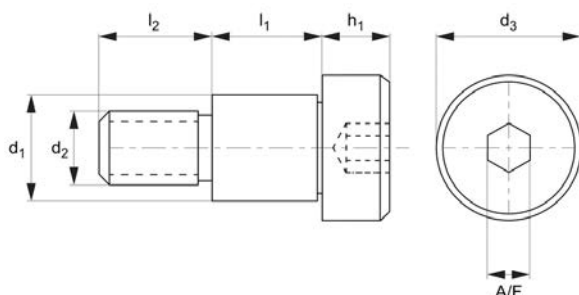




Shoulder Screws - Cap Head

hex drive - 303 stainless, blackened

Shoulder Screws



P0130.B2

SHOULDER SCREWS

Material

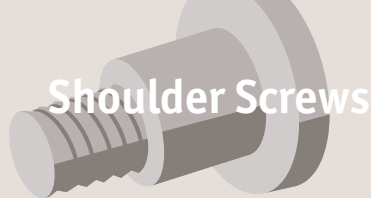
Stainless steel (AISI 303, 1.4305), black oxide coating. Tensile strength 550 N/mm². Proof stress min. 190 N/mm², austenitic stainless steel.

Technical Notes

303 series stainless steel provides good resistance to corrosion. It is mildly magnetic.
For torx drive versions please see P0145.

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 ₁	A/F
P0130.030-002-B2	3	2	M 2	5	4	2	1.5
P0130.030-003-B2	3	3	M 2	5	4	2	1.5
P0130.030-004-B2	3	4	M 2	5	4	2	1.5
P0130.030-005-B2	3	5	M 2	5	4	2	1.5
P0130.030-006-B2	3	6	M 2	5	4	2	1.5
P0130.030-007-B2	3	7	M 2	5	4	2	1.5
P0130.030-008-B2	3	8	M 2	5	4	2	1.5
P0130.030-010-B2	3	10	M 2	5	4	2	1.5
P0130.030-012-B2	3	12	M 2	5	4	2	1.5
P0130.030-014-B2	3	14	M 2	5	4	2	1.5
P0130.030-016-B2	3	16	M 2	5	4	2	1.5
P0130.030-018-B2	3	18	M 2	5	4	2	1.5
P0130.030-020-B2	3	20	M 2	5	4	2	1.5
P0130.030-025-B2	3	25	M 2	5	4	2	1.5
P0130.040-002-B2	4	2	M 3	6	4	3	2.0
P0130.040-003-B2	4	3	M 3	6	4	3	2.0
P0130.040-004-B2	4	4	M 3	6	4	3	2.0
P0130.040-005-B2	4	5	M 3	6	4	3	2.0
P0130.040-006-B2	4	6	M 3	6	4	3	2.0
P0130.040-007-B2	4	7	M 3	6	4	3	2.0
P0130.040-008-B2	4	8	M 3	6	4	3	2.0
P0130.040-010-B2	4	10	M 3	6	4	3	2.0
P0130.040-012-B2	4	12	M 3	6	4	3	2.0
P0130.040-014-B2	4	14	M 3	6	4	3	2.0
P0130.040-016-B2	4	16	M 3	6	4	3	2.0
P0130.040-018-B2	4	18	M 3	6	4	3	2.0
P0130.040-020-B2	4	20	M 3	6	4	3	2.0
P0130.040-025-B2	4	25	M 3	6	4	3	2.0
P0130.040-030-B2	4	30	M 3	6	4	3	2.0
P0130.040-035-B2	4	35	M 3	6	4	3	2.0
P0130.040-040-B2	4	40	M 3	6	4	3	2.0
P0130.040-045-B2	4	45	M 3	6	4	3	2.0
P0130.040-050-B2	4	50	M 3	6	4	3	2.0



Shoulder Screws - Cap Head

hex drive - 303 stainless, blackened



SHOULDER SCREWS

Order No.	d_1 +0 -0.025	l_1 +0.05 -0.0	d_2	d_3	l_2	h_1	A/F
P0130.050-002-B2	5	2	M 4	8	5	4	2.5
P0130.050-003-B2	5	3	M 4	8	5	4	2.5
P0130.050-004-B2	5	4	M 4	8	5	4	2.5
P0130.050-005-B2	5	5	M 4	8	5	4	2.5
P0130.050-006-B2	5	6	M 4	8	5	4	2.5
P0130.050-007-B2	5	7	M 4	8	5	4	2.5
P0130.050-008-B2	5	8	M 4	8	5	4	2.5
P0130.050-010-B2	5	10	M 4	8	5	4	2.5
P0130.050-012-B2	5	12	M 4	8	5	4	2.5
P0130.050-014-B2	5	14	M 4	8	5	4	2.5
P0130.050-016-B2	5	16	M 4	8	5	4	2.5
P0130.050-018-B2	5	18	M 4	8	5	4	2.5
P0130.050-020-B2	5	20	M 4	8	5	4	2.5
P0130.050-025-B2	5	25	M 4	8	5	4	2.5
P0130.050-030-B2	5	30	M 4	8	5	4	2.5
P0130.050-035-B2	5	35	M 4	8	5	4	2.5
P0130.050-040-B2	5	40	M 4	8	5	4	2.5
P0130.050-045-B2	5	45	M 4	8	5	4	2.5
P0130.050-050-B2	5	50	M 4	8	5	4	2.5
P0130.060-002-B2	6	2	M 5	10	6	5	3.0
P0130.060-003-B2	6	3	M 5	10	6	5	3.0
P0130.060-004-B2	6	4	M 5	10	6	5	3.0
P0130.060-005-B2	6	5	M 5	10	6	5	3.0
P0130.060-006-B2	6	6	M 5	10	6	5	3.0
P0130.060-007-B2	6	7	M 5	10	6	5	3.0
P0130.060-008-B2	6	8	M 5	10	6	5	3.0
P0130.060-010-B2	6	10	M 5	10	6	5	3.0
P0130.060-012-B2	6	12	M 5	10	6	5	3.0
P0130.060-014-B2	6	14	M 5	10	6	5	3.0
P0130.060-016-B2	6	16	M 5	10	6	5	3.0
P0130.060-018-B2	6	18	M 5	10	6	5	3.0
P0130.060-020-B2	6	20	M 5	10	6	5	3.0
P0130.060-025-B2	6	25	M 5	10	6	5	3.0
P0130.060-030-B2	6	30	M 5	10	6	5	3.0
P0130.060-035-B2	6	35	M 5	10	6	5	3.0
P0130.060-040-B2	6	40	M 5	10	6	5	3.0
P0130.060-045-B2	6	45	M 5	10	6	5	3.0
P0130.060-050-B2	6	50	M 5	10	6	5	3.0
P0130.060-055-B2	6	55	M 5	10	6	5	3.0
P0130.060-060-B2	6	60	M 5	10	6	5	3.0
P0130.060-070-B2	6	70	M 5	10	6	5	3.0
P0130.060-080-B2	6	80	M 5	10	6	5	3.0
P0130.060-090-B2	6	90	M 5	10	6	5	3.0
P0130.060-100-B2	6	100	M 5	10	6	5	3.0
P0130.080-004-B2	8	4	M 6	12	11	6	4.0
P0130.080-005-B2	8	5	M 6	12	11	6	4.0
P0130.080-006-B2	8	6	M 6	12	11	6	4.0
P0130.080-007-B2	8	7	M 6	12	11	6	4.0
P0130.080-008-B2	8	8	M 6	12	11	6	4.0
P0130.080-010-B2	8	10	M 6	12	11	6	4.0
P0130.080-012-B2	8	12	M 6	12	11	6	4.0
P0130.080-014-B2	8	14	M 6	12	11	6	4.0
P0130.080-016-B2	8	16	M 6	12	11	6	4.0
P0130.080-018-B2	8	18	M 6	12	11	6	4.0
P0130.080-020-B2	8	20	M 6	12	11	6	4.0
P0130.080-025-B2	8	25	M 6	12	11	6	4.0
P0130.080-030-B2	8	30	M 6	12	11	6	4.0
P0130.080-035-B2	8	35	M 6	12	11	6	4.0
P0130.080-040-B2	8	40	M 6	12	11	6	4.0
P0130.080-045-B2	8	45	M 6	12	11	6	4.0
P0130.080-050-B2	8	50	M 6	12	11	6	4.0
P0130.080-055-B2	8	55	M 6	12	11	6	4.0
P0130.080-060-B2	8	60	M 6	12	11	6	4.0
P0130.080-065-B2	8	65	M 6	12	11	6	4.0
P0130.080-070-B2	8	70	M 6	12	11	6	4.0
P0130.080-075-B2	8	75	M 6	12	11	6	4.0
P0130.080-080-B2	8	80	M 6	12	11	6	4.0
P0130.080-090-B2	8	90	M 6	12	11	6	4.0



