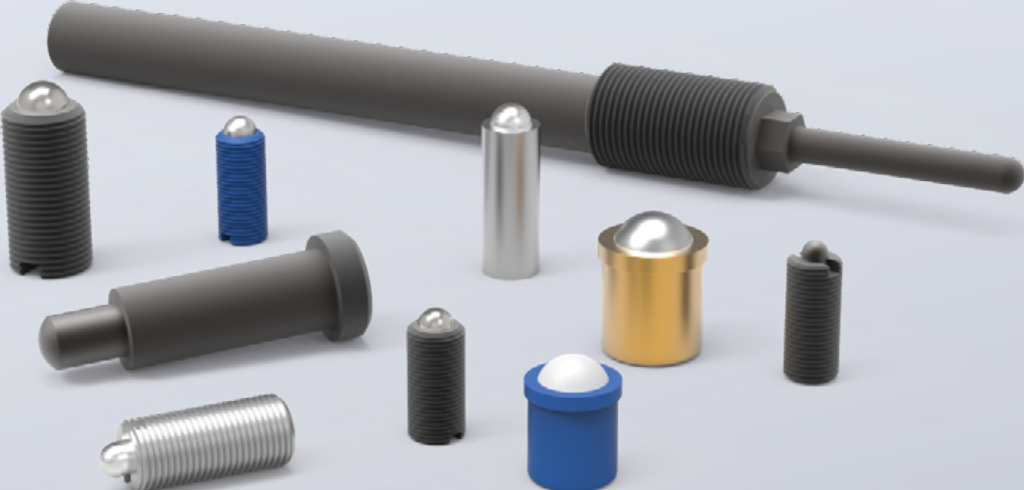


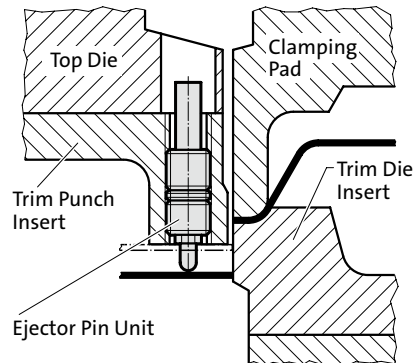
SPRING PLUNGERS



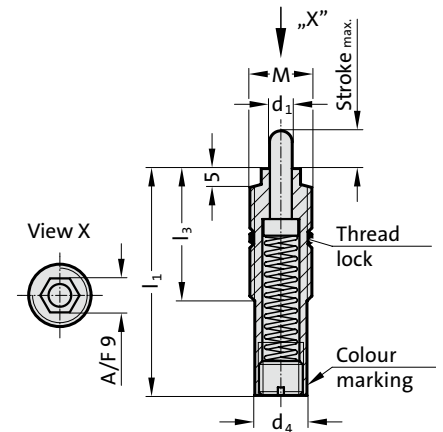
SPRING PLUNGER, STANDARD SPRING FORCE, VDI 3004, COLOUR MARKING: YELLOW



Mounting example



2470.10. .1



Description:

Spring plungers are used as ejectors, damper pins, fixing and retaining pins in many sectors of the tool-, jig- and fixture-making industries. Assembly requires the use of special FIBRO insertion tool (2470.10.11). The spring-loaded pins are hardened.

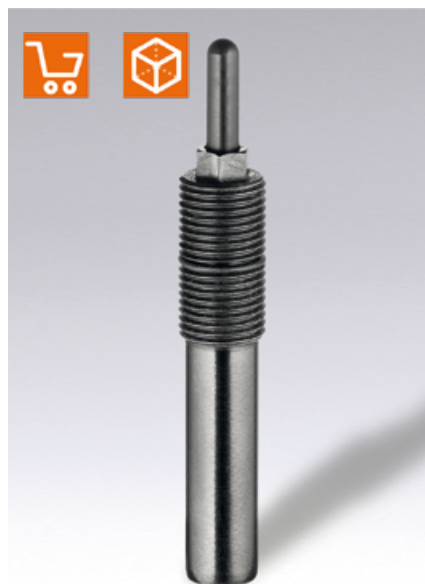
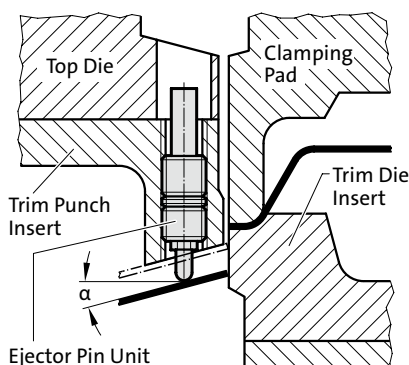
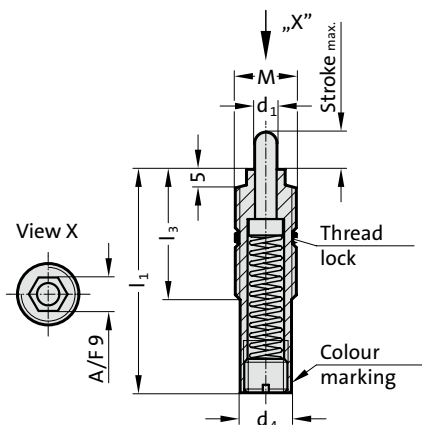
2470.10. .1 Spring plunger, standard spring force, VDI 3004, Colour marking: yellow

Order No	d ₁	d ₄	M	l ₁	l ₃	Stroke max.	Spring rate [N/mm]	Spring force [N] initial	Spring force [N] final
2470.10.010.060.1	6	13.4	16x2	60	35	10	0.95	3.8	13.3
2470.10.010.016.060.1	6	13.4	16x1.5	60	35	10	0.95	3.8	13.3
2470.10.015.060.1	6	13.4	16x2	60	35	15	2	10	40
2470.10.015.016.060.1	6	13.4	16x1.5	60	35	15	2	10	40
2470.10.020.080.1	6	13.4	16x2	80	35	20	1.38	6.9	34.5
2470.10.020.016.080.1	6	13.4	16x1.5	80	35	20	1.38	6.9	34.5
2470.10.030.080.1	6	13.4	16x2	80	35	30	1.3	6.5	45.5
2470.10.030.016.080.1	6	13.4	16x1.5	80	35	30	1.3	6.5	45.5
2470.10.030.120.1	6	13.4	16x2	120	35	30	0.73	18	40
2470.10.030.016.120.1	6	13.4	16x1.5	120	35	30	0.73	18	40
2470.10.040.150.1	6	13.4	16x2	150	35	40	0.6	13.2	37.2
2470.10.040.016.150.1	6	13.4	16x1.5	150	35	40	0.6	13.2	37.2
2470.10.050.150.1	6	13.4	16x2	150	35	50	0.6	13.2	43.2
2470.10.050.016.150.1	6	13.4	16x1.5	150	35	50	0.6	13.2	43.2
2470.10.060.150.1	6	13.4	16x2	150	35	60	0.6	13.2	49.2
2470.10.060.016.150.1	6	13.4	16x1.5	150	35	60	0.6	13.2	49.2
2470.10.070.200.1	6	13.4	16x2	200	35	70	0.44	9.68	40.5
2470.10.070.016.200.1	6	13.4	16x1.5	200	35	70	0.44	9.68	40.5
2470.10.080.200.1	6	13.4	16x2	200	35	80	0.44	9.68	44.8
2470.10.080.016.200.1	6	13.4	16x1.5	200	35	80	0.44	9.68	44.8

SPRING PLUNGER, LOW MAINTENANCE, STANDARD SPRING FORCE, VDI 3004, COLOUR MARKING: YELLOW

2470.20..1

Mounting example



Description:

Resilient thrust pieces are used as knock out pins, damper pins, fixing and ejector pins in many sectors of the tool, jig and fixture manufacturing industries. Assembly requires the use of special FIBRO insertion tool (2470.10.11).

