



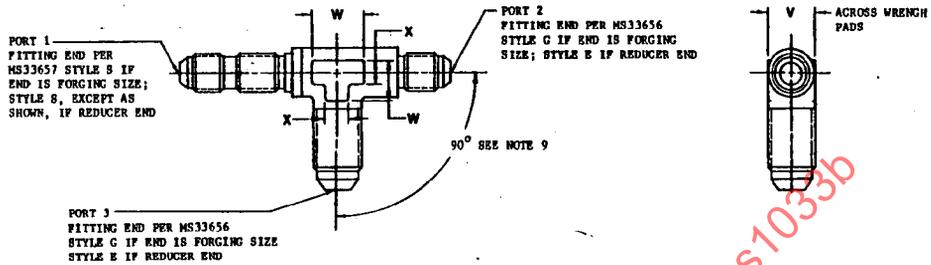
400 COMMONWEALTH DRIVE, WARRENDALE, PA 15096

AEROSPACE STANDARD

AS 1033B

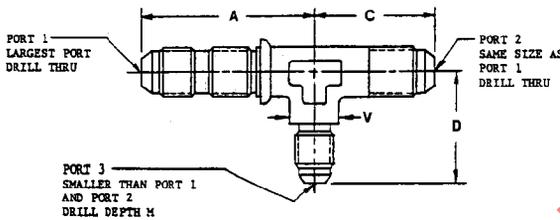
Issued 8-15-62  
Revised 4-4-83

REDUCER TEE - BULKHEAD ON RUN, FLARED TUBE

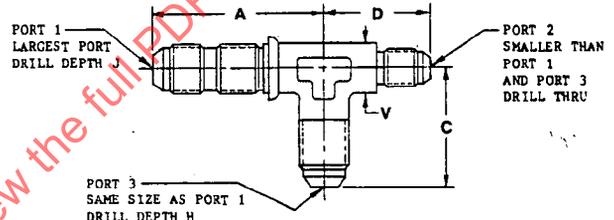


STYLE I  
EXAMPLE: AS1033-121208

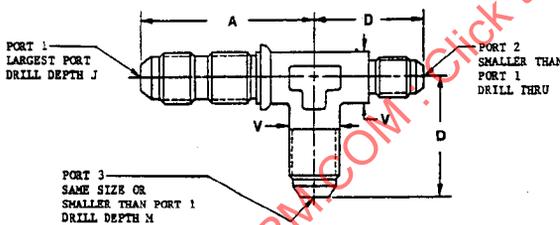
REDUCER COMBINATIONS



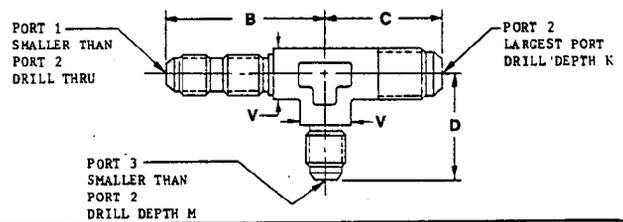
STYLE II  
EXAMPLE: AS1033D120812



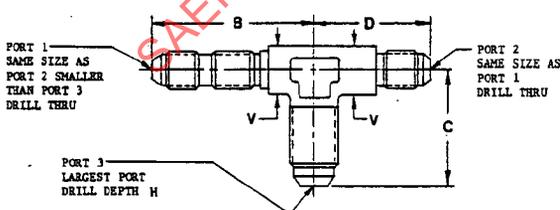
STYLE III  
EXAMPLE: AS1033J120808



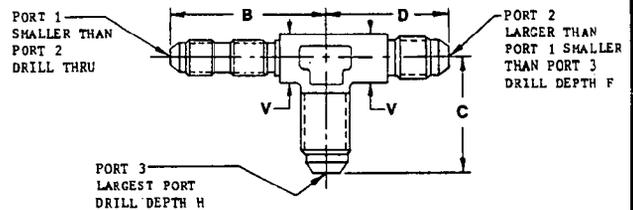
STYLE IV  
EXAMPLE: AS1033K0812D6



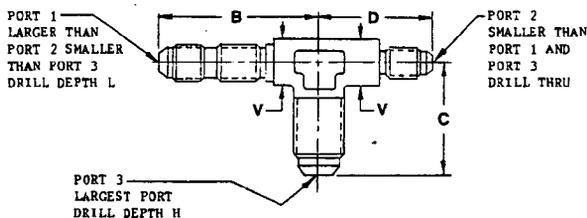
STYLE V  
EXAMPLE: AS10335080812



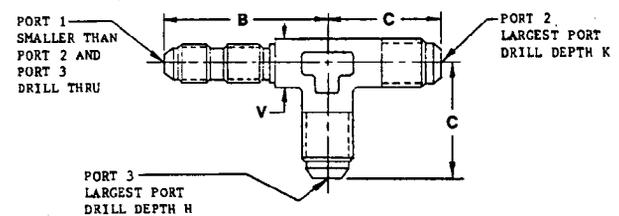
STYLE VI  
EXAMPLE: AS1033-060812



STYLE VII  
EXAMPLE: AS1D33J080612



STYLE VIII  
EXAMPLE: AS1033D081010



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FORGING SIZE	A	C	H	V	W	X
	+ .016	+ .016	+ .016	+ .016	APP	APP
3	1.461	.851	.891	.375	.375	.250
4	1.601	.914	.953	.438	.375	.250
5	1.632	.976	1.016	.500	.469	.312
6	1.820	1.086	1.125	.563	.500	.312
8	2.117	1.273	1.312	.750	.688	.438
10	2.398	1.476	1.516	.875	.781	.438
12	2.679	1.679	1.719	1.063	.906	.500
16	2.804	1.836	1.875	1.312	1.094	.625
20	3.132	2.086	2.125	1.625	1.312	.750
24	3.429	2.351	2.391	1.875	1.500	.875
32	4.117	3.086	3.125	2.562	2.031	1.188

LEG LENGTH B +.016

FORGING SIZE											SIZE OF #1 PORT
3	4	5	6	8	10	12	16	20	24	32	
1.461	1.507	1.538	1.648	1.789	1.929	2.039	2.164	2.445	2.726	3.133	2
	1.507	1.538	1.648	1.789	1.929	2.039	2.164	2.445	2.726	3.133	3
		1.632	1.742	1.883	2.023	2.133	2.258	2.539	2.820	3.227	4
			1.742	1.883	2.023	2.133	2.258	2.539	2.820	3.227	5
				1.961	2.101	2.211	2.336	2.617	2.898	3.305	6
					2.257	2.367	2.492	2.773	3.054	3.461	8
						2.508	2.633	2.914	3.195	3.602	10
							2.804	3.085	3.366	3.773	12
								3.085	3.366	3.773	16
									3.413	3.820	20
										3.836	24

LEG LENGTH D +.016

FORGING SIZE											SIZE OF #2 OR #3 PORT
3	4	5	6	8	10	12	16	20	24	32	
.820	.874	.978	1.064	1.166	1.263	1.373	1.576	1.716	2.201	2	
	.943	.905	1.009	1.095	1.197	1.294	1.404	1.607	1.747	2.232	3
