FEDERAL SUPPLY CLASS
4720

RATIONALE

AS622C HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE FIVE-YEAR REVIEW POLICY.

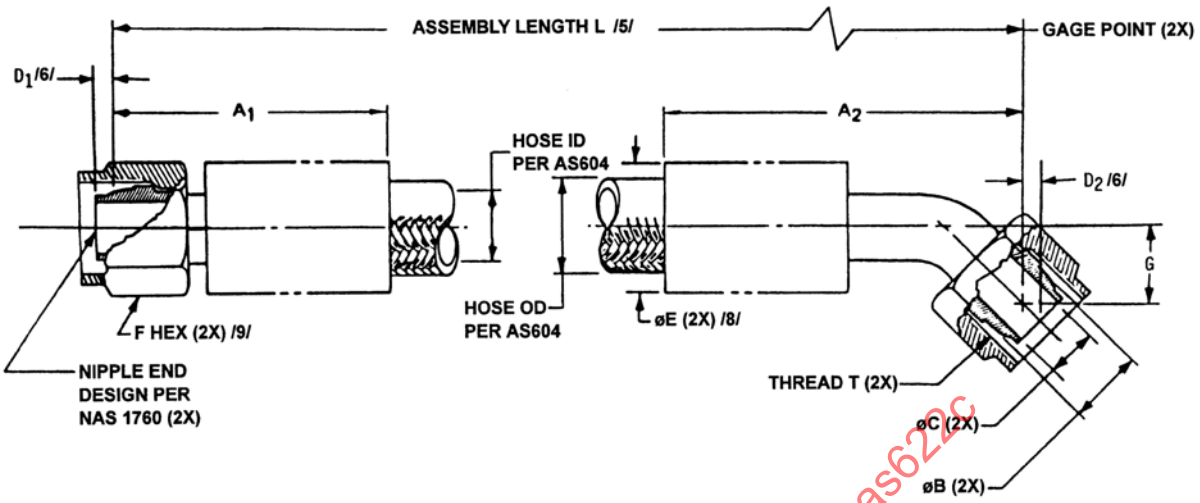


FIGURE 1 - HOSE AND FITTING DIMENSIONS

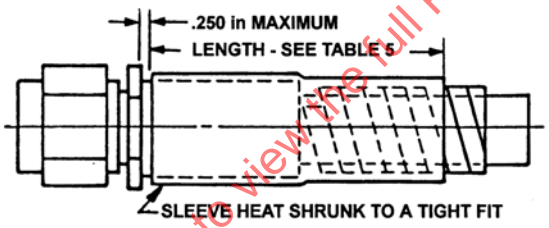


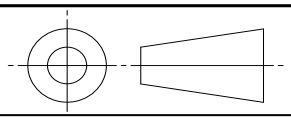
FIGURE 2 - TUBULAR/COIL ABRASION END /10/ /11/

TABLE 1 - ASSEMBLY DIMENSIONS

HOSE ASSEMBLY AS622 SIZE CODE	HOSE ASSEMBLY SIZE (REF)	THREAD T PER AS8879 (REF)	A_1 MAX	A_2 MAX	B GAGE BASIC	C /7/ MIN	D_1 (REF)	D_2 (REF)	E MAX WITHOUT SLEEVING	F HEX (REF)
04	.250	.4375-20 UNJF-3B	1.56	2.17	.2930	.135	.16	.11	.88	.56
06	.375	.5625-18 UNJF-3B	1.80	2.68	.4120	.240	.16	.12	1.00	.69
08	.500	.7500-16 UNJF-3B	2.06	3.11	.5600	.340	.19	.13	1.20	.88
10	.625	.8750-14 UNJF-3B	2.44	3.59	.6730	.410	.20	.14	1.41	1.00
12	.750	1.0625-12 UNJ-3B	2.56	3.67	.8100	.510	.23	.16	1.69	1.25
16	1.00	1.3125-12 UNJ-3B	3.00	4.44	1.0620	.760	.30	.21	2.00	1.50
20	1.25	1.6250-12 UNJ-3B	3.00	4.65	1.3160	.925	.30	.21	2.13	2.00

SAE values your input. To provide feedback on this Technical Report, please visit
http://www.sae.org/technical/standards/AS622C

THIRD ANGLE PROJECTION



CUSTODIAN: G-3/G-3D

PROCUREMENT SPECIFICATION: AS604 /2/

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

HOSE ASSEMBLY, 3000 psi, PTFE, FLARELESS, STRAIGHT TO 45°, HEAVYWEIGHT

SAE AS622

REV. C

ISSUED 1984-07 REVISED 2001-05 REAFFIRMED 2013-01

TABLE 1 (CONTINUED)

