

AS4629

FEDERAL SUPPLY CLASS  
4720

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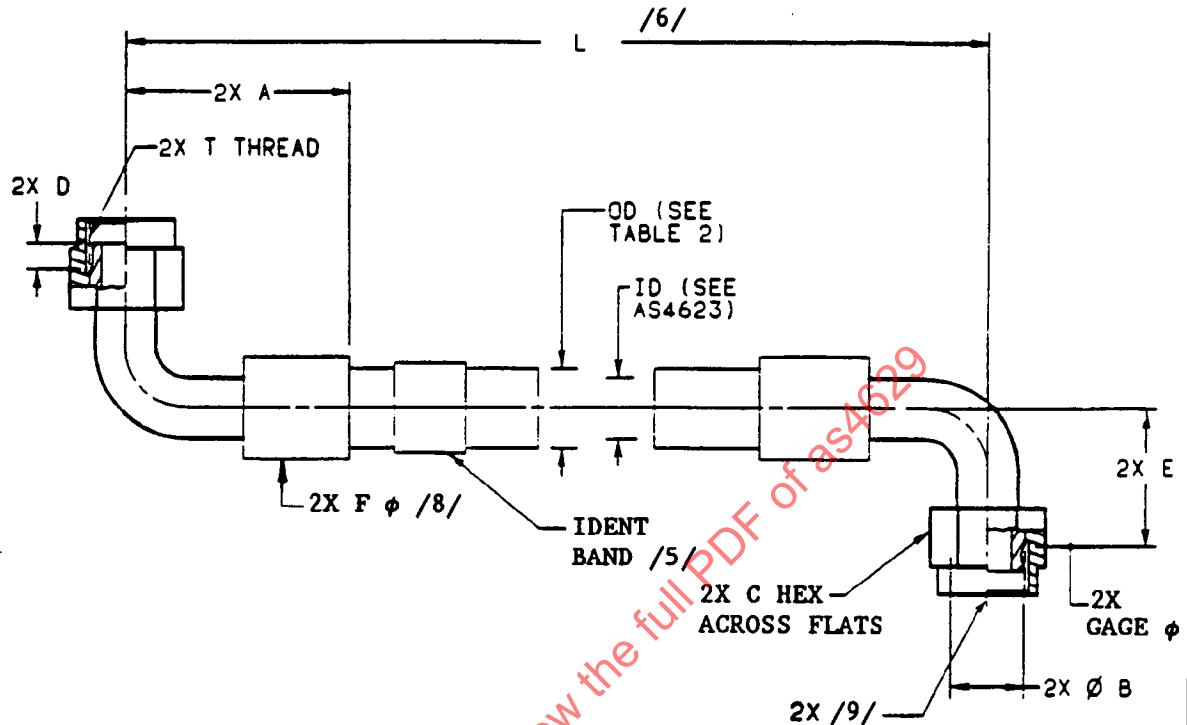


FIGURE 1 - HOSE ASSEMBLY, 90° ELBOW TO 90° ELBOW

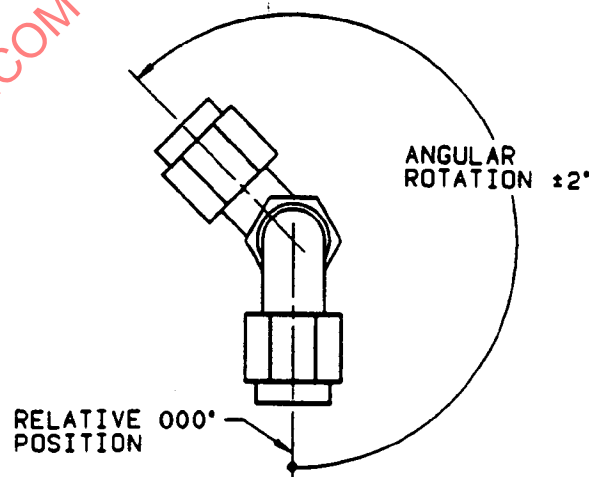


FIGURE 2 - FITTING ORIENTATION

CUSTODIAN: SAE G-3/G-30

PROCUREMENT SPECIFICATION: /2/ AS4623

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400 Commonwealth Drive, Warrendale, PA 15096-0001

# AEROSPACE STANDARD

HOSE ASSEMBLY, POLYTETRAFLUOROETHYLENE,  
ARAMID REINFORCED, HEAVY-DUTY, 275 °F, 3000 psi,  
FLARELESS, TITANIUM FITTINGS, 90° TO 90°

