

ISO 7047

Raised countersunk head screws with cross recess



Standard	ISO 7047		
Product Type	ISO 7047:2011 specifies the characteristics of countersunk raised head screws of product grade A, with threads from M1,6 to M10 inclusive and with type H or type Z cross recess.		
Material	Stainless Steel, Carbon Steel		
Property Class	A2-70 (ISO 3506-1) · 4.8 (ISO 898-1)		
Surface Finish	Passivated, Plain, Zinc Plated, Nickel Plated		
Size Range	M1.6 - M10	Length Range	3-50 mm
Thread	ISO metric coarse pitch		

BASIS OF SPECIFICATION

WHICH STANDARD GOVERNS WHAT

Dimensions to	ISO 7047:2011
Carbon steel / Alloy steel mechanical properties to	ISO 898-1:2013
Stainless steel mechanical properties to	ISO 3506-1:2020
Product grade	A

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

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

DIMENSIONAL DATA - SIZES WE SUPPLY

ALL DIMENSIONS PER THE STANDARD

d Diameter - mm	P Thread Pitch - mm	a (max) Thread Runout - mm	dk (max) Theoretical Head Diameter - mm	dk Head Diameter - mm	dk (min) Head Diameter - mm	f (ref) Raised Head Height - mm	k Nominal Head Height - mm	r (max) Radius - mm	rf (ref) Head Radius - mm	x (max) Incomplete Thread - mm	Recess Number	m (ref) Type H Recess Width - mm	(min) Type H Penetration - mm
M3	0.5	1	6.3	5.5	5.2	0.7	1.65	0.8	6	1.25	2	3.4	1.8
M4	0.7	1.4	9.4	8.4	8.04	1	2.7	1	9.5	1.75	2	5.2	2.7
M5	0.8	1.6	10.4	9.3	8.94	1.2	2.7	1.3	9.5	2	2	5.4	2.9
M6	1	2	12.6	11.3	10.87	1.4	3.3	1.5	12	2.5	3	7.3	3.5
M8	1.25	2.5	17.3	15.8	15.37	2	4.65	2	16.5	3.2	3	9.6	4.75

d Diameter - mm	(max) Type H Penetration - mm	m (ref) Type Z / Socket Width - mm	(min) Type Z Penetration - mm	(max) Type Z Penetration - mm
M3	2.2	3.1	1.83	2.08
M4	3.2	5	2.65	3.1
M5	3.4	5.3	2.9	3.35
M6	4	7.1	3.4	3.85
M8	5.25	9.5	4.75	5.2

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	a (max) Thread Runout - mm	dk (max) Theoretical Head Diameter - mm	dk Head Diameter - mm	dk (min) Head Diameter - mm	f (ref) Raised Head Height - mm	k Nominal Head Height - mm	r (max) Radius - mm	rf (ref) Head Radius - mm	x (max) Incomplete Thread - mm	Recess Number	m (ref) Type H Recess Width - mm	(min) Type H Penetration - mm
M1.6	0.35	0.7	3.6	3	2.7	0.4	1	0.4	3	0.9	0	1.9	0.9
M2	0.4	0.8	4.4	3.8	3.5	0.5	1.2	0.5	4	1	1	2	1.2
M2.5	0.45	0.9	5.5	4.7	4.4	0.6	1.5	0.6	5	1.1	1	3	1.5
M3.5	0.6	1.2	8.2	7.3	6.94	0.8	2.35	0.9	8.5	1.5	2	4.8	2.25
M10	1.5	3	20	18.3	17.78	2.3	5	2.5	19.5	3.8	4	10.4	5.5

d Diameter - mm	(max) Type H Penetration - mm	m (ref) Type Z / Socket Width - mm	(min) Type Z Penetration - mm	(max) Type Z Penetration - mm
M1.6	1.2	1.9	0.95	1.2
M2	1.5	2.2	1.15	1.4
M2.5	1.85	2.8	1.5	1.75
M3.5	2.75	4.6	2.25	2.7
M10	6	10.3	5.6	6.05

MARKING
Steel — Not usual - marked only if the purchaser requires it

What	If the purchaser requires marking, the system of 10.3 applies: manufacturer identification mark and property class symbol
Where	Where the head shape allows it
Sizes	All sizes
Clause	ISO 898-1:2013, 10.3.3.5 Other types of bolts and screws

"Marking is not usual for screws with flat countersunk head, oval countersunk head, cheese head, pan head or similar head shapes that are slotted, cross-recessed, or with socket or other internal driving feature."

Stainless steel — Required

What	Steel group and property class, plus the manufacturer identification mark
Where	Preferably on the head, where it is possible to do so. This product is neither a hexagon head (10.3.1) nor a socket head (10.3.2), so this general clause is the one that applies
Sizes	All sizes
Clause	ISO 3506-1:2020, 10.3.3 Other types of bolts and screws

- "Other types of bolts and screws shall be marked in the same way where it is possible to do so, and preferably on the head."
- Cross-recessed raised countersunk head screw. This head shape falls under the not usual sentence of ISO 898-1 10.3.3.5, so steel parts normally carry no marking. This is a checked negative on both the product standard and the material standard, not a gap in our records.
- 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.