

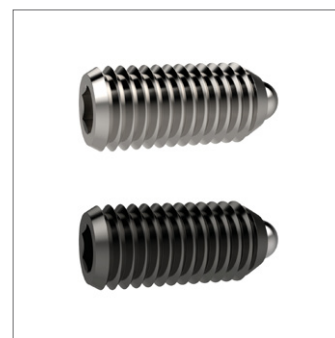
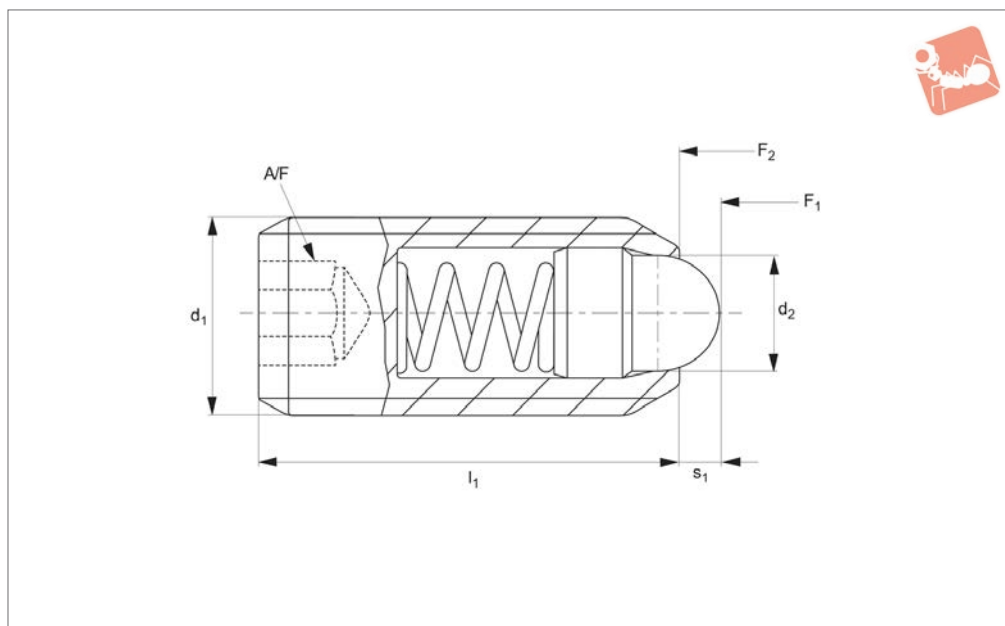


# Spring Plungers

with round-ended pin & hex. socket



## Spring Plunger & Detent Pins



**31600**

SPRING PLUNGER & DETENT PINS

### 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.

Order No.	Material	Spring load	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	Spring load F <sub>1</sub> N ≈	Spring load F <sub>2</sub> N ≈	Stroke s <sub>1</sub>	A/F	Weight g
31600.W0104	Steel	Normal	M 4	1.8	12	4.5	12.5	1.5	2.0	0.6
31600.W0105	Steel	Normal	M 5	2.4	14	5.0	13.0	2.0	2.5	1.3
31600.W0106	Steel	Normal	M 6	2.7	15	6.0	17.0	2.0	3.0	1.9
31600.W0108	Steel	Normal	M 8	3.8	18	16.0	33.0	2.0	4.0	4.2
31600.W0110	Steel	Normal	M10	4.5	23	19.0	42.0	2.5	5.0	8.5
31600.W0112	Steel	Normal	M12	6.2	26	22.0	57.0	3.5	6.0	13.0
31600.W0116	Steel	Normal	M16	8.5	33	38.0	78.0	4.5	8.0	32.0
31600.W0120	Steel	Normal	M20	10.0	43	39.0	81.0	6.5	10.0	67.0
31600.W0124	Steel	Normal	M24	13.0	48	72.0	155.0	8.0	12.0	106.0
31600.W0146	Steel	Increased	M 6	2.7	15	11.0	25.0	2.0	3.0	2.0
31600.W0148	Steel	Increased	M 8	3.8	18	23.0	59.0	2.0	4.0	4.2
31600.W0150	Steel	Increased	M10	4.5	23	20.0	54.0	2.5	5.0	8.5
31600.W0152	Steel	Increased	M12	6.2	26	38.0	96.0	3.5	6.0	13.0
31600.W0156	Steel	Increased	M16	8.5	33	50.0	100.0	4.5	8.0	32.0
31600.W0160	Steel	Increased	M20	10.0	43	52.0	133.0	6.5	10.0	67.0
31600.W0164	Steel	Increased	M24	13.0	48	91.0	223.0	8.0	12.0	106.0
31600.W0304	Stainless	Normal	M 4	1.8	12	4.5	12.5	1.5	2.0	0.6
31600.W0305	Stainless	Normal	M 5	2.4	14	5.0	13.0	2.0	2.5	1.3
31600.W0306	Stainless	Normal	M 6	2.7	15	6.0	17.0	2.0	3.0	1.9
31600.W0308	Stainless	Normal	M 8	3.8	18	16.0	33.0	2.0	4.0	4.2
31600.W0310	Stainless	Normal	M10	4.5	23	19.0	42.0	2.5	5.0	8.5
31600.W0312	Stainless	Normal	M12	6.2	26	22.0	57.0	3.5	6.0	13.0
31600.W0316	Stainless	Normal	M16	8.5	33	38.0	78.0	4.5	8.0	32.0
31600.W0320	Stainless	Normal	M20	10.0	43	39.0	81.0	6.5	10.0	67.0
31600.W0324	Stainless	Normal	M24	13.0	48	72.0	155.0	8.0	12.0	106.0
31600.W0346	Stainless	Increased	M 6	2.7	15	11.0	25.0	2.0	3.0	2.0

