

ISO 14579

Hexalobular socket head cap screws



Standard	ISO 14579		
Product Type	ISO 14579:2011 specifies the characteristics of hexalobular socket head cap screws, with thread sizes from M2 up to and including M20, of product grade A.		
Material	Stainless Steel, Carbon Steel, Alloy Steel		
Property Class	A2-70, A4-80 (ISO 3506-1) · 8.8, 10.9 (ISO 898-1)		
Surface Finish	Passivated, Plain, Blackened, Zinc Plated		
Size Range	M2 - M20	Length Range	6-200 mm
Thread	ISO metric coarse pitch		

BASIS OF SPECIFICATION

WHICH STANDARD GOVERNS WHAT

Dimensions to	ISO 14579:2011
Carbon steel / Alloy steel mechanical properties to	ISO 898-1:2013
Stainless steel mechanical properties to	ISO 3506-1:2020
Product grade	A
Minimum usable thread length	to be agreed

MECHANICAL PROPERTIES

REQUIRED VALUES PER ISO 3506-1

Class	Rm min.	Yield requirement	Elongation requirement	Hardness	Source
A2-70	700 MPa	Rp0.2 min. 450 MPa	0,4d mm	-	ISO 3506-1
A4-80	800 MPa	Rp0.2 min. 600 MPa	0,3d mm	-	ISO 3506-1

MECHANICAL PROPERTIES

REQUIRED VALUES PER ISO 898-1

Class	Rm min.	Yield requirement	Elongation requirement	Hardness	Source
8.8	800 MPa	Rp0.2 min. 640 MPa	A min. 12 %	250 - 320 HV	ISO 898-1 (d ≤ M16)
8.8	830 MPa	Rp0.2 min. 660 MPa	A min. 12 %	255 - 335 HV	ISO 898-1 (d > M16)
10.9	1040 MPa	Rp0.2 min. 940 MPa	A min. 9 %	320 - 380 HV	ISO 898-1

DIMENSIONAL DATA - SIZES WE SUPPLY

ALL DIMENSIONS PER THE STANDARD

d Diameter - mm	P Thread Pitch - mm	dk Head Diameter - mm	dk (min) Head Diameter - mm	k Nominal Head Height - mm	k (min) Head Height - mm	r (min) Radius - mm	Recess Number	A (ref) Hexalobular Socket A - mm	t (max) Socket Depth - mm	t (min) Socket Depth - mm
M3	0.5	5.5	5.32	3	2.86	0.1	10	2.8	1.27	1.01
M4	0.7	7	6.78	4	3.82	0.2	20	3.95	1.8	1.42
M5	0.8	8.5	8.28	5	4.82	0.2	25	4.5	2.03	1.65
M6	1	10	9.78	6	5.7	0.25	30	5.6	2.42	2.02
M8	1.25	13	12.73	8	7.64	0.4	45	7.95	3.31	2.92
M10	1.5	16	15.73	10	9.64	0.4	50	8.95	4.02	3.62
M12	1.75	18	17.73	12	11.57	0.6	55	11.35	5.21	4.82
M16	2	24	23.67	16	15.57	0.6	70	15.7	7.01	6.62
M20	2.5	30	29.67	20	19.48	0.8	90	20.2	9.2	8.69

FURTHER SIZES IN THIS STANDARD

ALL DIMENSIONS PER THE STANDARD

Not held in stock. Available to order; minimum order quantity applies.

d Diameter - mm	P Thread Pitch - mm	dk Head Diameter - mm	dk (min) Head Diameter - mm	k Nominal Head Height - mm	k (min) Head Height - mm	r (min) Radius - mm	Recess Number	A (ref) Hexalobular Socket A - mm	t (max) Socket Depth - mm	t (min) Socket Depth - mm
M2	0.4	3.8	3.62	2	1.86	0.1	6	1.75	0.84	0.71
M2.5	0.45	4.5	4.32	2.5	2.36	0.1	8	2.4	1.04	0.91
M14	2	21	20.67	14	13.57	0.6	60	13.45	5.99	5.62
M18	2.5	27	26.67	18	17.57	0.6	80	17.75	8	7.5

MARKING
Steel — Required

What	Manufacturer identification mark and the property class symbol (Table 19)
Where	Preferably indented on the side of the head; alternatively indented or embossed on the top of the head
Sizes	d >= 5 mm
Clause	ISO 898-1:2013, 10.3.3.2 Hexagon and hexalobular socket head cap screws

Stainless steel — Required

What	Stainless steel grade (Clause 6), property class symbol (Table 13, or Table 14 with a leading zero for reduced loadability) and manufacturer identification mark
Where	For cap screws and cheese head bolts and screws, preferably on the top of the head, indented or embossed, or on the side of the head, indented; other head shapes on the head
Sizes	d >= 5 mm
Clause	ISO 3506-1:2020, 10.3.2 Hexagon socket or hexalobular socket bolts and screws

"Hexagon socket bolts and screws and hexalobular socket bolts and screws of nominal thread diameter d >= 5 mm shall be marked for all stainless steel grades and all property classes, with the stainless steel grade in accordance with Clause 6, with the property class symbol in accordance with Table 13 (fasteners with full loadability) or Table 14 (fasteners with reduced loadability that can be tensile tested with b >= 3d in accordance with 9.1), and with the manufacturer's identification mark in accordance with 10.2."

This standard starts at M2. M2, M2.5, M3 and M4 sit below the d >= 5 mm threshold, so those four sizes carry no marking obligation - a small screw with a blank head is not an unmarked screw.

Where bar-turned stainless parts are supplied as A1-70 or A1-50, footnote b requires them to be marked with the property class they actually meet.

Confirm the ordered property class before production.

INSPECTION DOCUMENTS WE CAN ISSUE

EN 10204 3.1 material certificate	Can be included when agreed in the order.
Dimensional inspection report	Can be provided for the agreed inspection scope.
Certificate of conformity	Can be issued against the confirmed order requirements.
Mechanical test report	Available when the required tests are agreed before production.
Chemical analysis report	Available when the material verification scope is agreed.
Coating inspection report	Can record the coating checks agreed for the order.

REFERENCES & NOTES

Note: Dimensional values follow the selected execution standard. Material properties and batch test results are included only when declared or supported by the applicable certificate or test report.

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