FEDERAL SUPPLY CLASS
4720

RATIONALE

THIS DOCUMENT HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE 5-YEAR REVIEW POLICY.

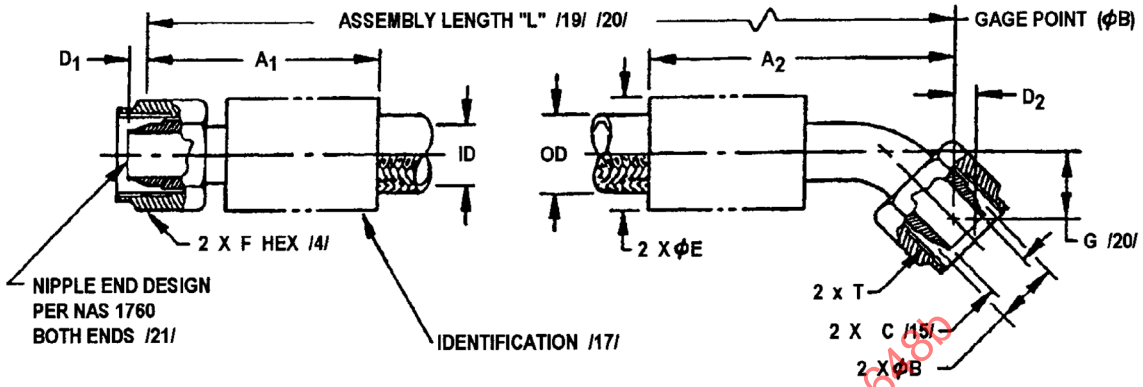



FIGURE 1 - HOSE ASSEMBLY

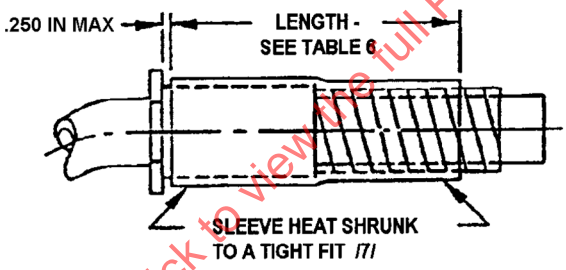



FIGURE 2 - ABRASION SLEEVE ATTACHMENT

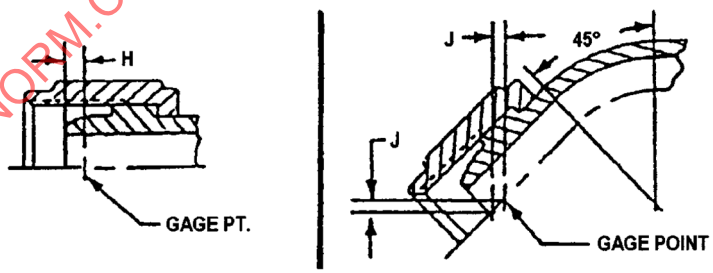
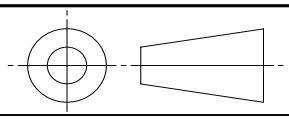