# Spring Plunger & Detent Pins

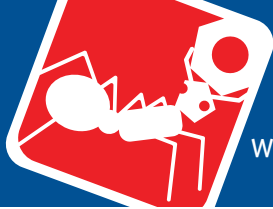


## Spring Plungers with round-ended pin & hex. socket



Order No.	Material	Spring load	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	Spring load F <sub>1</sub> N ≈	Spring load F <sub>2</sub> N ≈	Stroke s <sub>1</sub>	A/F	Weight g
<b>31600.W0348</b>	Stainless	Increased	M 8	3.8	18	23.0	59.0	2.0	4.0	4.2
<b>31600.W0350</b>	Stainless	Increased	M10	4.5	23	20.0	54.0	2.5	5.0	8.5
<b>31600.W0352</b>	Stainless	Increased	M12	6.2	26	38.0	96.0	3.5	6.0	13.0
<b>31600.W0356</b>	Stainless	Increased	M16	8.5	33	50.0	100.0	4.5	8.0	32.0
<b>31600.W0360</b>	Stainless	Increased	M20	10.0	43	52.0	133.0	6.5	10.0	67.0
<b>31600.W0364</b>	Stainless	Increased	M24	13.0	48	91.0	223.0	8.0	12.0	106.0

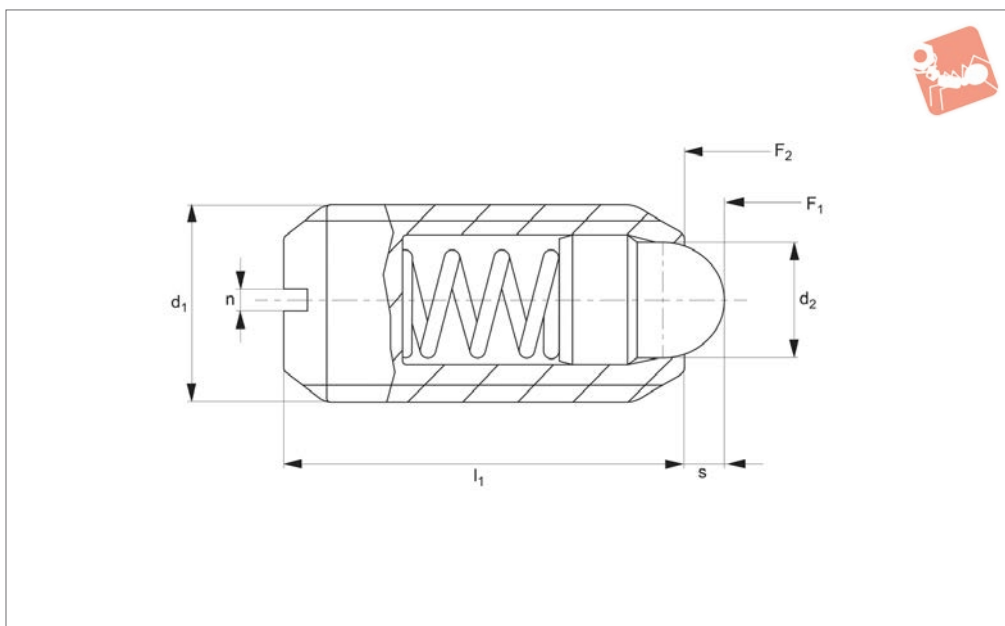
SPRING PLUNGER & DETENT PINS



# Spring Plungers

with round-ended pin & slot - stainless steel or steel

# Spring Plunger & Detent Pins



## 32150

SPRING PLUNGER & DETENT PINS

### 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.

Order No.	Material	Spring load	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	n <sub>1</sub>	s <sub>1</sub>	Spring load F <sub>1</sub> N ≈	Spring load F <sub>2</sub> N ≈	Weight g
32150.W0104	Steel	Normal	M 4	1.8	9	0.6	1.5	4.5	12.5	0.4
32150.W0105	Steel	Normal	M 5	2.4	12	0.8	2.0	5.0	13.0	1.1
32150.W0106	Steel	Normal	M 6	2.7	14	1.0	2.0	6.0	17.0	1.8
32150.W0108	Steel	Normal	M 8	3.8	16	1.2	2.0	16.0	33.0	3.7
32150.W0110	Steel	Normal	M10	4.5	19	1.5	2.5	19.0	42.0	7.1
32150.W0112	Steel	Normal	M12	6.2	22	2.0	3.5	22.0	57.0	11.0
32150.W0116	Steel	Normal	M16	8.5	24	2.0	4.5	38.0	78.0	23.0
32150.W0120	Steel	Normal	M20	10.0	30	2.5	6.5	39.0	81.0	46.0
32150.W0124	Steel	Normal	M24	13.0	34	3.0	8.0	72.0	155.0	73.0
32150.W0306	Steel	Increased	M 6	2.7	14	1.0	2.0	11.0	25.0	1.8
32150.W0308	Steel	Increased	M 8	3.8	16	1.2	2.0	23.0	59.0	3.8
32150.W0310	Steel	Increased	M10	4.5	19	1.5	2.5	20.0	54.0	7.0
32150.W0312	Steel	Increased	M12	6.2	22	2.0	3.5	38.0	96.0	11.0
32150.W0320	Steel	Increased	M20	10.0	30	2.5	6.5	52.0	133.0	46.0
32150.W0324	Steel	Increased	M24	13.0	34	3.0	8.0	91.0	223.0	74.0
32150.W0504	Stainless	Normal	M 4	1.8	9	0.6	1.5	4.5	12.5	0.4
32150.W0505	Stainless	Normal	M 5	2.4	12	0.8	2.0	5.0	13.0	1.1
32150.W0506	Stainless	Normal	M 6	2.7	14	1.0	2.0	6.0	17.0	1.8
32150.W0508	Stainless	Normal	M 8	3.8	16	1.2	2.0	16.0	33.0	3.7
32150.W0510	Stainless	Normal	M10	4.5	19	1.5	2.5	19.0	42.0	7.1
32150.W0512	Stainless	Normal	M12	6.2	22	2.0	3.5	22.0	57.0	11.0
32150.W0516	Stainless	Normal	M16	8.5	24	2.0	4.5	38.0	78.0	23.0
32150.W0520	Stainless	Normal	M20	10.0	30	2.5	6.5	39.0	81.0	46.0
32150.W0524	Stainless	Normal	M24	13.0	34	3.0	8.0	72.0	155.0	73.0
32150.W0706	Stainless	Increased	M 6	2.7	14	1.0	2.0	11.0	25.0	1.8
32150.W0708	Stainless	Increased	M 8	3.8	16	1.2	2.0	23.0	59.0	3.8

