



METRIC - HEX FLANGE NUTS, STYLE 1

ISO 4161

Nominal Size	Thread Pitch	F		G	H		B
		Width Across Flats		Width Across Corners	Nut Thickness		Flange Diameter
		Max	Min	Min	Max	Min	Max
M5	0.8	8.00	7.78	8.79	5	4.7	11.8
M6	1	10.00	9.78	11.05	6	5.7	14.2
M8	1.25	13.00	12.73	14.38	8	7.6	17.9
M10	1.5	15.00	14.73	16.64	10	9.6	21.8
M12	1.75	18.00	17.73	20.03	12	11.6	26
M16	2	24.00	23.67	26.75	16	15.3	34.5
M20	2.5	30.00	29.16	32.95	20	18.9	42.8

Description	Hex nut with an enlarged circular base flaring out from the bottom of the nut. The bearing surface of the flange is smooth.	
Applications/Advantages	Larger bearing surface will span oversized or poorly aligned holes. Flange provides a more uniform bearing-stress to clamp-force ratio than other low carbon lock nuts.	
Material	Class 8 nuts shall be made of a steel which conforms to the following chemical composition-- <i>Carbon</i> : 0.58% maximum; <i>Manganese</i> : 0.25% minimum; <i>Phosphorus</i> : 0.060% maximum; <i>Sulfur</i> : 0.150% maximum.	Class 10 nuts shall be made of a steel which conforms to the following chemical composition-- <i>Carbon</i> : 0.58% maximum; <i>Manganese</i> : 0.30% minimum; <i>Phosphorus</i> : 0.048% maximum; <i>Sulfur</i> : 0.058% maximum.
Hardness	Diameters M5 through M16 : Vickers HV 200 - 302 Diameter M20 : Vickers HV 233 - 353	Diameters M5 through M20 : Vickers HV 272 - 353
Proof Load	Diameters M4 through M7 : 855 N/mm ² Diameters M8 through M10 : 870 N/mm ² Diameters M12 through M16 : 880 N/mm ² Diameter M20 : 920 N/mm ²	Diameters M4 through M10 : 1,040 N/mm ² Diameters M12 through M16 : 1,050 N/mm ² Diameter M20 : 1,060 N/mm ²
Plating	See Appendix-A for plating information	