



Standard Part

Hexagon Nuts - Metric Fine Thread, Non-Preferred

STPE520

87366968

Rev BE

Page 1 of 8

1. SCOPE

The fasteners defined by this specification are non-preferred metric fine 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, M12X1.25 6 ZND

NUT, M8X1 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

SAE J122—Surface Discontinuities on Nuts

SAE J995—Mechanical and Material Requirements for Steel Nuts

ISO 8673—Hexagon nuts, style 1, with metric fine pitch thread - Product grades A and B

ISO 8674—Hexagon nuts, style 2, with metric fine pitch thread - Product grades A and B

ISO 898/2—Mechanical properties of fasteners

ISO 898/6—Mechanical properties of fasteners - Fine pitch thread

DIN 934—Hexagon Nuts-Metric Screw Threads Product Grades A and B

Fiat 10112—Regular Hexagon Nuts

Fiat 10112/63—Regular Hexagon Nuts for Severe Applications

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

3.2 REPLACED STANDARDS

Case EM-004—Hex Nuts Metric Fine Pitch General Specification

Case EM-005—Hex Nuts Metric Fine Pitch

AUTHOR	APPROVED BY	ECO	PART NUMBER
A KHAN	08MAR24	A KHAN	08MAR24
		35385103	87366968

THE INFORMATION HEREON IS THE CONFIDENTIAL AND PROPRIETARY PROPERTY OF CNH INDUSTRIAL N.V. AND/OR ITS SUBSIDIARIES OR DIVISIONS. ANY USE, EXCEPT THAT FOR WHICH IT MAY BE LOANED, IS PROHIBITED.

UNCONTROLLED COPY When Printed



Standard Part

Hexagon Nuts - Metric Fine Thread, Non-Preferred

STPE520

87366968

Rev BE

Page 2 of 8

4. REQUIREMENTS

4.1 MATERIAL

Material per CNH STPA020. Metric fine thread nuts in property classes 6 and 8 will be Style 1 per ISO 8673. To ensure full loadability, metric fine thread nuts in property class 10 will be Style 2 per ISO 8674.

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 fine pitch threads, tolerance class 6H.

4.4 SURFACE DISCONTINUITIES

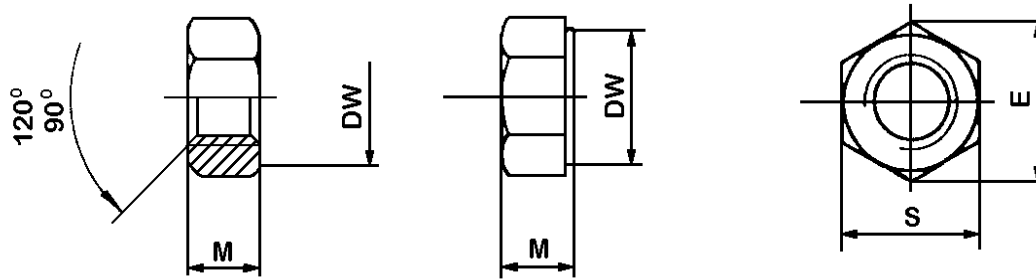
All products under this specification shall be free from burrs, seams, laps, loose scale, irregular surfaces and any defects affecting their serviceability per SAE J122 (Surface Discontinuities on Nuts).

4.5 DIMENSIONS

All dimensions in this standard are in millimetres. All unspecified detail shall conform to the above listed standards.

