,8	5	14	18
33060.W0291	5	80	5,5	33,9	14,5	6,0	26,7	10,8	5	14	19
33060.W0301	8	100	9,6	39,2	18,4	8,2	33,3	13,4	8	38	54
33060.W0302	6	10	7,0	33,2	14,5	7,0	26,7	10,8	6	35	16
33060.W0303	6	15	7,0	33,2	14,5	7,0	26,7	10,8	6	35	17
33060.W0304	6	20	7,0	33,2	14,5	7,0	26,7	10,8	6	35	18
33060.W0305	6	25	7,0	33,2	14,5	7,0	26,7	10,8	6	35	19
33060.W0306	6	30	7,0	33,2	14,5	7,0	26,7	10,8	6	35	20
33060.W0307	6	35	7,0	33,2	14,5	7,0	26,7	10,8	6	35	21
33060.W0308	6	40	7,0	33,2	14,5	7,0	26,7	10,8	6	35	22
33060.W0309	6	45	7,0	33,2	14,5	7,0	26,7	10,8	6	35	23
33060.W0310	6	50	7,0	33,2	14,5	7,0	26,7	10,8	6	35	24
33060.W0311	8	90	7,0	39,2	18,4	8,2	33,3	13,4	8	38	36
33060.W0312	8	10	9,6	39,2	18,5	8,2	33,3	13,4	8	38	38
33060.W0313	8	15	9,6	39,2	18,5	8,2	33,3	13,4	8	38	58
33060.W0314	8	20	9,6	39,2	19,3	8,2	33,3	13,4	8	63	40
33060.W0315	8	25	9,6	39,2	19,3	8,2	33,3	13,4	8	63	42
33060.W0316	8	30	9,6	39,2	19,3	8,2	33,3	13,4	8	63	44
33060.W0317	8	35	9,6	39,2	19,3	8,2	33,3	13,4	8	63	46
33060.W0318	8	40	9,6	39,2	19,3	8,2	33,3	13,4	8	63	47
33060.W0319	8	45	9,6	39,2	19,3	8,2	33,3	13,4	8	63	49
33060.W0320	8	50	9,6	39,2	19,3	8,2	33,3	13,4	8	63	51
33060.W0321	8	50	9,6	39,2	19,3	8,2	33,3	13,4	8	63	51
33060.W0322	8	50	9,6	39,2	19,3	8,2	33,3	13,4	8	63	51
33060.W0323	8	80	9,6	39,2	18,4	8,2	33,3	13,4	8	38	69
33060.W0324	10	20	12,0	39,2	19,3	9,6	33,3	13,4	10	100	47
33060.W0325	10	25	12,0	39,2	19,3	9,6	33,3	13,4	10	100	49
33060.W0326	10	30	12,0	39,2	19,3	9,6	33,3	13,4	10	100	53
33060.W0327	10	35	12,0	39,2	19,3	9,6	33,3	13,4	10	100	55
33060.W0328	10	40	12,0	39,2	19,3	9,6	33,3	13,4	10	100	58
33060.W0329	10	45	12,0	39,2	19,3	9,6	33,3	13,4	10	100	61
33060.W0330	10	50	12,0	39,2	19,3	9,6	33,3	13,4	10	100	64
33060.W0331	10	15	12,0	39,2	18,4	9,6	33,3	13,4	10	60	86
33060.W0332	10	60	12,0	39,2	19,3	9,6	33,3	13,4	10	100	70
33060.W0333	10	91	12,0	39,2	18,4	9,6	33,3	13,4	10	60	70

Material

Pin: stainless steel 1,4542 (AISI 630), precipitation hardened, blast finish. (marked at end of shaft to denote 1.4542 material).
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: thermoplastic PA 6.
Available colours: grey/orange, grey/blue, grey/grey, black/black.

Technical Notes

Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections.

Tips

For lanyards & retaining cables see part no.33250. Easy install locating bushes available see part no.33248.

Important Notes

Extreme load capacity due to high material grade.
*Shearing resistance similar to DIN 50141.
Also available in stainless grade 1.4305 (AISI 303), see part no.33080.

STAINLESS STEEL 630 HIGH SHEAR FORCES

Handle

self-locking - stainless steel 1.4542 (AISI 630)

33060

Order No.	d_1	l_1	d_2	d_3	d_4	l_2	l_3	l_4	Loc'n hole H11	Shearing resistance, double kN min.*	g
33060.W0334	10	80	12,0	39,2	18,4	9,6	33,3	13,4	10	60	97
33060.W0335	10	90	12,0	39,2	18,4	9,6	33,3	13,4	10	60	103
33060.W0336	10	100	12,0	39,2	18,4	9,6	33,3	13,4	10	60	109
33060.W0337	10	110	12,0	39,2	18,4	9,6	33,3	13,4	10	60	115
33060.W0338	10	120	12,0	39,2	18,4	9,6	33,3	13,4	10	60	53
33060.W0339	12	20	14,5	47,6	25,2	10,6	39,7	16,7	12	87	156
33060.W0344	12	20	14,5	47,6	26,3	10,6	39,7	16,7	12	87	156
33060.W0345	12	25	14,5	47,6	26,3	10,6	39,7	16,7	12	144	96
33060.W0346	12	30	14,5	47,6	26,3	10,6	39,7	16,7	12	144	100
33060.W0347	12	35	14,5	47,6	26,3	10,6	39,7	16,7	12	144	105
33060.W0348	12	40	14,5	47,6	26,3	10,6	39,7	16,7	12	144	109
33060.W0349	12	45	14,5	47,6	26,3	10,6	39,7	16,7	12	144	113
33060.W0350	12	50	14,5	47,6	26,3	10,6	39,7	16,7	12	144	117
33060.W0352	12	60	14,5	47,6	26,3	10,6	39,7	16,7	12	144	126
33060.W0354	12	70	14,5	47,6	26,3	10,6	39,7	16,7	12	144	134
33060.W0356	12	80	14,5	47,6	26,3	10,6	39,7	16,7	12	144	143
33060.W0357	12	90	14,5	47,6	25,2	10,6	39,7	16,7	12	87	165
33060.W0358	12	100	14,5	47,6	25,2	10,6	39,7	16,7	12	87	173
33060.W0359	12	110	14,5	47,6	25,2	10,6	39,7	16,7	12	87	182
33060.W0360	12	120	14,5	47,6	25,2	10,6	39,7	16,7	12	87	96
33060.W0366	16	30	19,0	47,6	26,3	14,0	39,7	16,7	16	257	132
33060.W0367	16	35	19,0	47,6	26,3	14,0	39,7	16,7	16	257	140
33060.W0368	16	40	19,0	47,6	26,3	14,0	39,7	16,7	16	257	148
33060.W0369	16	45	19,0	47,6	26,3	14,0	39,7	16,7	16	257	155
33060.W0370	16	50	19,0	47,6	26,3	14,0	39,7	16,7	16	257	168
33060.W0372	16	60	19,0	47,6	26,3	14,0	39,7	16,7	16	257	178
33060.W0374	16	70	19,0	47,6	26,3	14,0	39,7	16,7	16	257	194
33060.W0376	16	80	19,0	47,6	26,3	14,0	39,7	16,7	16	257	208
33060.W0377	16	90	19,0	47,6	25,2	14,0	39,7	16,7	16	155	234
33060.W0378	16	100	19,0	47,6	25,2	14,0	39,7	16,7	16	155	251
33060.W0379	16	110	19,0	47,6	25,2	14,0	39,7	16,7	16	155	266
33060.W0380	16	120	19,0	47,6	25,2	14,0	39,7	16,7	16	155	281
33060.W0381	16	130	19,0	47,6	25,2	14,0	39,7	16,7	16	155	297
33060.W0382	16	140	19,0	47,6	25,2	14,0	39,7	16,7	16	155	313
33060.W0383	16	150	19,0	47,6	25,2	14,0	39,7	16,7	16	155	328
33060.W0391	20	50	25,0	57,1	33,8	20,5	50,7	21,5	20	403	329
33060.W0392	20	60	25,0	57,1	35,4	20,5	50,7	21,5	20	403	343
33060.W0393	20	90	25,0	57,1	33,8	20,5	50,7	21,5	20	403	377
33060.W0396	20	80	25,0	57,1	35,4	20,5	50,7	21,5	20	403	392
33060.W0397	20	90	25,0	57,1	33,8	20,5	50,7	21,5	20	403	426
33060.W0400	20	100	25,0	57,1	35,4	20,5	50,7	21,5	20	403	440
33060.W0401	20	110	25,0	57,1	33,8	20,5	50,7	21,5	20	403	474
33060.W0404	20	120	25,0	57,1	35,4	20,5	50,7	21,5	20	403	488
33060.W0405	20	130	25,0	57,1	33,8	20,5	50,7	21,5	20	403	523
33060.W0406	20	140	25,0	57,1	33,8	20,5	50,7	21,5	20	403	546
33060.W0407	20	150	25,0	57,1	33,8	20,5	50,7	21,5	20	403	571
33060.W0409	25	50	30,8	57,1	33,8	22,0	50,7	21,5	25	631	415
33060.W0410	25	60	30,8	57,1	33,8	22,0	50,7	21,5	25	631	453
33060.W0411	25	70	30,8	57,1	33,8	22,0	50,7	21,5	25	631	490
33060.W0412	25	80	30,8	57,1	33,8	22,0	50,7	21,5	25	631	528
33060.W0413	25	90	30,8	57,1	33,8	22,0	50,7	21,5	25	631	565
33060.W0414	25	100	30,8	57,1	33,8	22,0	50,7	21,5	25	631	603
33060.W0415	25	110	30,8	57,1	33,8	22,0	50,7	21,5	25	631	640
33060.W0416	25	120	30,8	57,1	33,8	22,0	50,7	21,5	25	631	678
33060.W0417	25	130	30,8	57,1	33,8	22,0	50,7	21,5	25	631	715
33060.W0418	25	140	30,8	57,1	33,8	22,0	50,7	21,5	25	631	753
33060.W0419	25	150	30,8	57,1	33,8	22,0	50,7	21,5	25	631	790



Material

Pin: stainless steel 1,4542 (AISI 630), precipitation hardened, blast finish. (marked at end of shaft to denote 1.4542 material).
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: thermoplastic PA 6.
Available colours: grey/orange, grey/blue, grey/grey, black/black.

Technical Notes

Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections.

Tips

For lanyards & retaining cables see part no.33250. Easy install locating bushes available see part no.33248.

Important Notes

Extreme load capacity due to high material grade.
*Shearing resistance similar to DIN 50141.
Also available in stainless grade 1.4305 (AISI 303), see part no.33080.

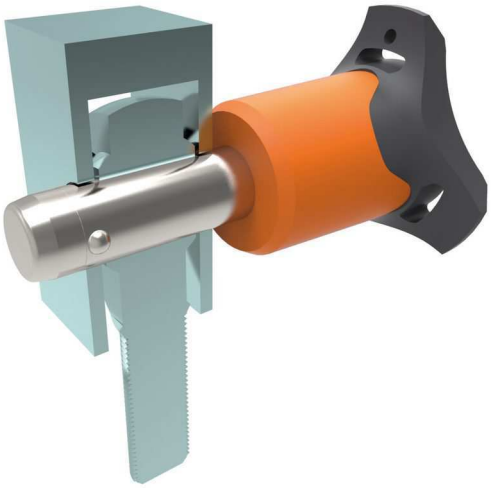
STAINLESS STEEL 630

HIGH SHEAR FORCES

Handle

self-locking - stainless steel 1.4542 (AISI 630)

33060





Material
Pin: stainless steel 1,4542 (AISI 630), precipitation hardened, blast finish. (marked at end of shaft to denote 1.4542 material).
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: thermoplastic PA 6.
Available colours: grey/orange, grey/blue, grey/grey, black/black.

Technical Notes
Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections.

Tips
For lanyards & retaining cables see part no.33250. Easy install locating bushes available see part no.33248.

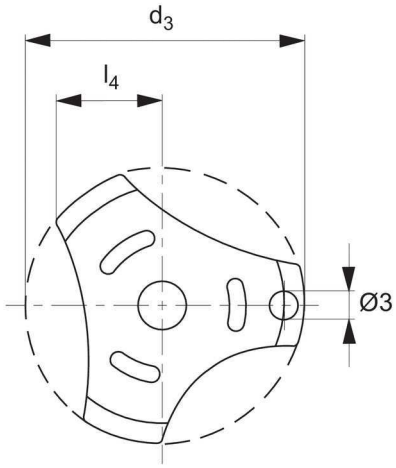
Important Notes
Extreme load capacity due to high material grade.
*Shearing resistance similar to DIN 50141.
Also available in stainless grade 1.4305 (AISI 303), see part no.33080.

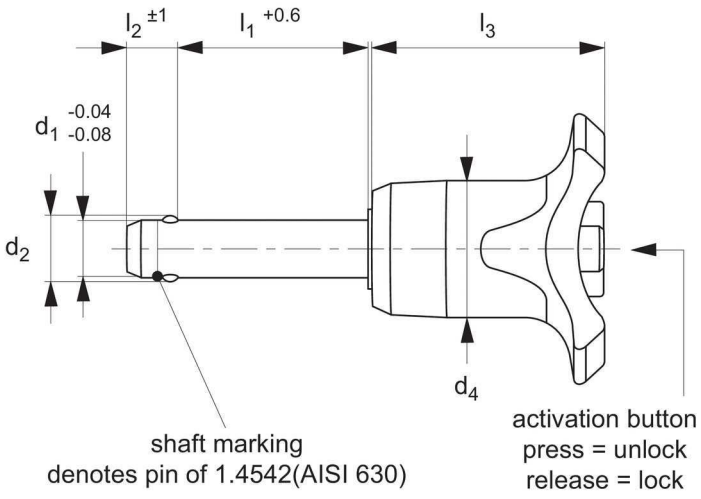
Handle

self-locking - stainless steel 1.4542 (AISI 630)



33060







Order No.	d_1	l_1	d_2	d_3	d_4	l_2	l_3	l_4	Loc'n hole H11	Shearing resistance, double kN min.*	g
33060.W0152	5	10	5,5	33,2	14,5	6,0	26,7	10,8	5	24	15
33060.W0153	5	15	5,5	33,2	14,5	6,0	26,7	10,8	5	24	15
33060.W0154	5	20	5,5	33,2	14,5	6,0	26,7	10,8	5	24	16
33060.W0155	5	25	5,5	33,2	14,5	6,0	26,7	10,8	5	24	17
33060.W0156	5	30	5,5	33,2	14,5	6,0	26,7	10,8	5	24	18
33060.W0157	6	60	7,0	33,2	14,5	7,0	26,7	10,8	6	21	26
33060.W0158	6	70	7,0	33,2	14,5	7,0	26,7	10,8	6	21	28
33060.W0159	6	80	7,0	33,2	14,5	7,0	26,7	10,8	6	21	30
33060.W0145	5	35	5,5	33,2	14,5	6,0	26,7	10,8	5	14	19
33060.W0146	5	40	5,5	33,2	14,5	6,0	26,7	10,8	5	14	20
33060.W0147	5	45	5,5	33,2	14,5	6,0	26,7	10,8	5	14	21
33060.W0148	5	50	5,5	33,2	14,5	6,0	26,7	10,8	5	14	23
33060.W0149	5	60	5,5	33,2	14,5	6,0	26,7	10,8	5	14	24
33060.W0150	5	70	5,5	33,2	14,5	6,0	26,7	10,8	5	14	18
33060.W0151	5	80	5,5	33,2	14,5	6,0	26,7	10,8	5	14	19
33060.W0161	8	100	9,6	39,2	18,4	8,2	33,3	13,4	8	38	54
33060.W0162	6	10	7,0	33,2	14,5	7,0	26,7	10,8	6	35	16
33060.W0163	6	15	7,0	33,2	14,5	7,0	26,7	10,8	6	35	17
33060.W0164	6	20	7,0	33,2	14,5	7,0	26,7	10,8	6	35	18
33060.W0165	6	25	7,0	33,2	14,5	7,0	26,7	10,8	6	35	19
33060.W0166	6	30	7,0	33,2	14,5	7,0	26,7	10,8	6	35	20
33060.W0167	6	35	7,0	33,2	14,5	7,0	26,7	10,8	6	35	21
33060.W0168	6	40	7,0	33,2	14,5	7,0	26,7	10,8	6	35	22
33060.W0169	6	45	7,0	33,2	14,5	7,0	26,7	10,8	6	35	23
33060.W0170	6	50	7,0	33,2	14,5	7,0	26,7	10,8	6	35	24
33060.W0171	8	90	9,6	39,2	18,4	8,2	33,3	13,4	8	38	36
33060.W0172	8	10	9,6	39,2	18,4	8,2	33,3	13,4	8	38	38
33060.W0173	8	15	9,6	39,2	18,4	8,2	33,3	13,4	8	38	58
33060.W0174	8	20	9,6	39,2	19,3	8,2	33,3	13,4	8	63	40
33060.W0175	8	25	9,6	39,2	19,3	8,2	33,3	13,4	8	63	42
33060.W0176	8	30	9,6	39,2	19,3	8,2	33,3	13,4	8	63	44
33060.W0177	8	35	9,6	39,2	19,3	8,2	33,3	13,4	8	63	46
33060.W0178	8	40	9,6	39,2	19,3	8,2	33,3	13,4	8	63	47
33060.W0179	8	45	9,6	39,2	19,3	8,2	33,3	13,4	8	63	49
33060.W0180	8	50	9,6	39,2	19,3	8,2	33,3	13,4	8	63	51
33060.W0181	8	60	9,6	39,2	18,4	8,2	33,3	13,4	8	38	62
33060.W0182	8	70	9,6	39,2	18,4	8,2	33,3	13,4	8	38	65
33060.W0183	8	80	9,6	39,2	18,4	8,2	33,3	13,4	8	38	69
33060.W0184	10	20	12,0	39,2	19,3	9,6	33,3	13,4	10	100	47
33060.W0185	10	25	12,0	39,2	19,3	9,6	33,3	13,4	10	100	49
33060.W0186	10	30	12,0	39,2	19,3	9,6	33,3	13,4	10	100	53
33060.W0187	10	35	12,0	39,2	19,3	9,6	33,3	13,4	10	100	55
33060.W0188	10	40	12,0	39,2	19,3	9,6	33,3	13,4	10	100	58
33060.W0189	10	45	12,0	39,2	19,3	9,6	33,3	13,4	10	100	61
33060.W0190	10	50	12,0	39,2	19,3	9,6	33,3	13,4	10	100	64
33060.W0191	10	15	12,0	39,2	18,4	9,6	33,3	13,4	10	60	86
33060.W0192	10	60	12,0	39,2	19,3	9,6	33,3	13,4	10	100	70
33060.W0193	10	70	12,0	39,2	18,4	9,6	33,3	13,4	10	60	70

Material

Pin: stainless steel 1,4542 (AISI 630), precipitation hardened, blast finish. (marked at end of shaft to denote 1.4542 material).
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: thermoplastic PA 6.
Available colours: grey/orange, grey/blue, grey/grey, black/black.

Technical Notes

Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections.

Tips

For lanyards & retaining cables see part no.33250. Easy install locating bushes available see part no.33248.

Important Notes

Extreme load capacity due to high material grade.
*Shearing resistance similar to DIN 50141.
Also available in stainless grade 1.4305 (AISI 303), see part no.33080.

STAINLESS STEEL 630

HIGH SHEAR FORCES

Handle

self-locking - stainless steel 1.4542 (AISI 630)

33060

Order No.	d_1	l_1	d_2	d_3	d_4	l_2	l_3	l_4	Loc'n hole H11	Shearing resistance, double kN min.*	g
33060.W0194	10	80	12,0	39,2	18.4	9,6	33,3	13,4	10	60	97
33060.W0195	10	90	12,0	39,2	18,4	9,6	33,3	13,4	10	60	103
33060.W0196	10	100	12,0	39,2	18,4	9,6	33,3	13,4	10	60	109
33060.W0197	10	110	12,0	39,2	18,4	9,6	33,3	13,4	10	60	115
33060.W0198	10	120	12,0	39,2	18,4	9,6	33,3	13,4	10	60	53
33060.W0204	12	20	14,5	47,6	25,2	10,6	39,7	16,7	12	87	156
33060.W0205	12	25	14,5	47,6	26,3	10,6	39,7	16,7	12	144	96
33060.W0206	12	30	14,5	47,6	26,3	10,6	39,7	16,7	12	144	100
33060.W0207	12	35	14,5	47,6	26,3	10,6	39,7	16,7	12	144	105
33060.W0208	12	40	14,5	47,6	26,3	10,6	39,7	16,7	12	144	109
33060.W0209	12	45	14,5	47,6	26,3	10,6	39,7	16,7	12	144	113
33060.W0210	12	50	14,5	47,6	26,3	10,6	39,7	16,7	12	144	117
33060.W0212	12	60	14,5	47,6	26,3	10,6	39,7	16,7	12	144	126
33060.W0214	12	70	14,5	47,6	26,3	10,6	39,7	16,7	12	144	134
33060.W0216	12	80	14,5	47,6	26,3	10,6	39,7	16,7	12	144	143
33060.W0217	12	90	14,5	47,6	25,2	10,6	39,7	16,7	12	87	165
33060.W0218	12	100	14,5	47,6	25,2	10,6	39,7	16,7	12	87	173
33060.W0219	12	110	14,5	47,6	25,2	10,6	39,7	16,7	12	87	182
33060.W0220	12	120	14,5	47,6	25,2	10,6	39,7	16,7	12	87	177
33060.W0226	16	30	19,0	47,6	26,3	14,0	39,7	16,7	16	257	132
33060.W0227	16	35	19,0	47,6	26,3	14,0	39,7	16,7	16	257	140
33060.W0228	16	40	19,0	47,6	26,3	14,0	39,7	16,7	16	257	148
33060.W0229	16	45	19,0	47,6	26,3	14,0	39,7	16,7	16	257	155
33060.W0230	16	50	19,0	47,6	26,3	14,0	39,7	16,7	16	257	168
33060.W0232	16	60	19,0	47,6	26,3	14,0	39,7	16,7	16	257	178
33060.W0234	16	70	19,0	47,6	26,3	14,0	39,7	16,7	16	257	194
33060.W0236	16	80	19,0	47,6	26,3	14,0	39,7	16,7	16	257	208
33060.W0237	16	90	19,0	47,6	25,2	14,0	39,7	16,7	16	155	234
33060.W0238	16	100	19,0	47,6	25,2	14,0	39,7	16,7	16	155	151
33060.W0239	16	110	19,0	47,6	25,2	14,0	39,7	16,7	16	155	266
33060.W0240	16	120	19,0	47,6	25,2	14,0	39,7	16,7	16	155	281
33060.W0241	16	130	19,0	47,6	25,2	14,0	39,7	16,7	16	155	297
33060.W0242	16	140	19,0	47,6	25,2	14,0	39,7	16,7	16	155	313
33060.W0243	16	150	19,0	47,6	25,2	14,0	39,7	16,7	16	155	328
33060.W0251	20	50	25,0	57,1	33,8	20,5	50,7	21,5	20	403	329
33060.W0252	20	60	25,0	57,1	35,4	20,5	50,7	21,5	20	403	343
33060.W0253	20	70	25,0	57,1	33,8	20,5	50,7	21,5	20	403	377
33060.W0256	20	80	25,0	57,1	35,4	20,5	50,7	21,5	20	403	392
33060.W0257	20	90	25,0	57,1	33,8	20,5	50,7	21,5	20	403	426
33060.W0260	20	100	25,0	57,1	35,4	20,5	50,7	21,5	20	403	440
33060.W0261	20	110	25,0	57,1	33,5	20,5	50,7	21,5	20	403	474
33060.W0264	20	120	25,0	57,1	35,4	20,5	50,7	21,5	20	403	488
33060.W0265	20	130	25,0	57,1	33,8	20,5	50,7	21,5	20	403	523
33060.W0266	20	140	25,0	57,1	33,8	20,5	50,7	21,5	20	403	546
33060.W0267	20	150	25,0	57,1	33,8	20,5	50,7	21,5	20	403	571
33060.W0269	25	50	30,8	57,1	33,8	22,0	50,7	21,5	25	631	415
33060.W0270	25	60	30,8	57,1	33,8	22,0	50,7	21,5	25	631	453
33060.W0271	25	70	30,8	57,1	33,8	22,0	50,7	21,5	25	631	490
33060.W0272	25	80	30,8	57,1	33,8	22,0	50,7	21,5	25	631	528
33060.W0273	25	90	30,8	57,1	33,8	22,0	50,7	21,5	25	631	565
33060.W0274	25	100	30,8	57,1	33,8	22,0	50,7	21,5	25	631	603
33060.W0275	25	110	30,8	57,1	33,8	22,0	50,7	21,5	25	631	640
33060.W0276	25	120	30,8	57,1	33,8	22,0	50,7	21,5	25	631	678
33060.W0277	25	130	30,8	57,1	33,8	22,0	50,7	21,5	25	631	715
33060.W0278	25	140	30,8	57,1	33,8	22,0	50,7	21,5	25	631	753
33060.W0279	25	150	30,8	57,1	33,8	22,0	50,7	21,5	25	631	790



Material

Pin: stainless steel 1,4542 (AISI 630), precipitation hardened, blast finish. (marked at end of shaft to denote 1.4542 material).
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: thermoplastic PA 6.
Available colours: grey/orange, grey/blue, grey/grey, black/black.

Technical Notes

Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections.

Tips

For lanyards & retaining cables see part no.33250. Easy install locating bushes available see part no.33248.

Important Notes

Extreme load capacity due to high material grade.
*Shearing resistance similar to DIN 50141.
Also available in stainless grade 1.4305 (AISI 303), see part no.33080.

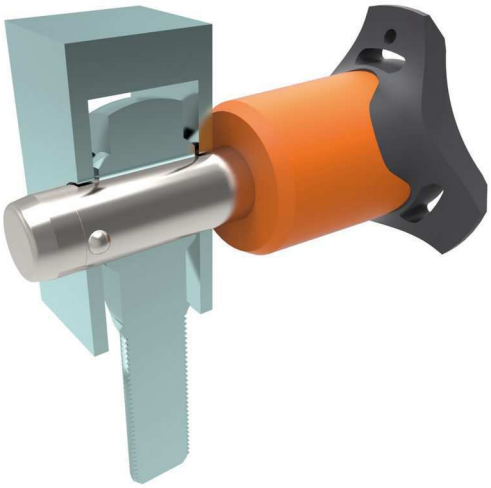
STAINLESS STEEL 630

HIGH SHEAR FORCES

Handle

self-locking - stainless steel 1.4542 (AISI 630)

33060





Material
Pin: stainless steel 1,4542 (AISI 630), precipitation hardened, blast finish. (marked at end of shaft to denote 1.4542 material).
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: thermoplastic PA 6.
Available colours: grey/orange, grey/blue, grey/grey, black/black.

Technical Notes
Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections.

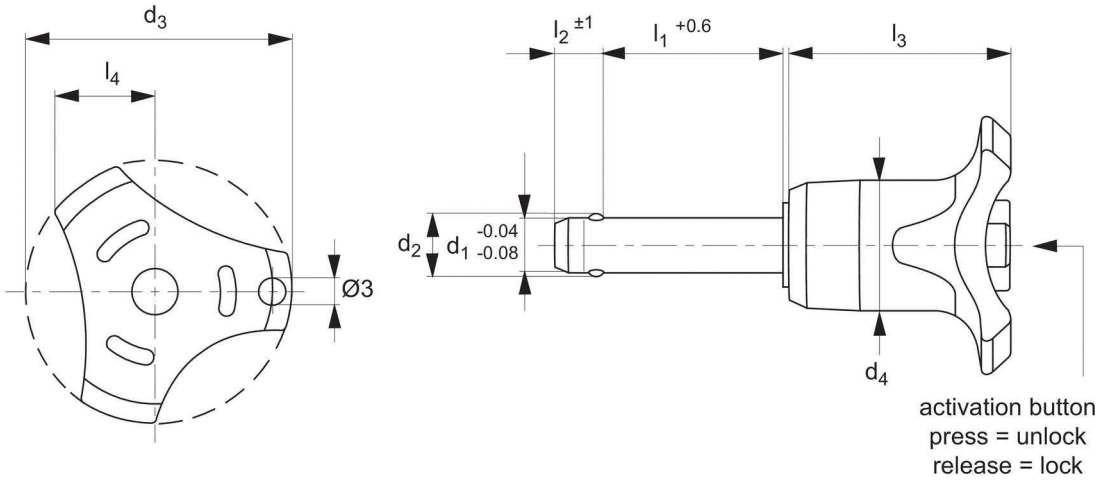
Tips
For lanyards & retaining cables see part no.33250. Easy install locating bushes available see part no.33248.

Important Notes
Extreme load capacity due to high material grade.
*Shearing resistance similar to DIN 50141.
Also available in stainless grade 1.4305 (AISI 303), see part no.33080.

Handle

self-locking - stainless steel 1.4305 (AISI 303)

33080





Order No.	d_1	l_1	d_2	d_3	d_4	l_2	l_3	l_4	Loc'n hole H11	Shearing resistance, double kN min.*	g
33080.W0812	5	10	5,5	33,2	14,5	6,0	26,7	10,8	5	14	15
33080.W0813	5	15	5,5	33,2	14,5	6,0	26,7	10,8	5	14	15
33080.W0814	5	20	5,5	33,2	14,5	6,0	26,7	10,8	5	14	16
33080.W0815	5	20	5,5	33,2	14,5	6,0	26,7	10,8	5	14	16
33080.W0816	5	30	5,5	33,2	14,5	6,0	26,7	10,8	5	14	18
33080.W0817	6	60	7,0	33,2	14,5	7,0	26,7	10,8	6	21	26
33080.W0818	6	70	7,0	33,2	14,5	7,0	26,7	10,8	6	21	28
33080.W0819	6	80	7,0	33,2	14,5	7,0	26,7	10,8	6	21	30
33080.W0832	8	10	9,6	39,2	18,4	8,2	33,3	13,4	8	38	38
33080.W0833	8	15	9,6	39,2	18,4	8,2	33,3	13,4	8	38	58
33080.W0805	5	35	5,5	33,2	14,5	6,0	26,7	10,8	5	14	19
33080.W0806	5	40	5,5	33,2	14,5	6,0	26,7	10,8	5	14	20
33080.W0807	5	45	5,5	33,2	14,5	6,0	26,7	10,8	5	14	21
33080.W0808	5	50	5,5	33,2	14,5	6,0	26,7	10,8	5	14	23
33080.W0809	5	60	5,5	33,2	14,5	6,0	26,7	10,8	5	14	24
33080.W0810	5	70	5,5	33,2	14,5	6,0	26,7	10,8	5	14	18
33080.W0811	5	80	5,5	33,2	14,5	6,0	26,7	10,8	5	14	19
33080.W0822	6	10	7,0	33,2	14,5	7,0	26,7	10,8	6	21	16
33080.W0823	6	15	7,0	33,2	14,5	7,0	26,7	10,8	6	21	17
33080.W0824	6	20	7,0	33,2	14,5	7,0	26,7	10,8	6	21	18
33080.W0825	6	25	7,0	33,2	14,5	7,0	26,7	10,8	6	21	19
33080.W0826	6	30	7,0	33,2	14,5	7,0	26,7	10,8	6	21	20
33080.W0827	6	35	7,0	33,2	14,5	7,0	26,7	10,8	6	21	21
33080.W0828	6	35	7,0	33,2	14,5	7,0	26,7	10,8	6	21	21
33080.W0829	6	45	7,0	33,2	14,5	7,0	26,7	10,8	6	21	23
33080.W0830	6	50	7,0	33,2	14,5	7,0	26,7	10,8	6	21	24
33080.W0834	8	20	9,6	39,2	19,3	8,2	33,3	13,4	8	38	40
33080.W0835	8	25	9,6	39,2	19,3	8,2	33,3	13,4	8	38	42
33080.W0836	8	30	9,6	39,2	19,3	8,2	33,3	13,4	8	38	44
33080.W0837	8	35	9,6	39,2	19,3	8,2	33,3	13,4	8	38	46
33080.W0838	8	40	9,6	39,2	19,3	8,2	33,3	13,4	8	38	47
33080.W0839	8	45	9,6	39,2	19,3	8,2	33,3	13,4	8	38	49
33080.W0840	8	50	9,6	39,2	19,3	8,2	33,3	13,4	8	38	51
33080.W0841	8	60	9,6	39,2	18,4	8,2	33,3	13,4	8	38	62
33080.W0842	8	70	9,6	39,2	18,4	8,2	33,3	13,4	8	38	65
33080.W0843	8	80	9,6	39,2	18,4	8,2	33,3	13,4	8	38	69
33080.W0831	8	90	9,6	39,2	18,4	8,2	33,3	13,4	8	38	36
33080.W0821	8	100	9,6	39,2	18,4	8,2	33,3	13,4	8	38	54
33080.W0851	10	15	12,0	39,2	18,4	9,6	33,3	13,4	10	60	86
33080.W0844	10	20	12,0	39,2	19,3	9,6	33,3	13,4	10	60	47
33080.W0845	10	25	12,0	39,2	19,3	9,6	33,3	13,4	10	60	49
33080.W0846	10	30	12,0	39,2	19,3	9,6	33,3	13,4	10	60	53
33080.W0847	10	35	12,0	39,2	19,3	9,6	33,3	13,4	10	60	55
33080.W0848	10	40	12,0	39,2	19,3	9,6	33,3	13,4	10	60	58
33080.W0849	10	45	12,0	39,2	19,3	9,6	33,3	13,4	10	60	61
33080.W0850	10	50	12,0	39,2	19,3	9,6	33,3	13,4	10	60	64
33080.W0852	10	60	12,0	39,2	19,3	9,6	33,3	13,4	10	60	70
33080.W0853	10	70	12,0	39,2	18,4	9,6	33,3	13,4	10	60	91
33080.W0854	10	80	12,0	39,2	18,4	9,6	33,3	13,4	10	60	97

Material
Pin: stainless steel 1.4542 (AISI 630)
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: thermoplastic PA 6.
Available colours: grey/orange, grey/blue, grey/grey.

Technical Notes
Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections.

Tips
For lanyards & retaining cables see part no.33250-33261. Easy install locating bushes available see part no.33248 + 33246.

Important Notes
*Shearing resistance similar to DIN 50141.
Also available in stainless grade 1.4542 (AISI 630) for higher shear forces, see part no.33060.

Handle

self-locking - stainless steel 1.4305 (AISI 303)

33080

Order No.	d_1	l_1	d_2	d_3	d_4	l_2	l_3	l_4	Loc'n hole H11	Shearing resistance, double kN min.*	g
33080.W0855	10	90	12,0	39,2	18,4	9,6	33,3	13,4	10	60	103
33080.W0856	10	100	12,0	39,2	18,4	9,6	33,3	13,4	10	60	109
33080.W0857	10	110	12,0	39,2	18,4	9,6	33,3	13,4	10	60	115
33080.W0858	10	120	12,0	39,2	18,4	9,6	33,3	13,4	10	60	53
33080.W0864	12	20	14,5	47,6	25,2	10,6	39,7	16,7	12	87	156
33080.W0866	12	30	14,5	47,6	25,2	10,6	39,7	16,7	12	87	100
33080.W0869	12	45	14,5	47,6	25,2	10,6	39,7	16,7	12	87	113
33080.W0865	12	25	14,5	47,6	26,3	10,6	39,7	16,7	12	87	96
33080.W0867	12	35	14,5	47,6	26,3	10,6	39,7	16,7	12	87	105
33080.W0868	12	40	14,5	47,6	26,3	10,6	39,7	16,7	12	87	109
33080.W0869	12	45	14,5	47,6	26,3	10,6	39,7	16,7	12	87	113
33080.W0870	12	50	14,5	47,6	26,3	10,6	39,7	16,7	12	87	117
33080.W0872	12	60	14,5	47,6	26,3	10,6	39,7	16,7	12	87	126
33080.W0874	12	70	14,5	47,6	26,3	10,6	39,7	16,7	12	87	134
33080.W0876	12	80	14,5	47,6	26,3	10,6	39,7	16,7	12	87	143
33080.W0877	12	90	14,5	47,6	25,2	10,6	39,7	16,7	12	87	165
33080.W0878	12	100	14,5	47,6	25,2	10,6	39,7	16,7	12	87	173
33080.W0879	12	110	14,5	47,6	25,2	10,6	39,7	16,7	12	87	182
33080.W0880	12	120	14,5	47,6	25,2	10,6	39,7	16,7	12	87	96
33080.W0886	16	30	19,0	47,6	26,3	14,0	39,7	16,7	16	155	132
33080.W0887	16	35	19,0	47,6	26,3	14,0	39,7	16,7	16	155	140
33080.W0888	16	40	19,0	47,6	26,3	14,0	39,7	16,7	16	155	148
33080.W0889	16	45	19,0	47,6	26,3	14,0	39,7	16,7	16	155	155
33080.W0890	16	50	19,0	47,6	26,3	14,0	39,7	16,7	16	155	168
33080.W0892	16	60	19,0	47,6	26,3	14,0	39,7	16,7	16	155	178
33080.W0894	16	70	19,0	47,6	26,3	14,0	39,7	16,7	16	155	194
33080.W0896	16	80	19,0	47,6	26,3	14,0	39,7	16,7	16	155	208
33080.W0897	16	90	19,0	47,6	25,2	14,0	39,7	16,7	16	155	234
33080.W0898	16	100	19,0	47,6	25,2	14,0	39,7	16,7	16	155	251
33080.W0899	16	110	19,0	47,6	25,2	14,0	39,7	16,7	16	155	266
33080.W0899	16	110	19,0	47,6	25,2	14,0	39,7	16,7	16	155	266
33080.W0900	16	120	19,0	47,6	25,2	14,0	39,7	16,7	16	155	281
33080.W0901	16	130	19,0	47,6	25,2	14,0	39,7	16,7	16	155	297
33080.W0902	16	140	19,0	47,6	25,2	14,0	39,7	16,7	16	155	313
33080.W0903	16	150	19,0	47,6	25,2	14,0	39,7	16,7	16	155	328
33080.W0905	20	50	25,0	57,1	33,8	20,5	50,7	21,5	20	244	329
33080.W0906	20	70	25,0	57,1	33,8	20,5	50,7	21,5	20	244	377
33080.W0909	20	90	25,0	57,1	33,8	20,5	50,7	21,5	20	244	426
33080.W0913	20	110	25,0	57,1	33,8	20,5	50,7	21,5	20	244	474
33080.W0904	20	60	25,0	57,1	35,4	20,5	50,7	21,5	20	244	343
33080.W0908	20	80	25,0	57,1	35,4	20,5	50,7	21,5	20	244	392
33080.W0912	20	100	25,0	57,1	35,4	20,5	50,7	21,5	20	244	440
33080.W0916	20	120	25,0	57,1	35,4	20,5	50,7	21,5	20	244	488
33080.W0917	20	130	25,0	57,1	33,8	20,5	50,7	21,5	20	244	523
33080.W0918	20	140	25,0	57,1	33,8	20,5	50,7	21,5	20	244	546
33080.W0919	20	150	25,0	57,1	33,8	20,5	50,7	21,5	20	244	571
33080.W0921	25	50	30,8	57,1	33,8	22,0	50,7	21,5	25	386	415
33080.W0922	25	60	30,8	57,1	33,8	22,0	50,7	21,5	25	386	453
33080.W0923	25	70	30,8	57,1	33,8	22,0	50,7	21,5	25	386	490
33080.W0924	25	80	30,8	57,1	33,8	22,0	50,7	21,5	25	386	528
33080.W0925	25	90	30,8	57,1	33,8	22,0	50,7	21,5	25	386	565
33080.W0926	25	100	30,8	57,1	33,8	22,0	50,7	21,5	25	386	603
33080.W0927	25	110	30,8	57,1	33,8	22,0	50,7	21,5	25	386	640
33080.W0928	25	120	30,8	57,1	33,8	22,0	50,7	21,5	25	386	690
33080.W0929	25	130	30,8	57,1	33,8	22,0	50,7	21,5	25	386	715
33080.W0930	25	140	30,8	57,1	33,8	22,0	50,7	21,5	25	386	753
33080.W0931	25	150	30,8	57,1	33,8	22,0	50,7	21,5	25	386	790



Material

Pin: stainless steel 1.4542 (AISI 630)
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: thermoplastic PA 6.
Available colours: grey/orange, grey/blue, grey/grey.

Technical Notes

Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections.

Tips

For lanyards & retaining cables see part no.33250-33261. Easy install locating bushes available see part no.33248 + 33246.

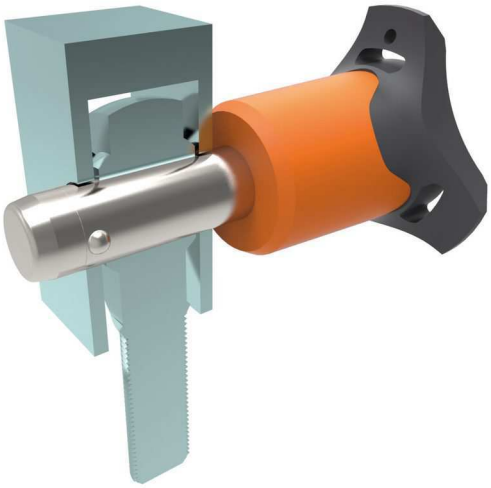
Important Notes

*Shearing resistance similar to DIN 50141.
Also available in stainless grade 1.4542 (AISI 630) for higher shear forces, see part no.33060.

Handle

self-locking - stainless steel 1.4305 (AISI 303)

33080





Material
Pin: stainless steel 1.4542 (AISI 630)
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: thermoplastic PA 6.
Available colours: grey/orange, grey/blue, grey/grey.

Technical Notes
Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections.

Tips
For lanyards & retaining cables see part no.33250-33261. Easy install locating bushes available see part no.33248 + 33246.

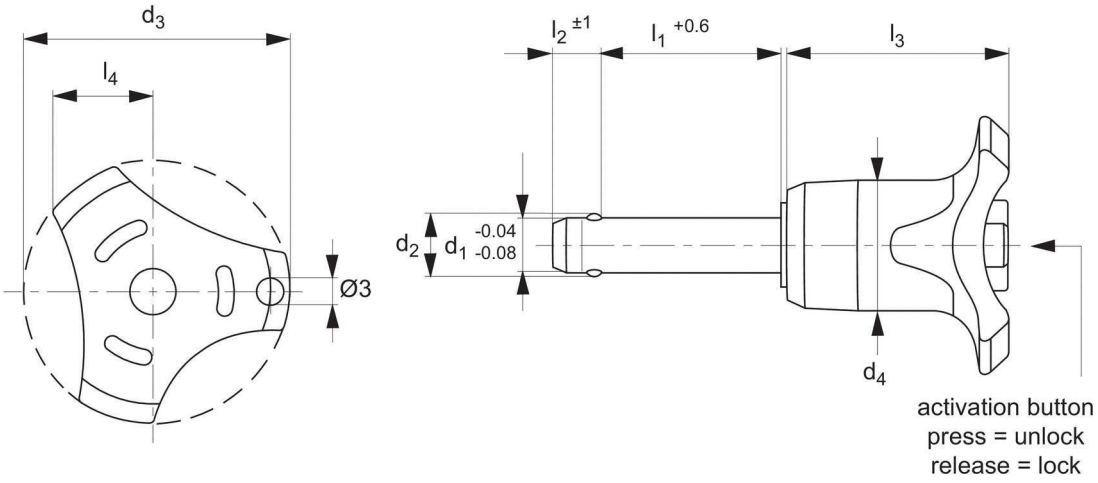
Important Notes
*Shearing resistance similar to DIN 50141.
Also available in stainless grade 1.4542 (AISI 630) for higher shear forces, see part no.33060.

Handle

self-locking - stainless steel 1.4305 (AISI 303)



33080





Order No.	d_1	l_1	d_2	d_3	d_4	l_2	l_3	l_4	Loc'n hole H11	Shearing resistance, double kN min.*	g
33080.W0432	5	10	5,5	33,2	14,5	6,0	26,7	10,8	5	14	15
33080.W0433	5	15	5,5	33,2	14,5	6,0	26,7	10,8	5	14	15
33080.W0434	5	20	5,5	33,2	14,5	6,0	26,7	10,8	5	14	16
33080.W0435	5	25	5,5	33,2	14,5	6,0	26,7	10,8	5	14	17
33080.W0436	5	30	5,5	33,2	14,5	6,0	26,7	10,8	5	14	18
33080.W0437	6	60	7,0	33,2	14,5	7,0	26,7	10,8	6	21	26
33080.W0438	6	70	7,0	33,2	14,5	7,0	26,7	10,8	6	21	28
33080.W0439	6	80	7,0	33,2	14,5	7,0	26,7	10,8	6	21	30
33080.W0425	5	35	5,5	33,2	14,5	6,0	26,7	10,8	5	14	19
33080.W0426	5	40	5,5	33,2	14,5	6,0	26,7	10,8	5	14	20
33080.W0427	5	45	5,5	33,2	14,5	6,0	26,7	10,8	5	14	21
33080.W0428	5	50	5,5	33,2	14,5	6,0	26,7	10,8	5	14	23
33080.W0429	5	60	5,5	33,2	14,5	6,0	26,7	10,8	5	14	24
33080.W0430	5	70	5,5	33,2	14,5	6,0	26,7	10,8	5	14	18
33080.W0431	5	80	5,5	33,2	14,5	6,0	26,7	10,8	5	14	19
33080.W0442	6	10	7,0	33,2	14,5	7,0	26,7	10,8	6	21	16
33080.W0443	6	15	7,0	33,2	14,5	7,0	26,7	10,8	6	21	17
33080.W0444	6	20	7,0	33,2	14,5	7,0	26,7	10,8	6	21	18
33080.W0445	6	25	7,0	33,2	14,5	7,0	26,7	10,8	6	21	19
33080.W0446	6	30	7,0	33,2	14,5	7,0	26,7	10,8	6	21	20
33080.W0447	6	35	7,0	33,2	14,5	7,0	26,7	10,8	6	21	21
33080.W0448	6	40	7,0	33,2	14,5	7,0	26,7	10,8	6	21	22
33080.W0449	6	45	7,0	33,2	14,5	7,0	26,7	10,8	6	21	23
33080.W0450	6	50	7,0	33,2	14,5	7,0	26,7	10,8	6	21	24
33080.W0452	8	10	9,6	39,2	18,4	8,2	33,3	13,4	8	38	38
33080.W0453	8	15	9,6	39,2	18,4	8,2	33,3	13,4	8	38	58
33080.W0454	8	20	9,6	39,2	19,3	8,2	33,3	13,4	8	38	40
33080.W0455	8	25	9,6	39,2	19,3	8,2	33,3	13,4	8	38	42
33080.W0456	8	30	9,6	39,2	19,3	8,2	33,3	13,4	8	38	44
33080.W0457	8	35	9,6	39,2	19,3	8,2	33,3	13,4	8	38	46
33080.W0458	8	40	9,6	39,2	19,3	8,2	33,3	13,4	8	38	47
33080.W0459	8	45	9,6	39,2	19,3	8,2	33,3	13,4	8	38	49
33080.W0460	8	50	9,6	39,2	19,3	8,2	33,3	13,4	8	38	51
33080.W0461	8	60	9,6	39,2	18,4	8,2	33,3	13,4	8	38	62
33080.W0462	8	70	9,6	39,2	18,4	8,2	33,3	13,4	8	38	65
33080.W0463	8	80	9,6	39,2	18,4	8,2	33,3	13,4	8	38	69
33080.W0451	8	90	9,6	39,2	18,4	8,2	33,3	13,4	8	38	36
33080.W0441	8	100	9,6	39,2	18,4	8,2	33,3	13,4	8	38	54
33080.W0464	10	20	12,0	39,2	19,3	9,6	33,3	13,4	10	60	47
33080.W0465	10	25	12,0	39,2	19,3	9,6	33,3	13,4	10	60	49
33080.W0466	10	30	12,0	39,2	19,3	9,6	33,3	13,4	10	60	53
33080.W0467	10	35	12,0	39,2	19,3	9,6	33,3	13,4	10	60	55
33080.W0468	10	40	12,0	39,2	19,3	9,6	33,3	13,4	10	60	58
33080.W0469	10	45	12,0	39,2	19,3	9,6	33,3	13,4	10	60	61
33080.W0470	10	50	12,0	39,2	19,3	9,6	33,3	13,4	10	60	64
33080.W0471	10	15	12,0	39,2	18,4	9,6	33,3	13,4	10	60	86
33080.W0473	10	70	12,0	39,2	18,4	9,6	33,3	13,4	10	60	91
33080.W0474	10	80	12,0	39,2	18,4	9,6	33,3	13,4	10	60	97
33080.W0475	10	90	12,0	39,2	18,4	9,6	33,3	13,4	10	60	103

Material
Pin: stainless steel 1.4542 (AISI 630)
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: thermoplastic PA 6.
Available colours: grey/orange, grey/blue, grey/grey.

Technical Notes
Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections.

Tips
For lanyards & retaining cables see part no.33250-33261. Easy install locating bushes available see part no.33248 + 33246.

Important Notes
*Shearing resistance similar to DIN 50141.
Also available in stainless grade 1.4542 (AISI 630) for higher shear forces, see part no.33060.



Handle

self-locking - stainless steel 1.4305 (AISI 303)

33080

Order No.	d_1	l_1	d_2	d_3	d_4	l_2	l_3	l_4	Loc'n hole H11	Shearing resistance, double kN min.*	g
33080.W0476	10	100	12,0	39,2	18,4	9,6	33,3	13,4	10	60	109
33080.W0477	10	110	12,0	39,2	18,4	9,6	33,3	13,4	10	60	115
33080.W0478	10	120	12,0	39,2	18,4	9,6	33,3	13,4	10	60	53
33080.W0484	12	20	14,5	47,0	25,2	10,6	39,7	16,7	12	87	156
33080.W0472	10	60	12,0	39,2	19,3	9,6	33,3	13,4	10	60	70
33080.W0485	12	25	14,5	47,6	26,3	10,6	39,7	16,7	12	87	96
33080.W0486	12	30	14,5	47,6	26,3	10,6	39,7	16,7	12	87	100
33080.W0487	12	35	14,5	47,6	26,3	10,6	39,7	16,7	12	87	105
33080.W0488	12	40	14,5	47,6	26,3	10,6	39,7	16,7	12	87	109
33080.W0489	12	45	14,5	47,6	26,3	10,6	39,7	16,7	12	87	113
33080.W0490	12	50	14,5	47,6	26,3	10,6	39,7	16,7	12	87	117
33080.W0492	12	60	14,5	47,6	26,3	10,6	39,7	16,7	12	87	126
33080.W0494	12	70	14,5	47,6	26,3	10,6	39,7	16,7	12	87	134
33080.W0496	12	80	14,5	47,6	26,3	10,6	39,7	16,7	12	87	143
33080.W0497	12	90	14,5	47,6	25,2	10,6	39,7	16,7	12	87	165
33080.W0498	12	100	14,5	47,6	25,2	10,6	39,7	16,7	12	87	173
33080.W0499	12	110	14,5	47,6	25,2	10,6	39,7	16,7	12	87	182
33080.W0500	12	120	14,5	47,6	25,2	10,6	39,7	16,7	12	87	96
33080.W0506	16	30	19,0	47,6	26,3	14,0	39,7	16,7	16	155	132
33080.W0507	16	35	19,0	47,6	26,3	14,0	39,7	16,7	16	155	140
33080.W0508	16	40	19,0	47,6	26,3	14,0	39,7	16,7	16	155	148
33080.W0509	16	45	19,0	47,6	26,3	14,0	39,7	16,7	16	155	155
33080.W0510	16	50	19,0	47,6	26,3	14,0	39,7	16,7	16	155	168
33080.W0512	16	60	19,0	47,6	26,3	14,0	39,7	16,7	16	155	178
33080.W0514	16	70	19,0	47,6	26,3	14,0	39,7	16,7	16	155	194
33080.W0516	16	80	19,0	47,6	26,3	14,0	39,7	16,7	16	155	208
33080.W0517	16	90	19,0	47,6	25,2	14,0	39,7	16,7	16	155	234
33080.W0518	16	100	19,0	47,6	25,2	14,0	39,7	16,7	16	155	251
33080.W0519	16	110	19,0	47,6	25,2	14,0	39,7	16,7	16	155	266
33080.W0520	16	120	19,0	47,6	25,2	14,0	39,7	16,7	16	155	281
33080.W0521	16	130	19,0	47,6	25,2	14,0	39,7	16,7	16	155	297
33080.W0522	16	140	19,0	47,6	25,2	14,0	39,7	16,7	16	155	313
33080.W0523	16	150	19,0	47,6	25,2	14,0	39,7	16,7	16	155	328
33080.W0531	20	50	25,0	57,1	33,8	20,5	50,7	21,5	20	244	329
33080.W0533	20	70	25,0	57,1	33,8	20,5	50,7	21,5	20	244	377
33080.W0537	20	90	25,0	57,1	33,8	20,5	50,7	21,5	20	244	426
33080.W0532	20	60	25,0	57,1	35,4	20,5	50,7	21,5	20	244	343
33080.W0536	20	80	25,0	57,1	35,4	20,5	50,7	21,5	20	244	392
33080.W0540	20	100	25,0	57,1	35,4	20,5	50,7	21,5	20	244	440
33080.W0544	20	120	25,0	57,1	35,4	20,5	50,7	21,5	20	244	488
33080.W0545	20	130	25,0	57,1	33,8	20,5	50,7	21,5	20	244	523
33080.W0546	20	140	25,0	57,1	33,8	20,5	50,7	21,5	20	244	546
33080.W0547	20	150	25,0	57,1	33,8	20,5	50,7	21,5	20	244	571
33080.W0549	25	50	30,8	57,1	33,8	22,0	50,7	21,5	25	386	415
33080.W0550	25	60	30,8	57,1	33,8	22,0	50,7	21,5	25	386	453
33080.W0551	25	70	30,8	57,1	33,8	22,0	50,7	21,5	25	386	490
33080.W0552	25	80	30,8	57,1	33,8	22,0	50,7	21,5	25	386	528
33080.W0553	25	90	30,8	57,1	33,8	22,0	50,7	21,5	25	386	565
33080.W0554	25	100	30,8	57,1	33,8	22,0	50,7	21,5	25	386	603
33080.W0556	25	120	30,8	57,1	33,8	22,0	50,7	21,5	25	386	690
33080.W0557	25	130	30,8	57,1	33,8	22,0	50,7	21,5	25	386	715
33080.W0558	25	140	30,8	57,1	33,8	22,0	50,7	21,5	25	386	753
33080.W0559	25	150	30,8	57,1	33,8	22,0	50,7	21,5	25	386	790



Material

Pin: stainless steel 1.4542 (AISI 630)
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: thermoplastic PA 6.
Available colours: grey/orange, grey/blue, grey/grey.

Technical Notes

Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections.

Tips

For lanyards & retaining cables see part no.33250-33261. Easy install locating bushes available see part no.33248 + 33246.

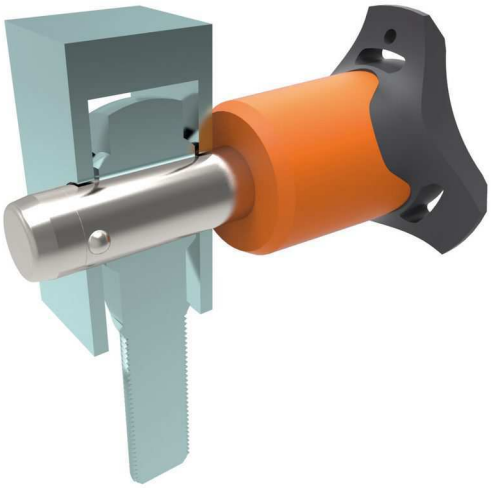
Important Notes

*Shearing resistance similar to DIN 50141.
Also available in stainless grade 1.4542 (AISI 630) for higher shear forces, see part no.33060.

Handle

self-locking - stainless steel 1.4305 (AISI 303)

33080





Material
Pin: stainless steel 1.4542 (AISI 630)
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: thermoplastic PA 6.
Available colours: grey/orange, grey/blue, grey/grey.

Technical Notes
Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections.

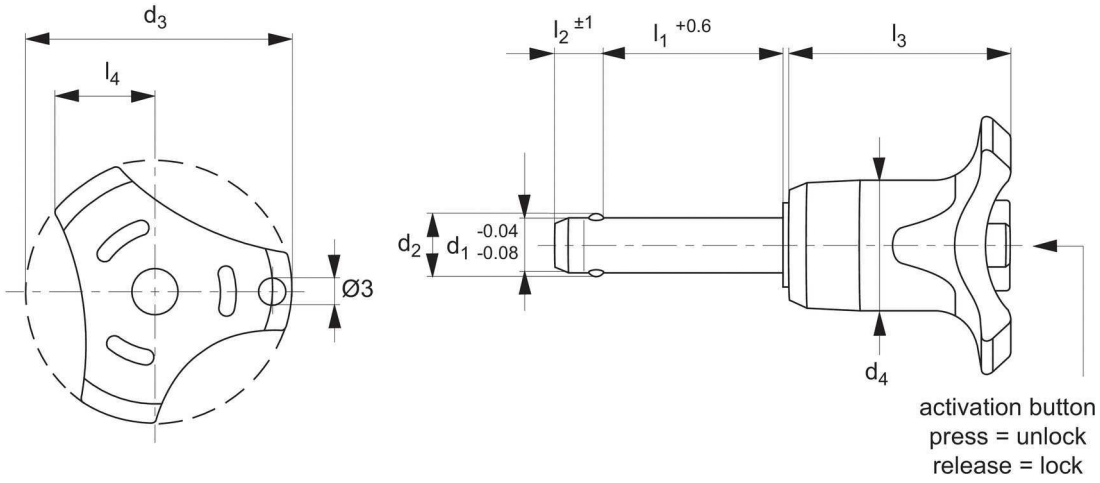
Tips
For lanyards & retaining cables see part no.33250-33261. Easy install locating bushes available see part no.33248 + 33246.

Important Notes
*Shearing resistance similar to DIN 50141.
Also available in stainless grade 1.4542 (AISI 630) for higher shear forces, see part no.33060.

Handle

self-locking - stainless steel 1.4305 (AISI 303)

33080





Order No.	d_1	l_1	d_2	d_3	d_4	l_2	l_3	l_4	Loc'n hole H11	Shearing resistance, double kN min.*	g
33080.W0292	5	10	5,5	33,2	14,5	6,0	26,7	10,8	5	14	15
33080.W0293	5	15	5,5	33,2	14,5	6,0	26,7	10,8	5	14	15
33080.W0294	5	20	5,5	33,2	14,5	6,0	26,7	10,8	5	14	16
33080.W0295	5	25	5,5	33,2	14,5	6,0	26,7	10,8	5	14	17
33080.W0296	5	30	5,5	33,2	14,5	6,0	26,7	10,8	5	14	18
33080.W0297	6	60	7,0	33,2	14,5	7,0	26,7	10,8	6	21	26
33080.W0298	6	70	7,0	33,2	14,5	7,0	26,7	10,8	6	21	28
33080.W0299	6	80	7,0	33,2	14,5	7,0	26,7	10,8	6	21	30
33080.W0285	5	35	5,5	33,2	14,5	6,0	26,7	10,8	5	14	19
33080.W0286	5	40	5,5	33,2	14,5	6,0	26,7	10,8	5	14	20
33080.W0287	5	45	5,5	33,2	14,5	6,0	26,7	10,8	5	14	21
33080.W0288	5	50	5,5	33,2	14,5	6,0	26,7	10,8	5	14	23
33080.W0289	5	60	5,5	33,2	14,5	6,0	26,7	10,8	5	14	24
33080.W0290	5	70	5,5	33,2	14,5	6,0	26,7	10,8	5	14	18
33080.W0291	5	80	5,5	33,2	14,5	6,0	26,7	10,8	5	14	19
33080.W0302	6	10	7,0	33,2	14,5	7,0	26,7	10,8	6	21	16
33080.W0301	8	100	9,6	39,2	18,4	8,2	33,3	13,4	8	38	54
33080.W0303	6	15	7,0	33,2	14,5	7,0	26,7	10,8	6	21	17
33080.W0304	6	20	7,0	33,2	14,5	7,0	26,7	10,8	6	21	18
33080.W0305	6	25	7,0	33,2	14,5	7,0	26,7	10,8	6	21	19
33080.W0306	6	30	7,0	33,2	14,5	7,0	26,7	10,8	6	21	20
33080.W0307	6	35	7,0	33,2	14,5	7,0	26,7	10,8	6	21	21
33080.W0308	6	40	7,0	33,2	14,5	7,0	26,7	10,8	6	21	22
33080.W0309	6	45	7,0	33,2	14,5	7,0	26,7	10,8	6	21	23
33080.W0310	6	50	7,0	33,2	14,5	7,0	26,7	10,8	6	21	24
33080.W0311	8	90	9,6	39,2	18,4	8,2	33,3	13,4	8	38	36
33080.W0312	8	10	9,6	39,2	18,4	8,2	33,3	13,4	8	38	38
33080.W0313	8	15	9,6	39,2	18,4	8,2	33,3	13,4	8	38	58
33080.W0314	8	20	9,6	39,2	19,3	8,2	33,3	13,4	8	38	40
33080.W0315	8	25	9,6	39,2	19,3	8,2	33,3	13,4	8	38	42
33080.W0316	8	30	9,6	39,2	19,3	8,2	33,3	13,4	8	38	44
33080.W0317	8	35	9,6	39,2	19,3	8,2	33,3	13,4	8	38	46
33080.W0318	8	40	9,6	39,2	19,3	8,2	33,3	13,4	8	38	47
33080.W0319	8	45	9,6	39,2	19,3	8,2	33,3	13,4	8	38	49
33080.W0320	8	50	9,6	39,2	19,3	8,2	33,3	13,4	8	38	51
33080.W0321	8	60	9,6	39,2	18,4	8,2	33,3	13,4	8	38	62
33080.W0322	8	70	9,6	39,2	18,4	8,2	33,3	13,4	8	38	65
33080.W0323	8	80	9,6	39,2	18,4	8,2	33,3	13,4	8	38	69
33080.W0324	10	20	12,0	39,2	19,3	9,6	33,3	13,4	10	60	47
33080.W0325	10	25	12,0	39,2	19,3	9,6	33,3	13,4	10	60	49
33080.W0326	10	30	12,0	39,2	19,3	9,6	33,3	13,4	10	60	53
33080.W0327	10	35	12,0	39,2	19,3	9,6	33,3	13,4	10	60	55
33080.W0328	10	40	12,0	39,2	19,3	9,6	33,3	13,4	10	60	58
33080.W0329	10	45	12,0	39,2	19,3	9,6	33,3	13,4	10	60	61
33080.W0330	10	50	12,0	39,2	19,3	9,6	33,3	13,4	10	60	64
33080.W0331	10	15	12,0	39,2	18,4	9,6	33,3	13,4	10	60	86
33080.W0332	10	60	12,0	39,2	19,3	9,6	33,3	13,4	10	60	70
33080.W0333	10	70	12,0	39,2	18,4	9,6	33,3	13,4	10	60	91
33080.W0334	10	80	12,0	39,2	18,4	9,6	33,3	13,4	10	60	97

Material
Pin: stainless steel 1.4542 (AISI 630)
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: thermoplastic PA 6.
Available colours: grey/orange, grey/blue, grey/grey.

Technical Notes
Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections.

Tips
For lanyards & retaining cables see part no.33250-33261. Easy install locating bushes available see part no.33248 + 33246.

Important Notes
*Shearing resistance similar to DIN 50141.
Also available in stainless grade 1.4542 (AISI 630) for higher shear forces, see part no.33060.

Handle

self-locking - stainless steel 1.4305 (AISI 303)

33080

Order No.	d_1	l_1	d_2	d_3	d_4	l_2	l_3	l_4	Loc'n hole H11	Shearing resistance, double kN min.*	g
33080.W0335	10	90	12,0	39,2	18,4	9,6	33,3	13,4	10	60	103
33080.W0336	10	100	12,0	39,2	18,4	9,6	33,3	13,4	10	60	109
33080.W0337	10	110	12,0	39,2	18,4	9,6	33,3	13,4	10	60	115
33080.W0338	10	120	12,0	39,2	18,4	9,6	33,3	13,4	10	60	53
33080.W0344	12	20	14,5	47,6	25,2	10,6	39,7	16,7	12	87	156
33080.W0345	12	25	14,5	47,6	26,3	10,6	39,7	16,7	12	87	96
33080.W0346	12	30	14,5	47,6	26,3	10,6	39,7	16,7	12	87	100
33080.W0347	12	35	14,5	47,6	26,3	10,6	39,7	16,7	12	87	105
33080.W0348	12	40	14,5	47,6	26,3	10,6	39,7	16,7	12	87	109
33080.W0349	12	45	14,5	47,6	26,3	10,6	39,7	16,7	12	87	113
33080.W0350	12	50	14,5	47,6	26,3	10,6	39,7	16,7	12	87	117
33080.W0352	12	60	14,5	47,6	26,3	10,6	39,7	16,7	12	87	126
33080.W0354	12	70	14,5	47,6	26,3	10,6	39,7	16,7	12	87	134
33080.W0356	12	80	14,5	47,6	26,3	10,6	39,7	16,7	12	87	143
33080.W0357	12	90	14,5	47,6	25,2	10,6	39,7	16,7	12	87	165
33080.W0358	12	100	14,5	47,6	25,2	10,6	39,7	16,7	12	87	173
33080.W0359	12	110	14,5	47,6	25,2	10,6	39,7	16,7	12	87	182
33080.W0360	12	120	14,5	47,6	25,2	10,6	39,7	16,7	12	87	96
33080.W0366	16	30	19,0	47,6	26,3	14,0	39,7	16,7	16	155	132
33080.W0367	16	35	19,0	47,6	26,3	14,0	39,7	16,7	16	155	140
33080.W0368	16	40	19,0	47,6	26,3	14,0	39,7	16,7	16	155	148
33080.W0369	16	45	19,0	47,6	26,3	14,0	39,7	16,7	16	155	155
33080.W0370	16	50	19,0	47,6	26,3	14,0	39,7	16,7	16	155	168
33080.W0372	16	60	19,0	47,6	26,3	14,0	39,7	16,7	16	155	178
33080.W0374	16	70	19,0	47,6	26,3	14,0	39,7	16,7	16	155	194
33080.W0376	16	80	19,0	47,6	26,3	14,0	39,7	16,7	16	155	208
33080.W0377	16	90	19,0	47,6	25,2	14,0	39,7	16,7	16	155	234
33080.W0378	16	100	19,0	47,6	25,2	14,0	39,7	16,7	16	155	251
33080.W0379	16	110	19,0	47,6	25,2	14,0	39,7	16,7	16	155	266
33080.W0380	16	120	19,0	47,6	25,2	14,0	39,7	16,7	16	155	281
33080.W0381	16	130	19,0	47,6	25,2	14,0	39,7	16,7	16	155	297
33080.W0382	16	140	19,0	47,6	25,2	14,0	39,7	16,7	16	155	313
33080.W0383	16	150	19,0	47,6	25,2	14,0	39,7	16,7	16	155	328
33080.W0391	20	50	25,0	57,1	33,8	20,5	50,7	21,5	20	244	329
33080.W0392	20	60	25,0	57,1	35,4	20,5	50,7	21,5	20	244	343
33080.W0393	20	70	25,0	57,1	33,8	20,5	50,7	21,5	20	244	377
33080.W0397	20	90	25,0	57,1	33,8	20,5	50,7	21,5	20	244	426
33080.W0401	20	110	25,0	57,1	33,8	20,5	50,7	21,5	20	244	474
33080.W0396	20	80	25,0	57,1	35,4	20,5	50,7	21,5	20	244	392
33080.W0400	20	100	25,0	57,1	35,4	20,5	50,7	21,5	20	244	440
33080.W0404	20	120	25,0	57,1	33,8	20,5	50,7	21,5	20	244	488
33080.W0406	20	130	25,0	57,1	33,8	20,5	50,7	21,5	20	244	523
33080.W0407	20	150	25,0	57,1	33,8	20,5	50,7	21,5	20	244	571
33080.W0409	25	50	30,8	57,1	33,8	22,0	50,7	21,5	25	286	415
33080.W0410	25	60	30,8	57,1	33,8	22,0	50,7	21,5	25	286	453
33080.W0411	25	70	30,8	57,1	33,8	22,0	50,7	21,5	25	286	490
33080.W0412	25	80	30,8	57,1	33,8	22,0	50,7	21,5	25	286	528
33080.W0413	25	90	30,8	57,1	33,8	22,0	50,7	21,5	25	286	565
33080.W0414	25	100	30,8	57,1	33,8	22,0	50,7	21,5	25	286	603
33080.W0415	25	110	30,8	57,1	33,8	22,0	50,7	21,5	25	286	640
33080.W0416	25	120	30,8	57,1	33,8	22,0	50,7	21,5	25	286	690
33080.W0417	25	130	30,8	57,1	33,8	22,0	50,7	21,5	25	286	715
33080.W0418	25	140	30,8	57,1	33,8	22,0	50,7	21,5	25	286	753
33080.W0419	25	150	30,8	57,1	33,8	22,0	50,7	21,5	25	286	790



Material

Pin: stainless steel 1.4542 (AISI 630)
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: thermoplastic PA 6.
Available colours: grey/orange, grey/blue, grey/grey.

Technical Notes

Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections.

Tips

For lanyards & retaining cables see part no.33250-33261. Easy install locating bushes available see part no.33248 + 33246.

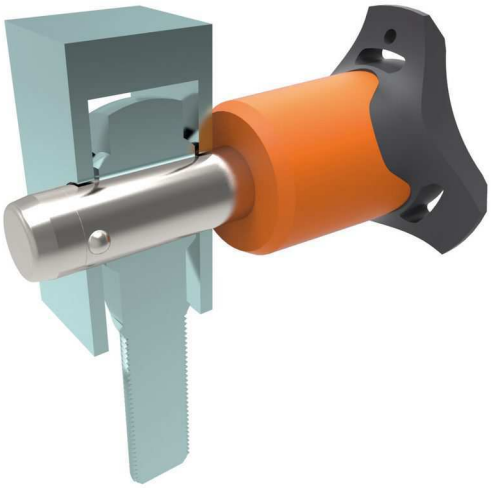
Important Notes

*Shearing resistance similar to DIN 50141.
Also available in stainless grade 1.4542 (AISI 630) for higher shear forces, see part no.33060.

Handle

self-locking - stainless steel 1.4305 (AISI 303)

33080





Material
Pin: stainless steel 1.4542 (AISI 630)
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: thermoplastic PA 6.
Available colours: grey/orange, grey/blue, grey/grey.

Technical Notes
Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections.

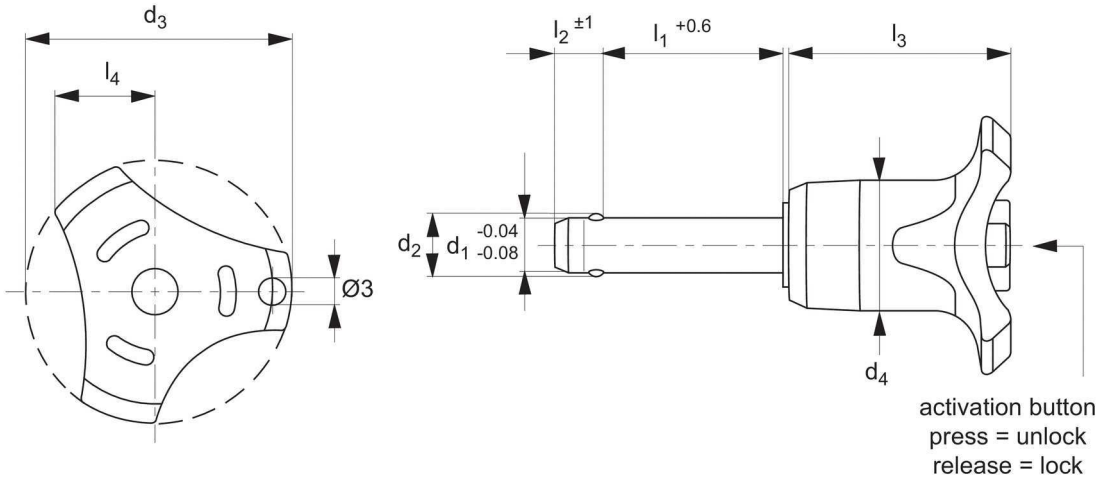
Tips
For lanyards & retaining cables see part no.33250-33261. Easy install locating bushes available see part no.33248 + 33246.

Important Notes
*Shearing resistance similar to DIN 50141.
Also available in stainless grade 1.4542 (AISI 630) for higher shear forces, see part no.33060.

Handle

self-locking - stainless steel 1.4305 (AISI 303)

33080





Order No.	d_1	l_1	d_2	d_3	d_4	l_2	l_3	l_4	Loc'n hole H11	Shearing resistance, double kN min.*	g
33080.W0152	5	10	5,5	33,2	14,5	6,0	26,7	10,8	5	14	15
33080.W0153	5	15	5,5	33,2	14,5	6,0	26,7	10,8	5	14	15
33080.W0154	5	20	5,5	33,2	14,5	6,0	26,7	10,8	5	14	16
33080.W0155	5	25	5,5	33,2	14,5	6,0	26,7	10,8	5	14	17
33080.W0156	5	30	5,5	33,2	14,5	6,0	26,7	10,8	5	14	18
33080.W0157	6	60	7,0	33,2	14,5	7,0	26,7	10,8	6	21	26
33080.W0158	6	70	7,0	33,2	14,5	7,0	26,7	10,8	6	21	28
33080.W0159	6	80	7,0	33,2	14,5	7,0	26,7	10,8	6	21	30
33080.W0145	5	35	5,5	33,2	14,5	6,0	26,7	10,8	5	14	19
33080.W0146	5	40	5,5	33,2	14,5	6,0	26,7	10,8	5	14	20
33080.W0147	5	45	5,5	33,2	14,5	6,0	26,7	10,8	5	14	21
33080.W0148	5	50	5,5	33,2	14,5	6,0	26,7	10,8	5	14	23
33080.W0149	5	60	5,5	33,2	14,5	6,0	26,7	10,8	5	14	24
33080.W0150	5	70	5,5	33,2	14,5	6,0	26,7	10,8	5	14	18
33080.W0151	5	80	5,5	33,2	14,5	6,0	26,7	10,8	5	14	19
33080.W0161	8	100	9,6	39,2	18,4	8,2	33,3	13,4	8	38	54
33080.W0162	6	10	7,0	33,2	14,5	7,0	26,7	10,8	6	21	16
33080.W0163	6	15	7,0	33,2	14,5	7,0	26,7	10,8	6	21	17
33080.W0164	6	20	7,0	33,2	14,5	7,0	26,7	10,8	6	21	18
33080.W0165	6	25	7,0	33,2	14,5	7,0	26,7	10,8	6	21	19
33080.W0166	6	30	7,0	33,2	14,5	7,0	26,7	10,8	6	21	20
33080.W0167	6	35	7,0	33,2	14,5	7,0	26,7	10,8	6	21	21
33080.W0168	6	40	7,0	33,2	14,5	7,0	26,7	10,8	6	21	22
33080.W0169	6	45	7,0	33,2	14,5	7,0	26,7	10,8	6	21	23
33080.W0170	6	50	7,0	33,2	14,5	7,0	26,7	10,8	6	21	24
33080.W0171	8	90	9,6	39,2	18,4	8,2	33,3	13,4	8	38	36
33080.W0172	8	10	9,6	39,2	18,4	8,2	33,3	13,4	8	38	38
33080.W0173	8	15	9,6	39,2	18,4	8,2	33,3	13,4	8	38	58
33080.W0174	8	20	9,6	39,2	19,3	8,2	33,3	13,4	8	38	40
33080.W0175	8	25	9,6	39,2	19,3	8,2	33,3	13,4	8	38	42
33080.W0176	8	30	9,6	39,2	19,3	8,2	33,3	13,4	8	38	44
33080.W0177	8	35	9,6	39,2	19,3	8,2	33,3	13,4	8	38	46
33080.W0178	8	40	9,6	39,2	19,3	8,2	33,3	13,4	8	38	47
33080.W0179	8	45	9,6	39,2	19,3	8,2	33,3	13,4	8	38	49
33080.W0180	8	50	9,6	39,2	19,3	8,2	33,3	13,4	8	38	51
33080.W0181	8	60	9,6	39,2	19,3	8,2	33,3	13,4	8	38	62
33080.W0182	8	70	9,6	39,2	19,3	8,2	33,3	13,4	8	38	65
33080.W0183	8	80	9,6	39,2	18,4	8,2	33,3	13,4	8	38	69
33080.W0184	10	20	12,0	39,2	19,3	9,6	33,3	13,4	10	60	47
33080.W0185	10	25	12,0	39,2	19,3	9,6	33,3	13,4	10	60	49
33080.W0186	10	30	12,0	39,2	19,3	9,6	33,3	13,4	10	60	53
33080.W0187	10	35	12,0	39,2	19,3	9,6	33,3	13,4	10	60	55
33080.W0188	10	40	12,0	39,2	19,3	9,6	33,3	13,4	10	60	58
33080.W0189	10	45	12,0	39,2	19,3	9,6	33,3	13,4	10	60	61
33080.W0190	10	50	12,0	39,2	19,3	9,6	33,3	13,4	10	60	64
33080.W0191	10	15	12,0	39,2	18,4	9,6	33,3	13,4	10	60	86
33080.W0192	10	60	12,0	39,2	19,3	9,6	33,3	13,4	10	60	70
33080.W0193	10	70	12,0	39,2	18,4	9,6	33,3	13,4	10	60	91
33080.W0195	10	90	12,0	39,2	18,4	9,6	33,3	13,4	10	60	103

Material
Pin: stainless steel 1,4542 (AISI 630)
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: thermoplastic PA 6.
Available colours: grey/orange, grey/blue, grey/grey.

Technical Notes
Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections.

Tips
For lanyards & retaining cables see part no.33250-33261. Easy install locating bushes available see part no.33248 + 33246.

Important Notes
*Shearing resistance similar to DIN 50141.
Also available in stainless grade 1.4542 (AISI 630) for higher shear forces, see part no.33060.

Handle

self-locking - stainless steel 1.4305 (AISI 303)

33080

Order No.	d_1	l_1	d_2	d_3	d_4	l_2	l_3	l_4	Loc'n hole H11	Shearing resistance, double kN min.*	g
33080.W0194	10	80	12,0	39,2	18,4	9,6	33,3	13,4	10	60	97
33080.W0196	10	100	12,0	39,2	18,4	9,6	33,3	13,4	10	60	109
33080.W0197	10	110	12,0	39,2	18,4	9,6	33,3	13,4	10	60	115
33080.W0198	10	120	12,0	39,2	18,4	9,6	33,3	13,4	10	60	53
33080.W0204	12	20	14,5	47,6	25,2	10,6	39,7	16,7	12	87	156
33080.W0205	12	25	14,5	47,6	26,3	10,6	39,7	16,7	12	87	96
33080.W0206	12	30	14,5	47,6	26,3	10,6	39,7	16,7	12	87	100
33080.W0207	12	35	14,5	47,6	26,3	10,6	39,7	16,7	12	87	105
33080.W0208	12	40	14,5	47,6	26,3	10,6	39,7	16,7	12	87	109
33080.W0209	12	45	14,5	47,6	26,3	10,6	39,7	16,7	12	87	113
33080.W0210	12	50	14,5	47,6	26,3	10,6	39,7	16,7	12	87	117
33080.W0212	12	60	14,5	47,6	26,3	10,6	39,7	16,7	12	87	126
33080.W0214	12	70	14,5	47,6	26,3	10,6	39,7	16,7	12	87	134
33080.W0216	12	80	14,5	47,6	26,3	10,6	39,7	16,7	12	87	143
33080.W0217	12	90	14,5	47,6	25,2	10,6	39,7	16,7	12	87	165
33080.W0218	12	100	14,5	47,6	25,2	10,6	39,7	16,7	12	87	173
33080.W0219	12	110	14,5	47,6	25,2	10,6	39,7	16,7	12	87	182
33080.W0220	12	120	14,5	47,6	25,2	10,6	39,7	16,7	12	87	177
33080.W0226	16	30	19,0	47,6	26,3	14,0	39,7	16,7	16	155	132
33080.W0227	16	35	19,0	47,6	26,3	14,0	39,7	16,7	16	155	140
33080.W0228	16	40	19,0	47,6	26,3	14,0	39,7	16,7	16	155	148
33080.W0229	16	45	19,0	47,6	26,3	14,0	39,7	16,7	16	155	155
33080.W0230	16	50	19,0	47,6	26,3	14,0	39,7	16,7	16	155	168
33080.W0232	16	60	19,0	47,6	26,3	14,0	39,7	16,7	16	155	178
33080.W0234	16	70	19,0	47,6	26,3	14,0	39,7	16,7	16	155	194
33080.W0236	16	80	19,0	47,6	26,3	14,0	39,7	16,7	16	155	208
33080.W0237	16	90	19,0	47,6	25,2	14,0	39,7	16,7	16	155	234
33080.W0238	16	100	19,0	47,6	25,2	14,0	39,7	16,7	16	155	251
33080.W0239	16	110	19,0	47,6	25,2	14,0	39,7	16,7	16	155	266
33080.W0240	16	120	19,0	47,6	25,2	14,0	39,7	16,7	16	155	281
33080.W0241	16	130	19,0	47,6	25,2	14,0	39,7	16,7	16	155	297
33080.W0242	16	140	19,0	47,6	25,2	14,0	39,7	16,7	16	155	313
33080.W0243	16	150	19,0	47,6	25,2	14,0	39,7	16,7	16	155	328
33080.W0251	20	50	25,0	57,1	33,8	20,5	50,7	21,5	20	244	329
33080.W0252	20	60	25,0	57,1	35,4	20,5	50,7	21,5	20	244	343
33080.W0253	20	70	25,0	57,1	33,8	20,5	50,7	21,5	20	244	377
33080.W0256	20	80	25,0	57,1	35,4	20,5	50,7	21,5	20	244	392
33080.W0257	20	90	25,0	57,1	33,8	20,5	50,7	21,5	20	244	426
33080.W0260	20	100	25,0	57,1	35,4	20,5	50,7	21,5	20	244	440
33080.W0261	20	110	25,0	57,1	33,8	20,5	50,7	21,5	20	244	474
33080.W0264	20	120	25,0	57,1	35,4	20,5	50,7	21,5	20	244	488
33080.W0265	20	130	25,0	57,1	33,8	20,5	50,7	21,5	20	244	523
33080.W0266	20	140	25,0	57,1	33,8	20,5	50,7	21,5	20	244	546
33080.W0267	20	150	25,0	57,1	33,8	20,5	50,7	21,5	20	244	571
33080.W0269	25	50	30,8	57,1	33,8	22,0	50,7	21,5	25	386	415
33080.W0270	25	60	30,8	57,1	33,8	22,0	50,7	21,5	25	386	453
33080.W0271	25	70	30,8	57,1	33,8	22,0	50,7	21,5	25	386	490
33080.W0272	25	80	30,8	57,1	33,8	22,0	50,7	21,5	25	386	528
33080.W0273	25	90	30,8	57,1	33,8	22,0	50,7	21,5	25	386	565
33080.W0274	25	100	30,8	57,1	33,8	22,0	50,7	21,5	25	386	603
33080.W0275	25	110	30,8	57,1	33,8	22,0	50,7	21,5	25	386	640
33080.W0276	25	120	30,8	57,1	33,8	22,0	50,7	21,5	25	386	690
33080.W0277	25	130	30,8	57,1	33,8	22,0	50,7	21,5	25	386	715
33080.W0278	25	140	30,8	57,1	33,8	22,0	50,7	21,5	25	386	753
33080.W0279	25	150	30,8	57,1	33,8	22,0	50,7	21,5	25	386	790



Material

Pin: stainless steel 1,4542 (AISI 630)
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: thermoplastic PA 6.
Available colours: grey/orange, grey/blue, grey/grey.

Technical Notes

Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections.

Tips

For lanyards & retaining cables see part no.33250-33261. Easy install locating bushes available see part no.33248 + 33246.

