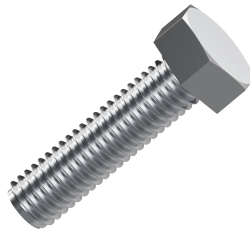


DIN 933

Hex Head Screw - Fully Threaded



Standard	DIN 933		
Product Type	M1.6 to M52, hexagon head screws threaded up to the head, product grades A and B.		
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 Finish	Hot Dip Galvanized, Zinc Plated, Blackened, Plain, Dacromet, Phosphate, Passivated		
Size Range	M1.6 - M52	Length Range	2-200 mm
Thread	ISO metric coarse pitch		

BASIS OF SPECIFICATION

WHICH STANDARD GOVERNS WHAT

Dimensions to	DIN 933:1987-09
Carbon steel / Alloy steel mechanical properties to	DIN ISO 898 Part 1
Stainless steel mechanical properties to	ISO 3506-1:2020
Product grade	A / B

MECHANICAL PROPERTIES

REQUIRED VALUES PER ISO 898-1

Class	Rm min.	Yield requirement	Elongation requirement	Hardness	Source
4.8	420 MPa	Rpf min. 340 MPa (not a test value)	Af min. 0.24	130 - 220 HV	ISO 898-1
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

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

DIMENSIONAL DATA - SIZES WE SUPPLY

ALL DIMENSIONS PER THE STANDARD

d	P	a (max)	c (min)	c (max)	da (max)	dw (min)	e (min)	k	k (min)	k (max)	k'	r (min)	s (max)	s (min)
Diameter - mm	Thread Pitch - mm	Thread Runout - mm	Washer Height - mm	Dimension c - mm	Underhead Diameter - mm	Bearing Diameter - mm	Width Across Corners - mm	Nominal Head Height - mm	Head Height - mm	Head Height - mm	Minimum Wrenching Height - mm	Radius - mm	Width Across Flats - mm	Width Across Flats - mm
M3	0.5	1.5	0.15	0.4	3.6	4.6	6.01	2	1.88	2.12	1.3	0.1	5.5	5.32
M4	0.7	2.1	0.15	0.4	4.7	5.9	7.66	2.8	2.68	2.92	1.9	0.2	7	6.78
M5	0.8	2.4	0.15	0.5	5.7	6.9	8.79	3.5	3.35	3.65	2.28	0.2	8	7.78
M6	1	3	0.15	0.5	6.8	8.9	11.05	4	3.85	4.15	2.63	0.25	10	9.78
M8	1.25	3.75	0.15	0.6	9.2	11.6	14.38	5.3	5.15	5.45	3.54	0.4	13	12.73
M10	1.5	4.5	0.15	0.6	11.2	15.6	18.9	6.4	6.22	6.56	4.28	0.4	17	16.73
M12	1.75	5.25	0.15	0.6	13.7	17.4	21.1	7.5	7.32	7.68	5.05	0.6	19	18.67
M16	2	6	0.2	0.8	17.7	22.5	26.75	10	9.82	10.18	6.8	0.6	24	23.67
M20	2.5	7.5	0.2	0.8	22.4	28.2	33.53	12.5	12.28	12.72	8.5	0.8	30	29.67
M24	3	9	0.2	0.8	26.4	33.6	39.98	15	14.78	15.22	10.3	0.8	36	35.38

FURTHER SIZES IN THIS STANDARD

ALL DIMENSIONS PER THE STANDARD

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

d	P	a (max)	c (min)	c (max)	da (max)	dw (min)	e (min)	k	k (min)	k (max)	k'	r (min)	s (max)	s (min)
Diameter - mm	Thread Pitch - mm	Thread Runout - mm	Washer Height - mm	Dimension c - mm	Underhead Diameter - mm	Bearing Diameter - mm	Width Across Corners - mm	Nominal Head Height - mm	Head Height - mm	Head Height - mm	Minimum Wrenching Height - mm	Radius - mm	Width Across Flats - mm	Width Across Flats - mm
M1.6	0.35	1.05	0.1	0.25	2	2.4	3.41	1.1	0.98	1.22	0.7	0.1	3.2	3.02
M2	0.4	1.2	0.1	0.25	2.6	3.2	4.32	1.4	1.28	1.52	0.9	0.1	4	3.82
M2.5	0.45	1.35	0.1	0.25	3.1	4.1	5.45	1.7	1.58	1.82	1.1	0.1	5	4.82
M3.5	0.6	1.8	0.15	0.4	4.1	5.1	6.58	2.4	2.28	2.52	1.6	0.1	6	5.82
M7	1	3	0.15	0.5	7.8	9.6	12.12	4.8	4.65	4.95	3.19	0.25	11	10.73
M14	2	6	0.15	0.6	15.7	20.5	24.49	8.8	8.62	8.98	5.96	0.6	22	21.67
M18	2.5	7.5	0.2	0.8	20.2	25.3	30.14	11.5	11.28	11.72	7.8	0.6	27	26.67
M22	2.5	7.5	0.2	0.8	24.4	30	35.72	14	13.78	14.22	9.6	0.8	32	31.61
M27	3	9	0.2	0.8	30.4	38	45.2	17	16.65	17.35	11.7	1	41	40
M30	3.5	10.5	0.2	0.8	33.4	42.7	50.85	18.7	18.28	19.12	12.8	1	46	45
M33	3.5	10.5	0.2	0.8	36.4	46.5	55.37	21	20.58	21.42	14.4	1	50	49
M36	4	12	0.2	0.8	39.4	51.1	60.79	22.5	22.08	22.92	15.5	1	55	53.8
M39	4	12	0.3	1	42.4	55.9	66.44	25	24.58	25.42	17.2	1	60	58.8
M42	4.5	13.5	0.3	1	45.6	59.9	71.3	26	25.58	26.42	17.9	1.2	65	63.1
M45	4.5	13.5	0.3	1	48.6	64.7	76.95	28	27.58	28.42	19.3	1.2	70	68.1
M48	5	15	0.3	1	52.6	69.4	82.6	30	29.58	30.42	20.9	1.6	75	73.1
M52	5	15	0.3	1	56.6	74.2	88.25	33	32.5	33.5	22.8	1.6	80	78.1

MARKING

Steel — Required

What	Steel fasteners follow DIN ISO 898 Part 1 marking; stainless and non-ferrous requirements follow the referenced DIN 267 parts
Where	As specified in the referenced part
Sizes	All sizes
Clause	DIN 933, Referenced material standards

 Confirm the ordered class and certificate.

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: DIN 933 is a withdrawn legacy standard; the current standard for this product is GB/T 5783, ISO 4017. This sheet is built to DIN 933. Dimensions can differ between the two - check the recorded correspondence on our website before substituting one for the other.

taurusfix.com