Standard Part

Hexagon Nuts - Metric Fine Thread, Non-Preferred



STYLE 1 NUTS - PROPERTY CLASS 6 AND 8

Table 1. Metric Style 1 Hex Nut Dimensions – Fine Threads Property Classes 6 and 8							
Nominal Diameter	Pitch	S		E	DW	M	
		Width across Flats		Width across Corners	Bearing Face Dia.	Thickness	
		Max	Min	Min		Max	Min
8	1	13	12.73	14.38	11.6	6.8	6.44
10*	1	16	15.73	17.77	14.6	8.4	8.04
10	1.25	16	15.73	17.77	14.6	8.4	8.04
12*	1.25	18	17.73	20.03	16.6	10.8	10.37
12	1.5	18	17.73	20.03	16.6	10.8	10.37
14	1.5	21	20.67	23.35	19.6	12.8	12.1
16	1.5	24	23.67	26.75	22.5	14.8	14.1
18	1.5	27	26.16	29.56	24.9	15.8	15.1
18*	2	27	26.16	29.56	24.9	15.8	15.1
20*	1.5	30	29.16	32.95	27.7	18.0	16.9
20	2	30	29.16	32.95	27.7	18.0	16.9
22*	1.5	34	33	38.29	31.4	19.4	18.1
22*	2	34	33	38.29	31.4	19.4	18.1
24*	1.5	36	35	39.55	33.2	21.5	20.2
24	2	36	35	39.55	33.2	21.5	20.2
27	2	41	40	45.2	38	23.8	22.5
30	2	46	45	50.85	42.7	25.6	24.3
30*	1.5	46	45	50.85	42.7	25.6	24.3
36	3	55	53.8	60.79	51.1	31	29.4
42*	1.5	65	63.1	71.3	59.95	34	32.4
42	3	65	63.1	71.3	59.95	34	32.4
48*	1.5	75	73.1	82.6	69.45	38	36.4
48	3	75	73.1	82.6	69.45	38	36.4

* Extra Fine Pitch

Standard Part

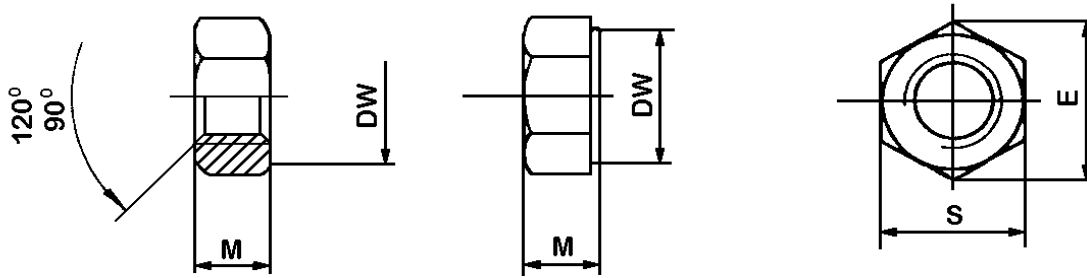
Hexagon Nuts - Metric Fine Thread, Non-Preferred

STPE520

87366968

Rev BE

Page 4 of 8



STYLE 2 NUTS - PROPERTY CLASS 10

Table 2. Metric Style 2 Hex Nut Dimensions – Fine Threads Property Class 10							
Nominal Diameter	Pitch	S		E	DW	M	
		Width across Flats		Width across Corners	Bearing Face Dia.	Thickness	
		Max	Min	Min		Max	Min
8	1	13	12.73	14.38	11.6	7.5	7.14
10*	1	16	15.73	17.77	14.6	9.3	8.94
10	1.25	16	15.73	17.77	14.6	9.3	8.94
12*	1.25	18	17.73	20.03	16.6	12	11.57
12	1.5	18	17.73	20.03	16.6	12	11.57
14	1.5	21	20.67	23.36	19.6	14.1	13.4
16	1.5	24	23.67	26.75	22.5	16.4	15.7
18	1.5	27	26.16	29.56	24.9	17.6	16.9
18*	2	27	26.16	29.56	24.9	17.6	16.9
20*	1.5	30	29.16	32.95	27.7	20.3	19
20	2	30	29.16	32.95	27.7	20.3	19
22*	1.5	34	33	37.29	31.4	21.8	20.5
22*	2	34	33	37.29	31.4	21.8	20.5
24*	1.5	36	35	39.55	33.2	23.9	22.6
24	2	36	35	39.55	33.2	23.9	22.6
27	2	41	40	45.20	38.0	26.7	25.4
30	2	46	45	50.85	42.7	28.6	27.3
36	3	55	53.8	60.79	51.1	34.7	33.1