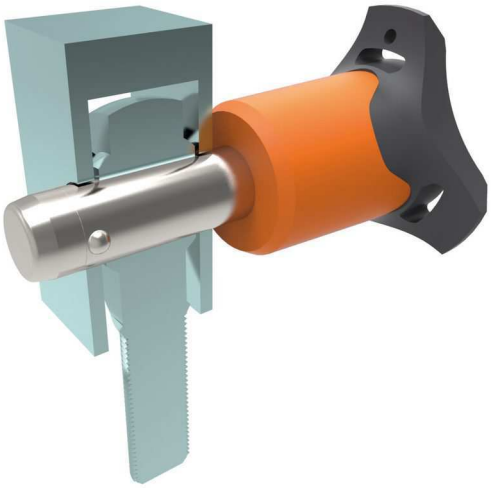
Important Notes

*Shearing resistance similar to DIN 50141.
Also available in stainless grade 1.4542 (AISI 630) for higher shear forces, see part no.33060.

Handle

self-locking - stainless steel 1.4305 (AISI 303)

33080





Material
Pin: stainless steel 1,4542 (AISI 630)
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: thermoplastic PA 6.
Available colours: grey/orange, grey/blue, grey/grey.

Technical Notes
Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections.

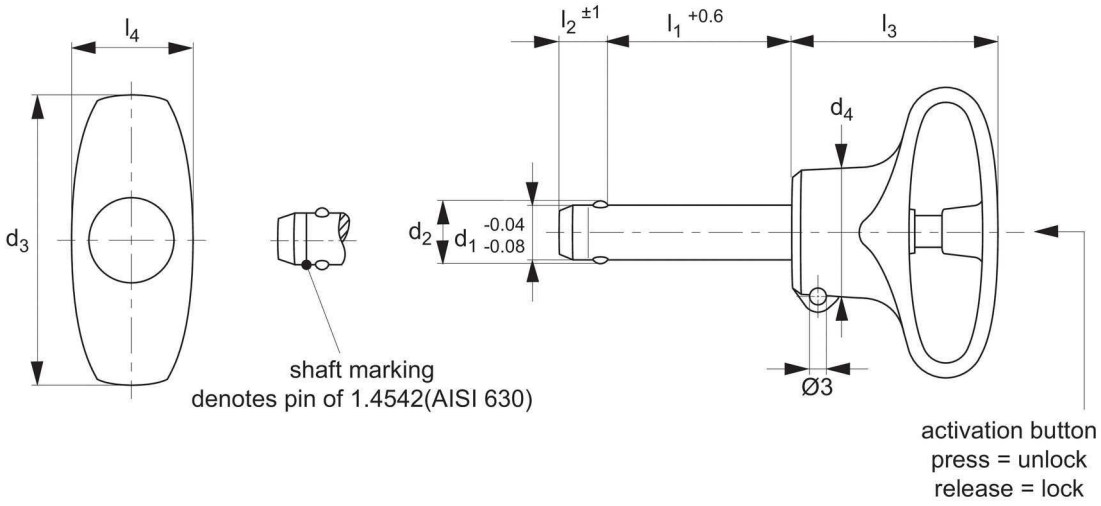
Tips
For lanyards & retaining cables see part no.33250-33261. Easy install locating bushes available see part no.33248 + 33246.

Important Notes
*Shearing resistance similar to DIN 50141.
Also available in stainless grade 1.4542 (AISI 630) for higher shear forces, see part no.33060.

Handle

self-locking

33100





Order No. Type One Stainless 1,4305	Order No. Type Two Stainless 1,4542	d_1	l_1	d_2	d_3	d_4	l_2	l_3	l_4	Location hole H11	Shearing resistance, double kN min. 1,4305 *	Shearing resistance, double kN min. 1,4542 *	g
33100.W0712	33100.W0912	5	10	5,5	36	12,7	6,0	31,0	15,9	5	14	24	9
33100.W0713	33100.W0913	5	15	5,5	36	12,7	6,0	31,0	15,9	5	14	24	10
33100.W0714	33100.W0914	5	20	5,5	36	12,7	6,0	31,0	15,9	5	14	24	11
33100.W0715	33100.W0915	5	25	5,5	36	12,7	6,0	31,0	15,9	5	14	24	11
33100.W0716	33100.W0916	5	30	5,5	36	12,7	6,0	31,0	15,9	5	14	24	12
33100.W0722	33100.W0922	6	10	7,0	36	12,7	7,0	31,0	15,9	6	21	35	10
33100.W0723	33100.W0923	6	15	7,0	35	12,7	7,0	31,0	15,9	6	21	35	11
33100.W0724	33100.W0924	6	20	7,0	36	12,7	7,0	31,0	15,9	6	21	35	12
33100.W0725	33100.W0925	6	25	7,0	36	12,7	7,0	31,0	15,9	6	21	35	13
33100.W0726	33100.W0926	6	30	7,0	36	12,7	7,0	31,0	15,9	6	21	35	14
33100.W0727	33100.W0927	6	35	7,0	36	12,7	7,0	31,0	15,9	6	21	35	15
33100.W0728	33100.W0928	6	40	7,0	36	12,7	7,0	31,0	15,9	6	21	35	16
33100.W0729	33100.W0929	6	45	7,0	36	12,7	7,0	31,0	15,9	6	21	35	18
33100.W0730	33100.W0930	6	50	7,0	36	12,7	7,0	31,0	15,9	6	21	35	18
33100.W0734	33100.W0934	8	20	9,6	41	16,4	8,2	34,8	19,2	8	38	63	23
33100.W0735	33100.W0935	8	25	9,6	41	16,4	8,2	34,8	19,2	8	38	63	25
33100.W0736	33100.W0936	8	30	9,6	41	16,4	8,2	34,8	19,2	8	38	63	26
33100.W0737	33100.W0937	8	35	9,6	41	16,4	8,2	34,8	19,2	8	38	63	28
33100.W0738	33100.W0938	8	40	9,6	41	16,4	8,2	34,8	19,2	8	38	63	30
33100.W0739	33100.W0939	8	45	9,6	41	16,4	8,2	34,8	19,2	8	38	63	32
33100.W0740	33100.W0940	8	50	9,6	41	16,4	8,2	34,8	19,2	8	38	63	34
33100.W0744	33100.W0944	10	20	12,0	41	16,4	9,6	34,8	19,2	10	60	100	30
33100.W0745	33100.W0945	10	25	12,0	41	16,4	9,6	34,8	19,2	10	60	100	32
33100.W0746	33100.W0946	10	30	12,0	41	16,4	9,6	34,8	19,2	10	60	100	35
33100.W0747	33100.W0947	10	35	12,0	41	16,4	9,6	34,8	19,2	10	60	100	38
33100.W0748	33100.W0948	10	40	12,0	41	16,4	9,6	34,8	19,2	10	60	100	41
33100.W0749	33100.W0949	10	45	12,0	41	16,4	9,6	34,8	19,2	10	60	100	44
33100.W0750	33100.W0950	10	50	12,0	41	16,4	9,6	34,8	19,2	10	60	100	47
33100.W0752	33100.W0952	10	60	12,0	41	16,4	9,6	34,8	19,2	10	60	100	53
33100.W0765	33100.W0965	12	25	14,5	49	21,2	10,6	40,5	24,8	12	87	144	54
33100.W0766	33100.W0966	12	30	14,5	49	21,2	10,6	40,5	24,8	12	87	144	59
33100.W0767	33100.W0967	12	35	14,5	49	21,2	10,6	40,5	24,8	12	87	144	63
33100.W0768	33100.W0968	12	40	14,5	49	21,2	10,6	40,5	24,8	12	87	144	67
33100.W0769	33100.W0969	12	45	14,5	49	21,2	10,6	40,5	24,8	12	87	144	71
33100.W0770	33100.W0970	12	50	14,5	49	21,2	10,6	40,5	24,8	12	87	144	75
33100.W0772	33100.W0972	12	60	14,5	49	21,2	10,6	40,5	24,8	12	87	144	84
33100.W0774	33100.W0974	12	70	14,5	49	21,2	10,6	40,5	24,8	12	87	144	93
33100.W0776	33100.W0976	12	80	14,5	49	21,2	10,6	40,5	24,8	12	87	144	101
33100.W0786	33100.W0986	16	30	19,0	49	21,2	14,0	40,5	24,8	16	155	257	91
33100.W0787	33100.W0987	16	35	19,0	49	21,2	14,0	40,5	24,8	16	155	257	98
33100.W0788	33100.W0988	16	40	19,0	49	21,2	14,0	40,5	24,8	16	155	257	106
33100.W0789	33100.W0989	16	45	19,0	49	21,2	14,0	40,5	24,8	16	155	257	114
33100.W0790	33100.W0990	16	50	19,0	49	21,2	14,0	40,5	24,8	16	155	257	121
33100.W0792	33100.W0992	16	60	19,0	49	21,2	14,0	40,5	24,8	16	155	257	137

Material

Type One-
Pin: Stainless steel 1.4305 (AISI 303).
Type Two-
Pin: Stainless steel 1.4542 (AISI 630), precipitation hardened, blast finish. Offering extreme load capacity. (Marked at end of shaft to denote 1.4542 material).
Handle: plastic (PBT/TPE). Colours avail.; orange/grey

Technical Notes

Pressing = unlocking.
Releasing = locking.
Unique design; elastic handle provides integral spring action to reset pin (hence no internal spring mechanism required).
Tested to over 100,000+ repetitions.
Temperature resistance -30°C to 80°C.
For quick fastening and locking of requently repeated connections in applications such as; sports, leisure, medical and general engineering applications.

Tips

For easy to install locating bush see part 33248 .

Important Notes

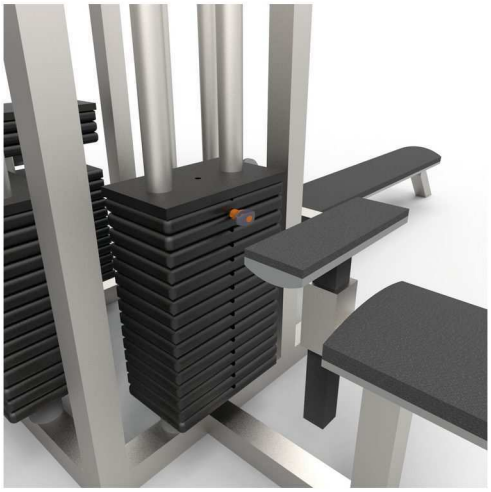
*Shearing resistance similar to DIN 50141.

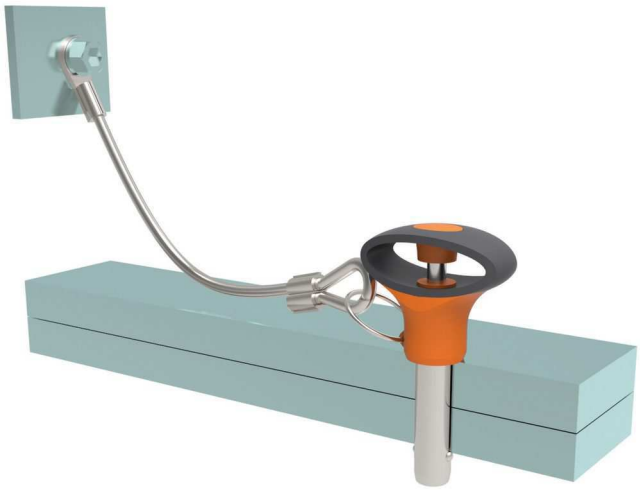
Handle

self-locking

33100

Order No. Type One Stainless 1,4305	Order No. Type Two Stainless 1,4542	d_1	l_1	d_2	d_3	d_4	l_2	l_3	l_4	Location hole H11	Shearing resistance, double kN min. 1,4305 *	Shearing resistance, double kN min. 1,4542 *	g
33100.W0794	33100.W0994	16	70	19,0	49	21,2	14,0	40,5	24,8	16	155	257	152
33100.W0796	33100.W0996	16	80	19,0	49	21,2	14,0	40,5	24,8	16	155	257	167







Material

Type One-
Pin: Stainless steel 1.4305 (AISI 303).
Type Two-
Pin: Stainless steel 1.4542 (AISI 630), precipitation hardened, blast finish. Offering extreme load capacity. (Marked at end of shaft to denote 1.4542 material).
Handle: plastic (PBT/TPE). Colours avail.; orange/grey

Technical Notes

Pressing = unlocking.
Releasing = locking.
Unique design; elastic handle provides integral spring action to reset pin (hence no internal spring mechanism required).
Tested to over 100,000+ repetitions.
Temperature resistance -30°C to 80°C.
For quick fastening and locking of requently repeated connections in applications such as; sports, leisure, medical and general engineering applications.

Tips

For easy to install locating bush see part 33248 .

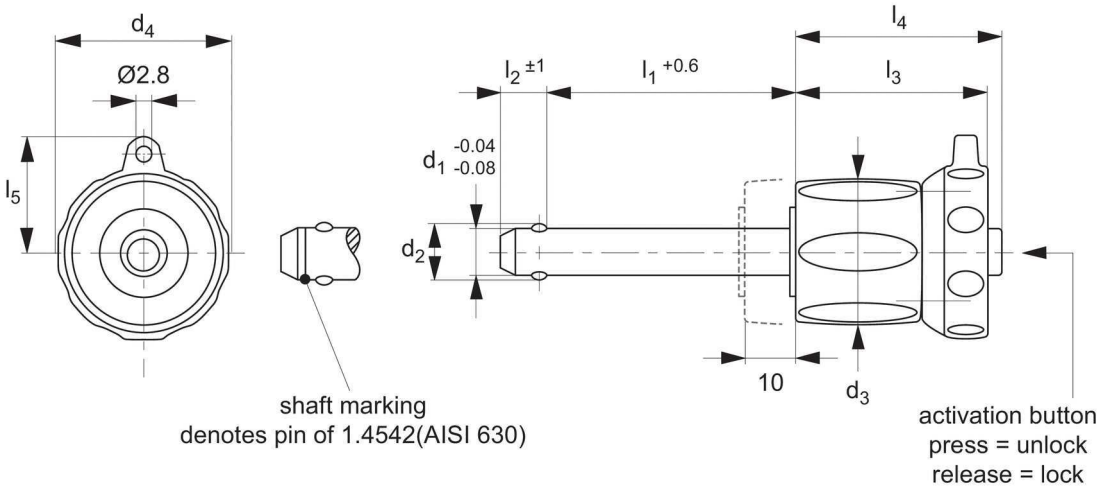
Important Notes

*Shearing resistance similar to DIN 50141.

Ball Lock Pins - Single Acting - Adj. Length

self-locking

33104





Order No. Type One Stainless 1.4305	Order No. Type Two Stainless 1.4542	d_1	l_1	d_2	d_3	d_4	l_2	l_3	l_4	l_5	Locn hole H11	Shearing resistance, double kN min. 1.4305*	Shearing resistance, double kN min. 1.4542*	g
33104.W0192	33104.W0392	5	0 - 10	5,5	17,6	23,6	6,0	25,7	26,2	15,9	5	14	24	24
33104.W0193	33104.W0393	5	5 - 15	5,5	17,6	23,6	6,0	25,7	26,2	15,9	5	14	24	25
33104.W0194	33104.W0394	5	10 - 20	5,5	17,6	23,6	6,0	25,7	26,2	15,9	5	14	24	26
33104.W0195	33104.W0395	5	15 - 25	5,5	17,6	23,6	6,0	25,7	26,2	15,9	5	14	24	27
33104.W0196	33104.W0396	5	20 - 30	5,5	17,6	23,6	6,0	25,7	26,2	15,9	5	14	24	27
33104.W0202	33104.W0402	6	0 - 10	7,0	17,6	23,6	7,0	25,7	26,2	15,9	6	21	35	25
33104.W0203	33104.W0403	6	5 - 15	7,0	17,6	23,6	7,0	25,7	26,2	15,9	6	21	35	26
33104.W0204	33104.W0404	6	10 - 20	7,0	17,6	23,6	7,0	25,7	26,2	15,9	6	21	35	27
33104.W0205	33104.W0405	6	15 - 25	7,0	17,6	23,6	7,0	25,7	26,2	15,9	6	21	35	28
33104.W0206	33104.W0406	6	20 - 30	7,0	17,6	23,6	7,0	25,7	26,2	15,9	6	21	35	29
33104.W0207	33104.W0407	6	25 - 35	7,0	17,6	23,6	7,0	25,7	26,2	15,9	6	21	35	30
33104.W0208	33104.W0408	6	30 - 40	7,0	17,6	23,6	7,0	25,7	26,2	15,9	6	21	35	31
33104.W0209	33104.W0409	6	35 - 45	7,0	17,6	23,6	7,0	25,7	26,2	15,9	6	21	35	32
33104.W0210	33104.W0410	6	40 - 50	7,0	17,6	23,6	7,0	25,7	26,2	15,9	6	21	35	33
33104.W0214	33104.W0414	8	10 - 20	9,6	23,0	27,6	8,2	31,2	33,1	18,0	8	38	63	57
33104.W0215	33104.W0415	8	15 - 25	9,6	23,0	27,6	8,2	31,2	33,1	18,0	8	38	63	58
33104.W0216	33104.W0416	8	20 - 30	9,6	23,0	27,6	8,2	31,2	33,1	18,0	8	38	63	60
33104.W0217	33104.W0417	8	25 - 35	9,6	23,0	27,6	8,2	31,2	33,1	18,0	8	38	63	62
33104.W0218	33104.W0418	8	30 - 40	9,6	23,0	27,6	8,2	31,2	33,1	18,0	8	38	63	64
33104.W0219	33104.W0419	8	35 - 45	9,6	23,0	27,6	8,2	31,2	33,1	18,0	8	38	63	66
33104.W0220	33104.W0420	8	40 - 50	9,6	23,0	27,6	8,2	31,2	33,1	18,0	8	38	63	68
33104.W0224	33104.W0424	10	10 - 20	12,0	23,0	27,6	9,6	31,2	33,1	18,0	10	60	100	63
33104.W0225	33104.W0425	10	15 - 25	12,0	23,0	27,6	9,6	31,2	33,1	18,0	10	60	100	66
33104.W0226	33104.W0426	10	20 - 30	12,0	23,0	27,6	9,6	31,2	33,1	18,0	10	60	100	69
33104.W0227	33104.W0427	10	25 - 35	12,0	23,0	27,6	9,6	31,2	33,1	18,0	10	60	100	72
33104.W0228	33104.W0428	10	30 - 40	12,0	23,0	27,6	9,6	31,2	33,1	18,0	10	60	100	75
33104.W0229	33104.W0429	10	35 - 45	12,0	23,0	27,6	9,6	31,2	33,1	18,0	10	60	100	78
33104.W0230	33104.W0430	10	40 - 50	12,0	23,0	27,6	9,6	31,2	33,1	18,0	10	60	100	81
33104.W0232	33104.W0432	10	50 - 60	12,0	23,0	27,6	9,6	31,2	33,1	18,0	10	60	100	87
33104.W0235	33104.W0435	12	15 - 25	14,5	29,0	34,6	10,6	36,7	39,5	21,8	12	87	144	123
33104.W0236	33104.W0436	12	20 - 30	14,5	29,0	34,6	10,6	36,7	39,5	21,8	12	87	144	127
33104.W0237	33104.W0437	12	25 - 35	14,5	29,0	34,6	10,6	36,7	39,5	21,8	12	87	144	131
33104.W0238	33104.W0438	12	30 - 40	14,5	29,0	34,6	10,6	36,7	39,5	21,8	12	87	144	135
33104.W0239	33104.W0439	12	35 - 45	14,5	29,0	34,6	10,6	36,7	39,5	21,8	12	87	144	140
33104.W0240	33104.W0440	12	40 - 50	14,5	29,0	34,6	10,6	36,7	39,5	21,8	12	87	144	144
33104.W0242	33104.W0442	12	50 - 60	14,5	29,0	34,6	10,6	36,7	39,5	21,8	12	87	144	152
33104.W0244	33104.W0444	12	60 - 70	14,5	29,0	34,6	10,6	36,7	39,5	21,8	12	87	144	161
33104.W0246	33104.W0446	12	70 - 80	14,5	29,0	34,6	10,6	36,7	39,5	21,8	12	87	144	169
33104.W0256	33104.W0456	16	20 - 30	19,0	29,0	34,6	14,0	36,7	39,5	21,8	16	155	257	159
33104.W0257	33104.W0457	16	25 - 35	19,0	29,0	34,6	14,0	36,7	39,5	21,8	16	155	257	166
33104.W0258	33104.W0458	16	30 - 40	19,0	29,0	34,6	14,0	36,7	39,5	21,8	16	155	257	174
33104.W0259	33104.W0459	16	35 - 45	19,0	29,0	34,6	14,0	36,7	39,5	21,8	16	155	257	182
33104.W0260	33104.W0460	16	40 - 50	19,0	29,0	34,6	14,0	36,7	39,5	21,8	16	155	257	189
33104.W0262	33104.W0462	16	50 - 60	19,0	29,0	34,6	14,0	36,7	39,5	21,8	16	155	257	205

Material

Type One -
Pin: stainless steel 1.4305 (AISI 303).
Ball: stainless steel 1.3541
Spring: stainless steel.
Type Two -
Pin: stainless steel 1.4542 (AISI 630), precipitation hardened, blast finish. Offering extreme load capacity. (Marked at end of shaft to denote 1.4542 material).
Ball: stainless steel 1.3541
Spring: stainless steel.
Adj. Grip: thermoplastic, grey/black.

Technical Notes

Pressing = unlocking.
Releasing = locking.
Unique design; adj.grip offers up to 10mm of clamping stroke on pin length l_1 after installation.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections, with additional clamping capacity of up to 10mm stroke.

Tips

For lanyards & retaining cables see part no.33250. Easy install locating bushes available see part no.33248.

Important Notes

*Shearing resistance similar to DIN 50141.

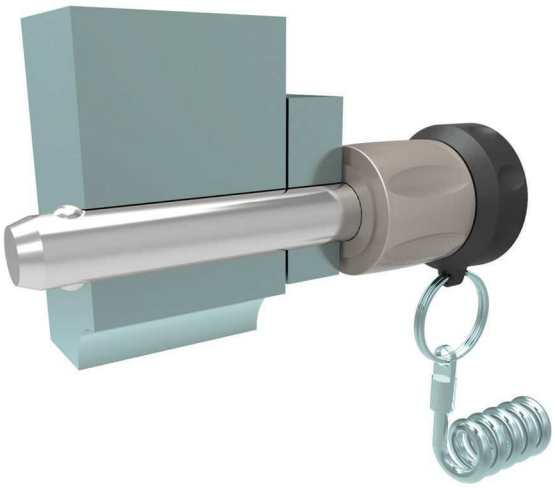


Ball Lock Pins - Single Acting - Adj. Length

self-locking

33104

Order No. Type One Stainless 1.4305	Order No. Type Two Stainless 1.4542	d_1	l_1	d_2	d_3	d_4	l_2	l_3	l_4	l_5	Loc'n hole H11	Shearing resistance, double kN min. 1.4305*	Shearing resistance, double kN min. 1.4542*	g
33104.W0264	33104.W0464	16	60 - 70	19,0	29,0	34,6	14,0	36,7	39,5	21,8	16	155	257	220
33104.W0266	33104.W0466	16	70 - 80	19,0	29,0	34,6	14,0	36,7	39,5	21,8	16	155	257	235





Material

Type One -
Pin: stainless steel 1.4305 (AISI 303).
Ball: stainless steel 1.3541
Spring: stainless steel.
Type Two -
Pin: stainless steel 1.4542 (AISI 630), precipitation hardened, blast finish. Offering extreme load capacity. (Marked at end of shaft to denote 1.4542 material).
Ball: stainless steel 1.3541
Spring: stainless steel.
Adj. Grip: thermoplastic, grey/black.

Technical Notes

Pressing = unlocking.
Releasing = locking.
Unique design; adj.grip offers up to 10mm of clamping stroke on pin length l_1 after installation.
Temperature resistance -30°C to +80°C.
For quick fastening and locking of frequently repeated connections, with additional clamping capacity of up to 10mm stroke.

Tips

For lanyards & retaining cables see part no.33250. Easy install locating bushes available see part no.33248.

Important Notes

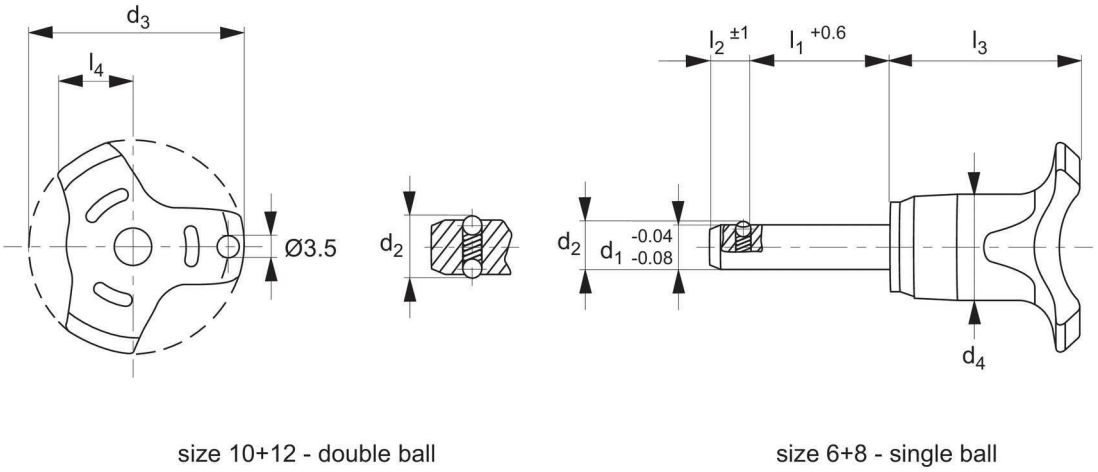
*Shearing resistance similar to DIN 50141.



Socket Pins

non-locking

33140



size 10+12 - double ball

size 6+8 - single ball



Order No.	d_1	l_1	d_2	d_3	d_4	l_2	l_3	l_4	Location hole H11	Shearing resistance, double kN	Tensile force non lubricated N max.	g
33140.W0062	6	10	6,5	38	17,3	5,0	27,0	10,8	6	22	8	14
33140.W0064	6	15	6,5	38	17,3	5,0	27,0	10,8	6	22	8	16
33140.W0066	6	20	6,5	38	17,3	5,0	27,0	10,8	6	22	8	16
33140.W0068	6	25	6,5	38	17,3	5,0	27,0	10,8	6	22	8	17
33140.W0070	6	30	6,5	38	17,3	5,0	27,0	10,8	6	22	8	18
33140.W0075	6	50	6,5	38	17,3	5,0	27,0	10,8	6	22	8	23
33140.W0084	8	15	8,7	38	17,3	6,3	28,6	10,8	8	40	15	21
33140.W0086	8	20	8,7	38	17,3	6,3	28,6	10,8	8	40	15	22
33140.W0088	8	25	8,7	38	17,3	6,3	28,6	10,8	8	40	15	25
33140.W0090	8	30	8,7	38	17,3	6,3	28,6	10,8	8	40	15	27
33140.W0095	8	50	8,7	38	17,3	6,3	28,6	10,8	8	40	15	33
33140.W0104	10	15	12,0	38	17,3	8,7	28,6	10,8	10	62	30	32
33140.W0106	10	20	12,0	38	17,3	8,7	28,6	10,8	10	62	30	35
33140.W0108	10	25	12,0	38	17,3	8,7	28,6	10,8	10	62	30	38
33140.W0110	10	30	12,0	38	17,3	8,7	28,6	10,8	10	62	30	39
33140.W0115	10	50	12,0	38	17,3	8,7	28,6	10,8	10	62	30	53
33140.W0122	12	20	14,5	38	17,3	9,5	28,6	10,8	12	90	32	43
33140.W0124	12	30	14,5	38	17,3	9,5	28,6	10,8	12	90	32	52
33140.W0126	12	40	14,5	38	17,3	9,5	28,6	10,8	12	90	32	61
33140.W0128	12	50	14,5	38	17,3	9,5	28,6	10,8	12	90	32	68

Material

Pin: stainless steel 1,4305 (AISI 303).
Handle: thermoplastic PA 6, grey.
Spring: stainless steel.

Technical Notes

Balls are simply spring loaded and do not lock out. Resulting in pins being easier to pull out.
Temperature range: -30°C to +80°C.
For a quick fastening, locking, adjusting, changing and securing.
Quickly and easily unlockable for frequently repeated connections.

Tips

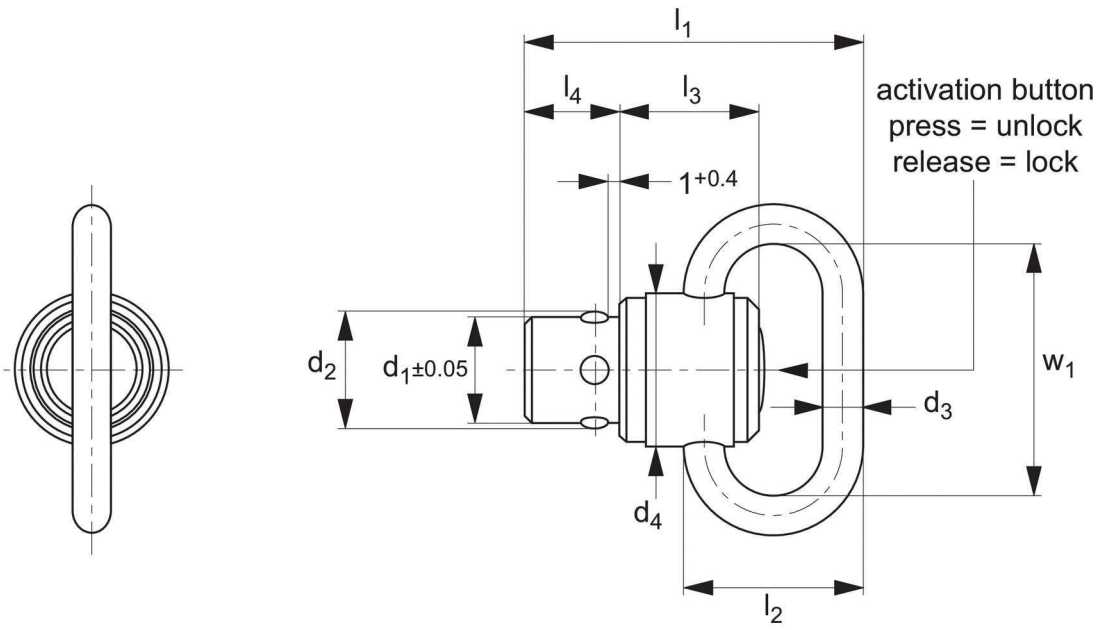
For lanyards & retaining cables see part no. 33250.





Sling Swivel Pin

33170





Material
Pin: Stainless Steel 1.4305 (AISI 303)
Spring: Stainless Steel
Finish: Black or Natural

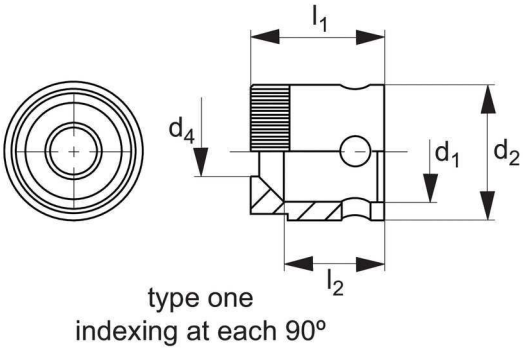
Technical Notes
Temperature range -50°C to +150°C.
For quick fastening and locking of frequently repeated conections; gun slings, tool holders etc, used in combination with sling swivel receivers no.33172.
Pressing = Unlocking
Releasing = Locking

Order No.	Finish	Nom. pin dia	d_1 +0,05	w_1	d_2	d_3	d_4	l_1	l_2	l_3	l_4	Max.load capacity kN	g
33170.W0010	Black	9,5	9,5	23	11,1	3,5	14	31,3	16,5	12,5	9	1,2	20
33170.W0020	Black	9,5	9,5	40	11,1	4,5	14	36,6	23,0	12,5	9	2,0	29
33170.W0110	Natural	9,5	9,5	23	11,1	3,5	14	31,3	16,5	12,5	9	1,2	20
33170.W0120	Natural	9,5	9,5	40	11,1	4,5	14	36,6	23,0	12,5	9	2,0	29

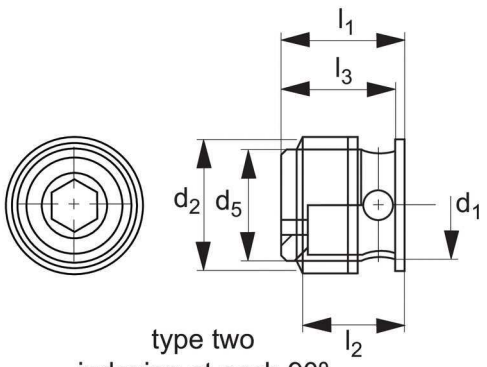


Sling Swivel Receivers

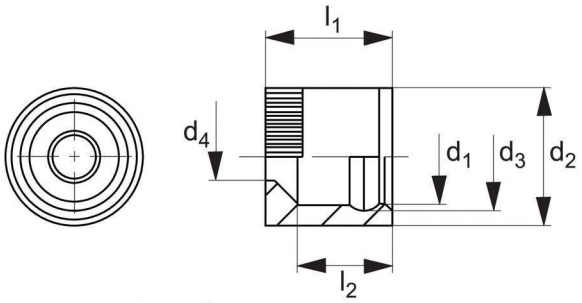
33172



type one
indexing at each 90°



type two
indexing at each 90°



type three
non-indexing, 360° rotation



Material
Pin: stainless steel 1.4305.
Spring: stainless steel.
Finish: Black or natural.

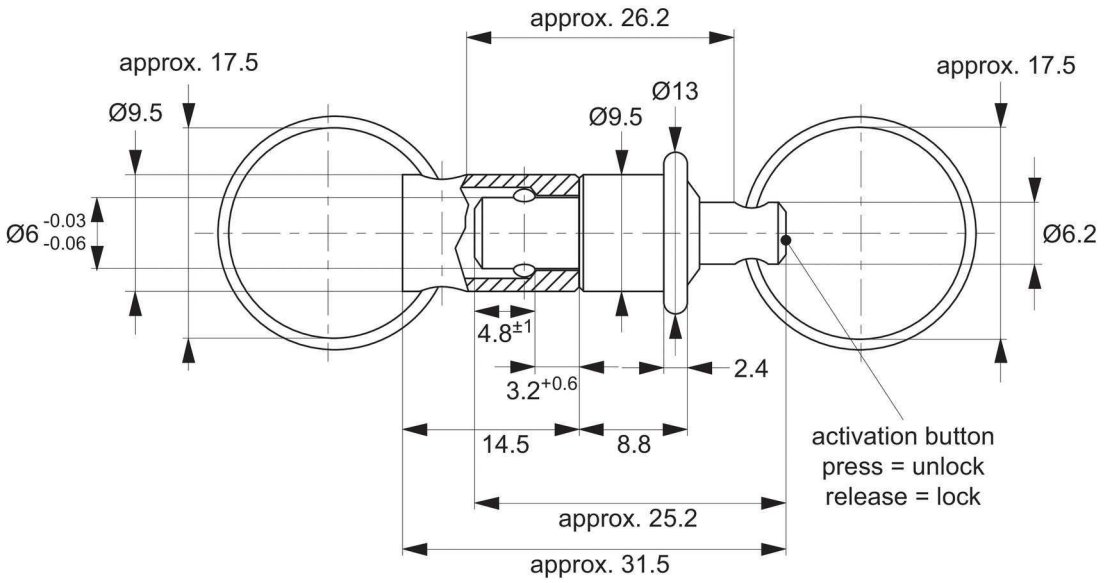
Technical Notes
Temperature range -50°C to +150°C.
Receivers for sling swivel pins part no. 33170.
To achieve quick fastening and locking frequently repeated connections.
Type one and two: indexing at 90°.
Type three:non-indexing, 360°rotation.

Order No.	Nom. pin dia	Type	Finish	For mounting in	d_1 H9	d_2 ±0,1	d_3	d_4	d_5	l_1	l_2	l_3	a/f	g
33172.W0205	9,5	One	Black	Wood	9,6	12,65	-	4,9	-	12,65	9,65	-	-	5,6
33172.W0210	9,5	Two	Black	Plastic	9,6	12,65	-	-	10,7	12,10	9,20	11	5	3,0
33172.W0215	9,5	Three	Black	Wood 360°	9,6	13,50	11,3	4,9	-	12,65	9,65	-	-	6,5
33172.W0305	9,5	One	Natural	Wood	9,6	12,65	-	4,9	-	12,65	9,65	-	-	5,6
33172.W0310	9,5	Two	Natural	Plastic	9,6	12,65	-		10,7	12,10	9,20	11	5	3,0
33172.W0315	9,5	Three	Natural	Wood 360°	9,6	13,50	11,3	4,9	-	12,65	9,65	-	-	6,5

Ball Lock Pins - Single Acting - Key Ring

self-locking

33178





Order No.	Load capacity max. N	g
33178.W0905	30	15

Material

Pin & Bush: stainless steel 1.4305 (AISI 303).
Ball: stainless steel 1.3541
Ring & Spring: stainless steel.

Technical Notes

Pressing = unlocking
Releasing = locking.
Temperature resistance up to max. 250 °C.

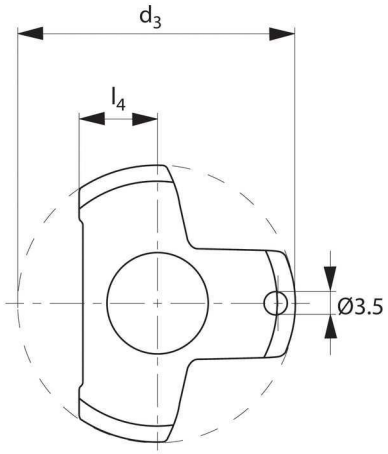
Tips

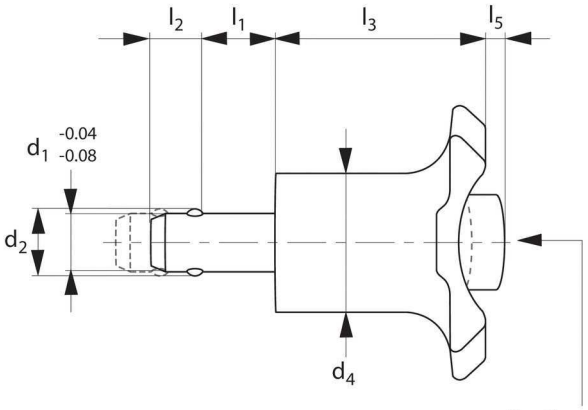
For lanyards & retaining cables see part no. 33250.

Clamping Pin

self-locking

33180





activation button
press = unlock
release = lock and
simultaneous clamping



Material

Pin: stainless steel 1,4305 (AISI 303).
Handle: thermoplastic PA 6, grey.
Spring: stainless steel.

Technical Notes

Pressing = unlocking & fixing.
Releasing = locking and simultaneous clamping.
Temperature resistance: -30°C to +80°C.
Locks and simultaneously clamps thin walled plates, with clamping distance of up to 5mm. Applications in welding work, protection of covers and to close doors.

Tips

For lanyards & retaining cables see part no. 33250.

Order No.	d_1	l_1	d_2	d_3	d_4	l_2	l_3	l_4	l_5 Un-clamped	Location hole H11	Clamping force N max.	g
33180.W0010	6	0 - 5	7,0	38	17,5	5,0	30,2	11,0	3	6	16	19
33180.W0012	6	5 - 10	7,0	38	17,5	5,0	30,2	11,0	3	6	18	23
33180.W0020	8	0 - 5	9,5	38	17,5	6,5	30,2	11,0	3	8	16	22
33180.W0022	8	5 - 10	9,5	38	17,5	6,5	30,2	11,0	3	8	18	25
33180.W0030	10	0 - 5	12,0	47	23,0	8,7	36,0	11,0	4	10	21	45
33180.W0032	10	5 - 10	12,0	47	23,0	8,7	36,0	11,0	4	10	23	47
33180.W0040	12	0 - 5	14,0	47	23,0	9,4	36,0	13,5	4	12	21	47
33180.W0042	12	5 - 10	14,0	47	23,0	9,4	36,0	13,5	4	12	23	54



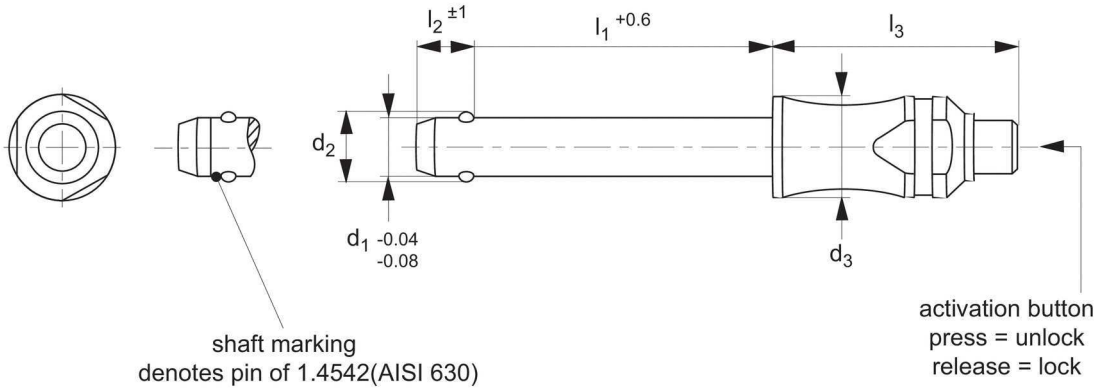




Ball Lock Pins - Contoured Handle

self-locking - single acting

33194





Order No. Type One Stainless 1,4305	Order No. Type Two Stainless 1,4542	d_1	l_1	d_2	d_3	l_2	l_3	Location hole H11	Shearing resistance, double kN min 1.4305	Shearing resistance, double kN min 1.4542	g
33194.W0012	33194.W0312	5	10	5,5	10	6,0	26,2	5	14	24	10
33194.W0013	33194.W0313	5	15	5,5	10	6,0	26,2	5	14	24	11
33194.W0014	33194.W0314	5	20	5,5	10	6,0	26,2	5	14	24	12
33194.W0015	33194.W0315	5	25	5,5	10	6,0	26,2	5	14	24	13
33194.W0016	33194.W0316	5	30	5,5	10	6,0	26,2	5	14	24	13
33194.W0017	33194.W0317	5	35	5,5	10	6,0	26,2	5	14	24	14
33194.W0018	33194.W0318	5	40	5,5	10	6,0	26,2	5	14	24	15
33194.W0007	33194.W0307	5	45	5,5	10	6,0	26,2	5	14	24	15
33194.W0008	33194.W0308	5	50	5,5	10	6,0	26,2	5	14	24	16
33194.W0009	33194.W0309	5	60	5,5	10	6,0	26,2	5	14	24	17
33194.W0010	33194.W0310	5	70	5,5	10	6,0	26,2	5	14	24	19
33194.W0011	33194.W0311	5	80	5,5	10	6,0	26,2	5	14	24	20
33194.W0022	33194.W0322	6	10	7,0	10	7,0	26,2	6	21	35	11
33194.W0023	33194.W0323	6	15	7,0	10	7,0	26,2	6	21	35	12
33194.W0024	33194.W0324	6	20	7,0	10	7,0	26,2	6	21	35	13
33194.W0025	33194.W0325	6	25	7,0	10	7,0	26,2	6	21	35	14
33194.W0026	33194.W0326	6	30	7,0	10	7,0	26,2	6	21	35	15
33194.W0027	33194.W0327	6	35	7,0	10	7,0	26,2	6	21	35	16
33194.W0028	33194.W0328	6	40	7,0	10	7,0	26,2	6	21	35	17
33194.W0029	33194.W0329	6	45	7,0	10	7,0	26,2	6	21	35	18
33194.W0030	33194.W0330	6	50	7,0	10	7,0	26,2	6	21	35	19
33194.W0019	33194.W0319	6	60	7,0	10	7,0	26,2	6	21	35	21
33194.W0020	33194.W0320	6	70	7,0	10	7,0	26,2	6	21	35	21
33194.W0021	33194.W0321	6	80	7,0	10	7,0	26,2	6	21	35	25
33194.W0032	33194.W0332	8	10	9,6	14	8,2	33,1	8	38	63	29
33194.W0033	33194.W0333	8	15	9,6	14	8,2	33,1	8	38	63	31
33194.W0034	33194.W0334	8	20	9,6	14	8,2	33,1	8	38	63	33
33194.W0035	33194.W0335	8	25	9,6	14	8,2	33,1	8	38	63	34
33194.W0036	33194.W0336	8	30	9,6	14	8,2	33,1	8	38	63	36
33194.W0037	33194.W0337	8	35	9,6	14	8,2	33,1	8	38	63	38
33194.W0038	33194.W0338	8	40	9,6	14	8,2	33,1	8	38	63	40
33194.W0039	33194.W0339	8	45	9,6	14	8,2	33,1	8	38	63	42
33194.W0040	33194.W0340	8	50	9,6	14	8,2	33,1	8	38	63	44
33194.W0031	33194.W0331	8	60	9,6	14	8,2	33,1	8	38	63	47
33194.W0041	33194.W0341	8	70	9,6	14	8,2	33,1	8	38	63	51
33194.W0042	33194.W0342	8	80	9,6	14	8,2	33,1	8	38	63	55
33194.W0043	33194.W0343	8	90	9,6	14	8,2	33,1	8	38	63	58
33194.W0051	33194.W0351	8	100	9,6	14	8,2	33,1	8	38	63	62
33194.W0059	33194.W0359	10	15	12,0	14	9,6	33,1	10	60	100	36
33194.W0044	33194.W0344	10	20	12,0	14	9,6	33,1	10	60	100	39
33194.W0045	33194.W0345	10	25	12,0	14	9,6	33,1	10	60	100	42
33194.W0046	33194.W0346	10	30	12,0	14	9,6	33,1	10	60	100	45
33194.W0047	33194.W0347	10	35	12,0	14	9,6	33,1	10	60	100	48
33194.W0048	33194.W0348	10	40	12,0	14	9,6	33,1	10	60	100	51
33194.W0049	33194.W0349	10	45	12,0	14	9,6	33,1	10	60	100	54
33194.W0050	33194.W0350	10	50	12,0	14	9,6	33,1	10	60	100	57
33194.W0052	33194.W0352	10	60	12,0	14	9,6	33,1	10	60	100	63
33194.W0053	33194.W0353	10	70	12,0	14	9,6	33,1	10	60	100	69
33194.W0054	33194.W0354	10	80	12,0	14	9,6	33,1	10	60	100	74
33194.W0055	33194.W0355	10	90	12,0	14	9,6	33,1	10	60	100	80

Material

Type One-
Pin: stainless steel 1.4305 (AISI 303).
Spring: stainless steel.
Type Two-
Pin: stainless steel 1.4542 (AISI 630), precipitation-hardened, blast finish. Offering extreme load capacity (marked at end of shaft to denote 1.4542 material).
End of shaft marked for material type 1.4542.
Spring: stainless steel.

Technical Notes

Pressing = unlocking.
Releasing = locking.
Single piece contoured design for limited space applications.
Temperature resistance up to 250°C.
For quick fastening and locking of frequently repeated connections.
For suitable lanyards see part no. 33250.W0970 and .W0974 only.
Easy install locating bushes available see part no. 33248.

Tips

Single piece design, no danger of parts coming away from pin - ideal for applications with F.O.B (Foreign Object Body) issues.

Important Notes

*Shearing resistance similar to DIN 50141.



Ball Lock Pins - Contoured Handle

self-locking - single acting

33194

Order No. Type One Stainless 1,4305	Order No. Type Two Stainless 1,4542	d_1	l_1	d_2	d_3	l_2	l_3	Location hole H11	Shearing resistance, double kN min 1.4305	Shearing resistance, double kN min 1.4542	g
33194.W0056	33194.W0356	10	100	12,0	14	9,6	33,1	10	60	100	86
33194.W0057	33194.W0357	10	110	12,0	14	9,6	33,1	10	60	100	92
33194.W0058	33194.W0358	10	120	12,0	14	9,6	33,1	10	60	100	98
33194.W0064	33194.W0364	12	20	14,5	20	10,6	39,5	12	87	144	98
33194.W0065	33194.W0365	12	25	14,5	20	10,6	39,5	12	87	144	84
33194.W0066	33194.W0366	12	30	14,5	20	10,6	39,5	12	87	144	88
33194.W0067	33194.W0367	12	35	14,5	20	10,6	39,5	12	87	144	92
33194.W0068	33194.W0368	12	40	14,5	20	10,6	39,5	12	87	144	96
33194.W0069	33194.W0369	12	45	14,5	20	10,6	39,5	12	87	144	101
33194.W0070	33194.W0370	12	50	14,5	20	10,6	39,5	12	87	144	105
33194.W0072	33194.W0372	12	60	14,5	20	10,6	39,5	12	87	144	113
33194.W0074	33194.W0374	12	70	14,5	20	10,6	39,5	12	87	144	122
33194.W0076	33194.W0376	12	80	14,5	20	10,6	39,5	12	87	144	130
33194.W0060	33194.W0360	12	90	14,5	20	10,6	39,5	12	87	144	139
33194.W0061	33194.W0361	12	100	14,5	20	10,6	39,5	12	87	144	148
33194.W0062	33194.W0362	12	110	14,5	20	10,6	39,5	12	87	144	157
33194.W0063	33194.W0363	12	120	14,5	20	10,6	39,5	12	87	144	165
33194.W0086	33194.W0386	16	30	19,0	20	14,0	39,5	16	155	257	120
33194.W0087	33194.W0387	16	35	19,0	20	14,0	39,5	16	155	257	127
33194.W0088	33194.W0388	16	40	19,0	20	14,0	39,5	16	155	257	135
33194.W0089	33194.W0389	16	45	19,0	20	14,0	39,5	16	155	257	143
33194.W0090	33194.W0390	16	50	19,0	20	14,0	39,5	16	155	257	150
33194.W0092	33194.W0392	16	60	19,0	20	14,0	39,5	16	155	257	166
33194.W0094	33194.W0394	16	70	19,0	20	14,0	39,5	16	155	257	181
33194.W0096	33194.W0396	16	80	19,0	20	14,0	39,5	16	155	257	196
33194.W0097	33194.W0397	16	90	19,0	20	14,0	39,5	16	155	257	216
33194.W0098	33194.W0398	16	100	19,0	20	14,0	39,5	16	155	257	233
33194.W0099	33194.W0399	16	110	19,0	20	14,0	39,5	16	155	257	248
33194.W0100	33194.W3100	16	120	19,0	20	14,0	39,5	16	155	257	263
33194.W0101	33194.W3101	16	130	19,0	20	14,0	39,5	16	155	257	279
33194.W0102	33194.W3102	16	140	19,0	20	14,0	39,5	16	155	257	295
33194.W0103	33194.W3103	16	150	19,0	20	14,0	39,5	16	155	257	310
33194.W0111	33194.W0411	20	50	25,0	28	20,5	49,9	20	244	403	303
33194.W0112	33194.W0412	20	60	25,0	28	20,5	49,9	20	244	403	322
33194.W0116	33194.W0416	20	80	25,0	28	20,5	49,9	20	244	403	370
33194.W0117	33194.W0417	20	90	25,0	28	20,5	49,9	20	244	403	400
33194.W0120	33194.W0420	20	100	25,0	28	20,5	49,9	20	244	403	414
33194.W0124	33194.W0424	20	120	25,0	28	20,5	49,9	20	244	403	466
33194.W0125	33194.W0425	20	130	25,0	28	20,5	49,9	20	244	403	497
33194.W0126	33194.W0426	20	140	25,0	28	20,5	49,9	20	244	403	520
33194.W0127	33194.W0427	20	150	25,0	28	20,5	49,9	20	244	403	545
33194.W0129	33194.W0429	20	50	30,8	28	22,0	49,9	25	386	631	466
33194.W0130	33194.W0430	25	60	30,8	28	22,0	49,9	25	386	631	432
33194.W0131	33194.W0431	20	70	30,8	28	22,0	49,9	25	386	631	470
33194.W0132	33194.W0432	25	810	30,8	28	22,0	49,9	25	386	631	507
33194.W0133	33194.W0433	25	90	30,8	28	22,0	49,9	25	386	631	545
33194.W0134	33194.W0434	25	100	30,8	28	22,0	49,9	25	386	631	582
33194.W0135	33194.W0435	25	110	30,8	28	22,0	49,9	25	386	631	620
33194.W0136	33194.W0436	25	120	30,8	28	22,0	49,9	25	386	631	657
33194.W0137	33194.W0433	25	130	30,8	28	22,0	49,9	25	386	631	695
33194.W0138	33194.W0438	25	140	30,8	28	22,0	49,9	25	386	631	732
33194.W0139	33194.W0439	25	150	30,8	28	22,0	49,9	25	386	631	770



Material

Type One-
Pin: stainless steel 1.4305 (AISI 303).
Spring: stainless steel.
Type Two-
Pin: stainless steel 1.4542 (AISI 630), precipitation-hardened, blast finish. Offering extreme load capacity (marked at end of shaft to denote 1.4542 material).
End of shaft marked for material type 1.4542.
Spring: stainless steel.

Technical Notes

Pressing = unlocking.
Releasing = locking.
Single piece contoured design for limited space applications.
Temperature resistance up to 250°C.
For quick fastening and locking of frequently repeated connections.
For suitable lanyards see part no. 33250.W0970 and .W0974 only.
Easy install locating bushes available see part no. 33248.

Tips

Single piece design, no danger of parts coming away from pin - ideal for applications with F.O.B (Foreign Object Body) issues.

Important Notes

*Shearing resistance similar to DIN 50141.



Ball Lock Pins - Contoured Handle

self-locking - single acting

33194







Material

Type One-
Pin: stainless steel 1.4305 (AISI 303).
Spring: stainless steel.
Type Two-
Pin: stainless steel 1.4542 (AISI 630), precipitation-hardened, blast finish. Offering extreme load capacity (marked at end of shaft to denote 1.4542 material).
End of shaft marked for material type 1.4542.
Spring: stainless steel.

Technical Notes

Pressing = unlocking.
Releasing = locking.
Single piece contoured design for limited space applications.
Temperature resistance up to 250°C.
For quick fastening and locking of frequently repeated connections.
For suitable lanyards see part no. 33250.W0970 and .W0974 only.
Easy install locating bushes available see part no. 33248.

Tips

Single piece design, no danger of parts coming away from pin - ideal for applications with F.O.B (Foreign Object Body) issues.

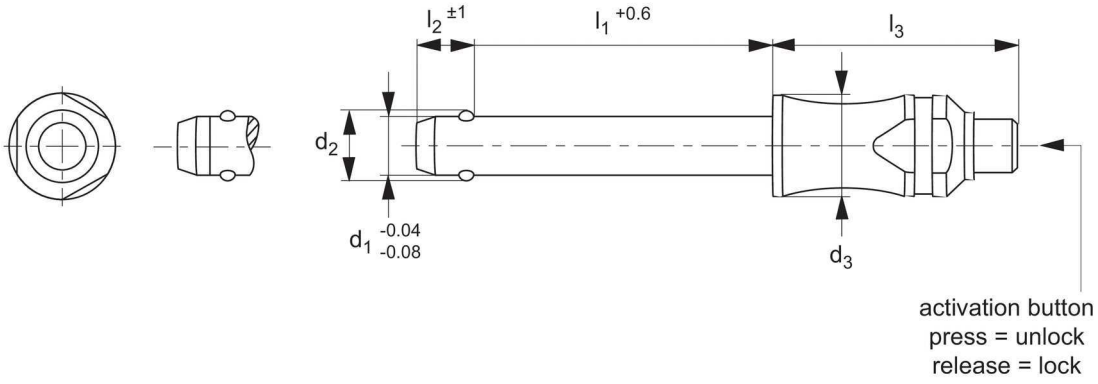
Important Notes

*Shearing resistance similar to DIN 50141.

Ball Lock Pins - Contoured Handle

self-locking - single acting - titanium

33196





Order No.	d_1	l_1	d_2	d_3	l_2	l_3	Location hole tol. H11	Shearing Resistance , double kN. min.	g
33196.W0022	6	10	7,0	10	7,0	26,2	6	23	7
33196.W0024	6	20	7,0	10	7,0	26,2	6	23	8
33196.W0026	6	30	7,0	10	7,0	26,2	6	23	9
33196.W0028	6	40	7,0	10	7,0	26,2	6	23	10
33196.W0030	6	50	7,0	10	7,0	26,2	6	23	11
33196.W0034	8	20	9,6	14	8,2	33,1	8	43	19
33196.W0036	8	30	9,6	14	8,2	33,1	8	43	21
33196.W0038	8	40	9,6	14	8,2	33,1	8	43	23
33196.W0040	8	50	9,6	14	8,2	33,1	8	43	25
33196.W0044	10	20	12,0	14	9,6	33,1	8	46	23
33196.W0046	10	30	12,0	14	9,6	26,2	10	69	26
33196.W0048	10	40	12,0	14	9,6	26,2	10	69	29
33196.W0050	10	50	12,0	14	9,6	26,2	10	69	32
33196.W0052	10	60	12,0	14	9,6	26,2	10	69	36



Material

Pin: Titanium G5 (6A/4V DIN 3.7165). Offering extreme load capacity.
Ball: Ceramic.
Spring: Corrosion resistant alloy.

Technical Notes

Pressing = unlocking.
Releasing = locking.
Single piece contoured design for limited space applications.
Temperature resistance up to 400°C.
For quick fastening and locking of frequently repeated connections.
For suitable lanyards see part no. 33250.W0970 and .W0974 only.
Easy install locating bushes available see part no. 33248.

Tips

Single piece design, no danger of parts coming away from pin - ideal for applications with F.O.B (Foreign Object Body) issues.

Important Notes

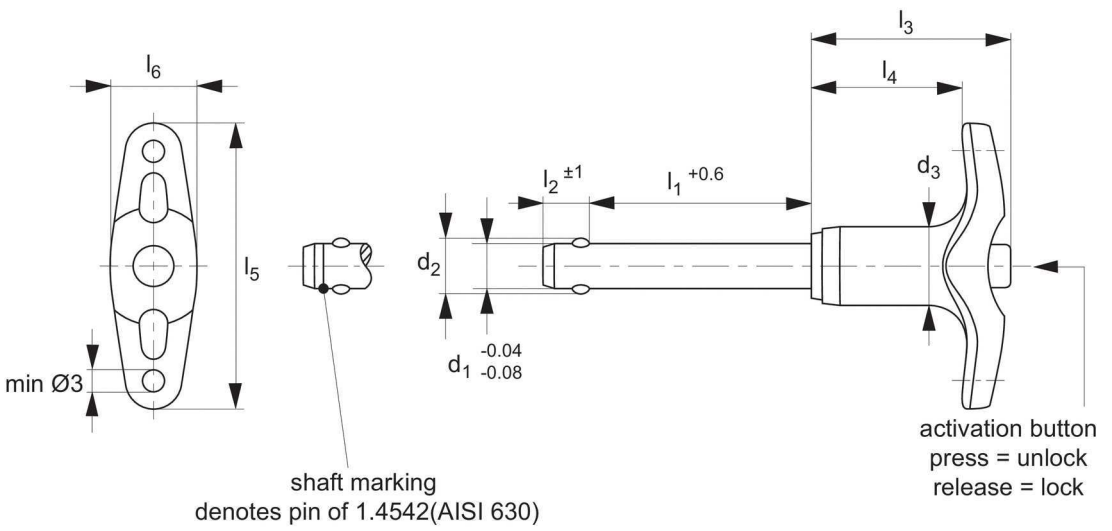
*Shearing resistance similar to DIN 50141.



Ball Lock Pins - Single Acting - T-Handle

self-locking

33200





Order No. Type One Stainless 1.4305	Order No. Type Two Stainless 1.4542	d_1	l_1	d_2	d_3	l_2	l_3	l_4	l_5	l_6	Locn hole H11	Shearing resistance, double kN min. 1.4305 *	Shearing resistance, double kN min. 1.4542 *	g
33200.W0007	33200.W0307	5	45	5,5	11,8	6,0	31,6	24,1	45,2	12,7	5	14	24	25
33200.W0008	33200.W0308	5	50	5,5	11,8	6,0	31,6	24,1	45,2	12,7	5	14	24	26
33200.W0009	33200.W0309	5	60	5,5	11,8	6,0	31,6	24,1	45,2	12,7	5	14	24	27
33200.W0011	33200.W0311	5	80	5,5	11,8	6,0	31,6	24,1	45,2	12,7	5	14	24	30
33200.W0010	33200.W0310	5	70	5,5	11,8	6,0	31,6	24,1	45,2	12,7	5	14	24	29
33200.W0012	33200.W0312	5	10	5,5	11,8	6,0	31,6	24,1	45,2	12,7	5	14	24	19
33200.W0013	33200.W0313	5	15	5,5	11,8	6,0	31,6	24,1	45,2	12,7	5	14	24	20
33200.W0014	33200.W0314	5	20	5,5	11,8	6,0	31,6	24,1	45,2	12,7	5	14	24	20
33200.W0015	33200.W0315	5	25	5,5	11,8	6,0	31,6	24,1	45,2	12,7	5	14	24	21
33200.W0016	33200.W0316	5	30	5,5	11,8	6,0	31,6	24,1	45,2	12,7	5	14	24	22
33200.W0017	33200.W0317	5	35	5,5	11,8	6,0	31,6	24,1	45,2	12,7	5	14	24	24
33200.W0018	33200.W0318	5	40	5,5	11,8	6,0	31,6	24,1	45,2	12,7	5	14	24	24
33200.W0019	33200.W0319	6	60	7,0	11,8	7,0	31,6	24,1	45,2	12,7	6	21	35	31
33200.W0020	33200.W0320	6	70	7,0	11,8	7,0	31,6	24,1	45,2	12,7	6	21	35	33
33200.W0021	33200.W0321	6	80	7,0	11,8	7,0	31,6	24,1	45,2	12,7	6	21	35	35
33200.W0022	33200.W0322	6	10	7,0	11,8	7,0	31,6	24,1	45,2	12,7	6	21	35	20
33200.W0023	33200.W0323	6	15	7,0	11,8	7,0	31,6	24,1	45,2	12,7	6	21	35	21
33200.W0024	33200.W0324	6	20	7,0	11,8	7,0	31,6	24,1	45,2	12,7	6	21	35	22
33200.W0025	33200.W0325	6	25	7,0	11,8	7,0	31,6	24,1	45,2	12,7	6	21	35	23
33200.W0026	33200.W0326	6	30	7,0	11,8	7,0	31,6	24,1	45,2	12,7	6	21	35	24
33200.W0027	33200.W0327	6	35	7,0	11,8	7,0	31,6	24,1	45,2	12,7	6	21	35	25
33200.W0028	33200.W0328	6	40	7,0	11,8	7,0	31,6	24,1	45,2	12,7	6	21	35	26
33200.W0029	33200.W0329	6	45	7,0	11,8	7,0	31,6	24,1	45,2	12,7	6	21	35	27
33200.W0030	33200.W0330	6	50	7,0	11,8	7,0	31,6	24,1	45,2	12,7	6	21	35	28
33200.W0032	33200.W0332	8	10	9,5	14,7	8,2	35,8	26,9	51,5	15,8	8	38	63	33
33200.W0033	33200.W0333	8	15	9,5	14,7	8,2	35,8	26,9	51,5	15,8	8	38	63	35
33200.W0034	33200.W0334	8	20	9,5	14,7	8,2	35,8	26,9	51,5	15,8	8	38	63	37
33200.W0035	33200.W0335	8	25	9,5	14,7	8,2	35,8	26,9	51,5	15,8	8	38	63	39
33200.W0036	33200.W0336	8	30	9,5	14,7	8,2	35,8	26,9	51,5	15,8	8	38	63	41
33200.W0037	33200.W0337	8	35	9,5	14,7	8,2	35,8	26,9	51,5	15,8	8	38	63	43
33200.W0038	33200.W0338	8	40	9,5	14,7	8,2	35,8	26,9	51,5	15,8	8	38	63	44
33200.W0039	33200.W0339	8	45	9,5	14,7	8,2	35,8	26,9	51,5	15,8	8	38	63	46
33200.W0040	33200.W0340	8	50	9,5	14,7	8,2	35,8	26,9	51,5	15,8	8	38	63	48
33200.W0031	33200.W0331	8	60	9,5	14,7	8,2	35,8	26,9	51,5	15,8	8	38	63	52
33200.W0041	33200.W0341	8	70	9,5	14,7	8,2	35,8	26,9	51,5	15,8	8	38	63	56
33200.W0042	33200.W0342	8	80	9,5	14,7	8,2	35,8	26,9	51,5	15,8	8	38	63	60
33200.W0043	33200.W0343	8	90	9,5	14,7	8,2	35,8	26,9	51,5	15,8	8	38	63	63
33200.W0051	33200.W0351	8	100	9,5	14,7	8,2	35,8	26,9	51,5	15,8	8	38	63	67
33200.W0044	33200.W0344	10	20	12,0	14,7	9,6	35,8	26,9	51,5	15,8	10	60	100	44
33200.W0045	33200.W0345	10	25	12,0	14,7	9,6	35,8	26,9	51,5	15,8	10	60	100	47
33200.W0046	33200.W0346	10	30	12,0	14,7	9,6	35,8	26,9	51,5	15,8	10	60	100	49
33200.W0047	33200.W0347	10	35	12,0	14,7	9,6	35,8	26,9	51,5	15,8	10	60	100	52
33200.W0048	33200.W0348	10	40	12,0	14,7	9,6	35,8	26,9	51,5	15,8	10	60	100	55

Material

Type One -
Pin: stainless steel 1.4305 (AISI 303).
Ball: stainless steel 1.3541
Handle: aluminium, black (similar to RAL 9005)
Spring: stainless Steel
Type Two -
Pin: stainless steel 1.4542 (AISI 630). Precipitation hardened, blast finish. Offering extreme load capacity. (Marked at end of shaft to denote 1.4542 material).
Ball: stainless steel 1.3541
Handle: aluminium, black (RAL9003).
Spring: stainless steel.

Technical Notes

Pressing = unlocking.
Releasing = locking.
Temperature range -30°C to +150°C.
For quick fastening and locking frequently repeated connections.

Tips

For lanyards & retaining cables see part no.33250-33261. Easy install locating bushes available see part no.33248 + 33246.

Important Notes

*Shearing resistance similar to DIN 50141.

Ball Lock Pins - Single Acting - T-Handle

self-locking

33200

Order No. Type One Stainless 1.4305	Order No. Type Two Stainless 1.4542	d_1	l_1	d_2	d_3	l_2	l_3	l_4	l_5	l_6	Loc'n hole H11	Shearing resistance, double kN min. 1.4305 *	Shearing resistance, double kN min. 1.4542 *	g
33200.W0049	33200.W0349	10	45	12,0	14,7	9,6	35,8	26,9	51,5	15,8	10	60	100	58
33200.W0050	33200.W0350	10	50	12,0	14,7	9,6	35,8	26,9	51,5	15,8	10	60	100	61
33200.W0052	33200.W0352	10	60	12,0	14,7	9,6	35,8	26,9	51,5	15,8	10	60	100	67
33200.W0053	33200.W0353	10	70	12,0	14,7	9,6	35,8	26,9	51,5	15,8	10	60	100	73
33200.W0054	33200.W0354	10	80	12,0	14,7	9,6	35,8	26,9	51,5	15,8	10	60	100	79
33200.W0055	33200.W0355	10	90	12,0	14,7	9,6	35,8	26,9	51,5	15,8	10	60	100	85
33200.W0056	33200.W0356	10	100	12,0	14,7	9,6	35,8	26,9	51,5	15,8	10	60	100	91
33200.W0057	33200.W0357	10	110	12,0	14,7	9,6	35,8	26,9	51,5	15,8	10	60	100	97
33200.W0058	33200.W0358	10	120	12,0	14,7	9,6	35,8	26,9	51,5	15,8	10	60	100	103
33200.W0064	33200.W0364	12	20	14,5	18,2	10,6	35,1	25,3	59,1	20,2	12	87	144	68
33200.W0059	33200.W0359	10	15	12,0	14,7	9,6	35,8	26,9	51,5	15,8	10	60	100	40
33200.W0065	33200.W0365	12	25	14,5	18,2	10,6	35,1	25,3	59,1	20,2	12	87	144	73
33200.W0066	33200.W0366	12	30	14,5	18,2	10,6	35,1	25,3	59,1	20,2	12	87	144	77
33200.W0067	33200.W0367	12	35	14,5	18,2	10,6	35,1	25,3	59,1	20,2	12	87	144	81
33200.W0068	33200.W0368	12	40	14,5	18,2	10,6	35,1	25,3	59,1	20,2	12	87	144	86
33200.W0069	33200.W0369	12	45	14,5	18,2	10,6	35,1	25,3	59,1	20,2	12	87	144	90
33200.W0070	33200.W0370	12	50	14,5	18,2	10,6	35,1	25,3	59,1	20,2	12	87	144	94
33200.W0072	33200.W0372	12	60	14,5	18,2	10,6	35,1	25,3	59,1	20,2	12	87	144	103
33200.W0074	33200.W0374	12	70	14,5	18,2	10,6	35,1	25,3	59,1	20,2	12	87	144	111
33200.W0076	33200.W0376	12	80	14,5	18,2	10,6	35,1	25,3	59,1	20,2	12	87	144	119
33200.W0060	33200.W0360	12	90	14,5	18,2	10,6	35,1	25,3	59,1	20,2	12	87	144	127
33200.W0061	33200.W0361	12	100	14,5	18,2	10,6	35,1	25,3	59,1	20,2	12	87	144	136
33200.W0062	33200.W0362	12	110	14,5	18,2	10,6	35,1	25,3	59,1	20,2	12	87	144	144
33200.W0063	33200.W0363	12	120	14,5	18,2	10,6	35,1	25,3	59,1	20,2	12	87	144	153
33200.W0071	33200.W0371	16	30	19,0	23,4	14,0	42,2	29,8	74,8	24,7	16	155	257	150
33200.W0073	33200.W0373	16	35	19,0	23,4	14,0	42,2	29,8	74,8	24,7	16	155	257	157
33200.W0075	33200.W0375	16	40	19,0	23,4	14,0	42,2	29,8	74,8	24,7	16	155	257	165
33200.W0077	33200.W0377	16	45	19,0	23,4	14,0	42,2	29,8	74,8	24,7	16	155	257	173
33200.W0078	33200.W0378	16	50	19,0	23,4	14,0	42,2	29,8	74,8	24,7	16	155	257	180
33200.W0079	33200.W0379	16	60	19,0	23,4	14,0	42,2	29,8	74,8	24,7	16	155	257	196
33200.W0080	33200.W0380	16	70	19,0	23,4	14,0	42,2	29,8	74,8	24,7	16	155	257	211
33200.W0081	33200.W0381	16	80	19,0	23,4	14,0	42,2	29,8	74,8	24,7	16	155	257	226
33200.W0082	33200.W0382	16	90	19,0	23,4	14,0	42,2	29,8	74,8	24,7	16	155	257	242
33200.W0083	33200.W0383	16	100	19,0	23,4	14,0	42,2	29,8	74,8	24,7	16	155	257	257
33200.W0084	33200.W0384	16	110	19,0	23,4	14,0	42,2	29,8	74,8	24,7	16	155	257	272
33200.W0085	33200.W0385	16	120	19,0	23,4	14,0	42,2	29,8	74,8	24,7	16	155	257	288
33200.W0086	33200.W0386	16	130	19,0	23,4	14,0	42,2	29,8	74,8	24,7	16	155	257	303
33200.W0087	33200.W0387	16	140	19,0	23,4	14,0	42,2	29,8	74,8	24,7	16	155	257	319
33200.W0088	33200.W0388	16	150	19,0	23,4	14,0	42,2	29,8	74,8	24,7	16	155	257	334
33200.W0089	33200.W0389	20	50	24,8	23,4	17,0	43,1	29,8	74,8	24,7	20	244	403	241
33200.W0090	33200.W3090	20	60	24,8	23,4	17,0	43,1	29,8	74,8	24,7	20	244	403	265
33200.W0091	33200.W0391	20	70	24,8	23,4	17,0	43,1	29,8	74,8	24,7	20	244	403	289
33200.W0092	33200.W0392	20	80	24,8	23,4	17,0	43,1	29,8	74,8	24,7	20	244	403	313
33200.W0093	33200.W0393	20	90	24,8	23,4	17,0	43,1	29,8	74,8	24,7	20	244	403	337
33200.W0094	33200.W0394	20	100	24,8	23,4	17,0	43,1	29,8	74,8	24,7	20	244	403	361
33200.W0095	33200.W0395	20	110	24,8	23,4	17,0	43,1	29,8	74,8	24,7	20	244	403	385
33200.W0096	33200.W0396	20	120	24,8	23,4	17,0	43,1	29,8	74,8	24,7	20	244	403	409
33200.W0097	33200.W0397	20	130	24,8	23,4	17,0	43,1	29,8	74,8	24,7	20	244	403	433
33200.W0098	33200.W0398	20	140	24,8	23,4	17,0	43,1	29,8	74,8	24,7	20	244	403	457
33200.W0099	33200.W0399	20	150	24,8	23,4	17,0	43,1	29,8	74,8	24,7	20	244	403	481
33200.W0100	33200.W3100	25	50	31,0	30,4	22,0	54,8	37,5	88,7	33,2	25	386	631	447
33200.W0101	33200.W3101	25	60	31,0	30,4	22,0	54,8	37,5	88,7	33,2	25	386	631	484
33200.W0102	33200.W3102	25	70	31,0	30,4	22,0	54,8	37,5	88,7	33,2	25	386	631	522
33200.W0103	33200.W3103	25	80	31,0	30,4	22,0	54,8	37,5	88,7	33,2	25	386	631	560
33200.W0104	33200.W3104	25	90	31,0	30,4	22,0	54,8	37,5	88,7	33,2	25	386	631	598
33200.W0105	33200.W3105	25	100	31,0	30,4	22,0	54,8	37,5	88,7	33,2	25	386	631	636
33200.W0106	33200.W3106	25	110	31,0	30,4	22,0	54,8	37,5	88,7	33,2	25	386	631	674
33200.W0107	33200.W3107	25	120	31,0	30,4	22,0	54,8	37,5	88,7	33,2	25	386	631	712
33200.W0108	33200.W3108	25	130	31,0	30,4	22,0	54,8	37,5	88,7	33,2	25	386	631	750
33200.W0109	33200.W3019	25	140	31,0	30,4	22,0	54,8	37,5	88,7	33,2	25	386	631	788
33200.W0110	33200.W3110	25	150	31,0	30,4	22,0	54,8	37,5	88,7	33,2	25	386	631	825



Material

Type One -
Pin: stainless steel 1.4305 (AISI 303).
Ball: stainless steel 1.3541
Handle: aluminium, black (similar to RAL 9005)
Spring: stainless Steel
Type Two -
Pin: stainless steel 1.4542 (AISI 630). Precipitation hardened, blast finish. Offering extreme load capacity. (Marked at end of shaft to denote 1.4542 material).
Ball: stainless steel 1.3541
Handle: aluminium, black (RAL9003).
Spring: stainless steel.

Technical Notes

Pressing = unlocking.
Releasing = locking.
Temperature range -30°C to +150°C.
For quick fastening and locking frequently repeated connections.

Tips

For lanyards & retaining cables see part no.33250-33261. Easy install locating bushes available see part no.33248 + 33246.

Important Notes

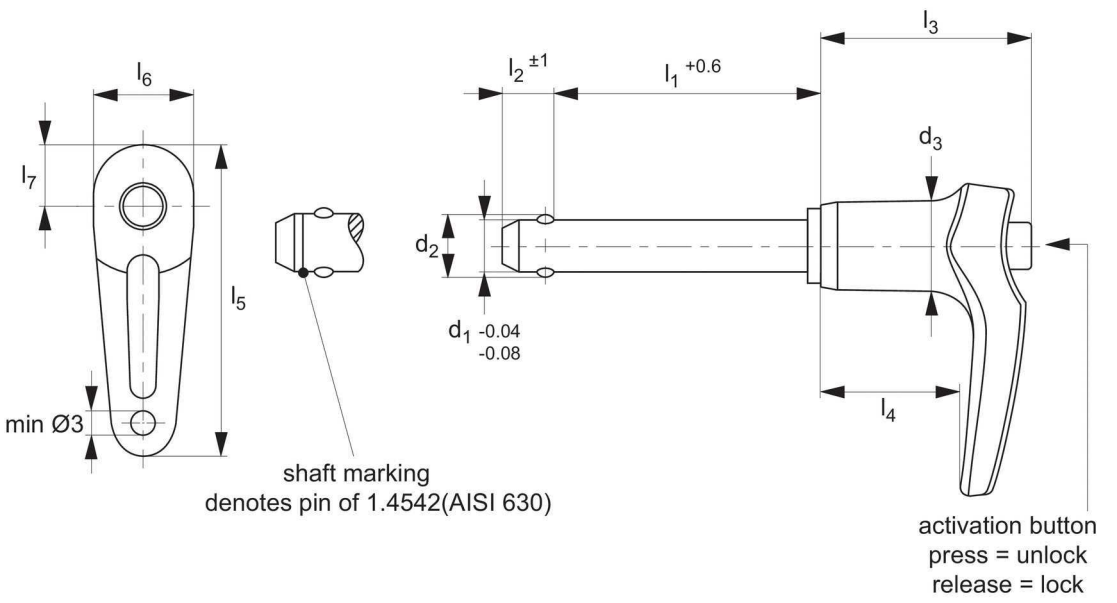
*Shearing resistance similar to DIN 50141.



Ball Lock Pins - Single Acting - L-Handle

self-locking

33220





Order No. Type One Stainless 1.4305	Order No. Type Two Stainless 1.4542	d_1	l_1	d_2	d_3	l_2	l_3	l_4	l_5	l_6	l_7	Location hole H11	Shearing resistance kN type 1.4305*	Shearing resistance kN type 1.4542*	g
33220.W0112	33220.W0312	5	10	5,5	11,8	6,0	31,6	21,9	43,8	12,6	8,5	5	14	24	20
33220.W0113	33220.W0313	5	15	5,5	11,8	6,0	31,6	21,9	43,8	12,6	8,5	5	14	24	21
33220.W0114	33220.W0314	5	20	5,5	11,8	6,0	31,6	21,9	43,8	12,6	8,5	5	14	24	21
33220.W0115	33220.W0315	5	25	5,5	11,8	6,0	31,6	21,9	43,8	12,6	8,5	5	14	24	22
33220.W0116	33220.W0316	5	30	5,5	11,8	6,0	31,6	21,9	43,8	12,6	8,5	5	14	24	23
33220.W0122	33220.W0322	6	10	7,0	11,8	7,0	31,6	21,9	43,8	12,6	8,5	6	21	35	21
33220.W0123	33220.W0323	6	15	7,0	11,8	7,0	31,6	21,9	43,8	12,6	8,5	6	21	35	22
33220.W0124	33220.W0324	6	20	7,0	11,8	7,0	31,6	21,9	43,8	12,6	8,5	6	21	35	23
33220.W0125	33220.W0325	6	25	7,0	11,8	7,0	31,6	21,9	43,8	12,6	8,5	6	21	35	24
33220.W0126	33220.W0326	6	30	7,0	11,8	7,0	31,6	21,9	43,8	12,6	8,5	6	21	35	25
33220.W0127	33220.W0327	6	35	7,0	11,8	7,0	31,6	21,9	43,8	12,6	8,5	6	21	35	26
33220.W0128	33220.W0328	6	40	7,0	11,8	7,0	31,6	21,9	43,8	12,6	8,5	6	21	35	27
33220.W0129	33220.W0329	6	45	7,0	11,8	7,0	31,6	21,9	43,8	12,6	8,5	6	21	35	28
33220.W0130	33220.W0330	6	50	7,0	11,8	7,0	31,6	21,9	43,8	12,6	8,5	6	21	35	29
33220.W0134	33220.W0334	8	20	9,5	14,7	8,2	35,8	24,4	49,7	15,8	9,9	8	38	63	37
33220.W0135	33220.W0335	8	25	9,5	14,7	8,2	35,8	24,4	49,7	15,8	9,9	8	38	63	39
33220.W0136	33220.W0336	8	30	9,5	14,7	8,2	35,8	24,4	49,7	15,8	9,9	8	38	63	41
33220.W0137	33220.W0337	8	35	9,5	14,7	8,2	35,8	24,4	49,7	15,8	9,9	8	38	63	43
33220.W0138	33220.W0338	8	40	9,5	14,7	8,2	35,8	24,4	49,7	15,8	9,9	8	38	63	45
33220.W0139	33220.W0339	8	45	9,5	14,7	8,2	35,8	24,4	49,7	15,8	9,9	8	38	63	46
33220.W0140	33220.W0340	8	50	9,5	14,7	8,2	35,8	24,4	49,7	15,8	9,9	8	38	63	48
33220.W0144	33220.W0344	10	20	12,0	14,7	9,6	35,8	24,4	49,7	15,8	9,9	10	60	100	44
33220.W0145	33220.W0345	10	25	12,0	14,7	9,6	35,8	24,4	49,7	15,8	9,9	10	60	100	47
33220.W0146	33220.W0346	10	30	12,0	14,7	9,6	35,8	24,4	49,7	15,8	9,9	10	60	100	50
33220.W0147	33220.W0347	10	35	12,0	14,7	9,6	35,8	24,4	49,7	15,8	9,9	10	60	100	53
33220.W0148	33220.W0348	10	40	12,0	14,7	9,6	35,8	24,4	49,7	15,8	9,9	10	60	100	56
33220.W0149	33220.W0349	10	45	12,0	14,7	9,6	35,8	24,4	49,7	15,8	9,9	10	60	100	58
33220.W0150	33220.W0350	10	50	12,0	14,7	9,6	35,8	24,4	49,7	15,8	9,9	10	60	100	62
33220.W0152	33220.W0352	10	60	12,0	14,7	9,6	35,8	24,4	49,7	15,8	9,9	10	60	100	67
33220.W0165	33220.W0365	12	25	14,5	18,2	10,6	35,1	22,7	57,1	20,2	12,6	12	87	144	73
33220.W0166	33220.W0366	12	30	14,5	18,2	10,6	35,1	22,7	57,1	20,2	12,6	12	87	144	77
33220.W0167	33220.W0367	12	35	14,5	18,2	10,6	35,1	22,7	57,1	20,2	12,6	12	87	144	82
33220.W0168	33220.W0368	12	40	14,5	18,2	10,6	35,1	22,7	57,1	20,2	12,6	12	87	144	86
33220.W0169	33220.W0369	12	45	14,5	18,2	10,6	35,1	22,7	57,1	20,2	12,6	12	87	144	90
33220.W0170	33220.W0370	12	50	14,5	18,2	10,6	35,1	22,7	57,1	20,2	12,6	12	87	144	94
33220.W0172	33220.W0372	12	60	14,5	18,2	10,6	35,1	22,7	57,1	20,2	12,6	12	87	144	103
33220.W0174	33220.W0374	12	70	14,5	18,2	10,6	35,1	22,7	57,1	20,2	12,6	12	87	144	111
33220.W0176	33220.W0376	12	80	14,5	18,2	10,6	35,1	22,7	57,1	20,2	12,6	12	87	144	120

Material

Type One -
Pin: stainless steel 1.4305 (AISI 303).
Ball: stainless steel 1.3541
Spring: stainless steel
Type Two -
Pin: stainless steel 1.4542 (AISI 630). Precipitation hardened, blast finish. Offering extreme load capacity. (Marked at end of shaft to denote 1.4542 material).
Ball: stainless steel 1.3541
Handle: alumnium, black (RAL9003).
Spring: stainless steel.

Technical Notes

Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +150°C.
For quick fastening and locking of frequently repeated connections.

Tips

For lanyards & retaining cables see aprt no. 33250. Easy install locating bushes available see part no. 33248.