The spring pin made from high performance plastic with additives permits lateral loading of max. 15° depending on the stroke length.

Note:

Working temperature: 0 °C to +80 °C
 Max. recommended extensions per minute: approx. 120 (at 20 °C)
 Max. piston speed: 1.6 m/s

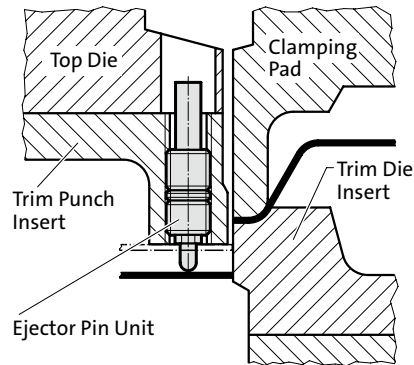
2470.20..1 Spring plunger, low maintenance, standard spring force, VDI 3004, Colour marking: yellow

Order No	d ₁	d ₄	M	l ₁	l ₃	Stroke max.	Spring rate [N/mm]	Spring force [N]		α
								initial	final	
2470.20.010.060.1	6	13.4	16x2	60	35	10	0.95	3.8	13.3	15
2470.20.010.016.060.1	6	13.4	16x1.5	60	35	10	0.95	3.8	13.3	15
2470.20.015.060.1	6	13.4	16x2	60	35	15	2	10	40	15
2470.20.015.016.060.1	6	13.4	16x1.5	60	35	15	2	10	40	15
2470.20.020.080.1	6	13.4	16x2	80	35	20	1.38	6.9	34.5	15
2470.20.020.016.080.1	6	13.4	16x1.5	80	35	20	1.38	6.9	34.5	15
2470.20.030.080.1	6	13.4	16x2	80	35	30	1.3	6.5	45.5	15
2470.20.030.016.080.1	6	13.4	16x1.5	80	35	30	1.3	6.5	45.5	15
2470.20.030.120.1	6	13.4	16x2	120	35	30	0.73	18	40	15
2470.20.030.016.120.1	6	13.4	16x1.5	120	35	30	0.73	18	40	15
2470.20.040.150.1	6	13.4	16x2	150	35	40	0.6	13.2	37.2	10
2470.20.040.016.150.1	6	13.4	16x1.5	150	35	40	0.6	13.2	37.2	10
2470.20.050.150.1	6	13.4	16x2	150	35	50	0.6	13.2	43.2	8
2470.20.050.016.150.1	6	13.4	16x1.5	150	35	50	0.6	13.2	43.2	8

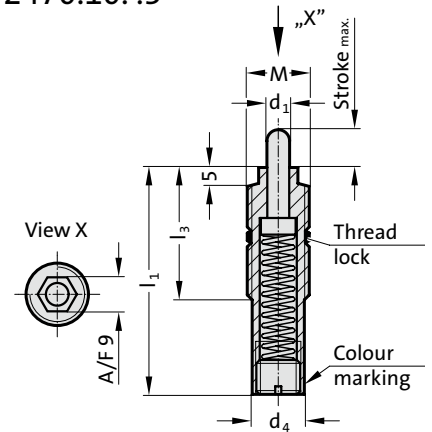
SPRING PLUNGER, MEDIUM SPRING FORCE, VDI 3004, COLOUR MARKING: WHITE



Mounting example



2470.10. .3



Description:

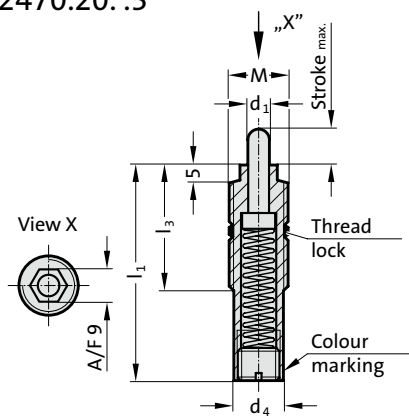
Spring plungers are used as ejectors, damper pins, fixing and retaining pins in many sectors of the tool-, jig- and fixture-making industries. Assembly requires the use of special FIBRO insertion tool (2470.10.11). The spring-loaded pins are hardened.

2470.10. .3 Spring plunger, medium spring force, VDI 3004, Colour marking: white

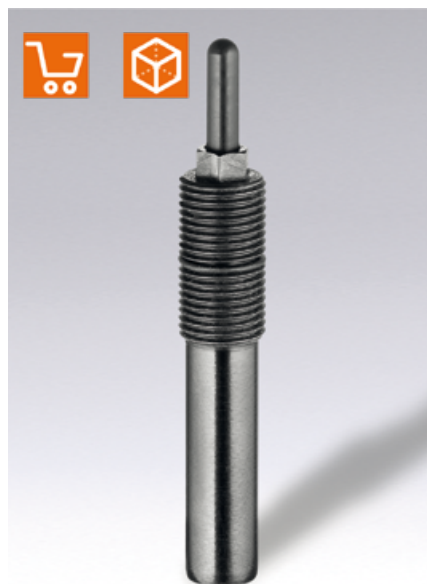
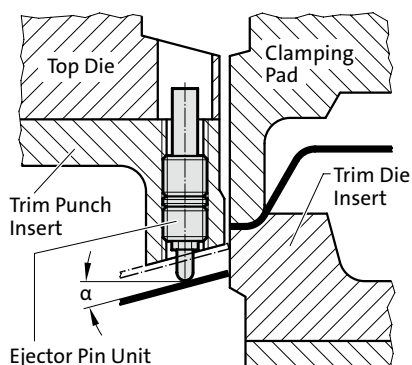
Order No	d ₁	d ₄	M	l ₁	l ₃	Stroke max.	Spring rate [N/mm]	Spring force [N] initial	Spring force [N] final
2470.10.020.080.3	6	13.4	16x2	80	35	20	3.02	15.1	75.6
2470.10.020.016.080.3	6	13.4	16x1.5	80	35	20	3.02	15.1	75.6

SPRING PLUNGER, LOW MAINTENANCE, MEDIUM SPRING FORCE, VDI 3004, COLOUR MARKING: WHITE

2470.20. .3



Mounting example



Description:

Resilient thrust pieces are used as knock out pins, damper pins, fixing and ejector pins in many sectors of the tool, jig and fixture manufacturing industries. Assembly requires the use of special FIBRO insertion tool (2470.10.11).

The spring pin made from high performance plastic with additives permits lateral loading of max. 15° depending on the stroke length.