FIGURE 3 - GAGE POINT - SEE TABLE 7 /19/

THIRD ANGLE PROJECTION



ISSUED 1992-06 REVISED 2003-09 REAFFIRMED 2007-07

CUSTODIAN: SAE G-3/G-3D

PROCUREMENT SPECIFICATION: /14/ AS1946

SAE Aerospace
An SAE International Group

# AEROSPACE STANDARD

(R) HOSE ASSEMBLY, POLYTETRAFLUOROETHYLENE, METAL BRAID, MEDIUM PRESSURE, FLARELESS, STRAIGHT TO 45°

AS648



REV. B

TABLE 1 - DIMENSIONS

| Hose Assembly No. & Size /24/ | Hose Size (ref) | Fitting Type (ref) /25/ | Fitting Matl /24/ /26/ | Thread T per AS8879 (ref) | Hose ID Min (ref) | A1 Max | A2 Max | B Gage Basic | C Dia Min /15/ | Min Ball Dia ELB/STR /15/ | D1 (ref) | D2 (ref) | E Max Without Sleeving /16/ | F Hex (ref) | G Min | G Max |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AS648D (-03) | .188 | --- | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| AS648D (-03) | .188 | S | CRES | .3750-24UNJF-3B | .110 | 1.20 | 1.660 | .2340 | .080 | .068/.072 | .14 | .10 | .49 | .500 | .336 | .477 |
| | | | AL | .3750-24UNJF-3B | .110 | 1.20 | 1.660 | .2340 | .080 | .068/.072 | .14 | .10 | .49 | .500 | .336 | .477 |
| | | | TI | .3750-24UNJF-3B | .110 | 1.20 | 1.660 | .2340 | .080 | .068/.072 | .14 | .10 | .49 | .500 | .336 | .477 |
| AS648D (-03) | .188 | E | CRES | .4375-20UNJF-3B | .110 | 1.20 | 1.610 | .2930 | .080 | .068/.072 | .16 | .11 | .49 | .562 | .350 | .485 |
| | | | AL | .4375-20UNJF-3B | .110 | 1.20 | 1.610 | .2930 | .080 | .068/.072 | .16 | .11 | .49 | .562 | .350 | .485 |
| | | | TI | .4375-20UNJF-3B | .110 | 1.20 | 1.610 | .2930 | .080 | .068/.072 | .16 | .11 | .49 | .562 | .350 | .485 |
| AS648E (-04) | .250 | R | CRES | .3750-24UNJF-3B | .173 | 1.21 | 1.570 | .2340 | .080 | .068/.072 | .14 | .10 | .55 | .500 | .332 | .477 |
| | | | AL | .3750-24UNJF-3B | .173 | 1.21 | 1.570 | .2340 | .080 | .068/.072 | .14 | .10 | .55 | .500 | .332 | .477 |
| | | | TI | .3750-24UNJF-3B | .173 | 1.21 | 1.570 | .2340 | .080 | .068/.072 | .14 | .10 | .55 | .500 | .332 | .477 |
| AS648E (-04) | .250 | S | CRES | .4375-20UNJF-3B | .173 | 1.21 | 1.730 | .2930 | .132 | .112/.119 | .16 | .11 | .55 | .562 | .350 | .485 |
| | | | AL | .4375-20UNJF-3B | .173 | 1.21 | 1.730 | .2930 | .132 | .112/.119 | .16 | .11 | .55 | .562 | .350 | .485 |
| | | | TI | .4375-20UNJF-3B | .173 | 1.21 | 1.730 | .2930 | .132 | .112/.119 | .16 | .11 | .55 | .562 | .350 | .485 |
| AS648E (-04) | .250 | E | CRES | .5000-20UNJF-3B | .173 | 1.23 | 1.610 | .3500 | .132 | .112/.119 | .16 | .11 | .55 | .625 | .368 | .512 |
| | | | AL | .5000-20UNJF-3B | .173 | 1.23 | 1.610 | .3500 | .132 | .112/.119 | .16 | .11 | .55 | .625 | .368 | .512 |
| | | | TI | .5000-20UNJF-3B | .173 | 1.23 | 1.610 | .3500 | .132 | .112/.119 | .16 | .11 | .55 | .625 | .368 | .512 |
| AS648F (-05) | .312 | R | CRES | .4375-20UNJF-3B | .235 | 1.33 | 1.760 | .2930 | .132 | .112/.119 | .16 | .10 | .63 | .562 | .350 | .485 |
| | | | AL | .4375-20UNJF-3B | .235 | 1.33 | 1.760 | .2930 | .132 | .112/.119 | .16 | .10 | .63 | .562 | .350 | .485 |
| | | | TI | .4375-20UNJF-3B | .235 | 1.33 | 1.760 | .2930 | .132 | .112/.119 | .16 | .10 | .63 | .562 | .350 | .485 |
| AS648F (-05) | .312 | S | CRES | .5000-20UNJF-3B | .235 | 1.35 | 1.910 | .3500 | .193 | .164/.174 | .16 | .11 | .63 | .625 | .368 | .512 |
| | | | AL | .5000-20UNJF-3B | .235 | 1.35 | 1.910 | .3500 | .193 | .164/.174 | .16 | .11 | .63 | .625 | .368 | .512 |
| | | | TI | .5000-20UNJF-3B | .235 | 1.35 | 1.910 | .3500 | .193 | .164/.174 | .16 | .11 | .63 | .625 | .368 | .512 |
| AS648F (-05) | .312 | E | CRES | .5625-18UNJF-3B | .235 | 1.36 | 1.830 | .4120 | .193 | .164/.174 | .16 | .11 | .63 | .688 | .434 | .589 |
| | | | AL | .5625-18UNJF-3B | .235 | 1.36 | 1.830 | .4120 | .193 | .164/.174 | .16 | .11 | .63 | .688 | .434 | .589 |
| | | | TI | .5625-18UNJF-3B | .235 | 1.36 | 1.830 | .4120 | .193 | .164/.174 | .16 | .11 | .63 | .688 | .434 | .589 |
| AS648G (-06) | .375 | R | CRES | .5000-20UNJF-3B | .298 | 1.42 | 2.040 | .3500 | .193 | .164/.174 | .16 | .11 | .70 | .625 | .387 | .512 |
| | | | AL | .5000-20UNJF-3B | .298 | 1.42 | 2.040 | .3500 | .193 | .164/.174 | .16 | .11 | .70 | .625 | .387 | .512 |
| | | | TI | .5000-20UNJF-3B | .298 | 1.42 | 2.040 | .3500 | .193 | .164/.174 | .16 | .11 | .70 | .625 | .387 | .512 |
| AS648G (-06) | .375 | S | CRES | .5625-18UNJF-3B | .298 | 1.45 | 2.120 | .4120 | .256 | .218/.230 | .16 | .12 | .70 | .688 | .434 | .589 |
| | | | AL | .5625-18UNJF-3B | .298 | 1.45 | 2.120 | .4120 | .256 | .218/.230 | .16 | .12 | .70 | .688 | .434 | .589 |
| | | | TI | .5625-18UNJF-3B | .298 | 1.45 | 2.120 | .4120 | .256 | .218/.230 | .16 | .12 | .70 | .688 | .434 | .589 |
| AS648G (-06) | .375 | E | CRES | .7500-16UNJF-3B | .298 | 1.57 | 2.190 | .5600 | .256 | .218/.230 | .19 | .13 | .70 | .875 | .497 | .744 |
| | | | AL | .7500-16UNJF-3B | .298 | 1.57 | 2.190 | .5600 | .256 | .218/.230 | .19 | .13 | .70 | .875 | .497 | .744 |
| | | | TI | .7500-16UNJF-3B | .298 | 1.57 | 2.190 | .5600 | .256 | .218/.230 | .19 | .13 | .70 | .875 | .497 | .744 |
| AS648H (-08) | .500 | R | CRES | .5625-18UNJF-3B | .391 | 1.52 | 2.180 | .4120 | .256 | .218/.230 | .16 | .12 | .83 | .688 | .434 | .589 |
| | | | AL | .5625-18UNJF-3B | .391 | 1.52 | 2.180 | .4120 | .256 | .218/.230 | .16 | .12 | .83 | .688 | .434 | .589 |
| | | | TI | .5625-18UNJF-3B | .391 | 1.52 | 2.180 | .4120 | .256 | .218/.230 | .16 | .12 | .83 | .688 | .434 | .589 |