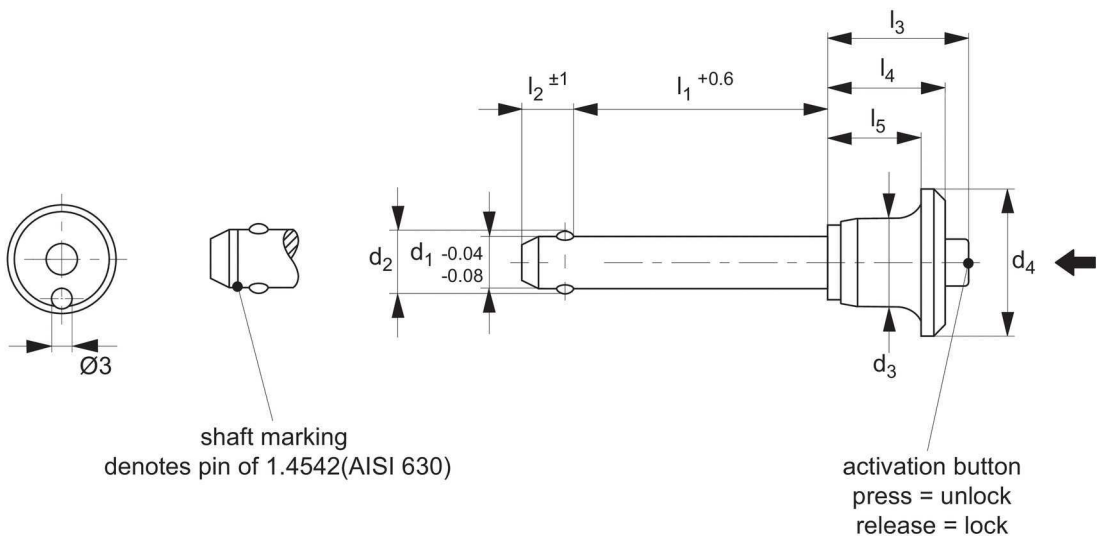
Important Notes

*Shearing resistance similar to DIN 50141.

Ball Lock Pins - Mushroom Handle

single acting - self-locking

33224





Order No.	Stainless Type	d_1	d_2	d_3	d_4	l_1	l_2	l_3	l_4	l_5	Location hole H11	Shearing resistance double kN		g
33224.W0085	Stainless 1.4305	16	19,0	23,4	40	120	14,0	42,2	34,5	28,5	16	155	-	283
33224.W0212	Stainless 1.4305	5	5,5	11,3	20	10	6,0	20,7	17,6	14,6	5	14	-	12
33224.W0213	Stainless 1.4305	5	5,5	11,3	20	15	6,0	20,7	17,6	14,6	5	14	-	12
33224.W0214	Stainless 1.4305	5	5,5	11,3	20	20	6,0	20,7	17,6	14,6	5	14	-	13
33224.W0215	Stainless 1.4305	5	5,5	11,3	20	25	6,0	20,7	17,6	14,6	5	14	-	14
33224.W0216	Stainless 1.4305	5	5,5	11,3	20	30	6,0	20,7	17,6	14,6	5	14	-	15
33224.W0221	Stainless 1.4305	6	7,0	11,3	20	80	7,0	20,7	17,6	14,6	6	21	-	27
33224.W0222	Stainless 1.4305	6	7,0	11,3	20	10	7,0	20,7	17,6	14,6	6	21	-	13
33224.W0223	Stainless 1.4305	6	7,0	11,3	20	15	7,0	20,7	17,6	14,6	6	21	-	14
33224.W0224	Stainless 1.4305	6	7,0	11,3	20	20	7,0	20,7	17,6	14,6	6	21	-	15
33224.W0225	Stainless 1.4305	6	7,0	11,3	20	25	7,0	20,7	17,6	14,6	6	21	-	16
33224.W0226	Stainless 1.4305	6	7,0	11,3	20	30	7,0	20,7	17,6	14,6	6	21	-	17
33224.W0227	Stainless 1.4305	6	7,0	11,3	20	35	7,0	20,7	17,6	14,6	6	21	-	18
33224.W0228	Stainless 1.4305	6	7,0	11,3	20	40	7,0	20,7	17,6	14,6	6	21	-	19
33224.W0229	Stainless 1.4305	6	7,0	11,3	20	45	7,0	20,7	17,6	14,6	6	21	-	20
33224.W0230	Stainless 1.4305	6	7,0	11,3	20	50	7,0	20,7	17,6	14,6	6	21	-	21
33224.W0234	Stainless 1.4305	8	9,5	14,1	25	20	8,2	27,3	22,6	18,6	8	38	-	28
33224.W0235	Stainless 1.4305	8	9,5	14,1	25	25	8,2	27,3	22,6	18,6	8	38	-	30
33224.W0236	Stainless 1.4305	8	9,5	14,1	25	30	8,2	27,3	22,6	18,6	8	38	-	32
33224.W0237	Stainless 1.4305	8	9,5	14,1	25	35	8,2	27,3	22,6	18,6	8	38	-	34
33224.W0238	Stainless 1.4305	8	9,5	14,1	25	40	8,2	27,3	22,6	18,6	8	38	-	36
33224.W0239	Stainless 1.4305	8	9,5	14,1	25	45	8,2	27,3	22,6	18,6	8	38	-	38
33224.W0240	Stainless 1.4305	8	9,5	14,1	25	50	8,2	27,3	22,6	18,6	8	38	-	40
33224.W0244	Stainless 1.4305	10	12,0	14,1	25	20	9,6	27,3	22,6	18,6	10	60	-	35
33224.W0245	Stainless 1.4305	10	12,0	14,1	25	25	9,6	27,3	22,6	18,6	10	60	-	38
33224.W0246	Stainless 1.4305	10	12,0	14,1	25	30	9,6	27,3	22,6	18,6	10	60	-	40
33224.W0247	Stainless 1.4305	10	12,0	14,1	25	35	9,6	27,3	22,6	18,6	10	60	-	44
33224.W0248	Stainless 1.4305	10	12,0	14,1	25	40	9,6	27,3	22,6	18,6	10	60	-	47
33224.W0249	Stainless 1.4305	10	12,0	14,1	25	45	9,6	27,3	22,6	18,6	10	60	-	50
33224.W0250	Stainless 1.4305	10	12,0	14,1	25	50	9,6	27,3	22,6	18,6	10	60	-	53
33224.W0252	Stainless 1.4305	10	12,0	14,1	25	60	9,6	27,3	22,6	18,6	10	60	-	59
33224.W0265	Stainless 1.4305	12	14,5	17,7	35	25	10,6	33,2	27,3	22,3	12	87	-	69
33224.W0266	Stainless 1.4305	12	14,5	17,7	35	30	10,6	33,2	27,3	22,3	12	87	-	73
33224.W0267	Stainless 1.4305	12	14,5	17,7	35	35	10,6	33,2	27,3	22,3	12	87	-	78
33224.W0268	Stainless 1.4305	12	14,5	17,7	35	40	10,6	33,2	27,3	22,3	12	87	-	82
33224.W0269	Stainless 1.4305	12	14,5	17,7	35	45	10,6	33,2	27,3	22,3	12	87	-	86
33224.W0270	Stainless 1.4305	12	14,5	17,7	35	50	10,6	33,2	27,3	22,3	12	87	-	90
33224.W0272	Stainless 1.4305	12	14,5	17,7	35	60	10,6	33,2	27,3	22,3	12	87	-	99
33224.W0274	Stainless 1.4305	12	14,5	17,7	35	70	10,6	33,2	27,3	22,3	12	87	-	108
33224.W0276	Stainless 1.4305	12	14,5	17,7	35	80	10,6	33,2	27,3	22,3	12	87	-	116
33224.W0303	Stainless 1.4305	25	31,0	30,4	50	80	22,0	54,8	43,5	36,5	25	386	-	547
33224.W0304	Stainless 1.4305	25	31,0	30,4	50	90	22,0	54,8	43,5	36,5	25	386	-	585
33224.W0306	Stainless 1.4305	25	31,0	30,4	50	110	22,0	54,8	43,5	36,5	25	386	-	660
33224.W0512	Stainless 1.4542	5	5,5	11,3	20	10	6,0	20,7	17,6	14,6	5	-	24	12
33224.W0513	Stainless 1.4542	5	5,5	11,3	20	15	6,0	20,7	17,6	14,6	5	-	24	12
33224.W0514	Stainless 1.4542	5	5,5	11,3	20	20	6,0	20,7	17,6	14,6	5	-	24	13

Material

Type One
Pin: Stainless steel 1.4305 (AISI 303).
Ball: stainless steel 1.3541
Spring: stainless steel.

Type Two
Pin: Stainless steel 1.4542 (AISI 630), precipitation hardened, blast finish. Offering extreme load capacity. (Marked at end of shaft to denote 1.4542 material).
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: aluminium, black (RAL9003).

Technical Notes

Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +150°C
For quick fastening and locking of frequently repeated connections.

Tips

For lanyards & retaining cables see part no. 33250. Easy install locating bushes available see part no. 33248.

Important Notes

*Shearing resistance similar to DIN 50141.

Ball Lock Pins - Mushroom Handle

single acting - self-locking

33224

Order No.	Stainless Type	d_1	d_2	d_3	d_4	l_1	l_2	l_3	l_4	l_5	Location hole H11	Shearing resistance double kN		g
33224.W0515	Stainless 1.4542	5	5,5	11,3	20	25	6,0	20,7	17,6	14,6	5	-	24	14
33224.W0516	Stainless 1.4542	5	5,5	11,3	20	30	6,0	20,7	17,6	14,6	5	-	24	15
33224.W0522	Stainless 1.4542	6	7,0	11,3	20	10	7,0	20,7	17,6	14,6	6	-	35	13
33224.W0523	Stainless 1.4542	6	7,0	11,3	20	15	7,0	20,7	17,6	14,6	6	-	35	14
33224.W0524	Stainless 1.4542	6	7,0	11,3	20	20	7,0	20,7	17,6	14,6	6	-	35	15
33224.W0525	Stainless 1.4542	6	7,0	11,3	20	25	7,0	20,7	17,6	14,6	6	-	35	16
33224.W0526	Stainless 1.4542	6	7,0	11,3	20	30	7,0	20,7	17,6	14,6	6	-	35	17
33224.W0527	Stainless 1.4542	6	7,0	11,3	20	35	7,0	20,7	17,6	14,6	6	-	35	18
33224.W0528	Stainless 1.4542	6	7,0	11,3	20	40	7,0	20,7	17,6	14,6	6	-	35	19
33224.W0529	Stainless 1.4542	6	7,0	11,3	20	45	7,0	20,7	17,6	14,6	6	-	35	20
33224.W0530	Stainless 1.4542	6	7,0	11,3	20	50	7,0	20,7	17,6	14,6	6	-	35	21
33224.W0531	Stainless 1.4542	8	9,5	14,1	25	60	8,2	27,3	22,6	18,6	8	-	63	44
33224.W0534	Stainless 1.4542	8	9,5	14,1	25	20	8,2	27,3	22,6	18,6	8	-	63	28
33224.W0535	Stainless 1.4542	8	9,5	14,1	25	25	8,2	27,3	22,6	18,6	8	-	63	30
33224.W0536	Stainless 1.4542	8	9,5	14,1	25	30	8,2	27,3	22,6	18,6	8	-	63	32
33224.W0537	Stainless 1.4542	8	9,5	14,1	25	35	8,2	27,3	22,6	18,6	8	-	63	34
33224.W0538	Stainless 1.4542	8	9,5	14,1	25	40	8,2	27,3	22,6	18,6	8	-	63	36
33224.W0539	Stainless 1.4542	8	9,5	14,1	25	45	8,2	27,3	22,6	18,6	8	-	63	38
33224.W0540	Stainless 1.4542	8	9,5	14,1	25	50	8,2	27,3	22,6	18,6	8	-	63	40
33224.W0544	Stainless 1.4542	10	12,0	14,1	25	20	9,6	27,3	22,6	18,6	10	-	100	35
33224.W0545	Stainless 1.4542	10	12,0	14,1	25	25	9,6	27,3	22,6	18,6	10	-	100	38
33224.W0546	Stainless 1.4542	10	12,0	14,1	25	30	9,6	27,3	22,6	18,6	10	-	100	40
33224.W0547	Stainless 1.4542	10	12,0	14,1	25	35	9,6	27,3	22,6	18,6	10	-	100	44
33224.W0548	Stainless 1.4542	10	12,0	14,1	25	40	9,6	27,3	22,6	18,6	10	-	100	47
33224.W0549	Stainless 1.4542	10	12,0	14,1	25	45	9,6	27,3	22,6	18,6	10	-	100	50
33224.W0550	Stainless 1.4542	10	12,0	14,1	25	50	9,6	27,3	22,6	18,6	10	-	100	53
33224.W0552	Stainless 1.4542	10	12,0	14,1	25	60	9,6	27,3	22,6	18,6	10	-	100	59
33224.W0565	Stainless 1.4542	12	14,5	17,7	35	25	10,6	33,2	27,3	22,3	12	-	144	69
33224.W0566	Stainless 1.4542	12	14,5	17,7	35	30	10,6	33,2	27,3	22,3	12	-	144	73
33224.W0567	Stainless 1.4542	12	14,5	17,7	35	35	10,6	33,2	27,3	22,3	12	-	144	78
33224.W0568	Stainless 1.4542	12	14,5	17,7	35	40	10,6	33,2	27,3	22,3	12	-	144	82
33224.W0569	Stainless 1.4542	12	14,5	17,7	35	45	10,6	33,2	27,3	22,3	12	-	144	86
33224.W0570	Stainless 1.4542	12	14,5	17,7	35	50	10,6	33,2	27,3	22,3	12	-	144	90
33224.W0572	Stainless 1.4542	12	14,5	17,7	35	60	10,6	33,2	27,3	22,3	12	-	144	99
33224.W0574	Stainless 1.4542	12	14,5	17,7	35	70	10,6	33,2	27,3	22,3	12	-	144	108
33224.W0576	Stainless 1.4542	12	14,5	17,7	35	80	10,6	33,2	27,3	22,3	12	-	144	116
33224.W0590	Stainless 1.4542	20	24,8	23,4	40	60	17,0	43,1	34,5	28,5	20	-	403	261





Material

Type One
Pin: Stainless steel 1.4305 (AISI 303).
Ball: stainless steel 1.3541
Spring: stainless steel.

Type Two
Pin: Stainless steel 1.4542 (AISI 630), precipitation hardened, blast finish. Offering extreme load capacity. (Marked at end of shaft to denote 1.4542 material).
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: aluminium, black (RAL9003).

Technical Notes

Pressing = unlocking.
Releasing = locking.
Temperature resistance -30°C to +150°C
For quick fastening and locking of frequently repeated connections.

Tips

For lanyards & retaining cables see part no. 33250. Easy install locating bushes available see part no. 33248.

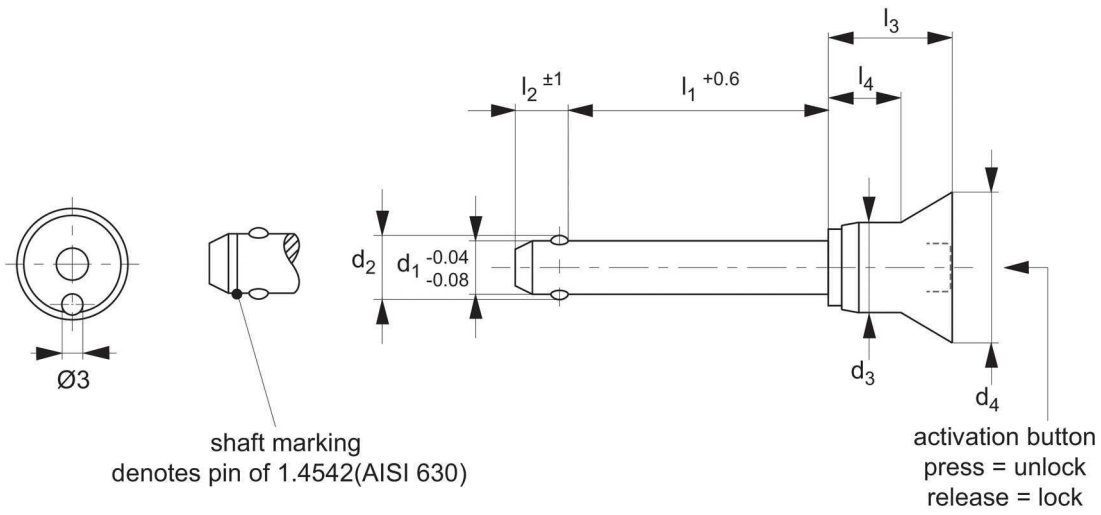
Important Notes

*Shearing resistance similar to DIN 50141.

Ball Lock Pins - Single Acting - Safety Handle

self-locking

33226





Order No. Type One Stainless 1.4305	Order No. Type Two Stainless 1.4542	d_1	l_1	d_2	d_3	d_4	l_2	l_4	l_3	Location hole H11	Shearing resistance, double kN min. 1.4305	Shearing resistance, double kN min. 1.4542	g
33226.W1012	33226.W1512	5	10	5,5	10,3	20	6,0	11,6	21,0	5	14	24	18
33226.W1013	33226.W1513	5	15	5,5	10,3	20	6,0	11,6	21,0	5	14	24	19
33226.W1014	33226.W1514	5	20	5,5	10,3	20	6,0	11,6	21,0	5	14	24	20
33226.W1015	33226.W1515	5	25	5,5	10,3	20	6,0	11,6	21,0	5	14	24	21
33226.W1016	33226.W1516	5	30	5,5	10,3	20	6,0	11,6	21,0	5	14	24	21
33226.W1022	33226.W1522	6	10	7,0	10,3	20	7,0	11,6	21,0	6	21	35	19
33226.W1023	33226.W1523	6	15	7,0	10,3	20	7,0	11,6	21,0	6	21	35	20
33226.W1024	33226.W1524	6	20	7,0	10,3	20	7,0	11,6	21,0	6	21	35	22
33226.W1025	33226.W1525	6	25	7,0	10,3	20	7,0	11,6	21,0	6	21	35	23
33226.W1026	33226.W1526	6	30	7,0	10,3	20	7,0	11,6	21,0	6	21	35	24
33226.W1027	33226.W1527	6	35	7,0	10,3	20	7,0	11,6	21,0	6	21	35	25
33226.W1028	33226.W1528	6	40	7,0	10,3	20	7,0	11,6	21,0	6	21	35	26
33226.W1029	33226.W1529	6	45	7,0	10,3	20	7,0	11,6	21,0	6	21	35	27
33226.W1030	33226.W1530	6	50	7,0	10,3	20	7,0	11,6	21,0	6	21	35	28
33226.W1034	33226.W1534	8	20	9,5	13,3	24	8,2	17,4	27,5	8	38	63	40
33226.W1035	33226.W1535	8	25	9,5	13,3	24	8,2	17,4	27,5	8	38	63	41
33226.W1036	33226.W1536	8	30	9,5	13,3	24	8,2	17,4	27,5	8	38	63	43
33226.W1037	33226.W1537	8	35	9,5	13,3	24	8,2	17,4	27,5	8	38	63	45
33226.W1038	33226.W1538	8	40	9,5	13,3	24	8,2	17,4	27,5	8	38	63	47
33226.W1039	33226.W1539	8	45	9,5	13,3	24	8,2	17,4	27,5	8	38	63	49
33226.W1040	33226.W1540	8	50	9,5	13,3	24	8,2	17,4	27,5	8	38	63	51
33226.W1044	33226.W1544	10	20	12,0	13,3	24	9,6	17,4	27,5	10	60	100	46
33226.W1045	33226.W1545	10	25	12,0	13,3	24	9,6	17,4	27,5	10	60	100	49
33226.W1046	33226.W1546	10	30	12,0	13,3	24	9,6	17,4	27,5	10	60	100	52
33226.W1047	33226.W1547	10	35	12,0	13,3	24	9,6	17,4	27,5	10	60	100	5
33226.W1048	33226.W1548	10	40	12,0	13,3	24	9,6	17,4	27,5	10	60	100	58
33226.W1049	33226.W1549	10	45	12,0	13,3	24	9,6	17,4	27,5	10	60	100	61
33226.W1050	33226.W1550	10	50	12,0	13,3	24	9,6	17,4	27,5	10	60	100	64
33226.W1052	33226.W1552	10	60	12,0	13,3	24	9,6	17,4	27,5	10	60	100	70
33226.W1065	33226.W1565	12	25	14,5	16,5	28	10,6	23,1	33,5	12	87	144	77
33226.W1066	33226.W1566	12	30	14,5	16,5	28	10,6	23,1	33,5	12	87	144	82
33226.W1067	33226.W1567	12	35	14,5	16,5	28	10,6	23,1	33,5	12	87	144	86
33226.W1068	33226.W1568	12	40	14,5	16,5	28	10,6	23,1	33,5	12	87	144	90
33226.W1069	33226.W1569	12	45	14,5	16,5	28	10,6	23,1	33,5	12	87	144	94
33226.W1070	33226.W1570	12	50	14,5	16,5	28	10,6	23,1	33,5	12	87	144	99
33226.W1072	33226.W1572	12	60	14,5	16,5	28	10,6	23,1	33,5	12	87	144	107
33226.W1074	33226.W1574	12	70	14,5	16,5	28	10,6	23,1	33,5	12	87	144	116
33226.W1076	33226.W1576	12	80	14,5	16,5	28	10,6	23,1	33,5	12	87	144	124

Material

Type One -
Pin: Stainless steel 1.4305 (AISI 303).
Ball: stainless steel 1.3541
Spring: stainless steel.
Type Two -
Pin: Stainless steel 1.4542 (AISI 630), precipitation hardened, blast finish. Offering extreme load capacity. (Marked at end of shaft to denote 1.4542 material).
Ball: stainless steel 1.3541
Spring: stainless steel.
Handle: stainless steel.

Technical Notes

Pressing = unlocking.
Releasing = locking.

Handle shape protects against accidental actuation of ball lock pin.
Temperature resistant up to 250°C
For quick fastening and locking of frequently repeated connections.

Tips

For lanyards & retaining cables see part no. 33250. Easy install locating bushes available see part no. 33248.

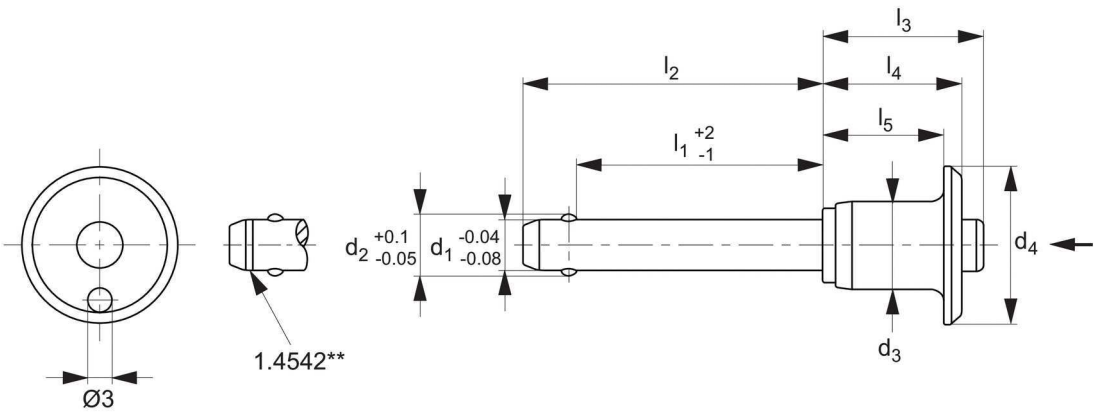
Important Notes

*Shearing resistance similar to DIN 50141.

Clamp Lock Pins - Single Acting

button handle - stainless steel

33230





Order No.	d_1	Type	l_1	d_2	d_3	d_4	l_2	l_4	l_3	Location hole tol. H11	Shearing resistance double kN min. 1.4305	Shearing resistance double kN min. 1.4542	g
33230.W0022	6	Type One Stainless 1.4305	10	6,2	11,3	20	17,4	20,7	17,6	6	21	35	13
33230.W0122	6	Type Two Stainless 1.4542	10	6,2	11,3	20	17,4	20,7	17,6	6	21	35	13
33230.W0024	6	Type One Stainless 1.4305	20	6,2	11,3	20	27,4	20,7	17,6	6	21	35	15
33230.W0124	6	Type Two Stainless 1.4542	20	6,2	11,3	20	27,4	20,7	17,6	6	21	35	15
33230.W0028	6	Type One Stainless 1.4305	40	6,2	11,3	20	47,4	20,7	17,6	6	21	35	19
33230.W0128	6	Type Two Stainless 1.4542	40	6,2	11,3	20	47,4	20,7	17,6	6	21	35	19
33230.W0032	6	Type One Stainless 1.4305	60	6,2	11,3	20	67,4	20,7	17,6	6	21	35	23
33230.W0132	6	Type Two Stainless 1.4542	60	6,2	11,3	20	67,4	20,7	17,6	6	21	35	23
33230.W0042	8	Type One Stainless 1.4305	10	8,3	14,1	25	18,6	27,3	22,6	8	38	63	25
33230.W0142	8	Type Two Stainless 1.4542	10	8,3	14,1	25	18,6	27,3	22,6	8	38	63	25
33230.W0044	8	Type One Stainless 1.4305	20	8,3	14,1	25	28,6	27,3	22,6	8	38	63	28
33230.W0144	8	Type Two Stainless 1.4542	20	8,3	14,1	25	28,6	27,3	22,6	8	38	63	28
33230.W0048	8	Type One Stainless 1.4305	40	8,3	14,1	25	48,6	27,3	22,6	8	38	63	36
33230.W0148	8	Type Two Stainless 1.4542	40	8,3	14,1	25	48,6	27,3	22,6	8	38	63	36
33230.W0052	8	Type One Stainless 1.4305	60	8,3	14,1	25	68,6	27,3	22,6	8	38	63	43
33230.W0152	8	Type Two Stainless 1.4542	60	8,3	14,1	25	68,6	27,3	22,6	8	38	63	43
33230.W0056	8	Type One Stainless 1.4305	80	8,3	14,1	25	88,6	27,3	22,6	8	38	63	51
33230.W0156	8	Type Two Stainless 1.4542	80	8,3	14,1	25	88,6	27,3	22,6	8	38	63	51
33230.W0062	10	Type One Stainless 1.4305	20	10,3	14,1	25	30,0	27,3	22,6	10	60	100	35
33230.W0162	10	Type Two Stainless 1.4542	20	10,3	14,1	25	30,0	27,3	22,6	10	60	100	35
33230.W0066	10	Type One Stainless 1.4305	40	10,3	14,1	25	50,0	27,3	22,6	10	60	100	47
33230.W0166	10	Type Two Stainless 1.4542	40	10,3	14,1	25	50,0	27,3	22,6	10	60	100	47
33230.W0070	10	Type One Stainless 1.4305	60	10,3	14,1	25	70,0	27,3	22,6	10	60	100	58
33230.W0170	10	Type Two Stainless 1.4542	60	10,3	14,1	25	70,0	27,3	22,6	10	60	100	58
33230.W0072	10	Type One Stainless 1.4305	80	10,3	14,1	25	100,0	27,3	22,6	10	60	100	70
33230.W0172	10	Type Two Stainless 1.4542	80	10,3	14,1	25	100,0	27,3	22,6	10	60	100	70
33230.W0074	10	Type One Stainless 1.4305	100	10,3	14,1	25	120,0	27,3	22,6	10	60	100	83
33230.W0174	10	Type Two Stainless 1.4542	100	10,3	14,1	25	120,0	27,3	22,6	10	60	100	83

Material

Type One
Pin: Stainless steel 1.4305 (AISI 303).
Type Two
Pin: Stainless steel 1.4542 (AISI 630), precipitation hardened.
Both
Handle: Aluminium, black.
Button: Stainless steel, yellow.
Spring: Stainless steel.

Technical Notes

Not suitable for lifting loads.
Corrosion resistant.
Press button = unlocking.
Release button = clamping.
For securing in blind holes H_{11}.
Temperature range -30 to 150°C.
Quick fastening , adjusting and locking of frequently repeated connections.

Tips

Used with:
33250: Lanyards & retaining cables

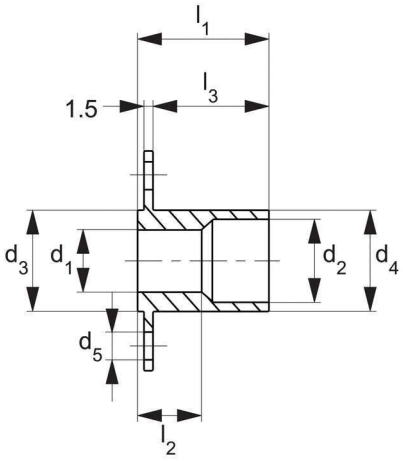
Important Notes

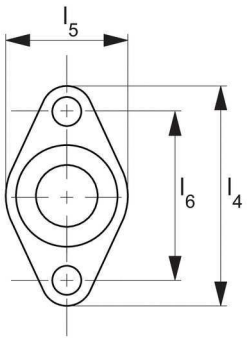
*Shearing resistance similar to DIN 50141.

Flange Bushings for Ball Lock pins

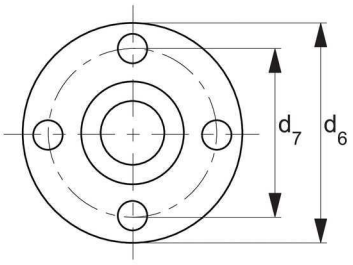
stainless steel

33246





oval flange



round flange





Order No.	Type	For nom. pin dia	d_1 tol. H11	d_2	d_3 -0,05	d_4 -0,1	d_5	d_6	d_7	l_1	l_2	l_3	l_4	l_5	l_6	g
33246.W0305	Oval flange	5	5	8	10	9,9	3,4	-	-	12	5,4	9,5	25	15	19	6
33246.W0306	Oval flange	6	6	8	10	9,9	3,4	-	-	13	5,3	10,5	25	15	19	6
33246.W0308	Oval flange	8	8	10	12	11.9	4,5	-	-	19	10,3	16,5	30	18	22	10
33246.W0310	Oval flange	10	10	13	16	15,9	4,5	-	-	21	10,2	18,5	35	20	27	19
33246.W0312	Oval flange	12	12	15	19	18,9	4,5	-	-	27	15,2	24,5	40	24	30	34
33246.W0316	Oval flange	16	16	20	24	23,9	5,5	-	-	30	15,3	27,5	50	30	40	52
33246.W0405	Round flange	5	5	8	10	9,9	3,4	25	19	12	5,4	9,5	-	-	-	9
33246.W0406	Round flange	6	6	8	10	9,9	3,4	25	19	13	5,3	10,5	-	-	-	9
33246.W0408	Round flange	8	8	10	12	11,9	4,5	30	22	19	10,3	16,5	-	-	-	14
33246.W0410	Round flange	10	10	13	16	15,9	4,5	35	27	21	10,2	18,5	-	-	-	24
33246.W0412	Round flange	12	12	15	19	18,9	4,5	40	30	27	15,2	24,5	-	-	-	41
33246.W0416	Round flange	16	16	20	24	23,9	5,5	50	40	30	15,3	27,5	-	-	-	63

Material

Body: stainless steel 1.4305. (AISI 303).

Technical Notes

For quick and safe location of single acting ball lock pins - especially in soft materials such as aluminium, or in thin walled components.
Can be used from both sides.
Optimised centering due to precision collar on bush.

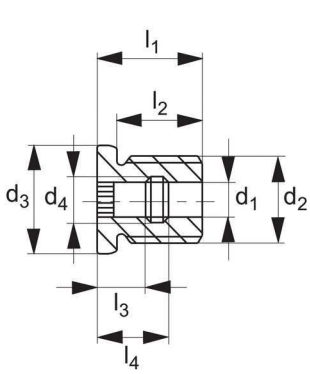
Tips

For use with our wide range of metric ball lock pins, see part no.'s 33060 through to 33226.

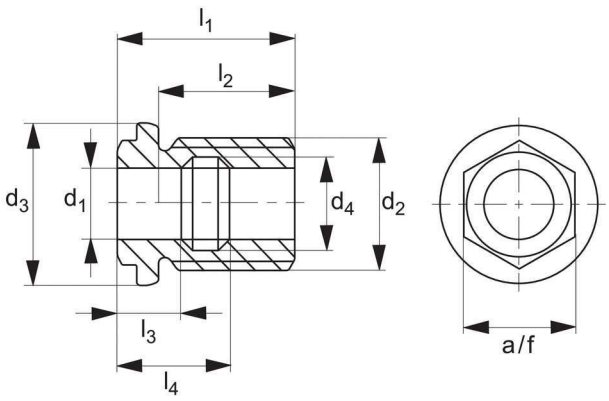
Locating Bushes

for ball lock pins

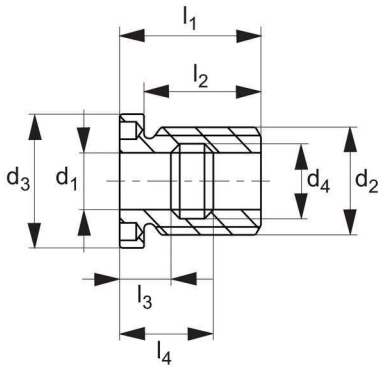
33248

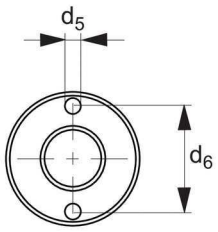


internal hexagon



external hexagon





plain



Order No.	Type	d_1 H11	d_2	d_3 h9	d_4	d_5	d_6	g
33248.W0905	Int Hex	5	M12	18	6,0	-	-	15
33248.W0906	Int Hex	6	M12	18	7,5	-	-	13
33248.W0908	Int Hex	8	M16	22	10,0	-	-	29
33248.W0910	Int Hex	10	M24	30	12,5	-	-	75
33248.W0912	Int Hex	12	M24	30	15,0	-	-	66
33248.W0916	Ext Hex	16	M30	36	19,5	-	-	124
33248.W0920	Ext Hex	20	M36	45	25,5	-	-	208
33248.W0924	Ext Hex	25	M42	50	32,0	-	-	415
33248.W0925	Plain	16	M30	39	19,5	5,1	30	160
33248.W0926	Plain	20	M36	43	25,5	5,1	30	257
33248.W0927	Plain	25	M42	50	32,0	5,1	36	434

Order No.	l_1	l_2	l_3	l_4	l_5	l_6	a/f
33248.W0905	19	15	9,0	13,0	5,1	9,0	5
33248.W0906	19	15	9,4	13,0	5,6	8,8	6
33248.W0908	25	20	12,0	17,0	7,3	11,7	8
33248.W0910	29	24	13,5	19,5	8,9	14,1	10
33248.W0912	29	24	14	20	9,6	14,4	12
33248.W0916	39	29	15,5	23,5	6,1	12,8	24
33248.W0920	49	38	17,5	31,5	7,7	19,3	30
33248.W0924	65	50	26,5	38,5	13,3	21,8	36
33248.W0925	39	33	15,5	23,5	10,4	16,6	-
33248.W0926	49	42	17,5	31,5	11,9	23,1	-
33248.W0927	65	57	26,5	38,5	13,3	21,8	

Material

Body: stainless steel 1.4305. (AISI 303).

Technical Notes

For quick and safe location of single acting ball lock pins - especially in soft materials such as aluminium, or in thin walled components.
Can be used from both sides.
Optimised centering due to precision collar on bush.

Important Notes

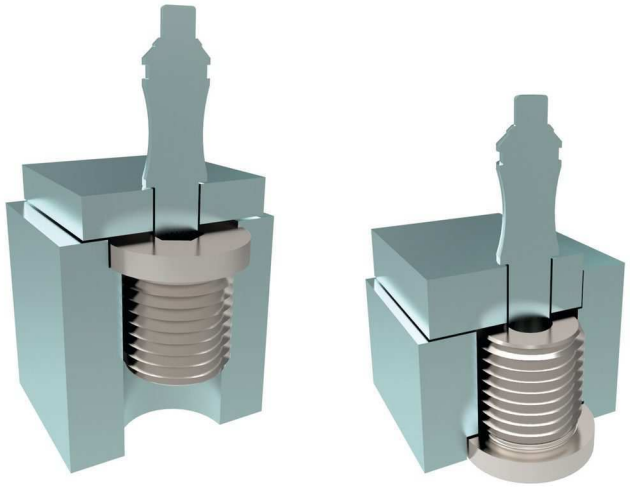
l_5 and l_6 refer to depths of ball locating recess when bush is installed flange collar up, or flange collar inverted (see diagram below).
Use pin face spanner with 5mm pin to install pin mount bushings.

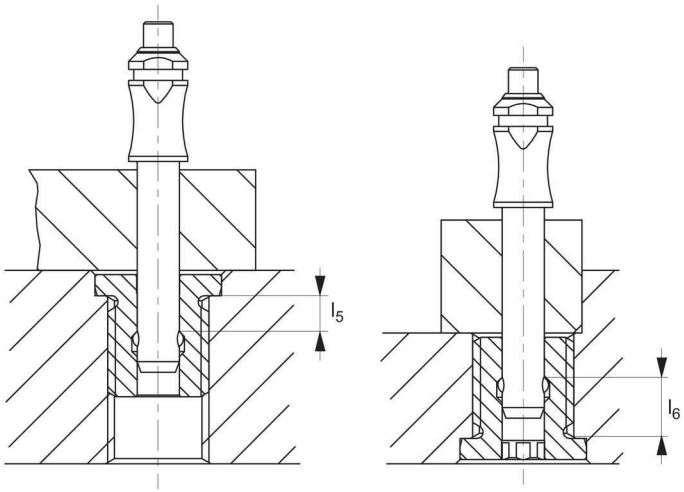
STAINLESS STEEL 303

Locating Bushes

for ball lock pins

33248







Material

Body: stainless steel 1.4305. (AISI 303).

Technical Notes

For quick and safe location of single acting ball lock pins - especially in soft materials such as aluminium, or in thin walled components.
Can be used from both sides.
Optimised centering due to precision collar on bush.

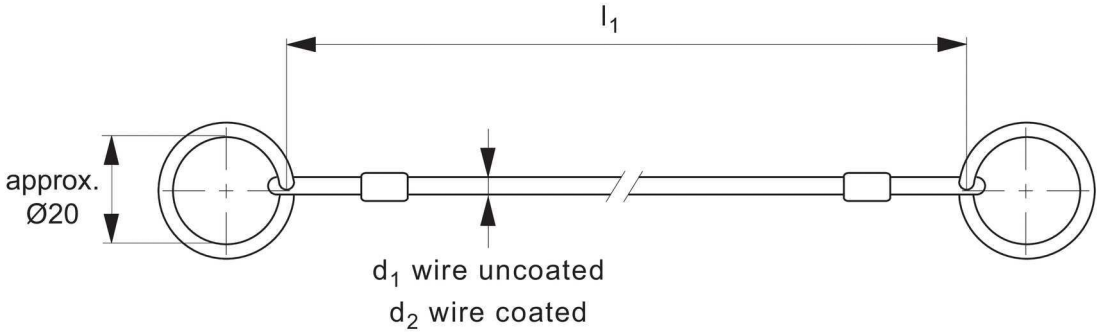
Important Notes

l_5 and l_6 refer to depths of ball locating recess when bush is installed flange collar up, or flange collar inverted (see diagram below).
Use pin face spanner with 5mm pin to install pin mount bushings.

Lanyard - Loop to Loop

with split rings - crimps stainless

33250





Order No.	Coating	d_1 wire uncoated	l_1	d_2 wire coated	g
33250.W0940	Black	1,5	150	2,2	6,5
33250.W0941	Black	1,5	200	2,2	6,4
33250.W0943	Black	1,5	300	2,2	7,5
33250.W0950	Clear	1,5	150	2,2	6,5
33250.W0952	Clear	1,5	200	2,2	6,4
33250.W0956	Clear	1,5	300	2,2	7,5
33250.W0930	Uncoated	1,5	150	-	6,5
33250.W0931	Uncoated	1,5	200	-	6,4
33250.W0933	Uncoated	1,5	300	-	7,5

Material
Wire rope: stainless steel
Coating (if present): PA6 see table.
Crimps /sleeves: stainless steel
Split rings: stainless steel

Technical Notes
Crimps tested to failure at 28 Kgf.
Temperature range: up to 250°C (uncoated)

Tips
For use in securing components to assemblies, or to avoid items being misplaced. For our wide range of quick release pins nos. 33060 through 33226.

33060 -33250

Wixroyd Ball Lock Pins

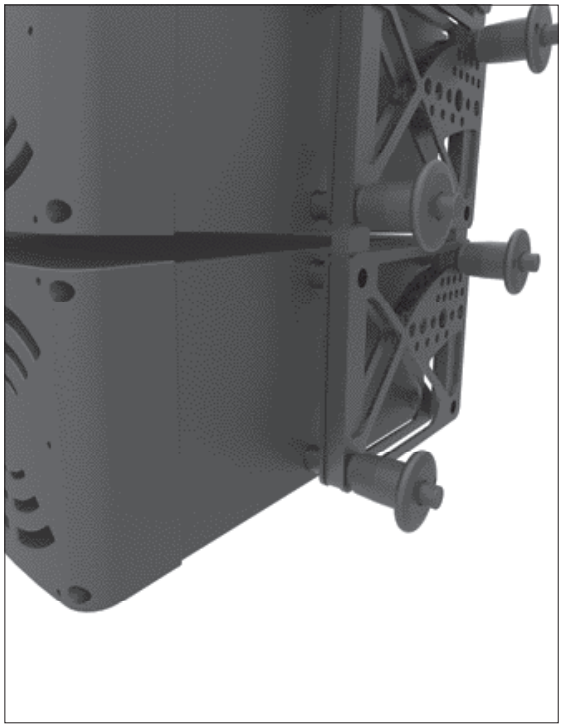
applications

Sound rigging systems

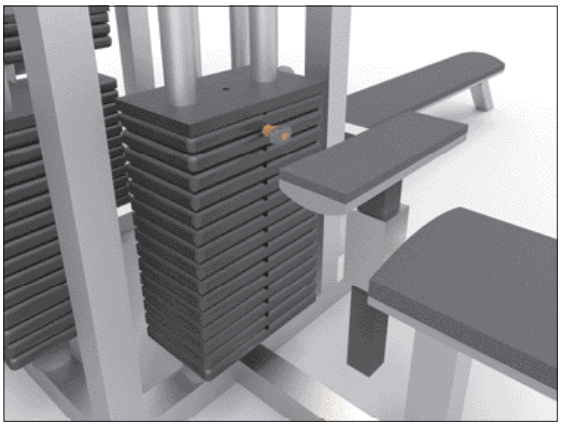
Ball lock pins on a sound rigging system. Offering secure fixing with high shear forces and easy fitting for operators at heights.

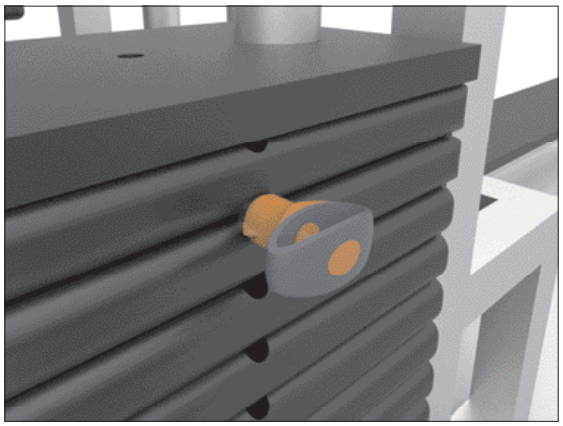
In addition full black powder coating of grip and actuation button eliminates glare from other stage lighting.



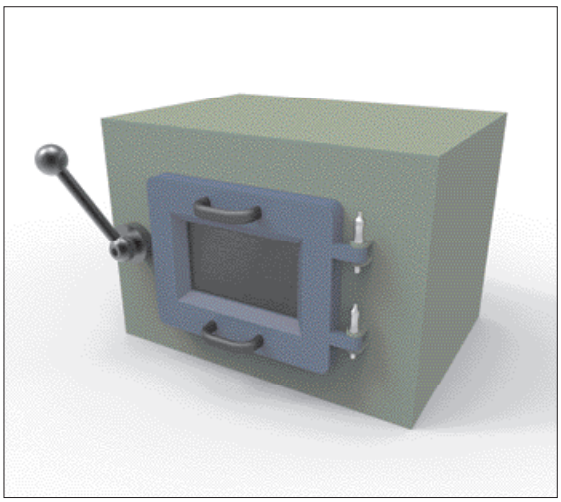


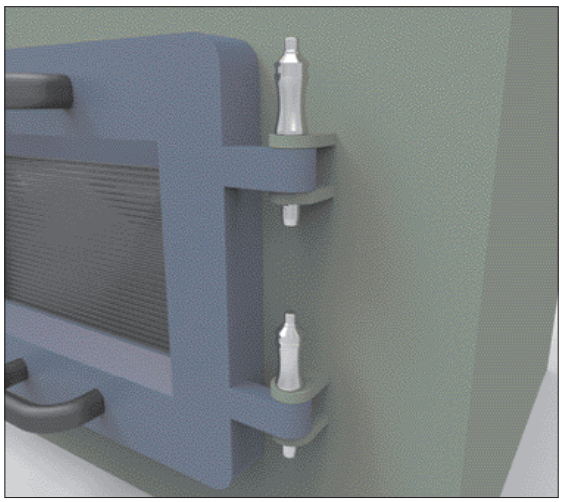
Gym equipment





Scientific and medical





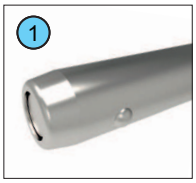
Wixroyd 0845 26 66 577 info@wixroyd.com

Wixroyd Ball Lock Pins

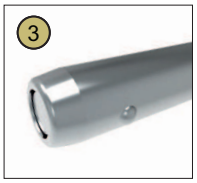
features

Pin material

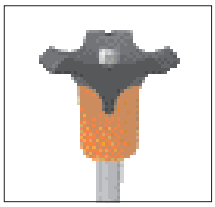
1. 1.4305 (AISI 303) - shear force approx. 60% of higher material version 1.4542
2. 1.4542 (AISI 630) - identified by the ridge on the pin
3. CRES 17-4PH (AMS 5643) aviation standard







Handle style

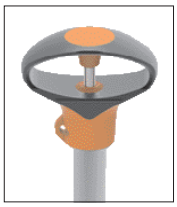

Plastic tri-star


T-handled, metal


L-handled, metal


Mushroom, metal


Single piece metal, contoured


Special plastic self-spring


Adjustable grip length, plastic


Key ring


Safety, metal


Mushroom Type B aviation


Type R aviation

Lanyards and locating bushes


Stainless wire - (coated) - 2 x key ring


Stainless wire - Key ring and fixing loop

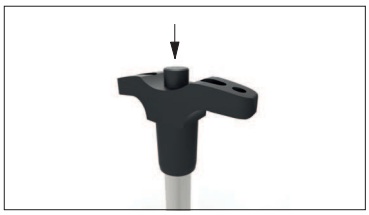

Plastic - 2 x cable tie

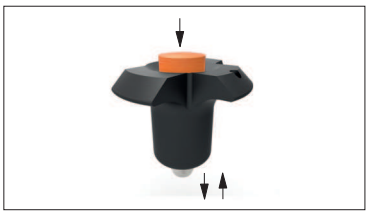

Steel wire - (coated) - 2 x key ring


Stainless bead chain - 2 x key ring


Locating bushes

Actuation


Press = unlock
Release = lock
(standard)


Press = unlock and position
Release = lock and simultaneous clamp

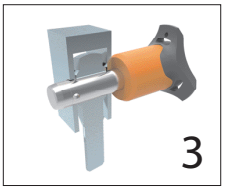

Simple spring loaded balls "pullout pin"

Important note

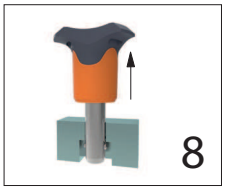
Important Note: Ball lock pins are not suited to lifting applications!

For quick release lifting pins, see part 33400.





Shear force



Lifting force

Special variations



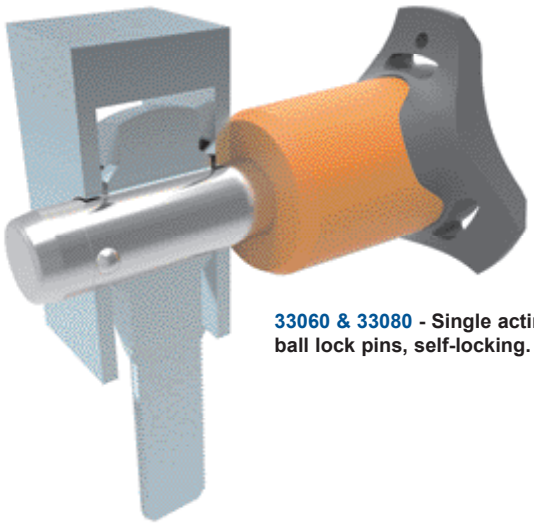


Variations on our standard designs are possible, please contact our sales team for technical assistance. Quick production on specials can be as little as 3 weeks.

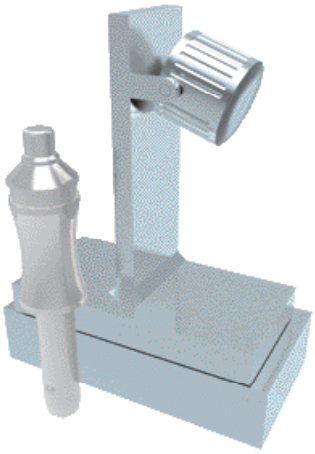
Wixroyd Ball Lock Pins

Applications

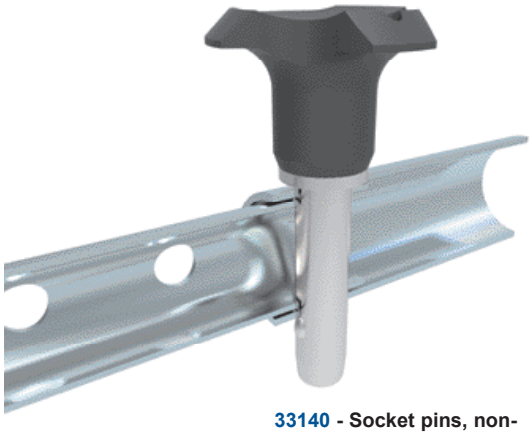
- Positioning.
- Lifting.
- Locking.
- Indexing.
- Joining.



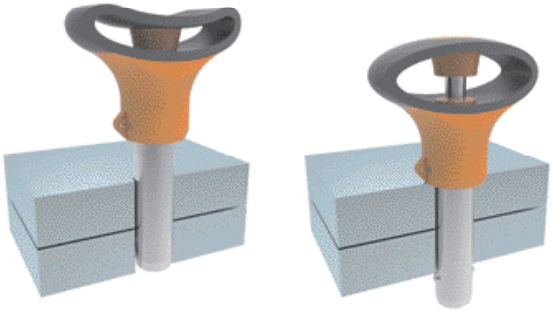
33060 & 33080 - Single acting ball lock pins, self-locking.



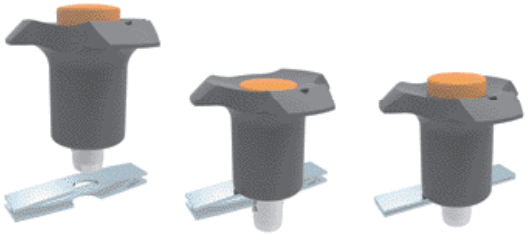
33194 - Single acting ball lock pins, self locking, simple finish.



33140 - Socket pins, non-locking, spring loaded balls.



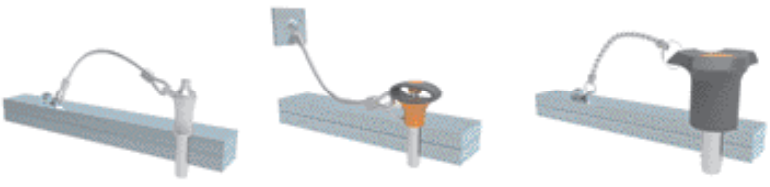
33100 - Single acting ball lock pin, self locking.



33180 - Clamping pins, with span compensation, self-locking.



33220 - Ball lock pins, single acting - L-handle



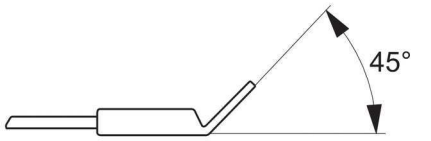
33250 & 33270 - Lanyards.

Wixroyd 0845 26 66 577 info@wixroyd.com

Lanyard - Eyelet to Loop

with split rings - crimps stainless

33251





Order No.	Coating	d_1 wire uncoated	l_1	d_2 wire uncoated	Ø a	g
33251.W0945	Black	1,5	150	2,0	4,8	6,9
33251.W0946	Black	1,5	200	2,0	4,8	7,6
33251.W0948	Black	1,5	300	2,0	4,8	8,6
33251.W0960	Clear	1,5	150	2,0	4,8	6,9
33251.W0962	Clear	1,5	200	2,0	4,8	7,6
33251.W0966	Clear	1,5	300	2,0	4,8	8,6
33251.W0935	Uncoated	1,5	150	2,0	4,8	6,9
33251.W0936	Uncoated	1,5	200	2,0	4,8	7,6
33251.W0938	Uncoated	1,5	300	2,0	4,8	8,6

Material

Wire rope: stainless steel.
Coating (if present): PA6, see table.
Crimps /sleeves: stainless steel.
Eyelet and split ring: stainless steel.

Technical Notes

Crimps tested for failure at 28 Kgf.
Temperature range: up to 250°C (uncoated).

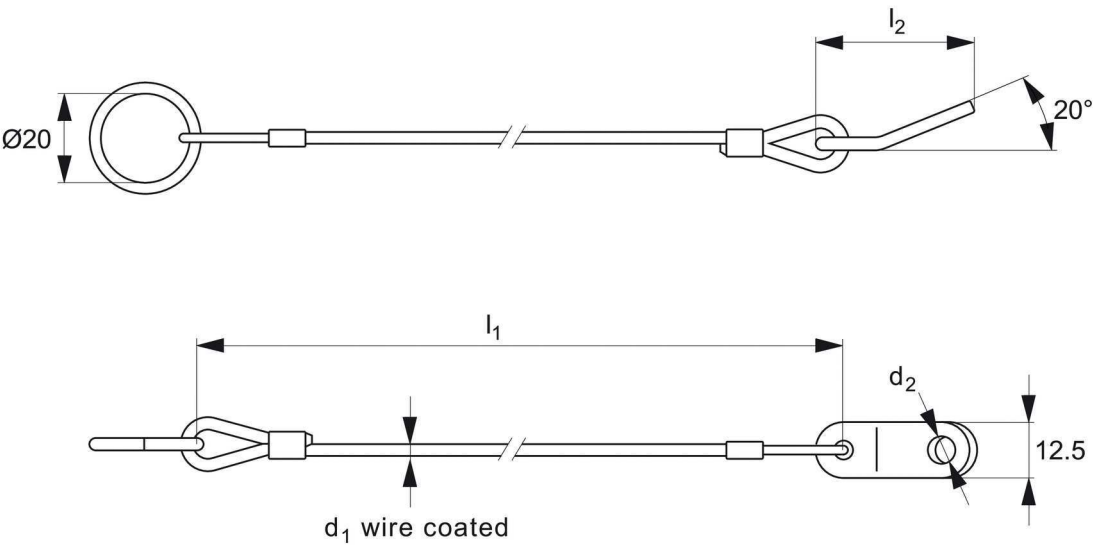
Tips

For use in securing components to assemblies, or to avoid items being misplaced. For our wide range of quick release pins nos. 33060 through 33226.

Lanyard - Split Ring to Rectangle Tab

crimps brass, tab stainless steel

33252





Order No.	Coating	d_1 wire coated	l_1	d_2	l_2	g
33252.W1301	Green	2,4	150	294,9	29	13
33252.W1302	Green	2,4	200	4,9	29	14
33252.W1303	Green	2,4	300	4,9	29	16

Material

Wire rope: stainless steel.
Coating: thermoplastic, PVC, green transparent
Crimps: brass, zinc plated.
Tabs: stainless steel
Split ring: stainless steel.

Technical Notes

Temperature range up to 80°C.

Tips

For use in securing components to assemblies, or to avoid items being misplaced. For our wide range of quick release pins nos.33060 through 33226.

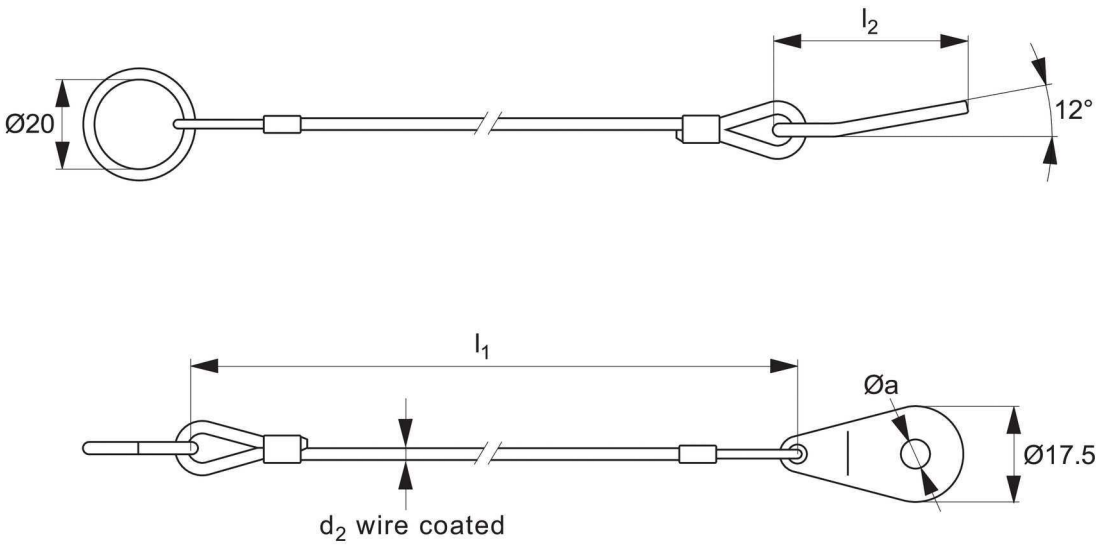
Important Notes

Conform to military spec MIL-DTL-83420 specification

Lanyard - Ring to Teardrop Tab

crimps brass - tab stainless steel

33253





Order No.	Coating	d_2 wire coated	l_1	Ø a	l_2	g
33253.W1311	Green	2,4	150	4,9	33	13,0
33253.W1312	Green	2,4	200	4,9	33	14,0
33253.W1313	Green	2,4	300	4,9	33	16,0

Material
Wire rope: stainless steel.
Coating: thermoplastic, PVC, green transparent
Crimps: brass, zinc plated.
Tabs: stainless steel
Split ring: stainless steel.

Technical Notes
Temperature range up to 80°C.

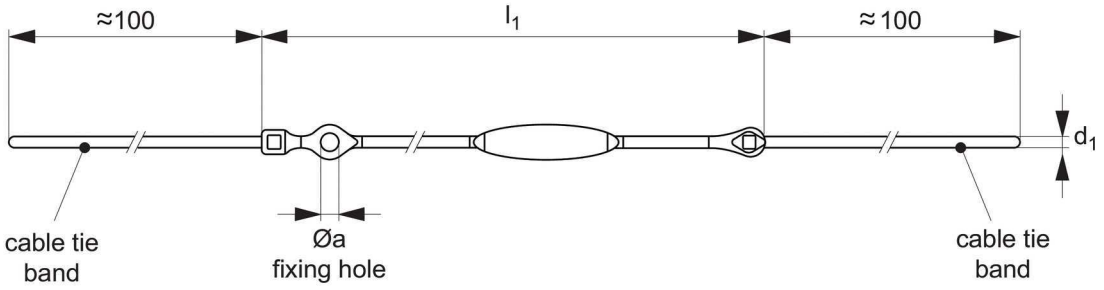
Tips
For use in securing components to assemblies, or to avoid items being misplaced. For our wide range of quick release pins nos.33060 through 33226.

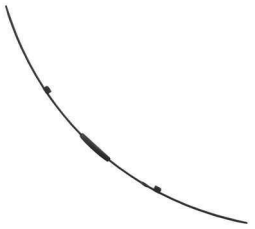
Important Notes
Conform to military spec MIL-DTL-83420 specification

Lanyard - Cable Tie Loop

thermoplastic

33260





Order No.	Coating	d_1	l_1	Øa	g
33260.W0970	n/a	2,5	150	4,2	2,1
33260.W0974	n/a	2,5	250	4,2	2,7

Material

Thermoplastic PA6, grey.

Technical Notes

Temperature range up to 80°C offers two fixing alternatives:
- Cable tie at both ends
- Cable tie one end and fixing hole at other to secure with M4 screw.

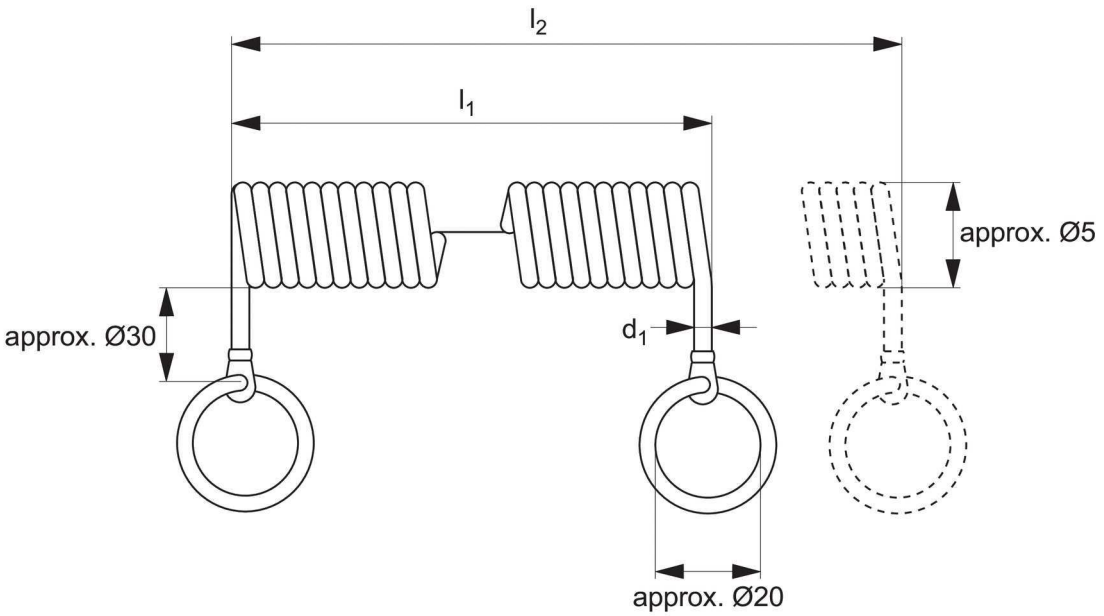
Tips

For use in securing components to assemblies, or to avoid items being misplaced.

Lanyard - Spiral Wire with Split Rings

crimps brass, zinc plated

33261





Order No.	PUR coating	d_1	l_1 retracted	l_2 extended	g
33261.W0980	Black	1,5	100	600	11,5
33261.W0982	Black	1,5	200	1200	17,4

Material

Wire rope: steel.
Coating: PUR, thermoplastic.
Eyelet: brass, zinc plated.
Split ring: stainless steel.

Technical Notes

Temperature range up to 80°C.
Coiled sprung wire offers high extended length in a compact design.

Tips

For use in securing components to assemblies, or to avoid items being misplaced.
For our wide range of quick release pins, part nos. 33060 to 33226.

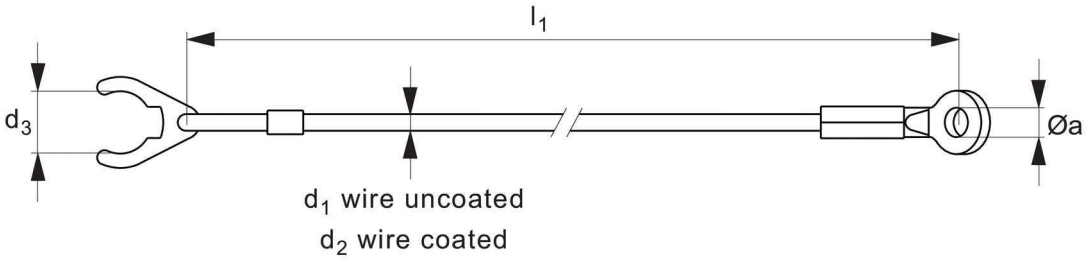
Lanyard - Circlip End to Eyelet

crimps brass, tabs stainless steel

33265







Material
Wire rope: stainless steel.
Coating (if present): PVC, see table.
Crimps/sleeves: brass.
Eyelet, circlip end and split ring: stainless steel.

Technical Notes
Designed specifically to hold ball lock pin 33194.

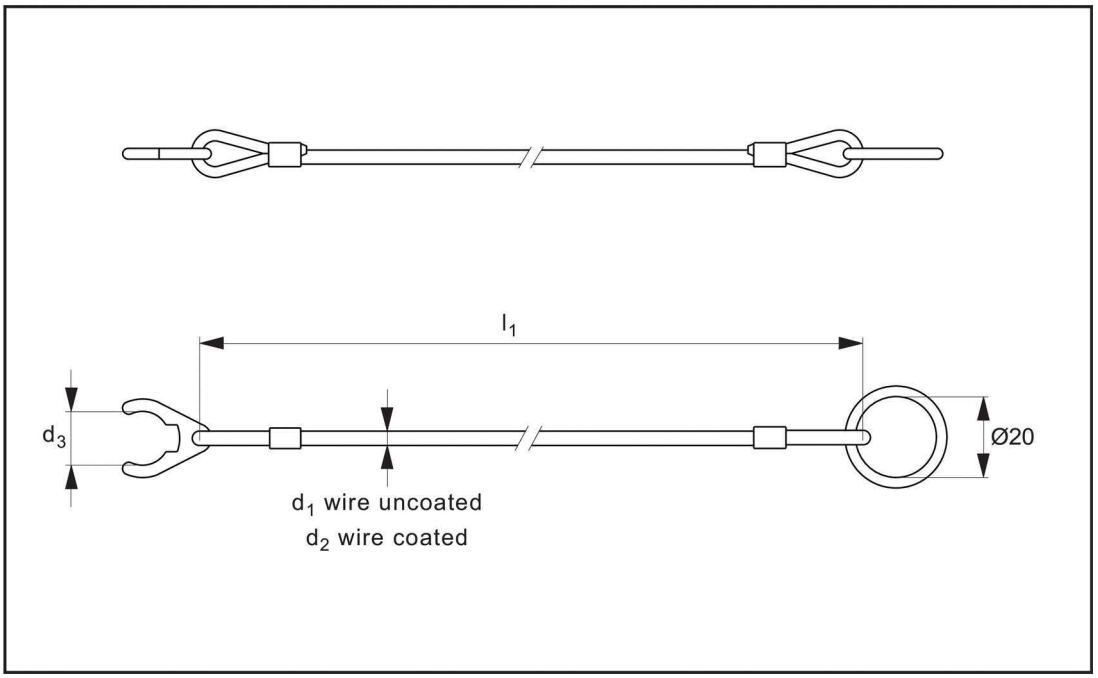
Important Notes
Assemble by attaching holding clips to the ball lock pin with a soft-face mallet, disassemble via levering off with a screw driver.

Order No.	Coating	d_1 wire uncoated	l_1	d_2 wire coated	Ø a	d_5 for use with part no. 33914 of pin dia d_1	g
33265.W1001	Clear	1,5	150	2,0	4,8	5/ 6	6,0
33265.W1021	Clear	1,5	200	2,0	4,8	5/ 6	7,0
33265.W1041	Clear	1,5	300	2,0	4,8	5/ 6	8,0
33265.W1061	Clear	1,5	150	4,8	2,0	8/10	7,0
33265.W1002	Clear	1,5	200	2,0	4,8	8/10	8,0
33265.W1022	Clear	1,5	200	2,0	4,8	8/10	9,0
33265.W1042	Clear	1,5	150	2,0	4,8	12/16	8,0
33265.W1062	Clear	1,5	200	2,0	4,8	12/16	9,0
33265.W1003	Clear	1,5	300	2,0	4,8	12/16	10,0
33265.W1023	Clear	1,5	150	2,0	4,8	20/25	12,0
33265.W1043	Clear	1,5	200	2,0	4,8	20/25	13,0
33265.W1063	Clear	1,5	300	2,0	4,8	20/25	14,0
33265.W1101	Black	1,5	150	2,0	4,8	5/ 6	6,0
33265.W1121	Black	1,5	200	2,0	4,8	5/ 6	7,0
33265.W1141	Black	1,5	300	2,0	4,8	5/ 6	8,0
33265.W1161	Black	1,5	150	2,0	4,8	8/10	7,0
33265.W1102	Black	1,5	200	2,0	4,8	8/10	8,0
33265.W1122	Black	1,5	300	2,0	4,8	8/10	9,0
33265.W1142	Black	1,5	150	2,0	4,8	12/16	8,0
33265.W1162	Black	1,5	200	2,0	4,8	12/16	9,0
33265.W1103	Black	1,5	300	2,0	4,8	12/16	10,0
33265.W1123	Black	1,5	150	2,0	4,8	20/25	12,0
33265.W1143	Black	1,5	200	2,0	4,8	20/25	13,0
33265.W1163	Black	1,5	300	2,0	4,8	20/25	14,0
33265.W1201	Uncoated	1,5	150	-	4,8	5/ 6	6,0
33265.W1221	Uncoated	1,5	200	-	4,8	5/ 6	7,0
33265.W1241	Uncoated	1,5	300	-	4,8	5/ 6	8,0
33265.W1261	Uncoated	1,5	150	-	4,8	8/10	7,0
33265.W1202	Uncoated	1,5	200	-	4,8	8/10	8,0
33265.W1222	Uncoated	1,5	300	-	4,8	8/10	9,0
33265.W1242	Uncoated	1,5	200	-	4,8	12/16	8,0
33265.W1262	Uncoated	1,5	200	-	4,8	12/16	9,0
33265.W1203	Uncoated	1,5	300	-	4,8	12/16	10,0
33265.W1223	Uncoated	1,5	150	-	4,8	20/25	12,0
33265.W1243	Uncoated	1,5	200	-	4,8	20/25	13,0
33265.W1263	Uncoated	1,5	300	-	4,8	20/25	14,0

Lanyard - Circlip End to Loop with Split Ring

crimps brass, tabs stainless steel, for ball lock pins 33194

33266





Material
Wire rope: stainless steel.
Coating (if present): PA6, see table.
Crimps/sleeves: brass.
Circlip end and split ring: stainless steel.

Technical Notes
Designed specifically to hold ball lock pin 33194.

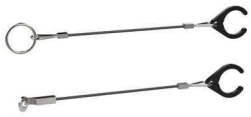
Important Notes
Assemble by attaching holding clips to the ball lock pin with a soft-face mallet, disassemble via levering off with a screw driver.

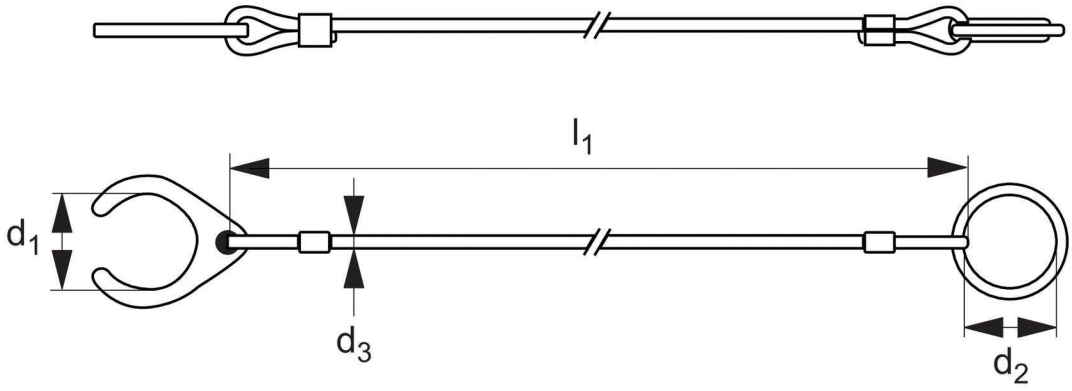
Order No.	Coating	d_1 wire uncoated	l_1	d_2 wire coated	d_5 for use with part no. 33914 of pin dia d_1	g
33266.W1011	Clear	1,5	150	2,0	5/ 6	6,0
33266.W1031	Clear	1,5	200	2,0	5/ 6	7,0
33266.W1051	Clear	1,5	300	2,0	5/ 6	8,0
33266.W1071	Clear	1,5	150	2,0	8/10	7,0
33266.W1012	Clear	1,5	200	2,0	8/10	8,0
33266.W1032	Clear	1,5	300	2,0	8/10	9,0
33266.W1052	Clear	1,5	150	2,0	12/16	8,0
33266.W1072	Clear	1,5	200	2,0	12/16	9,0
33266.W1013	Clear	1,5	300	2,0	12/16	10,0
33266.W1033	Clear	1,5	150	2,0	20/25	12,0
33266.W1053	Clear	1,5	200	2,0	20/25	13,0
33266.W1073	Clear	1,5	300	2,0	20/25	14,0
33266.W1111	Black	1,5	150	2,0	5/ 6	6,0
33266.W1131	Black	1,5	200	2,0	5/ 6	7,0
33266.W1151	Black	1,5	300	2,0	5/ 6	8,0
33266.W1171	Black	1,5	150	2,0	8/10	7,0
33266.W1112	Black	1,5	200	2,0	8/10	8,0
33266.W1132	Black	1,5	300	2,0	8/10	9,0
33266.W1152	Black	1,5	150	2,0	12/16	8,0
33266.W1172	Black	1,5	200	2,0	12/16	9,0
33266.W1113	Black	1,5	300	2,0	12/16	10,0
33266.W1133	Black	1,5	150	2,0	20/25	12,0
33266.W1153	Black	1,5	200	2,0	20/25	13,0
33266.W1173	Black	1,5	300	2,0	20/25	14,0
33266.W1211	Uncoated	1,5	150	-	5/ 6	6,0
33266.W1231	Uncoated	1,5	150	-	5/ 6	7,0
33266.W1251	Uncoated	1,5	300	-	5/ 6	8,0
33266.W1271	Uncoated	1,5	150	-	8/10	7,0
33266.W1212	Uncoated	1,5	200	-	8/10	8,0
33266.W1232	Uncoated	1,5	300	-	8/10	9,0
33266.W1252	Uncoated	1,5	150	-	12/16	8,0
33266.W1272	Uncoated	1,5	200	-	12/16	9,0
33266.W1213	Uncoated	1,5	300	-	12/16	10,0
33266.W1233	Uncoated	1,5	150	-	20/25	12,0
33266.W1253	Uncoated	1,5	200	-	20/25	13,0
33266.W1273	Uncoated	1,5	300	-	20/25	14,0

Retaining Cable

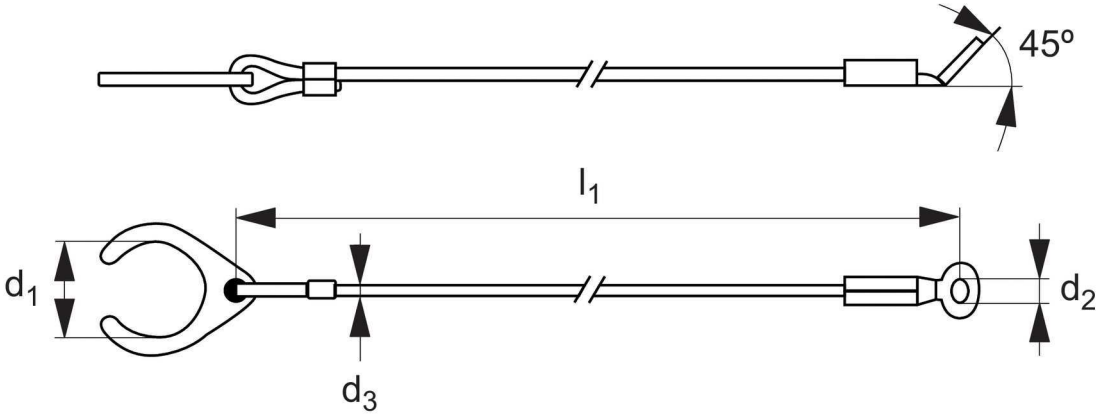
with holding clip for no. 33331

33268





type 1 - retaining ring



type 2 - eyelet

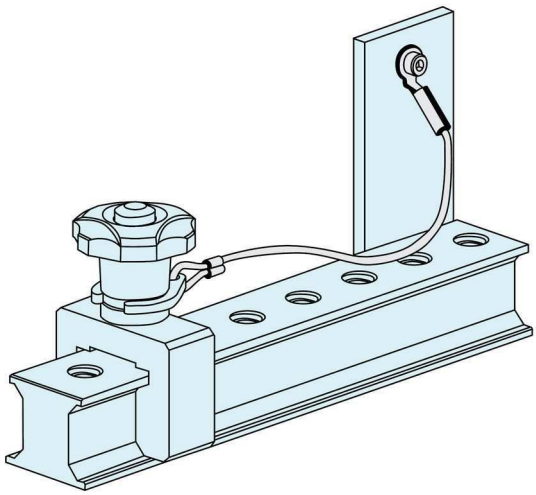
Material

Split ring or eyelet: stainless steel.
Holding circlip: thermoplastic PA 6, black.
Wire rope: stainless steel.
Coating: thermoplastic PA 6, black.

Technical Notes

Retaining cables designed specifically for use with threaded lock pin no. 33331. Lanyard prevents accidental loss of pin from application.

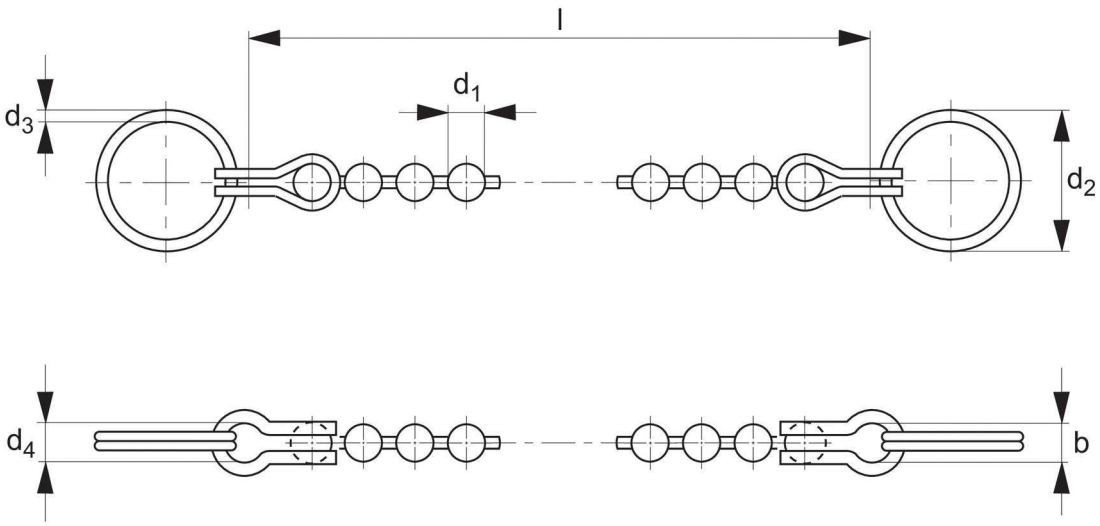
Order No.	Type	l_1	To suite lock pin 33331	d_1	d_2	d_3 Wire coated	g
33268.W6001	1	150	M 8 to M16	20,3	20,3	2	6
33268.W6002	1	200	M 8 to M16	20,3	20,3	2	7
33268.W6003	1	300	M 8 to M16	20,3	20,3	2	8
33268.W6011	2	150	M 8 to M16	20,3	4,8	2	6
33268.W6012	2	200	M 8 to M16	20,3	4,8	2	7
33268.W6013	2	300	M 8 to M16	20,3	4,8	2	8



Retaining Bead Chain

stainless steel

33270





Material

Bead chain: stainless steel AISI 304, polished.
End attachments: brass, nickel plated.
Split rings: stainless steel.

Technical Notes

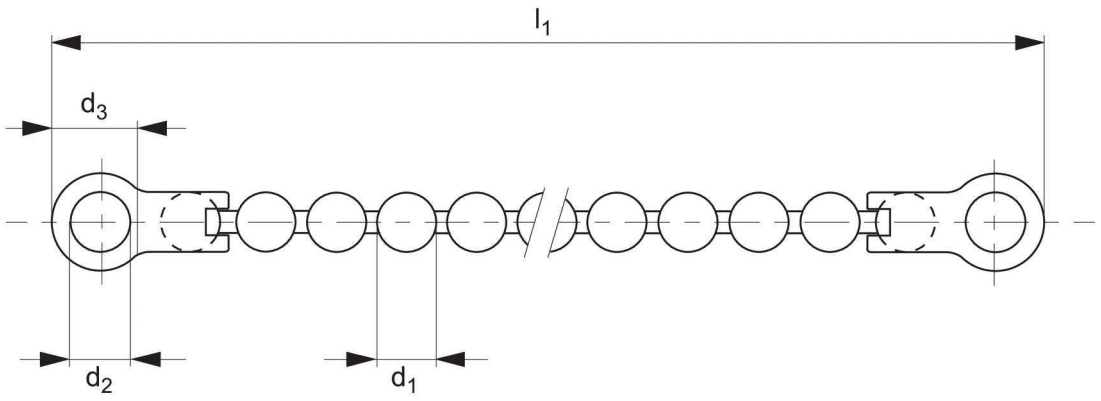
Retaining chains secure single-acting ball lock pins against possible loss.
Other chain lengths available on request.

Order No.	Length l	d_1	Min. breaking strength Kg	d_4	b	Ring thickness d_3	Ring dia. d_2
33270.W0200	200	3.2	20	3.5	6	1.52	24
33270.W0350	350	3.2	20	3.5	6	1.52	24
33270.W0500	500	3.2	20	3.5	6	1.52	24

Lanyard - Bead Chain

stainless steel

33272





Order No.	Trade size	d_1	$l_{1\ nom.}$	d_2	d_3	Terminal material
33272.W0080	10	4,5	80	4,7	6,35	Brass
33272.W0100	10	4,5	100	4,7	6,35	Brass
33272.W0150	10	4,5	150	4,7	6,35	Brass
33272.W0200	10	4,5	200	4,7	6,35	Brass
33272.W0300	10	4,5	300	4,7	6,35	Brass
33272.W0450	10	4,5	450	4,7	6,35	Brass

Material

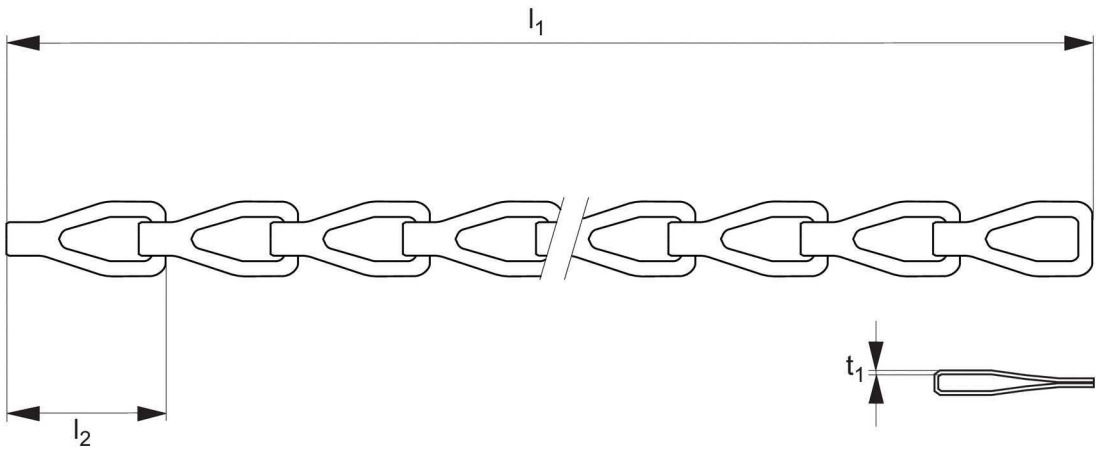
Bead chain: stainless steel AISI 304.
Terminals: brass.