Note:

Working temperature: 0 °C to +80 °C

Max. recommended extensions per minute: approx. 120 (at 20 °C)

Max. piston speed: 1.6 m/s

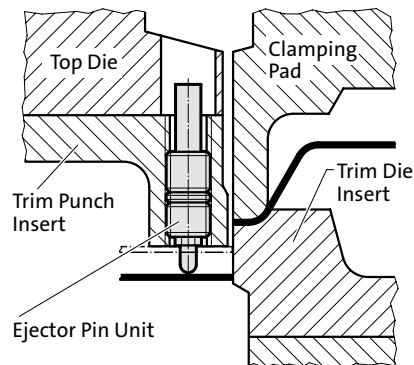
2470.20. .3 Spring plunger, low maintenance, medium spring force, VDI 3004, Colour marking: white

Order No	d ₁	d ₄	M	l ₁	l ₃	Stroke max.	Spring rate [N/mm]	Spring force [N] initial	Spring force [N] final	α
2470.20.020.080.3	6	13.4	16x2	80	35	20	3.02	15.1	75.6	15
2470.20.020.016.080.3	6	13.4	16x1.5	80	35	20	3.02	15.1	75.6	15

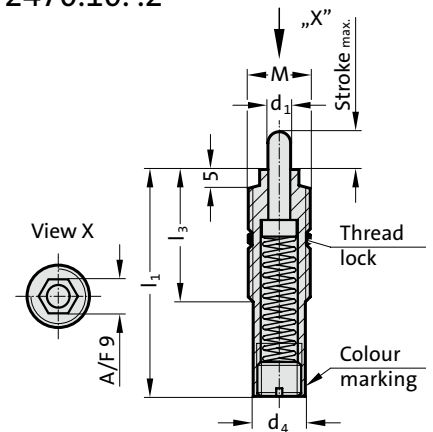
SPRING PLUNGER, INCREASED SPRING FORCE, VDI 3004, COLOUR MARKING: RED



Mounting example



2470.10. .2



Description:

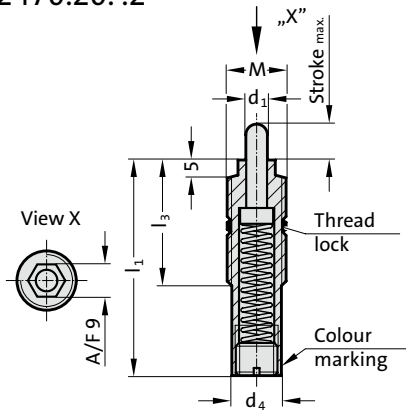
Spring plungers are used as ejectors, damper pins, fixing and retaining pins in many sectors of the tool-, jig- and fixture-making industries. Assembly requires the use of special FIBRO insertion tool (2470.10.11). The spring-loaded pins are hardened.

2470.10. .2 Spring plunger, increased spring force, VDI 3004, Colour marking: red

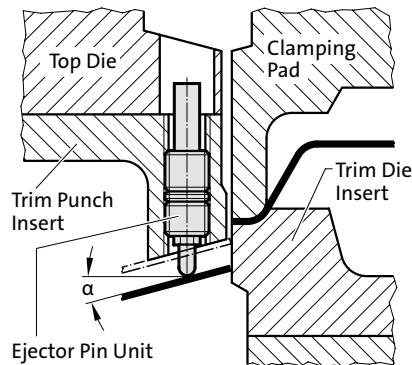
Order No	d ₁	d ₄	M	l ₁	l ₃	Stroke max.	Spring rate [N/mm]	Spring force [N] initial	Spring force [N] final
2470.10.010.060.2	6	13.4	16x2	60	35	10	3.25	13	45.5
2470.10.010.016.060.2	6	13.4	16x1.5	60	35	10	3.25	13	45.5
2470.10.015.060.2	6	13.4	16x2	60	35	15	2.6	15	56
2470.10.015.016.060.2	6	13.4	16x1.5	60	35	15	2.6	15	56
2470.10.020.080.2	6	13.4	16x2	80	35	20	6.9	34.5	172.5
2470.10.020.016.080.2	6	13.4	16x1.5	80	35	20	6.9	34.5	172.5
2470.10.030.120.2	6	13.4	16x2	120	35	30	2	20	80
2470.10.030.016.120.2	6	13.4	16x1.5	120	35	30	2	20	80
2470.10.030.150.2	6	13.4	16x2	150	35	30	2.55	56.1	132.6
2470.10.030.016.150.2	6	13.4	16x1.5	150	35	30	2.55	56.1	132.6
2470.10.040.150.2	6	13.4	16x2	150	35	40	2.55	56.1	158.1
2470.10.040.016.150.2	6	13.4	16x1.5	150	35	40	2.55	56.1	158.1
2470.10.050.200.2	6	13.4	16x2	200	35	50	1.61	19.3	99.9
2470.10.050.016.200.2	6	13.4	16x1.5	200	35	50	1.61	19.3	99.9
2470.10.060.200.2	6	13.4	16x2	200	35	60	1.61	19.3	116.1
2470.10.060.016.200.2	6	13.4	16x1.5	200	35	60	1.61	19.3	116.1
2470.10.070.200.2	6	13.4	16x2	200	35	70	1.61	19.3	132.1
2470.10.070.016.200.2	6	13.4	16x1.5	200	35	70	1.61	19.3	132.1
2470.10.080.200.2	6	13.4	16x2	200	35	80	0.94	25	100.1
2470.10.080.016.200.2	6	13.4	16x1.5	200	35	80	0.94	25	100.1

SPRING PLUNGER, LOW MAINTENANCE, INCREASED SPRING FORCE, VDI 3004, COLOUR MARKING: RED

2470.20. .2



Mounting example



Description:

Resilient thrust pieces are used as knock out pins, damper pins, fixing and ejector pins in many sectors of the tool, jig and fixture manufacturing industries. Assembly requires the use of special FIBRO insertion tool (2470.10.11).

The spring pin made from high performance plastic with additives permits lateral loading of max. 15° depending on the stroke length.

Note:

Working temperature: 0 °C to +80 °C

Max. recommended extensions per minute: approx. 120 (at 20 °C)

Max. piston speed: 1.6 m/s

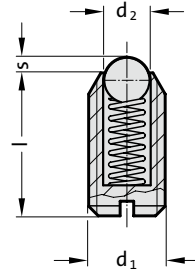
2470.20. .2 Spring plunger, low maintenance, increased spring force, VDI 3004, Colour marking: red

Order No	d ₁	d ₄	M	l ₁	l ₃	Stroke max.	Spring rate [N/mm]	Spring force [N]		α
								initial	final	
2470.20.010.060.2	6	13.4	16x2	60	35	10	3.25	13	45.5	15
2470.20.010.016.060.2	6	13.4	16x1.5	60	35	10	3.25	13	45.5	15
2470.20.015.060.2	6	13.4	16x2	60	35	15	2.6	15	56	15
2470.20.015.016.060.2	6	13.4	16x1.5	60	35	15	2.6	15	56	15
2470.20.020.080.2	6	13.4	16x2	80	35	20	6.9	34.5	172.5	15
2470.20.020.016.080.2	6	13.4	16x1.5	80	35	20	6.9	34.5	172.5	15
2470.20.030.120.2	6	13.4	16x2	120	35	30	2	20	80	15
2470.20.030.016.120.2	6	13.4	16x1.5	120	35	30	2	20	80	15
2470.20.030.150.2	6	13.4	16x2	150	35	30	2.55	56.1	132.6	15
2470.20.030.016.150.2	6	13.4	16x1.5	150	35	30	2.55	56.1	132.6	15
2470.20.040.150.2	6	13.4	16x2	150	35	40	2.55	56.1	158.1	10
2470.20.040.016.150.2	6	13.4	16x1.5	150	35	40	2.55	56.1	158.1	10
2470.20.050.200.2	6	13.4	16x2	200	35	50	1.61	19.3	99.9	8
2470.20.050.016.200.2	6	13.4	16x1.5	200	35	50	1.61	19.3	99.9	8

SPRING PLUNGER, WITH SPRING LOADED BALL, WITH SLOT, STANDARD SPRING FORCE



2471.01.



Material:

Sleeve: Free machining steel, burnished

Ball: Hardened ball bearing steel

Spring: Nirosta

Note:

For locking and for pressing upwards or downwards.