# Spring Plunger & Detent Pins



## Spring Plungers with round-ended pin & slot - stainless steel or steel



Order No.	Material	Spring load	$d_1$	$d_2$	$l_1$	$n_1$	$s_1$	Spring load $F_1$ N $\approx$	Spring load $F_2$ N $\approx$	Weight g
<b>32150.W0710</b>	Stainless	Increased	M10	4.5	19	1.5	2.5	20.0	54.0	7.0
<b>32150.W0712</b>	Stainless	Increased	M12	6.2	22	2.0	3.5	38.0	96.0	11.0
<b>32150.W0720</b>	Stainless	Increased	M20	10.0	30	2.5	6.5	52.0	133.0	46.0
<b>32150.W0724</b>	Stainless	Increased	M24	13.0	34	3.0	8.0	91.0	223.0	74.0

SPRING PLUNGER & DETENT PINS

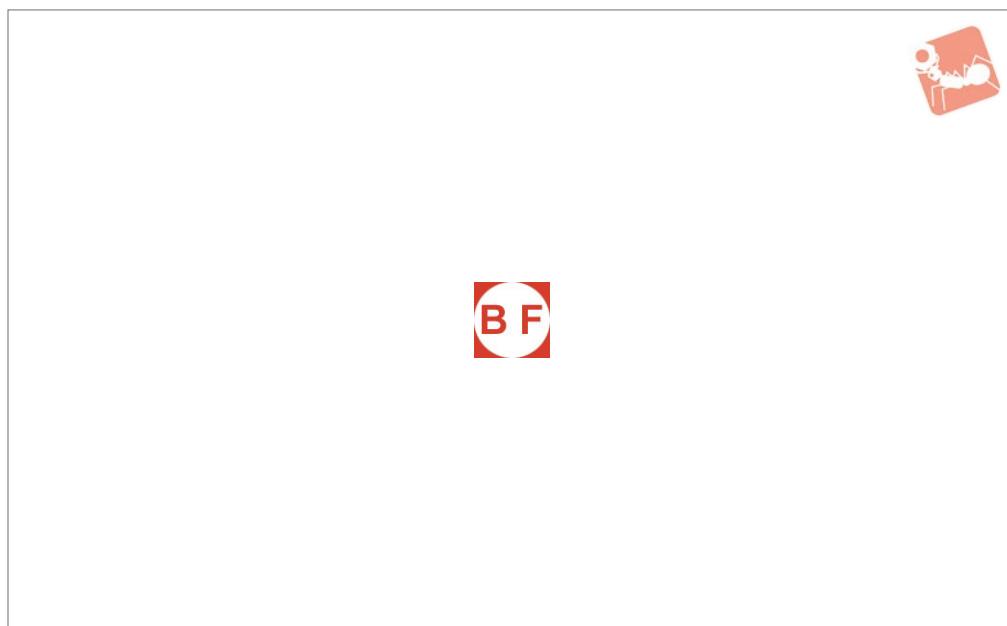


# Spring Plungers

with pin end & hex. socket - stainless steel



## Spring Plunger & Detent Pins



**32200**

SPRING PLUNGER & DETENT PINS

### 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 250°C.  
Steel or stainless with thermoplastic pin, -30°C to +50°C.  
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.**

