SAE Aerospace
An SAE International Group

AEROSPACE RECOMMENDED PRACTICE

SAE ARP4919

Issued 1998-05
Reaffirmed 2013-01

Fluid Connections, Fittings, Hex Width

RATIONALE

ARP4919 has been reaffirmed to comply with the SAE five-year review policy.

1. SCOPE:

This SAE Aerospace Recommended Practice (ARP) is intended as a guide toward standard practice for selection of nominal hex widths for fittings.

1.1 Field of Application:

Primarily for fittings which are machined from bar stock and incorporate a hex wrenching surface. The document applies to union fittings (both ends the same size). For reducer fittings, use the hex width for the largest fitting end.

2. APPLICABLE DOCUMENTS:

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

2.1 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

ARP1201 Hexagon Bar, Machined Flat and Forged Wrenching Flat Sizes for Fluid Fittings
ARP1942 Across Corners Dimensions of Hex Fittings

2.2 ANSI Publications:

Available from ANSI, 11 West 42nd Street, New York, NY 10036-8002.

ANSI Y14.5M Dimensioning and Tolerancing

TO PLACE A DOCUMENT ORDER: **Tel: 877-606-7323 (inside USA and Canada)**
Tel: +1 724-776-4970 (outside USA)
Fax: 724-776-0790
Email: CustomerService@sae.org
SAE WEB ADDRESS: **http://www.sae.org**

3. TECHNICAL REQUIREMENTS:

3.1 Design and Fabrication:

3.1.1 Dimensions: Refer to Figure 1 and Table 1. For sizes not listed in the table, the hex width can be determined by the following empirical equation: hex width = hex size x .144 + .107 rounded .xx.

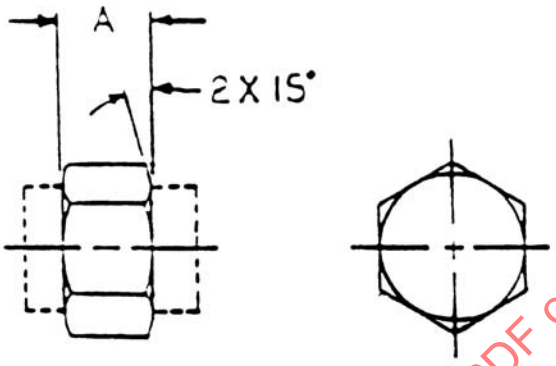

FIGURE 1 - Fitting Hex Width

TABLE 1 - Dimensions

Hex Size	A Nominal	Hex Size	A Nominal	Hex Size	A Nominal
.125	.13	.563	.19	1.250	.29
.188	.13	.625	.20	1.500	.32
.250	.14	.688	.21	1.750	.36
.313	.15	.750	.22	2.000	.40
.375	.16	.875	.23	2.500	.47
.438	.17	.938	.24	2.625	.49
.500	.18	1.000	.25		