



# Standard Part

## Hexagon Nuts - Metric Coarse Thread, Preferred and Non-Preferred

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### 1. SCOPE

The fasteners defined by this specification are preferred and non-preferred metric coarse thread Hex Nuts.

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.

### 2. PART DESCRIPTION

Typical part description for BOM's and CAD drawings entered by Standards.

NUT, M12 6 ZND

NUT, M8 8 PLN

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

### 3. RELATED DOCUMENTS

#### 3.1 REFERENCE STANDARDS

CNH STPA020—Fastener Finishes and Material Specifications

CNH MAT0310—Zinc Plating

DIN 6330—Hexagon Nuts with Height of 1.5xDiameter

SAE J122—Surface Discontinuities on Nuts

ISO 4032—Hexagon nuts, style 1- Product grades A and B

ISO 898/2—Mechanical Properties of Fasteners

Fiat 10112—Regular Hexagon Nuts

Iveco 18-1103—Zinc-Nickel Electrolytic Coating for Ferrous Metal Parts

#### 3.2 REPLACED STANDARDS

Case EM-001—Hex Nuts General Specification

Case EM-002—Hex Nuts Class 5 & 10 ZND & PHC, Preferred

Case EM-003—Hex Nuts Non-Preferred

NH FNHA-1-A-310.00—Hex Nuts Class 8 Coarse Threads ZND

NH FNHA-1-A-320.00—Hex Nuts Class 8 Coarse Threads PLN

NH FNHA-1-A-340.00—Hex Nuts Class 10 Coarse Threads ZND

### 4. REQUIREMENTS

#### 4.1 MATERIAL

Material per CNH STPA020 and ISO 898/2.

Stainless Steel Material A4-80 per ISO 3506-2

AUTHOR	APPROVED BY	ECO	PART NUMBER
A KHAN	19SEP24	A KHAN	19SEP24
		35393473	<b>87028094</b>

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### 4.2 NUT IDENTIFICATION

Hex nuts of property classes equal to or higher than 8 shall be marked with the property class designation symbol per ISO 898/2.

### 4.3 THREAD GEOMETRY

Hex Nut thread geometry shall conform to ISO general purpose metric coarse pitch threads.

### 4.4 SURFACE DISCONTINUITIES

All products under this specification shall be free from burrs, seams, laps, loose scale, irregular surfaces and any defects affecting their serviceability per SAE J122 (Surface Discontinuities on Nuts).

### 4.5 DIMENSIONS

All dimensions in this standard are in millimeters. All unspecified detail shall conform to ISO 4032.

## 5. 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.

It is important that all fasteners of a given diameter on a product be to the same head size. Therefore, fasteners to the old and current standard should not be mixed.

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

Fasteners 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 fasteners to the old dimensions has been granted.



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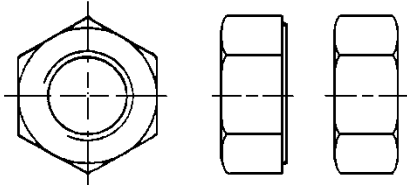
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**Table 1. Metric Hex Nut Dimensions (ISO 4032)**

Nominal Diameter	Pitch	Width across Flats nom./ max	Width across Corners min.	Height max.
2*	0.4	4	4.32	1.6
3*	0.5	5.5	6.01	2.4
4*	0.7	7	7.66	3.2
5*	0.8	8	8.79	4.7
6	1	10	11.05	5.2
8	1.25	13	14.38	6.8
10	1.5	16	17.77	8.4
12	1.75	18	20.03	10.8
14*	2	21	23.35	12.8
16	2	24	26.75	14.8
18*	2.5	27	29.56	15.8
20	2.5	30	32.95	18
22*	2.5	34	38.29	19.4
24*	3	36	39.55	21.5
27*	3	41	45.2	23.8
30*	3.5	46	50.85	25.6
36*	4	55	60.79	31
42*	4.5	65	71.3	34

\* Non-Preferred Nominal Diameter



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Table 2a. Metric Coarse Thread Hexagon Nuts (ISO 4032)

