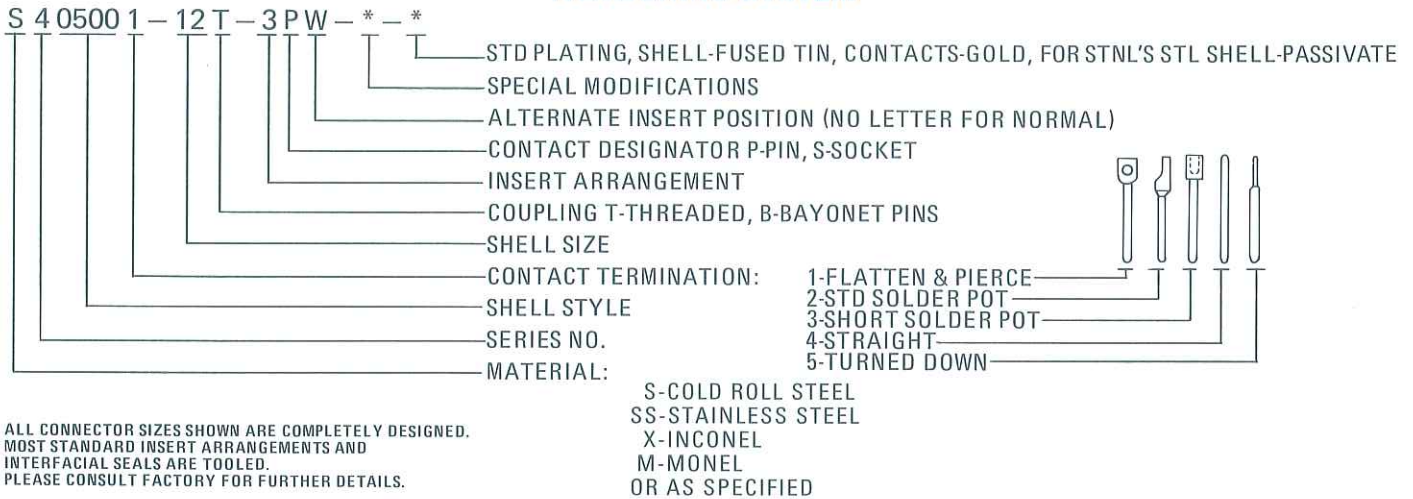


NUMBERING SYSTEM



ALL CONNECTOR SIZES SHOWN ARE COMPLETELY DESIGNED. MOST STANDARD INSERT ARRANGEMENTS AND INTERFACIAL SEALS ARE TOOLED. PLEASE CONSULT FACTORY FOR FURTHER DETAILS.



Hermetic Seal Corporation Series 400000 is manufactured to meet the rigorous criteria of NAS 1599. The 400000 Series is a general purpose circular connector designed and utilized in the aerospace industry featuring both threaded and bayonet couplings.

Numerous mounting flanges are available in standard configuration plus special configurations are available upon request.

Although designed primarily for the aerospace industry commercial applications are unlimited due to the flexibility of this series. High temperature (1000°F) connectors are obtainable in this series with single and/or thermocouple contacts.

GENERAL SPECIFICATIONS

AIR LEAKAGE (HERMETICITY)
LEAKAGE RATE LESS THAN .01 MICRON PER CUBIC FOOT PER HOUR (1×10^{-7} cc/sec) AT 17.7 P.S.I.

INSULATION RESISTANCE
GREATER THAN 1,000 MEGOHMS AT 500 VDC PER MIL-STD-202, METHOD 302, CONDITION B. GREATER THAN 500 MEGOHMS AT 200°C (392°F).

INSERT RETENTION
INSERT WILL WITHSTAND 100 P.S.I. WITHOUT DAMAGE.

DIELECTRIC WITHSTANDING VOLTAGE
CONNECTORS SHOW NO EVIDENCE OF BREAKDOWN OR FLASHOVER WHEN TESTED AT VOLTAGES SHOWN PER MIL-STD-202, METHOD 301.

Altitude Feet	Test Voltages (AC RMS)	
	Service Rating I	Service Rating II
Sea Level	1500	2300
50,000	500	750
70,000	375	550
110,000	200	200