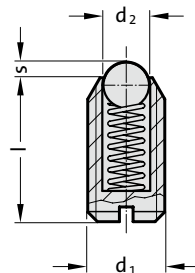
Temperature operating range: max. 250°C

2471.01. Spring plunger, with spring loaded ball, with slot, standard spring force

Order No	d ₁	l	s	d ₂	Spring force [N]	
					initial	final
2471.01.003	M3	7	0.4	1.5	3	4.5
2471.01.004	M4	9	0.8	2.5	8.5	14
2471.01.005	M5	12	0.9	3	8	14
2471.01.006	M6	14	1	3.5	11	18
2471.01.008	M8	16	1.5	4.5	18	31
2471.01.010	M10	19	2	6	24	45
2471.01.012	M12	22	2.5	8	26	49
2471.01.016	M16	24	3.5	10	41	86
2471.01.020	M20	30	4.5	12	56	111
2471.01.024	M24	34	5.5	15	81	151



2471.31.



Material:

Sleeve: Nirosta 1.4305

Ball: Nirosta hardened

Spring: Nirosta

Note:

For locking and for pressing upwards or downwards.

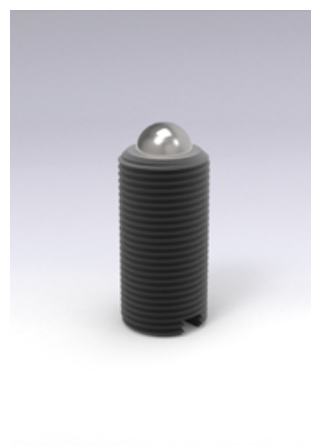
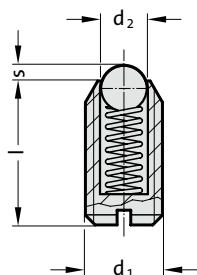
Temperature operating range: max. 250°C

2471.31. Spring plunger, with spring loaded ball, with slot, standard spring force

Order No	d ₁	l	s	d ₂	Spring force [N]	
					initial	final
2471.31.003	M3	7	0.4	1.5	3	4.5
2471.31.004	M4	9	0.8	2.5	8.5	14
2471.31.005	M5	12	0.9	3	8	14
2471.31.006	M6	14	1	3.5	11	18
2471.31.008	M8	16	1.5	4.5	18	31
2471.31.010	M10	19	2	6	24	45
2471.31.012	M12	22	2.5	8	26	49
2471.31.016	M16	24	3.5	10	41	86
2471.31.020	M20	30	4.5	12	56	111
2471.31.024	M24	34	5.5	15	81	151

SPRING PLUNGER, WITH SPRING LOADED BALL, WITH SLOT, INCREASED SPRING FORCE

2471.02.



2471.02. Spring plunger, with spring loaded ball, with slot, increased spring force

Order No	d ₁	l	s	d ₂	Spring force [N]	
					initial	final
2471.02.005	M5	12	0.9	3	15	22
2471.02.006	M6	14	1	3.5	19	28
2471.02.008	M8	16	1.5	4.5	36	62
2471.02.010	M10	19	2	6	57	104
2471.02.012	M12	22	2.5	8	61	110
2471.02.016	M16	24	3.5	10	68	142
2471.02.020	M20	30	4.5	12	84	166
2471.02.024	M24	34	5.5	15	127	237

Material:

Sleeve: Free machining steel, burnished

Ball: Hardened ball bearing steel

Spring: Nirosta

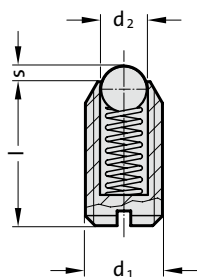
Note:

For locking and for pressing upwards or downwards.

Temperature operating range: max. 250°C

Identification of increased spring force by two longitudinal marks on the sleeve.

2471.32.



2471.32. Spring plunger, with spring loaded ball, with slot, increased spring force

Order No	d ₁	l	s	d ₂	Spring force [N]	
					initial	final
2471.32.005	M5	12	0.9	3	15	22
2471.32.006	M6	14	1	3.5	19	28
2471.32.008	M8	16	1.5	4.5	36	62
2471.32.010	M10	19	2	6	57	104
2471.32.012	M12	22	2.5	8	61	110
2471.32.016	M16	24	3.5	10	68	142
2471.32.020	M20	30	4.5	12	84	166
2471.32.024	M24	34	5.5	15	127	237

Material:

Sleeve: Nirosta 1.4305

Ball: Nirosta hardened

Spring: Nirosta

Note:

For locking and for pressing upwards or downwards.

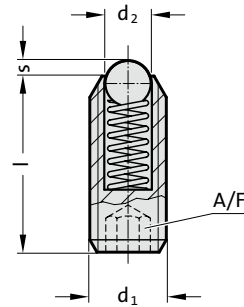
Temperature operating range: max. 250°C

Identification of increased spring force by two longitudinal marks on the sleeve.

SPRING PLUNGER, WITH SPRING LOADED BALL, WITH HEXAGON SOCKET, STANDARD SPRING FORCE



2471.03.



Material:

Sleeve: Free machining steel, burnished

Ball: Hardened ball bearing steel

Spring: Nirosta

Note:

For locking and for pressing upwards or downwards.

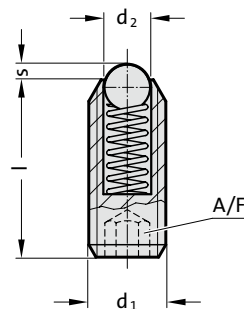
Temperature operating range: max. 250°C

2471.03. Spring plunger, with spring loaded ball, with hexagon socket, standard spring force

Order No	d ₁	d ₂	SW	l	s	Spring force [N]	
						initial	final
2471.03.003	M3	1.5	1.5	8	0.4	3	4.5
2471.03.004	M4	2.5	2	12	0.8	8.5	14
2471.03.005	M5	3	2.5	14	0.9	8	14
2471.03.006	M6	3.5	3	15	1	11	18
2471.03.008	M8	4.5	4	18	1.5	18	31
2471.03.010	M10	6	5	23	2	24	45
2471.03.012	M12	8	6	26	2.5	26	49
2471.03.016	M16	10	8	33	3.5	41	86
2471.03.020	M20	12	10	43	4.5	56	111
2471.03.024	M24	15	12	48	5.5	81	151



2471.33.



Material:

Sleeve: Nirosta 1.4305

Ball: Nirosta hardened

Spring: Nirosta

Note:

For locking and for pressing upwards or downwards.

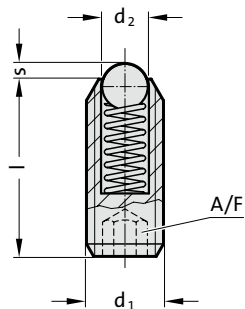
Temperature operating range: max. 250°C

2471.33. Spring plunger, with spring loaded ball, with hexagon socket, standard spring force

Order No	d ₁	d ₂	SW	l	s	Spring force [N]	
						initial	final
2471.03.003	M3	1.5	1.5	8	0.4	3	4.5
2471.03.004	M4	2.5	2	12	0.8	8.5	14
2471.03.005	M5	3	2.5	14	0.9	8	14
2471.03.006	M6	3.5	3	15	1	11	18
2471.03.008	M8	4.5	4	18	1.5	18	31
2471.03.010	M10	6	5	23	2	24	45
2471.03.012	M12	8	6	26	2.5	26	49
2471.03.016	M16	10	8	33	3.5	41	86
2471.03.020	M20	12	10	43	4.5	56	111
2471.03.024	M24	15	12	48	5.5	81	151

SPRING PLUNGER, WITH SPRING LOADED BALL, WITH HEXAGON SOCKET, INCREASED SPRING FORCE

2471.04.



