



Standard Part

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

STPB590

87027056

Rev BE

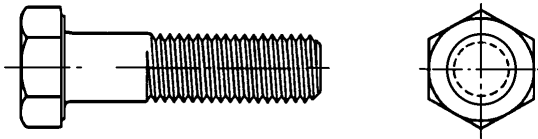
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REFERENCE DOCUMENTS

CNH STPA020	Fastener Finishes and Material Specifications
CNH STPB580	Hex Metric Coarse 10.9 ZND Preferred Sizes
CNH STPB680	Hex Metric Coarse Full thread 10.9 ZND
ISO 4014	Hexagon head bolts – Product grades A and B
ISO 888	Bolts screws and studs – Nominal lengths and Tread 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 4014

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).

AUTHOR	APPROVED BY	ECO	PART NUMBER
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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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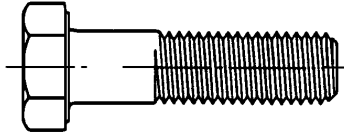
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Thread Length: ISO 888
 Material: Class: 10.9 ISO 898-1
 Finish: Zinc Dichromate Yellow (ZND) per STPA020 and MAT0310
 Head dimensions: ISO 4014

Table 1. Non-Preferred Metric Hexagon Head Bolts CL 10.9 ZND

Length	Bolt Nominal Diameter							
	6	8	10	12	14	16	18	20
55	10903731	16044331		87021825				
58		81867934						
65	9850137	86639211	1185622	86624980		11119231		
70	86639207				87556906			
75	11030431	16044731	86624979	87648725	412084	11119431	90356060	
80	43228				91859800		92679425	
85		16044931	1537277	86979023	87303344	1148521		87530315
90	11032331	86516395			721789		16040031	
95		16045131		91799019	91799020	11119831		11125631
100	86639208	86512165			412082			
105					92039592			47777792
110		86516527	86556139		47633371		11123131	
115			7120985	86900194	1758991			
120	11031431	16045631	1186238		2700505			
125						76039934		
130		86574721	86508621	9847703	87386580			
135						11120631		47650087
140		16046031	7120741	1768807			2900033	
145								87629046
150		16046231	86639150	44151				
160								
170		16046531	47646874		87534077	15202431		86624992
180				1909677		9840670		15204031
185								
190			2142569	87375465		87646161		86624993
195			2900906					
Bolt Nominal Diameter	6	8	10	12	14	16	18	20
Coarse Thread Pitch	1	1.25	1.5	1.75	2	2	2.5	2.5
Length of thread for								
Bolt length to 125	18	22	26	30	34	38	42	46
Bolt length 126 to 200	24	28	32	36	40	44	48	52
Bolt length: >200	37	41	45	49	53	57	61	65
Width across flats nom./ max	10	13	16	18	21	24	27	30
Width across corners min.	11.05	14.38	17.77	20.03	23.35	26.75	30.14	32.95
Head height nom.	4	5.3	6.4	7.5	8.8	10	11.5	12.5



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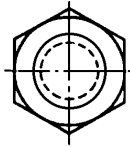
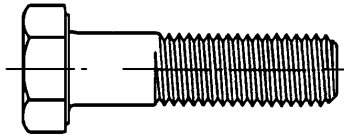
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Thread Length: ISO 888
 Material: Class: 10.9 ISO 898-1
 Finish: Zinc Dichromate Yellow (ZND) per STPA020 and MAT0310
 Head dimensions: ISO 4014

Table 1 Continued. Non-Preferred Metric Hexagon Head Bolts CL 10.9 ZND

LENGTH	Bolt Nominal Diameter					
	22	24	27	30	36	39
65	84326211	92717834				
70	87690481					
80	87670757					
90		87017607				
100		87015585				
110	1768905	9780064		1627301		
120	2115104	86639185		44139		
130	86639171	87015586		76039779		
135		16162731				
140	86639172	86639186		86541421		
150		87301267		47669688		
160	86639173	86505748				
170	87530327			1836642		
180		16047131		1637386		
190		73187325		92117062		2292620
200		86528190				
210		87306413				
220		44164		87017906		2700801
230		16055337		47978817		
240				76040319	47988656	
250		51471334				
260		86584034		87497922	2426580	
270		86639187				
280				2079796		
290		87316948				
300		73170150				
310				1768224		
320				87358874	2142329	
330		87530317				
340				86508625	2213930	
350					2739234	
380		87306677				
440					2247068	
450		87017608			2900434	
460				2186566		
500		47706862				
560					2186567	
Bolt Nominal Diameter	22	24	27	30	36	39
Coarse Thread Pitch	2.5	3	3	3.5	4	4
Length of thread for						
Bolt length to 125	50	54	60	66	78	84
Bolt length 126 to 200	56	60	66	72	84	90
Bolt length: >200	69	73	79	85	97	103
Width across flats nom./ max	34	36	41	46	55	60
Width across corners min.	37.29	39.98	45.2	50.85	60.79	66.44
Head height nom.	14	15	17	18.7	22.5	25

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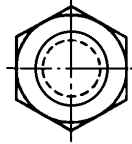
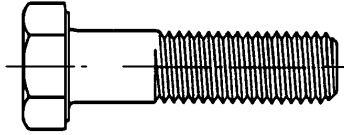
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Thread Length: ISO 888
 Material: Class: 10.9 ISO 898-1
 Finish: Zinc Dichromate Yellow (ZND) per STPA020 and MAT0310
 Head dimensions: DIN 931 (DIN 931 has been withdrawn and is replaced by ISO 4014)

Table 2 Bolts with heads per obsolete DIN standards CL 10.9 ZND

Non-preferred parts, do NOT use for new design.

LENGTH	Bolt Nominal Diameter		
	10	12	14
40	11106831		
45	11107031	11113031	
50	11107231	11113231	
55	11107331	11113331	11116331
60	11107431	11113431	11116431
65	11107531	11113531	11116531
70	11107631	11113631	11116631
75	11107731	11113731	
80	11107831	11113831	11116831
85	11107931	11113931	
90	11108031	11114031	11117031
95	11108131	11114131	11117131
100	11108231	11114231	11117231
110	11108431	11114431	11117431
115			11117531
120	11108631	11114631	15888931
125		11114731	
130	11108831	11114831	11117831
135		11114931	
140	11109031	11115031	
150		11115231	
160			11118331
170		16163131	
180		15201731	
200			15202231
Bolt Nominal Diameter	10	12	14
Coarse 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