



Technical Information

Threaded Inserts

Threaded Inserts

Threaded inserts are used to quickly repair stripped, damaged or worn out threads with new stronger threads, or are used in original equipment to guarantee stronger thread connections. Automotion inserts are easy to install and remove, without the need for special drills, taps or pre-winder tools. The 'locking keys' on threaded inserts are easily driven down into the thread of the surrounding base material – locking the insert securely in place.



P0083
Carbon Steel Insert



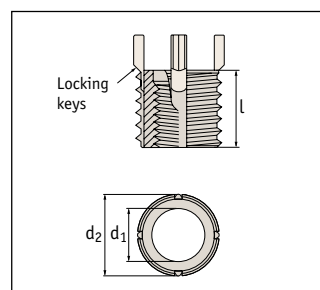
P0084
Stainless Steel Inserts



P0087
Solid Inserts

Key Features

- Solid, one-piece construction providing high pull-out strengths.
- Locking "keys" provide a positive mechanical lock against rotation of the insert.
- Easy installation and removal.
- Installation with standard drills and taps.
- No pre-winder tools required.
- No tangs to break off and account for in the assembly.
- For use in a wide variety of materials.
- Both metric and imperial sizes available in coarse and fine pitches.



Installation and Removal

Installation

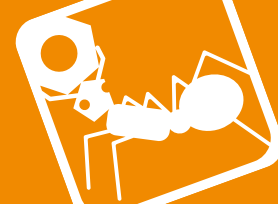
- Select desired threaded insert, and from the product data table identify the installation drill and tap sizes (note the drill is slightly oversized deliberately).
Drill with standard tap drill as per product data table, and countersink with standard 82-100° countersink.
- Tap new threads with standard tap – as specified in product data table.
- Screw in the insert until it is 0.254 to 0.762mm (.010 to .030 inch) below the surface.
- Drive keys down with several hammer taps on the installation tool – see product data table for correct tool.
- Insert is installed.

Removal

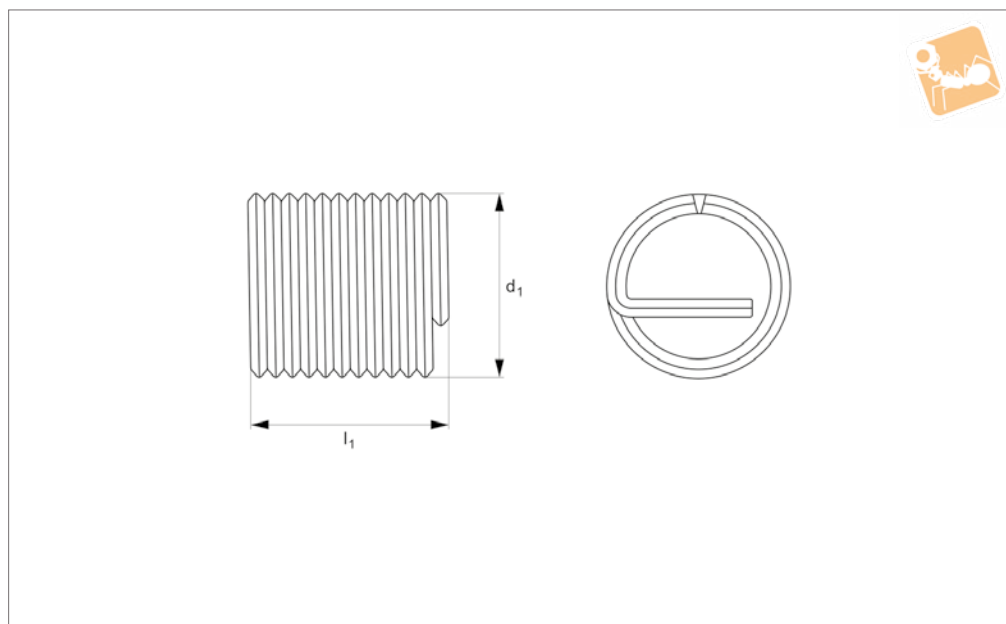
Automotion threaded inserts, if required, can be removed without damage to the parent/surrounding material, follow these steps.

- Refer to the product data table of the installed threaded insert and identify the drill size and drill depth required for removal. Drill out the material between the insert keys and the internal thread to specified depth.
- Bend the locking keys inward and break off.
- Remove the old insert using a screw extractor or similar.
- Install a replacement insert into the original tapped hole as per installation instruction above.





P0080



Material

Stainless steel (A2, AISI 304).

Technical Notes

To DIN 8140-1A

These inserts are used for the repair and reinforcement of cracked and damaged threads.

Thread inserts are oversized so that when installed they are kept in position,

by the pressure between the sides of the hole and the coils.

Threads are metric coarse threads, other pitches available on request.

Temperature range for use -160° C to +420° C and can withstand temperature surges up to +500° C.

Tips

A special tap is required to install these inserts.

The installation procedure includes the following steps:

1. Drill Hole 2. Tap with wire insert tap
3. Check hole with gauge 4. Install insert
5. Remove tang 6. Check thread ,go:no-go'.

Order No.	d ₁ x pitch	Drill dia. d ₂	C'bore dia. d ₃	l ₁
P0080.020-1.0-A2	M2 x0,4	2.1	2,52 - 2,61	2.0
P0080.020-1.5-A2	M2 x0,4	2.1	2,52 - 2,61	3.0
P0080.020-2.0-A2	M2 x0,4	2.1	2,52 - 2,61	4.0
P0080.020-2.5-A2	M2 x0,4	2.1	2,52 - 2,61	5.0
P0080.020-3.0-A2	M2 x0,4	2.1	2,52 - 2,61	6.0
P0080.030-1.0-A2	M3 x0,5	3.2	3,65 - 4,35	3.0
P0080.030-1.5-A2	M3 x0,5	3.2	3,65 - 4,35	4.5
P0080.030-2.0-A2	M3 x0,5	3.2	3,65 - 4,35	6.0
P0080.030-2.5-A2	M3 x0,5	3.2	3,65 - 4,35	7.5
P0080.030-3.0-A2	M3 x0,5	3.2	3,65 - 4,35	9.0
P0080.025-1.0-A2	M2,5x0,45	2.6	3,08 - 3,18	2.5
P0080.025-1.5-A2	M2,5x0,45	2.6	3,08 - 3,18	3.75
P0080.025-2.0-A2	M2,5x0,45	2.6	3,08 - 3,18	5.0
P0080.025-2.5-A2	M2,5x0,45	2.6	3,08 - 3,18	6.25
P0080.025-3.0-A2	M2,5x0,45	2.6	3,08 - 3,18	7.5
P0080.040-1.0-A2	M4 x0,7	4.2	4,9 - 5,06	4.0
P0080.040-1.5-A2	M4 x0,7	4.2	4,9 - 5,06	6.0
P0080.040-2.0-A2	M4 x0,7	4.2	4,9 - 5,06	8.0
P0080.040-2.5-A2	M4 x0,7	4.2	4,9 - 5,06	10.0
P0080.040-3.0-A2	M4 x0,7	4.2	4,9 - 5,06	12.0
P0080.050-1.0-A2	M5 x0,8	5.2	6,04 - 6,21	5.0
P0080.050-1.5-A2	M5 x0,8	5.2	6,04 - 6,21	7.5
P0080.050-2.0-A2	M5 x0,8	5.2	6,04 - 6,21	10.0
P0080.050-2.5-A2	M5 x0,8	5.2	6,04 - 6,21	12.5
P0080.050-3.0-A2	M5 x0,8	5.2	6,04 - 6,21	15.0
P0080.060-1.0-A2	M6 x1,0	6.3	7,3 - 7,51	6.0
P0080.060-1.5-A2	M6 x1,0	6.3	7,3 - 7,51	9.0
P0080.060-2.0-A2	M6 x1,0	6.3	7,3 - 7,51	12.0



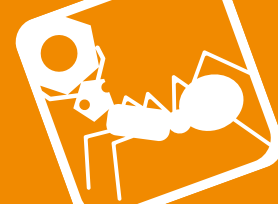
Wire Thread Inserts - Free Running

A2 stainless

Thread Inserts



Order No.	d ₁ x pitch	Drill dia. d ₂	C'bore dia. d ₃	l ₁
P0080.060-2.5-A2	M6 x1,0	6.3	7,3 - 7,51	15.0
P0080.060-3.0-A2	M6 x1,0	6.3	7,3 - 7,51	18.0
P0080.080-1.0-A2	M8 x1,25	8.3	9,62 - 9,89	8.0
P0080.080-1.5-A2	M8 x1,25	8.3	9,62 - 9,89	12.0
P0080.080-2.0-A2	M8 x1,25	8.3	9,62 - 9,89	16.0
P0080.080-2.5-A2	M8 x1,25	8.3	9,62 - 9,89	20.0
P0080.080-3.0-A2	M8 x1,25	8.3	9,62 - 9,89	24.0
P0080.100-1.0-A2	M10x1,5	10.4	11,95 - 12,27	10.0
P0080.100-1.5-A2	M10x1,5	10.4	11,95 - 12,27	15.0
P0080.100-2.0-A2	M10x1,5	10.4	11,95 - 12,27	20.0
P0080.100-2.5-A2	M10x1,5	10.4	11,95 - 12,27	25.0
P0080.100-3.0-A2	M10x1,5	10.4	11,95 - 12,27	30.0
P0080.120-1.0-A2	M12x1,75	12.5	14,27 - 14,65	12.0
P0080.120-1.5-A2	M12x1,75	12.5	14,27 - 14,65	18.0
P0080.120-2.0-A2	M12x1,75	12.5	14,27 - 14,65	24.0
P0080.120-2.5-A2	M12x1,75	12.5	14,27 - 14,65	30.0
P0080.120-3.0-A2	M12x1,75	12.5	14,27 - 14,65	36.0
P0080.140-1.0-A2	M14x2,0	14.5	16,60 - 17,03	14.0
P0080.140-1.5-A2	M14x2,0	14.5	16,60 - 17,03	21.0
P0080.140-2.0-A2	M14x2,0	14.5	16,60 - 17,03	28.0
P0080.140-2.5-A2	M14x2,0	14.5	16,60 - 17,03	35.0
P0080.140-3.0-A2	M14x2,0	14.5	16,60 - 17,03	42.0
P0080.160-1.0-A2	M16x2,0	16.5	18,60 - 19,03	16.0
P0080.160-1.5-A2	M16x2,0	16.5	18,60 - 19,03	24.0
P0080.160-2.0-A2	M16x2,0	16.5	18,60 - 19,03	32.0
P0080.160-2.5-A2	M16x2,0	16.5	18,60 - 19,03	40.0
P0080.160-3.0-A2	M16x2,0	16.5	18,60 - 19,03	48.0
P0080.180-1.0-A2	M18x2,5	18.8	21,25 - 21,79	18.0
P0080.180-1.5-A2	M18x2,5	18.8	21,25 - 21,79	27.0
P0080.180-2.0-A2	M18x2,5	18.8	21,25 - 21,79	36.0
P0080.180-2.5-A2	M18x2,5	18.8	21,25 - 21,79	45.0
P0080.180-3.0-A2	M18x2,5	18.8	21,25 - 21,79	54.0
P0080.200-1.0-A2	M20x2,5	20.8	23,25 - 23,79	20.0
P0080.200-1.5-A2	M20x2,5	20.8	23,25 - 23,79	30.0
P0080.200-2.0-A2	M20x2,5	20.8	23,25 - 23,79	40.0
P0080.200-2.5-A2	M20x2,5	20.8	23,25 - 23,79	50.0
P0080.200-3.0-A2	M20x2,5	20.8	23,25 - 23,79	60.0
P0080.220-1.0-A2	M22x2,5	22.8	25,25 - 25,79	22.0
P0080.220-1.5-A2	M22x2,5	22.8	25,25 - 25,79	33.0
P0080.220-2.0-A2	M22x2,5	22.8	25,25 - 25,79	44.0
P0080.220-2.5-A2	M22x2,5	22.8	25,25 - 25,79	55.0
P0080.220-3.0-A2	M22x2,5	22.8	25,25 - 25,79	66.0
P0080.240-1.0-A2	M24x3,0	25.0	27,90 - 28,54	24.0
P0080.240-1.5-A2	M24x3,0	25.0	27,90 - 28,54	36.0
P0080.240-2.0-A2	M24x3,0	25.0	27,90 - 28,54	48.0
P0080.240-2.5-A2	M24x3,0	25.0	27,90 - 28,54	60.0
P0080.240-3.0-A2	M24x3,0	25.0	27,90 - 28,54	72.0
P0080.270-1.0-A2	M27x3,0	28.0	30,90 - 31,54	27.0
P0080.270-1.5-A2	M27x3,0	28.0	30,90 - 31,54	40.5
P0080.270-2.0-A2	M27x3,0	28.0	30,90 - 31,54	54.0
P0080.270-2.5-A2	M27x3,0	28.0	30,90 - 31,54	67.5
P0080.270-3.0-A2	M27x3,0	28.0	30,90 - 31,54	81.0
P0080.300-1.0-A2	M30x3,5	31.0	34,55 - 35,30	30.0
P0080.300-1.5-A2	M30x3,5	31.0	34,55 - 35,30	45.0
P0080.300-2.0-A2	M30x3,5	31.0	34,55 - 35,30	60.0
P0080.300-2.5-A2	M30x3,5	31.0	34,55 - 35,30	75.0
P0080.300-3.0-A2	M30x3,5	31.0	34,55 - 35,30	90.0
P0080.330-1.0-A2	M33x3,5	34.0	37,55 - 38,30	33.0
P0080.330-1.5-A2	M33x3,5	34.0	37,55 - 38,30	49.5
P0080.330-2.0-A2	M33x3,5	34.0	37,55 - 38,30	66.0
P0080.330-2.5-A2	M33x3,5	34.0	37,55 - 38,30	82.5
P0080.330-3.0-A2	M33x3,5	34.0	37,55 - 38,30	99.0
P0080.360-1.0-A2	M36x4,0	37.0	41,20 - 42,06	36.0
P0080.360-1.5-A2	M36x4,0	37.0	41,20 - 42,06	54.0
P0080.360-2.0-A2	M36x4,0	37.0	41,20 - 42,06	72.0
P0080.360-2.5-A2	M36x4,0	37.0	41,20 - 42,06	90.0
P0080.360-3.0-A2	M36x4,0	37.0	41,20 - 42,06	108.0
P0080.390-1.0-A2	M39x4,0	40.0	44,20 - 45,06	39.0
P0080.390-1.5-A2	M39x4,0	40.0	44,20 - 45,06	58.5



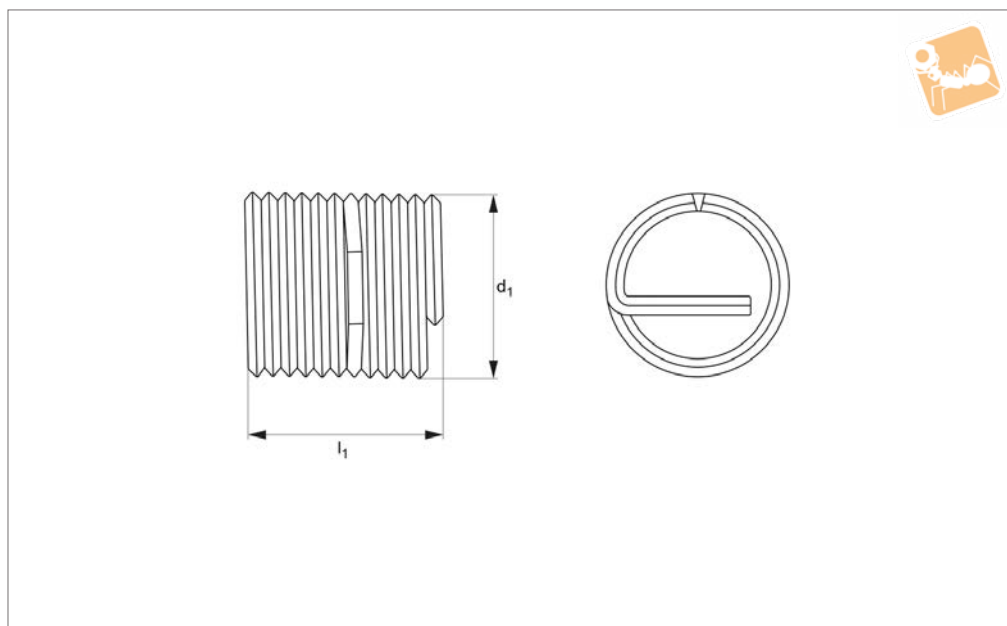
Order No.	d ₁ x pitch	Drill dia. d ₂	C'bore dia. d ₃	l ₁
P0080.390-2.0-A2	M39x4,0	40.0	44,20 - 45.06	78.0
P0080.390-2.5-A2	M39x4,0	40.0	44,20 - 45.06	97.5
P0080.390-3.0-A2	M39x4,0	40.0	44,20 - 45.06	117.0
P0080.420-1.0-A2	M42x4,5	43.0	47,85 - 48,82	42.0
P0080.420-1.5-A2	M42x4,5	43.0	47,85 - 48,82	63.0
P0080.420-2.0-A2	M42x4,5	43.0	47,85 - 48,82	84.0
P0080.420-2.5-A2	M42x4,5	43.0	47,85 - 48,82	105.0
P0080.420-3.0-A2	M42x4,5	43.0	47,85 - 48,82	126.0



Wire Thread Inserts - Screw Lock

A2 stainless

Thread Inserts



P0081

THREAD INSERTS

Material

Stainless steel (A2, AISI 304).

Technical Notes

To DIN 8140-1A

These inserts are used for the repair and reinforcement of cracked and damaged threads. Thread inserts are oversized so that when installed they are kept in position by the pressure between the sides of the hole and the coils. These „screw lock“ thread inserts (prevailing torque) are

useful in applications where there is cyclic vibration or impact. A portion of the thread in the mid area of the insert has polygonal threads and these exert radial pressure on the male thread. It is recommended to use „close fit“ thread tolerance male bolts or screws.

Threads are metric coarse threads, other pitches available on request.

Temperature range for use -160° C to +420° C and can withstand temperature

surges up to +500° C.

Tips

A special tap is required to install these inserts.

The installation procedure includes the following steps:

1. Drill Hole
2. Tap with wire insert tap
3. Check hole with gauge
4. Install insert
5. Remove tang
6. Check thread „go:no-go“.

Order No.	d ₁ x pitch	Drill dia. d ₂	C'bore dia. d ₃	l ₁
P0081.020-1.0-A2	M2 x0,4	2.1	2,52 - 2,61	2.0
P0081.020-1.5-A2	M2 x0,4	2.1	2,52 - 2,61	3.0
P0081.020-2.0-A2	M2 x0,4	2.1	2,52 - 2,61	4.0
P0081.020-2.5-A2	M2 x0,4	2.1	2,52 - 2,61	5.0
P0081.020-3.0-A2	M2 x0,4	2.1	2,52 - 2,61	6.0
P0081.030-1.0-A2	M3 x0,5	3.2	3,65 - 4,35	3.0
P0081.030-1.5-A2	M3 x0,5	3.2	3,65 - 4,35	4.5
P0081.030-2.0-A2	M3 x0,5	3.2	3,65 - 4,35	6.0
P0081.030-2.5-A2	M3 x0,5	3.2	3,65 - 4,35	7.5
P0081.030-3.0-A2	M3 x0,5	3.2	3,65 - 4,35	9.0
P0081.025-1.0-A2	M2,5x0,45	2.6	3,08 - 3,18	2.5
P0081.025-1.5-A2	M2,5x0,45	2.6	3,08 - 3,18	3.75
P0081.025-2.0-A2	M2,5x0,45	2.6	3,08 - 3,18	5.0
P0081.025-2.5-A2	M2,5x0,45	2.6	3,08 - 3,18	6.25
P0081.025-3.0-A2	M2,5x0,45	2.6	3,08 - 3,18	7.5
P0081.040-1.0-A2	M4 x0,7	4.2	4,9 - 5,06	4.0
P0081.040-1.5-A2	M4 x0,7	4.2	4,9 - 5,06	6.0
P0081.040-2.0-A2	M4 x0,7	4.2	4,9 - 5,06	8.0
P0081.040-2.5-A2	M4 x0,7	4.2	4,9 - 5,06	10.0
P0081.040-3.0-A2	M4 x0,7	4.2	4,9 - 5,06	12.0
P0081.050-1.0-A2	M5 x0,8	5.2	6,04 - 6,21	5.0
P0081.050-1.5-A2	M5 x0,8	5.2	6,04 - 6,21	7.5
P0081.050-2.0-A2	M5 x0,8	5.2	6,04 - 6,21	10.0
P0081.050-2.5-A2	M5 x0,8	5.2	6,04 - 6,21	12.5
P0081.050-3.0-A2	M5 x0,8	5.2	6,04 - 6,21	15.0
P0081.060-1.0-A2	M6 x1,0	6.3	7,3 - 7,51	6.0



Order No.	d ₁ x pitch	Drill dia. d ₂	C'bore dia. d ₃	l ₁
P0081.060-1.5-A2	M6 x1,0	6.3	7,3 - 7,51	9.0
P0081.060-2.0-A2	M6 x1,0	6.3	7,3 - 7,51	12.0
P0081.060-2.5-A2	M6 x1,0	6.3	7,3 - 7,51	15.0
P0081.060-3.0-A2	M6 x1,0	6.3	7,3 - 7,51	18.0
P0081.080-1.0-A2	M8 x1,25	8.3	9,62 - 9,89	8.0
P0081.080-1.5-A2	M8 x1,25	8.3	9,62 - 9,89	12.0
P0081.080-2.0-A2	M8 x1,25	8.3	9,62 - 9,89	16.0
P0081.080-2.5-A2	M8 x1,25	8.3	9,62 - 9,89	20.0
P0081.080-3.0-A2	M8 x1,25	8.3	9,62 - 9,89	24.0
P0081.100-1.0-A2	M10x1,5	10.4	11,95 - 12,27	10.0
P0081.100-1.5-A2	M10x1,5	10.4	11,95 - 12,27	15.0
P0081.100-2.0-A2	M10x1,5	10.4	11,95 - 12,27	20.0
P0081.100-2.5-A2	M10x1,5	10.4	11,95 - 12,27	25.0
P0081.100-3.0-A2	M10x1,5	10.4	11,95 - 12,27	30.0
P0081.120-1.0-A2	M12x1,75	12.5	14,27 - 14,65	12.0
P0081.120-1.5-A2	M12x1,75	12.5	14,27 - 14,65	18.0
P0081.120-2.0-A2	M12x1,75	12.5	14,27 - 14,65	24.0
P0081.120-2.5-A2	M12x1,75	12.5	14,27 - 14,65	30.0
P0081.120-3.0-A2	M12x1,75	12.5	14,27 - 14,65	36.0
P0081.140-1.0-A2	M14x2,0	14.5	16,60 - 17,03	14.0
P0081.140-1.5-A2	M14x2,0	14.5	16,60 - 17,03	21.0
P0081.140-2.0-A2	M14x2,0	14.5	16,60 - 17,03	28.0
P0081.140-2.5-A2	M14x2,0	14.5	16,60 - 17,03	35.0
P0081.140-3.0-A2	M14x2,0	14.5	16,60 - 17,03	42.0
P0081.160-1.0-A2	M16x2,0	16.5	18,60 - 19,03	16.0
P0081.160-1.5-A2	M16x2,0	16.5	18,60 - 19,03	24.0
P0081.160-2.0-A2	M16x2,0	16.5	18,60 - 19,03	32.0
P0081.160-2.5-A2	M16x2,0	16.5	18,60 - 19,03	40.0
P0081.160-3.0-A2	M16x2,0	16.5	18,60 - 19,03	48.0
P0081.180-1.0-A2	M18x2,5	18.8	21,25 - 21,79	18.0
P0081.180-1.5-A2	M18x2,5	18.8	21,25 - 21,79	27.0
P0081.180-2.0-A2	M18x2,5	18.8	21,25 - 21,79	36.0
P0081.180-2.5-A2	M18x2,5	18.8	21,25 - 21,79	45.0
P0081.180-3.0-A2	M18x2,5	18.8	21,25 - 21,79	54.0
P0081.200-1.0-A2	M20x2,5	20.8	23,25 - 23,79	20.0
P0081.200-1.5-A2	M20x2,5	20.8	23,25 - 23,79	30.0
P0081.200-2.0-A2	M20x2,5	20.8	23,25 - 23,79	40.0
P0081.200-2.5-A2	M20x2,5	20.8	23,25 - 23,79	50.0
P0081.200-3.0-A2	M20x2,5	20.8	23,25 - 23,79	60.0
P0081.220-1.0-A2	M22x2,5	22.8	25,25 - 25,79	22.0
P0081.220-1.5-A2	M22x2,5	22.8	25,25 - 25,79	33.0
P0081.220-2.0-A2	M22x2,5	22.8	25,25 - 25,79	44.0
P0081.220-2.5-A2	M22x2,5	22.8	25,25 - 25,79	55.0
P0081.220-3.0-A2	M22x2,5	22.8	25,25 - 25,79	66.0
P0081.240-1.0-A2	M24x3,0	25.0	27,90 - 28,54	24.0
P0081.240-1.5-A2	M24x3,0	25.0	27,90 - 28,54	36.0
P0081.240-2.0-A2	M24x3,0	25.0	27,90 - 28,54	48.0
P0081.240-2.5-A2	M24x3,0	25.0	27,90 - 28,54	60.0
P0081.240-3.0-A2	M24x3,0	25.0	27,90 - 28,54	72.0
P0081.270-1.0-A2	M27x3,0	28.0	30,90 - 31,54	27.0
P0081.270-1.5-A2	M27x3,0	28.0	30,90 - 31,54	40.5
P0081.270-2.0-A2	M27x3,0	28.0	30,90 - 31,54	54.0
P0081.270-2.5-A2	M27x3,0	28.0	30,90 - 31,54	67.5
P0081.270-3.0-A2	M27x3,0	28.0	30,90 - 31,54	81.0
P0081.300-1.0-A2	M30x3,5	31.0	34,55 - 35,30	30.0
P0081.300-1.5-A2	M30x3,5	31.0	34,55 - 35,30	45.0
P0081.300-2.0-A2	M30x3,5	31.0	34,55 - 35,30	60.0
P0081.300-2.5-A2	M30x3,5	31.0	34,55 - 35,30	60.0
P0081.300-3.0-A2	M30x3,5	31.0	34,55 - 35,30	90.0
P0081.330-1.0-A2	M33x3,5	34.0	37,55 - 38,30	33.0
P0081.330-1.5-A2	M33x3,5	34.0	37,55 - 38,30	49.5
P0081.330-2.0-A2	M33x3,5	34.0	37,55 - 38,30	66.0
P0081.330-2.5-A2	M33x3,5	34.0	37,55 - 38,30	82.5
P0081.330-3.0-A2	M33x3,5	34.0	37,55 - 38,30	99.0
P0081.360-1.0-A2	M36x4,0	37.0	41,20 - 42,06	36.0
P0081.360-1.5-A2	M36x4,0	37.0	41,20 - 42,06	54.0
P0081.360-2.0-A2	M36x4,0	37.0	41,20 - 42,06	72.0
P0081.360-2.5-A2	M36x4,0	37.0	41,20 - 42,06	90.0
P0081.360-3.0-A2	M36x4,0	37.0	41,20 - 42,06	108.0



Wire Thread Inserts - Screw Lock

A2 stainless

Thread Inserts

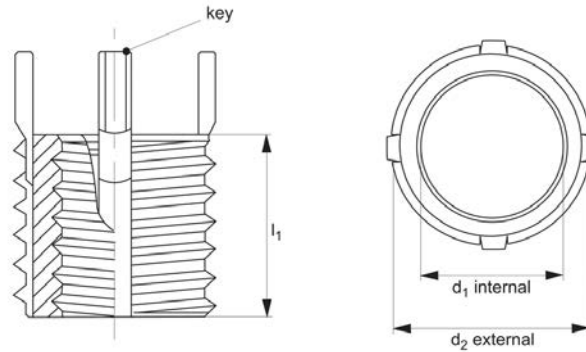


Order No.	d ₁ x pitch	Drill dia. d ₂	C'bore dia. d ₃	l ₁
P0081.390-1.0-A2	M39x4,0	40.0	44,20 - 45.06	39.0
P0081.390-1.5-A2	M39x4,0	40.0	44,20 - 45.06	58.5
P0081.390-2.0-A2	M39x4,0	40.0	44,20 - 45.06	78.0
P0081.390-2.5-A2	M39x4,0	40.0	44,20 - 45.06	97.5
P0081.390-3.0-A2	M39x4,0	40.0	44,20 - 45.06	117.0
P0081.420-1.0-A2	M42x4,5	43.0	47,85 - 48,82	42.0
P0081.420-1.5-A2	M42x4,5	43.0	47,85 - 48,82	63.0
P0081.420-2.0-A2	M42x4,5	43.0	47,85 - 48,82	84.0
P0081.420-2.5-A2	M42x4,5	43.0	47,85 - 48,82	105.0
P0081.420-3.0-A2	M42x4,5	43.0	47,85 - 48,82	126.0

THREAD INSERTS



P0083.1



Material

Inserts: stainless steel (AISI 303) or equivalent. Passivated.

Keys: stainless steel (302 CRES) or equivalent. Passivated.

Technical Notes

General tolerances:

±0,25, unless specified.

Tap drill hole tolerances:

6,9 to 10,8 = +0,10/-0,025.

12,8 and over = +0,13/-0,025.

Tips

Order installation tool separately, as identified by „Inst. tool ref.“ in table.

Important Notes

Four locking keys on internal threads M 8 and over. Two locking keys on internal threads smaller than M 8.

Installation (Inst.) drill size, countersink, thread tap and thread depth as specified in table.

Removal drill size and drill depth as speci-

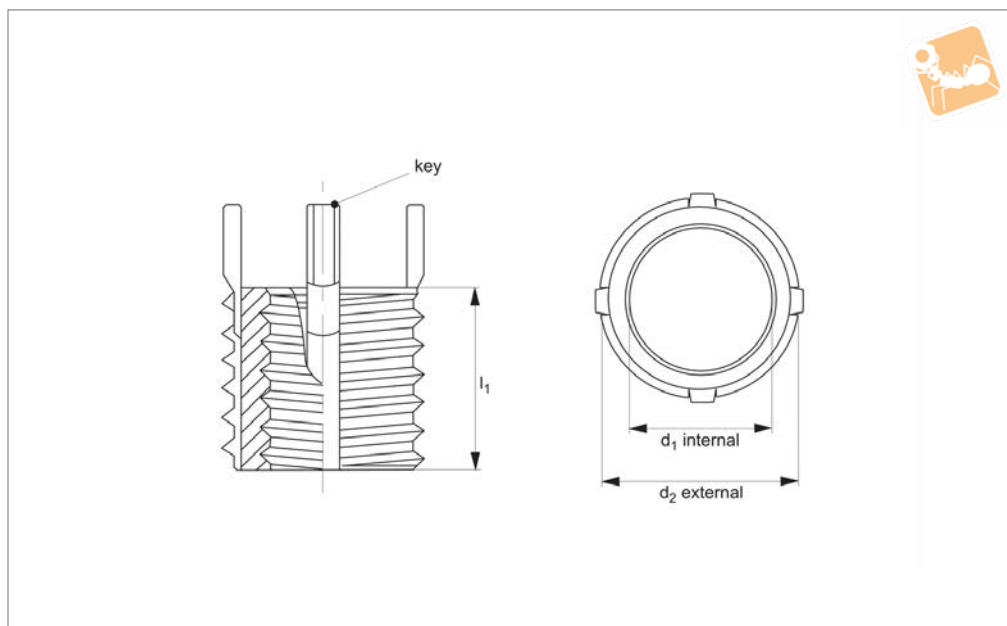
Order No.	Int. d ₁ tol. 6H	Int. thread type d ₁	Ext. d ₂ tol. 6g	Ext. thread type d ₂	l ₁	Inst. tool ref. 22062	Inst. tap drill size	Inst. c'sink dia. ±0.25 ± 0.000	Inst. thread tap tol. 6H	Inst. thread depth min.	Removal drill size	Removal drill depth
P0083.040-070-A2	M 4x0,70	Coarse	M 8x1,25	Coarse	8	.W0630	6,9	8,3	M 8x1,25	9,5	5,5	4,0
P0083.050-080-A2	M 5x0,80	Coarse	M10x1,25	Fine	10	.W0640	8,8	10,3	M10x1,25	12,5	7,5	4,8
P0083.060-100-A2	M 6x1,00	Coarse	M12x1,25	Fine	12	.W0650	10,8	12,3	M12x1,25	14,5	9,5	4,8
P0083.080-125-A2	M 8x1,25	Coarse	M14x1,50	Fine	14	.W0660	12,8	14,3	M14x1,50	16,5	11,5	4,8
P0083.080-100-A2	M 8x1,00	Fine	M14x1,50	Fine	14	.W0660	12,8	14,3	M14x1,50	16,5	11,5	4,8
P0083.100-150-A2	M10x1,50	Coarse	M16x1,50	Fine	16	.W0670	14,8	16,3	M16x1,50	18,5	13,5	4,8
P0083.100-125-A2	M10x1,25	Fine	M16x1,50	Fine	16	.W0670	14,8	16,3	M16x1,50	18,5	13,5	4,8
P0083.120-175-A2	M12x1,75	Coarse	M18x1,50	Fine	18	.W0690	16,8	18,3	M18x1,50	20,5	15,5	4,8
P0083.120-125-A2	M12x1,25	Fine	M18x1,50	Fine	18	.W0690	16,8	18,3	M18x1,50	20,5	15,5	4,8
P0083.140-200-A2	M14x2,00	Coarse	M20x1,50	Fine	20	.W0700	18,8	20,3	M20x1,50	22,5	17,5	4,8
P0083.140-150-A2	M14x1,50	Fine	M20x1,50	Fine	20	.W0700	18,8	20,3	M20x1,50	22,5	17,5	4,8
P0083.160-200-A2	M16x2,00	Coarse	M22x1,50	Fine	22	.W0710	20,5	22,3	M22x1,50	24,5	17,8	6,4
P0083.160-150-A2	M16x1,50	Fine	M22x1,50	Fine	22	.W0710	20,5	22,3	M22x1,50	24,5	17,8	6,4
P0083.180-150-A2	M18x1,50	Fine	M24x1,50	Fine	24	.W0720	22,5	24,3	M24x1,50	26,5	19,8	6,4
P0083.200-250-A2	M20x2,50	Coarse	M30x2,00	Non-Std	30	.W0730	28,0	30,3	M30x2,00	34,5	25,8	6,4
P0083.200-150-A2	M20x1,50	Fine	M30x2,00	Non-Std	30	.W0730	28,0	30,3	M30x2,00	34,5	25,8	6,4
P0083.220-150-A2	M22x1,50	Fine	M32x2,00	Non-Std	32	.W0740	30,0	32,3	M32x2,00	36,5	27,8	6,4
P0083.240-300-A2	M24x3,00	Coarse	M33x2,00	Non-Std	33	.W0750	31,0	33,3	M33x2,00	37,5	28,8	6,4
P0083.240-200-A2	M24x2,00	Fine	M33x2,00	Non-Std	33	.W0750	31,0	33,3	M33x2,00	37,5	28,8	6,4



Threaded Insert - Metric

heavy duty - carbon steel

Thread Inserts



P0083.2

THREAD INSERTS

Material

Inserts: carbon steel (C1215) or equivalent. Zinc phosphate.
Keys: stainless steel (302 CRES) or equivalent. Passivated.

Technical Notes

General tolerances:
±0,25, unless specified.

Tap drill hole tolerances:

6,9 to 10,8 = +0,10/-0,025.
12,8 and over = +0,13/-0,025.

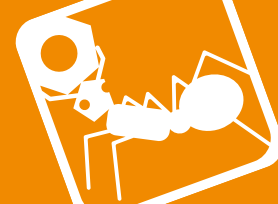
Tips

Order installation tool separately, as identified by „Inst. tool ref.“ in table.

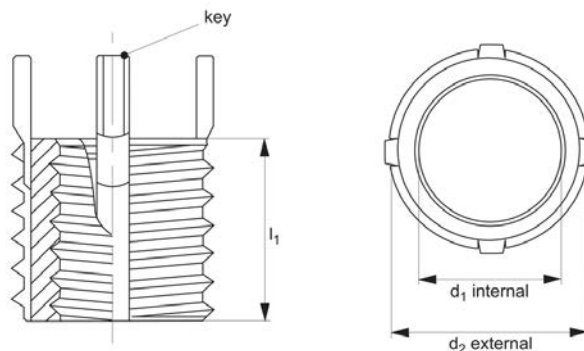
Important Notes

Four locking keys on internal threads M 8 and over. Two locking keys on internal threads smaller than M 8.
Installation (Inst.) drill size, countersink, thread tap and thread depth as specified in table.
Removal drill size and drill depth as speci-

Order No.	Int. d ₁ tol. 6H	Int. thread type d ₁	Ext. d ₂ tol. 6g	Ext. thread type d ₂	l ₁	Inst. tool ref. 22062	Inst. tap drill size	Inst. c'sink dia. ±0.25 ± 0.000	Inst. thread tap tol. 6H	Inst. thread depth min.	Removal drill size	Removal drill depth
P0083.040-070-CS	M 4x0,70	Coarse	M 8x1,25	Coarse	8	.W0630	6,9	8,3	M 8x1,25	9,5	5,5	4,0
P0083.050-080-CS	M 5x0,80	Coarse	M10x1,25	Fine	10	.W0640	8,8	10,3	M10x1,25	12,5	7,5	4,8
P0083.060-100-CS	M 6x1,00	Coarse	M12x1,25	Fine	12	.W0650	10,8	12,3	M12x1,25	14,5	9,5	4,8
P0083.080-125-CS	M 8x1,25	Coarse	M14x1,50	Fine	14	.W0660	12,8	14,3	M14x1,50	16,5	11,5	4,8
P0083.080-100-CS	M 8x1,00	Fine	M14x1,50	Fine	14	.W0660	12,8	14,3	M14x1,50	16,5	11,5	4,8
P0083.100-150-CS	M10x1,50	Coarse	M16x1,50	Fine	16	.W0670	14,8	16,3	M16x1,50	18,5	13,5	4,8
P0083.100-125-CS	M10x1,25	Fine	M16x1,50	Fine	16	.W0670	14,8	16,3	M16x1,50	18,5	13,5	4,8
P0083.120-175-CS	M12x1,75	Coarse	M18x1,50	Fine	18	.W0690	16,8	18,3	M18x1,50	20,5	15,5	4,8
P0083.120-125-CS	M12x1,25	Fine	M18x1,50	Fine	18	.W0690	16,8	18,3	M18x1,50	20,5	15,5	4,8
P0083.140-200-CS	M14x2,00	Coarse	M20x1,50	Fine	20	.W0700	18,8	20,3	M20x1,50	22,5	17,5	4,8
P0083.140-150-CS	M14x1,50	Fine	M20x1,50	Fine	20	.W0700	18,8	20,3	M20x1,50	22,5	17,5	4,8
P0083.160-200-CS	M16x2,00	Coarse	M22x1,50	Fine	22	.W0710	20,5	22,3	M22x1,50	24,5	17,8	6,4
P0083.160-150-CS	M16x1,50	Fine	M22x1,50	Fine	22	.W0710	20,5	22,3	M22x1,50	24,5	17,8	6,4
P0083.180-150-CS	M18x1,50	Fine	M24x1,50	Fine	24	.W0720	22,5	24,3	M24x1,50	26,5	19,8	6,4
P0083.200-250-CS	M20x2,50	Coarse	M30x2,00	Non-Std	30	.W0730	28,0	30,3	M30x2,00	34,5	25,8	6,4
P0083.200-150-CS	M20x1,50	Fine	M30x2,00	Non-Std	30	.W0730	28,0	30,3	M30x2,00	34,5	25,8	6,4
P0083.220-150-CS	M22x1,50	Fine	M32x2,00	Non-Std	32	.W0740	30,0	32,3	M32x2,00	36,5	27,8	6,4
P0083.240-300-CS	M24x3,00	Coarse	M33x2,00	Non-Std	33	.W0750	31,0	33,3	M33x2,00	37,5	28,8	6,4
P0083.240-200-CS	M24x2,00	Fine	M33x2,00	Non-Std	33	.W0750	31,0	33,3	M33x2,00	37,5	28,8	6,4



P0084.1



Material

Inserts: stainless steel (AISI 303) or equivalent. Passivated.

Keys: stainless steel (302 CRES) or equivalent. Passivated.

Technical Notes

General tolerances:

±0,25, unless specified.

Tap drill hole tolerances:

6,9 to 10,8 = +0,10/-0,025.

12,8 and over = +0,13/-0,025.

Tips

Order installation tool separately, as identified by „Inst. tool ref.“ in table.

Important Notes

Four locking keys on internal threads M 8 and over. Two locking keys on internal threads smaller than M 8.

Installation (Inst.) drill size, countersink, thread tap and thread depth as specified in table.

Removal drill size and drill depth as speci-

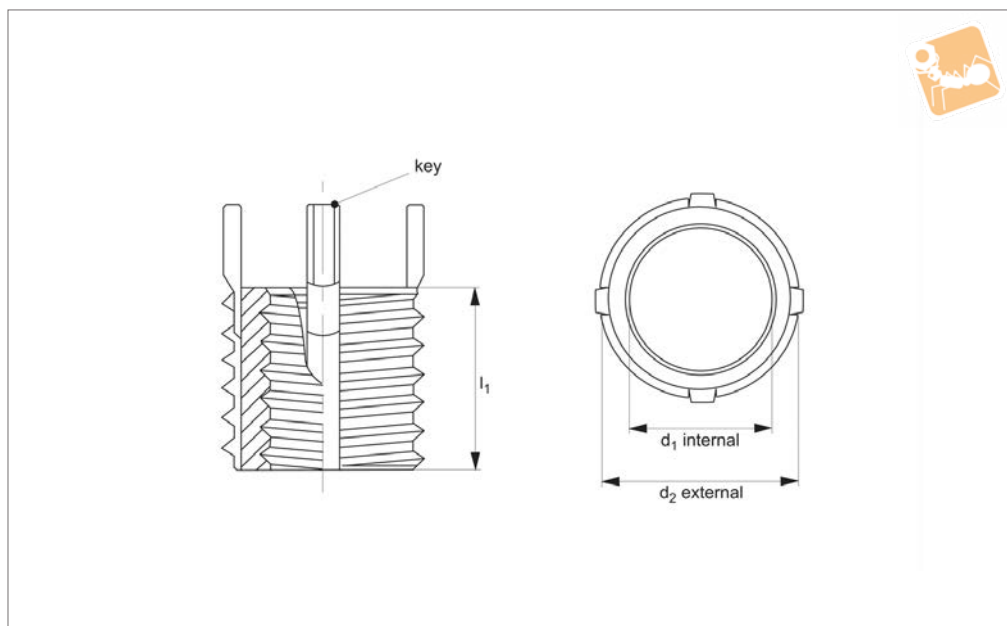
Order No.	Int. d ₁ tol. 6H	Int. thread type d ₁	Ext. d ₂ tol. 6g	Ext. thread type d ₂	l ₁	Inst. tap drill size	Inst. tool ref. 22060	Inst. c'sink dia. ±0.25 ± 0.000	Inst. thread tap tol. 6H	Inst. thread depth min.	Removal drill size	Removal drill depth
P0084.050-080-A2	M 5x0,80	Coarse	M 8x1,25	Coarse	8	6,9	.W0510	8,3	M 8x1,25	9,5	5,5	4,0
P0084.060-100-A2	M 6x1,00	Coarse	M10x1,25	Fine	10	8,8	.W0520	10,3	M10x1,25	11,5	7,5	4,8
P0084.080-125-A2	M 8x1,25	Coarse	M12x1,25	Fine	12	10,8	.W0530	12,3	M12x1,25	13,5	9,5	4,8
P0084.080-100-A2	M 8x1,00	Fine	M12x1,25	Fine	12	10,8	.W0530	12,3	M12x1,25	13,5	9,5	4,8
P0084.100-150-A2	M10x1,50	Coarse	M14x1,50	Fine	14	12,8	.W0550	14,3	M14x1,50	15,5	11,5	4,8
P0084.100-125-A2	M10x1,25	Fine	M14x1,50	Fine	14	12,8	.W0550	14,3	M14x1,50	15,5	11,5	4,8
P0084.120-175-A2	M12x1,75	Coarse	M16x1,50	Fine	16	14,2	.W0560	14,3	M16x1,50	17,5	13,5	4,8
P0084.120-125-A2	M12x1,25	Fine	M16x1,50	Fine	16	14,8	.W0560	16,3	M16x1,50	17,5	13,5	4,8



Threaded Insert - Metric

thinwall - carbon steel

Thread Inserts



P0084.2

THREAD INSERTS

Material

Inserts: carbon steel (C1215) or equivalent. Zinc phosphate.
Keys: stainless steel (302 CRES) or equivalent. Passivated.

Technical Notes

General tolerances:

±0,25, unless specified.

Tap drill hole tolerances:

6,9 to 10,8 = +0,10/-0,025.
12,8 and over = +0,13/-0,025.

Tips

Order installation tool separately, as identified by „Inst. tool ref.“ in table.

Important Notes

Four locking keys on internal threads M 8 and over. Two locking keys on internal threads smaller than M 8.

Installation (Inst.) drill size, countersink, thread tap and thread depth as specified in table.

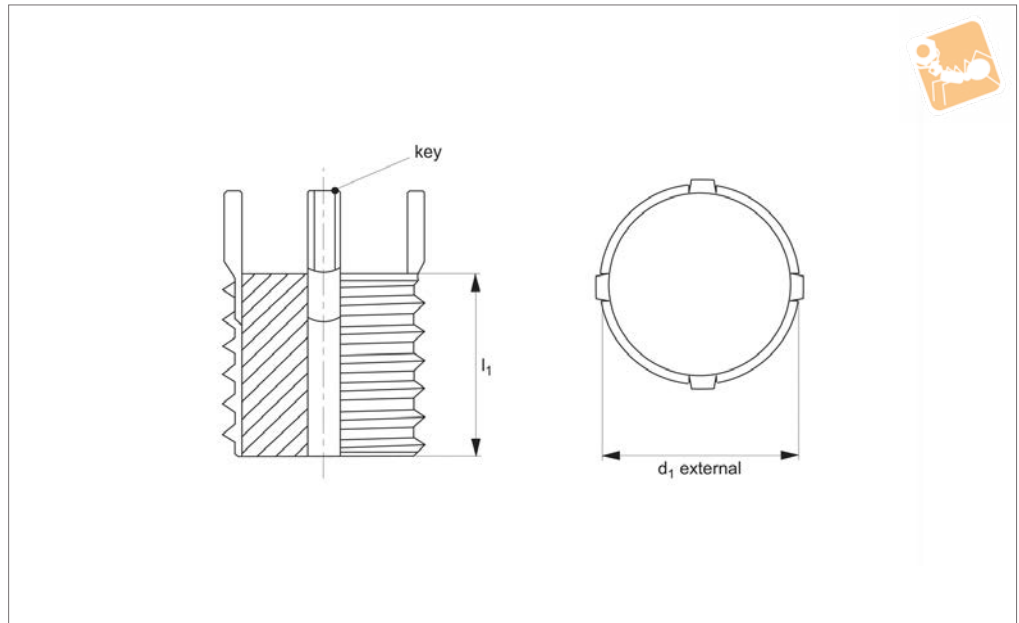
Removal drill size and drill depth as speci-

Order No.	Int. d ₁ tol. 6H	Int. thread type d ₁	Ext. d ₂ tol. 6g	Ext. thread type d ₂	l ₁	Inst. tap drill size	Inst. tool ref. 22060	Inst. c'sink dia. ±0.25 ± 0.000	Inst. thread tap tol. 6H	Inst. thread depth min.	Removal drill size	Removal drill depth
P0084.050-080-CS	M 5x0,80	Coarse	M 8x1,25	Coarse	8	6,9	.W0510	8,3	M 8x1,25	9,5	5,5	4,0
P0084.060-100-CS	M 6x1,00	Coarse	M 10x1,25	Fine	10	8,8	.W0520	10,3	M 10x1,25	11,5	7,5	4,8
P0084.080-125-CS	M 8x1,25	Coarse	M 12x1,25	Fine	12	10,8	.W0530	12,3	M 12x1,25	13,5	9,5	4,8
P0084.080-100-CS	M 8x1,00	Fine	M 12x1,25	Fine	12	10,8	.W0530	12,3	M 12x1,25	13,5	9,5	4,8
P0084.100-150-CS	M 10x1,50	Coarse	M 14x1,50	Fine	14	12,8	.W0550	14,3	M 14x1,50	15,5	11,5	4,8
P0084.100-125-CS	M 10x1,25	Fine	M 14x1,50	Fine	14	12,8	.W0550	14,3	M 14x1,50	15,5	11,5	4,8
P0084.120-175-CS	M 12x1,75	Coarse	M 16x1,50	Fine	16	14,8	.W0560	16,3	M 16x1,50	17,5	13,5	4,8
P0084.120-125-CS	M 12x1,25	Fine	M 16x1,50	Fine	16	14,8	.W0560	16,3	M 16x1,50	17,5	13,5	4,8





P0087.1



Material

Inserts: carbon steel (C1215) or equivalent. Zinc phosphate.

