



**P0133**

### Material

Stainless steel (AISI 416, DIN 1.4005). Heat treated to 26-32 HRC, tensile strength 850-950 N/mm<sup>2</sup>.

### Technical notes

Stainless steel 416 is a harder, stronger grade of stainless steel than the 303 stainless alternatives. They are magnetic and slightly less resistant to corrosion than the 303

alternative (see P0130 or P0132). For corrosion resistance it is suited to dry atmosphere, fresh water and mild alkalis and acids. Special lengths and diameters produced to drawings.

Order No.	$d_1$ +0, -0.025	$l_1$ +0.05, -0.0	$d_2$	$d_3$	$l_2$	$h$
P0133.040-004	4	4	M 3	6	4	3
P0133.040-005	4	5	M 3	6	4	3
P0133.040-006	4	6	M 3	6	4	3
P0133.040-008	4	8	M 3	6	4	3
P0133.040-010	4	10	M 3	6	4	3
P0133.050-004	5	4	M 4	8	5	4
P0133.050-005	5	5	M 4	8	5	4
P0133.050-006	5	6	M 4	8	5	4
P0133.050-008	5	8	M 4	8	5	4
P0133.050-010	5	10	M 4	8	5	4
P0133.050-012	5	12	M 4	8	5	4
P0133.050-014	5	14	M 4	8	5	4
P0133.050-016	5	16	M 4	8	5	4
P0133.050-020	5	20	M 4	8	5	4
P0133.050-030	5	30	M 4	8	5	4
P0133.060-004	6	4	M 5	10	6	5
P0133.060-005	6	5	M 5	10	6	5
P0133.060-006	6	6	M 5	10	6	5
P0133.060-008	6	8	M 5	10	6	5
P0133.060-010	6	10	M 5	10	6	5
P0133.060-014	6	14	M 5	10	6	5
P0133.060-016	6	16	M 5	10	6	5
P0133.060-020	6	20	M 5	10	6	5
P0133.060-025	6	25	M 5	10	6	5
P0133.060-030	6	30	M 5	10	6	5
P0133.080-006	8	6	M 6	12	11	6

# Shoulder Screws - Slot Head

416 stainless

Shoulder Screws

Order No.	d <sub>1</sub> +0, -0.025	l <sub>1</sub> +0.05, -0.0	d <sub>2</sub>	d <sub>3</sub>	l <sub>2</sub>	h
<b>P0133.080-008</b>	8	8	M 6	12	11	6
<b>P0133.080-010</b>	8	10	M 6	12	11	6
<b>P0133.080-012</b>	8	12	M 6	12	11	6
<b>P0133.080-016</b>	8	16	M 6	12	11	6
<b>P0133.100-008</b>	10	8	M 6	12	11	6
<b>P0133.100-012</b>	10	12	M 6	12	11	6
<b>P0133.100-016</b>	10	16	M 6	12	11	6
<b>P0133.101-008</b>	10	8	M 8	14	12	7
<b>P0133.101-012</b>	10	12	M 8	14	12	7
<b>P0133.101-016</b>	10	16	M 8	14	12	7
<b>P0133.120-012</b>	12	12	M10	20	16	8
<b>P0133.120-016</b>	12	16	M10	20	16	8
<b>P0133.120-025</b>	12	26	M10	20	16	8

### Steel shoulder screws

These are our least expensive option. They are produced to ISO 7379 standards. Thread sizes from Ø4 M3 to Ø24 M20. We manufacture special shoulder screws to customer drawings with a minimum batch size.



### Stainless steel shoulder screws

We have three different grades of stainless steel shoulder screws:

**A2 series** – these are our standard grade of stainless. They are strong and resistant to corrosion but not to very harsh environments such as salt water.

For standard sizes Ø6 M5 up to Ø16 M12, see our part no P0137. For miniature sizes down to Ø4 M3 see parts numbers P0130 and P0132.

**416 series** – these are made from harder stainless steel with improved shear strengths but the parts are more prone to corrosion (see part no. P0131 and P0133).

**A4 series** – these shoulder screws (P0143) are very resistant to corrosion but are considerably more expensive than other stainless versions.



### Shoulder bolts

Our range of precision shoulder bolts with hexagonal heads come in both steel (grades 8.8 and 10.9) and stainless steel (grade A2). These bolts are manufactured to DIN 609 and DIN 610. We also have shoulder bolts for construction, manufactured to DIN 7968.

	DIN 609 standard length thread	DIN 610 short length thread	DIN 7968 construction
<b>Grade 8.8 steel</b> 	P0138.SC	P0140.SC	P0142
<b>Grade 10.9 steel</b> 	P0139	P0141	-
<b>A2 stainless steel</b> 	P0138.A2	P0140.A2	-

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# Product Overview

## Shoulder Screws & Shoulder Bolts

# Shoulder Screws

Part No.		Material	Head	Corrosion resistance	Strength	Ø/thread	DIN/ISO
P0130		Stainless A2	Hex socket	✓✓	✓	Min: Ø4/M3 Max: Ø12/M10	-
P0131		Stainless 416	Hex socket	✓	✓✓	Min: Ø4/M3 Max: Ø12/M10	-
P0132		Stainless A2	Slotted	✓✓	✓	Min: Ø4/M3 Max: Ø12/M10	-
P0133		Stainless 416	Slotted	✓	✓✓	Min: Ø4/M3 Max: Ø12/M10	-
P0134		Stainless A2	Hex socket	✓✓	✓	Min: Ø4/M3 Max: Ø8/M6	-
P0135		Stainless A2	Hex head	✓✓	✓	Min: Ø4/M3 Max: Ø12/M10	-
P0136		Steel 12,9	Hex socket	✗	✓✓	Min: Ø4/M3 Max: Ø24/M20	ISO 7379
P0137		Stainless A2	Hex socket	✓✓	✓	Min: Ø6/M5 Max: Ø20/M16	ISO 7379
P0138		Steel 8,8	Hex head (long thread)	✗	✓	Min: Ø9/M8 Max: Ø44/M42	DIN 610
P0139		Steel 10,9	Hex head (long thread)	✗	✓✓	Min: Ø9/M8 Max: Ø38/M36	DIN 610
P0140		Steel 8,8	Hex socket (short thread)	✗	✓✓	Min: Ø9/M8 Max: Ø44/M42	DIN 609
P0141		Steel 10,9	Hex socket (short thread)	✗	✓✓	Min: Ø9/M8 Max: Ø38/M36	DIN 609
P0142		Steel 8,8	Hex head	✗	✓✓	Min: Ø12/M12 Max: Ø27/M27	DIN 7968
P0143		Stainless A4	Hex socket	✓✓✓	✓	Min: Ø4/M3 Max: Ø12/M10	ISO 7379
P0144		Stainless A2	Pan head	✓✓	✓✓	Min: Ø4/M3 Max: Ø10/M8	DIN 923

Shoulder Screw from Automation Components