

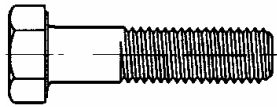
Hexagon Head Bolts - Metric Coarse Thread Class 10.9 ZND - Preferred

REFERENCE DOCUMENTS

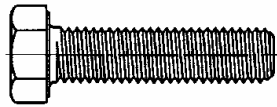
- CNH STPA020 Fastener Finishes and Material Specifications
- ISO 4014 Hexagon head bolts – Product grades A and B
- ISO 4017 Hexagon head bolts – Product grades A and B Full Thread
- ISO 888 Bolts screws and studs – Nominal lengths and thread lengths for general purpose bolts
- ISO 898-1 Mechanical properties of fasteners made of carbon steel and alloy steel
- ISO 6157-3 Fasteners - Surface Discontinuities

When a standard is referenced in a drawing or specification, it is understood that the reference is to the latest revision of the standard, unless stated otherwise.

For cross-reference listing of company part numbers, go to [Metric Standard Parts Cross Reference](#).



ISO 4014 Bolt with shank



ISO 4017 Bolt fully threaded

- Thread Length: ISO 888
- Material: Class 10.9 ISO 898-1
- Finish: Zinc Dichromate Yellow (ZND) per STPA020 and MAT0310
- Head dimensions: ISO 4014, ISO 4017

Typical part description for BOM's and CAD drawings

BOLT, M12X30 FULL 10.9 ZND

Bolts and screws shall be free from burrs, seams, laps, loose scale, irregular surfaces and any defects affecting their serviceability (ISO 6157-3).

ISSUED BY DPS 28FEB08	ECN NO. 35060512	NAME CLASS 10.9 ZND METRIC BOLT - PREFERRED	
APPROVED BY SWH 28FEB08	REV. H	PAGE 1 OF 3	CNH NUMBER 87027055

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Head Size Issues.

At the time of the merger, Case was already using ISO standards as a basis for standard hardware parts, while New Holland was generally using DIN standards. CNH standard parts will be specified to ISO standards whenever available.

When we began to combine Case and New Holland standard parts there were systems issues preventing the use of the former Case alpha-numeric part numbers in the New Holland systems. To resolve this problem, it was determined to use the New Holland number as the surviving number whenever one was available. If an all numeric format number was not available, one was created.

Cross references, were based on overall dimensions and performance characteristics. In the case of hex head screws, bolts and nuts, some dimensional mismatches resulted; namely head dimensions as follows:

Bolt size	Across flats dimension	
	Old DIN	CNH, ISO
M10	17	16
M12	19	18
M14	22	21
M22	32	34

Bolts in this standard, which may have formerly been supplied to these old across flats dimensions must now be delivered with the current ISO dimensions, unless explicit engineering deviation to use bolts to the old dimensions has been granted.

It is important that all bolts of a given diameter on a product be to the same head size. Therefore, bolts to the old and current standard should not be mixed.

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Table 1. Preferred Metric Hexagon Head Bolts

		Bolt Nominal Diameter						
	Length	6	8	10	12	16	20	
Bolt Fully Threaded ISO 4017	12	86508616						
	16	86639037	43232			Non preferred sizes See STPB680		
	20	86505530	43233	9861444				
	25	86639038	43234	9846677	398792			
	30	86508617	43235	9515003	43260			
Bolt With Shank ISO 4014	35	86579344	86639209	86624978	9824642	86529976		
	40	86639188	9780069	43248	337563	374835	9512573	
	45	84068386	86639210	86508618	412087	86508624	86500658	
	50	86556136	86625003	43249	337476	412398	9843590	
	60	86639189	86625005	86508619	43263		9843495	
	70		84042348	355788	86505259	9847468	412641	
	80		379748	43252	412085	86577946	9846949	
	90			86508620	412605	86521733	9846950	
	100			43253	86508622	86541970	9843612	
	110				9501756	84036080	86508350	
	120				86639151	43281	86511674	
	130	Non preferred sizes See STPB590					392531	86639145
	140					1791248	84025013	
	150					84439252	9849411	
	160					87015582	73171000	
	180						84334022	
	200						86511002	
Bolt Nominal Diameter		6	8	10	12	16	20	
Coarse Thread Pitch		1	1.25	1.5	1.75	2	2.5	
Length of thread for								
Bolt length to 125		18	22	26	30	38	46	
Bolt length 126 to 200		24	28	32	36	44	52	
Bolt length: >200		37	41	45	49	57	65	
Width across flats nom./ max		10	13	16	18	24	30	
Width across corners min.		11.05	14.38	17.77	20.03	26.75	33.53	
Head height max.		4.15	5.45	6.58	7.68	10.18	12.72	