Keys: stainless steel (302 CRES) or equivalent. Passivated.

Technical Notes

General tolerances:

± 0,25" unless specified.

Tap drill hole tolerances:

6,9 to 10,8 = +0,10/-0,025".

12,8 and over = +0,13/-0,025".

Tips

Order installation tool separately, as identified by „Inst. tool ref.“ in table.

Important Notes

Four locking keys on external threads M12 and over. Two locking keys on external

threads smaller than M12.

Installation (Inst.) drill size, countersink, thread tap and thread depth as specified in table.

Removal drill size and drill depth as specified in table.

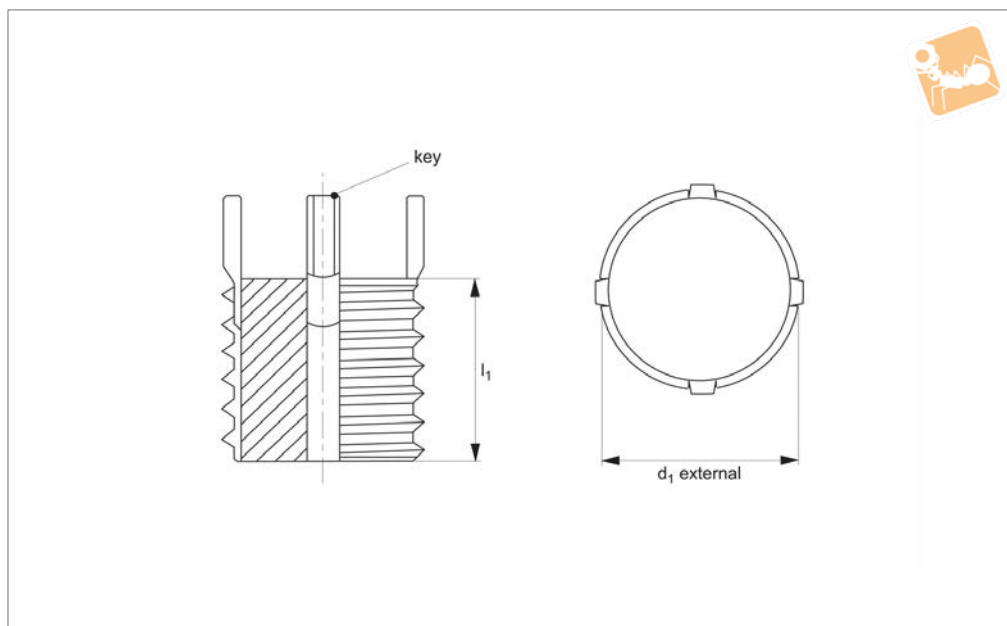
External metric thread allows you to machine your internal thread.

Order No.	d ₁ tol. 6g	Thread type d ₁	l ₁	Inst. tool ref. 22052	Inst. tap drill size	Inst. c'sink dia. +0.25 -0.00	Inst. thread tap tol. 6H	Inst. thread tap depth min.	Removal drill size	Removal drill depth
P0087.080-125-CS	M 8x1,25	Coarse	8	.W0210	6,90	8,3	M 8x1,25	9,5	5,5	4,0
P0087.100-125-CS	M10x1,25	Fine	10	.W0220	8,80	10,3	M10x1,25	12,5	7,5	4,8
P0087.120-125-CS	M12x1,25	Fine	12	.W0230	10,80	12,3	M12x1,25	14,5	9,5	4,8
P0087.140-150-CS	M14x1,50	Fine	14	.W0240	12,80	14,3	M14x1,50	16,5	11,5	4,8
P0087.160-150-CS	M16x1,50	Fine	16	.W0250	14,75	16,3	M16x1,50	18,5	13,5	4,8
P0087.180-150-CS	M18x1,50	Fine	18	.W0260	16,75	18,3	M18x1,50	20,5	15,5	4,8
P0087.200-150-CS	M20x1,50	Fine	20	.W0270	18,75	20,3	M20x1,50	22,5	17,5	4,8
P0087.220-150-CS	M22x1,50	Fine	22	.W0280	20,50	22,3	M22x1,50	24,5	17,8	6,4
P0087.240-150-CS	M24x1,50	Fine	24	.W0290	22,50	24,3	M24x1,50	26,5	19,8	6,4
P0087.300-200-CS	M30x2,00	Fine	30	.W0300	28,00	30,3	M30x2,00	34,5	25,8	6,4
P0087.320-200-CS	M32x2,00	Non-Std	32	.W0310	30,00	32,3	M32x2,00	36,5	27,8	6,4
P0087.330-200-CS	M33x2,00	Non-Std	33	.W0320	31,00	33,3	M33x2,00	37,5	28,8	6,4



Threaded Insert - Solid - Metric stainless steel

Thread Inserts



P0087.2

THREAD INSERTS

Material

Inserts: stainless steel (AISI 303) or equivalent. Passivated.

Keys: stainless steel (302 CRES) or equivalent. Passivated.

Technical Notes

General tolerances:

± 0,25 unless specified.

Tap drill hole tolerances:

6,9 to 10,8 = +0,10/-0,025.

12,8 and over = +0,13/-0,025.

Tips

Order installation tool separately, as identified by „Inst. tool ref.“ in table.

Important Notes

Four locking keys on external threads M12 and over. Two locking keys on external

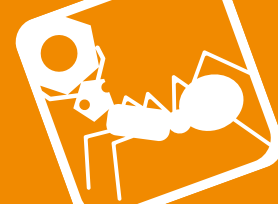
threads smaller than M12.

Installation (Inst.) drill size, countersink, thread tap and thread depth as specified in table.

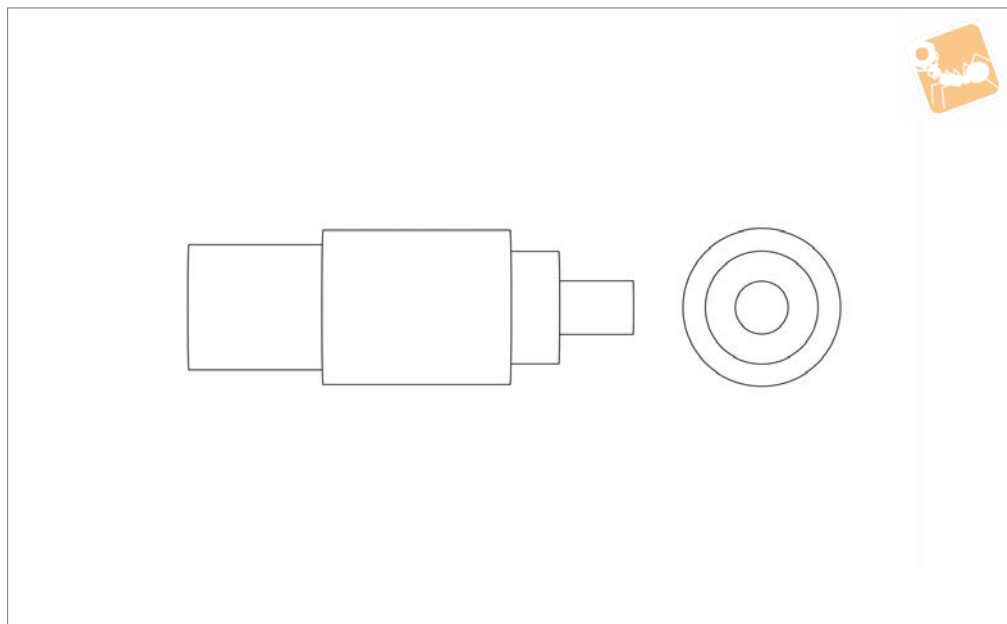
Removal drill size and drill depth as specified in table.

External metric thread allows you to machine your internal thread.

Order No.	d ₁ tol. 6g	Thread type d ₁	l ₁	Inst. tool ref. 22052	Inst. tap drill size	Inst. c'sink dia. +0.25 -0.00	Inst. thread tap tol. 6H	Inst. thread depth min.	Removal drill size	Removal drill depth
P0087.080-125-A2	M 8x1,25	Coarse	8	.W0210	6,9	8,3	M 8x1,25	9,5	5,50	4,0
P0087.100-125-A2	M10x1,25	Fine	10	.W0220	8,8	10,3	M10x1,25	12,5	7,50	4,8
P0087.120-125-A2	M12x1,25	Fine	12	.W0230	10,8	12,3	M12x1,25	14,5	9,50	4,8
P0087.140-150-A2	M14x1,50	Fine	14	.W0240	12,8	14,3	M14x1,50	16,5	11,50	4,8
P0087.160-150-A2	M16x1,50	Fine	16	.W0250	14,8	16,3	M16x1,50	18,5	13,50	4,8
P0087.180-150-A2	M18x1,50	Fine	18	.W0260	16,8	18,3	M18x1,50	20,5	15,50	4,8
P0087.200-150-A2	M20x1,50	Fine	20	.W0270	18,8	20,3	M20x1,50	22,5	17,50	4,8
P0087.220-150-A2	M22x1,50	Fine	22	.W0280	20,5	22,3	M22x1,50	24,5	17,75	6,4
P0087.240-150-A2	M24x1,50	Fine	24	.W0290	22,5	24,3	M24x1,50	26,5	19,75	6,4
P0087.300-200-A2	M30x2,00	Non-Std	30	.W0300	28,0	30,3	M30x2,00	34,5	25,75	6,4
P0087.320-200-A2	M32x2,00	Non-Std	32	.W0310	30,0	32,3	M32x2,00	36,5	27,75	6,4
P0087.330-200-A2	M33x2,00	Non-Std	33	.W0320	31,0	33,3	M33x2,00	37,5	28,75	6,4



P0088.1



Material

Steel, blackened.

Tips

For use with metric thinwall threaded

inserts P0084.1 and P0084.2.

Select installation tool of corresponding insert internal thread d_1 and external thread d_2 . If in doubt refer to data tables of

insert where correct „Inst. tool ref.“ is stated.

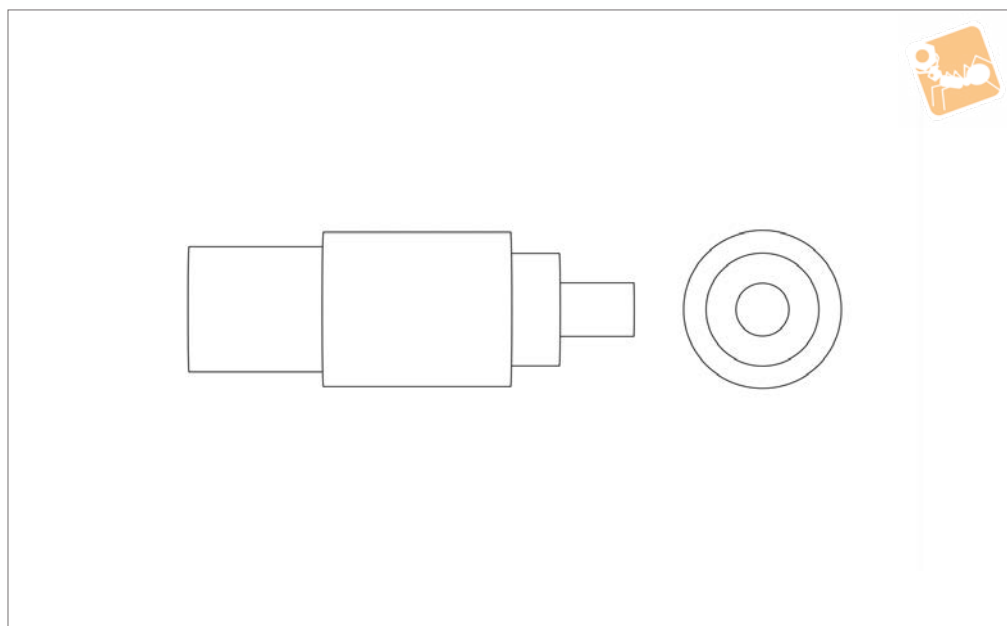
Order No.	For insert of internal thread = d_1	For insert of external thread = d_2
P0088.050-TW	M 5x0,75	M 8x1,25
P0088.060-TW	M 6x1,00	M10x1,25
P0088.080-TW	M 8x1,25/ M 8x1,00	M12x1,25
P0088.100-TW	M10x1,50/ M10x1,25	M14x1,50
P0088.120-TW	M12x1,75/ M12x1,25	M16x1,50



Installation Tool - Metric - Heavy Duty

for threaded inserts P0083.1 & P0083.2

Thread Inserts



P0088.2

THREAD INSERTS

Material

Steel, blackened.

Tips

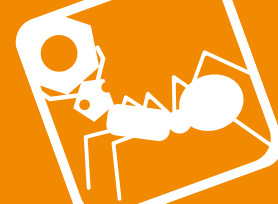
For use with metric heavy duty threaded

inserts P0083.1 and P0083.2.

Select installation tool of corresponding insert internal thread d_1 and external thread d_2 . If in doubt refer to data tables of

insert where correct „Inst. tool ref.“ is stated.

Order No.	For insert of internal thread = d_1	For insert of external thread = d_2
P0088.040-HD	M 4x0,70	M 8x1,25
P0088.050-HD	M 5x0,75	M10x1,30
P0088.060-HD	M 6x1,00	M12x1,25
P0088.080-HD	M 8x1,25/ M 8x1,00	M14x1,50
P0088.100-HD	M10x1,50/ M10x1,25	M16x1,50
P0088.120-HD	M12x1,75/ M12x1,25	M18x1,50
P0088.140-HD	M14x2,00/ M14x1,50	M20x1,50
P0088.160-HD	M16x2,00/ M16x1,50	M22x1,50
P0088.180-HD	M18x1,50	M24x1,50
P0088.200-HD	M20x2,50/ M20x1,50	M30x2,00
P0088.220-HD	M22x1,50	M32x2,00
P0088.240-HD	M24x3,00/ M24x2,00	M33x2,00



Benefits

- High corrosion resistance
- High strength:weight ratio
- Approx 55-60% weight of steel
- Non-magnetic
- Low electrical conductivity

Grade 2 titanium (pure titanium ASTM 348 Grade 2) is widely used, and forms the basis of our titanium fixings. We have many other titanium fixings available on request and we can also offer these parts in ASTM 348 Grade 5.

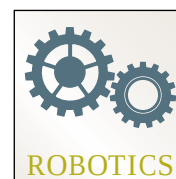
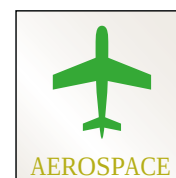
Grade 2 titanium is highly resistant to chemical environments including oxidising and alkaline media, organic acids and compounds and aqueous salt solutions and hot gases.

In sea water, grade 2 is fully resistant to corrosion at temperatures up to 310°C

Technical Specifications

Property	Grade 2 (pure titanium) ASTM 348 Gr.2	Grade 5 Ti-6AL-4V ASTM 348 Gr.5
Density (g/cm ³)	4.5	4.4
Tensile strength (N/mm ²)	345 - 450	895 - 1100
Yield point (N/mm ²)	270	820
Elongation (min %)	20	10
Hardness	160HB/30	36HRC
Melting point (°C)	1668	1650
Modulus of elasticity (GPa)	103	110
Coefficient of thermal expansion (/°C)	8.4 x 10 ⁻⁶	8.5 x 10 ⁻⁶
Units for Thermal Conductivity (cal/cm ² /sec/°C/cm)	0.052	0.024
Electrical resistance (μΩ - cm)	55	75

Applications



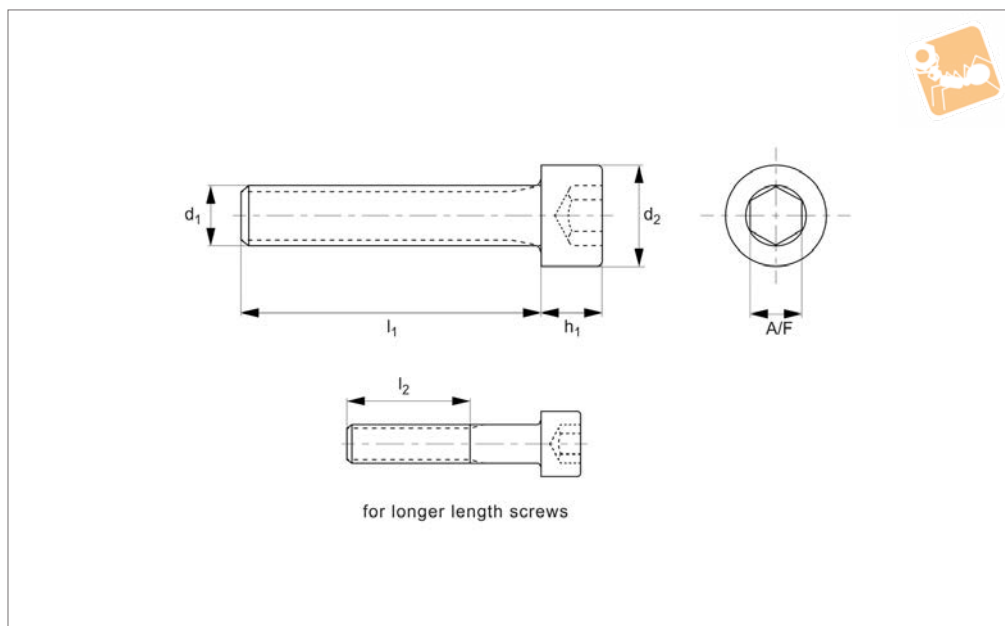
Titanium Screws from Automation Components



Socket Cap Screw - M2 - M6

DIN 912 Gr.2

Titanium Screws



P0100.1

TITANIUM SCREWS

Material

Titanium Grade 2 (commercial grade, high corrosion resistance, strong weldability, standard strength).

Technical Notes

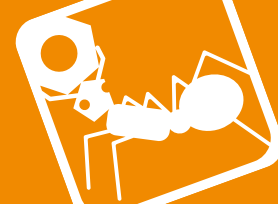
Items to DIN 912 where stated in data

table.

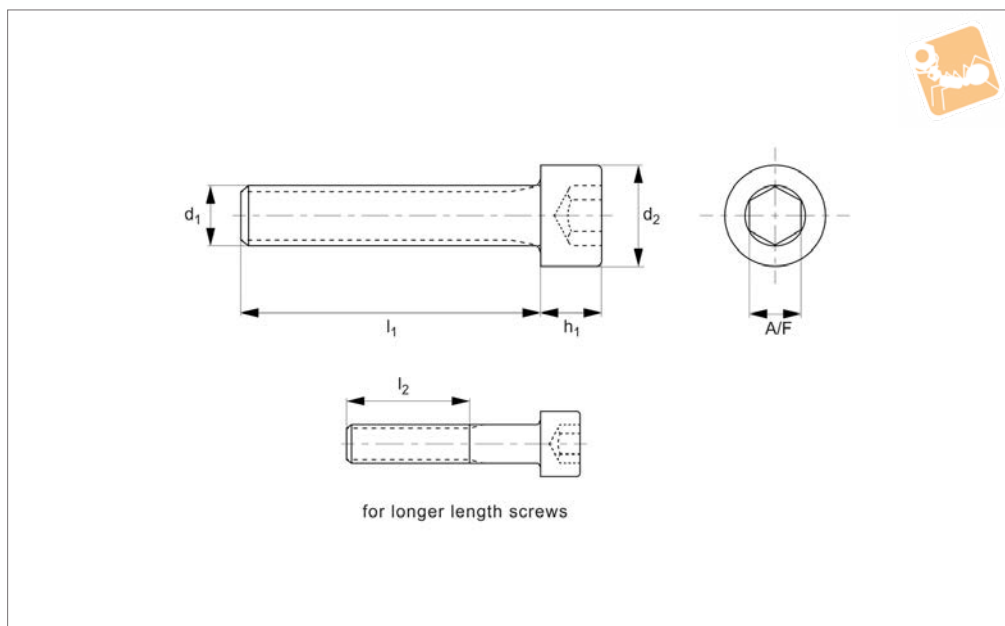
For the majority of screw lengths the threads goes all the way to the head of the screw (i.e. $l_1 = l_2$) less 2.5 thread pitches.

For longer length screws the threaded portion $l_2 < l_1$.

Order No.	Finish	d ₁	l ₁	d ₂	h ₁	l ₂	A/F	Grade	Material	To standard
P0100.040-010-G2	Natural	M 4	25	7.0	4.0	20.0	3	Comm	Ti-G2	DIN 912
P0100.040-040-G2	Natural	M 4	40	7.0	4.0	20.0	3	Comm	Ti-G2	DIN 912
P0100.040-045-G2	Natural	M 4	45	7.0	4.0	20.0	3	Comm	Ti-G2	DIN 912
P0100.040-050-G2	Natural	M 4	50	7.0	4.0	20.0	3	Comm	Ti-G2	DIN 912
P0100.040-055-G2	Natural	M 4	55	7.0	4.0	20.0	3	Comm	Ti-G2	DIN 912
P0100.040-060-G2	Natural	M 4	60	7.0	4.0	20.0	3	Comm	Ti-G2	DIN 912
P0200.050-012-T2	Natural	M 5	12	8.5	5.0	-	4	Comm	Ti-G2	DIN 912
P0100.060-006-G2	Natural	M 6	6	10.0	6.0	-	5	Comm	Ti-G2	DIN 912
P0100.060-065-G2	Natural	M 6	65	10.0	6.0	24.0	5	Comm	Ti-G2	DIN 912
P0100.060-070-G2	Natural	M 6	70	10.0	6.0	24.0	5	Comm	Ti-G2	DIN 912
P0100.060-075-G2	Natural	M 6	75	10.0	6.0	24.0	5	Comm	Ti-G2	DIN 912
P0100.060-080-G2	Natural	M 6	80	10.0	6.0	24.0	5	Comm	Ti-G2	DIN 912
P0100.060-085-G2	Natural	M 6	85	10.0	6.0	24.0	5	Comm	Ti-G2	DIN 912
P0100.060-090-G2	Natural	M 6	90	10.0	6.0	24.0	5	Comm	Ti-G2	DIN 912
P0100.060-095-G2	Natural	M 6	95	10.0	6.0	24.0	5	Comm	Ti-G2	DIN 912
P0100.060-110-G2	Natural	M 6	110	10.0	6.0	24.0	5	Comm	Ti-G2	DIN 912
P0100.060-120-G2	Natural	M 6	120	10.0	6.0	24.0	5	Comm	Ti-G2	DIN 912
P0100.060-130-G2	Natural	M 6	130	10.0	6.0	24.0	5	Comm	Ti-G2	DIN 912
P0100.060-140-G2	Natural	M 6	140	10.0	6.0	24.0	5	Comm	Ti-G2	DIN 912
P0100.060-150-G2	Natural	M 6	150	10.0	6.0	24.0	5	Comm	Ti-G2	DIN 912
P0100.080-010-G2	Natural	M 8	10	13.0	8.0	-	6	Comm	Ti-G2	DIN 912
P0100.080-012-G2	Natural	M 8	12	13.0	8.0	-	6	Comm	Ti-G2	DIN 912
P0100.080-045-G2	Natural	M 8	45	13.0	8.0	28.0	6	Comm	Ti-G2	DIN 912
P0100.080-055-G2	Natural	M 8	55	13.0	8.0	28.0	6	Comm	Ti-G2	DIN 912
P0100.080-065-G2	Natural	M 8	65	13.0	8.0	28.0	6	Comm	Ti-G2	DIN 912
P0100.080-070-G2	Natural	M 8	70	13.0	8.0	28.0	6	Comm	Ti-G2	DIN 912
P0100.080-080-G2	Natural	M 8	80	13.0	8.0	28.0	6	Comm	Ti-G2	DIN 912



P0100.2



Material

Titanium Grade 2 (commercial grade, high corrosion resistance, strong weldability, standard strength).

Technical Notes

Items to DIN 912 where stated in data

table.

For the majority of screw lengths the threads goes all the way to the head of the screw (i.e. $l_1 = l_2$) less 2.5 thread pitches.

For longer length screws the threaded portion $l_2 < l_1$.

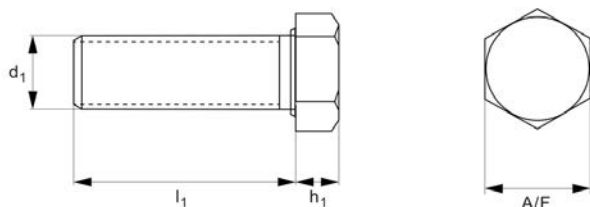
Order No.	Finish	d_1	l_1	d_2	h_1	l_2	A/F	Grade	Material	To standard
P0100.080-085-G2	Natural	M 8	85	13	8	28	6	Comm	Ti-G2	DIN 912
P0100.080-090-G2	Natural	M 8	90	13	8	28	6	Comm	Ti-G2	DIN 912
P0100.080-100-G2	Natural	M 8	100	13	8	28	6	Comm	Ti-G2	DIN 912
P0100.080-110-G2	Natural	M 8	110	13	8	28	6	Comm	Ti-G2	DIN 912
P0100.100-045-G2	Natural	M10	45	16	10	32	8	Comm	Ti-G2	DIN 912
P0100.100-120-G2	Natural	M10	120	16	10	32	8	Comm	Ti-G2	DIN 912
P0100.120-030-G2	Natural	M12	30	19	12	34	10	Comm	Ti-G2	DIN 912
P0100.120-040-G2	Natural	M12	40	19	12	34	10	Comm	Ti-G2	DIN 912



Titanium Hex Head Bolts

Grade 2

Titanium Screws



P0101

TITANIUM SCREWS

Material

Titanium (ASTM 348 grade 2, pure titanium).
Tensile strength 345-450 N/mm², yield strength 270 N/mm², hardness 160HB/30.
Grade 5 titanium available on request.

Technical Notes

To DIN 931.

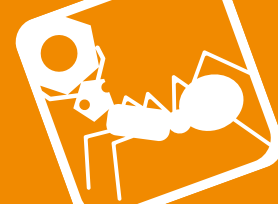
Titanium has a high strength/weight ratio. The specific gravity of titanium is approximately 60% that of stainless steel. For use in lightweight applications in the automobile, aerospace, medical and robotic industries. Highly resistant to corrosion (including from salt water) and chemical environ-

ments. Non magnetic.

Tips

Please see Technical page for full grade 2 titanium properties.

Order No.	d ₁	l ₁	h	l ₂	A/F	Material
P0101.060-025-G2	M 6	25	3.85	18	10	Ti - G2
P0101.060-008-G2	M 6	8	3.85	8	10	Ti - G2
P0101.060-010-G2	M 6	10	3.85	10	10	Ti - G2
P0101.060-012-G2	M 6	12	3.85	12	10	Ti - G2
P0101.060-016-G2	M 6	16	3.85	16	10	Ti - G2
P0101.060-020-G2	M 6	20	3.85	18	10	Ti - G2
P0101.060-030-G2	M 6	30	3.85	18	10	Ti - G2
P0101.060-035-G2	M 6	35	3.85	18	10	Ti - G2
P0101.060-040-G2	M 6	40	3.85	18	10	Ti - G2
P0101.060-045-G2	M 6	45	3.85	18	10	Ti - G2
P0101.060-050-G2	M 6	50	3.85	18	10	Ti - G2
P0101.060-055-G2	M 6	55	3.85	18	10	Ti - G2
P0101.060-060-G2	M 6	60	3.85	18	10	Ti - G2
P0101.060-070-G2	M 6	70	3.85	18	10	Ti - G2
P0101.060-080-G2	M 6	80	3.85	18	10	Ti - G2
P0101.060-090-G2	M 6	90	3.85	18	10	Ti - G2
P0101.060-100-G2	M 6	100	3.85	18	10	Ti - G2
P0101.080-016-G2	M 8	16	5.15	16	13	Ti - G2
P0101.080-020-G2	M 8	20	5.15	20	13	Ti - G2
P0101.080-025-G2	M 8	25	5.15	22	13	Ti - G2
P0101.080-030-G2	M 8	30	5.15	22	13	Ti - G2
P0101.080-035-G2	M 8	35	5.15	22	13	Ti - G2
P0101.080-040-G2	M 8	40	5.15	22	13	Ti - G2
P0101.080-045-G2	M 8	45	5.15	22	13	Ti - G2
P0101.080-050-G2	M 8	50	5.15	22	13	Ti - G2
P0101.080-055-G2	M 8	55	5.15	22	13	Ti - G2
P0101.080-070-G2	M 8	70	5.15	22	13	Ti - G2
P0101.080-080-G2	M 8	80	5.15	22	13	Ti - G2
P0101.080-090-G2	M 8	90	5.15	22	13	Ti - G2



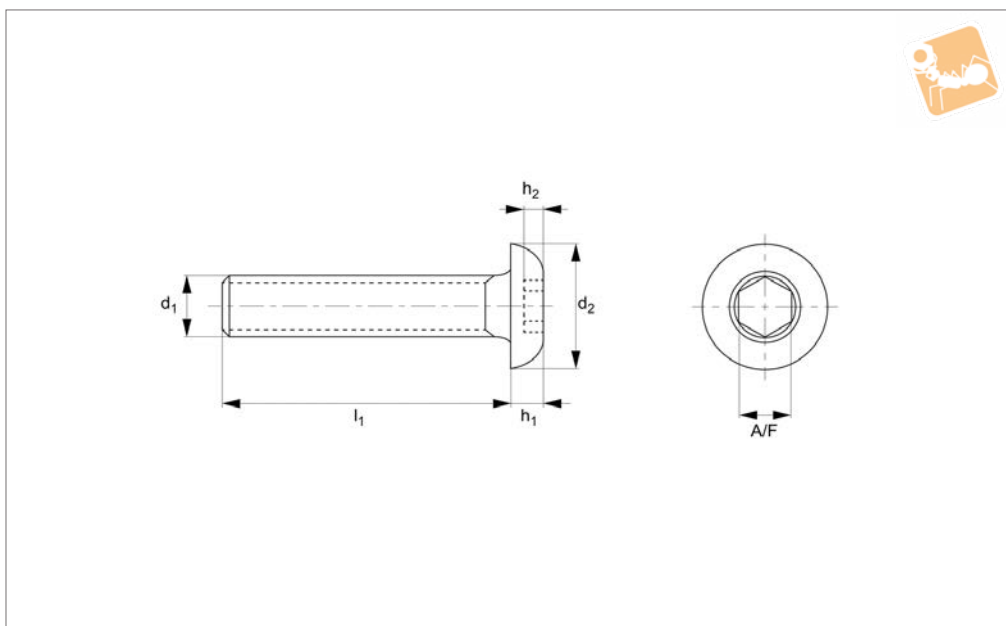
Order No.	d ₁	l ₁	h	l ₂	A/F	Material
P0101.080-100-G2	M 8	100	5.15	22	13	Ti - G2
P0101.080-120-G2	M 8	120	5.15	22	13	Ti - G2
P0101.100-025-G2	M10	25	6.22	25	17	Ti - G2
P0101.100-030-G2	M10	30	6.22	26	17	Ti - G2
P0101.100-040-G2	M10	40	6.22	26	17	Ti - G2
P0101.100-050-G2	M10	50	6.22	26	17	Ti - G2
P0101.100-060-G2	M10	60	6.22	26	17	Ti - G2
P0101.100-070-G2	M10	70	6.22	26	17	Ti - G2
P0101.100-080-G2	M10	80	6.22	26	17	Ti - G2
P0101.100-090-G2	M10	90	6.22	26	17	Ti - G2
P0101.100-100-G2	M10	100	6.22	26	17	Ti - G2
P0101.120-025-G2	M12	25	7.32	25	19	Ti - G2
P0101.120-030-G2	M12	30	7.32	30	19	Ti - G2
P0101.120-040-G2	M12	40	7.32	30	19	Ti - G2
P0101.120-050-G2	M12	50	7.32	30	19	Ti - G2
P0101.120-060-G2	M12	60	7.32	30	19	Ti - G2
P0101.120-070-G2	M12	70	7.32	30	19	Ti - G2
P0101.120-080-G2	M12	80	7.32	30	19	Ti - G2
P0101.120-100-G2	M12	100	7.32	30	19	Ti - G2
P0101.120-120-G2	M12	120	7.32	30	19	Ti - G2



Titanium Socket Button Screws

Grade 2

Titanium Screws



P0102

TITANIUM SCREWS

Material

Titanium (ASTM 348 grade 2, pure titanium).
Tensile strength 345-450 N/mm², yield strength 270 N/mm², hardness 160HB/30.
Grade 5 titanium available on request.

Technical Notes

To ISO 7380. Titanium has a high strength/

weight ratio.

The specific gravity of titanium is approximately 60% that of stainless steel.

For use in lightweight applications in the automobile, aerospace, medical and robotic industries.

Highly resistant to corrosion (including from salt water) and chemical environ-

ments. Non magnetic.

Tips

Also available with TX drive.
Please see Technical page for full grade 2 titanium properties.

Order No.	d ₁	l	d ₂	h ₁	h ₂	A/F
P0102.030-004-G2	M 3	4	5.7	1.65	1.04	2
P0102.030-005-G2	M 3	5	5.7	1.65	1.04	2
P0102.030-006-G2	M 3	6	5.7	1.65	1.04	2
P0102.030-008-G2	M 3	8	5.7	1.65	1.04	2
P0102.030-010-G2	M 3	10	5.7	1.65	1.04	2
P0102.030-012-G2	M 3	12	5.7	1.65	1.04	2
P0102.030-014-G2	M 3	14	5.7	1.65	1.04	2
P0102.030-016-G2	M 3	16	5.7	1.65	1.04	2
P0102.030-020-G2	M 3	20	5.7	1.65	1.04	2
P0102.030-025-G2	M 3	25	5.7	1.65	1.04	2
P0102.030-030-G2	M 3	30	5.7	1.65	1.04	2
P0102.030-035-G2	M 3	35	5.7	1.65	1.04	2
P0102.030-040-G2	M 3	40	5.7	1.65	1.04	2
P0102.040-004-G2	M 4	4	7.6	2.2	1.3	2.5
P0102.040-005-G2	M 4	5	7.6	2.2	1.3	2.5
P0102.040-006-G2	M 4	6	7.6	2.2	1.3	2.5
P0102.040-008-G2	M 4	8	7.6	2.2	1.3	2.5
P0102.040-010-G2	M 4	10	7.6	2.2	1.3	2.5
P0102.040-012-G2	M 4	12	7.6	2.2	1.3	2.5
P0102.040-014-G2	M 4	14	7.6	2.2	1.3	2.5
P0102.040-016-G2	M 4	16	7.6	2.2	1.3	2.5
P0102.040-020-G2	M 4	20	7.6	2.2	1.3	2.5
P0102.040-025-G2	M 4	25	7.6	2.2	1.3	2.5
P0102.040-030-G2	M 4	30	7.6	2.2	1.3	2.5
P0102.040-035-G2	M 4	35	7.6	2.2	1.3	2.5
P0102.040-040-G2	M 4	40	7.6	2.2	1.3	2.5
P0102.040-045-G2	M 4	45	7.6	2.2	1.3	2.5
P0102.040-050-G2	M 4	50	7.6	2.2	1.3	2.5
P0102.050-006-G2	M 5	6	9.5	2.75	1.56	3



Order No.	d ₁	l	d ₂	h ₁	h ₂	A/F
P0102.050-008-G2	M 5	8	9.5	2.75	1.56	3
P0102.050-010-G2	M 5	10	9.5	2.75	1.56	3
P0102.050-012-G2	M 5	12	9.5	2.75	1.56	3
P0102.050-014-G2	M 5	14	9.5	2.75	1.56	3
P0102.050-016-G2	M 5	16	9.5	2.75	1.56	3
P0102.050-020-G2	M 5	20	9.5	2.75	1.56	3
P0102.050-025-G2	M 5	25	9.5	2.75	1.56	3
P0102.050-030-G2	M 5	30	9.5	2.75	1.56	3
P0102.050-035-G2	M 5	35	9.5	2.75	1.56	3
P0102.050-040-G2	M 5	40	9.5	2.75	1.56	3
P0102.050-045-G2	M 5	45	9.5	2.75	1.56	3
P0102.050-050-G2	M 5	50	9.5	2.75	1.56	3
P0102.050-055-G2	M 5	55	9.5	2.75	1.56	3
P0102.050-060-G2	M 5	60	9.5	2.75	1.56	3
P0102.060-008-G2	M 6	8	10.5	3.3	2.08	4
P0102.060-010-G2	M 6	10	10.5	3.3	2.08	4
P0102.060-012-G2	M 6	12	10.5	3.3	2.08	4
P0102.060-014-G2	M 6	14	10.5	3.3	2.08	4
P0102.060-016-G2	M 6	16	10.5	3.3	2.08	4
P0102.060-020-G2	M 6	20	10.5	3.3	2.08	4
P0102.060-025-G2	M 6	25	10.5	3.3	2.08	4
P0102.060-030-G2	M 6	30	10.5	3.3	2.08	4
P0102.060-035-G2	M 6	35	10.5	3.3	2.08	4
P0102.060-040-G2	M 6	40	10.5	3.3	2.08	4
P0102.060-045-G2	M 6	45	10.5	3.3	2.08	4
P0102.060-050-G2	M 6	50	10.5	3.3	2.08	4
P0102.060-055-G2	M 6	55	10.5	3.3	2.08	4
P0102.060-060-G2	M 6	60	10.5	3.3	2.08	4
P0102.060-070-G2	M 6	70	10.5	3.3	2.08	4
P0102.060-080-G2	M 6	80	10.5	3.3	2.08	4
P0102.080-010-G2	M 8	10	14	4.4	2.6	5
P0102.080-012-G2	M 8	12	14	4.4	2.6	5
P0102.080-014-G2	M 8	14	14	4.4	2.6	5
P0102.080-016-G2	M 8	16	14	4.4	2.6	5
P0102.080-020-G2	M 8	20	14	4.4	2.6	5
P0102.080-025-G2	M 8	25	14	4.4	2.6	5
P0102.080-030-G2	M 8	30	14	4.4	2.6	5
P0102.080-035-G2	M 8	35	14	4.4	2.6	5
P0102.080-040-G2	M 8	40	14	4.4	2.6	5
P0102.080-045-G2	M 8	45	14	4.4	2.6	5
P0102.080-050-G2	M 8	50	14	4.4	2.6	5
P0102.080-055-G2	M 8	55	14	4.4	2.6	5
P0102.080-060-G2	M 8	60	14	4.4	2.6	5
P0102.080-070-G2	M 8	70	14	4.4	2.6	5
P0102.080-080-G2	M 8	80	14	4.4	2.6	5
P0102.100-012-G2	M10	12	17.5	5.5	3.12	6
P0102.100-016-G2	M10	16	17.5	5.5	3.12	6
P0102.100-020-G2	M10	20	17.5	5.5	3.12	6
P0102.100-025-G2	M10	25	17.5	5.5	3.12	6
P0102.100-030-G2	M10	30	17.5	5.5	3.12	6
P0102.100-035-G2	M10	35	17.5	5.5	3.12	6
P0102.100-040-G2	M10	40	17.5	5.5	3.12	6
P0102.100-045-G2	M10	45	17.5	5.5	3.12	6
P0102.100-050-G2	M10	50	17.5	5.5	3.12	6
P0102.100-055-G2	M10	55	17.5	5.5	3.12	6
P0102.100-060-G2	M10	60	17.5	5.5	3.12	6
P0102.100-070-G2	M10	70	17.5	5.5	3.12	6
P0102.100-080-G2	M10	80	17.5	5.5	3.12	6

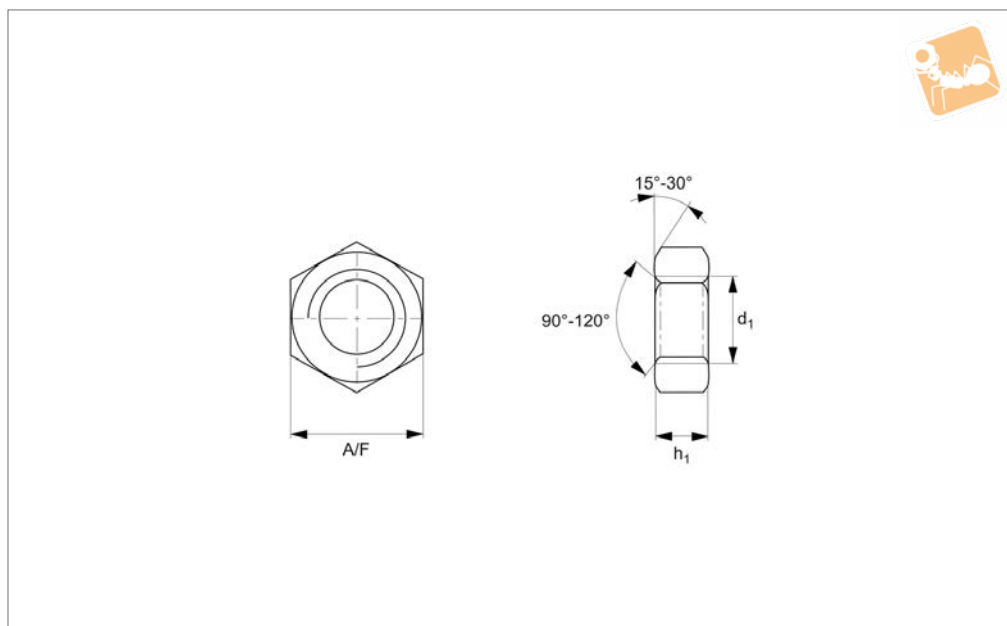


Titanium Hex Nuts

Grade 2



Titanium Screws



P0108

TITANIUM SCREWS

Material

Titanium (ASTM 348 grade 2, pure titanium).
Tensile strength 345-450 N/mm², yield strength 270 N/mm², hardness 160HB/30. Grade 5 titanium available on request.

Technical Notes

To DIN 934.

Titanium has a high strength/weight ratio. The specific gravity of titanium is approximately 60% that of stainless steel. For use in lightweight applications in the automobile, aerospace, medical and robotic industries. Highly resistant to corrosion (including from salt water) and chemical environ-

ments. Non magnetic.

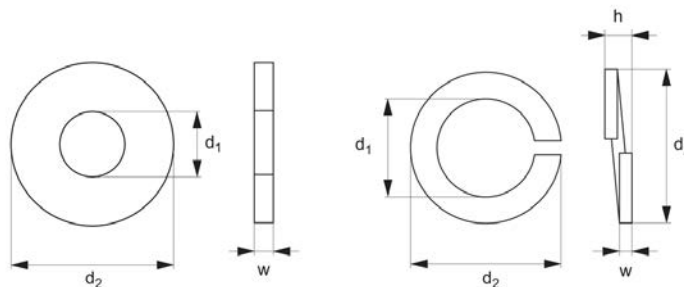
Tips

Please see Technical page for full grade 2 titanium properties.

Order No.	d ₁	h min.	A/F	Type
P0108.030-G2	M 3	2.4	5.5	Standard
P0108.040-G2	M 4	3.2	7	Standard
P0108.050-G2	M 5	4	8	Standard
P0108.060-G2	M 6	5	10	Standard
P0108.080-G2	M 8	6.5	13	Standard
P0108.100-G2	M10	8	17	Standard
P0108.120-G2	M12	10	19	Standard
P0108.160-G2	M16	13	24	Standard
P0108.200-G2	M20	15	30	Standard
P0108.240-G2	M24	18	36	Standard



P0109



flat washer

locking washer

Material

Titanium (ASTM 348 grade 2, pure titanium).
Tensile strength 345-450 N/mm², yield strength 270 N/mm², hardness 160HB/30.
Grade 5 titanium available on request.

Technical Notes

Flat washers to DIN 9021, locking washers

to DIN 127.

Titanium has a high strength/weight ratio. The specific gravity of titanium is approximately 60% that of stainless steel. For use in lightweight applications in the automobile, aerospace, medical and robotic industries. Highly resistant to corrosion (including

from salt water) and chemical environments. Non magnetic. Part no.s ending with F are flat washers. Part no.s ending with L are lock washers.

Tips

Please see Technical page for full grade 2 titanium properties.

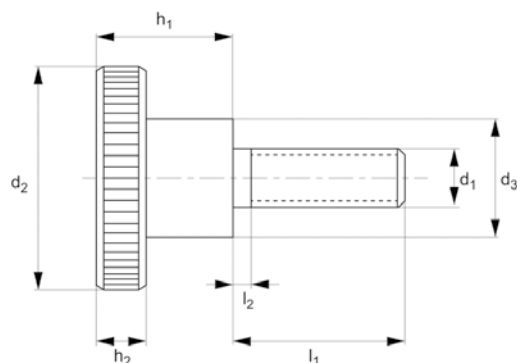
Order No.	Finish	For thread	d ₁	d ₂ max.	h max.	h ₁	w	Type
P0109.030-F-G2	-	M 3	-	-	-	-	-	Flat
P0109.040-F-G2	-	M 4	4.3	12	-	-	1.0	Flat
P0109.040-L-G2	-	M 4	4.3	8	2.5	-	0.9	Lock
P0109.050-F-G2	-	M 5	5.3	15	-	-	1.6	Flat
P0109.050-L-G2	-	M 5	5.3	10	3.2	-	1.2	Lock
P0109.060-F-G2	-	M 6	6.4	18	-	-	1.6	Flat
P0109.060-L-G2	-	M 6	6.4	12	4.2	-	1.6	Lock
P0109.080-F-G2	-	M 8	8.4	25	-	-	2.0	Flat
P0109.080-L-G2	-	M 8	8.4	16	5.4	-	2.0	Lock
P0109.100-F-G2	-	M10	10.5	30	-	-	2.5	Flat
P0109.120-F-G2	M12	13.0	24	-	2.7	Grade 2	-	Flat
P0109.160-F-G2	-	M16	-	-	-	-	-	Flat
P0109.200-F-G2	-	M20	-	-	-	-	-	Flat
P0109.240-F-G2	-	M24	-	-	-	-	-	Flat
P0109.100-L-G2	-	M10	10.5	20	5.9	-	2.2	Lock



Steel Knurled Thumb Screws

Steel (class 5.8) - zinc-plated

Thumb Screws



P0400.ZP

THUMB SCREWS

Material

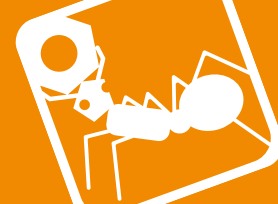
Steel (class 5.8), bright zinc-plated.

Technical Notes

To DIN 464, all knurled screws are one-

piece manufactured, contrary to the official standard sheet, they all have a thread up to the head, as shown, but no recess at the thread end.