HOSE ASSEMBLY AS622 SIZE CODE	HOSE ASSEMBLY SIZE (REF)	G MIN	G MAX	INSPECTION BALL SIZE /7/ STRAIGHT END FITTING DIA IN	INSPECTION BALL SIZE /7/ ELBOW END FITTING DIA IN
04	.250	.31	.50	.122	.115
06	.375	.44	.62	.216	.204
08	.500	.50	.75	.306	.289
10	.625	.56	.81	.369	.349
12	.750	.62	.88	.459	.434
16	1.00	.81	1.09	.684	.646
20	1.25	1.24	1.31	.833	.786

TABLE 2 - HOSE OR SLEEVE OUTSIDE DIAMETER /14/

SLEEVE CODE	SLEEVE MATERIAL	TEMP. LIMIT °F	HOSE SIZE .250	HOSE SIZE .375	HOSE SIZE .500	HOSE SIZE .625	HOSE SIZE .750	HOSE SIZE 1.00	HOSE SIZE 1.25
NONE	(-) INDICATES HOSE ONLY, NO SLEEVE	400	.455 .395	.595 .535	.735 .675	.935 .875	1.090 1.030	1.410 1.350	1.650 1.590
A	ABRASION SLEEVE TUBULAR (TFE-AS1291-CODE B) /10/	400	.540 .468	.715 .635	.855 .770	1.025 .960	1.195 1.125	1.515 1.445	1.825 1.755
B	ABRASION SLEEVE COIL (NYLON AS1294) /11/	275	.509 .413	.684 .584	.809 .733	1.005 .923	1.170 1.088	1.492 1.408	1.750 1.690
C	FIRESLEEVE (AS1072 SIL-FG) (15 min) /12/ /13/ /18/	400	.688 .562	.875 .750	1.000 .875	1.250 1.125	1.375 1.250	1.750 1.625	2.000 1.875
E	ABRASION SLEEVE SHRINK-ON (FEP) /16/	350	.458 .417	.638 .592	.773 .727	.973 .927	1.148 1.102	1.438 1.392	1.688 1.632
F	ABRASION SLEEVE SHRINK-ON (POLYOLEFIN AS1073 - CODE B) /16/	275	.490 .440	.670 .610	.795 .745	.997 .937	1.174 1.112	1.482 1.428	1.740 1.680
G	FIRESLEEVE (AS1072 SIL-FG) (5 min) /12/ /13/ /17/	400	.688 .562	.875 .750	1.000 .875	1.250 1.125	1.375 1.250	1.750 1.625	2.000 1.875
H	FIRESLEEVE INTEGRAL SILICONE (15 min) /18/	400	.700 .640	.880 .820	1.000 .940	1.203 1.143	1.343 1.283	1.656 1.596	1.906 1.846
J	FIRESLEEVE INTEGRAL SILICONE (5 min) /17/	400	.705 .645	.880 .820	1.005 .945	1.217 1.143	1.382 1.280	1.748 1.593	1.906 1.846
K	INTEGRAL ABRASION SLEEVE (BRAIDED) POLYESTER /15/	300	.505 .480	.675 .645	.795 .765	.985 .955	1.150 1.120	1.470 1.440	1.720 1.680
L	ABRASION SLEEVE COIL (PTFE-AS1293) /11/	400	.522 .449	.692 .622	.817 .747	1.007 .937	1.172 1.102	1.492 1.422	1.750 1.690

TABLE 3 - ASSEMBLY LENGTH TOLERANCE

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

TABLE 4 - WEIGHTS (NOMINAL)

HOSE OR SLEEVE CODE	HOSE OR TYPE SLEEVE	UNITS	HOSE SIZE .250	HOSE SIZE .375	HOSE SIZE .500	HOSE SIZE .625	HOSE SIZE .750	HOSE SIZE 1.00	HOSE SIZE 1.25
NONE	HOSE ONLY	LB/IN	.012	.028	.040	.062	.086	.140	.154
A	ABRASION SLEEVE (TFE-AS1291-CODE B)	LB/IN	.003	.004	.004	.005	.007	.009	.011
B	ABRASION SLEEVE (NYLON AS1294)	LB/IN	.001	.002	.003	.003	.004	.005	.007
C	FIRESLEEVE (15 min) AS1072	LB/IN	.007	.010	.011	.015	.017	.021	.025
E	ABRASION SLEEVE (FEP)	LB/IN	.002	.003	.003	.005	.006	.007	.009
F	ABRASION SLEEVE (AS1073-CODE B)	LB/IN	.002	.003	.003	.004	.005	.006	.008
G	FIRESLEEVE (5 min) AS1072	LB/IN	.007	.010	.011	.015	.017	.021	.025
H	FIRESLEEVE INTEGRAL (15 min) ON HOSE	LB/IN	.022	.042	.056	.081	.102	.154	.190
J	FIRESLEEVE INTEGRAL (5 min) ON HOSE	LB/IN	.022	.042	.056	.081	.102	.154	.190
K	ABRASION SLEEVE POLYESTER WITH HOSE	LB/IN	.013	.028	.039	.060	.082	.130	.160
L	ABRASION SLEEVE (PTFE-AS1293)	LB/IN	.003	.004	.005	.005	.006	.007	.009
NONE	FIRESLEEVE CLAMP (*)	LB/EA	.020	.020	.025	.026	.026	.033	.038
NONE	FITTING END (STRAIGHT) (*)	LB/EA	.070	.117	.172	.266	.520	.713	1.400
NONE	FITTING END (45°) (*)	LB/EA	.078	.130	.221	.327	.597	.860	1.581

(*) NOTE: FIRESLEEVE CLAMP AND FITTING END ARE IN POUNDS EACH.

