

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be revised, reaffirmed, stabilized, or cancelled. SAE invites your written comments and suggestions.

REV.
D

AS4504

FEDERAL SUPPLY CLASS

RATIONALE

CORRECTED NOTE NUMBERS AND CLARIFIED COVER CODES SHOWN IN TABLE 3. UPDATED NOTE 2 TO CURRENT STANDARD QPL WORDING.

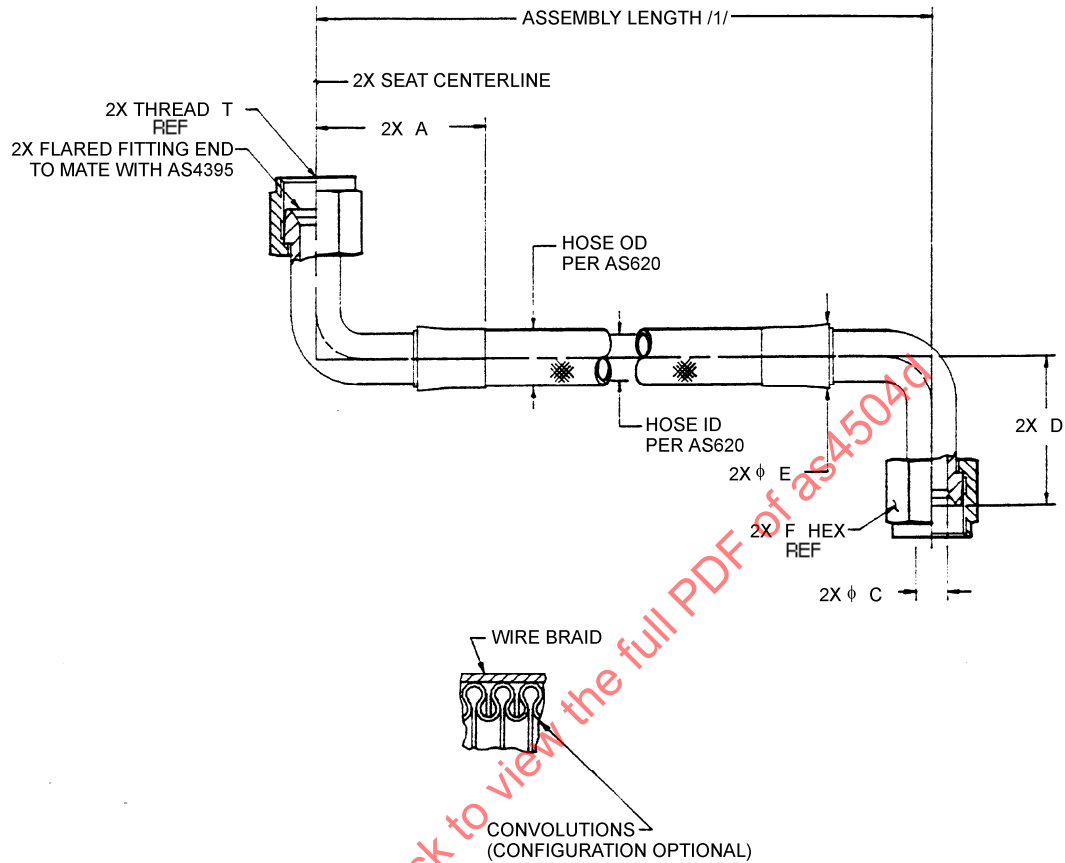


FIGURE 1 - HOSE ASSEMBLY

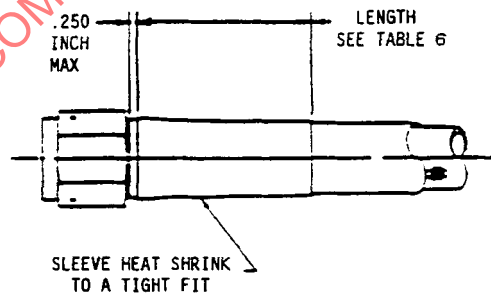
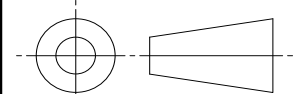


FIGURE 2 - SPIRAL AND POLYESTER ABRASION COVER /6/, /7/

SAE values your input. To provide feedback on this Technical Report, please visit <http://www.sae.org/technical/standards/AS4504D>