Tips

For use in securing components to assemblies, or to avoid items being misplaced. For a wide range of detent pins and quick release ball lock pins see parts 33010 through 33226. Terminals also available in AISI 304 stainless steel on request. Subject to min. quantity.

Lanyard - Sash Chain

33274





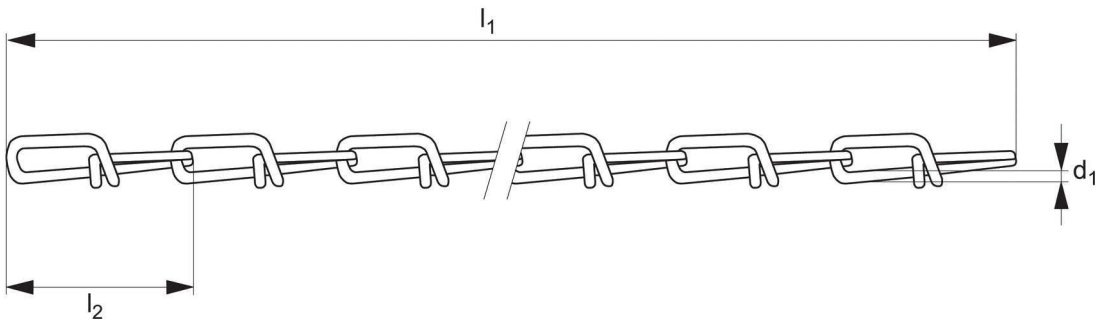
Material
Brass.

Tips
For use in securing components to assemblies, or to avoid items being misplaced. For a wide range of detent pins and quick release ball lock pins see parts 33010 through 33226.

Order No.	Trade size	Material	$l_{1\ nom.}$	l_2	t_1
33274.W0100	8	Brass	100	25	0,95
33274.W0150	8	Brass	150	25	0,95
33274.W0200	8	Brass	200	25	0,95
33274.W0300	8	Brass	300	25	0,95
33274.W0450	8	Brass	450	25	0,95

Lanyard - Tenso Chain

33276





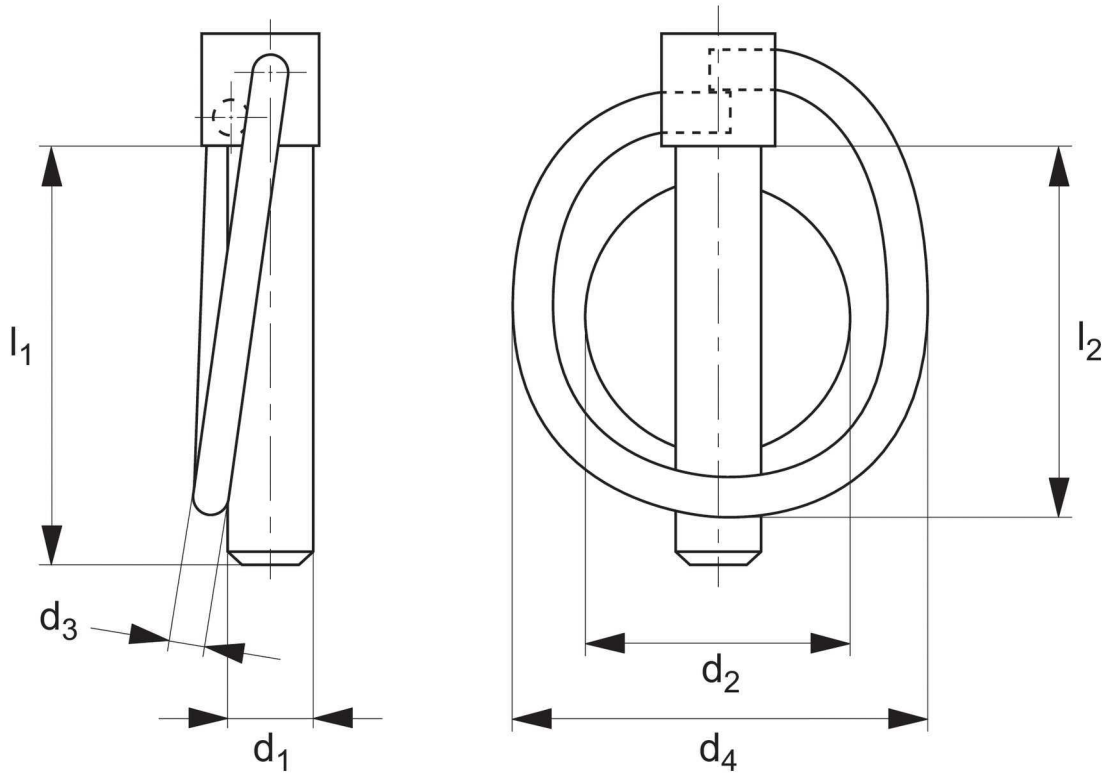
Order No.	Trade size	Material	$l_{1\ nom.}$	l_2	d_1
33276.W0128	4	Steel	128	32	1,8
33276.W0192	4	Steel	192	32	1,8
33276.W0256	4	Steel	256	32	1,8
33276.W0320	4	Steel	320	32	1,8
33276.W0448	4	Steel	448	32	1,8

Material
Steel (1008), zinc plated.

Tips
For use in securing components to assemblies, or to avoid items being misplaced. For a wide range of detent pins and quick release ball lock pins see parts 33010 through 33226. Terminals also available in AISI 304 stainless steel on request. Subject to min. quantity.

33300





Material
Mild steel, generally silver zinc plated.

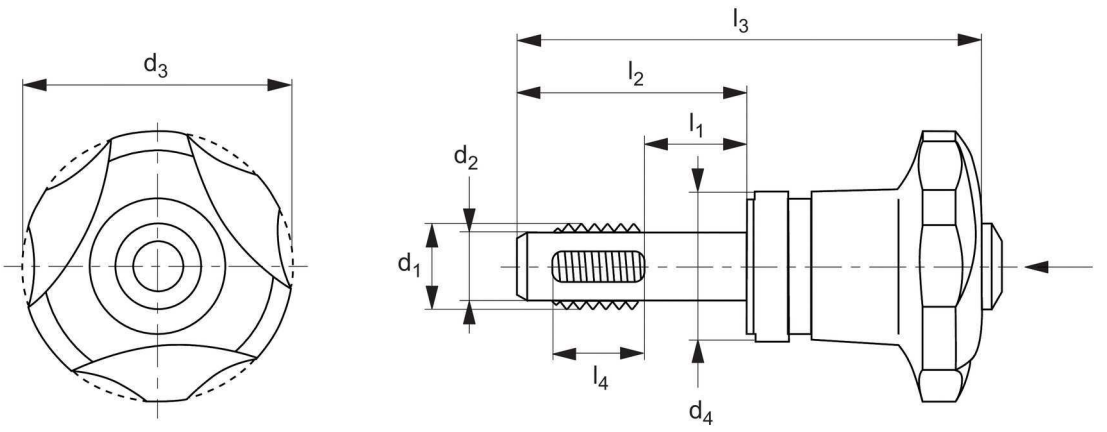
Technical Notes
To DIN 11023. With spring steel "keep".
For pin d_1 = 4,5 & 6 there is no flat on the pin.

Order No.	d_1	l_1	d_2 max.	d_3	d_4	l_2
33300.W0004	4,5	42	25	3,5	41	37
33300.W0006	6,0	42	32	3,5	41	37
33300.W0007	7,0	42	32	3,5	41	37
33300.W0008	8,0	42	32	3,5	41	37
33300.W0009	9,0	42	32	3,5	41	37
33300.W0010	10,0	42	32	3,5	41	37
33300.W0011	11,0	42	32	3,5	41	37

Threaded Lock Pins

self-locking

33331





Material

Pin: Free cutting steel, manganese phosphated or stainless steel 1.4305 (AISI 303).
Handle: Thermoplastic PA 6, black similar to RAL 9005
Press button: Aluminium, orange, anodised.
Threaded element: stainless steel 1.4542 (AISI 630), precipitation-hardened.
Spring: stainless steel.

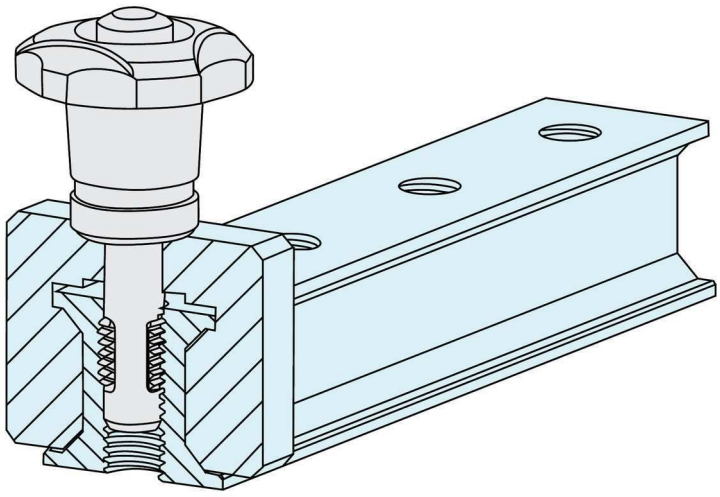
Technical Notes

Pressing = unlocking.
Releasing = locking.
To suit metric course threads. The threaded lock pin can be quickly inserted into a threaded hole, and further tightened up to indicated max. torque reducing both assembly and disassembly times.

Tips

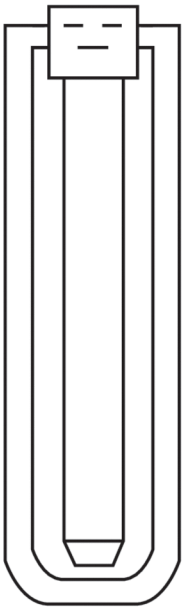
For suitable lanyards see part no. 33268. Lanyards can be used to prevent accidental loss of pin from application.

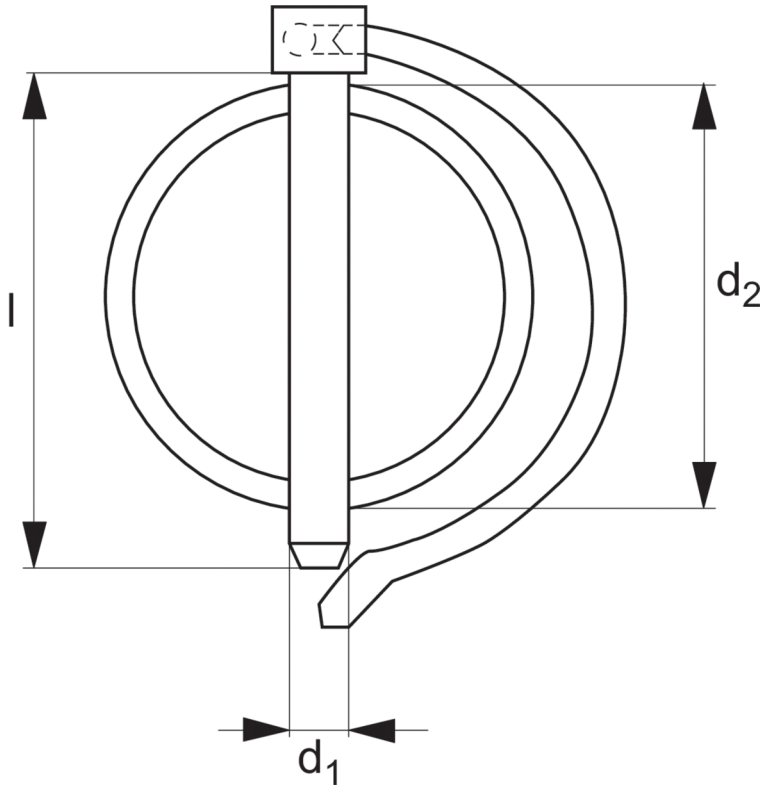
Order No.	Type	d_1	l_1	d_2 -0,07	d_3	d_4	l_2	l_3	l_4	Locating thread	Min temp	Max temp	Torque to max Nm.	Shearing resistance two-shear min. kN.	g
33331.W0102	Steel	M 8	10	6,62	40	21,6	23,8	58,4	8	M 8	-30	80	5	12,7	40
33331.W0104	Steel	M 8	20	6,62	40	21,6	33,8	68,4	8	M 8	-30	80	5	12,7	42
33331.W0106	Steel	M 8	30	6,62	40	21,6	43,8	78,4	8	M 8	-30	80	5	12,7	45
33331.W0202	Steel	M10	10	8,35	40	21,6	26,0	60,6	10	M10	-30	80	5	20,6	44
33331.W0204	Steel	M10	20	8,35	40	21,6	36,0	70,6	10	M10	-30	80	5	20,6	48
33331.W0206	Steel	M10	30	8,35	40	21,6	46,0	80,6	10	M10	-30	80	5	20,6	52
33331.W0303	Steel	M12	15	10,07	40	21,6	34,0	68,6	12	M12	-30	80	5	30,4	53
33331.W0306	Steel	M12	30	10,07	40	21,6	49,0	83,6	12	M12	-30	80	5	30,4	62
33331.W0310	Steel	M12	50	10,07	40	21,6	69,0	103,6	12	M12	-30	80	5	30,4	74
33331.W0503	Steel	M16	15	13,80	40	21,6	34,0	68,6	12	M16	-30	80	5	62,9	70
33331.W0506	Steel	M16	30	13,80	40	21,6	49,0	83,6	12	M16	-30	80	5	62,9	87
33331.W0510	Steel	M16	50	13,80	40	21,6	69,0	103,6	12	M16	-30	80	5	62,9	109
33331.W1102	Stainless Steel	M 8	10	6,62	40	21,6	23,8	58,4	8	M 8	-30	80	5	16,7	40
33331.W1104	Stainless Steel	M 8	20	6,62	40	21,6	33,8	68,4	8	M 8	-30	80	5	16,7	42
33331.W1106	Stainless Steel	M 8	30	6,62	40	21,6	43,8	78,4	8	M 8	-30	80	5	16,7	45
33331.W1202	Stainless Steel	M10	10	8,35	40	21,6	26,0	60,6	10	M10	-30	80	5	27,1	44
33331.W1204	Stainless Steel	M10	20	8,35	40	21,6	36,0	70,6	10	M10	-30	80	5	27,1	48
33331.W1206	Stainless Steel	M10	30	8,35	40	21,6	46,0	80,6	10	M10	-30	80	5	27,1	52
33331.W1303	Stainless Steel	M12	15	10,07	40	21,6	34,0	68,6	12	M12	-30	80	5	40,0	53
33331.W1306	Stainless Steel	M12	30	10,07	40	21,6	49,0	83,6	12	M12	-30	80	5	40,0	62
33331.W1310	Stainless Steel	M12	50	10,07	40	21,6	69,0	103,6	12	M12	-30	80	5	40,0	74
33331.W1503	Stainless Steel	M16	15	13,80	40	21,6	34,0	68,6	12	M16	-30	80	5	82,7	70
33331.W1506	Stainless Steel	M16	30	13,80	40	21,6	49,0	83,6	12	M16	-30	80	5	82,7	87
33331.W1510	Stainless Steel	M16	50	13,80	40	21,6	69,0	103,6	12	M16	-30	80	5	82,7	109



Shaft Locking Pins

33320







Material
Mild steel, silver or yellow zinc plated.

Technical Notes
With spring steel "keep".

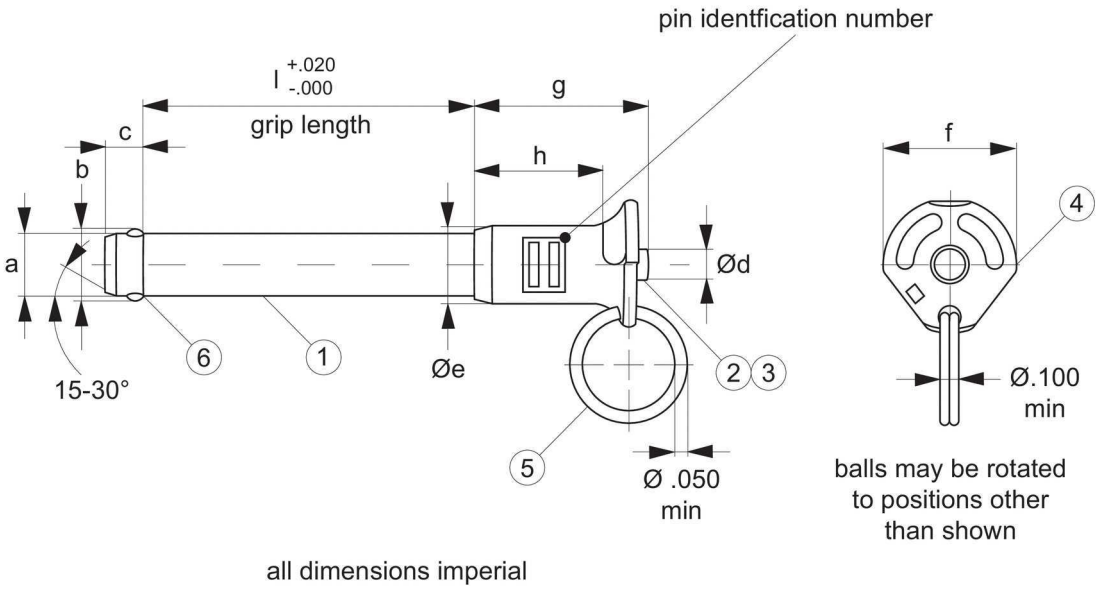
Order No.	d_1	l	d_2 max.
33320.W0041	4,5	32	28
33320.W0042	4,5	40	36
33320.W0061	6,0	32	28
33320.W0062	6,0	40	36
33320.W0063	6,0	45	40
33320.W0080	8,0	40	36
33320.W0081	8,0	45	40
33320.W0082	8,0	50	45
33320.W0083	8,0	60	50
33320.W0101	10,0	40	36
33320.W0102	10,0	50	45
33320.W0103	10,0	60	55
33320.W0111	11,0	45	40
33320.W0112	11,0	55	50

Aviation Pip-Pin - Standard B Handle

single acting - quick release pins

33600





all dimensions imperial

Order No.	Nom. dia. Ø	Grip l	b	c	Ø d max.	Ø e max.	g
33600.A005	3/16	0,5	0,220	0,26	0,31	0,44	17
33600.A006	3/16	0,6	0,220	0,26	0,31	0,44	17
33600.A007	3/16	0,7	0,220	0,26	0,31	0,44	17
33600.A008	3/16	0,8	0,220	0,26	0,31	0,44	18
33600.A010	3/16	1,0	0,220	0,26	0,31	0,44	18
33600.A011	3/16	1,1	0,220	0,26	0,31	0,44	19
33600.A013	3/16	1,3	0,220	0,26	0,31	0,44	19
33600.A015	3/16	1,5	0,220	0,26	0,31	0,44	20
33600.A018	3/16	1,8	0,220	0,26	0,31	0,44	21
33600.A020	3/16	2,0	0,220	0,26	0,31	0,44	22
33600.B007	1/4	0,7	0,289	0,29	0,31	0,44	20
33600.B008	1/4	0,8	0,289	0,29	0,31	0,44	20
33600.B010	1/4	1,0	0,289	0,29	0,31	0,44	22
33600.B011	1/4	1,1	0,289	0,29	0,31	0,44	22
33600.B012	1/4	1,2	0,289	0,29	0,31	0,44	24
33600.B014	1/4	1,4	0,289	0,29	0,31	0,44	24
33600.B018	1/4	1,8	0,289	0,29	0,31	0,44	26
33600.B019	1/4	1,9	0,289	0,29	0,31	0,44	27
33600.B020	1/4	2,0	0,289	0,29	0,31	0,44	27
33600.B023	1/4	2,3	0,289	0,29	0,31	0,44	29
33600.B025	1/4	2,5	0,289	0,29	0,31	0,44	32
33600.B028	1/4	2,8	0,289	0,29	0,31	0,44	32
33600.B029	1/4	2,9	0,289	0,29	0,31	0,44	33
33600.B064	1/4	6,4	0,289	0,29	0,31	0,44	59
33600.C008	5/16	0,8	0,375	0,33	0,31	0,49	25
33600.C010	5/16	1,0	0,375	0,33	0,31	0,49	28
33600.C012	5/16	1,2	0,375	0,33	0,31	0,49	29
33600.C014	5/16	1,4	0,375	0,33	0,31	0,49	31
33600.C016	5/16	1,6	0,375	0,33	0,31	0,49	33
33600.C017	5/16	1,7	0,375	0,33	0,31	0,49	34
33600.C019	5/16	1,9	0,375	0,33	0,31	0,49	33
33600.C020	5/16	2,0	0,375	0,33	0,31	0,49	36
33600.C022	5/16	2,2	0,375	0,33	0,31	0,49	38
33600.C023	5/16	2,3	0,375	0,33	0,31	0,49	39
33600.C025	5/16	2,5	0,375	0,33	0,31	0,49	43
33600.C029	5/16	2,9	0,375	0,33	0,31	0,49	46
33600.C030	5/16	3,0	0,375	0,33	0,31	0,49	47
33600.C036	5/16	3,6	0,375	0,33	0,31	0,49	53
33600.C049	5/16	4,9	0,375	0,33	0,31	0,49	65
33600.C062	5/16	6,2	0,375	0,33	0,31	0,49	73
33600.C067	5/16	6,7	0,375	0,33	0,31	0,49	85

Order No.	Øf max.	g max.	h min.	Shear resistance double min. lbs.	Location hole Ø max.	MS Part No.
33600.A005	0,800	0,83	0,48	5,150	0,1940	MS17984C305
33600.A006	0,800	0,83	0,48	5,150	0,1940	MS17984C306
33600.A007	0,800	0,83	0,48	5,150	0,1940	MS17984C307
33600.A008	0,800	0,83	0,48	5,150	0,1940	MS17984C308

Material

Shank (part 1) & Spindle (part 2):
CRES 17-4PH (AMS 5643), heat treated per MIL-H-6875, condition H900, min. 40 HRC, passivated per AMS2700
Spring (part 3, not shown):
CRES 302 (ASTM-A-313), heat treated per MIL-H-6875, passivated per AMS2700
Handle (part 4):
A380 (QQ-A-591), anodized (black) per MIL-A-8625
Attaching ring (part 5):
CRES 302 (ASTM-A-313), passivated per AMS2700
Ball (locking element, part 6):
CRES CL440C (AMS5630), heat treated per MIL-H-6875, passivated per AMS2700

Technical Notes

Wixroyd Aviation Pip-Pins manufactured to Aviation Norm NASM 17984 (former norm: MS 17984) and tested to NAS 1332. Manufacture certified & assessed to EN9100D by EASE (European Aerospace Supplier Evaluation).
Temp. range -22°F to 302°F

Pressing = unlocking.
Releasing = locking.
Pip-Pins are used for frequently repeated operations such as quick fastening, locking, adjusting, changing and securing.
All dimensions shown are imperial.

Tips

We can manufacture specials (both metric & imperial) to your drawing, and are certified to produce to NASM standards.
Wixroyd Aviation Pip-Pins can be produced within the following dimensions:
+ diameter: from 3/16" to 1"
+ grip length: from 0.3" to 9.9"
Quick production time on small batches.

Referral

For non-aviation pip-pin equivalents please refer to our product range 33060 to 33230.

Aviation Pip-Pin - Standard B Handle

single acting - quick release pins

33600

Order No.	Øf max.	g max.	h min.	Shear resistance double min. lbs.	Location hole Ø max.	MS Part No.
33600.A010	0,800	0,83	0,48	5,150	0,1940	MS17984C310
33600.A011	0,800	0,83	0,48	5,150	0,1940	MS17984C311
33600.A013	0,800	0,83	0,48	5,150	0,1940	MS17984C313
33600.A015	0,800	0,83	0,48	5,150	0,1940	MS17984C315
33600.A018	0,800	0,83	0,48	5,150	0,1940	MS17984C318
33600.A020	0,800	0,83	0,48	5,150	0,1940	MS17984C320
33600.B007	0,800	0,89	0,48	9,200	0,2540	MS17984C407
33600.B008	0,800	0,89	0,48	9,200	0,2540	MS17984C408
33600.B010	0,800	0,89	0,48	9,200	0,2540	MS17984C410
33600.B011	0,800	0,89	0,48	9,200	0,2540	MS17984C411
33600.B012	0,800	0,89	0,48	9,200	0,2540	MS17984C412
33600.B014	0,800	0,89	0,48	9,200	0,2540	MS17984C414
33600.B018	0,800	0,89	0,48	9,200	0,2540	MS17984C418
33600.B019	0,800	0,89	0,48	9,200	0,2540	MS17984C419
33600.B020	0,800	0,89	0,48	9,200	0,2540	MS17984C410
33600.B023	0,800	0,89	0,48	9,200	0,2540	MS17984C423
33600.B025	0,800	0,89	0,48	9,200	0,2540	MS17984C425
33600.B028	0,800	0,89	0,48	9,200	0,2540	MS17984C428
33600.B029	0,800	0,89	0,48	9,200	0,2540	MS17984C429
33600.B064	0,800	0,89	0,48	9,200	0,2540	MS17984C464
33600.C008	1,135	0,93	0,48	14,400	0,3165	MS17984C508
33600.C010	1,135	0,93	0,48	14,400	0,3165	MS17984C510
33600.C012	1,135	0,93	0,48	14,400	0,3165	MS17984C512
33600.C014	1,135	0,93	0,48	14,400	0,3165	MS17984C514
33600.C016	1,135	0,93	0,48	14,400	0,3165	MS17984C516
33600.C017	1,135	0,93	0,48	14,400	0,3165	MS17984C517
33600.C019	1,135	0,93	0,48	14,400	0,3165	MS17984C519
33600.C020	1,135	0,93	0,48	14,400	0,3165	MS17984C520
33600.C022	1,135	0,93	0,48	14,400	0,3165	MS17984C522
33600.C023	1,135	0,93	0,48	14,400	0,3165	MS17984C523
33600.C025	1,135	0,93	0,48	14,400	0,3165	MS17984C525
33600.C029	1,135	0,93	0,48	14,400	0,3165	MS17984C529
33600.C030	1,135	0,93	0,48	14,400	0,3165	MS17984C530
33600.C036	1,135	0,93	0,48	14,400	0,3165	MS17984C536
33600.C049	1,135	0,93	0,48	14,400	0,3165	MS17984C549
33600.C062	1,135	0,93	0,48	14,400	0,3165	MS17984C562
33600.C067	1,135	0,93	0,48	14,400	0,3165	MS17984C567



Material

Shank (part 1) & Spindle (part 2):
CRES 17-4PH (AMS 5643), heat treated per MIL-H-6875, condition H900, min. 40 HRC, passivated per AMS2700
Spring (part 3, not shown):
CRES 302 (ASTM-A-313), heat treated per MIL-H-6875, passivated per AMS2700
Handle (part 4):
A380 (QQ-A-591), anodized (black) per MIL-A-8625
Attaching ring (part 5):
CRES 302 (ASTM-A-313), passivated per AMS2700
Ball (locking element, part 6):
CRES CL440C (AMS5630), heat treated per MIL-H-6875, passivated per AMS2700

Technical Notes

Wixroyd Aviation Pip-Pins manufactured to Aviation Norm NASM 17984 (former norm: MS 17984) and tested to NAS 1332. Manufacture certified & assessed to EN9100D by EASE (European Aerospace Supplier Evaluation).
Temp. range -22°F to 302°F

Pressing = unlocking.
Releasing = locking.
Pip-Pins are used for frequently repeated operations such as quick fastening, locking, adjusting, changing and securing.
All dimensions shown are imperial.

Tips

We can manufacture specials (both metric & imperial) to your drawing, and are certified to produce to NASM standards.
Wixroyd Aviation Pip-Pins can be produced within the following dimensions:
+ diameter: from 3/16" to 1"
+ grip length: from 0.3" to 9.9"
Quick production time on small batches.

Referral

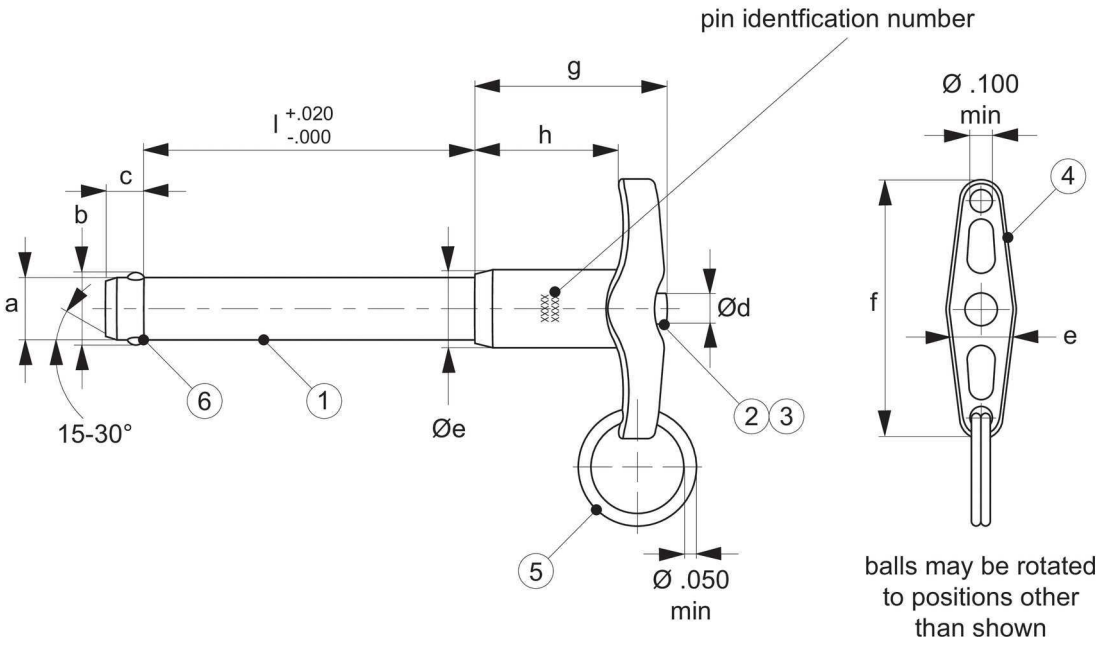
For non-aviation pip-pin equivalents please refer to our product range 33060 to 33230.

Aviation Pip-Pin - Standard T-Handle

single acting - quick release pins - according to NASM 17985

33610





Order No.	Nom. dia. Ø "	Grip l "	b	c	Ø d max.	Ø e max.	g
33610.A003	3/16	0,3	,220	,260	,310	0,500	24
33610.A005	3/16	0,5	,220	,260	,310	0,500	24
33610.A008	3/16	0,8	,220	,260	,310	0,500	25
33610.A012	3/16	1,2	,220	,260	,310	0,500	26
33610.A013	3/16	1,3	,220	,260	,310	0,500	27
33610.A014	3/16	1,4	,220	,260	,310	0,500	27
33610.A026	3/16	2,6	,220	,260	,310	0,500	33
33610.B005	1/4	0,5	,289	,290	,310	0,500	26
33610.B009	1/4	0,9	,289	,290	,310	0,500	27
33610.B011	1/4	1,1	,289	,290	,310	0,500	28
33610.B012	1/4	1,2	,289	,290	,310	0,500	30
33610.B013	1/4	1,3	,289	,290	,310	0,500	30
33610.B015	1/4	1,5	,289	,290	,310	0,500	32
33610.B016	1/4	1,6	,289	,290	,310	0,500	33
33610.B021	1/4	2,1	,289	,290	,310	0,500	36
33610.B026	1/4	2,6	,289	,290	,310	0,500	40
33610.B028	1/4	2,8	,289	,290	,310	0,500	41
33610.B040	1/4	4,0	,289	,290	,310	0,500	49
33610.C003	5/16	0,3	,375	,330	,310	0,500	27
33610.C006	5/16	0,6	,375	,330	,310	0,500	30
33610.C010	5/16	1,0	,375	,330	,310	0,500	34
33610.C013	5/16	1,3	,375	,330	,310	0,500	36
33610.C015	5/16	1,5	,375	,330	,310	0,500	39
33610.C016	5/16	1,6	,375	,330	,310	0,500	39
33610.C018	5/16	1,8	,375	,330	,310	0,500	41
33610.C020	5/16	2,0	,375	,330	,310	0,500	43
33610.C023	5/16	2,3	,375	,330	,310	0,500	45
33610.C029	5/16	2,9	,375	,330	,310	0,500	52
33610.C030	5/16	3,0	,375	,330	,310	0,500	53
33610.C033	5/16	3,3	,375	,330	,310	0,500	56
33610.C040	5/16	4,0	,375	,330	,310	0,500	62
33610.C050	5/16	5,0	,375	,330	,310	0,500	75
33610.C064	5/16	6,4	,375	,330	,310	0,500	89
33610.C070	5/16	7,0	,375	,330	,310	0,500	93
33610.D005	3/8	0,5	,440	,365	,390	0,625	43
33610.D010	3/8	1,0	,440	,365	,390	0,625	48
33610.D012	3/8	1,2	,440	,365	,390	0,625	55
33610.D015	3/8	1,5	,440	,365	,390	0,625	57
33610.D016	3/8	1,6	,440	,365	,390	0,625	58
33610.D020	3/8	2,0	,440	,365	,390	0,625	60
33610.D024	3/8	2,4	,440	,365	,390	0,625	69
33610.D025	3/8	2,5	,440	,365	,390	0,625	72
33610.D026	3/8	2,6	,440	,365	,390	0,625	72
33610.D028	3/8	2,8	,440	,365	,390	0,625	72
33610.D031	3/8	3,1	,440	,365	,390	0,625	80
33610.D032	3/8	3,2	,440	,365	,390	0,625	80

Material

Shank (part 1) & spindle (part 2): CRES 17-4PH (AMS 5643), heat treated per MIL-H-6875, condition H900, min. 40 HRC, passivated per AMS2700.
Spring (part 3, not shown): CRES 302 (ASTM-A-313), heat treated per MIL-H-6875, passivated per AMS2700.
Handle (part 4): A380 (QQ-A-591), anodized (black) per MIL-A-8625.
Attaching ring (part 5): CRES 302 (ASTM-A-313), passivated per AMS2700.
Ball (locking element, part 6): CRES CL440C (AMS5630), heat treated per MIL-H-6875, passivated per AMS2700.

Technical Notes

Wixroyd Aviation Pip-pins manufactured to Aviation Norm NASM 17985 (former norm: MS 17985) and tested to NAS 1332. Manufacture certified & assessed to EN9100D by EASE (European Aerospace Supplier Evaluation).
Temp. range -22°F to 302°F

Pressing = unlocking.
Releasing = locking.
Pip-pins are used for frequently repeated operations such as quick fastening, locking, adjusting, changing and securing.
All dimensions shown are imperial.

Tips

We can manufacture specials (both metric & imperial) to your drawing, and are certified to produce to NASM standards.
Wixroyd Aviation Pip-Pins can be produced within the following dimensions:
+ diameter: from 3/16" to 1"
+ grip length: from 0.3" to 9.9"
Quick production time on small batches.

Referral

For non-aviation pip-pin equivalents please refer to our product range 33060 to 33230.

NASM STD. NAS TESTED AVIATION CERTIFIED

Aviation Pip-Pin - Standard T-Handle

single acting - quick release pins - according to NASM 17985

33610



Order No.	Nom. dia. Ø "	Grip l "	b	c	Ø d max.	Ø e max.	g
33610.D035	3/8	3,5	,440	,365	,390	0,625	85
33610.D040	3/8	4,0	,440	,365	,390	0,625	91
33610.D045	3/8	4,5	,440	,365	,390	0,625	100
33610.E012	7/16	1,2	,509	,380	,390	0,625	60
33610.E018	7/16	1,8	,509	,380	,390	0,625	69
33610.E023	7/16	2,3	,509	,380	,390	0,625	82
33610.E024	7/16	2,4	,509	,380	,390	0,625	80
33610.E026	7/16	2,6	,509	,380	,390	0,625	90
33610.E029	7/16	2,9	,509	,380	,390	0,625	93
33610.E040	7/16	4,0	,509	,380	,390	0,625	113
33610.E042	7/16	4,2	,509	,380	,390	0,625	117
33610.E055	7/16	5,5	,509	,380	,390	0,625	145
33610.E072	1/2	7,2	,594	,460	,390	0,625	176
33610.F010	1/2	1,0	,594	,460	,565	0,800	82
33610.F012	1/2	1,2	,594	,460	,565	0,800	87
33610.F014	1/2	1,4	,594	,460	,565	0,800	94
33610.F015	1/2	1,5	,594	,460	,565	0,800	94
33610.F019	1/2	1,9	,594	,460	,565	0,800	106
33610.F020	1/2	2,0	,594	,460	,565	0,800	108
33610.F024	1/2	2,4	,594	,460	,565	0,800	117
33610.F029	1/2	2,9	,594	,460	,565	0,800	130
33610.F031	1/2	3,1	,594	,460	,565	0,800	135
33610.F036	1/2	3,6	,594	,460	,565	0,800	147
33610.F037	1/2	3,7	,594	,460	,565	0,800	146
33610.F040	1/2	4,0	,594	,460	,565	0,800	156
33610.F047	1/2	4,7	,594	,460	,565	0,800	177
33610.F048	1/2	4,8	,594	,460	,565	0,800	179
33610.F064	1/2	6,4	,594	,460	,565	0,800	218
33610.G017	9/16	1,7	,666	,510	,565	0,800	120
33610.G032	9/16	3,2	,666	,510	,565	0,800	160
33610.G036	9/16	3,6	,666	,510	,565	0,800	176
33610.G040	9/16	4,0	,666	,510	,565	0,800	190
33610.G061	9/16	6,1	,666	,510	,565	0,800	252

Order No.	Øf max.	g max.	h min.	Shear resistance double min. lbs.	Location hole Ø max.	MS Part No.
33610.A003	1,815	1,27	0,800	5,150	0,1940	MS17985C303
33610.A005	1,815	1,27	0,800	5,150	0,1940	MS17985C305
33610.A008	1,815	1,27	0,800	5,150	0,1940	MS17985C308
33610.A012	1,815	1,27	0,800	5,150	0,1940	MS17985C312
33610.A013	1,815	1,27	0,800	5,150	0,1940	MS17985C313
33610.A014	1,815	1,27	0,800	5,150	0,1940	MS17985C314
33610.A026	1,815	1,27	0,800	5,150	0,1940	MS17985C326
33610.B005	1,815	1,27	0,800	9,200	0,2540	MS17985C405
33610.B009	1,815	1,27	0,800	9,200	0,2540	MS17985C409
33610.B011	1,815	1,27	0,800	9,200	0,2540	MS17985C411
33610.B012	1,815	1,27	0,800	9,200	0,2540	MS17985C412
33610.B013	1,815	1,27	0,800	9,200	0,2540	MS17985C413
33610.B015	1,815	1,27	0,800	9,200	0,2540	MS17985C415
33610.B016	1,815	1,27	0,800	9,200	0,2540	MS17985C416
33610.B021	1,815	1,27	0,800	9,200	0,2540	MS17985C421
33610.B026	1,815	1,27	0,800	9,200	0,2540	MS17985C426
33610.B028	1,815	1,27	0,800	9,200	0,2540	MS17985C428
33610.B040	1,815	1,27	0,800	9,200	0,2540	MS17985C440
33610.C003	1,815	1,27	0,800	14,400	0,3165	MS17985C503
33610.C006	1,815	1,27	0,800	14,400	0,3165	MS17985C506
33610.C010	1,815	1,27	0,800	14,400	0,3165	MS17985C510
33610.C013	1,815	1,27	0,800	14,400	0,3165	MS17985C513
33610.C015	1,815	1,27	0,800	14,400	0,3165	MS17985C515
33610.C016	1,815	1,27	0,800	14,400	0,3165	MS17985C516
33610.C018	1,815	1,27	0,800	14,400	0,3165	MS17985C518
33610.C020	1,815	1,27	0,800	14,400	0,3165	MS17985C520
33610.C023	1,815	1,27	0,800	14,400	0,3165	MS17985C523
33610.C029	1,815	1,27	0,800	14,400	0,3165	MS17985C529
33610.C030	1,815	1,27	0,800	14,400	0,3165	MS17985C530
33610.C033	1,815	1,27	0,800	14,400	0,3165	MS17985C533
33610.C040	1,815	1,27	0,800	14,400	0,3165	MS17985C540
33610.C050	1,815	1,27	0,800	14,400	0,3165	MS17985C550
33610.C064	1,815	1,27	0,800	14,400	0,3165	MS17985C564
33610.C070	1,815	1,27	0,800	14,400	0,3165	MS17985C570
33610.D005	2,065	1,45	0,850	20,700	0,3790	MS17985C605

Material

Shank (part 1) & spindle (part 2):
CRES 17-4PH (AMS 5643), heat treated per MIL-H-6875, condition H900, min. 40 HRC, passivated per AMS2700.
Spring (part 3, not shown):
CRES 302 (ASTM-A-313), heat treated per MIL-H-6875, passivated per AMS2700.
Handle (part 4):
A380 (QQ-A-591), anodized (black) per MIL-A-8625.
Attaching ring (part 5):
CRES 302 (ASTM-A-313), passivated per AMS2700.
Ball (locking element, part 6):
CRES CL440C (AMS5630), heat treated per MIL-H-6875, passivated per AMS2700.

Technical Notes

Wixroyd Aviation Pip-pins manufactured to Aviation Norm NASM 17985 (former norm: MS 17985) and tested to NAS 1332. Manufacture certified & assessed to EN9100D by EASE (European Aerospace Supplier Evaluation).
Temp. range -22°F to 302°F

Pressing = unlocking.
Releasing = locking.
Pip-pins are used for frequently repeated operations such as quick fastening, locking, adjusting, changing and securing.
All dimensions shown are imperial.

Tips

We can manufacture specials (both metric & imperial) to your drawing, and are certified to produce to NASM standards.
Wixroyd Aviation Pip-Pins can be produced within the following dimensions:
+ diameter: from 3/16" to 1"
+ grip length: from 0.3" to 9.9"
Quick production time on small batches.

Referral

For non-aviation pip-pin equivalents please refer to our product range 33060 to 33230.

NASM STD. NAS TESTED AVIATION CERTIFIED

Aviation Pip-Pin - Standard T-Handle

single acting - quick release pins - according to NASM 17985

33610

Order No.	Øf max.	g max.	h min.	Shear resistance double min. lbs.	Location hole Ø max.	MS Part No.
33610.D010	2,065	1,45	0,850	20,700	0,3790	MS17985C610
33610.D012	2,065	1,45	0,850	20,700	0,3790	MS17985C612
33610.D015	2,065	1,45	0,850	20,700	0,3790	MS17985C615
33610.D016	2,065	1,45	0,850	20,700	0,3790	MS17985C616
33610.D020	2,065	1,45	0,850	20,700	0,3790	MS17985C620
33610.D024	2,065	1,45	0,850	20,700	0,3790	MS17985C624
33610.D025	2,065	1,45	0,850	20,700	0,3790	MS17985C625
33610.D026	2,065	1,45	0,850	20,700	0,3790	MS17985C626
33610.D028	2,065	1,45	0,850	20,700	0,3790	MS17985C628
33610.D031	2,065	1,45	0,850	20,700	0,3790	MS17985C631
33610.D032	2,065	1,45	0,850	20,700	0,3790	MS17985C632
33610.D035	2,065	1,45	0,850	20,700	0,3790	MS17985C635
33610.D040	2,065	1,45	0,850	20,700	0,3790	MS17985C640
33610.D045	2,065	1,45	0,850	20,700	0,3790	MS17985C645
33610.E012	2,065	1,47	0,850	28,500	0,4425	MS17985C712
33610.E018	2,065	1,47	0,850	28,500	0,4425	MS17985C718
33610.E023	2,065	1,47	0,850	28,500	0,4425	MS17985C723
33610.E024	2,065	1,47	0,850	28,500	0,4425	MS17985C724
33610.E026	2,065	1,47	0,850	28,500	0,4425	MS17985C726
33610.E029	2,065	1,47	0,850	28,500	0,4425	MS17985C729
33610.E040	2,065	1,47	0,850	28,500	0,4425	MS17985C740
33610.E042	2,065	1,47	0,850	28,500	0,4425	MS17985C742
33610.E055	2,065	1,47	0,850	28,500	0,4425	MS17985C755
33610.E072	2,345	1,60	0,850	36,900	0,5050	MS17985C772
33610.F010	2,345	1,60	0,885	36,900	0,5050	MS17985C810
33610.F012	2,345	1,60	0,885	36,900	0,5050	MS17985C812
33610.F014	2,345	1,60	0,885	36,900	0,5050	MS17985C814
33610.F015	2,345	1,60	0,885	36,900	0,5050	MS17985C815
33610.F019	2,345	1,60	0,885	36,900	0,5050	MS17985C819
33610.F020	2,345	1,60	0,885	36,900	0,5050	MS17985C820
33610.F024	2,345	1,60	0,885	36,900	0,5050	MS17985C824
33610.F029	2,345	1,60	0,885	36,900	0,5050	MS17985C829
33610.F031	2,345	1,60	0,885	36,900	0,5050	MS17985C831
33610.F036	2,345	1,60	0,885	36,900	0,5050	MS17985C836
33610.F037	2,345	1,60	0,885	36,900	0,5050	MS17985C837
33610.F040	2,345	1,60	0,885	36,900	0,5050	MS17985C840
33610.F047	2,345	1,60	0,885	36,900	0,5050	MS17985C847
33610.F048	2,345	1,60	0,885	36,900	0,5050	MS17985C848
33610.F064	2,345	1,60	0,885	36,900	0,5050	MS17985C864
33610.G017	2,345	1,60	0,885	46,700	0,5675	MS17985C917
33610.G032	2,345	1,60	0,885	46,700	0,5675	MS17985C932
33610.G036	2,345	1,60	0,885	46,700	0,5675	MS17985C936
33610.G040	2,345	1,60	0,885	46,700	0,5675	MS17985C940
33610.G061	2,345	1,60	0,885	46,700	0,5675	MS17985C961



Material

Shank (part 1) & spindle (part 2):
CRES 17-4PH (AMS 5643), heat treated per MIL-H-6875, condition H900, min. 40 HRC, passivated per AMS2700.
Spring (part 3, not shown):
CRES 302 (ASTM-A-313), heat treated per MIL-H-6875, passivated per AMS2700.
Handle (part 4):
A380 (QQ-A-591), anodized (black) per MIL-A-8625.
Attaching ring (part 5):
CRES 302 (ASTM-A-313), passivated per AMS2700.
Ball (locking element, part 6):
CRES CL440C (AMS5630), heat treated per MIL-H-6875, passivated per AMS2700.

Technical Notes

Wixroyd Aviation Pip-pins manufactured to Aviation Norm NASM 17985 (former norm: MS 17985) and tested to NAS 1332. Manufacture certified & assessed to EN9100D by EASE (European Aerospace Supplier Evaluation).
Temp. range -22°F to 302°F

Pressing = unlocking.
Releasing = locking.
Pip-pins are used for frequently repeated operations such as quick fastening, locking, adjusting, changing and securing.
All dimensions shown are imperial.

Tips

We can manufacture specials (both metric & imperial) to your drawing, and are certified to produce to NASM standards.
Wixroyd Aviation Pip-Pins can be produced within the following dimensions:
+ diameter: from 3/16" to 1"
+ grip length: from 0.3" to 9.9"
Quick production time on small batches.

Referral

For non-aviation pip-pin equivalents please refer to our product range 33060 to 33230.

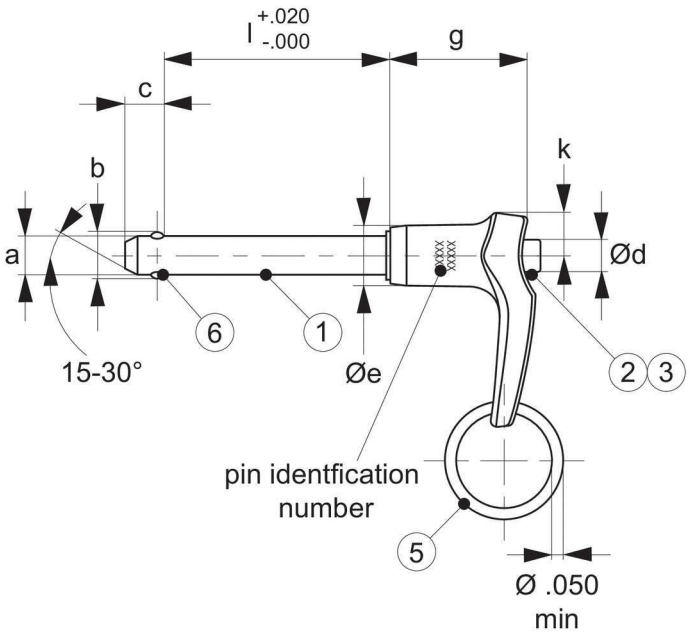
NASM STD. NAS TESTED AVIATION CERTIFIED

Aviation Pip-Pin, Standard LA Handle

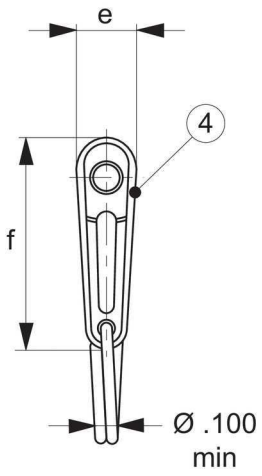
single acting, quick release pins - according to NASM 17986

33620





all dimensions imperial



balls may be rotated to positions other than shown

Order No.	Nom. dia. Ø	Grip l	b	c	Ø d max.	Ø e max.	g
33620.A005	3/16	0,5	,594	,460	,565	0,500	23
33620.A008	3/16	0,8	,594	,460	,565	0,500	26
33620.A010	3/16	1,0	,594	,460	,565	0,500	26
33620.A013	3/16	1,3	,594	,460	,565	0,500	28
33620.A014	3/16	1,4	,594	,460	,565	0,500	28
33620.A017	3/16	1,7	,594	,460	,565	0,500	27
33620.B012	1/4	1,2	,594	,460	,565	0,500	32
33620.B015	1/4	1,5	,594	,460	,565	0,500	33
33620.B017	1/4	1,7	,594	,460	,565	0,500	34
33620.B016	1/4	1,6	,594	,460	,565	0,500	33
33620.B021	1/4	2,1	,594	,460	,565	0,500	36
33620.C004	5/16	0,4	,594	,460	,565	0,500	29
33620.C006	5/16	0,6	,594	,460	,565	0,500	30
33620.C010	5/16	1,0	,594	,460	,565	0,500	34
33620.C013	5/16	1,3	,594	,460	,565	0,500	37
33620.C016	5/16	1,6	,594	,460	,565	0,500	40
33620.C018	5/16	1,8	,594	,460	,565	0,500	43
33620.C020	5/16	2,0	,594	,460	,565	0,500	41
33620.C023	5/16	2,3	,594	,460	,565	0,500	46
33620.C029	5/16	2,9	,594	,460	,565	0,500	54
33620.C030	5/16	3,0	,594	,460	,565	0,500	53
33620.C033	5/16	3,3	,594	,460	,565	0,500	57
33620.C036	5/16	3,6	,594	,460	,565	0,500	60
33620.C040	5/16	4,0	,594	,460	,565	0,500	64
33620.D010	3/8	1,0	,594	,460	,565	0,625	49
33620.D015	3/8	1,5	,594	,460	,565	0,625	59
33620.D020	3/8	2,0	,594	,460	,565	0,625	65
33620.D024	3/8	2,4	,594	,460	,565	0,625	71
33620.D026	3/8	2,6	,594	,460	,565	0,625	73
33620.D030	3/8	3,0	,594	,460	,565	0,625	72
33620.D060	3/8	6,0	,594	,460	,565	0,625	122
33620.E012	7/16	1,2	,594	,460	,565	0,625	61
33620.E035	7/16	3,5	,594	,460	,565	0,625	
33620.E040	7/16	4,0	,594	,460	,565	0,625	115
33620.E055	7/16	5,5	,594	,460	,565	0,625	146
33620.F010	1/2	1,0	,594	,460	,565	0,800	83
33620.F015	1/2	1,5	,594	,460	,565	0,800	95
33620.F019	1/2	1,9	,594	,460	,565	0,800	103
33620.F034	1/2	3,4	,594	,460	,565	0,800	143
33620.F042	1/2	4,2	,594	,460	,565	0,800	160
33620.F045	1/2	4,5	,594	,460	,565	0,800	172
33620.G017	9/16	1,7	,594	,460	,565	0,800	116
33620.G025	9/16	2,5	,594	,460	,565	0,800	140
33620.G040	9/16	4,0	,594	,460	,565	0,800	189
33620.G050	9/16	5,0	,594	,460	,565	0,800	

Material

Shank (part 1) & spindle (part 2):
CRES 17-4PH (AMS 5643), heat treated per MIL-H-6875, condition H900, min. 40 HRC, passivated per AMS2700.
Spring (part 3, not shown):
CRES 302 (ASTM-A-313), heat treated per MIL-H-6875, passivated per AMS2700.
Handle (part 4):
A380 (QQ-A-591), anodized (black) per MIL-A-8625.
Attaching ring (part 5):
CRES 302 (ASTM-A-313), passivated per AMS2700.
Ball (locking element, part 6):
CRES CL440C (AMS5630), heat treated per MIL-H-6875, passivated per AMS2700.

Technical Notes

Wixroyd Aviation Pip-pins manufactured to Aviation Norm NASM 17986 (former norm: MS 17986) and tested to NAS 1332. Manufacture certified & assessed to EN9100D by EASE (European Aerospace Supplier Evaluation).
Temp. range -22°F to 302°F

Pressing = unlocking.
Releasing = locking.
Pip-pins are used for frequently repeated operations such as quick fastening, locking, adjusting, changing and securing.
All dimensions shown are imperial.

Tips

We can manufacture specials (both metric & imperial) to your drawing, and are certified to produce to NASM standards.
Wixroyd Aviation Pip-Pins can be produced within the following dimensions:
+ diameter: from 3/16" to 1"
+ grip length: from 0.3" to 9.9"
Quick production time on small batches.

Referral

For non-aviation pip-pin equivalents please refer to our product range 33060 to 33230.

NASM STD. NAS TESTED AVIATION CERTIFIED

Aviation Pip-Pin, Standard LA Handle

single acting, quick release pins - according to NASM 17986

33620

Order No.	Nom. dia. Ø	Grip l	b	c	Ø d max.	Ø e max.	g
33620.G060	9/16	6,0	,594	,460	,565	0,800	249
33620.G075	9/16	7,5	,594	,460	,565	0,800	298

Order No.	Øf max.	g max.	h min.	k max.	Shear resistance double min. lbs.	Location hole Ø max.	MS Part No.
33620.A005	1,80	1,27	0,76	0,34	5,150	0,1940	MS17986C305
33620.A008	1,80	1,27	0,76	0,34	5,150	0,1940	MS17986C308
33620.A010	1,80	1,27	0,76	0,34	5,150	0,1940	MS17986C310
33620.A013	1,80	1,27	0,76	0,34	5,150	0,1940	MS17986C313
33620.A014	1,80	1,27	0,76	0,34	5,150	0,1940	MS17986C314
33620.A017	1,80	1,27	0,76	0,34	5,150	0,1940	MS17986C317
33620.B012	1,80	1,27	0,76	0,34	9,200	0,2540	MS17986C412
33620.B015	1,80	1,27	0,76	0,34	9,200	0,2540	MS17986C415
33620.B017	1,80	1,27	0,76	0,34	9,200	0,2540	MS17986C417
33620.B016	1,80	1,27	0,76	0,34	9,200	0,2540	MS17986C416
33620.B021	1,80	1,27	0,76	0,34	9,200	0,2540	MS17986C421
33620.C004	1,80	1,27	0,76	0,34	14400	0,3165	MS17986C504
33620.C006	1,80	1,27	0,76	0,34	14400	0,3165	MS17986C506
33620.C010	1,80	1,27	0,76	0,34	14400	0,3165	MS17986C510
33620.C013	1,80	1,27	0,76	0,34	14400	0,3165	MS17986C513
33620.C016	1,80	1,27	0,76	0,34	14400	0,3165	MS17986C516
33620.C018	1,80	1,27	0,76	0,34	14400	0,3165	MS17986C518
33620.C020	1,80	1,27	0,76	0,34	14400	0,3165	MS17986C520
33620.C023	1,80	1,27	0,76	0,34	14400	0,3165	MS17986C523
33620.C029	1,80	1,27	0,76	0,34	14400	0,3165	MS17986C529
33620.C030	1,80	1,27	0,76	0,34	14400	0,3165	MS17986C530
33620.C033	1,80	1,27	0,76	0,34	14400	0,3165	MS17986C533
33620.C036	1,80	1,27	0,76	0,34	14400	0,3165	MS17986C536
33620.C040	1,80	1,27	0,76	0,34	14400	0,3165	MS17986C540
33620.D010	2,03	1,45	0,85	0,39	20700	0,3790	MS17986C610
33620.D015	2,03	1,45	0,85	0,39	20700	0,3790	MS17986C615
33620.D020	2,03	1,45	0,85	0,39	20700	0,3790	MS17986C620
33620.D024	2,03	1,45	0,85	0,39	20700	0,3790	MS17986C624
33620.D026	2,03	1,45	0,85	0,39	20700	0,3790	MS17986C626
33620.D030	2,03	1,45	0,85	0,39	20700	0,3790	MS17986C630
33620.D060	2,03	1,45	0,85	0,39	20700	0,3790	MS17986C660
33620.E012	2,03	1,47	0,85	0,39	28500	0,4425	MS17986C712
33620.E035	2,03	1,47	0,85	0,39	28500	0,4425	MS17986C735
33620.E040	2,03	1,47	0,85	0,39	28500	0,4425	MS17986C740
33620.E055	2,03	1,47	0,85	0,39	28500	0,4425	MS17986C755
33620.F010	2,36	1,60	0,85	0,50	36900	0,5050	MS17986C810
33620.F015	2,36	1,60	0,85	0,50	36900	0,5050	MS17986C815
33620.F019	2,36	1,60	0,85	0,50	36900	0,5050	MS17986C819
33620.F034	2,36	1,60	0,85	0,50	36900	0,5050	MS17986C834
33620.F042	2,36	1,60	0,85	0,50	36900	0,5050	MS17986C842
33620.F045	2,36	1,60	0,85	0,50	36900	0,5050	MS17986C845
33620.G017	2,36	1,60	0,85	0,50	46700	0,5675	MS17986C917
33620.G025	2,36	1,60	0,85	0,50	46700	0,5675	MS17986C925
33620.G040	2,36	1,60	0,85	0,50	46700	0,5675	MS17986C940
33620.G050	2,36	1,60	0,85	0,50	46700	0,5675	MS17986C950
33620.G060	2,36	1,60	0,85	0,50	46700	0,5675	MS17986C960
33620.G075	2,36	1,60	0,85	0,50	46700	0,5675	MS17986C975



Material

Shank (part 1) & spindle (part 2):
CRES 17-4PH (AMS 5643), heat treated per MIL-H-6875, condition H900, min. 40 HRC, passivated per AMS2700.
Spring (part 3, not shown):
CRES 302 (ASTM-A-313), heat treated per MIL-H-6875, passivated per AMS2700.
Handle (part 4):
A380 (QQ-A-591), anodized (black) per MIL-A-8625.
Attaching ring (part 5):
CRES 302 (ASTM-A-313), passivated per AMS2700.
Ball (locking element, part 6):
CRES CL440C (AMS5630), heat treated per MIL-H-6875, passivated per AMS2700.

Technical Notes

Wixroyd Aviation Pip-pins manufactured to Aviation Norm NASM 17986 (former norm: MS 17986) and tested to NAS 1332. Manufacture certified & assessed to EN9100D by EASE (European Aerospace Supplier Evaluation).
Temp. range -22°F to 302°F

Pressing = unlocking.
Releasing = locking.
Pip-pins are used for frequently repeated operations such as quick fastening, locking, adjusting, changing and securing.
All dimensions shown are imperial.

Tips

We can manufacture specials (both metric & imperial) to your drawing, and are certified to produce to NASM standards.
Wixroyd Aviation Pip-Pins can be produced within the following dimensions:
+ diameter: from 3/16" to 1"
+ grip length: from 0.3" to 9.9"
Quick production time on small batches.

Referral

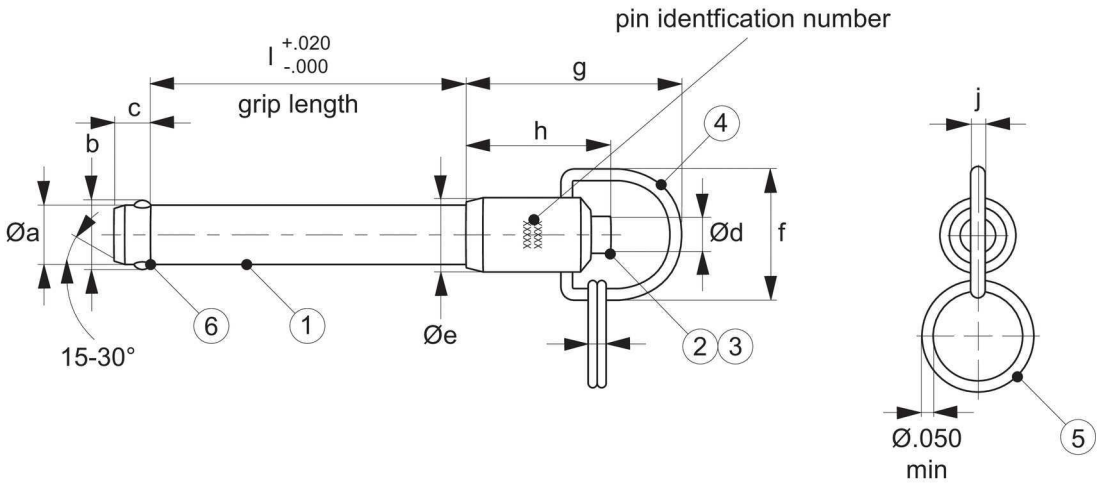
For non-aviation pip-pin equivalents please refer to our product range 33060 to 33230.

NASM STD. NAS TESTED AVIATION CERTIFIED

Aviation Pip-Pin, Standard R Handle

single acting, quick release pins - according to NASM 17987

33630



all dimensions imperial

balls may be rotated to positions other than shown



Order No.	Nom. dia. Ø	Grip l	b	c	Ø d max.	Ø e max.	g
33630.A008	3/16	0,8	,594	,460	,565	0,53	24
33630.A009	3/16	0,9	,594	,460	,565	0,53	24
33630.A010	3/16	1,0	,594	,460	,565	0,53	24
33630.A011	3/16	1,1	,594	,460	,565	0,53	25
33630.A012	3/16	1,2	,594	,460	,565	0,53	25
33630.A015	3/16	1,5	,594	,460	,565	0,53	26
33630.A016	3/16	1,6	,594	,460	,565	0,53	26
33630.A017	3/16	1,7	,594	,460	,565	0,53	27
33630.A025	3/16	2,5	,594	,460	,565	0,53	30
33630.A031	3/16	3,1	,594	,460	,565	0,53	33
33630.A043	5/16	4,3	,594	,460	,565	0,53	
33630.B004	1/4	0,4	,594	,460	,565	0,53	24
33630.B005	1/4	0,5	,594	,460	,565	0,53	24
33630.B006	1/4	0,6	,594	,460	,565	0,53	25
33630.B007	1/4	0,7	,594	,460	,565	0,53	26
33630.B008	1/4	0,8	,594	,460	,565	0,53	27
33630.B009	1/4	0,9	,594	,460	,565	0,53	27
33630.B010	1/4	1,0	,594	,460	,565	0,53	27
33630.B011	1/4	1,1	,594	,460	,565	0,53	28
33630.B012	1/4	1,2	,594	,460	,565	0,53	29
33630.B014	1/4	1,4	,594	,460	,565	0,53	30
33630.B015	1/4	1,5	,594	,460	,565	0,53	31
33630.B017	1/4	1,7	,594	,460	,565	0,53	32
33630.B018	1/4	1,8	,594	,460	,565	0,53	32
33630.B019	1/4	1,9	,594	,460	,565	0,53	33
33630.B020	1/4	2,0	,594	,460	,565	0,53	34
33630.B021	1/4	2,1	,594	,460	,565	0,53	34
33630.B022	1/4	2,2	,594	,460	,565	0,53	36
33630.B025	1/4	2,5	,594	,460	,565	0,53	37
33630.B029	1/4	2,9	,594	,460	,565	0,53	40
33630.B030	1/4	3,0	,594	,460	,565	0,53	39
33630.B040	1/4	4,0	,594	,460	,565	0,53	47
33630.B047	1/4	4,7	,594	,460	,565	0,53	50
33630.C006	5/16	0,6	,594	,460	,565	0,59	30
33630.C007	5/16	0,7	,594	,460	,565	0,59	31
33630.C008	5/16	0,8	,594	,460	,565	0,59	33
33630.C009	5/16	0,9	,594	,460	,565	0,59	34
33630.C011	5/16	1,1	,594	,460	,565	0,59	35
33630.C012	5/16	1,2	,594	,460	,565	0,59	36
33630.C013	5/16	1,3	,594	,460	,565	0,59	38
33630.C015	5/16	1,5	,594	,460	,565	0,59	39
33630.C016	5/16	1,6	,594	,460	,565	0,59	39
33630.C018	5/16	1,8	,594	,460	,565	0,59	42
33630.C019	5/16	1,9	,594	,460	,565	0,59	43
33630.C020	5/16	2,0	,594	,460	,565	0,59	43
33630.C023	5/16	2,3	,594	,460	,565	0,59	46
33630.C026	5/16	2,6	,594	,460	,565	0,59	48
33630.C033	5/16	3,3	,594	,460	,565	0,59	56

Material

Shank (part 1) & spindle (part 2):
CRES 17-4PH (AMS 5643), heat treated per MIL-H-6875, condition H900, min. 40 HRC, passivated per AMS2700.
Spring (part 3, not shown):
CRES 302 (ASTM-A-313), heat treated per MIL-H-6875, passivated per AMS2700.
Handle (part 4):
CRES 302 (ASTM-A-313), passivated per AMS2700.
Attaching ring (part 5):
CRES 302 (ASTM-A-313), passivated per AMS2700.
Ball (locking element, part 6):
CRES CL440C (AMS5630), heat treated per MIL-H-6875, passivated per AMS2700.

Technical Notes

Wixroyd Aviation Pip-pins manufactured to Aviation Norm NASM 17987 (former norm: MS 17987) and tested to NAS 1332. Manufacture certified & assessed to EN9100D by EASE (European Aerospace Supplier Evaluation).
Temp. range -22°F to 302°F

Pressing = unlocking.
Releasing = locking.
Pip-pins are used for frequently repeated operations such as quick fastening, locking, adjusting, changing and securing.
All dimensions shown are imperial.

Tips

We can manufacture specials (both metric & imperial) to your drawing, and are certified to produce to NASM standards.
Wixroyd Aviation Pip-Pins can be produced within the following dimensions:
+ diameter: from 3/16" to 1"
+ grip length: from 0.3" to 9.9"
Quick production time on small batches.

Referral

For non-aviation pip-pin

Aviation Pip-Pin, Standard R Handle

single acting, quick release pins - according to NASM 17987

33630

Order No.	Nom. dia. Ø	Grip l	b	c	Ø d max.	Ø e max.	g
33630.C035	5/16	3,5	,594	,460	,565	0,59	59
33630.C060	5/16	6,0	,594	,460	,565	0,59	85
33630.C067	5/16	6,7	,594	,460	,565	0,59	92
33630.D008	3/8	0,8	,594	,460	,565	0,65	49
33630.D009	3/8	0,9	,594	,460	,565	0,65	50
33630.D010	3/8	1,0	,594	,460	,565	0,65	52
33630.D011	3/8	1,1	,594	,460	,565	0,65	53
33630.D012	3/8	1,2	,594	,460	,565	0,65	54
33630.D013	3/8	1,3	,594	,460	,565	0,65	55
33630.D014	3/8	1,4	,594	,460	,565	0,65	55
33630.D015	3/8	1,5	,594	,460	,565	0,65	58
33630.D016	3/8	1,6	,594	,460	,565	0,65	61
33630.D018	3/8	1,8	,594	,460	,565	0,65	62
33630.D026	3/8	2,6	,594	,460	,565	0,65	73
33630.D030	3/8	3,0	,594	,460	,565	0,65	80
33630.D031	3/8	3,1	,594	,460	,565	0,65	82
33630.D043	3/8	4,3	,594	,460	,565	0,65	97
33630.E008	7/16	0,8	,594	,460	,565	0,71	56
33630.E012	7/16	1,2	,594	,460	,565	0,71	65
33630.E014	7/16	1,4	,594	,460	,565	0,71	68
33630.E015	7/16	1,5	,594	,460	,565	0,71	
33630.E019	7/16	1,9	,594	,460	,565	0,71	77
33630.E020	7/16	2,0	,594	,460	,565	0,71	81
33630.E022	7/16	2,2	,594	,460	,565	0,71	81
33630.E024	7/16	2,4	,594	,460	,565	0,71	88
33630.E026	7/16	2,6	,594	,460	,565	0,71	88
33630.F011	1/2	1,1	,594	,460	,565	0,80	88
33630.F012	1/2	1,2	,594	,460	,565	0,80	91
33630.F013	1/2	1,3	,594	,460	,565	0,80	93
33630.F014	1/2	1,4	,594	,460	,565	0,80	96
33630.F015	1/2	1,5	,594	,460	,565	0,80	98
33630.F020	1/2	2,0	,594	,460	,565	0,80	109
33630.F023	1/2	2,3	,594	,460	,565	0,80	117
33630.F033	1/2	3,3	,594	,460	,565	0,80	141
33630.F039	1/2	3,9	,594	,460	,565	0,80	160
33630.F045	1/2	4,5	,594	,460	,565	0,80	160
33630.F050	1/2	5,0	,594	,460	,565	0,80	187
33630.F053	1/2	5,3	,594	,460	,565	0,80	186
33630.F065	1/2	6,5	,594	,460	,565	0,80	215
33630.F080	1/2	8,0	,594	,460	,565	0,80	260
33630.F080	1/2	8,0	,594	,460	,565	0,80	260
33630.G013	9/16	1,3	,594	,460	,565	0,84	120
33630.G025	9/16	2,5	,594	,460	,565	0,84	150
33630.G030	9/16	3,0	,594	,460	,565	0,84	166
33630.G037	9/16	3,7	,594	,460	,565	0,84	183
33630.G055	9/16	5,5	,594	,460	,565	0,84	245

Order No.	Øf max.	g max.	h min.	Shear resistance double min. lbs.	Location hole Ø max.	MS Part No.
33630.A008	1,45	0,73	0,08	5,150	0,1940	MS17987C308
33630.A009	1,45	0,73	0,08	5,150	0,1940	MS17987C309
33630.A010	1,45	0,73	0,08	5,150	0,1940	MS17987C310
33630.A011	1,45	0,73	0,08	5,150	0,1940	MS17987C311
33630.A012	1,45	0,73	0,08	5,150	0,1940	MS17987C312
33630.A015	1,45	0,73	0,08	5,150	0,1940	MS17987C315
33630.A016	1,45	0,73	0,08	5,150	0,1940	MS17987C316
33630.A017	1,45	0,73	0,08	5,150	0,1940	MS17987C317
33630.A025	1,45	0,73	0,08	5,150	0,1940	MS17987C325
33630.A031	1,45	0,73	0,08	5,150	0,1940	MS17987C331
33630.A043	1,45	0,73	0,08	5,150	0,1940	MS17987C343
33630.B004	1,50	0,78	0,08	9,200	0,2540	MS17987C404
33630.B005	1,50	0,78	0,08	9,200	0,2540	MS17987C405
33630.B006	1,50	0,78	0,08	9,200	0,2540	MS17987C406
33630.B007	1,50	0,78	0,08	9,200	0,2540	MS17987C407
33630.B008	1,50	0,78	0,08	9,200	0,2540	MS17987C408
33630.B009	1,50	0,78	0,08	9,200	0,2540	MS17987C409
33630.B010	1,50	0,78	0,08	9,200	0,2540	MS17987C410
33630.B011	1,50	0,78	0,08	9,200	0,2540	MS17987C411
33630.B012	1,50	0,78	0,08	9,200	0,2540	MS17987C412
33630.B014	1,50	0,78	0,08	9,200	0,2540	MS17987C414
33630.B015	1,50	0,78	0,08	9,200	0,2540	MS17987C415
33630.B017	1,50	0,78	0,08	9,200	0,2540	MS17987C417



Material

Shank (part 1) & spindle (part 2):
CRES 17-4PH (AMS 5643), heat treated per MIL-H-6875, condition H900, min. 40 HRC, passivated per AMS2700.
Spring (part 3, not shown):
CRES 302 (ASTM-A-313), heat treated per MIL-H-6875, passivated per AMS2700.
Handle (part 4):
CRES 302 (ASTM-A-313), passivated per AMS2700.
Attaching ring (part 5):
CRES 302 (ASTM-A-313), passivated per AMS2700.
Ball (locking element, part 6):
CRES CL440C (AMS5630), heat treated per MIL-H-6875, passivated per AMS2700.

Technical Notes

Wixroyd Aviation Pip-pins manufactured to Aviation Norm NASM 17987 (former norm: MS 17987) and tested to NAS 1332. Manufacture certified & assessed to EN9100D by EASE (European Aerospace Supplier Evaluation).
Temp. range -22°F to 302°F

Pressing = unlocking.
Releasing = locking.
Pip-pins are used for frequently repeated operations such as quick fastening, locking, adjusting, changing and securing.
All dimensions shown are imperial.

Tips

We can manufacture specials (both metric & imperial) to your drawing, and are certified to produce to NASM standards.
Wixroyd Aviation Pip-Pins can be produced within the following dimensions:
+ diameter: from 3/16" to 1"
+ grip length: from 0.3" to 9.9"
Quick production time on small batches.

Referral

For non-aviation pip-pin

Aviation Pip-Pin, Standard R Handle

single acting, quick release pins - according to NASM 17987

33630

Order No.	Øf max.	g max.	h min.	Shear resistance double min. lbs.	Location hole Ø max.	MS Part No.
33630.B018	1,50	0,78	0,08	9,200	0,2540	MS17987C418
33630.B019	1,50	0,78	0,08	9,200	0,2540	MS17987C419
33630.B020	1,50	0,78	0,08	9,200	0,2540	MS17987C420
33630.B021	1,50	0,78	0,08	9,200	0,2540	MS17987C421
33630.B022	1,50	0,78	0,08	9,200	0,2540	MS17987C422
33630.B025	1,50	0,78	0,08	9,200	0,2540	MS17987C425
33630.B029	1,50	0,78	0,08	9,200	0,2540	MS17987C429
33630.B030	1,50	0,78	0,08	9,200	0,2540	MS17987C430
33630.B040	1,50	0,78	0,08	9,200	0,2540	MS17987C440
33630.B047	1,50	0,78	0,08	9,200	0,2540	MS17987C447
33630.C006	1,65	0,83	0,08	14400	0,3165	MS17987C506
33630.C007	1,65	0,83	0,08	14400	0,3165	MS17987C507
33630.C008	1,65	0,83	0,08	14400	0,3165	MS17987C508
33630.C009	1,65	0,83	0,08	14400	0,3165	MS17987C509
33630.C011	1,65	0,83	0,08	14400	0,3165	MS17987C511
33630.C012	1,65	0,83	0,08	14400	0,3165	MS17987C512
33630.C013	1,65	0,83	0,08	14400	0,3165	MS17987C513
33630.C015	1,65	0,83	0,08	14400	0,3165	MS17987C515
33630.C016	1,65	0,83	0,08	14400	0,3165	MS17987C516
33630.C018	1,65	0,83	0,08	14400	0,3165	MS17987C518
33630.C019	1,65	0,83	0,08	14400	0,3165	MS17987C519
33630.C020	1,65	0,83	0,08	14400	0,3165	MS17987C520
33630.C023	1,65	0,83	0,08	14400	0,3165	MS17987C523
33630.C026	1,65	0,83	0,08	14400	0,3165	MS17987C526
33630.C033	1,65	0,83	0,08	14400	0,3165	MS17987C533
33630.C035	1,65	0,83	0,08	14400	0,3165	MS17987C535
33630.C060	1,65	0,83	0,08	14400	0,3165	MS17987C560
33630.C067	1,65	0,83	0,08	14400	0,3165	MS17987C567
33630.D008	1,65	0,94	0,08	20700	0,3790	MS17987C608
33630.D009	1,65	0,94	0,08	20700	0,3790	MS17987C609
33630.D010	1,65	0,94	0,08	20700	0,3790	MS17987C610
33630.D011	1,65	0,94	0,08	20700	0,3790	MS17987C611
33630.D012	1,65	0,94	0,08	20700	0,3790	MS17987C612
33630.D013	1,65	0,94	0,08	20700	0,3790	MS17987C613
33630.D014	1,65	0,94	0,08	20700	0,3790	MS17987C614
33630.D015	1,65	0,94	0,08	20700	0,3790	MS17987C615
33630.D016	1,65	0,94	0,08	20700	0,3790	MS17987C616
33630.D018	1,65	0,94	0,08	20700	0,3790	MS17987C618
33630.D026	1,65	0,94	0,08	20700	0,3790	MS17987C626
33630.D030	1,65	0,94	0,08	20700	0,3790	MS17987C630
33630.D031	1,65	0,94	0,08	20700	0,3790	MS17987C631
33630.D043	1,65	0,94	0,08	20700	0,3790	MS17987C643
33630.E008	1,85	0,98	0,08	28500	0,4425	MS17987C708
33630.E012	1,85	0,98	0,08	28500	0,4425	MS17987C712
33630.E014	1,85	0,98	0,08	28500	0,4425	MS17987C714
33630.E015	1,85	0,98	0,08	28500	0,4425	MS17987C715
33630.E019	1,85	0,98	0,08	28500	0,4425	MS17987C719
33630.E020	1,85	0,98	0,08	28500	0,4425	MS17987C720
33630.E022	1,85	0,98	0,08	28500	0,4425	MS17987C722
33630.E024	1,85	0,98	0,08	28500	0,4425	MS17987C724
33630.E026	1,85	0,98	0,08	28500	0,4425	MS17987C726
33630.F011	1,85	1,14	0,08	36900	0,5050	MS17987C811
33630.F012	1,85	1,14	0,08	36900	0,5050	MS17987C812
33630.F013	1,85	1,14	0,08	36900	0,5050	MS17987C813
33630.F014	1,85	1,14	0,08	36900	0,5050	MS17987C814
33630.F015	1,85	1,14	0,08	36900	0,5050	MS17987C815
33630.F020	1,85	1,14	0,08	36900	0,5050	MS17987C820
33630.F023	1,85	1,14	0,08	36900	0,5050	MS17987C823
33630.F033	1,85	1,14	0,08	36900	0,5050	MS17987C833
33630.F039	1,85	1,14	0,08	33900	0,5050	MS17987C839
33630.F045	1,85	1,14	0,08	36900	0,5050	MS17987C845
33630.F050	1,85	1,14	0,08	36900	0,5050	MS17987C850
33630.F053	1,85	1,14	0,08	36900	0,5050	MS17987C853
33630.F065	1,85	1,14	0,08	36900	0,5050	MS17987C865
33630.F080	1,85	1,14	0,08	36900	0,5050	MS17987C880
33630.F080	1,85	1,14	0,08	36900	0,5050	MS17987C880
33630.G013	2,03	1,14	0,08	46700	0,5675	MS17987C913
33630.G025	2,03	1,14	0,08	46700	0,5675	MS17987C925
33630.G030	2,03	1,14	0,08	46700	0,5675	MS17987C930
33630.G037	2,03	1,14	0,08	46700	0,5675	MS17987C937
33630.G055	2,03	1,14	0,08	46700	0,5675	MS17987C955



Material

Shank (part 1) & spindle (part 2):
CRES 17-4PH (AMS 5643), heat treated per MIL-H-6875, condition H900, min. 40 HRC, passivated per AMS2700.
Spring (part 3, not shown):
CRES 302 (ASTM-A-313), heat treated per MIL-H-6875, passivated per AMS2700.
Handle (part 4):
CRES 302 (ASTM-A-313), passivated per AMS2700.
Attaching ring (part 5):
CRES 302 (ASTM-A-313), passivated per AMS2700.
Ball (locking element, part 6):
CRES CL440C (AMS5630), heat treated per MIL-H-6875, passivated per AMS2700.

Technical Notes

Wixroyd Aviation Pip-pins manufactured to Aviation Norm NASM 17987 (former norm: MS 17987) and tested to NAS 1332. Manufacture certified & assessed to EN9100D by EASE (European Aerospace Supplier Evaluation).
Temp. range -22°F to 302°F

Pressing = unlocking.
Releasing = locking.
Pip-pins are used for frequently repeated operations such as quick fastening, locking, adjusting, changing and securing.
All dimensions shown are imperial.

Tips

We can manufacture specials (both metric & imperial) to your drawing, and are certified to produce to NASM standards.
Wixroyd Aviation Pip-Pins can be produced within the following dimensions:
+ diameter: from 3/16" to 1"
+ grip length: from 0.3" to 9.9"
Quick production time on small batches.

Referral

For non-aviation pip-pin

Aviation Pip-Pin, Standard R Handle

single acting, quick release pins - according to NASM 17987

33630



Material

Shank (part 1) & spindle (part 2):
CRES 17-4PH (AMS 5643), heat treated per MIL-H-6875, condition H900, min. 40 HRC, passivated per AMS2700.
Spring (part 3, not shown):
CRES 302 (ASTM-A-313), heat treated per MIL-H-6875, passivated per AMS2700.
Handle (part 4):
CRES 302 (ASTM-A-313), passivated per AMS2700.
Attaching ring (part 5):
CRES 302 (ASTM-A-313), passivated per AMS2700.
Ball (locking element, part 6):
CRES CL440C (AMS5630), heat treated per MIL-H-6875, passivated per AMS2700.

Technical Notes

Wixroyd Aviation Pip-pins manufactured to Aviation Norm NASM 17987 (former norm: MS 17987) and tested to NAS 1332. Manufacture certified & assessed to EN9100D by EASE (European Aerospace Supplier Evaluation).
Temp. range -22°F to 302°F

Pressing = unlocking.
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Wixroyd Aviation Pip-Pins can be produced within the following dimensions:
+ diameter: from 3/16" to 1"
+ grip length: from 0.3" to 9.9"
Quick production time on small batches.

Referral

For non-aviation pip-pin

Wixroyd Flight Pin Range - Certified to aviation standards

With many years experience producing an extensive range of standard Pip-pins (also know as quick release pins or ball lock pins) we are now able to offer of Aviation Standard approved Pip-pins, manufactured according to NASM norms (formerly MS norms) and tested to NAS 1332 standards.

Expanding range



33600 - Single acting Pip-pin, standard B handle



33610 - Single acting Pip-pin, standard TA handle



33620 - Single acting Pip-pin, standard LA handle



33630 - Single acting Pip-pin, standard R handle

Wide range of Aviation applications

- Interior panel attachment
- Baby bassinet pin
- Curtain track attachment
- Curtain track support pins
- TV monitor attachment
- Folding table assembly (e.g. First Class Cabins)

Aviation approved

The Wixroyd Aviation Pip-pin range is produced according to NASM norms, and tested to NAS standards. Our manufacturing processes have been assessed and certified by EASE (European Aerospace Supplier Evaluation) to EN9100D.

All our Aviation Pip-pins are individually marked to enable identification of their production lot number.

In-stock and available?

