



AEROSPACE RECOMMENDED PRACTICE

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HEXAGON BAR SIZES FOR FLUID FITTINGS

1. SCOPE

This recommended practice lists the recommended across flats limits for hexagon bar stock drawing callouts. This recommendation is based on the comparison of existing hexagon tolerance standards and minimum wrench openings. These callouts should be used when specifying fluid fitting dimensions in which the unmachined material hex dimension will appear on the finished part as a wrenching surface.

TABLE I

HEXAGON ACROSS FLATS LIMITS FOR FLUID FITTING WRENCHING SURFACE

<u>Hex Size</u> <u>Inches</u>	<u>Recommended</u> <u>Hex Tolerance</u>
5/16	+ .003
3/8	- .004
7/16	
1/2	
9/16	
5/8	
11/16	
3/4	
13/16	+ .004
7/8	
15/16	
1	
1-1/16	
1-1/8	
1-3/16	+ .006
1-3/4	
1-5/16	
1-3/8	
1-7/16	
1-1/2	
1-5/8	
1-3/4	
1-7/8	
2	
2-1/8	
2-1/4	
2-1/2	+ .008
2-3/4	

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NOTES FOR TABLE I

NOTE 1. The maximum hex is equal to the minimum wrench opening or the nominal (rounded off to smaller three place decimal figure, i.e., .3125 = .312) hex plus the minimum plus tolerance.

NOTE 2. The minimum hex is equal to the nominal minus the maximum minus tolerance.

TABLE II

WRENCH AND MATERIAL DIMENSIONS

Hex Size Inches	HEX TOLERANCES FOR INDICATED MATERIALS				Wrench Openings (Min) GGG-W-636 Table I
	Carbon Steel QQ-S-637	Corrosion Resistant Steel QQ-S-763	Aluminum Alloy QQ-A-225	Titanium Mill Tolerances	
5/16	+.000				.316
3/8	-.003				.378
7/16					.440
1/2					.504
9/16					.566
5/8	+.000				.629
11/16	-.004				.692
3/4					.755
13/16					.818
7/8					.880
15/16					.944
1					1.006
1-1/16					1.068
1-1/8					1.132
1-3/16					1.194
1-1/4					1.257
1-5/16					1.320
1-3/8					1.383
1-7/16	+.000				1.446
1-1/2	-.005				1.508
1-5/8					1.634
1-3/4					—
1-7/8					1.885
2					2.011
2-1/8					—
2-1/4					2.262
2-1/2					—
2-3/4	+.000				2.766
	-.006				