



# Standard Part

## Heavy Hexagon Flange Bolts Metric

<b>STPB820</b>
<b>87305326</b>
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### 1. SCOPE

This standard establishes the requirements for heavy hexagon head flange bolts as defined by EN 1665, "Hexagon Bolts with Flange – Heavy series." All part numbers contained in this document are classified as 'preferred' as defined by ENPA110, "Standard Preferred Parts," and are compliant with EN 1665.

### 2. CONTENTS

[TABLE 1: Heavy Hexagon Flange Bolts General Dimensions](#)

[TABLE 2: Heavy Hexagon Flange Bolts](#)

### 3. RELATED DOCUMENTS

#### 3.1 REFERENCE STANDARDS

- DIN 6921—Hexagon Flange Bolts
- EN 1665—Hexagon Bolts With Flange – Heavy series
- CNH STPA020—Fastener Finishes and Material Specifications
- CNH MAT0310—Zinc Plating
- Case MS-91—Phosphate Conversion Coating - Ferrous Materials
- 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

#### 3.2 REPLACED STANDARDS

- Case BM-041—Heavy Hex Flange Head Bolts Metric Series General Specifications
- Case BM-042—Heavy Flange Head Bolts - Heavy Hex - Preferred
- Case BM-043—Heavy Hex Flange Head Bolts - Heavy Hex - Non Preferred
- FNHA 1-A-050—Screw, Cap, Hex Head, Flange, Class 8.8, ZnCr, Metric
- Fiat 10366—Flanged Hex Head Bolts

### 4. REQUIREMENTS

#### 4.1 DIMENSIONS

Reference EN 1665 for all dimensions not specified in this document. All dimensions in this standard are in millimeters. M6 and M8 Flange Head Bolts can be supplied per DIN 6921

#### 4.2 MATERIAL

All flange bolts defined in this standard must be manufactured from either ISO Class 8.8 or ISO Class 10.9 materials. See ISO 898/1, "Mechanical Properties of Fasteners made from Carbon Steel and Alloy Steel", for details.

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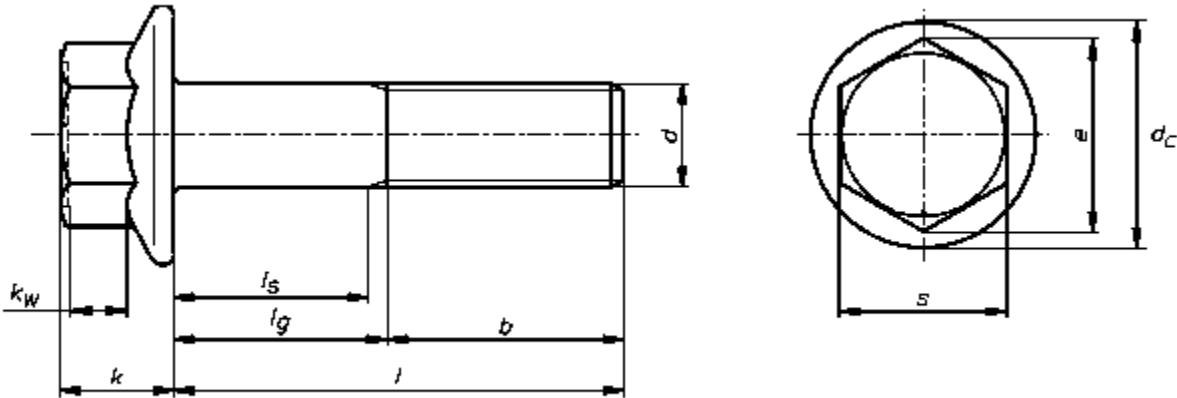
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### 4.3 FINISH

CNH STPA020 Fastener Finishes and Material Specifications

### 5. CROSS REFERENCE

For cross-reference listing of company part numbers, go to [CNH Catalogue](#).