TABLE 5 - SLEEVE LENGTH

HOSE SIZE	LENGTH (INCHES)
.250	2.00 ± .25
.375	
.500	2.50 ± .25
.625	
.750	3.00 ± .25
1.00	
1.25	3.50 ± .25

NOTES:

1. MATERIALS:

   a. HOSE AND FITTINGS PER AS604
   b. SLEEVES - SEE APPLICABLE STANDARD PER TABLE 2

/2/ THIS HOSE ASSEMBLY SHALL BE QUALIFIED IN ACCORDANCE WITH PROCUREMENT SPECIFICATION AS604. USERS OF THIS STANDARD ARE ADVISED TO CONTROL SOURCE APPROVAL(S) BY STANDARD PAGE SUPPLEMENT SHEET OR SIMILAR MEANS.

CHANGE-OVER FROM USER-QPL TO PRI-QPL SHALL BE PERFORMED IN ACCORDANCE WITH AS604D, AND COMPLETED BY MARCH 1, 2002. USERS OF THIS STANDARD SHALL PROCURE THE PRODUCT FROM ACCREDITED MANUFACTURERS, OR THEIR ACCREDITED DISTRIBUTORS, AS LISTED IN THE PERFORMANCE REVIEW INSTITUTE (PRI) QUALIFIED PRODUCTS LIST OF PRI-QPL-AS604 FOR THIS STANDARD.

3. MARKING SHALL BE PER AS604 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 PERMANENTLY MARKED ON THE BAND OR ON AN END FITTING OR A FIRESLEEVE CLAMP.

4. CONSTRUCTION AND PERFORMANCE PER AS604. FITTINGS SHALL BE PERMANENTLY ATTACHED TO THE HOSE.

/5/ 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 "GAGE POINT" TO "GAGE POINT." FOR LENGTH TOLERANCES SEE TABLE 3.

/6/ TO CONVERT "GAGE POINT" TO "GAGE POINT" TO "END TO END" MEASUREMENT, ADD "D_1" + "D_2" TO LENGTH "L".

/7/ HOSE ASSEMBLY INSIDE DIAMETER SHALL BE VERIFIED BY PASSING THE DESIGNATED, OR LARGER, SPHERICAL BALL PER TABLE 1 THROUGH THE HOSE ASSEMBLY.

/8/ DISTANCE ACROSS CORNERS OF THE COUPLING NUT MAY EXCEED THIS DIMENSION.

/9/ STANDARD COUPLING NUTS SHALL BE IN ACCORDANCE WITH AS21921 OR AS4370. NONSTANDARD COUPLING NUTS MAY BE USED, PROVIDED THEY ARE DIMENSIONALLY AND FUNCTIONALLY EQUIVALENT, AND PROVIDED THEY CANNOT BE REMOVED FROM THE FITTING.

/10/ TUBULAR ABRASION (TFE) SLEEVES SHALL HAVE AN ID NO GREATER THAN HOSE OD + .05 in. AXIAL MOVEMENT OF THE SLEEVE INSTALLED 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 5 AND FIGURE 2.

/11/ 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 5 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 I, COLOR TRANSPARENT, PTFE (OPTIONAL AMS-DTL-23053/11 (FEP), CLASS 1 OR 2, COLOR CLEAR).

/12/ 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.

/13/ 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.

/14/ DIAMETERS ARE LISTED FOR CLAMP SELECTION. TUBULAR SLEEVES MAY NOT BE A PERFECT ROUND AND SHALL BE MEASURED WITH A DIAMETER TAPE RULER (OFTEN REFERRED TO AS PI-TAPE).

/15/ INTEGRAL ABRASION SLEEVE SHALL FORM AN INTEGRAL, PERMANENT PART OF THE HOSE AND SHALL TERMINATE A MAXIMUM OF .200 in FROM THE END OF THE COLLAR.

/16/ FEP AND POLYOLEFIN SHRINK ABRASION SLEEVES SHALL BE SHRUNK TO A SNUG FIT OVER THE HOSE AND END FITTING COLLARS.

/17/ ADD "AS1055 TYPE IIb CLASS A-S/P" OR "AS150 TYPE VIIIbA" TO IDENTIFICATION MARKING TO SHOW LEVEL OF COMPLIANCE, "FIRE RESISTANT" (5 min), WITH AS1055 OR AS150.