Order No.	Spring load	Finish	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	s <sub>1</sub>	Spring load F <sub>1</sub> N ≈	Spring load F <sub>2</sub> N ≈	t <sub>1</sub>	w <sub>1</sub>	A/F	Weight g
32200.W0003	Normal	All Steel	M 3	1.0	12	1.0	2.0	4	0.5	0.4	0.7	0.40
32200.W0004	Normal	All Steel	M 4	1.5	15	1.5	4.5	16	0.6	0.6	1.3	0.93
32200.W0005	Normal	All Steel	M 5	2.4	18	2.3	6.0	19	0.8	1.2	1.5	1.70
32200.W0006	Normal	All Steel	M 6	2.7	20	2.5	6.0	19	0.9	1.3	2.0	2.80
32200.W0008	Normal	All Steel	M 8	3.5	22	3.0	10.0	39	1.4	1.5	2.5	5.80
32200.W0010	Normal	All Steel	M10	4.0	22	3.0	10.0	39	1.4	1.5	3.0	9.20
32200.W0012	Normal	All Steel	M12	6.0	28	4.0	12.0	53	2.0	2.7	4.0	16.00
32200.W0016	Normal	All Steel	M16	7.5	32	5.0	45.0	100	2.5	3.2	5.0	35.00
32200.W0020	Normal	All Steel	M20	10.0	40	7.0	52.0	125	3.0	3.7	6.0	68.00
32200.W0024	Normal	All Steel	M24	12.0	52	10.0	70.0	170	3.0	3.7	8.0	131.00
32200.W0105	Increased	All Steel	M 5	2.4	18	2.3	11.0	40	0.8	1.2	1.5	1.60
32200.W0106	Increased	All Steel	M 6	2.7	20	2.5	15.0	43	0.9	1.3	2.0	2.80
32200.W0108	Increased	All Steel	M 8	3.5	22	3.0	20.0	75	1.4	1.5	2.5	5.80
32200.W0110	Increased	All Steel	M10	4.0	22	3.0	20.0	75	1.4	1.5	3.0	9.30
32200.W0112	Increased	All Steel	M12	6.0	28	4.0	45.0	120	2.0	2.7	4.0	16.00
32200.W0116	Increased	All Steel	M16	7.5	32	5.0	64.0	160	2.5	3.2	5.0	33.00
32200.W0120	Increased	All Steel	M20	10.0	40	7.0	75.0	195	3.0	3.7	6.0	67.00
32200.W0124	Increased	All Steel	M24	12.0	52	10.0	75.0	245	3.0	3.7	8.0	129.00
32200.W0204	Normal	Steel, Thermo Pin	M 4	1.5	15	1.5	4.5	16	0.6	0.6	1.3	0.86
32200.W0205	Normal	Steel, Thermo Pin	M 5	2.4	18	2.3	6.0	19	0.8	1.2	1.5	1.50
32200.W0206	Normal	Steel, Thermo Pin	M 6	2.7	20	2.5	6.0	19	0.9	1.3	2.0	2.30
32200.W0208	Normal	Steel, Thermo Pin	M 8	3.5	22	3.0	10.0	39	1.4	1.5	2.5	5.10



Order No.	Spring load	Finish	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	s <sub>1</sub>	Spring load F <sub>1</sub> N ≈	Spring load F <sub>2</sub> N ≈	t <sub>1</sub>	w <sub>1</sub>	A/F	Weight g
<b>32200.W0210</b>	Normal	Steel, Thermo Pin	M10	4.0	22	3.0	10.0	39	1.4	1.5	3.0	8.10
<b>32200.W0212</b>	Normal	Steel, Thermo Pin	M12	6.0	28	4.0	12.0	53	2.0	2.7	4.0	14.00
<b>32200.W0216</b>	Normal	Steel, Thermo Pin	M16	7.5	32	5.0	45.0	100	2.5	3.2	5.0	31.00
<b>32200.W0404</b>	Normal	All Stainless	M 4	1.5	15	1.5	4.5	16	0.6	0.6	1.3	1.10
<b>32200.W0405</b>	Normal	All Stainless	M 5	2.4	18	2.3	6.0	19	0.8	1.2	1.5	1.70
<b>32200.W0406</b>	Normal	All Stainless	M 6	2.7	20	2.5	6.0	19	0.9	1.3	2.0	2.80
<b>32200.W0408</b>	Normal	All Stainless	M 8	3.5	22	3.0	10.0	39	1.4	1.5	2.5	5.90
<b>32200.W0410</b>	Normal	All Stainless	M10	4.0	22	3.0	10.0	39	1.4	1.5	3.0	9.50
<b>32200.W0412</b>	Normal	All Stainless	M12	6.0	28	4.0	12.0	53	2.0	2.7	4.0	17.00
<b>32200.W0416</b>	Normal	All Stainless	M16	7.5	32	5.0	45.0	100	2.5	3.2	5.0	35.00
<b>32200.W0420</b>	Normal	All Stainless	M20	10.0	40	7.0	52.0	125	3.0	3.7	6.0	68.00
<b>32200.W0604</b>	Normal	S/S, Thermo Pin	M 4	1.5	15	1.5	4.5	16	0.6	0.6	1.3	0.93
<b>32200.W0605</b>	Normal	S/S, Thermo Pin	M 5	2.4	18	2.3	6.0	19	0.8	1.2	1.5	1.60
<b>32200.W0606</b>	Normal	S/S, Thermo Pin	M 6	2.7	20	2.5	6.0	19	0.9	1.3	2.0	2.50
<b>32200.W0608</b>	Normal	S/S, Thermo Pin	M 8	3.5	22	3.0	10.0	39	1.4	1.5	2.5	5.10
<b>32200.W0610</b>	Normal	S/S, Thermo Pin	M10	4.0	22	3.0	10.0	39	1.4	1.5	3.0	8.50
<b>32200.W0612</b>	Normal	S/S, Thermo Pin	M12	6.0	28	4.0	12.0	53	2.0	2.7	4.0	14.00
<b>32200.W0616</b>	Normal	S/S, Thermo Pin	M16	7.5	32	5.0	45.0	100	2.5	3.2	5.0	32.00
<b>32200.W0803</b>	Head ø2,5	Screwdriver	M 3	-	-	-	-	-	-	-	-	13.00
<b>32200.W0804</b>	Head ø4,0	Screwdriver	M 4	-	-	-	-	-	-	-	-	29.00
<b>32200.W0805</b>	Head ø5,0	Screwdriver	M 5	-	-	-	-	-	-	-	-	61.00
<b>32200.W0806</b>	Head ø5,5	Screwdriver	M 6	-	-	-	-	-	-	-	-	65.00
<b>32200.W0808</b>	Head ø7,0	Screwdriver	M 8	-	-	-	-	-	-	-	-	108.00
<b>32200.W0810</b>	Head ø8,0	Screwdriver	M10	-	-	-	-	-	-	-	-	124.00
<b>32200.W0812</b>	Head ø11,0	Screwdriver	M12	-	-	-	-	-	-	-	-	112.00
<b>32200.W0816</b>	Head ø14,0	Screwdriver	M16	-	-	-	-	-	-	-	-	173.00
<b>32200.W0820</b>	Head ø18,0	Screwdriver	M20	-	-	-	-	-	-	-	-	226.00
<b>32200.W0824</b>	Head ø19,9	Screwdriver	M24	-	-	-	-	-	-	-	-	258.00



