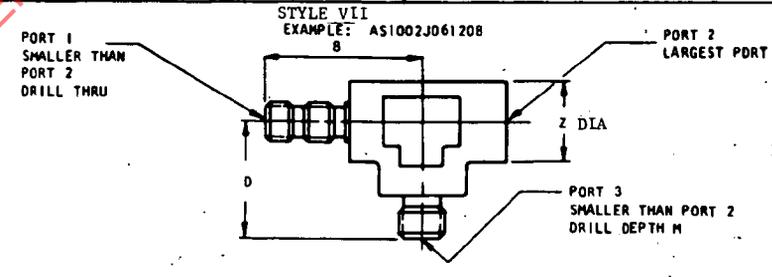
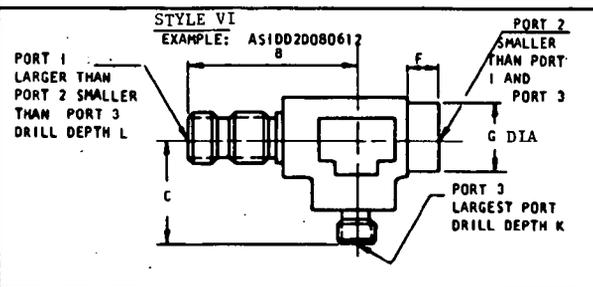
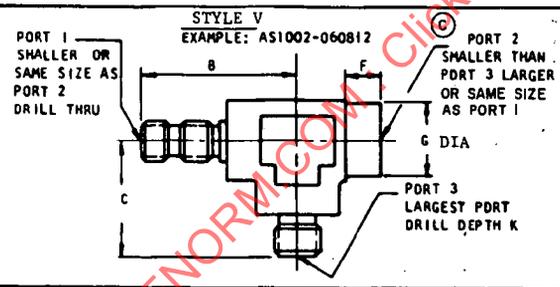
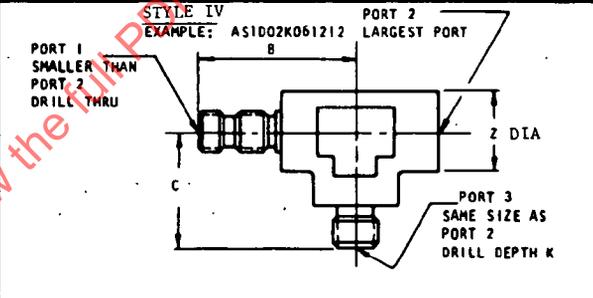
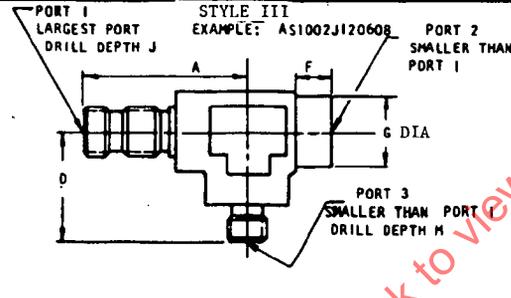
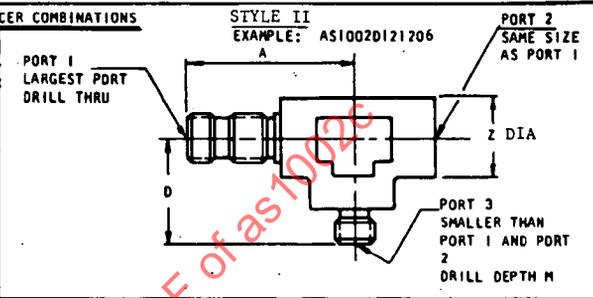
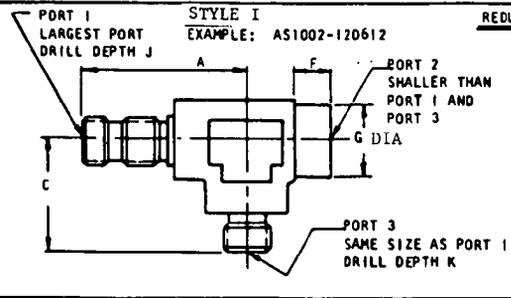
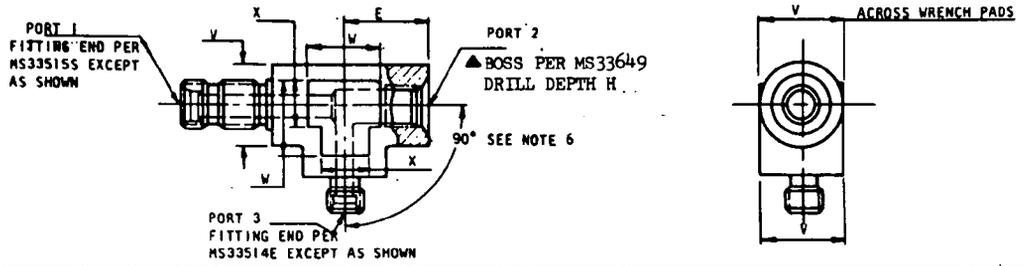