Order No.	d ₁	l ₁	d ₂	d ₃	h ₁	h ₂	l ₂
P0400.030-006-ZP	M 3	6	12	6	7.5	2.5	2
P0400.030-010-ZP	M 3	10	12	6	7.5	2.5	2
P0400.030-012-ZP	M 3	12	12	6	7.5	2.5	2
P0400.030-016-ZP	M 3	16	12	6	7.5	2.5	2
P0400.030-020-ZP	M 3	20	12	6	7.5	2.5	2
P0400.040-006-ZP	M 4	6	16	8	9.5	3.5	2
P0400.040-008-ZP	M 4	8	16	8	9.5	3.5	2
P0400.040-010-ZP	M 4	10	16	8	9.5	3.5	2
P0400.040-012-ZP	M 4	12	16	8	9.5	3.5	2
P0400.040-016-ZP	M 4	16	16	8	9.5	3.5	2
P0400.040-020-ZP	M 4	20	16	8	9.5	3.5	2
P0400.040-025-ZP	M 4	25	16	8	9.5	3.5	2
P0400.050-006-ZP	M 5	6	20	10	11.5	4.0	2
P0400.050-008-ZP	M 5	8	20	10	11.5	4.0	2
P0400.050-010-ZP	M 5	10	20	10	11.5	4.0	2
P0400.050-012-ZP	M 5	12	20	10	11.5	4.0	2
P0400.050-016-ZP	M 5	16	20	10	11.5	4.0	2
P0400.050-020-ZP	M 5	20	20	10	11.5	4.0	2
P0400.050-025-ZP	M 5	25	20	10	11.5	4.0	2
P0400.050-030-ZP	M 5	30	20	10	11.5	4.0	2
P0400.060-008-ZP	M 6	8	24	12	15.0	5.0	2
P0400.060-010-ZP	M 6	10	24	12	15.0	5.0	2
P0400.060-012-ZP	M 6	12	24	12	15.0	5.0	2
P0400.060-016-ZP	M 6	16	24	12	15.0	5.0	2
P0400.060-020-ZP	M 6	20	24	12	15.0	5.0	2
P0400.060-025-ZP	M 6	25	24	12	15.0	5.0	2
P0400.060-030-ZP	M 6	30	24	12	15.0	5.0	2
P0400.060-035-ZP	M 6	35	24	12	15.0	5.0	2
P0400.060-040-ZP	M 6	40	24	12	15.0	5.0	2
P0400.080-012-ZP	M 8	12	30	16	18.0	6.0	2
P0400.080-016-ZP	M 8	16	30	16	18.0	6.0	2
P0400.080-020-ZP	M 8	20	30	16	18.0	6.0	2
P0400.080-025-ZP	M 8	25	30	16	18.0	6.0	2
P0400.080-030-ZP	M 8	30	30	16	18.0	6.0	2



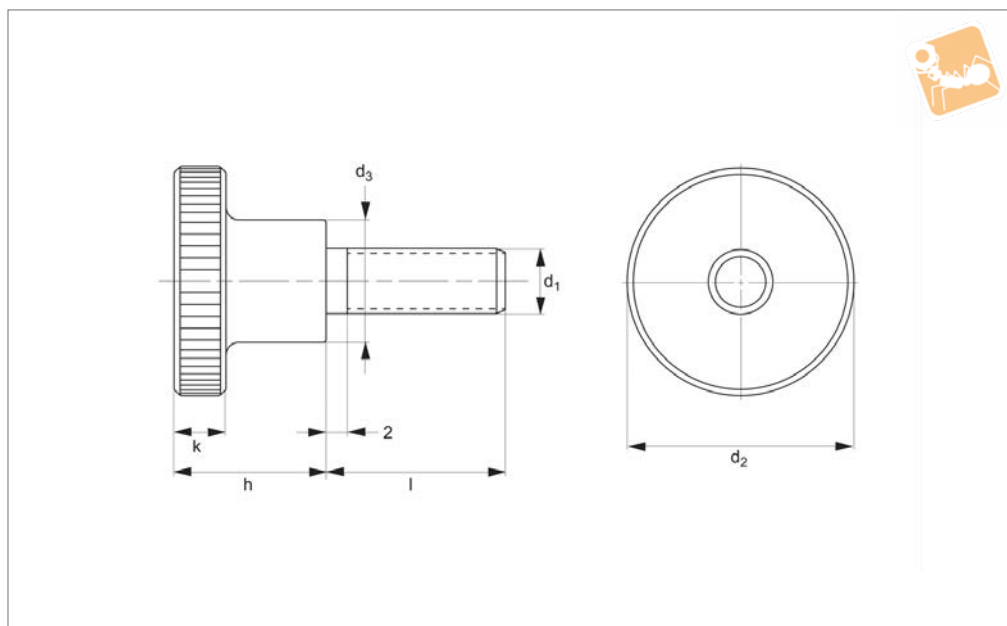
Order No.	d ₁	l ₁	d ₂	d ₃	h ₁	h ₂	l ₂
P0400.080-035-ZP	M 8	35	30	16	18.0	6.0	2
P0400.080-040-ZP	M 8	40	30	16	18.0	6.0	2
P0400.100-020-ZP	M10	20	36	20	23.0	8.0	2
P0400.100-025-ZP	M10	25	36	20	23.0	8.0	2
P0400.100-030-ZP	M10	30	36	20	23.0	8.0	2
P0400.100-035-ZP	M10	35	36	20	23.0	8.0	2
P0400.100-040-ZP	M10	40	36	20	23.0	8.0	2



Knurled Thumb Screws

DIN 464

Thumb Screws



P0400.BL

THUMB SCREWS

Material

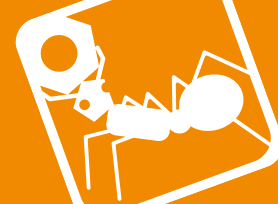
Steel, quality 5.8, blackened. Turned, visible face, good finish.

Technical Notes

All knurled screws are one-piece manufac-

tured. Contrary to the Official Standard Sheet, they all have a thread up to the head, as shown, but no recess at the thread end.

Order No.	d ₁	d ₂	d ₃	h	k	l	Weight g
P0400.030-006-BL	M 3	12	6	7.5	2.5	6	3.7
P0400.030-010-BL	M 3	12	6	7.5	2.5	10	3.8
P0400.030-012-BL	M 3	12	6	7.5	2.5	12	4.0
P0400.030-016-BL	M 3	12	6	7.5	2.5	16	4.0
P0400.040-008-BL	M 4	16	8	9.5	3.5	8	7.9
P0400.040-010-BL	M 4	16	8	9.5	3.5	10	8.1
P0400.040-012-BL	M 4	16	8	9.5	3.5	12	8.3
P0400.040-016-BL	M 4	16	8	9.5	3.5	16	8.4
P0400.040-020-BL	M 4	16	8	9.5	3.5	20	9.1
P0400.040-025-BL	M 4	16	8	9.5	3.5	25	9.0
P0400.050-006-BL	M 5	20	10	11.5	4.0	6	14.0
P0400.050-008-BL	M 5	20	10	11.5	4.0	8	15.0
P0400.050-010-BL	M 5	20	10	11.5	4.0	10	15.0
P0400.050-012-BL	M 5	20	10	11.5	4.0	12	15.0
P0400.050-020-BL	M 5	20	10	11.5	4.0	20	16.0
P0400.050-025-BL	M 5	20	10	11.5	4.0	25	17.0
P0400.050-030-BL	M 5	20	10	11.5	4.0	30	17.0
P0400.060-008-BL	M 6	24	12	15.0	5.0	8	28.0
P0400.060-010-BL	M 6	24	12	15.0	5.0	10	27.0
P0400.060-012-BL	M 6	24	12	15.0	5.0	12	28.0
P0400.060-016-BL	M 6	24	12	15.0	5.0	16	28.0
P0400.060-020-BL	M 6	24	12	15.0	5.0	20	29.0
P0400.060-025-BL	M 6	24	12	15.0	5.0	25	30.0
P0400.060-030-BL	M 6	24	12	15.0	5.0	30	31.0
P0400.060-035-BL	M 6	24	12	15.0	5.0	35	31.0
P0400.080-012-BL	M 8	30	16	18.0	6.0	12	53.0
P0400.080-016-BL	M 8	30	16	18.0	6.0	16	55.0
P0400.080-020-BL	M 8	30	16	18.0	6.0	20	56.0
P0400.080-025-BL	M 8	30	16	18.0	6.0	25	58.0
P0400.080-030-BL	M 8	30	16	18.0	6.0	30	60.0
P0400.080-035-BL	M 8	30	16	18.0	6.0	35	50.0
P0400.080-040-BL	M 8	30	16	18.0	6.0	40	61.0



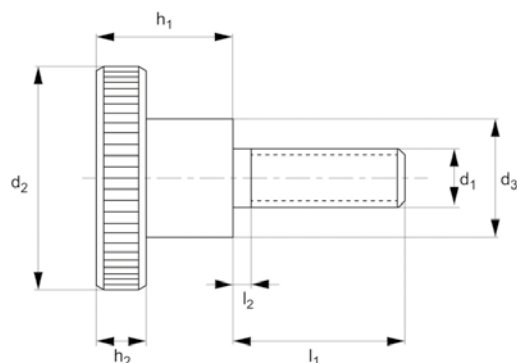
Order No.	d ₁	d ₂	d ₃	h	k	l	Weight g
P0400.100-020-BL	M10	36	20	23.0	8.0	20	106.0
P0400.100-025-BL	M10	36	20	23.0	8.0	25	109.0
P0400.100-030-BL	M10	36	20	23.0	8.0	30	112.0
P0400.100-035-BL	M10	36	20	23.0	8.0	35	116.0
P0400.100-040-BL	M10	36	20	23.0	8.0	40	116.0



Knurled Thumb Screws

A4 stainless

Thumb Screws



P0400.A4

THUMB SCREWS

Material

Stainless steel (A4, AISI 316).

Technical Notes

To DIN 464, all knurled screws are one-piece manufactured, contrary to the offi-

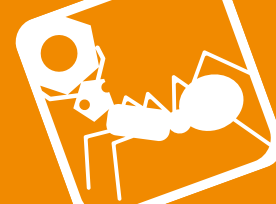
cial standard sheet, they all have a thread up to the head, as shown, but no recess at the thread end.

Tips

A4 (AISI 316) stainless steel is typically

used in food, pharmaceutical and similar applications requiring a degree of corrosion protection.

Order No.	d ₁	l ₁	d ₂	d ₃	h ₁	h ₂	l ₂
P0400.030-005-A4	M 3	6	12	6	7.5	2.5	2
P0400.030-006-A4	M 3	6	12	6	7.5	2.5	2
P0400.030-008-A4	M 3	8	12	6	7.5	2.5	2
P0400.030-010-A4	M 3	10	12	6	7.5	2.5	2
P0400.030-012-A4	M 3	12	12	6	7.5	2.5	2
P0400.030-016-A4	M 3	16	12	6	7.5	2.5	2
P0400.040-005-A4	M 4	5	16	8	9.5	3.5	2
P0400.040-006-A4	M 4	6	16	8	9.5	3.5	2
P0400.040-008-A4	M 4	8	16	8	9.5	3.5	2
P0400.040-010-A4	M 4	10	16	8	9.5	3.5	2
P0400.040-012-A4	M 4	12	16	8	9.5	3.5	2
P0400.040-016-A4	M 4	16	16	8	9.5	3.5	2
P0400.040-020-A4	M 4	20	16	8	9.5	3.5	2
P0400.040-025-A4	M 4	25	16	8	9.5	3.5	2
P0400.050-010-A4	M 5	10	20	10	11.5	4.0	2
P0400.050-012-A4	M 5	12	20	10	11.5	4.0	2
P0400.050-016-A4	M 5	16	20	10	11.5	4.0	2
P0400.050-020-A4	M 5	20	20	10	11.5	4.0	2
P0400.050-025-A4	M 5	25	20	10	11.5	4.0	2
P0400.050-030-A4	M 5	30	20	10	11.5	4.0	2
P0400.060-008-A4	M 6	8	24	12	15.0	5.0	2
P0400.060-010-A4	M 6	10	24	12	15.0	5.0	2
P0400.060-012-A4	M 6	12	24	12	15.0	5.0	2
P0400.060-016-A4	M 6	16	24	12	15.0	5.0	2
P0400.060-020-A4	M 6	20	24	12	15.0	5.0	2
P0400.060-025-A4	M 6	25	24	12	15.0	5.0	2
P0400.060-030-A4	M 6	30	24	12	15.0	5.0	2
P0400.080-012-A4	M 8	12	30	16	18.0	6.0	2
P0400.080-016-A4	M 8	16	30	16	18.0	6.0	2
P0400.080-020-A4	M 8	20	30	16	18.0	6.0	2
P0400.080-025-A4	M 8	25	30	16	18.0	6.0	2
P0400.080-030-A4	M 8	30	30	16	18.0	6.0	2
P0400.100-016-A4	M10	16	36	20	23.0	8.0	2

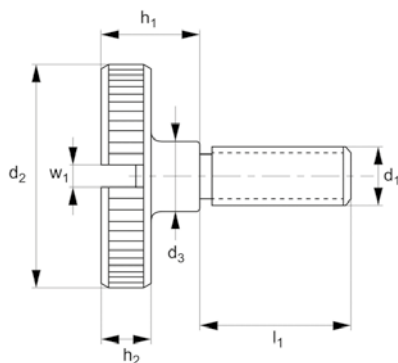


Order No.	d ₁	l ₁	d ₂	d ₃	h ₁	h ₂	l ₂
P0400.100-020-A4	M10	20	36	20	23.0	8.0	2
P0400.100-025-A4	M10	25	36	20	23.0	8.0	2
P0400.100-030-A4	M10	30	36	20	23.0	8.0	2



Knurled Thumb Screws with slot

Thumb Screws



P0404

THUMB SCREWS

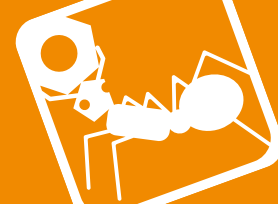
Material

Stainless steel (A2, AISI 303).

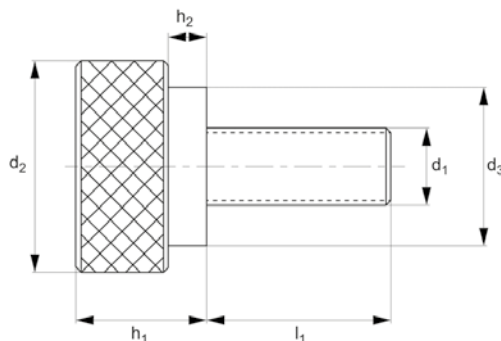
Technical Notes

To DIN 465, with slot.

Order No.	d ₁	l ₁	d ₂	d ₃	h ₁	h ₂	w ₁	Material
P0404.030-006-A2	M3	6	12	6	7.5	2.5	0.8	A2 s/s
P0404.030-008-A2	M3	8	12	6	7.5	2.5	0.8	A2 s/s
P0404.030-010-A2	M3	10	12	6	7.5	2.5	0.8	A2 s/s
P0404.030-012-A2	M3	12	12	6	7.5	2.5	0.8	A2 s/s
P0404.030-016-A2	M3	16	12	6	7.5	2.5	0.8	A2 s/s
P0404.030-020-A2	M3	20	12	6	7.5	2.5	0.8	A2 s/s
P0404.040-006-A2	M4	6	16	8	9.5	3.5	1.0	A2 s/s
P0404.040-008-A2	M4	8	16	8	9.5	3.5	1.0	A2 s/s
P0404.040-010-A2	M4	10	16	8	9.5	3.5	1.0	A2 s/s
P0404.040-012-A2	M4	12	16	8	9.5	3.5	1.0	A2 s/s
P0404.040-016-A2	M4	16	16	8	9.5	3.5	1.0	A2 s/s
P0404.040-020-A2	M4	20	16	8	9.5	3.5	1.0	A2 s/s
P0404.050-006-A2	M5	6	20	10	11.5	4.0	1.2	A2 s/s
P0404.050-008-A2	M5	8	20	10	11.5	4.0	1.2	A2 s/s
P0404.050-010-A2	M5	10	20	10	11.5	4.0	1.2	A2 s/s
P0404.050-012-A2	M5	12	20	10	11.5	4.0	1.2	A2 s/s
P0404.050-016-A2	M5	16	20	10	11.5	4.0	1.2	A2 s/s
P0404.050-020-A2	M5	20	20	10	11.5	4.0	1.2	A2 s/s
P0404.060-010-A2	M6	10	24	12	15.0	5.0	1.6	A2 s/s
P0404.060-012-A2	M6	12	24	12	15.0	5.0	1.6	A2 s/s
P0404.060-016-A2	M6	16	24	12	15.0	5.0	1.6	A2 s/s
P0404.060-020-A2	M6	20	24	12	15.0	5.0	1.6	A2 s/s



P0438.A2



Material

Stainless steel (AISI 303 series 1.4305).

Technical Notes

Stainless steel AISI 303 is a hard stainless

steel which may (in harsh conditions) exhibit slight signs of rusting. Typically used in food and pharmaceutical applications.

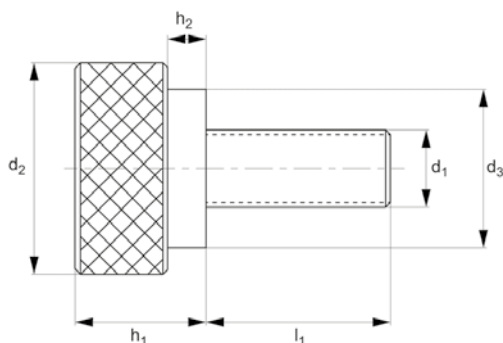
Order No.	d_1	l_1	d_2	d_3	h_1	h_2
P0438.030-008-A2	M 3	8	10	6.5	8	2.5
P0438.030-010-A2	M 3	10	10	6.5	8	2.5
P0438.030-012-A2	M 3	12	10	6.5	8	2.5
P0438.030-014-A2	M 3	14	10	6.5	8	2.5
P0438.040-008-A2	M 4	8	12	9.5	8	2.5
P0438.040-010-A2	M 4	10	12	9.5	8	2.5
P0438.040-012-A2	M 4	12	12	9.5	8	2.5
P0438.040-014-A2	M 4	14	12	9.5	8	2.5
P0438.050-010-A2	M 5	10	12	9.5	8	2.5
P0438.050-012-A2	M 5	12	12	9.5	8	2.5
P0438.050-014-A2	M 5	14	12	9.5	8	2.5
P0438.050-016-A2	M 5	16	12	9.5	8	2.5
P0438.060-010-A2	M 6	10	14	9.5	10	3.5
P0438.060-012-A2	M 6	12	14	9.5	10	3.5
P0438.060-016-A2	M 6	16	14	9.5	10	3.5
P0438.060-020-A2	M 6	20	14	9.5	10	3.5



Thumb Screws with Collar

stainless 316 series

Thumb Screws



P0438.A4

THUMB SCREWS

Material

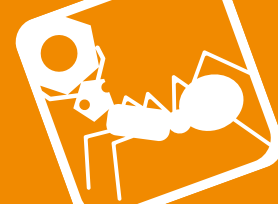
Stainless steel (AISI 316 series 1.440).

Technical Notes

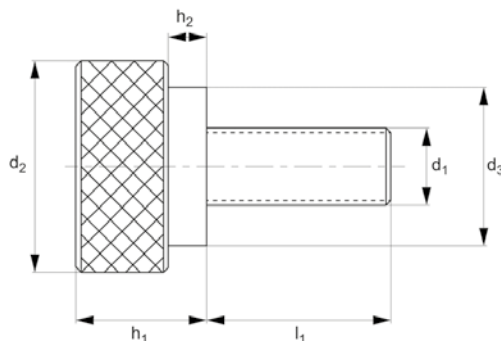
Stainless steel AISI 316 is a softer stainless

steel, of a higher grade. Very resistant to corrosion - even in extremely harsh conditions (such as salt, water etc.) but more expensive.

Order No.	d ₁	l ₁	d ₂	d ₃	h ₁	h ₂
P0438.030-008-A4	M 3	8	10	6.5	8	2.5
P0438.030-010-A4	M 3	10	10	6.5	8	2.5
P0438.030-012-A4	M 3	12	10	6.5	8	2.5
P0438.030-014-A4	M 3	14	10	6.5	8	2.5
P0438.040-008-A4	M 4	8	12	9.5	8	2.5
P0438.040-010-A4	M 4	10	12	9.5	8	2.5
P0438.040-012-A4	M 4	12	12	9.5	8	2.5
P0438.040-014-A4	M 4	14	12	9.5	8	2.5
P0438.050-010-A4	M 5	10	12	9.5	8	2.5
P0438.050-012-A4	M 5	12	12	9.5	8	2.5
P0438.050-014-A4	M 5	14	12	9.5	8	2.5
P0438.050-016-A4	M 5	16	12	9.5	8	2.5
P0438.060-010-A4	M 6	10	14	9.5	10	3.5
P0438.060-012-A4	M 6	12	14	9.5	10	3.5
P0438.060-016-A4	M 6	16	14	9.5	10	3.5
P0438.060-020-A4	M 6	20	14	9.5	10	3.5



P0438.B2



Material

Stainless steel (AISI 303 series 1.4305), black oxide coating.

steel which may (in harsh conditions) exhibit slight signs of rusting. Typically used in food and pharmaceutical applications.

Technical Notes

Stainless steel AISI 303 is a hard stainless

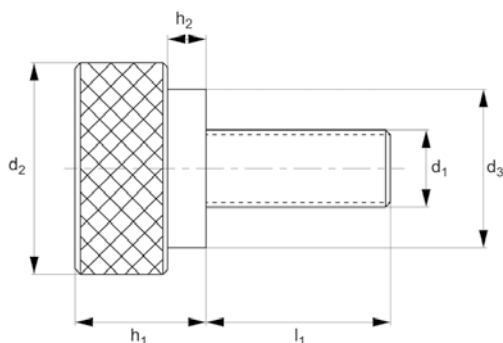
Order No.	d ₁	l ₁	d ₂	d ₃	h ₁	h ₂
P0438.030-008-B2	M 3	8	10	6.5	8	2.5
P0438.030-010-B2	M 3	10	10	6.5	8	2.5
P0438.030-012-B2	M 3	12	10	6.5	8	2.5
P0438.030-014-B2	M 3	14	10	6.5	8	2.5
P0438.040-008-B2	M 4	8	12	9.5	8	2.5
P0438.040-010-B2	M 4	10	12	9.5	8	2.5
P0438.040-012-B2	M 4	12	12	9.5	8	2.5
P0438.040-014-B2	M 4	14	12	9.5	8	2.5
P0438.050-010-B2	M 5	10	12	9.5	8	2.5
P0438.050-012-B2	M 5	12	12	9.5	8	2.5
P0438.050-014-B2	M 5	14	12	9.5	8	2.5
P0438.050-016-B2	M 5	16	12	9.5	8	2.5
P0438.060-010-B2	M 6	10	14	9.5	10	3.5
P0438.060-012-B2	M 6	12	14	9.5	10	3.5
P0438.060-016-B2	M 6	16	14	9.5	10	3.5
P0438.060-020-B2	M 6	20	14	9.5	10	3.5



Thumb Screws with Collar

stainless 316 series, blackened

Thumb Screws



P0438.B4

THUMB SCREWS

Material

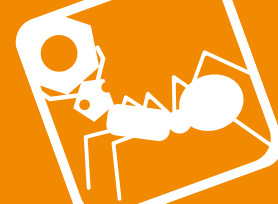
Stainless steel (AISI 316 series 1.440), black oxide coating.

steel, of a higher grade. Very resistant to corrosion - even in extremely harsh conditions (such as salt, water etc.) but more expensive.

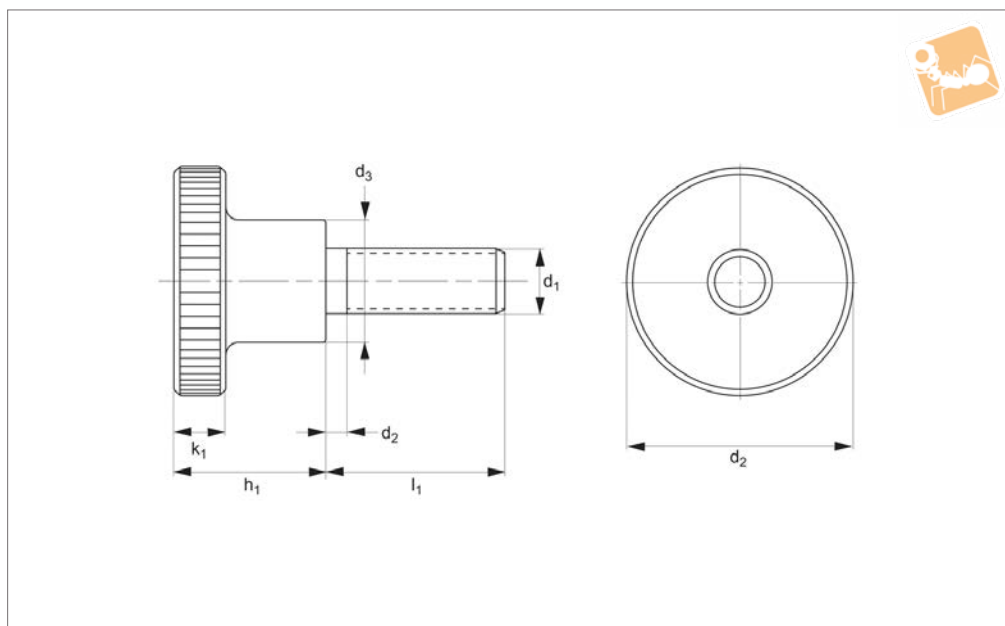
Technical Notes

Stainless steel AISI 316 is a softer stainless

Order No.	d ₁	l ₁	d ₂	d ₃	h ₁	h ₂
P0438.030-008-B4	M 3	8	10	6.5	8	2.5
P0438.030-010-B4	M 3	10	10	6.5	8	2.5
P0438.030-012-B4	M 3	12	10	6.5	8	2.5
P0438.030-014-B4	M 3	14	10	6.5	8	2.5
P0438.040-008-B4	M 4	8	12	9.5	8	2.5
P0438.040-010-B4	M 4	10	12	9.5	8	2.5
P0438.040-012-B4	M 4	12	12	9.5	8	2.5
P0438.040-014-B4	M 4	14	12	9.5	8	2.5
P0438.050-010-B4	M 5	10	12	9.5	8	2.5
P0438.050-012-B4	M 5	12	12	9.5	8	2.5
P0438.050-014-B4	M 5	14	12	9.5	8	2.5
P0438.050-016-B4	M 5	16	12	9.5	8	2.5
P0438.060-010-B4	M 6	10	14	9.5	10	3.5
P0438.060-012-B4	M 6	12	14	9.5	10	3.5
P0438.060-016-B4	M 6	16	14	9.5	10	3.5
P0438.060-020-B4	M 6	20	14	9.5	10	3.5



P0400.A2



Material

Stainless steel 1.4305 (AISI 303), matte, shot-blasted.

Technical Notes

All knurled screws are one-piece manufac-

tured. Contrary to the Official Standard Sheet, they all have a thread up to the head, as shown, but no recess at the thread end.

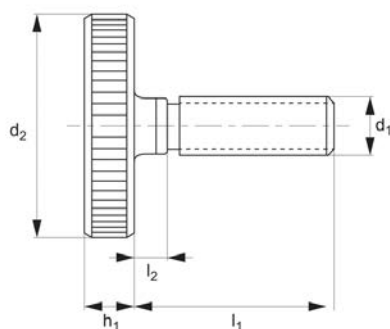
Order No.	d ₁	d ₂	d ₃	h ₁	k ₁	l ₁	Weight g
P0400.040-008-A2	M 4	16	8	9.5	3.5	8	7.9
P0400.040-010-A2	M 4	16	8	9.5	3.5	10	8.1
P0400.040-012-A2	M 4	16	8	9.5	3.5	12	8.3
P0400.040-016-A2	M 4	16	8	9.5	3.5	16	8.4
P0400.050-010-A2	M 5	20	10	11.5	4.0	10	15.0
P0400.050-012-A2	M 5	20	10	11.5	4.0	12	15.0
P0400.050-016-A2	M 5	20	10	11.5	4.0	16	16.0
P0400.050-020-A2	M 5	20	10	11.5	4.0	20	16.0
P0400.050-025-A2	M 5	20	10	11.5	4.0	25	17.0
P0400.060-012-A2	M 6	24	12	15.0	5.0	12	28.0
P0400.060-016-A2	M 6	24	12	15.0	5.0	16	28.0
P0400.060-020-A2	M 6	24	12	15.0	5.0	20	29.0
P0400.060-025-A2	M 6	24	12	15.0	5.0	25	30.0
P0400.060-030-A2	M 6	24	12	15.0	5.0	30	31.0
P0400.080-020-A2	M 8	30	16	18.0	6.0	20	56.0
P0400.080-025-A2	M 8	30	16	18.0	6.0	25	58.0
P0400.080-030-A2	M 8	30	16	18.0	6.0	30	60.0



Flat Knurled Thumb Screws

Flat - steel - zinc-plated

Thumb Screws



P0405.ZP

THUMB SCREWS

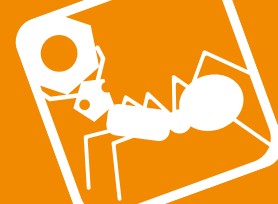
Material

Steel (class5.8) zinc-plated.

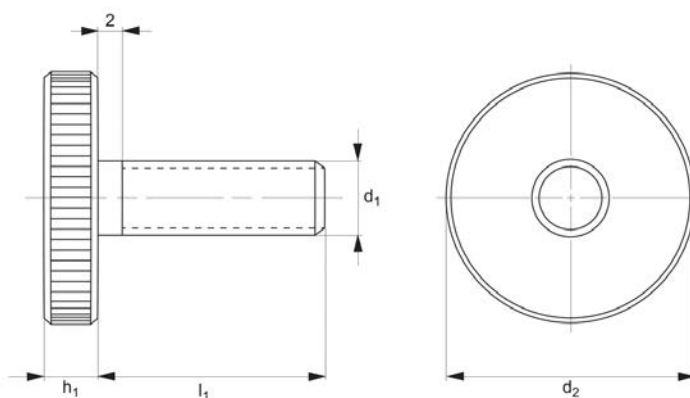
Technical Notes

To DIN 653.

Order No.	d ₁	l ₁	d ₂	h ₁	l ₂	Material	Weight g
P0405.030-006-ZP	M 3	6	12	2.5	2	Steel ZP	2.4
P0405.030-008-ZP	M 3	8	12	2.5	2	Steel ZP	2.5
P0405.030-010-ZP	M 3	10	12	2.5	2	Steel ZP	2.6
P0405.030-016-ZP	M 3	16	12	2.5	2	Steel ZP	2.9
P0405.040-008-ZP	M 4	8	16	3.5	3	Steel ZP	6.1
P0405.040-010-ZP	M 4	10	16	3.5	3	Steel ZP	6.2
P0405.040-012-ZP	M 4	12	16	3.5	3	Steel ZP	6.4
P0405.040-016-ZP	M 4	16	16	3.5	3	Steel ZP	6.7
P0405.040-020-ZP	M 4	20	16	3.5	3	Steel ZP	7.0
P0405.040-025-ZP	M 4	25	16	3.5	3	Steel ZP	7.4
P0405.050-010-ZP	M 5	10	20	4.0	3	Steel ZP	11.0
P0405.050-012-ZP	M 5	12	20	4.0	3	Steel ZP	11.3
P0405.050-016-ZP	M 5	16	20	4.0	3	Steel ZP	11.7
P0405.050-020-ZP	M 5	20	20	4.0	3	Steel ZP	12.0
P0405.050-025-ZP	M 5	25	20	4.0	3	Steel ZP	12.6
P0405.050-030-ZP	M 5	30	20	4.0	3	Steel ZP	13.0
P0405.060-012-ZP	M 6	12	24	5.0	4	Steel ZP	20.0
P0405.060-016-ZP	M 6	16	24	5.0	4	Steel ZP	20.4
P0405.060-020-ZP	M 6	20	24	5.0	4	Steel ZP	21.0
P0405.060-025-ZP	M 6	25	24	5.0	4	Steel ZP	22.0
P0405.060-030-ZP	M 6	30	24	5.0	4	Steel ZP	22.6
P0405.080-020-ZP	M 8	20	30	6.0	5	Steel ZP	40.0
P0405.080-025-ZP	M 8	25	30	6.0	5	Steel ZP	42.0
P0405.080-030-ZP	M 8	30	30	6.0	5	Steel ZP	43.0
P0405.080-035-ZP	M 8	35	30	6.0	5	Steel ZP	45.0
P0405.080-040-ZP	M 8	40	30	6.0	5	Steel ZP	47.0
P0405.100-020-ZP	M10	20	36	8.0	6	Steel ZP	73.0
P0405.100-025-ZP	M10	25	36	8.0	6	Steel ZP	76.0
P0405.100-030-ZP	M10	30	36	8.0	6	Steel ZP	78.0
P0405.100-040-ZP	M10	40	36	8.0	6	Steel ZP	83.0



P0405.BL



Material

Steel, quality 5.8, blackened. Turned, visible face, good finish.

Technical Notes

All knurled screws are one-piece manufactured with thread up to the head (DIN-

designation ,A').

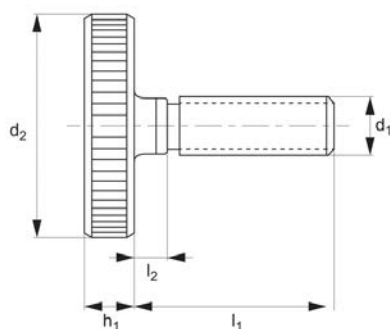
Order No.	d ₁	d ₂	h ₁	l ₁	Weight g
P0405.030-006-BL	M 3	12	2.5	6	2.3
P0405.030-008-BL	M 3	12	2.5	8	2.4
P0405.030-010-BL	M 3	12	2.5	10	2.5
P0405.030-016-BL	M 3	12	2.5	16	2.7
P0405.040-008-BL	M 4	16	3.5	8	5.6
P0405.040-010-BL	M 4	16	3.5	10	5.7
P0405.040-012-BL	M 4	16	3.5	12	6.1
P0405.040-016-BL	M 4	16	3.5	16	6.2
P0405.040-020-BL	M 4	16	3.5	20	6.6
P0405.040-025-BL	M 4	16	3.5	25	7.0
P0405.050-010-BL	M 5	20	4.0	10	10.0
P0405.050-012-BL	M 5	20	4.0	12	11.0
P0405.050-016-BL	M 5	20	4.0	16	12.0
P0405.050-020-BL	M 5	20	4.0	20	12.0
P0405.050-025-BL	M 5	20	4.0	25	12.0
P0405.050-030-BL	M 5	20	4.0	30	13.0
P0405.060-012-BL	M 6	24	5.0	12	18.0
P0405.060-016-BL	M 6	24	5.0	16	20.0
P0405.060-020-BL	M 6	24	5.0	20	20.0
P0405.060-025-BL	M 6	24	5.0	25	20.0
P0405.060-030-BL	M 6	24	5.0	30	22.0
P0405.080-020-BL	M 8	30	6.0	20	37.0
P0405.080-025-BL	M 8	30	6.0	25	39.0
P0405.080-030-BL	M 8	30	6.0	30	41.0
P0405.080-035-BL	M 8	30	6.0	35	42.0
P0405.080-040-BL	M 8	30	6.0	40	44.0
P0405.100-020-BL	M10	36	8.0	20	71.0
P0405.100-025-BL	M10	36	8.0	25	72.0
P0405.100-030-BL	M10	36	8.0	30	76.0
P0405.100-040-BL	M10	36	8.0	40	80.0



Flat Knurled Thumb Screws

Flat Knurled A2 & A4 stainless

Thumb Screws



P0405.SS

THUMB SCREWS

Material

Stainless steel (A2 AISI 303 or A4 AISI 316).

Technical Notes

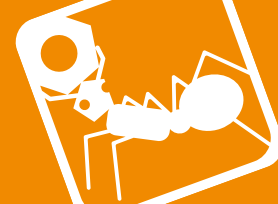
To DIN 653. Stainless steel 303 series is a

hard stainless steel which may (in harsh conditions) exhibit slight signs of rusting. Typically used in food and pharmaceutical applications. 303 stainless steel provides good resistance to corrosion, it is soft and

mildly magnetic.

316 stainless provides excellent corrosion resistance for use in highly caustic or marine environments and its non-magnetic.

Order No.	d ₁	l ₁	d ₂	h	l ₂	Material	Weight g
P0405.030-008-A2	M3	8	12	2.5	2	A2 s/s	6.1
P0405.030-010-A2	M3	10	12	2.5	2	A2 s/s	6.1
P0405.030-012-A2	M3	12	12	2.5	2	A2 s/s	6.1
P0405.030-016-A2	M3	16	12	2.5	2	A2 s/s	6.1
P0405.030-020-A2	M3	20	12	2.5	2	A2 s/s	6.1
P0405.040-008-A2	M4	8	16	3.5	3	A2 s/s	6.1
P0405.040-010-A2	M4	10	16	3.5	3	A2 s/s	6.2
P0405.040-012-A2	M4	12	16	3.5	3	A2 s/s	6.4
P0405.040-016-A2	M4	16	16	3.5	3	A2 s/s	6.7
P0405.040-020-A2	M4	20	16	3.5	3	A2 s/s	6.7
P0405.040-025-A2	M4	25	16	3.5	3	A2 s/s	6.7
P0405.040-030-A2	M4	30	16	3.5	3	A2 s/s	6.7
P0405.050-008-A2	M5	8	20	4.0	3	A2 s/s	11.0
P0405.050-010-A2	M5	10	20	4.0	3	A2 s/s	11.0
P0405.050-012-A2	M5	12	20	4.0	3	A2 s/s	11.3
P0405.050-016-A2	M5	16	20	4.0	3	A2 s/s	11.7
P0405.050-020-A2	M5	20	20	4.0	3	A2 s/s	12.0
P0405.050-025-A2	M5	25	20	4.0	3	A2 s/s	12.0
P0405.050-030-A2	M5	30	20	4.0	2	A2 s/s	12.0
P0405.060-010-A2	M6	10	24	5.0	4	A2 s/s	20.0
P0405.060-012-A2	M6	12	24	5.0	4	A2 s/s	20.0
P0405.060-016-A2	M6	16	24	5.0	4	A2 s/s	20.4
P0405.060-020-A2	M6	20	24	5.0	4	A2 s/s	21.0
P0405.060-025-A2	M6	25	24	5.0	4	A2 s/s	22.0
P0405.060-030-A2	M6	30	24	5.0	4	A2 s/s	22.0
P0405.080-012-A2	M8	12	30	6.0	5	A2 s/s	40.0
P0405.080-016-A2	M8	16	30	6.0	5	A2 s/s	40.0
P0405.080-020-A2	M8	20	30	6.0	5	A2 s/s	40.0
P0405.080-025-A2	M8	25	30	6.0	5	A2 s/s	42.0
P0405.080-030-A2	M8	30	30	6.0	5	A2 s/s	43.0
P0405.030-008-A4	M3	8	12	2.5	2	A4 s/s	6.1
P0405.030-010-A4	M3	10	12	2.5	2	A4 s/s	6.1



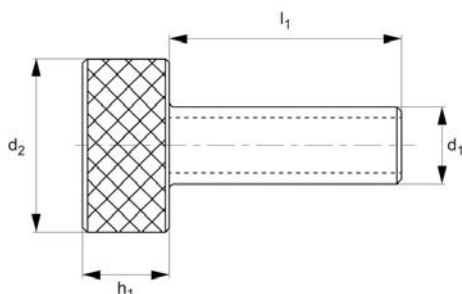
Order No.	d ₁	l ₁	d ₂	h	l ₂	Material	Weight g
P0405.030-012-A4	M3	12	12	2.5	2	A4 s/s	6.1
P0405.030-016-A4	M3	16	12	2.5	2	A2 s/s	6.1
P0405.030-020-A4	M3	20	12	2.5	2	A4 s/s	6.1
P0405.040-008-A4	M4	8	16	3.5	3	A4 s/s	6.1
P0405.040-010-A4	M4	10	16	3.5	3	A4 s/s	6.2
P0405.040-012-A4	M4	12	16	3.5	3	A4 s/s	6.4
P0405.040-016-A4	M4	16	16	3.5	3	A4 s/s	6.7
P0405.040-020-A4	M4	20	16	3.5	3	A4 s/s	6.7
P0405.040-025-A4	M4	25	16	3.5	3	A4 s/s	6.7
P0405.040-030-A4	M4	30	16	3.5	3	A4 s/s	6.7
P0405.050-008-A4	M5	8	20	4.0	3	A4 s/s	11.0
P0405.050-010-A4	M5	10	20	4.0	3	A4 s/s	11.0
P0405.050-012-A4	M5	12	20	4.0	3	A4 s/s	11.3
P0405.050-016-A4	M5	16	20	4.0	3	A4 s/s	11.7
P0405.050-020-A4	M5	20	20	4.0	3	A4 s/s	12.0
P0405.050-025-A4	M5	25	20	4.0	3	A4 s/s	12.0
P0405.050-030-A4	M5	30	20	4.0	3	A4 s/s	12.0
P0405.060-010-A4	M6	10	24	5.0	4	A4 s/s	20.0
P0405.060-012-A4	M6	12	24	5.0	4	A4 s/s	20.0
P0405.060-016-A4	M6	16	24	5.0	4	A4 s/s	20.4
P0405.060-020-A4	M6	20	24	5.0	4	A4 s/s	21.0
P0405.060-025-A4	M6	25	24	5.0	4	A4 s/s	22.0
P0405.060-030-A4	M6	30	24	5.0	4	A4 s/s	22.0
P0405.080-012-A4	M8	12	30	6.0	5	A4 s/s	40.0
P0405.080-016-A4	M8	16	30	6.0	5	A4 s/s	40.0
P0405.080-020-A4	M8	20	30	6.0	5	A4 s/s	40.0
P0405.080-025-A4	M8	25	30	6.0	5	A4 s/s	42.0
P0405.080-030-A4	M8	30	30	6.0	5	A4 s/s	43.0



Narrow Head Thumb Screws

303 series stainless

Thumb Screws



P0437.A2

THUMB SCREWS

Material

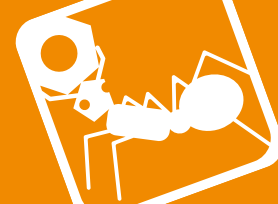
Stainless steel (AISI 303 series 1.4305).

Technical Notes

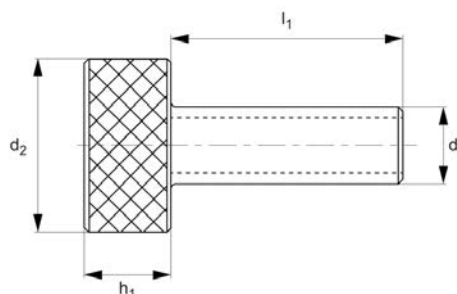
Stainless steel 303 series is a hard stain-

less steel which may (in harsh conditions) exhibit slight signs of rusting. Typically used in food and pharmaceutical applications.

Order No.	d ₁	l ₁	d ₂	h ₁
P0437.030-008-A2	M 3	8	8	5
P0437.030-010-A2	M 3	10	8	5
P0437.030-012-A2	M 3	12	8	5
P0437.030-014-A2	M 3	14	8	5
P0437.040-008-A2	M 4	8	10	5
P0437.040-010-A2	M 4	10	10	5
P0437.040-012-A2	M 4	12	10	5
P0437.040-014-A2	M 4	14	10	5
P0437.040-016-A2	M 4	16	10	5
P0437.050-008-A2	M 5	8	12	5
P0437.050-010-A2	M 5	10	12	5
P0437.050-012-A2	M 5	12	12	5
P0437.050-014-A2	M 5	14	12	5
P0437.050-016-A2	M 5	16	12	5
P0437.060-012-A2	M 6	12	13	6
P0437.060-014-A2	M 6	14	13	6
P0437.060-016-A2	M 6	16	13	6
P0437.060-018-A2	M 6	18	13	6
P0437.060-020-A2	M 6	20	13	6



P0437.A4



Material

Stainless steel (AISI 316 series 1.4401).

Technical Notes

316 series stainless steel is the most corro-

sion resistant alloy of stainless steel. It resists corrosion from seawater and strong chemicals. Suitable for outdoor use and in marine, medical and chemical applica-

tions.

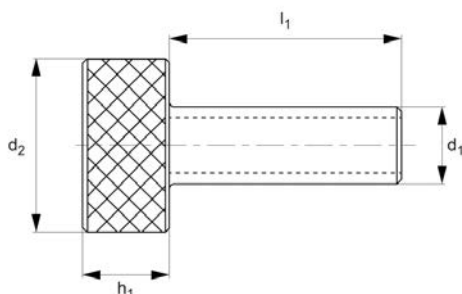
Order No.	d_1	l_1	d_2	h_1
P0437.030-008-A4	M 3	8	8	5
P0437.030-010-A4	M 3	10	8	5
P0437.030-012-A4	M 3	12	8	5
P0437.030-014-A4	M 3	14	8	5
P0437.040-008-A4	M 4	8	10	5
P0437.040-010-A4	M 4	10	10	5
P0437.040-012-A4	M 4	12	10	5
P0437.040-014-A4	M 4	14	10	5
P0437.040-016-A4	M 4	16	10	5
P0437.050-008-A4	M 5	8	12	5
P0437.050-010-A4	M 5	10	12	5
P0437.050-012-A4	M 5	12	12	5
P0437.050-014-A4	M 5	14	12	5
P0437.050-016-A4	M 5	16	12	5
P0437.060-012-A4	M 6	12	13	6
P0437.060-014-A4	M 6	14	13	6
P0437.060-016-A4	M 6	16	13	6
P0437.060-018-A4	M 6	18	13	6
P0437.060-020-A4	M 6	20	13	6



Narrow Head Thumb Screws

303 stainless, blackened

Thumb Screws



P0437.B2

THUMB SCREWS

Material

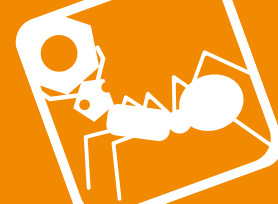
Stainless steel (AISI 303 series 1.4305), with black oxide coating.

steel which may (in harsh conditions) exhibit slight signs of rusting. Typically used in food and pharmaceutical applications.

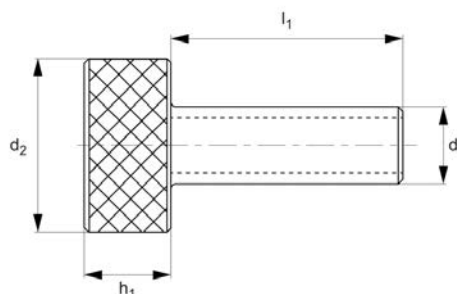
Technical Notes

303 series stainless steel is a hard stainless

Order No.	d ₁	l ₁	d ₂	h ₁
P0437.030-008-B2	M 3	8	8	5
P0437.030-010-B2	M 3	10	8	5
P0437.030-012-B2	M 3	12	8	5
P0437.030-014-B2	M 3	14	8	5
P0437.040-008-B2	M 4	8	10	5
P0437.040-010-B2	M 4	10	10	5
P0437.040-012-B2	M 4	12	10	5
P0437.040-014-B2	M 4	14	10	5
P0437.040-016-B2	M 4	16	10	5
P0437.050-008-B2	M 5	8	12	5
P0437.050-010-B2	M 5	10	12	5
P0437.050-012-B2	M 5	12	12	5
P0437.050-014-B2	M 5	14	12	5
P0437.050-016-B2	M 5	16	12	5
P0437.060-012-B2	M 6	12	13	6
P0437.060-014-B2	M 6	14	13	6
P0437.060-016-B2	M 6	16	13	6
P0437.060-018-B2	M 6	18	13	6
P0437.060-020-B2	M 6	20	13	6



P0437.B4



Material

Stainless steel (AISI 316 series 1.4401), with black oxide coating.

Technical Notes

316 series stainless steel is the most corro-

sion resistant alloy of stainless steel. It resists corrosion from seawater and strong chemicals. Suitable for outdoor use and in marine, medical and chemical applications.

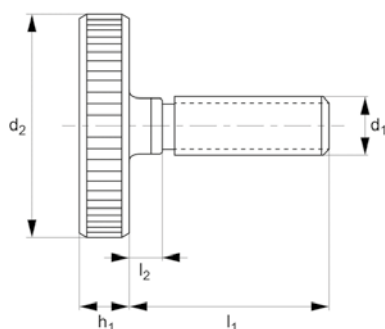
Order No.	d_1	l_1	d_2	h_1
P0437.030-008-B4	M 3	8	8	5
P0437.030-010-B4	M 3	10	8	5
P0437.030-012-B4	M 3	12	8	5
P0437.030-014-B4	M 3	14	8	5
P0437.040-008-B4	M 4	8	10	5
P0437.040-010-B4	M 4	10	10	5
P0437.040-012-B4	M 4	12	10	5
P0437.040-014-B4	M 4	14	10	5
P0437.040-016-B4	M 4	16	10	5
P0437.050-008-B4	M 5	8	12	5
P0437.050-010-B4	M 5	10	12	5
P0437.050-012-B4	M 5	12	12	5
P0437.050-014-B4	M 5	14	12	5
P0437.050-016-B4	M 5	16	12	5
P0437.060-012-B4	M 6	12	13	6
P0437.060-014-B4	M 6	14	13	6
P0437.060-016-B4	M 6	16	13	6
P0437.060-018-B4	M 6	18	13	6
P0437.060-020-B4	M 6	20	13	6



Flat Knurled Thumb Screws

DIN 653

Thumb Screws



P0405.BR

THUMB SCREWS

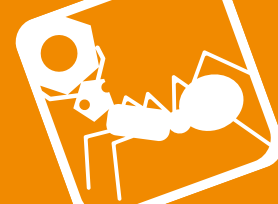
Material

Brass, Cu3 (CuZn39Pb3).

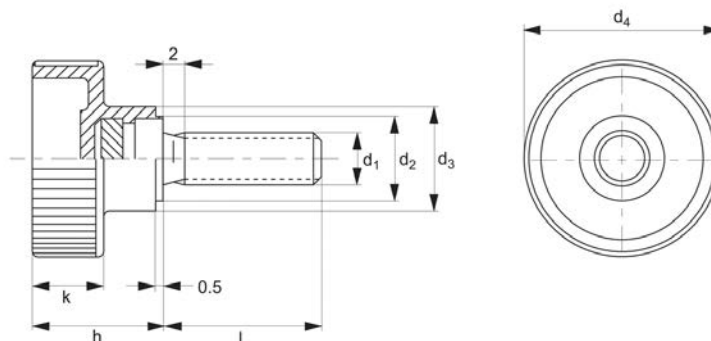
Technical Notes

To DIN 653.