Nominal Diameter	Material Class	Nut Finish								
		Preferred			Non-Preferred					
		PHC	ZND	BZN	BGM	DAC	DOR	PHC	PLN	ZND
2	8									92034124
3	5					90343309				
3	6									73174765
3	8								11546	86508812
3	10									
4	5									87016570
4	8					90343310			412267	100012
4	10					90343315				86509264
4	BRS									
5	5									87016571
5	8					90343316	84401337	9990706		86508813
5	10									86509265
6	8			87020308	90347316	90343317			336266	9706755
6 (LH)	8									
6	10	86625072	86500688		90347315	15896224	87698779	*		*
6 (LH)	10									
6	BRS									
6	SST								87582904	
8	5					90343329				
8	8				91776280	90343325		9628092	336256	9706690
8 (LH)	8									119441
8	10		43362	86639231	90347326	90343319			70950953	*
8	12									
8	BRS									
10	5					90343380				
10	8				90347324	90343334			412105	100016
10 (LH)	8								86529981 @	47470565 @
10	10		86500689	87016576	90347312	90343331	87344209			*
10	12		87564741					87564742		
12	5									87328858
12	8				51532141	90343394	87344214	87564743	86000021	9706685
12	10		337475		90347327	90343391	87344210		86521848	*
12	SST									
14	8				92089081				412374	86508817
14	10		87564740					84580738		
16	8								86509246	100020
16	10	87016572	392530			90343424	86981470	*	9780036	*

(LH) Left Hand Thread; @ Across Flats Ref 17 and other dimensions Per DIN 934

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**Table 2a. Metric Coarse Thread Hexagon Nuts (ISO 4032) Continued**

Nominal Diameter	Material Class	Nut Finish								
		Preferred			Non-Preferred					
		PHC	ZND	BZN	BGM	DAC	DOR	PHC	PLN	ZND
16	12	47485567								
16 (LH)	10								84246770	47724118
18	8									86512013
18	12								412716	
20	8				92138954				412111	9706694
20	10		9847024		92089087		87619751		47458560	*
20	12					47710514				87301413
20	SST								84323491	
20 (LH)	SST								48092783	
22	8								84270865	86729941
22	10		87564750						87690473	
24	8								72180156	85700123
24	10				51451713	87391840		87016573	9780038	9848973
27	10									
30	8									325290
30 (LH)	8									90405538
^30 (LH)	8									87371937
30	10								87034485	86509266
36	10									87016574
42	8								87016575	

(LH) Left Hand Thread; ^Per DIN 934 Height 24mm



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**Table 2b. Metric Coarse Thread Hexagon Nuts (ISO 4032)**

Stainless Steel Material A4-80 per ISO 3506-2

These nuts shall be provided with Everlube 620C lubricant  
which shall be clean and dry to touch

Nominal Diameter	Pitch	Material	Finish	Part Number
6	1	A4-80	PLN	51479936
8	1.25	A4-80	PLN	51479942
10	1.5	A4-80	PLN	51479943
12	1.75	A4-80	PLN	51479945
16	2	A4-80	PLN	51479949

**Table 2c. Metric Coarse Thread Hexagon Nuts (ISO 4032)**

Nominal Diameter	Pitch	Material	Finish	Part Number
8	1.25	10	Zn-Ni	90502755
8	1.25	10	ZN-NI-4	92302314
20	2.5	10	Zn-Ni	90509370

Zn-Ni – Zinc Nickel per Iveco 18-1103 Fe/ZnNi 7 IV  
ZN-NI--4 per STPA020



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Table 3. Metric Hex Nut Dimensions (Fiat)

Nominal Diameter	Pitch	Width across Flats nom./ max	Width across Corners min.	Height max.
3	.5	5.5	6.08	2.4
4	.7	7	7.74	3.2
4	.7	7	7.74	5
5	.8	8	8.87	4
6	1	10	11.05	5
8	1.25	13	14.38	6.5
10	1.5	17	18.90	10
12	1.75	19	21.10	10
14	2	22	24.49	11
16	2	24	26.75	13
18*	2.5	27	30.14	15
20	2.5	30	33.53	16
22*	2.5	32	35.72	18
24	3	36	39.98	19



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**Table 4a. Metric Coarse Thread Hexagon Nuts (Fiat)**

Nominal Diameter	Material Class	Nut Finish					
		Non-Preferred					
		BZN	DAC	BGM	PHC	PLN	ZND
3	8		16101714				
3	10	16101727					16101721
4	8		10794014				
4	10		10794024				10720821
4	BRS					10794040	
5 (LH)	8						10790211
5	8	15896417	15896414			15896410	15896411
5	10	15896427	15896424			15896420	15896421
6	8		15896214				15896211
6 (LH)	8					10789610	10789615
6	10						15896221
6 (LH)	10						10789621
6	BRS					15896240	
6	A2-70						
8	8	16100817	16100814			16100810	
8 (LH)	8						16102111
8	10		16100824	5182253			
8	A2-70					16100870	
8	#A4-70					84390794	
8	12		16100834		16100833		
8	BRS					16100840	
10	8					10788210	10788211
10	10					10788220	10788221
10	8 (HT 8)		11701714	90502756		11701710	11701711
10	10 (HT 8)		11701724			11701720	11701721
10	12 (HT 8)				11701733		11701731
10	A2-70 (HT 8)					11701770	
10	#A4-70 (HT 8)					48171725	
12	8		11702914			11702910	11702911
12	10		11702924			11702920	11702921
12	12						11702931
12	8 (HT 12)		90343420				10719311
12	10 (HT 12)					10719320	10719321
12	A2-70					87618213	

