



Standard Part

Hex Head Bolts Thread CL 8.8 ZND - Non-Preferred

STPB520

87027054

Rev BC

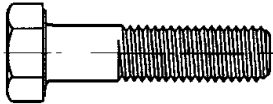
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REFERENCE DOCUMENTS

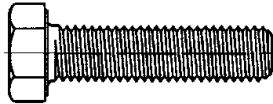
- CNH STPA020 Fastener Finishes and Material Specifications
- CNH STPB510 Hex Metric Coarse 8.8 ZND Preferred Sizes
- CNH STPB670 Hex Metric Coarse Full thread 8.8 ZND
- ISO 4014 Hexagon head bolts – Product grades A and B
- ISO 888 Bolts screws and studs – Nominal lengths and thread lengths for general purpose bolts
- ISO 898-1 Mechanical properties of fasteners made of carbon steel and alloy steel
- ISO 6157-3 Fasteners - Surface Discontinuities
- FIAT 10312 Hexagon Bolts

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](#).



ISO 4014 Bolt with shank



ISO 4017 Bolt fully threaded

- Thread Length: ISO 888
- Material: Class 8.8 ISO 898-1
- Finish: Zinc Dichromate Yellow (ZND) per STPA020 and MAT0310
- Head dimensions: ISO 4014

Typical part description for BOM's and CAD drawings

BOLT, M12X30 FULL 8.8 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.



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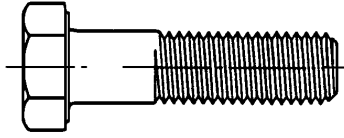
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Thread Length: ISO 888
 Material: Class: 8.8 ISO 898-1
 Finish: Zinc Dichromate Yellow (ZND)
 Head dimensions: DIN 931(DIN 931 has been withdrawn and is replaced by ISO 4014)

Table 1. Non-Preferred Metric Hexagon Head Bolts

Length	Bolt Nominal Diameter					
	4	5	6	8	10	12
12				918369		
16		10977821				
25	10445221	707771884				
30	385682	86508566				
32			10902921			
35		86544168		16043921	707702319	
40	87384106	86025725			120068	
45	1725021	86508567				
50	47422258	10978821				
55			10903721	16044321	412151	300512
60	15200521	15201121				
65		7120995	10903921	300510	120071	300809
70			86508569			
75			11030421	331175	83931335	350460
80			86508570			
85			11030921	16044921	87015575	86624981
90			9850685	86508571		
95			788212	16045121	7120323	87028007
100			86505841	412215		
105				16045321	7120049	
110			1768926	44028	86508573	
115				16045521		
120				86528166	86508574	
125			2292390	16045721	84058418	
130			2268340	381522	86508575	395277
135				16045921		
140			2900704	300807	331168	328048
145					1709624	
150				412422	86624000	385427
160				396420	86509596	397393
165					2292557	
170			2426425	412110	326100	380423
175					15973321	
180				87690472	991741	336383
185						450974
Bolt Nominal Diameter	4	5	6	8	10	12
Course Thread Pitch	0.7	0.8	1	1.25	1.5	1.75
Length of thread for						
Bolt length to 125	14	16	18	22	26	30
Bolt length 126 to 200	20	22	24	28	32	36
Bolt length: >200	33	35	37	41	45	49
Width across flats nom./ max	7	8	10	13	16	18
Width across corners min.	7.66	8.79	11.05	14.38	17.77	20.03
Head height max.	2.92	3.65	4.15	5.45	6.58	7.68

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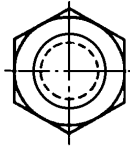
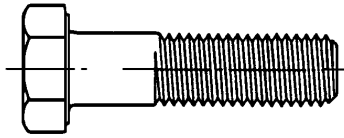
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Thread Length: ISO 888
 Material: Class: 8.8 ISO 898-1
 Finish: Zinc Dichromate Yellow (ZND)
 Head dimensions: DIN 931(DIN 931 has been withdrawn and is replaced by ISO 4014)

Table 1 Continued. Non-Preferred Metric Hexagon Head Bolts

Length	Bolt Nominal Diameter						
	14	16	18	20	22	24	30
25							
30							
32							
35							
40							
45		707883796					
50	280264						
55		87573374					
60	86523012	120091		707772320			
65		355259					
70	86509598		11122321				
75	86518210	11119421	15984721	11125221			
80			11122521			11398121	47754385
85		87575686		48094699			
90	86509599					16054921	
95				47836149			
100	86508582		16040321			11131621	
105							
110	300812		84281054			15206021	
115				47707820			
120						15206121	1656891
125							
130					84285333	15206321	
135				84294532			
140	86624982				48090681	15206421	
145							
150			47870965			15206521	1886177
160	86979016			62125		1740079	
165							
170		86508584		84444625			
180	47679414	15202521				87026664	
Bolt Nominal Diameter	14	16	18	20	22	24	30
Course Thread Pitch	2	2	2.5	2.5	2.5	3	3.5
Length of thread for							
Bolt length to 125	34	38	42	46	50	54	66
Bolt length 126 to 200	40	44	58	52	56	60	72
Bolt length: >200	53	57	71	65	69	73	85
Width across flats nom./ max	21	24	27	30	33	36	46
Width across corners min.	23.35	26.75	29.56	32.95	37.29	39.55	50.85
Head height max.	8.98	10.15	11.72	12.72	14.22	15.22	19.12