Order No.	Thread	l_1	d_2	h_1	l_2	Material	Weight g
P0405.030-006-BR	M 3	6.0	12	2.5	2.0	Brass	2.3
P0405.030-008-BR	M 3	8.0	12	2.5	2.0	Brass	2.4
P0405.030-010-BR	M 3	10	12	2.5	2.0	Brass	2.5
P0405.030-012-BR	M 3	12	12	2.5	2.0	Brass	2.6
P0405.030-016-BR	M 3	16	12	2.5	2.0	Brass	2.7
P0405.030-020-BR	M 3	20	12	2.5	2.0	Brass	2.7
P0405.030-025-BR	M 3	25	12	2.5	2.0	Brass	2.7
P0405.040-008-BR	M 4	8.0	16	3.5	3.0	Brass	6.1
P0405.040-010-BR	M 4	10	16	3.5	3.0	Brass	6.2
P0405.040-012-BR	M 4	12	16	3.5	3.0	Brass	6.4
P0405.040-016-BR	M 4	16	16	3.5	3.0	Brass	6.7
P0405.040-020-BR	M 4	20	16	3.5	3.0	Brass	6.7
P0405.040-025-BR	M 4	25	16	3.5	3.0	Brass	6.7
P0405.050-008-BR	M 5	8	20	4.0	3.0	Brass	11.0
P0405.050-010-BR	M 5	10	20	4.0	3.0	Brass	11.0
P0405.050-012-BR	M 5	12	20	4.0	3.0	Brass	11.3
P0405.050-016-BR	M 5	16	20	4.0	3.0	Brass	11.7
P0405.050-020-BR	M 5	20	20	4.0	3.0	Brass	12.0
P0405.050-025-BR	M 5	25	20	4.0	3.0	Brass	12.0
P0405.050-030-BR	M 5	30	20	4.0	3.0	Brass	12.0
P0405.060-010-BR	M 6	10	24.0	5.0	4.0	Brass	20.0
P0405.060-012-BR	M 6	12	24.0	5.0	4.0	Brass	20.0
P0405.060-016-BR	M 6	16	24.0	5.0	4.0	Brass	20.4
P0405.060-020-BR	M 6	20	24.0	5.0	4.0	Brass	21.0
P0405.060-025-BR	M 6	25	24.0	5.0	4.0	Brass	25.0
P0405.060-030-BR	M 6	30	24.0	5.0	4.0	Brass	22.0
P0405.060-040-BR	M 6	40	24.0	5.0	4.0	Brass	22.0
P0405.080-016-BR	M 8	16	30.0	6.0	5.0	Brass	40.0
P0405.080-020-BR	M 8	20	30.0	6.0	5.0	Brass	40.0
P0405.080-025-BR	M 8	25	30.0	6.0	5.0	Brass	42.0
P0405.080-030-BR	M 8	30	30.0	6.0	5.0	Brass	43.0
P0405.080-040-BR	M 8	40	30.0	6.0	5.0	Brass	45.0



P0440.ZP



Material

Handle: thermoplastic PA, black.
Screw: steel, galvanised

Technical Notes

Temperature range from -30°C up to +80°C.

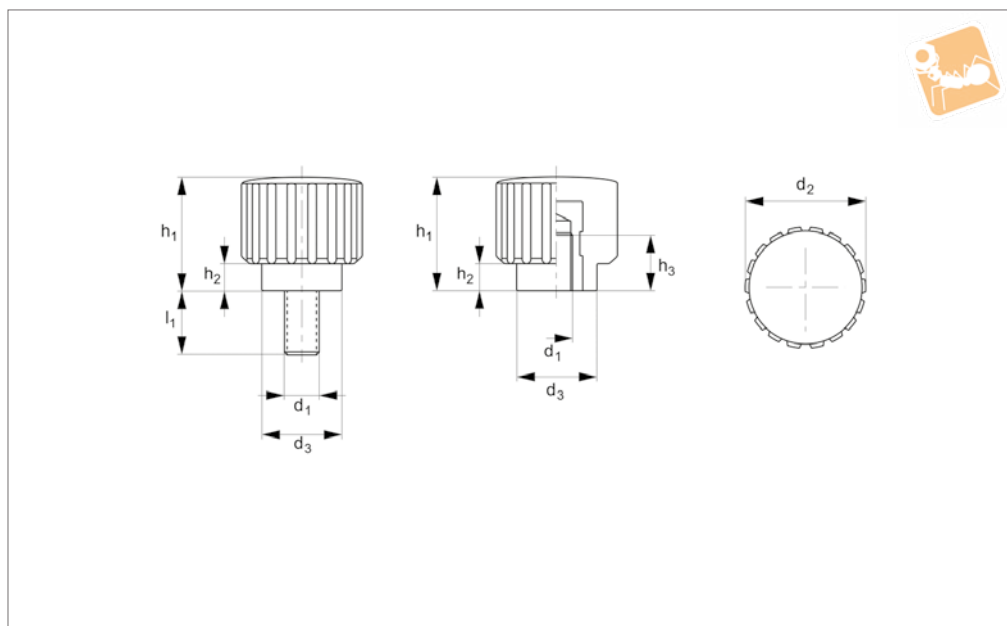
Order No.	d ₁	d ₂	d ₃	d ₄	h	k	l	Weight g
P0440.040-015-ZP	M 4	9	12	19	14.0	8.0	15	6.0
P0440.040-020-ZP	M 4	9	12	19	14.0	8.0	20	7.0
P0440.050-010-ZP	M 5	9	12	19	14.0	8.0	10	6.0
P0440.050-020-ZP	M 5	9	12	19	14.0	8.0	20	7.0
P0440.050-025-ZP	M 5	9	12	19	14.0	8.0	25	8.0
P0440.060-016-ZP	M 6	12	14	24	16.5	9.5	16	8.0
P0440.060-020-ZP	M 6	12	14	24	16.5	9.5	20	12.0
P0440.060-030-ZP	M 6	12	14	24	16.5	9.5	30	13.0
P0440.080-020-ZP	M 8	14	16	30	19.5	11.0	20	16.0
P0440.080-025-ZP	M 8	14	16	30	19.5	11.0	25	17.0
P0440.080-030-ZP	M 8	14	16	30	19.5	11.0	30	23.0
P0440.100-025-ZP	M10	16	18	36	22.5	12.5	25	31.0
P0440.100-030-ZP	M10	16	18	36	22.5	12.5	30	33.0
P0440.100-040-ZP	M10	16	18	36	22.5	12.5	40	38.0



Plastic Head Thumbscrews

Fluted body

Thumb Screws



P0444

THUMB SCREWS

Material

Duroplast, black satin finish, male version
with zinc-plated thread, female version

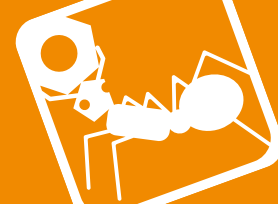
with brass insert.

Technical Notes

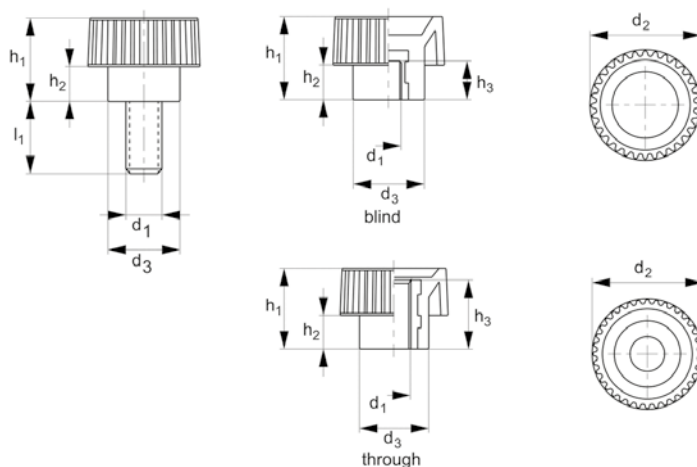
Resistant to organic and inorganic

chemical substances such as oils, greases,
fuels and solvents.

Order No.	Type	d ₁	l ₁	d ₂	d ₃	h ₁	h ₂	Insert material	h ₃
P0444.040-010-ZP	Male	M4	10	15	11	12	1.5	Steel ZP	-
P0444.050-010-ZP	Male	M5	10	15	11	12	1.5	Steel ZP	-
P0444.050-013-ZP	Male	M5	13	18	12	17	4.0	Steel ZP	-
P0444.050-040-ZP	Male	M5	40	24	12	17	5.5	Steel ZP	-
P0444.060-013-ZP	Male	M6	13	18	16	17	4.0	Steel ZP	-
P0444.060-015-ZP	Male	M6	15	24	16	17	5.5	Steel ZP	-
P0444.080-015-ZP	Male	M8	15	24	16	17	5.5	Steel ZP	-
P0444.080-025-ZP	Male	M8	25	24	16	17	5.5	Steel ZP	-
P0444.030-015-BR	Female	M3	-	15	11	12	1.5	Brass	9
P0444.040-015-BR	Female	M4	-	15	11	12	1.5	Brass	9
P0444.050-015-BR	Female	M5	-	15	11	12	1.5	Brass	9
P0444.050-018-BR	Female	M5	-	18	12	17	4.0	Brass	9
P0444.060-015-BR	Female	M5	-	15	11	12	1.5	Brass	9
P0444.060-018-BR	Female	M6	-	18	12	17	4.0	Brass	9
P0444.060-024-BR	Female	M6	-	24	16	17	5.5	Brass	9
P0444.080-024-BR	Female	M8	-	24	16	17	5.5	Brass	9



P0445



Material

Duroplast, black, male version with zinc-plated thread, female versions with brass insert.

Type A has a tapped blind bush, type B has a through threaded bush.

Technical Notes

Resistant to organic and inorganic chemical substances such as oils, greases, fuels and solvents.

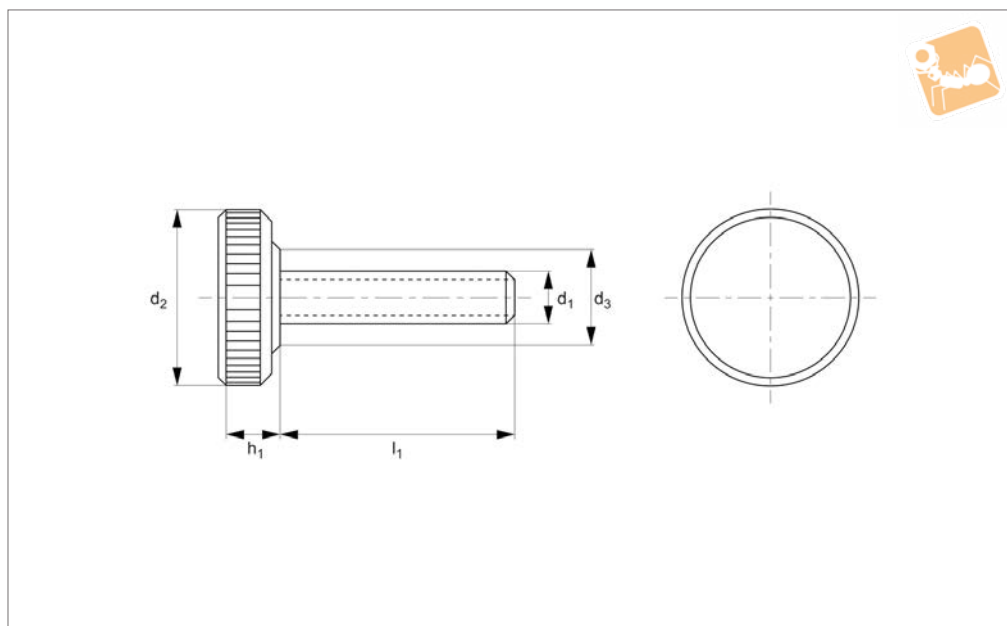
Order No.	Type	d ₁	l ₁	d ₂	d ₃	h ₁	h ₂	Insert material	h ₃
P0445.030-010-ZP	Male	M 3	10	15	11.5	13.5	5	Steel ZP	-
P0445.040-010-ZP	Male	M 4	10	15	11.5	13.5	5	Steel ZP	-
P0445.040-015-ZP	Male	M 4	15	15	11.5	13.5	5	Steel ZP	-
P0445.040-025-ZP	Male	M 4	25	15	11.5	13.5	5	Steel ZP	-
P0445.050-010-ZP	Male	M 5	10	20	13.0	16.0	6	Steel ZP	-
P0445.050-015-ZP	Male	M 5	15	15	11.5	13.5	5	Steel ZP	-
P0445.050-016-ZP	Male	M 5	15	20	13.0	16.0	6	Steel ZP	-
P0445.050-017-ZP	Male	M 5	20	20	13.0	16.0	6	Steel ZP	-
P0445.050-025-ZP	Male	M 5	25	20	13.0	16.0	6	Steel ZP	-
P0445.060-015-ZP	Male	M 6	15	15	11.5	13.5	5	Steel ZP	-
P0445.030-15A-BR	Female - blind	M 3	-	15	11.5	13.5	5	Brass	9
P0445.040-15A-BR	Female - blind	M 4	-	15	11.5	13.5	5	Brass	9
P0445.050-15A-BR	Female - blind	M 5	-	15	11.5	13.5	5	Brass	9
P0445.060-15A-BR	Female - blind	M 6	-	15	11.5	13.5	5	Brass	9
P0445.050-20A-BR	Female - blind	M 5	-	20	13.0	16.0	6	Brass	9
P0445.060-20A-BR	Female - blind	M 6	-	20	13.0	16.0	6	Brass	9
P0445.060-32A-BR	Female - blind	M 6	-	32	17.0	22.0	9	Brass	11
P0445.080-32A-BR	Female - blind	M 8	-	32	17.0	22.0	9	Brass	11
P0445.100-32A-BR	Female - blind	M10	-	32	17.0	22.0	9	Brass	11
P0445.030-15B-BR	Female - through	M 3	-	15	11.5	13.5	5	Brass	11.5
P0445.040-15B-BR	Female - through	M 4	-	15	11.5	13.5	5	Brass	11.5
P0445.040-20B-BR	Female - through	M 4	-	20	13.0	16.0	6	Brass	11.5
P0445.050-15B-BR	Female - through	M 5	-	15	11.5	13.5	5	Brass	11.5
P0445.050-20B-BR	Female - through	M 5	-	20	13.0	16.0	6	Brass	11.5
P0445.060-15B-BR	Female - through	M 6	-	15	11.5	13.5	5	Brass	11.5
P0445.060-20B-BR	Female - through	M 6	-	20	13.0	16.0	6	Brass	11.5
P0445.060-32B-BR	Female - through	M 6	-	32	17.0	22.0	9	Brass	16.5
P0445.080-32B-BR	Female - through	M 8	-	32	17.0	22.0	9	Brass	16.5
P0445.100-32B-BR	Female - through	M10	-	32	17.0	22.0	9	Brass	16.5



Plastic Head Thumb Screws

A4 stainless thread

Thumb Screws



P0480.A4

THUMB SCREWS

Material

Stainless steel thread (A4, AISI 316), with black plastic head, other colours (red,

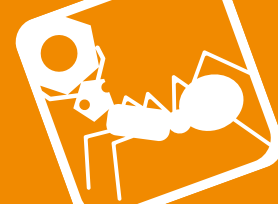
blue, green, white) available on request.

stant to corrosion.

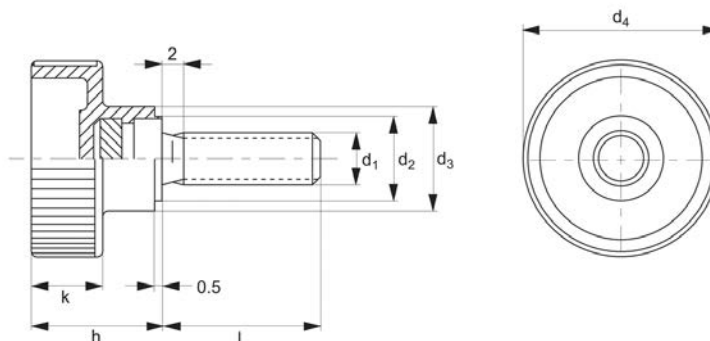
Technical Notes

Stainless steel A4, AISI 316 is highly resi-

Order No.	d ₁	l ₁	d ₂	d ₃	h ₁
P0480.030-005-A4	M3	5	10	8	4
P0480.030-006-A4	M3	6	10	8	4
P0480.030-008-A4	M3	8	10	8	4
P0480.030-012-A4	M3	12	10	8	4
P0480.030-016-A4	M3	16	10	8	4
P0480.030-020-A4	M3	20	10	8	4
P0480.030-025-A4	M3	25	10	8	4
P0480.040-006-A4	M4	6	13	10	5
P0480.040-010-A4	M4	10	13	10	5
P0480.040-012-A4	M4	12	13	10	5
P0480.040-016-A4	M4	16	13	10	5
P0480.040-020-A4	M4	20	13	10	5
P0480.040-025-A4	M4	25	13	10	5
P0480.050-008-A4	M5	8	16	12	6
P0480.050-010-A4	M5	10	16	12	6
P0480.050-012-A4	M5	12	16	12	6
P0480.050-016-A4	M5	16	16	12	6
P0480.050-020-A4	M5	20	16	12	6
P0480.050-025-A4	M5	25	16	12	6
P0480.060-010-A4	M6	10	19	14	8
P0480.060-012-A4	M6	12	19	14	8
P0480.060-016-A4	M6	16	19	14	8
P0480.060-020-A4	M6	20	19	14	8
P0480.060-025-A4	M6	25	19	14	8
P0480.060-030-A4	M6	30	19	14	8
P0480.080-010-A4	M8	10	26	16	10
P0480.080-012-A4	M8	12	26	16	10
P0480.080-016-A4	M8	16	26	16	10
P0480.080-020-A4	M8	20	26	16	10
P0480.080-025-A4	M8	25	26	16	10
P0480.080-030-A4	M8	30	26	16	10
P0480.080-040-A4	M8	40	26	16	10



P0440.A2



Material

Handle: thermoplastic PA, black.

Screw: stainless steel 1.4567. (AISI 304)

Technical Notes

Temperature range from -30°C up to +80°C.

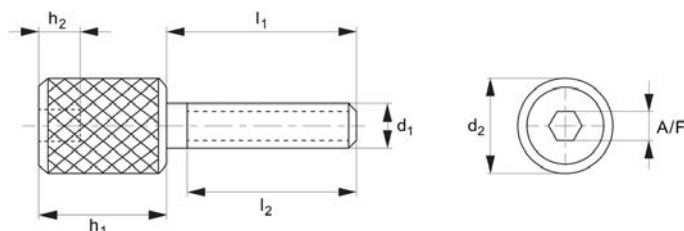
Order No.	d ₁	d ₂	d ₃	d ₄	h	k	l	Weight g
P0440.050-010-A2	M 5	9	12	19	14.0	8.0	10	4.3
P0440.050-025-A2	M 5	9	12	19	14.0	8.0	25	6.0
P0440.060-016-A2	M 6	12	14	24	16.5	9.5	16	8.0
P0440.060-020-A2	M 6	12	14	24	16.5	9.5	20	9.0
P0440.060-030-A2	M 6	12	14	24	16.5	9.5	30	10.0
P0440.080-025-A2	M 8	14	16	30	19.5	11.0	25	17.0
P0440.080-030-A2	M 8	14	16	30	19.5	11.0	30	19.0



Thin Head Thumb Screws

303 series stainless

Thumb Screws



P0435.A2

THUMB SCREWS

Material

Stainless steel (AISI 303, 1.4305).
Tensile strength 550 N/mm².
Proof stress min. 190 N/mm², austenitic

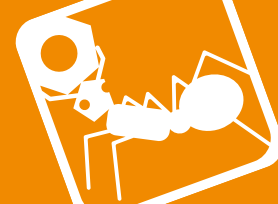
stainless steel.

Technical Notes

Stainless steel 303 series is a hard stain-

less steel which may (in harsh conditions) exhibit slight signs of rusting. Typically used in food and pharmaceutical applications.

Order No.	d ₁	l ₁	d ₂	l ₂	h ₁	h ₂ min.	A/F
P0435.03-06-12-A2	M 3	12	6	11	12	2	2
P0435.03-06-20-A2	M 3	20	6	16	12	2	2
P0435.03-08-12-A2	M 3	12	8	11	12	2	2
P0435.03-08-20-A2	M 3	20	8	16	12	2	2
P0435.03-10-10-A2	M 3	10	10	8	12	3	3
P0435.03-10-12-A2	M 3	12	10	11	12	3	3
P0435.04-06-12-A2	M 4	12	6	11	12	2	2
P0435.04-06-20-A2	M 4	20	6	16	12	2	2
P0435.04-06-25-A2	M 4	25	6	20	12	2	2
P0435.04-08-12-A2	M 4	12	8	11	12	2	2
P0435.04-08-20-A2	M 4	20	8	16	12	2	2
P0435.04-08-25-A2	M 4	25	8	20	12	2	2
P0435.04-10-10-A2	M 4	10	10	8	12	3	3
P0435.04-10-14-A2	M 4	14	10	12	12	3	3
P0435.04-10-20-A2	M 4	20	10	16	12	3	3
P0435.05-08-12-A2	M 5	12	8	11	12	2	2
P0435.05-08-20-A2	M 5	20	8	16	12	2	2
P0435.05-08-25-A2	M 5	25	8	20	12	2	2
P0435.05-08-32-A2	M 5	32	8	25	12	2	2
P0435.05-10-12-A2	M 5	12	10	11	12	3	3
P0435.05-10-20-A2	M 5	20	10	16	12	3	3
P0435.05-10-25-A2	M 5	25	10	20	12	3	3
P0435.05-10-32-A2	M 5	32	10	25	12	3	3
P0435.06-10-12-A2	M 6	12	10	11	12	3	3
P0435.06-10-20-A2	M 6	20	10	16	12	3	3
P0435.06-10-25-A2	M 6	25	10	20	12	3	3
P0435.06-10-30-A2	M 6	30	10	25	12	3	3
P0435.06-10-35-A2	M 6	35	10	30	12	3	3
P0435.08-12-12-A2	M 8	12	12	11	15	3	3
P0435.08-12-20-A2	M 8	20	12	16	15	3	3
P0435.08-12-25-A2	M 8	25	12	20	15	3	3
P0435.08-12-30-A2	M 8	30	12	25	15	3	3
P0435.08-12-35-A2	M 8	35	12	30	15	3	3
P0435.08-15-12-A2	M 8	12	15	11	15	3	3



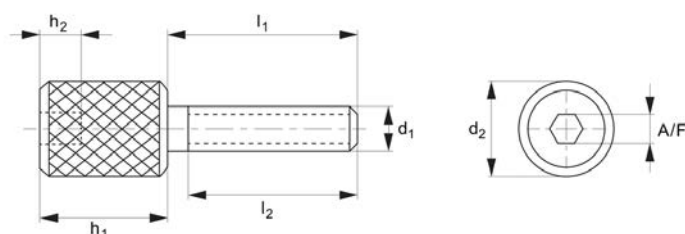
Order No.	d ₁	l ₁	d ₂	l ₂	h ₁	h ₂ min.	A/F
P0435.08-15-20-A2	M 8	20	15	16	15	3	3
P0435.08-15-25-A2	M 8	25	15	20	15	3	3
P0435.08-15-30-A2	M 8	30	15	25	15	3	3
P0435.08-15-35-A2	M 8	35	15	30	15	3	3
P0435.10-15-12-A2	M10	12	15	11	20	3	3
P0435.10-15-20-A2	M10	20	15	16	20	3	3
P0435.10-15-25-A2	M10	25	15	20	20	3	3
P0435.10-15-30-A2	M10	30	15	25	20	3	3
P0435.10-15-35-A2	M10	35	15	30	20	3	3
P0435.10-20-12-A2	M10	12	20	11	20	3	3
P0435.10-20-20-A2	M10	20	20	16	20	3	3
P0435.10-20-25-A2	M10	25	20	20	20	3	3
P0435.10-20-30-A2	M10	30	20	25	20	3	3
P0435.10-20-35-A2	M10	35	20	30	20	3	3



Thin Head Thumb Screws

316 series stainless

Thumb Screws



P0435.A4

THUMB SCREWS

Material

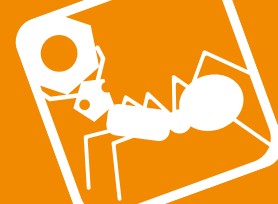
Stainless steel (AISI 316, 1.440).
Tensile strength 480 N/mm².
Proof stress min. 200 N/mm², austenitic stainless steel.

Technical Notes

316 series stainless steel is the most corrosion resistant alloy of stainless steel. It resists corrosion from seawater and strong chemicals. Suitable for outdoor use and in

marine, medical and chemical applications.

Order No.	d ₁	l ₁	d ₂	l ₂	h ₁	h ₂ min.	A/F
P0435.03-06-12-A4	M3	12	6	11	12	2	2
P0435.03-06-20-A4	M3	20	6	16	12	2	2
P0435.03-08-12-A4	M3	12	8	11	12	2	2
P0435.03-08-20-A4	M3	20	8	16	12	2	2
P0435.03-10-10-A4	M3	10	10	8	12	3	3
P0435.03-10-12-A4	M3	12	10	11	12	3	3
P0435.04-06-12-A4	M4	12	6	11	12	2	2
P0435.04-06-20-A4	M4	20	6	16	12	2	2
P0435.04-06-25-A4	M4	25	6	20	12	2	2
P0435.04-08-12-A4	M4	12	8	11	12	2	2
P0435.04-08-20-A4	M4	20	8	16	12	2	2
P0435.04-08-25-A4	M4	25	8	20	12	2	2
P0435.04-10-10-A4	M4	10	10	8	12	3	3
P0435.04-10-14-A4	M4	14	10	12	12	3	3
P0435.04-10-20-A4	M4	20	10	16	12	3	3
P0435.05-08-12-A4	M5	12	8	11	12	2	2
P0435.05-08-20-A4	M5	20	8	16	12	2	2
P0435.05-08-25-A4	M5	25	8	20	12	2	2
P0435.05-08-32-A4	M5	32	8	25	12	2	2
P0435.05-10-12-A4	M5	12	10	11	12	3	3
P0435.05-10-20-A4	M5	20	10	16	12	3	3
P0435.05-10-25-A4	M5	25	10	20	12	3	3
P0435.05-10-32-A4	M5	32	10	25	12	3	3
P0435.06-10-12-A4	M6	12	10	11	12	3	3
P0435.06-10-20-A4	M6	20	10	16	12	3	3
P0435.06-10-25-A4	M6	25	10	20	12	3	3
P0435.06-10-30-A4	M6	30	10	25	12	3	3
P0435.06-10-35-A4	M6	35	10	30	12	3	3
P0435.08-12-12-A4	M8	12	12	11	15	3	3
P0435.08-12-20-A4	M8	20	12	16	15	3	3
P0435.08-12-25-A4	M8	25	12	20	15	3	3
P0435.08-12-30-A4	M8	30	12	25	15	3	3
P0435.08-12-35-A4	M8	35	12	30	15	3	3



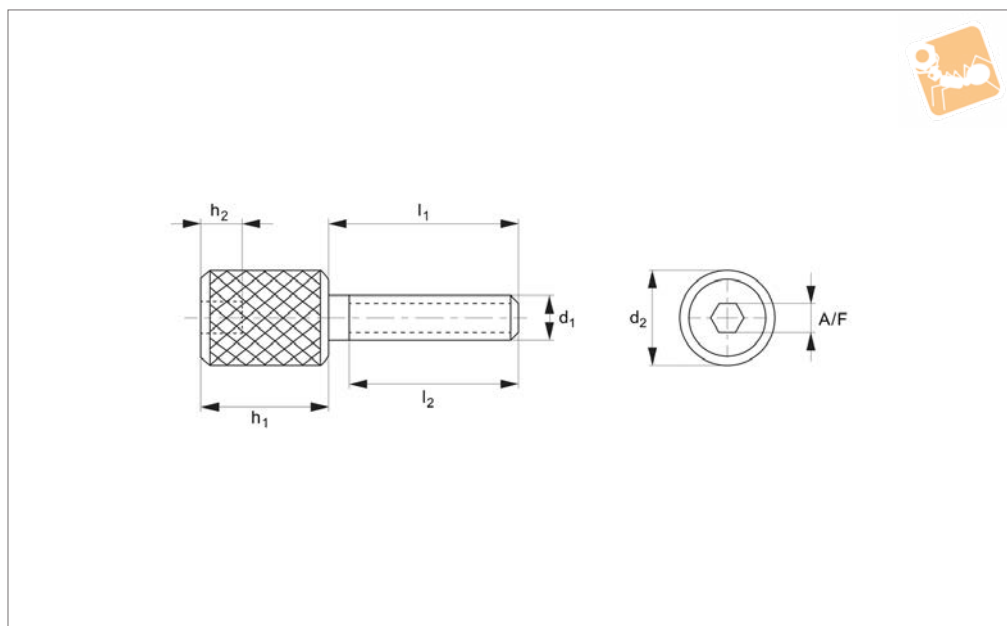
Order No.	d ₁	l ₁	d ₂	l ₂	h ₁	h ₂ min.	A/F
P0435.08-15-12-A4	M8	12	15	11	15	3	3
P0435.08-15-20-A4	M8	20	15	16	15	3	3
P0435.08-15-25-A4	M8	25	15	20	15	3	3
P0435.08-15-30-A4	M8	30	15	25	15	3	3
P0435.08-15-35-A4	M8	35	15	30	15	3	3
P0435.10-15-12-A4	M10	12	15	11	20	3	3
P0435.10-15-20-A4	M10	20	15	16	20	3	3
P0435.10-15-25-A4	M10	25	15	20	20	3	3
P0435.10-15-30-A4	M10	30	15	25	20	3	3
P0435.10-15-35-A4	M10	35	15	30	20	3	3
P0435.10-20-12-A4	M10	12	20	11	20	3	3
P0435.10-20-20-A4	M10	20	20	16	20	3	3
P0435.10-20-25-A4	M10	25	20	20	20	3	3
P0435.10-20-30-A4	M10	30	20	25	20	3	3
P0435.10-20-35-A4	M10	35	20	30	20	3	3



Thin Head Thumb Screws

303 stainless, blackened

Thumb Screws



P0435.B2

THUMB SCREWS

Material

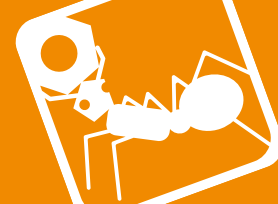
Stainless steel (AISI 303 series, 1.4305), black oxide coating.

steel which may (in harsh conditions) exhibit slight signs of rusting. Typically used in food and pharmaceutical applications.

Technical Notes

303 series stainless steel is a hard stainless

Order No.	d ₁	l ₁	d ₂	l ₂	h ₁	h ₂ min.	A/F
P0435.03-06-12-B2	M3	12	6	11	12	2	2
P0435.03-06-20-B2	M3	20	6	16	12	2	2
P0435.03-08-12-B2	M3	12	8	11	12	2	2
P0435.03-08-20-B2	M3	20	8	16	12	2	2
P0435.03-10-10-B2	M3	10	10	8	12	3	3
P0435.03-10-12-B2	M3	12	10	11	12	3	3
P0435.04-06-12-B2	M4	12	6	11	12	2	2
P0435.04-06-20-B2	M4	20	6	16	12	2	2
P0435.04-06-25-B2	M4	25	6	20	12	2	2
P0435.04-08-12-B2	M4	12	8	11	12	2	2
P0435.04-08-20-B2	M4	20	8	16	12	2	2
P0435.04-08-25-B2	M4	25	8	20	12	2	2
P0435.04-10-10-B2	M4	10	10	8	12	3	3
P0435.04-10-14-B2	M4	14	10	12	12	3	3
P0435.04-10-20-B2	M4	20	10	16	12	3	3
P0435.05-08-12-B2	M5	12	8	11	12	2	2
P0435.05-08-20-B2	M5	20	8	16	12	2	2
P0435.05-08-25-B2	M5	25	8	20	12	2	2
P0435.05-08-32-B2	M5	32	8	25	12	2	2
P0435.05-10-12-B2	M5	12	10	11	12	3	3
P0435.05-10-20-B2	M5	20	10	16	12	3	3
P0435.05-10-25-B2	M5	25	10	20	12	3	3
P0435.05-10-32-B2	M5	32	10	25	12	3	3
P0435.06-10-12-B2	M6	12	10	11	12	3	3
P0435.06-10-20-B2	M6	20	10	16	12	3	3
P0435.06-10-25-B2	M6	25	10	20	12	3	3
P0435.06-10-30-B2	M6	30	10	25	12	3	3
P0435.06-10-35-B2	M6	35	10	30	12	3	3
P0435.08-12-12-B2	M8	12	12	11	15	3	3
P0435.08-12-20-B2	M8	20	12	16	15	3	3
P0435.08-12-25-B2	M8	25	12	20	15	3	3
P0435.08-12-30-B2	M8	30	12	25	15	3	3



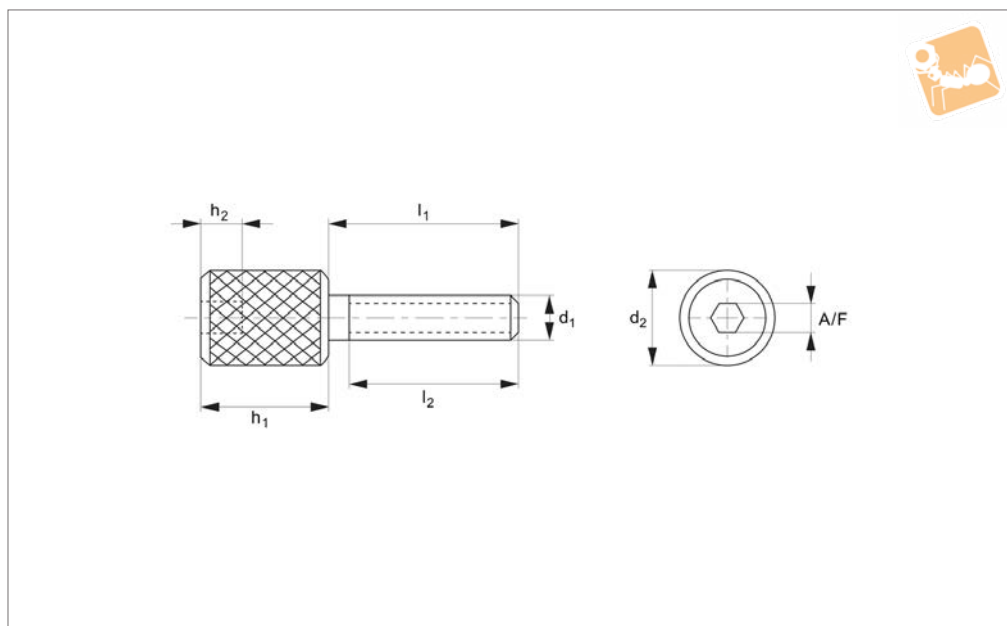
Order No.	d ₁	l ₁	d ₂	l ₂	h ₁	h ₂ min.	A/F
P0435.08-12-35-B2	M8	35	12	30	15	3	3
P0435.08-15-12-B2	M8	12	15	11	15	3	3
P0435.08-15-20-B2	M8	20	15	16	15	3	3
P0435.08-15-25-B2	M8	25	15	20	15	3	3
P0435.08-15-30-B2	M8	30	15	25	15	3	3
P0435.08-15-35-B2	M8	35	15	30	15	3	3
P0435.10-15-12-B2	M10	12	15	11	20	3	3
P0435.10-15-20-B2	M10	20	15	16	20	3	3
P0435.10-15-25-B2	M10	25	15	20	20	3	3
P0435.10-15-30-B2	M10	30	15	25	20	3	3
P0435.10-15-35-B2	M10	35	15	30	20	3	3
P0435.10-20-12-B2	M10	12	20	11	20	3	3
P0435.10-20-20-B2	M10	20	20	16	20	3	3
P0435.10-20-25-B2	M10	25	20	20	20	3	3
P0435.10-20-30-B2	M10	30	20	25	20	3	3
P0435.10-20-35-B2	M10	35	20	30	20	3	3



Thin Head Thumb Screws

316 stainless, blackened

Thumb Screws



P0435.B4

THUMB SCREWS

Material

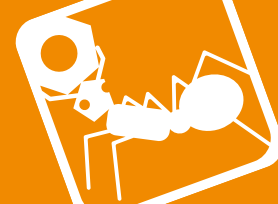
Stainless steel (AISI 316 series, 1.4401), with black oxide coating.

Technical Notes

316 series stainless steel is the most corro-

sion resistant alloy of stainless steel. It resists corrosion from seawater and strong chemicals. Suitable for outdoor use and in marine, medical and chemical applications.

Order No.	d ₁	l ₁	d ₂	l ₂	h ₁	h ₂ min.	A/F
P0435.03-06-12-B4	M3	12	6	11	12	2	2
P0435.03-06-20-B4	M3	20	6	16	12	2	2
P0435.03-08-12-B4	M3	12	8	11	12	2	2
P0435.03-08-20-B4	M3	20	8	16	12	2	2
P0435.03-10-10-B4	M3	10	10	8	12	3	3
P0435.03-10-12-B4	M3	12	10	11	12	3	3
P0435.04-06-12-B4	M4	12	6	11	12	2	2
P0435.04-06-20-B4	M4	20	6	16	12	2	2
P0435.04-06-25-B4	M4	25	6	20	12	2	2
P0435.04-08-12-B4	M4	12	8	11	12	2	2
P0435.04-08-20-B4	M4	20	8	16	12	2	2
P0435.04-08-25-B4	M4	25	8	20	12	2	2
P0435.04-10-10-B4	M4	10	10	8	12	3	3
P0435.04-10-14-B4	M4	14	10	12	12	3	3
P0435.04-10-20-B4	M4	20	10	16	12	3	3
P0435.05-08-12-B4	M5	12	8	11	12	2	2
P0435.05-08-20-B4	M5	20	8	16	12	2	2
P0435.05-08-25-B4	M5	25	8	20	12	2	2
P0435.05-08-32-B4	M5	32	8	25	12	2	2
P0435.05-10-12-B4	M5	12	10	11	12	3	3
P0435.05-10-20-B4	M5	20	10	16	12	3	3
P0435.05-10-25-B4	M5	25	10	20	12	3	3
P0435.05-10-32-B4	M5	32	10	25	12	3	3
P0435.06-10-12-B4	M6	12	10	11	12	3	3
P0435.06-10-20-B4	M6	20	10	16	12	3	3
P0435.06-10-25-B4	M6	25	10	20	12	3	3
P0435.06-10-30-B4	M6	30	10	25	12	3	3
P0435.06-10-35-B4	M6	35	10	30	12	3	3
P0435.08-12-12-B4	M8	12	12	11	15	3	3
P0435.08-12-20-B4	M8	20	12	16	15	3	3
P0435.08-12-25-B4	M8	25	12	20	15	3	3
P0435.08-12-30-B4	M8	30	12	25	15	3	3

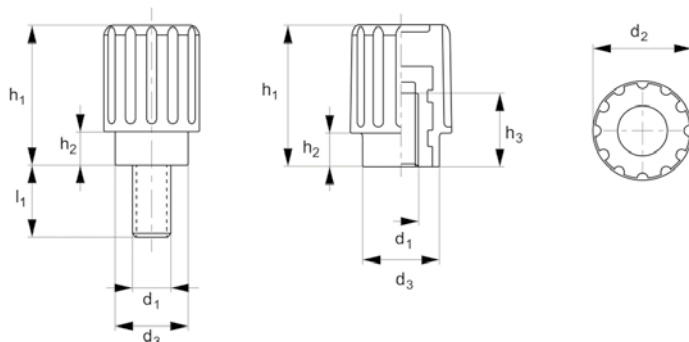


Order No.	d ₁	l ₁	d ₂	l ₂	h ₁	h ₂ min.	A/F
P0435.08-12-35-B4	M8	35	12	30	15	3	3
P0435.08-15-12-B4	M8	12	15	11	15	3	3
P0435.08-15-20-B4	M8	20	15	16	15	3	3
P0435.08-15-25-B4	M8	25	15	20	15	3	3
P0435.08-15-30-B4	M8	30	15	25	15	3	3
P0435.08-15-35-B4	M8	35	15	30	15	3	3
P0435.10-15-12-B4	M10	12	15	11	20	3	3
P0435.10-15-20-B4	M10	20	15	16	20	3	3
P0435.10-15-25-B4	M10	25	15	20	20	3	3
P0435.10-15-30-B4	M10	30	15	25	20	3	3
P0435.10-15-35-B4	M10	35	15	30	20	3	3
P0435.10-20-12-B4	M10	12	20	11	20	3	3
P0435.10-20-20-B4	M10	20	20	16	20	3	3
P0435.10-20-25-B4	M10	25	20	20	20	3	3
P0435.10-20-30-B4	M10	30	20	25	20	3	3
P0435.10-20-35-B4	M10	35	20	30	20	3	3



Thin Head Thumbscrews

Thumb Screws



P0443

THUMB SCREWS

Material

Thermoplastic (PA) knob, black satin finish, male version with zinc-plated

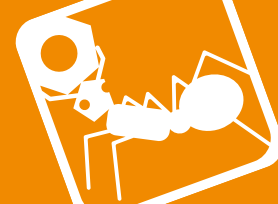
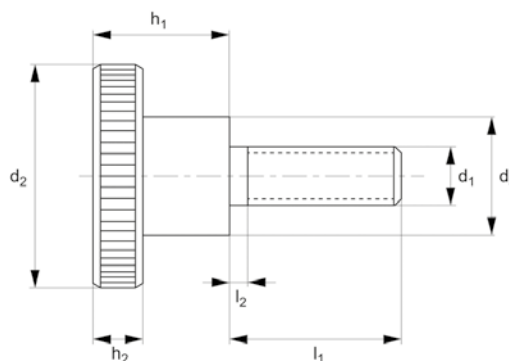
thread, female version with brass insert.

Technical Notes

Resistant to organic and inorganic

chemical substances such as oils, greases, fuels and solvents.

Order No.	Type	d ₁	l ₁	d ₂	d ₃	h ₁	h ₂	Insert material	h ₃
P0443.040-010-ZP	Male	M4	10	15	11.5	21	5	Steel ZP	-
P0443.040-015-ZP	Male	M4	15	15	11.5	21	5	Steel ZP	-
P0443.050-010-ZP	Male	M5	10	15	11.5	21	5	Steel ZP	-
P0443.050-015-ZP	Male	M5	15	15	11.5	21	5	Steel ZP	-
P0443.060-010-ZP	Male	M6	10	15	11.5	21	5	Steel ZP	-
P0443.060-015-ZP	Male	M6	15	15	11.5	21	5	Steel ZP	-
P0443.040-BR	Female	M4	-	15	11.5	21	5	Brass	9
P0443.050-BR	Female	M5	-	15	11.5	21	5	Brass	9
P0443.060-BR	Female	M6	-	15	11.5	21	5	Brass	9

**P0400.BR****Material**

Brass.

Technical Notes

To DIN 464, all knurled screws are one-

piece manufactured, contrary to the official standard sheet, they all have a thread up to the head, as shown, but no recess at the thread end.

Order No.	d ₁	l ₁	d ₂	d ₃	h ₁	h ₂	l ₂
P0400.030-004-BR	M 3	4	12	6	7.5	2.5	2
P0400.030-006-BR	M 3	6	12	6	7.5	2.5	2
P0400.030-008-BR	M 3	8	12	6	7.5	2.5	2
P0400.030-010-BR	M 3	10	12	6	7.5	2.5	2
P0400.030-012-BR	M 3	12	12	6	7.5	2.5	2
P0400.030-016-BR	M 3	16	12	6	7.5	2.5	2
P0400.030-020-BR	M 3	20	12	6	7.5	2.5	2
P0400.040-006-BR	M 4	6	16	8	9.5	3.5	2
P0400.040-008-BR	M 4	8	16	8	9.5	3.5	2
P0400.040-010-BR	M 4	10	16	8	9.5	3.5	2
P0400.040-012-BR	M 4	12	16	8	9.5	3.5	2
P0400.040-016-BR	M 4	16	16	8	9.5	3.5	2
P0400.040-020-BR	M 4	20	16	8	9.5	3.5	2
P0400.040-030-BR	M 4	30	16	8	9.5	3.5	2
P0400.050-006-BR	M 5	6	20	10	11.5	4.0	2
P0400.050-008-BR	M 5	8	20	10	11.5	4.0	2
P0400.050-010-BR	M 5	10	20	10	11.5	4.0	2
P0400.050-012-BR	M 5	12	20	10	11.5	4.0	2
P0400.050-016-BR	M 5	16	20	10	11.5	4.0	2
P0400.050-020-BR	M 5	20	20	10	11.5	4.0	2
P0400.050-025-BR	M 5	25	20	10	11.5	4.0	2
P0400.050-030-BR	M 5	30	20	10	11.5	4.0	2
P0400.060-008-BR	M 6	8	24	12	15.0	5.0	2
P0400.060-010-BR	M 6	10	24	12	15.0	5.0	2
P0400.060-012-BR	M 6	12	24	12	15.0	5.0	2
P0400.060-016-BR	M 6	16	24	12	15.0	5.0	2
P0400.060-020-BR	M 6	20	24	12	15.0	5.0	2
P0400.060-025-BR	M 6	25	24	12	15.0	5.0	2
P0400.060-030-BR	M 6	30	24	12	15.0	5.0	2
P0400.060-040-BR	M 6	40	24	12	15.0	5.0	2
P0400.080-012-BR	M 8	12	30	16	18.0	6.0	2
P0400.080-016-BR	M 8	16	30	16	18.0	6.0	2
P0400.080-020-BR	M 8	20	30	16	18.0	6.0	2
P0400.080-025-BR	M 8	25	30	16	18.0	6.0	2



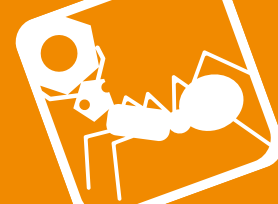
Brass Knurled Thumb Screws

brass

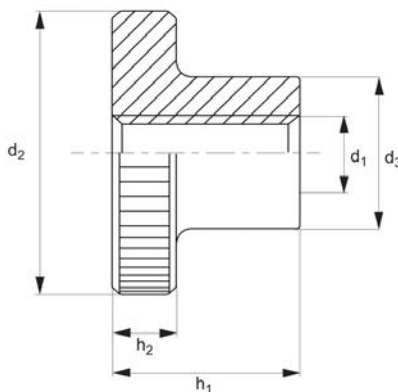
Thumb Screws



Order No.	d ₁	l ₁	d ₂	d ₃	h ₁	h ₂	l ₂
P0400.080-030-BR	M 8	30	30	16	18.0	6.0	2
P0400.080-040-BR	M 8	40	30	16	18.0	6.0	2



P0403.A4



Material

Stainless steel (A4, AISI 316).

Technical Notes

To DIN 466, size M12 not contained in DIN standard.

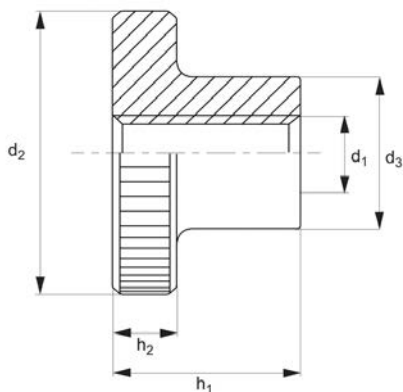
Order No.	d ₁	d ₂	d ₃	h ₁	h ₂	Material	Weight g
P0403.020-A4	M 2	9	4.5	5.3	2	A4 s/s	3
P0403.025-A4	M2,5	11	5	6.5	2.5	A4 s/s	4
P0403.030-A4	M 3	12	6	7.5	2.5	A4 s/s	5
P0403.040-A4	M 4	16	8	9.5	3.5	A4 s/s	7
P0403.050-A4	M 5	20	10	11.5	4	A4 s/s	13
P0403.060-A4	M 6	24	12	15	5	A4 s/s	24
P0403.080-A4	M 8	30	16	18	6	A4 s/s	46
P0403.100-A4	M10	36	20	23	8	A4 s/s	62



Knurled Thumb Nuts

With collar - A2 stainless

Thumb Screws



P0403.A2

THUMB SCREWS

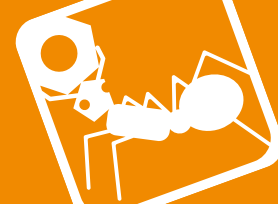
Material

Stainless steel (A2, AISI 303).

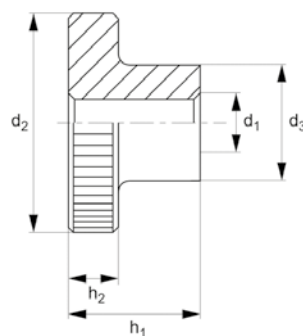
Technical Notes

To DIN 466, size M12 not contained in DIN standard.

Order No.	d ₁	d ₂	d ₃	h ₁	h ₂	Material	Weight g
P0403.020-A2	M 2	9	4.5	5.3	2	A2 s/s	3
P0403.025-A2	M2,5	11	5	6.5	2.5	A2 s/s	4
P0403.030-A2	M 3	12	6	7.5	2.5	A2 s/s	5
P0403.040-A2	M 4	16	8	9.5	3.5	A2 s/s	7
P0403.050-A2	M 5	20	10	11.5	4	A2 s/s	13
P0403.060-A2	M 6	24	12	15	5	A2 s/s	24
P0403.080-A2	M 8	30	16	18	6	A2 s/s	46
P0403.100-A2	M10	36	20	23	8	A2 s/s	62



P0403.BR



Material

Brass, Cu3 (CuZn39Pb3).