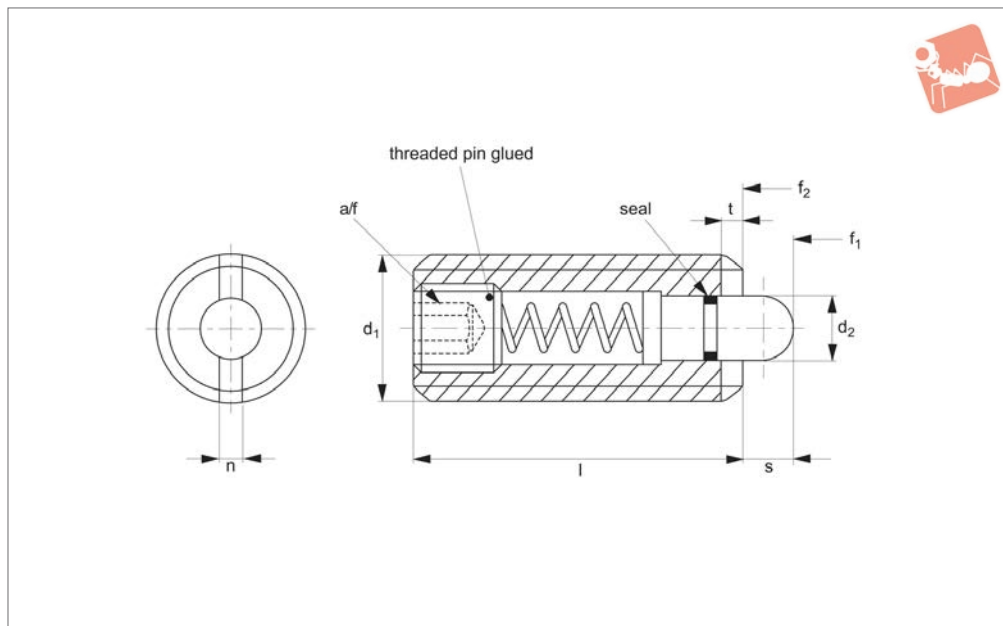


# Spring Plungers

with pin end & hex socket and seal - stainless steel



# Spring Plunger & Detent Pins



**32220**

SPRING PLUNGER & DETENT PINS

### 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.**

Order No.	Spring load	Finish	d <sub>1</sub>	d <sub>2</sub>	l	n	s	Spring load F <sub>1</sub> N ≈	Spring load F <sub>2</sub> N ≈	t	A/F	Weight g
<b>32220.W0048</b>	Normal	All Steel	M 8	3.8	26	1.5	3.0	9	24	1.4	2.5	6.9
<b>32220.W0050</b>	Normal	All Steel	M10	4.0	28	1.5	3.5	15	30	1.4	3.0	11.0
<b>32220.W0052</b>	Normal	All Steel	M12	6.0	35	2.7	4.0	24	50	2.0	4.0	20.0
<b>32220.W0056</b>	Normal	All Steel	M16	7.5	40	3.2	5.0	36	58	2.5	5.0	43.0
<b>32220.W0148</b>	Increased	All Steel	M 8	3.8	26	1.5	3.0	17	39	1.4	2.5	6.6
<b>32220.W0150</b>	Increased	All Steel	M10	4.0	28	1.5	3.5	22	43	1.4	3.0	12.0
<b>32220.W0152</b>	Increased	All Steel	M12	6.0	35	2.7	4.0	40	80	2.0	4.0	20.0
<b>32220.W0156</b>	Increased	All Steel	M16	7.5	40	3.2	5.0	44	113	2.5	5.0	45.0
<b>32220.W0448</b>	Normal	All Stainless	M 8	3.8	26	1.5	3.0	9	24	1.4	2.5	7.2
<b>32220.W0450</b>	Normal	All Stainless	M10	4.0	28	1.5	3.5	15	30	1.4	3.0	12.0
<b>32220.W0452</b>	Normal	All Stainless	M12	6.0	35	2.7	4.0	24	50	2.0	4.0	20.0
<b>32220.W0456</b>	Normal	All Stainless	M16	7.5	40	3.2	5.0	36	58	2.5	5.0	44.0