| AS648H (-08) | .500 | S | CRES | .7500-16UNJF-3B | .391 | 1.64 | 2.380 | .5600 | .340 | .289/.306 | .19 | .13 | .83 | .875 | .497 | .744 |
| | | | AL | .7500-16UNJF-3B | .391 | 1.64 | 2.380 | .5600 | .340 | .289/.306 | .19 | .13 | .83 | .875 | .497 | .744 |
| | | | TI | .7500-16UNJF-3B | .391 | 1.64 | 2.380 | .5600 | .340 | .289/.306 | .19 | .13 | .83 | .875 | .497 | .744 |
| AS648H (-08) | .500 | E | CRES | .8750-14UNJF-3B | .391 | 1.71 | 2.840 | .6730 | .340 | .289/.306 | .20 | .14 | .83 | 1.000 | .497 | .822 |
| | | | AL | .8750-14UNJF-3B | .391 | 1.71 | 2.956 | .6730 | .340 | .289/.306 | .20 | .14 | .83 | 1.000 | .576 | 1.032 |
| | | | TI | .8750-14UNJF-3B | .391 | 1.71 | 3.310 | .6730 | .340 | .289/.306 | .20 | .14 | .83 | 1.000 | .576 | 1.179 |
| AS648J (-10) | .625 | R | CRES | .7500-16UNJF-3B | .485 | 1.81 | 2.190 | .5600 | .340 | .289/.306 | .19 | .13 | .97 | .875 | .497 | .744 |
| | | | AL | .7500-16UNJF-3B | .485 | 1.81 | 3.219 | .5600 | .340 | .289/.306 | .19 | .13 | .97 | .875 | 1.300 | 1.465 |
| | | | TI | .7500-16UNJF-3B | .485 | 1.81 | 3.661 | .5600 | .340 | .289/.306 | .19 | .13 | .97 | .875 | 1.950 | 2.090 |
| AS648J (-10) | .625 | S | CRES | .8750-14UNJF-3B | .485 | 1.96 | 2.850 | .6730 | .430 | .366/.387 | .20 | .14 | .97 | 1.000 | .576 | .822 |
| | | | AL | .8750-14UNJF-3B | .485 | 1.96 | 2.850 | .6730 | .430 | .366/.387 | .20 | .14 | .97 | 1.000 | .576 | .822 |
| | | | TI | .8750-14UNJF-3B | .485 | 1.96 | 3.743 | .6730 | .430 | .366/.387 | .20 | .14 | .97 | 1.000 | 1.180 | 2.172 |
| AS648J (-10) | .625 | E | CRES | 1.0625-12UNJ-3B | .485 | 1.96 | 2.861 | .8100 | .430 | .366/.387 | .23 | .16 | .97 | 1.250 | .730 | .924 |
| | | | AL | 1.0625-12UNJ-3B | .485 | 1.96 | 3.303 | .8100 | .430 | .366/.387 | .23 | .16 | .97 | 1.250 | 1.350 | 1.549 |
| | | | TI | 1.0625-12UNJ-3B | .485 | 1.96 | 3.744 | .8100 | .430 | .366/.387 | .23 | .16 | .97 | 1.250 | 1.940 | 2.174 |
| AS648K (-12) | .750 | R | CRES | .8750-14UNJF-3B | .615 | 2.10 | 3.208 | .6730 | .430 | .366/.387 | .20 | .14 | 1.17 | 1.000 | .576 | .936 |
| | | | AL | .8750-14UNJF-3B | .615 | 2.10 | 3.738 | .6730 | .430 | .366/.387 | .20 | .14 | 1.17 | 1.000 | .985 | 1.179 |
| | | | TI | .8750-14UNJF-3B | .615 | 2.10 | 4.268 | .6730 | .430 | .366/.387 | .20 | .14 | 1.17 | 1.000 | 1.185 | 1.398 |
| AS648K (-12) | .750 | S | CRES | 1.0625-12UNJ-3B | .615 | 2.17 | 3.120 | .8100 | .548 | .466/.493 | .23 | .16 | 1.17 | 1.250 | .582 | .903 |
| | | | AL | 1.0625-12UNJ-3B | .615 | 2.17 | 3.120 | .8100 | .548 | .466/.493 | .23 | .16 | 1.17 | 1.250 | .582 | .903 |
| | | | TI | 1.0625-12UNJ-3B | .615 | 2.17 | 4.270 | .8100 | .548 | .466/.493 | .23 | .16 | 1.17 | 1.250 | 1.210 | 1.400 |
| AS648K (-12) | .750 | E | CRES | 1.3125-12UNJ-3B | .615 | 2.27 | 3.233 | 1.0620 | .548 | .466/.493 | .30 | .21 | 1.17 | 1.500 | .648 | .976 |
| | | | AL | 1.3125-12UNJ-3B | .615 | 2.27 | 3.763 | 1.0620 | .548 | .466/.493 | .30 | .21 | 1.17 | 1.500 | .980 | 1.204 |
| | | | TI | 1.3125-12UNJ-3B | .615 | 2.27 | 4.294 | 1.0620 | .548 | .466/.493 | .30 | .21 | 1.17 | 1.500 | 1.220 | 1.424 |
| AS648M (-16) | 1.000 | R | CRES | 1.0625-12UNJ-3B | .851 | 2.45 | 3.644 | .8100 | .548 | .466/.493 | .23 | .16 | 1.52 | 1.250 | .830 | 1.025 |
| | | | AL | 1.0625-12UNJ-3B | .851 | 2.45 | 4.329 | .8100 | .548 | .466/.493 | .23 | .16 | 1.52 | 1.250 | 1.100 | 1.308 |
| | | | TI | 1.0625-12UNJ-3B | .851 | 2.45 | 5.014 | .8100 | .548 | .466/.493 | .23 | .16 | 1.52 | 1.250 | 1.395 | 1.592 |
| AS648M (-16) | 1.000 | S | CRES | 1.3125-12UNJ-3B | .851 | 2.55 | 3.500 | 1.0620 | .778 | .661/.700 | .30 | .21 | 1.52 | 1.500 | .648 | .976 |
| | | | AL | 1.3125-12UNJ-3B | .851 | 2.55 | 3.500 | 1.0620 | .778 | .661/.700 | .30 | .21 | 1.52 | 1.500 | .648 | .976 |
| | | | TI | 1.3125-12UNJ-3B | .851 | 2.55 | 5.038 | 1.0620 | .778 | .661/.700 | .30 | .21 | 1.52 | 1.500 | 1.405 | 1.616 |
| AS648M (-16) | 1.000 | E | CRES | 1.6250-12UNJ-3B | .851 | 2.67 | 3.720 | 1.3160 | .778 | .661/.700 | .30 | .21 | 1.52 | 2.000 | .900 | 1.132 |
| | | | AL | 1.6250-12UNJ-3B | .851 | 2.67 | 4.405 | 1.3160 | .778 | .661/.700 | .30 | .21 | 1.52 | 2.000 | 1.190 | 1.385 |
| | | | TI | 1.6250-12UNJ-3B | .851 | 2.67 | 5.091 | 1.3160 | .778 | .661/.700 | .30 | .21 | 1.52 | 2.000 | 1.450 | 1.669 |
| AS648N (-20) | 1.250 | R | CRES | 1.3125-12UNJ-3B | 1.101 | 2.25 | 3.433 | 1.0620 | .778 | .661/.700 | .30 | .21 | 2.00 | 1.500 | .900 | 1.113 |
| | | | AL | 1.3125-12UNJ-3B | 1.101 | 2.25 | 4.273 | 1.0620 | .778 | .661/.700 | .30 | .21 | 2.00 | 1.500 | 1.200 | 1.461 |
| | | | TI | 1.3125-12UNJ-3B | 1.101 | 2.25 | 5.113 | 1.0620 | .778 | .661/.700 | .30 | .21 | 2.00 | 1.500 | 1.600 | 1.809 |
| AS648N (-20) | 1.250 | S | CRES | 1.6250-12UNJ-3B | 1.101 | 2.48 | 4.070 | 1.3160 | 1.000 | .850/.900 | .30 | .21 | 2.00 | 2.000 | .799 | 1.132 |
| | | | AL | 1.6250-12UNJ-3B | 1.101 | 2.48 | 4.325 | 1.3160 | 1.000 | .850/.900 | .30 | .21 | 2.00 | 2.000 | 1.300 | 1.513 |
| | | | TI | 1.6250-12UNJ-3B | 1.101 | 2.48 | 5.165 | 1.3160 | 1.000 | .850/.900 | .30 | .21 | 2.00 | 2.000 | 1.650 | 1.861 |
| AS648N (-20) | 1.250 | E | CRES | 1.8750-12UNJ-3B | 1.101 | 2.55 | 3.592 | 1.5650 | 1.000 | .850/.900 | .37 | .26 | 2.00 | 2.125 | 1.025 | 1.307 |
| | | | AL | 1.8750-12UNJ-3B | 1.101 | 2.55 | 4.432 | 1.5650 | 1.000 | .850/.900 | .37 | .26 | 2.00 | 2.125 | 1.400 | 1.606 |
| | | | TI | 1.8750-12UNJ-3B | 1.101 | 2.55 | 5.272 | 1.5650 | 1.000 | .850/.900 | .37 | .26 | 2.00 | 2.125 | 1.750 | 1.954 |