Shoulder Screws - Cap Head

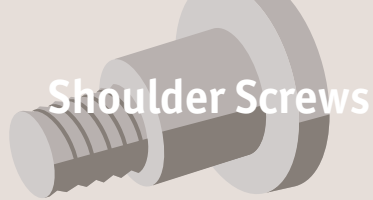
hex drive - 303 stainless, blackened

Shoulder Screws



SHOULDER SCREWS

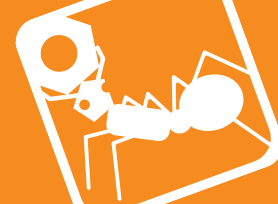
Order No.	d_1 +0 -0.025	l_1 +0.05 -0.0	d_2	d_3	l_2	h_1	A/F
P0130.080-100-B2	8	100	M 6	12	11	6	4.0
P0130.100-008-B6	10	8	M 6	14	11	6	4.0
P0130.100-010-B6	10	10	M 6	14	11	6	4.0
P0130.100-012-B6	10	12	M 6	14	11	6	4.0
P0130.100-016-B6	10	16	M 6	14	11	6	4.0
P0130.100-008-B8	10	8	M 8	14	12	7	5.0
P0130.100-010-B8	10	10	M 8	14	12	7	5.0
P0130.100-012-B8	10	12	M 8	14	12	7	5.0
P0130.100-014-B8	10	14	M 8	14	12	7	5.0
P0130.100-016-B8	10	16	M 8	14	12	7	5.0
P0130.100-018-B8	10	18	M 8	14	12	7	5.0
P0130.100-020-B8	10	20	M 8	14	12	7	5.0
P0130.100-025-B8	10	25	M 8	14	12	7	5.0
P0130.100-030-B8	10	30	M 8	14	12	7	5.0
P0130.100-035-B8	10	35	M 8	14	12	7	5.0
P0130.100-040-B8	10	40	M 8	14	12	7	5.0
P0130.100-045-B8	10	45	M 8	14	12	7	5.0
P0130.100-050-B8	10	50	M 8	14	12	7	5.0
P0130.100-055-B8	10	55	M 8	14	12	7	5.0
P0130.100-060-B8	10	60	M 8	14	12	7	5.0
P0130.100-065-B8	10	65	M 8	14	12	7	5.0
P0130.100-070-B8	10	70	M 8	14	12	7	5.0
P0130.100-080-B8	10	80	M 8	14	12	7	5.0
P0130.100-090-B8	10	90	M 8	14	12	7	5.0
P0130.100-100-B8	10	100	M 8	14	12	7	5.0
P0130.120-008-B2	12	8	M 10	20	16	8	6.0
P0130.120-010-B2	12	10	M 10	20	16	8	6.0
P0130.120-012-B2	12	12	M 10	20	16	8	6.0
P0130.120-014-B2	12	14	M 10	20	16	8	6.0
P0130.120-016-B2	12	16	M 10	20	16	8	6.0
P0130.120-018-B2	12	18	M 10	20	16	8	6.0
P0130.120-020-B2	12	20	M 10	20	16	8	6.0
P0130.120-025-B2	12	25	M 10	20	16	8	6.0
P0130.120-030-B2	12	30	M 10	20	16	8	6.0
P0130.120-035-B2	12	35	M 10	20	16	8	6.0
P0130.120-040-B2	12	40	M 10	20	16	8	6.0
P0130.120-045-B2	12	45	M 10	20	16	8	6.0
P0130.120-050-B2	12	50	M 10	20	16	8	6.0
P0130.120-055-B2	12	55	M 10	20	16	8	6.0
P0130.120-060-B2	12	60	M 10	20	16	8	6.0
P0130.120-065-B2	12	65	M 10	20	16	8	6.0
P0130.120-070-B2	12	70	M 10	20	16	8	6.0
P0130.120-075-B2	12	75	M 10	20	16	8	6.0
P0130.120-080-B2	12	80	M 10	20	16	8	6.0
P0130.120-090-B2	12	90	M 10	20	16	8	6.0
P0130.120-100-B2	12	100	M 10	20	16	8	6.0
P0130.160-025-B2	16	25	M 12	24	18	11	8.0
P0130.160-030-B2	16	30	M 12	24	18	11	8.0
P0130.160-035-B2	16	35	M 12	24	18	11	8.0
P0130.160-040-B2	16	40	M 12	24	18	11	8.0
P0130.160-045-B2	16	45	M 12	24	18	11	8.0
P0130.160-050-B2	16	50	M 12	24	18	11	8.0
P0130.160-055-B2	16	55	M 12	24	18	11	8.0
P0130.160-060-B2	16	60	M 12	24	18	11	8.0
P0130.160-065-B2	16	65	M 12	24	18	11	8.0
P0130.160-070-B2	16	70	M 12	24	18	11	8.0
P0130.160-075-B2	16	75	M 12	24	18	11	8.0
P0130.160-080-B2	16	80	M 12	24	18	11	8.0
P0130.160-090-B2	16	90	M 12	24	18	11	8.0
P0130.160-100-B2	16	100	M 12	24	18	11	8.0
P0130.200-030-B2	20	30	M 16	30	22	14	10.0
P0130.200-035-B2	20	35	M 16	30	22	14	10.0
P0130.200-040-B2	20	40	M 16	30	22	14	10.0
P0130.200-045-B2	20	45	M 16	30	22	14	10.0
P0130.200-050-B2	20	50	M 16	30	22	14	10.0
P0130.200-055-B2	20	55	M 16	30	22	14	10.0
P0130.200-060-B2	20	60	M 16	30	22	14	10.0
P0130.200-065-B2	20	65	M 16	30	22	14	10.0



Shoulder Screws

Shoulder Screws - Cap Head

hex drive - 303 stainless, blackened



Order No.	d_1 +0 -0.025	l_1 +0.05 -0.0	d_2	d_3	l_2	h_1	A/F
P0130.200-070-B2	20	70	M 16	30	22	14	10.0
P0130.200-075-B2	20	75	M 16	30	22	14	10.0
P0130.200-080-B2	20	80	M 16	30	22	14	10.0
P0130.200-090-B2	20	90	M 16	30	22	14	10.0
P0130.200-100-B2	20	100	M 16	30	22	14	10.0

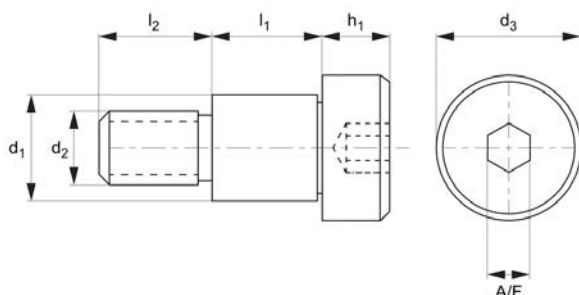
SHOULDER SCREWS



Shoulder Screws - Cap Head

hex drive - 316 stainless, blackened

Shoulder Screws



P0130.B4

SHOULDER SCREWS

Material

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

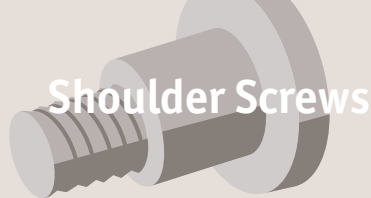
stainless steel.

Technical Notes

Highly resistant to corrosion (including from salt water).

Shim washers can be used to reduce shoulder length if required. It is non-magnetic.

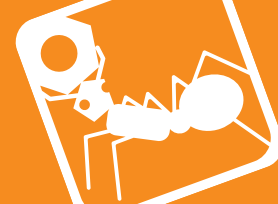
Order No.	d ₁ +0 -0.025	l ₁ +0.05 -0.0	d ₂	d ₃	l ₂	h ₁	A/F
P0130.030-003-B4	3	3	M 2	5	4	2	1.5
P0130.030-004-B4	3	4	M 2	5	4	2	1.5
P0130.030-005-B4	3	5	M 2	5	4	2	1.5
P0130.030-006-B4	3	6	M 2	5	4	2	1.5
P0130.030-007-B4	3	7	M 2	5	4	2	1.5
P0130.030-008-B4	3	8	M 2	5	4	2	1.5
P0130.030-010-B4	3	10	M 2	5	4	2	1.5
P0130.040-004-B4	4	4	M 3	6	4	3	2.0
P0130.040-005-B4	4	5	M 3	6	4	3	2.0
P0130.040-006-B4	4	6	M 3	6	4	3	2.0
P0130.040-007-B4	4	7	M 3	6	4	3	2.0
P0130.040-008-B4	4	8	M 3	6	4	3	2.0
P0130.040-010-B4	4	10	M 3	6	4	3	2.0
P0130.040-012-B4	4	12	M 3	6	4	3	2.0
P0130.040-014-B4	4	14	M 3	6	4	3	2.0
P0130.040-016-B4	4	16	M 3	6	4	3	2.0
P0130.040-018-B4	4	18	M 3	6	4	3	2.0
P0130.040-020-B4	4	20	M 3	6	4	3	2.0
P0130.050-005-B4	5	5	M 4	8	5	4	2.5
P0130.050-006-B4	5	6	M 4	8	5	4	2.5
P0130.050-007-B4	5	7	M 4	8	5	4	2.5
P0130.050-008-B4	5	8	M 4	8	5	4	2.5
P0130.050-010-B4	5	10	M 4	8	5	4	2.5
P0130.050-012-B4	5	12	M 4	8	5	4	2.5
P0130.050-014-B4	5	14	M 4	8	5	4	2.5
P0130.050-016-B4	5	16	M 4	8	5	4	2.5
P0130.050-018-B4	5	18	M 4	8	5	4	2.5
P0130.050-020-B4	5	20	M 4	8	5	4	2.5
P0130.050-025-B4	5	25	M 4	8	5	4	2.5
P0130.050-030-B4	5	30	M 4	8	5	4	2.5
P0130.060-006-B4	6	6	M 5	10	6	5	3.0
P0130.060-007-B4	6	7	M 5	10	6	5	3.0
P0130.060-008-B4	6	8	M 5	10	6	5	3.0



Shoulder Screws

Shoulder Screws - Cap Head

hex drive - 316 stainless, blackened



SHOULDER SCREWS

Order No.	d_1 +0 -0.025	l_1 +0.05 -0.0	d_2	d_3	l_2	h_1	A/F
P0130.060-010-B4	6	10	M 5	10	6	5	3.0
P0130.060-012-B4	6	12	M 5	10	6	5	3.0
P0130.060-014-B4	6	14	M 5	10	6	5	3.0
P0130.060-016-B4	6	16	M 5	10	6	5	3.0
P0130.060-018-B4	6	18	M 5	10	6	5	3.0
P0130.060-020-B4	6	20	M 5	10	6	5	3.0
P0130.060-025-B4	6	25	M 5	10	6	5	3.0
P0130.060-030-B4	6	30	M 5	10	6	5	3.0
P0130.060-035-B4	6	35	M 5	10	6	5	3.0
P0130.060-040-B4	6	40	M 5	10	6	5	3.0
P0130.060-045-B4	6	45	M 5	10	6	5	3.0
P0130.060-050-B4	6	50	M 5	10	6	5	3.0
P0130.080-008-B4	8	8	M 6	12	11	6	4.0
P0130.080-010-B4	8	10	M 6	12	11	6	4.0
P0130.080-012-B4	8	12	M 6	12	11	6	4.0
P0130.080-014-B4	8	14	M 6	12	11	6	4.0
P0130.080-016-B4	8	16	M 6	12	11	6	4.0
P0130.080-018-B4	8	18	M 6	12	11	6	4.0
P0130.080-020-B4	8	20	M 6	12	11	6	4.0
P0130.080-025-B4	8	25	M 6	12	11	6	4.0
P0130.080-030-B4	8	30	M 6	12	11	6	4.0
P0130.080-035-B4	8	35	M 6	12	11	6	4.0
P0130.080-040-B4	8	40	M 6	12	11	6	4.0
P0130.080-045-B4	8	45	M 6	12	11	6	4.0
P0130.080-050-B4	8	50	M 6	12	11	6	4.0
P0130.100-008-B4	10	8	M 8	14	12	7	5.0
P0130.100-010-B4	10	10	M 8	14	12	7	5.0
P0130.100-012-B4	10	12	M 8	14	12	7	5.0
P0130.100-014-B4	10	14	M 8	14	12	7	5.0
P0130.100-016-B4	10	16	M 8	14	12	7	5.0
P0130.100-020-B4	10	20	M 8	14	12	7	5.0
P0130.100-025-B4	10	25	M 8	14	12	7	5.0
P0130.100-030-B4	10	30	M 8	14	12	7	5.0
P0130.100-035-B4	10	35	M 8	14	12	7	5.0
P0130.100-040-B4	10	40	M 8	14	12	7	5.0
P0130.100-045-B4	10	45	M 8	14	12	7	5.0
P0130.100-050-B4	10	50	M 8	14	12	7	5.0
P0130.100-055-B4	10	55	M 8	14	12	7	5.0
P0130.100-060-B4	10	60	M 8	14	12	7	5.0
P0130.100-065-B4	10	65	M 8	14	12	7	5.0
P0130.100-070-B4	10	70	M 8	14	12	7	5.0
P0130.120-008-B4	12	8	M 10	20	16	8	6.0
P0130.120-010-B4	12	10	M 10	20	16	8	6.0
P0130.120-012-B4	12	12	M 10	20	16	8	6.0
P0130.120-014-B4	12	14	M 10	20	16	8	6.0
P0130.120-016-B4	12	16	M 10	20	16	8	6.0
P0130.120-018-B4	12	18	M 10	20	16	8	6.0
P0130.120-020-B4	12	20	M 10	20	16	8	6.0
P0130.120-025-B4	12	25	M 10	20	16	8	6.0
P0130.120-030-B4	12	30	M 10	20	16	8	6.0
P0130.120-035-B4	12	35	M 10	20	16	8	6.0
P0130.120-040-B4	12	40	M 10	20	16	8	6.0
P0130.120-045-B4	12	45	M 10	20	16	8	6.0
P0130.120-050-B4	12	50	M 10	20	16	8	6.0
P0130.120-055-B4	12	55	M 10	20	16	8	6.0
P0130.120-060-B4	12	60	M 10	20	16	8	6.0
P0130.120-065-B4	12	65	M 10	20	16	8	6.0
P0130.120-070-B4	12	70	M 10	20	16	8	6.0
P0130.160-025-B4	16	25	M 12	24	18	11	8.0
P0130.160-030-B4	16	30	M 12	24	18	11	8.0
P0130.160-035-B4	16	35	M 12	24	18	11	8.0
P0130.160-040-B4	16	40	M 12	24	18	11	8.0
P0130.160-045-B4	16	45	M 12	24	18	11	8.0
P0130.160-050-B4	16	50	M 12	24	18	11	8.0
P0130.160-055-B4	16	55	M 12	24	18	11	8.0
P0130.160-060-B4	16	60	M 12	24	18	11	8.0
P0130.160-065-B4	16	65	M 12	24	18	11	8.0
P0130.160-070-B4	16	70	M 12	24	18	11	8.0