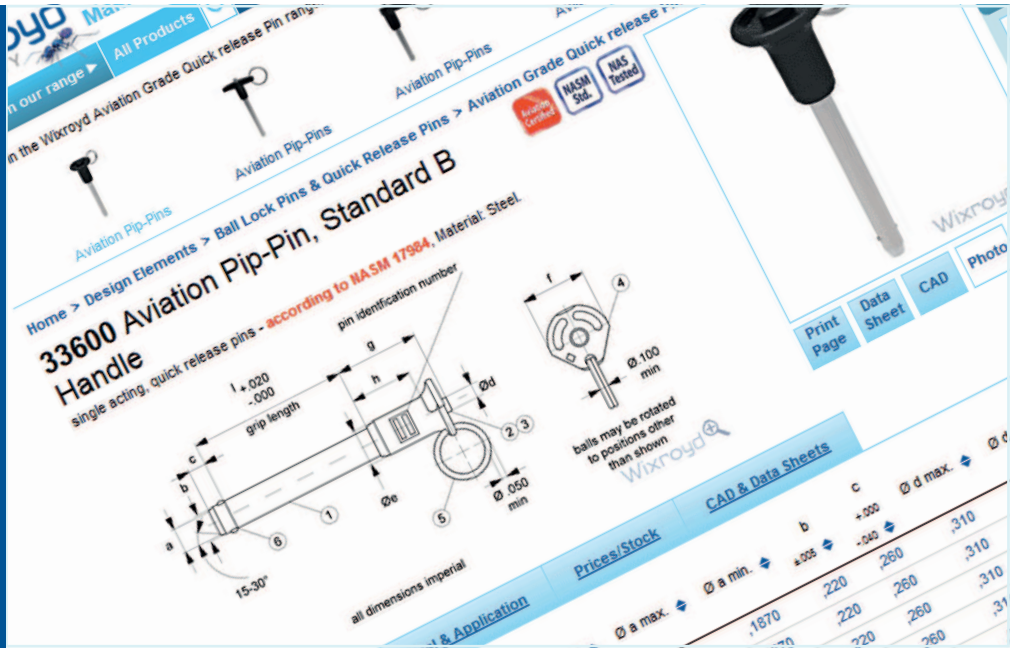
Yes! The product sizes shown on the following pages, with a cross reference to the NASM part code for ease of identification, are all available from stock for delivery within 5 days.

Special designs

We have extensive knowledge and experience in designing, producing and assembling bespoke design pip-pins and ball lock pins in both imperial and metric sizes. We produce under a fully certified manufacturing process, both to our own high standard or to meet Aviation standards.

Please contact our technical team to discuss your requirements (tel. 0845 26 66 577) or email a drawing to info@wixroyd.com

see our website for our full range:
wixroyd.com



Wixroyd Aviation Flight Pins

Wixroyd Flight Pin Range - Certified to aviation standards

Your normal experience may be that imperial Aviation Standard Pip-pins are hard to obtain; price prohibitive, and delivery times far too long. The range of Wixroyd Aviation Pip-pins, in a variety of imperial dimensions, has been designed to solve these problems - we hold a wide, and ever increasing range of sizes ex-stock for immediate delivery - no more 6-8 week lead time!

With many years experience producing an extensive range of standard Pip-pins (also know as quick release pins or ball lock pins) we are now able to offer of Aviation Standard approved Pip-pins, manufactured according to NASM norms (formerly MS norms) and tested to NAS 1332 standards.

Wide range of Aviation applications

- Interior panel attachment
- Baby bassinet pin
- Curtain track attachment
- Curtain track support pins
- TV monitor attachment
- Folding table assembly (e.g. First Class Cabins)

In-stock and available?

Yes! The product sizes shown on the following pages, with a cross reference to the NASM part code for ease of identification, are all available from stock for delivery within 5 days.

Materials

Our Aviation Pip-pins are manufactured to NASM norms, and we follow the material specification of these norms, which means you can feel safe in purchasing a part which is to specification - both in materials and strength.

Aviation approved



The new Wixroyd Aviation Pip-pin range is produced according to NASM norms, and tested to NAS standards. Our manufacturing processes have been assessed and certified by EASE (European Aerospace Supplier Evaluation) to EN9100D.

Identifying production batches

All our Aviation Pip-pins are individually marked to enable identification of their production lot number. Marking allows identification of:

- NASM Standard Number
- Material Grade
- Pin/shank diameter
- Grip length
- Company identification
- Production lot number.

Special designs

We have extensive knowledge and experience in designing, producing and assembling bespoke design pip-pins and ball lock pins in both imperial and metric sizes. We produce under a fully certified manufacturing process, both to our own high stardard or to meet Aviation standards.

We can customise to meet your needs:

- Changes in grip/handle type
- Material variations
- Changes of functional dimensions; pin diameter, pin grip length

Please contact our technical team to discuss your requirements (tel. 0845 26 66 577) or email a drawing to info@wixroyd.com

Expanding range



Single acting Pip-pin, standard B handle



Single acting Pip-pin, standard TA handle



Single acting Pip-pin, standard LA handle

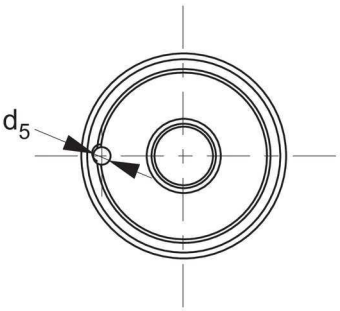


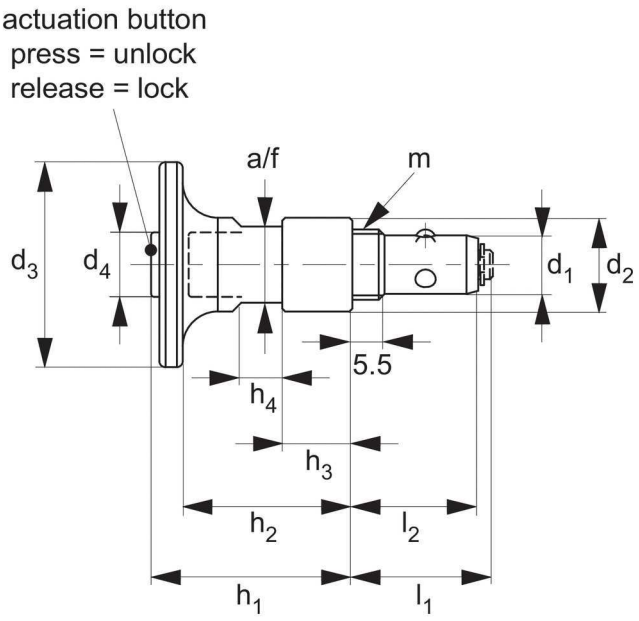
Single acting Pip-pin, standard R handle

One-Touch Fastener - Ball Locking

push button lock - recessed button - steel

33910

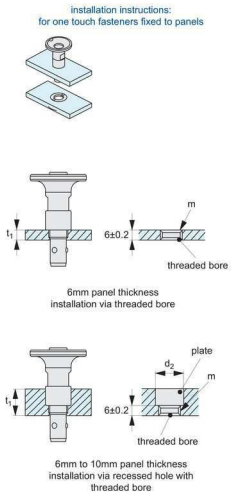






Order No.	For single panel thickness	d_1 -0,05 -0,10	d_2	d_3	d_4	d_5	l_1	l_2	g
33910.W1006	6-10	6	12	25	8	-	21,0	19,0	30
33910.W1610	6-16	10	16	35	11	3	23,5	21,5	30

Order No.	h_1	h_2	h_3	h_4	m	a/f	Clamping force N	Shear strength N	Tensile strength N
33910.W1006	22,0	18	6	5,5	M 8x1,25	10	30	3000	500
33910.W1610	34,5	29	12	7,0	M12x1,50	13	50	9000	1500



Material

Body & button: steel, nickel plated.
Ball: stainless steel.
Coil ring: stainless steel.
O-Ring: fluororubber.

Technical Notes

One-touch fasteners are the ideal solution for applications requiring rapid and re-curring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and drive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time waste in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery.
Temperature resistant to 180°C.

Tips

Secure one-touch fasteners to your assembly with lanyards and retaining cables, see part no. 33250.

Important Notes

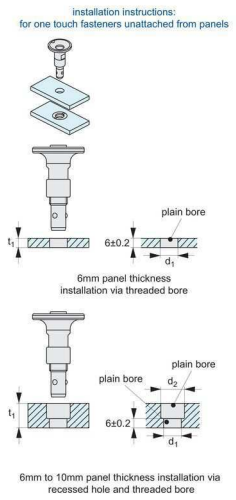
Suitable for panels/enclosures of 6 to 10mm thickness. For locating bushes see part no. 33920.
Recessed button handle means button is not exposed to accidental activation for added security.

Actuation:
push button: unlock (to pass pin through panels)
release button: lock to securely fasten.

One-Touch Fastener - Ball Locking

push button lock - recessed button - steel

33910





Material

Body & button: steel, nickel plated.
Ball: stainless steel.
Coil ring: stainless steel.
O-Ring: fluororubber.

Technical Notes

One-touch fasteners are the ideal solution for applications requiring rapid and re-curring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and drive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time waste in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery.
Temperature resistant to 180°C.

Tips

Secure one-touch fasteners to your assembly with lanyards and retaining cables, see part no. 33250.

Important Notes

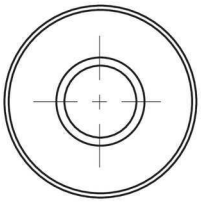
Suitable for panels/enclosures of 6 to 10mm thickness. For locating bushes see part no. 33920.
Recessed button handle means button is not exposed to accidental activation for added security.

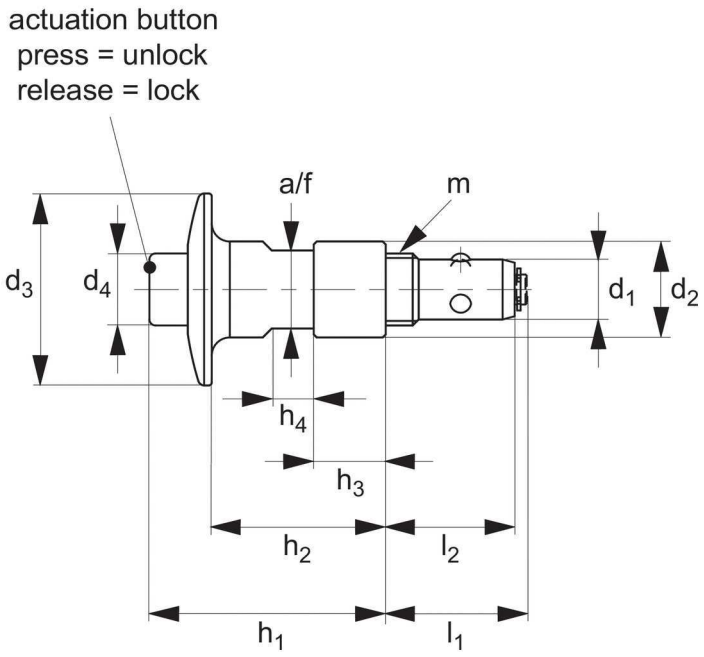
Actuation:
push button: unlock (to pass pin through panels)
release button: lock to securely fasten.

One-Touch Fastener - Ball Locking

push button lock - button handle - stainless steel

33912

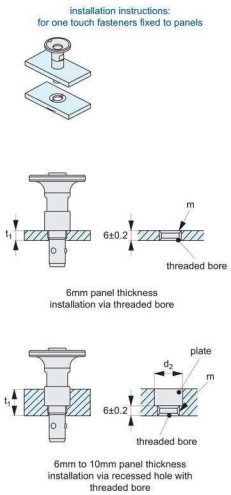






Order No.	For single panel thickness	d_1 -0,05 -0,10	d_2	d_3	d_4	l_1	l_2	g
33912.W1006	6-10	6	12	23	8	21,0	19,0	30
33912.W1610	6-16	10	16	32	12	23,5	21,5	75

Order No.	h_1	h_2	h_3	h_4	m	a/f	Clamping force N	Shear strength N	Tensile strength N
33912.W1006	26,0	18	6	5,5	M 8x1,25	10	30	3000	500
33912.W1610	39,4	29	12	7,0	M12x1,50	13	50	9000	1500



Material

Body: stainless steel.
Button: stainless steel, nickel plated.
Ball & coil ring: stainless steel.
O-Ring: fluororubber.

Technical Notes

One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and drive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time waste in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery.
Temperature resistant to 180°C.

Important Notes

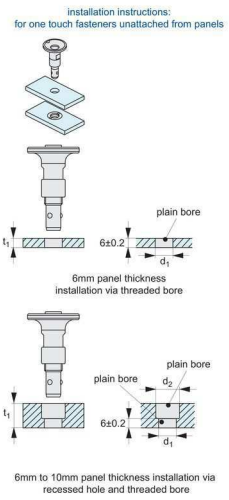
Suitable for panels/enclosures of 6 to 10mm thickness.
For locating bushes see part no. 33920.

Actuation:
push button: unlock (to pass pin through panels)
release button: lock to securely fasten.

One-Touch Fastener - Ball Locking

push button lock - button handle - stainless steel

33912





Material

Body: stainless steel.
Button: stainless steel, nickel plated.
Ball & coil ring: stainless steel.
O-Ring: fluororubber.

Technical Notes

One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and drive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time waste in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery.
Temperature resistant to 180°C.

Important Notes

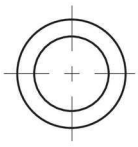
Suitable for panels/enclosures of 6 to 10mm thickness.
For locating bushes see part no. 33920.

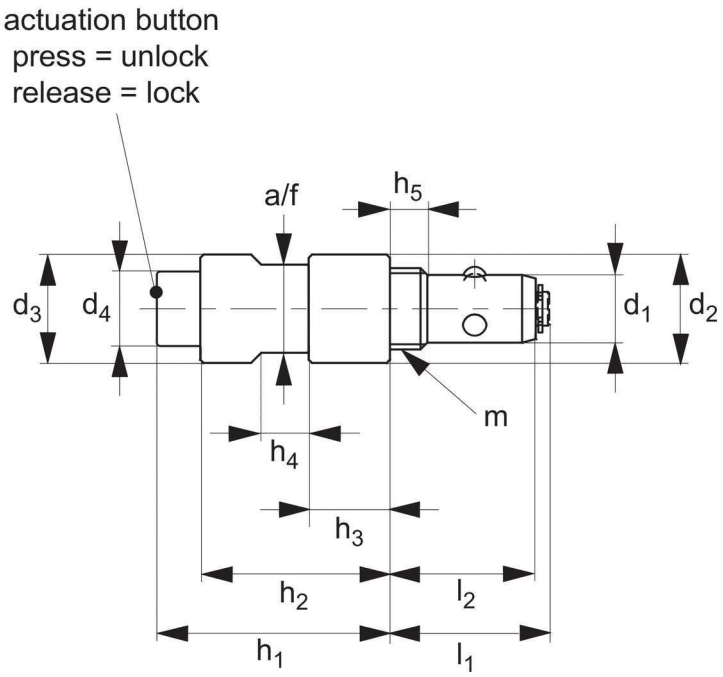
Actuation:
push button: unlock (to pass pin through panels)
release button: lock to securely fasten.

One-Touch Fastener - Ball Locking

push button lock - straight - steel

33914



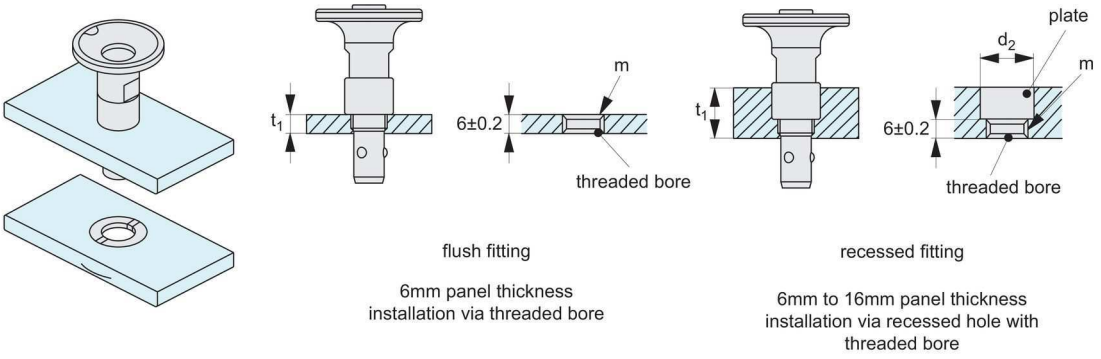




Order No.	For single panel thickness	d_1 -0,05 -0,10	d_2	d_3	d_4	l_1	l_2	h_1	g
33914.W1006	6-10	6	12	12	8	21,0	19,0	22,0	30
33914.W1610	6-16	10	16	16	11	23,5	21,5	34,4	50

Order No.	h_2	h_3	h_4	h_5	m	a/f	Clamping force N	Shear strength N	Tensile strength N
33914.W1610	28,0	12	7,0	5,5	M12x1,5	13	50	9000	1500
33914.W1006	17,5	6	5,5	5,5	M8x1,25	10	30	3000	500

installation instructions: for one touch fasteners fixed to panels



flush fitting

6mm panel thickness
installation via threaded bore

recessed fitting

6mm to 16mm panel thickness
installation via recessed hole with threaded bore

Material

Body & button: steel, nickel plated.
Ball & coil ring: stainless steel.
Snap Ring: stainless steel.

Technical Notes

One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and drive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time wasted in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery.
Temperature resistant to 180°C.

Important Notes

Suitable for panels/enclosures of 6 to 16mm thickness.
For locating bushes see part no. 33920.

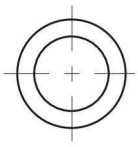
Actuation:
push button: unlock (to pass pin through panels)
release button: lock to securely fasten.

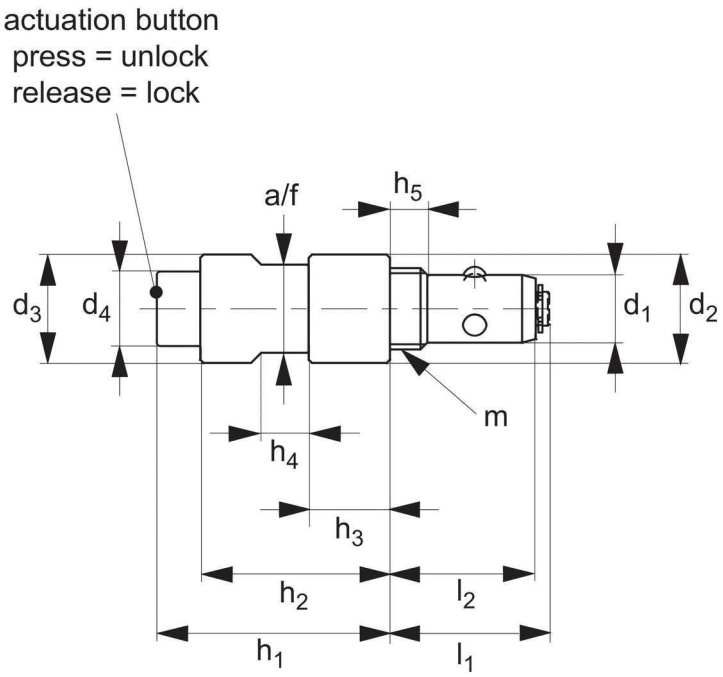
Note: One-touch fastener 33914 is not suitable for installation unattached from panel.

One-Touch Fastener - Ball Locking

push button lock - straight - stainless steel

33915



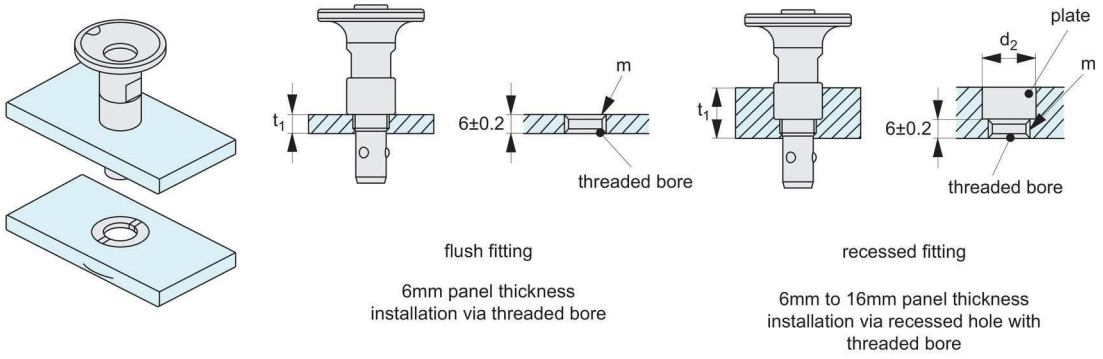




Order No.	For single panel thickness	d_1 -0,05 -0,10	d_2	d_3	d_4	l_1	l_2	h_1	g
33915.W1006	6-10	6	12	25	8	21,0	19,0	22,0	30
33915.W1610	6-16	10	16	35	11	23,5	21,5	34,4	50

Order No.	h_2	h_3	h_4	h_5	m	a/f	Clamping force N	Shear strength N	Tensile strength N
33915.W1610	28,0	12	7,0	5,5	M12x1,5	13	50	9000	1500
33915.W1006	17,5	6	5,5	5,5	M 8x1,25	10	30	3000	500

installation instructions: for one touch fasteners fixed to panels



flush fitting

6mm panel thickness
installation via threaded bore

recessed fitting

6mm to 16mm panel thickness
installation via recessed hole with threaded bore

Material

Body & button: stainless steel
Ball & coil ring: stainless steel.
Snap Ring: stainless steel.

Technical Notes

One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and drive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time wasted in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery.
Temperature resistant to 180°C.

Important Notes

Suitable for panels/enclosures of 6 to 16mm thickness.
For locating bushes see part no. 33920.

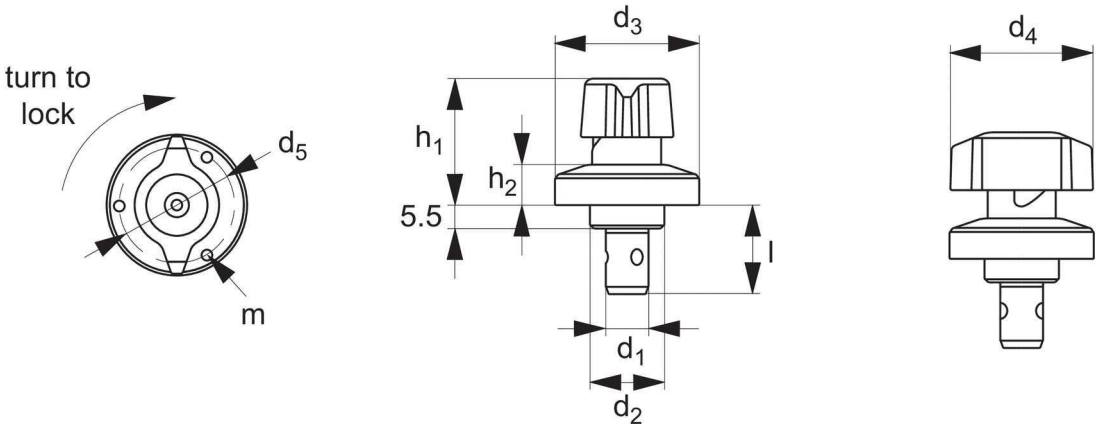
Actuation:
push button: unlock (to pass pin through panels)
release button: lock to securely fasten.

Note: One-touch fastener 33915 is not suitable for installation unattached from panel.

One-Touch Fastener - Ball Locking

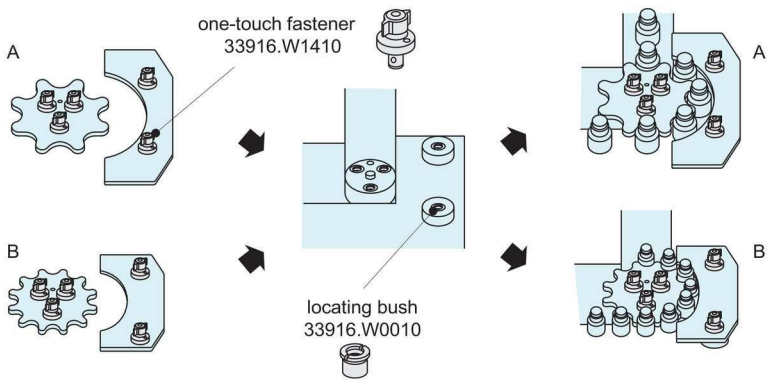
quarter turn lock - t-handle grip - plastic

33916





Order No.	For single panel thickness	d_1 -0,05 -0,10	d_2 h9	d_3	d_4	d_5	h_1	h_2	l	m	Clamping force N	g
33916.W1006	6-10	6	14	25	25	21	24,5	6,5	19,5	M 2x0,4	30	40
33916.W1410	6-14	10	18	34	34	28	31,0	10,0	21,5	M 3x0,5	50	95
33916.W2010	12-20	10	18	34	34	28	31,0	10,0	27,5	M 3x0,5	50	100



quick change of star wheels and guide plates on bottling lines

Material

Body & Shank:steel, nickel plated.
Knob: plastic, black.
Ball & Spring: Titanium G5.

Technical Notes

One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and drive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time wasted in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery.

Important Notes

Suitable for panels/enclosures of 6 to 20mm thickness.
For locating bushes see part no. 33920.
Quarter turn handle, easy-to-read on/off position of the one-touch fastener for increased security.
Temperature resistant to 180°C.

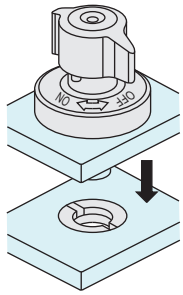
Actuation:
-Turn handle to off position: locking balls retract and are held in retracted position via notched catch.
-Pass fastener through panel.
-Turn handle 45° to on position: locking balls engage with locating bush, panels are securely fastened.

33916 -33918

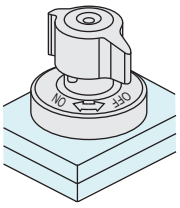
One-Touch Fastener - Ball Locking

quarter turn - installation instructions

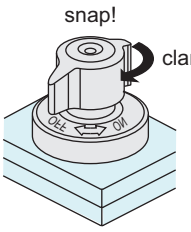
Operating instructions



ensure that the knob is positioned at the "OFF" mark

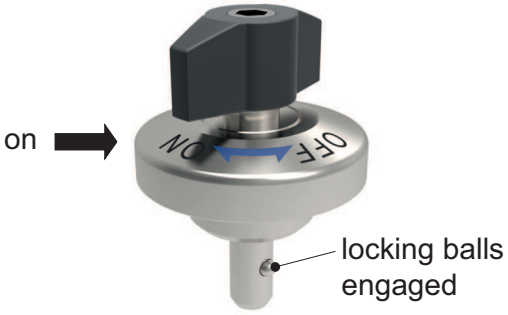


align pin and receiver

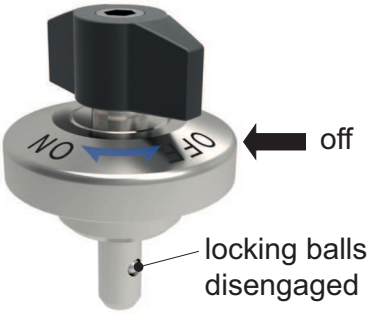


turn the knob to the "ON" mark to clamp

Easy status identification

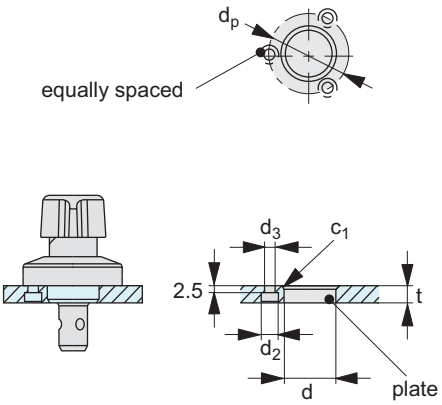


At ON position

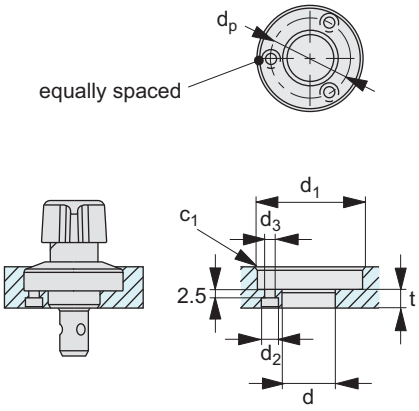


At OFF position

Installation dimensions for 33916-33918



Installation for 6mm panels



Installation for 6mm to 20mm panels

33916/17/18	Single panel thickness t±0,2	d_6 +0,1 +0,0	d_7	d_8	d_9	d_5	c_1
.W1006	6	14	-	4,4	2,4	21	
W1006	6 to 10	14	26	4,4	2,4	21	
W1410	6	18	-	6,5	3,4	28	
W1410	6 to 14	18	35	6,5	3,4	28	
W2010	12	18	-	6,5	3,4	28	
W2010	12 to 20	18	35	6,5	3,4	28	

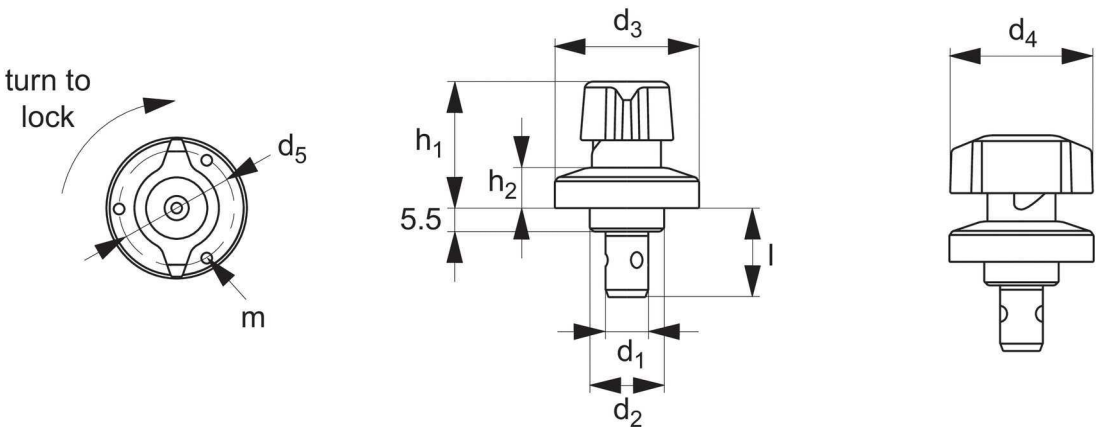
Note: if two fasteners used, allow spacing tolerance of ± 0,1mm

ov-33916-a - Updated - 10-01-2017

One-Touch Fastener - Ball Locking

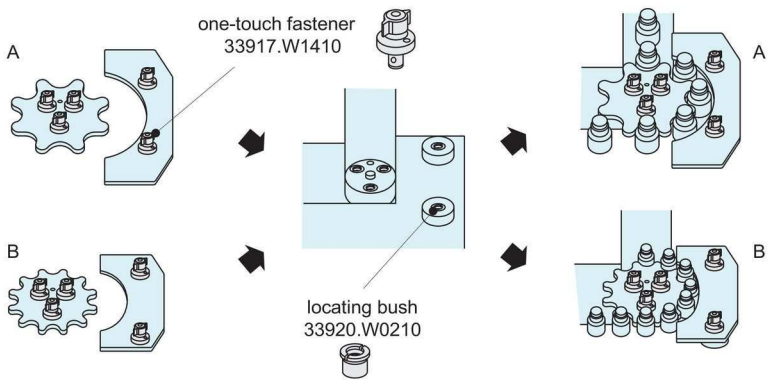
quarter turn lock - t-handle grip - steel

33917





Order No.	For single panel thickness	d_1 -0,05 -0,10	d_2 h9	d_3	d_4	d_5	h_1	h_2	l	m	Clamping force N	g
33917.W1006	6-10	6	14	25	25	21	24,5	6,5	19,5	M 2x0,4	30	40
33917.W1410	6-14	10	18	34	34	28	31,0	10,0	21,5	M 3x0,5	50	95
33917.W2010	12-20	10	18	34	34	28	31,0	10,0	27,5	M 3x0,5	50	100



quick change of star wheels and guide plates on bottling lines

Material

Body & shank: steel, nickel plated.
Knob: stainless steel.
Ball & spring: stainless steel.

Technical Notes

One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and drive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time wasted in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery.

Important Notes

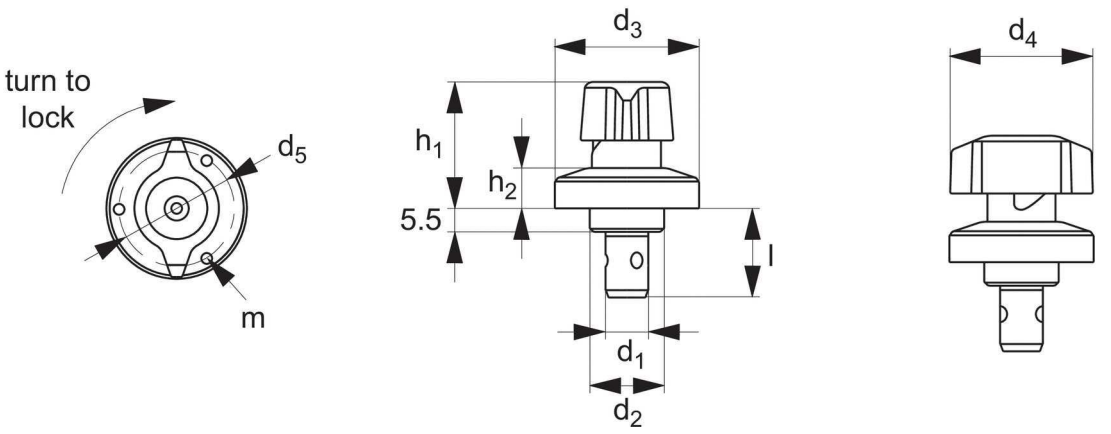
Suitable for panels/enclosures of 6 to 20mm thickness.
For locating bushes see part no. 33920.
Quarter turn handle, easy-to-read on/off position of the one-touch fastener for increased security.
Temperature resistant to 180°C.

Actuation:
-Turn handle to off position: locking balls retract and are held in retracted position via notched catch.
-Pass fastener through panel.
-Turn handle 45° to on position: locking balls engage with locating bush, panels are securely fastened.

One-Touch Fastener - Ball Locking

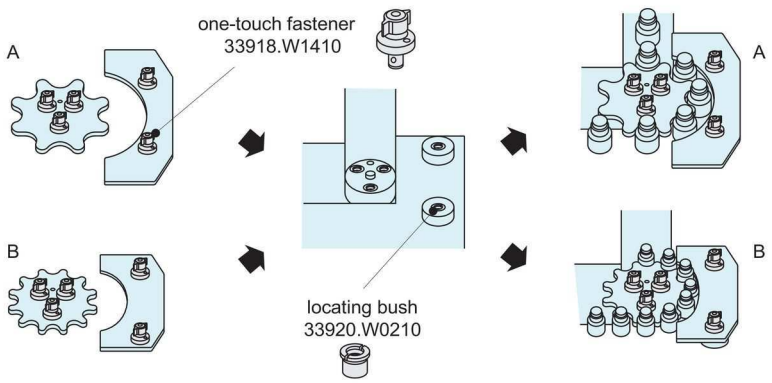
quarter turn lock - t-handle grip - stainless steel

33918





Order No.	For single panel thickness	d_1 -0,05 -0,10	d_2 h9	d_3	d_4	d_5	h_1	h_2	l	m	Clamping force N	g
33918.W1006	6-10	6	14	25	25	21	24,5	6,5	19,5	M 2x0,4	30	40
33918.W1410	6-14	10	18	34	34	28	31,0	10,0	21,5	M 3x0,5	50	95
33918.W2010	12-20	10	18	34	34	28	31,0	10,0	27,5	M 3x0,5	50	100



quick change of star wheels and guide plates on bottling lines

Material

Body & shank: stainless steel.
Knob: stainless steel.
Ball & spring: stainless steel.

Technical Notes

One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and drive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time wasted in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery.

Important Notes

Suitable for panels/enclosures of 6 to 20mm thickness.
For locating bushes see part no. 33920.
Quarter turn handle, easy-to-read on/off position of the one-touch fastener for increased security.
Temperature resistant to 180°C.

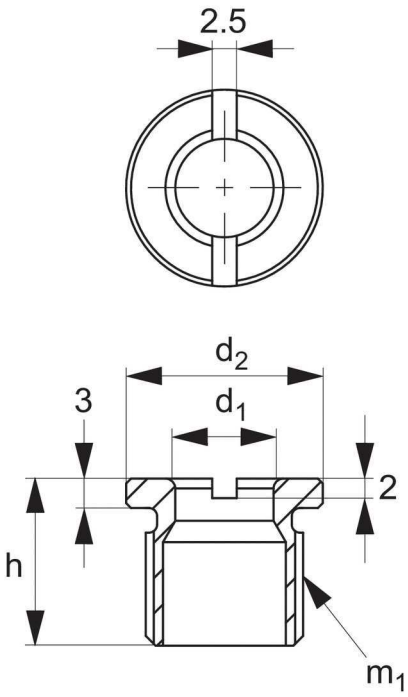
Actuation:
-Turn handle to off position: locking balls retract and are held in retracted position via notched catch.
-Pass fastener through panel.
-Turn handle 45° to on position: locking balls engage with locating bush, panels are securely fastened.

Locating Bushes

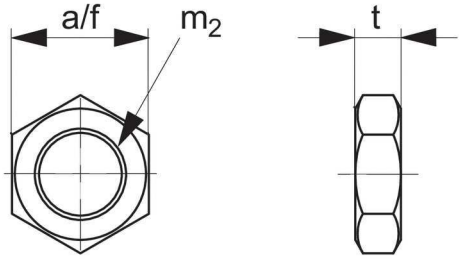
for one-touch fasteners 33910 to 33918

33920





locating bush



lock nut

Material
Body: steel or stainless steel SUS303.
Nut: stainless steel SUS303.

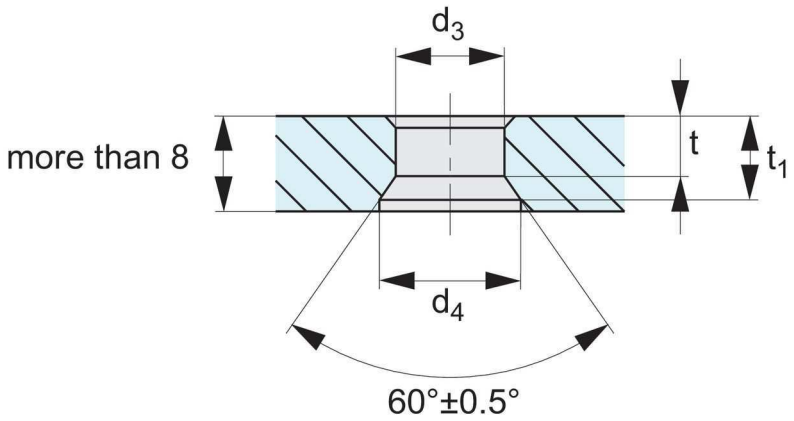
Technical Notes
Used in conjunction with one-touch fasteners 33910 to 33918, locating bushes 33920 provide secure fastening of panels and covers. Locating bushes are of particular use in soft metals, such as aluminium where receiving surfaces may wear. One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and drive belts.

Tips
While we recommend the use of locating bushes as receivers for our one-touch fasteners, it is also possible to mount one-touch fasteners without them, see specifications opposite.

Important Notes
Suitable for panels/enclosures of 6 to 20mm thickness.
For one-touch fasteners see part no. 33910 to 33918. For installation instructions see technical page.
Temperature resistant to 180°C.

Order No.	Type	Material	d_1 +0,4 +0,2	d_2 h9	h	t	a/f	m_1	m_2	For panel thickness t	g
33920.W0006	Bush	Steel	6	16	15	-	-	M12x1,5	-	>6	9
33920.W0010	Bush	Steel	10	20	17	-	-	M16x1,5	-	>6	13
33920.W0206	Bush	S/S	6	16	15	-	-	M12x1,5	-	>6	9
33920.W0210	Bush	S/S	10	20	17	-	-	M16x1,5	-	>6	13
33920.W0900	Tool	Steel	-	-	-	-	-	-	-	-	-
33920.W5012	Nut	S/S	-	-	-	6	19	-	M12x1,5	-	-
33920.W5016	Nut	S/S	-	-	-	8	24	-	M16x1,5	-	-

installation in receiver panel - without locating bush

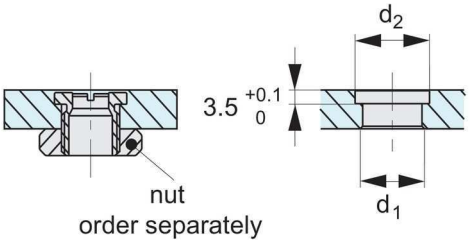


Locating Bushes

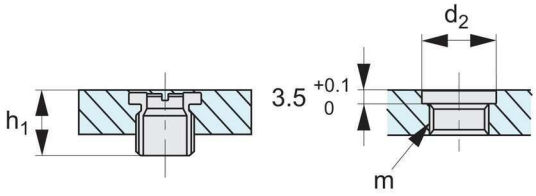
for one-touch fasteners 33910 to 33918

33920

installation in receiver panel - with locating bush



installation via plain bore and locking nut



installation via threaded bore



Material

Body: steel or stainless steel SUS303.
Nut: stainless steel SUS303.

Technical Notes

Used in conjunction with one-touch fasteners 33910 to 33918, locating bushes 33920 provide secure fastening of panels and covers. Locating bushes are of particular use in soft metals, such as aluminium where receiving surfaces may wear. One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and drive belts.

Tips

While we recommend the use of locating bushes as receivers for our one-touch fasteners, it is also possible to mount one-touch fasteners without them, see specifications opposite.

Important Notes

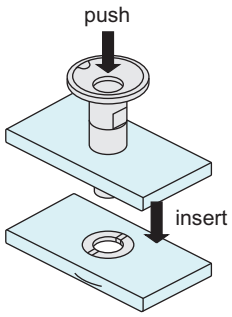
Suitable for panels/enclosures of 6 to 20mm thickness.
For one-touch fasteners see part no. 33910 to 33918. For installation instructions see technical page.
Temperature resistant to 180°C.

33910 -33920

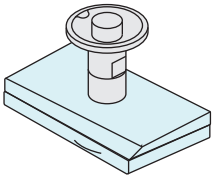
One-Touch Fastener - Ball Locking

technical information

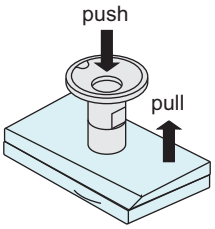
Operating instructions



depress button,
align pin and insert

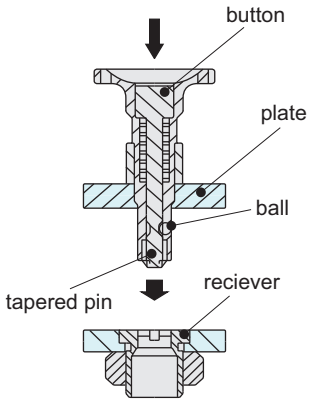


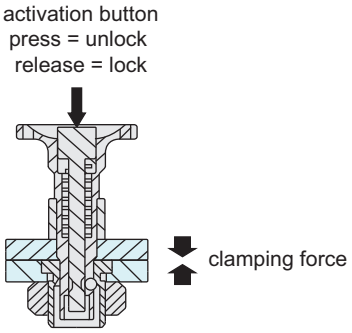
when the button is released,
clamping is complete



depress button to release,
and pull out

Operating principle





during clamping the tapered pin pushes out the ball bearing, into the recessed holes of the reciever, securely clamping the two surfaces together

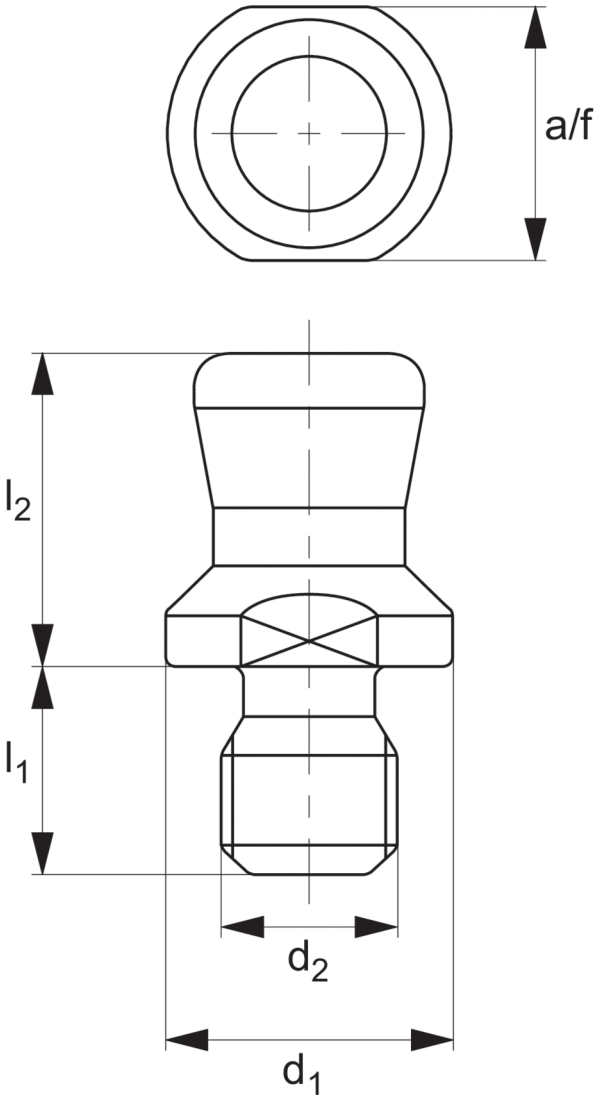
Wixroyd 0845 26 66 577 info@wixroyd.com

One-Touch Fastener - Ball Clamping

pin - for one touch fasteners 33924 to 33929

33923





Order No.	d_1 -0.05 -0.10	d_2	l_1	l_2	a/f	g
33923.W0006	6	M 4x0,7	5,8	7,6	5	2
33923.W0008	8	M 5x0,8	5,8	8,7	7	3

Material

Body: stainless steel, SUS630

Technical Notes

One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and dive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time wasted in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery.

Important Notes

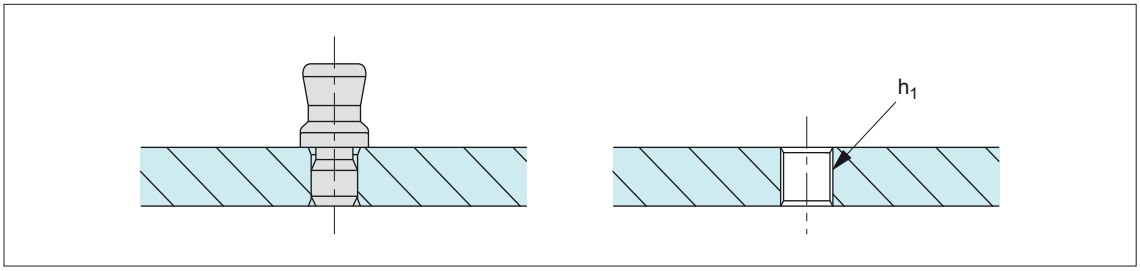
Pin 33923 for use in conjunction with one-touch fasteners, ball clamping;
33924 through 33929. Pins for installation in material to minimum depth 6,0mm or greater.
Recess of 0,5mm +0,1 is recommended to ensure full surface contact and achieve maximum strength of pin.

One-Touch Fastener - Pins

overview - use with one touch fasteners 33924 to 33929

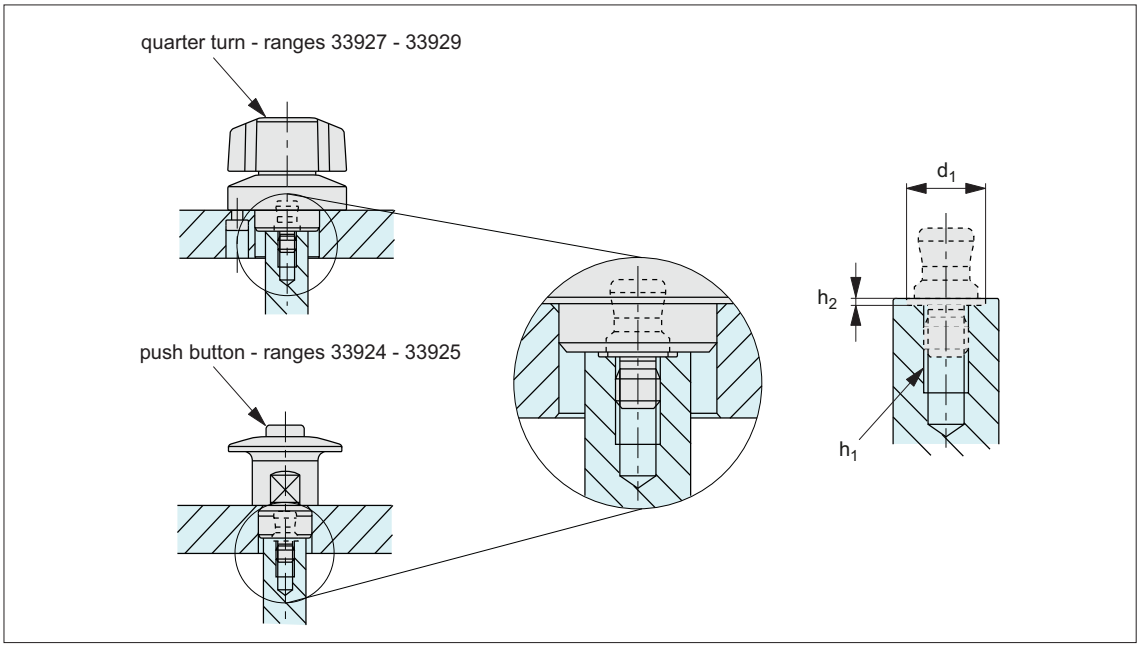
Installation Dimensions

Standard mount



Recessed mount

Prepare a tapped hole according to the thread of the pin. Ensure a counter bore is machined to depth h_2 to complete pin installation.



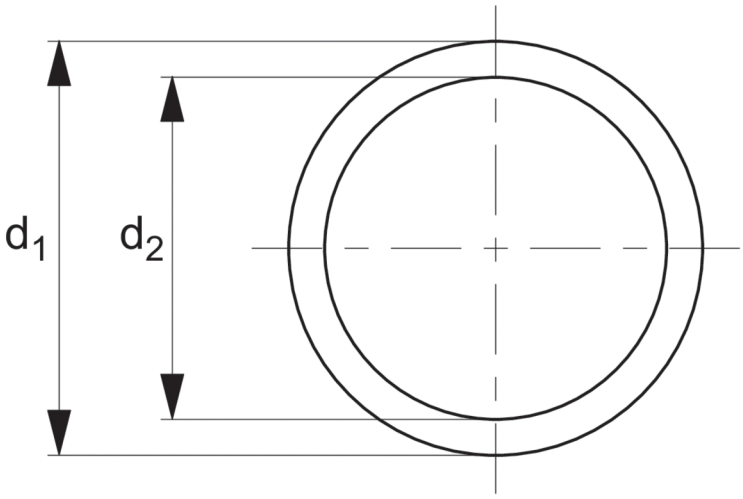
	Mounting type	h_1	h_2 +0,1	d_3
33923.W0006	Standard	M4x0,7	-	-
33923.W0006	Recessed	M4x0,7	0,5	7
33923.W0008	Standard	M5x0,8	-	-
33923.W0008	Recessed	M5x0,8	0,5	9

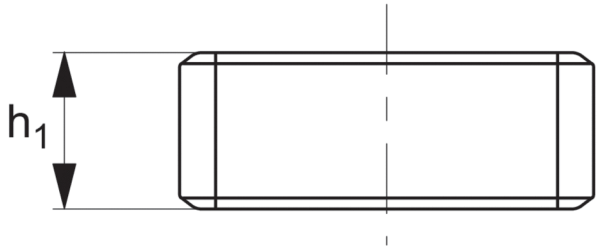
One-Touch Fastener - Ball Clamping

spacer- for one-touch fastener 33924 & 33925

33926







Material
Stainless steel SUS303

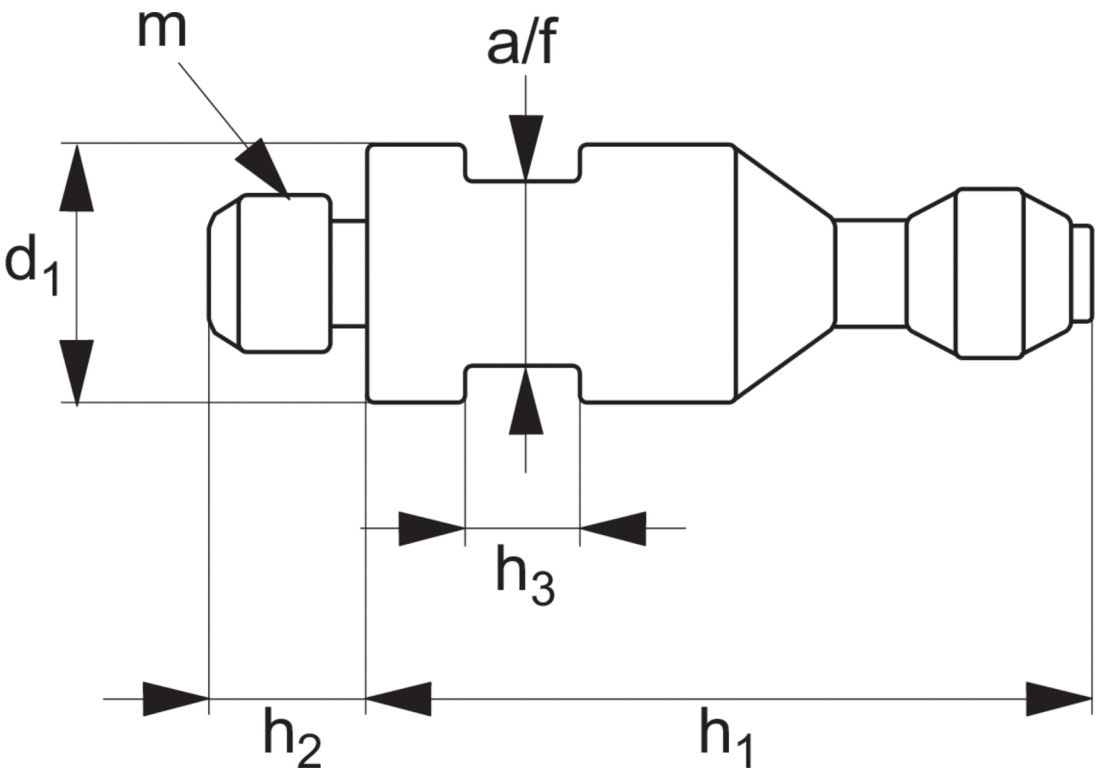
Technical Notes
For use with one-touch fasteners 33924 and 33925. Spacer adapts thread length of one-touch fastener to different thread reaches on mounting panels of different thickness.

Order No.	For panel thickness	d_1	$d_{2\ +0.2\ +0.01}$	$h_{1\ +0.05}$	g
33926.W1604	6	19	16	4	2,5
33926.W1605	5	19	16	5	3,0
33926.W1606	4	19	16	6	3,5
33926.W1607	3	19	16	7	4,0

One-Touch Fastener - Ball Clamping

pin

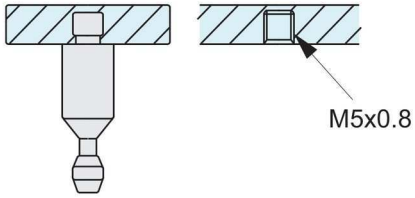
33930



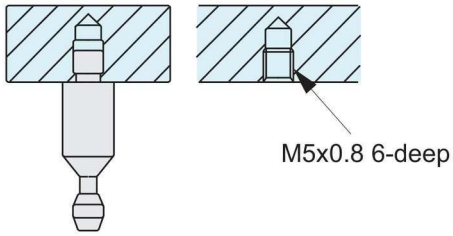


Order No.	d_1 -0,2 -0,4	a/f	h_1	h_2	h_3	m	g
33930.W0008	Ø8	6	23	5	4	M 5x0,8	7

installation dimensions



for installation in 6mm-thick plates



for installation in plates of thickness over 6mm, use screw-in method

Material

Body: steel, nickel plated.

Technical Notes

One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and dive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time waste in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery.

Important Notes

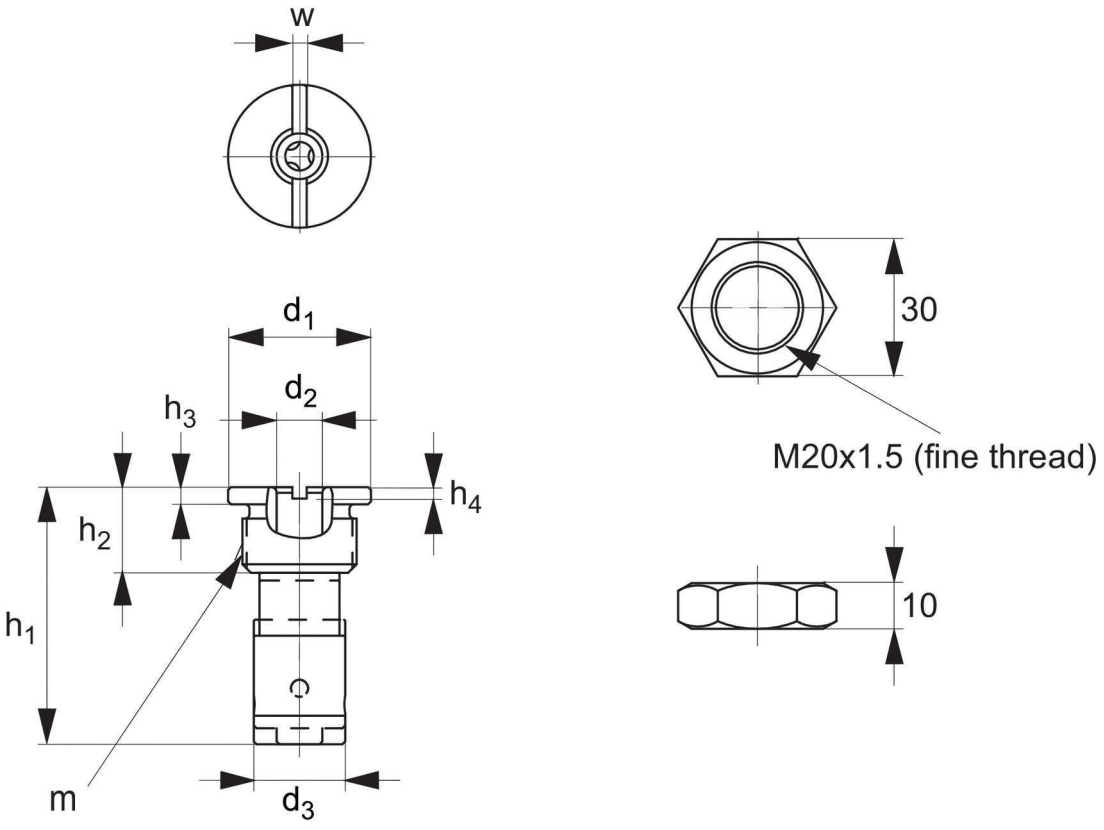
Pin 33930 is for use inconjunction with one-touch fasteners, ball clamping; 33934 and 33936. Suitable for panels/enclosues of 6 to 20 mm thickness. Requires an M 6 thread, 6mm deep for installation into blind hole. See technical pages for further information.

One-Touch Fastener - Ball Clamping

locating bush and receiver - safety release

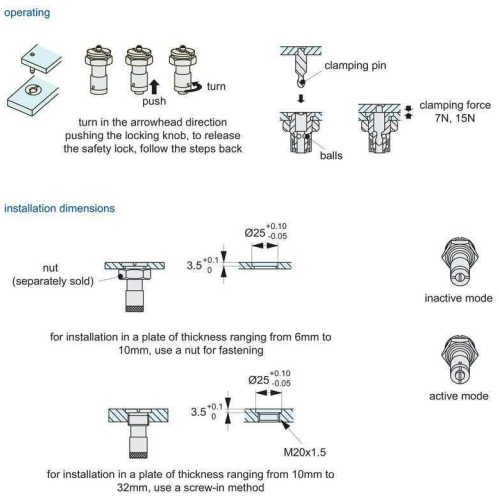
33934





receiver lock nut

Order No.	Type	d_1 h9	d_2 +0,10 +0,50	d_3	h_1	h_2	h_3	h_4	m	w	Clamping force N	Shear strength N	Tensile strength N	g
33934.W0807	Receiver	Ø26	Ø8	Ø16	45	15	3	2	M20x1,5	2,5	7	1800	1800	65
33934.W0815	Receiver	Ø26	Ø8	Ø16	45	15	3	2	M20x1,5	2,5	17	1800	1800	65
33920.W5020	Nut	-	-	-	-	-	-	-	M20x1,5	-	-	-		-



Material

Body: steel, nickel plated.
Balls: stainless steel.

Technical Notes

One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and drive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time waste in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery.
Temperature resistant to 180°C.

Important Notes

Suitable for panels/enclosues of 6 to 32 mm thicknes. Used inconjunction with pin 33930. Offers a safety release fature to prevent accidental release in of pin/assembly.
* Tensile strength stated is for locked position/state of the fastener.

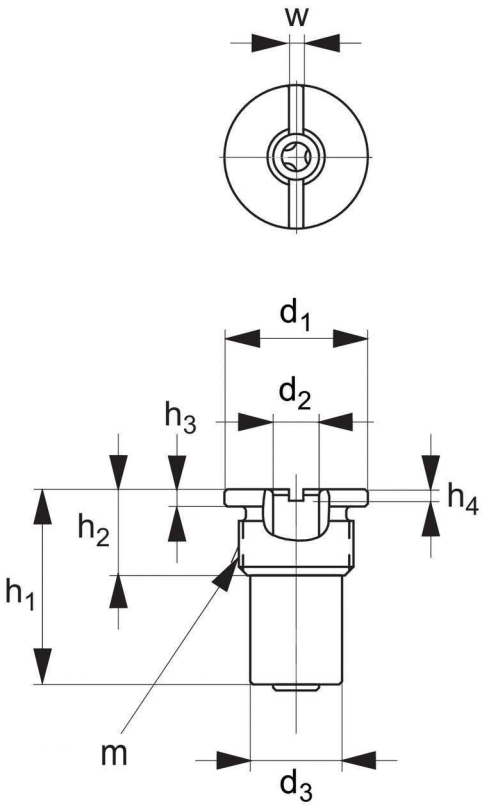
Actuation:
Engage pin into receiver, a positive "click" is heard, securing balls are engaged. Panels are securely fastened.
To release, pull safety release housing on under side of receiver, balls are retracted and panel is released.

One-Touch Fastener - Ball Clamping

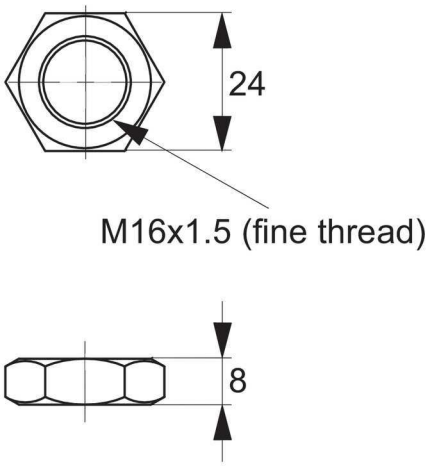
locating bush and receiver - mechanical release

33936





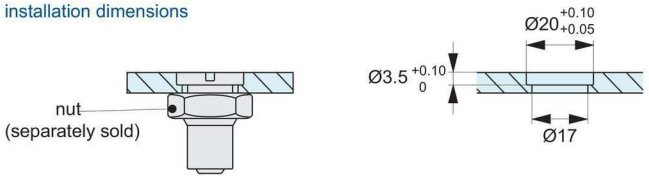
receiver



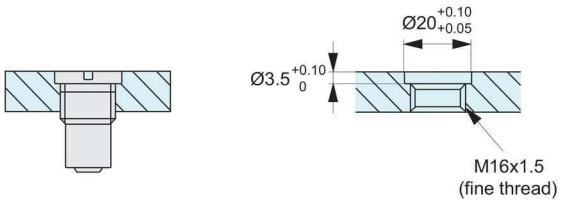
lock nut

Order No.	Type	d_1 h9	d_2 +0,10 +0,05	d_3	h_1	h_2	h_3	m	w	Clamping force N	Shear strength N	Tensile strength N	g
33936.W0807	Receiver	Ø20	Ø8	Ø14	29	15	3	M16x1,5	2,5	7	1800	1800	30
33936.W0815	Receiver	Ø20	Ø8	Ø14	29	15	3	M16x1,5	2,5	15	1800	1800	30
33920.W5016	Nut	-	-	-	-	-	-	M16x1,5	-	-	-	-	-

installation dimensions



for installation in a plate of thickness ranging from 6mm to10mm, use a nut for fastening



for installation in a plate of thickness over 10mm, use a screw-in method

Material

Body: steel, nickel plated.
Balls & spring: stainless steel.

Technical Notes

One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and dive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time waste in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery. Temperature resistant to 180°C.

Important Notes

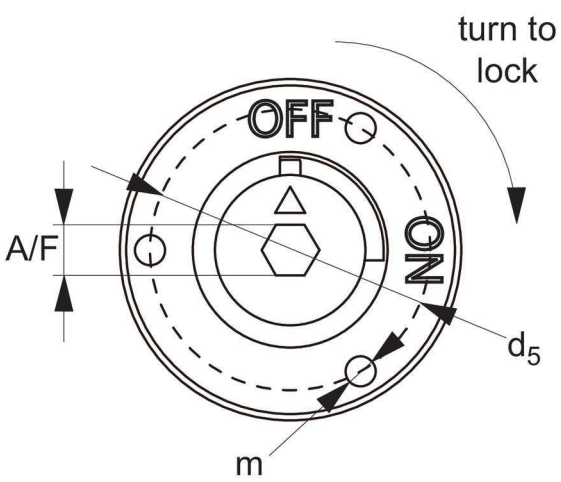
Suitable for panels/enclosures of 6 to 32 mm thickness. Used inconjunction with pin 33930. Mechanical release only (no safety release).
* Tensile strength stated is for locked position/state of the fastener.

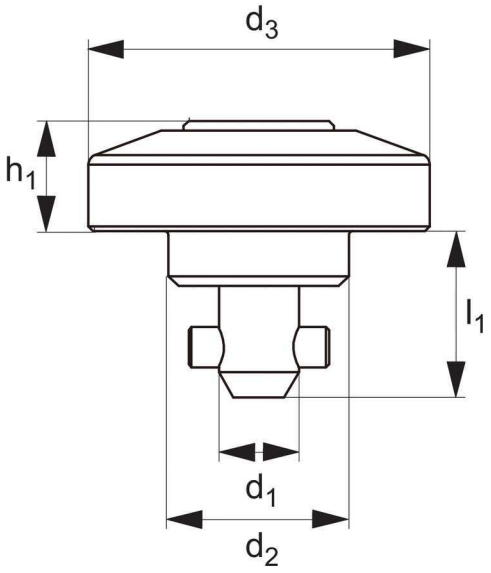
Actuation:
Engage pin into receiver, a positive "click" is heard, securing balls are engaged. Panels are securely fastened.
To release, simply pull panels apart with sufficient force to overcome securing balls, panel is released.

One-Touch Fastener - Cam Locking

quarter turn - low height - hex key - steel

33945







Order No.	For single panel thickness	d_1 -0,04 0,08	d_2 tol. h9	d_3	m	l_1	h_1	A/F	Clamping force N	Shear strength N	Tensile strength N	g
33945.W1005	6 - 10	5	14	25	M 2x0,4	15,5	8	4	60	1800	1200	30
33945.W1408	6 - 14	8	18	34	M 3x0,5	17,0	11	5	90	3200	2600	105
33945.W2008	12 - 20	8	18	34	M 3x0,5	23,0	11	5	90	3200	2600	110

Material

Body: stainless steel SUS303.
Shank: steel, nickel plated.
Pin: stainless SUS 304.

Technical Notes

One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and dive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time wasted in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery.
Temperature resistant to 200°C.

Important Notes

Suitable for panels/enclosures of 6 to 20 mm thicknes. For locating bushes see part no. 33948 and 33949.

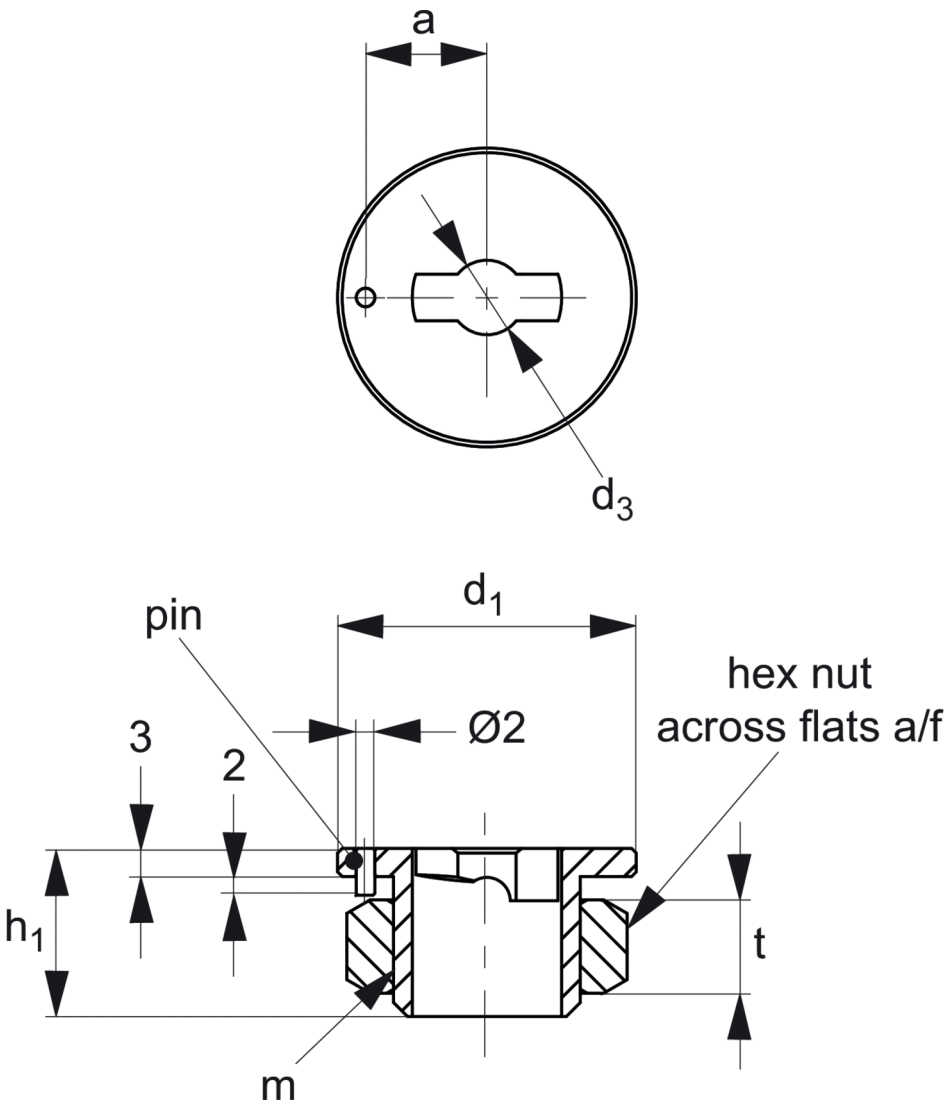
Actuation:
-Use suitable hex key to turn lock to off positon. Present cover panel to frame and align to locking bush.
-With the hex key, now turn the lock back 45° to the on position; locking pin follows, tightening fastener and fasterning panel.

One-Touch Fastener - Cam Locking

thin plate locating bush for quarter turn

33948





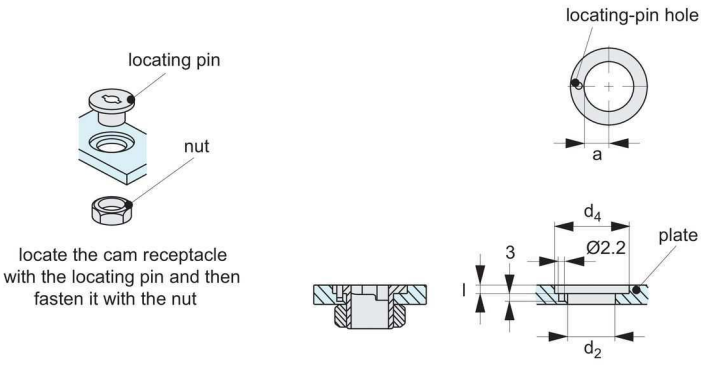
Material
Body: steel, nickel plated or stainless steel.
Nut: stainless steel.

Technical Notes
Used in conjunction with one-touch fasteners 33940 to 33946, locating bushes 33948 provide secure fastening of panels and covers. Locating bushes are of particular use in soft metals, such as aluminium where receiving surfaces may wear. One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and drive belts. Temperature resistant to 200°C.

Important Notes
Suitable for panels/enclosures of 6 to 12 mm thickness. For one-touch fasteners see part nos. 33940 to 33946. For installation instructions see technical page.

Order No.	Material	For single panel thickness	d_1 -0,04 -0,08	h_1	d_3 +0,08 +0,04	a ±0,1	m	t	A/F	d_2	d_4 +0,10 +0,05	l_1	g
33948.W0005	Steel	6-10	25	16	5	10,5	M14x1,5	8	22	15	25	3,5	40
33948.W0008	Steel	6-12	32	18	8	13,0	M20x1,5	10	30	21	32	3,5	55
33948.W0105	Stainless Steel	6-10	25	16	5	10,5	M14x1,5	8	22	15	25	3,5	40
33948.W0108	Stainless Steel	6-12	32	18	8	13,0	M20x1,5	10	30	21	32	3,5	55

installation dimensions - locating bush



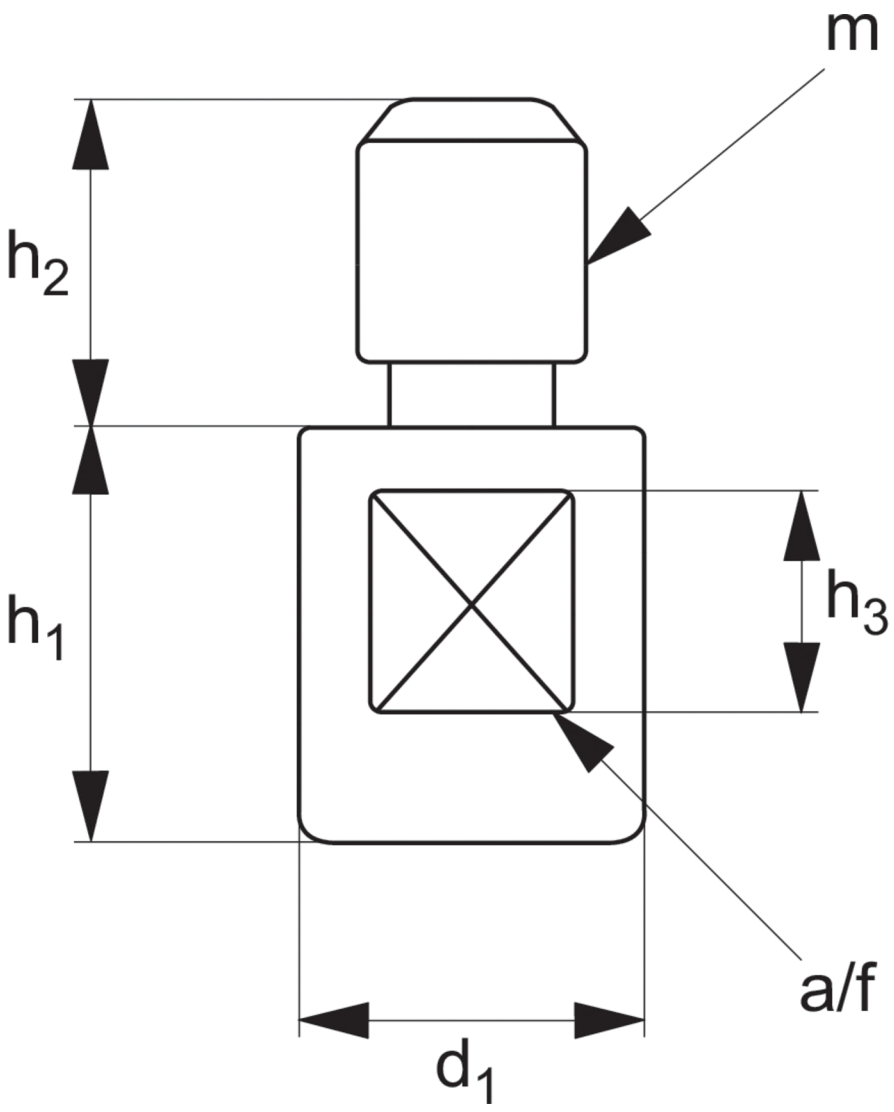
installation for locating bush 33948

One-Touch Fastener - Magnetic Hold

pin

33950





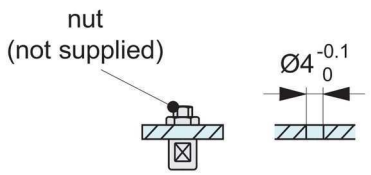
Order No.	For single panel thickness	d_1 -0,02 -0,04	h_1	h_2	h_3	m	A/F	Shear strength N	g
33950.W0006	2 to 6	Ø6	7	5,8	4	M 4x0,7	5	900	2

Material
Body: steel, nickel plated.

Technical Notes
Used in conjunction with magnetic one-touch fasteners 33956, provides secure fastening of panels and covers. One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and drive belts. **Note: pin itself is not magnetic, it is for use with locating bush part no. 33956, which contains magnet.**

Important Notes
Suitable for panels/enclosures of 2 to 6 20 mm thickness.
For installation instructions see technical page.

installation dimensions for magnetic hold clamping pin



for installation in a plate of thickness ranging from 2mm to 6mm, use a nut for fastening

for installation in a plate of thickness over 6mm, use a screw-in method



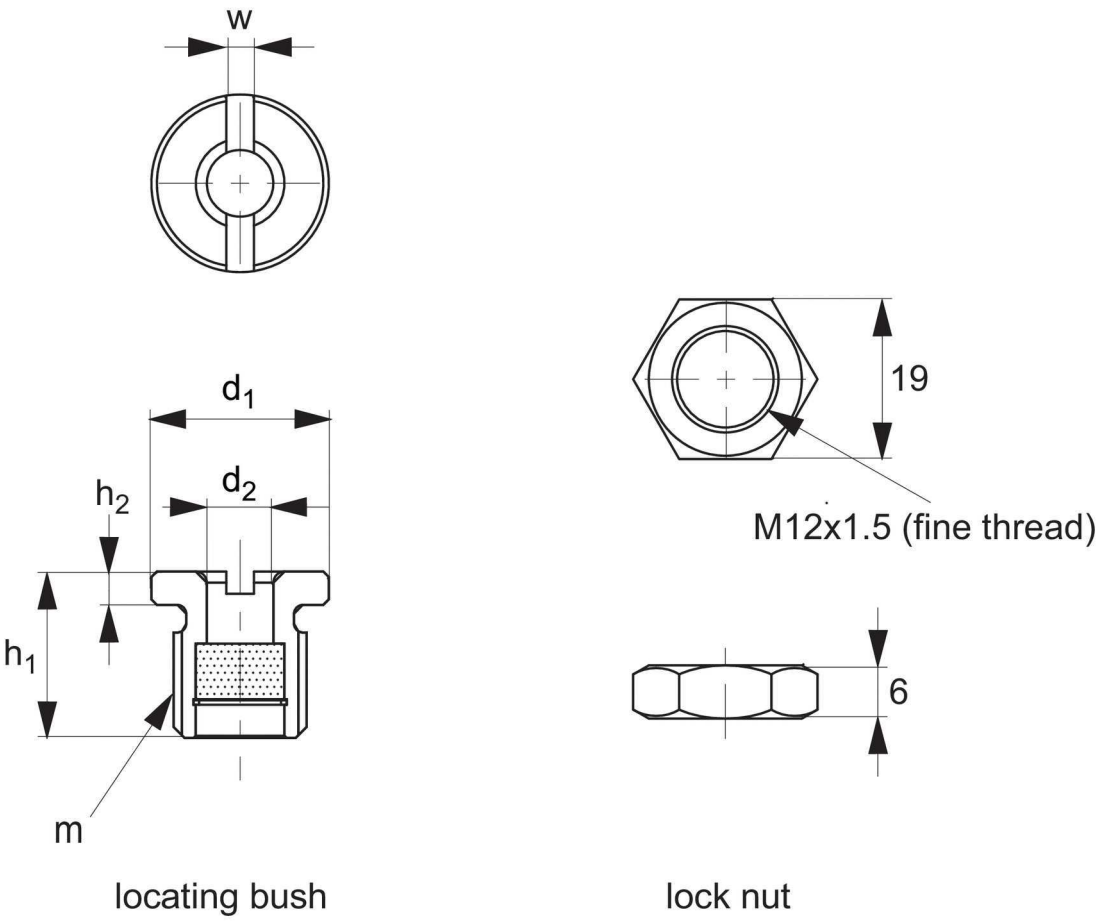
for use of 2pcs of more, the spacing tolerance should be ±0.1

One-Touch Fastener - Magnetic Hold

locating bush for 33950

33956





Material
Body: stainless steel.
Magnet: neodymium.

Technical Notes
One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and dive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time waste in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery.

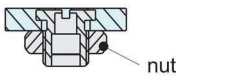
Important Notes
Suitable for panels/enclosues of 2 to 6 mm thicknes. For pin see part no. 33950. Part contains Neodymium magnets which inconjunction with one-touch pin no. 33950 creates a magnetic clamping force of 7 N.

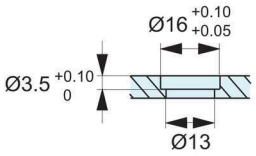
Actuation:
Engage pin into receiver, magnetic effect will take hold. Panels are securely fastened.
To release, simply pull panels apart with sufficient force to overcome magnetic holding force, panel is released.