#A4-70 Stainless Steel – refer to ASTM F738M; HT = Height of the nut



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**Table 4a. Metric Coarse Thread Hexagon Nuts Fiat (Continued)**

Nominal Diameter	Material Class	Nut Finish					
		Non-Preferred					
		BZN	DAC	BGM	PHC	PLN	ZND
14	8					12163210	
14	8 (HT 14)						10719411
14	12						12163231
16	8						12163311
16 (LH)	8						**47707937
16	10	12163327	12163324				
18	8		11703214				11703211
18	10	11703227					11703221
18	12						
20	8						**84001867
20	10	12163527	12163524				
20 (LH)	10						**48087366
20	12		92092731				
22	8						
22	10						
24	8						
24	10						
27	10						
30	8						
30	10						
36	10						
42	8						

(LH) Left Hand Thread    \*\*Not a Fiat Part Number See Table 3 for dimensions; HT = Height of the nut

**Table 4b. Metric Coarse Thread Hexagon Nuts (Fiat)**

Nominal Diameter	Material Class	Nut Finish	
		Non-Preferred	
		ZN-NI-4	
10	8 (HT 8)	92305853	



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**Table 5. Metric Hex Nut Dimensions (Fiat Deviations)**

Nominal Diameter	Pitch	Width across Flats nom./ max	Width across Corners min.	Height max.
4	.7	7	7.74	4
4	.7	7	7.74	5
5	.8	8	8.87	3.5
5	.8	8	8.87	5
6	1	10	11.05	6
7	1	11	12.12	5.5
7	1	11	12.12	7
8	1	13	14.38	6.5
8	1	13	14.38	8
8	1	14	15.51	6.5
8	1	14	15.51	8
8	1.25	13	14.38	8
8	1.25	14	15.51	6.5
8	1.25	14	15.51	8
9	1	14	15.51	8.5
10	1.25	17	18.90	
10	1.5	17	18.90	
10	1	17	18.90	
12	1.5	19	21.10	
12	1.25	19	21.10	
12	1.75	19	21.10	
14	1.25	22	24.49	
14	1.5	22	24.49	
14	2	22	24.49	
16	1.5	24	26.75	
16	2	24	26.75	
18	1.5	27	30.14	
18	2.5	27	30.14	
20	1.5	30	33.53	
20	2.5	30	33.53	
22	2.5	32	35.72	
22	1.5	32	33.53	22
24	1.5	36	39.98	
24	3	36	39.98	
24	2	36	39.98	
27	2	41	45.63	
27	3	41	45.63	



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**Table 5. Metric Hex Nut Dimensions (Fiat Deviations)**

Nominal Diameter	Pitch	Width across Flats nom./ max	Width across Corners min.	Height max.
30	2	46	51.28	
30	3.5	46	51.28	
33	2	50	55.80	
33	3.5	50	55.80	
36	3	55	61.31	
36	4	55	61.31	
48	3	75	83.91	

**Table 6. Metric Hex Nuts (Fiat Deviations)**

Nominal Diameter	Pitch	Width across Flats	Height	Material	Finish	Part Number
5	0.8	8	3.5	8	PLN	10788810
5	0.8	8	3.5	8	ZND	10788811
5	0.8	8	3.5	10	DAC	10788824
6	1	10	6	8	BGM	92088205
6	1	10	6	8	ZND	10720111
6	1	10	6	8	DAC	10720114
6	1	10	6	10	DAC	10720124
8	1.25	13	8	8	PLN	16102210
8	1.25	13	8	8	ZND	16102211
8	1.25	13	8	10	PLN	16102220
16	2	24	13	10	ZND	12163325
22	2.5	32	22	10	DAC	10719824



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**Table 7. Metric Hex Nut Dimensions (DIN 6330)**

Nominal Diameter	Width across Flats nom./ max	Width across Corners min.	Height max.
M6	10	11.05	9
M8	13	14.38	12
M16	24	26.75	24
M18	27	29.56	27
M20	30	32.95	30
M24	36	39.55	36
M27	41	45.20	41
M30	46	50.85	45

**Table 8. Metric Hex Nut (DIN 6330)**

Nominal Diameter	Pitch	Material Class	Finish	Part Number
6	1	8	ZND	91802903
16	2	10	PLN	47480689
20	2.5	8	PLN	47745282