Shoulder Screws - Cap Head

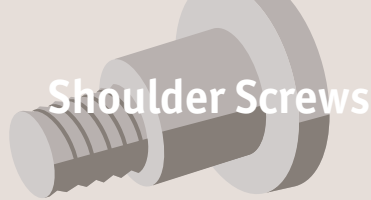
hex drive - 316 stainless, blackened

Shoulder Screws



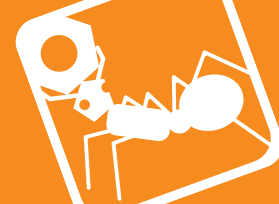
Order No.	d_1 +0 -0.025	l_1 +0.05 -0.0	d_2	d_3	l_2	h_1	A/F
P0130.160-075-B4	16	75	M 12	24	18	11	8.0
P0130.160-080-B4	16	80	M 12	24	18	11	8.0
P0130.160-090-B4	16	90	M 12	24	18	11	8.0
P0130.160-100-B4	16	100	M 12	24	18	11	8.0
P0130.200-030-B4	20	30	M 16	30	22	14	10.0
P0130.200-035-B4	20	35	M 16	30	22	14	10.0
P0130.200-040-B4	20	40	M 16	30	22	14	10.0
P0130.200-045-B4	20	45	M 16	30	22	14	10.0
P0130.200-050-B4	20	50	M 16	30	22	14	10.0

SHOULDER SCREWS



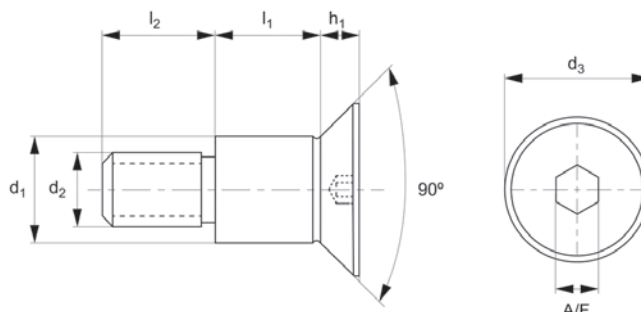
Shoulder Screws - Countersunk

hex drive - 303 stainless - blackened



P0128.B2

MADE IN
BRITAIN



Material

Stainless steel (AISI 303, 1.4305),
blackened.

Tensile strength 550 N/mm².

Proof stress min. 190 N/mm², austenitic

stainless steel.

Technical Notes

303 stainless steel provides good resistance to corrosion, it is soft and mildly

magnetic.

Blackening provides some further corrosion resistance

Order No.	d_1 +0.000 -0.025	l_1 +0.05 -0.00	d_2 tol. G6	d_3	l_2 +0.05 -0.00	h_1 +0.00 -0.05	A/F
P0128.040-010-B2	4	10	M 3	8	4	2.0	2
P0128.040-012-B2	4	12	M 3	8	4	2.0	2
P0128.040-014-B2	4	14	M 3	8	4	2.0	2
P0128.040-016-B2	4	16	M 3	8	4	2.0	2
P0128.040-018-B2	4	18	M 3	8	4	2.0	2
P0128.040-020-B2	4	20	M 3	8	4	2.0	2
P0128.040-025-B2	4	25	M 3	8	4	2.0	2
P0128.040-030-B2	4	30	M 3	8	4	2.0	2
P0128.050-010-B2	5	10	M 4	10	5	2.5	2.5
P0128.050-012-B2	5	12	M 4	10	5	2.5	2.5
P0128.050-016-B2	5	16	M 4	10	5	2.5	2.5
P0128.050-020-B2	5	20	M 4	10	5	2.5	2.5
P0128.050-025-B2	5	25	M 4	10	5	2.5	2.5
P0128.050-030-B2	5	30	M 4	10	5	2.5	2.5
P0128.050-035-B2	5	35	M 4	10	5	2.5	2.5
P0128.050-040-B2	5	40	M 4	10	5	2.5	2.5
P0128.060-010-B2	6	10	M 5	12	6	3.0	3
P0128.060-012-B2	6	12	M 5	12	6	3.0	3
P0128.060-016-B2	6	16	M 5	12	6	3.0	3
P0128.060-020-B2	6	20	M 5	12	6	3.0	3
P0128.060-025-B2	6	25	M 5	12	6	3.0	3
P0128.060-030-B2	6	30	M 5	12	6	3.0	3
P0128.060-035-B2	6	35	M 5	12	6	3.0	3
P0128.060-040-B2	6	40	M 5	12	6	3.0	3
P0128.080-010-B2	8	10	M 6	16	11	4.0	4
P0128.080-012-B2	8	12	M 6	16	11	4.0	4
P0128.080-016-B2	8	16	M 6	16	11	4.0	4
P0128.080-020-B2	8	20	M 6	16	11	4.0	4
P0128.080-025-B2	8	25	M 6	16	11	4.0	4
P0128.080-030-B2	8	30	M 6	16	11	4.0	4
P0128.080-035-B2	8	35	M 6	16	11	4.0	4
P0128.080-040-B2	8	40	M 6	16	11	4.0	4
P0128.100-012-B2	10	12	M 8	20	12	5.0	5



Shoulder Screws - Countersunk

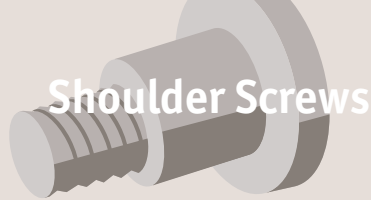
hex drive - 303 stainless - blackened

Shoulder Screws



Order No.	d_1 +0.000 -0.025	l_1 +0.05 -0.00	d_2 tol. G6	d_3	l_2 +0.05 -0.00	h_1 +0.00 -0.05	A/F
P0128.100-016-B2	10	16	M 8	20	12	5.0	5
P0128.100-020-B2	10	20	M 8	20	12	5.0	5
P0128.100-025-B2	10	25	M 8	20	12	5.0	5
P0128.100-030-B2	10	30	M 8	20	12	5.0	5
P0128.100-040-B2	10	40	M 8	20	12	5.0	5
P0128.100-050-B2	10	50	M 8	20	12	5.0	5
P0128.120-012-B2	12	12	M10	24	16	6.0	6
P0128.120-016-B2	12	16	M10	24	16	6.0	6
P0128.120-020-B2	12	20	M10	24	16	6.0	6
P0128.120-025-B2	12	25	M10	24	16	6.0	6
P0128.120-030-B2	12	30	M10	24	16	6.0	6
P0128.120-040-B2	12	40	M10	24	16	6.0	6
P0128.120-050-B2	12	50	M10	24	16	6.0	6

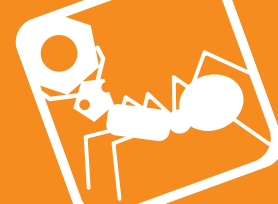
SHOULDER SCREWS



Shoulder Screws

Shoulder Screws - Countersunk

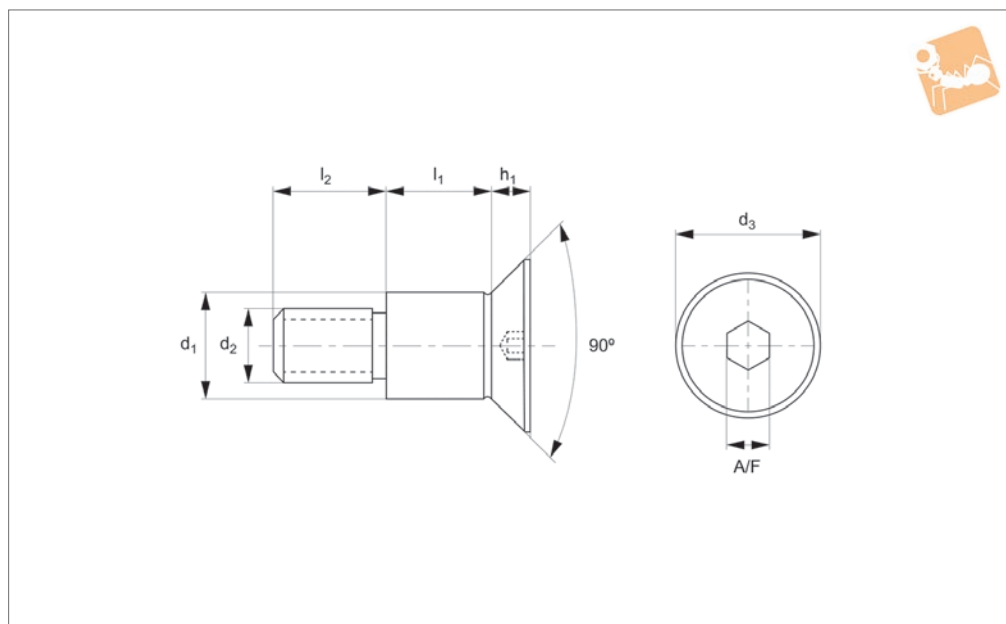
hex drive - 316 stainless - blackened



SHOULDER SCREWS



P0128.B4



Material

Stainless steel (AISI 316, 1.440), blackened.

Tensile strength 480 N/mm².

Proof stress min. 200 N/mm², austenitic stainless steel.

Technical Notes

316 Stainless provides excellent corrosion resistance for use in highly caustic or marine environments. For more standard applications please see our A2 range which is more cost effective.

Non-magnetic.

