

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

REV.
E

AS1007

FEDERAL SUPPLY CLASS
4730

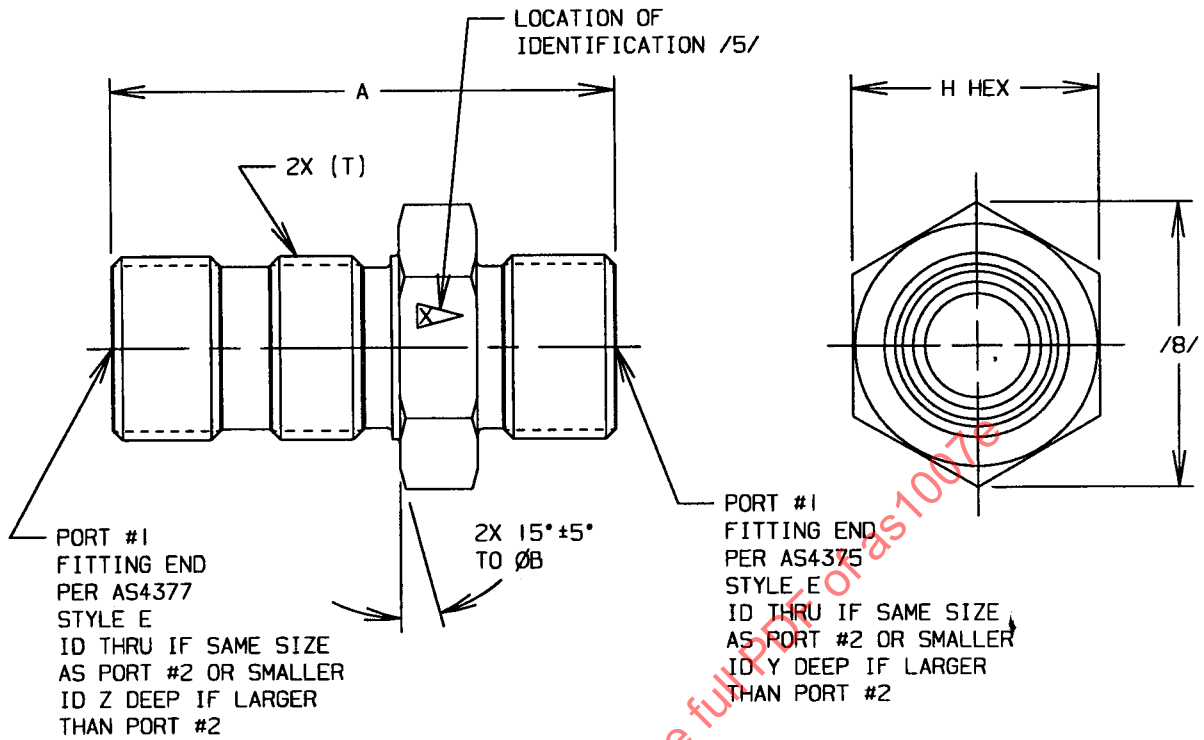
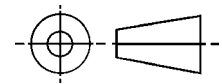


FIGURE 1 - FITTING, UNION, STANDARD AND REDUCER

INACTIVE IN PART /20/

THIRD ANGLE PROJECTION



CUSTODIAN: SAE G-3/G-3B

PROCUREMENT SPECIFICATION: /4/ AS18280

SAE The Engineering Society
For Advancing Mobility
Land Sea Air and Space®
INTERNATIONAL
400 Commonwealth Drive, Warrendale, PA 15096-0001

(R)