2471.04. Spring plunger, with spring loaded ball, with hexagon socket, increased spring force

Order No	d ₁	d ₂	SW	l	s	Spring force [N]	
						initial	final
2471.04.005	M5	3	2.5	14	0.9	15	22
2471.04.006	M6	3.5	3	15	1	19	28
2471.04.008	M8	4.5	4	18	1.5	36	62
2471.04.010	M10	6	5	23	2	57	104
2471.04.012	M12	8	6	26	2.5	61	110
2471.04.016	M16	10	8	33	3.5	68	142
2471.04.020	M20	12	10	43	4.5	84	166
2471.04.024	M24	15	12	48	5.5	127	237

Material:

Sleeve: Free machining steel, burnished

Ball: Hardened ball bearing steel

Spring: Nirosta

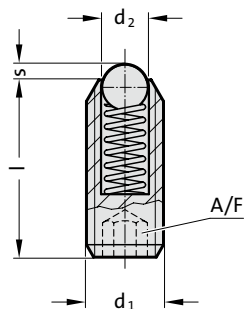
Note:

For locking and for pressing upwards or downwards.

Temperature operating range: max. 250°C

Identification of increased spring force by two longitudinal marks on the sleeve.

2471.34.



2471.34. Spring plunger, with spring loaded ball, with hexagon socket, increased spring force

Order No	d ₁	d ₂	SW	l	s	Spring force [N]	
						initial	final
2471.04.005	M5	3	2.5	14	0.9	15	22
2471.04.006	M6	3.5	3	15	1	19	28
2471.04.008	M8	4.5	4	18	1.5	36	62
2471.04.010	M10	6	5	23	2	57	104
2471.04.012	M12	8	6	26	2.5	61	110
2471.04.016	M16	10	8	33	3.5	68	142
2471.04.020	M20	12	10	43	4.5	84	166
2471.04.024	M24	15	12	48	5.5	127	237

Material:

Sleeve: Nirosta 1.4305

Ball: Nirosta hardened

Spring: Nirosta

Note:

For locking and for pressing upwards or downwards.

Temperature operating range: max. 250°C

Identification of increased spring force by two longitudinal marks on the sleeve.

SPRING PLUNGER, WITH SPRING LOADED BALL, WITH SLOT, STANDARD SPRING FORCE



Material:

Sleeve: Delrin blue (POM)

Ball: Delrin white (POM)

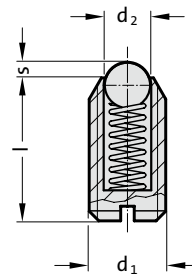
Spring: Nirosta

Note:

For locking and for pressing upwards or downwards.

Temperature operating range: -30°C up to 50°C

2471.05.



2471.05. Spring plunger, with spring loaded ball, with slot, standard spring force

Order No	d ₁	l	s	d ₂	Spring force [N]	
					initial	final
2471.05.006	M6	14	0.9	3.5	12	17
2471.05.008	M8	16	1.5	5	20	35
2471.05.010	M10	19	1.9	6	25	45



Material:

Sleeve: Delrin blue (POM)

Ball: Nirosta hardened (POM)

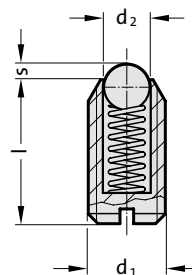
Spring: Nirosta

Note:

For locking and for pressing upwards or downwards.

Temperature operating range: -30°C up to 50°C

2471.35.

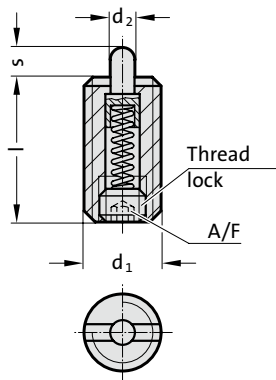


2471.35. Spring plunger, with spring loaded ball, with slot, standard spring force

Order No	d ₁	l	s	d ₂	Spring force [N]	
					initial	final
2471.35.006	M6	14	0.9	3.5	12	17
2471.35.008	M8	16	1.5	5	20	35
2471.35.010	M10	19	1.9	6	25	45

SPRING PLUNGER, WITH SPRING LOADED PIN, WITH SLOT, STANDARD SPRING FORCE

2472.01.



2472.01. Spring plunger, with spring loaded pin, with slot, standard spring force

Order No	d ₁	d ₂	l	s	SW	Spring force [N]	
						initial	final
2472.01.003	M3	1	12	1	0.7	2	4
2472.01.004	M4	1.5	15	1.5	1.3	4.5	16
2472.01.005	M5	2.4	18	2.3	1.5	6	19
2472.01.006	M6	2.7	20	2.5	2	6	19
2472.01.008	M8	3.5	22	3	2.5	10	39
2472.01.010	M10	4	22	3	3	10	39
2472.01.012	M12	6	28	4	4	12	53
2472.01.016	M16	7.5	32	5	5	45	100
2472.01.020	M20	10	40	7	6	52	125
2472.01.024	M24	12	52	10	8	70	170

Material:

Sleeve: Free machining steel, burnished

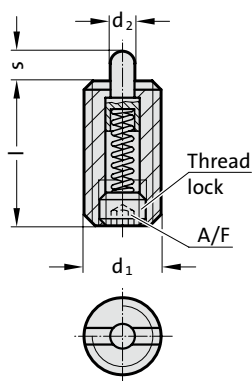
Pin: Free machining steel hardened, burnished

Spring: Nirosta

Note:

For locking and for pressing upwards or downwards. Removable with hexagon socket screw key or slotted screwdriver.

2472.31.



2472.31. Spring plunger, with spring loaded pin, with slot, standard spring force

Order No	d ₁	d ₂	l	s	SW	Spring force [N]	
						initial	final
2472.31.004	M4	1.5	15	1.5	1.3	4.5	16
2472.31.005	M5	2.4	18	2.3	1.5	6	19
2472.31.006	M6	2.7	20	2.5	2	6	19
2472.31.008	M8	3.5	22	3	2.5	10	39
2472.31.010	M10	4	22	3	3	10	39
2472.31.012	M12	6	28	4	4	12	53
2472.31.016	M16	7.5	32	5	5	45	100
2472.31.020	M20	10	40	7	6	52	125

Material:

Sleeve: Inox 1.4305

Pin: Inox 1.4305

Spring: Nirosta

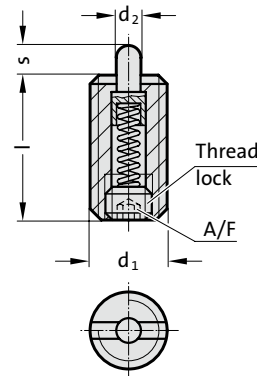
Note:

For locking and for pressing upwards or downwards. Removable with hexagon socket screw key or slotted screwdriver.

SPRING PLUNGER, WITH SPRING LOADED PIN, WITH SLOT, STANDARD SPRING FORCE



2472.21.



Material:

Sleeve: Delrin blue (POM)

Ball: Delrin white (POM)

Spring: Nirosta

Note:

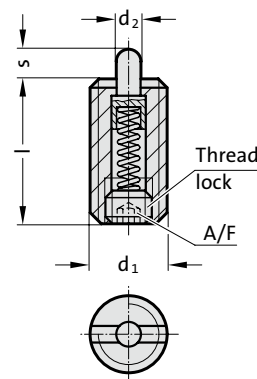
For locking and for pressing upwards or downwards. Removable with hexagon socket screw key or slotted screwdriver.

2472.21. Spring plunger, with spring loaded pin, with slot, standard spring force

Order No	d ₁	d ₂	l	s	SW	Spring force [N]	
						initial	final
2472.21.004	M4	1.5	15	1.5	1.3	4.5	16
2472.21.005	M5	2.4	18	2.3	1.5	6	19
2472.21.006	M6	2.7	20	2.5	2	6	19
2472.21.008	M8	3.5	22	3	2.5	10	39
2472.21.010	M10	4	22	3	3	10	39
2472.21.012	M12	6	28	4	4	12	53
2472.21.016	M16	7.5	32	5	5	45	100



2472.22.