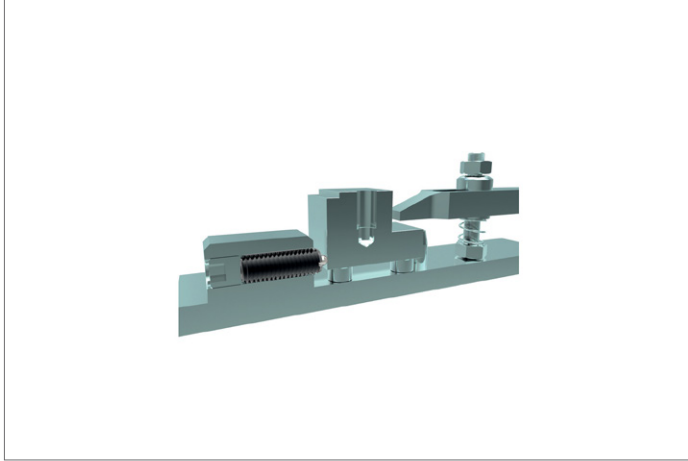
# Spring Plunger & Detent Pins



## Spring Plungers with pin end & hex socket and seal - stainless steel



SPRING PLUNGER & DETENT PINS



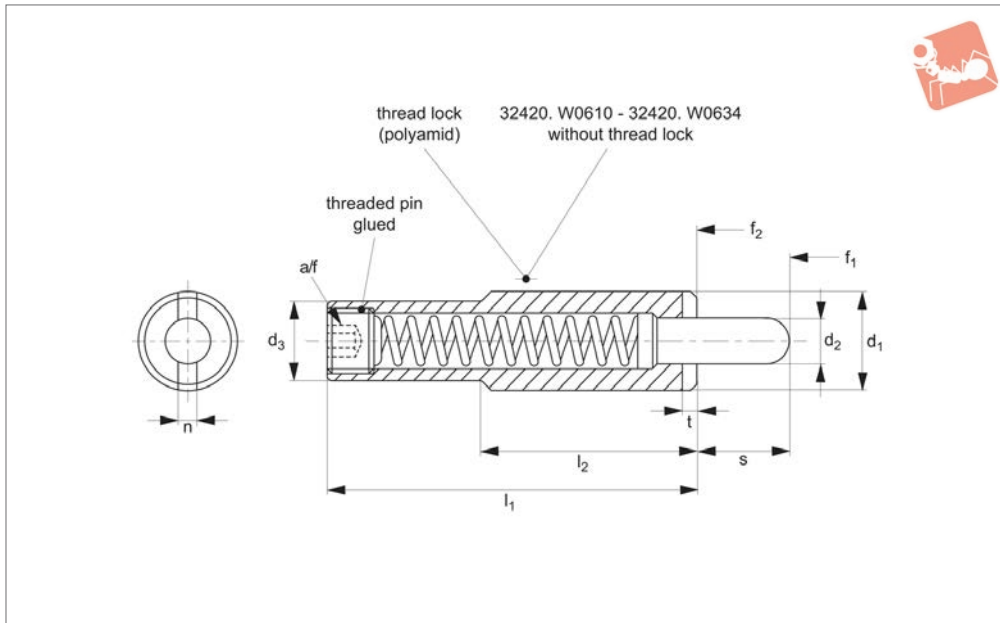




# Spring Plungers

## Long version

# Spring Plunger & Detent Pins



## 32420

SPRING PLUNGER & DETENT PINS

### 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.**

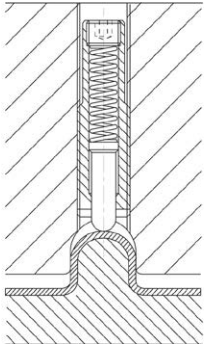
Order No.	Spring load	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	n	s	Spring load F <sub>1</sub> N ≈	Spring load F <sub>2</sub> N ≈	t	A/F	Weight g
32420.W0408	Normal	M10	4.0	7.8	35	25	1.5	8	6	16	1.4	3	13
32420.W0412	Normal	M12	5.5	9.5	43	35	2.7	10	4	18	2.0	4	22
32420.W0430	Normal	M16	8.0	13.4	48	35	3.2	10	7	24	3.0	6	47
32420.W0432	Normal	M16	8.0	13.4	58	35	3.2	10	15	42	3.0	6	52
32420.W0436	Normal	M16	8.0	13.4	58	35	3.2	15	9	33	3.0	6	54
32420.W0440	Normal	M16	8.0	13.4	58	35	3.2	20	4	23	3.0	6	55
32420.W0442	Normal	M16	8.0	13.4	83	35	3.2	20	11	43	3.0	6	71
32420.W0444	Normal	M16	8.0	13.4	98	35	3.2	25	13	41	3.0	6	81
32420.W0450	Normal	M16	8.0	13.4	98	35	3.2	30	13	47	3.0	6	83
32420.W0452	Normal	M16	8.0	13.4	118	35	3.2	30	24	110	3.0	6	97
32420.W0455	Normal	M16	8.0	13.4	148	35	3.2	40	13	63	3.0	6	117
32420.W0460	Normal	M16	8.0	13.4	148	35	3.2	50	7	43	3.0	6	117
32420.W0480	Normal	M24	10.0	19.6	60	45	3.7	15	14	87	3.0	8	132
32420.W0512	Increased	M12	5.5	9.5	43	35	2.7	10	7	46	2.0	4	23
32420.W0530	Increased	M16	8.0	13.4	48	35	3.2	10	10	43	3.0	6	47
32420.W0532	Increased	M16	8.0	13.4	58	35	3.2	10	14	84	3.0	6	54
32420.W0536	Increased	M16	8.0	13.4	58	35	3.2	15	10	57	3.0	6	55
32420.W0542	Increased	M16	8.0	13.4	83	35	3.2	20	18	72	3.0	6	72
32420.W0544	Increased	M16	8.0	13.4	98	35	3.2	25	20	70	3.0	6	82
32420.W0550	Increased	M16	8.0	13.4	98	35	3.2	30	20	80	3.0	6	83
32420.W0555	Increased	M16	8.0	13.4	148	35	3.2	40	21	113	3.0	6	121
32420.W0560	Increased	M16	8.0	13.4	148	35	3.2	50	13	75	3.0	6	121
32420.W0580	Increased	M24	10.0	19.6	60	45	3.7	15	24	192	3.0	8	134
32420.W0610	Normal, Heat-Treated	M16	7.3	13.4	80	35	3.2	11	17	74	3.0	8	69
32420.W0612	Normal, Heat-Treated	M16	7.3	13.4	120	35	3.2	21	21	81	3.0	8	96
32420.W0614	Normal, Heat-Treated	M16	7.3	13.4	150	35	3.2	31	21	89	3.0	8	117
32420.W0616	Normal, Heat-Treated	M16	7.3	13.4	200	35	3.2	41	16	80	3.0	8	149