**AS4629**

SHEET 1 OF 5

TABLE 1 - HOSE AND FITTING DIMENSIONS

| HOSE<br>ASSEMBLY<br>NO. AND<br>SIZE CODE | (THREAD T)<br>(PER MIL-S-8879) | B GAGE   |                            | E    |     | BALL SIZE MIN<br>THRU $\phi$ /7/<br>MS19059<br>DASH NO. |          | BALL SIZE MIN<br>THRU $\phi$ /7/<br>$\phi$<br>IN |      |
|------------------------------------------|--------------------------------|----------|----------------------------|------|-----|---------------------------------------------------------|----------|--------------------------------------------------|------|
|                                          |                                | A<br>MAX | $\phi$<br>BASIC<br>HEX (C) | D    | MAX | E<br>MIN                                                | E<br>MAX |                                                  |      |
| AS4629E                                  | .250 .4375-20UNJF-38           | 1.180    | .2930                      | .56  | .11 | .770                                                    | .645     | .69                                              | .109 |
| AS4629G                                  | .375 .5625-18UNJF-38           | 2.180    | .4120                      | .69  | .12 | .840                                                    | .715     | .80                                              | .188 |
| AS4629H                                  | .500 .7500-16UNJF-38           | 2.538    | .5600                      | .88  | .13 | .970                                                    | .845     | .97                                              | .313 |
| AS4629J                                  | .625 .8750-14UNJF-38           | 3.375    | .6730                      | 1.00 | .14 | 1.210                                                   | 1.085    | 1.15                                             | .375 |
| AS4629K                                  | .750 1.0625-12UNJ-38           | 3.940    | .8100                      | 1.25 | .16 | 1.400                                                   | 1.275    | 1.38                                             | .469 |
| AS4629M                                  | 1.000 1.3125-12UNJ-38          | 4.510    | 1.0620                     | 1.50 | .21 | 1.625                                                   | 1.550    | 1.66                                             | .719 |
| AS4629N                                  | 1.250 1.5625-12UNJ-38          | 5.310    | 1.3160                     | 1.81 | .04 | 1.825                                                   | 1.700    | 2.32                                             | .906 |

TABLE 2 - HOSE OR SLEEVE OUTSIDE DIAMETERS

| SLEEVE<br>CODE | SLEEVE MATERIAL                                                 | TEMP.<br>LIMIT<br>°F | HOSE OR<br>SLEEVE<br>OUTSIDE<br>DIAMETERS<br>(MAX-MIN)<br>/10/<br>/10/ |             | HOSE OR<br>SLEEVE<br>OUTSIDE<br>DIAMETERS<br>(MAX-MIN)<br>/10/<br>/10/ |              | HOSE OR<br>SLEEVE<br>OUTSIDE<br>DIAMETERS<br>(MAX-MIN)<br>/10/<br>/10/ |              | HOSE OR<br>SLEEVE<br>OUTSIDE<br>DIAMETERS<br>(MAX-MIN)<br>/10/<br>/10/ |           | HOSE OR<br>SLEEVE<br>OUTSIDE<br>DIAMETERS<br>(MAX-MIN)<br>/10/<br>/10/ |           |
|----------------|-----------------------------------------------------------------|----------------------|------------------------------------------------------------------------|-------------|------------------------------------------------------------------------|--------------|------------------------------------------------------------------------|--------------|------------------------------------------------------------------------|-----------|------------------------------------------------------------------------|-----------|
|                |                                                                 |                      | HOSE SIZE                                                              | HOSE SIZE   | HOSE SIZE                                                              | HOSE SIZE    | HOSE SIZE                                                              | HOSE SIZE    | HOSE SIZE                                                              | HOSE SIZE | HOSE SIZE                                                              | HOSE SIZE |
| --             | (-) INDICATES HOSE ONLY<br>NO SLEEVE (SEE AS4623)               | 275                  | --                                                                     | --          | --                                                                     | --           | --                                                                     | --           | --                                                                     | --        | --                                                                     | --        |
| A              | FIRE SLEEVE (AS1072 SIL-F6)<br>(5 min) /11/ /12/ /13/           | 275                  | .930/ .730                                                             | 1.070/ .880 | 1.205/ 1.015                                                           | 1.370/ 1.130 | 1.590/ 1.380                                                           | 1.847/ 1.677 | 2.130/ 1.950                                                           |           |                                                                        |           |
| B              | ABRASION SLEEVE SHRINK-ON<br>(POLYOLEFIN AS1073-CODE B)<br>/21/ | 275                  | .620/ .540                                                             | .770/ .690  | .917/ .833                                                             | 1.042/ .948  | 1.314/ 1.206                                                           | 1.623/ 1.511 | 1.896/ 1.784                                                           |           |                                                                        |           |