Material:

Sleeve: Delrin blue (POM)

Ball: Nirosta hardened (POM)

Spring: Nirosta

Note:

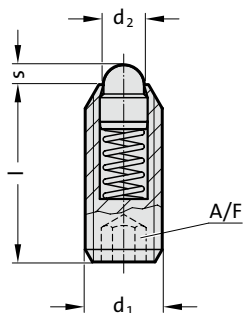
For locking and for pressing upwards or downwards. Removable with hexagon socket screw key or slotted screwdriver.

2472.22. Spring plunger, with spring loaded pin, with slot, standard spring force

Order No	d ₁	d ₂	l	s	SW	Spring force [N]	
						initial	final
2472.22.004	M4	1.5	15	1.5	1.3	4.5	16
2472.22.005	M5	2.4	18	2.3	1.5	6	19
2472.22.006	M6	2.7	20	2.5	2	6	19
2472.22.008	M8	3.5	22	3	2.5	10	39
2472.22.010	M10	4	22	3	3	10	39
2472.22.012	M12	6	28	4	4	12	53
2472.22.016	M16	7.5	32	5	5	45	100

SPRING PLUNGER, WITH SPRING LOADED PIN, WITH HEXAGON SOCKET, STANDARD SPRING FORCE

2472.03.



2472.03. Spring plunger, with spring loaded pin, with hexagon socket, standard spring force

Order No	d ₁	d ₂	l	s	SW	Spring force [N]	
						initial	final
2472.03.004	M4	1.8	12	1.5	2	4.5	12.5
2472.03.005	M5	2.4	14	2	2.5	5	13
2472.03.006	M6	2.7	15	2	3	6	17
2472.03.008	M8	3.8	18	2	4	16	33
2472.03.010	M10	4.5	23	2.5	5	19	42
2472.03.012	M12	6	26	3.5	6	22	57
2472.03.016	M16	8.5	33	4.5	8	38	78
2472.03.020	M20	10	43	6.5	10	39	81
2472.03.024	M24	13	48	8	12	72	155

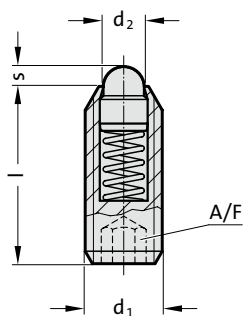
Material:

Sleeve: Free machining steel, burnished
Pin: Free machining steel hardened, burnished
Spring: Nirosta

Note:

For locking and for pressing upwards or downwards.
Temperature operating range: max. 250°C

2472.33.



2472.33. Spring plunger, with spring loaded pin, with hexagon socket, standard spring force

Order No	d ₁	d ₂	l	s	SW	Spring force [N]	
						initial	final
2472.33.004	M4	1.8	12	1.5	2	4.5	12.5
2472.33.005	M5	2.4	14	2	2.5	5	13
2472.33.006	M6	2.7	15	2	3	6	17
2472.33.008	M8	3.8	18	2	4	16	33
2472.33.010	M10	4.5	23	2.5	5	19	42
2472.33.012	M12	6	26	3.5	6	22	57
2472.33.016	M16	8.5	33	4.5	8	38	78
2472.33.020	M20	10	43	6.5	10	39	81
2472.33.024	M24	13	48	8	12	72	155

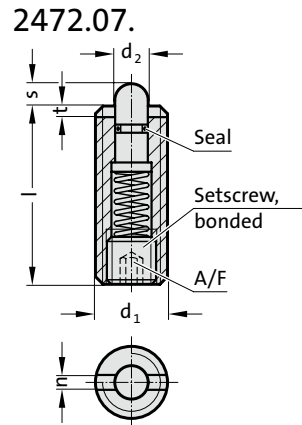
Material:

Sleeve: Inox 1.4305
Pin: Inox 1.4305
Spring: Nirosta

Note:

For locking and for pressing upwards or downwards.
Temperature operating range: max. 250°C

SPRING PLUNGER, WITH SPRING LOADED PIN AND SEAL, WITH HEXAGON SOCKET, STANDARD SPRING FORCE



Material:

Sleeve: Free machining steel, burnished

Pin: Free machining steel hardened, burnished

Spring: Nirosta

Note:

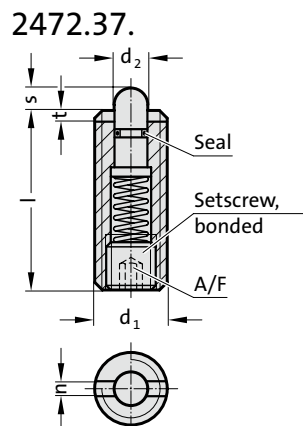
For locking and for pressing upwards or downwards. The seal prevents the ingress of liquids into the forcing pin. Assembly and dismantling using hexagon socket key and slotted screwdriver.

Temperature operating range: -30°C up to 80°C

2472.07.

Spring plunger, with spring loaded pin and seal, with hexagon socket, standard spring force

Order No	d ₁	d ₂	l	n	s	t	SW	Spring force [N]	
								initial	final
2472.07.008	M8	3.8	26	1.5	3	1.4	2.5	9	24
2472.07.010	M10	4	28	1.5	3.5	1.4	3	15	30
2472.07.012	M12	6	35	2.7	4	2	4	24	50
2472.07.016	M16	7.5	40	3.2	5	2.5	5	36	58



Material:

Sleeve: Inox 1.4305

Pin: Inox 1.4305

Spring: Nirosta

Note:

For locking and for pressing upwards or downwards. The seal prevents the ingress of liquids into the forcing pin. Assembly and dismantling using hexagon socket key and slotted screwdriver.

Temperature operating range: -30°C up to 80°C

2472.37.

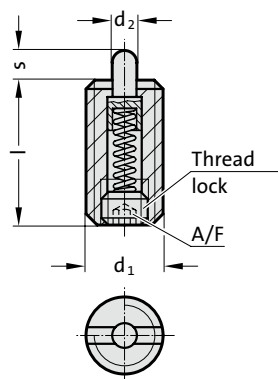
Spring plunger, with spring loaded pin and seal, with hexagon socket, standard spring force

Order No	d ₁	d ₂	l	n	s	t	SW	Spring force [N]	
								initial	final
2472.37.008	M8	3.8	26	1.5	3	1.4	2.5	9	24
2472.37.010	M10	4	28	1.5	3.5	1.4	3	15	30
2472.37.012	M12	6	35	2.7	4	2	4	24	50
2472.37.016	M16	7.5	40	3.2	5	2.5	5	36	58

SPRING PLUNGER, WITH SPRING LOADED PIN, WITH SLOT, INCREASED SPRING FORCE

SPRING PLUNGER, WITH SPRING LOADED PIN AND SEAL, WITH HEXAGON SOCKET, INCREASED SPRING FORCE

2472.02.



2472.02. Spring plunger, with spring loaded pin, with slot, increased spring force

Order No	d ₁	d ₂	SW	l	s	Spring force [N]	
						initial	final
2472.02.005	M5	2.4	1.5	18	2.3	11	40
2472.02.006	M6	2.7	2	20	2.5	15	43
2472.02.008	M8	3.5	2.5	22	3	20	75
2472.02.010	M10	4	3	22	3	20	75
2472.02.012	M12	6	4	28	4	45	120
2472.02.016	M16	7.5	5	32	5	64	160
2472.02.020	M20	10	6	40	7	75	195
2472.02.024	M24	12	8	52	10	75	245

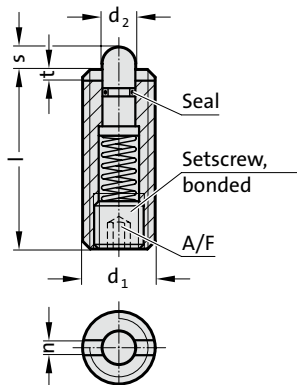
Material:

Sleeve: Free machining steel, burnished
Pin: Free machining steel hardened, burnished
Spring: Nirosta

Note:

For locking and for pressing upwards or downwards. Removable with hexagon socket screw key or slotted screwdriver.
Identification of increased spring force by two longitudinal marks on the sleeve.

