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400 COMMONWEALTH DRIVE, WARRENDALE, PA 15096

# AEROSPACE STANDARD

## AS 1036B

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### CROSS, REDUCER, FLARED TUBE

PORT 3  
FITTING END PER MS33656  
STYLE G IF END IS FORGING SIZE  
STYLE E IF REDUCER END

PORT 1  
FITTING END PER  
MS33656 STYLE G

PORT 4  
FITTING END PER MS33656  
STYLE G IF END IS FORGING SIZE  
STYLE E IF REDUCER END

PORT 2  
FITTING END PER MS33656  
STYLE G IF END IS FORGING SIZE  
STYLE E IF REDUCER END

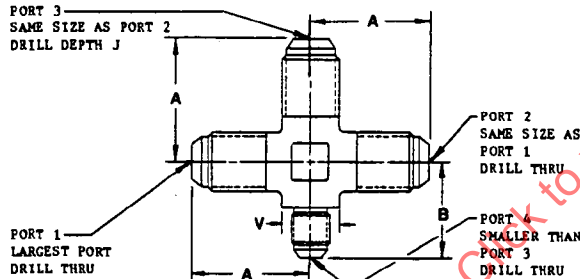
ACROSS WRENCH PADS

90° SEE NOTE 9

#### REDUCER COMBINATIONS

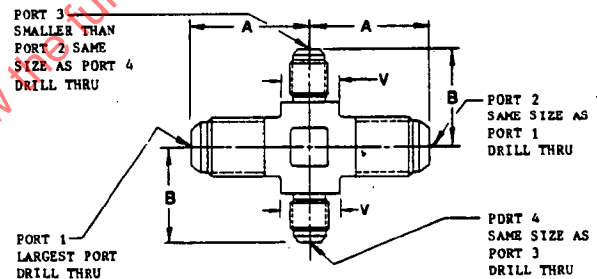
##### STYLE I

EXAMPLE: AS1036-12121208



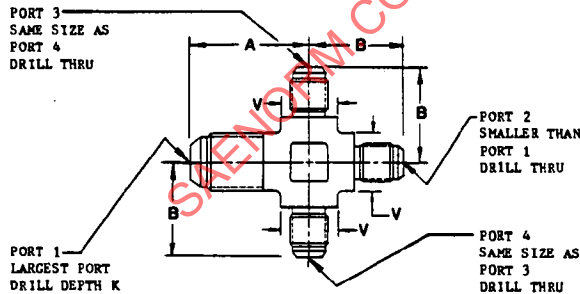
##### STYLE II

EXAMPLE: AS1036D12120808



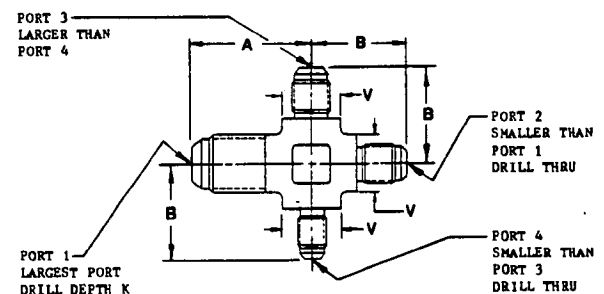
##### STYLE III

EXAMPLE: AS1036K12080808



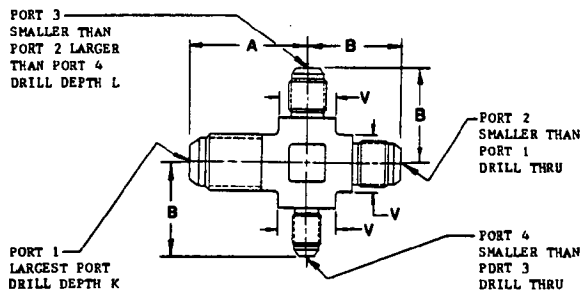
##### STYLE IV

EXAMPLE: AS 1036J12061008



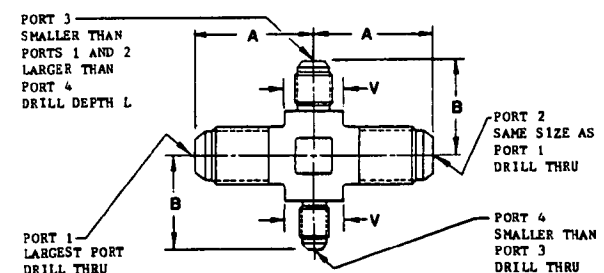
##### STYLE V

EXAMPLE: AS1036S12100806



##### STYLE VI

EXAMPLE: AS1036-10100806



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# AS 1036B

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## LEG LENGTH B $\pm 0.016$

| FORGING SIZE |      |      |       |       |       |       |       |       |       |       |    | SIZE<br>OF<br>#2<br>#3<br>OR<br>#4<br>PORT |
|--------------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|----|--------------------------------------------|
| 3            | 4    | 5    | 6     | 8     | 10    | 12    | 16    | 20    | 24    | 32    |    |                                            |
| .789         | .789 | .843 | .946  | 1.033 | 1.135 | 1.232 | 1.341 | 1.544 | 1.685 | 2.169 | 2  |                                            |
|              | .811 | .874 | .977  | 1.064 | 1.166 | 1.263 | 1.372 | 1.575 | 1.716 | 2.200 | 3  |                                            |
|              |      | .945 | 1.048 | 1.135 | 1.237 | 1.334 | 1.443 | 1.646 | 1.787 | 2.271 | 4  |                                            |
|              |      |      | 1.048 | 1.135 | 1.237 | 1.334 | 1.443 | 1.646 | 1.787 | 2.271 | 5  |                                            |
|              |      |      |       | 1.141 | 1.243 | 1.340 | 1.499 | 1.652 | 1.793 | 2.277 | 6  |                                            |
|              |      |      |       |       | 1.344 | 1.441 | 1.550 | 1.753 | 1.894 | 2.378 | 8  |                                            |
|              |      |      |       |       |       | 1.542 | 1.651 | 1.854 | 1.995 | 2.479 | 10 |                                            |