| Hose Assembly No. & Size /24/ | Hose Size (ref) | Fitting Type (ref) /25/ | Fitting Matl /24/ /26/ | Thread T per AS8879 (ref) | Hose ID Min (ref) | A1 Max | A2 Max | B Gage Basic | C Dia Min /15/ | Min Ball Dia ELB/STR /15/ | D1 (ref) | D2 (ref) | E Max Without Sleeving /16/ | F Hex (ref) | G Min | G Max |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AS648P (-24) | 1.500 | R | CRES | 1.6250-12UNJ-3B | 1.344 | 2.85 | 3.750 | 1.3160 | 1.000 | .850/.900 | .30 | .21 | 2.28 | 2.000 | 1.000 | 1.220 |
| | | | AL | 1.6250-12UNJ-3B | 1.344 | 2.85 | 4.860 | 1.3160 | 1.000 | .850/.900 | .30 | .21 | 2.28 | 2.000 | 1.400 | 1.623 |
| | | | TI | 1.6250-12UNJ-3B | 1.344 | 2.85 | 5.832 | 1.3160 | 1.000 | .850/.900 | .30 | .21 | 2.28 | 2.000 | 1.800 | 2.025 |
| AS648P (-24) | 1.500 | S | CRES | 1.8750-12UNJ-3B | 1.344 | 2.85 | 4.600 | 1.5650 | 1.250 | 1.063/1.125 | .37 | .26 | 2.28 | 2.125 | 1.000 | 1.307 |
| | | | AL | 1.8750-12UNJ-3B | 1.344 | 2.85 | 4.966 | 1.5650 | 1.250 | 1.063/1.125 | .37 | .26 | 2.28 | 2.125 | 1.500 | 1.729 |
| | | | TI | 1.8750-12UNJ-3B | 1.344 | 2.85 | 5.939 | 1.5650 | 1.250 | 1.063/1.125 | .37 | .26 | 2.28 | 2.125 | 1.900 | 2.132 |
| AS648P (-24) | 1.500 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