Blackening provides some further corrosion resistance

Order No.	d ₁ +0.000 -0.025	l ₁ +0.05 -0.00	d ₂ tol. G6	d ₃	l ₂ +0.05 -0.00	h ₁ +0.00 -0.05	A/F
P0128.040-010-B4	4	10	M 3	8	4	2.0	2
P0128.040-012-B4	4	12	M 3	8	4	2.0	2
P0128.040-014-B4	4	14	M 3	8	4	2.0	2
P0128.040-016-B4	4	16	M 3	8	4	2.0	2
P0128.040-018-B4	4	18	M 3	8	4	2.0	2
P0128.040-020-B4	4	20	M 3	8	4	2.0	2
P0128.040-025-B4	4	25	M 3	8	4	2.0	2
P0128.040-030-B4	4	30	M 3	8	4	2.0	2
P0128.050-010-B4	5	10	M 4	10	5	2.5	2.5
P0128.050-012-B4	5	12	M 4	10	5	2.5	2.5
P0128.050-016-B4	5	16	M 4	10	5	2.5	2.5
P0128.050-020-B4	5	20	M 4	10	5	2.5	2.5
P0128.050-025-B4	5	25	M 4	10	5	2.5	2.5
P0128.050-030-B4	5	30	M 4	10	5	2.5	2.5
P0128.050-035-B4	5	35	M 4	10	5	2.5	2.5
P0128.050-040-B4	5	40	M 4	10	5	2.5	2.5
P0128.060-010-B4	6	10	M 5	12	6	3.0	3
P0128.060-012-B4	6	12	M 5	12	6	3.0	3
P0128.060-016-B4	6	16	M 5	12	6	3.0	3
P0128.060-020-B4	6	20	M 5	12	6	3.0	3
P0128.060-025-B4	6	25	M 5	12	6	3.0	3
P0128.060-030-B4	6	30	M 5	12	6	3.0	3
P0128.060-035-B4	6	35	M 5	12	6	3.0	3
P0128.060-040-B4	6	40	M 5	12	6	3.0	3
P0128.080-010-B4	8	10	M 6	16	11	4.0	4
P0128.080-012-B4	8	12	M 6	16	11	4.0	4
P0128.080-016-B4	8	16	M 6	16	11	4.0	4
P0128.080-020-B4	8	20	M 6	16	11	4.0	4
P0128.080-025-B4	8	25	M 6	16	11	4.0	4
P0128.080-030-B4	8	30	M 6	16	11	4.0	4
P0128.080-035-B4	8	35	M 6	16	11	4.0	4
P0128.080-040-B4	8	40	M 6	16	11	4.0	4



Shoulder Screws - Countersunk

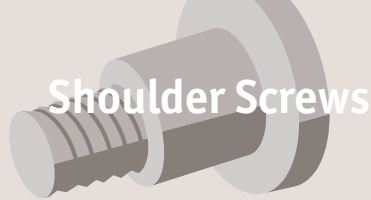
hex drive - 316 stainless - blackened

Shoulder Screws



Order No.	d_1 +0.000 -0.025	l_1 +0.05 -0.00	d_2 tol. G6	d_3	l_2 +0.05 -0.00	h_1 +0.00 -0.05	A/F
P0128.100-012-B4	10	12	M 8	20	12	5.0	5
P0128.100-016-B4	10	16	M 8	20	12	5.0	5
P0128.100-020-B4	10	20	M 8	20	12	5.0	5
P0128.100-025-B4	10	25	M 8	20	12	5.0	5
P0128.100-030-B4	10	30	M 8	20	12	5.0	5
P0128.100-040-B4	10	40	M 8	20	12	5.0	5
P0128.100-050-B4	10	50	M 8	20	12	5.0	5
P0128.120-012-B4	12	12	M10	24	16	6.0	6
P0128.120-016-B4	12	16	M10	24	16	6.0	6
P0128.120-020-B4	12	20	M10	24	16	6.0	6
P0128.120-025-B4	12	25	M10	24	16	6.0	6
P0128.120-030-B4	12	30	M10	24	16	6.0	6
P0128.120-040-B4	12	40	M10	24	16	6.0	6
P0128.120-050-B4	12	50	M10	24	16	6.0	6

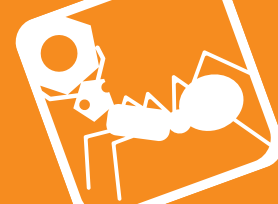
SHOULDER SCREWS



Shoulder Screws

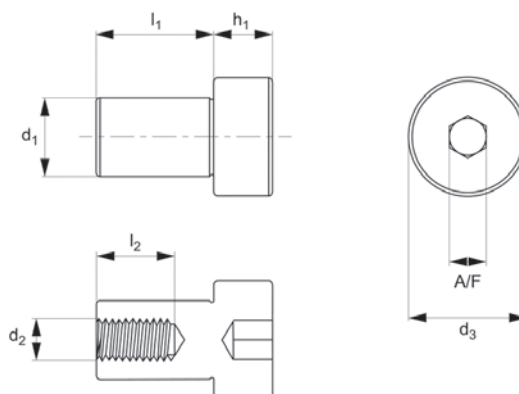
Shoulder Nuts - Cap Head

hex drive - 303 stainless - blackened



P0127.B2

MADE IN
BRITAIN



Material

Stainless steel (AISI 303, 1.4305), black oxide coating.
Tensile strength 550 N/mm².

Proof stress min. 190 N/mm², austenitic stainless steel.

Technical Notes

303 stainless steel provides good resistance to corrosion, it is mildly magnetic. Blackening provides some further corrosion resistance.

Order No.	d_1 +0.000/-0.025	l_1 +0.05/-0.00	d_2	d_3	l_2	h_1	A/F
P0127.040-006-B2	4	6	M 2	6	4	3	2
P0127.040-008-B2	4	8	M 2	6	4	3	2
P0127.040-010-B2	4	10	M 2	6	4	3	2
P0127.040-012-B2	4	12	M 2	6	4	3	2
P0127.040-014-B2	4	14	M 2	6	4	3	2
P0127.040-016-B2	4	16	M 2	6	4	3	2
P0127.040-018-B2	4	18	M 2	6	4	3	2
P0127.040-020-B2	4	20	M 2	6	4	3	2
P0127.050-008-B2	5	8	M 2,5	8	5	4	2.5
P0127.050-010-B2	5	10	M 2,5	8	5	4	2.5
P0127.050-012-B2	5	12	M 2,5	8	5	4	2.5
P0127.050-016-B2	5	16	M 2,5	8	5	4	2.5
P0127.050-020-B2	5	20	M 2,5	8	5	4	2.5
P0127.050-025-B2	5	25	M 2,5	8	5	4	2.5
P0127.060-008-B2	6	8	M 3	10	6	5	3
P0127.060-010-B2	6	10	M 3	10	6	5	3
P0127.060-012-B2	6	12	M 3	10	6	5	3
P0127.060-016-B2	6	16	M 3	10	6	5	3
P0127.060-020-B2	6	20	M 3	10	6	5	3
P0127.060-025-B2	6	25	M 3	10	6	5	3
P0127.060-030-B2	6	30	M 3	10	6	5	3
P0127.060-040-B2	6	40	M 3	10	6	5	3
P0127.060-050-B2	6	50	M 3	10	6	5	3
P0127.080-016-B2	8	16	M 3,5	12	11	6	4
P0127.080-020-B2	8	20	M 3,5	12	11	6	4
P0127.080-025-B2	8	25	M 3,5	12	11	6	4
P0127.080-030-B2	8	30	M 3,5	12	11	6	4
P0127.080-040-B2	8	40	M 3,5	12	11	6	4
P0127.080-050-B2	8	50	M 3,5	12	11	6	4
P0127.100-016-B2	10	16	M 4	14	12	7	5
P0127.100-020-B2	10	20	M 4	14	12	7	5
P0127.100-025-B2	10	25	M 4	14	12	7	5
P0127.100-030-B2	10	30	M 4	14	12	7	5
P0127.100-040-B2	10	40	M 4	14	12	7	5



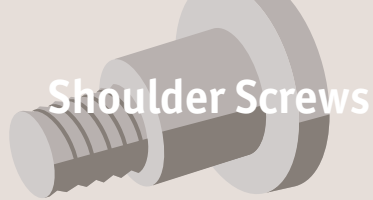
Shoulder Nuts - Cap Head

hex drive - 303 stainless - blackened

Shoulder Screws



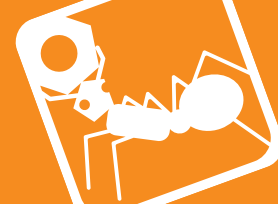
Order No.	d_1 +0.000 -0.025	l_1 +0.05 -0.00	d_2	d_3	l_2	h_1	A/F
P0127.120-025-B2	12	25	M 5	20	16	8	6
P0127.120-030-B2	12	30	M 5	20	16	8	6
P0127.120-040-B2	12	40	M 5	20	16	8	6
P0127.120-050-B2	12	50	M 5	20	16	8	6



Shoulder Screws

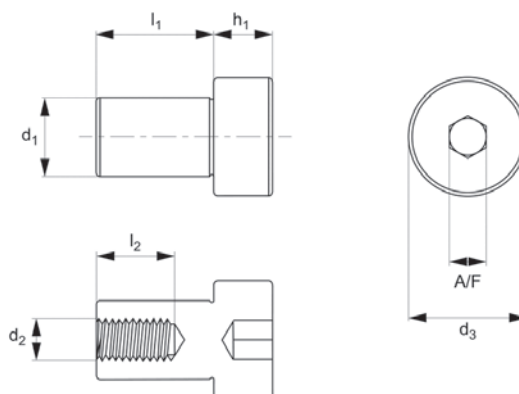
Shoulder Nuts - Cap Head

hex drive - 316 stainless - blackened



P0127.B4

MADE IN
BRITAIN



Material

Stainless steel (AISI 316, 1.440), black oxide coating.
Tensile strength 480 N/mm².

Proof stress min. 200 N/mm², austenitic stainless steel.

Technical Notes

It is non-magnetic.
Blackening provides some further corrosion resistance.

Order No.	d_1 +0.000 -0.025	l_1 +0.05 -0.00	d_2	d_3	l_2	h_1	A/F
P0127.040-006-B4	4	6	M 2	6	4	3	2
P0127.040-008-B4	4	8	M 2	6	4	3	2
P0127.040-010-B4	4	10	M 2	6	4	3	2
P0127.040-012-B4	4	12	M 2	6	4	3	2
P0127.040-014-B4	4	14	M 2	6	4	3	2
P0127.040-016-B4	4	16	M 2	6	4	3	2
P0127.040-018-B4	4	18	M 2	6	4	3	2
P0127.040-020-B4	4	20	M 2	6	4	3	2
P0127.050-008-B4	5	8	M 2,5	8	5	4	2.5
P0127.050-010-B4	5	10	M 2,5	8	5	4	2.5
P0127.050-012-B4	5	12	M 2,5	8	5	4	2.5
P0127.050-016-B4	5	16	M 2,5	8	5	4	2.5
P0127.050-020-B4	5	20	M 2,5	8	5	4	2.5
P0127.050-025-B4	5	25	M 2,5	8	5	4	2.5
P0127.060-008-B4	6	8	M 3	10	6	5	3
P0127.060-010-B4	6	10	M 3	10	6	5	3
P0127.060-012-B4	6	12	M 3	10	6	5	3
P0127.060-016-B4	6	16	M 3	10	6	5	3
P0127.060-020-B4	6	20	M 3	10	6	5	3
P0127.060-025-B4	6	25	M 3	10	6	5	3
P0127.060-030-B4	6	30	M 3	10	6	5	3
P0127.060-040-B4	6	40	M 3	10	6	5	3
P0127.060-050-B4	6	50	M 3	10	6	5	3
P0127.080-016-B4	8	16	M 3,5	12	11	6	4
P0127.080-020-B4	8	20	M 3,5	12	11	6	4
P0127.080-025-B4	8	25	M 3,5	12	11	6	4
P0127.080-030-B4	8	30	M 3,5	12	11	6	4
P0127.080-040-B4	8	40	M 3,5	12	11	6	4
P0127.080-050-B4	8	50	M 3,5	12	11	6	4
P0127.100-016-B4	10	16	M 4	14	12	7	5
P0127.100-020-B4	10	20	M 4	14	12	7	5
P0127.100-025-B4	10	25	M 4	14	12	7	5
P0127.100-030-B4	10	30	M 4	14	12	7	5
P0127.100-040-B4	10	40	M 4	14	12	7	5