AEROSPACE STANDARD

FITTING, UNION,
STANDARD AND REDUCER,
BULKHEAD, FLARELESS

AS1007
SHEET 1 OF 6

**REV.
E**

REV.
E

AS1007

TABLE 1 - OVERALL LENGTH A /12/

SIZE OF PORT #2	SIZE OF #1 PORT 02 ±.010	SIZE OF #1 PORT 03 ±.010	SIZE OF #1 PORT 04 ±.010	SIZE OF #1 PORT 05 ±.010	SIZE OF #1 PORT 06 ±.010	SIZE OF #1 PORT 08 ±.010	SIZE OF #1 PORT 10 ±.010	SIZE OF #1 PORT 12 ±.010	SIZE OF #1 PORT 14 ±.010	SIZE OF #1 PORT 16 ±.010	SIZE OF #1 PORT 20 ±.010	SIZE OF #1 PORT 24 ±.010	SIZE OF #1 PORT 32 ±.010
02	1.484	1.516	1.578	1.609	1.703	1.844	2.000	2.156	2.156	2.156	2.156	2.156	2.422
03	1.516	1.563	1.625	1.656	1.750	1.891	2.047	2.203	2.203	2.203	2.203	2.203	2.469
04	1.547	1.594	1.656	1.688	1.781	1.922	2.078	2.234	2.234	2.234	2.234	2.234	2.500
05	1.578	1.625	1.688	1.688	1.781	1.922	2.078	2.234	2.234	2.234	2.234	2.234	2.500
06	1.641	1.688	1.750	1.750	1.797	1.938	2.094	2.250	2.250	2.250	2.250	2.250	2.516
08	1.734	1.781	1.844	1.844	1.891	2.031	2.188	2.344	2.344	2.344	2.344	2.344	2.609
10	1.813	1.859	1.922	1.922	1.969	2.109	2.250	2.406	2.406	2.406	2.406	2.406	2.672
12	1.922	1.969	2.031	2.031	2.078	2.219	2.360	2.484	2.469	2.469	2.469	2.469	2.734
14	1.922	1.969	2.031	2.031	2.078	2.219	2.360	2.469	2.469	2.469	2.469	2.469	2.734
16	1.922	1.969	2.031	2.031	2.078	2.219	2.360	2.469	2.469	2.469	2.469	2.469	2.734
20	1.922	1.969	2.031	2.031	2.078	2.219	2.360	2.469	2.469	2.469	2.469	2.469	2.734
24	1.922	1.969	2.031	2.031	2.078	2.219	2.360	2.469	2.469	2.469	2.469	2.469	2.734
32	1.984	2.031	2.094	2.094	2.141	2.281	2.422	2.531	2.531	2.531	2.531	2.531	2.734

TABLE 2 - HOLE DEPTH Y /12/

SIZE OF PORT #2	SIZE OF #1 PORT 24	SIZE OF #1 PORT 20	SIZE OF #1 PORT 16	SIZE OF #1 PORT 14	SIZE OF #1 PORT 12	SIZE OF #1 PORT 10	SIZE OF #1 PORT 08	SIZE OF #1 PORT 06	SIZE OF #1 PORT 05	SIZE OF #1 PORT 04	SIZE OF #1 PORT 03	SIZE OF #1 PORT 02
32	.656	.578	.562	.485	.516	.469	.469	.469	.469	.469	.438	.453
24	-	.656	.641	.547	.578	.656	.641	.562	.547	.531	.516	.516
20	-	-	.703	.625	.656	.625	.625	.641	.609	.609	.594	.594
16	-	-	-	.688	.719	.688	.688	.703	.672	.672	.656	.656
14	-	-	-	-	.861	.719	.719	.735	.719	.704	.688	.688
12	-	-	-	-	-	.750	.750	.766	.750	.734	.719	.719
10	-	-	-	-	-	-	.672	.703	.672	.672	.656	.656
08	-	-	-	-	-	-	-	.641	.625	.625	.594	.594
06	-	-	-	-	-	-	-	-	.562	.562	.531	.547
05	-	-	-	-	-	-	-	-	-	.516	.500	.500
04	-	-	-	-	-	-	-	-	-	-	.484	.484
03	-	-	-	-	-	-	-	-	-	-	-	.469

REV.
E

AS1007

TABLE 3 - HOLE DEPTH Z /12/

SIZE OF PORT #2	SIZE OF PORT #1 03	SIZE OF PORT #1 04	SIZE OF PORT #1 05	SIZE OF PORT #1 06	SIZE OF PORT #1 08	SIZE OF PORT #1 10	SIZE OF PORT #1 12	SIZE OF PORT #1 14	SIZE OF PORT #1 16	SIZE OF PORT #1 20	SIZE OF PORT #1 24	SIZE OF PORT #1 32
02	1.016	1.062	1.078	1.156	1.250	1.391	1.500	1.477	1.438	1.375	1.297	1.438
03	-	1.047	1.078	1.141	1.250	1.391	1.500	1.471	1.422	1.375	1.297	1.422
04	-	-	1.094	1.172	1.281	1.406	1.516	1.494	1.453	1.391	1.312	1.453
05	-	-	-	1.172	1.281	1.422	1.531	1.500	1.453	1.391	1.328	1.453
06	-	-	-	-	1.297	1.438	1.547	1.523	1.391	1.422	1.344	1.484
08	-	-	-	-	-	1.453	1.562	1.533	1.484	1.438	1.359	1.391
10	-	-	-	-	-	-	1.562	1.537	1.500	1.438	1.359	1.500
12	-	-	-	-	-	-	-	1.574	1.531	1.468	1.406	1.531
14	-	-	-	-	-	-	-	-	1.566	1.503	1.430	1.559
16	-	-	-	-	-	-	-	-	-	1.516	1.453	1.562
20	-	-	-	-	-	-	-	-	-	-	1.468	1.594
24	-	-	-	-	-	-	-	-	-	-	-	1.672