# Spring Plunger & Detent Pins

## Spring Plungers long version

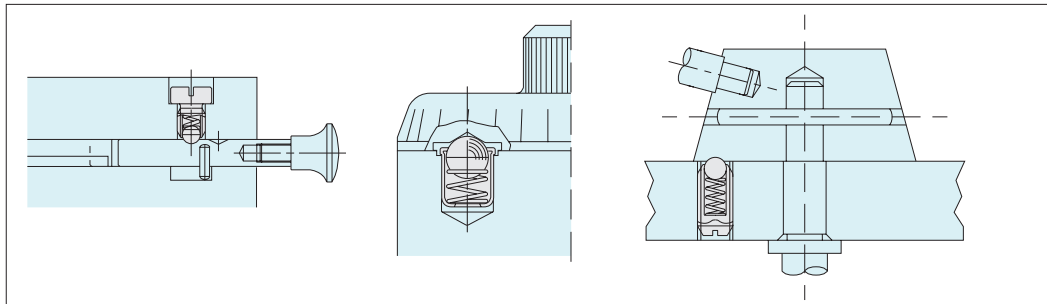


Order No.	Spring load	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	n	s	Spring load F <sub>1</sub> N ≈	Spring load F <sub>2</sub> N ≈	t	A/F	Weight g
<b>32420.W0630</b>	Normal, Heat-Treated	M22	9.0	19.0	130	50	3.5	21	80	214	4.0	8	211
<b>32420.W0632</b>	Normal, Heat-Treated	M22	9.0	19.0	168	50	3.5	31	70	210	4.0	8	278
<b>32420.W0634</b>	Normal, Heat-Treated	M22	9.0	19.0	226	50	3.5	41	76	208	4.0	8	358
<b>32420.W0830</b>	Screwdriver	for M10	-	-	-	-	-	-	-	-	-	-	87
<b>32420.W0832</b>	Screwdriver	for M12	-	-	-	-	-	-	-	-	-	-	88
<b>32420.W0834</b>	Screwdriver	for M16	-	-	-	-	-	-	-	-	-	-	110
<b>32420.W0836</b>	Screwdriver	for M22	-	-	-	-	-	-	-	-	-	-	245
<b>32420.W0838</b>	Screwdriver	for M24	-	-	-	-	-	-	-	-	-	-	258



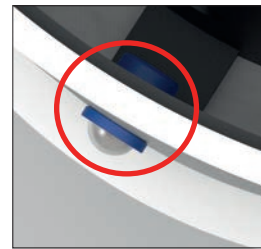


## Wixroyd Spring Plungers - A Range of Endless Possibilities



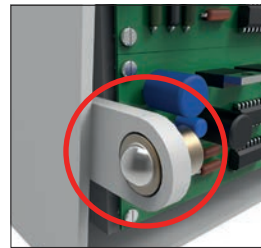
Made of high quality steel and stainless steel, Wixroyd's Spring Plunger range is proven to be reliable for millions of repetitions in securing, positioning, positive locking, indexing and quick release. Their application is limited only by the imagination!

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.



### Commercial Lighting

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.



### Medical Applications

#### Uses

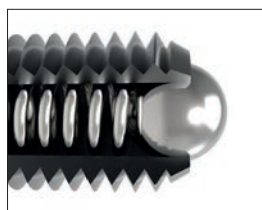
- For location, applying pressure and "lifting off".
- Securing and positioning.
- Positive locking and indexing.
- Quick release.

#### Industry Sectors

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

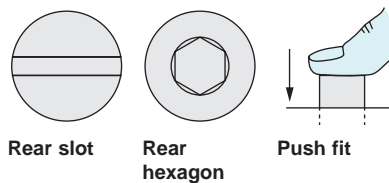
#### Applications

## Wixroyd Spring Plungers - Uses and Mounting Options



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

#### Mounting Options

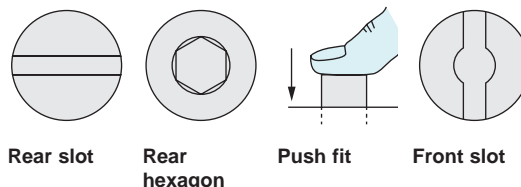


### Ball Type



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

#### Mounting Options



### Pin Head Type



## 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.

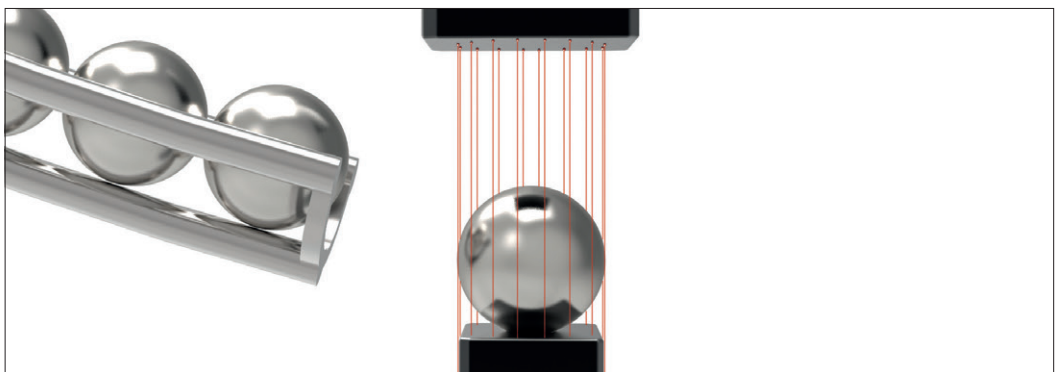
### Accuracy of 'S' Stroke/ Spring Range