Order No.	Type	For single panel thickness	d_1 tol. h9	d_2 +0,10 +0,05	h_1	h_2	m	w	Clamping force N	g
33956.W0076	Bush	2 to 6mm	Ø16	Ø6	15	3	M12x1,5	2,5	7	12
33920.W5012	Nut	2 to 6mm	-	-	-	-	M12x1,5	-	-	-

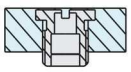
installation dimensions for magnetic hold locating bush

for installation in a plate of thickness ranging from 6mm to 10mm, use a nut for fastening

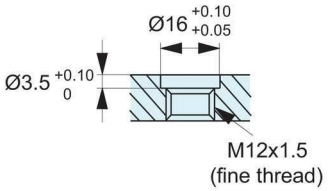




for installation in a plate of thickness over 10mm, use a screw-in method

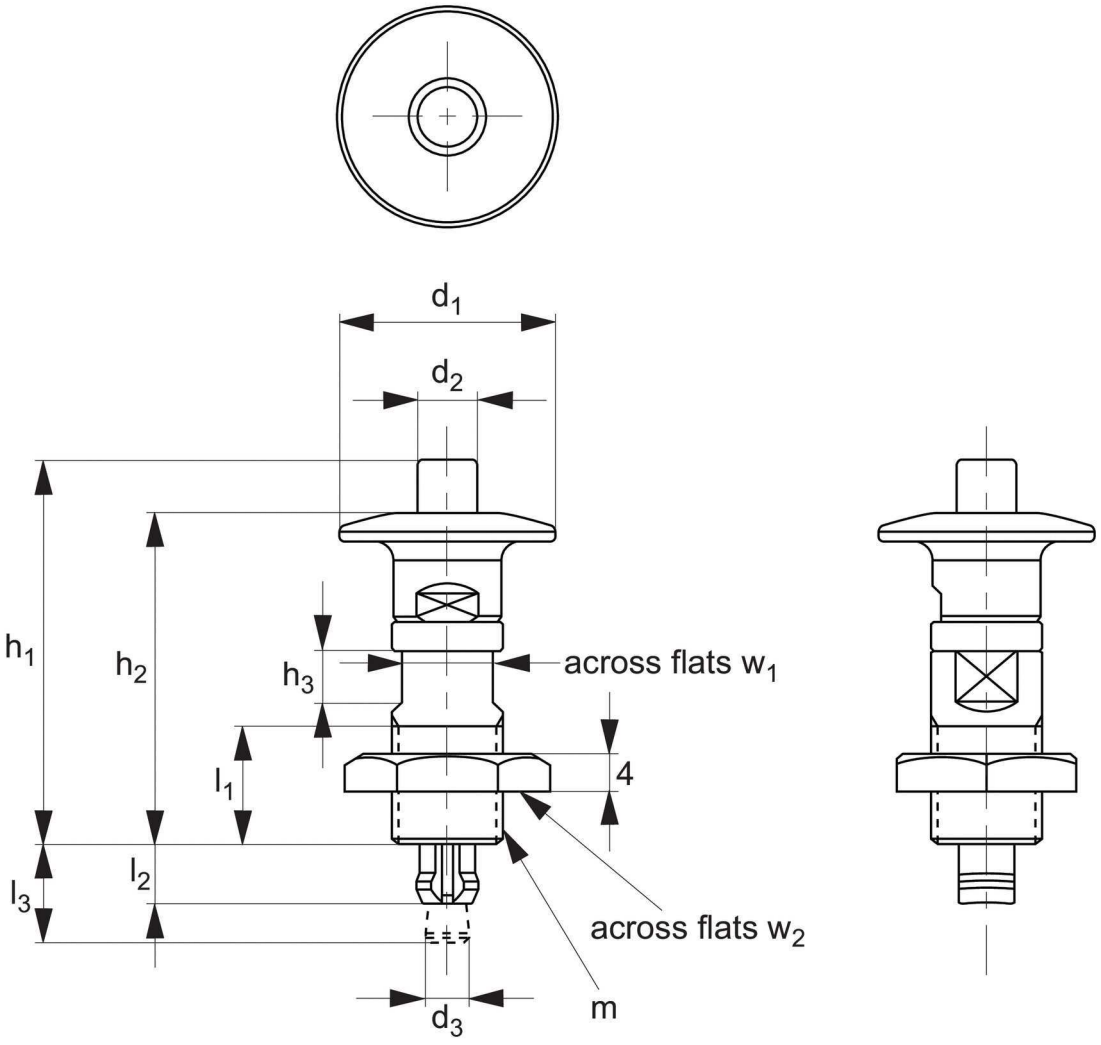


for use of 2pcs or more, the spacing tollerance should be ±0.1



33960





Material
Stainless steel.

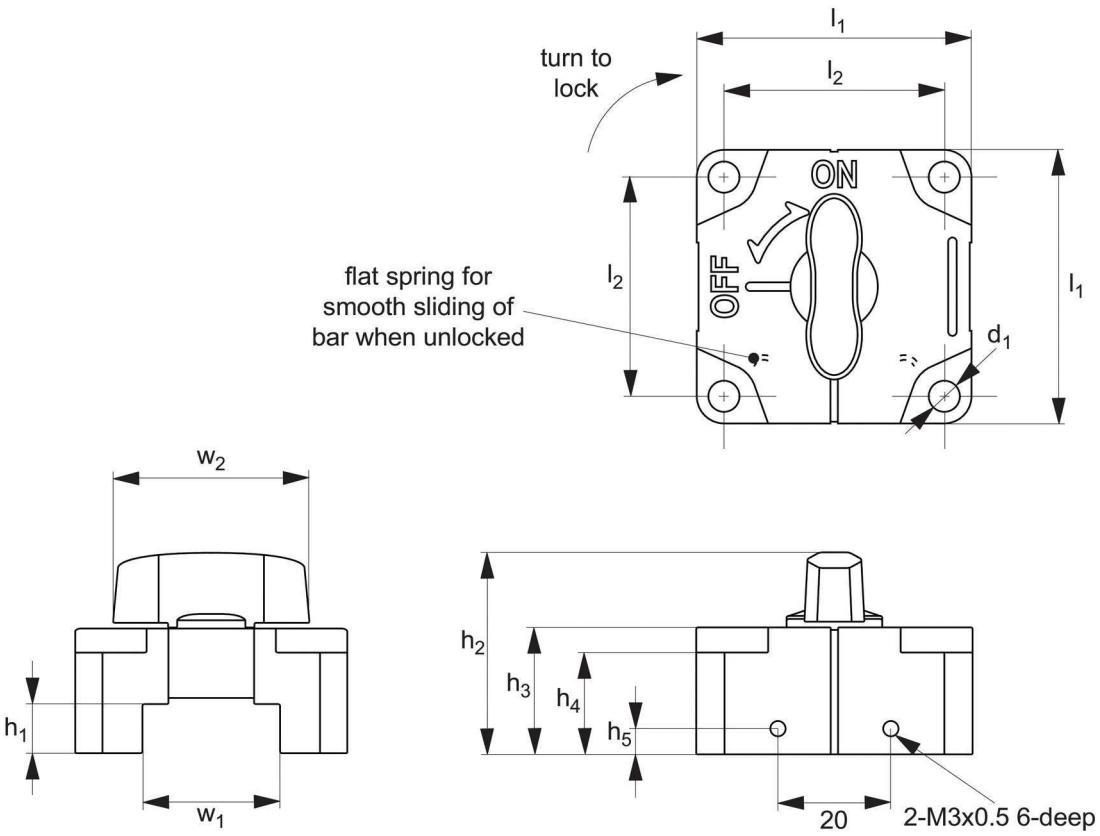
Order No.	d	d_1	d_2	h	l	h_1	l_1	l_2	h_2	g
33960.W6123	6,5	23	6,5	40	12,5	32	6,5	10,5	5,5	41
33960.W6126	6,5	23	6,5	37	12,5	29	6,5	13,5	5,5	40
33960.W8123	8,5	32	10	51	16,5	41,5	6,5	11	7	88
33960.W8126	8,5	32	10	48	16,5	38,5	9,5	14	7	88

Sliding Clamps - for Solid Sliding Bar

quarter turn lock - t-handle grip - zinc

33972





Order No.	For bar width x height	Handle	w_1 +0,05, 0	h_1 +0,02, 0	l_1	h_2	h_3	h_4	h_5	l_2	w_2	d_1	g
33972.W0122	12x12	Plastic, orange	12	12	40	36	22	18,5	6,0	32	28	4,5	130
33972.W0166	16x16	Plastic, orange	16	16	40	40	26	22,5	8,0	32	28	4,5	150
33972.W0250	25x 9	Plastic, orange	25	9	50	37	23	18,5	4,5	40	35	5,5	220
33972.W0252	25x12	Plastic, orange	25	12	50	40	26	21,5	6,0	40	35	5,5	240
33972.W0322	32x12	Plastic, orange	32	12	50	40	26	21,5	6,0	40	35	5,5	220
33972.W0326	32x16	Plastic, orange	32	16	50	44	30	25,5	8,0	40	35	5,5	240
33972.W1122	12x12	Plastic, black	12	12	40	36	22	18,5	6,0	32	28	4,5	130
33972.W1166	16x16	Plastic, black	16	16	40	40	26	22,5	8,0	32	28	4,5	150
33972.W1250	25x 9	Plastic, black	25	9	50	37	23	18,5	4,5	40	35	5,5	220
33972.W1252	25x12	Plastic, black	25	12	50	40	26	21,5	6,0	40	35	5,5	240
33972.W1322	32x12	Plastic, black	32	12	50	40	26	21,5	6,0	40	35	5,5	220
33972.W1326	32x16	Plastic, black	32	16	50	44	30	25,5	8,0	40	35	5,5	240
33972.W2122	12x12	Stainless	12	12	40	36	22	18,5	6,0	32	28	4,5	145
33972.W2166	16x16	Stainless	16	16	40	40	26	22,5	8,0	32	28	4,5	165
33972.W2250	25x 9	Stainless	25	9	50	37	23	18,5	4,5	40	35	5,5	245
33972.W2252	25x12	Stainless	25	12	50	40	26	21,5	6,0	40	35	5,5	265
33972.W2322	32x12	Stainless	32	12	50	40	26	21,5	6,0	40	35	5,5	245
33972.W2326	32x16	Stainless	32	16	50	44	30	25,5	8,0	40	35	5,5	265

Material

Body: die-cast zinc, chrome plated.
Grip: polyamide plastic (black or orange), or stainless steel SUS304.
Clamping shaft/wedge: stainless steel.
Flat spring: phosphor bronze.

Technical Notes

Sliding clamps are ideal for the quick positioning, locking, releasing and re-positioning of sliding bars in many applications. When additionally used with a scale plate (see part no. 33975, 33976 and 33977), the reading line on the sliding clamp enables quick, easy and accurate alignment.

The sliding clamp is mounted, for greater stability, in a fixed position in an assembly. With the clamp set to its off position the sliding bar (not supplied) can be moved left or right, with two spring loaded ball plungers provide for free movement of bar.
Once in its desired position the sliding bar can be locked in place, through a 90 degree turn of the sliding clamp's handle which engages the clamp's clamping shaft/wedge.

Please see technical diagram below for recommended machining details for your sliding bar (not supplied). Riser plates can be used to provide clearance between sliding bar and mounting surface to improve free running of sliding bar, see part no. 33974.

Temperature resistance up to 90°C. Max. static load up to 800N - please refer to performance graph below.

Important Notes

Sliding clamps are suited only to straight linear movement of sliding bar (not supplied), and do not tolerate any other applied loads.

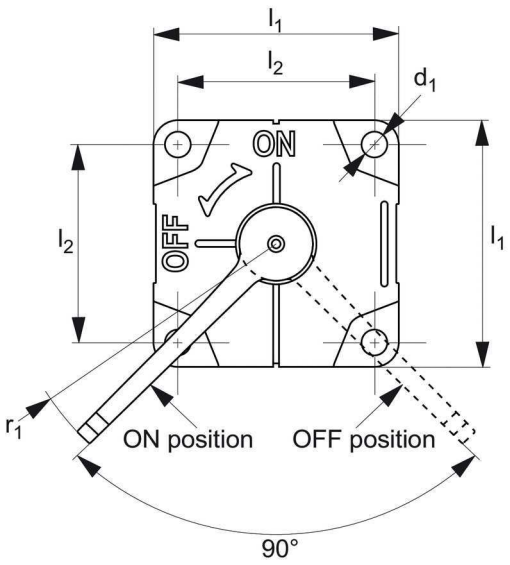
Displacement of sliding bar, through repetitive use, will increase if excessive shock or vibration is present. Do not use sliding clamp in vertical applications where vibration is present.
Displacement will also increase with adhesion or immersion of oil or other foreign substances.
Ensure sliding bar is not bent nor warped as this may cause the sliding bar to slip even when sliding clamp is in its on position.

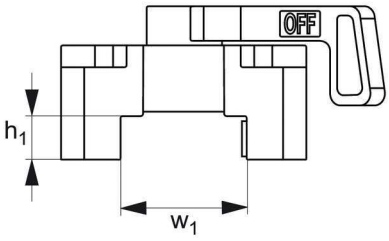
Sliding Clamps - for Solid Sliding Bar

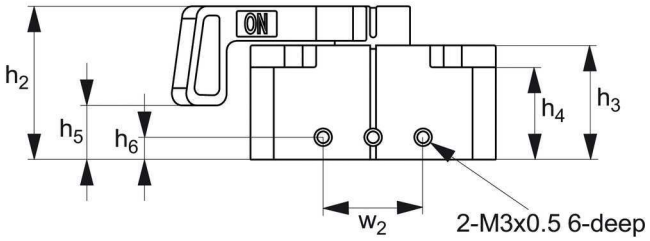
quarter turn lock - lever handle grip - zinc

33973





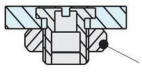




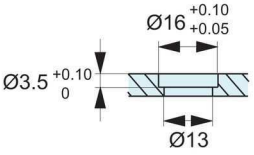
Order No.	For bar width x height	Handle	d_1	h_1 +0,02 0	h_2	h_3	h_4	h_5	h_6	l_1	l_2	w_1 +0,05 0	w_2	r_1	Max. static load N	g
33973.W2122	12x12	Stainless	4,5	12	29	22	18,5	11	6,0	40	32	12	20	46,0	500	150
33973.W2166	16x16	Stainless	4,5	16	33	26	22,5	15	8,0	40	32	16	20	46,0	500	160
33973.W2250	25x 9	Stainless	5,5	9	31	23	18,5	11	4,5	50	40	25	20	55,5	800	250
33973.W2252	25x12	Stainless	5,5	12	34	26	21,5	14	6,0	50	40	25	20	55,5	800	250
33973.W2322	32x12	Stainless	5,5	12	34	26	21,5	14	6,0	50	40	32	20	55,5	800	320
33973.W2326	32x16	Stainless	5,5	16	38	30	25,5	18	8,0	50	40	32	20	55,5	800	270

installation dimensions for magnetic hold locating bush

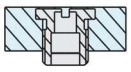
for installation in a plate of thickness ranging from 6mm to 10mm, use a nut for fastening

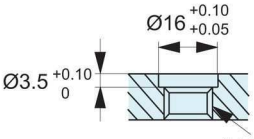


nut
(sold separately)



for installation in a plate of thickness over 10mm, use a screw-in method





for use of 2pcs or more, the spacing tollerance should be ±0.1

Material

Body: die-cast zinc, chrome plated.
Handle: stainless steel SUS304.
Clamping shaft/wedge: stainless steel.
Flat spring: phosphor bronze.

Technical Notes

Sliding clamps are ideal for the quick positioning, locking, releasing and re-positioning of sliding bars in many applications. When additionally used with a scale plate (see part no. 33975, 33976 and 33977), the reading line on the sliding clamp enables quick, easy and accurate alignment.

The sliding clamp is mounted, for greater stability, in a fixed position in an assembly. With the clamp set to its off position the sliding bar (not supplied) can be moved left or right, with two spring loaded ball plungers provide for free movement of bar.
Once in its desired position the sliding bar can be locked in place, through a 90 degree turn of the sliding clamp's handle which engages the clamp's clamping shaft/wedge.

Please see technical diagram below for recommended machining details for your sliding bar (not supplied). Riser plates can be used to provide clearance between sliding bar and mounting surface to improve free running of sliding bar, see part no. 33974.

Temperature resistance upto 90°C. Max. static load upto 800N - please refer to performance graph below.

Important Notes

Sliding clamps are suited only to straight linear movement of sliding bar (not supplied), and do not tolerate any other applied loads.

Displacement of sliding bar, through repetitive use, will increase if excessive shock or vibration is present. Do not use sliding clamp in vertical applications where vibration is present.
Displacement will also increase with adhesion or immersion of oil or other foreign substances.
Ensure sliding bar is not bent nor warped as this may cause the sliding bar to slip even when sliding clamp is in its on position.

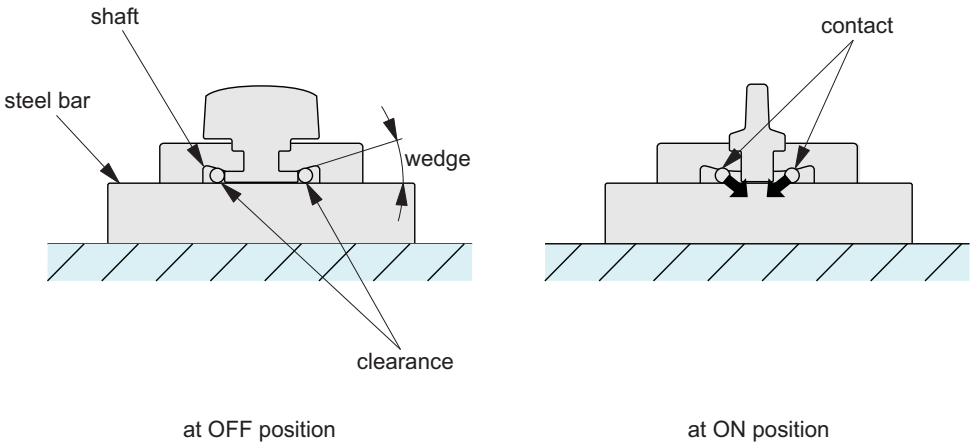
One-Touch Fastener - Solid Sliding Bar

overview

Operating Principle

You can slide the steel bar when the knob is at the “OFF” position since there is clearance between the steel bar and the shafts.

The steel bar is locked when the knob is at the “ON” position since the shafts are pushed by the wedge.

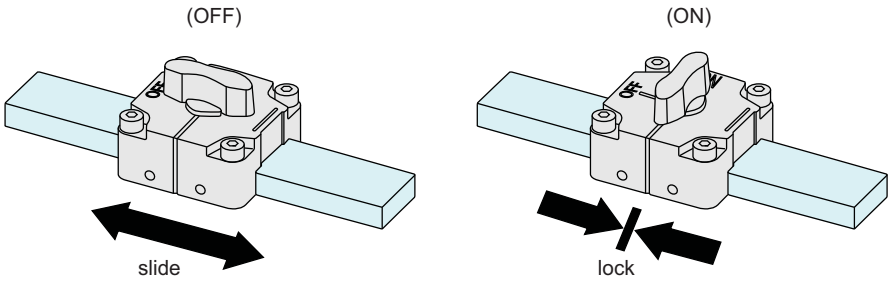


Operating Instructions

The steel bar can slide to right and left at the “OFF” position.

The steel bar is locked at the “ON” position.

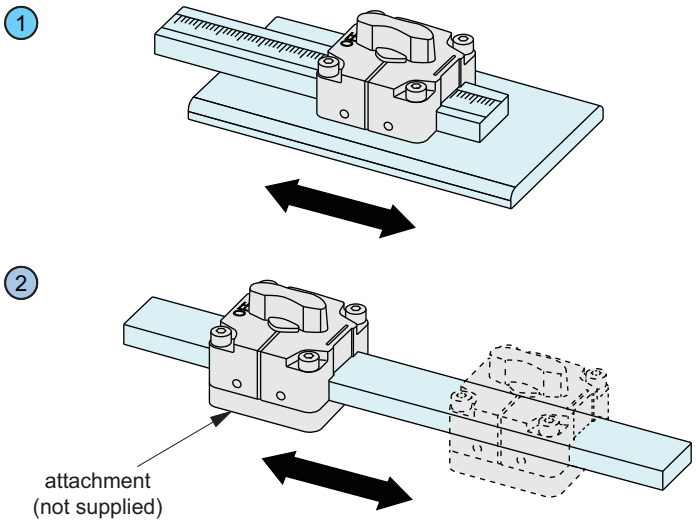
Note: The knob clicks at the “ON” and “OFF” positions, and this enables the operators to lock/unlock securely.



How to use

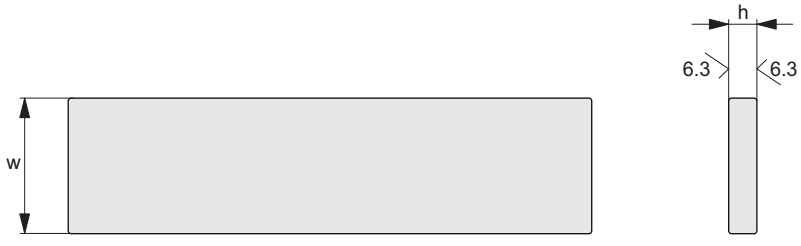
Please refer to notes for safe use (see last page of guide).

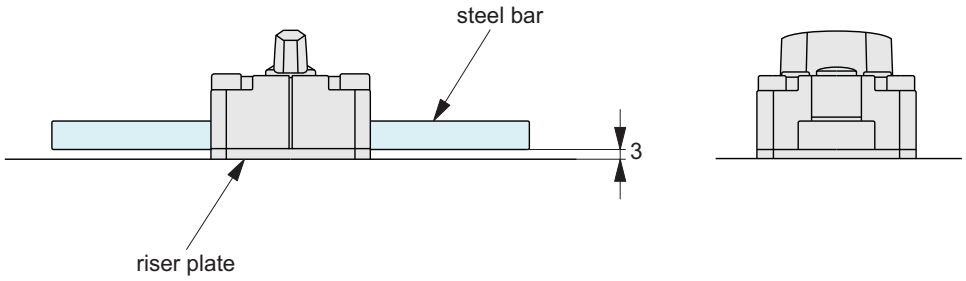
1. Slide the steel bar.
2. Slide the sliding locks for square bar.



How to use steel bar materials

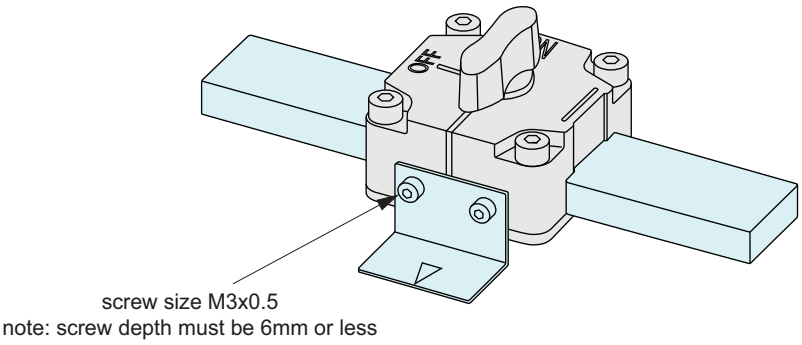
Usable Materials: Flat bar (JIS h14 grade) made of SS400, S45C or SUS304 etc.





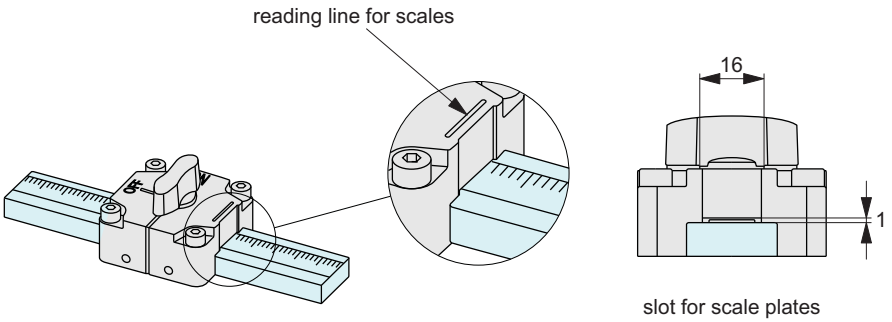
How to use riser plate

Riser plates (to be ordered separately) can lift the steel bar to create a clearance between the steel bar and the base.



How to use tapped holes on side surface

Can be used with attachments such as pointer plates and brackets.



How to use scale plate

Scale plate can be put on the steel bar.

Note: Fit scale plate inside the slot in the figure below. Putting scale plate outside the slot cause interference between scale plate and sliding lock.

Scale plate is separately available.

See ranges 33975, 33976 and 33977.



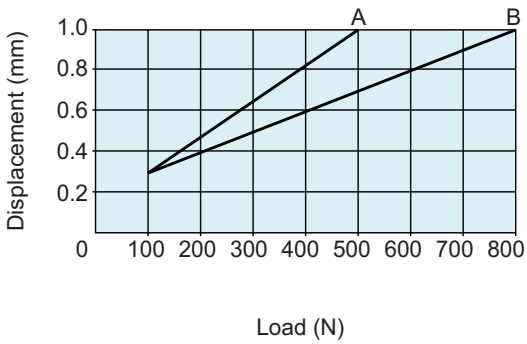
Performance curve

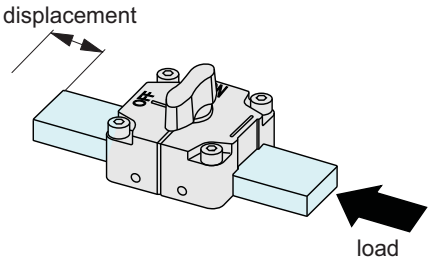
Displacement of steel bar by axial load (static load from single direction)

A: For bar width x heights; 12x12mm and 16x16mm.

B: For bar width x heights; 25x9, 25x12, 32x12, 32x16.

Note: This data is for a flat bar bade of SUS304 stainless steel, SS400 steel and S45C steel. Using an aluminum flat bar, the surface will be scratched or dented by applied load.





Notes

- Ensure that the knob is at the “OFF” position when mounting. Mounting of sliding locks at the “ON” position may cause damage.
- The displacement will increase with excess shock or vibration. Do not use this product vertically in environments where excess vibration is present.
- The displacement can increase with adhesion or contamination by oil or foreign substances.
- If the steel plate slips or chatters by the load applied to the steel plate, prepare guides or supports as needed. (See figure 1 and 2 below)
- Excess displacement or misalignment may be caused if there is a clearance between the steel bar and the base when the sliding locks at “ON” position. (See figure 3 below) Ensure that the steel plate and the base are not bent or warped.

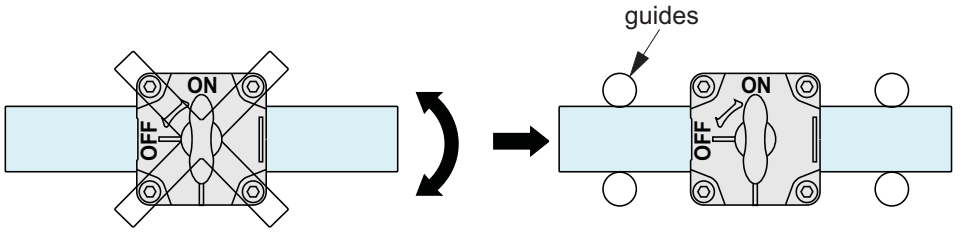


figure 1

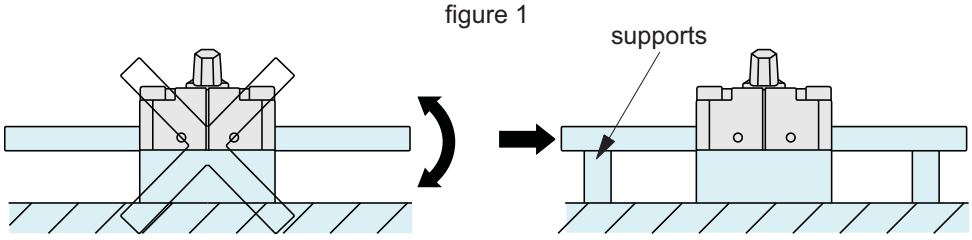


figure 2

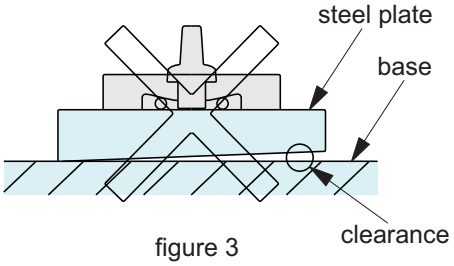


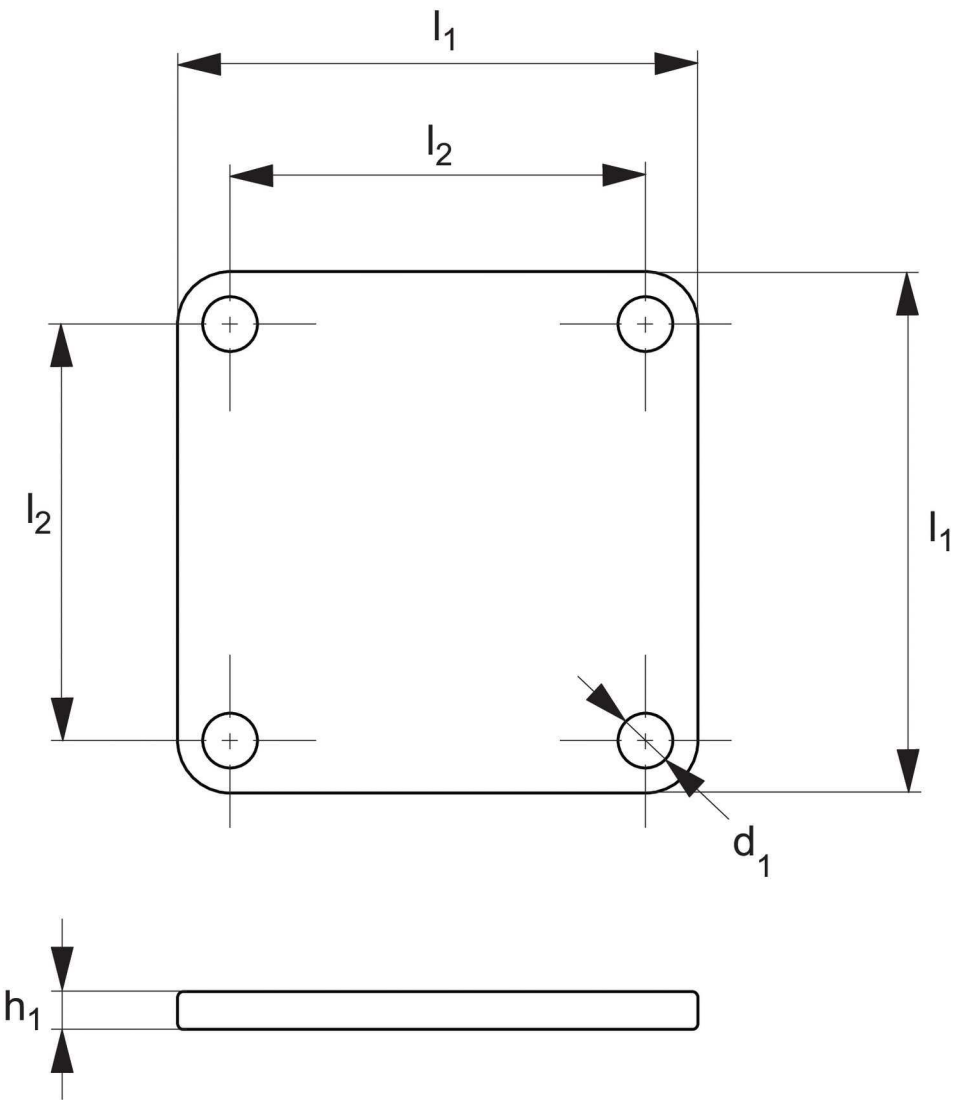
figure 3

Riser Plates for Sliding Clamps

for 33972 and 33973

33974





Material
Body: stainless steel, SUS 304

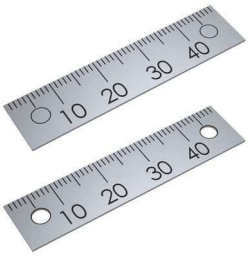
Technical Notes
To be used with sliding clamps part no. 33972 and 33973

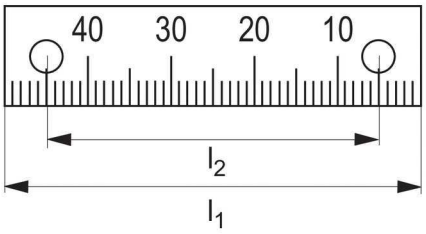
Order No.	d_1	l_1	l_2	h_1	g
33974.W4032	4,5	40	32	3	35
33974.W5040	5,5	50	40	3	55

Scale Plates - Single Scale

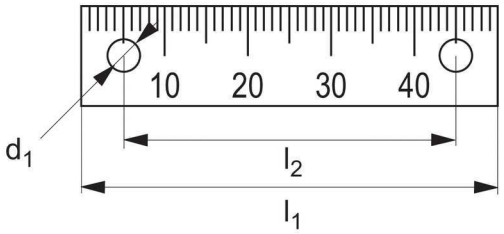
for sliding clamps 33970, 33972, 33973

33975

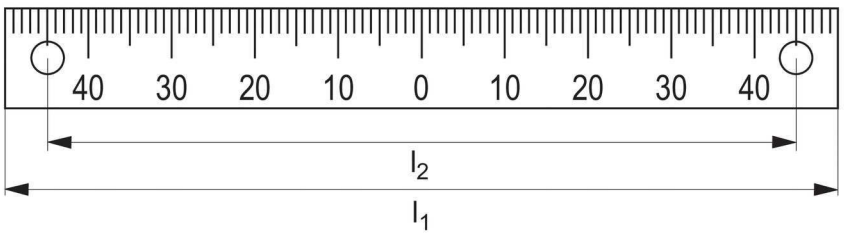




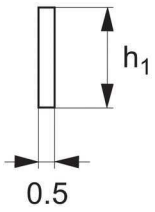
"0" point on right, scale reading right to left, positioned below values

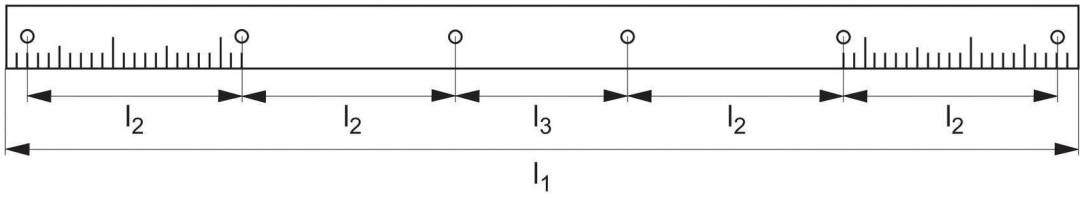


"0" point on left, scale reading left to right, positioned above values



"0" point on centre, scale reading from centre, positioned above values





mounting hole spacing for 500mm-long scale plates

Material
Aluminium, with etched graduation/markings.

Technical Notes
For use with sliding clamps 33970, 33972 and 33973. Markings are for indicative purpses, and are not intended for precise measurement.

Adhesive mounting type: ensure receiving surface is clean and dirt free (features outline of screw hole location, not drilled).

Srew mounting type: holes drilled to 3,5mm dia.

When selecting scale plate consider;
- direction scale reads (left to right, right to left or from centre).
- position of scale relative to number valves (above, below or both).

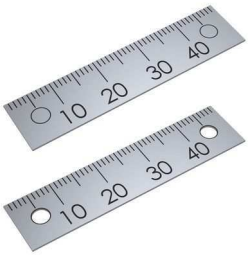
Order No.	Mounting type	Number of mounting holes	Direction of measurement	Scale position	d_1 (marked) drilled	l_1	l_2	l_3	h_1	g
33975.W1005	Adhesive	2	Left	Top	(3,5)	50	40	-	12	0,8
33975.W1010	Adhesive	2	Left	Top	(3,5)	100	90	-	12	1,6
33975.W1015	Adhesive	3	Left	Top	(3,5)	150	70	-	12	2,4
33975.W1020	Adhesive	3	Left	Top	(3,5)	200	95	-	12	3,2
33975.W1030	Adhesive	2	Right	Top	(3,5)	50	40	-	12	0,8
33975.W1035	Adhesive	2	Right	Top	(3,5)	100	90	-	12	1,6
33975.W1040	Adhesive	3	Right	Top	(3,5)	150	70	-	12	2,4
33975.W1045	Adhesive	3	Right	Top	(3,5)	200	95	-	12	3,2
33975.W1055	Adhesive	2	Centre	Top	(3,5)	100	90	-	12	1,6
33975.W1060	Adhesive	3	Centre	Top	(3,5)	200	95	-	12	3,2
33975.W2005	Adhesive	2	Left	Bottom	(3,5)	50	40	-	12	0,8
33975.W2010	Adhesive	2	Left	Bottom	(3,5)	100	90	-	12	1,6
33975.W2015	Adhesive	3	Left	Bottom	(3,5)	150	70	-	12	2,4
33975.W2020	Adhesive	3	Left	Bottom	(3,5)	200	95	-	12	3,2
33975.W2030	Adhesive	2	Right	Bottom	(3,5)	50	40	-	12	0,8
33975.W2035	Adhesive	2	Right	Bottom	(3,5)	100	90	-	12	1,6
33975.W2040	Adhesive	3	Right	Bottom	(3,5)	150	70	-	12	2,4
33975.W2045	Adhesive	3	Right	Bottom	(3,5)	200	95	-	12	3,2
33975.W2055	Adhesive	2	Centre	Bottom	(3,5)	100	90	-	12	1,6
33975.W2060	Adhesive	3	Centre	Bottom	(3,5)	200	95	-	12	3,2
33975.W5005	Screw Mount	2	Left	Top	3,5	50	40	-	12	0,8
33975.W5010	Screw Mount	2	Left	Top	3,5	100	90	-	12	1,6
33975.W5015	Screw Mount	3	Left	Top	3,5	150	70	-	12	2,4
33975.W5020	Screw Mount	3	Left	Top	3,5	200	95	-	12	3,2
33975.W5025	Screw Mount	6	Left	Top	3,5	500	100	90	12	8,0
33975.W5030	Screw Mount	2	Right	Top	3,5	50	40	-	12	0,8
33975.W5035	Screw Mount	2	Right	Top	3,5	100	90	-	12	1,6
33975.W5040	Screw Mount	3	Right	Top	3,5	150	70	-	12	2,4

Scale Plates - Single Scale

for sliding clamps 33970, 33972, 33973

33975

Order No.	Mounting type	Number of mounting holes	Direction of measurement	Scale position	d_1 (marke d) drilled	l_1	l_2	l_3	h_1	g
33975.W5045	Screw Mount	3	Right	Top	3,5	200	95	-	12	3,2
33975.W5050	Screw Mount	6	Right	Top	3,5	500	100	90	12	8,0
33975.W5055	Screw Mount	2	Centre	Top	3,5	100	90	-	12	1,6
33975.W5060	Screw Mount	3	Centre	Top	3,5	200	95	-	12	3,2
33975.W5065	Screw Mount	6	Centre	Top	3,5	500	100	90	12	8,0
33975.W6005	Screw Mount	2	Left	Bottom	3,5	50	40	-	12	0,8
33975.W6010	Screw Mount	2	Left	Bottom	3,5	100	90	-	12	1,6
33975.W6015	Screw Mount	3	Left	Bottom	3,5	150	70	-	12	2,4
33975.W6020	Screw Mount	3	Left	Bottom	3,5	200	95	-	12	3,2
33975.W6025	Screw Mount	6	Left	Bottom	3,5	500	100	90	12	8,0
33975.W6030	Screw Mount	2	Right	Bottom	3,5	50	40	-	12	0,8
33975.W6035	Screw Mount	2	Right	Bottom	3,5	100	90	-	12	1,6
33975.W6040	Screw Mount	3	Right	Bottom	3,5	150	70	-	12	2,4
33975.W6045	Screw Mount	3	Right	Bottom	3,5	200	95	-	12	3,2
33975.W6050	Screw Mount	6	Right	Bottom	3,5	500	100	90	12	8,0
33975.W6055	Screw Mount	2	Centre	Bottom	3,5	100	90	-	12	1,6
33975.W6060	Screw Mount	3	Centre	Bottom	3,5	200	95		12	3,2
33975.W6065	Screw Mount	6	Centre	Bottom	3,5	500	100	90	12	8,0



Material

Aluminium, with etched graduation/markings.

Technical Notes

For use with sliding clamps 33970, 33972 and 33973. Markings are for indicative purpses, and are not intended for precise measurement.

Adhesive mounting type: ensure receiving surface is clean and dirt free (features outline of screw hole location, not drilled).

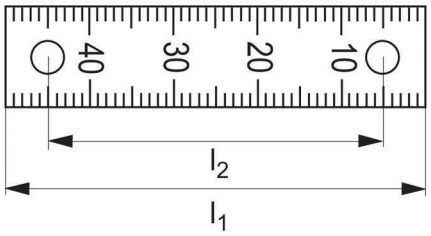
Srew mounting type: holes drilled to 3,5mm dia.

When selecting scale plate consider;
- direction scale reads (left to right, right to left or from centre).
- position of scale relative to number valves (above, below or both).

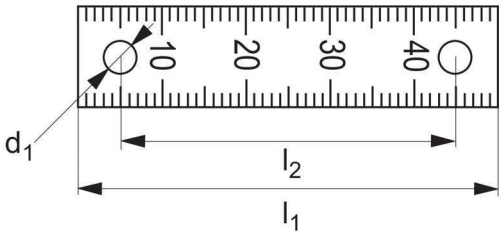
Scale Plates - Double Scale

for sliding clamps 33970, 33972, 33973

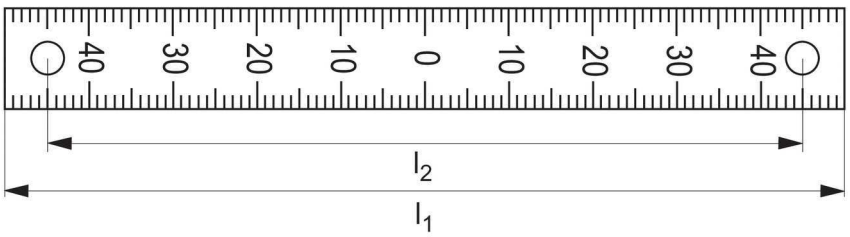
33976



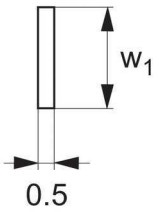
"0" point on right, scale reading right to left, positioned above and below values



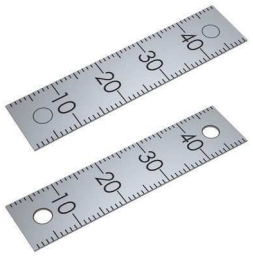
"0" point on left, scale reading left to right, positioned above and below values



"0" point on centre, scale reading from centre, positioned above and below values



Order No.	Mounting type	Number of mounting holes	Location of "0" point	d_1	l_1	l_2	w_1	g
33976.W1005	Adhesive	2	Left	-	50	40	15	1
33976.W1010	Adhesive	2	Left	-	100	90	15	2
33976.W1015	Adhesive	2	Right	-	50	40	15	1
33976.W1020	Adhesive	2	Right	-	100	90	15	2
33976.W1025	Adhesive	2	Centre	-	100	90	15	2
33976.W5005	Screw Mount	2	Left	3,5	50	40	15	1
33976.W5010	Screw Mount	2	Left	3,5	100	90	15	2
33976.W5015	Screw Mount	2	Right	3,5	50	40	15	1
33976.W5020	Screw Mount	2	Right	3,5	100	90	15	2
33976.W5025	Screw Mount	2	Centre	3,5	100	90	15	2



Material

Aluminium, with etched graduation/markings.

Technical Notes

For use with sliding clamps 33970, 33972 and 33973. Markings are for indicative purposes, and are not intended for precise measurement.

Adhesive mounting type: ensure receiving surface is clean and dirt free (features outline of screw hole location, not drilled).

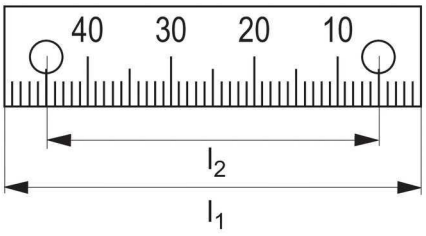
Screw mounting type: holes drilled to 3,5mm dia.

When selecting scale plate consider;
- direction scale reads (left to right, right to left or from centre).
- position of scale relative to number valves (above, below or both).

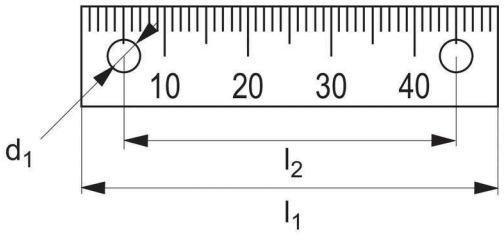
Scale Plates - Single Scale

stainless steel

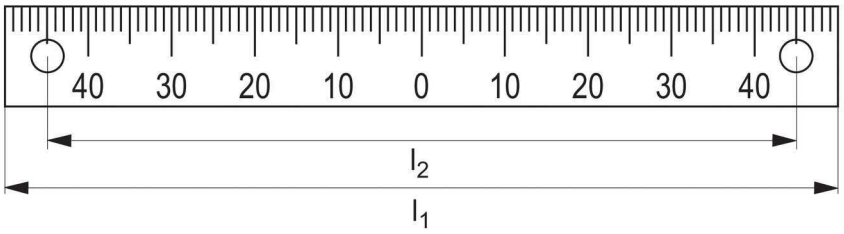
33977



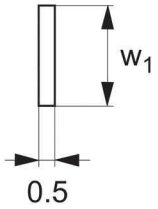
"0" point on right, scale reading right to left, positioned below values



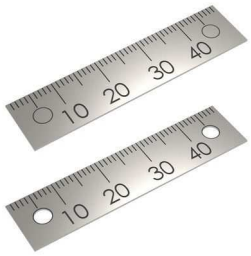
"0" point on left, scale reading left to right, positioned above values



"0" point on centre, scale reading from centre, positioned above values



Order No.	Mounting type	Number of mounting holes	Location of "0" point	Markings location	d_1	l_1	l_2	w_1	g
33977.W1005	Adhesive	2	Top	-	50	40	12	2,4	Left
33977.W1010	Adhesive	2	Top	-	100	90	12	4,7	Left
33977.W1015	Adhesive	2	Top	-	50	40	12	2,4	Right
33977.W1020	Adhesive	2	Top	-	100	90	12	4,7	Right
33977.W1025	Adhesive	2	Top	-	100	90	12	4,7	Centre
33977.W5005	Screw-Mount	2	Top	3,5	50	40	12	2,4	Left
33977.W5010	Screw-Mount	2	Top	3,5	100	90	12	4,7	Left
33977.W5015	Screw-Mount	2	Top	3,5	50	40	12	2,4	Right
33977.W5020	Screw-Mount	2	Top	3,5	100	90	12	4,7	Right
33977.W5025	Screw-Mount	2	Top	3,5	100	90	12	4,7	Centre



Material

Stainless steel, with etched graduation/markings.

Technical Notes

For use with sliding clamps 33970, 33972 and 33973. Markings are for indicative purposes, and are not intended for precise measurement.

Adhesive mounting type: ensure receiving surface is clean and dirt free (features outline of screw hole location, not drilled).

Screw mounting type: holes drilled to 3,5mm dia.

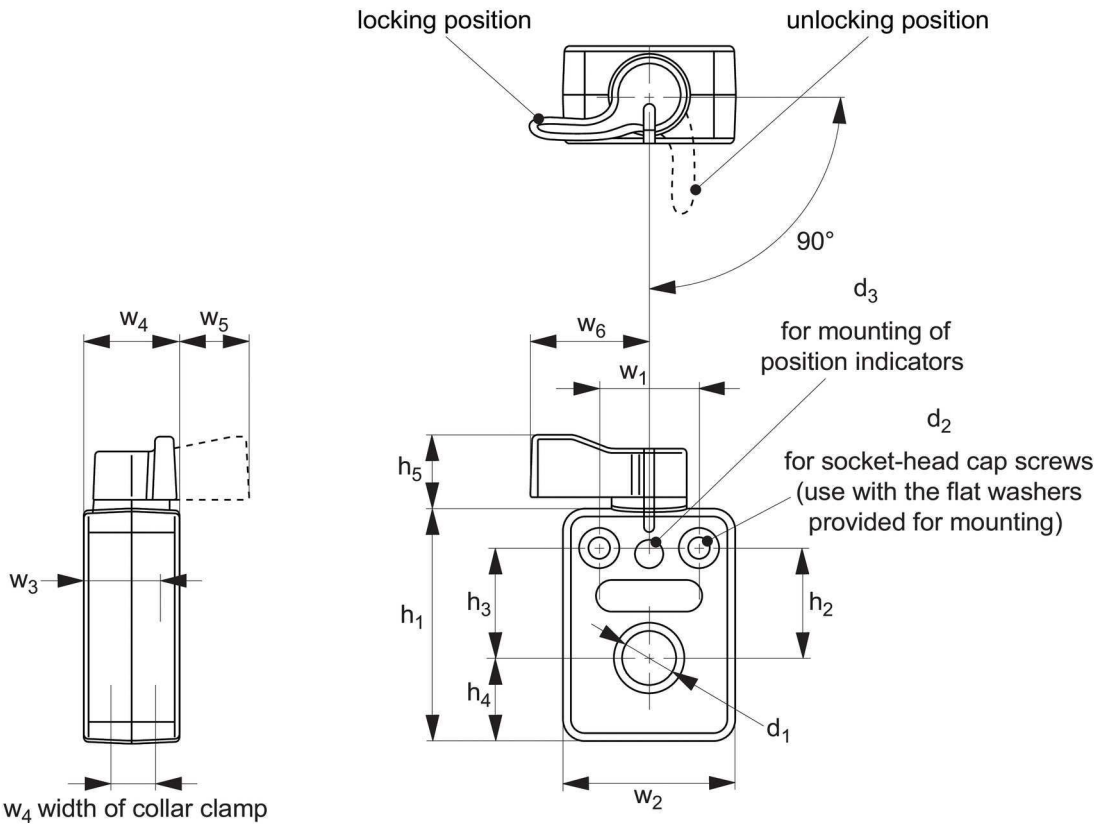
When selecting scale plate consider;
- direction scale reads (left to right, right to left or from centre).
- position of scale relative to number valves (above, below or both).

Sliding Clamps - for Solid Round Bar

quarter turn lock- l-handle grip - polyamide

33980





Material

Housing: Polyamide (glass-fibre reinforced)
Boss: Polyamide (glass-fibre reinforced)
Base: Polyamide (glass-fibre reinforced)
Insert: Stainless steel

Technical Notes

It has teeth inside and it engages at every 7.2° (=360°/ 50).
33981 pulls the spindle by the inner spring with 70N force to prevent chattering of the spindle. Note: The spindle should be fully inserted into the knob for 25mm.

Order No.	Handle	d_1 for shaft dia. h_7	d_2	d_3	h_1	h_2	h_3	h_4	g
33980.W1308	Orange	8	M 4	6	48,5	23,5	22	17	50
33980.W1310	Orange	10	M 4	6	48,5	23,5	22	17	50
33980.W1312	Orange	12	M 4	6	48,5	23,5	22	17	50
33980.W1314	Orange	14	M 4	6	48,5	23,5	22	17	50
33980.W1512	Orange	12	M 5	6	69,0	17,0	30	26	100
33980.W1515	Orange	15	M 5	6	69,0	17,0	30	26	100
33980.W1516	Orange	16	M 5	6	69,0	17,0	30	26	100
33980.W1520	Orange	20	M 5	6	69,0	17,0	30	26	100
33980.W2308	Black	8	M 4	6	48,5	23,5	22	17	50
33980.W2310	Black	10	M 4	6	48,5	23,5	22	17	50
33980.W2312	Black	12	M 4	6	48,5	23,5	22	17	21
33980.W2314	Black	14	M 4	6	48,5	23,5	22	17	21
33980.W2512	Black	12	M 5	6	69,0	17,0	30	26	100
33980.W2515	Black	15	M 5	6	69,0	17,0	30	26	100
33980.W2516	Black	16	M 5	6	69,0	17,0	30	26	100
33980.W2520	Black	20	M 5	6	69,0	17,0	30	26	34

Order No.	h_5	w_1	w_2	w_3	w_4	w_5	w_6	Max. allowable holding torque Nm	Max. allowable sliding torque Nm
33980.W1308	15,5	21	36	14,0	20	15	25	3	400
33980.W1310	15,5	21	36	14,0	20	15	25	3	400
33980.W1312	15,5	21	36	14,0	20	15	25	4	400
33980.W1314	15,5	21	36	14,0	20	15	25	4	400
33980.W1512	15,5	34	51	12,5	20	15	25	5	500
33980.W1515	15,5	34	51	12,5	20	15	25	5	500
33980.W1516	15,5	34	51	12,5	20	15	25	6	500
33980.W1520	15,5	34	51	12,5	20	15	25	6	500
33980.W2308	15,5	21	36	14,0	20	15	25	3	400
33980.W2310	15,5	21	36	14,0	20	15	25	3	400
33980.W2312	15,5	21	36	14,0	20	15	25	4	400
33980.W2314	15,5	21	36	14,0	20	15	25	4	400
33980.W2512	15,5	34	51	12,5	20	15	25	5	500
33980.W2515	15,5	34	51	12,5	20	15	25	5	500
33980.W2516	15,5	34	51	12,5	20	15	25	6	500

Sliding Clamps - for Solid Round Bar

quarter turn lock- l-handle grip - polyamide

33980

Order No.	h_5	w_1	w_2	w_3	w_4	w_5	w_6	Max. allowable holding torque Nm	Max. allowable sliding torque Nm
33980.W2520	15,5	34	51	12,5	20	15	25	6	500



Material

Housing: Polyamide (glass-fibre reinforced)
Boss: Polyamide (glass-fibre reinforced)
Base: Polyamide (glass-fibre reinforced)
Insert: Stainless steel

Technical Notes

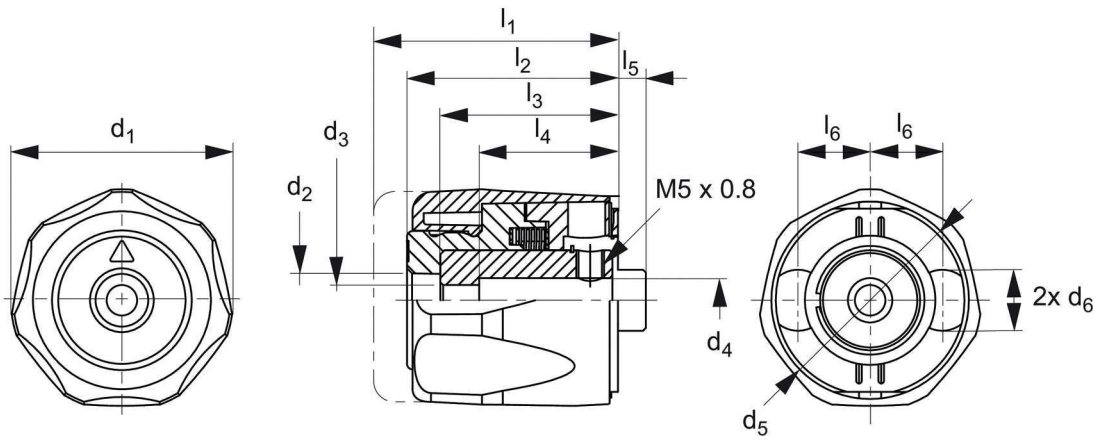
It has teeth inside and it engages at every 7.2° (=360°/ 50).
33981 pulls the spindle by the inner spring with 70N force to prevent chattering of the spindle. Note: The spindle should be fully inserted into the knob for 25mm.

One-touch locking knobs

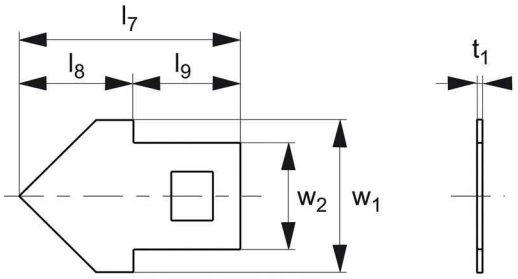
One-touch locking knobs

33981





one-touch locking knob



pointer plate

Material
Housing: polyamide (glass fibre reinforced) black, orange.
Boss: Polyamide (glass fibre reinforced) blue.
Base: Polyamide (glass fibre reinforced) red.
Insert & Pointer plate: Stainless steel A2.

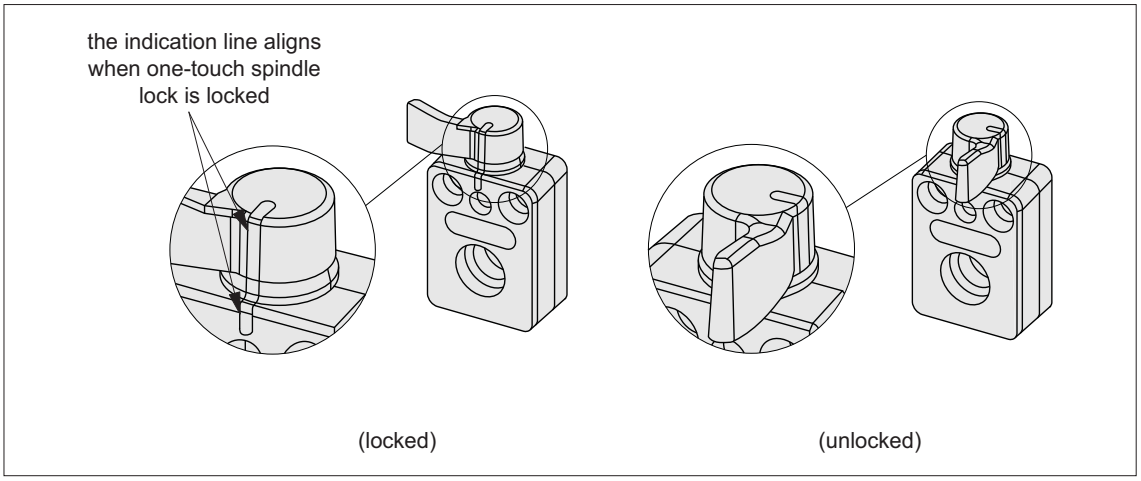
Order No.	d_1	g
33981.W0040	-	21
33981.W4008	8	95
33981.W4010	10	90
33981.W4108	8	95
33981.W4110	10	90

One-Touch Fastener - Spindle Locks

overview

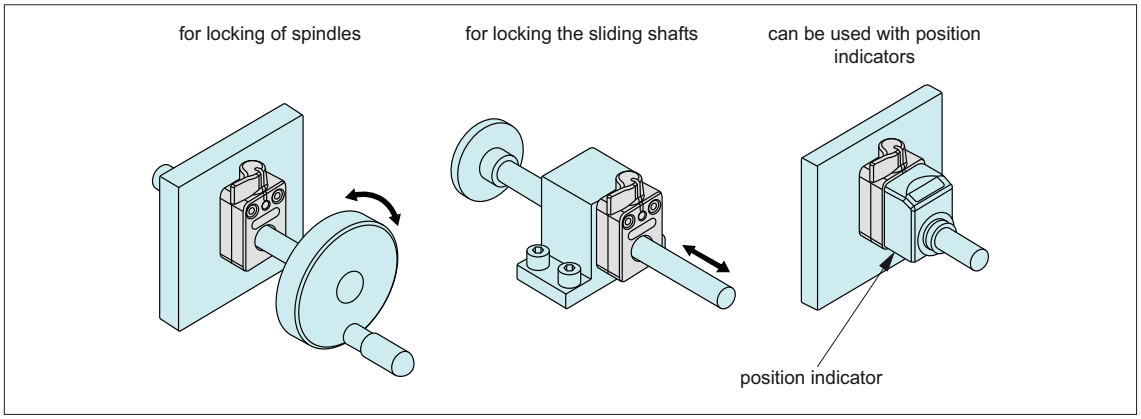
Operating Principle

- One-touch spindle locks enable quick and secure locking of shafts with one click of the knob.
- When one-touch spindle lock is operated, the knob clicks and the shaft is locked with a steady force. This provides reliable locking of shafts.
- The knob position and the indication line clearly indicate lock/unlock position.



Operating Instructions

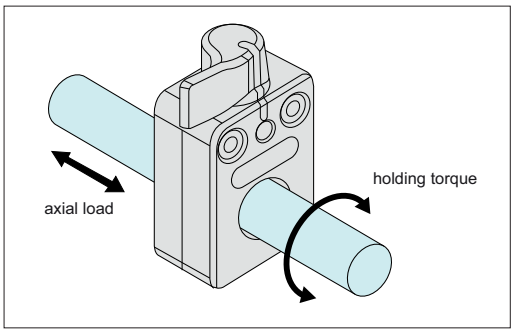
Note: To mount position indicators to one-touch spindle locks, use the rubber cushion supplied with position indicators.



Load Ratings

One-touch spindle locks can fix both revolving and sliding shafts.

For shaft Ø h_7	d_2	Max. holding torque Nm	Max. axial load N
8	M4	3	400
10	M4	3	400
12	M4	4	400
14	M4	4	400
12	M5	5	500
15	M5	5	500
16	M5	6	500
20	M5	6	500



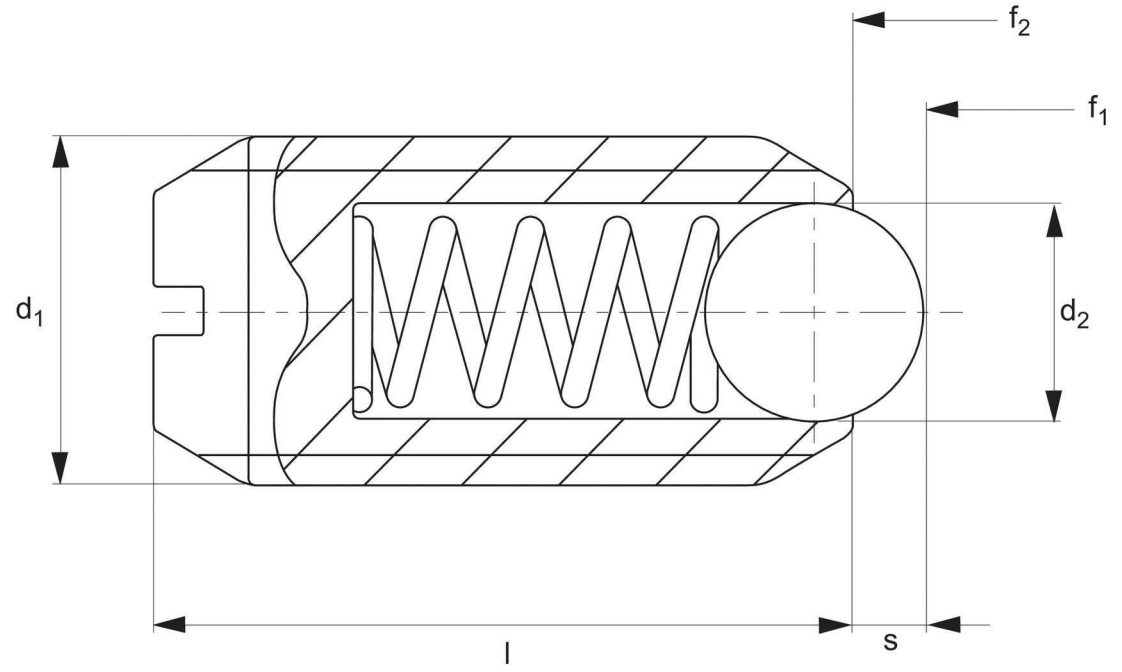
Notes

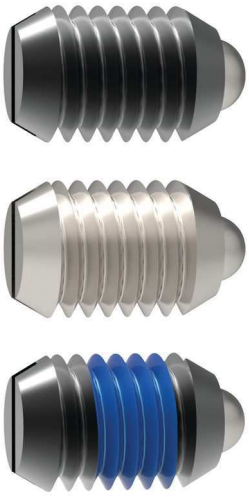
- This product cannot be used as bearings or guides for shafts.
- Shafts may slip in environments where shocks or vibrations are present.
- The allowable holding torque and the allowable sliding load may decrease with adhesion of particles or immersion in oil.

Spring Plungers - IMPERIAL

with ball and slot

3B100





Order No.	Type	Finish	Spring load	UNC/UNF d_1**	l_1**	s**	d_2**	Spring load* F_1 lbs≈	Spring load* F_2 lbs≈	oz.
3B100.W0010	w/o Threadlock	Steel	Light	UNF 10-32	33/64	0,025	3/32	0,9	1,5	0,049
3B100.W0012	w/o Threadlock	Steel	Light	UNC 1/4-20	17/32	0,035	1/8	2,1	4,0	0,074
3B100.W0016	w/o Threadlock	Steel	Light	UNC 5/16-18	37/64	0,040	5/32	2,0	4,6	0,123
3B100.W0018	w/o Threadlock	Steel	Light	UNC 3/8-16	5/8	0,048	3/16	2,5	5,0	0,193
3B100.W0020	w/o Threadlock	Steel	Light	UNC 1/2-13	3/4	0,072	9/32	3,0	6,0	0,397
3B100.W0022	w/o Threadlock	Steel	Light	UNC 5/8-11	63/64	0,096	3/8	4,5	9,0	0,787
3B100.W0031	w/o Threadlock	Steel	Standard	UNF 4-48	3/16	0,020	1/16	0,1	0,5	0,008
3B100.W0032	w/o Threadlock	Steel	Standard	UNC 5-40	1/4	0,020	1/16	0,3	0,8	0,016
3B100.W0033	w/o Threadlock	Steel	Standard	UNC 6-32	5/16	0,023	5/64	0,5	1,0	0,020
3B100.W0035	w/o Threadlock	Steel	Standard	UNF 6-40	5/16	0,023	5/64	0,5	1,0	0,020
3B100.W0036	w/o Threadlock	Steel	Standard	UNC 8-32	11/32	0,025	3/32	0,8	1,3	0,026
3B100.W0038	w/o Threadlock	Steel	Standard	UNF 8-36	11/32	0,025	3/32	0,8	1,3	0,026
3B100.W0040	w/o Threadlock	Steel	Standard	UNF 10-32	33/64	0,025	3/32	2,0	3,1	0,049
3B100.W0042	w/o Threadlock	Steel	Standard	UNC 1/4-20	17/32	0,035	1/8	3,8	6,8	0,073
3B100.W0046	w/o Threadlock	Steel	Standard	UNC 5/16-18	37/64	0,040	5/32	4,0	8,4	0,123
3B100.W0048	w/o Threadlock	Steel	Standard	UNC 3/8-16	5/8	0,048	3/16	5,0	10,3	0,198
3B100.W0050	w/o Threadlock	Steel	Standard	UNC 1/2-13	3/4	0,072	9/32	6,0	12,0	0,406
3B100.W0052	w/o Threadlock	Steel	Standard	UNC 5/8-11	63/64	0,096	3/8	9,0	18,0	0,811
3B100.W0070	w/o Threadlock	Steel	Heavy	UNF 10-32	33/64	0,025	3/32	3,3	4,8	0,049
3B100.W0072	w/o Threadlock	Steel	Heavy	UNC 1/4-20	17/32	0,035	1/8	5,6	8,6	0,073
3B100.W0076	w/o Threadlock	Steel	Heavy	UNC 5/16-18	37/64	0,040	5/32	6,0	11,1	0,122
3B100.W0078	w/o Threadlock	Steel	Heavy	UNC 3/8-16	5/8	0,048	3/16	7,5	15,1	0,196
3B100.W0080	w/o Threadlock	Steel	Heavy	UNC 1/2-13	3/4	0,072	9/32	6,0	24,0	0,408
3B100.W0082	w/o Threadlock	Steel	Heavy	UNC 5/8-11	63/64	0,096	3/8	7,0	40,0	0,825
3B100.W0110	w/o Threadlock	Stainless	Light	UNF 10-32	33/64	0,025	3/32	0,9	1,5	0,048
3B100.W0112	w/o Threadlock	Stainless	Light	UNC 1/4-20	17/32	0,035	1/8	2,1	4,0	0,071
3B100.W0116	w/o Threadlock	Stainless	Light	UNC 5/16-18	37/64	0,040	5/32	2,0	4,6	0,123
3B100.W0118	w/o Threadlock	Stainless	Light	UNC 3/8-16	5/8	0,048	3/16	2,5	5,0	0,190
3B100.W0120	w/o Threadlock	Stainless	Light	UNC 1/2-13	3/4	0,072	9/32	3,0	6,0	0,397
3B100.W0122	w/o Threadlock	Stainless	Light	UNC 5/8-11	63/64	0,096	3/8	4,5	9,0	0,790
3B100.W0131	w/o Threadlock	Stainless	Standard	UNF 4-48	3/16	0,020	1/16	0,1	0,5	0,005
3B100.W0132	w/o Threadlock	Stainless	Standard	UNC 5-40	1/4	0,020	1/16	0,3	0,8	0,015
3B100.W0133	w/o Threadlock	Stainless	Standard	UNC 6-32	5/16	0,023	5/64	0,5	1,0	0,018
3B100.W0135	w/o Threadlock	Stainless	Standard	UNF 6-40	5/16	0,023	5/64	0,5	1,0	0,019
3B100.W0136	w/o Threadlock	Stainless	Standard	UNC 8-32	11/32	0,025	3/32	0,8	1,3	0,026
3B100.W0138	w/o Threadlock	Stainless	Standard	UNF 8-36	11/32	0,025	3/32	0,8	1,3	0,026
3B100.W0140	w/o Threadlock	Stainless	Standard	UNF 10-32	33/64	0,025	3/32	2,0	3,1	0,049
3B100.W0142	w/o Threadlock	Stainless	Standard	UNC 1/4-20	17/32	0,035	1/8	3,8	6,8	0,072
3B100.W0146	w/o Threadlock	Stainless	Standard	UNC 5/16-18	37/64	0,040	5/32	4,0	8,4	0,123
3B100.W0148	w/o Threadlock	Stainless	Standard	UNC 3/8-16	5/8	0,048	3/16	5,0	10,3	0,198
3B100.W0150	w/o Threadlock	Stainless	Standard	UNC 1/2-13	3/4	0,072	9/32	6,0	12,0	0,396

Material

Free cutting steel type-
Body: free cutting steel, blackened.
Ball: ball bearing steel 1.3505 (100Cr6) hardened.
Spring: stainless steel.
Stainless steel type-
Body: stainless steel 1.4305 (AISI 303).
Ball: ball bearing steel, hardened.
Spring: stainless steel.

Technical Notes

To be used as detents or for locating, positioning, indexing, locking, latching, ejecting, lifting off and other similar push application.
Temperature range for execution without thread up to 482°F.
Thread lock - Polyamide spot coating.

Tips

Light spring load - marked with one line.
Standard spring load - no marking.
Heavy spring load - marked with two lines.
Special types available on request.

Important Notes

* statistical average value
** all dimensions are in inches
Thread: 2A-UNC/UNF.

STAINLESS STEEL 303

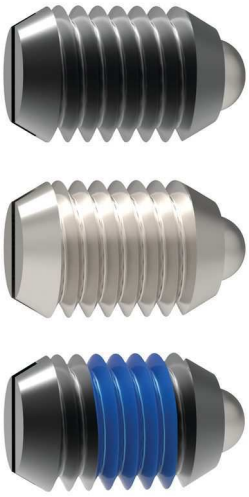
IMPERIAL SIZES

Spring Plungers - IMPERIAL

with ball and slot

3B100

Order No.	Type	Finish	Spring load	UNC/UNF d_1**	l_1**	s**	d_2**	Spring load* F_1 lbs≈	Spring load* F_2 lbs≈	oz.
3B100.W0152	w/o Threadlock	Stainless	Standard	UNC 5/8-11	63/64	0,096	3/8	9,0	18,0	0,813
3B100.W0170	w/o Threadlock	Stainless	Heavy	UNF 10-32	33/64	0,025	3/32	3,3	4,8	0,046
3B100.W0172	w/o Threadlock	Stainless	Heavy	UNC 1/4-20	17/32	0,35	1/8	5,6	8,6	0,074
3B100.W0176	w/o Threadlock	Stainless	Heavy	UNC 5/16-18	37/64	0,040	5/32	6,0	11,1	0,123
3B100.W0178	w/o Threadlock	Stainless	Heavy	UNC 3/8-16	5/8	0,048	3/16	7,5	15,1	0,197
3B100.W0180	w/o Threadlock	Stainless	Heavy	UNC 1/2-13	3/4	0,072	9/32	6,0	24,0	0,409
3B100.W0182	w/o Threadlock	Stainless	Heavy	UNC 5/8-11	63/64	0,096	3/8	7,0	40,0	0,825
3B100.W0210	With Threadlock	Steel	Light	UNF 10-32	33/64	0,025	3/32	0,9	1,5	0,049
3B100.W0212	With Threadlock	Steel	Light	UNC 1/4-20	17/32	0,035	1/8	2,1	4,0	0,074
3B100.W0216	With Threadlock	Steel	Light	UNC 5/16-18	37/64	0,040	5/32	2,0	4,6	0,123
3B100.W0218	With Threadlock	Steel	Light	UNC 3/8-16	5/8	0,048	3/16	2,5	5,0	0,193
3B100.W0220	With Threadlock	Steel	Light	UNC 1/2-13	3/4	0,072	9/32	3,0	6,0	0,397
3B100.W0222	With Threadlock	Steel	Light	UNC 5/8-11	63/64	0,096	3/8	4,5	9,0	0,787
3B100.W0231	With Threadlock	Steel	Standard	UNF 4-48	3/16	0,020	1/16	0,1	0,5	0,008
3B100.W0232	With Threadlock	Steel	Standard	UNC 5-40	1/4	0,020	1/16	0,3	0,8	0,016
3B100.W0233	With Threadlock	Steel	Standard	UNC 6-32	5/16	0,023	5/64	0,5	1,0	0,020
3B100.W0235	With Threadlock	Steel	Standard	UNF 6-40	5/16	0,023	5/64	0,5	1,0	0,020
3B100.W0236	With Threadlock	Steel	Standard	UNC 8-32	11/32	0,025	3/32	0,8	1,3	0,026
3B100.W0238	With Threadlock	Steel	Standard	UNF 8-36	11/32	0,025	3/32	0,8	1,3	0,026
3B100.W0240	With Threadlock	Steel	Standard	UNF 10-32	33/64	0,025	3/32	2,0	3,1	0,049
3B100.W0242	With Threadlock	Steel	Standard	UNC 1/4-20	17/32	0,035	1/8	3,8	6,8	0,073
3B100.W0246	With Threadlock	Steel	Standard	UNC 5/16-18	37/64	0,040	5/32	4,0	8,4	0,123
3B100.W0248	With Threadlock	Steel	Standard	UNC 3/8-16	5/8	0,048	3/16	5,0	10,3	0,198
3B100.W0250	With Threadlock	Steel	Standard	UNC 1/2-13	3/4	0,072	9/32	6,0	12,0	0,406
3B100.W0252	With Threadlock	Steel	Standard	UNC 5/8-11	63/64	0,096	3/8	9,0	18,0	0,811
3B100.W0270	With Threadlock	Steel	Heavy	UNF 10-32	33/64	0,025	3/32	3,3	4,8	0,049
3B100.W0272	With Threadlock	Steel	Heavy	UNC 1/4-20	17/32	0,035	1/8	5,6	8,6	0,073
3B100.W0276	With Threadlock	Steel	Heavy	UNC 5/16-18	37/64	0,040	5/32	6,0	11,1	0,122
3B100.W0278	With Threadlock	Steel	Heavy	UNC 3/8-16	5/8	0,048	3/16	7,5	15,1	0,196
3B100.W0280	With Threadlock	Steel	Heavy	UNC 1/2-13	3/4	0,072	9/32	6,0	24,0	0,408
3B100.W0282	With Threadlock	Steel	Heavy	UNC 5/8-11	63/64	0,096	3/8	7,0	40,0	0,825
3B100.W0310	With Threadlock	Stainless	Light	UNF 10-32	33/64	0,025	3/32	0,9	1,5	0,048
3B100.W0312	With Threadlock	Stainless	Light	UNC 1/4-20	17/32	0,035	1/8	2,1	4,0	0,071
3B100.W0316	With Threadlock	Stainless	Light	UNC 5/16-18	37/64	0,040	5/32	2,0	4,6	0,123
3B100.W0318	With Threadlock	Stainless	Light	UNC 3/8-16	5/8	0,048	3/16	2,5	5,0	0,190
3B100.W0320	With Threadlock	Stainless	Light	UNC 1/2-13	3/4	0,072	9/32	3,0	6,0	0,397
3B100.W0322	With Threadlock	Stainless	Light	UNC 5/8-11	63/64	0,096	3/8	4,5	9,0	0,790
3B100.W0331	With Threadlock	Stainless	Standard	UNF 4-48	3/16	0,020	1/16	0,1	0,5	0,005
3B100.W0332	With Threadlock	Stainless	Standard	UNC 5-40	1/4	0,020	1/16	0,3	0,8	0,015
3B100.W0333	With Threadlock	Stainless	Standard	UNC 6-32	5/16	0,023	5/64	0,5	1,0	0,018
3B100.W0335	With Threadlock	Stainless	Standard	UNF 6-40	5/16	0,023	5/64	0,5	1,0	0,019
3B100.W0336	With Threadlock	Stainless	Standard	UNC 8-32	11/32	0,025	3/32	0,8	1,3	0,026
3B100.W0338	With Threadlock	Stainless	Standard	UNF 8-36	11/32	0,025	3/32	0,8	1,3	0,026
3B100.W0340	With Threadlock	Stainless	Standard	UNF 10-32	33/64	0,025	3/32	2,0	3,1	0,035
3B100.W0342	With Threadlock	Stainless	Standard	UNC 1/4-20	17/32	0,035	1/8	3,8	6,8	0,072
3B100.W0346	With Threadlock	Stainless	Standard	UNC 5/16-18	37/64	0,040	5/32	4,0	8,4	0,123
3B100.W0348	With Threadlock	Stainless	Standard	UNC 3/8-16	5/8	0,048	3/16	5,0	10,3	0,198
3B100.W0350	With Threadlock	Stainless	Standard	UNC 1/2-13	3/4	0,072	9/32	6,0	12,0	0,396
3B100.W0352	With Threadlock	Stainless	Standard	UNC 5/8-11	63/64	0,096	3/8	9,0	18,0	0,813
3B100.W0370	With Threadlock	Stainless	Heavy	UNF 10-32	33/64	0,025	3/32	3,3	4,8	0,046
3B100.W0372	With Threadlock	Stainless	Heavy	UNC 1/4-20	17/32	0,35	1/8	5,6	8,6	0,074
3B100.W0376	With Threadlock	Stainless	Heavy	UNC 5/16-18	37/64	0,040	5/32	6,0	11,1	0,123
3B100.W0378	With Threadlock	Stainless	Heavy	UNC 3/8-16	5/8	0,048	3/16	7,5	15,1	0,197
3B100.W0380	With Threadlock	Stainless	Heavy	UNC 1/2-13	3/4	0,072	9/32	6,0	24,0	0,409
3B100.W0382	With Threadlock	Stainless	Heavy	UNC 5/8-11	63/64	0,096	3/8	7,0	40,0	0,825



Material

Free cutting steel type-
Body: free cutting steel, blackened.
Ball: ball bearing steel 1.3505 (100Cr6) hardened.
Spring: stainless steel.
Stainless steel type-
Body: stainless steel 1.4305 (AISI 303).
Ball: ball bearing steel, hardened.
Spring: stainless steel.

Technical Notes

To be used as detents or for locating, positioning, indexing, locking, latching, ejecting, lifting off and other similar push application.
Temperature range for execution without thread up to 482°F.
Thread lock - Polyamide spot coating.

Tips

Light spring load - marked with one line.
Standard spring load - no marking.
Heavy spring load - marked with two lines.
Special types available on request.

Important Notes

* statistical average value
** all dimensions are in inches
Thread: 2A-UNC/UNF.

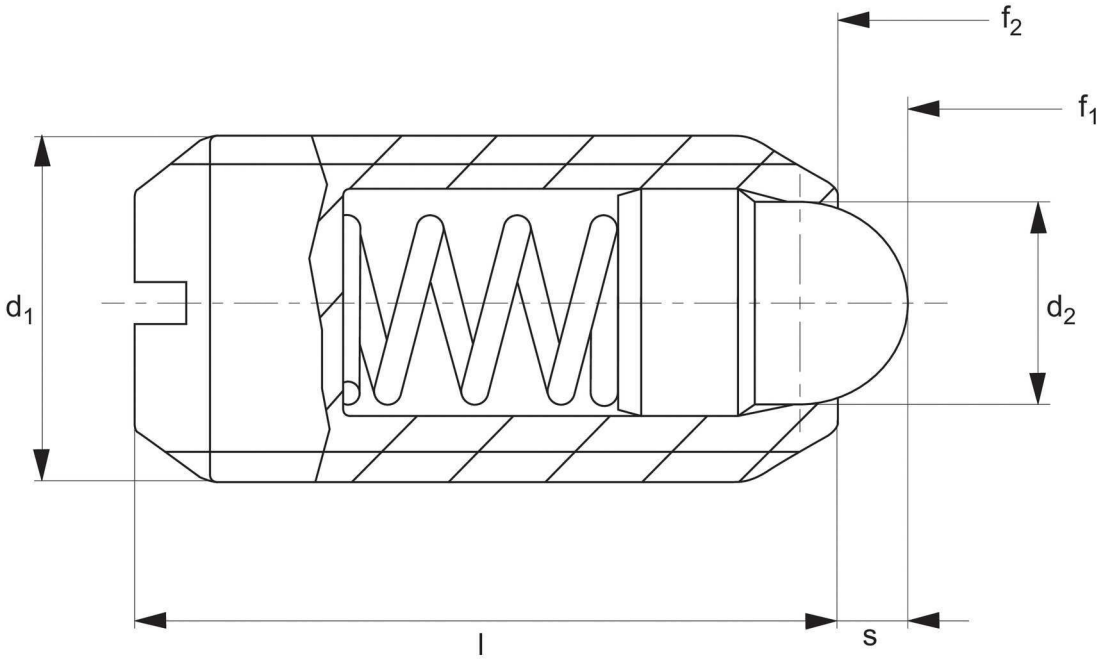
STAINLESS STEEL 303

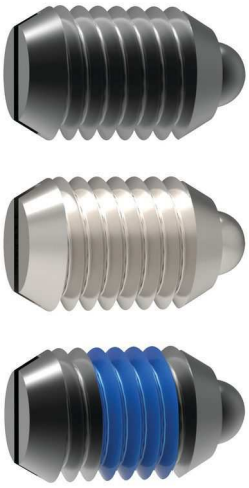
IMPERIAL SIZES

Spring Plungers - IMPERIAL

with round-ended pin and slot - stainless steel

3B150





Order No. w/o Threadlock	Order No. with Threadlock	Finish	Spring load	UNC/UNF d_1**	l**	s**	d_2**	Spring load* f_1 lbs≈	Spring load* f_2 lbs≈	oz.
3B150.W0033	3B150.W0233	Steel	Standard	UNC 6-32	3/8	0,063	0,046	0,5	1,5	0,021
3B150.W0036	3B150.W0236	Steel	Standard	UNC 8-32	7/16	0,052	0,070	0,8	1,5	0,032
3B150.W0038	3B150.W0238	Steel	Standard	UNF 8-36	7/16	0,052	0,070	0,8	1,5	0,032
3B150.W0040	3B150.W0240	Steel	Standard	UNF 10-32	15/32	0,065	0,093	1,0	2,5	0,042
3B150.W0042	3B150.W0242	Steel	Standard	UNC 1/4-20	17/32	0,078	0,119	1,1	3,5	0,074
3B150.W0046	3B150.W0246	Steel	Standard	UNC 5/16-18	37/64	0,084	0,135	1,0	4,0	0,123
3B150.W0048	3B150.W0248	Steel	Standard	UNC 3/8-16	5/8	0,110	0,186	1,5	4,5	0,187
3B150.W0050	3B150.W0250	Steel	Standard	UNC 1/2-13	3/4	0,151	0,248	1,8	5,5	0,377
3B150.W0052	3B150.W0252	Steel	Standard	UNC 5/8-11	1 1/16	0,215	0,310	2,0	8,5	0,885
3B150.W0063	3B150.W0263	Steel	Heavy	UNC 6-32	3/8	0,063	0,046	0,5	2,5	0,018
3B150.W0066	3B150.W0266	Steel	Heavy	UNC 8-32	7/16	0,052	0,070	1.8	4,6	0,032
3B150.W0068	3B150.W0268	Steel	Heavy	UNF 8-36	7/16	0,052	0,070	1,8	4,6	0,032
3B150.W0070	3B150.W0270	Steel	Heavy	UNF 10-32	15/32	0,065	0,093	2,6	6,3	0,042
3B150.W0072	3B150.W0272	Steel	Heavy	UNC 1/4-20	17/32	0,078	0,119	3,0	9,7	0,074
3B150.W0076	3B150.W0276	Steel	Heavy	UNC 5/16-18	37/64	0,084	0,135	3,8	13,0	0,123
3B150.W0078	3B150.W0278	Steel	Heavy	UNC 3/8-16	5/8	0,110	0,186	4,5	16,0	0,190
3B150.W0080	3B150.W0280	Steel	Heavy	UNC 1/2-13	3/4	0,151	0,248	5,0	22,4	0,384
3B150.W0082	3B150.W0282	Steel	Heavy	UNC 5/8-11	1 1/16	0,215	0,310	7,0	43,5	0,907
3B150.W0133	3B150.W0333	Stainless	Standard	UNC 6-32	3/8	0,063	0,046	0,5	1,5	0,021
3B150.W0136	3B150.W0336	Stainless	Standard	UNC 8-32	7/16	0,052	0,070	0,8	1,5	0,032
3B150.W0138	3B150.W0338	Stainless	Standard	UNF 8-36	7/16	0,052	0,070	0,8	1,5	0,032
3B150.W0140	3B150.W0340	Stainless	Standard	UNF 10-32	15/32	0,065	0,093	1,0	2,5	0,042
3B150.W0142	3B150.W0342	Stainless	Standard	UNC 1/4-20	17/32	0,078	0,119	1,1	3,5	0,074
3B150.W0146	3B150.W0346	Stainless	Standard	UNC 5/16-18	37/64	0,084	0,135	1,0	4,0	0,123
3B150.W0148	3B150.W0348	Stainless	Standard	UNC 3/8-16	5/8	0,110	0,186	1,5	4,5	0,190
3B150.W0150	3B150.W0350	Stainless	Standard	UNC 1/2-13	3/4	0,151	0,248	1,8	5,5	0,388
3B150.W0152	3B150.W0352	Stainless	Standard	UNC 5/8-11	1 1/16	0,215	0,310	2,0	8,5	0,892
3B150.W0163	3B150.W0363	Stainless	Heavy	UNC 6-32	3/8	0,063	0,046	0,5	2,5	0,014
3B150.W0166	3B150.W0366	Stainless	Heavy	UNC 8-32	7/16	0,052	0,070	1,8	4,6	0,032
3B150.W0168	3B150.W0368	Stainless	Heavy	UNF 8-36	7/16	0,052	0,070	1,8	4,6	0,032
3B150.W0170	3B150.W0370	Stainless	Heavy	UNF 10-32	15/32	0,065	0,093	2,6	6,3	0,042
3B150.W0172	3B150.W0372	Stainless	Heavy	UNC 1/4-20	17/32	0,078	0,119	3,0	9,7	0,071
3B150.W0176	3B150.W0376	Stainless	Heavy	UNC 5/16-18	37/64	0,084	0,135	3,8	13,0	0,123
3B150.W0178	3B150.W0378	Stainless	Heavy	UNC 3/8-16	5/8	0,110	0,186	4,5	16,0	0,194
3B150.W0180	3B150.W0380	Stainless	Heavy	UNC 1/2-13	3/4	0,151	0,248	5,0	22,4	0,399
3B150.W0182	3B150.W0382	Stainless	Heavy	UNC 5/8-11	1 1/16	0,215	0,310	7,0	43,5	0,914

Material

Free cutting steel type-
Body: free cutting steel, blackened.
Pin: free cutting steel, hardened.
Spring: stainless steel.
Stainless steel type-
Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel 1.4305 (AISI 303).
Spring: stainless steel.