2472.08.



2472.08. Spring plunger, with spring loaded pin and seal, with hexagon socket, increased spring force

Order No	d ₁	d ₂	l	n	s	t	SW	Spring force [N]	
								initial	final
2472.08.008	M8	3.8	26	1.5	3	1.4	2.5	17	39
2472.08.010	M10	4	28	1.5	3.5	1.4	3	22	43
2472.08.012	M12	6	35	2.7	4	2	4	40	80
2472.08.016	M16	7.5	40	3.2	5	2.5	5	44	113

Material:

Sleeve: Free machining steel, burnished
Pin: Free machining steel hardened, burnished
Spring: Nirosta

Note:

For locking and for pressing upwards or downwards. The seal prevents the ingress of liquids into the forcing pin. Assembly and dismantling using hexagon socket key and slotted screwdriver.
Temperature operating range: -30°C up to 80°C
Identification of increased spring force by two longitudinal marks on the sleeve.

SPRING PLUNGER, WITH SPRING LOADED PIN, WITH HEXAGON SOCKET, INCREASED SPRING FORCE



Material:

Sleeve: Free machining steel, burnished

Pin: Free machining steel hardened, burnished

Spring: Nirosta

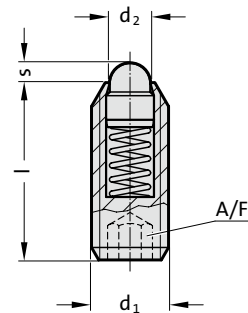
Note:

For locking and for pressing upwards or downwards.

Temperature operating range: max. 250°C

Identification of increased spring force by two longitudinal marks on the sleeve.

2472.04.



2472.04. Spring plunger, with spring loaded pin, with hexagon socket, increased spring force

Order No	d ₁	d ₂	l	s	SW	Spring force [N]	
						initial	final
2472.04.006	M6	2.7	15	2	3	11	25
2472.04.008	M8	3.8	18	2	4	23	59
2472.04.010	M10	4.5	23	2.5	5	20	54
2472.04.012	M12	6	26	3.5	6	38	96
2472.04.016	M16	8.5	33	4.5	8	50	100
2472.04.020	M20	10	43	6.5	10	52	133
2472.04.024	M24	13	48	8	12	91	223



Material:

Sleeve: Inox 1.4305

Pin: Inox 1.4305

Spring: Nirosta

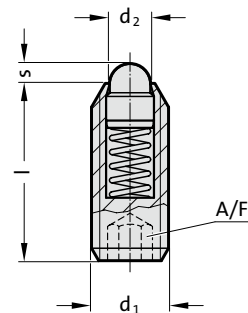
Note:

For locking and for pressing upwards or downwards.

Temperature operating range: max. 250°C

Identification of increased spring force by two longitudinal marks on the sleeve.

2472.34.

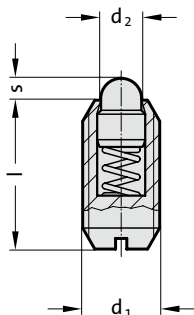


2472.34. Spring plunger, with spring loaded pin, with hexagon socket, increased spring force

Order No	d ₁	d ₂	l	s	SW	Spring force [N]	
						initial	final
2472.04.006	M6	2.7	15	2	3	11	25
2472.04.008	M8	3.8	18	2	4	23	59
2472.04.010	M10	4.5	23	2.5	5	20	54
2472.04.012	M12	6	26	3.5	6	38	96
2472.04.016	M16	8.5	33	4.5	8	50	100
2472.04.020	M20	10	43	6.5	10	52	133
2472.04.024	M24	13	48	8	12	91	223

SPRING PLUNGER, WITH SPRING LOADED PIN, WITH SLOT, STANDARD SPRING FORCE

2472.05.



2472.05. Spring plunger, with spring loaded pin, with slot, standard spring force

Order No	d ₁	d ₂	l	s	Spring force [N]	
					initial	final
2472.05.004	4	1.8	9	1.5	4.5	12.5
2472.05.005	5	2.4	12	2	5	13
2472.05.006	6	2.7	14	2	6	17
2472.05.008	8	3.8	16	2	16	33
2472.05.010	10	4.5	19	2.5	19	42
2472.05.012	12	6.2	22	3.5	22	57
2472.05.016	16	8.5	24	4.5	38	78
2472.05.020	20	10	30	6.5	39	81
2472.05.024	24	13	34	8	72	155

Material:

Sleeve: Free machining steel, burnished

Pin: Free machining steel hardened, burnished

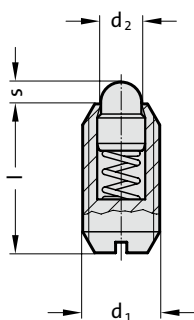
Spring: Nirosta

Note:

For locking and for pressing upwards or downwards.

Temperature operating range: max. 250°C

2472.35.



2472.35. Spring plunger, with spring loaded pin, with slot, standard spring force

Order No	d ₁	d ₂	l	s	Spring force [N]	
					initial	final
2472.35.004	4	1.8	9	1.5	4.5	12.5
2472.35.005	5	2.4	12	2	5	13
2472.35.006	6	2.7	14	2	6	17
2472.35.008	8	3.8	16	2	16	33
2472.35.010	10	4.5	19	2.5	19	42
2472.35.012	12	6.2	22	3.5	22	57
2472.35.016	16	8.5	24	4.5	38	78
2472.35.020	20	10	30	6.5	39	81
2472.35.024	24	13	34	8	72	155

Material:

Sleeve: Inox 1.4305

Pin: Inox 1.4305

Spring: Nirosta

Note:

For locking and for pressing upwards or downwards.

Temperature operating range: max. 250°C

SPRING PLUNGER, WITH SPRING LOADED PIN, WITH SLOT, INCREASED SPRING FORCE



Material:

Sleeve: Free machining steel, burnished

Pin: Free machining steel hardened, burnished

Spring: Nirosta

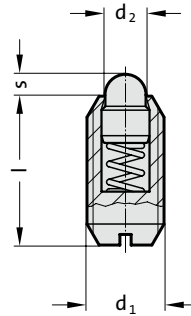
Note:

For locking and for pressing upwards or downwards.

Temperature operating range: max. 250°C

Identification of increased spring force by two longitudinal marks on the sleeve.

2472.06.



2472.06. Spring plunger, with spring loaded pin, with slot, increased spring force

Order No	d ₁	d ₂	l	s	Spring force [N]	
					initial	final
2472.06.006	M6	2.7	14	2	11	25
2472.06.008	M8	3.8	16	2	23	59
2472.06.010	M10	4.5	19	2.5	20	54
2472.06.012	M12	6.2	22	3.5	38	96
2472.06.016	M16	8.5	24	4.5	50	100
2472.06.020	M20	10	30	6.5	52	133
2472.06.024	M24	13	34	8	91	223



Material:

Sleeve: Inox 1.4305

Pin: Inox 1.4305

Spring: Nirosta

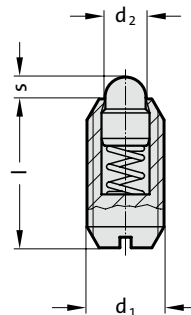
Note:

For locking and for pressing upwards or downwards.