THIRD ANGLE PROJECTION



CUSTODIAN: G-3/G-3D

PROCUREMENT SPECIFICATION: AS620 /2/



AEROSPACE STANDARD

HOSE ASSEMBLY, CONVOLUTED,
POLYTETRAFLUOROETHYLENE, METALLIC REINFORCED
CONDUCTIVE, FLARED, 90° TO 90°

AS4504
SHEET 1 OF 5

REV.
D

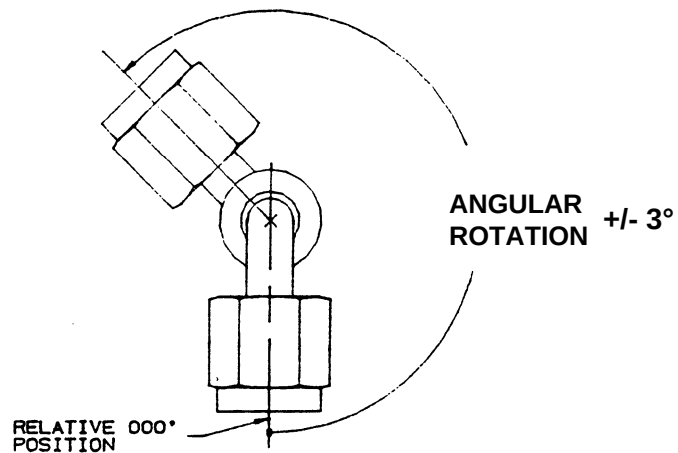


FIGURE 3 - FITTING ANGULAR ORIENTATION /15/

TABLE 1 - ASSEMBLY DIMENSIONS

HOSE ASSEMBLY AS4504 SIZE CODE	HOSE ASSEMBLY SIZE REF	THREAD T PER AS8879 REF	A MAX	ØC /8/ MIN	D MIN	D MAX	ØE /9/ MAX WITHOUT SLEEVING	F HEX REF
E	.250	.4375-20UNJF-3B	1.36	.132	.607	.677	.55	.56
G	.375	.5625-18UNJF-3B	1.56	.256	.855	.925	.68	.69
H	.500	.7500-16UNJF-3B	1.85	.345	1.072	1.142	.86	.88
J	.625	.8750-14UNJF-3B	2.19	.430	1.246	1.316	.95	1.00
K	.750	1.0625-12UNJ-3B	2.67	.635	1.370	1.440	1.28	1.25
M	1.000	1.3125-12UNJ-3B	2.87	.835	1.673	1.743	1.47	1.50
N	1.250	1.6250-12UNJ-3B	3.39	1.085	2.015	2.085	1.70	1.81
P	1.500	1.8750-12UNJ-3B	3.65	1.310	2.335	2.405	2.00	2.12
R	2.000	2.5000-12UNJ-3B	4.96	1.780	3.040	3.110	2.56	2.75

TABLE 2 - ASSEMBLY LENGTH TOLERANCE

+250/-125 INCH FOR LENGTHS UNDER 18 INCHES
+500/-250 INCH FOR LENGTHS FROM 18 TO 36 INCHES EXL.
+1.000/-500 INCH FOR LENGTHS FROM 36 TO 50 INCHES EXL.
+2%/-1% FOR LENGTHS 50 INCHES AND OVER



AEROSPACE STANDARD

HOSE ASSEMBLY, CONVOLUTED,
POLYTETRAFLUOROETHYLENE, METALLIC REINFORCED
CONDUCTIVE, FLARED, 90° TO 90°

AS4504
SHEET 2 OF 5

**REV.
D**

TABLE 3 - HOSE OR COVER OUTSIDE DIAMETER

COVER CODE	HOSE OR TYPE OF PROTECTIVE COVER	HOSE SIZE									UPPER TEMP. LIMIT °F
		.250	.375	.500	.625	.750	1.00	1.25	1.50	2.00	
—	HOSE ONLY PER AS620	.413/.477	.523/.587	.723/.787	.818/.882	1.028/1.092	1.266/1.330	1.494/1.558	1.758/1.822	2.293/2.357	—
B	SPIRAL ABRASION /6/	.505	.615	.825	.935	1.140	1.358	1.630	1.890	2.395	275
H	INTEGRAL FIRESLEEVE /10/	.710/.760	.798/.862	.978/1.055	1.100/1.202	1.300/1.392	1.478/1.610	1.718/1.840	1.968/2.120	2.480/2.564	400
N	FIRESLEEVE SIL/FG (AS1072) /10/ /11/ /12/	.900	1.030	1.150	1.380	1.590	1.800	2.060	2.320	2.740	400
K	INTEGRAL ABRASION /7/ (BRAIDED) POLYESTER	.468/.532	.598/.662	.808/.872	.888/.952	1.103/1.167	1.313/1.405	1.568/1.632	1.838/1.902	2.370/2.452	300
J	INTEGRAL FIRESLEEVE /13/	.653/.717	.763/.827	.963/1.027	1.058/1.122	1.268/1.332	1.498/1.562	—	—	2.480/2.564	400

TABLE 4 - HOSE ASSEMBLIES PHYSICAL CHARACTERISTICS

HOSE SIZE REF	OPERATING PRESSURE MAX PSI	PROOF PRESSURE MIN PSI	BURST PRESSURES ROOM TEMP MIN PSI	BURST PRESSURES HIGH TEMP MIN PSI	BEND RADIUS AT INSIDE OF BEND INCHES (HOSE ONLY)
E	1000	2000	4000	2800	1.25
G	1000	2000	4000	2800	2.25
H	1000	2000	4000	2800	2.88
J	1000	1800	3600	2500	3.00
K	1000	1800	3600	2500	3.75
M	1000	1800	3600	2500	5.00
N	1000	1800	3600	2500	6.25
P	750	1500	3000	2100	7.50
R	250	500	1000	700	10.00