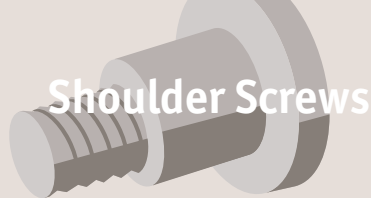
Shoulder Nuts - Cap Head

hex drive - 316 stainless - blackened

Shoulder Screws

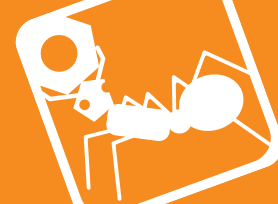


Order No.	d_1 +0.000 -0.025	l_1 +0.05 -0.00	d_2	d_3	l_2	h_1	A/F
P0127.120-025-B4	12	25	M 5	20	16	8	6
P0127.120-030-B4	12	30	M 5	20	16	8	6
P0127.120-040-B4	12	40	M 5	20	16	8	6
P0127.120-050-B4	12	50	M 5	20	16	8	6

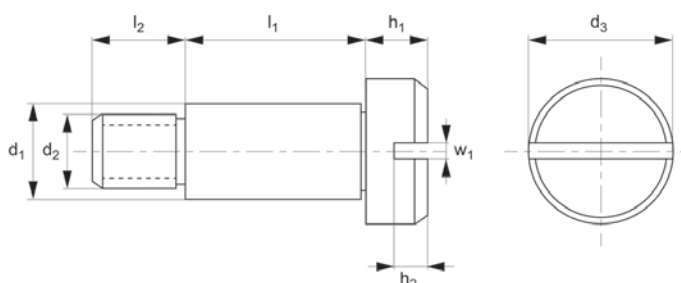


Shoulder Screw - Cap Head

slot drive - 303 stainless, blackened



P0132.B2



Material

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

Technical Notes

303 series stainless steel provides good

resistance to corrosion. It is mildly magnetic.

These shoulder screws are less expensive than the 416 steel grade (see part no. P0133), which are harder but less resistant to corrosion.

For Ø16 (and above) stainless steel shoulder screws see part no. P0137.

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 ₁	h ₂	w ₁
P0132.040-004-B2	4	4	M 3	6	4.0	3	0.9	0.8
P0132.040-005-B2	4	5	M 3	6	4.0	3	0.9	0.8
P0132.040-006-B2	4	6	M 3	6	4.0	3	0.9	0.8
P0132.040-008-B2	4	8	M 3	6	4.0	3	0.9	0.8
P0132.040-010-B2	4	10	M 3	6	4.0	3	0.9	0.8
P0132.040-012-B2	4	12	M 3	6	4.0	3	0.9	0.8
P0132.040-016-B2	4	16	M 3	6	4.0	3	0.9	0.8
P0132.040-020-B2	4	20	M 3	6	4.0	3	0.9	0.8
P0132.050-004-B2	5	4	M 4	8	5.0	4	1.2	1.0
P0132.050-005-B2	5	5	M 4	8	5.0	4	1.2	1.0
P0132.050-006-B2	5	6	M 4	8	5.0	4	1.2	1.0
P0132.050-008-B2	5	8	M 4	8	5.0	4	1.2	1.0
P0132.050-010-B2	5	10	M 4	8	5.0	4	1.2	1.0
P0132.050-012-B2	5	12	M 4	8	5.0	4	1.2	1.0
P0132.050-014-B2	5	14	M 4	8	5.0	4	1.2	1.0
P0132.050-016-B2	5	16	M 4	8	5.0	4	1.2	1.0
P0132.050-020-B2	5	20	M 4	8	5.0	4	1.2	1.0
P0132.050-025-B2	5	25	M 4	8	5.0	4	1.2	1.0
P0132.050-030-B2	5	30	M 4	8	5.0	4	1.2	1.0
P0132.060-004-B2	6	4	M 5	10	6.0	5	1.3	1.2
P0132.060-005-B2	6	5	M 5	10	6.0	5	1.3	1.2
P0132.060-006-B2	6	6	M 5	10	6.0	5	1.3	1.2
P0132.060-008-B2	6	8	M 5	10	6.0	5	1.3	1.2
P0132.060-010-B2	6	10	M 5	10	6.0	5	1.3	1.2
P0132.060-012-B2	6	12	M 5	10	6.0	5	1.3	1.2
P0132.060-014-B2	6	14	M 5	10	6.0	5	1.3	1.2
P0132.060-016-B2	6	16	M 5	10	6.0	5	1.3	1.2
P0132.060-020-B2	6	20	M 5	10	6.0	5	1.3	1.2
P0132.060-025-B2	6	25	M 5	10	6.0	5	1.3	1.2
P0132.060-030-B2	6	30	M 5	10	6.0	5	1.3	1.2



Shoulder Screw - Cap Head

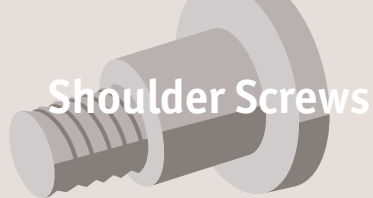
slot drive - 303 stainless, blackened

Shoulder Screws



Order No.	d_1 +0 -0.025	l_1 +0.05 -0.0	d_2	d_3	l_2	h_1	h_2	w_1
P0132.080-006-B2	8	6	M 6	12	11.0	6	1.5	1.6
P0132.080-008-B2	8	8	M 6	12	11.0	6	1.5	1.6
P0132.080-010-B2	8	10	M 6	12	11.0	6	1.5	1.6
P0132.080-012-B2	8	12	M 6	12	11.0	6	1.5	1.6
P0132.080-016-B2	8	16	M 6	12	11.0	6	1.5	1.6
P0132.080-020-B2	8	20	M 6	12	11.0	6	1.5	1.6
P0132.100-008-B2	10	8	M 6	14	11.0	6	1.5	1.6
P0132.100-012-B2	10	12	M 6	14	11.0	6	1.5	1.6
P0132.101-008-B2	10	8	M 8	14	12.0	7	1.9	2.0
P0132.101-010-B2	10	10	M 8	14	12.0	7	1.9	2.0
P0132.101-012-B2	10	12	M 8	14	12.0	7	1.9	2.0
P0132.101-016-B2	10	16	M 8	14	12.0	7	1.9	2.0
P0132.120-008-B2	12	8	M10	20	16.0	8	2.4	2.5
P0132.120-010-B2	12	10	M10	20	16.0	8	2.4	2.5
P0132.120-012-B2	12	12	M10	20	16.0	8	2.4	2.5
P0132.120-016-B2	12	16	M10	20	16.0	8	2.4	2.5
P0132.120-020-B2	12	20	M10	20	16.0	8	2.4	2.5
P0132.120-025-B2	12	25	M10	20	16.0	8	2.4	2.5

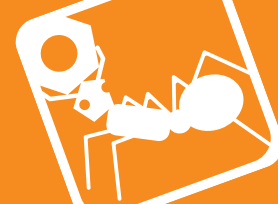
SHOULDER SCREWS



Shoulder Screws

Ultra Low Head - Shoulder Screw

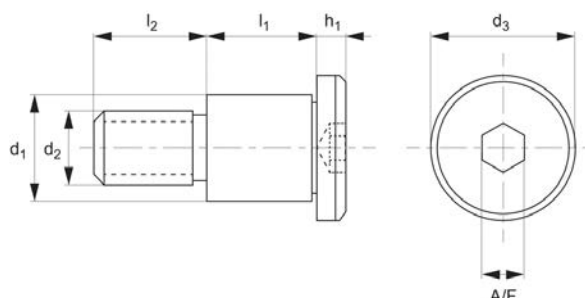
hex drive - 303 stainless, blackened



SHOULDER SCREWS



P0134.B2



Material

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

Technical Notes

These very low profile socket shoulder screws have a head height approximately 1/3 that of normal shoulder screws (P0130).

303 Series stainless is suitable for pharmaceutical and other applications. Stainless steel suitable for marine and other applications.

Order No.	d ₁ +0 -0.025	l ₁ +0.05 -0.0	d ₂	d ₃	l ₂	h ₁	A/F
P0134.040-004-B2	4	4	M 3	6	4	1.3	2
P0134.040-005-B2	4	5	M 3	6	4	1.3	2
P0134.040-006-B2	4	6	M 3	6	4	1.3	2
P0134.040-008-B2	4	8	M 3	6	4	1.3	2
P0134.040-010-B2	4	10	M 3	6	4	1.3	2
P0134.040-012-B2	4	12	M 3	6	4	1.3	2
P0134.040-016-B2	4	16	M 3	6	4	1.3	2
P0134.040-020-B2	4	20	M 3	6	4	1.3	2
P0134.050-004-B2	5	4	M 4	9	5	1.3	2.5
P0134.050-005-B2	5	5	M 4	9	5	1.3	2.5
P0134.050-006-B2	5	6	M 4	9	5	1.3	2.5
P0134.050-008-B2	5	8	M 4	9	5	1.3	2.5
P0134.050-010-B2	5	10	M 4	9	5	1.3	2.5
P0134.050-012-B2	5	12	M 4	9	5	1.3	2.5
P0134.050-016-B2	5	16	M 4	9	5	1.3	2.5
P0134.050-020-B2	5	20	M 4	9	5	1.3	2.5
P0134.050-025-B2	5	25	M 4	9	5	1.3	2.5
P0134.050-030-B2	5	30	M 4	9	5	1.3	2.5
P0134.050-040-B2	5	40	M 4	9	5	1.3	2.5
P0134.060-004-B2	6	4	M 5	10	6	1.7	3
P0134.060-005-B2	6	5	M 5	10	6	1.7	3
P0134.060-006-B2	6	6	M 5	10	6	1.7	3
P0134.060-008-B2	6	8	M 5	10	6	1.7	3
P0134.060-010-B2	6	10	M 5	10	6	1.7	3
P0134.060-012-B2	6	12	M 5	10	6	1.7	3
P0134.060-016-B2	6	16	M 5	10	6	1.7	3
P0134.060-020-B2	6	20	M 5	10	6	1.7	3
P0134.060-025-B2	6	25	M 5	10	6	1.7	3
P0134.060-030-B2	6	30	M 5	10	6	1.7	3
P0134.060-040-B2	6	40	M 5	10	6	1.7	3
P0134.080-006-B2	8	6	M 6	13	11	2.0	4
P0134.080-008-B2	8	8	M 6	13	11	2.0	4
P0134.080-010-B2	8	10	M 6	13	11	2.0	4