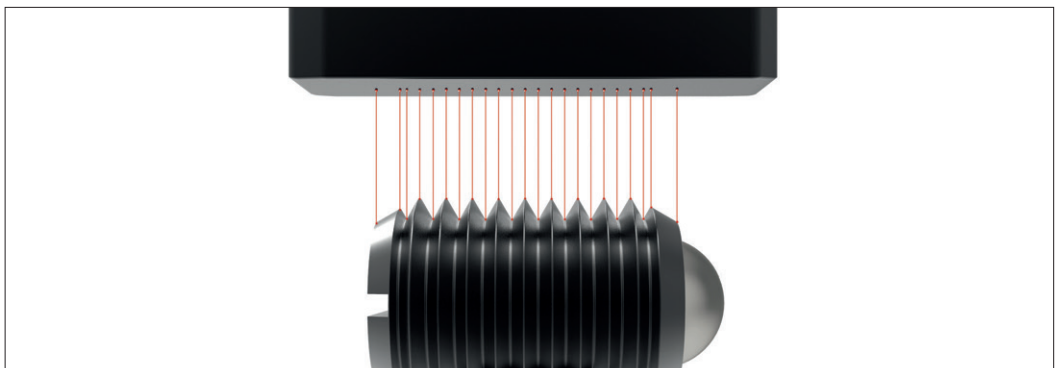
### Accuracy of $f_1$ and $f_2$ Spring Forces



### Accuracy of Ball Diameter



### Accuracy of Thread





# Wixroyd Spring Plungers

metric thread

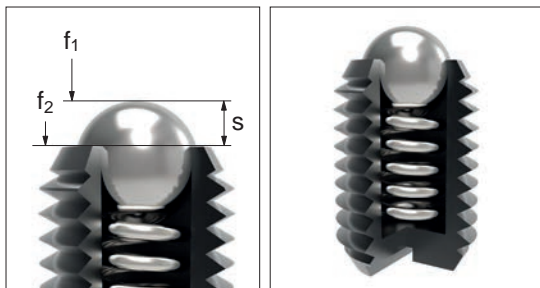
31000 - 32420  
Positioning Elements

	ISO metric coarse threads (mm)															
Thread (D)	3	3,5	4	4,5	5	6	7	8	10	12	14	16	18	20	22	24
Pitch	0,5	0,6	0,7	0,75	0,8	1,0	1,0	1,25	1,5	1,75	2,00	2,0	2,5	2,5	2,5	3,0

## Thread Details

All Wixroyd metric spring plungers have a coarse thread.

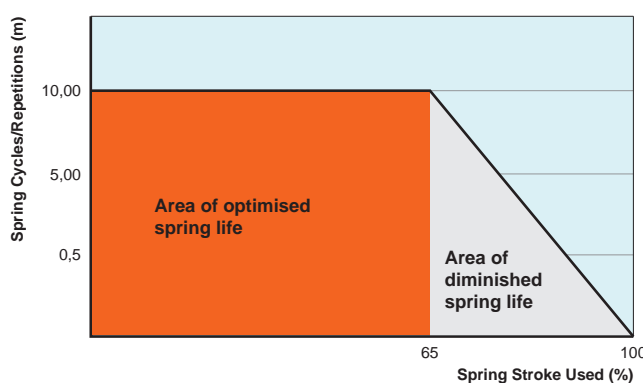
- s** Stroke, or movement of plunger's ball or pin.
- f<sub>1</sub>** The force required in Newtons (N) to overcome the static strength of the spring and achieve initial movement of the plunger's ball or pin.
- f<sub>2</sub>** The force required in Newtons (N) to fully compress the spring until the ball or pin is fully depressed against the plunger's body.



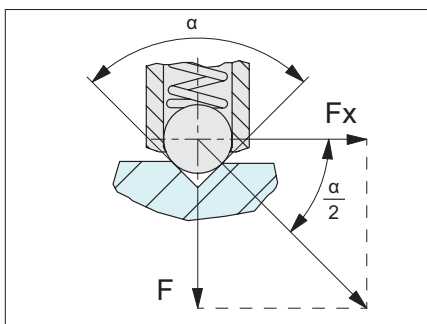
## Spring Loads

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.



## Typical Spring Repetitions



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.

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

$F_x$  = pull or push force (N)  
 $F$  = plungers spring force (see relevant product table)  
 $\alpha$  = angle of the indexing counterpart face

### For example:

For Spring plunger 31500.W0010;  
 $F = 24\text{N}$  (see product table)

If  $\alpha = 90^\circ$

$$F_x = \frac{24}{\tan \frac{90}{2}} = 24\text{N}$$

If  $\alpha = 60^\circ$

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

If  $\alpha = 120^\circ$

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

## Calculating Indexing Resistance

**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 0333 207 4497.