### TABLE 3 - HOSE ASSEMBLY LENGTH TOLERANCES

| HOSE ASSEMBLY LENGTH | AVAILABLE INCREMENTS     | TOLERANCE |
|----------------------|--------------------------|-----------|
| UNDER 18 in          | (NOT LESS THAN) .125 in  | ±.125 in  |
| 18 THRU 36 in        | (NOT LESS THAN) .250 in  | ±.250 in  |
| OVER 36 THRU 50 in   | (NOT LESS THAN) .500 in  | ±.500 in  |
| OVER 50 in           | (NOT LESS THAN) 1.000 in | ±1%       |

**TABLE 4 - WEIGHTS**

| HOSE<br>OR<br>SLEEVE<br>CODE | HOSE OR TYPE SLEEVE                         | UNITS | REFERENCE       |                 | REFERENCE       |                 | REFERENCE       |                 | REFERENCE       |                 | REFERENCE       |                 |
|------------------------------|---------------------------------------------|-------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                              |                                             |       | WEIGHT<br>LB/IN | WEIGHT<br>LB/IN | WEIGHT<br>LB/IN | WEIGHT<br>LB/IN | WEIGHT<br>LB/IN | WEIGHT<br>LB/IN | WEIGHT<br>LB/IN | WEIGHT<br>LB/IN | WEIGHT<br>LB/IN | WEIGHT<br>LB/IN |
| --                           | HOSE ONLY (SEE AS4623)                      | LB/IN | --              | --              | --              | --              | --              | --              | --              | --              | --              | --              |
| A                            | FIRE SLEEVE (AS1072 SIL-FG)<br>(5 min) /14/ | LB/IN | .017            | .018            | .022            | .028            | .031            | .030            | .037            |                 |                 |                 |
| B                            | ABRASION SLEEVE (AS1073B)<br>/21/           | LB/IN | .0018           | .0018           | .0032           | .0032           | .0049           | .0082           | .0082           |                 |                 |                 |
| NONE                         | FIRE SLEEVE CLAMP                           | LB/EA | .020            | .020            | .021            | .021            | .025            | .025            | .032            |                 |                 |                 |
| NONE                         | FITTING END (90°)<br>/15/ /19/              | LB/EA | .077            | .121            | .176            | .297            | .560            | .947            | TBD /9/         |                 |                 |                 |

