



# Standard Part

## Hex Head Bolts - Coarse Full Thd 10.9 ZND - Non-Preferred

STPB680

87027245

Rev AR

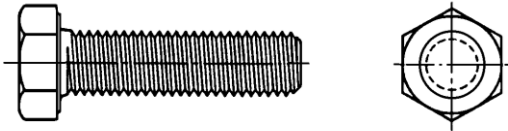
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### REFERENCE DOCUMENTS

CNH STPA020	Fastener Finishes and Material Specifications
CNH STPB580	Hex Metric Coarse 10.9 ZND Preferred Sizes
CNH STPB590	Hex Metric Coarse 10.9 ZND Non-preferred
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 [PARTsolutions](#).



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

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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.

Part numbers that retain the DIN head sizes are shown in Table 2.



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**Table 1. Non-Preferred Metric Hexagon Head Bolts**

LENGTH	Bolt Nominal Diameter							
	4	5	6	8	10	12	14	16
8	10445831		11635731					
10	10444531	10977531	10979431	16042931	15857831			
12	10444631	10977631		43231				
14		10977731	10902131	16043131				
16		10977831			87547661			
18		10977931	10902331	16043331	7121387			
20		10978031				43258		84331289
22			10902531	16043531				
25		10978231						86639032
28				16043731				
30			87317695					86508623
35							73184732	
40				86643108			87555733	
45				15213531	92717831		87015765	
50				16040731		91838210	87316174	
55				15213631			86589011	9843611
60				15213731	87017353	1637759		9828248
65				15213831				379280
70				15213931	86639030	91838213		
75								
80						87015764		
90						412485		
100				86639040				
110								87746968
120								47707940
130				92151944				
140						412719		84312240
150						47598614		
160								87698773
170								84180949
200								87736152
260								47740650
320								86639034
380								84129696
Bolt Nominal Diameter	<b>4</b>	<b>5</b>	<b>6</b>	<b>8</b>	<b>10</b>	<b>12</b>	<b>14</b>	<b>16</b>
Coarse thread pitch	0.7	0.8	1	1.25	1.5	1.75	2	2
Width across flats nom./ max	7	8	10	13	16	18	21	24
Width across corners min.	7.66	8.79	11.05	14.38	17.77	20.03	23.35	26.75
Head heightmax.	2.92	3.65	4.15	5.45	6.58	7.68	8.98	10.15





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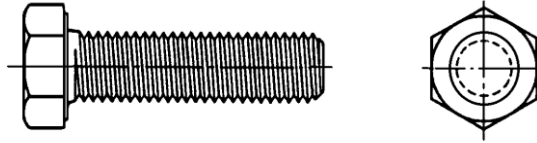
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Thread Length: ISO 888  
 Material: Class 10.9 ISO 898-1  
 Finish: Zinc Dichromate Yellow (ZND)  
 per STPA020 and MAT0310  
 Specifications: DIN 933 (Withdrawn standard)

DIN 933 has been withdrawn and is replaced by  
 ISO 4017

**Table 2. Bolts with heads per obsolete DIN standards**

Do NOT use for new design

LENGTH	Nominal Diameter		
	10	12	14
10	15857831		
12	10857231	15858331	
14	10979331		
16	10979231	16055231	
18	11103031	11112031	
20	11106031	11112131	
22	11106131	11109231	
25	11106231	11112231	11115331
28	11106331	11112331	
30	11106431	11112431	11115531
32	11106531	11112531	
35	11106631	11112631	11115631
38		11112731	
40	16040831	11112831	11115831
45	11098631	11599531	
50	16160131	15215731	16041131
55	15214731		15217731
60		15215831	
65	15214931		
70	15215031		
85		15216331	
115		15216931	
Bolt Nominal Diameter	10	12	14
Coarse thread pitch	1.5	1.75	2
Width across flats nom./max	17	19	22
Width across corners min.	18.9	21.1	24.49
Head heightmax.	6.58	7.68	8.98