TABLE 5 - WEIGHTS (NOM)

HOSE SIZE REF	HOSE ONLY LB/IN	HOSE WITH SPIRAL ABRASION COVER CODE B LB/IN	HOSE WITH INTEGRAL FIRESLEEVE COVER CODE H & J LB/IN	HOSE WITH TUBULAR FIRESLEEVE COVER CODE N LB/IN	HOSE WITH POLYESTER ABRASION COVER CODE K LB/IN	90° END FITTING LB EACH
E	.010	.011	—	.018	.009	.06
G	.010	.014	.028	.021	.012	.12
H	.022	.020	.032	.030	.018	.19
J	.020	.025	.042	.035	.022	.30
K	.027	.032	.050	.044	.028	.42
M	.040	.039	.055	.057	.038	.66
N	.055	.060	.070	.077	.045	1.00
P	.060	.071	.082	.107	.058	1.41
R	.090	.105	.129	.142	.100	2.46



AEROSPACE STANDARD

HOSE ASSEMBLY, CONVOLUTED,
POLYTETRAFLUOROETHYLENE, METALLIC REINFORCED
CONDUCTIVE, FLARED, 90° TO 90°

AS4504
SHEET 3 OF 5

**REV.
D**

TABLE 6 - SLEEVE LENGTH

REF HOSE SIZE	LENGTH (IN)
E/G	2.00 ± .25
H/J	2.50 ± .25
K/M	3.00 ± .25
N/P	3.50 ± .25
R	4.00 ± .25

**TABLE 7 - MINIMUM INSPECTION BALL SIZE
FOR VERIFYING HOSE ASSEMBLY ID /8/**

HOSE SIZE REF	ELBOW END FITTING DIA IN
E	.112
G	.218
H	.293
J	.366
K	.540
M	.710
N	.922
P	1.114
R	1.513

NOTES:

1. MATERIALS: HOSE AND FITTINGS PER AS620, TYPE II, CLASS 1 OR 2, AS SPECIFIED BY PART NUMBER.
CODE B, SPIRAL ABRASION COVER, BLACK NYLON COIL PER AS1294
CODE H AND J, INTEGRAL FIRESLEEVE, RED OR BROWN SILICONE
CODE N, TUBULAR FIRESLEEVE, FIBERGLASS SILICONE PER AS1072
CODE K, INTEGRAL ABRASION SLEEVE, BRAIDED POLYESTER
- /2/ PROCUREMENT SPECIFICATION: AS620 EXCEPT AS SPECIFIED ON THIS STANDARD. PRODUCT SUPPLIED TO THIS SPECIFICATION SHALL BE MANUFACTURED AND ASSEMBLED BY AN ACCREDITED MANUFACTURER OR ASSEMBLED BY AN ACCREDITED DISTRIBUTOR LISTED IN THE PERFORMANCE REVIEW INSTITUTE (PRI) QUALIFIED PRODUCTS LIST (QPL) PRI QPL AS620 FOR THIS STANDARD. SEE www.eAuditNet.com FOR CURRENT QPL ON-LINE.
3. MARKING SHALL BE PER AS620 ON A STAINLESS STEEL BAND NOT OVER 1.0 INCH WIDE OR ON THE END FITTING COLLAR. THE CHARACTERS SHALL BE A MINIMUM OF .06 INCH HIGH. THE BAND SHALL BE SO DESIGNED AS TO REMAIN TIGHT ON THE HOSE TO PREVENT RELATIVE MOTION AND CHAFING. IT SHALL BE OF SUFFICIENT STRENGTH TO PREVENT REMOVAL BY HAND.
4. CONSTRUCTION AND PERFORMANCE PER AS620. FITTINGS SHALL BE PERMANENTLY ATTACHED TO HOSE.
- /5/ 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 IN FRACTION OF AN INCH IN EIGHTHS. LENGTH "L" IS MEASURED FROM "END" TO "END." SEE TABLE 2 FOR LENGTH TOLERANCES.
- /6/ SPIRAL ABRASION COVER WHEN ASSEMBLED IN THE STRAIGHT CONDITION ON THE HOSE SHALL HAVE AN AVERAGE GAP BETWEEN SPIRALS NOT EXCEEDING .05 INCH. DISPLACEMENT OF THE SPIRAL COVER, CAUSING A GREATER GAP, SHALL NOT BE CAUSE FOR REJECTION IF THE SPIRALS CAN BE REPOSITIONED TO MEET THE GAP REQUIREMENT. ENDS OF THE SPIRAL COVER SHALL BE TERMINATED WITH A LENGTH OF AMS-DTL-23053/5 BLACK POLYOLEFIN TUBING PER TABLE 6 AND FIGURE 2.

	AEROSPACE STANDARD	AS4504 SHEET 4 OF 5	REV. D
	HOSE ASSEMBLY, CONVOLUTED, POLYTETRAFLUOROETHYLENE, METALLIC REINFORCED CONDUCTIVE, FLARED, 90° TO 90°		