Technical Notes

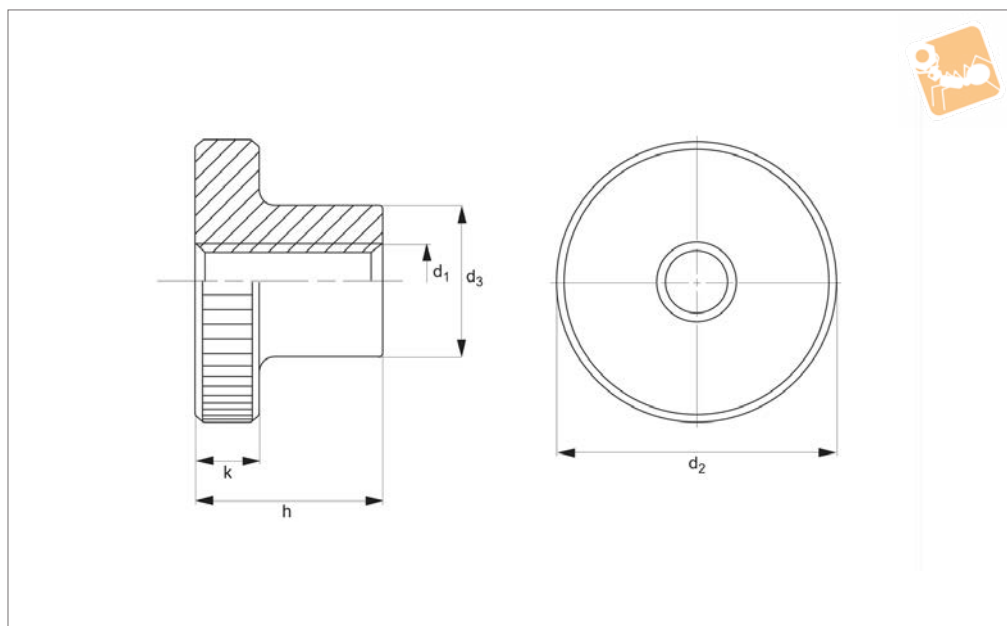
To DIN 466, size M12 not contained in DIN standard.

Order No.	Thread	d ₂	d ₃	h ₁	h ₂	Material	Finish	Weight g
P0403.060-BR	M 6	24	12	15	5.0	Brass	Self colour/Unfinished	24



Knurled Nuts with collar - DIN 466

Thumb Screws



P0403.BL

THUMB SCREWS

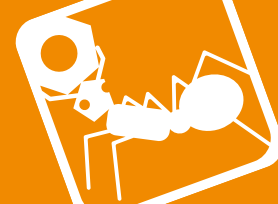
Material

Steel, quality 5, blackened. Turned, visible face, good finish.

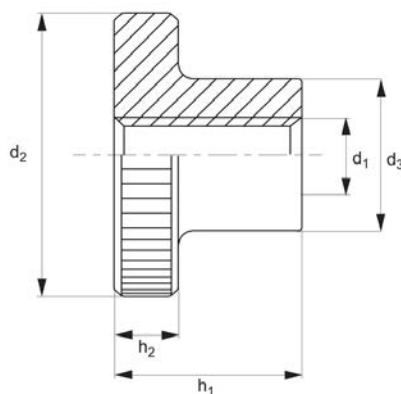
Technical Notes

Size M12 not contained in DIN standard.

Order No.	d ₁	d ₂	d ₃	h	k	Weight g
P0403.030-BL	M 3	12	6	7.5	2.5	2.9
P0403.040-BL	M 4	16	8	9.5	3.5	6.7
P0403.050-BL	M 5	20	10	11.5	4.0	12.0
P0403.060-BL	M 6	24	12	15.0	5.0	23.0
P0403.080-BL	M 8	30	16	18.0	6.0	44.0
P0403.100-BL	M10	36	20	23.0	8.0	85.0
P0403.120-BL	M12	40	22	25.0	10.0	119.0



P0403.ZP



Material

Steel (class 5.8), zinc-plated.

Technical Notes

To DIN 466, size M12 not contained in DIN standard.

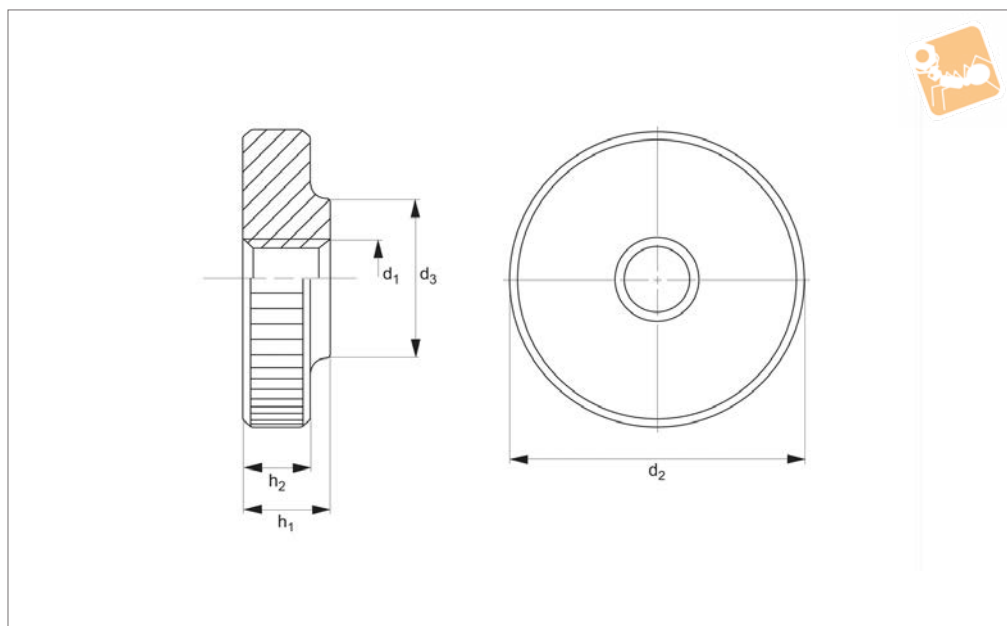
Order No.	d_1	d_2	d_3	h_1	h_2	Material	Weight g
P0403.030-ZP	M 3	12	6	7.5	2.5	Steel ZP	3
P0403.040-ZP	M 4	16	8	9.5	3.5	Steel ZP	7
P0403.050-ZP	M 5	20	10	11.5	4.0	Steel ZP	13
P0403.060-ZP	M 6	24	12	15.0	5.0	Steel ZP	24
P0403.080-ZP	M 8	30	16	18.0	6.0	Steel ZP	46
P0403.100-ZP	M10	36	20	23.0	8.0	Steel ZP	83



Flat Knurled Nuts

stainless steel

Thumb Screws



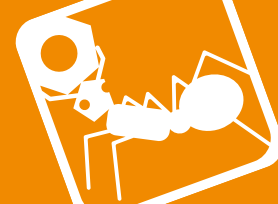
P0406.A2

THUMB SCREWS

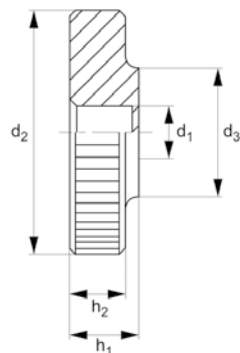
Material

Stainless steel 1,4305 (AISI 303), dull blasted.

Order No.	d_1	d_2	d_3	h_1	h_2	Weight g
P0406.040-A2	M 4	16	8	4	3.5	5.0
P0406.050-A2	M 5	20	10	5	4.0	9.4
P0406.060-A2	M 6	24	12	6	5.0	17.0
P0406.080-A2	M 8	30	16	8	6.0	32.0



P0406.BR



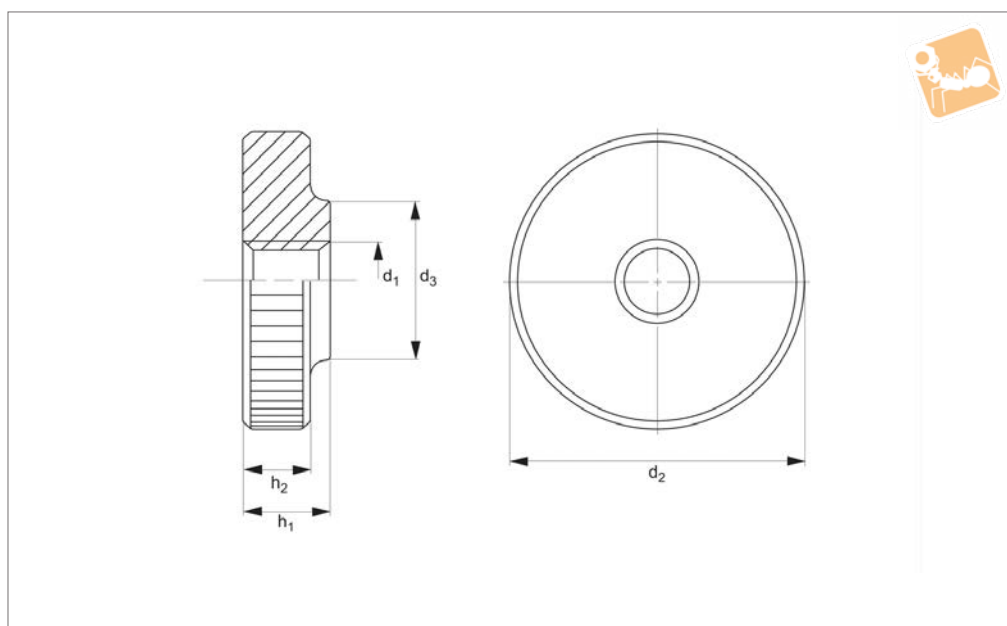
Material

Brass, Cu3 (CuZn39Pb3).

Technical Notes

To DIN 467, size M12 not contained in DIN standard.

Order No.	Thread	d ₂	d ₃	h ₁	h ₂	Material	Finish	Weight g
P0406.040-BR	M 4	16.0	8.0	4.0	3.5	Brass	Self colour/Unfinished	5.0



P0406.BL

THUMB SCREWS

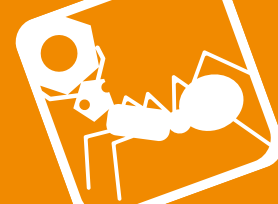
Material

Steel, quality 5, blackened. Turned, visible face, good finish.

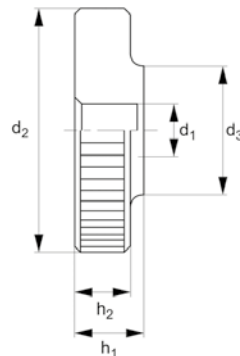
Technical Notes

Size M12 not contained in DIN standard.

Order No.	d_1	d_2	d_3	h_1	h_2	Weight g
P0406.030-BL	M 3	12	6	3	2.5	2.1
P0406.040-BL	M 4	16	8	4	3.5	5.0
P0406.050-BL	M 5	20	10	5	4.0	9.4
P0406.060-BL	M 6	24	12	6	5.0	17.0
P0406.080-BL	M 8	30	16	8	6.0	32.0
P0406.100-BL	M10	36	20	10	8.0	61.0
P0406.120-BL	M12	40	22	12	10.0	92.0



P0406.ZP



Material

Steel (class 5.8), zinc-plated.

Technical Notes

To DIN 467, size M12 not contained in DIN standard.

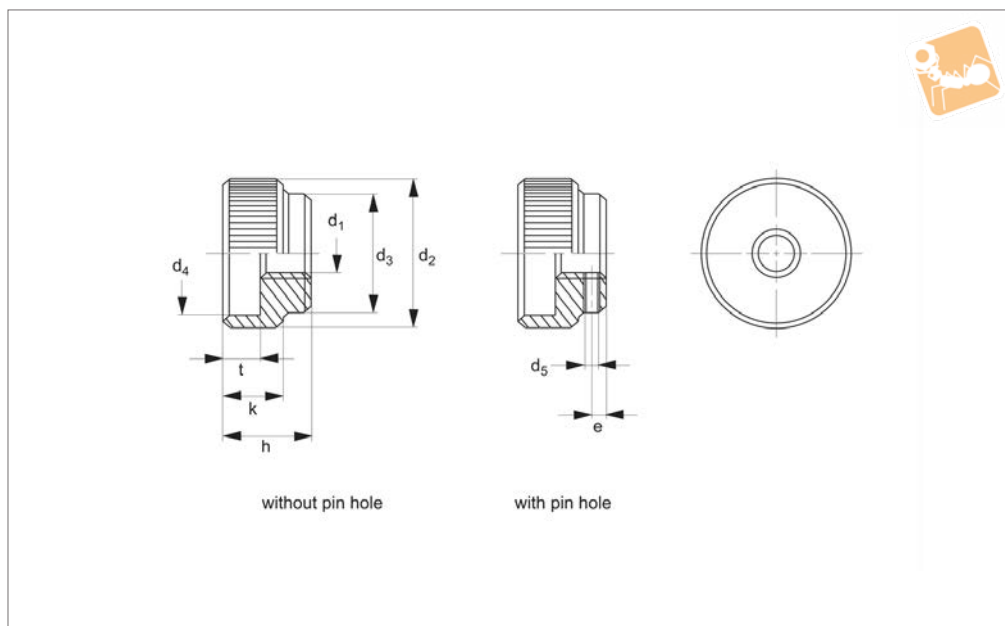
Order No.	d ₁	d ₂	d ₃	h ₁	h ₂	Material	Weight g
P0406.030-ZP	M 3	12.0	6.0	3.0	2.5	Steel ZP	2.0
P0406.040-ZP	M 4	16.0	8.0	4.0	3.5	Steel ZP	5.0
P0406.050-ZP	M 5	20.0	10.0	5.0	4.0	Steel ZP	10.0
P0406.060-ZP	M 6	24.0	12.0	6.0	5.0	Steel ZP	17.0
P0406.080-ZP	M 8	30.0	16.0	8.0	6.0	Steel ZP	33.0
P0406.100-ZP	M10	36.0	20.0	10.0	8.0	Steel ZP	63.0
P0406.120-ZP	M12	40.0	22.0	12.0	10.0	Steel ZP	93.0



Knurled Nuts

stainless steel - DIN 6303

Thumb Screws



P0409.A2

THUMB SCREWS

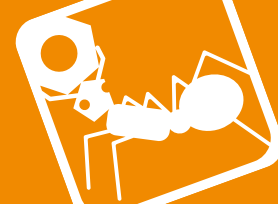
Material

Stainless steel 1.4305 (AISI 303), matte, shot-blasted.

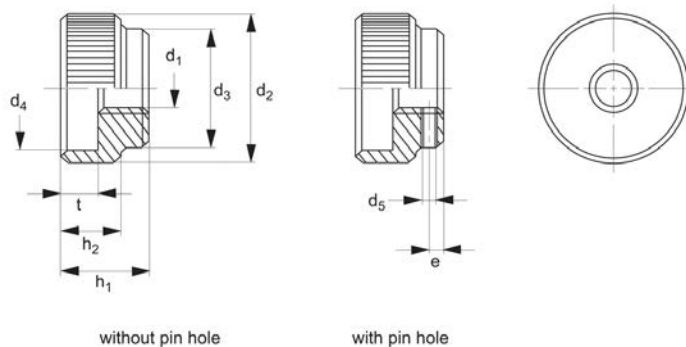
Technical Notes

Tolerance of pin hole d_5 is H7.

Order No.	Type	d_1	d_2	d_3	d_4	d_5 pre-drilled	e	h	k	t	Pin required DIN 7	Weight g
P0409.050-A2	Without Pin Hole	M 5	20	14	15	-	-	12	8	5	-	16
P0409.006-A2	Without Pin Hole	M 6	24	16	18	-	-	14	10	6	-	27
P0409.080-A2	Without Pin Hole	M 8	30	20	24	-	-	17	12	7	-	46
P0409.100-A2	Without Pin Hole	M10	36	28	30	-	-	20	14	8	-	82
P0409.120-A2	Without Pin Hole	M12	40	32	34	-	-	24	16	10	-	123
P0409.050-A2-W	With Pin Hole	M 5	20	14	15	1.4	2.5	12	8	5	1,5 M 6x14	15
P0409.060-A2-W	With Pin Hole	M 6	24	16	18	1.4	2.5	14	10	6	1,5 M 6x16	25
P0409.080-A2-W	With Pin Hole	M 8	30	20	24	1.9	3.0	17	12	7	2,0 M 6x20	45
P0409.100-A2-W	With Pin Hole	M10	36	28	30	2.9	4.0	20	14	8	3,0 M 6x28	86
P0409.120-A2-W	With Pin Hole	M12	40	32	34	3.9	4.0	24	16	10	4,0 M 6x32	121



P0409.BL



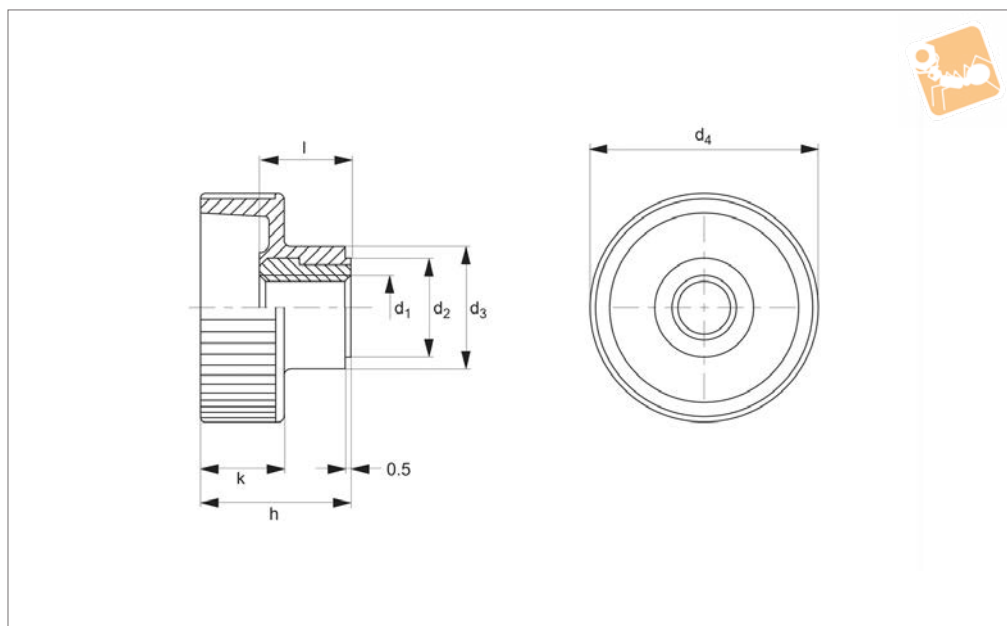
Material

Free-cutting steel, blackened.

Technical Notes

Tolerance of pin hole d_5 is H7.

Order No.	Type	d_1	d_2	d_3	d_4	d_5 pre-drilled	e	h_1	h_2	t	Pin required DIN 7	Weight g
P0409.050-BL	Without Pin Hole	M 5	20	14	15	-	-	12	8	5	-	16
P0409.060-BL	Without Pin Hole	M 6	24	16	18	-	-	14	10	6	-	27
P0409.080-BL	Without Pin Hole	M 8	30	20	24	-	-	17	12	7	-	46
P0409.100-BL	Without Pin Hole	M10	36	28	30	-	-	20	14	8	-	82
P0409.120-BL	Without Pin Hole	M12	40	32	34	-	-	24	16	10	-	123
P0409.050-BL-W	With Pin Hole	M 5	20	14	15	1.4	2.5	12	8	5	1,5 M 6x14	15
P0409.060-BL-W	With Pin Hole	M 6	24	16	18	1.4	2.5	14	10	6	1,5 M 6x16	25
P0409.080-BL-W	With Pin Hole	M 8	30	20	24	1.9	3.0	17	12	7	2,0 M 6x20	45
P0409.100-BL-W	With Pin Hole	M10	36	28	30	2.9	4.0	20	14	8	3,0 M 6x28	86
P0409.120-BL-W	With Pin Hole	M12	40	32	34	3.9	4.0	24	16	10	4,0 M 6x32	121



P0441

THUMB SCREWS

Material

Body: thermoplastic (PA), black. Insert: steel, galvanised or stainless steel 1.4305

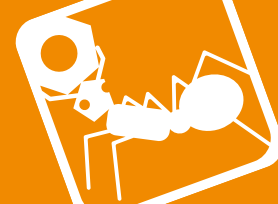
(AISI 303).

80°C.

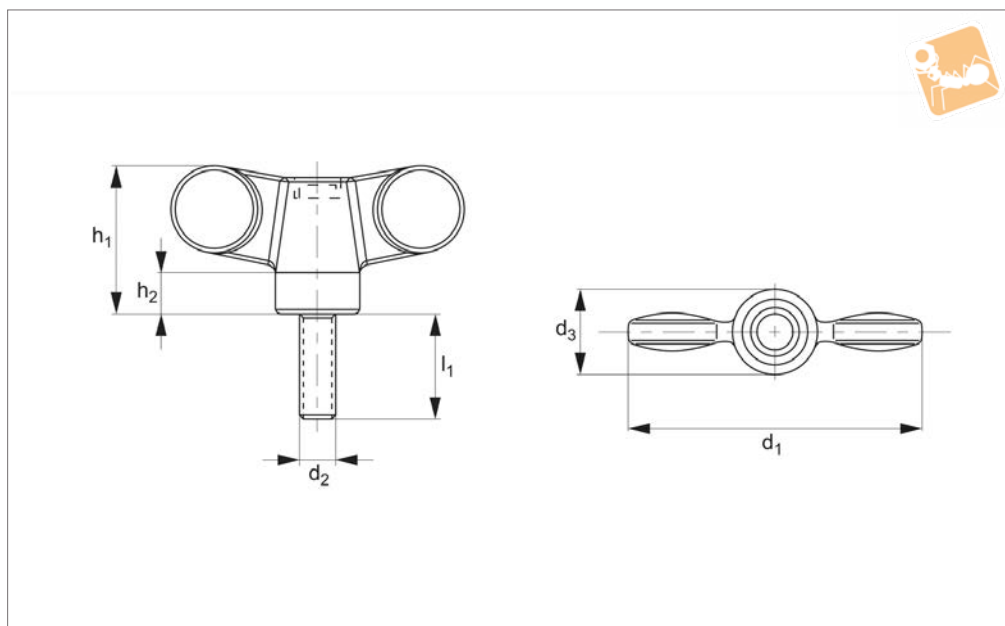
Technical Notes

Temperature resistant from -30°C to +

Order No.	Type	d ₁	d ₂	d ₃	d ₄	h	k	l	Weight g
P0441.040-ZP	Steel Insert	M 4	9	12	19	14.0	8.0	9.0	4.5
P0441.050-ZP	Steel Insert	M 5	9	12	19	14.0	8.0	9.0	4.0
P0441.060-ZP	Steel Insert	M 6	12	14	24	16.5	9.5	10.5	7.0
P0441.080-ZP	Steel Insert	M 8	14	16	30	19.5	11.0	11.5	10.0
P0441.100-ZP	Steel Insert	M10	16	18	36	22.5	12.5	14.0	15.0
P0441.050-A2	Stainless Insert	M 5	9	12	19	14.0	8.0	9.0	4.0
P0441.060-A2	Stainless Insert	M 6	12	14	24	16.5	9.5	10.5	7.0
P0441.080-A2	Stainless Insert	M 8	14	16	30	19.5	11.0	11.5	10.0



P0481



Material

Thermoplastic black.

Plastic insert: black RAL9005, red

RAL3000, blue RAL 5019.

subject to minimum quantity.

Tips

Other colour inserts available on request,

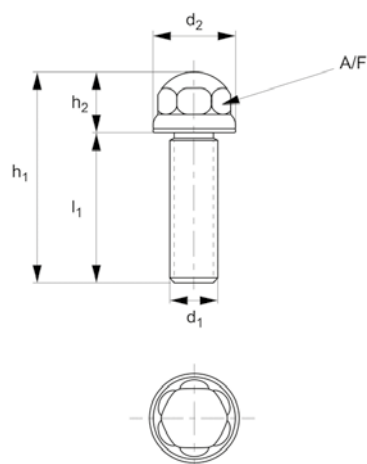
Order No.	Insert colour	d ₁	d ₂	d ₃	h ₁	h ₂	l ₁	Weight g
P0481.10-28-20	Black	55	M10	16	28	8	20	30



Hygienic Screws - Male

304 stainless steel

Thumb Screws



P0490

THUMB SCREWS

Material

Stainless steel (AISI 304) high-gloss polished dome-nut, FDA blue silicone gasket, 3-A accepted.

be mounted without dead spaces.

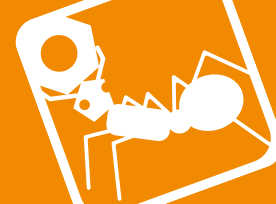
Sealing ring is hydrogenated acrylonitrile butadiene rubber (H-NBR), hardness 85±5 shore A, temp range -25°C to +150°C, blue.

Polished finish Ra < 0,8µ.

Technical Notes

For use in hygienic areas, components can

Order No.	d ₁	d ₂	h ₁	l ₁	h ₂	A/F
P0490.050-010	M5x0,8	19	24	10	14	HEX 14
P0490.050-016	M5x0,8	19	26	16	10	HEX 14
P0490.050-020	M5x0,8	19	34	20	14	HEX 14
P0490.060-012	M6x1	19	26	12	14	HEX 14
P0490.060-016	M6x1	19	30	16	14	HEX 14
P0490.060-020	M6x1	19	34	20	14	HEX 14
P0490.060-025	M6x1	19	39	25	14	HEX 14
P0490.060-030	M6x1	19	44	30	14	HEX 14
P0490.080-016	M8x1,25	24	33	16	17	HEX 17
P0490.080-020	M8x1,25	24	37	20	17	HEX 17
P0490.080-025	M8x1,25	24	42	25	17	HEX 17
P0490.080-030	M8x1,25	24	47	30	17	HEX 17
P0490.080-040	M8x1,25	24	57	40	17	HEX 17
P0490.100-020	M10x1,5	24	37	20	17	HEX 17
P0490.100-025	M10x1,5	24	42	25	17	HEX 17
P0490.100-030	M10x1,5	24	47	30	17	HEX 17
P0490.100-040	M10x1,5	24	57	40	17	HEX 17
P0490.100-050	M10x1,5	24	67	50	17	HEX 17
P0490.120-020	M12x1,75	24	27	20	7	HEX 17
P0490.120-025	M12x1,75	24	42	25	17	HEX 17
P0490.120-030	M12x1,75	24	47	30	17	HEX 17
P0490.120-040	M12x1,75	24	57	40	17	HEX 17
P0490.120-050	M12x1,75	24	67	50	17	HEX 17
P0490.160-030	M16x2	30	52	30	22	HEX 22
P0490.160-040	M16x2	30	62	40	22	HEX 22
P0490.160-050	M16x2	30	72	50	22	HEX 22
P0490.160-060	M16x2	30	82	60	22	HEX 22
P0490.160-070	M16x2	30	92	70	22	HEX 22
P0490.160-080	M16x2	30	102	80	22	HEX 22
P0490.200-030	M20x2,5	35	56	30	26	HEX 27
P0490.200-040	M20x2,5	35	66	40	26	HEX 27
P0490.200-050	M20x2,5	35	76	50	26	HEX 27



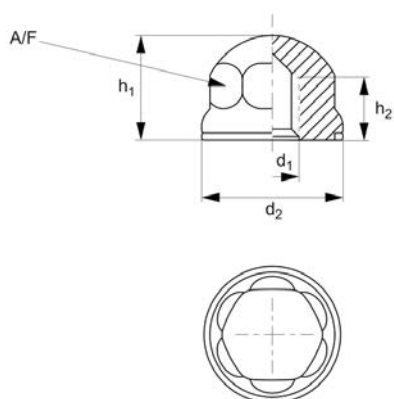
Order No.	d ₁	d ₂	h ₁	l ₁	h ₂	A/F
P0490.200-060	M20x2,5	35	86	60	26	HEX 27
P0490.200-070	M20x2,5	35	96	70	26	HEX 27
P0490.200-080	M20x2,5	35	106	80	26	HEX 27



Hygienic Nuts - Female

304 stainless steel

Thumb Screws



P0491

THUMB SCREWS

Material

AISI 304 stainless steel high-gloss polished dome-nut, FDA blue silicone gasket, 3-A accepted. Available on request in AISI 316.

Technical Notes

For use in hygienic areas, components can be mounted without dead spaces. Sealing ring is hydrogenated acrylonitrile butadiene rubber (H-NBR), hardness 85±5

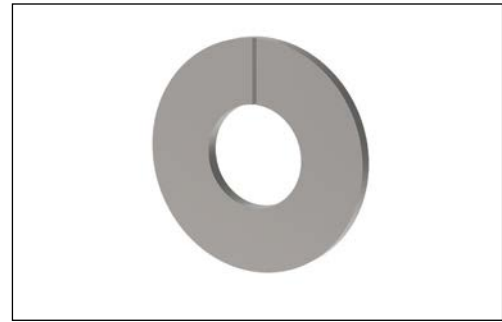
shore A, temp range -25°C to +150°C, blue.

Polished finish Ra < 0,8μ

Order No.	d ₁	d ₂	h ₁	h ₂	A/F
P0491.030	M 3x0,5	15	12	8	HEX 10
P0491.040	M 4x0,7	15	12	8	HEX 10
P0491.050	M 5x0,8	19	17	12	HEX 14
P0491.060	M 6x1	19	17	12	HEX 14
P0491.080	M 8x1,25	24	23	15	HEX 17
P0491.100	M10x1,5	24	23	15	HEX 17
P0491.120	M12x1,75	24	23	15	HEX 17
P0491.140	M14x2	30	28	20	HEX 22
P0491.160	M16x2	30	28	20	HEX 22
P0491.200	M20x2,5	35	34	25	HEX 27
P0491.240	M24x3	42	40	30	HEX 32



Vented screws are used to remove trapped gases (at the bottom of blind threads) in HV (high vacuum) and UHV (ultra-high vacuum) systems. They are precision cleaned.



They are at their most effective when used with vented washers.

Finishing Options



Silver plating



Gold plating



Nickel plating



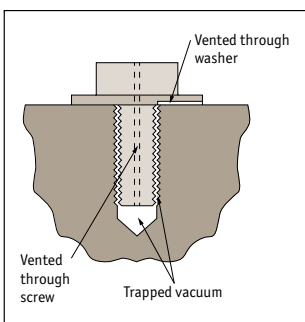
Molybdenum coating



Tungsten coating

Typical Applications

- Semi-conductor industry (wafers & microelectronics in UHV)
- Clean rooms (ultra clean assembly processes)
- Energy/Solar energy (photovoltaic panel production)
- Vacuum applications (helping to seal vacuums effectively)
- R&D



Virtual Leaks

A blind tapped hole inside a vacuum system leaves residual air space at the bottom that cannot be fully evacuated in the vacuum cycle when a bolt, screw, or other fastener is threaded into the hole. The screw itself is a helix with a large surface area also containing voids of trapped air. This produces virtual leaks. Vented screws and fasteners ensure direct ventilation of these voids, allowing the trapped volumes of air within the threads and at the bottoms of the holes to be fully evacuated. This speeds pump-down and helps improve system performance.

Galling

In High Vacuum and Ultra High Vacuum systems, like materials can become cold-fused together (called galling) due to thermal expansion and the lack of moisture created by the vacuum. Screws threaded into blind tapped holes are commonly affected in this way, and components made of stainless steel are particularly susceptible. Finishes, coatings, and platings are uniquely formulated to prevent galling, making parts maintenance and replacement faster and easier. Without the hassle of galled, stuck fasteners, downtime is minimized.

Vacuum Contamination

Our vented and coated fasteners are inspected, cleaned, and packaged in a Class 100 cleanroom environment therefore particulate and organic surface contamination is significantly reduced or eliminated altogether.



Vented Screws - Cap Head

hex. drive - 304 stainless

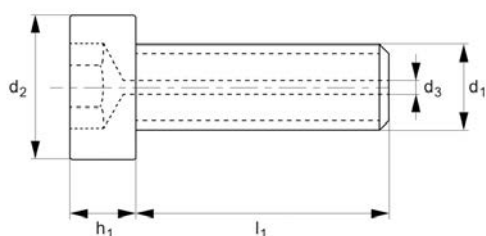
Vented Screws



MADE IN BRITAIN

P0090.A2

VENTED SCREWS



Material

Stainless steel (AISI 304, 1.4301), strength class 60.
Ultrasonically cleaned.

Technical Notes

To DIN 912 (with central vent), precision

cleaned. Other sizes available on request.

Tips

These products help eliminate virtual leaks from high vacuum (HV and UHV) systems, thereby improving pump-down times.
Trapped gases at the bottom of a tapped

hole are able to escape via the central vent in the middle of the screw.

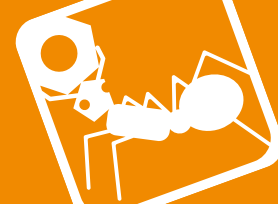
Order No.	l_1	d_1	d_2	d_3	h_1	A/F
P0090.020-004-A2	4	M 2	3.8	0.7	2.0	1.5
P0090.020-005-A2	5	M 2	3.8	0.7	2.0	1.5
P0090.020-006-A2	6	M 2	3.8	0.7	2.0	1.5
P0090.020-008-A2	8	M 2	3.8	0.7	2.0	1.5
P0090.020-010-A2	10	M 2	3.8	0.7	2.0	1.5
P0090.020-012-A2	12	M 2	3.8	0.7	2.0	1.5
P0090.020-016-A2	16	M 2	3.8	0.7	2.0	1.5
P0090.025-004-A2	4	M 2,5	4.5	0.9	2.5	2.0
P0090.025-005-A2	5	M 2,5	4.5	0.9	2.5	2.0
P0090.025-006-A2	6	M 2,5	4.5	0.9	2.5	2.0
P0090.025-008-A2	8	M 2,5	4.5	0.9	2.5	2.0
P0090.025-010-A2	10	M 2,5	4.5	0.9	2.5	2.0
P0090.025-012-A2	12	M 2,5	4.5	0.9	2.5	2.0
P0090.025-016-A2	16	M 2,5	4.5	0.9	2.5	2.0
P0090.025-020-A2	20	M 2,5	4.5	0.9	2.5	2.0
P0090.030-005-A2	5	M 3	5.5	1.0	3.0	2.5
P0090.030-006-A2	6	M 3	5.5	1.0	3.0	2.5
P0090.030-008-A2	8	M 3	5.5	1.0	3.0	2.5
P0090.030-010-A2	10	M 3	5.5	1.0	3.0	2.5
P0090.030-012-A2	12	M 3	5.5	1.0	3.0	2.5
P0090.030-016-A2	16	M 3	5.5	1.0	3.0	2.5
P0090.040-005-A2	5	M 4	7.0	1.0	4.0	3.0
P0090.040-006-A2	6	M 4	7.0	1.0	4.0	3.0
P0090.040-008-A2	8	M 4	7.0	1.0	4.0	3.0
P0090.040-010-A2	10	M 4	7.0	1.0	4.0	3.0
P0090.040-012-A2	12	M 4	7.0	1.0	4.0	3.0
P0090.040-016-A2	16	M 4	7.0	1.0	4.0	3.0
P0090.040-020-A2	20	M 4	7.0	1.0	4.0	3.0
P0090.040-025-A2	25	M 4	7.0	1.0	4.0	3.0
P0090.040-030-A2	30	M 4	7.0	1.0	4.0	3.0
P0090.040-035-A2	35	M 4	7.0	1.0	4.0	3.0
P0090.050-006-A2	6	M 5	8.5	1.3	5.0	4.0



Automotion
AN ESSENTA COMPANY

0333 207 4498

sales@automotioncomponents.co.uk



Order No.	l ₁	d ₁	d ₂	d ₃	h ₁	A/F
P0090.050-008-A2	8	M 5	8.5	1.3	5.0	4.0
P0090.050-010-A2	10	M 5	8.5	1.3	5.0	4.0
P0090.050-012-A2	12	M 5	8.5	1.3	5.0	4.0
P0090.050-016-A2	16	M 5	8.5	1.3	5.0	4.0
P0090.050-020-A2	20	M 5	8.5	1.3	5.0	4.0
P0090.050-025-A2	25	M 5	8.5	1.3	5.0	4.0
P0090.050-030-A2	30	M 5	8.5	1.3	5.0	4.0
P0090.050-035-A2	35	M 5	8.5	1.3	5.0	4.0
P0090.050-040-A2	40	M 5	8.5	1.3	5.0	4.0
P0090.060-008-A2	8	M 6	10.0	1.6	6.0	5.0
P0090.060-010-A2	10	M 6	10.0	1.6	6.0	5.0
P0090.060-012-A2	12	M 6	10.0	1.6	6.0	5.0
P0090.060-016-A2	16	M 6	10.0	1.6	6.0	5.0
P0090.060-020-A2	20	M 6	10.0	1.6	6.0	5.0
P0090.060-025-A2	25	M 6	10.0	1.6	6.0	5.0
P0090.060-030-A2	30	M 6	10.0	1.6	6.0	5.0
P0090.060-035-A2	35	M 6	10.0	1.6	6.0	5.0
P0090.060-040-A2	40	M 6	10.0	1.6	6.0	5.0
P0090.060-045-A2	45	M 6	10.0	1.6	6.0	5.0
P0090.060-050-A2	50	M 6	10.0	1.6	6.0	5.0
P0090.080-012-A2	12	M 8	13.0	1.8	8.0	6.0
P0090.080-016-A2	16	M 8	13.0	1.8	8.0	6.0
P0090.080-020-A2	20	M 8	13.0	1.8	8.0	6.0
P0090.080-025-A2	25	M 8	13.0	1.8	8.0	6.0
P0090.080-030-A2	30	M 8	13.0	1.8	8.0	6.0
P0090.080-035-A2	35	M 8	13.0	1.8	8.0	6.0
P0090.080-040-A2	40	M 8	13.0	1.8	8.0	6.0
P0090.080-045-A2	45	M 8	13.0	1.8	8.0	6.0
P0090.080-050-A2	50	M 8	13.0	1.8	8.0	6.0
P0090.080-060-A2	60	M 8	13.0	1.8	8.0	6.0
P0090.100-016-A2	16	M10	16.0	1.8	10.0	8.0
P0090.100-020-A2	20	M10	16.0	1.8	10.0	8.0
P0090.100-025-A2	25	M10	16.0	1.8	10.0	8.0
P0090.100-030-A2	30	M10	16.0	1.8	10.0	8.0
P0090.100-035-A2	35	M10	16.0	1.8	10.0	8.0
P0090.100-040-A2	40	M10	16.0	1.8	10.0	8.0
P0090.100-045-A2	45	M10	16.0	1.8	10.0	8.0
P0090.100-050-A2	50	M10	16.0	1.8	10.0	8.0
P0090.100-060-A2	60	M10	16.0	1.8	10.0	8.0
P0090.120-020-A2	20	M12	18.0	1.8	12.0	10.0
P0090.120-025-A2	25	M12	18.0	1.8	12.0	10.0
P0090.120-030-A2	30	M12	18.0	1.8	12.0	10.0
P0090.120-035-A2	35	M12	18.0	1.8	12.0	10.0
P0090.120-040-A2	40	M12	18.0	1.8	12.0	10.0
P0090.120-045-A2	45	M12	18.0	1.8	12.0	10.0
P0090.120-050-A2	50	M12	18.0	1.8	12.0	10.0
P0090.120-060-A2	60	M12	18.0	1.8	12.0	10.0
P0090.160-025-A2	25	M16	24.0	1.8	16.0	14.0
P0090.160-030-A2	30	M16	24.0	1.8	16.0	14.0
P0090.160-035-A2	35	M16	24.0	1.8	16.0	14.0
P0090.160-040-A2	40	M16	24.0	1.8	16.0	14.0
P0090.160-045-A2	45	M16	24.0	1.8	16.0	14.0
P0090.160-050-A2	50	M16	24.0	1.8	16.0	14.0
P0090.160-060-A2	60	M16	24.0	1.8	16.0	14.0



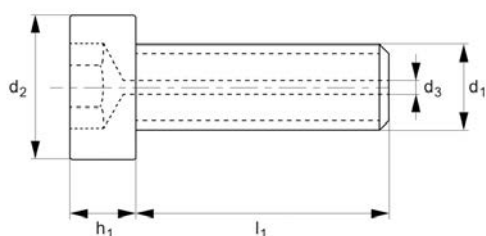
Vented Screws - Cap Head

hex. drive - 316 stainless

Vented Screws



P0090.A4



VENTED SCREWS

Material

Stainless steel (AISI 316, 1.4401),
strength class 60.
Ultrasonically cleaned.

Technical Notes

To DIN 912 (with central vent). Other sizes

can be produced on request.

Tips

These products help eliminate virtual leaks
from high vacuum (HV and UHV) systems,
thereby improving pump-down times.
Trapped gases at the bottom of a tapped

hole are able to escape via the central vent
down the middle of the screw.

Order No.	l_1	d_1	d_2	d_3	h_1	A/F
P0090.020-004-A4	4	M 2	3.8	0.7	2.0	1.5
P0090.020-005-A4	5	M 2	3.8	0.7	2.0	1.5
P0090.020-006-A4	6	M 2	3.8	0.7	2.0	1.5
P0090.020-008-A4	8	M 2	3.8	0.7	2.0	1.5
P0090.020-010-A4	10	M 2	3.8	0.7	2.0	1.5
P0090.020-012-A4	12	M 2	3.8	0.7	2.0	1.5
P0090.020-016-A4	16	M 2	3.8	0.7	2.0	1.5
P0090.025-004-A4	4	M 2,5	4.5	0.9	2.5	2.0
P0090.025-005-A4	5	M 2,5	4.5	0.9	2.5	2.0
P0090.025-006-A4	6	M 2,5	4.5	0.9	2.5	2.0
P0090.025-008-A4	8	M 2,5	4.5	0.9	2.5	2.0
P0090.025-010-A4	10	M 2,5	4.5	0.9	2.5	2.0
P0090.025-012-A4	12	M 2,5	4.5	0.9	2.5	2.0
P0090.025-016-A4	16	M 2,5	4.5	0.9	2.5	2.0
P0090.025-020-A4	20	M 2,5	4.5	0.9	2.5	2.0
P0090.030-005-A4	5	M 3	5.5	1.0	3.0	2.5
P0090.030-006-A4	6	M 3	5.5	1.0	3.0	2.5
P0090.030-008-A4	8	M 3	5.5	1.0	3.0	2.5
P0090.030-010-A4	10	M 3	5.5	1.0	3.0	2.5
P0090.030-012-A4	12	M 3	5.5	1.0	3.0	2.5
P0090.030-016-A4	16	M 3	5.5	1.0	3.0	2.5
P0090.040-005-A4	5	M 4	7.0	1.0	4.0	3.0
P0090.040-006-A4	6	M 4	7.0	1.0	4.0	3.0
P0090.040-008-A4	8	M 4	7.0	1.0	4.0	3.0
P0090.040-010-A4	10	M 4	7.0	1.0	4.0	3.0
P0090.040-012-A4	12	M 4	7.0	1.0	4.0	3.0
P0090.040-016-A4	16	M 4	7.0	1.0	4.0	3.0
P0090.040-020-A4	20	M 4	7.0	1.0	4.0	3.0
P0090.040-025-A4	25	M 4	7.0	1.0	4.0	3.0
P0090.040-030-A4	30	M 4	7.0	1.0	4.0	3.0
P0090.040-035-A4	35	M 4	7.0	1.0	4.0	3.0
P0090.050-006-A4	6	M 5	8.5	1.3	5.0	4.0



Order No.	l ₁	d ₁	d ₂	d ₃	h ₁	A/F
P0090.050-008-A4	8	M 5	8.5	1.3	5.0	4.0
P0090.050-010-A4	10	M 5	8.5	1.3	5.0	4.0
P0090.050-012-A4	12	M 5	8.5	1.3	5.0	4.0
P0090.050-016-A4	16	M 5	8.5	1.3	5.0	4.0
P0090.050-020-A4	20	M 5	8.5	1.3	5.0	4.0
P0090.050-025-A4	25	M 5	8.5	1.3	5.0	4.0
P0090.050-030-A4	30	M 5	8.5	1.3	5.0	4.0
P0090.050-035-A4	35	M 5	8.5	1.3	5.0	4.0
P0090.050-040-A4	40	M 5	8.5	1.3	5.0	4.0
P0090.060-008-A4	8	M 6	10.0	1.6	6.0	5.0
P0090.060-010-A4	10	M 6	10.0	1.6	6.0	5.0
P0090.060-012-A4	12	M 6	10.0	1.6	6.0	5.0
P0090.060-016-A4	16	M 6	10.0	1.6	6.0	5.0
P0090.060-020-A4	20	M 6	10.0	1.6	6.0	5.0
P0090.060-025-A4	25	M 6	10.0	1.6	6.0	5.0
P0090.060-030-A4	30	M 6	10.0	1.6	6.0	5.0
P0090.060-035-A4	35	M 6	10.0	1.6	6.0	5.0
P0090.060-040-A4	40	M 6	10.0	1.6	6.0	5.0
P0090.060-045-A4	45	M 6	10.0	1.6	6.0	5.0
P0090.060-050-A4	50	M 6	10.0	1.6	6.0	5.0
P0090.080-012-A4	12	M 8	13.0	1.8	8.0	6.0
P0090.080-016-A4	16	M 8	13.0	1.8	8.0	6.0
P0090.080-020-A4	20	M 8	13.0	1.8	8.0	6.0
P0090.080-025-A4	25	M 8	13.0	1.8	8.0	6.0
P0090.080-030-A4	30	M 8	13.0	1.8	8.0	6.0
P0090.080-035-A4	35	M 8	13.0	1.8	8.0	6.0
P0090.080-040-A4	40	M 8	13.0	1.8	8.0	6.0
P0090.080-045-A4	45	M 8	13.0	1.8	8.0	6.0
P0090.080-050-A4	50	M 8	13.0	1.8	8.0	6.0
P0090.080-060-A4	60	M 8	13.0	1.8	8.0	6.0
P0090.100-016-A4	16	M10	16.0	1.8	10.0	8.0
P0090.100-020-A4	20	M10	16.0	1.8	10.0	8.0
P0090.100-025-A4	25	M10	16.0	1.8	10.0	8.0
P0090.100-030-A4	30	M10	16.0	1.8	10.0	8.0
P0090.100-035-A4	35	M10	16.0	1.8	10.0	8.0
P0090.100-040-A4	40	M10	16.0	1.8	10.0	8.0
P0090.100-045-A4	45	M10	16.0	1.8	10.0	8.0
P0090.100-050-A4	50	M10	16.0	1.8	10.0	8.0
P0090.100-060-A4	60	M10	16.0	1.8	10.0	8.0
P0090.120-020-A4	20	M12	18.0	1.8	12.0	10.0
P0090.120-025-A4	25	M12	18.0	1.8	12.0	10.0
P0090.120-030-A4	30	M12	18.0	1.8	12.0	10.0
P0090.120-035-A4	35	M12	18.0	1.8	12.0	10.0
P0090.120-040-A4	40	M12	18.0	1.8	12.0	10.0
P0090.120-045-A4	45	M12	18.0	1.8	12.0	10.0
P0090.120-050-A4	50	M12	18.0	1.8	12.0	10.0
P0090.120-060-A4	60	M12	18.0	1.8	12.0	10.0
P0090.160-025-A4	25	M16	24.0	1.8	16.0	14.0
P0090.160-030-A4	30	M16	24.0	1.8	16.0	14.0
P0090.160-035-A4	35	M16	24.0	1.8	16.0	14.0
P0090.160-040-A4	40	M16	24.0	1.8	16.0	14.0
P0090.160-045-A4	45	M16	24.0	1.8	16.0	14.0
P0090.160-050-A4	50	M16	24.0	1.8	16.0	14.0
P0090.160-060-A4	60	M16	24.0	1.8	16.0	14.0



Vented Screws - Hex. Head

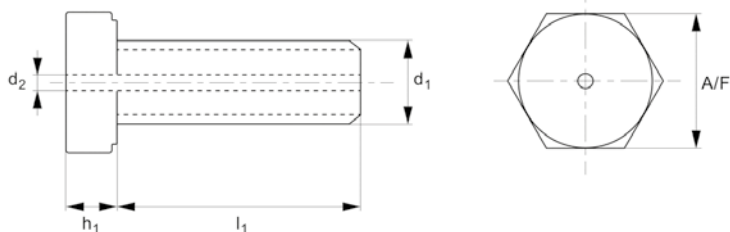
304 stainless

Vented Screws



P0091.A2

VENTED SCREWS



Material

Stainless steel (AISI 304, 1.4301),
strength class 60.
Ultrasonically cleaned.

