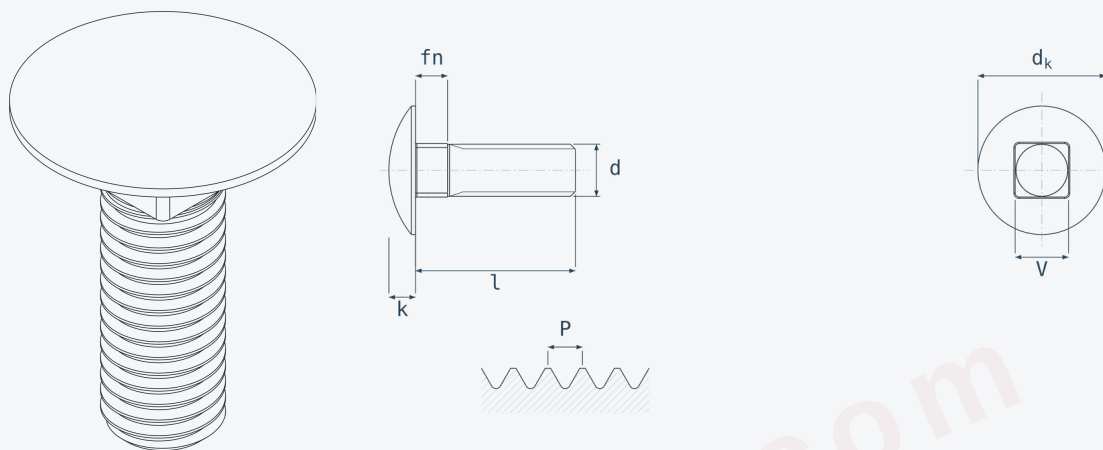


ISO 8677 Carriage Bolt



STANDARD

ISO 8677 Cup head square neck bolts with large head - Product grade C · withdrawn

THREAD

ISO metric coarse pitch

SIZES

M5 - M20 · lengths 20 – 200 mm

MATERIAL

Carbon Steel, Stainless Steel, Alloy Steel

PROPERTY CLASS

4.8, 8.8, 10.9 (ISO 898-1) · A2-70, A4-80 (ISO 3506-1)

SURFACE

Zinc Plated, Hot Dip Galvanized, Dacromet, Blackened, Phosphate, Plain, Passivated

ISO 8677 is a withdrawn legacy standard; the current standard for this product is DIN 603. This sheet follows ISO 8677. The two can differ in some dimensions; our website compares them size by size.

BASIS OF SPECIFICATION

DIMENSIONS	CARBON STEEL / ALLOY STEEL	STAINLESS STEEL	PRODUCT GRADE
ISO 8677:1986	ISO 898-1:2013	ISO 3506-1:2020	C
THREAD LENGTH	MINIMUM USABLE THREAD LENGTH		
to be agreed	to be agreed		

DIMENSIONS

mm · ISO 8677

d	P	b l ≤ 125	b 125 < l ≤ 200	b l > 200	ds max	e	v max	v min	f max	f min	dk max	dk min
M5	0.8	16	—	—	5.48	5.9	5.48	4.52	4.1	2.9	13	11.9
M6	1	18	—	—	6.48	7.2	6.48	5.52	4.6	3.4	16	14.9
M8	1.25	22	28	—	8.58	9.6	8.58	7.42	5.6	4.4	20	18.7
M10	1.5	26	32	—	10.58	12.2	10.58	9.42	6.6	5.4	24	22.7
M12	1.75	30	36	—	12.7	14.7	12.7	11.3	8.8	7.2	30	28.7
M16	2	38	44	57	16.7	19.9	16.7	15.3	12.9	11.1	38	36.4
M20	2.5	46	52	65	20.84	24.9	20.84	19.16	15.9	14.1	46	44.4

d	k max	k min	r max
M5	3.1	2.5	0.4
M6	3.6	3	0.5
M8	4.8	4	0.8
M10	5.8	5	0.8
M12	6.8	6	1.2
M16	8.9	8	1.2
M20	10.9	10	1.6

P thread pitch b thread length ds body diameter e corner distance v square neck width f square neck height dk head diameter k head height r radius

MECHANICAL PROPERTIES

ISO 898-1

Class	Rm min.	Yield requirement	Elongation requirement	Hardness
4.8	420 MPa	Rpf min. 340 MPa (not a test value)	Af min. 0.24	130 - 220 HV
8.8 up to M16	800 MPa	Rp0.2 min. 640 MPa	A min. 12 %	250 - 320 HV
10.9	1040 MPa	Rp0.2 min. 940 MPa	A min. 9 %	320 - 380 HV

MECHANICAL PROPERTIES

ISO 3506-1

Class	Rm min.	Yield requirement	Elongation requirement	Hardness
A2-70	700 MPa	Rp0.2 min. 450 MPa	0,4d mm	—
A4-80	800 MPa	Rp0.2 min. 600 MPa	0,3d mm	—

MARKING

Steel (required): Manufacturer identification mark and the property class symbol (Table 19). Position: On the head, embossed or indented (Figure 13). Sizes: $d \geq 5$ mm. Clause: ISO 898-1:2013, 10.3.3.3 Cup head square neck bolts.

Cup head square neck bolts must be marked - ISO 898-1 gives this head shape a clause of its own.

Do not apply the not usual sentence of 10.3.3.5 to it: square neck bolts have their own clause and it is compulsory.

DOCUMENTS

EN 10204 3.1 material certificate, dimensional inspection report and mechanical test report, on request.

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