

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 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.

Dimensional range

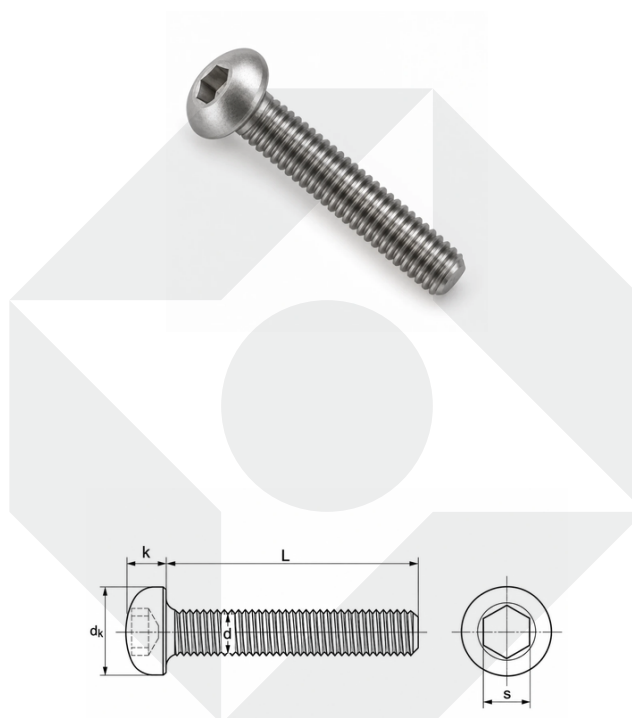
M3-M16

Thread

Metric · coarse pitch

Configuration

Reduced-loadability head



Technical drawing

d

nominal diameter

dk

head diameter

k

head height

s

hexagon socket size

t

socket depth

L

underhead length

b

reference thread length

Variants and dimensional data

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

Dimensions in mm. Identification drawing, not a manufacturing drawing.

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.

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Table dimensions refer to the stated execution. DIN/UNI, polymer and special variants require verification of their own dimensions; they do not automatically inherit reference geometry, weight or performance.

Materials, classes, finishes and treatments

Executions are distinguished by reference, material, class and finish. DIN, ISO and UNI references do not imply dimensional equivalence or availability of every size in each material. Supply and batch documents require quotation confirmation.

Execution reference	Material	Class / hardness	Documented finishes
ISO 7380-1	Stainless A2	To be specified	To be specified
ISO 7380-1	Steel	010.9	Black zinc plated; GEOMET 321A; Plain; Yellow zinc plated; Yellow zinc plated Cr III 12 µm with sealer; Zinc plated
ISO 7380-1	Steel	8.8 (reduced loadability)	Zinc plated
ISO 7380-1	Stainless A4	To be specified	To be specified
ISO 7380-1	Steel	10.9 (reduced loadability)	Black oxide
ISO 7380-1	Duplex D6 · 1.4462	To be specified	To be specified

“To be specified” is a requirement not established by this selection; it does not imply class 70/80, HV hardness or an automatic finish. Steel property classes do not apply to nylon/polyamide; PA6 and PA66 are distinguished only where stated. For nuts with non-metallic inserts, the material shown is the body material.

Documentation

Document	Status
Declaration of conformity	Subject to order agreement
Material certificate	Subject to order agreement
EN 10204 2.2 test report	Subject to order agreement
EN 10204 3.1 inspection certificate	Subject to order agreement
Dimensional inspection report	Subject to order agreement
Coating report	Subject to order agreement
Other documentation	Subject to order agreement

Batch documents are not automatically included: specify your requirements in the RFQ.

ISO, DIN and UNI: key differences

ISO 7380-1:2022

Main standard used for the dimensions in this data sheet.