TABLE 2 - TOLERANCES

| HOSE ASSEMBLY LENGTH | TOLERANCE |
|---|---|
| UNDER 18 IN | ±.125 |
| 18 TO 36 IN EXCLUSIVE | ±.250 |
| 36 TO 50 IN EXCLUSIVE | ±.500 |
| 50 IN AND OVER | ±1% |

TABLE 3 - HOSE AND SLEEVE CODES

| HOSE OR SLEEVE CODE | SLEEVE MATERIAL | TEMP. LIMIT °F |
|---|---|---|
| - | (-) INDICATES HOSE ONLY, NO SLEEVE (AS639) | 450 |
| A | ABRASION SLEEVE TUBULAR (PTFE - AS1291 - CODE B) /6/ | 450 |
| B | ABRASION SLEEVE COIL (NYLON AS1294) /7/ | 275 |
| C | FIRE SLEEVE (AS1072 SIL-FG) (15 min) /8/ /9/ /13/ | 450 |
| E | ABRASION SLEEVE SHRINK-ON (FEP) /11/ | 350 |
| F | ABRASION SLEEVE SHRINK-ON (POLYOLEFIN AS1073 - CODE B) /11/ | 275 |
| G | FIRE SLEEVE (AS1072 SIL-FG) (5 min) /8/ /9/ /12/ | 450 |
| H | FIRE SLEEVE INTEGRAL SILICONE (AS1723) (15 min) /13/ | 450 |
| J | FIRE SLEEVE INTEGRAL SILICONE (5 min) /12/ | 450 |
| K | INTEGRAL ABRASION SLEEVE (BRAIDED) POLYESTER /10/ | 300 |
| L | ABRASION SLEEVE COIL (PTFE - AS1293) /7/ | 450 |