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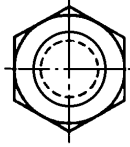
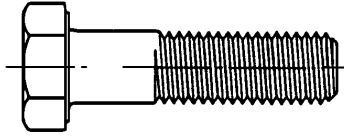
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 Head dimensions: DIN 931(DIN 931 has been withdrawn and is replaced by ISO 4014

Table 1 Continued. Non-Preferred Metric Hexagon Head Bolts

Length	Bolt Nominal Diameter				
	8	10	12	14	16
190	47595159	936186	382181		86508585
195	87522762	1709625			
200	87571260	337474	87560260		382358
205		87015576			
210	87695409				9780015
220	87522766	412005	364053		86624001
225	87363999	8402123			
230		412350	412585		120094
235		2426170			
240		48145638			86508586
245		86624977			
250	86025724	73170989			86622969
260		412004	84019085		86508587
265					2426706
270					1758381
280	87346693				9780016
290					
300			86561843		84056369
310					
320			84018914		87026663
330					87579332
340			84023922		
360					
380					
420					
490					
Bolt Nominal Diameter	8	10	12	14	16
Course Thread Pitch	1.25	1.5	1.75	2	2
Length of thread for					
Bolt length to 125	22	26	30	34	38
Bolt length 126 to 200	28	32	36	40	44
Bolt length: >200	41	45	49	53	57
Width across flats nom./ max	13	16	18	21	24
Width across corners min.	14.38	17.77	20.03	23.36	26.75
Head height max.	5.45	6.58	7.68	8.98	10.15



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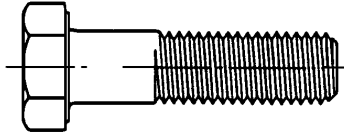
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Table 1 Continued. Non-Preferred Metric Hexagon Head Bolts

Length	Bolt Nominal Diameter			
	18	20	24	30
190		380422		
200			86503155	
210		381523		
220	92736084	44085	1627602	2031770
230		47844945		
240		86509730	86529762	1758574
250		90352989		
260		73178204		
280		84056367	1590069	
290		86508065		
300		47884330		
310			1590070	
320		1590067		
330		87560270		
340		1570102	1590071	
360		1570099		
380		1590068		
420		1570101		
490		1570103		
Bolt Nominal Diameter	18	20	24	30
Course Thread Pitch	2.5	2.5	3	3.5
Length of thread for				
Bolt length to 125	42	46	54	66
Bolt length 126 to 200	58	52	60	72
Bolt length: >200	71	65	73	85
Width across flats nom./ max	27	30	36	46
Width across corners min.	29.56	32.95	39.55	50.85
Head height max.	11.72	12.72	15.22	19.12



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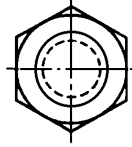
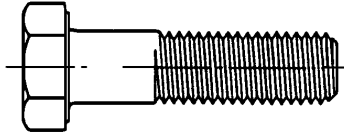
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Table 2. Bolts with heads per obsolete DIN standards

Non-preferred parts
 Do NOT use for new design

Length	Bolt Nominal Diameter		
	10	12	14
30			11115521
45	11107021		
50	11107221	11113221	
55	11107321	11113321	
60	11107421	11113421	11116421
65	11107521	11113521	11116521
70	11107621	11113621	
75	11107721	11113721	
80	11107821	11113821	11116821
85	11107921		
90		11114021	
95	11108121	11114121	
100	11108221	11114221	
105		11114321	
110	11108421	11114421	
120	11108621	11114621	15888921
130	11108821	11114821	11117821
140	11109021	11115021	
150	11133521	11115221	15201821
155	11133621		
160	15201521	15201621	
170		16163121	
180		15201721	
190		16162921	
210		364052	11094921
Bolt Nominal Diameter	10	12	14
Course Thread Pitch	1.5	1.75	2
Length of thread for			
Bolt length to 125	26	30	34
Bolt length 126 to 200	32	36	40
Bolt length: >200	45	49	53
Width across flats nom./ max	17	19	22
Width across corners min.	18.9	21.1	24.49
Head height max.	6.58	7.68	8.98