MAY '92

FEDERAL SUPPLY CLASS
4730

AS 1002



SHEET	I	2
REV	C	C

CUSTODIAN: SAE G-3 / G-3B PROCUREMENT: MIL-F-18280

SAE The Engineering Society
For Advancing Mobility
Land Sea Air and Space

400 Commonwealth Drive
Warrendale, PA 15096

AEROSPACE STANDARD

TEE, REDUCER, BULKHEAD AND
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SHEET 1 OF 2

ISSUED 3-15-66 REVISED 2-2-87

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AS 1002

FORGING SIZE	A ±.016	C ±.016	E ±.016	F ±.016	V ±.016	W MIN	X MIN	K ±.016	Z ±.016
3	1.477	.930	.711	-	.562	.500	.312	.969	.625
4	1.695	1.117	.773	.375	.750	.688	.438	1.156	.750
5	1.695	1.117	.773	.375	.750	.688	.438	1.156	.750
6	1.914	1.180	.836	.375	.875	.781	.438	1.219	.875
8	2.055	1.367	1.023	.469	1.062	.906	.500	1.406	1.062
10	2.273	1.523	1.180	.625	1.062	.906	.500	1.562	1.125
12	2.461	1.664	1.367	.688	1.312	.094	.625	1.703	1.312
16	2.680	1.857	1.555	.719	1.625	.312	.750	1.906	1.625
20	2.820	2.008	1.742	.781	1.875	.500	.875	2.047	1.875

LEG LENGTH B ±.016										
FORGING SIZE										
3	4	5	6	8	10	12	16	20		
1.430	1.585	1.585	1.758	1.727	1.804	1.883	2.102	2.242	2	PORT #1
	1.632	1.632	1.805	1.774	1.851	1.930	2.149	2.289	3	SIZE
		1.695	1.868	1.837	1.914	1.993	2.212	2.352	4	
			1.868	1.837	1.914	1.993	2.212	2.352	5	
				1.883	1.960	2.039	2.258	2.398	6	
					2.132	2.211	2.430	2.570	8	
						2.352	2.571	2.711	10	
							2.580	2.820	12	
								2.820	16	

LEG LENGTH D ±.016										
FORGING SIZE										
3	4	5	6	8	10	12	16	20		
.883	1.039	1.039	1.086	1.180	1.273	1.351	1.554	1.695	2	PORT #3
	1.086	1.086	1.133	1.227	1.320	1.398	1.601	1.742	3	SIZE
		1.117	1.164	1.258	1.351	1.429	1.632	1.773	4	
			1.164	1.258	1.351	1.429	1.632	1.773	5	
				1.274	1.367	1.445	1.648	1.789	6	
					1.460	1.538	1.741	1.882	8	
						1.601	1.804	1.945	10	
							1.867	2.008	12	
								2.008	16	

TURN DIA G ±.016										
FORGING SIZE										
3	4	5	6	8	10	12	16	20		
-	.594	.594	.594	.594	.594	.594	.594	.594	2	PORT #2
	.656	.656	.656	.656	.656	.656	.656	.656	3	SIZE
		.719	.719	.719	.719	.719	.719	.719	4	
			.781	.781	.781	.781	.781	.781	5	
				.844	.844	.844	.844	.844	6	
					-	1.062	1.062	1.062	8	
							1.188	1.188	10	
								1.438	1.438	12
									1.688	16

ORILL DEPTH H ±.016										
FORGING SIZE										
3	4	5	6	8	10	12	16	20		
.797	.859	.859	.922	1.109	1.265	1.453	1.641	1.828	2	PORT #3
	.812	.875	.938	1.125	1.281	1.469	1.656	1.844	3	SIZE
		.906	.969	1.156	1.312	1.500	1.688	1.875	4	
			.922	.984	1.172	1.328	1.516	1.703	5	
				1.016	1.202	1.375	1.547	1.734	6	
					1.286	1.422	1.609	1.797	8	
						1.469	1.656	1.844	10	
							1.734	1.922	12	
								2.031	16	
									2.328	20

ORILL DEPTH J ±.016										
PORT #1 SIZE										
J	4	5	6	8	10	12	16	20		
1.562	1.781	1.781	2.000	2.141	2.359	2.438	2.766	2.906	2	PORT #3
	1.578	1.797	2.016	2.156	2.375	2.562	2.781	2.922	3	SIZE
		1.828	1.828	2.047	2.188	2.406	2.593	2.812	4	
			1.844	2.062	2.203	2.422	2.609	2.828	5	
				2.094	2.234	2.453	2.641	2.875	6	
					2.297	2.516	2.703	2.922	8	
						2.562	2.750	2.959	10	
							2.828	3.047	12	
								3.156	3.297	16
									3.406	20