TABLE 4 - HOSE AND SLEEVE OUTSIDE DIAMETERS

| HOSE OR SLEEVE CODE | TOLERANCE | HOSE SIZE /5/ .188 | HOSE SIZE /5/ .250 | HOSE SIZE /5/ .313 | HOSE SIZE /5/ .375 | HOSE SIZE /5/ .500 | HOSE SIZE /5/ .625 | HOSE SIZE /5/ .750 | HOSE SIZE /5/ 1.000 | HOSE SIZE /5/ 1.250 | HOSE SIZE /5/ 1.500 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| - | MAX | .285 | .343 | .406 | .469 | .585 | .687 | .812 | 1.140 | 1.390 | 1.707 |
| | MIN | .234 | .304 | .367 | .430 | .546 | .641 | .766 | 1.078 | 1.328 | 1.637 |
| A | MAX | .390 | .473 | .524 | .620 | .715 | .818 | .955 | 1.295 | 1.550 | 1.841 |
| | MIN | .320 | .393 | .454 | .515 | .645 | .748 | .870 | 1.210 | 1.450 | 1.771 |
| B | MAX | .339 | .409 | .472 | .535 | .669 | .767 | .896 | 1.224 | 1.474 | 1.807 |
| | MIN | .260 | .330 | .393 | .456 | .590 | .681 | .810 | 1.122 | 1.372 | 1.681 |
| C | MAX | .692 | .692 | .780 | .840 | .970 | 1.090 | 1.220 | 1.590 | 1.900 | 2.190 |
| | MIN | .533 | .533 | .598 | .658 | .778 | .908 | 1.038 | 1.288 | 1.658 | 1.898 |
| E | MAX | .301 | .375 | .438 | .507 | .635 | .749 | .887 | 1.288 | 1.440 | 1.761 |
| | MIN | .248 | .320 | .383 | .452 | .578 | .679 | .811 | 1.146 | 1.358 | 1.667 |
| F | MAX | .341 | .411 | .474 | .547 | .663 | .769 | .904 | 1.244 | 1.482 | 1.823 |
| | MIN | .278 | .348 | .411 | .484 | .600 | .699 | .834 | 1.158 | 1.396 | 1.729 |
| G | MAX | .692 | .692 | .780 | .840 | .970 | 1.090 | 1.220 | 1.590 | 1.900 | 2.190 |
| | MIN | .533 | .533 | .598 | .658 | .778 | .908 | 1.038 | 1.288 | 1.658 | 1.898 |
| H | MAX | .641 | .641 | .704 | .766 | .891 | 1.016 | 1.141 | 1.454 | 1.704 | 2.016 |
| | MIN | .537 | .594 | .657 | .719 | .844 | .949 | 1.074 | 1.394 | 1.649 | 1.957 |
| J | MAX | .641 | .641 | .704 | .766 | .891 | 1.016 | 1.141 | 1.454 | 1.704 | 2.016 |
| | MIN | .537 | .594 | .657 | .719 | .844 | .949 | 1.074 | 1.394 | 1.649 | 1.957 |
| K | MAX | .378 | .430 | .499 | .559 | .665 | .772 | .887 | 1.210 | 1.460 | 1.782 |
| | MIN | .320 | .390 | .450 | .510 | .625 | .726 | .841 | 1.148 | 1.398 | 1.712 |
| L | MAX | .375 | .445 | .508 | .571 | .687 | .789 | .914 | 1.242 | 1.492 | 1.809 |
| | MIN | .267 | .333 | .407 | .470 | .586 | .681 | .828 | 1.138 | 1.388 | 1.697 |

TABLE 5 - HOSE WEIGHT MAX. ALL OTHERS REF

| HOSE OR SLEEVE CODE OR FITTING | FITTING TYPE /25/ | UNITS | HOSE SIZE .188 | HOSE SIZE .250 | HOSE SIZE .313 | HOSE SIZE .375 | HOSE SIZE .500 | HOSE SIZE .625 | HOSE SIZE .750 | HOSE SIZE 1.000 | HOSE SIZE 1.250 | HOSE SIZE 1.500 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| - | | LB/IN | .005 | .007 | .008 | .010 | .012 | .016 | .020 | .045 | .058 | .074 |
| A | | LB/IN | .003 | .004 | .004 | .006 | .007 | .008 | .010 | .014 | .020 | .045 |
| B | | LB/IN | .001 | .001 | .002 | .002 | .003 | .004 | .004 | .005 | .006 | .009 |
| C | | LB/IN | .009 | .009 | .011 | .012 | .017 | .018 | .028 | .030 | .040 | .037 |
| E | | LB/IN | .001 | .002 | .002 | .002 | .003 | .004 | .006 | .007 | .007 | .008 |
| F | | LB/IN | .002 | .002 | .002 | .002 | .003 | .003 | .005 | .006 | .006 | .007 |
| G | | LB/IN | .009 | .009 | .011 | .012 | .017 | .018 | .028 | .030 | .040 | .037 |
| H | | LB/IN | .016 | .018 | .020 | .023 | .030 | .037 | .045 | .085 | .107 | .132 |
| J | | LB/IN | .016 | .017 | .018 | .021 | .027 | .035 | .042 | .079 | .100 | .123 |
| K | | LB/IN | .006 | .008 | .009 | .011 | .015 | .018 | .023 | .050 | .063 | .081 |
| L | | LB/IN | .003 | .004 | .004 | .005 | .008 | .009 | .011 | .018 | .022 | .028 |
| FIRESLEEVE CLAMP | | LB/EA | .015 | .016 | .018 | .019 | .021 | .023 | .025 | .029 | .033 | .037 |
| FITTING END STR /26/ A/D - CRES | R | LB/EA | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| | S | LB/EA | .040 | .055 | .075 | .085 | .155 | .235 | .330 | .535 | .995 | 1.370 |
| | E | LB/EA | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| B/E - ALUM | R | LB/EA | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| | S | LB/EA | --- | --- | --- | .050 | .073 | .117 | .164 | .255 | .473 | .638 |
| | E | LB/EA | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| C/F - TI | R | LB/EA | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| | S | LB/EA | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| | E | LB/EA | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| FITTING END 45° /26/ A/D - CRES | R | LB/EA | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| | S | LB/EA | .051 | .065 | .080 | .112 | .172 | .266 | .360 | .590 | 1.110 | 1.540 |
| | E | LB/EA | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| B/E - ALUM | R | LB/EA | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| | S | LB/EA | --- | --- | --- | .055 | .080 | .110 | .165 | .275 | .470 | .640 |
| | E | LB/EA | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| C/F - TI | R | LB/EA | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| | S | LB/EA | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| | E | LB/EA | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD | TBD |