Ultra Low Head - Shoulder Screw

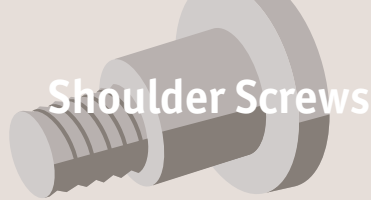
hex drive - 303 stainless, blackened

Shoulder Screws



Order No.	d_1 +0 -0.025	l_1 +0.05 -0.0	d_2	d_3	l_2	h_1	A/F
P0134.080-012-B2	8	12	M 6	13	11	2.0	4
P0134.080-016-B2	8	16	M 6	13	11	2.0	4
P0134.080-020-B2	8	20	M 6	13	11	2.0	4
P0134.080-025-B2	8	25	M 6	13	11	2.0	4
P0134.080-030-B2	8	30	M 6	13	11	2.0	4
P0134.080-040-B2	8	40	M 6	13	11	2.0	4
P0134.100-008-B2	10	8	M 8	14	12	2.7	5
P0134.100-010-B2	10	10	M 8	14	12	2.7	5
P0134.100-012-B2	10	12	M 8	14	12	2.7	5
P0134.100-016-B2	10	16	M 8	14	12	2.7	5
P0134.100-020-B2	10	20	M 8	14	12	2.7	5
P0134.100-025-B2	10	25	M 8	14	12	2.7	5
P0134.100-030-B2	10	30	M 8	14	12	2.7	5
P0134.100-040-B2	10	40	M 8	14	12	2.7	5
P0134.100-050-B2	10	50	M 8	14	12	2.7	5
P0134.120-010-B2	12	10	M10	20	16	3.5	6
P0134.120-012-B2	12	12	M10	20	16	3.5	6
P0134.120-016-B2	12	16	M10	20	16	3.5	6
P0134.120-020-B2	12	20	M10	20	16	3.5	6
P0134.120-025-B2	12	25	M10	20	16	3.5	6
P0134.120-030-B2	12	30	M10	20	16	3.5	6
P0134.120-040-B2	12	40	M10	20	16	3.5	6
P0134.120-050-B2	12	50	M10	20	16	3.5	6

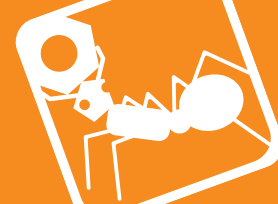
SHOULDER SCREWS



Shoulder Screws

Ultra Low Head - Shoulder Screw

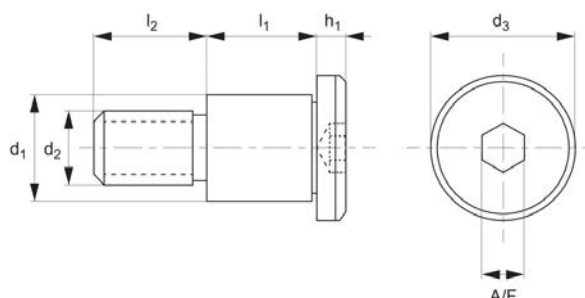
hex drive - 316 stainless, blackened



SHOULDER SCREWS



P0134.B4



Material

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

Technical Notes

These very low profile socket shoulder screws have a head height approximately 1/3 that of normal shoulder screws (P0130).

316 Series stainless have excellent corrosion resistance. Stainless steel suitable for marine and other applications.

Order No.	d ₁ +0 -0.025	l ₁ +0.05 -0.0	d ₂	d ₃	l ₂	h ₁	A/F
P0134.040-004-B4	4	4	M 3	6	4	1.3	2
P0134.040-005-B4	4	5	M 3	6	4	1.3	2
P0134.040-006-B4	4	6	M 3	6	4	1.3	2
P0134.040-008-B4	4	8	M 3	6	4	1.3	2
P0134.040-010-B4	4	10	M 3	6	4	1.3	2
P0134.040-012-B4	4	12	M 3	6	4	1.3	2
P0134.040-016-B4	4	16	M 3	6	4	1.3	2
P0134.040-020-B4	4	20	M 3	6	4	1.3	2
P0134.050-004-B4	5	4	M 4	9	5	1.3	2.5
P0134.050-005-B4	5	5	M 4	9	5	1.3	2.5
P0134.050-006-B4	5	6	M 4	9	5	1.3	2.5
P0134.050-008-B4	5	8	M 4	9	5	1.3	2.5
P0134.050-010-B4	5	10	M 4	9	5	1.3	2.5
P0134.050-012-B4	5	12	M 4	9	5	1.3	2.5
P0134.050-016-B4	5	16	M 4	9	5	1.3	2.5
P0134.050-020-B4	5	20	M 4	9	5	1.3	2.5
P0134.050-025-B4	5	25	M 4	9	5	1.3	2.5
P0134.050-030-B4	5	30	M 4	9	5	1.3	2.5
P0134.050-040-B4	5	40	M 4	9	5	1.3	2.5
P0134.060-004-B4	6	4	M 5	10	6	1.7	3
P0134.060-005-B4	6	5	M 5	10	6	1.7	3
P0134.060-006-B4	6	6	M 5	10	6	1.7	3
P0134.060-008-B4	6	8	M 5	10	6	1.7	3
P0134.060-010-B4	6	10	M 5	10	6	1.7	3
P0134.060-012-B4	6	12	M 5	10	6	1.7	3
P0134.060-016-B4	6	16	M 5	10	6	1.7	3
P0134.060-020-B4	6	20	M 5	10	6	1.7	3
P0134.060-025-B4	6	25	M 5	10	6	1.7	3
P0134.060-030-B4	6	30	M 5	10	6	1.7	3
P0134.060-040-B4	6	40	M 5	10	6	1.7	3
P0134.080-006-B4	8	6	M 6	13	11	2.0	4
P0134.080-008-B4	8	8	M 6	13	11	2.0	4
P0134.080-010-B4	8	10	M 6	13	11	2.0	4



Ultra Low Head - Shoulder Screw

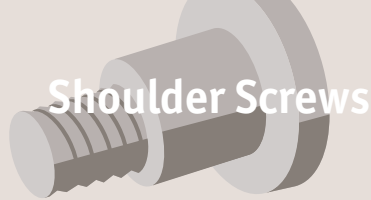
hex drive - 316 stainless, blackened

Shoulder Screws



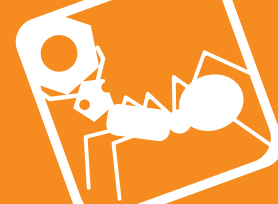
Order No.	d_1 +0 -0.025	l_1 +0.05 -0.0	d_2	d_3	l_2	h_1	A/F
P0134.080-012-B4	8	12	M 6	13	11	2.0	4
P0134.080-016-B4	8	16	M 6	13	11	2.0	4
P0134.080-020-B4	8	20	M 6	13	11	2.0	4
P0134.080-025-B4	8	25	M 6	13	11	2.0	4
P0134.080-030-B4	8	30	M 6	13	11	2.0	4
P0134.080-040-B4	8	40	M 6	13	11	2.0	4
P0134.100-008-B4	10	8	M 8	14	12	2.7	5
P0134.100-010-B4	10	10	M 8	14	12	2.7	5
P0134.100-012-B4	10	12	M 8	14	12	2.7	5
P0134.100-016-B4	10	16	M 8	14	12	2.7	5
P0134.100-020-B4	10	20	M 8	14	12	2.7	5
P0134.100-025-B4	10	25	M 8	14	12	2.7	5
P0134.100-030-B4	10	30	M 8	14	12	2.7	5
P0134.100-040-B4	10	40	M 8	14	12	2.7	5
P0134.100-050-B4	10	50	M 8	14	12	2.7	5
P0134.120-010-B4	12	10	M10	20	16	3.5	6
P0134.120-012-B4	12	12	M10	20	16	3.5	6
P0134.120-016-B4	12	16	M10	20	16	3.5	6
P0134.120-020-B4	12	20	M10	20	16	3.5	6
P0134.120-025-B4	12	25	M10	20	16	3.5	6
P0134.120-030-B4	12	30	M10	20	16	3.5	6
P0134.120-040-B4	12	40	M10	20	16	3.5	6
P0134.120-050-B4	12	50	M10	20	16	3.5	6

SHOULDER SCREWS



Shoulder Screws - Cap Head

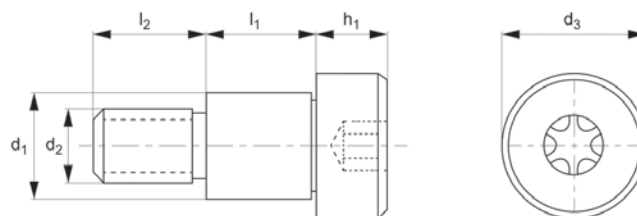
TX drive - 303 stainless - blackened



SHOULDER SCREWS



P0145.B2



Material

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

Tensile strength 550 N/mm².

Proof stress min. 190 N/mm², austenitic stainless steel.

Technical Notes

303 series stainless steel provides good resistance to corrosion. It is mildly magnetic.

Order No.	d ₁ +0 -0.025	l ₁ +0.05 -0.0	d ₂	d ₃	l ₂	h ₁	TX size
P0145.040-002-B2	4	2	M 3	6	4	3	TX-10
P0145.040-003-B2	4	3	M 3	6	4	3	TX-10
P0145.040-004-B2	4	4	M 3	6	4	3	TX-10
P0145.040-005-B2	4	5	M 3	6	4	3	TX-10
P0145.040-006-B2	4	6	M 3	6	4	3	TX-10
P0145.040-007-B2	4	7	M 3	6	4	3	TX-10
P0145.040-008-B2	4	8	M 3	6	4	3	TX-10
P0145.040-010-B2	4	10	M 3	6	4	3	TX-10
P0145.040-012-B2	4	12	M 3	6	4	3	TX-10
P0145.040-014-B2	4	14	M 3	6	4	3	TX-10
P0145.040-016-B2	4	16	M 3	6	4	3	TX-10
P0145.040-018-B2	4	18	M 3	6	4	3	TX-10
P0145.040-020-B2	4	20	M 3	6	4	3	TX-10
P0145.040-025-B2	4	25	M 3	6	4	3	TX-10
P0145.040-030-B2	4	30	M 3	6	4	3	TX-10
P0145.040-035-B2	4	35	M 3	6	4	3	TX-10
P0145.040-040-B2	4	40	M 3	6	4	3	TX-10
P0145.040-045-B2	4	45	M 3	6	4	3	TX-10
P0145.040-050-B2	4	50	M 3	6	4	3	TX-10
P0145.050-002-B2	5	2	M 4	8	5	4	TX-20
P0145.050-003-B2	5	3	M 4	8	5	4	TX-20
P0145.050-004-B2	5	4	M 4	8	5	4	TX-20
P0145.050-005-B2	5	5	M 4	8	5	4	TX-20
P0145.050-006-B2	5	6	M 4	8	5	4	TX-20
P0145.050-007-B2	5	7	M 4	8	5	4	TX-20
P0145.050-008-B2	5	8	M 4	8	5	4	TX-20
P0145.050-010-B2	5	10	M 4	8	5	4	TX-20
P0145.050-012-B2	5	12	M 4	8	5	4	TX-20
P0145.050-014-B2	5	14	M 4	8	5	4	TX-20
P0145.050-016-B2	5	16	M 4	8	5	4	TX-20
P0145.050-018-B2	5	18	M 4	8	5	4	TX-20
P0145.050-020-B2	5	20	M 4	8	5	4	TX-20
P0145.050-025-B2	5	25	M 4	8	5	4	TX-20
P0145.050-030-B2	5	30	M 4	8	5	4	TX-20