		.976	1.080	1.166	1.268	1.365	1.475	1.678	1.818	2.303	4
			1.080	1.166	1.268	1.365	1.475	1.678	1.818	2.303	5
				1.172	1.274	1.371	1.481	1.684	1.824	2.309	6
					1.375	1.472	1.582	1.785	1.925	2.410	8
						1.573	1.683	1.886	2.026	2.511	10
							1.789	1.992	2.132	2.617	12
								2.039	2.179	2.664	16
									2.226	2.711	20
										2.836	24

DRILL DEPTH F +.016

FORGING SIZE											SIZE OF #2 OR #3 PORT
4	5	6	8	10	12	16	20	24	32		
.960	1.063	1.203	1.328	1.484	1.641	1.859	2.188	2.438	3.156	3	
	1.125	1.266	1.406	1.547	1.703	1.938	2.250	2.516	3.234	4	
		1.266	1.406	1.547	1.703	1.938	2.250	2.516	3.234	5	
			1.406	1.547	1.703	1.938	2.250	2.516	3.234	6	
				1.656	1.813	2.047	2.359	2.625	3.344	8	
					1.922	2.141	2.469	2.719	3.438	10	
						2.250	2.562	2.828	3.547	12	
							2.609	2.875	3.594	16	
								2.922	3.641	20	
									3.766	24	

DRILL DEPTH J +.016

FORGING SIZE											SIZE OF #3 PORT
3	4	5	6	8	10	12	16	20	24	32	
1.531	1.672	1.703	1.891	2.188	2.469	2.750	3.203	3.500	4.188	2	
1.563	1.703	1.734	1.922	2.219	2.500	2.781	2.906	3.234	3.531	3	
	1.719	1.750	1.938	2.234	2.516	2.797	2.922	3.250	3.547	4	
		1.781	1.969	2.266	2.547	2.828	2.953	3.281	3.578	4.266	5
			2.000	2.297	2.578	2.859	2.984	3.312	3.609	4.297	6
				2.344	2.625	2.906	3.031	3.359	3.656	4.344	8
					2.672	2.953	3.078	3.406	3.703	4.391	10
						3.016	3.141	3.469	3.766	4.453	12
							3.266	3.594	3.891	4.578	16
								3.703	4.000	4.688	20
									4.125	4.812	24
										5.047	32

DRILL DEPTH K +.016

FORGING SIZE											SIZE OF #3 PORT
3	4	5	6	8	10	12	16	20	24	32	
.922	.984	1.047	1.156	1.344	1.547	1.750	1.906	2.156	2.422	3.156	2
.953	1.016	1.078	1.188	1.375	1.578	1.781	1.938	2.188	2.453	3.188	3
	1.031	1.094	1.203	1.391	1.594	1.797	1.953	2.203	2.469	3.203	4
		1.125	1.234	1.422	1.625	1.828	1.984	2.234	2.500	3.235	5
			1.266	1.453	1.656	1.858	2.016	2.266	2.531	3.266	6
				1.500	1.703	1.906	2.063	2.328	2.578	3.328	8
					1.750	1.953	2.109	2.359	2.625	3.359	10
						2.016	2.172	2.422	2.688	3.422	12
							2.297	2.547	2.812	3.547	16
								2.656	2.922	3.656	20
									3.047	3.781	24
										4.016	32