TABLE 6 - SLEEVE LENGTH

| HOSE SIZE | LENGTH |
|---|---|
| .188, .250, .313, .375 | 2.00 ± .25 |
| .500, .625 | 2.50 ± .25 |
| .750, 1.000 | 3.00 ± .25 |
| 1.250, 1.500 | 4.00 ± .25 |

TABLE 7 - DIMENSION H (SEE FIGURE 3) /19/

| SIZE CODE | H | J |
|---|---|---|
| 3 | .085 | .060 |
| 4 | .062 | .044 |
| 5 | .058 | .041 |
| 6 | .059 | .042 |
| 8 | .064 | .045 |
| 10 | .078 | .055 |
| 12 | .069 | .049 |
| 16 | .132 | .093 |
| 20 | .090 | .064 |
| 24 | .134 | .095 |

NOTES:

1. CONSTRUCTION AND PERFORMANCE: AS1946, FITTINGS SHALL BE PERMANENTLY ATTACHED TO THE HOSE.

2. OPERATING CHARACTERISTICS: SEE AS1946.

3. MATERIALS:

   a. HOSE AND FITTINGS - PER AS1946 /26/

   b. SLEEVES - SEE APPLICABLE STANDARDS, TABLE 3

/4/ STANDARD COUPLING NUTS SHALL BE IN ACCORDANCE WITH AS21921, AS1790, OR AS4370 AND MATE WITH AS33514, AS4377 OR AS4375 FITTING ENDS. NONSTANDARD COUPLING NUTS MAY BE USED, PROVIDED THEY ARE FUNCTIONALLY EQUIVALENT, AND PROVIDED THEY CANNOT BE REMOVED FROM THE FITTING. NUTS SHALL MEET THE TORQUE TEST REQUIREMENTS PER AS1946.

/5/ DIAMETERS ARE LISTED FOR CLAMP SELECTION. TUBULAR SLEEVES MAY NOT BE A PERFECT ROUND AND SHALL BE MEASURED WITH A DIAMETER MEASUREMENT TAPE.

/6/ THE INSTALLED TUBULAR ABRASION SLEEVES AXIAL MOVEMENT ON THE HOSE SHALL NOT EXCEED .05 IN. ENDS OF THE TUBULAR SLEEVE SHALL BE TERMINATED WITH A LENGTH OF AMS-DTL-23053/11 (FEP) CLASS 1 OR 2, COLOR CLEAR, PER TABLE 6 AND FIGURE 2.

/7/ COIL ABRASION SLEEVES, WHEN ASSEMBLED ON A STRAIGHT HOSE, SHALL HAVE AN AVERAGE GAP BETWEEN COILS NOT EXCEEDING .05 in. DISPLACEMENT OF THE COILS OF THE SLEEVE, CAUSING A GREATER GAP, SHALL NOT BE CAUSE FOR REJECTION IF THE COILS CAN BE REPOSITIONED TO MEET THE GAP REQUIREMENTS. ENDS OF THE COIL SLEEVE SHALL BE TERMINATED WITH A LENGTH OF HEAT SHRINKABLE SLEEVING IN ACCORDANCE WITH TABLE 6 AND FIGURE 2. CODE "B" (NYLON COIL) ABRASION SLEEVES SHALL BE TERMINATED WITH AMS-DTL-23053/5 CLASS 1 OR 3, COLOR BLACK. CODE "L" (COIL ABRASION) SLEEVES SHALL BE TERMINATED WITH AMS-DTL-23053/12, CLASS 1, COLOR TRANSPARENT, PTFE. (OPTIONAL FOR BOTH SLEEVES AMS-DTL-23053/11 (FEP) CLASS 1 OR 2, COLOR CLEAR).

/8/ THE TABLE 4 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.