TABLE 4 - TUBE SIZE AND CORRESPONDING THREAD

PORT SIZE	(NOMINAL TUBE SIZE)	T THREAD PER AS8879 CLASS A
02	.125	.3125-24 UNJF
03	.188	.3750-24 UNJF
04	.250	.4375-20 UNJF
05	.312	.5000-20 UNJF
06	.375	.5625-18 UNJF
08	.500	.7500-16 UNJF
10	.625	.8750-14 UNJF
12	.750	1.0625-12 UNJ
14	.875	1.1875-12 UNJ
16	1.000	1.3125-12 UNJ
20	1.250	1.6250-12 UNJ
24	1.500	1.8750-12 UNJ
32	2.000	2.5000-12 UNJ

REV.
E

AS1007

TABLE 5 - HEX DIMENSION AND WEIGHTS /11/

BASIC NO. AS1007 /19/ LARGEST PORT SIZE CODE	B ±.010	H	LB/EA APPROX REF ALUM	LB/EA APPROX REF STEEL	LB/EA APPROX REF TI
02	.542	.552- .565	.00990	.0279	.0153
03	.605	.615- .628	.0162	.0432	.0243
04	.668	.678- .691	.0207	.0558	.0315
05	.730	.740- .753	.0261	.0702	.0405
06	.792	.802- .815	.0315	.0855	.0486
08	.980	.990-1.003	.0576	.158	.0900
10	1.103	1.113-1.128	.0810	.210	.126
12	1.353	1.363-1.380	.120	.325	.187
14	1.478	1.488-1.505	-	-	-
16	1.603	1.613-1.630	.182	.437	.286
20	1.853	1.863-1.880	.224	.610	.332
24	2.099	2.109-2.225	.266	.733	.422
32	2.724	2.734-2.760	-	-	-

NOTES:

/1/ MATERIAL:

- NO CODE LETTER - TYPE 4130 LOW ALLOY STEEL BAR PER AMS 6370 OR AMS-S-6758 EXCEPT HEAT TREATMENT PER PROCUREMENT SPECIFICATION. /2/
- CODE LETTER D - TYPE 2024-T6 OR -T851 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/6. /2/ /20/
- CODE LETTER J - TYPE 304 CORROSION RESISTANT STEEL BAR PER AMS 5639 OR AMS-QQ-S-763 EXCEPT HARDNESS PER PROCUREMENT SPECIFICATION. /2/
- CODE LETTER K - TYPE 316 CORROSION RESISTANT STEEL BAR PER AMS 5648 OR AMS-QQ-S-763 EXCEPT HARDNESS PER PROCUREMENT SPECIFICATION. /2/
- CODE LETTER R - TYPE 321 CORROSION RESISTANT STEEL BAR PER AMS 5645 OR AMS-QQ-S-763 EXCEPT HARDNESS PER PROCUREMENT SPECIFICATION. /2/
- CODE LETTER S - TYPE 347 CORROSION RESISTANT STEEL BAR PER AMS 5646 OR AMS-QQ-S-763 EXCEPT HARDNESS PER PROCUREMENT SPECIFICATION. /2/ /20/
- CODE LETTER T - TYPE 6AL-4V TITANIUM ALLOY BAR PER AMS 4928.
- CODE LETTER W - TYPE 7075-T7351 ALUMINUM ALLOY BAR PER AMS 4124; OR 7075-T73 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/9. /2/

/2/ HEAT TREATMENT:

- NO CODE LETTER - HARDNESS SHALL BE 92 HRB TO 40 HRC PER SPECIFICATION.
- MATERIAL CODE LETTERS D AND W - ELECTRICAL CONDUCTIVITY AND HARDNESS PER PROCUREMENT SPECIFICATION.
- MATERIAL CODE LETTERS J, K, R AND S - HARDNESS SHALL BE Rb 80 MINIMUM PER PROCUREMENT SPECIFICATION.
- OTHER MATERIAL CODES - NONE.