Technical Notes

To DIN 933 (with central vent). Other sizes

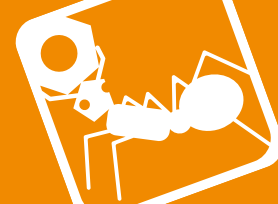
available on request.

Tips

These products help eliminate virtual leaks
from high vacuum (HV and UHV) systems,
thereby improving pump-down times.
Trapped gases at the bottom of a tapped

hole are able to escape via the central vent
down the middle of the screw.

Order No.	l_1	d_1	d_2	h_1	A/F
P0091.030-005-A2	5	M 3	1.0	2.0	6
P0091.030-006-A2	6	M 3	1.0	2.0	6
P0091.030-008-A2	8	M 3	1.0	2.0	6
P0091.030-010-A2	10	M 3	1.0	2.0	6
P0091.030-012-A2	12	M 3	1.0	2.0	6
P0091.030-016-A2	16	M 3	1.0	2.0	6
P0091.040-005-A2	5	M 4	1.0	2.8	7
P0091.040-006-A2	6	M 4	1.0	2.8	7
P0091.040-008-A2	8	M 4	1.0	2.8	7
P0091.040-010-A2	10	M 4	1.0	2.8	7
P0091.040-012-A2	12	M 4	1.0	2.8	7
P0091.040-016-A2	16	M 4	1.0	2.8	7
P0091.040-020-A2	20	M 4	1.0	2.8	7
P0091.040-025-A2	25	M 4	1.0	2.8	7
P0091.040-030-A2	30	M 4	1.0	2.8	7
P0091.040-035-A2	35	M 4	1.0	2.8	7
P0091.050-006-A2	6	M 5	1.3	3.5	8
P0091.050-008-A2	8	M 5	1.3	3.5	8
P0091.050-010-A2	10	M 5	1.3	3.5	8
P0091.050-012-A2	12	M 5	1.3	3.5	8
P0091.050-016-A2	16	M 5	1.3	3.5	8
P0091.050-020-A2	20	M 5	1.3	3.5	8
P0091.050-025-A2	25	M 5	1.3	3.5	8
P0091.050-030-A2	30	M 5	1.3	3.5	8
P0091.050-035-A2	35	M 5	1.3	3.5	8
P0091.050-040-A2	40	M 5	1.3	3.5	8
P0091.060-008-A2	8	M 6	1.6	4.0	10
P0091.060-010-A2	10	M 6	1.6	4.0	10
P0091.060-012-A2	12	M 6	1.6	4.0	10
P0091.060-016-A2	16	M 6	1.6	4.0	10
P0091.060-020-A2	20	M 6	1.6	4.0	10
P0091.060-025-A2	25	M 6	1.6	4.0	10



Order No.	l ₁	d ₁	d ₂	h ₁	A/F
P0091.060-030-A2	30	M 6	1.6	4.0	10
P0091.060-035-A2	35	M 6	1.6	4.0	10
P0091.060-040-A2	40	M 6	1.6	4.0	10
P0091.060-045-A2	45	M 6	1.6	4.0	10
P0091.060-050-A2	50	M 6	1.6	4.0	10
P0091.080-012-A2	12	M 8	1.8	5.3	13
P0091.080-016-A2	16	M 8	1.8	5.3	13
P0091.080-020-A2	20	M 8	1.8	5.3	13
P0091.080-025-A2	25	M 8	1.8	5.3	13
P0091.080-030-A2	30	M 8	1.8	5.3	13
P0091.080-035-A2	35	M 8	1.8	5.3	13
P0091.080-040-A2	40	M 8	1.8	5.3	13
P0091.080-045-A2	45	M 8	1.8	5.3	13
P0091.080-050-A2	50	M 8	1.8	5.3	13
P0091.080-055-A2	55	M 8	1.8	5.3	13
P0091.100-016-A2	16	M10	1.8	6.4	17
P0091.100-020-A2	20	M10	1.8	6.4	17
P0091.100-025-A2	25	M10	1.8	6.4	17
P0091.100-030-A2	30	M10	1.8	6.4	17
P0091.100-035-A2	35	M10	1.8	6.4	17
P0091.100-040-A2	40	M10	1.8	6.4	17
P0091.100-045-A2	45	M10	1.8	6.4	17
P0091.100-050-A2	50	M10	1.8	6.4	17
P0091.100-055-A2	55	M10	1.8	6.4	17
P0091.100-060-A2	60	M10	1.8	6.4	17
P0091.120-020-A2	20	M12	1.8	7.5	19
P0091.120-025-A2	25	M12	1.8	7.5	19
P0091.120-030-A2	30	M12	1.8	7.5	19
P0091.120-035-A2	35	M12	1.8	7.5	19
P0091.120-040-A2	40	M12	1.8	7.5	19
P0091.120-045-A2	45	M12	1.8	7.5	19
P0091.120-050-A2	50	M12	1.8	7.5	19
P0091.120-060-A2	60	M12	1.8	7.5	19
P0091.160-025-A2	25	M16	1.8	10.0	24
P0091.160-030-A2	30	M16	1.8	10.0	24
P0091.160-035-A2	35	M16	1.8	10.0	24
P0091.160-040-A2	40	M16	1.8	10.0	24
P0091.160-045-A2	45	M16	1.8	10.0	24
P0091.160-050-A2	50	M16	1.8	10.0	24
P0091.160-060-A2	60	M16	1.8	10.0	24



Vented Screws - Hex. Head

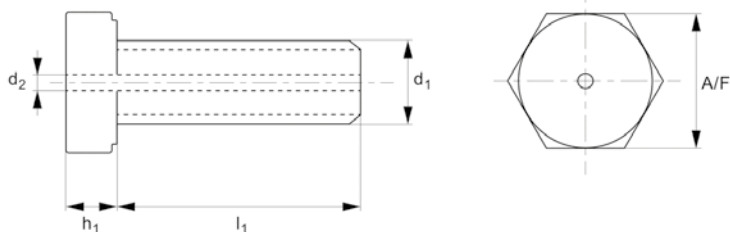
316 stainless

Vented Screws



P0091.A4

VENTED SCREWS



Material

Stainless steel (AISI 316, 1.4401),
strength class 60.
Ultrasonically cleaned.

Technical Notes

To DIN 933 (with central vent). Other sizes

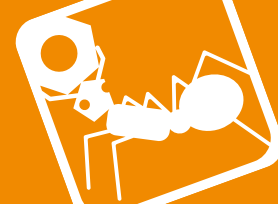
available on request.

Tips

These products help eliminate virtual leaks
from high vacuum (HV and UHV) systems,
thereby improving pump-down times.
Trapped gases at the bottom of a tapped

hole are able to escape via the central vent
down the middle of the screw.

Order No.	l_1	d_1	d_2	h_1	A/F
P0091.030-005-A4	5	M 3	1.0	2.0	5
P0091.030-006-A4	6	M 3	1.0	2.0	5
P0091.030-008-A4	8	M 3	1.0	2.0	5
P0091.030-010-A4	10	M 3	1.0	2.0	5
P0091.030-012-A4	12	M 3	1.0	2.0	5
P0091.030-016-A4	16	M 3	1.0	2.0	5
P0091.040-005-A4	5	M 4	1.0	2.8	7
P0091.040-006-A4	6	M 4	1.0	2.8	7
P0091.040-008-A4	8	M 4	1.0	2.8	7
P0091.040-010-A4	10	M 4	1.0	2.8	7
P0091.040-012-A4	12	M 4	1.0	2.8	7
P0091.040-016-A4	16	M 4	1.0	2.8	7
P0091.040-020-A4	20	M 4	1.0	2.8	7
P0091.040-025-A4	25	M 4	1.0	2.8	7
P0091.040-030-A4	30	M 4	1.0	2.8	7
P0091.040-035-A4	35	M 4	1.0	2.8	7
P0091.050-006-A4	6	M 5	1.3	3.5	8
P0091.050-008-A4	8	M 5	1.3	3.5	8
P0091.050-010-A4	10	M 5	1.3	3.5	8
P0091.050-012-A4	12	M 5	1.3	3.5	8
P0091.050-016-A4	16	M 5	1.3	3.5	8
P0091.050-020-A4	20	M 5	1.3	3.5	8
P0091.050-025-A4	25	M 5	1.3	3.5	8
P0091.050-030-A4	30	M 5	1.3	3.5	8
P0091.050-035-A4	35	M 5	1.3	3.5	8
P0091.050-040-A4	40	M 5	1.3	3.5	8
P0091.060-008-A4	8	M 6	1.6	4.0	10
P0091.060-010-A4	10	M 6	1.6	4.0	10
P0091.060-012-A4	12	M 6	1.6	4.0	10
P0091.060-016-A4	16	M 6	1.6	4.0	10
P0091.060-020-A4	20	M 6	1.6	4.0	10
P0091.060-025-A4	25	M 6	1.6	4.0	10



Order No.	l_1	d_1	d_2	h_1	A/F
P0091.060-030-A4	30	M 6	1.6	4.0	10
P0091.060-035-A4	35	M 6	1.6	4.0	10
P0091.060-040-A4	40	M 6	1.6	4.0	10
P0091.060-045-A4	45	M 6	1.6	4.0	10
P0091.060-050-A4	50	M 6	1.6	4.0	10
P0091.080-012-A4	12	M 8	1.8	5.3	13
P0091.080-016-A4	16	M 8	1.8	5.3	13
P0091.080-020-A4	20	M 8	1.8	5.3	13
P0091.080-025-A4	25	M 8	1.8	5.3	13
P0091.080-030-A4	30	M 8	1.8	5.3	13
P0091.080-035-A4	35	M 8	1.8	5.3	13
P0091.080-040-A4	40	M 8	1.8	5.3	13
P0091.080-045-A4	45	M 8	1.8	5.3	13
P0091.080-050-A4	50	M 8	1.8	5.3	13
P0091.080-055-A4	55	M 8	1.8	5.3	13
P0091.100-016-A4	16	M10	1.8	6.4	17
P0091.100-020-A4	20	M10	1.8	6.4	17
P0091.100-025-A4	25	M10	1.8	6.4	17
P0091.100-030-A4	30	M10	1.8	6.4	17
P0091.100-035-A4	35	M10	1.8	6.4	17
P0091.100-040-A4	40	M10	1.8	6.4	17
P0091.100-045-A4	45	M10	1.8	6.4	17
P0091.100-050-A4	50	M10	1.8	6.4	17
P0091.100-055-A4	55	M10	1.8	6.4	17
P0091.100-060-A4	60	M10	1.8	6.4	17
P0091.120-020-A4	20	M12	1.8	7.5	19
P0091.120-025-A4	25	M12	1.8	7.5	19
P0091.120-030-A4	30	M12	1.8	7.5	19
P0091.120-035-A4	35	M12	1.8	7.5	19
P0091.120-040-A4	40	M12	1.8	7.5	19
P0091.120-045-A4	45	M12	1.8	7.5	19
P0091.120-050-A4	50	M12	1.8	7.5	19
P0091.120-060-A4	60	M12	1.8	7.5	19
P0091.160-025-A4	25	M16	1.8	10.0	24
P0091.160-030-A4	30	M16	1.8	10.0	24
P0091.160-035-A4	35	M16	1.8	10.0	24
P0091.160-040-A4	40	M16	1.8	10.0	24
P0091.160-045-A4	45	M16	1.8	10.0	24
P0091.160-050-A4	50	M16	1.8	10.0	24
P0091.160-060-A4	60	M16	1.8	10.0	24



Vented Countersunk Machine Screws

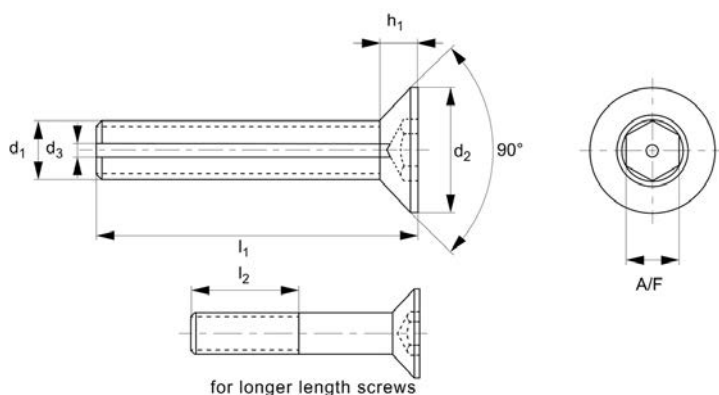
hex. drive - 304 stainless

Vented Screws



P0093.A2

VENTED SCREWS



Material

Stainless steel (AISI 304, 1.4301), strength class 60.

Technical Notes

To ISO 10642 with central vent. Other sizes

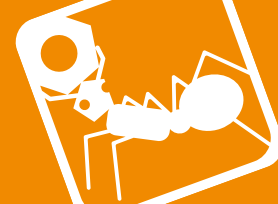
available on request.

Tips

These products help eliminate virtual leaks from high vacuum (HV and UHV) systems, thereby improving pump-down times.

Trapped gases at the bottom of a tapped hole are able to escape via the central vent down the middle of the screw.

Order No.	l_1	d_1	d_2	d_3	h_1	l_2	A/F
P0093.020-004-A2	4	M 2	3.8	0.8	1.3	-	1.3
P0093.020-005-A2	5	M 2	3.8	0.8	1.3	-	1.3
P0093.020-006-A2	6	M 2	3.8	0.8	1.3	-	1.3
P0093.020-008-A2	8	M 2	3.8	0.8	1.3	-	1.3
P0093.020-010-A2	10	M 2	3.8	0.8	1.3	-	1.3
P0093.020-012-A2	12	M 2	3.8	0.8	1.3	-	1.3
P0093.025-004-A2	4	M2,5	4.8	0.9	1.9	-	1.5
P0093.025-005-A2	5	M2,5	4.8	0.9	1.9	-	1.5
P0093.025-006-A2	6	M2,5	4.8	0.9	1.9	-	1.5
P0093.025-008-A2	8	M2,5	4.8	0.9	1.9	-	1.5
P0093.025-010-A2	10	M2,5	4.8	0.9	1.9	-	1.5
P0093.025-012-A2	12	M2,5	4.8	0.9	1.9	-	1.5
P0093.030-005-A2	5	M 3	6.0	1.0	1.7	-	2.0
P0093.030-006-A2	6	M 3	6.0	1.0	1.7	-	2.0
P0093.030-008-A2	8	M 3	6.0	1.0	1.7	-	2.0
P0093.030-010-A2	10	M 3	6.0	1.0	1.7	-	2.0
P0093.030-012-A2	12	M 3	6.0	1.0	1.7	-	2.0
P0093.030-016-A2	16	M 3	6.0	1.0	1.7	12	2.0
P0093.040-005-A2	5	M 4	8.0	1.0	2.3	-	2.5
P0093.040-006-A2	6	M 4	8.0	1.0	2.3	-	2.5
P0093.040-008-A2	8	M 4	8.0	1.0	2.3	-	2.5
P0093.040-010-A2	10	M 4	8.0	1.0	2.3	-	2.5
P0093.040-012-A2	12	M 4	8.0	1.0	2.3	-	2.5
P0093.040-016-A2	16	M 4	8.0	1.0	2.3	14	2.5
P0093.040-020-A2	20	M 4	8.0	1.0	2.3	14	2.5
P0093.040-025-A2	25	M 4	8.0	1.0	2.3	14	2.5
P0093.040-030-A2	30	M 4	8.0	1.0	2.3	14	2.5
P0093.040-035-A2	35	M 4	8.0	1.0	2.3	14	2.5
P0093.050-006-A2	6	M 5	10.0	1.3	2.8	-	3.0
P0093.050-008-A2	8	M 5	10.0	1.3	2.8	-	3.0
P0093.050-010-A2	10	M 5	10.0	1.3	2.8	-	3.0
P0093.050-012-A2	12	M 5	10.0	1.3	2.8	-	3.0
P0093.050-016-A2	16	M 5	10.0	1.3	2.8	-	3.0



Order No.	l ₁	d ₁	d ₂	d ₃	h ₁	l ₂	A/F
P0093.050-020-A2	20	M 5	10.0	1.3	2.8	16	3.0
P0093.050-025-A2	25	M 5	10.0	1.3	2.8	16	3.0
P0093.050-030-A2	30	M 5	10.0	1.3	2.8	16	3.0
P0093.050-035-A2	35	M 5	10.0	1.3	2.8	16	3.0
P0093.050-040-A2	40	M 5	10.0	1.3	2.8	16	3.0
P0093.060-008-A2	8	M 6	12.0	1.6	3.3	-	4.0
P0093.060-010-A2	10	M 6	12.0	1.6	3.3	-	4.0
P0093.060-012-A2	12	M 6	12.0	1.6	3.3	-	4.0
P0093.060-016-A2	16	M 6	12.0	1.6	3.3	-	4.0
P0093.060-020-A2	20	M 6	12.0	1.6	3.3	18	4.0
P0093.060-025-A2	25	M 6	12.0	1.6	3.3	18	4.0
P0093.060-030-A2	30	M 6	12.0	1.6	3.3	18	4.0
P0093.060-035-A2	35	M 6	12.0	1.6	3.3	18	4.0
P0093.060-040-A2	40	M 6	12.0	1.6	3.3	18	4.0
P0093.060-045-A2	45	M 6	12.0	1.6	3.3	18	4.0
P0093.060-050-A2	50	M 6	12.0	1.6	3.3	18	4.0
P0093.080-012-A2	12	M 8	16.0	1.8	4.4	-	5.0
P0093.080-016-A2	16	M 8	16.0	1.8	4.4	-	5.0
P0093.080-020-A2	20	M 8	16.0	1.8	4.4	-	5.0
P0093.080-025-A2	25	M 8	16.0	1.8	4.4	22	5.0
P0093.080-030-A2	30	M 8	16.0	1.8	4.4	22	5.0
P0093.080-035-A2	35	M 8	16.0	1.8	4.4	22	5.0
P0093.080-040-A2	40	M 8	16.0	1.8	4.4	22	5.0
P0093.080-045-A2	45	M 8	16.0	1.8	4.4	22	5.0
P0093.080-050-A2	50	M 8	16.0	1.8	4.4	22	5.0
P0093.080-055-A2	55	M 8	16.0	1.8	4.4	22	5.0
P0093.100-016-A2	16	M10	20.0	1.8	5.5	-	6.0
P0093.100-020-A2	20	M10	20.0	1.8	5.5	-	6.0
P0093.100-025-A2	25	M10	20.0	1.8	5.5	-	6.0
P0093.100-030-A2	30	M10	20.0	1.8	5.5	26	6.0
P0093.100-035-A2	35	M10	20.0	1.8	5.5	26	6.0
P0093.100-040-A2	40	M10	20.0	1.8	5.5	26	6.0
P0093.100-045-A2	45	M10	20.0	1.8	5.5	26	6.0
P0093.100-050-A2	50	M10	20.0	1.8	5.5	26	6.0
P0093.100-055-A2	55	M10	20.0	1.8	5.5	26	6.0
P0093.100-060-A2	60	M10	20.0	1.8	5.5	26	6.0
P0093.120-020-A2	20	M12	24.0	1.8	6.5	-	8.0
P0093.120-025-A2	25	M12	24.0	1.8	6.5	-	8.0
P0093.120-030-A2	30	M12	24.0	1.8	6.5	-	8.0
P0093.120-035-A2	35	M12	24.0	1.8	6.5	30	8.0
P0093.120-040-A2	40	M12	24.0	1.8	6.5	30	8.0
P0093.120-045-A2	45	M12	24.0	1.8	6.5	30	8.0
P0093.120-050-A2	50	M12	24.0	1.8	6.5	30	8.0
P0093.120-060-A2	60	M12	24.0	1.8	6.5	30	8.0
P0093.160-025-A2	25	M16	30.0	1.8	7.5	-	10.0
P0093.160-030-A2	30	M16	30.0	1.8	7.5	-	10.0
P0093.160-035-A2	35	M16	30.0	1.8	7.5	-	10.0
P0093.160-040-A2	40	M16	30.0	1.8	7.5	38	10.0
P0093.160-045-A2	45	M16	30.0	1.8	7.5	38	10.0
P0093.160-050-A2	50	M16	30.0	1.8	7.5	38	10.0
P0093.160-060-A2	60	M16	30.0	1.8	7.5	38	10.0



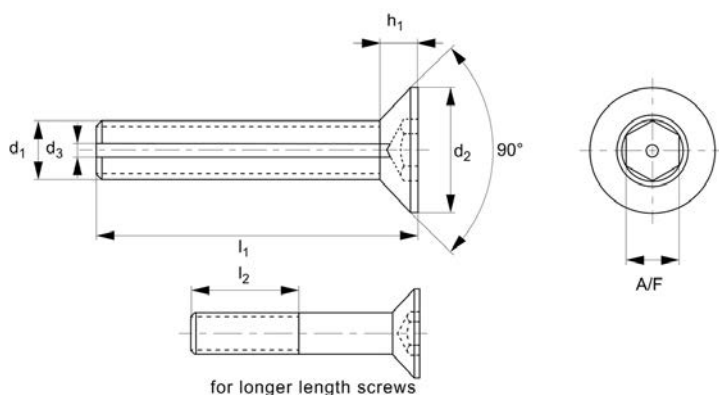
Vented Countersunk Machine Screws

hex. drive - 316 stainless

Vented Screws



P0093.A4



Material

Stainless steel (AISI 316, 1.4401), strength class 60.

Technical Notes

To ISO 10642 with central vent. Other sizes

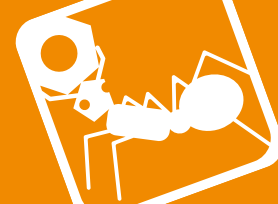
can be produced to technical drawings.

Tips

These products help eliminate virtual leaks from high vacuum (HV and UHV) systems, thereby improving pump-down times.

Trapped gases at the bottom of a tapped hole are able to escape via the central vent down the middle of the screw.

Order No.	l_1	d_1	d_2	d_3	h_1	l_2	A/F
P0093.020-004-A4	4	M 2	3.8	0.8	1.3	-	1.3
P0093.020-005-A4	5	M 2	3.8	0.8	1.3	-	1.3
P0093.020-006-A4	6	M 2	3.8	0.8	1.3	-	1.3
P0093.020-008-A4	8	M 2	3.8	0.8	1.3	-	1.3
P0093.020-010-A4	10	M 2	3.8	0.8	1.3	-	1.3
P0093.020-012-A4	12	M 2	3.8	0.8	1.3	-	1.3
P0093.025-004-A4	4	M2,5	4.8	0.9	1.9	-	1.5
P0093.025-005-A4	5	M2,5	4.8	0.9	1.9	-	1.5
P0093.025-006-A4	6	M2,5	4.8	0.9	1.9	-	1.5
P0093.025-008-A4	8	M2,5	4.8	0.9	1.9	-	1.5
P0093.025-010-A4	10	M2,5	4.8	0.9	1.9	-	1.5
P0093.025-012-A4	12	M2,5	4.8	0.9	1.9	-	1.5
P0093.030-005-A4	5	M 3	6.0	1.0	1.7	-	2.0
P0093.030-006-A4	6	M 3	6.0	1.0	1.7	-	2.0
P0093.030-008-A4	8	M 3	6.0	1.0	1.7	-	2.0
P0093.030-010-A4	10	M 3	6.0	1.0	1.7	-	2.0
P0093.030-012-A4	12	M 3	6.0	1.0	1.7	-	2.0
P0093.030-016-A4	16	M 3	6.0	1.0	1.7	12	2.0
P0093.040-005-A4	5	M 4	8.0	1.0	2.3	-	2.5
P0093.040-006-A4	6	M 4	8.0	1.0	2.3	-	2.5
P0093.040-008-A4	8	M 4	8.0	1.0	2.3	-	2.5
P0093.040-010-A4	10	M 4	8.0	1.0	2.3	-	2.5
P0093.040-012-A4	12	M 4	8.0	1.0	2.3	-	2.5
P0093.040-016-A4	16	M 4	8.0	1.0	2.3	14	2.5
P0093.040-020-A4	20	M 4	8.0	1.0	2.3	14	2.5
P0093.040-025-A4	25	M 4	8.0	1.0	2.3	14	2.5
P0093.040-030-A4	30	M 4	8.0	1.0	2.3	14	2.5
P0093.040-035-A4	35	M 4	8.0	1.0	2.3	14	2.5
P0093.050-006-A4	6	M 5	10.0	1.3	2.8	-	3.0
P0093.050-008-A4	8	M 5	10.0	1.3	2.8	-	3.0
P0093.050-010-A4	10	M 5	10.0	1.3	2.8	-	3.0
P0093.050-012-A4	12	M 5	10.0	1.3	2.8	-	3.0
P0093.050-016-A4	16	M 5	10.0	1.3	2.8	-	3.0



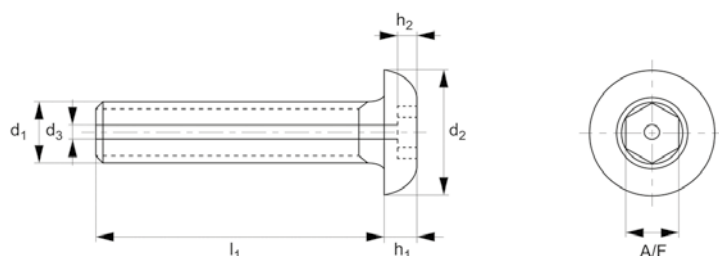
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P0093.050-020-A4	20	M 5	10.0	1.3	2.8	16	3.0
P0093.050-025-A4	25	M 5	10.0	1.3	2.8	16	3.0
P0093.050-030-A4	30	M 5	10.0	1.3	2.8	16	3.0
P0093.050-035-A4	35	M 5	10.0	1.3	2.8	16	3.0
P0093.050-040-A4	40	M 5	10.0	1.3	2.8	16	3.0
P0093.060-008-A4	8	M 6	12.0	1.6	3.3	-	4.0
P0093.060-010-A4	10	M 6	12.0	1.6	3.3	-	4.0
P0093.060-012-A4	12	M 6	12.0	1.6	3.3	-	4.0
P0093.060-016-A4	16	M 6	12.0	1.6	3.3	-	4.0
P0093.060-020-A4	20	M 6	12.0	1.6	3.3	18	4.0
P0093.060-025-A4	25	M 6	12.0	1.6	3.3	18	4.0
P0093.060-030-A4	30	M 6	12.0	1.6	3.3	18	4.0
P0093.060-035-A4	35	M 6	12.0	1.6	3.3	18	4.0
P0093.060-040-A4	40	M 6	12.0	1.6	3.3	18	4.0
P0093.060-045-A4	45	M 6	12.0	1.6	3.3	18	4.0
P0093.060-050-A4	50	M 6	12.0	1.6	3.3	18	4.0
P0093.080-012-A4	12	M 8	16.0	1.8	4.4	-	5.0
P0093.080-016-A4	16	M 8	16.0	1.8	4.4	-	5.0
P0093.080-020-A4	20	M 8	16.0	1.8	4.4	-	5.0
P0093.080-025-A4	25	M 8	16.0	1.8	4.4	22	5.0
P0093.080-030-A4	30	M 8	16.0	1.8	4.4	22	5.0
P0093.080-035-A4	35	M 8	16.0	1.8	4.4	22	5.0
P0093.080-040-A4	40	M 8	16.0	1.8	4.4	22	5.0
P0093.080-045-A4	45	M 8	16.0	1.8	4.4	22	5.0
P0093.080-050-A4	50	M 8	16.0	1.8	4.4	22	5.0
P0093.080-055-A4	55	M 8	16.0	1.8	4.4	22	5.0
P0093.100-016-A4	16	M10	20.0	1.8	5.5	-	6.0
P0093.100-020-A4	20	M10	20.0	1.8	5.5	-	6.0
P0093.100-025-A4	25	M10	20.0	1.8	5.5	-	6.0
P0093.100-030-A4	30	M10	20.0	1.8	5.5	26	6.0
P0093.100-035-A4	35	M10	20.0	1.8	5.5	26	6.0
P0093.100-040-A4	40	M10	20.0	1.8	5.5	26	6.0
P0093.100-045-A4	45	M10	20.0	1.8	5.5	26	6.0
P0093.100-050-A4	50	M10	20.0	1.8	5.5	26	6.0
P0093.100-055-A4	55	M10	20.0	1.8	5.5	26	6.0
P0093.100-060-A4	60	M10	20.0	1.8	5.5	26	6.0
P0093.120-020-A4	20	M12	24.0	1.8	6.5	-	8.0
P0093.120-025-A4	25	M12	24.0	1.8	6.5	-	8.0
P0093.120-030-A4	30	M12	24.0	1.8	6.5	-	8.0
P0093.120-035-A4	35	M12	24.0	1.8	6.5	30	8.0
P0093.120-040-A4	40	M12	24.0	1.8	6.5	30	8.0
P0093.120-045-A4	45	M12	24.0	1.8	6.5	30	8.0
P0093.120-050-A4	50	M12	24.0	1.8	6.5	30	8.0
P0093.120-060-A4	60	M12	24.0	1.8	6.5	30	8.0
P0093.160-025-A4	25	M16	30.0	1.8	7.5	-	10.0
P0093.160-030-A4	30	M16	30.0	1.8	7.5	-	10.0
P0093.160-035-A4	35	M16	30.0	1.8	7.5	-	10.0
P0093.160-040-A4	40	M16	30.0	1.8	7.5	38	10.0
P0093.160-045-A4	45	M16	30.0	1.8	7.5	38	10.0
P0093.160-050-A4	50	M16	30.0	1.8	7.5	38	10.0
P0093.160-060-A4	60	M16	30.0	1.8	7.5	38	10.0



Vented Screws - Socket Button Head

hex. drive - 304 stainless

Vented Screws



P0094.A2

VENTED SCREWS

Material

Stainless steel (AISI 304, 1.4301),
strength class 60.
Ultrasonically cleaned.

Technical Notes

To ISO 7380 (with central vent). Other

sizes available on request.

Tips

These products help eliminate virtual leaks
from high vacuum (HV and UHV) systems,
thereby improving pump-down times.
Trapped gases at the bottom of a tapped

hole are able to escape via the central vent
down the middle of the screw.

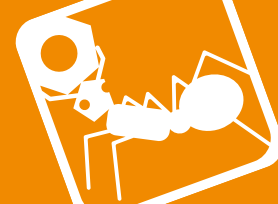
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P0094.030-006-A2	6	M 3	5.7	1.0	1.7	1.0	2
P0094.030-008-A2	8	M 3	5.7	1.0	1.7	1.0	2
P0094.030-010-A2	10	M 3	5.7	1.0	1.7	1.0	2
P0094.030-012-A2	12	M 3	5.7	1.0	1.7	1.0	2
P0094.030-016-A2	16	M 3	5.7	1.0	1.7	1.0	2
P0094.040-005-A2	5	M 4	7.6	1.0	2.2	1.3	3
P0094.040-006-A2	6	M 4	7.6	1.0	2.2	1.3	3
P0094.040-008-A2	8	M 4	7.6	1.0	2.2	1.3	3
P0094.040-010-A2	10	M 4	7.6	1.0	2.2	1.3	3
P0094.040-012-A2	12	M 4	7.6	1.0	2.2	1.3	3
P0094.040-016-A2	16	M 4	7.6	1.0	2.2	1.3	3
P0094.040-020-A2	20	M 4	7.6	1.0	2.2	1.3	3
P0094.040-025-A2	25	M 4	7.6	1.0	2.2	1.3	3
P0094.040-030-A2	30	M 4	7.6	1.0	2.2	1.3	3
P0094.040-035-A2	35	M 4	7.6	1.0	2.2	1.3	3
P0094.050-006-A2	6	M 5	9.5	1.3	2.8	1.6	3
P0094.050-008-A2	8	M 5	9.5	1.3	2.8	1.6	3
P0094.050-010-A2	10	M 5	9.5	1.3	2.8	1.6	3
P0094.050-012-A2	12	M 5	9.5	1.3	2.8	1.6	3
P0094.050-016-A2	16	M 5	9.5	1.3	2.8	1.6	3
P0094.050-020-A2	20	M 5	9.5	1.3	2.8	1.6	3
P0094.050-025-A2	25	M 5	9.5	1.3	2.8	1.6	3
P0094.050-030-A2	30	M 5	9.5	1.3	2.8	1.6	3
P0094.050-035-A2	35	M 5	9.5	1.3	2.8	1.6	3
P0094.050-040-A2	40	M 5	9.5	1.3	2.8	1.6	3
P0094.060-008-A2	8	M 6	10.5	1.6	3.3	2.1	4
P0094.060-010-A2	10	M 6	10.5	1.6	3.3	2.1	4
P0094.060-012-A2	12	M 6	10.5	1.6	3.3	2.1	4
P0094.060-016-A2	16	M 6	10.5	1.6	3.3	2.1	4
P0094.060-020-A2	20	M 6	10.5	1.6	3.3	2.1	4
P0094.060-025-A2	25	M 6	10.5	1.6	3.3	2.1	4



Automotion
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Order No.	l ₁	d ₁	d ₂	d ₃	h ₁	h ₂	A/F
P0094.060-030-A2	30	M 6	10.5	1.6	3.3	2.1	4
P0094.060-035-A2	35	M 6	10.5	1.6	3.3	2.1	4
P0094.060-040-A2	40	M 6	10.5	1.6	3.3	2.1	4
P0094.060-045-A2	45	M 6	10.5	1.6	3.3	2.1	4
P0094.060-050-A2	50	M 6	10.5	1.6	3.3	2.1	4
P0094.080-012-A2	12	M 8	14.0	1.8	4.4	2.6	5
P0094.080-016-A2	16	M 8	14.0	1.8	4.4	2.6	5
P0094.080-020-A2	20	M 8	14.0	1.8	4.4	2.6	5
P0094.080-025-A2	25	M 8	14.0	1.8	4.4	2.6	5
P0094.080-030-A2	30	M 8	14.0	1.8	4.4	2.6	5
P0094.080-035-A2	35	M 8	14.0	1.8	4.4	2.6	5
P0094.080-040-A2	40	M 8	14.0	1.8	4.4	2.6	5
P0094.080-045-A2	45	M 8	14.0	1.8	4.4	2.6	5
P0094.080-050-A2	50	M 8	14.0	1.8	4.4	2.6	5
P0094.080-060-A2	60	M 8	14.0	1.8	4.4	2.6	5
P0094.100-016-A2	16	M10	17.5	1.8	5.5	3.1	6
P0094.100-020-A2	20	M10	17.5	1.8	5.5	3.1	6
P0094.100-025-A2	25	M10	17.5	1.8	5.5	3.1	6
P0094.100-030-A2	30	M10	17.5	1.8	5.5	3.1	6
P0094.100-035-A2	35	M10	17.5	1.8	5.5	3.1	6
P0094.100-040-A2	40	M10	17.5	1.8	5.5	3.1	6
P0094.100-045-A2	45	M10	17.5	1.8	5.5	3.1	6
P0094.100-050-A2	50	M10	17.5	1.8	5.5	3.1	6
P0094.100-060-A2	60	M10	17.5	1.8	5.5	3.1	6
P0094.120-020-A2	20	M12	21.0	1.8	6.6	4.2	8
P0094.120-025-A2	25	M12	21.0	1.8	6.6	4.2	8
P0094.120-030-A2	30	M12	21.0	1.8	6.6	4.2	8
P0094.120-035-A2	35	M12	21.0	1.8	6.6	4.2	8
P0094.120-040-A2	40	M12	21.0	1.8	6.6	4.2	8
P0094.120-045-A2	45	M12	21.0	1.8	6.6	4.2	8
P0094.120-050-A2	50	M12	21.0	1.8	6.6	4.2	8
P0094.120-060-A2	60	M12	21.0	1.8	6.6	4.2	8



Vented Screws - Socket Button Head

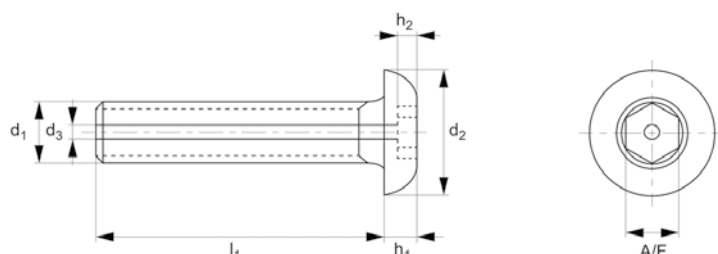
hex. drive - 316 stainless

Vented Screws



P0094.A4

VENTED SCREWS



Material

Stainless steel (AISI 316, 1.4401),
strength class 50.
Ultrasonically cleaned.

Technical Notes

To ISO 7380 (with central vent). Other

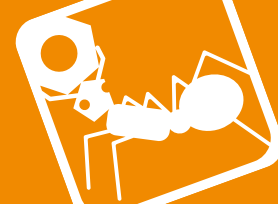
sizes available on request.

Tips

These products help eliminate virtual leaks
from high vacuum (HV and UHV) systems,
thereby improving pump-down times.
Trapped gases at the bottom of a tapped

hole are able to escape via the central vent
down the middle of the screw.

Order No.	l_1	d_1	d_2	d_3	h_1	h_2	A/F
P0094.030-005-A4	5	M 3	5.7	1.0	1.7	1.0	2
P0094.030-006-A4	6	M 3	5.7	1.0	1.7	1.0	2
P0094.030-008-A4	8	M 3	5.7	1.0	1.7	1.0	2
P0094.030-010-A4	10	M 3	5.7	1.0	1.7	1.0	2
P0094.030-012-A4	12	M 3	5.7	1.0	1.7	1.0	2
P0094.030-016-A4	16	M 3	5.7	1.0	1.7	1.0	2
P0094.040-005-A4	5	M 4	7.6	1.0	2.2	1.3	3
P0094.040-006-A4	6	M 4	7.6	1.0	2.2	1.3	3
P0094.040-008-A4	8	M 4	7.6	1.0	2.2	1.3	3
P0094.040-010-A4	10	M 4	7.6	1.0	2.2	1.3	3
P0094.040-012-A4	12	M 4	7.6	1.0	2.2	1.3	3
P0094.040-016-A4	16	M 4	7.6	1.0	2.2	1.3	3
P0094.040-020-A4	20	M 4	7.6	1.0	2.2	1.3	3
P0094.040-025-A4	25	M 4	7.6	1.0	2.2	1.3	3
P0094.040-030-A4	30	M 4	7.6	1.0	2.2	1.3	3
P0094.040-035-A4	35	M 4	7.6	1.0	2.2	1.3	3
P0094.050-006-A4	6	M 5	9.5	1.3	2.8	1.6	3
P0094.050-008-A4	8	M 5	9.5	1.3	2.8	1.6	3
P0094.050-010-A4	10	M 5	9.5	1.3	2.8	1.6	3
P0094.050-012-A4	12	M 5	9.5	1.3	2.8	1.6	3
P0094.050-016-A4	16	M 5	9.5	1.3	2.8	1.6	3
P0094.050-020-A4	20	M 5	9.5	1.3	2.8	1.6	3
P0094.050-025-A4	25	M 5	9.5	1.3	2.8	1.6	3
P0094.050-030-A4	30	M 5	9.5	1.3	2.8	1.6	3
P0094.050-035-A4	35	M 5	9.5	1.3	2.8	1.6	3
P0094.050-040-A4	40	M 5	9.5	1.3	2.8	1.6	3
P0094.060-008-A4	8	M 6	10.5	1.6	3.3	2.1	4
P0094.060-010-A4	10	M 6	10.5	1.6	3.3	2.1	4
P0094.060-012-A4	12	M 6	10.5	1.6	3.3	2.1	4
P0094.060-016-A4	16	M 6	10.5	1.6	3.3	2.1	4
P0094.060-020-A4	20	M 6	10.5	1.6	3.3	2.1	4
P0094.060-025-A4	25	M 6	10.5	1.6	3.3	2.1	4



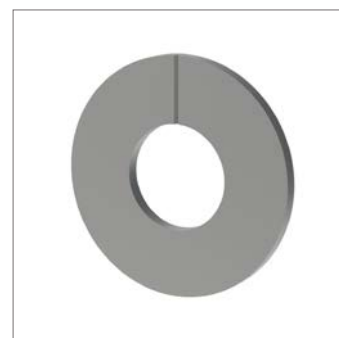
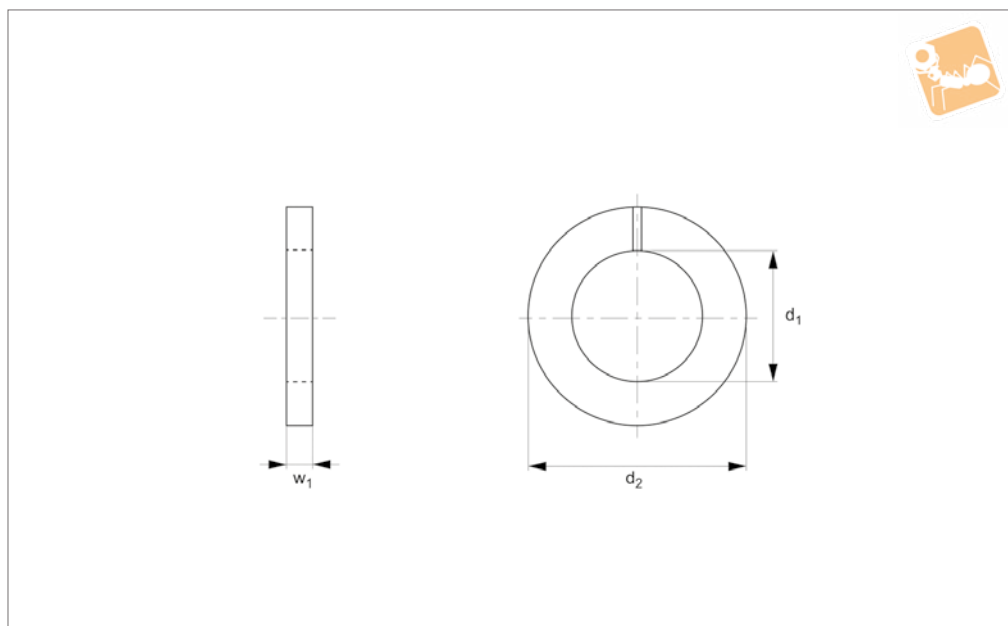
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P0094.060-035-A4	35	M 6	10.5	1.6	3.3	2.1	4
P0094.060-040-A4	40	M 6	10.5	1.6	3.3	2.1	4
P0094.060-045-A4	45	M 6	10.5	1.6	3.3	2.1	4
P0094.060-050-A4	50	M 6	10.5	1.6	3.3	2.1	4
P0094.080-012-A4	12	M 8	14.0	1.8	4.4	2.6	5
P0094.080-016-A4	16	M 8	14.0	1.8	4.4	2.6	5
P0094.080-020-A4	20	M 8	14.0	1.8	4.4	2.6	5
P0094.080-025-A4	25	M 8	14.0	1.8	4.4	2.6	5
P0094.080-030-A4	30	M 8	14.0	1.8	4.4	2.6	5
P0094.080-035-A4	35	M 8	14.0	1.8	4.4	2.6	5
P0094.080-040-A4	40	M 8	14.0	1.8	4.4	2.6	5
P0094.080-045-A4	45	M 8	14.0	1.8	4.4	2.6	5
P0094.080-050-A4	50	M 8	14.0	1.8	4.4	2.6	5
P0094.080-060-A4	60	M 8	14.0	1.8	4.4	2.6	5
P0094.100-016-A4	16	M10	17.5	1.8	5.5	3.1	6
P0094.100-020-A4	20	M10	17.5	1.8	5.5	3.1	6
P0094.100-025-A4	25	M10	17.5	1.8	5.5	3.1	6
P0094.100-030-A4	30	M10	17.5	1.8	5.5	3.1	6
P0094.100-035-A4	35	M10	17.5	1.8	5.5	3.1	6
P0094.100-040-A4	40	M10	17.5	1.8	5.5	3.1	6
P0094.100-045-A4	45	M10	17.5	1.8	5.5	3.1	6
P0094.100-050-A4	50	M10	17.5	1.8	5.5	3.1	6
P0094.100-060-A4	60	M10	17.5	1.8	5.5	3.1	6
P0094.120-020-A4	20	M12	21.0	1.8	6.6	4.2	8
P0094.120-025-A4	25	M12	21.0	1.8	6.6	4.2	8
P0094.120-030-A4	30	M12	21.0	1.8	6.6	4.2	8
P0094.120-035-A4	35	M12	21.0	1.8	6.6	4.2	8
P0094.120-040-A4	40	M12	21.0	1.8	6.6	4.2	8
P0094.120-045-A4	45	M12	21.0	1.8	6.6	4.2	8
P0094.120-050-A4	50	M12	21.0	1.8	6.6	4.2	8
P0094.120-060-A4	60	M12	21.0	1.8	6.6	4.2	8



Stainless Vented Washers

303 stainless

Vented Screws



P0097.A2

VENTED SCREWS

Material

Stainless steel (AISI 303, 1.4305).
Ultrasonically cleaned.

available: silver, gold, nickel and others.

Tips

Vented flat washers are key components in helping to eliminate virtual leaks from high vacuum (HV and UHV) systems. They

prevent gases being trapped beneath a fastener head along the screw shaft.

Technical Notes

To DIN 125A (with vent). Coatings

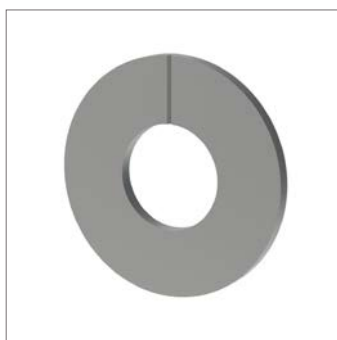
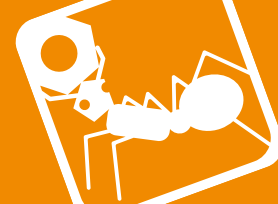
Order No.	For thread	d ₁	d ₂	w ₁
P0097.020-A2	M 2,0	2.2	5.0	0.3
P0097.025-A2	M 2,5	2.7	6.0	0.5
P0097.030-A2	M 3,0	3.2	7.0	0.5
P0097.040-A2	M 4,0	4.3	9.0	0.8
P0097.050-A2	M 5,0	5.3	10.0	1.0
P0097.060-A2	M 6,0	6.4	12.0	1.6
P0097.080-A2	M 8,0	8.4	16.0	1.6
P0097.100-A2	M10,0	10.5	20.0	2.0
P0097.120-A2	M12,0	13.0	24.0	2.5
P0097.160-A2	M16,0	17.0	30.0	3.0
P0097.200-A2	M20,0	21.0	37.0	3.0



Automotion
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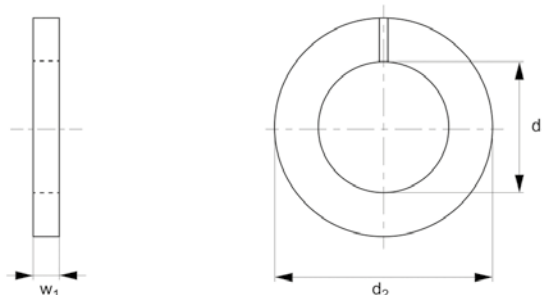
0333 207 4498

sales@automotioncomponents.co.uk



P0097.A4

VENTED SCREWS



Material

Stainless steel (AISI 316, 1.4401).
Ultrasonically cleaned.

Technical Notes

To DIN 125A (with vent). Passivation and/

or ultrasonic cleaning available on request. Coatings available: silver, gold, nickel and others.

Tips

Vented flat washers are key components in

helping to eliminate virtual leaks from high vacuum (HV and UHV) systems. They prevent gases being trapped beneath a fastener head along the screw shaft.

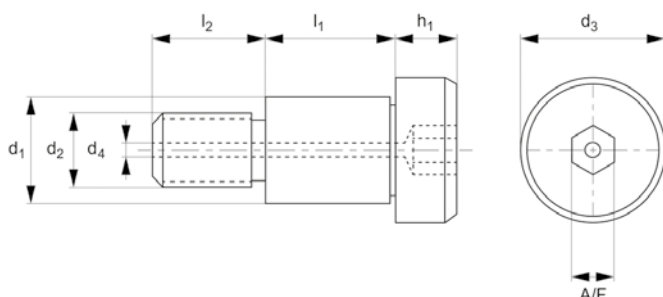
Order No.	For thread	d ₁	d ₂	w ₁
P0097.020-A4	M 2,0	2.2	4.0	0.3
P0097.025-A4	M 2,5	2.7	6.0	0.5
P0097.030-A4	M 3,0	3.2	7.0	0.5
P0097.040-A4	M 4,0	4.3	9.0	0.8
P0097.050-A4	M 5,0	5.3	10.0	1.0
P0097.060-A4	M 6,0	6.4	12.0	1.6
P0097.080-A4	M 8,0	8.4	16.0	1.6
P0097.100-A4	M10,0	10.5	20.0	2.0
P0097.120-A4	M12,0	13.0	24.0	2.5
P0097.160-A4	M16,0	17.0	30.0	3.0
P0097.200-A4	M20,0	21.0	37.0	3.0



Vented Shoulder Screws - Cap Head

hex. drive - 303 stainless

Vented Screws



P0098.A2

VENTED SCREWS

Material

Stainless steel (AISI 303, 1.4305),
strength class 60.
Ultrasonically cleaned.

