

REV.
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SAE AS648

RATIONALE

FEDERAL SUPPLY CLASS
4720

ESTABLISH CUFF DIMENSIONAL REQUIREMENTS FOR INTEGRAL FIRE SLEEVE ON HOSE AND SLEEVE CODE H & J CONFIGURATIONS, FOR STANDARIZATION PURPOSES.

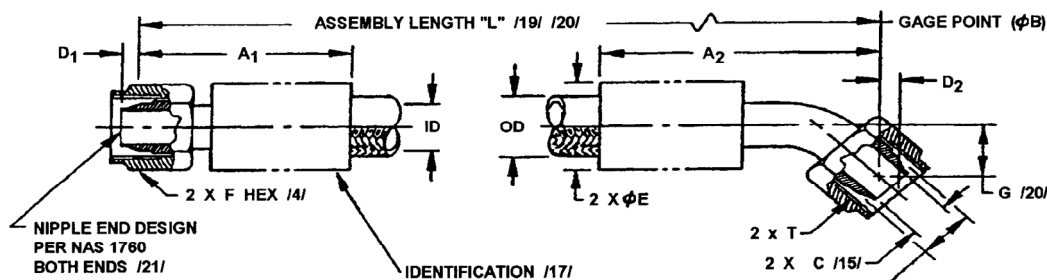


FIGURE 1 - HOSE ASSEMBLY

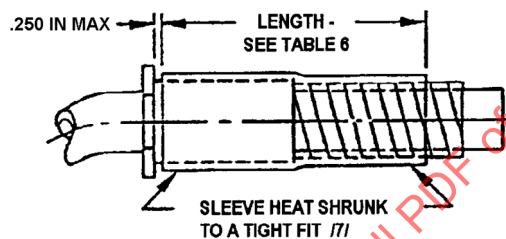


FIGURE 2 - ABRASION SLEEVE ATTACHMENT

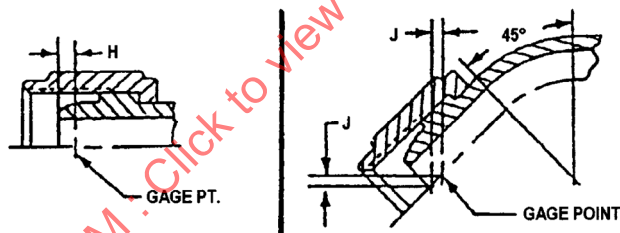


FIGURE 3 - GAGE POINT - SEE TABLE 7 /19/

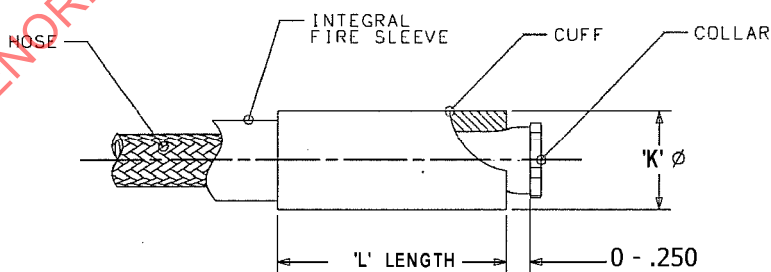
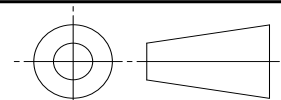


FIGURE 4 - SEE TABLE 8 /27/

SAE values your input. To provide feedback on this Technical Report, please visit <http://www.sae.org/technical/standards/AS648C>

THIRD ANGLE PROJECTION



CUSTODIAN:

PROCUREMENT SPECIFICATION:

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

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

SAE AS648
SHEET 1 OF 7

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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/ /27/	450
J	FIRE SLEEVE INTEGRAL SILICONE (5 MIN) /12/ /27/	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/	HOSE SIZE /5/	HOSE SIZE /5/	HOSE SIZE /5/	HOSE SIZE /5/	HOSE SIZE /5/	HOSE SIZE /5/	HOSE SIZE /5/	HOSE SIZE /5/	HOSE SIZE /5/
-	MAX	.188	.250	.313	.375	.500	.625	.750	1.000	1.250	1.500
	MIN	.285	.343	.406	.469	.585	.687	.812	1.140	1.390	1.707
		.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

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	.0601
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

TABLE 8 – INTEGRAL FIRE SLEEVE CUFF DIMENSIONS /27/

HOSE SIZE (REF)	'K' MAX	'L' MAX
.250	.90	1.61
.313	.97	1.70
.375	1.03	2.18
.500	1.15	2.50
.625	1.29	2.67
.750	1.41	2.67
1.00	1.71	3.10
1.25	2.04	2.80
1.50	2.37	2.95

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/ PRODUCT SUPPLIED TO THIS SPECIFICATION SHALL BE MANUFACTURED AND ASSEMBLED BY AN ACCREDITED MANUFACTURER OR ASSEMBLED BY AN ACCREDITED ASSEMBLING DISTRIBUTOR LISTED IN THE PERFORMANCE REVIEW INSTITUTE (PRI) QUALIFIED PRODUCT LIST FOR PRI-QPL-AS1946 FOR THIS STANDARD. SEE <http://www.eauditnet.com> FOR CURRENT QPL ONLINE
- /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.

 An SAE International Group	AEROSPACE STANDARD		SAE AS648 SHEET 5 OF 7	REV. C
	HOSE ASSEMBLY, POLYTETRAFLUOROETHYLENE, METAL BRAID, MEDIUM PRESSURE, FLARELESS, STRAIGHT TO 45°			