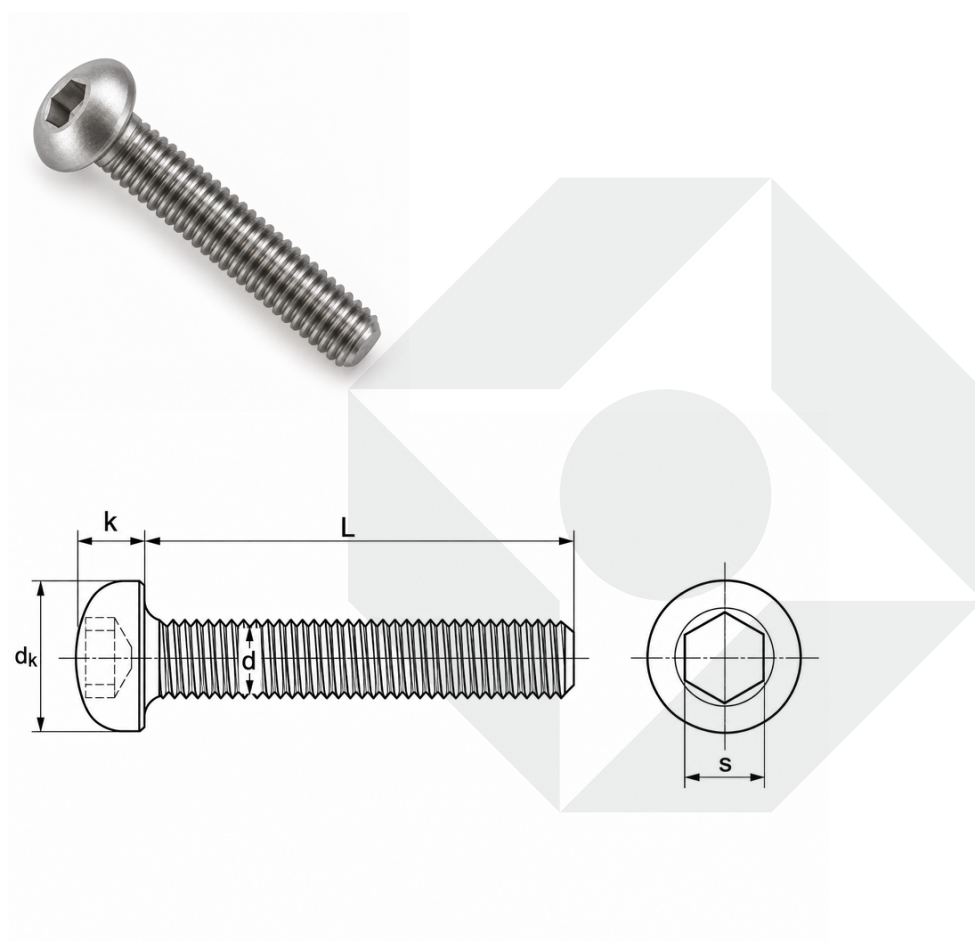


ISO 7380-1:2022

Hexagon socket button head screw

A low-profile rounded button head for a compact bearing arrangement. Reduced head loadability must be considered when selecting and tightening the screw.

ISO 7380-1:2022 dimensions M3–M16. Commercial lengths are recorded for M3–M12; submit a dedicated enquiry for M16 and other sizes.



d: nominal diameter · dk: head diameter · k: head height · s: hexagon socket size · t: socket depth · L: underhead length · b: reference thread length

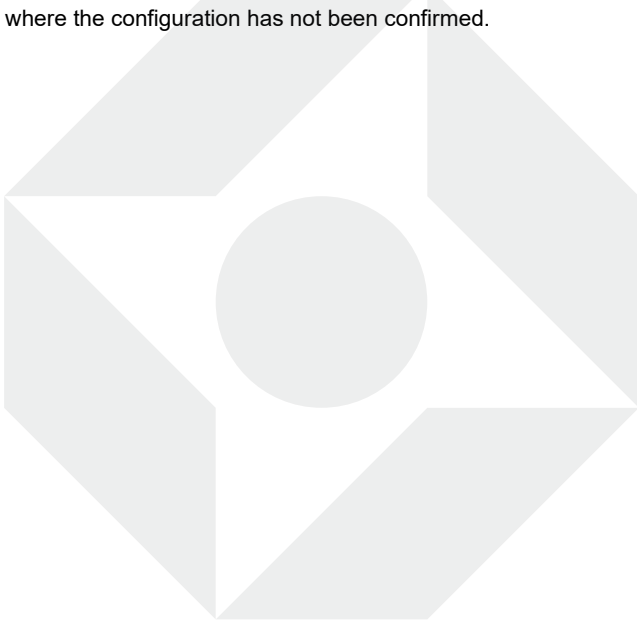
Identification drawing, not a manufacturing drawing.