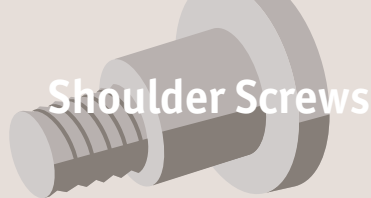
Shoulder Screws - Cap Head

TX drive - 303 stainless - blackened

Shoulder Screws



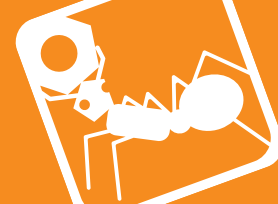
Order No.	d ₁ +0 -0.025	l ₁ +0.05 -0.0	d ₂	d ₃	l ₂	h ₁	TX size
P0145.050-035-B2	5	35	M 4	8	5	4	TX-20
P0145.050-040-B2	5	40	M 4	8	5	4	TX-20
P0145.050-045-B2	5	45	M 4	8	5	4	TX-20
P0145.050-050-B2	5	50	M 4	8	5	4	TX-20
P0145.060-002-B2	6	2	M 5	10	6	5	TX-25
P0145.060-003-B2	6	3	M 5	10	6	5	TX-25
P0145.060-004-B2	6	4	M 5	10	6	5	TX-25
P0145.060-005-B2	6	5	M 5	10	6	5	TX-25
P0145.060-006-B2	6	6	M 5	10	6	5	TX-25
P0145.060-007-B2	6	7	M 5	10	6	5	TX-25
P0145.060-008-B2	6	8	M 5	10	6	5	TX-25
P0145.060-010-B2	6	10	M 5	10	6	5	TX-25
P0145.060-012-B2	6	12	M 5	10	6	5	TX-25
P0145.060-014-B2	6	14	M 5	10	6	5	TX-25
P0145.060-016-B2	6	16	M 5	10	6	5	TX-25
P0145.060-018-B2	6	18	M 5	10	6	5	TX-25
P0145.060-020-B2	6	20	M 5	10	6	5	TX-25
P0145.060-025-B2	6	25	M 5	10	6	5	TX-25
P0145.060-030-B2	6	30	M 5	10	6	5	TX-25
P0145.060-035-B2	6	35	M 5	10	6	5	TX-25
P0145.060-040-B2	6	40	M 5	10	6	5	TX-25
P0145.060-045-B2	6	45	M 5	10	6	5	TX-25
P0145.060-050-B2	6	50	M 5	10	6	5	TX-25
P0145.060-055-B2	6	55	M 5	10	6	5	TX-25
P0145.060-060-B2	6	60	M 5	10	6	5	TX-25
P0145.060-070-B2	6	70	M 5	10	6	5	TX-25
P0145.060-080-B2	6	80	M 5	10	6	5	TX-25
P0145.060-090-B2	6	90	M 5	10	6	5	TX-25
P0145.060-100-B2	6	100	M 5	10	6	5	TX-25
P0145.080-004-B2	8	4	M 6	12	11	6	TX-30
P0145.080-005-B2	8	5	M 6	12	11	6	TX-30
P0145.080-006-B2	8	6	M 6	12	11	6	TX-30
P0145.080-007-B2	8	7	M 6	12	11	6	TX-30
P0145.080-008-B2	8	8	M 6	12	11	6	TX-30
P0145.080-010-B2	8	10	M 6	12	11	6	TX-30
P0145.080-012-B2	8	12	M 6	12	11	6	TX-30
P0145.080-014-B2	8	14	M 6	12	11	6	TX-30
P0145.080-016-B2	8	16	M 6	12	11	6	TX-30
P0145.080-018-B2	8	18	M 6	12	11	6	TX-30
P0145.080-020-B2	8	20	M 6	12	11	6	TX-30
P0145.080-025-B2	8	25	M 6	12	11	6	TX-30
P0145.080-030-B2	8	30	M 6	12	11	6	TX-30
P0145.080-035-B2	8	35	M 6	12	11	6	TX-30
P0145.080-040-B2	8	40	M 6	12	11	6	TX-30
P0145.080-045-B2	8	45	M 6	12	11	6	TX-30
P0145.080-050-B2	8	50	M 6	12	11	6	TX-30
P0145.080-055-B2	8	55	M 6	12	11	6	TX-30
P0145.080-060-B2	8	60	M 6	12	11	6	TX-30
P0145.080-065-B2	8	65	M 6	12	11	6	TX-30
P0145.080-070-B2	8	70	M 6	12	11	6	TX-30
P0145.080-075-B2	8	75	M 6	12	11	6	TX-30
P0145.080-080-B2	8	80	M 6	12	11	6	TX-30
P0145.080-090-B2	8	90	M 6	12	11	6	TX-30
P0145.080-100-B2	8	100	M 6	12	11	6	TX-30
P0145.100-008-B2	10	8	M 8	14	12	7	TX-45
P0145.100-010-B2	10	10	M 8	14	12	7	TX-45
P0145.100-012-B2	10	12	M 8	14	12	7	TX-45
P0145.100-014-B2	10	14	M 8	14	12	7	TX-45
P0145.100-016-B2	10	16	M 8	14	12	7	TX-45
P0145.100-018-B2	10	18	M 8	14	12	7	TX-45
P0145.100-020-B2	10	20	M 8	14	12	7	TX-45
P0145.100-025-B2	10	25	M 8	14	12	7	TX-45
P0145.100-030-B2	10	30	M 8	14	12	7	TX-45
P0145.100-035-B2	10	35	M 8	14	12	7	TX-45
P0145.100-040-B2	10	40	M 8	14	12	7	TX-45
P0145.100-045-B2	10	45	M 8	14	12	7	TX-45
P0145.100-050-B2	10	50	M 8	14	12	7	TX-45
P0145.100-055-B2	10	55	M 8	14	12	7	TX-45



Shoulder Screws

Shoulder Screws - Cap Head

TX drive - 303 stainless - blackened



SHOULDER SCREWS

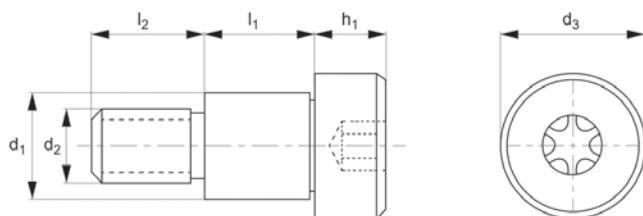
Order No.	d ₁ +0 -0.025	l ₁ +0.05 -0.0	d ₂	d ₃	l ₂	h ₁	TX size
P0145.100-060-B2	10	60	M 8	14	12	7	TX-45
P0145.100-065-B2	10	65	M 8	14	12	7	TX-45
P0145.100-070-B2	10	70	M 8	14	12	7	TX-45
P0145.100-080-B2	10	80	M 8	14	12	7	TX-45
P0145.100-090-B2	10	90	M 8	14	12	7	TX-45
P0145.100-100-B2	10	100	M 8	14	12	7	TX-45
P0145.120-008-B2	12	8	M10	20	16	8	TX-50
P0145.120-010-B2	12	10	M10	20	16	8	TX-50
P0145.120-012-B2	12	12	M10	20	16	8	TX-50
P0145.120-014-B2	12	14	M10	20	16	8	TX-50
P0145.120-016-B2	12	16	M10	20	16	8	TX-50
P0145.120-018-B2	12	18	M10	20	16	8	TX-50
P0145.120-020-B2	12	20	M10	20	16	8	TX-50
P0145.120-025-B2	12	25	M10	20	16	8	TX-50
P0145.120-030-B2	12	30	M10	20	16	8	TX-50
P0145.120-035-B2	12	35	M10	20	16	8	TX-50
P0145.120-040-B2	12	40	M10	20	16	8	TX-50
P0145.120-045-B2	12	45	M10	20	16	8	TX-50
P0145.120-050-B2	12	50	M10	20	16	8	TX-50
P0145.120-055-B2	12	55	M10	20	16	8	TX-50
P0145.120-060-B2	12	60	M10	20	16	8	TX-50
P0145.120-065-B2	12	65	M10	20	16	8	TX-50
P0145.120-070-B2	12	70	M10	20	16	8	TX-50
P0145.120-075-B2	12	75	M10	20	16	8	TX-50
P0145.120-080-B2	12	80	M10	20	16	8	TX-50
P0145.120-090-B2	12	90	M10	20	16	8	TX-50
P0145.120-100-B2	12	100	M10	20	16	8	TX-50
P0145.160-025-B2	16	25	M12	24	18	11	TX-60
P0145.160-030-B2	16	30	M12	24	18	11	TX-60
P0145.160-035-B2	16	35	M12	24	18	11	TX-60
P0145.160-040-B2	16	40	M12	24	18	11	TX-60
P0145.160-045-B2	16	45	M12	24	18	11	TX-60
P0145.160-050-B2	16	50	M12	24	18	11	TX-60
P0145.160-055-B2	16	55	M12	24	18	11	TX-60
P0145.160-060-B2	16	60	M12	24	18	11	TX-60
P0145.160-065-B2	16	65	M12	24	18	11	TX-60
P0145.160-070-B2	16	70	M12	24	18	11	TX-60
P0145.160-075-B2	16	75	M12	24	18	11	TX-60
P0145.160-080-B2	16	80	M12	24	18	11	TX-60
P0145.160-090-B2	16	90	M12	24	18	11	TX-60
P0145.160-100-B2	16	100	M12	24	18	11	TX-60
P0145.200-030-B2	20	30	M16	30	22	14	TX-70
P0145.200-035-B2	20	35	M16	30	22	14	TX-70
P0145.200-040-B2	20	40	M16	30	22	14	TX-70
P0145.200-045-B2	20	45	M16	30	22	14	TX-70
P0145.200-050-B2	20	50	M16	30	22	14	TX-70
P0145.200-055-B2	20	55	M16	30	22	14	TX-70
P0145.200-060-B2	20	60	M16	30	22	14	TX-70
P0145.200-065-B2	20	65	M16	30	22	14	TX-70
P0145.200-070-B2	20	70	M16	30	22	14	TX-70
P0145.200-075-B2	20	75	M16	30	22	14	TX-70
P0145.200-080-B2	20	80	M16	30	22	14	TX-70
P0145.200-090-B2	20	90	M16	30	22	14	TX-70
P0145.200-100-B2	20	100	M16	30	22	14	TX-70



Shoulder Screws - Cap Head

TX drive - 316 stainless - blackened

Shoulder Screws



MADE IN
BRITAIN

P0145.B4

SHOULDER SCREWS

Material

Stainless steel (AISI 316, 1.440) black oxide coating.
316 series tensile strength 480 N/mm², proof stress min. 200 N/mm², austenitic

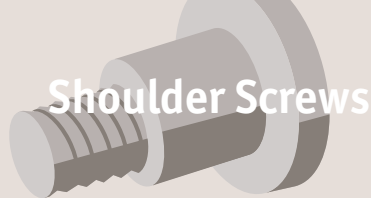
stainless steel.

Technical Notes

Highly resistant to corrosion (including from salt water).

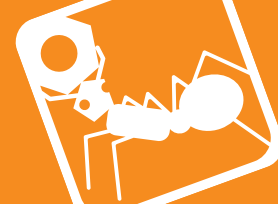
Shim washers can be used to reduce shoulder length if required. It is non-magnetic.