|              |      |      |       |       |       |       | 1.757 | 1.960 | 2.101 | 2.585 | 12 |                                            |
|              |      |      |       |       |       |       |       | 2.007 | 2.148 | 2.632 | 16 |                                            |
|              |      |      |       |       |       |       |       |       | 2.195 | 2.679 | 20 |                                            |
|              |      |      |       |       |       |       |       |       |       | 2.804 | 24 |                                            |

| FORGING<br>SIZE | A<br>±.016 | J<br>±.016 | V<br>±.016 | W<br>APP |
|-----------------|------------|------------|------------|----------|
| 3               | .820       | .922       | .375       | .375     |
| 4               | .822       | 1.000      | .438       | .375     |
| 5               | .945       | 1.094      | .500       | .469     |
| 6               | 1.054      | 1.234      | .562       | .500     |
| 8               | 1.242      | 1.469      | .750       | .688     |
| 10              | 1.445      | 1.719      | .875       | .781     |
| 12              | 1.648      | 1.984      | 1.062      | .906     |
| 16              | 1.804      | 2.266      | 1.312      | 1.094    |
| 20              | 2.054      | 2.625      | 1.625      | 1.312    |
| 24              | 2.320      | 3.016      | 1.875      | 1.500    |
| 32              | 3.054      | 3.984      | 2.562      | 2.031    |

| FORGING<br>SIZE | A<br>$\pm 0.016$ | J<br>$\pm 0.016$ | V<br>$\pm 0.016$ | W<br>APP |
|-----------------|------------------|------------------|------------------|----------|
| 3               | .820             | .922             | .375             | .375     |
| 4               | .822             | 1.000            | .438             | .375     |
| 5               | .945             | 1.094            | .500             | .469     |
| 6               | 1.054            | 1.234            | .562             | .500     |
| 8               | 1.242            | 1.469            | .750             | .688     |
| 10              | 1.445            | 1.719            | .875             | .781     |
| 12              | 1.648            | 1.984            | 1.062            | .906     |
| 16              | 1.804            | 2.266            | 1.312            | 1.094    |
| 20              | 2.054            | 2.625            | 1.625            | 1.312    |
| 24              | 2.320            | 3.016            | 1.875            | 1.500    |
| 32              | 3.054            | 3.984            | 2.562            | 2.031    |