Technical Notes

To be used as detents or for locating, positioning, indexing, locking, latching, ejecting, lifting off and other similar push application.
Temperature range for execution without thread up to 482°F.
Thread lock - Polyamide spot coating.

Tips

Standard spring load = no marking
Heavy spring load = marked with two lines
Special types available on request.

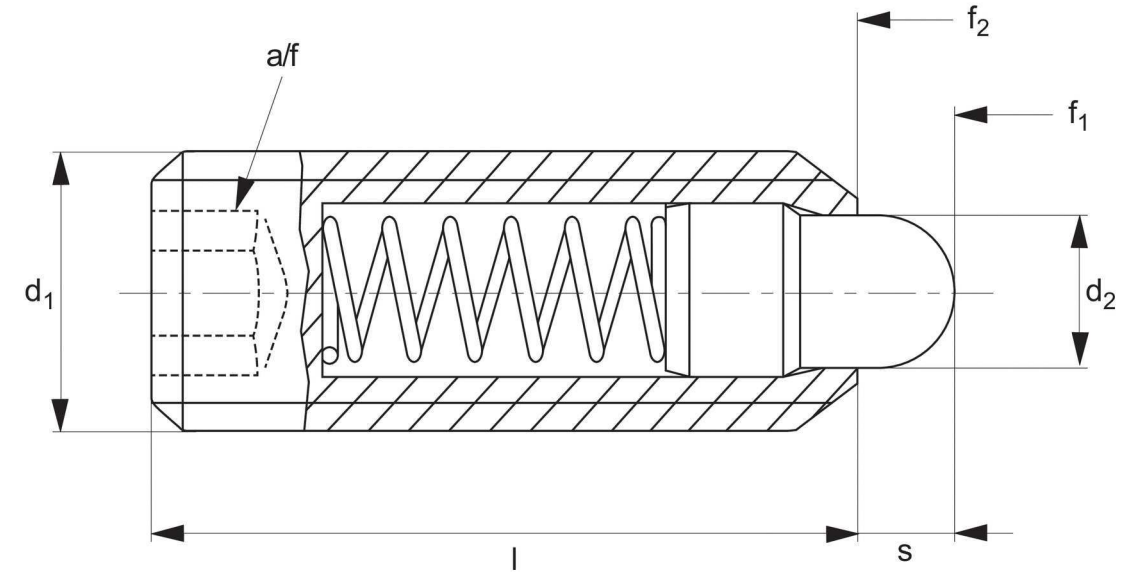
Important Notes

* statistical average value
** all dimensions are in inches
Thread: 2A-UNC/UNF.

Spring Plungers - IMPERIAL

with round-ended pin and hex. socket - stainless steel

3B200





Order No. w/o threadlock	Order No. with threadlock	Finish	Spring load	UNC/UNF d_1**	l**	s**	d_2**	a/f**	Spring Load* f_1 lbs≈	Spring Load* f_2 lbs≈	oz.
3B200.W0033	3B200.W0233	Steel	Std.	UNC 6-32	17/32	0,063	0,046	1/16	0,5	1,5	0,025
3B200.W0036	3B200.W0236	Steel	Std.	UNC 8-32	5/8	0,094	0,070	5/64	0,8	2,3	0,042
3B200.W0040	3B200.W0240	Steel	Std.	UNF 10-32	3/4	0,125	0,093	3/32	1,4	2,7	0,063
3B200.W0042	3B200.W0242	Steel	Std.	UNC 1/4-20	1	0,188	0,119	1/8	1,0	4,0	0,134
3B200.W0044	3B200.W0244	Steel	Std.	UNF 1/4-28	1	0,188	0.119	1/8	1,0	4,0	0,145
3B200.W0046	3B200.W0246	Steel	Std.	UNC 5/16-18	1	0,188	0,135	5/32	1,5	4,5	0,205
3B200.W0048	3B200.W0248	Steel	Std.	UNC 3/8-16	1 1/8	0,188	0,186	3/16	2,7	7,2	0,335
3B200.W0050	3B200.W0250	Steel	Std.	UNC 1/2-13	1 1/4	0,250	0,248	1/4	2,7	9,3	0,656
3B200.W0052	3B200.W0252	Steel	Std.	UNC 5/8-11	1 1/2	0,313	0,310	5/16	3,5	10,6	1,242
3B200.W0053	3B200.W0253	Steel	Std.	UNC 3/4-10	1 3/4	0,313	0,374	3/8	5,5	14,5	2,152
3B200.W0054	3B200.W0254	Steel	Std.	UNC 1-8	2 13/32	0,500	0,499	3/8	4,0	31,0	5,443
3B200.W0063	3B200.W0263	Steel	Heavy	UNC 6-32	17/32	0,063	0,046	1/16	1,5	3,4	0,026
3B200.W0066	3B200.W0266	Steel	Heavy	UNC 8-32	5/8	0,094	0,070	5/64	2,6	6,6	0,042
3B200.W0070	3B200.W0270	Steel	Heavy	UNF 10-32	3/4	0,125	0,093	3/32	3,2	9,0	0,067
3B200.W0072	3B200.W0272	Steel	Heavy	UNC 1/4-20	1	0,188	0,119	1/8	3,1	10,1	0,134
3B200.W0074	3B200.W0274	Steel	Heavy	UNF 1/4-28	1	0,188	0,119	1/8	3,1	10,1	0,145
3B200.W0076	3B200.W0276	Steel	Heavy	UNC 5/16-18	1	0,188	0,135	5/32	3,0	15,0	0,207
3B200.W0078	3B200.W0278	Steel	Heavy	UNC 3/8-16	1 1/8	0,188	0,186	3/16	5,5	12,7	0,335
3B200.W0080	3B200.W0280	Steel	Heavy	UNC 1/2-13	1 1/4	0,250	0,248	1/4	6,6	16,0	0,649
3B200.W0082	3B200.W0282	Steel	Heavy	UNC 5/8-11	1 1/2	0,313	0,310	5/16	10,5	22,2	1,245
3B200.W0083	3B200.W0283	Steel	Heavy	UNC 3/4-10	1 3/4	0,313	0,374	3/8	6,7	33,0	2,187
3B200.W0084	3B200.W0284	Steel	Heavy	UNC 1-8	2 13/32	0,500	0,499	3/8	16,0	60,0	5,538
3B200.W0133	3B200.W0333	Stainless	Std.	UNC 6-32	17/32	0,063	0,046	1/16	0,5	1,5	0,018
3B200.W0136	3B200.W0336	Stainless	Std.	UNC 8-32	5/8	0,094	0,070	5/64	0,8	2,3	0,039
3B200.W0140	3B200.W0340	Stainless	Std.	UNF 10-32	3/4	0,125	0,093	3/32	1,4	2,7	0,063
3B200.W0142	3B200.W0342	Stainless	Std.	UNC 1/4-20	1	0,188	0,119	1/8	1,0	4,0	0,131
3B200.W0144	3B200.W0344	Stainless	Std.	UNF 1/4-28	1	0,188	0,119	1/8	1,0	4,0	0,141
3B200.W0146	3B200.W0346	Stainless	Std.	UNC 5/16-18	1	0,188	0,135	5/32	1,5	4,5	0,208
3B200.W0148	3B200.W0348	Stainless	Std.	UNC 3/8-16	1 1/8	0,188	0,186	3/16	2,7	7,2	0,328
3B200.W0150	3B200.W0350	Stainless	Std.	UNC 1/2-13	1 1/4	0,250	0,248	1/4	2,7	9,3	0,653
3B200.W0152	3B200.W0352	Stainless	Std.	UNC 5/8-11	1 1/2	0,313	0,310	5/16	3,5	10,6	1,242
3B200.W0153	3B200.W0353	Stainless	Std.	UNC 3/4-10	1 3/4	0,313	0,374	3/8	5,5	14,5	2,180
3B200.W0154	3B200.W0354	Stainless	Std.	UNC 1-8	2 13/32	0,500	0,499	3/8	4,0	31,0	5,474
3B200.W0163	3B200.W0363	Stainless	Heavy	UNC 6-32	17/32	0,063	0,046	1/16	1,5	3,4	0,025
3B200.W0166	3B200.W0366	Stainless	Heavy	UNC 8-32	5/8	0,094	0,070	5/64	2,6	6,6	0,042
3B200.W0170	3B200.W0370	Stainless	Heavy	UNF 10-32	3/4	0,125	0,093	3/32	3,2	9,0	0,063
3B200.W0172	3B200.W0372	Stainless	Heavy	UNC 1/4-20	1	0,188	0,119	1/8	3,1	10,1	0,131
3B200.W0174	3B200.W0374	Stainless	Heavy	UNF 1/4-28	1	0,188	0,119	1/8	3,1	10,1	0,145
3B200.W0176	3B200.W0376	Stainless	Heavy	UNC 5/16-18	1	0,188	0,135	5/32	3,0	15,0	0,212
3B200.W0178	3B200.W0378	Stainless	Heavy	UNC 3/8-16	1 1/8	0,188	0,186	3/16	5,5	12,7	0,339
3B200.W0180	3B200.W0380	Stainless	Heavy	UNC 1/2-13	1 1/4	0,250	0,248	1/4	6,6	16,0	0,653
3B200.W0182	3B200.W0382	Stainless	Heavy	UNC 5/8-11	1 1/2	0,313	0,310	5/16	10,5	22,2	1,252
3B200.W0183	3B200.W0383	Stainless	Heavy	UNC 3/4-10	1 3/4	0,313	0,374	3/8	6,7	33,0	2,198
3B200.W0184	3B200.W0384	Stainless	Heavy	UNC 1-8	2 13/32	0,500	0,499	3/8	16,0	60,0	5,524

Material

Free cutting steel type-
Body: free cutting steel, blackened.
Pin: free cutting steel, hardened, blackened.
Spring: stainless steel.
Stainless steel type-
Body: stainless steel 1.4305 (AISI 303).
Pin: stainless steel 1.4305 (AISI 303).
Spring: stainless steel.

Technical Notes

To be used as detents or for locating, positioning, indexing, locking, latching, ejecting, lifting off and other similar push application.
Temperature range for execution without thread up to 482°F.
Thread lock - Polyamide spot coating.

Tips

Standard spring load = no marking
Heavy spring load = marked with two lines

Important Notes

* statistical average value
** all dimensions are in inches
Thread: 2A-UNC/UNF.

STAINLESS STEEL 303

IMPERIAL SIZES

Wixroyd Imperial Spring Plungers

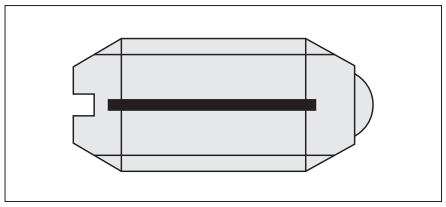
imperial thread

3B100 -3B200

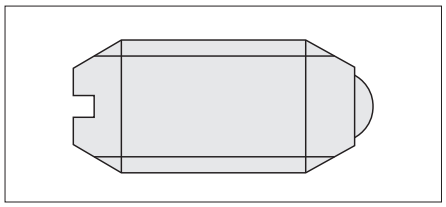
Wixroyd have applied their extensive experience and expertise in spring plunger design and production to offer a range of imperial plungers.

At last – imperial version spring plungers stocked in the UK!

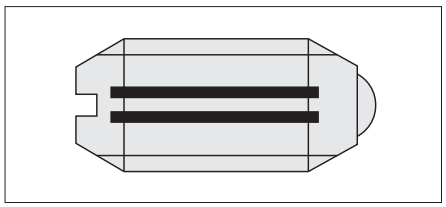




Light spring load = marked with one line.



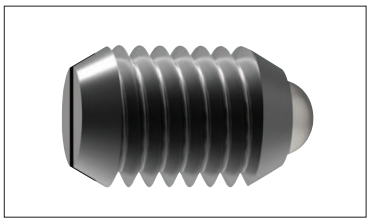
Standard spring load = no marking.



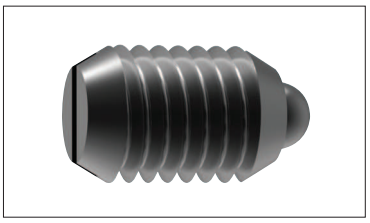
Heavy spring load = marked with two lines.

Spring loads

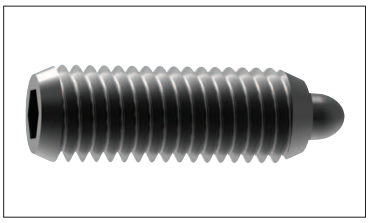
Three available spring pressure models.



3B100 Imperial plunger with ball and slot.



3B150 Imperial plunger with pin and slot.



3B200 Imperial plunger with pin and hex socket.

Thread details

2A-UNC/UNF: sizes 4-48 to 5/8-11.

Conversion table: Metric/Imperial values

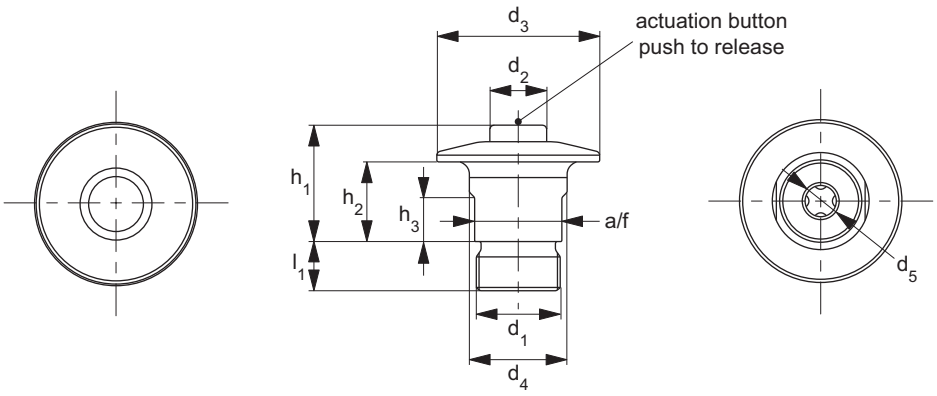
	To convert from	To	Use conversion factor
Lengths	Inch (in)	Millimeter (mm)	in x 25,4 = mm
	Millimeter (mm)	Inch (in)	mm x 0,03937 = in
Weight/force	Ounces (oz)	Gram (g)	oz x 28 = g
	Gram (g)	Ounces (oz)	g x 0,035 = oz
	Pounds (lbs)	Kilogram (Kg)	lbs x 0,4536 = Kg
	Kilogram (Kg)	Pounds (lbs)	Kg x 2,205 = lbs
	Kilogram (Kg)	Newton (N)	Kg x 9,81 = N
	Newton (N)	Kilogram (Kg)	N/ 9,81 = Kg
Temperature	Degree fahrenheit (°F)	Degree centigrade (°C)	(°F-32) x 5/9 = °C
	Degree centigrade (°C)	Degree fahrenheit (°F)	°C x 9/5 + 32 = °F
Torque	Foot-pounds (ft-lbs)	Newton-meter (Nm)	ft/lbs x 1,35 = Nm
	Newton-meter (Nm)	Foot-pounds (ft-lbs)	Nm x 0,74 = ft/lbs

One-Touch Fastener - Ball Clamping

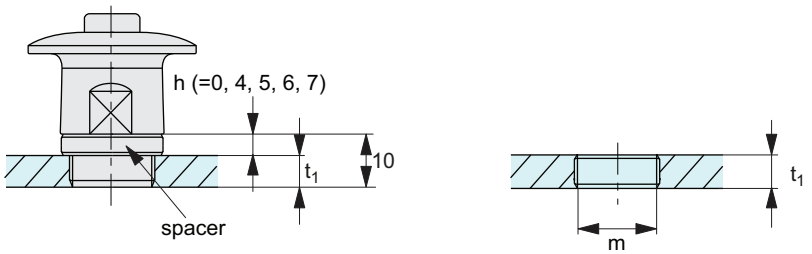
push button lock - button handle - stainless

33924





Order No.	For single panel thickness	For Pin Ø	d_1	d_2	d_3	d_4	d_5 +0.4 +0.2	h_1	h_2	h_3	l_1	a/f	Clamping force N	Shear strength N	Tensile strength N	g
33924.W1006	3-10	6	M16x1,0	11	32	19	6	23	15,5	8,5	9,5	17	6	1100	250	65



flush fitting
3-10mm panel thickness
installation via hole with
threaded bore

	Fitting	Single panel thickness mm	t_1 ±0,2	m
33924.W1006	Flush	3 to 10	3 to 10	M16x1,0

Material

Body: stainless steel SUS303
Ball: stainless steel SUS440
Spring: stainless steel SUS304
O-Ring: fluororubber

Technical Notes

One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and dive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time wasted in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery. Temperature resistant to 180°C.

Tips

Used in conjunction with pin 33923.
For highly accurate locating, use locating pins 36340 & 36341

Important Notes

Suitable for panel/enclosures of 3 to 10mm thickness.
Used in conjunction with pin 33923.
Tensile strength stated is for locked position/state of fastener.

Actuation:
-Engage clamp over pin, no need to push button, a positive "click" is heard.
-Securing balls are locked and panel fastened.
-To release; while pushing down on release button, lift panel from pin- panel is released.

33925

One-Touch Fastener - Ball Clamping

push button lock - straight body - stainless





Material

Body: stainless steel SUS303
Ball: stainless steel SUS440
Spring: stainless steel SUS304
O-Ring: fluororubber

Technical Notes

One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and dive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time wasted in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery. Temperature resistant to 180°C.

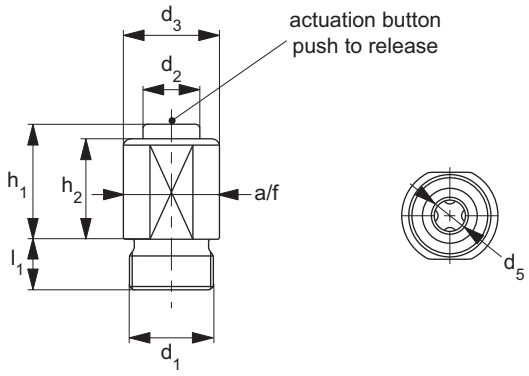
Tips

Used in conjunction with pin 33923. For highly accurate locating, use locating pins 36340 & 36341

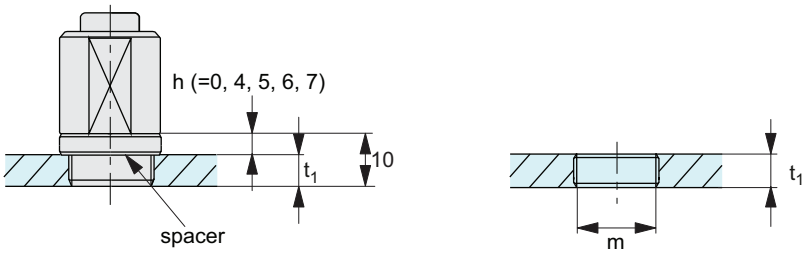
Important Notes

Suitable for panel/enclosures of 3 to 27mm thickness. Used in conjunction with pin 33923. Tensile strength stated is for locked position/state of fastener.

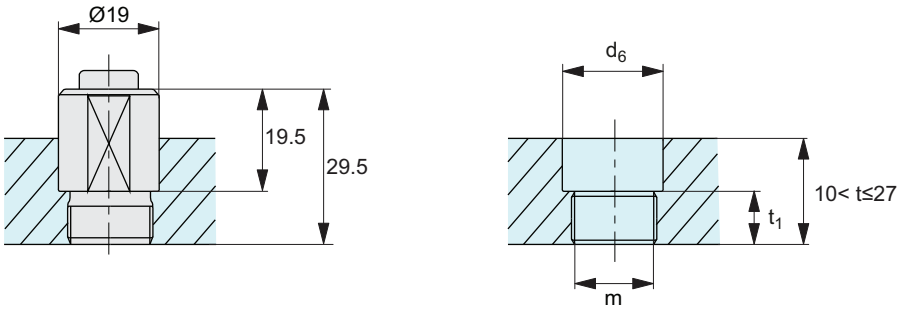
Actuation:
-To lock; engage clamp over pin, no need to push button, a positive "click" is heard.
-Securing balls are locked and panel fastened.
-To release; while pushing down on release button, lift panel from pin-panel is released.



Order No.	For single panel thickness	For Pin Ø	d_1	d_2	d_3	d_5 +0.4 +0.2	h_1	h_2	l_1	a/f	Clamping force N	Shear strength N	Tensile strength N	g
33925.W2706	3-27	6	M16x1,0	11	19	6	23	19,5	9,5	17	6	1100	250	50



flush fitting
3-10mm panel thickness
installation via hole with
threaded bore



10-27mm panel thickness
installation via recessed hole
with threaded bore

	Fitting	Single panel thickness mm	t_1 +0,2	m	d_6
33925.W2706	Flush	3 to 10	3 to 10	M16x1,0	-
33925.W2706	Recessed	10 to 27	10	M16x1,0	20

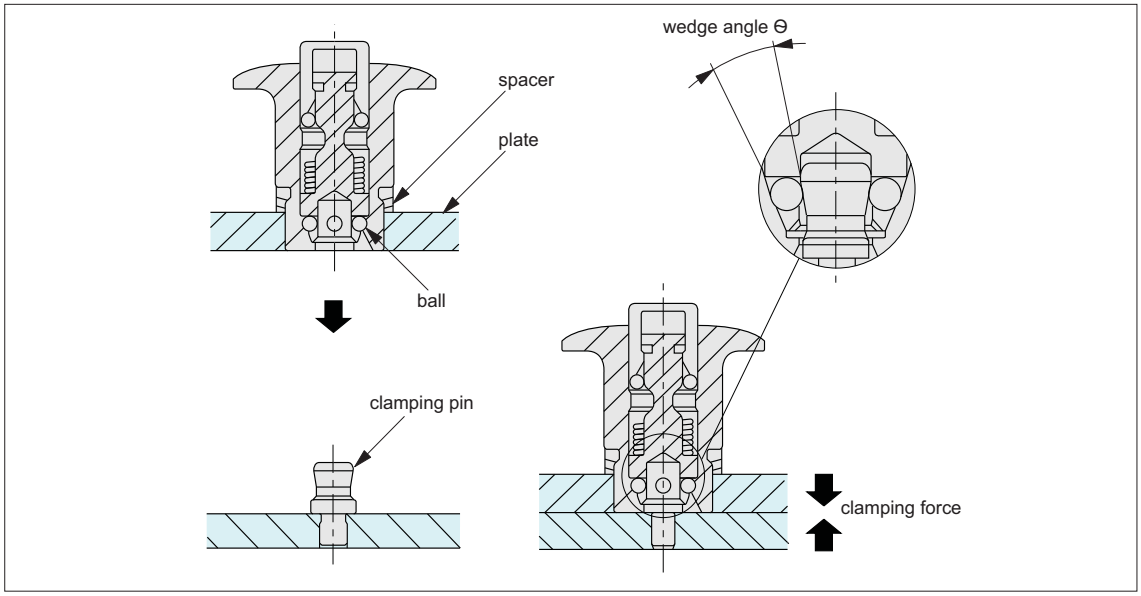
33924 -33925

One-Touch Fastener - Ball Clamping

overview

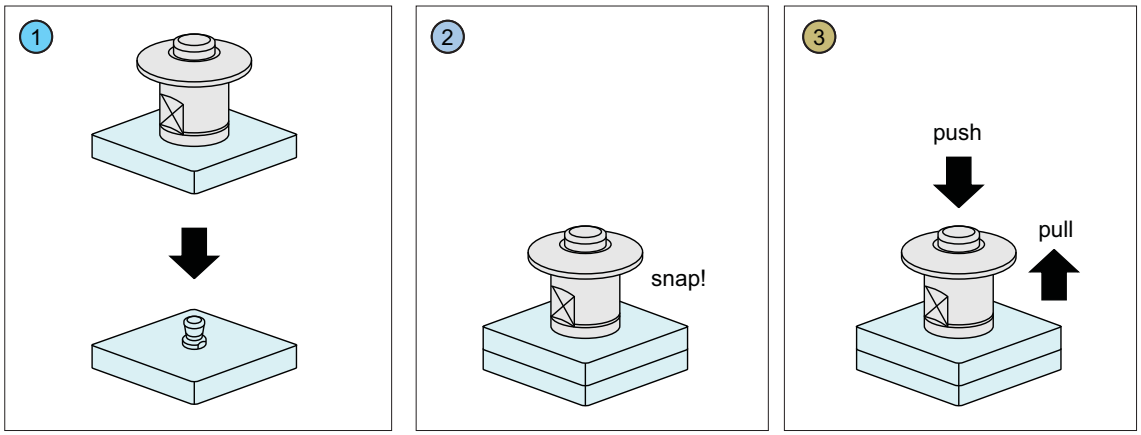
Operating Principle

Four ball bearings clamp onto the clamping pin (33923), the wedge shape of the pin draws the panels together during clamping.

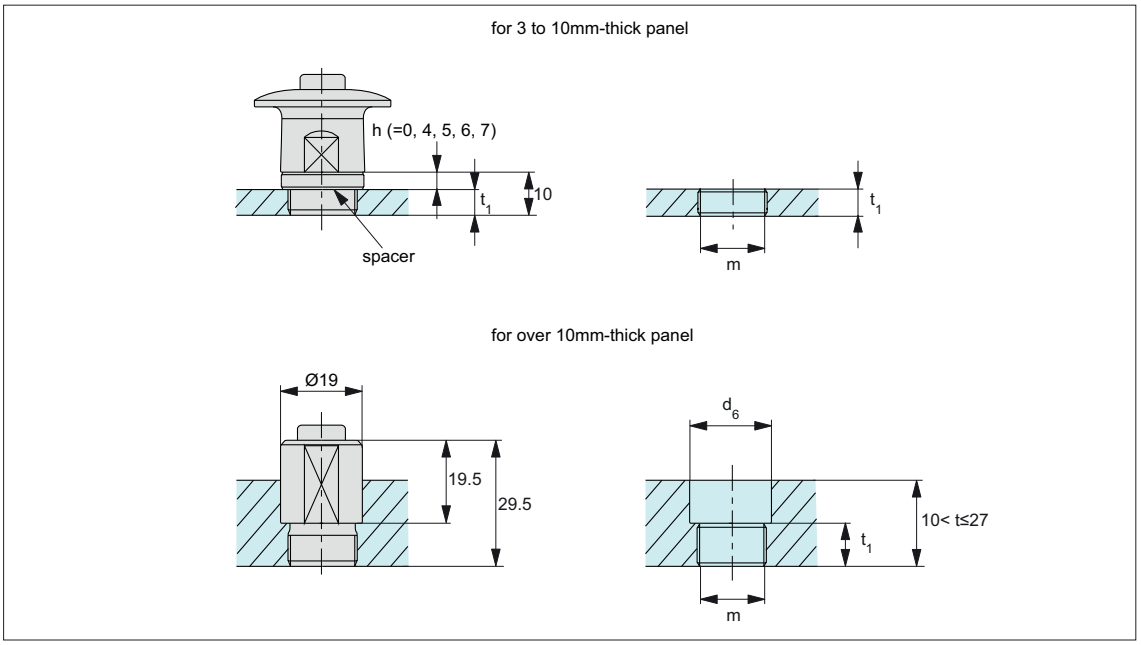


Operating Instructions

1. Engage clamp over pin, no need to push button, a positive “click” is heard.
2. Securing balls are locked and panel fastened.
3. To release; while pushing down on release button, lift panel from pin - panel is released.



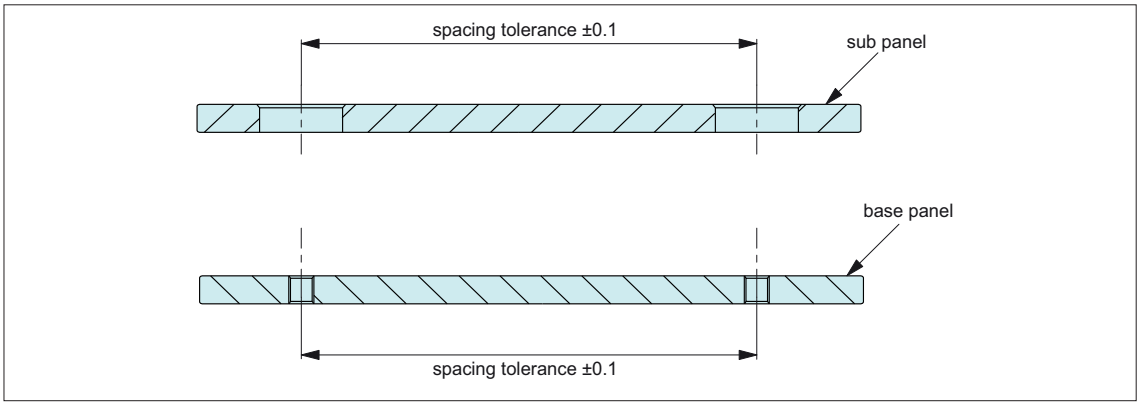
Installation Dimensions



Installation Best Practice

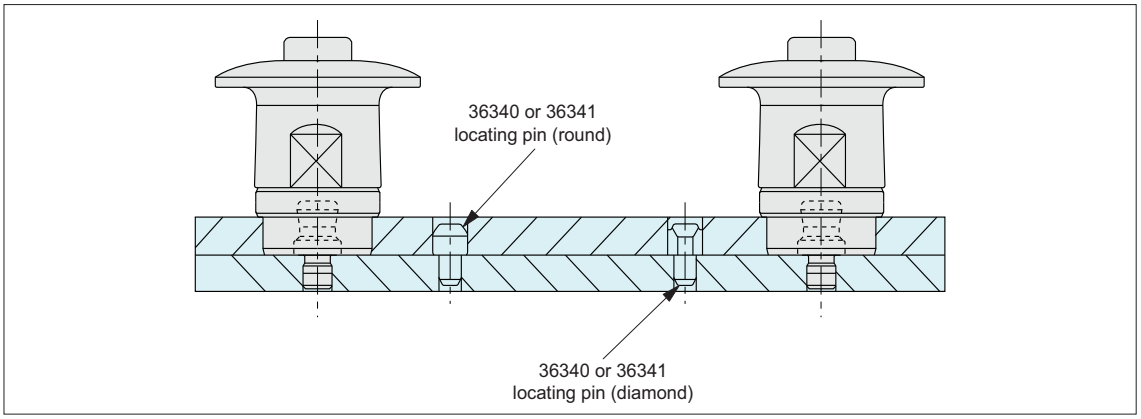
Panel tolerances

Spacing tolerance on both the sub panel and the base panel should be ±0.1.

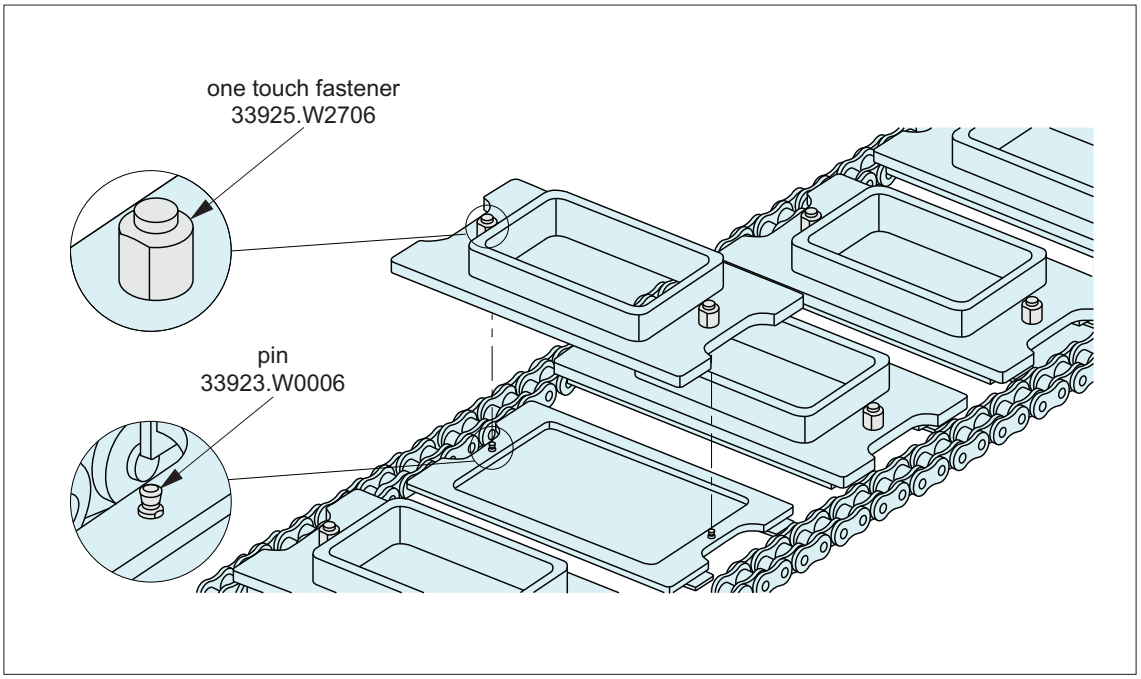


Repeatability

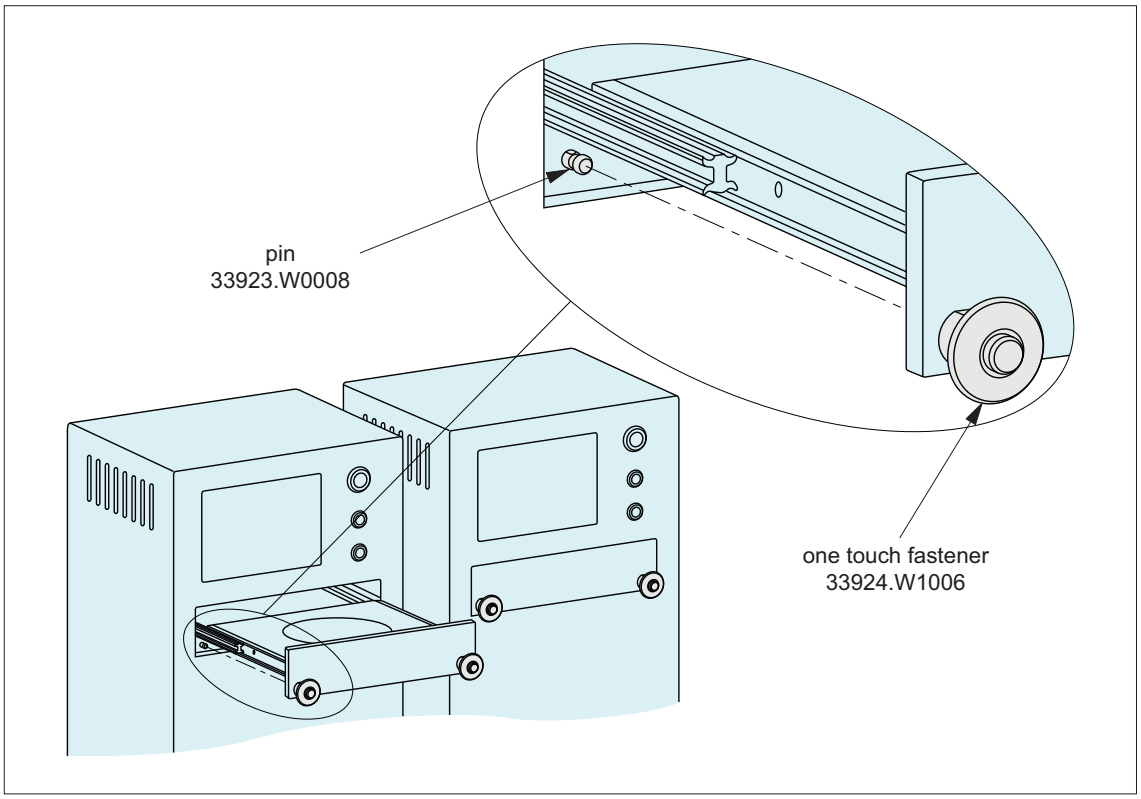
For highly accurate locating, use locating pins 36340 or 36341. Repeatability of ±0.25 is achievable.



One Touch Fastener Applications



Changes of trays and containers on conveyers



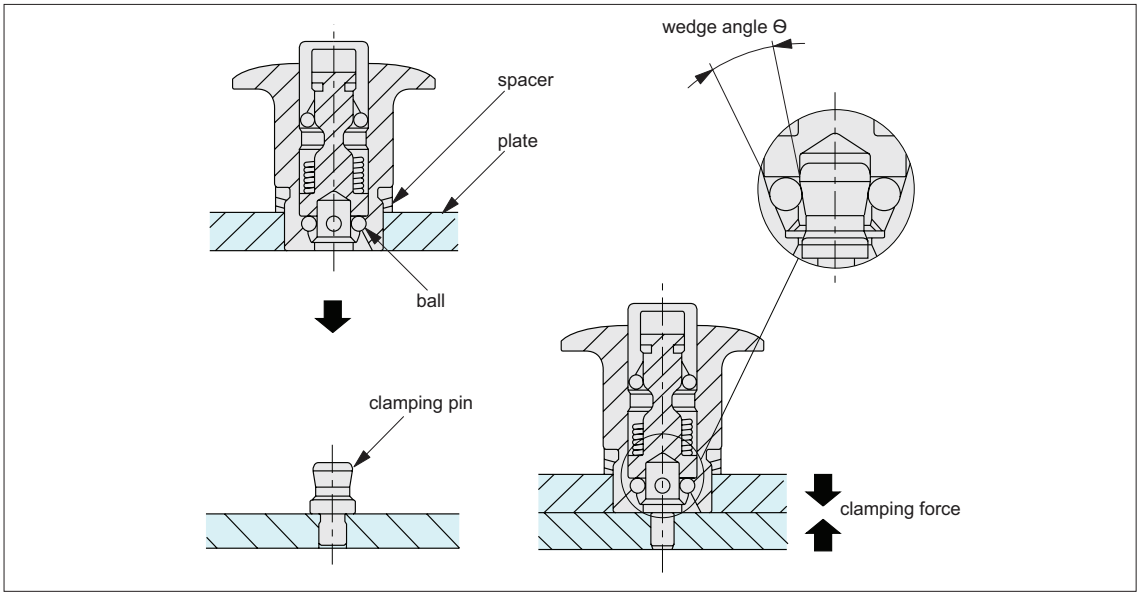
Securing sliding elements such as drawers

One-Touch Fastener - Ball Clamping

overview

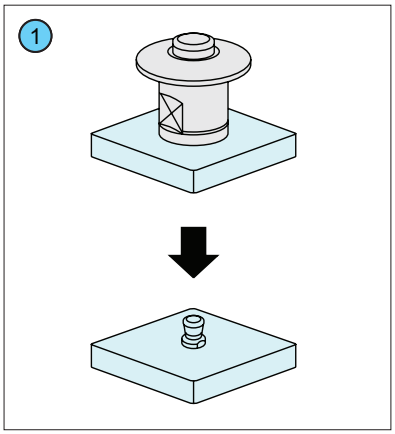
Operating Principle

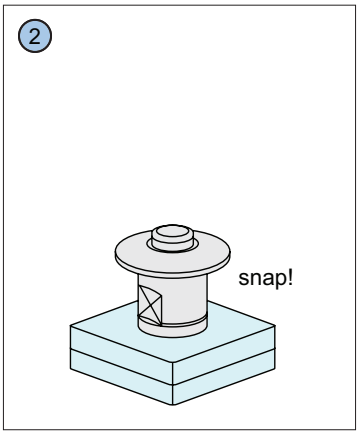
Four ball bearings clamp onto the clamping pin (33923), the wedge shape of the pin draws the panels together during clamping.

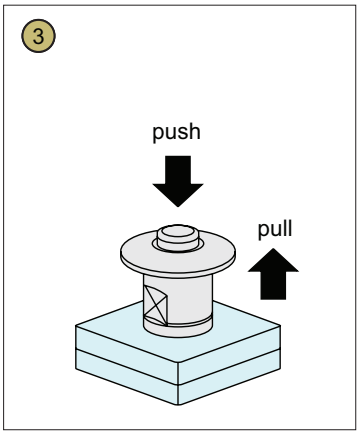


Operating Instructions

1. Engage clamp over pin, no need to push button, a positive “click” is heard.
2. Securing balls are locked and panel fastened.
3. To release; while pushing down on release button, lift panel from pin - panel is released.

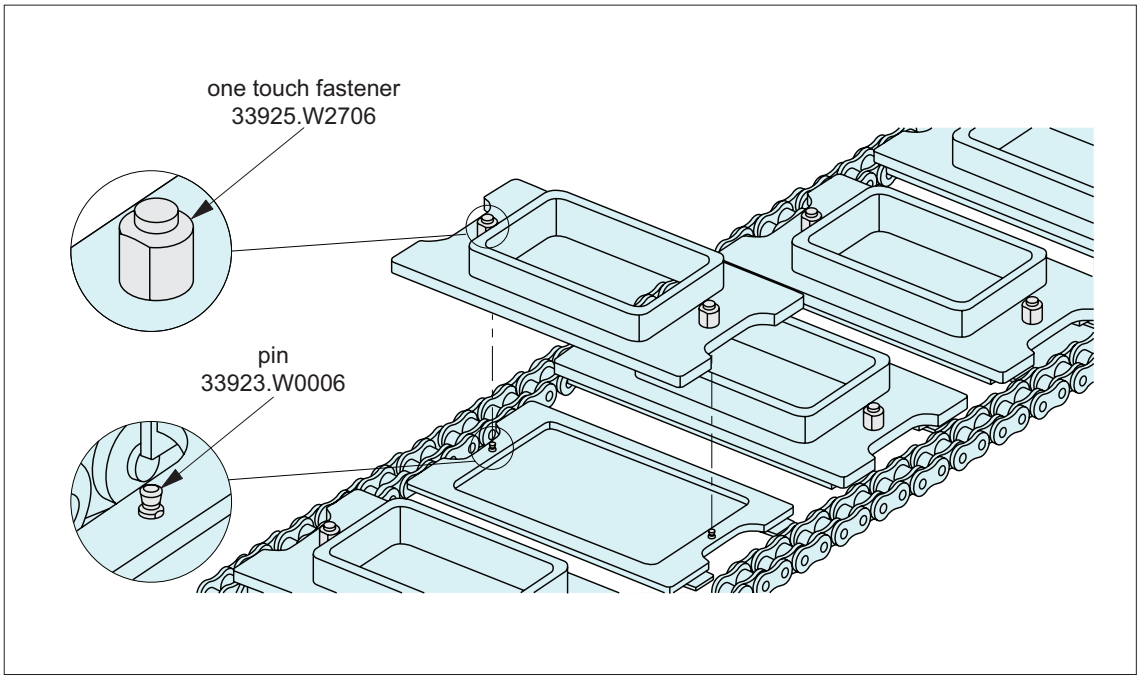




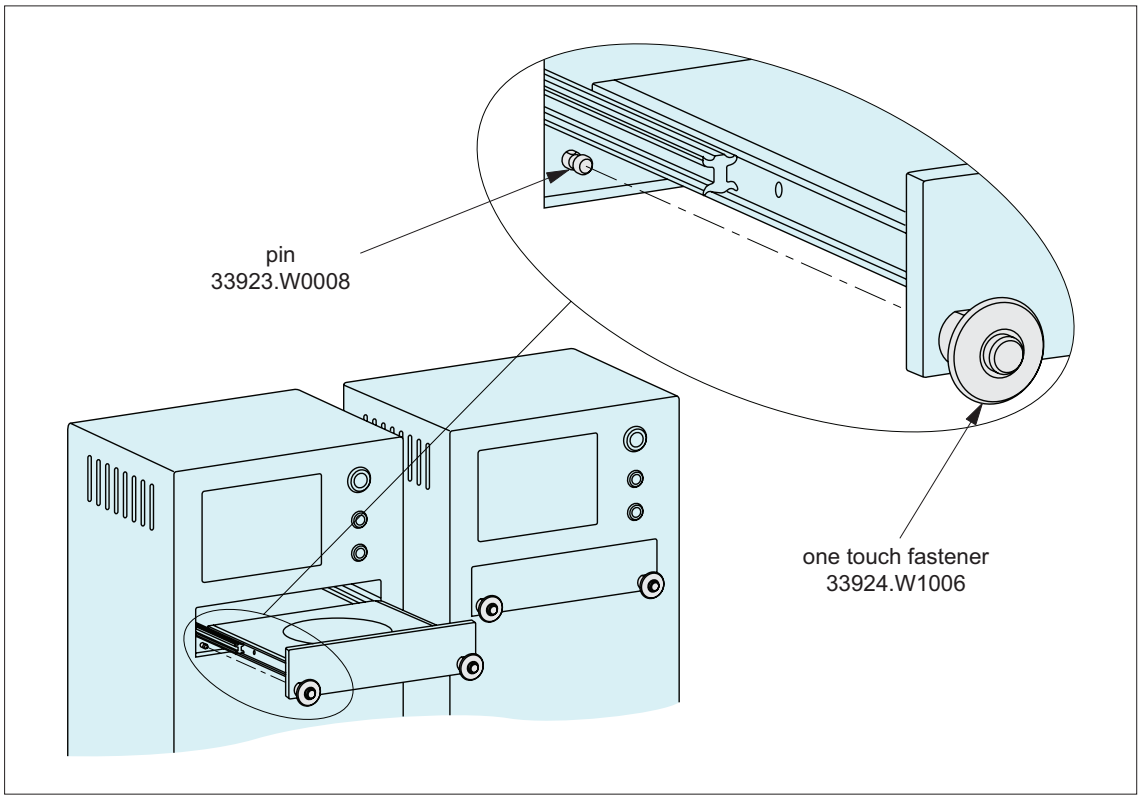


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One Touch Fastener Applications



Changes of trays and containers on conveyers



Securing sliding elements such as drawers

33927

One-Touch Fastener - Ball Clamping

quarter turn lock - t-handle grip - steel



Material

Body & Shank: Steel, nickel plated.
Knob: Polyamide, black.
Ball & Spring: Stainless steel.

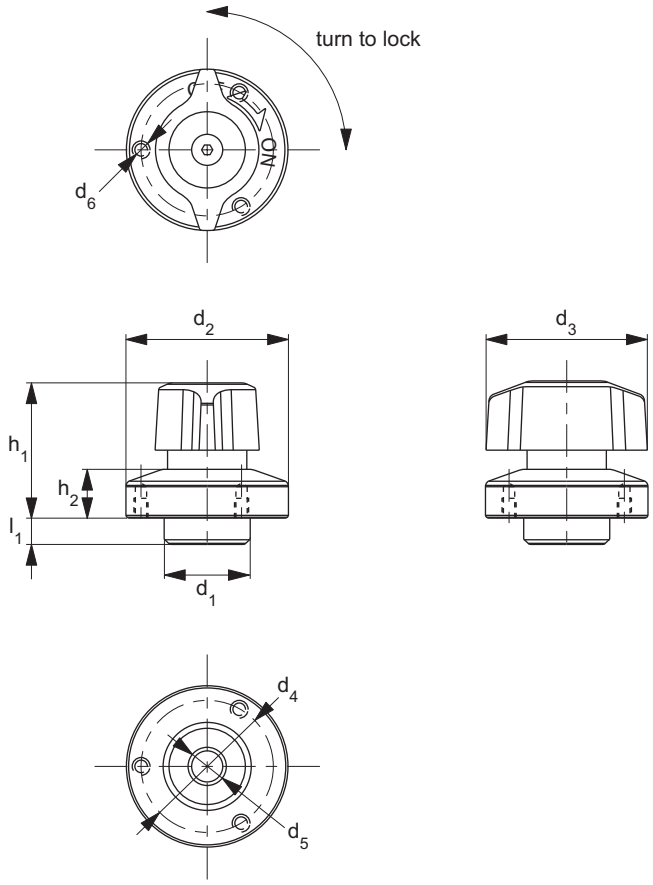
Technical Notes

One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and drive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time wasted in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery.

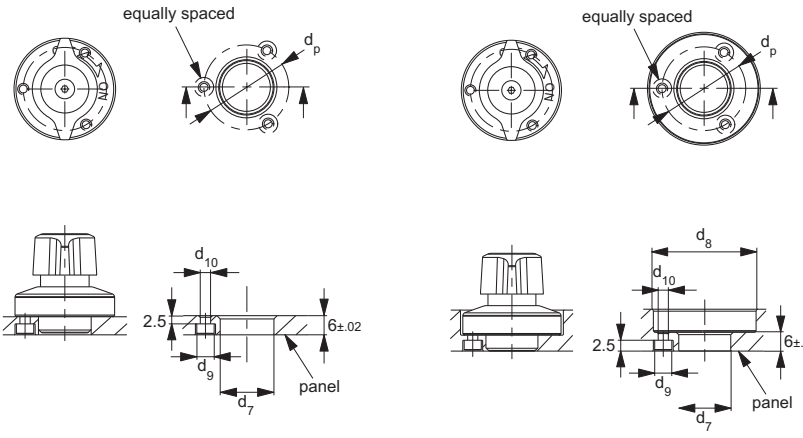
Tips

Used in conjunction with pin 33923. For highly accurate locating, use locating pins 36340 & 36341.

Actuation
-Turn handle to off position, clamping balls are retracted. Engage panel and clamp over clamping pin. Turn handle on to position to clamp.
-To unclamp, reverse steps above.



Order No.	For single panel thickness	For pin Ø	$d_{1\ h9}$	d_2	d_3	d_4	$d_{5\ +0.4\ +0.2}$	d_6	h_1	h_2	l_1	Clamping force N	Shear strength N	Tensile strength N	g
33927.W1006	6-10	6	14	25	25	21	6	M2x 0,4	23	6,5	5,5	7	1100	250	35
33927.W1408	6-14	8	18	34	34	28	8	M3x 0,5	28	10	5,5	9	1800	400	85



recessed fitting
installation for 6mm to 10mm panels

flush fitting
installation for 6mm to 14mm panels

	Fitting	Single panel thickness mm	d_7	d_8	d_9	d_{10}	d_p
33927.W1006	Flush	6	14	-	4,4	2,4	21
33927.W1006	Recessed	6 to 10	14	26	4,4	2,4	21
33927.W1408	Flush	6	18	-	6,5	3,4	28
33927.W1408	Recessed	6 to 10	18	35	6,5	3,4	28

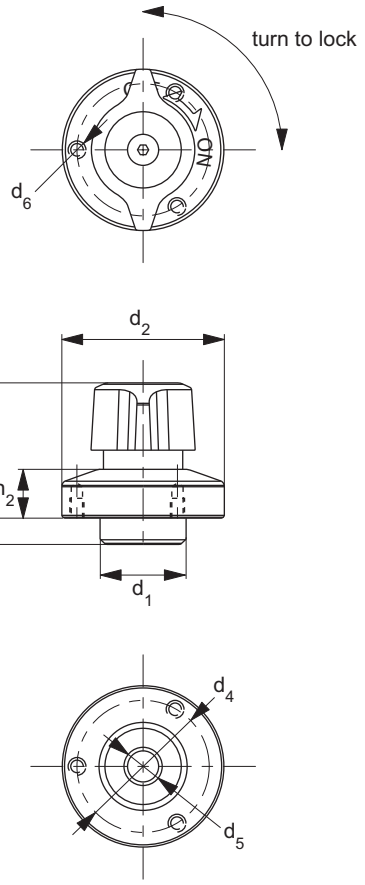
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One-Touch Fastener - Ball Clamping

quarter turn lock- t-handle-steel

33928





Material

Body & shank: Steel, nickel plated.
Knob: Stainless steel.
Ball & spring: Stainless steel.

Technical Notes

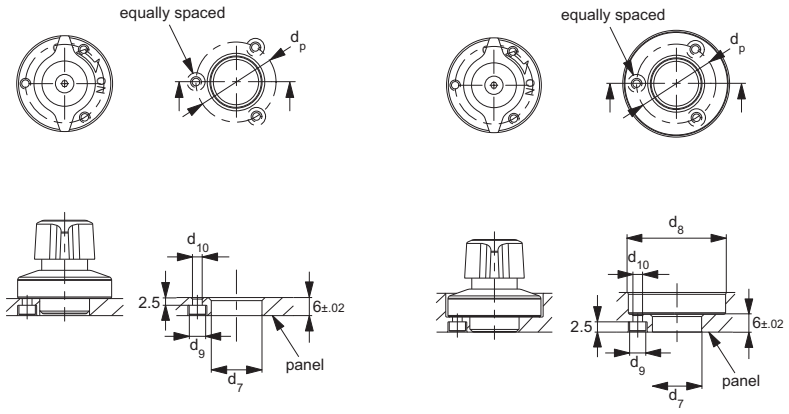
One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and drive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time wasted in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery.

Tips

Used in conjunction with pin 33923. For highly accurate locating, use locating pins 36340 & 36341.

Actuation
-Turn handle to off position, clamping balls are retracted.
- Engage panel and clamp over clamping pin. Turn handle on to position to clamp.
-To unclamp, reverse steps above.

Order No.	For single panel thickness	For pin Ø	d_1 h9	d_2	d_3	d_4	d_5 +0.4 +0.2	d_6	h_1	h_2	l_1	Clamping force N	Shear strength N	Tensile strength N	g
33928.W1006	6-10	6	14	25	25	21	6	M2x 0,4	23	6,5	5,5	7	1100	250	35
33928.W1408	6-14	8	18	34	34	28	8	M3x 0,5	28	10	5,5	9	1800	400	85



recessed fitting
installation for 6mm to 10mm panels

flush fitting
installation for 6mm to 14mm panels

	Fitting	Single panel thickness mm	d_7	d_8	d_9	d_{10}	d_p
33928.W1006	Flush	6	14	-	4,4	2,4	21
33928.W1006	Recessed	6 to 10	14	26	4,4	2,4	21
33928.W1408	Flush	6	18	-	6,5	3,4	28
33928.W1408	Recessed	6 to 10	18	35	6,5	3,4	28

33929

One-Touch Fastener - Ball Clamping

quarter turn lock - t-handle - stainless steel



Material

Body & shank: Stainless steel.
Knob: Stainless steel.
Ball & spring: Stainless steel.

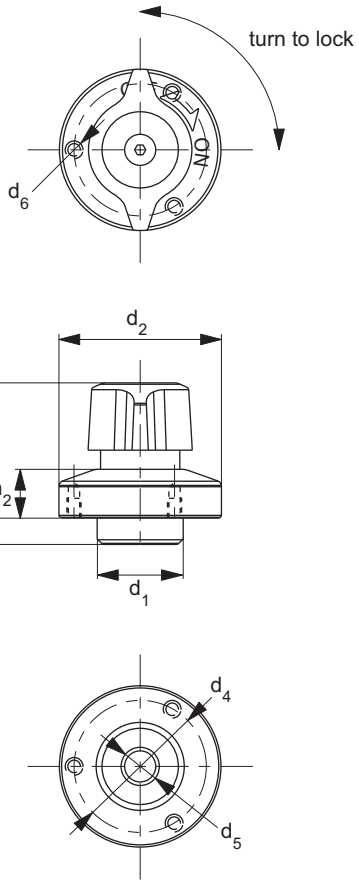
Technical Notes

One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and drive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time wasted in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery.

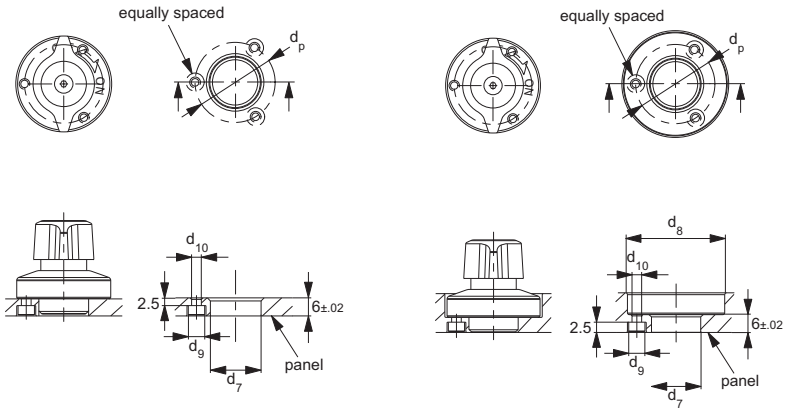
Tips

Used in conjunction with pin 33923. For highly accurate locating, use locating pins 36340 & 36341.

Actuation
-Turn handle to off position, clamping balls are retracted.
-Engage panel and clamp over clamping pin. Turn handle on to position to clamp.
-To unclamp, reverse steps above.



Order No.	For single panel thickness	For pin Ø	d_1 h9	d_2	d_3	d_4	d_5 +0.4 +0.2	d_6	h_1	h_2	l_1	Clamping force N	Shear strength N	Tensile strength N	g
33929.W1006	6-10	6	14	25	25	21	6	M2x 0,4	23	6,5	5,5	7	1100	250	35
33929.W1408	6-14	8	18	34	34	28	8	M3x 0,5	28	10	5,5	9	1800	400	85



recessed fitting
installation for 6mm to 10mm panels

flush fitting
installation for 6mm to 14mm panels

	Fitting	Single panel thickness mm	d_7	d_8	d_9	d_{10}	d_p
33929.W1006	Flush	6	14	-	4,4	2,4	21
33929.W1006	Recessed	6 to 10	14	26	4,4	2,4	21
33929.W1408	Flush	6	18	-	6,5	3,4	28
33929.W1408	Recessed	6 to 10	18	35	6,5	3,4	28

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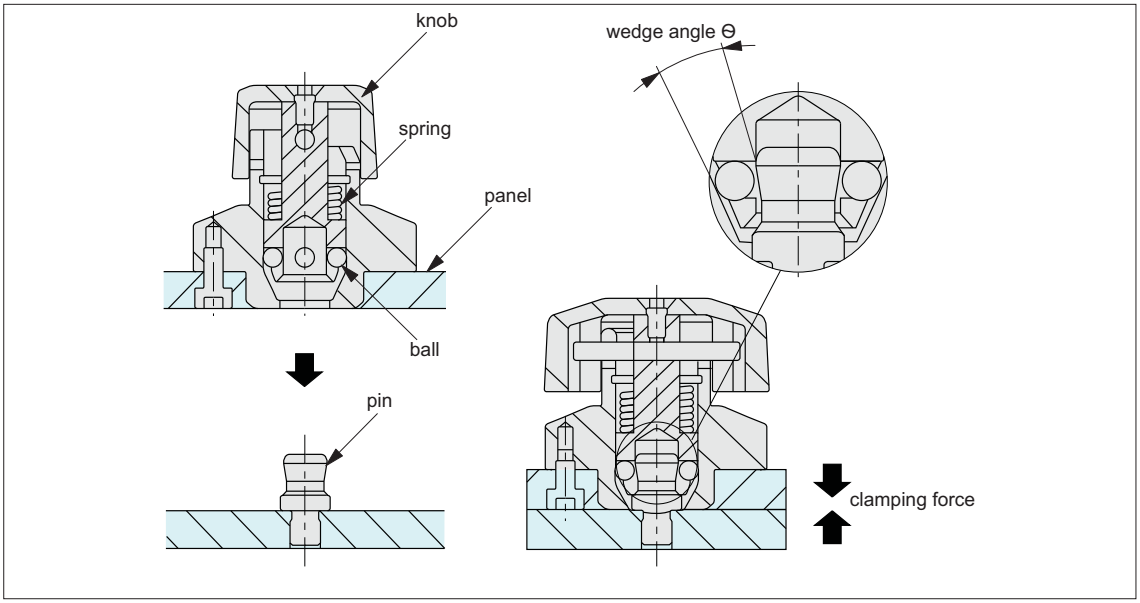
33927 -33929

One-Touch Fastener - Ball Clamping

quarter turn - overview

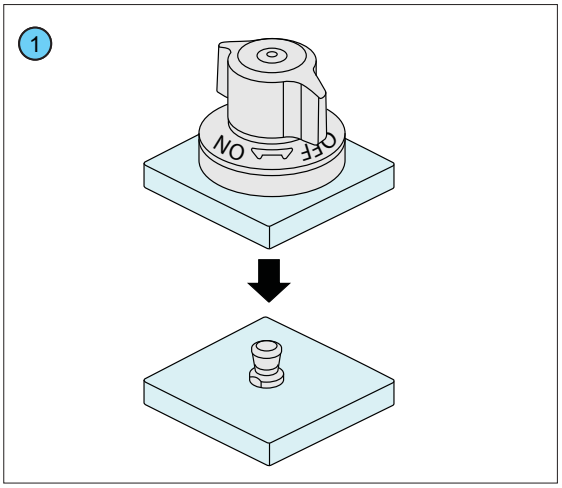
Operating Principle

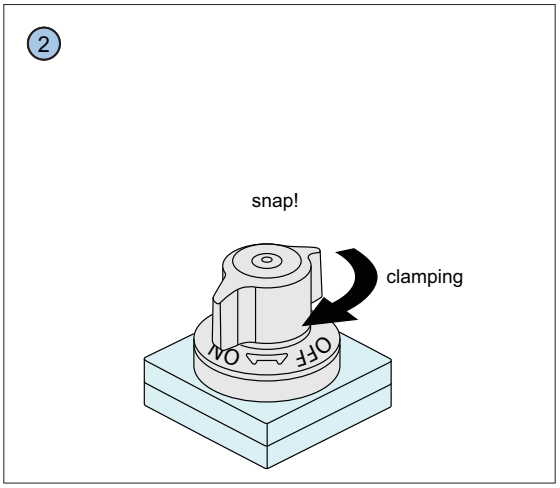
Four ball bearings clamp onto the clamping pin, the wedge shape of the pin (33929) draws the panels together during clamping.



Operating Instructions

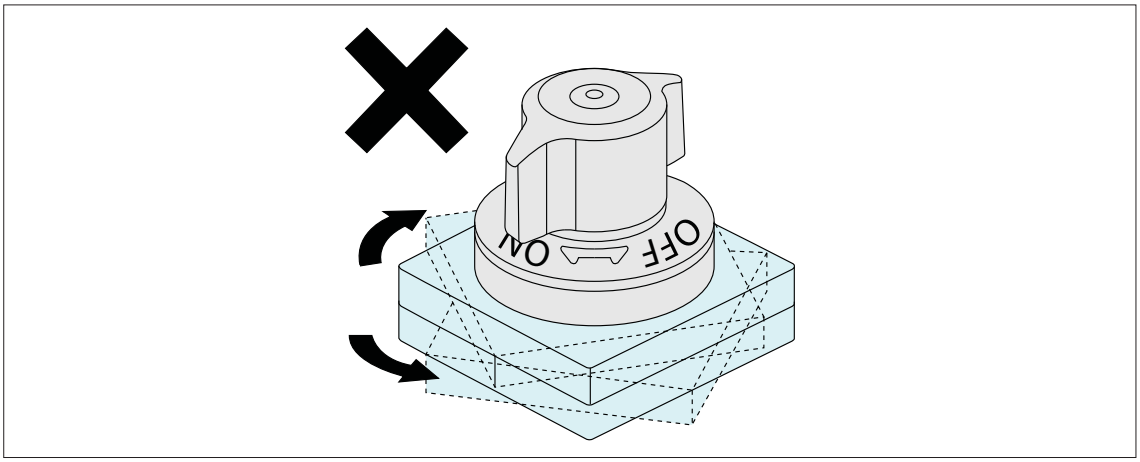
1. Turn handle to off position to retract the clamping balls. Engage panel and clamp over clamping pin. Turn handle on to position to clamp.
2. To unclamp, reverse steps above.





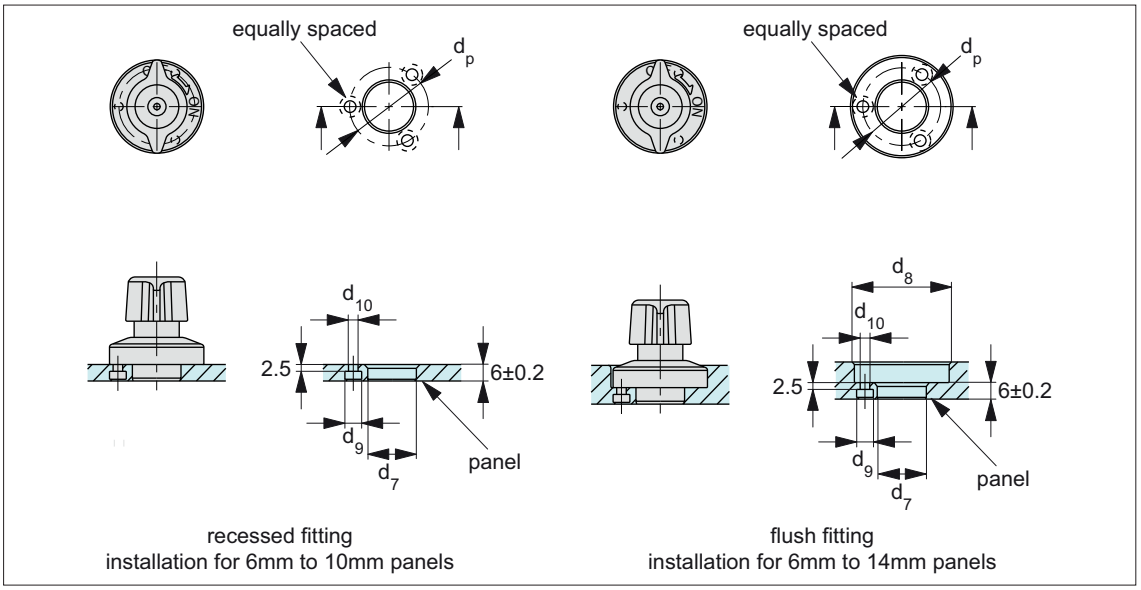
Warning

Rotation of either sub panel or base panel can result in one touch fastener unclamping. When either panel is at risk of rotating ensure a stop is in place.





Installation Dimensions

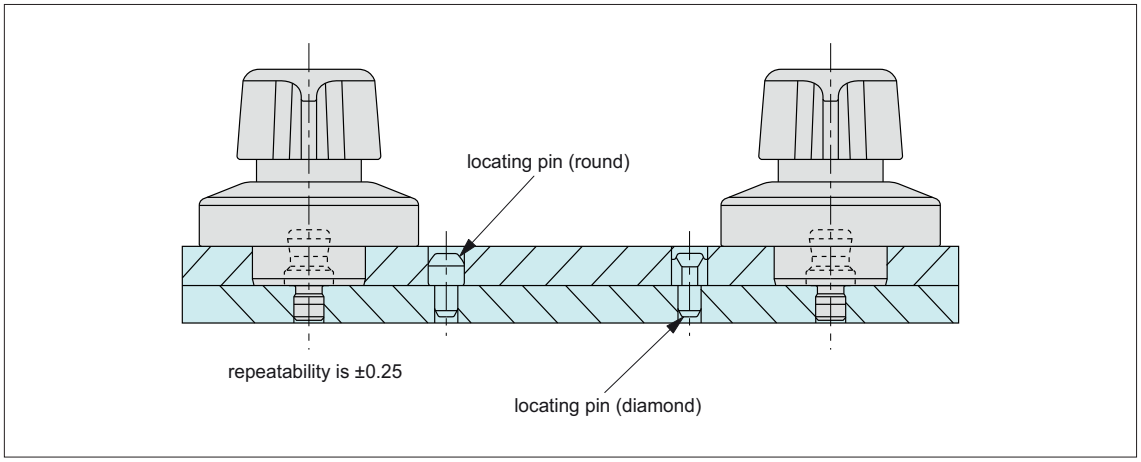


recessed fitting
installation for 6mm to 10mm panels

flush fitting
installation for 6mm to 14mm panels

Repeatability

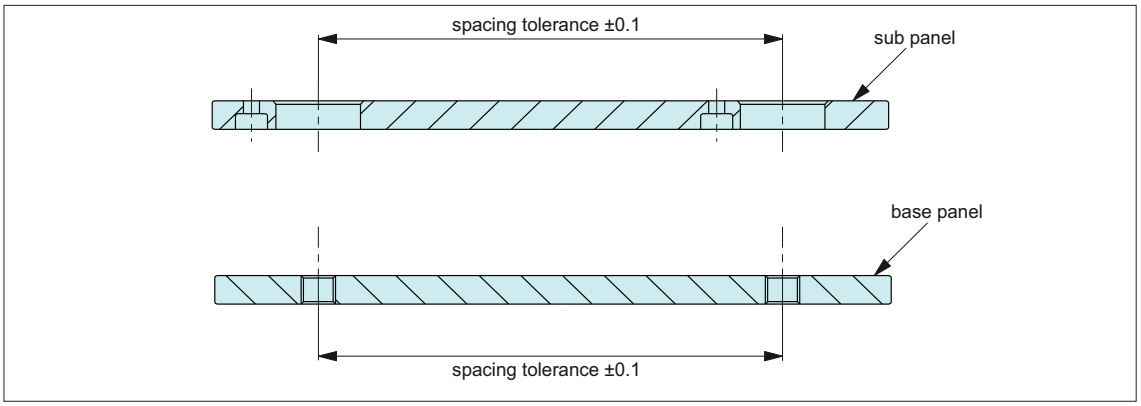
For highly accurate locating, use locating components 36340 or 36341. Repeatability of ±0.25 is achievable.



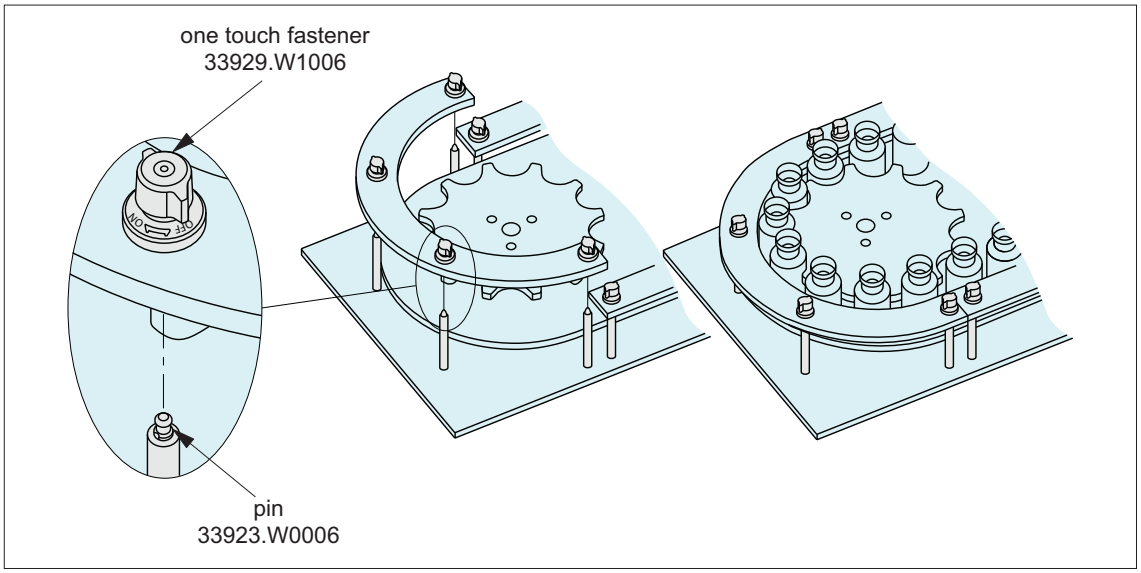
Installation Best Practice

Machining accuracy

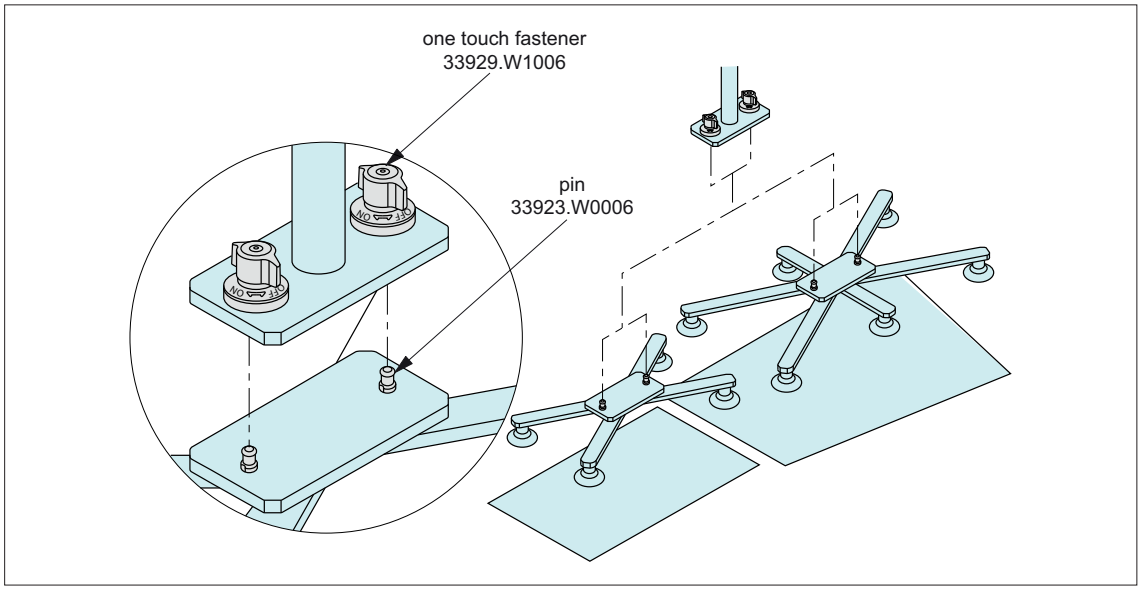
Spacing tolerance on both the sub plate and the base plate should be ±0.1.



Applications



Changes of guides around star wheels



Changes of suction grippers for wafer handling

33940

One-Touch Fastener - Cam Locking

quarter turn - t-handle grip - steel



Material

Body: steel, nickel plated.
Pin: stainless steel.
Knob: polyamide, black.
Spring: steel.

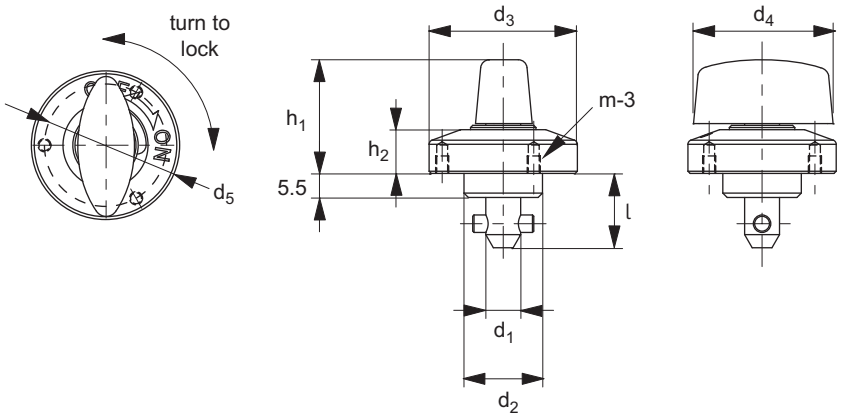
Technical Notes

One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and dive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time waste in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery.
Temperature resistant to 180°C.

Important Notes

Suitable for panels/encloses of 6 to 20 mm thickness. For locating bushes see part no. 33948 and 33949.

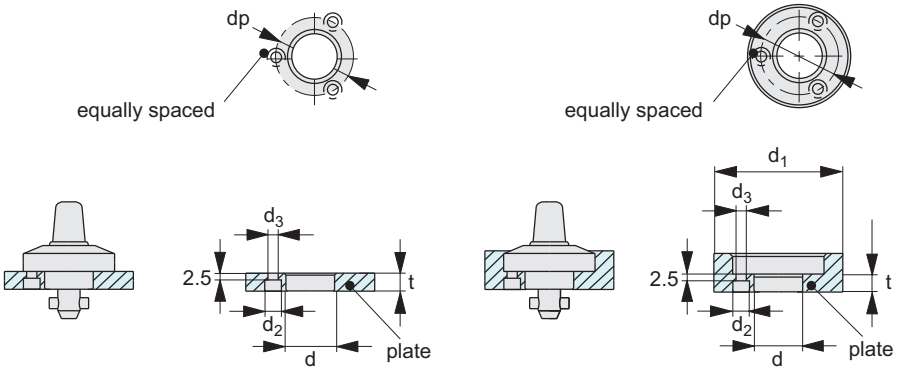
Actuation:
turn handle to off position: present cover panel to frame and align to locating bush.
turn handle 45º to on position: locking pin follows cam, tightening fastener and securely fastening panel.



Order No.	For single panel thickness	d_1 -0,04 -0,08	d_2 h9	d_3	d_4	d_5	g
33940.W1005	6-10	5	14	25	20	21	35
33940.W1408	6-14	8	18	34	32	28	105
33940.W2008	12-20	8	18	34	32	28	110

Order No.	h_1	h_2	l	m	Clamping force N	Shear strength N	Tensile strength N
33940.W1005	19	6,5	15,5	M 2x0,4	60	1800	1200
33940.W1408	26	-	17,0	M 3x0,5	90	3200	2600
33940.W2008	26	-	23,0	M 3x0,5	90	3200	2600

installation dimensions - fixed to panel



installation for 6mm panels

installation for 6mm to 20mm panels

	Single panel thickness (mm)	d (+0,10/+0,05)	d_1	t (±0,2)	d_2	d_3	d_p
33940.W1005	6	14	-	6	4,4	2,4	21
33940.W1005	6 to10	14	26	6	4,4	2,4	21
33940.W1408	6	18	-	6	6,5	3,4	28
33940.W1408	6 to14	18	35	6	6,5	3,4	28
33940.W2008	12	18	-	12	6,5	3,4	28
33940.W2008	12 to 20	18	35	12	6,5	3,4	28

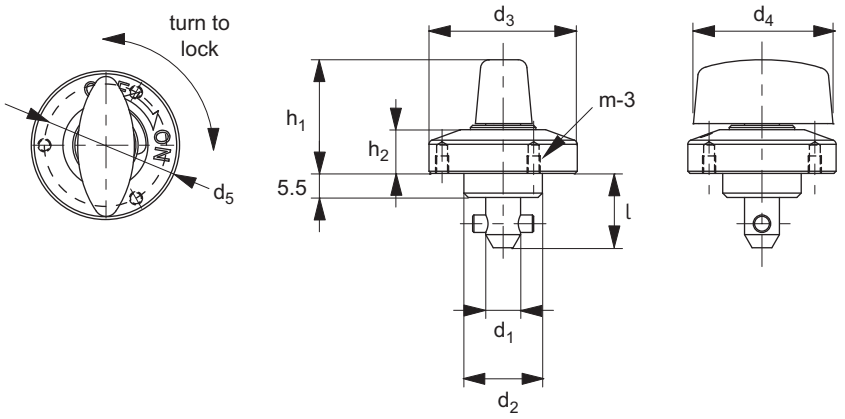
Wixroyd 0845 26 66 577 info@wixroyd.com

One-Touch Fastener - Cam Locking

quarter turn - t-handle grip - stainless

33942





Order No.	For single panel thickness	d_1 -0,04 -0,08	d_2 h9	d_3	d_4	d_5	h_1	h_2	l	m	Clamping force N	Shear strength N	Tensile strength N	g
33942.W1005	6-10	5	14	25	20	21	19,0	6,5	15,5	M 2x0,4	60	1800	1200	40
33942.W1408	6-14	8	18	34	32	28	25,5	10,0	17,0	M 3x0,5	90	3200	2600	130
33942.W2008	12-20	8	18	34	32	28	25,5	10,0	23,0	M 3x0,5	90	3200	2600	135

Material

Body: steel, nickel plated.
Pin & Knob: stainless steel.
Spring: steel.

Technical Notes

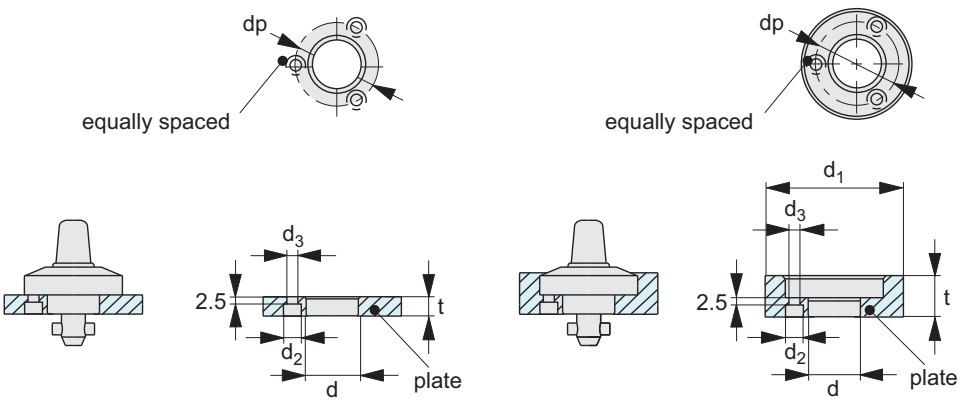
One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and drive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time waste in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery.
Temperature resistant to 200°C.

Important Notes

Suitable for panels/encloses of 6 to 20 mm thickness. For locating bushes see part no. 33948 and 33949.