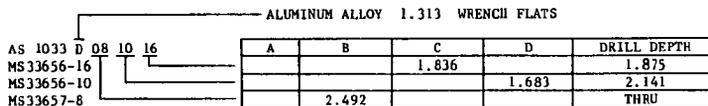
DRILL DEPTH L

PORT #1 SIZE											SIZE OF #3 PORT
24	20	16	12	10	8	6	5	4	3		
4.766	4.750	4.703	4.703	4.531	4.391	4.234	4.156	4.156	4.063	32	
	4.109	4.063	4.063	3.891	3.750	3.594	3.516	3.516	3.422	24	
		3.656	3.656	3.484	3.344	3.188	3.109	3.109	3.016	20	
			3.266	3.094	2.953	2.797	2.719	2.719	2.625	16	
				2.844	2.703	2.547	2.469	2.469	2.375	12	
					2.531	2.375	2.297	2.297	2.203	10	
						2.188	2.125	2.125	2.016	8	
							1.922	1.922	1.828	6	
								1.781	1.688	5	
									1.625	4	

DRILL DEPTH M

FORGING SIZE											SIZE OF #3 PORT
3	4	5	6	8	10	12	16	20	24	32	
.859	.859	.906	1.016	1.109	1.203	1.297	1.406	1.609	1.750	2.234	2
	.875	.938	1.047	1.141	1.234	1.328	1.438	1.641	1.781	2.266	3
		1.016	1.125	1.203	1.312	1.406	1.516	1.719	1.859	2.344	4
			1.125	1.203	1.312	1.406	1.516	1.719	1.859	2.344	5
				1.203	1.312	1.406	1.516	1.719	1.859	2.344	6
					1.406	1.516	1.625	1.828	1.969	2.453	8
						1.609	1.719	1.922	2.063	2.547	10
							1.828	2.031	2.172	2.656	12
								2.078	2.219	2.703	16
									2.266	2.750	20
										2.875	24

- SPECIFY END SIZES IN THE FOLLOWING ORDER: (1) BULKHEAD END; (2) OPPOSITE END ON RUN; (3) SIDE END.
- LARGEST TUBE SIZE DETERMINES FORGING SIZE.
- MATERIAL CODING:
  - STEEL 1137 OR 1141 PER QQ-S-637 (OPTIONAL: 4130/MIL-S-6758). FINISH CADMIUM PLATE PER QQ-P-416. TYPE II, CLASS 2. COLOR BLACK.
  - CRES TYPE 347. CRES PER QQ-S-763 SURFACE TREAT PER MIL-S-5002.
  - J CRES TYPE 304. CRES PER QQ-S-763 SURFACE TREAT PER MIL-S-5002.
  - K CRES TYPE 316. CRES PER QQ-S-763 SURFACE TREAT PER MIL-S-5002.
  - D ALUMINUM ALLOY 2014-T6 PER QQ-A-367 (OR 2024-T851). ANODIZE PER MIL-A-8625 TYPE II, CLASS 2. DYE BLUE.
  - W ALUMINUM ALLOY 7075-T73 PER QQ-A-225/9 (OPTIONAL: QQ-A-367). ANODIZE PER MIL-A-8625. TYPE II, CLASS 2. DYE BROWN.
  - T TITANIUM ALLOY (6AL-4V) PER AMS 4928. FLUORIDE PHOSPHATE COAT PER AMS 2486.
- PART NUMBER EXAMPLE:



- PROC. SPEC. MIL-P-5509, LATEST REVISION, UNLESS OTHERWISE SPECIFIED ON PURCHASE ORDER BY PURCHASER.
- REMOVE ALL BURRS AND BREAK ALL SHARP EDGES.
- THIS STANDARD TAKES PRECEDENCE OVER REFERENCED DOCUMENTS HEREIN.
- MANUFACTURER'S TRADEMARK AND BASIC PART NUMBER (EXCLUSIVE OF SIZE) TO APPEAR PERMANENTLY ON FINISHED PARTS. BASIC PART NUMBER MAY BE REDUCED TO "AS" ON FORGINGS SIZE 6 AND SMALLER. 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.
- TOLERANCE ON 90° ANGLE: ±2-1/2° FOR TUBE SIZE 6 AND SMALLER, ±1-1/2° FOR TUBE SIZE 8 AND LARGER.
- WHEN FITTING IS MADE FROM BAR, THE CONTOUR OF THE BODY SECTION SHALL BE PER AS 1376 FOR FORGING SIZES DASH 3 THROUGH 8, AND AS 1376 CODE M FOR SIZES DASH 10 AND LARGER.