Dimensional range

Dimensions in millimetres.

M	Pitch P	dk max.	k max.	s	t min.
3	0.5	5.7	1.65	2	1.04
4	0.7	7.6	2.2	2.5	1.3
5	0.8	9.5	2.75	3	1.56
6	1	10.5	3.3	4	2.08
8	1.25	14	4.4	5	2.6
10	1.5	17.5	5.5	6	3.12
12	1.75	21	6.6	8	4.16
16	2	28	8.8	10	5.2

Full or partial threading must be confirmed for the individual size and supply. Listed commercial lengths do not guarantee a plain-shank length; b remains ND where the configuration has not been confirmed.



Commercial lengths by diameter

ISO 7380-1:2022 assumes head loadability equal to 80% of thread loadability. This is neither a design working load nor a tightening torque. The marked property class has a leading zero, for example 08.8 or 010.9, to identify reduced loadability.

M	L (mm)
M3	6, 8, 10, 12, 14, 16
M4	6, 8, 10, 12, 14, 16, 18, 20, 25, 30, 35, 40, 45
M5	6, 8, 10, 12, 14, 16, 18, 20, 25, 30, 35, 40, 45, 50, 55, 60
M6	8, 10, 12, 14, 16, 18, 20, 25, 30, 35, 40, 45, 50, 55, 60, 70
M8	10, 12, 14, 16, 18, 20, 25, 30, 35, 40, 45, 50, 55, 60, 70, 80
M10	16, 18, 20, 25, 30, 35, 40, 45, 50, 55, 60, 70, 80
M12	20, 25, 30, 35, 40, 45, 50, 55, 60, 70, 80
M16	To specification



Materials and classes

Material	Class / hardness	M	Supply
Steel to mechanical specification	8.8	M3–M12	On request
Steel to mechanical specification	10.9	M3–M12	On request

Finishes and treatments

Finish	Material	Class	M
Black oxide	Steel to mechanical specification	8.8	M3–M12
Black oxide	Steel to mechanical specification	10.9	M3–M12

Select the finish for the material/property-class combination. Hydrogen relief and lubrication are separate process requirements, not certificates and not implied by the coating name.



Standards, documents and enquiry

ISO 7380-1:2022 assumes head loadability equal to 80% of thread loadability. This is neither a design working load nor a tightening torque. The marked property class has a leading zero, for example 08.8 or 010.9, to identify reduced loadability.

For this reduced-loadability geometry, select the nut, washer and tightening conditions through a joint assessment. Do not automatically transfer mating-component or preload recommendations from a full-loadability screw of the same property class.

Supply documentation

Declaration of conformity; Material certificate; EN 10204 2.2 test report; EN 10204 3.1 inspection certificate; Dimensional inspection report; Coating report; Other documentation

Documents are subject to order agreement; no batch certificate is automatically included.

Related components

ISO 7380 2, ISO 4762, DIN 7984. Match nominal diameter, pitch, strength, material, finish and joint conditions.

Request a quote

Specify standard, diameter, pitch and length where applicable, material, property class or hardness, finish, quantity and documents. Other sizes and dedicated production can be assessed on request, with agreed minimum quantities.

Reference technical configurations: these do not represent stock quantities.

Other materials and specifications

For requirements beyond the tabulated combinations, enquire about aluminium, brass, nylon, duplex, superduplex or an ASTM specification. Alloy or grade, dimensions, mechanical requirements and finish are defined for the enquiry; the geometric reference does not automatically imply conformity with the product standard.

