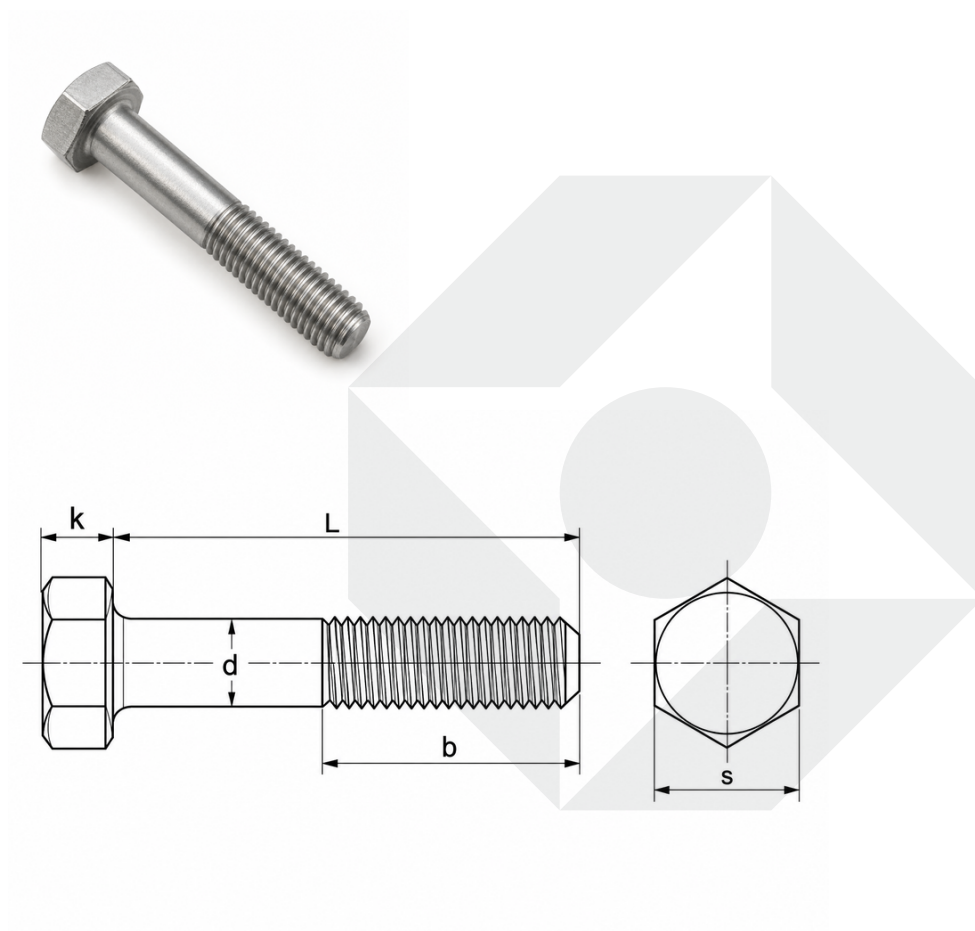


ISO 4014:2022

Hexagon head bolt, partially threaded

A plain shank and coarse metric thread for mechanical joints with a nut or tapped hole. Thread length must be selected together with the bolt length.

Reference dimensions M4–M48. Select commercial lengths by diameter; other sizes and dedicated production on request. The ISO scope also includes diameters outside this loaded range.



d: nominal diameter · k: head height · s: width across flats · L: underhead length · b: thread length

Identification drawing, not a manufacturing drawing.

Dimensional range

Dimensions in millimetres.

M	Pitch P	k	s
4	0.7	2.8	7
5	0.8	3.5	8
6	1	4	10
7	1	4.8	11
8	1.25	5.3	13
10	1.5	6.4	16
12	1.75	7.5	18
14	2	8.8	21
16	2	10	24
18	2.5	11.5	27
20	2.5	12.5	30
22	2.5	14	34
24	3	15	36
27	3	17	41
30	3.5	18.7	46
33	3.5	21	50
36	4	22.5	55
39	4	25	60
42	4.5	26	65
45	4.5	28	70
48	5	30	75

Thread length b

$L \leq 125$	$125 < L \leq 200$	$L > 200$
$b = 2d + 6$	$b = 2d + 12$	$b = 2d + 25$

b is not L. Apply only to compatible lengths; confirm plain shank, tolerances and standard length series when ordering.

Commercial lengths by diameter

L is the underhead length; b is the reference thread length. Listed lengths are commercial references: an ISO 4014:2022 order also requires confirmation of length range, tolerances and plain shank. Lengths outside the standard series require specific agreement.

M	L (mm)
M4	20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70
M5	20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 90, 100
M6	25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 110, 120, 130, 140, 150
M7	30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 100
M8	30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120, 125, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300
M10	35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120, 125, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300
M12	40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120, 125, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300
M14	45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300
M16	50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400
M18	50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300
M20	50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400
M22	60, 65, 70, 75, 80, 85, 90, 95, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400
M24	60, 65, 70, 75, 80, 85, 90, 95, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400
M27	70, 75, 80, 85, 90, 95, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 280, 300, 320
M30	70, 80, 85, 90, 95, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 280, 300, 320, 340, 360, 380, 400
M33	80, 90, 95, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 280, 300
M36	80, 90, 95, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 280, 300
M39	90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 280, 300
M42	100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 280, 300
M45	110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 280, 300, 320
M48	120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 280, 300, 320

Materials and classes

Material	Class / hardness	M	Supply
Steel to mechanical specification	4.8	M4–M39	On request
Steel to mechanical specification	8.8	M4–M39	On request
Steel to mechanical specification	10.9	M4–M39	On request
Steel to mechanical specification	12.9	M4–M24	On request
A2 stainless steel	70	M4–M24	On request
A4 stainless steel	70	M4–M24	On request
A4 stainless steel	80	M4–M24	On request

Finishes and treatments

Finish	Material	Class	M
Plain / as manufactured	Steel to mechanical specification	4.8	M4–M39
Plain / as manufactured	Steel to mechanical specification	8.8	M4–M39
Electroplated zinc	Steel to mechanical specification	8.8	M4–M39
Plain / as manufactured	Steel to mechanical specification	10.9	M4–M39
Plain / as manufactured	Steel to mechanical specification	12.9	M4–M24
Zinc flake	Steel to mechanical specification	10.9	M6–M24
Plain / as manufactured	A2 stainless steel	70	M4–M24
Plain / as manufactured	A4 stainless steel	70	M4–M24
Plain / as manufactured	A4 stainless steel	80	M4–M24

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

L is the underhead length; b is the reference thread length. Listed lengths are commercial references: an ISO 4014:2022 order also requires confirmation of length range, tolerances and plain shank. Lengths outside the standard series require specific agreement.

Commercial practice also includes class 8.8 bolts, class 8 nuts and 100 HV washers supplied to DIN 125 A / UNI 6592 references. Suitability must be checked against the joint conditions. For ISO 7089 washers, the reference hardness is 200 HV for bolts up to class 8.8 and nuts up to class 8, and 300 HV for bolts up to class 10.9 and nuts up to class 10. Commercial practice and standard requirements remain distinct.

DIN 931:1987

DIN 931-1 withdrawn. ISO/DIN widths across flats: M10 16/17; M12 18/19; M14 21/22; M22 34/32 mm. Also check lengths and product grade.

UNI 5737:1988

Withdrawn without replacement on 31 March 1995. Related historical reference, not an equivalence claim for ISO 4014:2022.

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 4032, ISO 7089. 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.