Order No.	d ₁ +0 -0.025	l ₁ +0.05 -0.0	d ₂	d ₃	l ₂	h ₁	TX size
P0145.040-002-B4	4	2	M 3	6	4	3	TX-10
P0145.040-003-B4	4	3	M 3	6	4	3	TX-10
P0145.040-004-B4	4	4	M 3	6	4	3	TX-10
P0145.040-005-B4	4	5	M 3	6	4	3	TX-10
P0145.040-006-B4	4	6	M 3	6	4	3	TX-10
P0145.040-007-B4	4	7	M 3	6	4	3	TX-10
P0145.040-008-B4	4	8	M 3	6	4	3	TX-10
P0145.040-010-B4	4	10	M 3	6	4	3	TX-10
P0145.040-012-B4	4	12	M 3	6	4	3	TX-10
P0145.040-014-B4	4	14	M 3	6	4	3	TX-10
P0145.040-016-B4	4	16	M 3	6	4	3	TX-10
P0145.040-018-B4	4	18	M 3	6	4	3	TX-10
P0145.040-020-B4	4	20	M 3	6	4	3	TX-10
P0145.040-025-B4	4	25	M 3	6	4	3	TX-10
P0145.040-030-B4	4	30	M 3	6	4	3	TX-10
P0145.040-035-B4	4	35	M 3	6	4	3	TX-10
P0145.040-040-B4	4	40	M 3	6	4	3	TX-10
P0145.040-045-B4	4	45	M 3	6	4	3	TX-10
P0145.040-050-B4	4	50	M 3	6	4	3	TX-10
P0145.050-002-B4	5	2	M 4	8	5	4	TX-20
P0145.050-003-B4	5	3	M 4	8	5	4	TX-20
P0145.050-004-B4	5	4	M 4	8	5	4	TX-20
P0145.050-005-B4	5	5	M 4	8	5	4	TX-20
P0145.050-006-B4	5	6	M 4	8	5	4	TX-20
P0145.050-007-B4	5	7	M 4	8	5	4	TX-20
P0145.050-008-B4	5	8	M 4	8	5	4	TX-20
P0145.050-010-B4	5	10	M 4	8	5	4	TX-20
P0145.050-012-B4	5	12	M 4	8	5	4	TX-20
P0145.050-014-B4	5	14	M 4	8	5	4	TX-20
P0145.050-016-B4	5	16	M 4	8	5	4	TX-20
P0145.050-018-B4	5	18	M 4	8	5	4	TX-20
P0145.050-020-B4	5	20	M 4	8	5	4	TX-20
P0145.050-025-B4	5	25	M 4	8	5	4	TX-20



Shoulder Screws - Cap Head

TX drive - 316 stainless - blackened



SHOULDER SCREWS

Order No.	d ₁ +0 -0.025	l ₁ +0.05 -0.0	d ₂	d ₃	l ₂	h ₁	TX size
P0145.050-030-B4	5	30	M 4	8	5	4	TX-20
P0145.050-035-B4	5	35	M 4	8	5	4	TX-20
P0145.050-040-B4	5	40	M 4	8	5	4	TX-20
P0145.050-045-B4	5	45	M 4	8	5	4	TX-20
P0145.050-050-B4	5	50	M 4	8	5	4	TX-20
P0145.060-002-B4	6	2	M 5	10	6	5	TX-25
P0145.060-003-B4	6	3	M 5	10	6	5	TX-25
P0145.060-004-B4	6	4	M 5	10	6	5	TX-25
P0145.060-005-B4	6	5	M 5	10	6	5	TX-25
P0145.060-006-B4	6	6	M 5	10	6	5	TX-25
P0145.060-007-B4	6	7	M 5	10	6	5	TX-25
P0145.060-008-B4	6	8	M 5	10	6	5	TX-25
P0145.060-010-B4	6	10	M 5	10	6	5	TX-25
P0145.060-012-B4	6	12	M 5	10	6	5	TX-25
P0145.060-014-B4	6	14	M 5	10	6	5	TX-25
P0145.060-016-B4	6	16	M 5	10	6	5	TX-25
P0145.060-018-B4	6	18	M 5	10	6	5	TX-25
P0145.060-020-B4	6	20	M 5	10	6	5	TX-25
P0145.060-025-B4	6	25	M 5	10	6	5	TX-25
P0145.060-030-B4	6	30	M 5	10	6	5	TX-25
P0145.060-035-B4	6	35	M 5	10	6	5	TX-25
P0145.060-040-B4	6	40	M 5	10	6	5	TX-25
P0145.060-045-B4	6	45	M 5	10	6	5	TX-25
P0145.060-050-B4	6	50	M 5	10	6	5	TX-25
P0145.060-055-B4	6	55	M 5	10	6	5	TX-25
P0145.060-060-B4	6	60	M 5	10	6	5	TX-25
P0145.060-070-B4	6	70	M 5	10	6	5	TX-25
P0145.060-080-B4	6	80	M 5	10	6	5	TX-25
P0145.060-090-B4	6	90	M 5	10	6	5	TX-25
P0145.060-100-B4	6	100	M 5	10	6	5	TX-25
P0145.080-004-B4	8	4	M 6	12	11	6	TX-30
P0145.080-005-B4	8	5	M 6	12	11	6	TX-30
P0145.080-006-B4	8	6	M 6	12	11	6	TX-30
P0145.080-007-B4	8	7	M 6	12	11	6	TX-30
P0145.080-008-B4	8	8	M 6	12	11	6	TX-30
P0145.080-010-B4	8	10	M 6	12	11	6	TX-30
P0145.080-012-B4	8	12	M 6	12	11	6	TX-30
P0145.080-014-B4	8	14	M 6	12	11	6	TX-30
P0145.080-016-B4	8	16	M 6	12	11	6	TX-30
P0145.080-018-B4	8	18	M 6	12	11	6	TX-30
P0145.080-020-B4	8	20	M 6	12	11	6	TX-30
P0145.080-025-B4	8	25	M 6	12	11	6	TX-30
P0145.080-030-B4	8	30	M 6	12	11	6	TX-30
P0145.080-035-B4	8	35	M 6	12	11	6	TX-30
P0145.080-040-B4	8	40	M 6	12	11	6	TX-30
P0145.080-045-B4	8	45	M 6	12	11	6	TX-30
P0145.080-050-B4	8	50	M 6	12	11	6	TX-30
P0145.080-055-B4	8	55	M 6	12	11	6	TX-30
P0145.080-060-B4	8	60	M 6	12	11	6	TX-30
P0145.080-065-B4	8	65	M 6	12	11	6	TX-30
P0145.080-070-B4	8	70	M 6	12	11	6	TX-30
P0145.080-075-B4	8	75	M 6	12	11	6	TX-30
P0145.080-080-B4	8	80	M 6	12	11	6	TX-30
P0145.080-090-B4	8	90	M 6	12	11	6	TX-30
P0145.080-100-B4	8	100	M 6	12	11	6	TX-30
P0145.100-008-B4	10	8	M 8	14	12	7	TX-45
P0145.100-010-B4	10	10	M 8	14	12	7	TX-45
P0145.100-012-B4	10	12	M 8	14	12	7	TX-45
P0145.100-014-B4	10	14	M 8	14	12	7	TX-45
P0145.100-016-B4	10	16	M 8	14	12	7	TX-45
P0145.100-018-B4	10	18	M 8	14	12	7	TX-45
P0145.100-020-B4	10	20	M 8	14	12	7	TX-45
P0145.100-025-B4	10	25	M 8	14	12	7	TX-45
P0145.100-030-B4	10	30	M 8	14	12	7	TX-45
P0145.100-035-B4	10	35	M 8	14	12	7	TX-45
P0145.100-040-B4	10	40	M 8	14	12	7	TX-45
P0145.100-045-B4	10	45	M 8	14	12	7	TX-45
P0145.100-050-B4	10	50	M 8	14	12	7	TX-45



Shoulder Screws - Cap Head

TX drive - 316 stainless - blackened

Shoulder Screws



SHOULDER SCREWS

Order No.	d ₁ +0 -0.025	l ₁ +0.05 -0.0	d ₂	d ₃	l ₂	h ₁	TX size
P0145.100-055-B4	10	55	M 8	14	12	7	TX-45
P0145.100-060-B4	10	60	M 8	14	12	7	TX-45
P0145.100-065-B4	10	65	M 8	14	12	7	TX-45
P0145.100-070-B4	10	70	M 8	14	12	7	TX-45
P0145.100-080-B4	10	80	M 8	14	12	7	TX-45
P0145.100-090-B4	10	90	M 8	14	12	7	TX-45
P0145.100-100-B4	10	100	M 8	14	12	7	TX-45
P0145.120-008-B4	12	8	M10	20	16	8	TX-50
P0145.120-010-B4	12	10	M10	20	16	8	TX-50
P0145.120-012-B4	12	12	M10	20	16	8	TX-50
P0145.120-014-B4	12	14	M10	20	16	8	TX-50
P0145.120-016-B4	12	16	M10	20	16	8	TX-50
P0145.120-018-B4	12	18	M10	20	16	8	TX-50
P0145.120-020-B4	12	20	M10	20	16	8	TX-50
P0145.120-025-B4	12	25	M10	20	16	8	TX-50
P0145.120-030-B4	12	30	M10	20	16	8	TX-50
P0145.120-035-B4	12	35	M10	20	16	8	TX-50
P0145.120-040-B4	12	40	M10	20	16	8	TX-50
P0145.120-045-B4	12	45	M10	20	16	8	TX-50
P0145.120-050-B4	12	50	M10	20	16	8	TX-50
P0145.120-055-B4	12	55	M10	20	16	8	TX-50
P0145.120-060-B4	12	60	M10	20	16	8	TX-50
P0145.120-065-B4	12	65	M10	20	16	8	TX-50
P0145.120-070-B4	12	70	M10	20	16	8	TX-50
P0145.120-075-B4	12	75	M10	20	16	8	TX-50
P0145.120-080-B4	12	80	M10	20	16	8	TX-50
P0145.120-090-B4	12	90	M10	20	16	8	TX-50
P0145.120-100-B4	12	100	M10	20	16	8	TX-50
P0145.160-025-B4	16	25	M12	24	18	11	TX-60
P0145.160-030-B4	16	30	M12	24	18	11	TX-60
P0145.160-035-B4	16	35	M12	24	18	11	TX-60
P0145.160-040-B4	16	40	M12	24	18	11	TX-60
P0145.160-045-B4	16	45	M12	24	18	11	TX-60
P0145.160-050-B4	16	50	M12	24	18	11	TX-60
P0145.160-055-B4	16	55	M12	24	18	11	TX-60
P0145.160-060-B4	16	60	M12	24	18	11	TX-60
P0145.160-065-B4	16	65	M12	24	18	11	TX-60
P0145.160-070-B4	16	70	M12	24	18	11	TX-60
P0145.160-075-B4	16	75	M12	24	18	11	TX-60
P0145.160-080-B4	16	80	M12	24	18	11	TX-60
P0145.160-090-B4	16	90	M12	24	18	11	TX-60
P0145.160-100-B4	16	100	M12	24	18	11	TX-60
P0145.200-030-B4	20	30	M16	30	22	14	TX-70
P0145.200-035-B4	20	35	M16	30	22	14	TX-70
P0145.200-040-B4	20	40	M16	30	22	14	TX-70
P0145.200-045-B4	20	45	M16	30	22	14	TX-70
P0145.200-050-B4	20	50	M16	30	22	14	TX-70
P0145.200-055-B4	20	55	M16	30	22	14	TX-70
P0145.200-060-B4	20	60	M16	30	22	14	TX-70
P0145.200-065-B4	20	65	M16	30	22	14	TX-70
P0145.200-070-B4	20	70	M16	30	22	14	TX-70
P0145.200-075-B4	20	75	M16	30	22	14	TX-70
P0145.200-080-B4	20	80	M16	30	22	14	TX-70
P0145.200-090-B4	20	90	M16	30	22	14	TX-70
P0145.200-100-B4	20	100	M16	30	22	14	TX-70