Technical Notes

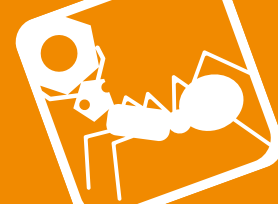
Other sizes available on request.

Tips

These products help eliminate virtual leaks
from high vacuum (HV and UHV) systems,
thereby improving pump-down times.
Trapped gases at the bottom of a tapped
hole are able to escape via the central vent

down the middle of the screw.

Order No.	l_1 +0.05 -0.0	d_1 +0 -0.025	d_2	d_3	d_4	h_1	l_2	A/F
P0098.030-010-A2	10	3	M 2	5.0	0.7	2.0	4.0	2
P0098.030-016-A2	16	3	M 2	5.0	0.7	2.0	4.0	2
P0098.030-020-A2	20	3	M 2	5.0	0.7	2.0	4.0	2
P0098.040-004-A2	4	4	M 3	6.0	1.0	3.0	4.0	2
P0098.040-005-A2	5	4	M 3	6.0	1.0	3.0	4.0	2
P0098.040-006-A2	6	4	M 3	6.0	1.0	3.0	4.0	2
P0098.040-008-A2	8	4	M 3	6.0	1.0	3.0	4.0	2
P0098.040-010-A2	10	4	M 3	6.0	1.0	3.0	4.0	2
P0098.040-012-A2	12	4	M 3	6.0	1.0	3.0	4.0	2
P0098.040-016-A2	16	4	M 3	6.0	1.0	3.0	4.0	2
P0098.040-020-A2	20	4	M 3	6.0	1.0	3.0	4.0	2
P0098.040-035-A2	35	4	M 3	6.0	1.0	3.0	4.0	2
P0098.050-004-A2	4	5	M 4	8.0	1.0	4.0	5.0	3
P0098.050-005-A2	5	5	M 4	8.0	1.0	4.0	5.0	3
P0098.050-006-A2	6	5	M 4	8.0	1.0	4.0	5.0	3
P0098.050-007-A2	7	5	M 4	8.0	1.0	4.0	5.0	3
P0098.050-008-A2	8	5	M 4	8.0	1.0	4.0	5.0	3
P0098.050-010-A2	10	5	M 4	8.0	1.0	4.0	5.0	3
P0098.050-012-A2	12	5	M 4	8.0	1.0	4.0	5.0	3
P0098.050-014-A2	14	5	M 4	8.0	1.0	4.0	5.0	3
P0098.050-016-A2	16	5	M 4	8.0	1.0	4.0	5.0	3
P0098.050-020-A2	20	5	M 4	8.0	1.0	4.0	5.0	3
P0098.050-025-A2	25	5	M 4	8.0	1.0	4.0	5.0	3
P0098.050-030-A2	30	5	M 4	8.0	1.0	4.0	5.0	3
P0098.060-004-A2	4	6	M 5	10.0	1.3	5.0	6.0	3
P0098.060-005-A2	5	6	M 5	10.0	1.3	5.0	6.0	3
P0098.060-006-A2	6	6	M 5	10.0	1.3	5.0	6.0	3
P0098.060-008-A2	8	6	M 5	10.0	1.3	5.0	6.0	3
P0098.060-010-A2	10	6	M 5	10.0	1.3	5.0	6.0	3
P0098.060-012-A2	12	6	M 5	10.0	1.3	5.0	6.0	3
P0098.060-014-A2	14	6	M 5	10.0	1.3	5.0	6.0	3



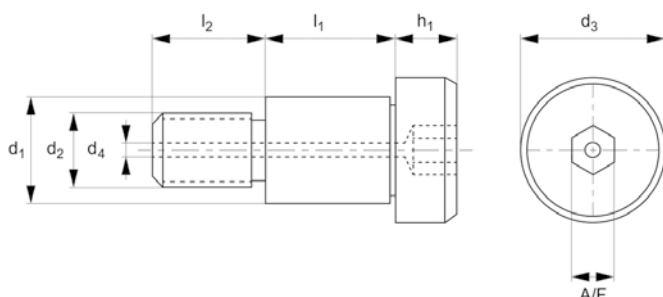
Order No.	l_1 +0.05 -0.0	d_1 +0 -0.025	d_2	d_3	d_4	h_1	l_2	A/F
P0098.060-020-A2	20	6	M 5	10.0	1.3	5.0	6.0	3
P0098.060-025-A2	25	6	M 5	10.0	1.3	5.0	6.0	3
P0098.060-030-A2	30	6	M 5	10.0	1.3	5.0	6.0	3
P0098.080-005-A2	5	8	M 6	12.0	1.6	6.0	11.0	4
P0098.080-006-A2	6	8	M 6	12.0	1.6	6.0	11.0	4
P0098.080-008-A2	8	8	M 6	12.0	1.6	6.0	11.0	4
P0098.080-010-A2	10	8	M 6	12.0	1.6	6.0	11.0	4
P0098.080-012-A2	12	8	M 6	12.0	1.6	6.0	11.0	4
P0098.080-014-A2	14	8	M 6	12.0	1.6	6.0	11.0	4
P0098.080-016-A2	16	8	M 6	12.0	1.6	6.0	11.0	4
P0098.080-020-A2	20	8	M 6	12.0	1.6	6.0	11.0	4
P0098.080-025-A2	25	8	M 6	12.0	1.6	6.0	11.0	4
P0098.080-045-A2	45	8	M 6	12.0	1.6	6.0	11.0	4
P0098.100-008-A2	8	10	M 8	14.0	1.8	7.0	12.0	5
P0098.100-010-A2	10	10	M 8	14.0	1.8	7.0	12.0	5
P0098.100-012-A2	12	10	M 8	14.0	1.8	7.0	12.0	5
P0098.100-016-A2	16	10	M 8	14.0	1.8	7.0	12.0	5
P0098.100-020-A2	20	10	M 8	14.0	1.8	7.0	12.0	5
P0098.100-030-A2	30	10	M 8	14.0	1.8	7.0	12.0	5
P0098.120-012-A2	12	12	M10	20.0	1.8	8.0	16.0	6
P0098.120-025-A2	25	12	M10	20.0	1.8	8.0	16.0	6
P0098.160-100-A2	100	16	M12	24.0	1.8	11.0	18.0	8



Vented Shoulder Screws - Cap Head

hex. drive - 316 stainless

Vented Screws



P0098.A4

VENTED SCREWS

Material

Stainless steel (AISI 316, 1.4401),
strength class 60.
Ultrasonically cleaned.

Technical Notes

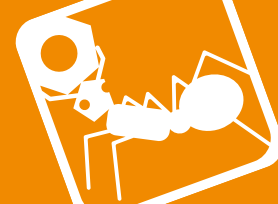
Other sizes available on request.

Tips

These products help eliminate virtual leaks
from high vacuum (HV and UHV) systems,
thereby improving pump-down times.
Trapped gases at the bottom of a tapped
hole are able to escape via the central vent

down the middle of the screw.

Order No.	l_1 +0.05 -0.0	d_1 +0 -0.025	d_2	d_3	d_4	h_1	l_2	A/F
P0098.030-010-A4	10	3	M 2	5.0	0.7	2.0	4.0	2
P0098.030-016-A4	16	3	M 2	5.0	0.7	2.0	4.0	2
P0098.030-020-A4	20	3	M 2	5.0	0.7	2.0	4.0	2
P0098.040-004-A4	4	4	M 3	6.0	1.0	3.0	4.0	2
P0098.040-005-A4	5	4	M 3	6.0	1.0	3.0	4.0	2
P0098.040-006-A4	6	4	M 3	6.0	1.0	3.0	4.0	2
P0098.040-008-A4	8	4	M 3	6.0	1.0	3.0	4.0	2
P0098.040-010-A4	10	4	M 3	6.0	1.0	3.0	4.0	2
P0098.040-012-A4	12	4	M 3	6.0	1.0	3.0	4.0	2
P0098.040-016-A4	16	4	M 3	6.0	1.0	3.0	4.0	2
P0098.040-020-A4	20	4	M 3	6.0	1.0	3.0	4.0	2
P0098.040-035-A4	35	4	M 3	6.0	1.0	3.0	4.0	2
P0098.050-004-A4	4	5	M 4	8.0	1.0	4.0	5.0	3
P0098.050-005-A4	5	5	M 4	8.0	1.0	4.0	5.0	3
P0098.050-006-A4	6	5	M 4	8.0	1.0	4.0	5.0	3
P0098.050-007-A4	7	5	M 4	8.0	1.0	4.0	5.0	3
P0098.050-008-A4	8	5	M 4	8.0	1.0	4.0	5.0	3
P0098.050-010-A4	10	5	M 4	8.0	1.0	4.0	5.0	3
P0098.050-012-A4	12	5	M 4	8.0	1.0	4.0	5.0	3
P0098.050-014-A4	14	5	M 4	8.0	1.0	4.0	5.0	3
P0098.050-016-A4	16	5	M 4	8.0	1.0	4.0	5.0	3
P0098.050-020-A4	20	5	M 4	8.0	1.0	4.0	5.0	3
P0098.050-025-A4	25	5	M 4	8.0	1.0	4.0	5.0	3
P0098.050-030-A4	30	5	M 4	8.0	1.0	4.0	5.0	3
P0098.060-004-A4	4	6	M 5	10.0	1.3	5.0	6.0	3
P0098.060-005-A4	5	6	M 5	10.0	1.3	5.0	6.0	3
P0098.060-006-A4	6	6	M 5	10.0	1.3	5.0	6.0	3
P0098.060-008-A4	8	6	M 5	10.0	1.3	5.0	6.0	3
P0098.060-010-A4	10	6	M 5	10.0	1.3	5.0	6.0	3
P0098.060-012-A4	12	6	M 5	10.0	1.3	5.0	6.0	3
P0098.060-014-A4	14	6	M 5	10.0	1.3	5.0	6.0	3

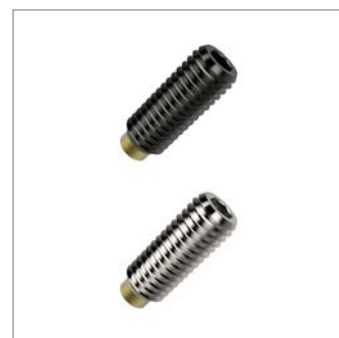
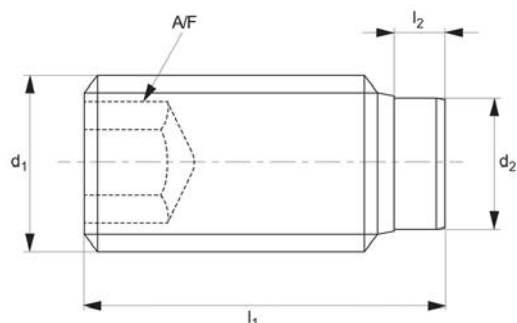


Order No.	l_1 +0.05 -0.0	d_1 +0 -0.025	d_2	d_3	d_4	h_1	l_2	A/F
P0098.060-020-A4	20	6	M 5	10.0	1.3	5.0	6.0	3
P0098.060-025-A4	25	6	M 5	10.0	1.3	5.0	6.0	3
P0098.060-030-A4	30	6	M 5	10.0	1.3	5.0	6.0	3
P0098.080-005-A4	5	8	M 6	12.0	1.6	6.0	11.0	4
P0098.080-006-A4	6	8	M 6	12.0	1.6	6.0	11.0	4
P0098.080-008-A4	8	8	M 6	12.0	1.6	6.0	11.0	4
P0098.080-010-A4	10	8	M 6	12.0	1.6	6.0	11.0	4
P0098.080-012-A4	12	8	M 6	12.0	1.6	6.0	11.0	4
P0098.080-014-A4	14	8	M 6	12.0	1.6	6.0	11.0	4
P0098.080-016-A4	16	8	M 6	12.0	1.6	6.0	11.0	4
P0098.080-020-A4	20	8	M 6	12.0	1.6	6.0	11.0	4
P0098.080-025-A4	25	8	M 6	12.0	1.6	6.0	11.0	4
P0098.080-045-A4	45	8	M 6	12.0	1.6	6.0	11.0	4
P0098.100-008-A4	8	10	M 8	14.0	1.8	7.0	12.0	5
P0098.100-010-A4	10	10	M 8	14.0	1.8	7.0	12.0	5
P0098.100-012-A4	12	10	M 8	14.0	1.8	7.0	12.0	5
P0098.100-016-A4	16	10	M 8	14.0	1.8	7.0	12.0	5
P0098.100-020-A4	20	10	M 8	14.0	1.8	7.0	12.0	5
P0098.100-030-A4	30	10	M 8	14.0	1.8	7.0	12.0	5
P0098.120-012-A4	12	12	M10	20.0	1.8	8.0	12.0	6
P0098.120-025-A4	25	12	M10	20.0	1.8	8.0	12.0	6
P0098.160-100-A4	100	16	M12	24.0	1.8	11.0	12.0	8



Thrust Screws - Brass Pad steel

Tipped Screws



P0121

TIPPED SCREWS

Material

Screw: heat treated steel, 1200 +/-100 N/mm².

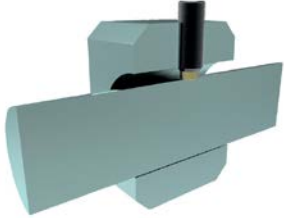
Pad: brass.

Technical Notes

Brass pad pressed in. These thrust screws can be used for gentle clamping or pressing of threaded spindles, axles, shafts or

surface treated parts.

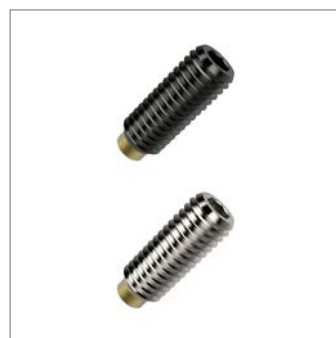
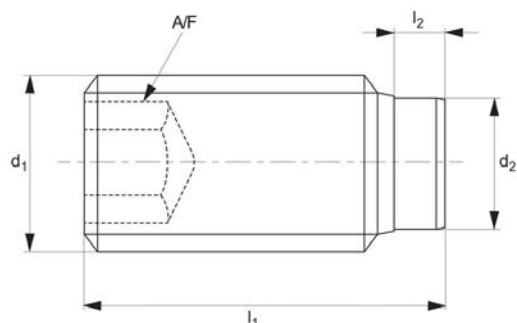
Order No.	Material	Type	d ₁	l ₁	l ₂	d ₂	A/F	Weight g
P0121.030-010	Steel	Brass Pad	M 3	10.0	1.0	1.5	1.5	0.5
P0121.040-006	Steel	Brass Pad	M 4	6.5	1.2	2.5	2.0	0.3
P0121.040-010	Steel	Brass Pad	M 4	10.5	1.2	2.5	2.0	0.8
P0121.040-016	Steel	Brass Pad	M 4	16.5	1.2	2.5	2.0	1.2
P0121.050-008	Steel	Brass Pad	M 5	8.5	1.3	3.0	2.5	0.9
P0121.050-012	Steel	Brass Pad	M 5	12.5	1.3	3.0	2.5	1.4
P0121.050-020	Steel	Brass Pad	M 5	20.5	1.3	3.0	2.5	2.1
P0121.060-012	Steel	Brass Pad	M 6	11.5	1.9	4.0	3.0	1.7
P0121.060-026	Steel	Brass Pad	M 6	26.5	1.9	4.0	3.0	4.2
P0121.080-012	Steel	Brass Pad	M 8	12.0	2.5	5.5	4.0	3.0
P0121.080-022	Steel	Brass Pad	M 8	22.0	2.5	5.5	4.0	5.8
P0121.080-032	Steel	Brass Pad	M 8	32.0	2.5	5.5	4.0	8.9
P0121.100-014	Steel	Brass Pad	M10	14.0	2.7	7.0	5.0	5.6
P0121.100-018	Steel	Brass Pad	M10	18.0	2.7	7.0	5.0	6.7
P0121.100-027	Steel	Brass Pad	M10	27.0	2.7	7.0	5.0	11.0
P0121.100-037	Steel	Brass Pad	M10	37.0	2.7	7.0	5.0	16.0
P0121.120-018	Steel	Brass Pad	M12	18.5	3.4	8.5	6.0	10.0
P0121.120-022	Steel	Brass Pad	M12	22.5	3.4	8.5	6.0	12.0
P0121.120-032	Steel	Brass Pad	M12	32.5	3.4	8.5	6.0	20.0
P0121.120-042	Steel	Brass Pad	M12	42.5	3.4	8.5	6.0	29.0





Thrust Screws - Brass Pad stainless steel

Tipped Screws



P0120

TIPPED SCREWS

Material

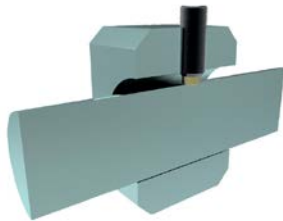
Screw: stainless steel 1.4305 (AISI 303).
Pad: brass.

Technical Notes

Brass pad pressed in. These thrust screws can be used for gentle clamping or pres-

sing of threaded spindles, axles, shafts or surface treated parts.

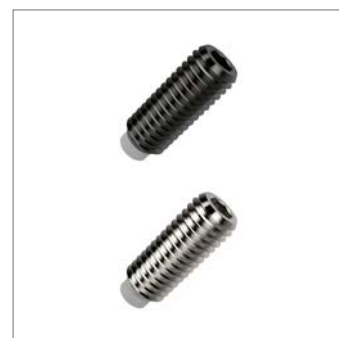
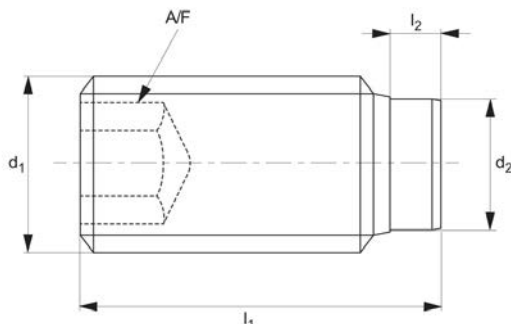
Order No.	Material	Type	d ₁	l ₁	l ₂	d ₂	A/F	Weight g
P0120.030-004	Stainless	Brass Pad	M 3	5.0	1.0	1.5	1.5	0.2
P0120.030-006	Stainless	Brass Pad	M 3	7.5	1.0	1.5	1.5	0.3
P0120.040-006	Stainless	Brass Pad	M 4	6.5	1.2	2.5	2.0	0.3
P0120.040-010	Stainless	Brass Pad	M 4	10.5	1.2	2.5	2.0	0.8
P0120.040-016	Stainless	Brass Pad	M 4	16.5	1.2	2.5	2.0	1.2
P0120.050-008	Stainless	Brass Pad	M 5	8.5	1.3	3.0	2.5	0.9
P0120.050-012	Stainless	Brass Pad	M 5	12.5	1.3	3.0	2.5	1.4
P0120.050-020	Stainless	Brass Pad	M 5	20.5	1.3	3.0	2.5	2.1
P0120.060-012	Stainless	Brass Pad	M 6	11.5	1.9	4.0	3.0	1.7
P0120.060-018	Stainless	Brass Pad	M 6	17.5	1.9	4.0	3.0	2.7
P0120.060-026	Stainless	Brass Pad	M 6	26.5	1.9	4.0	3.0	4.2
P0120.080-012	Stainless	Brass Pad	M 8	12.0	2.5	5.5	4.0	3.0
P0120.080-022	Stainless	Brass Pad	M 8	22.0	2.5	5.5	4.0	5.8
P0120.080-032	Stainless	Brass Pad	M 8	32.0	2.5	5.5	4.0	8.9
P0120.100-014	Stainless	Brass Pad	M10	14.0	2.7	7.0	5.0	5.6
P0120.100-018	Stainless	Brass Pad	M10	18.0	2.7	7.0	5.0	6.7
P0120.100-027	Stainless	Brass Pad	M10	27.0	2.7	7.0	5.0	11.0
P0120.100-037	Stainless	Brass Pad	M10	37.0	2.7	7.0	5.0	16.0
P0120.120-018	Stainless	Brass Pad	M12	18.5	3.4	8.5	6.0	10.0
P0120.120-022	Stainless	Brass Pad	M12	22.5	3.4	8.5	6.0	12.0
P0120.120-032	Stainless	Brass Pad	M12	32.5	3.4	8.5	6.0	20.0
P0120.120-042	Stainless	Brass Pad	M12	42.5	3.4	8.5	6.0	29.0





Thrust Screws - Plastic Pad steel

Tipped Screws



P0125

TIPPED SCREWS

Material

Screw: heat treated steel, 1200 +/-100 N/mm².

Pad: thermoplastic POM, white.

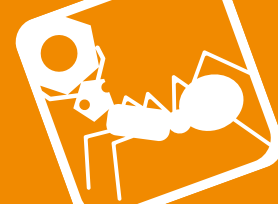
Technical Notes

Thermoplastic bolt pressed in.

For gentle clamping or pressing of thread spindles, axles, shafts and surface treated

parts.

Order No.	Material	Type	d ₁	l ₁	l ₂	d ₂	A/F	Weight g
P0125.040-007	Steel	Thermo Pad	M 4	7.0	1.0	2.0	2.0	0.3
P0125.040-009	Steel	Thermo Pad	M 4	9.0	1.0	2.0	2.0	0.4
P0125.040-011	Steel	Thermo Pad	M 4	11.0	1.0	2.0	2.0	0.6
P0125.040-013	Steel	Thermo Pad	M 4	13.0	1.0	2.0	2.0	0.7
P0125.040-017	Steel	Thermo Pad	M 4	17.0	1.0	2.0	2.0	1.0
P0125.040-021	Steel	Thermo Pad	M 4	21.0	1.0	2.0	2.0	1.3
P0125.050-009	Steel	Thermo Pad	M 5	9.0	1.0	3.0	2.5	0.7
P0125.050-011	Steel	Thermo Pad	M 5	11.0	1.0	3.0	2.5	0.8
P0125.050-013	Steel	Thermo Pad	M 5	13.0	1.0	3.0	2.5	1.0
P0125.050-017	Steel	Thermo Pad	M 5	17.0	1.0	3.0	2.5	1.2
P0125.050-021	Steel	Thermo Pad	M 5	21.0	1.0	3.0	2.5	2.0
P0125.050-026	Steel	Thermo Pad	M 5	26.0	1.0	3.0	2.5	2.6
P0125.060-011	Steel	Thermo Pad	M 6	11.3	1.3	3.5	3.0	1.2
P0125.060-013	Steel	Thermo Pad	M 6	13.3	1.3	3.5	3.0	1.5
P0125.060-017	Steel	Thermo Pad	M 6	17.3	1.3	3.5	3.0	2.2
P0125.060-021	Steel	Thermo Pad	M 6	21.3	1.3	3.5	3.0	2.8
P0125.060-026	Steel	Thermo Pad	M 6	26.3	1.3	3.5	3.0	3.8
P0125.060-033	Steel	Thermo Pad	M 6	33.3	1.3	3.5	3.0	4.9
P0125.060-041	Steel	Thermo Pad	M 6	41.3	1.3	3.5	3.0	6.3
P0125.060-051	Steel	Thermo Pad	M 6	51.3	1.3	3.5	3.0	7.9
P0125.080-013	Steel	Thermo Pad	M 8	13.6	1.6	5.0	4.0	2.6
P0125.080-017	Steel	Thermo Pad	M 8	17.6	1.6	5.0	4.0	3.6
P0125.080-021	Steel	Thermo Pad	M 8	21.6	1.6	5.0	4.0	5.0
P0125.080-026	Steel	Thermo Pad	M 8	26.6	1.6	5.0	4.0	6.4
P0125.080-033	Steel	Thermo Pad	M 8	33.6	1.6	5.0	4.0	8.5
P0125.080-041	Steel	Thermo Pad	M 8	41.6	1.6	5.0	4.0	11.0
P0125.080-051	Steel	Thermo Pad	M 8	51.6	1.6	5.0	4.0	14.0
P0125.080-064	Steel	Thermo Pad	M 8	64.6	1.6	5.0	4.0	18.0
P0125.100-018	Steel	Thermo Pad	M10	17.9	1.9	6.5	5.0	5.2
P0125.100-022	Steel	Thermo Pad	M10	21.9	1.9	6.5	5.0	7.1
P0125.100-027	Steel	Thermo Pad	M10	26.9	1.9	6.5	5.0	9.9
P0125.100-034	Steel	Thermo Pad	M10	33.9	1.9	6.5	5.0	13.0
P0125.100-042	Steel	Thermo Pad	M10	41.9	1.9	6.5	5.0	17.0
P0125.100-052	Steel	Thermo Pad	M10	51.9	1.9	6.5	5.0	22.0



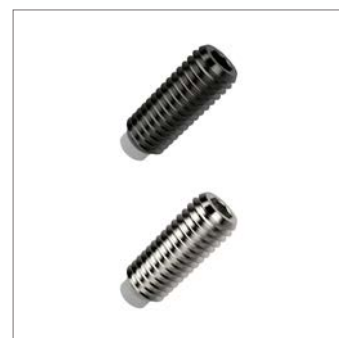
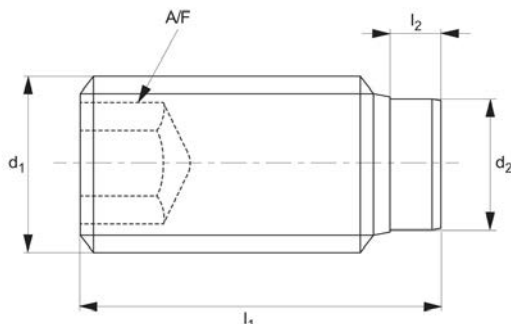
Order No.	Material	Type	d ₁	l ₁	l ₂	d ₂	A/F	Weight g
P0125.100-065	Steel	Thermo Pad	M10	64.9	1.9	6.5	5.0	28.0
P0125.100-082	Steel	Thermo Pad	M10	81.9	1.9	6.5	5.0	36.0
P0125.120-022	Steel	Thermo Pad	M12	22.1	2.1	8.0	6.0	9.0
P0125.120-027	Steel	Thermo Pad	M12	27.1	2.1	8.0	6.0	10.0
P0125.120-034	Steel	Thermo Pad	M12	34.1	2.1	8.0	6.0	19.0
P0125.120-042	Steel	Thermo Pad	M12	42.1	2.1	8.0	6.0	24.0
P0125.120-052	Steel	Thermo Pad	M12	52.1	2.1	8.0	6.0	31.0
P0125.120-065	Steel	Thermo Pad	M12	65.1	2.1	8.0	6.0	40.0
P0125.120-082	Steel	Thermo Pad	M12	82.1	2.1	8.0	6.0	51.0



Thrust Screws - Plastic Pad

stainless steel

Tipped Screws



P0124

TIPPED SCREWS

Material

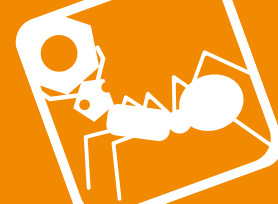
Screw: stainless steel 1.4305 (AISI 303).
Pad: thermoplastic POM, white.

Technical Notes

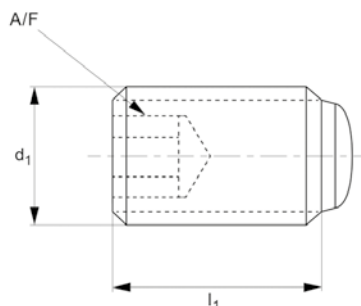
Thermoplastic bolt pressed in.
For gentle clamping or pressing of thread

spindles, axles, shafts and surface treated parts.

Order No.	Material	Type	d ₁	l ₁	l ₂	d ₂	A/F	Weight g
P0124.030-006	Stainless	Thermo Pad	M 3	5.8	0.8	1.5	1.5	0.3
P0124.040-007	Stainless	Thermo Pad	M 4	7.0	1.0	2.0	2.0	0.3
P0124.040-009	Stainless	Thermo Pad	M 4	9.0	1.0	2.0	2.0	0.4
P0124.040-011	Stainless	Thermo Pad	M 4	11.0	1.0	2.0	2.0	0.6
P0124.040-013	Stainless	Thermo Pad	M 4	13.0	1.0	2.0	2.0	0.7
P0124.040-017	Stainless	Thermo Pad	M 4	17.0	1.0	2.0	2.0	1.0
P0124.050-009	Stainless	Thermo Pad	M 5	9.0	1.0	3.0	2.5	0.7
P0124.050-011	Stainless	Thermo Pad	M 5	11.0	1.0	3.0	2.5	0.8
P0124.050-013	Stainless	Thermo Pad	M 5	13.0	1.0	3.0	2.5	1.0
P0124.050-017	Stainless	Thermo Pad	M 5	17.0	1.0	3.0	2.5	1.2
P0124.050-021	Stainless	Thermo Pad	M 5	21.0	1.0	3.0	2.5	2.0
P0124.060-013	Stainless	Thermo Pad	M 6	13.3	1.3	3.5	3.0	1.5
P0124.060-017	Stainless	Thermo Pad	M 6	17.3	1.3	3.5	3.0	2.2
P0124.060-021	Stainless	Thermo Pad	M 6	21.3	1.3	3.5	3.0	2.8
P0124.060-033	Stainless	Thermo Pad	M 6	33.3	1.3	3.5	3.0	4.9
P0124.080-013	Stainless	Thermo Pad	M 8	13.6	1.6	5.0	4.0	2.6
P0124.080-017	Stainless	Thermo Pad	M 8	17.6	1.6	5.0	4.0	3.6
P0124.080-021	Stainless	Thermo Pad	M 8	21.6	1.6	5.0	4.0	5.0
P0124.080-026	Stainless	Thermo Pad	M 8	26.6	1.6	5.0	4.0	6.4
P0124.080-033	Stainless	Thermo Pad	M 8	33.6	1.6	5.0	4.0	8.5
P0124.080-041	Stainless	Thermo Pad	M 8	41.6	1.6	5.0	4.0	11.0
P0124.100-018	Stainless	Thermo Pad	M10	17.9	1.9	6.5	5.0	5.2
P0124.100-022	Stainless	Thermo Pad	M10	21.9	1.9	6.5	5.0	7.1
P0124.100-027	Stainless	Thermo Pad	M10	26.9	1.9	6.5	5.0	9.9
P0124.100-034	Stainless	Thermo Pad	M10	33.9	1.9	6.5	5.0	13.0
P0124.100-042	Stainless	Thermo Pad	M10	41.9	1.9	6.5	5.0	17.0
P0124.100-052	Stainless	Thermo Pad	M10	51.9	1.9	6.5	5.0	22.0
P0124.120-022	Stainless	Thermo Pad	M12	22.1	2.1	8.0	6.0	9.0
P0124.120-027	Stainless	Thermo Pad	M12	27.1	2.1	8.0	6.0	10.0
P0124.120-034	Stainless	Thermo Pad	M12	34.1	2.1	8.0	6.0	19.0
P0124.120-042	Stainless	Thermo Pad	M12	42.1	2.1	8.0	6.0	24.0
P0124.120-052	Stainless	Thermo Pad	M12	52.1	2.1	8.0	6.0	31.0
P0124.120-065	Stainless	Thermo Pad	M12	65.1	2.1	8.0	6.0	40.0



P0129



Material

Stainless steel (A2), with silver solder (semi-soft) tip.

face control, will not marr or damage shaft or part.

Length of screw excludes length of silver solder tip.

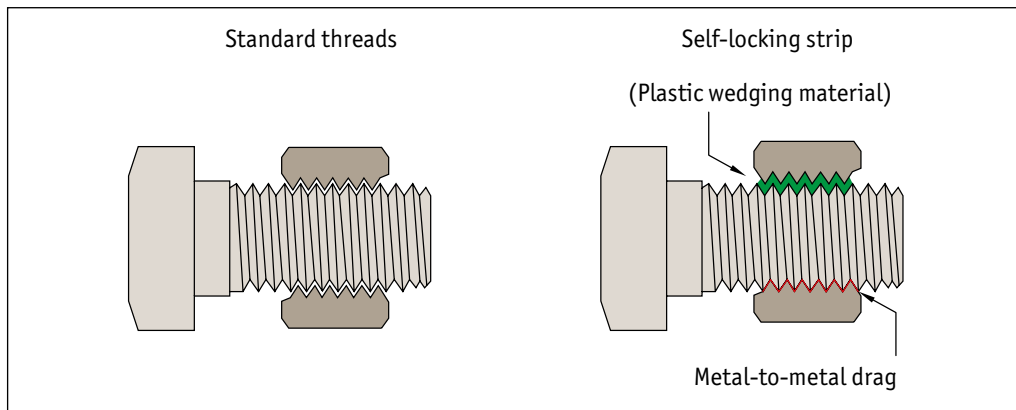
Technical Notes

Self-locking, extra holding power for full

Order No.	d ₁	l ₁ nom.	A/F
P0129.020-003	M 2	3	0.9
P0129.020-004	M 2	4	0.9
P0129.020-005	M 2	5	0.9
P0129.020-006	M 2	6	0.9
P0129.030-003	M 3	3	1.5
P0129.030-004	M 3	4	1.5
P0129.030-005	M 3	5	1.5
P0129.030-006	M 3	6	1.5
P0129.040-004	M 4	4	2.0
P0129.040-006	M 4	6	2.0
P0129.040-010	M 4	10	2.0
P0129.040-014	M 4	14	2.0
P0129.050-006	M 5	6	2.5
P0129.050-010	M 5	10	2.5
P0129.050-014	M 5	14	2.5
P0129.050-020	M 5	20	2.5
P0129.060-006	M 6	6	3.0
P0129.060-010	M 6	10	3.0
P0129.060-016	M 6	16	3.0
P0129.060-025	M 6	25	3.0
P0129.080-010	M 8	10	4.0
P0129.080-016	M 8	16	4.0
P0129.080-025	M 8	25	4.0
P0129.100-012	M10	12	5.0
P0129.100-020	M10	20	5.0
P0129.100-030	M10	30	5.0

This type of fastener is the only fastener that retains its locking torque independent of an axial load. When pre-load is lost, the prevailing torque fastener can prevent the loosening of an assembly subjected to continued shock or vibration.

The nylon strip wedges the fastener against the opposite of the locking device, causing metal-to-metal drag.



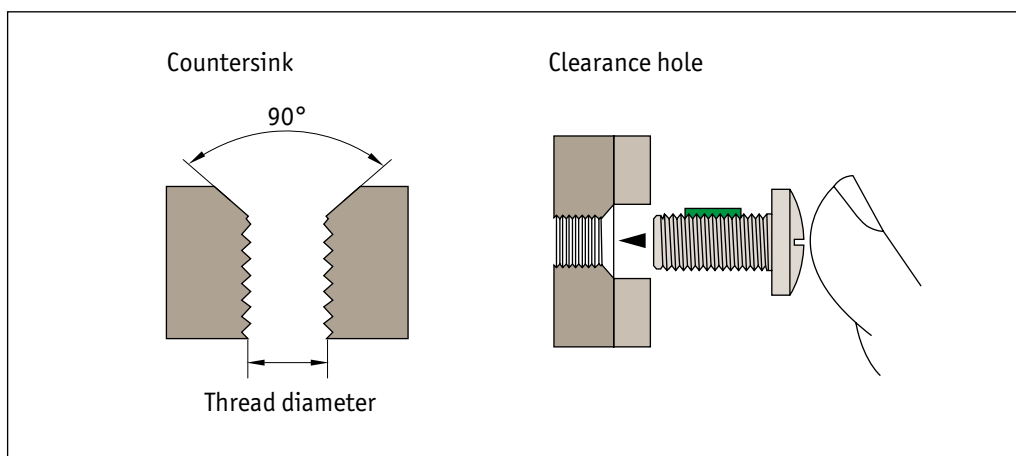
A resilient polymer (generally nylon) strip is inserted into a precisely machined slot that is milled into the thread. The strips are typically positioned one to three threads back from the end of the fastener to assure ease of starting.

When assembled with a mating part the strip is compressed and this provides a locking action in the thread. The locking strip is held in place on the thread without the use of adhesives or thread distortion. This results in a reusable fastener that is both locking and repeatedly adjustable.

These self-locking fasteners are produced to IFI 524 standard (requiring a re-usability of up to 15 on/off cycles). The strips will not dry, shrink or lose resiliency when exposed to commercial solvents, alcohol, oil etc.

Standard nylon temperature range (-50°C to $+120^{\circ}\text{C}$). Other materials available which can offer -250°C to $+300^{\circ}\text{C}$ (with lower reusability cycles).

We recommend a countersunk or counter-bored clearance hole to aid installation.

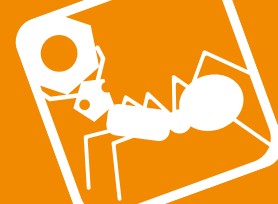


Plating

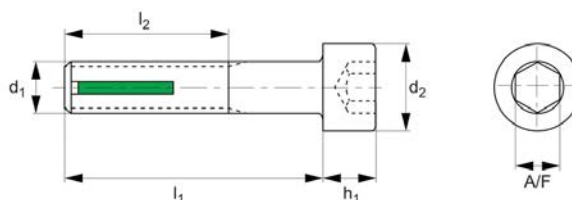
Locking inserts can be damaged by some plating processes or surface treatments so should never be attempted after user installation.

Please advise Automation components of any plating requirements when ordering so that the appropriate process can be applied.

Locking insert patches should never be removed by the end user. Removal and replacement will destroy the effectiveness of the insert.



P0110



Material

Stainless steel A2, with nylon locking patch.

A4 available on request.

Technical Notes

Screw to DIN 912 with locking patch. Vibration proof.

Standard green locking patch. Breakaway torque values are complex and can be

calculated on request.

Can be manufactured to MIL spec on request (MIL-DTL-18240 and NAS1283).

Tips

Surface finishes such as cadmium plating, nickel plating, armalloy coating, black oxide coating - all available on request. Due to the wide range of sizes, material grades and finishes, these parts are manu-

factured on demand - minimum batch size is 100 pieces.

Important Notes

For the majority of screw lengths the threads goes all the way to the head of the screw (i.e. $l_1 = l_2$).

For longer length screws the threaded portion $l_2 < l_1$.

Order No.	d ₁	l ₁	d ₂	l ₂ max.	h ₁	A/F
P0110.020-004L	M 2	4	3.8	-	2	1.5
P0110.020-005L	M 2	5	3.8	-	2	1.5
P0110.020-006L	M 2	6	3.8	-	2	1.5
P0110.020-008L	M 2	8	3.8	-	2	1.5
P0110.020-010L	M 2	10	3.8	-	2	1.5
P0110.020-012L	M 2	12	3.8	-	2	1.5
P0110.020-014L	M 2	14	3.8	-	2	1.5
P0110.020-016L	M 2	16	3.8	-	2	1.5
P0110.020-020L	M 2	20	3.8	-	2	1.5
P0110.025-004L	M2,5	4	4.5	-	2.5	2
P0110.025-005L	M2,5	5	4.5	-	2.5	2
P0110.025-006L	M2,5	6	4.5	-	2.5	2
P0110.025-008L	M2,5	8	4.5	-	2.5	2
P0110.025-010L	M2,5	10	4.5	-	2.5	2
P0110.025-012L	M2,5	12	4.5	-	2.5	2
P0110.025-014L	M2,5	14	4.5	-	2.5	2
P0110.025-016L	M2,5	16	4.5	-	2.5	2
P0110.025-020L	M2,5	20	4.5	-	2.5	2
P0110.030-004L	M 3	4	5.5	-	3	2.5
P0110.030-005L	M 3	5	5.5	-	3	2.5
P0110.030-006L	M 3	6	5.5	-	3	2.5
P0110.030-008L	M 3	8	5.5	-	3	2.5
P0110.030-010L	M 3	10	5.5	-	3	2.5
P0110.030-012L	M 3	12	5.5	-	3	2.5
P0110.030-014L	M 3	14	5.5	-	3	2.5
P0110.030-016L	M 3	16	5.5	-	3	2.5
P0110.030-018L	M 3	18	5.5	-	3	2.5
P0110.030-020L	M 3	20	5.5	-	3	2.5



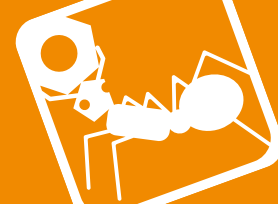
Self-Locking Cap Screws

Hex cap - nylon strip

Self Locking
Screws

Order No.	d ₁	l ₁	d ₂	l ₂ max.	h ₁	A/F
P0110.030-025L	M 3	25	5.5	18	3	2.5
P0110.030-030L	M 3	30	5.5	18	3	2.5
P0110.030-035L	M 3	35	5.5	18	3	2.5
P0110.030-040L	M 3	40	5.5	18	3	2.5
P0110.030-045L	M 3	45	5.5	18	3	2.5
P0110.030-050L	M 3	50	5.5	18	3	2.5
P0110.040-005L	M 4	5	7	-	4	3
P0110.040-006L	M 4	6	7	-	4	3
P0110.040-008L	M 4	8	7	-	4	3
P0110.040-010L	M 4	10	7	-	4	3
P0110.040-012L	M 4	12	7	-	4	3
P0110.040-014L	M 4	14	7	-	4	3
P0110.040-016L	M 4	16	7	-	4	3
P0110.040-018L	M 4	18	7	-	4	3
P0110.040-020L	M 4	20	7	-	4	3
P0110.040-025L	M 4	25	7	-	4	3
P0110.040-030L	M 4	30	7	20	4	3
P0110.040-035L	M 4	35	7	20	4	3
P0110.040-040L	M 4	40	7	20	4	3
P0110.040-045L	M 4	45	7	20	4	3
P0110.040-050L	M 4	50	7	20	4	3
P0110.040-055L	M 4	55	7	20	4	3
P0110.040-060L	M 4	60	7	20	4	3
P0110.040-070L	M 4	70	7	20	4	3
P0110.050-006L	M 5	6	8.5	-	5	4
P0110.050-008L	M 5	8	8.5	-	5	4
P0110.050-010L	M 5	10	8.5	-	5	4
P0110.050-012L	M 5	12	8.5	-	5	4
P0110.050-014L	M 5	14	8.5	-	5	4
P0110.050-016L	M 5	16	8.5	-	5	4
P0110.050-018L	M 5	18	8.5	-	5	4
P0110.050-020L	M 5	20	8.5	-	5	4
P0110.050-025L	M 5	25	8.5	-	5	4
P0110.050-030L	M 5	30	8.5	22	5	4
P0110.050-035L	M 5	35	8.5	22	5	4
P0110.050-040L	M 5	40	8.5	22	5	4
P0110.050-045L	M 5	45	8.5	22	5	4
P0110.050-050L	M 5	50	8.5	22	5	4
P0110.050-055L	M 5	55	8.5	22	5	4
P0110.050-060L	M 5	60	8.5	22	5	4
P0110.050-065L	M 5	65	8.5	22	5	4
P0110.050-070L	M 5	70	8.5	22	5	4
P0110.050-080L	M 5	80	8.5	22	5	4
P0110.050-090L	M 5	90	8.5	22	5	4
P0110.050-100L	M 5	100	8.5	22	5	4
P0110.060-006L	M 6	6	10	-	6	5
P0110.060-008L	M 6	8	10	-	6	5
P0110.060-010L	M 6	10	10	-	6	5
P0110.060-012L	M 6	12	10	-	6	5
P0110.060-014L	M 6	14	10	-	6	5
P0110.060-016L	M 6	16	10	-	6	5
P0110.060-018L	M 6	18	10	-	6	5
P0110.060-020L	M 6	20	10	-	6	5
P0110.060-025L	M 6	25	10	-	6	5
P0110.060-030L	M 6	30	10	-	6	5
P0110.060-035L	M 6	35	10	24	6	5
P0110.060-040L	M 6	40	10	24	6	5
P0110.060-045L	M 6	45	10	24	6	5
P0110.060-050L	M 6	50	10	24	6	5
P0110.060-055L	M 6	55	10	24	6	5
P0110.060-060L	M 6	60	10	24	6	5
P0110.060-065L	M 6	65	10	24	6	5
P0110.060-070L	M 6	70	10	24	6	5
P0110.060-080L	M 6	80	10	24	6	5
P0110.060-090L	M 6	90	10	24	6	5
P0110.060-100L	M 6	100	10	24	6	5
P0110.060-110L	M 6	110	10	24	6	5
P0110.060-120L	M 6	120	10	24	6	5

SELF LOCKING SCREWS



Order No.	d ₁	l ₁	d ₂	l ₂ max.	h ₁	A/F
P0110.060-130L	M 6	130	10	24	6	5
P0110.060-140L	M 6	140	10	24	6	5
P0110.060-150L	M 6	150	10	24	6	5
P0110.080-010L	M 8	10	13	-	8	6
P0110.080-012L	M 8	12	13	-	8	6
P0110.080-014L	M 8	14	13	-	8	6
P0110.080-016L	M 8	16	13	-	8	6
P0110.080-018L	M 8	18	13	-	8	6
P0110.080-020L	M 8	20	13	-	8	6
P0110.080-025L	M 8	25	13	-	8	6
P0110.080-030L	M 8	30	13	-	8	6
P0110.080-035L	M 8	35	13	-	8	6
P0110.080-040L	M 8	40	13	28	8	6
P0110.080-045L	M 8	45	13	28	8	6
P0110.080-050L	M 8	50	13	28	8	6
P0110.080-055L	M 8	55	13	28	8	6
P0110.080-060L	M 8	60	13	28	8	6
P0110.080-065L	M 8	65	13	28	8	6
P0110.080-070L	M 8	70	13	28	8	6
P0110.080-080L	M 8	80	13	28	8	6
P0110.080-090L	M 8	90	13	28	8	6
P0110.080-100L	M 8	100	13	28	8	6
P0110.080-110L	M 8	110	13	28	8	6
P0110.080-120L	M 8	120	13	28	8	6
P0110.080-130L	M 8	130	13	28	8	6
P0110.080-140L	M 8	140	13	28	8	6
P0110.080-150L	M 8	150	13	28	8	6
P0110.080-160L	M 8	160	13	28	8	6
P0110.100-012L	M10	12	16	-	10	8
P0110.100-016L	M10	16	16	-	10	8
P0110.100-018L	M10	18	16	-	10	8
P0110.100-020L	M10	20	16	-	10	8
P0110.100-025L	M10	25	16	-	10	8
P0110.100-030L	M10	30	16	-	10	8
P0110.100-035L	M10	35	16	-	10	8
P0110.100-040L	M10	40	16	-	10	8
P0110.100-045L	M10	45	16	32	10	8
P0110.100-050L	M10	50	16	32	10	8
P0110.100-055L	M10	55	16	32	10	8
P0110.100-060L	M10	60	16	32	10	8
P0110.100-065L	M10	65	16	32	10	8
P0110.100-070L	M10	70	16	32	10	8
P0110.100-075L	M10	75	16	32	10	8
P0110.100-080L	M10	80	16	32	10	8
P0110.100-090L	M10	90	16	32	10	8
P0110.100-100L	M10	100	16	32	10	8
P0110.100-110L	M10	110	16	32	10	8
P0110.100-120L	M10	120	16	32	10	8
P0110.100-130L	M10	130	16	32	10	8
P0110.100-140L	M10	140	16	32	10	8
P0110.100-150L	M10	150	16	32	10	8
P0110.100-160L	M10	160	16	32	10	8
P0110.120-016L	M12	16	18	-	12	10
P0110.120-020L	M12	20	18	-	12	10
P0110.120-025L	M12	25	18	-	12	10
P0110.120-030L	M12	30	18	-	12	10
P0110.120-035L	M12	35	18	-	12	10
P0110.120-040L	M12	40	18	-	12	10
P0110.120-045L	M12	45	18	-	12	10
P0110.120-050L	M12	50	18	-	12	10
P0110.120-055L	M12	55	18	36	12	10
P0110.120-060L	M12	60	18	36	12	10
P0110.120-065L	M12	65	18	36	12	10
P0110.120-070L	M12	70	18	36	12	10
P0110.120-080L	M12	80	18	36	12	10
P0110.120-090L	M12	90	18	36	12	10
P0110.120-100L	M12	100	18	36	12	10
P0110.120-110L	M12	110	18	36	12	10



Self-Locking Cap Screws

Hex cap - nylon strip

Self Locking
Screws

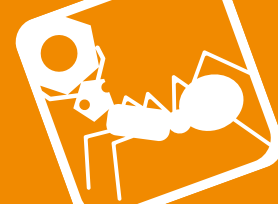
Order No.	d ₁	l ₁	d ₂	l ₂ max.	h ₁	A/F
P0110.120-120L	M12	120	18	36	12	10
P0110.120-130L	M12	130	18	36	12	10
P0110.120-140L	M12	140	18	36	12	10
P0110.120-150L	M12	150	18	36	12	10
P0110.120-160L	M12	160	18	36	12	10
P0110.140-020L	M14	20	21	-	14	12
P0110.140-025L	M14	25	21	-	14	12
P0110.140-030L	M14	30	21	-	14	12
P0110.140-035L	M14	35	21	-	14	12
P0110.140-040L	M14	40	21	-	14	12
P0110.140-045L	M14	45	21	-	14	12
P0110.140-050L	M14	50	21	-	14	12
P0110.140-055L	M14	55	21	-	14	12
P0110.140-060L	M14	60	21	40	14	12
P0110.140-065L	M14	65	21	40	14	12
P0110.140-070L	M14	70	21	40	14	12
P0110.140-080L	M14	80	21	40	14	12
P0110.140-090L	M14	90	21	40	14	12
P0110.140-100L	M14	100	21	40	14	12
P0110.140-110L	M14	110	21	40	14	12
P0110.140-120L	M14	120	21	40	14	12
P0110.140-130L	M14	130	21	40	14	12
P0110.140-140L	M14	140	21	40	14	12
P0110.140-150L	M14	150	21	40	14	12
P0110.140-160L	M14	160	21	40	14	12
P0110.160-020L	M16	20	24	-	16	14
P0110.160-025L	M16	25	24	-	16	14
P0110.160-030L	M16	30	24	-	16	14
P0110.160-035L	M16	35	24	-	16	14
P0110.160-040L	M16	40	24	-	16	14
P0110.160-045L	M16	45	24	-	16	14
P0110.160-050L	M16	50	24	-	16	14
P0110.160-055L	M16	55	24	-	16	14
P0110.160-060L	M16	60	24	-	16	14
P0110.160-065L	M16	65	24	40	16	14
P0110.160-070L	M16	70	24	40	16	14
P0110.160-080L	M16	80	24	40	16	14
P0110.160-090L	M16	90	24	40	16	14
P0110.160-100L	M16	100	24	40	16	14
P0110.160-110L	M16	110	24	40	16	14
P0110.160-120L	M16	120	24	40	16	14
P0110.160-130L	M16	130	24	40	16	14
P0110.160-140L	M16	140	24	40	16	14
P0110.160-150L	M16	150	24	40	16	14
P0110.160-160L	M16	160	24	40	16	14
P0110.180-030L	M18	30	27	-	18	14
P0110.180-035L	M18	35	27	-	18	14
P0110.180-040L	M18	40	27	-	18	14
P0110.180-045L	M18	45	27	-	18	14
P0110.180-050L	M18	50	27	-	18	14
P0110.180-055L	M18	55	27	-	18	14
P0110.180-060L	M18	60	27	-	18	14
P0110.180-065L	M18	65	27	-	18	14
P0110.180-070L	M18	70	27	48	18	14
P0110.180-075L	M18	75	27	48	18	14
P0110.180-080L	M18	80	27	48	18	14
P0110.180-090L	M18	90	27	48	18	14
P0110.180-100L	M18	100	27	48	18	14
P0110.180-110L	M18	110	27	48	18	14
P0110.180-120L	M18	120	27	48	18	14
P0110.180-130L	M18	130	27	48	18	14
P0110.180-140L	M18	140	27	48	18	14
P0110.180-150L	M18	150	27	48	18	14
P0110.180-160L	M18	160	27	48	18	14
P0110.200-030L	M20	30	30	-	20	17
P0110.200-035L	M20	35	30	-	20	17
P0110.200-040L	M20	40	30	-	20	17
P0110.200-045L	M20	45	30	-	20	17

SELF LOCKING SCREWS

Self Locking Screws

Self-Locking Cap Screws

Hex cap - nylon strip



SELF-LOCKING SCREWS

Order No.	d ₁	l ₁	d ₂	l ₂ max.	h ₁	A/F
P0110.200-050L	M20	50	30	-	20	17
P0110.200-055L	M20	55	30	-	20	17
P0110.200-060L	M20	60	30	-	20	17
P0110.200-065L	M20	65	30	-	20	17
P0110.200-070L	M20	70	30	-	20	17
P0110.200-080L	M20	80	30	52	20	17
P0110.200-090L	M20	90	30	52	20	17
P0110.200-100L	M20	100	30	52	20	17
P0110.200-110L	M20	110	30	52	20	17
P0110.200-120L	M20	120	30	52	20	17
P0110.200-130L	M20	130	30	52	20	17
P0110.200-140L	M20	140	30	52	20	17
P0110.200-150L	M20	150	30	52	20	17
P0110.200-160L	M20	160	30	52	20	17
P0110.240-040L	M24	40	36	-	24	19
P0110.240-045L	M24	45	36	-	24	19
P0110.240-050L	M24	50	36	-	24	19
P0110.240-055L	M24	55	36	-	24	19
P0110.240-060L	M24	60	36	-	24	19
P0110.240-065L	M24	65	36	-	24	19
P0110.240-070L	M24	70	36	-	24	19
P0110.240-080L	M24	80	36	-	24	19
P0110.240-090L	M24	90	36	-	24	19
P0110.240-100L	M24	100	36	66	24	19
P0110.240-110L	M24	110	36	66	24	19
P0110.240-120L	M24	120	36	66	24	19
P0110.240-130L	M24	130	36	66	24	19
P0110.240-140L	M24	140	36	66	24	19
P0110.240-150L	M24	150	36	66	24	19

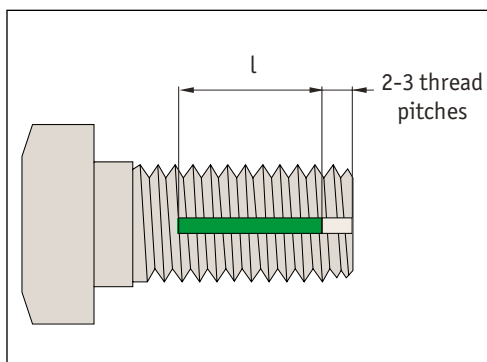
Strip materials

Materials	Colour code	Operating Temperature Range	Material Specification
Polycap Nylon	Green	-50°C to +120°C	ASTM-D-4066
Kel-F®*	Blue	-200°C to +200°C	AMS 3650
Vespe®	Brown	-250°C to +300°C	-
Hot-Lok™*	Silver	-250°C to +650°C	-

*These inserts are not recommended for reuse. Consult Automotion Components for technical details.