## DRILL DEPTH K $\pm 0.016$

| FORGING SIZE |      |       |       |       |       |       |       |       |       |       | SIZE<br>OF<br>#3<br>PORT |   |
|--------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------------|---|
| 3            | 4    | 5     | 6     | 8     | 10    | 12    | 16    | 20    | 24    | 32    |                          |   |
| .891         | .953 | 1.016 | 1.125 | 1.312 | 1.516 | 1.719 | 1.875 | 2.125 | 2.391 | 3.125 |                          | 2 |
|              | .984 | 1.047 | 1.156 | 1.344 | 1.547 | 1.750 | 1.906 | 2.156 | 2.422 | 3.156 |                          | 3 |
|              |      | 1.062 | 1.172 | 1.359 | 1.562 | 1.766 | 1.922 | 2.172 | 2.438 | 3.172 |                          | 4 |
|              |      |       | 1.203 | 1.391 | 1.594 | 1.797 | 1.953 | 2.203 | 2.469 | 3.203 |                          | 5 |
|              |      |       |       | 1.422 | 1.625 | 1.828 | 1.984 | 2.234 | 2.500 | 3.234 |                          | 6 |
|              |      |       |       |       | 1.672 | 1.875 | 2.031 | 2.281 | 2.547 | 3.281 |                          | 8 |
|              |      |       |       |       |       | 1.922 | 2.078 | 2.328 | 2.594 | 3.328 | 10                       |   |
|              |      |       |       |       |       |       | 2.141 | 2.391 | 2.656 | 3.391 | 12                       |   |
|              |      |       |       |       |       |       |       | 2.516 | 2.781 | 3.516 | 16                       |   |
|              |      |       |       |       |       |       |       |       | 2.891 | 3.625 | 20                       |   |
|              |      |       |       |       |       |       |       |       |       | 3.750 | 24                       |   |

WILL DEPTH L  $\pm .016$

| FORGING SIZE |       |       |       |       |       |       |
|--------------|-------|-------|-------|-------|-------|-------|
|              | 10    | 12    | 16    | 20    | 24    | 32    |
| 97           | 1.453 | 1.609 | 1.828 | 2.156 | 2.406 | 3.125 |
|              |       |       |       |       |       | 3     |

## DRILL DEPTH L $\pm 0.016$

| FORGING SIZE |       |       |       |       |       |       |       |       |       |    | 2.141                    |  |
|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|--------------------------|--|
| 4            | 5     | 6     | 8     | 10    | 12    | 16    | 20    | 24    | 32    |    |                          |  |
| .938         | 1.031 | 1.172 | 1.297 | 1.453 | 1.609 | 1.828 | 2.156 | 2.406 | 3.125 | 3  | SIZE<br>OF<br>#3<br>PORT |  |
|              | 1.094 | 1.234 | 1.375 | 1.516 | 1.672 | 1.906 | 2.219 | 2.484 | 3.203 | 4  |                          |  |
|              |       | 1.234 | 1.375 | 1.516 | 1.672 | 1.906 | 2.219 | 2.484 | 3.203 | 5  |                          |  |
|              |       |       | 1.375 | 1.516 | 1.688 | 1.906 | 2.234 | 2.484 | 3.203 | 6  |                          |  |
|              |       |       |       | 1.625 | 1.781 | 2.016 | 2.328 | 2.594 | 3.312 | 8  |                          |  |
|              |       |       |       |       | 1.891 | 2.109 | 2.438 | 2.688 | 3.406 | 10 |                          |  |
|              |       |       |       |       |       | 2.219 | 2.531 | 2.797 | 3.516 | 12 |                          |  |
|              |       |       |       |       |       |       | 2.578 | 2.844 | 3.562 | 16 |                          |  |
|              |       |       |       |       |       |       |       | 2.891 | 3.609 | 20 |                          |  |
|              |       |       |       |       |       |       |       |       | 3.734 | 24 |                          |  |

- SPECIFY END SIZES IN THE FOLLOWING ORDER: (1) LARGEST END; (2) OPPOSITE END ON RUN; (3) LARGEST REMAINING END; (4) OPPOSITE END (IF THERE ARE TWO LARGEST ENDS AT 90°, THE ONE WITH THE LARGEST OPPOSITE END SHALL BE FIRST).
- 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.
  - S 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:

| ALUMINUM ALLOY 1.313 WRENCH FLATS |    |    |    |    |       |       |             |
|-----------------------------------|----|----|----|----|-------|-------|-------------|
| AS 1036 D                         | 16 | 08 | 10 | 04 | A     | B     | DRILL DEPTH |
| MS33656-4                         |    |    |    |    |       | 1.443 | THRU        |
| MS33656-10                        |    |    |    |    |       | 1.651 | 2.109       |
| MS33656-8                         |    |    |    |    |       | 1.550 | THRU        |
| MS33656-16                        |    |    |    |    | 1.804 |       | 2.094       |

- PROC. SPEC. MIL-F-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:  $\pm 2-1/2^\circ$  FOR TUBE SIZE 6 AND SMALLER,  $\pm 1-1/2^\circ$  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 DASH 8, AND AS 1376 CODE M FOR SIZES DASH 10 AND LARGER.

PREPARED BY SUBCOMMITTEE G-3B, AEROSPACE FITTINGS OF  
SAE COMMITTEE G-3, AEROSPACE FITTINGS & HOSE ASSEMBLIES