Actuation:
-Turn handle to off position: present cover panel to frame and align to locating bush.
-Turn handle 45° to on position: locking pin follows cam, tightening fastener and securely fastening panel.

installation dimensions - fixed to panel



installation for 6mm panels

installation for 6mm to 20mm panels

	Single panel thickness (mm)	d (+0,10/+0,05)	d_1	t (±0,2)	d_2	d_3	d_p
33942.W1005	6	14	-	6	4,4	2,4	21
33942.W1005	6 to10	14	26	6	4,4	2,4	21
33942.W1408	6	18	-	6	6,5	3,4	28
33942.W1408	6 to14	18	35	6	6,5	3,4	28
33942.W2008	12	18	-	12	6,5	3,4	28
33942.W2008	12 to 20	18	35	12	6,5	3,4	28

33943

One-Touch Fastener - CAM Locking Stainless

quarter turn - t-handle grip -stainless





Material

Body: Stainless steel SUS304
Pin: Stainless steel SUS304
Knob: Stainless steel SUS304
Spring: Stainless steel SUS304

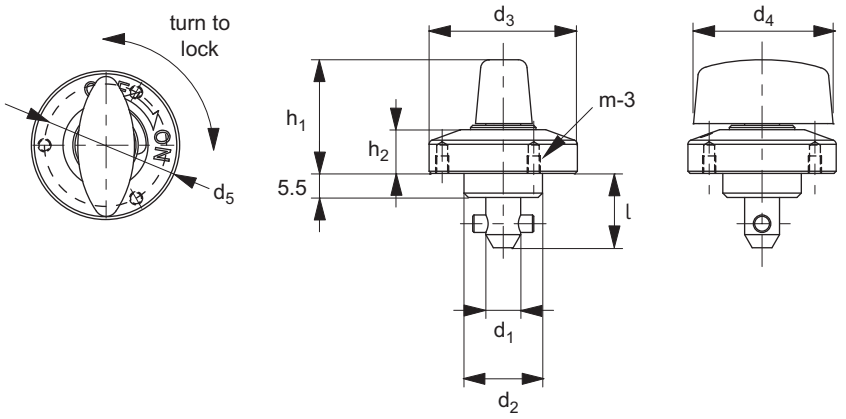
Technical Notes

One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and dive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time waste in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery.

Important Notes

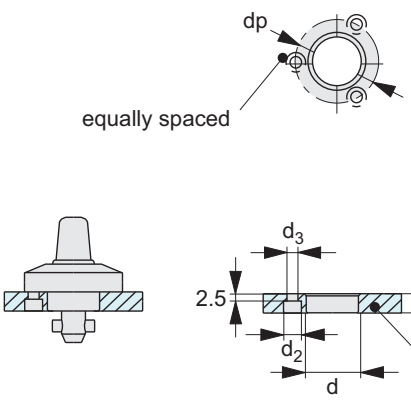
Suitable for panels/encloses of 6 to 20 mm thickness. For locating bushes see part no. 33948 and 33949.

Actuation:
-Turn handle to off position: present cover panel to frame and align to locating bush.
-Turn handle 45º to on position: locking pin follows cam, tightening fastener and securely fastening panel.

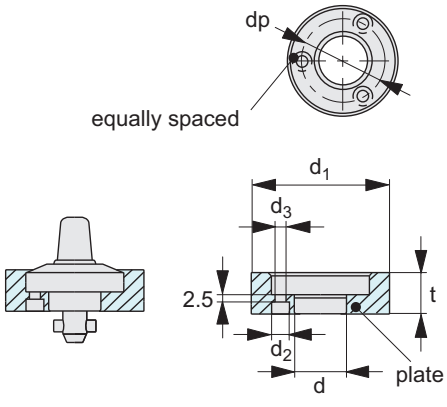


Order No.	For single panel thickness	d_1 -0,04 -0,08	d_2 h9	d_3	d_4	d_5	h_1	h_2	l	m	Clamping force N	Shear strength N	Tensile strength N	g
33943.W1005	6-10	5	14	25	20	21	19	6,5	15,5	M2x0,4	60	1800	1200	35
33943.W1408	6-14	8	18	34	32	28	26	-	17,0	M3x0,5	90	3200	2600	105
33943.W2008	12-20	8	18	34	32	28	26	-	23,0	M3x0,5	90	3200	2600	110

installation dimensions - fixed to panel



installation for 6mm panels



installation for 6mm to 20mm panels

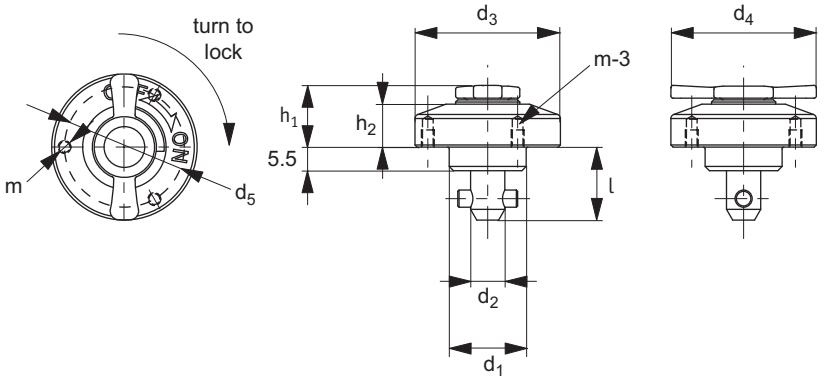
	Single panel thickness (mm)	d (+0,10/+0,05)	d_1	t (±0,2)	d_2	d_3	d_p
33943.W1005	6	14	-	6	4,4	2,4	21
33943.W1005	6 to10	14	26	6	4,4	2,4	21
33943.W1408	6	18	-	6	6,5	3,4	28
33943.W1408	6 to14	18	35	6	6,5	3,4	28
33943.W2008	12	18	-	12	6,5	3,4	28
33943.W2008	12 to 20	18	35	12	6,5	3,4	28

One-Touch Fastener - Cam Locking

quarter turn - low height - t-handle grip - steel

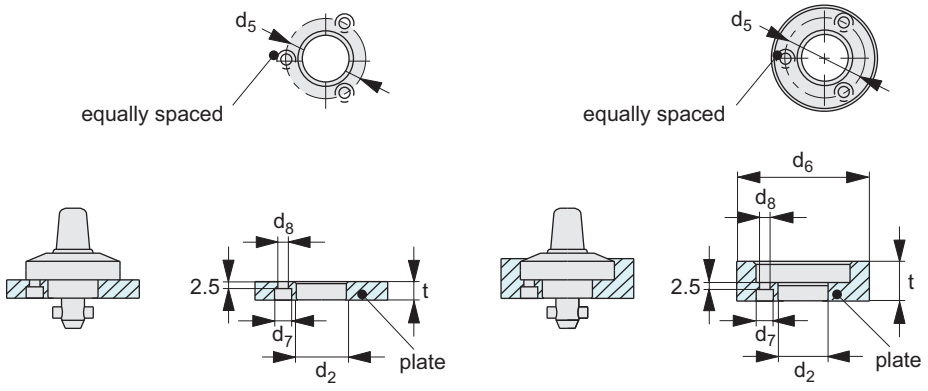
33944





Order No.	For single panel thickness	d_1 -0,04 -0,08	d_2 h9	d_3	d_4	d_5	h_1	h_2	l	m	Clamping force N	Shear strength N	Tensile strength N	g
33944.W1005	6-10	5	14	25	25	21	11,5	6,5	15,5	M2x0,4	60	1800	1200	35
33944.W1408	6-14	8	18	34	34	28	14,0	10,0	17,0	M3x0,5	90	3200	2600	80
33944.W2008	12-20	8	18	34	34	28	14,0	10,0	23,0	M3x0,5	90	3200	2600	85

installation dimensions - fixed to panel



installation for 6mm panels

installation for 6mm to 20mm panels

	Single panel thickness mm	d +0,10/+0,05	d_1	t ±0,2	d_2	d_3	d_p
33944.W1005	6	14	-	6	4,4	2,4	21
33944.W1005	6 to10	14	26	6	4,4	2,4	21
33944.W1408	6	18	-	6	6,5	3,4	28
33944.W1408	6 to14	18	35	6	6,5	3,4	28
33944.W2008	12	18	-	12	6,5	3,4	28
33944.W2008	12 to 20	18	35	12	6,5	3,4	28

Material

Body: steel, nickel plated.
Pin: stainless steel.
Knob: stainless steel
Spring: steel.

Technical Notes

One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and dive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time wasted in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery.
Temperature resistant to 200°C.

Important Notes

Suitable for panels/encloses of 6 to 20 mm thickness. For locating bushes see part no. 33948 and 33949.

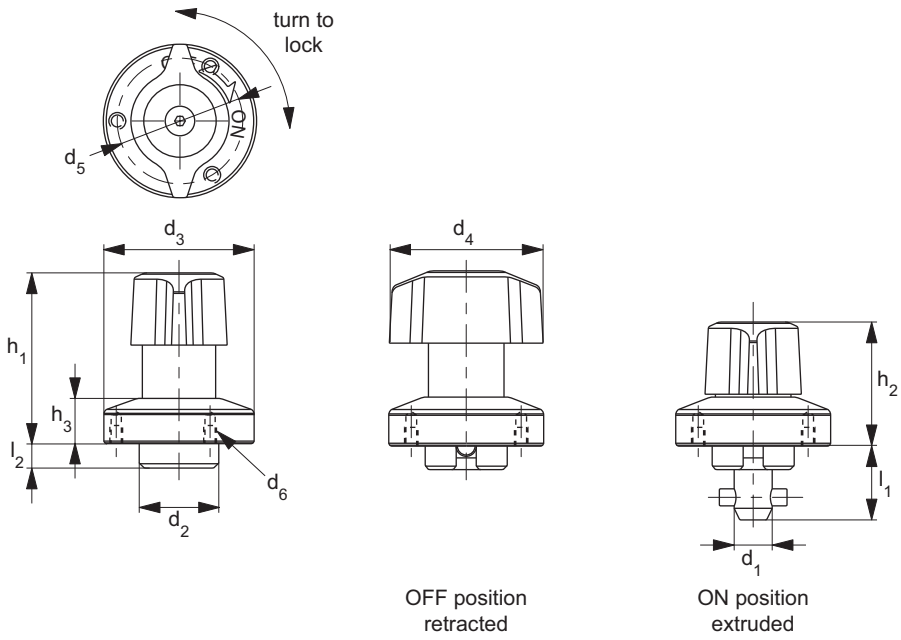
Actuation:
-Turn handle to off position: present cover panel to frame and align to locating bush.
-Turn handle 45° to on position: locking pin follows cam, tightening fastener and securely fastening panel.

One-Touch Fastener- Cam Locking - Retract

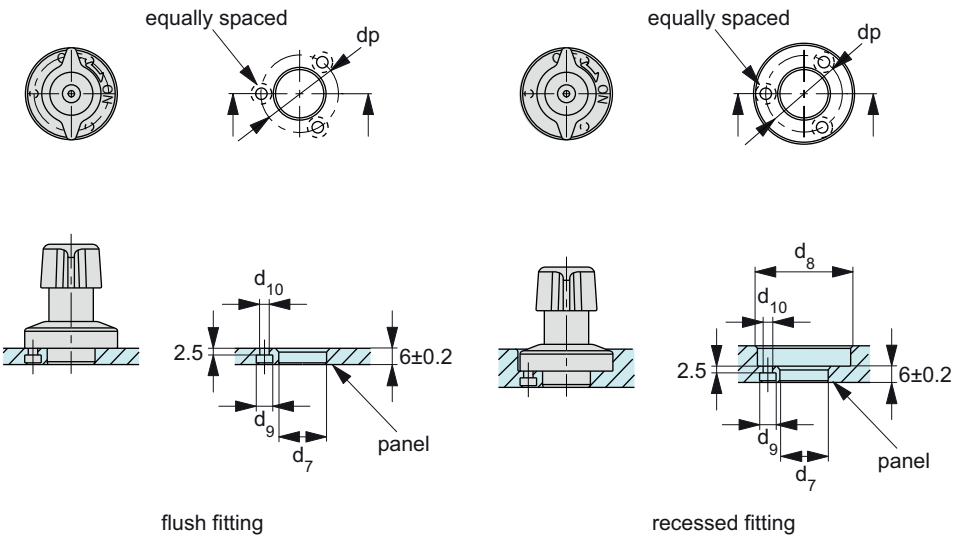
quarter turn - t-handle grip - plastic

33946





Order No.	Single panel thickness	d_1 -0.04 -0.9	d_2	d_3	d_4	d_5	d_6	l_1	l_2	h_1	h_2	h_3	Clamping force N	Shear strength N	Tensile strength N	g
33946.W1005	6-10	5	14	25	25	21	M2x 0,4	15,5	5,5	30	20	6,5	60	1800	1200	40
33946.W1408	6-14	8	8	18	34	28	M3x 0,5	17	5,5	38	36,5	10	90	3200	400	100



	Fitting	Single panel thickness mm	d_7	d_8	d_9	d_{10}	d_p
33946.W1005	Flush	6	14	-	4,4	2,4	21
33946.W1005	Recessed	6 to 10	14	26	4,4	2,4	21
33946.W1408	Flush	6	18	-	6,5	3,4	28
33946.W1408	Recessed	6 to 10	18	35	6,5	3,4	28

Material

Body: steel, nickel plated.
Shank: steel, nickel plated.
Pin: stainless steel, SUS304.
Knob: polyamide, black.
Spring: stainless steel.

Technical Notes

One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and dive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time waste in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery.
Temperature resistant to 130°C.

Important Notes

One-touch fastener offers full retraction of clamping shank when part is unlocked, this offer's the benefit of enabling
panels to be slid into position - especially useful with larger or oversized panels, and enables its use on sliding or linear rail applications to provide positive location and clamping of parts.

Actuation:
-Turn handle to off position, and ensure the shank is fully retracted.
-Place or slide the over in place and position over the locating bush.
-Turn handle to on position for clamping, an audible click is heard when fully clamped.
-To release, turn handle back to off position, the shank is fully retracted into clamp body assisted by the return spring.

33947

One-Touch Fastener- Cam Locking - Retract

quarter turn - t-handle grip - steel



Material

Body: steel, nickel plated.
Shank: steel, nickel plated.
Pin: stainless steel, SUS304.
Knob: stainless steel, SUS304.
Spring: stainless steel.

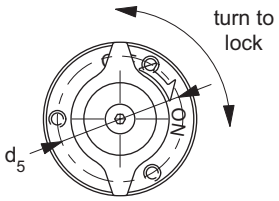
Technical Notes

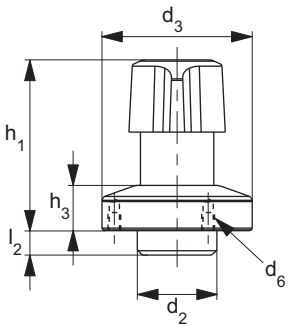
One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and dive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time waste in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery.
Temperature resistant to 200°C.

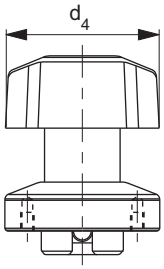
Important Notes

One-touch fastener offers full retraction of clamping shank when part is unlocked, this offer's the benefit of enabling
panels to be slid into position - especially useful with larger or oversized panels, and enables its use on sliding or linear rail applications to provide positive location and clamping of parts.

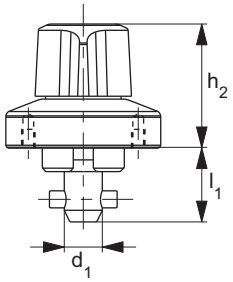
Actuation:
-Turn handle to off position, and ensure the shank is fully retracted.
-Place or slide the over in place and position over the locating bush.
-Turn handle to on position for clamping, an audible click is heard when fully clamped.
-To release, turn handle back to off position, the shank is fully retracted into clamp body assisted by the return spring.





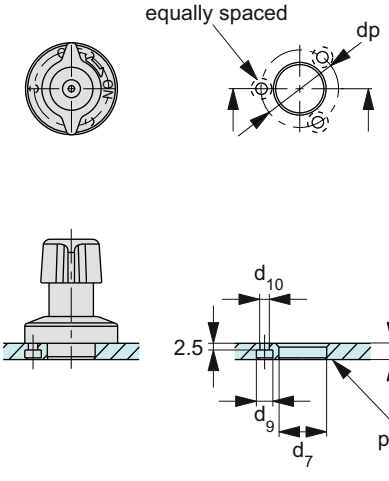


OFF position
retracted

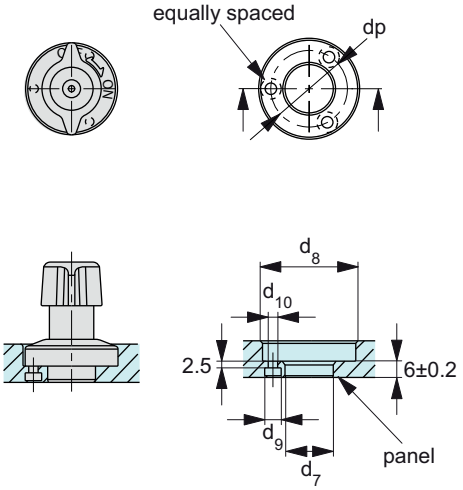


ON position
extruded

Order No.	Single panel thickness	d_1 -0.04 -0.9	d_2	d_3	d_4	d_5	d_6	l_1	l_2	h_1	h_2	h_3	Clamping force N	Shear strength N	Tensile strength N	g
33947.W1005	6-10	5	14	25	25	21	M2x 0,4	15,5	5,5	30	20	6,5	60	1800	1200	40
33947.W1408	6-14	8	8	18	34	28	M3x 0,5	17	5,5	38	36,5	10	90	3200	400	100



flush fitting



recessed fitting

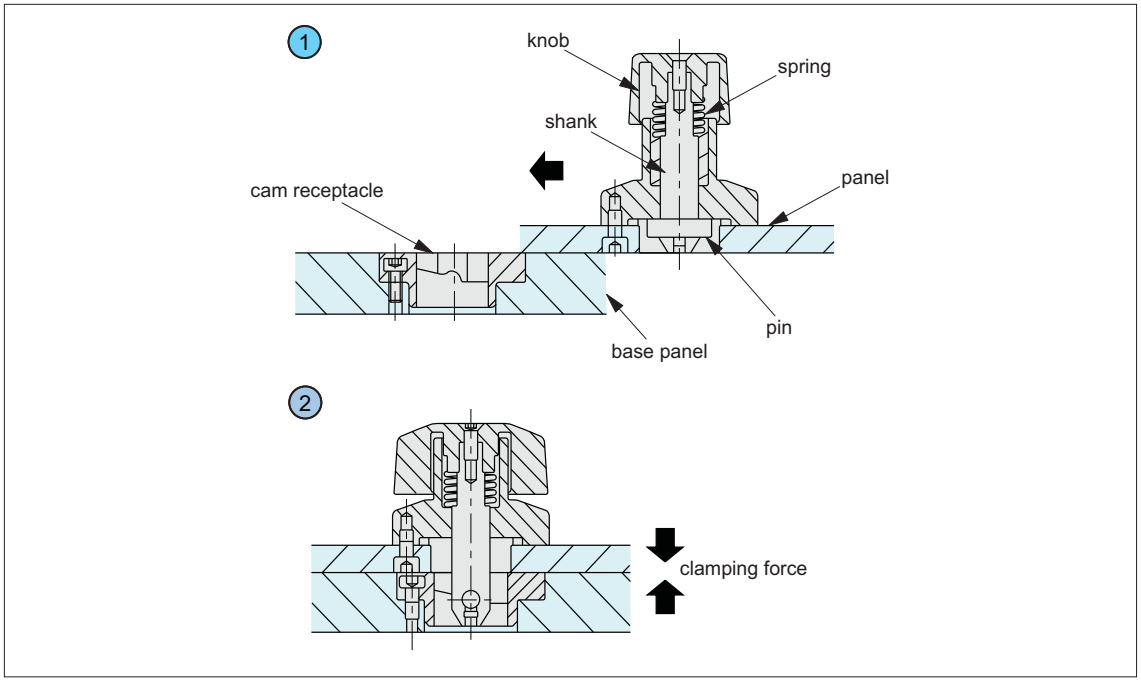
	Fitting	Single panel thickness mm	d_7	d_8	d_9	d_{10}	d_p
33947.W1005	Flush	6	14	-	4,4	2,4	21
33947.W1005	Recessed	6 to 10	14	26	4,4	2,4	21
33947.W1408	Flush	6	18	-	6,5	3,4	28
33947.W1408	Recessed	6 to 10	18	35	6,5	3,4	28

One-Touch Fastener - Cam Locking - Retract

overview

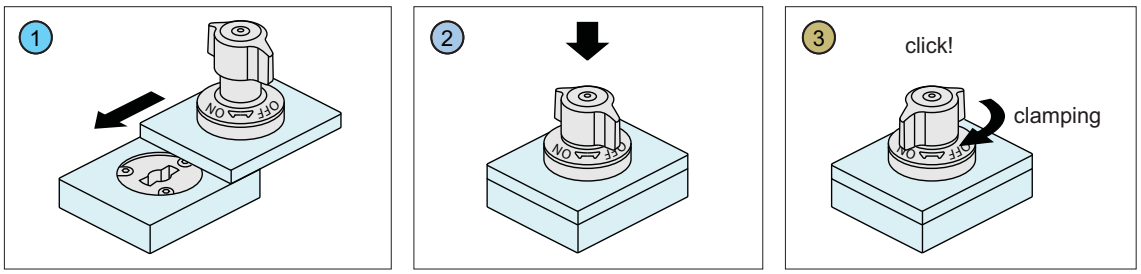
Operating Principle

1. The shank retracts at the unclamping position to enable operations without interference with the base panel.
2. When the pin contacts along the cam surface in the cam receptacle, the spring gets compressed to press down the panel.

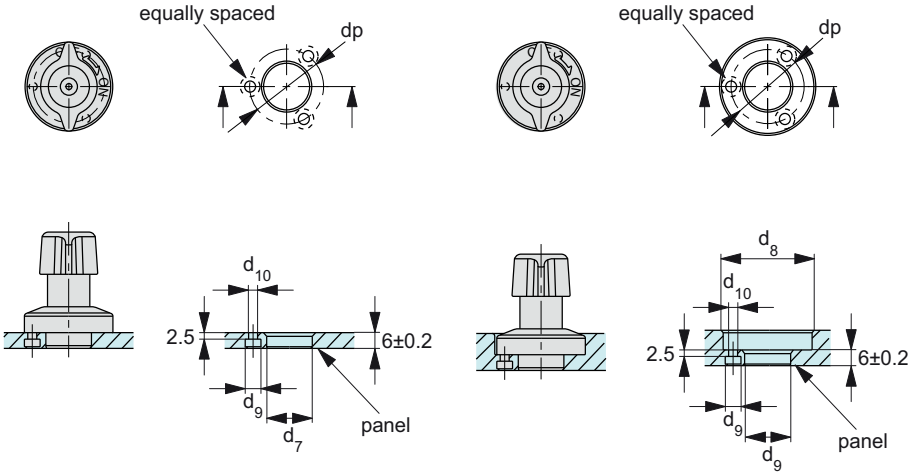


Operating Instructions

1. Ensure that the knob is positioned at the “OFF” mark and the pin is retracted.
2. Locate the cam receptacle directly under the fastener. Insert retracted pin by pressing the knob down.
3. Turn the knob to the “ON” mark for clamping. The knob clicks when clamped. Turning the knob to the “OFF” position, the pin returns automatically to the unclamping position.



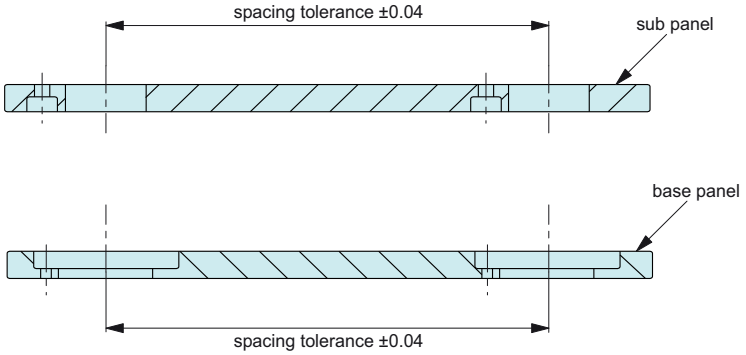
Installation Dimensions



Installation Best Practice

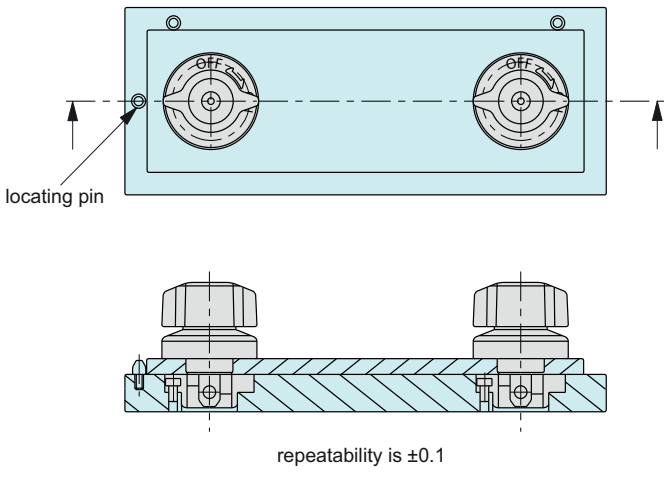
Machining accuracy

Spacing tolerance on both the sub panel and the base panel should be ±0.04.



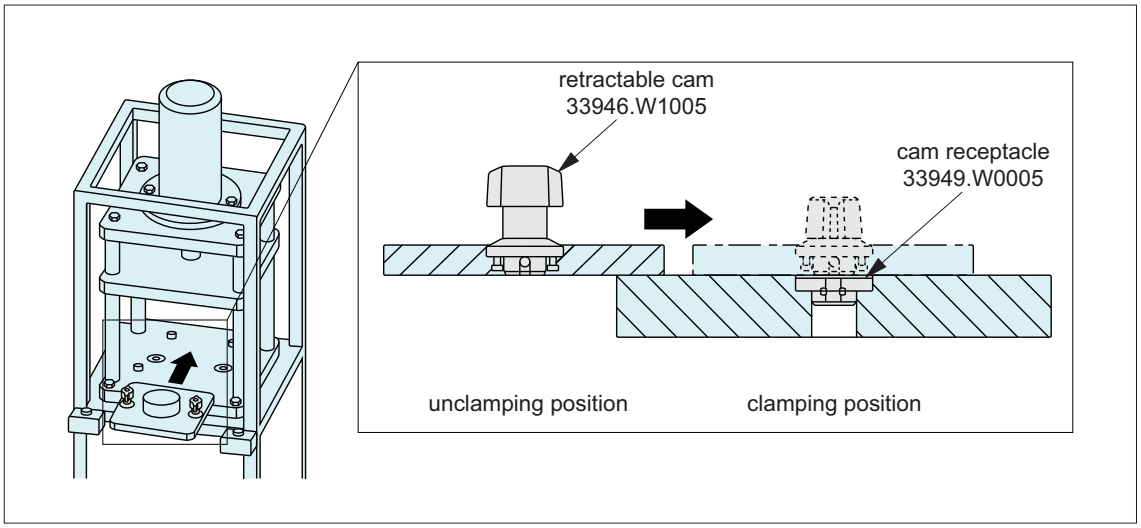
Repeatability

For highly accurate locating, use locating pins 36340 or 36341. Repeatability of ±0.1 is achievable.

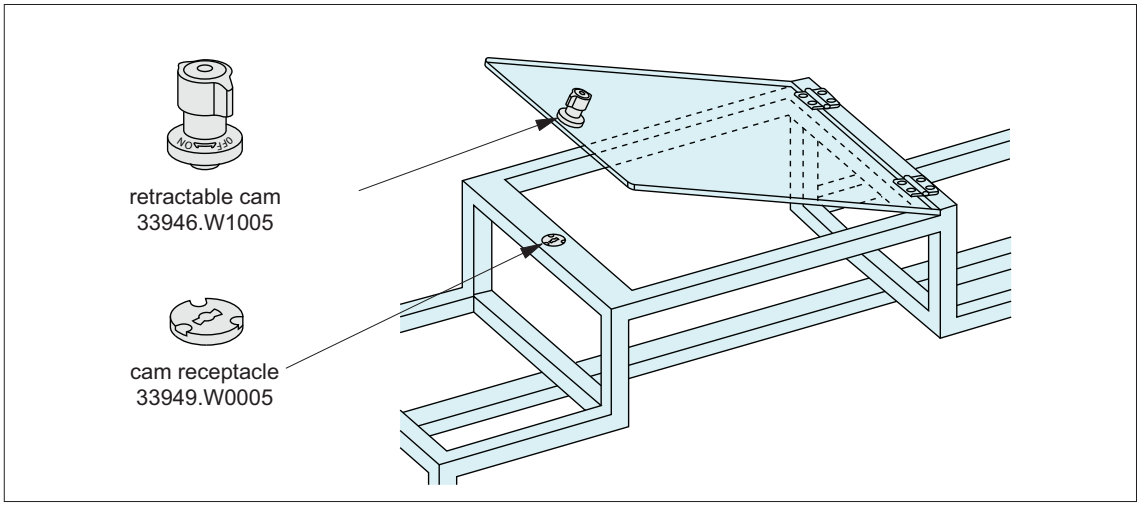


Applications

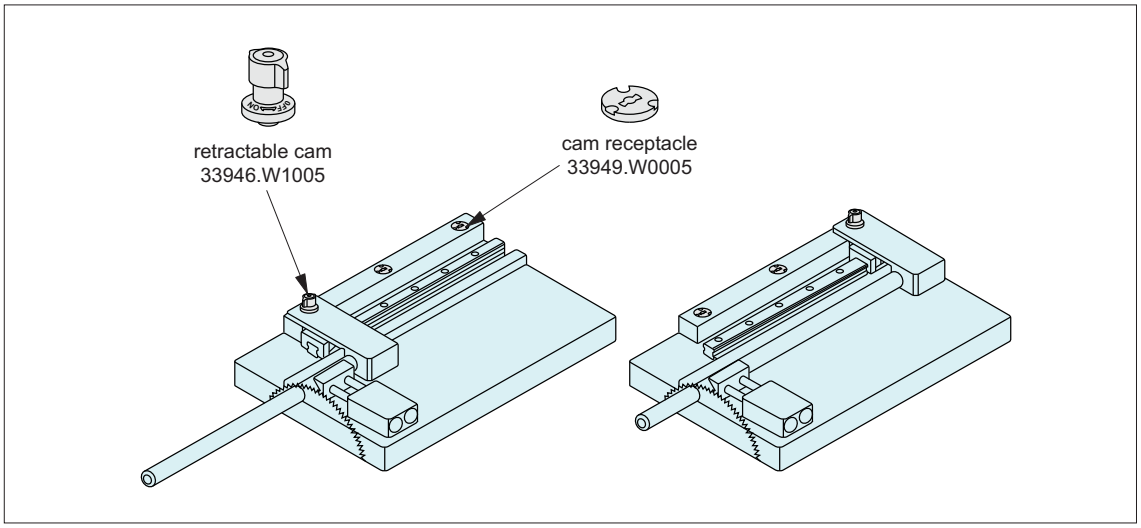
Changes of fixture plates



Lock for doors



Adjustment of workpiece guides

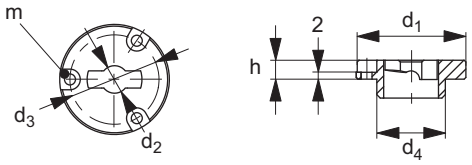


One-Touch Fastener - Cam Locking

flush fit locating bush - for 33940, 33942 and 33944

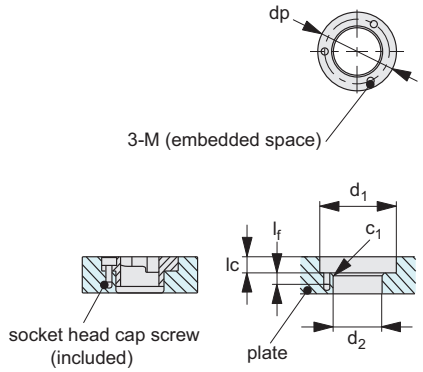
33949





Order No.	For single panel thickness	d_1	d_2	d_3	d_4 -0,04 -0,08	h	g
33949.W0005	>10	25	5	21	14	4,5	20
33949.W0008	>12	32	8	26	20	5,5	35

installation dimensions - for locating bush



installation for locating bush 33949

	Single panel thickness mm	d_1	d_2 (+0,10 / +0,05)	lc (+0,10 / 0)	m	lf	dp
33949.W0005	6 to 10	25	15	5	M 2x0,4	4	21
33949.W0008	6 to 12	32	21	6	M 3x0,5	5	26

Material

Body: steel, nickel plated.

Technical Notes

Used in conjunction with one-touch fasteners 33940 to 33946, locating bushes 3394820 provide secure fastening of panels and covers. Locating bushes are of particular use in soft metals, such as aluminium where receiving surfaces may wear. One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and dive belts.
Temperature resistant to 200°C.

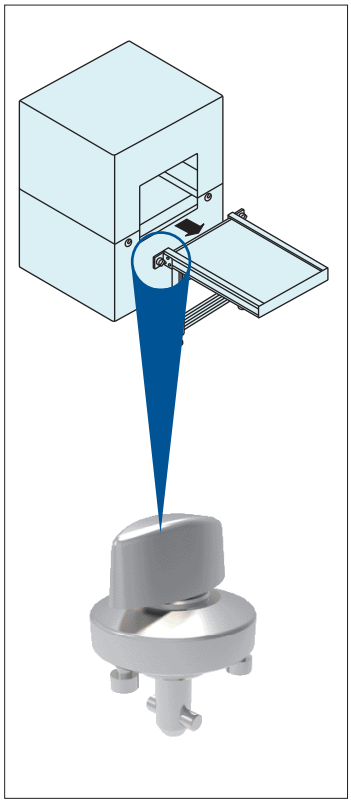
Important Notes

Suitable for panels/encloses of 6 to 20 mm thickness.
For one-touch fasteners see part nos. 33940 to 33946.
For installation instructions see technical page.

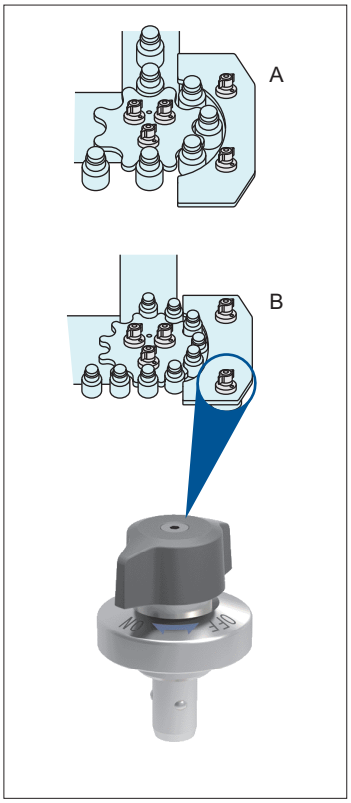
33910 -33956

One-Touch Fasteners for Frequent Set-Ups

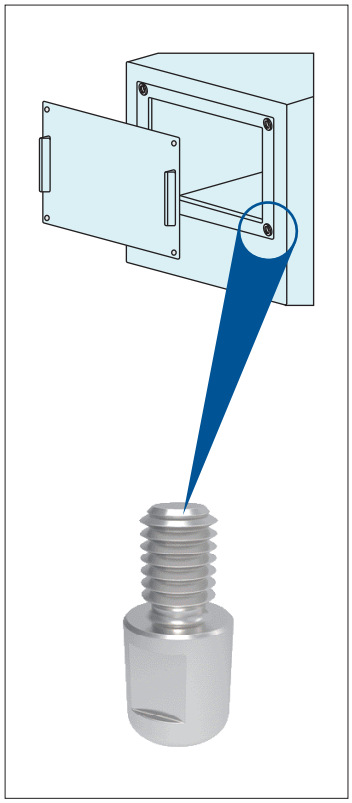
One-touch fasteners - alternatives to screws



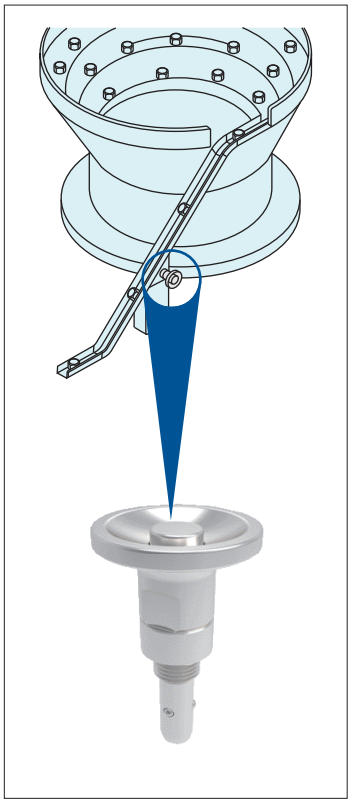
Installation and removal of conveyor sub assemblies



Changes of star wheels and guide plates



Installation and removal of panels or covers

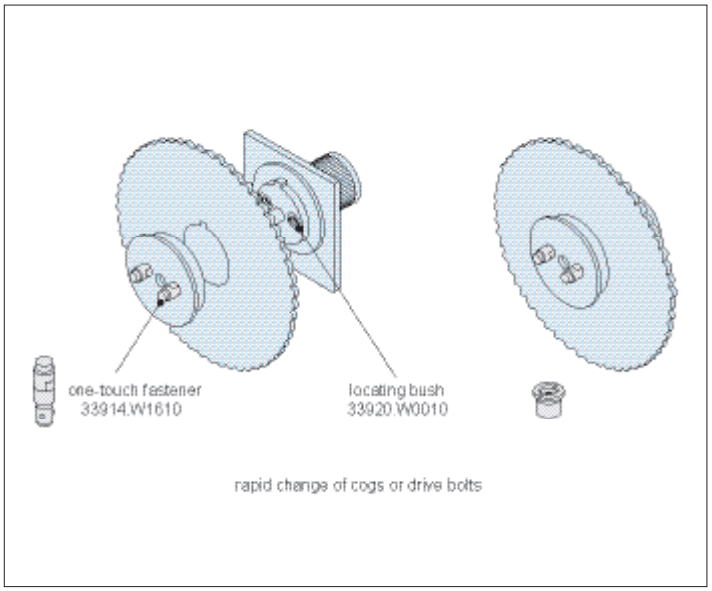


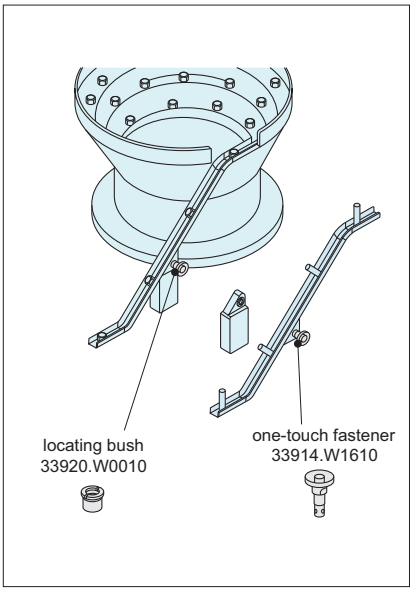
Change of shooters or production guides

Easy! Secure! For quick changeover with no tools!

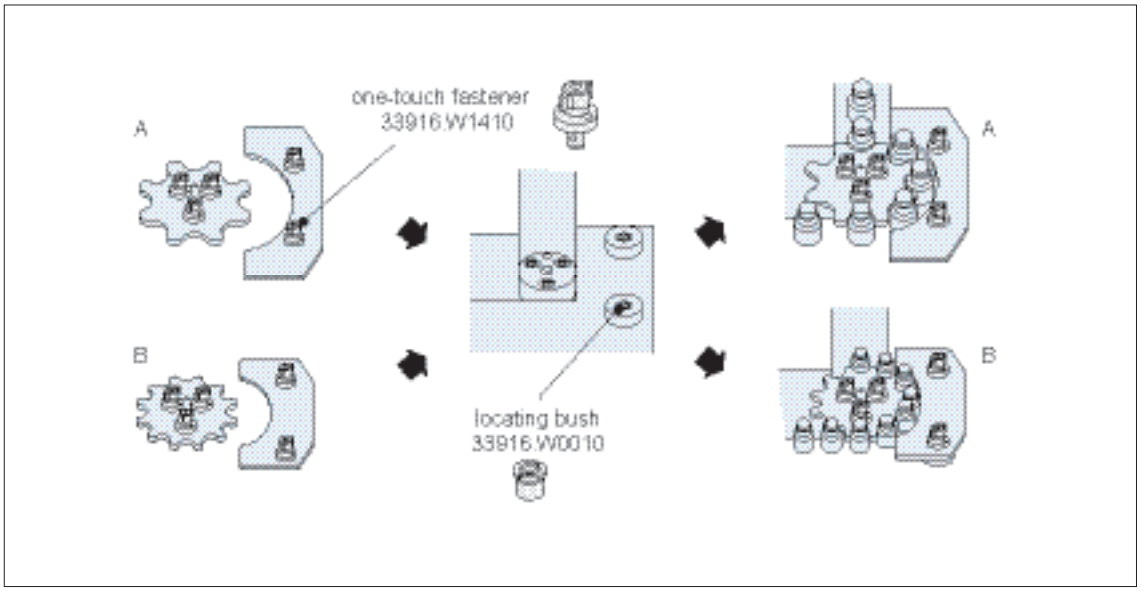


One-touch change over

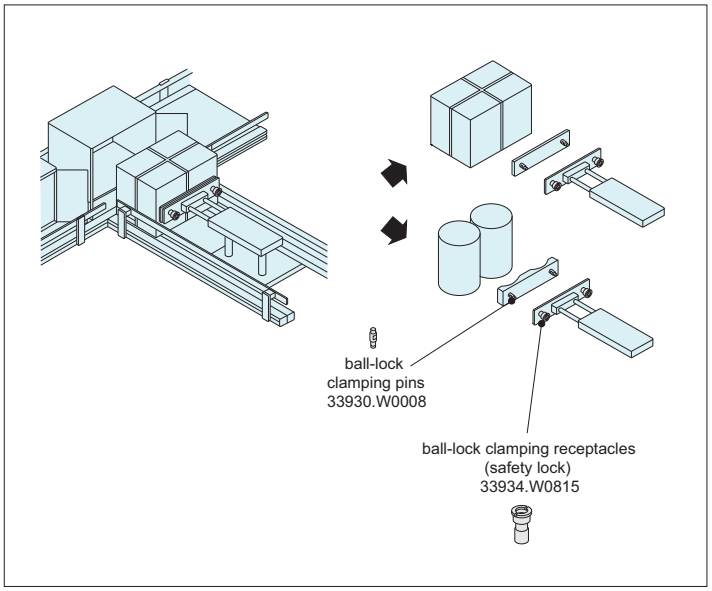


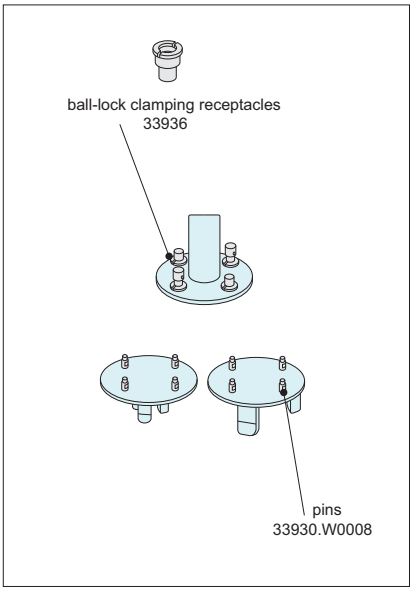


Installation and removal of rotary blades and changes of shooters



Changes of star wheels and guide plates





Changes of pusher and changes of chuck handling machines

33964

One-Touch Fastener - Pull Clamping

push button lock - button handle - stainless steel



Material

Body: stainless steel SUS 303.
Spacer: stainless steel SUS 303.
Spring: stainless steel SUS 303.

Technical Notes

One-touch fasteners are the ideal solution for applications requiring rapid and recurring change over of tooling or set ups. Use in applications as diverse as bottling processes, machine covers, changing of cogs and drive belts. One-touch fasteners provide a quick, simple and secure change over solution - no time waste in unfastening screws or other permanent fixings, and no opportunity for lost fixings in your machinery.

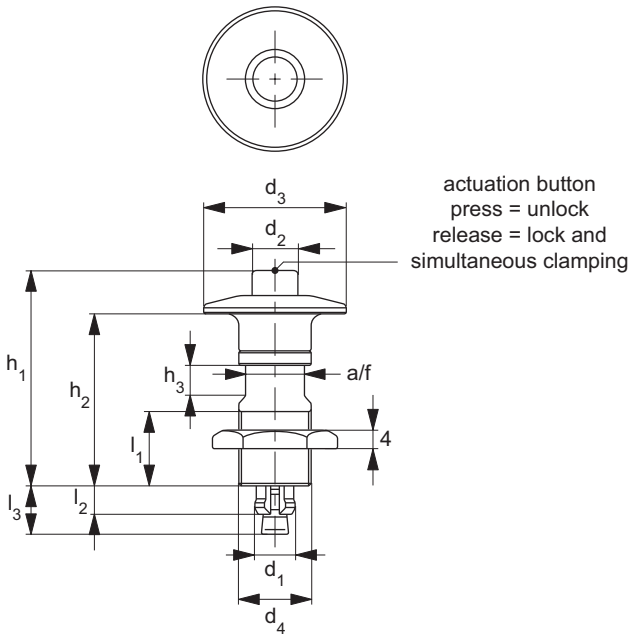
Tips

For highly accurate locating, use locating pins 36340 and 36341.

Important Notes

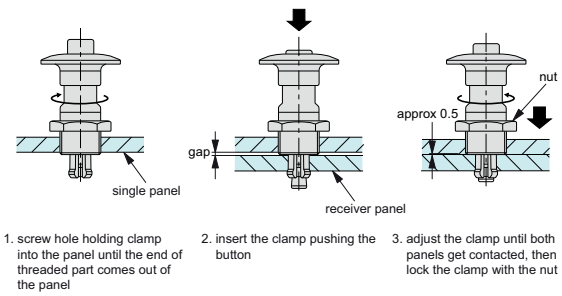
Suitable for panels/enclosures of 3 to 12 mm.
Unique locking and simultaneous clamping.

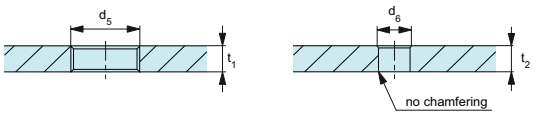
Actuation:
-While depressing the actuation button, align pin to receiving hole in frame.
-Once pin is aligned seated in the receiving hole, release button.
-Pin will retract, forcing clamping wedges to spread and pull the two panels together to securely fasten.
-To release, reverse steps described above.



Order No.	Single panel thickness mm	Receiver panel thickness	d_1	d_2	d_3	d_4	a/f	g
33964.W0803	3-8	3	6,5	8	23	M12x1	10	40
33964.W0806	3-8	6	6.5	8	23	M12x1	10	40
33964.W1203	3-12	3	8,5	10	32	M16x1	13	80
33964.W1206	3-12	6	8,5	10	32	M16x1	13	80

Order No.	h_1	h_2	h_3	l_1	l_2	l_3	Clamping Force N	Shear strength N	Tensile strength N
33964.W0803	37	29,0	5,5	12,5	6,5	10,5	3	200	150
33964.W0806	34	26,0	5,5	12,5	9,5	13,5	3	400	300
33964.W1203	48	38,5	7,0	16,5	6,5	11,0	6	200	150
33964.W1206	45	35,5	7,0	16,5	9,5	14,0	6	400	300





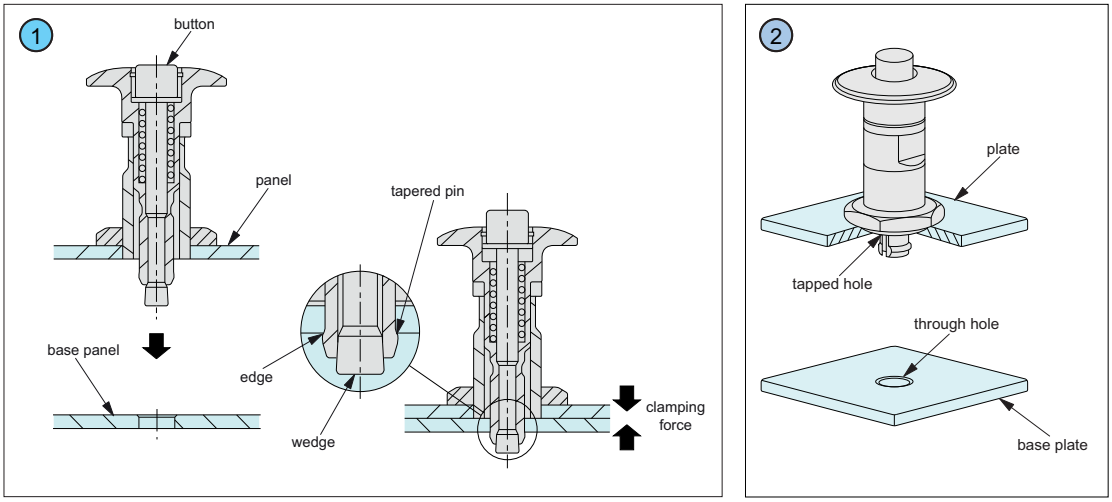
	Single panel thickness mm	Receiver panel thickness mm	t_1	d_5	d_6	t_2
33964.W0803	3 to 8	3	3 to 8	M12x1,0	6,5	3
33964.W0806	3 to 8	6	3 to 8	M12x1,0	6,5	6
33964.W1203	3 to 12	3	3 to 12	M16x1,0	8,5	3
33964.W1206	3 to 12	6	3 to 12	M16x1,0	6,5	6

One-Touch Fastener - Pull Clamping

overview

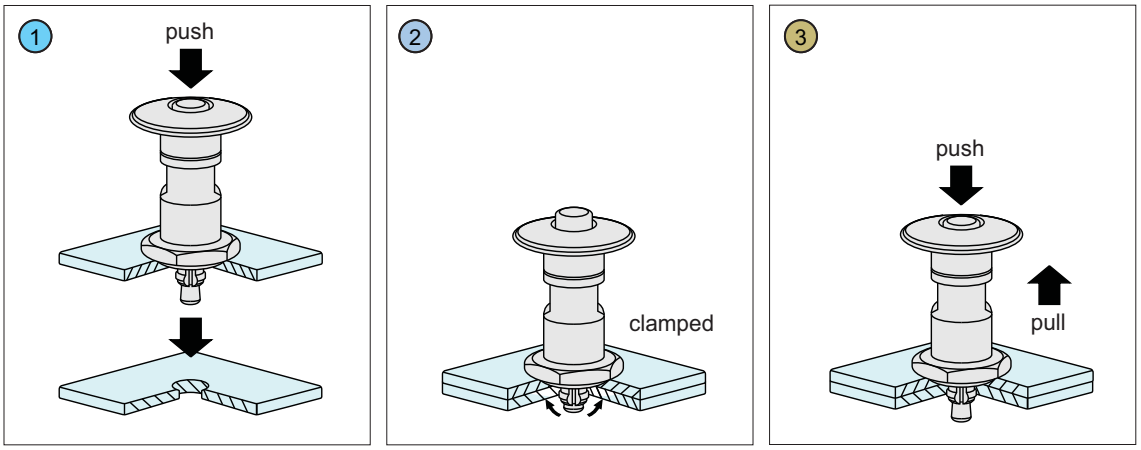
Operating Principle

1. The tapered pin expanded by the wedge pushes out against the edge of the hole on the base panel, and the two panels are clamped.
2. Just a tapped hole and a through hole are required.



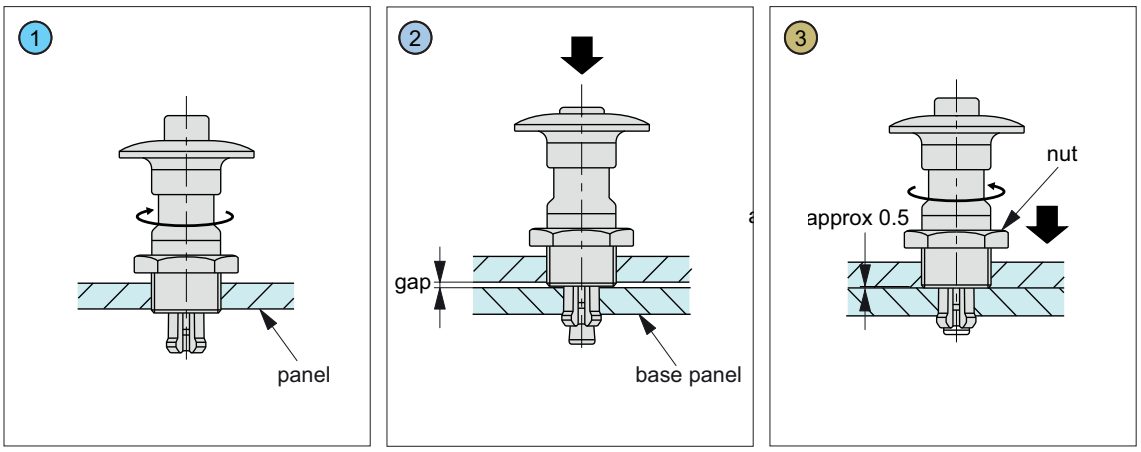
Operating Instructions

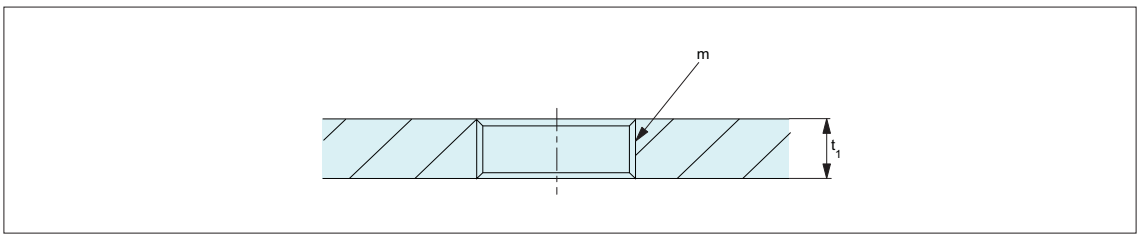
1. While depressing the actuation button, align the pin to receiving hole.
2. Once pin is aligned and seated in the receiving hole, release button. Pin will retract, forcing clamping wedges to spread and pull the two panels together to securely fasten.
3. To release, reverse steps described above.



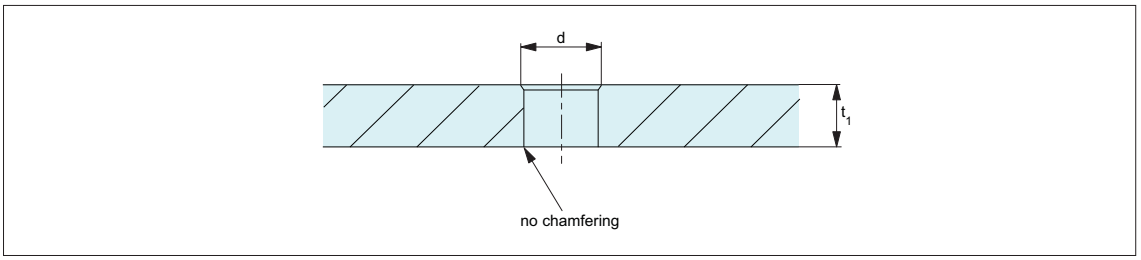
Installation Dimensions

1. Screw hole holding clamp into the panel until the end of threaded part comes out of the panel.
2. Insert the clamp pushing the button.
3. Adjust the clamp until the both panels get contracted and then lock the clamp with the nut.





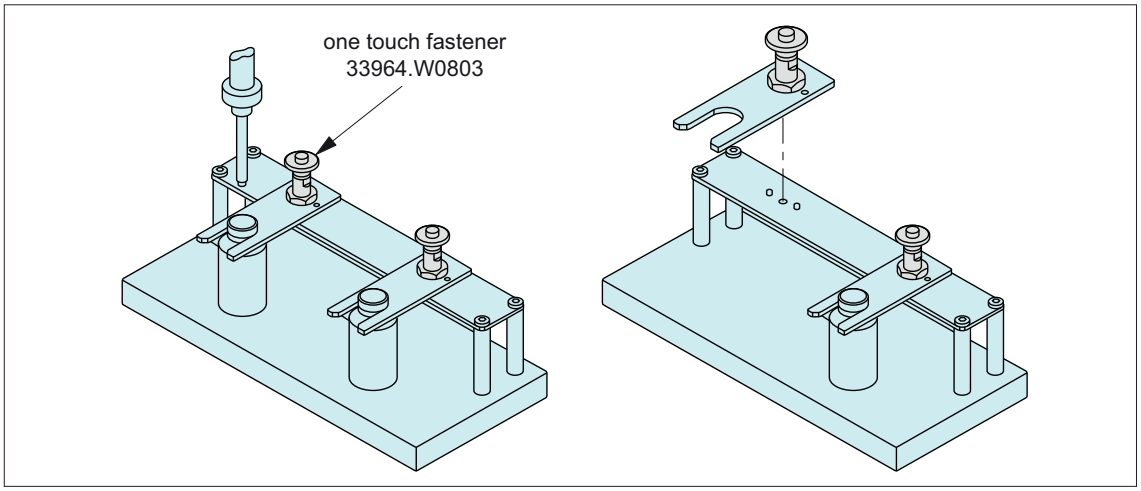
Mounting hole on panel



Mounting hole on base panel

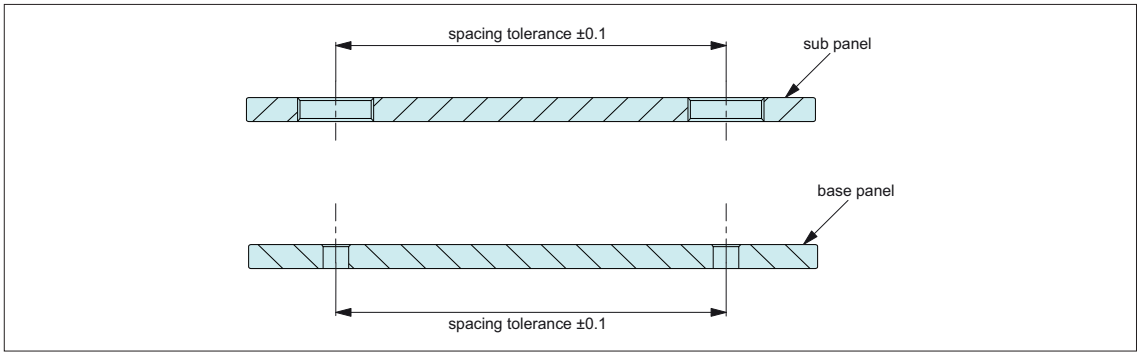
Use hard metals such as stainless steels for the base panel.

Applications



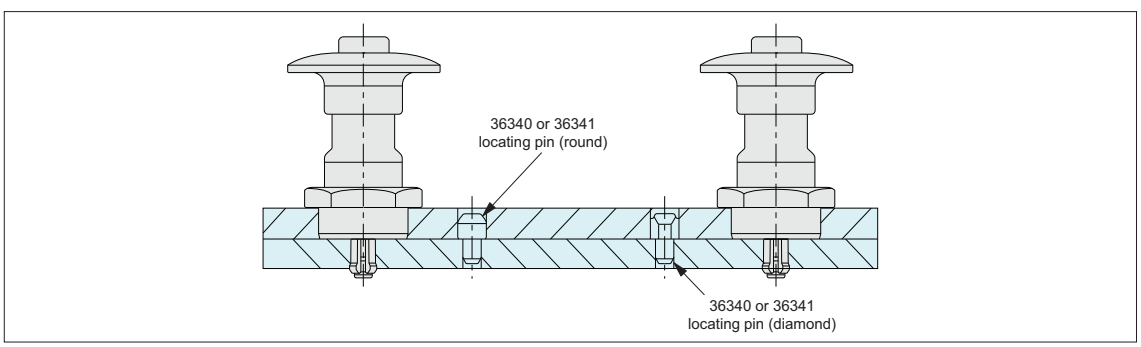
Changes of holder panel

Installation Best Practice



Machining accuracy

Spacing tolerance on both the sub panel and the base panel should be ±0.1.



Repeatability

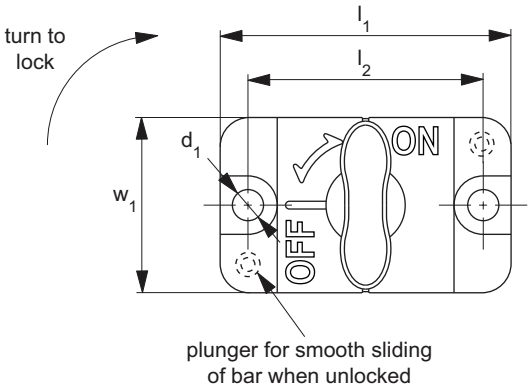
For highly accurate locating, use locating pins 36340 or 36341. Repeatability of ±0.25 is achievable.

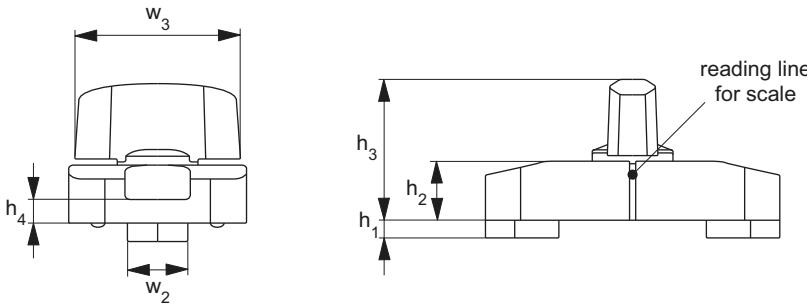
Sliding Clamps – for Slotted Hole

quarter turn lock – t-handle grip – zinc

33970

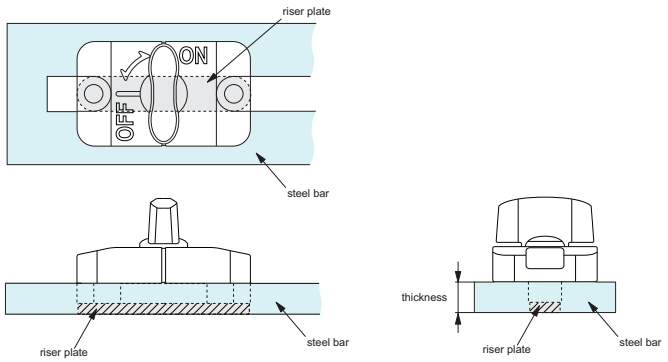






Order No.	For slot width	Min. slot depth	Handle	d_1	h_1	h_2	h_3	h_4	g
33970.W0103	10	3	Plastic, orange	5,5	3	10	24	4,5	80
33970.W0106	10	6	Plastic, orange	5,5	6	10	24	4,5	80
33970.W1103	10	3	Plastic, black	5,5	3	10	24	4,5	80
33970.W1106	10	6	Plastic, black	5,5	6	10	24	4,5	80
33970.W2103	10	3	Stainless	5,5	3	10	24	4,5	95
33970.W2106	10	6	Stainless	5,5	6	10	24	4,5	95

l_1	l_2	w_1	w_2 0, 0,05	w_3	Max. static load N
50	40	30	10	28	500
50	40	30	10	28	500
50	40	30	10	28	500
50	40	30	10	28	500
50	40	30	10	28	500
50	40	30	10	28	500



Sliding bar thickness	Sliding clamp	Sliding clamp h_1 =	Riser plate	Riser plate thickness t_1 =	Total thickness achieved ($h_1 + t_1$)
3	33970.Wxxx3	3	not req'd	-	3
5	33970.Wxxx3	3	33971.W0002	2	5
6	33970.Wxxx6	6	not req'd	-	6
8	33970.Wxxx6	6	33971.W0002	2	8
9	33970.Wxxx6	6	33971.W0003	3	9

Material

Body: die-cast zinc, chrome plated.
Grip: polyamide plastic (black or orange), or stainless steel SUS304.
Clamping shaft/wedge: stainless steel.
Ball plunger: polyacetal.

Technical Notes

Sliding clamps are ideal for the quick positioning, locking, releasing and re-positioning of sliding bars in many applications. When additionally used with a scale plate (see part no. 33975, 33976 and 33977), the reading line on the sliding clamp enables quick, easy and accurate alignment.

The sliding clamp is mounted, for greater stability, in a fixed position in an assembly. With the clamp set to its off position the sliding bar (not supplied) can be moved left or right, with two spring loaded ball plungers provide for free movement of bar. Once in its desired position the sliding bar can be locked in place, through a 90 degree turn of the sliding clamp's handle which engages the clamp's clamping shaft/wedge.

Please see technical diagram below for recommended machining details for your sliding bar (not supplied). Riser plates can be used to provide clearance between sliding bar and mounting surface to improve free running of sliding bar, see part no. 33971.

Temperature resistance up to 90°C.
Max. static load up to 500N – please refer to performance graph below.

Important Notes

Sliding clamps are suited only to straight linear movement of sliding bar (not supplied), and do not tolerate any other applied loads.

Displacement of sliding bar, through repetitive use, will increase if excessive shock or vibration is present. Do not use sliding clamp in vertical applications where vibration is present.
Displacement will also increase with adhesion or immersion of oil or other foreign substances.
Ensure sliding bar is not bent nor warped as this may cause the sliding bar to slip even when sliding clamp is in its on position.

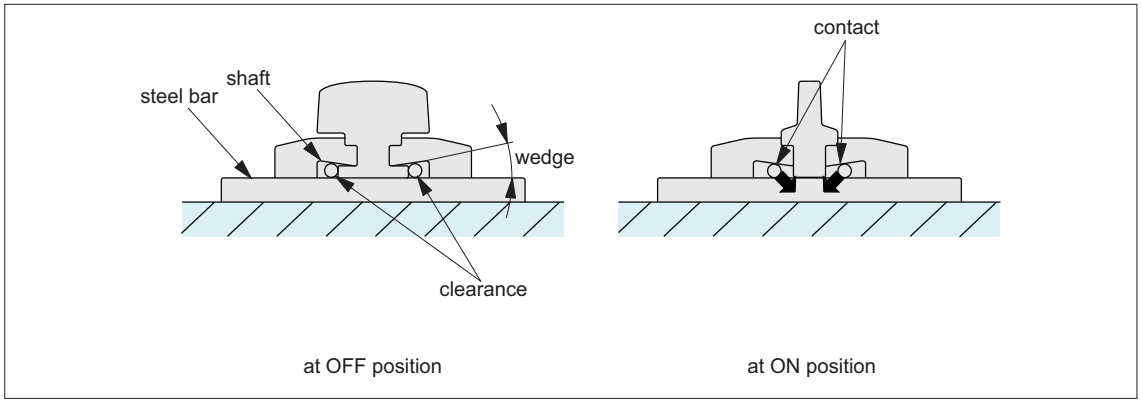
One-Touch Fastener - Sliding clamps

slotted hole - overview

Operating Principle

You can slide the steel bar when the knob is at the “OFF” position since there is clearance between the steel bar and the shafts.

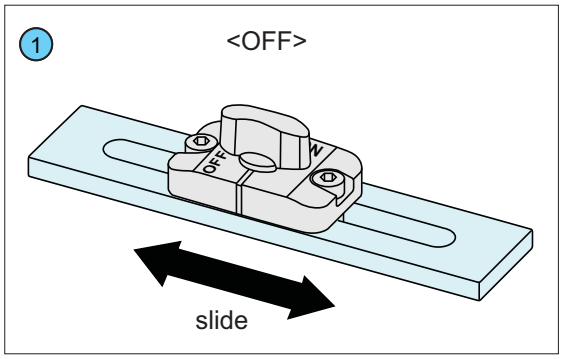
The steel bar is locked when the knob is at the “ON” position since the shafts are pushed by the wedge.

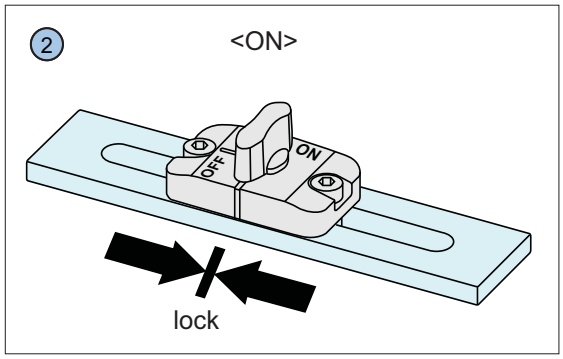


Operating Instructions

1. The steel bar can slide to the right and left at the “OFF” position.
2. The steel bar is locked at the “ON” position.

   Note: The knob clicks at the “ON” and “OFF” positions, and this gives the operator confirmation it has locked/unlocked securely.

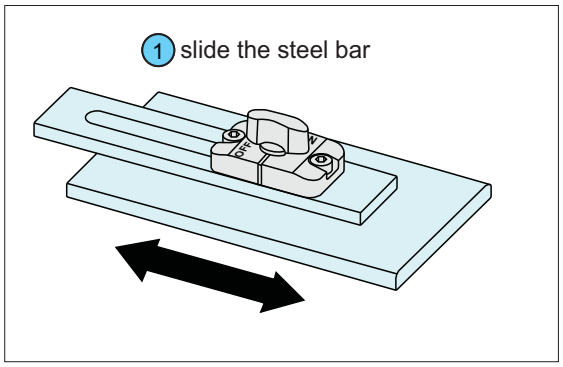


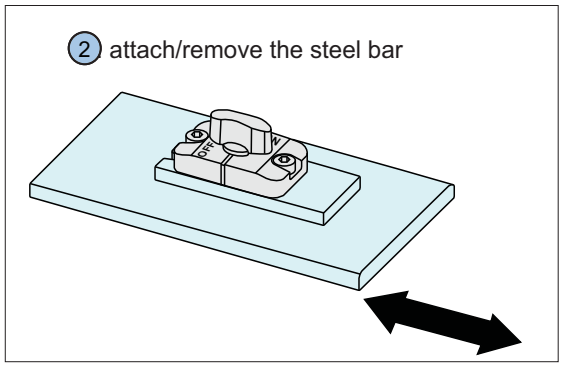


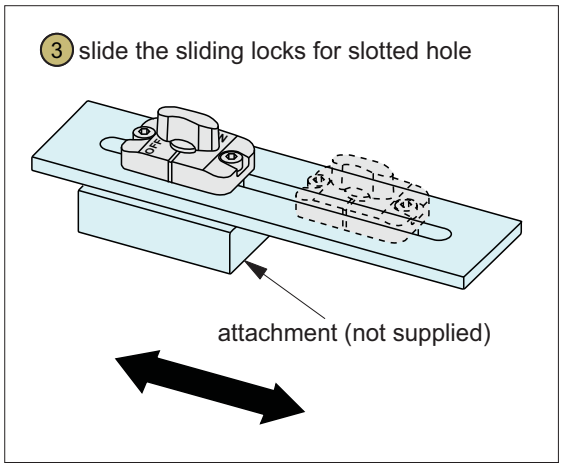
How to use

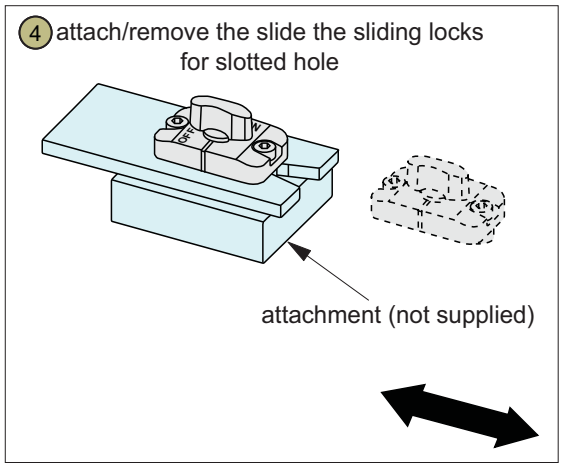
Please refer to notes for safe use (last page of guide).

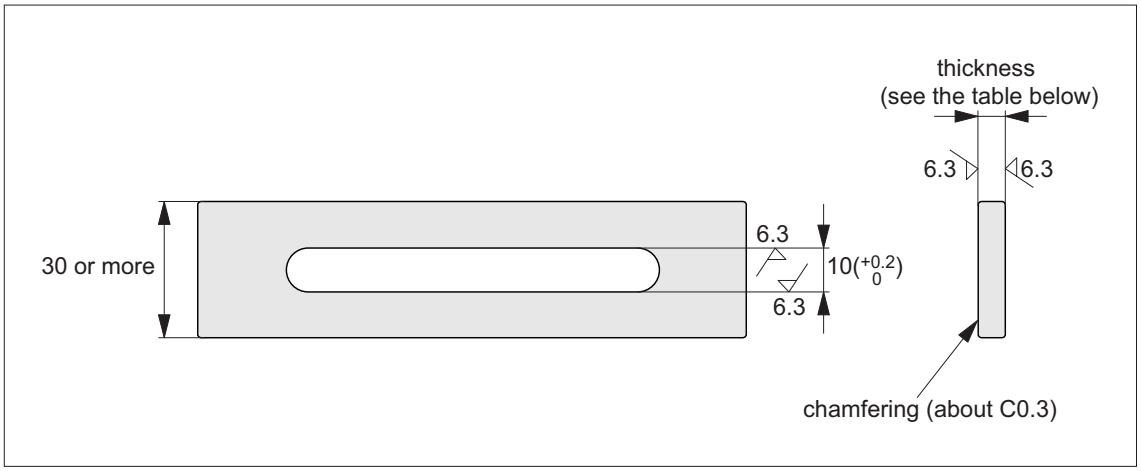
1. Slide the steel bar.
2. Attach/remove the steel bar.
3. Slide the sliding locks for slotted hole.
4. Attach/remove the sliding locks for slotted hole.









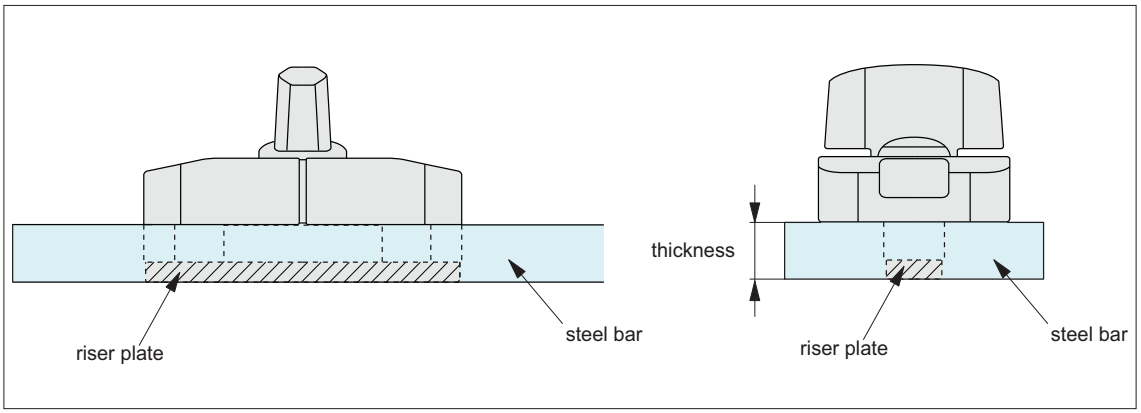


How to use steel bar materials

Usable Materials: Flat bar (JIS h14 grade) made of SS400, S45C or SUS304 etc.

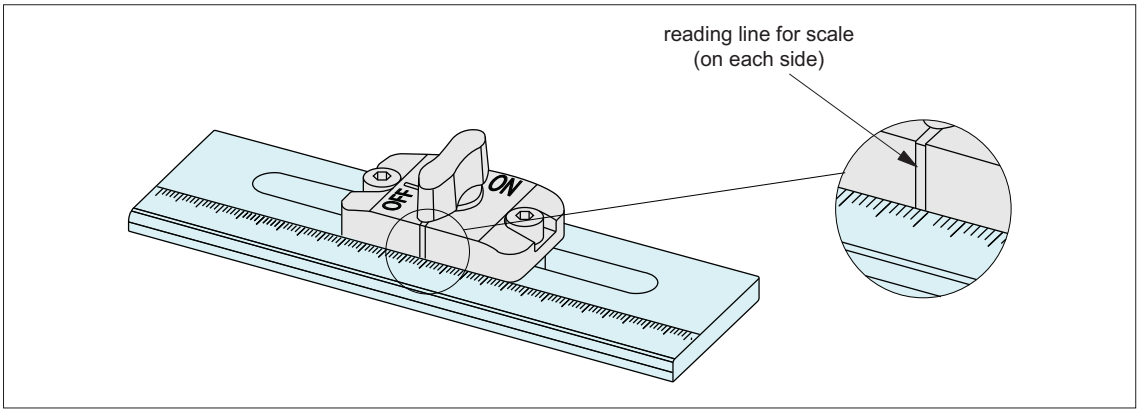
Machining of slotted hole: Recommended tolerance of the slotted hole to prevent chattering is shown left.

For more accurate sliding, machine the slotted hole to fit the dimension of 10mm (-0.05 to 0) on the bottom of sliding locks. Remove the burr around the slotted hole to ensure locking.



How to use riser plate

Can be used for various steel thicknesses by attaching the riser plates (ordered separately, see 33971).



How to use scale plate

You can read the scale with the line on the body of the sliding lock.

Scale plate is separately available.

See ranges 33975, 33976 and 33977.

Notes

- Ensure that the knob is at the "OFF" position when mounting. Mounting of sliding locks the at "ON" position may cause damage.
- The displacement will increase with excess shock or vibration. Do not use this product vertically in environments where excess vibration is present.
- The displacement can increase with adhesion or contamination by oil or foreign substances.
- If the steel plate slips or chatters by the load applied to the steel plate, prepare guides or supports as needed. (See figure 1 and 2 below)
- Excess displacement or misalignment may be caused if there is a clearance between the steel bar and the base when the sliding locks at the "ON" position. (See figure 3 below) Ensure that the steel plate and the base are not bent or warped.

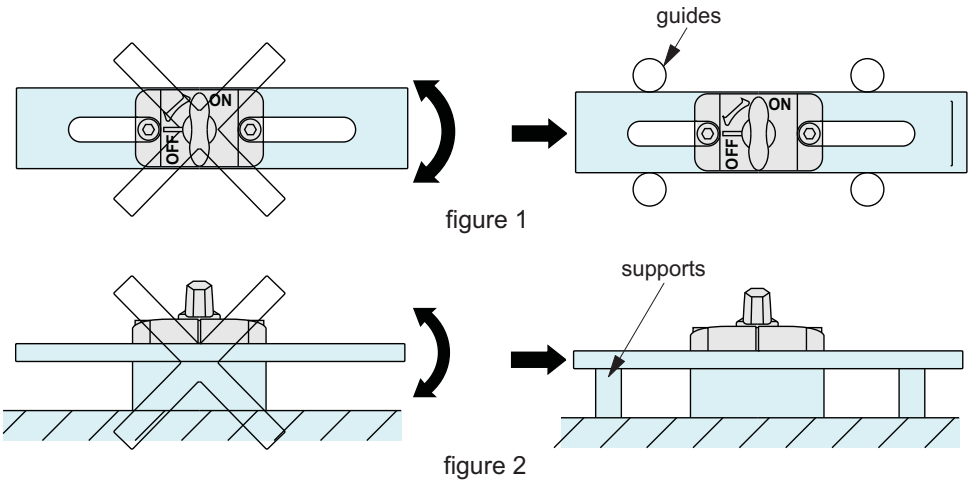


figure 1

figure 2

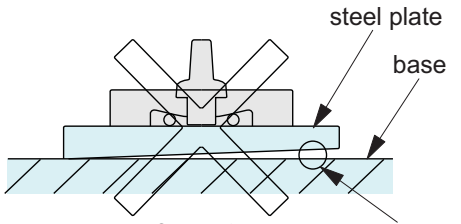
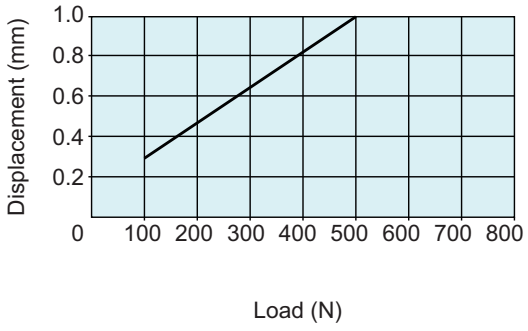


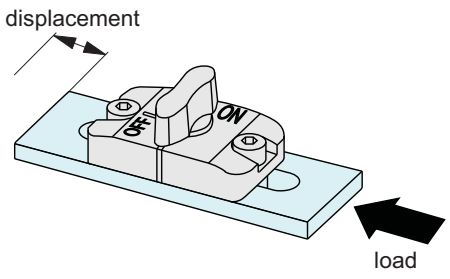
figure 3

Performance curve

The displacement of steel bar by axial load (static load from single direction)

Note: The data is for a flat bar made of SUS304 stainless steel, SS400 steel and S45C steel. Using an aluminum flat bar the surface will be scratched or dent by applied load.





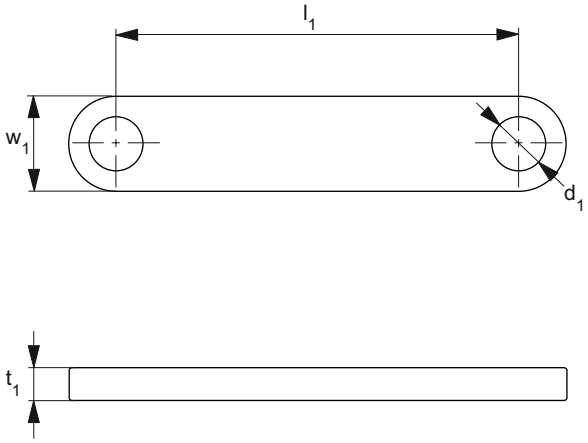
33971

Riser Plates for Sliding Locks

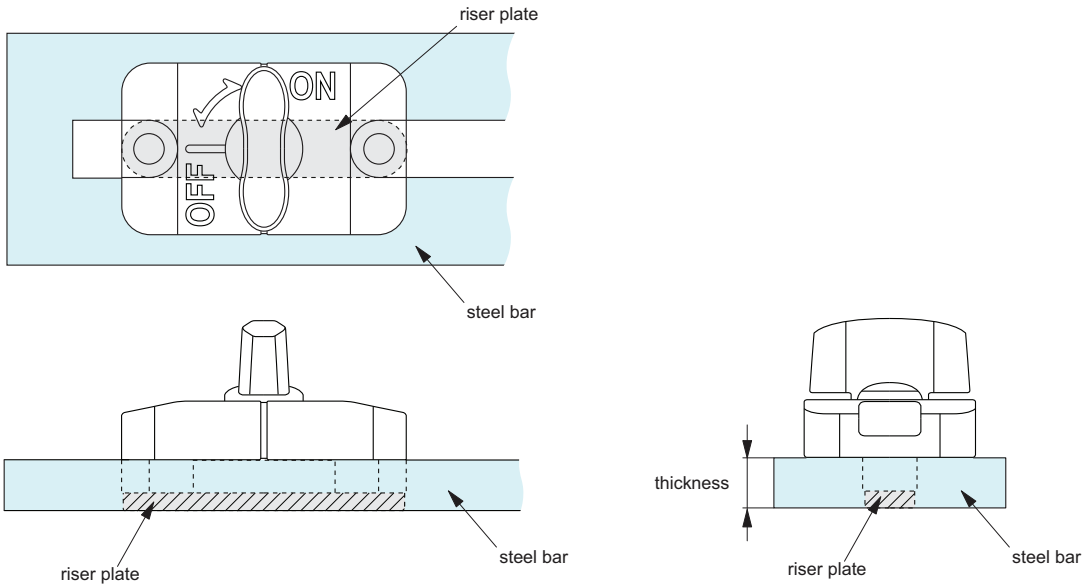


Material
Body: 304 stainless steel.

Technical Notes
For use with sliding clamp 33970, addition of riser plate to clamp enables clamps use for sliding bars of varying thickness.



Order No.	d_1	l_1	w_1	t_1	g
33971.W0002	5,5	40	9,5	2	6
33971.W0003	5,5	40	9,5	3	10



Sliding bar thickness	Sliding clamp	Sliding clamp h_1 =	Riser plate	Riser plate thickness t_1 =	Total thickness achieved ($h_1 + t_1$)
3	33970.Wxxx3	3	not req'd	-	3
5	33970.Wxxx3	3	33971.W0002	2	5
6	33970.Wxxx6	6	not req'd	-	6
8	33970.Wxxx6	6	33971.W0002	2	8
9	33970.Wxxx6	6	33971.W0003	3	9

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