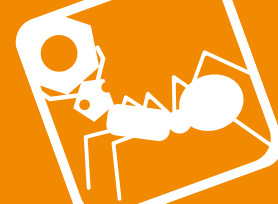
Standard "L" dimensions

Thread size	Approx "L" insert length
1,5	3,5
1,8	3,5
2,2	4,5
2,5	4,5
3,0	6,0
3,5	7,5
4,0	8,5
5,0	8,5
6,5	11,0
8,0	10,7
9,5	12,0
11,0	13,5
12,5	14,0
14,0	14,5
16,0	16,0
19,0	19,0
22,0	19,0
25,0	19,0

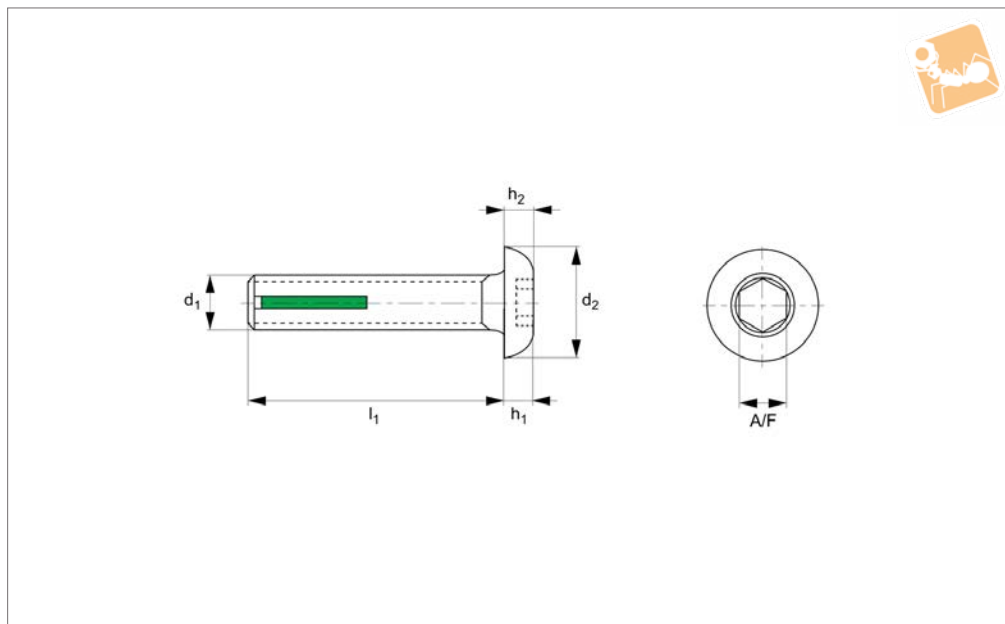


Insert length can be affected by overall length of thread.

Self-Locking Fasteners from Automotion Components



P0111



Material

Stainless steel A2, with nylon locking patch.

A4 available on request.

Technical Notes

To ISO 7380 with nylon locking patch.

Vibration proof.

Threaded within 2,5 x pitch of head.

Screw to DIN 912 with locking patch.

Standard green locking patch. Breakaway torque values are complex and can be calculated on request.

Can be manufactured to MIL spec on request (MIL-DTL-18240 and NAS1283).

Tips

Surface finishes such as cadum plating,

nickel plating, armalloy coating, black oxide coating - all available on request.

Due to the wide range of sizes, material grades and finishes, these parts are manufactured on demand - minimum batch size is 100 pieces.

Order No.	d ₁	l ₁	d ₂	h ₁	h ₂	A/F
P0111.030-004L	M 3	4	5.7	1.65	1.04	2
P0111.030-005L	M 3	5	5.7	1.65	1.04	2
P0111.030-006L	M 3	6	5.7	1.65	1.04	2
P0111.030-008L	M 3	8	5.7	1.65	1.04	2
P0111.030-010L	M 3	10	5.7	1.65	1.04	2
P0111.030-012L	M 3	12	5.7	1.65	1.04	2
P0111.030-016L	M 3	16	5.7	1.65	1.04	2
P0111.030-020L	M 3	20	5.7	1.65	1.04	2
P0111.030-025L	M 3	25	5.7	1.65	1.04	2
P0111.030-030L	M 3	30	5.7	1.65	1.04	2
P0111.030-035L	M 3	35	5.7	1.65	1.04	2
P0111.030-040L	M 3	40	5.7	1.65	1.04	2
P0111.040-005L	M 4	5	7.6	2.2	1.3	2.5
P0111.040-006L	M 4	6	7.6	2.2	1.3	2.5
P0111.040-008L	M 4	8	7.6	2.2	1.3	2.5
P0111.040-010L	M 4	10	7.6	2.2	1.3	2.5
P0111.040-012L	M 4	12	7.6	2.2	1.3	2.5
P0111.040-014L	M 4	14	7.6	2.2	1.3	2.5
P0111.040-016L	M 4	16	7.6	2.2	1.3	2.5
P0111.040-020L	M 4	20	7.6	2.2	1.3	2.5
P0111.040-025L	M 4	25	7.6	2.2	1.3	2.5
P0111.040-030L	M 4	30	7.6	2.2	1.3	2.5
P0111.040-035L	M 4	35	7.6	2.2	1.3	2.5
P0111.040-040L	M 4	40	7.6	2.2	1.3	2.5
P0111.040-045L	M 4	45	7.6	2.2	1.3	2.5
P0111.040-050L	M 4	40	7.6	2.2	1.3	2.5
P0111.050-005L	M 5	5	9.5	2.75	1.56	3
P0111.050-006L	M 5	6	9.5	2.75	1.56	3
P0111.050-008L	M 5	8	9.5	2.75	1.56	3



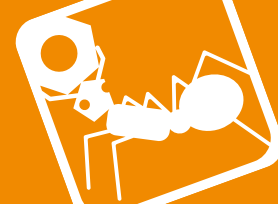
Self-Locking Button Head Screws

Hex button head - nylon strip

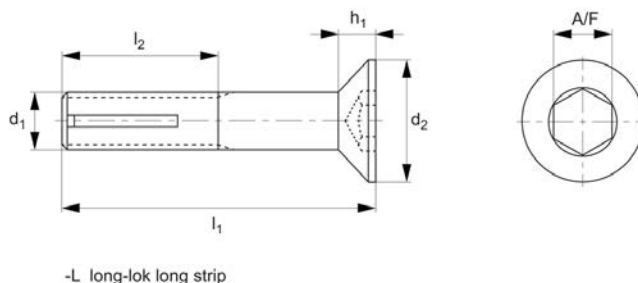
Self Locking
Screws

Order No.	d ₁	l ₁	d ₂	h ₁	h ₂	A/F
P0111.050-010L	M 5	10	9.5	2.75	1.56	3
P0111.050-012L	M 5	12	9.5	2.75	1.56	3
P0111.050-014L	M 5	14	9.5	2.75	1.56	3
P0111.050-016L	M 5	16	9.5	2.75	1.56	3
P0111.050-020L	M 5	20	9.5	2.75	1.56	3
P0111.050-025L	M 5	25	9.5	2.75	1.56	3
P0111.050-030L	M 5	30	9.5	2.75	1.56	3
P0111.050-035L	M 5	35	9.5	2.75	1.56	3
P0111.050-040L	M 5	40	9.5	2.75	1.56	3
P0111.050-045L	M 5	45	9.5	2.75	1.56	3
P0111.050-050L	M 5	50	9.5	2.75	1.56	3
P0111.050-055L	M 5	55	9.5	2.75	1.56	3
P0111.050-060L	M 5	60	9.5	2.75	1.56	3
P0111.060-008L	M 6	8	10.5	3.3	2.08	4
P0111.060-010L	M 6	10	10.5	3.3	2.08	4
P0111.060-012L	M 6	12	10.5	3.3	2.08	4
P0111.060-014L	M 6	14	10.5	3.3	2.08	4
P0111.060-016L	M 6	16	10.5	3.3	2.08	4
P0111.060-020L	M 6	20	10.5	3.3	2.08	4
P0111.060-025L	M 6	25	10.5	3.3	2.08	4
P0111.060-030L	M 6	30	10.5	3.3	2.08	4
P0111.060-035L	M 6	35	10.5	3.3	2.08	4
P0111.060-040L	M 6	40	10.5	3.3	2.08	4
P0111.060-045L	M 6	45	10.5	3.3	2.08	4
P0111.060-050L	M 6	50	10.5	3.3	2.08	4
P0111.060-055L	M 6	55	10.5	3.3	2.08	4
P0111.060-060L	M 6	60	10.5	3.3	2.08	4
P0111.060-070L	M 6	70	10.5	3.3	2.08	4
P0111.080-010L	M 8	10	14	4.4	2.6	5
P0111.080-012L	M 8	12	14	4.4	2.6	5
P0111.080-014L	M 8	14	14	4.4	2.6	5
P0111.080-016L	M 8	16	14	4.4	2.6	5
P0111.080-020L	M 8	20	14	4.4	2.6	5
P0111.080-025L	M 8	25	14	4.4	2.6	5
P0111.080-030L	M 8	30	14	4.4	2.6	5
P0111.080-035L	M 8	35	14	4.4	2.6	5
P0111.080-040L	M 8	40	14	4.4	2.6	5
P0111.080-045L	M 8	45	14	4.4	2.6	5
P0111.080-050L	M 8	50	14	4.4	2.6	5
P0111.080-055L	M 8	55	14	4.4	2.6	5
P0111.080-060L	M 8	60	14	4.4	2.6	5
P0111.080-070L	M 8	70	14	4.4	2.6	5
P0111.080-080L	M 8	80	14	4.4	2.6	5
P0111.100-012L	M10	12	17.5	5.5	3.12	6
P0111.100-016L	M10	16	17.5	5.5	3.12	6
P0111.100-020L	M10	20	17.5	5.5	3.12	6
P0111.100-025L	M10	25	17.5	5.5	3.12	6
P0111.100-030L	M10	30	17.5	5.5	3.12	6
P0111.100-035L	M10	35	17.5	5.5	3.12	6
P0111.100-040L	M10	40	17.5	5.5	3.12	6
P0111.100-045L	M10	45	17.5	5.5	3.12	6
P0111.100-050L	M10	50	17.5	5.5	3.12	6
P0111.100-055L	M10	55	17.5	5.5	3.12	6
P0111.100-060L	M10	60	17.5	5.5	3.12	6
P0111.100-070L	M10	70	17.5	5.5	3.12	6
P0111.100-080L	M10	80	17.5	5.5	3.12	6
P0111.120-020L	M12	20	21	6.6	4.16	8
P0111.120-025L	M12	25	21	6.6	4.16	8
P0111.120-030L	M12	30	21	6.6	4.16	8
P0111.120-035L	M12	35	21	6.6	4.16	8
P0111.120-040L	M12	40	21	6.6	4.16	8
P0111.120-045L	M12	45	21	6.6	4.16	8
P0111.120-050L	M12	50	21	6.6	4.16	8
P0111.120-055L	M12	55	21	6.6	4.16	8
P0111.120-060L	M12	60	21	6.6	4.16	8
P0111.120-070L	M12	70	21	6.6	4.16	8
P0111.120-080L	M12	80	21	6.6	4.16	8

SELF LOCKING SCREWS



P0112



Material

Stainless steel A2, with nylon locking patch.

A4 available on request.

Technical Notes

To DIN 7991, ISO 10642, with nylon locking patch. Vibration proof.

Standard green locking patch. Breakaway torque values are complex and can be calculated on request.

Can be manufactured to MIL spec on request (MIL-DTL-18240 and NAS1283).

Tips

Surface finishes such as cadum plating,

nickel plating, armalloy coating, black oxide coating - all available on request. Due to the wide range of sizes, material grades and finishes, these parts are manufactured on demand - minimum batch size is 100 pieces.

Order No.	d ₁	l ₁	d ₂	l ₂	h ₁	A/F
P0112.030-006L	M 3	6	6	-	1.7	2
P0112.030-008L	M 3	8	6	-	1.7	2
P0112.030-010L	M 3	10	6	-	1.7	2
P0112.030-012L	M 3	12	6	-	1.7	2
P0112.030-014L	M 3	14	6	-	1.7	2
P0112.030-016L	M 3	16	6	-	1.7	2
P0112.030-018L	M 3	18	6	-	1.7	2
P0112.030-020L	M 3	20	6	-	1.7	2
P0112.040-006L	M 4	6	8	-	2.3	2.5
P0112.040-008L	M 4	8	8	-	2.3	2.5
P0112.040-010L	M 4	10	8	-	2.3	2.5
P0112.040-012L	M 4	12	8	-	2.3	2.5
P0112.040-014L	M 4	14	8	-	2.3	2.5
P0112.040-016L	M 4	16	8	-	2.3	2.5
P0112.040-018L	M 4	18	8	-	2.3	2.5
P0112.040-020L	M 4	20	8	-	2.3	2.5
P0112.040-025L	M 4	25	8	-	2.3	2.5
P0112.040-030L	M 4	30	8	20	2.3	2.5
P0112.040-035L	M 4	35	8	20	2.3	2.5
P0112.040-040L	M 4	40	8	20	2.3	2.5
P0112.040-045L	M 4	45	8	20	2.3	2.5
P0112.040-050L	M 4	50	8	20	2.3	2.5
P0112.040-060L	M 4	60	8	20	2.3	2.5
P0112.050-006L	M 5	6	10	-	2.8	3
P0112.050-008L	M 5	8	10	-	2.8	3
P0112.050-010L	M 5	10	10	-	2.8	3
P0112.050-012L	M 5	12	10	-	2.8	3
P0112.050-014L	M 5	14	10	-	2.8	3
P0112.050-016L	M 5	16	10	-	2.8	3
P0112.050-018L	M 5	18	10	-	2.8	3
P0112.050-020L	M 5	20	10	-	2.8	3



Self-Locking Countersunk Screws

Hex. socket - nylon strip

Self Locking
Screws

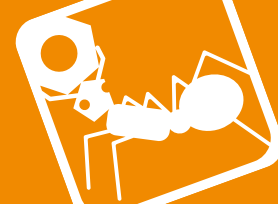
Order No.	d ₁	l ₁	d ₂	l ₂	h ₁	A/F
P0112.050-022L	M 5	22	10	-	2.8	3
P0112.050-025L	M 5	25	10	-	2.8	3
P0112.050-030L	M 5	30	10	-	2.8	3
P0112.050-035L	M 5	35	10	22	2.8	3
P0112.050-040L	M 5	40	10	22	2.8	3
P0112.050-045L	M 5	45	10	22	2.8	3
P0112.050-050L	M 5	50	10	22	2.8	3
P0112.050-060L	M 5	60	10	22	2.8	3
P0112.050-070L	M 5	70	10	22	2.8	3
P0112.050-080L	M 5	80	10	22	2.8	3
P0112.050-090L	M 5	90	10	22	2.8	3
P0112.050-100L	M 5	60	10	22	2.8	3
P0112.060-008L	M 6	8	12	-	3.3	4
P0112.060-010L	M 6	10	12	-	3.3	4
P0112.060-012L	M 6	12	12	-	3.3	4
P0112.060-014L	M 6	14	12	-	3.3	4
P0112.060-016L	M 6	16	12	-	3.3	4
P0112.060-018L	M 6	18	12	-	3.3	4
P0112.060-020L	M 6	20	12	-	3.3	4
P0112.060-022L	M 6	22	12	-	3.3	4
P0112.060-025L	M 6	25	12	-	3.3	4
P0112.060-030L	M 6	30	12	-	3.3	4
P0112.060-035L	M 6	35	12	-	3.3	4
P0112.060-040L	M 6	40	12	24	3.3	4
P0112.060-045L	M 6	45	12	24	3.3	4
P0112.060-050L	M 6	50	12	24	3.3	4
P0112.060-055L	M 6	55	12	24	3.3	4
P0112.060-060L	M 6	60	12	24	3.3	4
P0112.060-070L	M 6	70	12	24	3.3	4
P0112.060-080L	M 6	80	12	24	3.3	4
P0112.060-090L	M 6	90	12	24	3.3	4
P0112.060-100L	M 6	100	12	24	3.3	4
P0112.080-010L	M 8	10	16	-	4.4	5
P0112.080-012L	M 8	12	16	-	4.4	5
P0112.080-014L	M 8	14	16	-	4.4	5
P0112.080-016L	M 8	16	16	-	4.4	5
P0112.080-018L	M 8	18	16	-	4.4	5
P0112.080-020L	M 8	20	16	-	4.4	5
P0112.080-022L	M 8	22	16	-	4.4	5
P0112.080-025L	M 8	25	16	-	4.4	5
P0112.080-030L	M 8	30	16	-	4.4	5
P0112.080-035L	M 8	35	16	-	4.4	5
P0112.080-040L	M 8	40	16	-	4.4	5
P0112.080-045L	M 8	45	16	-	4.4	5
P0112.080-050L	M 8	50	16	28	4.4	5
P0112.080-055L	M 8	55	16	28	4.4	5
P0112.080-060L	M 8	60	16	28	4.4	5
P0112.080-065L	M 8	65	16	28	4.4	5
P0112.080-070L	M 8	70	16	28	4.4	5
P0112.080-075L	M 8	75	16	28	4.4	5
P0112.080-080L	M 8	80	16	28	4.4	5
P0112.080-090L	M 8	90	16	28	4.4	5
P0112.080-100L	M 8	100	16	28	4.4	5
P0112.100-016L	M10	16	20	-	5.5	6
P0112.100-020L	M10	20	20	-	5.5	6
P0112.100-025L	M10	25	20	-	5.5	6
P0112.100-030L	M10	30	20	-	5.5	6
P0112.100-035L	M10	35	20	-	5.5	6
P0112.100-040L	M10	40	20	-	5.5	6
P0112.100-045L	M10	45	20	-	5.5	6
P0112.100-050L	M10	50	20	-	5.5	6
P0112.100-055L	M10	55	20	32	5.5	6
P0112.100-060L	M10	60	20	32	5.5	6
P0112.100-065L	M10	65	20	32	5.5	6
P0112.100-070L	M10	70	20	32	5.5	6
P0112.100-075L	M10	75	20	32	5.5	6
P0112.100-080L	M10	80	20	32	5.5	6
P0112.100-090L	M10	90	20	32	5.5	6
P0112.100-100L	M10	100	20	32	5.5	6

SELF LOCKING SCREWS

Self Locking Screws

Self-Locking Countersunk Screws

Hex. socket - nylon strip



SELF-LOCKING SCREWS

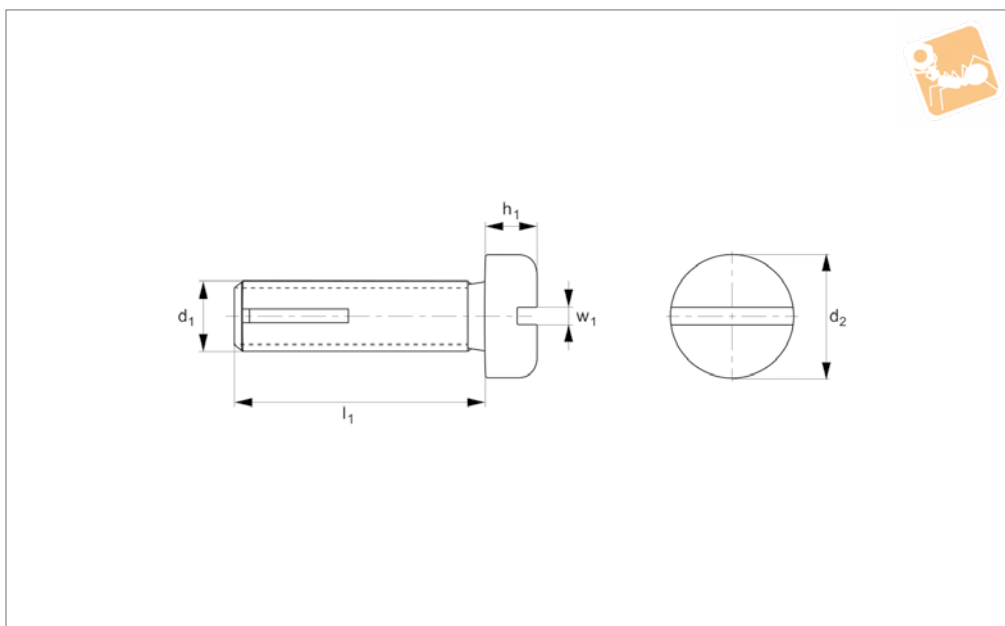
Order No.	d ₁	l ₁	d ₂	l ₂	h ₁	A/F
P0112.120-020L	M12	20	24	-	6.5	8
P0112.120-025L	M12	25	24	-	6.5	8
P0112.120-030L	M12	30	24	-	6.5	8
P0112.120-035L	M12	35	24	-	6.5	8
P0112.120-040L	M12	40	24	-	6.5	8
P0112.120-045L	M12	45	24	-	6.5	8
P0112.120-050L	M12	50	24	-	6.5	8
P0112.120-055L	M12	55	24	-	6.5	8
P0112.120-060L	M12	60	24	-	6.5	8
P0112.120-065L	M12	65	24	36	6.5	8
P0112.120-070L	M12	70	24	36	6.5	8
P0112.120-075L	M12	75	24	36	6.5	8
P0112.120-080L	M12	80	24	36	6.5	8
P0112.120-090L	M12	90	24	36	6.5	8
P0112.120-100L	M12	100	24	36	6.5	8
P0112.160-025L	M16	25	30	-	7.5	10
P0112.160-030L	M16	30	30	-	7.5	10
P0112.160-035L	M16	35	30	-	7.5	10
P0112.160-040L	M16	40	30	-	7.5	10
P0112.160-045L	M16	45	30	-	7.5	10
P0112.160-050L	M16	50	30	-	7.5	10
P0112.160-055L	M16	55	30	-	7.5	10
P0112.160-060L	M16	60	30	-	7.5	10
P0112.160-065L	M16	65	30	-	7.5	10
P0112.160-070L	M16	70	30	-	7.5	10
P0112.160-080L	M16	80	30	44	7.5	10
P0112.160-090L	M16	90	30	44	7.5	10
P0112.160-100L	M16	100	30	44	7.5	10
P0112.200-040L	M20	40	36	-	8.5	12
P0112.200-045L	M20	45	36	-	8.5	12
P0112.200-050L	M20	50	36	-	8.5	12
P0112.200-060L	M20	60	36	-	8.5	12
P0112.200-070L	M20	70	36	-	8.5	12
P0112.200-080L	M20	80	36	-	8.5	12
P0112.200-090L	M20	90	36	-	8.5	12
P0112.200.100L	M20	100	36	52	8.5	12



Self-Locking Pan Head Screws

Slotted pan head - nylon strip

Self Locking
Screws



P0115

SELF LOCKING SCREWS

Material

Stainless steel A2, with green polycap nylon locking patch.
A4 available on request.

Technical Notes

To DIN 85, ISO 1580, with nylon locking patch. Vibration proof.

Standard green locking patch. Breakaway torque values are complex and can be calculated on request.

Can be manufactured to MIL spec on request (MIL-DTL-18240 and NAS1283).

Tips

Surface finishes such as cadmium plating,

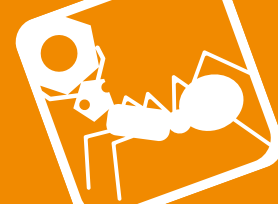
nickel plating, armalloy coating, black oxide coating - all available on request. Due to the wide range of sizes, material grades and finishes, these parts are manufactured on demand - minimum batch size is 100 pieces.

Order No.	d ₁	l ₁	d ₂	h ₁	w ₁
P0115.016-005L	M1,6	5	3.2	1.0	0.4
P0115.016-006L	M1,6	6	3.2	1.0	0.4
P0115.016-008L	M1,6	8	3.2	1.0	0.4
P0115.016-010L	M1,6	10	3.2	1.0	0.4
P0115.020-004L	M 2	4	4	1.3	0.5
P0115.020-005L	M 2	5	4	1.3	0.5
P0115.020-006L	M 2	6	4	1.3	0.5
P0115.020-008L	M 2	8	4	1.3	0.5
P0115.020-010L	M 2	10	4	1.3	0.5
P0115.020-012L	M 2	12	4	1.3	0.5
P0115.020-016L	M 2	16	4	1.3	0.5
P0115.020-020L	M 2	20	4	1.3	0.5
P0115.025-003L	M2,5	3	5	1.5	0.6
P0115.025-004L	M2,5	4	5	1.5	0.6
P0115.025-005L	M2,5	5	5	1.5	0.6
P0115.025-006L	M2,5	6	5	1.5	0.6
P0115.025-008L	M2,5	8	5	1.5	0.6
P0115.025-010L	M2,5	10	5	1.5	0.6
P0115.025-012L	M2,5	12	5	1.5	0.6
P0115.025-016L	M2,5	16	5	1.5	0.6
P0115.025-020L	M2,5	20	5	1.5	0.6
P0115.025-025L	M2,5	25	5	1.5	0.6
P0115.030-003L	M 3	3	6	1.8	0.8
P0115.030-004L	M 3	4	6	1.8	0.8
P0115.030-005L	M 3	5	6	1.8	0.8
P0115.030-006L	M 3	6	6	1.8	0.8
P0115.030-008L	M 3	8	6	1.8	0.8
P0115.030-010L	M 3	10	6	1.8	0.8
P0115.030-012L	M 3	12	6	1.8	0.8
P0115.030-014L	M 3	14	6	1.8	0.8
P0115.030-016L	M 3	16	6	1.8	0.8

Self Locking Screws

Self-Locking Pan Head Screws

Slotted pan head - nylon strip

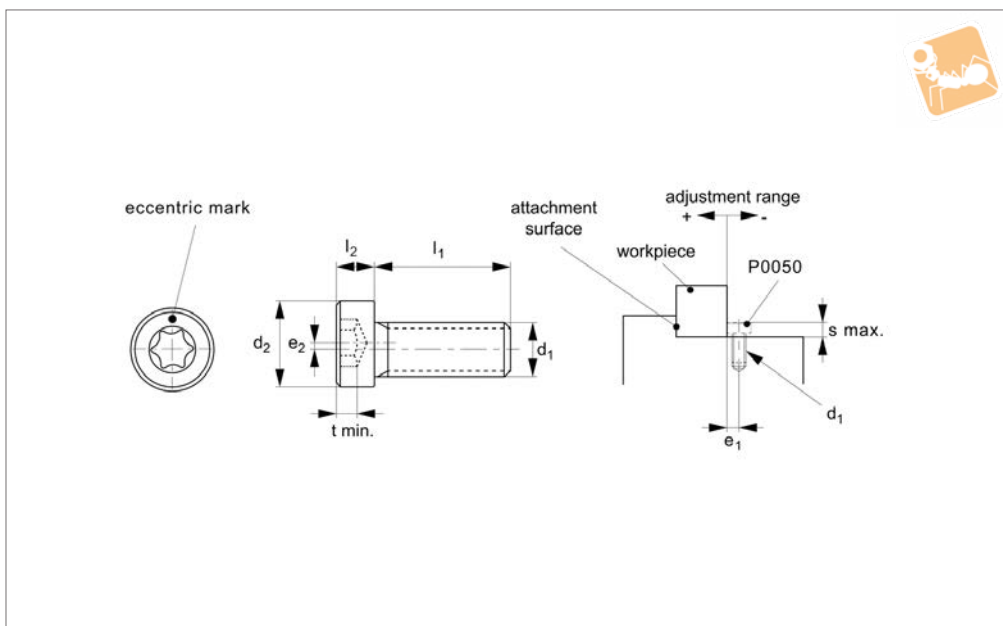


Order No.	d ₁	l ₁	d ₂	h ₁	w ₁
P0115.030-018L	M 3	18	6	1.8	0.8
P0115.030-020L	M 3	20	6	1.8	0.8
P0115.030-022L	M 3	22	6	1.8	0.8
P0115.030-025L	M 3	25	6	1.8	0.8
P0115.030-028L	M 3	28	6	1.8	0.8



Eccentric Clamp Screws for linear guideways

Clamping
Screws



P0050

CLAMPING SCREWS

Material

Steel, ferrosferic oxide coating or electroless nickel plated.

Technical Notes

For use when securing linear guideway rails or similar. The eccentricity of the clamping screw is formed as a result of the central

axis of the head being offset from the central axis of the shank. This offset ensures that the rail is firmly clamped by the head when the screw is tightened. The torx socket drive ensures the screw can withstand a high tightening torque.

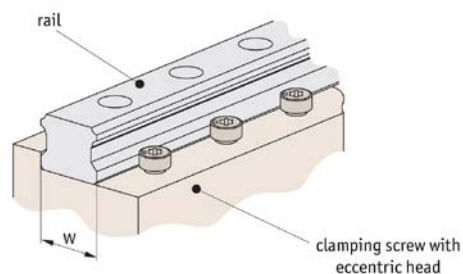
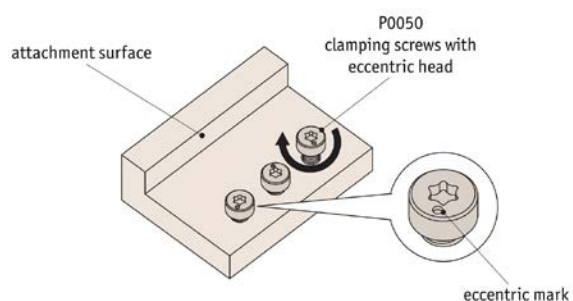
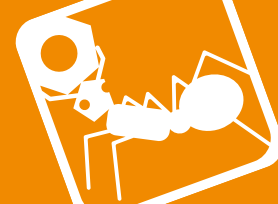
Tips

Use following suffixes to specify material when ordering:

BL - ferrosferic oxide coating

EN - electroless nickel plated, providing good corrosion resistance.

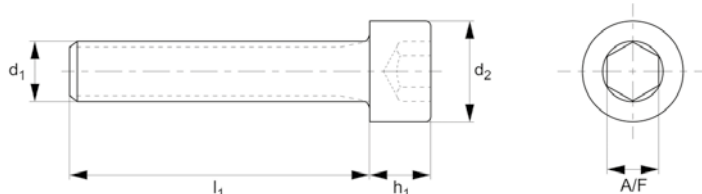
Order No.	d ₁	Adj. range min. max.	e ₁	d ₂ ±0.1	l ₁	l ₂	e ₂ +0.1 -0.0	t min.	TX size	For rail w	Weight g
P0050.030-BL	M 3	-0.10 / 0.70	3,10 ^{+0.3 - 0}	6.8	6	2.5	0.4	1.0	10	9, 12, 15	0.7
P0050.040-BL	M 4	-0.05 / 0.75	3,15 ^{+0.3 - 0}	7.0	8	3.0	0.4	1.2	15	9, 12, 15, 20	1.6
P0050.050-BL	M 5	-0.05 / 0.75	3,90 ^{+0.3 - 0}	8.5	10	4.0	0.4	1.5	20	20, 25	2.6
P0050.060-BL	M 6	-0.15 / 0.85	4,65 ^{+0.3 - 0}	10.0	12	4.0	0.5	2.0	25	25, 30	5.1
P0050.080-BL	M 8	-0.35 / 1.25	6,05 ^{+0.5 - 0}	13.0	16	5.0	0.8	2.5	30	30, 35	11.0
P0050.100-BL	M10	-0.50 / 1.00	7,50 ^{+0.5 - 0}	16.0	20	7.0	1.0	3.0	40	35, 45	22.0
P0050.120-BL	M12	-0.50 / 1.00	8,50 ^{+0.5 - 0}	18.0	24	8.0	1.0	3.5	45	45, 55	32.0
P0050.030-EN	M 3	-0.10 / 0.70	3,10 ^{+0.3 - 0}	6.8	6	2.5	0.4	1.0	10	9, 12, 15	0.7
P0050.040-EN	M 4	-0.05 / 0.75	3,15 ^{+0.3 - 0}	7.0	8	3.0	0.4	1.2	15	9, 12, 15, 20	1.6
P0050.050-EN	M 5	-0.05 / 0.75	3,90 ^{+0.3 - 0}	8.5	10	4.0	0.4	1.5	20	20, 25	2.6
P0050.060-EN	M 6	-0.15 / 0.85	4,65 ^{+0.3 - 0}	10.0	12	4.0	0.5	2.0	25	25, 30	5.1
P0050.080-EN	M 8	-0.35 / 1.25	6,05 ^{+0.5 - 0}	13.0	16	5.0	0.8	2.5	30	30, 35	11.0
P0050.100-EN	M10	-0.50 / 1.00	7,50 ^{+0.5 - 0}	16.0	20	7.0	1.0	3.0	40	35, 45	22.0
P0050.120-EN	M12	-0.50 / 1.00	8,50 ^{+0.5 - 0}	18.0	24	8.0	1.0	3.5	45	45, 55	32.0





Cap Head Hexagon Socket

Natural



P0500.NP

PEEK FASTENERS

Material

Natural Polyether-ether-ketone (PEEK).
Beige.

A high performance plastic with very good durability and wear resistance. PEEK has excellent chemical resistance and performs well at temperatures up to 260°C. Tensile

strength ~116N/mm²

Technical Notes

PEEK is used in the aerospace and petro-chemical industries.

For medical industry applications, we can offer these products in a variant of PEEK

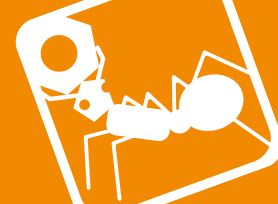
which is refined for biocompatibility.

For industries with a hygienic requirement, these products can be manufactured with an X-Ray opaque or metal detectable filler, as well as a blue colour for optical detection.

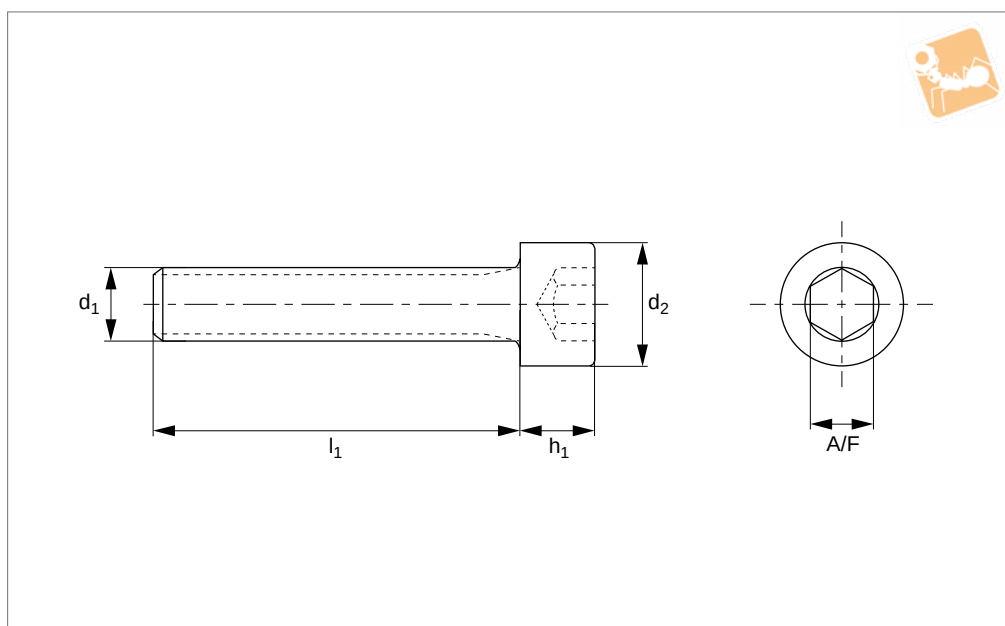
Order No.	d ₁	l ₁ +/- 0, 2	d ₂	h ₁	A/F
P0500.030-008-NP	M3	8	5.5	3	2.5
P0500.030-010-NP	M3	10	5.5	3	2.5
P0500.030-012-NP	M3	12	5.5	3	2.5
P0500.030-015-NP	M3	15	5.5	3	2.5
P0500.030-020-NP	M3	20	5.5	3	2.5
P0500.030-025-NP	M3	25	5.5	3	2.5
P0500.040-008-NP	M4	8	7.0	4	3.0
P0500.040-010-NP	M4	10	7.0	4	3.0
P0500.040-012-NP	M4	12	7.0	4	3.0
P0500.040-015-NP	M4	15	7.0	4	3.0
P0500.040-020-NP	M4	20	7.0	4	3.0
P0500.040-025-NP	M4	25	7.0	4	3.0
P0500.050-008-NP	M5	8	8.5	5	4.0
P0500.050-010-NP	M5	10	8.5	5	4.0
P0500.050-012-NP	M5	12	8.5	5	4.0
P0500.050-015-NP	M5	15	8.5	5	4.0
P0500.050-020-NP	M5	20	8.5	5	4.0
P0500.050-025-NP	M5	25	8.5	5	4.0
P0500.050-030-NP	M5	30	8.5	5	4.0
P0500.060-010-NP	M6	10	10.0	6	5.0
P0500.060-012-NP	M6	12	10.0	6	5.0
P0500.060-015-NP	M6	15	10.0	6	5.0
P0500.060-020-NP	M6	20	10.0	6	5.0
P0500.060-025-NP	M6	25	10.0	6	5.0
P0500.060-030-NP	M6	30	10.0	6	5.0
P0500.080-020-NP	M8	20	13.0	8	6.0
P0500.080-030-NP	M8	30	13.0	8	6.0
P0500.080-035-NP	M8	35	13.0	8	6.0

Cap head hexagon socket

Hygienic



P0500.HP



Material

Polyether ether ketone (PEEK). Blue

A high performance plastic with very good durability and wear resistance. PEEK has excellent chemical resistance and performs well at temperatures up to 260°C. Tensile

strength ~116N/mm²

Technical Notes

Manufactured for industries with a hygienic requirement, these products are made with an X-Ray opaque or metal detectable filler, in blue, for optical detection.

For medical industry applications, we can offer these products in a variant of PEEK which is refined for biocompatibility.

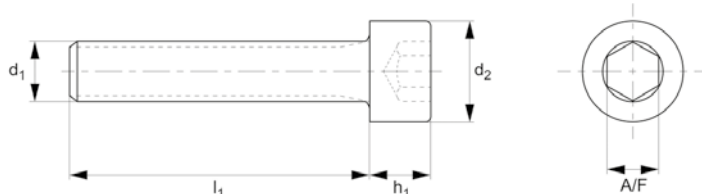
Natural PEEK is used in the aerospace and chemical industries.

Order No.	d ₁	l ₁ +/-0.2	d ₂	h ₁	A/F
P0500.030-008-HP	M3	8	5.5	3	2.5
P0500.030-010-HP	M3	10	5.5	3	2.5
P0500.030-012-HP	M3	12	5.5	3	2.5
P0500.030-015-HP	M3	15	5.5	3	2.5
P0500.030-020-HP	M3	20	5.5	3	2.5
P0500.030-025-HP	M3	25	5.5	3	2.5
P0500.040-008-HP	M4	8	7.0	4	3.0
P0500.040-010-HP	M4	10	7.0	4	3.0
P0500.040-012-HP	M4	12	7.0	4	3.0
P0500.040-015-HP	M4	15	7.0	4	3.0
P0500.040-020-HP	M4	20	7.0	4	3.0
P0500.040-025-HP	M4	25	7.0	4	3.0
P0500.050-008-HP	M5	8	8.5	5	4.0
P0500.050-010-HP	M5	10	8.5	5	4.0
P0500.050-012-HP	M5	12	8.5	5	4.0
P0500.050-015-HP	M5	15	8.5	5	4.0
P0500.050-020-HP	M5	20	8.5	5	4.0
P0500.050-025-HP	M5	25	8.5	5	4.0
P0500.050-030-HP	M5	30	8.5	5	4.0
P0500.060-010-HP	M6	10	10.0	6	5.0
P0500.060-012-HP	M6	12	10.0	6	5.0
P0500.060-015-HP	M6	15	10.0	6	5.0
P0500.060-020-HP	M6	20	10.0	6	5.0
P0500.060-025-HP	M6	25	10.0	6	5.5
P0500.060-030-HP	M6	30	10.0	6	5.5
P0500.080-020-HP	M8	20	13.0	8	6.0
P0500.080-025-HP	M8	25	13.0	8	6.0
P0500.080-030-HP	M8	30	13.0	8	6.0
P0500.080-035-HP	M8	35	13.0	8	6.0



Cap head hexagon socket

Medical



P0500.MP

PEEK FASTENERS

Material

Polyether ether ketone (PEEK). Green

A high performance plastic with very good durability and wear resistance. PEEK has excellent chemical resistance and performs well at temperatures up to 260°C. Tensile

strength ~116N/mm².

Technical Notes

Manufactured for medical industry applications, these products are in a variant of PEEK which is refined for biocompatibility.

For industries with a hygienic requirement, these products are available with an X-Ray opaque or metal detectable filler, blue in colour, for optical detection.

Natural PEEK is used in the aerospace and chemical industries.

Order No.	d ₁	l ₁ +/- 0.2	d ₂	h ₁	A/F
P0500.030-008-MP	M3	8	5.5	3	2.5
P0500.030-010-MP	M3	10	5.5	3	2.5
P0500.030-012-MP	M3	12	5.5	3	2.5
P0500.030-015-MP	M3	15	5.5	3	2.5
P0500.030-020-MP	M3	20	5.5	3	2.5
P0500.030-025-MP	M3	25	5.5	3	2.5
P0500.040-008-MP	M4	8	7.0	4	3.0
P0500.040-010-MP	M4	10	7.0	4	3.0
P0500.040-012-MP	M4	12	7.0	4	3.0
P0500.040-015-MP	M4	15	7.0	4	3.0
P0500.040-020-MP	M4	20	7.0	4	3.0
P0500.040-025-MP	M4	25	7.0	4	3.0
P0500.050-008-MP	M5	8	8.5	5	4.0
P0500.050-010-MP	M5	10	8.5	5	4.0
P0500.050-012-MP	M5	12	8.5	5	4.0
P0500.050-015-MP	M5	15	8.5	5	4.0
P0500.050-020-MP	M5	20	8.5	5	4.0
P0500.050-025-MP	M5	25	8.5	5	4.0
P0500.050-030-MP	M5	30	8.5	5	4.0
P0500.060-010-MP	M6	10	10.0	6	5.0
P0500.060-012-MP	M6	12	10.0	6	5.0
P0500.060-015-MP	M6	15	10.0	6	5.0
P0500.060-020-MP	M6	20	10.0	6	5.0
P0500.060-025-MP	M6	25	10.0	6	5.0
P0500.060-030-MP	M6	30	10.0	6	5.0
P0500.080-020-MP	M8	20	13.0	8	6.0
P0500.080-025-MP	M8	25	13.0	8	6.0
P0500.080-030-MP	M8	30	13.0	8	6.0
P0500.080-035-MP	M8	35	13.0	8	6.0