* Extra Fine Pitch

Standard Part

Hexagon Nuts - Metric Fine Thread, Non-Preferred

Table 3. Metric Fine Thread Hexagon Nuts

Nominal Diameter	Pitch	Material Class	Height (Fiat)	Nut Finish				
				DAC	DOR	PLN	ZND	PHC
***6	.75	8	5				84268307	
10	1	8					84022934	
10	1	8				84814894		
10	1.25	8	8.4				18711611	
10	1.25	10	8.4				18711621	
10	1.25	8					9837227	
12	1	8					9818861	
12	1.25	8	10.8				18711711	
12	1.25	10						
12	1.5	8					330327	
12 LH	1.5	8					9832126	
14	1.5	10				9503259		
14	1.5	8					86639148	
14	1.5	8	12.8				18712111	
14	1.5	10	12.8				18712121	
16	1.5	8				412496		
16	1.5	8					331192	
16	1.5	8	13	12164114			12164111	
16	1.5	10	16	10790524			10790521	
16	1.5	10	13	12164124				
18	1.5	8					100092	
18 LH	1.5	8					84307309	
18	1.5	8	15	12164214			12164211	
18	1.5	10	15	12164224			12164221	
18	1.5	10	18	10721024		10721020	10721021	
18	1.5	12	18	10721034				
18	1.5	10					84294529	
***20	1.5	8	16			412243	100085	
20	1.5	8	16	12164314			12164311	
20	1.5	10		90343441			86015195	
***20	1.5	10						44305
22 Style 1	1.5	10					84983530	
22 Style 2	1.5	10			87515119		84227695	
24	1.5	8				412377	100024	
***24	1.5	10	19				90385281	
24	2	8	19				12164511	
24	2	10	19			12164520	12164521	
27	2	8					87497920	
27	2	10					12166621	
30	1.5	8				90399018	48078061	
30	2	8					84022078	
30 LH	2	8					90467015	

*** Dimensions per Standard DIN 934; LH – Left Hand Thread



Standard Part

Hexagon Nuts - Metric Fine Thread, Non-Preferred

STPE520
87366968
 Rev BE
 Page 6 of 8

Table 3. Metric Fine Thread Hexagon Nuts (Cont'd)

Nominal Diameter	Pitch	Material Class	Height (Fiat)	Nut Finish				
				DAC	DOR	PLN	ZND	PHC
30	2	8	24	12166714				
30	2	10	24				12166721	
36	3	8					47432628	
42	1.5	8					47555296	
48	1.5	8					92246160	
48 LH	1.5	8					92246161	
48	3	8		51584781				

LH – Left Hand Thread

Table 4. Metric Fine Thread Hexagon Nuts

Nominal Diameter	Pitch	Material Class	Height (Fiat)	Nut Finish				
				BGM	BZN	*Zn-Ni		
14	1.5	8		90347332	90333233			
16	1.5	10	13	48063697				
18	1.5	10	15			91844835		
24	2	10	19	91776281				

*Zn-Ni – Zinc Nickel per Iveco 18-1103 Fe/ZnNi 7 IV

Standard Part

Hexagon Nuts - Metric Fine Thread, Non-Preferred

STPE520**87366968****Rev BE****Page 7 of 8**

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.

Standard Part

Hexagon Nuts - Metric Fine Thread, Non-Preferred

Table 5. Metric Thick Fine Thread Hexagon Nuts DIN (Fiat 10112)

Nominal Diameter	Pitch	Material Class	Height (Fiat)	Nut Finish					
				BZN	DAC	DOR	PHC	PLN	ZND
10	1.25	8	8		12164714			12164710	12164711
10	1.25	8	10		10790114			10790110	10790111
10	1.25	10	8		12164724			12164720	12164721
10	1.25	10	10						10790121
12	1.25	8	10		16101514				16101511
12	1.25	8	12		12164914				12164911
12	1.25	10	10		16101524				379752
12	1.25	10	12		12164924			@90470992	12164921
12	1.5	8	10		12163914			12163910	
12	1.5	8	12						10790311
12	1.5	10	10		12163924				12163921
14	1.5	8	11		12164014			12164010	12164011
14	1.5	10	11		12164024				12164021
14	1.5	8	14		10790414				10790411
14	1.5	10	14		10790424				10790421
14	1.5	12	14				10790433		
22	1.5	8	18		12164414				12164411
22	1.5	10	18	12164427					12164421

@ - Part number not available in Fiat document but based on Fiat 10112