Temperature operating range: max. 250°C

Identification of increased spring force by two longitudinal marks on the sleeve.

2472.36.

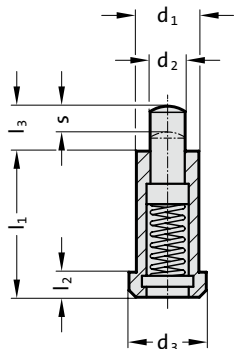


2472.36. Spring plunger, with spring loaded pin, with slot, increased spring force

Order No	d ₁	d ₂	l	s	Spring force [N]	
					initial	final
2472.36.006	M6	2.7	14	2	11	25
2472.36.008	M8	3.8	16	2	23	59
2472.36.010	M10	4.5	19	2.5	20	54
2472.36.012	M12	6.2	22	3.5	38	96
2472.36.016	M16	8.5	24	4.5	50	100
2472.36.020	M20	10	30	6.5	52	133
2472.36.024	M24	13	34	8	91	223

**SPRING PLUNGER, WITH SPRING LOADED PIN, STRAIGHT VERSION,
WITH COLLAR**
SPRING PLUNGER, WITH SPRING LOADED BALL, STRAIGHT VERSION

2473.01.



**2473.01. Spring plunger, with spring loaded pin,
straight version, with collar**

Order No	d ₁	d ₂	d ₃	l ₁	l ₂	l ₃	s	Spring force [N]	
								initial	final
2473.01.006	6	2.7	8	20	3.2	6	3.5	10	22
2473.01.008	8	3.9	10	24	3.2	8	4.5	30	88
2473.01.010	10	5.9	13	30	4	10	5.5	42	110
2473.01.012	12	7.9	16	36	5	12	6.5	50	130

Material:

Sleeve: Free machining steel, burnished

Pin: Steel, case hardened, burnished

Spring: Nirosta

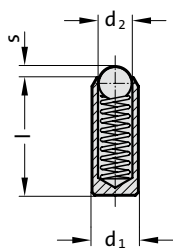
Note:

For use in toolmaking as forcing pins and spring loaded limit stops.

Neither the threaded cartridge nor any of its components can escape from the mounting.

Temperature operating range: max. 250 °C

2473.02.



**2473.02. Spring plunger, with spring loaded ball,
straight version**

Order No	d ₁	d ₂	l	s	Spring force [N]	
					initial	final
2473.02.030	3	2	7	0.65	4.5	7.5
2473.02.035	3.5	2.5	9	0.8	6	14.5
2473.02.040	4	3	11	0.9	8	14
2473.02.045	4.5	3.2	12	0.95	9.5	16.5
2473.02.050	5	3.5	13	1	11	18
2473.02.055	5.5	4	14	1.2	15.5	25
2473.02.060	6	4.5	15	1.5	18	31

Material:

Sleeve: Nirosta 1.4305

Ball: Nirosta hardened

Spring: Nirosta

Note:

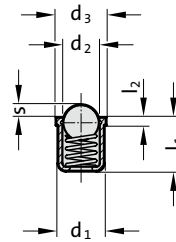
For locking and for pressing upwards or downwards.

Temperature operating range: max. 250 °C

SPRING PLUNGER, WITH SPRING LOADED BALL, STRAIGHT VERSION, WITH COLLAR



2475.01.



Material:

Sleeve: Delrin blue (POM)

Ball: Delrin white (POM)

Spring: Nirosta

Note:

For locking and for pressing upwards or downwards.

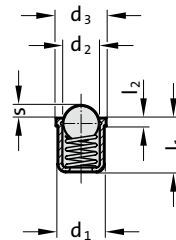
Temperature operating range: -30°C to +50°C

2475.01. Spring plunger, with spring loaded ball, straight version, with collar

Order No	d ₁	d ₂	d ₃	l ₁	l ₂	s	Spring force [N]	
							initial	final
2475.01.004	4	3	4.6	5	1	0.8	2.5	6.5
2475.01.005	5	4	5.6	6	1	1	6	9.4
2475.01.006	6	5	6.5	7	1	1.6	6.5	13
2475.01.008	8	6.5	8.5	9	1	1.9	8	18
2475.01.010	10	8	11	13.5	1.5	2.4	12	23
2475.01.012	12	10	13	16	1.5	3.3	13	25



2475.02.



Material:

Sleeve: Nirosta 1.4305

Ball: Nirosta hardened

Spring: Nirosta

Note:

For locking and for pressing upwards or downwards.

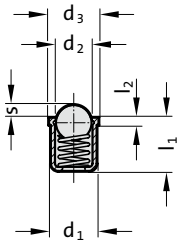
Temperature operating range: -30°C to +50°C

2475.02. Spring plunger, with spring loaded ball, straight version, with collar

Order No	d ₁	d ₂	d ₃	l ₁	l ₂	s	Spring force [N]	
							initial	final
2475.02.004	4	3	4.6	5	1	0.8	2.5	6.5
2475.02.005	5	4	5.6	6	1	1	6	9.4
2475.02.006	6	5	6.5	7	1	1.6	6.5	13
2475.02.008	8	6.5	8.5	9	1	1.9	8	18
2475.02.010	10	8	11	13.5	1.5	2.4	12	23
2475.02.012	12	10	13	16	1.5	3.3	13	25

SPRING PLUNGER, WITH SPRING LOADED BALL, STRAIGHT VERSION, WITH COLLAR

2475.03.



2475.03. Spring plunger, with spring loaded ball, straight version, with collar

Order No	d ₁	d ₂	d ₃	l ₁	l ₂	s	Spring force [N]	
							initial	final
2475.03.004	4	3	4.5	5	1	0.8	3	6
2475.03.005	5	4	5.5	6	1	1	4	6.5
2475.03.006	6	5	6.5	7	1	1.6	6	11.5
2475.03.008	8	6.5	8.5	9	1	1.9	8	12.5

Material:

Sleeve: Brass

Ball: Nirosta hardened

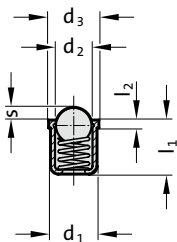
Spring: Nirosta

Note:

For locking and for pressing upwards or downwards.

Temperature operating range: max. 250°C

2475.04.



2475.04. Spring plunger, with spring loaded ball, straight version, with collar

Order No	d ₁	d ₂	d ₃	l ₁	l ₂	s	Spring force [N]	
							initial	final
2475.04.004	4	3	4.6	5	0.9	1	2.5	6
2475.04.005	5	4	5.6	6	0.9	1.4	3	6.5
2475.04.006	6	5	6.5	7	1	1.8	5.5	11.5
2475.04.008	8	6.5	8.5	9	1.1	2.4	7	12.5
2475.04.010	10	8.5	11	13.5	1.7	3.3	8.5	18.5
2475.04.012	12	10	13	16	2.3	4	12	26.5

Material:

Sleeve: Nirosta 1.4303

Ball: Nirosta hardened

Spring: Nirosta

Note:

For locking and for pressing upwards or downwards.

Temperature operating range: max. 250°C

ACCESSORIES FOR SPRING PLUNGERS



2470.10.11
Lock wrench
for 2470.10./20.



2470.12.010.017
Lock wrench
for 2479. and 3479.



2472.11.
Lock wrench
for 2472.01./02.

Order No for thread

2472.11.003.1	M3
2472.11.004.1	M4
2472.11.005.1	M5
2472.11.006.1	M6
2472.11.008.1	M8
2472.11.010.1	M10
2472.11.012.1	M12
2472.11.016.1	M16
2472.11.020.1	M20
2472.11.024	M24