/9/ THE CUT ENDS OF THE FIRE SLEEVE SHALL BE SEALED USING RTV SILICONE RUBBER, PRIOR TO INSTALLATION, TO PREVENT WICKING OF FLUIDS. THE FIRE SLEEVE ENDS SHALL BE SECURED TO THE HOSE ASSEMBLY END FITTINGS WITH CORROSION RESISTANT STEEL BANDS. AFTER INSTALLATION, CRACKS OR VOIDS IN THE FIRE SLEEVE, WHICH EXPOSE THE FIBERGLASS, SHALL BE COATED WITH SILICONE RUBBER.

/10/ INTEGRAL ABRASION SLEEVE SHALL FORM AN INTEGRAL, PERMANENT PART OF THE HOSE AND SHALL TERMINATE A MAXIMUM OF .250 FROM THE END OF THE COLLAR.

/11/ FEP AND POLYOLEFIN SHRINK ABRASION SLEEVES SHALL BE SHRUNK TO A SNUG FIT OVER THE HOSE AND END FITTING COLLARS. SLEEVE SHALL COVER A MINIMUM OF ONE HALF THE COLLAR.

/12/ ADD "AS1055 TYPE IIb CLASS A-S/P" OR “AS150 TYPE VIIbA” TO IDENTIFICATION MARKING TO SHOW LEVEL OF COMPLIANCE, "FIRE RESISTANT (5 min), WITH AS1055 OR AS150"

/13/ ADD "AS1055 TYPE IIb CLASS B-S/P" TO IDENTIFICATION MARKING TO SHOW LEVEL OF COMPLIANCE, "FIRE PROOF (15 min), WITH AS1055" /14/ THIS HOSE ASSEMBLY SHALL BE QUALIFIED IN ACCORDANCE WITH PROCUREMENT SPECIFICATION AS1946. USERS OF THIS STANDARD SHALL PROCURE THIS PRODUCT FROM ACCREDITED MANUFACTURER(S), OR THEIR ACCREDITED DISTRIBUTOR(S), AS LISTED IN THE PERFORMANCE REVIEW INSTITUTE (PRI) QUALIFIED PRODUCTS LIST PRI-QPL-AS1946 FOR THIS STANDARD.

/15/ A TRUE CIRCULAR CROSS SECTION IS NOT REQUIRED THROUGH THE FITTING ID. HOWEVER, THE APPLICABLE MINIMUM BALL DIAMETER LISTED IN TABLE 1 MUST BE CAPABLE OF PASSING THROUGH THE HOSE ASSEMBLY.

/16/ DISTANCE ACROSS CORNERS OF THE HEX MAY EXCEED THIS DIMENSION.

/17/ MARKING: MARKING SHALL BE PER AS1946 ON A STAINLESS STEEL BAND NOT OVER 1.0 in WIDE OR ON THE COLLAR. THE CHARACTERS SHALL BE A MINIMUM OF .0625 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 PERMANENTLY MARKED ON THE BAND OR ON AN END FITTING OR A FIRE SLEEVE CLAMP. IDENTIFICATION BANDS MAY BE APPLIED TO HOSE OR OVER END FITTING AND SHALL BE COVERED WITH A CLEAR HEAT SHRINK SLEEVE PER AMS-DTL-23053/11. PERMANENT MARKING MAY BE APPLIED TO THE HOSE FITTING.

18 SURFACE TEXTURE: SYMBOLS PER ASME Y14.36M: REQUIREMENTS PER ASME B46.1. UNLESS OTHERWISE SPECIFIED, MACHINED SURFACES TO BE 125µin Ra.

/19/ HOSE ASSEMBLY LENGTH FOR AS648, GAGE POINT TO GAGE POINT, AND ELBOW DROP LENGTHS, GAGE POINT TO GAGE POINT, ARE FUNCTIONALLY EQUIVALENT TO MS8006 STYLE B OR H. CALCULATE HOSE LENGTH REQUIRED TO REPLACE MS8006 HOSE ASSEMBLY, STYLE B OR H, BY SUBTRACTING, FOR EACH END, DIMENSION "H" OR "J" AS TABULATED IN TABLE 7 AND SHOWN IN FIGURE 3. FROM MS8006 LENGTH AND FORMULATE AN EQUIVALENT AS648 LENGTH TO THE NEAREST .125 INCREMENT. /24/

/20/ LENGTH "L" IS A FOUR DIGIT NUMBER OF WHICH THE FIRST THREE DIGITS DESCRIBE THE HOSE ASSEMBLY LENGTH IN WHOLE INCHES, AND THE FOURTH DIGIT, THE FRACTION OF AN INCH IN EIGHTHS. LENGTH "L" IS MEASURED FROM "SEAL POINT" TO "SEAL POINT". FOR LENGTH TOLERANCES SEE TABLE 2. TO CONVERT "SEAL POINT" TO "SEAL POINT" TO "END TO END" MEASUREMENT, ADD "D1" AND "D2" TO LENGTH "L".

/21/ LUBRICATE "B" NUT ID THREADS AND SHOULDER OR WIRE GROOVE WITH SOLID FILM LUBRICANT PER AS5272, TYPE I.

22. DIMENSIONING AND TOLERANCING: ASME Y14.5M-1994

23. SAFETY WIRE HOLES PER AS1043