**TABLE 1: Heavy Hexagon Flange Bolts General Dimensions**


Nominal Diameter		<b>M6</b>	<b>M8</b>	<b>M10</b>	<b>M12</b>	<b>M16</b>	<b>M20</b>
Pitch		1	1.25	1.5	1.75	2	2.5
<i>d</i> Body diameter	Max	6	8	10	12	16	20
	Min	5.82	7.78	9.78	11.73	15.73	19.67
<i>s</i> Width across flats	Max	<b>10</b>	<b>13</b>	<b>16</b>	<b>18</b>	<b>24</b>	<b>30</b>
	Min	9.78	12.73	15.73	17.73	23.67	29.67
<i>e</i> Width across corners	Min	10.95	14.26	17.62	19.86	26.51	33.23
<i>d<sub>c</sub></i> Flange diameter	Max	14.2	18.0	22.3	26.6	35	43
<i>k<sub>w</sub></i> Wrench height	Min	2.5	3.2	5.1	5.6	7.3	8.9
<i>k</i> Head height	Max	6.6	8.1	10.4	11.8	15.4	18.9
<i>b</i> Nominal thread length	<i>l</i> ≤ 125	18	22	26	30	38	46
	125 < <i>l</i> ≤ 200		28	32	36	44	52
	<i>l</i> > 200					57	65
	Fully threaded <i>l</i> ≤	25	30	35	40	50	60

Lengths (*l*): 10, 12, 16, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 180, 200



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**TABLE 2: Heavy Hexagon Flange Bolts**

Nominal Diameter	Length	Thread Length	Material	Finish	Part Number
M6	10	FULL	8.8	DAC	16297624
M6	10	FULL	8.8	ZND	48017611
M6	12	FULL	8.8	ZND	86050272
M6	12	FULL	8.8	DAC	90391693
M6	16	FULL	8.8	ZND	9804255
M6	16	FULL	8.8	DAC	16286024
M6	20	FULL	8.8	ZND	9804256
M6	20	FULL	8.8	DAC	90357952
M6	20	18	8.8	DAC	16286124
M6	25	FULL	8.8	ZND	9804257
M6	30	18	8.8	ZND	86511839
M6	30	18	8.8	DAC	16286324
M6	35	18	8.8	ZND	87015931
M6	40	18	8.8	ZND	86511840
M6	40	18	8.8	BZN	84227696
M6	45	18	8.8	ZND	47824196
M6	45	18	8.8	DAC	90358073
M6	50	18	8.8	ZND	87026500
M6	60	18	8.8	ZND	84188432
M6	70	18	8.8	ZND	87023526
M6	80	18	8.8	ZND	84382751
M8	14	FULL	8.8	DAC	16281924
M8	14	FULL	8.8	ZND	92240343
M8	16	FULL	8.8	ZND	86511841
M8	16	FULL	8.8	DAC	90358074
M8	20	FULL	8.8	ZND	9804258
M8	25	FULL	8.8	ZND	9671714
M8	25	FULL	8.8	DAC	90358075
M8	25	22	8.8	DAC	16287224
M8	30	FULL	8.8	ZND	9804260
M8	40	22	8.8	DAC	16287524
M8	40	22	8.8	ZND	86511842
M8	45	22	8.8	ZND	86609280
M8	45	22	8.8	DAC	90358077
M8	50	22	8.8	BGM	92112852
M8	50	22	8.8	ZND	86511481
M8	60	22	8.8	ZND	86511843
M8	60	FULL	8.8	ZND	47616068
M8	70	22	8.8	ZND	87015860
M8	75	22	8.8	ZND	92199250
M8	80	22	8.8	ZND	86705425
M8	90	22	8.8	ZND	84294528
M8	100	22	8.8	ZND	86511844
M12	25	FULL	8.8	ZND	9804266
M12	25	FULL	8.8	DAC	90506842
M12	35	FULL	10.9	PHC	87010705
M12	60	30	10.9	PHC	87015908



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TABLE 2: Heavy Hexagon Flange Bolts (Continued)

Nominal Diameter	Length	Thread Length	Material	Finish	Part Number
M12	70	30	8.8	ZND	87015925
M12	70	30	10.9	PHC	87386563
M12	75	30	10.9	PHC	47446500
M12	90	30	10.9	PHC	86639270
M12	95	30	8.8	ZND	47835648
M16	45	FULL	8.8	ZND	87015926
M16	110	38	10.9	PHC	92167881
M16	120	38	8.8	ZND	87025218
M16	120	38	8.8	DAC	90358078
M16	120	38	10.9	PHC	87015910
M16	125	38	10.9	PHC	84580739
M16	150	44	10.9	PHC	87690477
M16	225	57	8.8	ZND	47764641
M20	50	FULL	8.8	ZND	47674020
M20	130	52	8.8	ZND	47752548
M20	150	52	10.9	PHC	47803082