ORILL DEPTH L ±.016										
PORT #1 SIZE										
L	2	10	8	6	5	4	3			
3.406	3.406	3.297	3.156	2.984	2.938	2.938	2.875	20	PORT #3	
		3.156	3.047	2.906	2.734	2.688	2.625	16	SIZE	
			2.719	2.578	2.406	2.359	2.297	12		
				2.422	2.250	2.203	2.141	10		
					2.125	2.094	2.016	8		
						2.062	2.062	1.984	6	
							1.844	1.781	5	
								1.766	4	

ORILL DEPTH M ±.016										
FORGING SIZE										
M	4	5	6	8	10	12	16	20		
.922	1.078	1.078	1.125	1.219	1.312	1.391	1.594	1.734	2	PORT #3
	1.125	1.125	1.188	1.265	1.359	1.438	1.641	1.781	3	SIZE
		1.58	1.203	1.297	1.391	1.469	1.672	1.812	4	
			1.203	1.297	1.391	1.469	1.672	1.812	5	
				1.312	1.406	1.484	1.688	1.828	6	
					1.500	1.578	1.781	1.922	8	
						1.640	1.844	1.984	10	
							1.906	2.047	12	
								2.047	16	

NOTES:

- MATERIAL, FINISH, MANUFACTURE, AND PERFORMANCE REQUIREMENTS SHALL BE IN ACCORDANCE WITH MIL-F-18280, LATEST REVISION, UNLESS OTHERWISE SPECIFIED ON PURCHASE ORDER BY PURCHASER.
- SPECIFY END SIZES IN THIS ORDER: BULKHEAD FIRST; INTERNAL PORT SECOND; SIDE END THIRD.
- LARGEST END SHALL DETERMINE THE FORGING SIZE, EXCEPT THAT FOR STYLES 1, 3, 5 AND 6. FOR STYLES 1, 3, 5 AND 6 AN OPTIONAL FORGING SIZE OF ONE SIZE SMALLER THAN THE LARGEST EXTERNALLY THREADED PORT MAY BE USED TO FABRICATE THE FITTING. "G" DIAMETERS AND LEG LENGTHS WILL CONFORM TO THE DIMENSIONS OF FITTINGS MADE FROM THE ORIGINAL (NOT THE OPTIONAL) FORGING SIZE.
- MATERIAL CODE: IN PLACE OF FIRST DASH, ADD CODE LETTERS AS FOLLOWS:
 NO LETTER INDICATES 4130 STEEL (USE DASH "-").
 LETTER "D" INDICATES TYPE 2014T6 ALUMINUM ALLOY.
 LETTER "J" INDICATES CORROSION RESISTANT STEEL, CLASS 304.
 LETTER "S" INDICATES CORROSION RESISTANT STEEL, CLASS 347.
 LETTER "R" INDICATES CORROSION RESISTANT STEEL, CLASS 316.
 LETTER "W" INDICATES TYPE 7075-T73 ALUMINUM ALLOY.
 LETTER "T" INDICATES TYPE 6AL-4V TITANIUM ALLOY.
- EXAMPLE OF PART NUMBER: AS1002 D 10 16 08.
 BASIC PART NUMBER
 ALUMINUM ALLOY TYPE 2014T6
 PORT 1: BULKHEAD PER MS33515S10
 LEG LENGTH PER DIMENSION B, 2.571
 DRILL DEPTH THRU
 PORT 2: INTERNAL PORT PER MS33649-16
 LEG LENGTH PER DIMENSION E, 1.555
 DRILL DEPTH PER DIMENSION H, 1.797
 PORT 3: SHORT END ON SIDE PER MS33514E8
 LEG LENGTH PER DIMENSION D, 1.741
 DRILL DEPTH PER DIMENSION M, 1.781
- TOLERANCE ON 90° ANGLE: ± 2 1/2° FOR TUBE SIZE 6 AND SMALLER, ± 1 1/2° FOR TUBE SIZE 8 AND LARGER.
- REMOVE ALL BURRS AND BREAK ALL SHARP EDGES.
- IDENTIFY PER MIL-F-18280 EXCEPT SUBSTITUTE BASIC PART NUMBERS AS/AS1002 MARKINGS IN LIEU OF MS/MSXXXX AS APPLICABLE. PARTS PREVIOUSLY IMPRESSION STAMPED WITH AN, MS OR PROPRIETARY IDENTIFICATION SHALL BE ACCEPTABLE PROVIDED SUCH IDENTIFICATION IS OBLITERATED BY IMPRESSION STAMPING WITHOUT DAMAGING THE PART.

AEROSPACE STANDARD

TEE, REDUCER, BULKHEAD AND
INTERNAL PORT ON RUN, FLARELESS TUBE

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