



# Preferred Parts

Number:	BM-041
Date Issued:	A-FEB06

ELECTRONIC DOCUMENT IN THE VIEWER IS CONTROLLED. PRINTED COPY IS AN UNCONTROLLED DOCUMENT.

## HEAVY HEX FLANGE HEAD BOLTS METRIC SERIES (Superseded)

This standard has been superseded by CNH Standard Parts, STPB820 (87305326), Heavy Hexagon Flange Head Bolts - Metric Coarse - Preferred, STPB830 (87305327), Heavy Hexagon Flange Head Bolts - Metric Coarse - Non-Preferred and STPB835 (87695410) Hexagon Flange Bolts Metric.

The controlled versions of CNH specifications and standards are published on the CNH Intranet site.

The documents are also available on the CNH electronic viewing system (e.g. eViewer). Suppliers are able to access these documents on CSCN (CNH Supplier Communications Network).

The superseded standard remains available for viewing following this page if needed.

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METRIC SERIES  
(Superseded)**

**GENERAL SPECIFICATIONS**

**GENERAL:** This specification contains the essentials of the following Standards:

- American National Standards Institute: ANSI B18.2.3.9M (M10 to M20)
- German Institute of Standards: DIN 6921
- International Organization for Standardization: ISO/DIS 8102

Sizes M6, M8, and M10 according to DIN 6921 conform to width across flats dimensions specified in this Standard.

Bolts manufactured to DIN 6921 will differ from width across flats dimensions specified for M12 (2 mm smaller), M14, M16, and M20 (3 mm smaller) sizes.

It is recommended that locations, such as European operations sourcing to DIN, monitor stock and procurement practices to assure consistent production stock of flange head bolts.

**PREFERRED PARTS POLICY:** Preferred parts are so designated to reduce variety of parts and assure maximum availability, interchangeability, and cost savings.

- Material Finish: Class 8.8 Zinc with Chromate for M6 and M8 only
- Class 8.8 Phosphate coated for M6 and M8 only
- Class 10.9 Phosphate coated for all others
- Class 9.8 is acceptable alternate material for 8.8

Length Increments:

Dimensions in millimetres.

Lengths mm	M6	M8	M10	M12	M16	M20
12	X					
16	X	X				
20	X	X	X			
25	X	X	X	X		
30	X	X	X	X	X	
35	X	X	X	X	X	
40	X	X	X	X	X	X
45	X	X	X	X	X	X
50	X	X	X	X	X	X

Lengths mm	M6	M8	M10	M12	M16	M20
60	X	X	X	X	X	X
70	X	X	X	X	X	X
80	X	X	X	X	X	X
90	X	X	X	X	X	X
100		X	X	X	X	X
110		X	X	X	X	X
120			X	X	X	X
130					X	X
140					X	X
150					X	X
160					X	X

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**DIMENSIONS:** All dimensions in this Standard are in millimetres. All unspecified detail must conform to one or more of the listed Standards.

**THREADS:** Threads shall be metric standard coarse pitch thread conforming to ANSI B1.13M or ISO 965/2. Tolerance Class 6g shall apply.

Basic thread lengths for heavy hex flange head bolts are the same as for metric hex head bolts. Refer to Preferred Parts Section BM-001.

**MATERIAL:** Steel conforming to Property Class 8.8 and 10.9 per ISO 898/1 or SAE J1199. (Class 9.8 may be supplied for Class 8.8 at manufacturer's discretion in size M6 through M16.)

**MARKING:** Steel bolts of Property Class 8.8 or higher shall be marked with the Property Class symbol with the manufacturer's identification symbol.

**FINISHES:** Bolts shall be furnished plain (PLN), plated, or coated in accordance with Case Engineering Materials Specification:

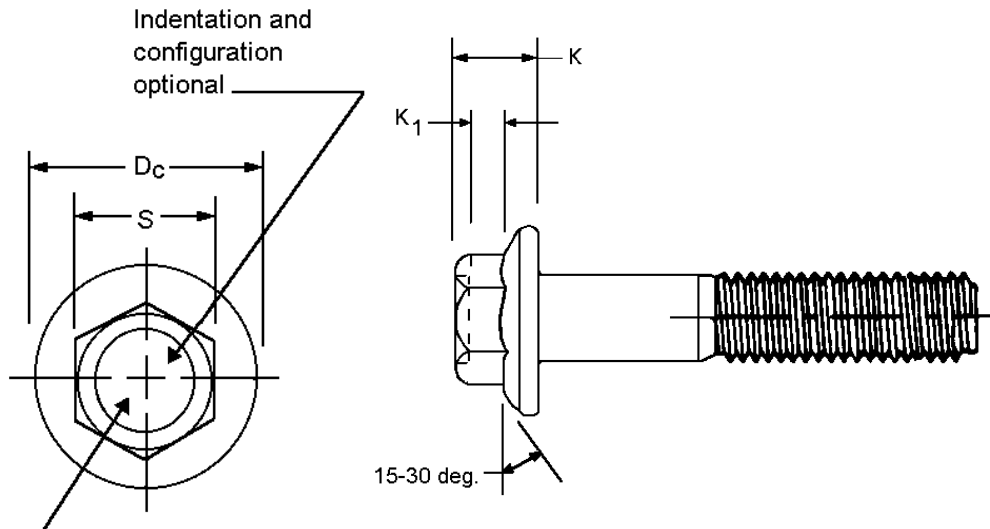
Phosphate Coating	(PHC)	- MS 91
Zinc with Chromate	(ZND)	- MS 201
Black Zinc	(BZN)	- MS 203
Black Teflon	(PTF)	- MS 61
Dorrtech	(DOR)	- A-011 Standard Parts Book
Electro Polyseal	(POL)	- A-011 Standard Parts Book

**WORKMANSHIP:** Bolts and screws shall be free from burrs, seams, laps, loose scale, irregular surfaces, and any defects affecting their serviceability.

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### HEAVY HEX FLANGE HEAD BOLTS METRIC SERIES (Superseded)



Property class and manufacturer's identification to appear on top of head

NOMINAL SIZE		M6	M8	M10	M12	M14*	M16	M20	
PITCH		1	1.25	1.5	1.75	2	2	2.5	
DC	FLANGE DIAMETER	MAX	14.2	18	22.3	26.6	30.5	35	43
K	HEAD HEIGHT	MAX	6.6	8.1	9.2	10.4	12.4	14.1	17.7
K1	WRENCHING HEIGHT	MIN	2.5	3.2	3.6	4.6	5.5	6.2	7.9
S	HEX WIDTH	MAX	10	13	15	18	21	24	30
		MIN	9.76	12.73	14.57	17.57	20.48	23.16	29.16

\* Non-Preferred Size

NOTE: It is common practice in ISO Standards to omit thread pitch from the product size designation when screw threads are the metric coarse thread series, e.g., M10 is M10 X 1.5.