## NOTES:

1. MATERIALS:
  - a. HOSE AND FITTINGS - PER AS4623.
  - b. THE COLLARS MAY BE STAINLESS STEEL /15/.
  - c. SLEEVES - SEE APPLICABLE STANDARDS, TABLE 2.
- /2/ THIS HOSE ASSEMBLY SHALL BE QUALIFIED IN ACCORDANCE WITH PROCUREMENT SPECIFICATION AS4623. USERS OF THIS STANDARD ARE ADVISED TO CONTROL SOURCE APPROVAL(S) BY STANDARD PAGE SUPPLEMENT SHEET OR SIMILAR MEANS.
3. CONSTRUCTION AND PERFORMANCE PER AS4623. FITTINGS SHALL BE PERMANENTLY ATTACHED TO THE HOSE.
4. OPERATING CHARACTERISTICS PER AS4623.
- /5/ MARKING: MARKING SHALL BE PER AS4623 ON A STAINLESS STEEL BAND NOT OVER 1.0 in WIDE OR ON THE COLLAR. THE CHARACTERS SHALL BE A MINIMUM OF .06 in HIGH. THE BAND SHALL BE SO DESIGNED AS TO REMAIN TIGHT ON THE HOSE TO PREVENT RELATIVE MOVEMENT AND RESULTANT CHAFING. IT SHALL BE OF SUFFICIENT STRENGTH TO PREVENT REMOVAL BY HAND. HOSE ASSEMBLY DATE AND "PT" SYMBOL SHALL BE ELECTROETCHED ON THE BAND OR ON AN END FITTING OR A FIRESLEEVE CLAMP. MARKING BAND SHALL BE COVERED WITH TRANSPARENT POLYOLEFIN SHRINK SLEEVE PER AS1073 CODE A.
- /6/ LENGTH "L" IS A THREE DIGIT NUMBER OF WHICH THE FIRST TWO DIGITS DESCRIBE THE HOSE ASSEMBLY LENGTH IN WHOLE INCHES, AND THE THIRD DIGIT, THE FRACTION OF AN INCH IN EIGHTHS. LENGTH "L" IS MEASURED FROM "GAGE DIAMETER" TO "GAGE DIAMETER". FOR LENGTH INCREMENTS AND TOLERANCES SEE TABLE 3. "END TO END" LENGTH MEASUREMENTS ARE THE SAME AS THE "GAGE DIAMETER" TO "GAGE DIAMETER" BECAUSE BOTH ENDS ARE 90° ELBOWS.
- /7/ A TRUE CIRCULAR CROSS SECTION IS NOT REQUIRED THROUGH THE FITTING I.D. HOWEVER, THE APPLICABLE BALL DIAMETER LISTED IN TABLE 1 MUST BE CAPABLE OF PASSING THROUGH THE HOSE ASSEMBLY.
- /8/ DISTANCE ACROSS CORNERS OF THE COUPLING NUT MAY EXCEED THIS DIMENSION.
- /9/ FITTING ENDS SIZE -4 THRU -16 MUST COMPLY TO NAS1760; FITTINGS FOR HOSE SIZE -20 AND LARGER TO COMPLY WITH AS4703. FITTINGS SHALL MATE WITH MS33514 FOR SIZES THRU -16 AND WITH AS4658 OR AS4659 IN SIZES -20 AND LARGER. -20 AND LARGER NUTS SHALL CONFORM TO AS4660 OR AS4702. STANDARD COUPLING NUTS SHALL BE IN ACCORDANCE WITH OR EQUIVALENT TO AS1790 OR AS1792.
- /10/ DIAMETERS ARE LISTED FOR CLAMP SELECTION. TUBULAR SLEEVES MAY NOT BE A PERFECT ROUND AND SHALL BE MEASURED WITH A DIAMETER TAPE RULE (OFTEN REFERRED TO AS A PI-TAPE).
- /11/ THE TABLE 2 SLEEVE DIAMETERS FOR AS1072 SLEEVES APPLY WHEN THE SLEEVE IS COMPRESSED, OR CLAMPED TO CONTACT THE HOSE, IN THIS CASE, A WRINKLE MAY OCCUR OVER APPROXIMATELY 10% OF THE SLEEVE CIRCUMFERENCE.
- /12/ THE CUT ENDS OF THE FIRESLEEVE SHALL BE COATED WITH RTV SILICONE RUBBER PRIOR TO INSTALLATION TO PREVENT WICKING OF FLUIDS. THE FIRESLEEVE ENDS SHALL BE SECURED TO THE HOSE ASSEMBLY END FITTINGS WITH CORROSION RESISTANT STEEL BANDS. AFTER INSTALLATION, CRACKS OR Voids IN THE FIRESLEEVE, WHICH EXPOSE THE FIBERGLASS, SHALL BE COATED WITH RTV SILICONE RUBBER.
- /13/ ADD "AS1055 TYPE 11b CLASS A-S/P" TO IDENTIFICATION MARKING TO SHOW LEVEL OF COMPLIANCE, "FIRE RESISTANT 275 °F (5 min), WITH AS1072".
- /14/ WHEN FIRESLEEVES ARE REQUIRED, WEIGHT LIMITS SHALL BE DEFINED BY THE PROCURING AUTHORITY.
- /15/ TITANIUM PARTS MAY BE REPLACED WITH STAINLESS STEEL IF MAXIMUM WEIGHT FOR FITTING IS NOT EXCEEDED.
16. DIMENSIONING AND TOLERANCING: ANSI Y14.5M.
17. LOCKWIRE HOLES LOCATION AND DIAMETER PER AS1043 CODED AS FOLLOWS:
  - a. U = TWO HOLES 180° APART
  - b. W = THREE HOLES 120° APART
18. THIS PART STANDARD TAKES PRECEDENCE IN CASES OF CONFLICT.
- /19/ THE FITTING'S ORIENTATION DASH NUMBER IS A THREE DIGIT NUMBER DEFINING THE RELATIVE POSITION OF THE END FITTINGS IN 1° INCREMENTS (EXAMPLE: D90 = 90°). FITTING ORIENTATION SHALL BE MEASURED COUNTERCLOCKWISE FROM THE NEAREST END FITTING WHICH SHALL BE IN THE RELATIVE 000° POSITION (SEE FIGURE 2). WHEN END FITTINGS ARE POINTED IN THE SAME DIRECTION, THIS DASH NUMBER SHALL BE 000.
- /20/ THE SHRINK-ON POLYOLEFIN SLEEVE WILL COVER THE ENTIRE HOSE AND A MINIMUM OF 50% OF THE COLLAR ON BOTH ENDS OF THE ASSEMBLY.