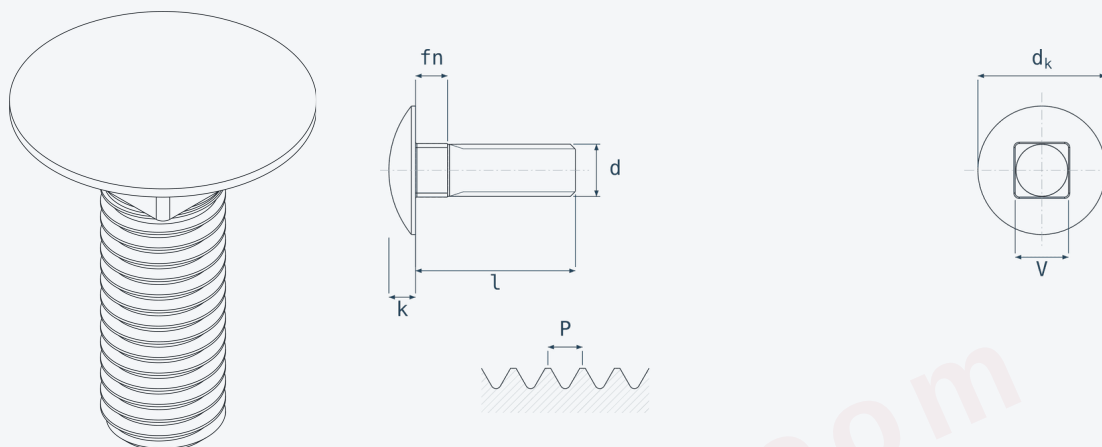


DIN 603 Carriage Bolt



STANDARD

DIN 603 Mushroom head square neck bolts

THREAD

ISO metric coarse pitch

SIZES

M5 - M20 · lengths 16 – 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

Dimensions follow the standard named on this sheet. Material properties and batch test results come with the order's certificate or test report.

BASIS OF SPECIFICATION

DIMENSIONS

DIN 603:2010-09

CARBON STEEL / ALLOY STEEL

DIN EN ISO 898-1

STAINLESS STEEL

DIN EN ISO 3506-1

LENGTH TOLERANCE

to be agreed

THREAD LENGTH

to be agreed

MINIMUM USABLE THREAD LENGTH

to be agreed

DIMENSIONS

mm · DIN 603

d	P	ds _{max}	ds _{min}	V _{max}	V _{min}	fn _{max}	fn _{min}	dk _{max}	dk _{min}	k _{max}	k _{min}
M5	0.8	5	4.52	5.48	4.52	4.1	2.9	13.55	12.45	3.3	2.7
M6	1	6	5.52	6.48	5.52	4.6	3.4	16.55	15.45	3.88	3.12
M8	1.25	8	7.42	8.58	7.42	5.6	4.4	20.65	19.35	4.88	4.12
M10	1.5	10	9.42	10.58	9.42	6.6	5.4	24.65	23.35	5.38	4.62
M12	1.75	12	11.3	12.7	11.3	8.75	7.25	30.65	29.35	6.95	6.05
M16	2	16	15.3	16.7	15.3	12.9	11.1	38.8	37.2	8.95	8.05
M20	2.5	20	19.16	20.84	19.16	15.9	14.1	46.8	45.2	11.05	9.95

P thread pitch ds body diameter V square neck width fn square neck height dk head diameter k head height

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 ≥ 5 mm. Clause: ISO 898-1:2013, 10.3.3.3 Cup head square neck bolts.

Clause 3 of DIN 603:1981-10 sets no marking symbol; the strength category is written into the designation when one is specified: Mushroom head bolt DIN 603 - M 10 x 70 - 4.6.

The material column carries steel only. Strength category 3.6 or 4.6 is at the manufacturer choice; 8.8 or other steels and strength categories are by agreement only.

A set marking exists for this product: where the bolt is supplied with DIN 555 hexagon nuts of class 5 or 4, the symbol Mu is added to the designation, for example DIN 603 - M 10 x 70 - Mu.

Thread tolerance is 8g, not 6g, to DIN 13 Part 13, and the product grade is C, previously type g.

DOCUMENTS

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