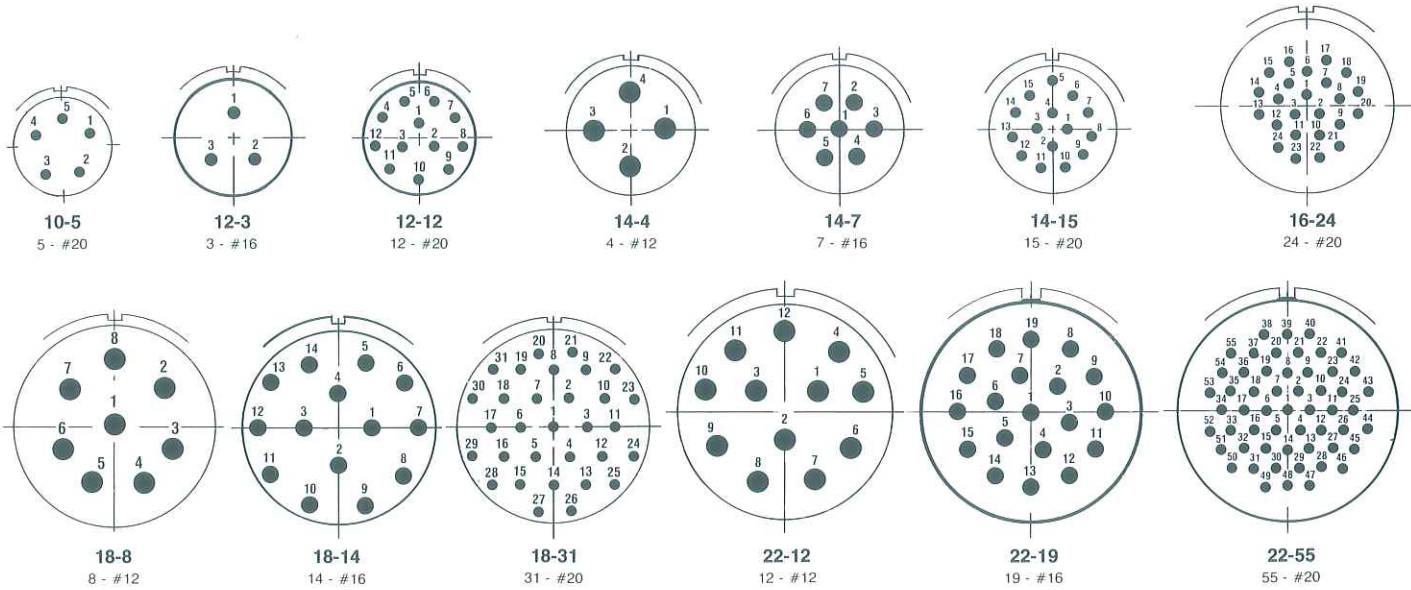
CORROSION
CONNECTOR WILL MEET SALT SPRAY TEST PER MIL-STD-202, METHOD 101.

TEMPERATURE LIFE
NO EVIDENCE OF DAMAGE DETRIMENTAL TO THE OPERATION OF THE CONNECTOR AFTER TEST OF 200°C (392°F) FOR 1,000 HRS.

THERMAL SHOCK
NO EVIDENCE OF DAMAGE DETRIMENTAL TO THE OPERATION OF CONNECTOR AFTER TESTING AT -55°C (-67°F) TO +200°C (+392°F).

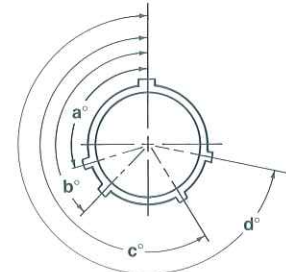
MOISTURE RESISTANCE
MAINTAINS INSULATION RESISTANCE OF 500 MEGOHMS/100 VDC OR GREATER PER MIL-STD-202, METHOD 106.

ENGAGING FACE OF PIN INSERT SHOWN

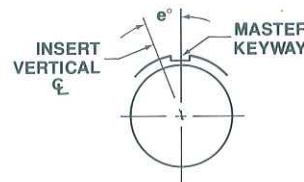


ALTERNATE INSERT AND KEYWAY POSITIONS THREADED SHELL SERIES

SHELL SIZE	POSITION	KEYWAY POSITIONS				INSERT POSITION
		a°	b°	c°	d°	
ALL	NORMAL	105	140	215	265	0
10, 12 14, 16 18, 22	1	105	140	215	265	10
	2	105	140	215	265	20
	3	105	140	215	265	30
	4	105	140	215	265	40
18	5	105	140	215	265	50
10	6	102	132	248	320	0
	7	80	118	230	312	0
	8	35	140	205	275	0
	9	64	155	234	304	0
	10	25	115	220	270	0
12, 14 16, 18 22	6	18	149	192	259	0
	7	92	152	222	342	0
	8	84	152	204	334	0
	9	24	135	199	240	0
	10	98	152	268	338	0



KEYWAY POSITION
ENGAGING FACE OF PIN INSERT
(SOCKET INSERT OPPOSITE).



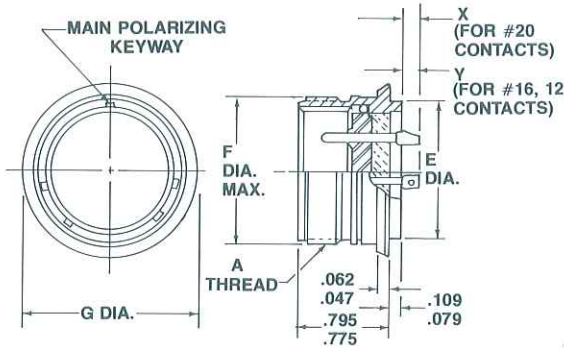
INSERT POSITION
ENGAGING FACE OF PIN INSERT
(SOCKET INSERT OPPOSITE).

NAS 1599

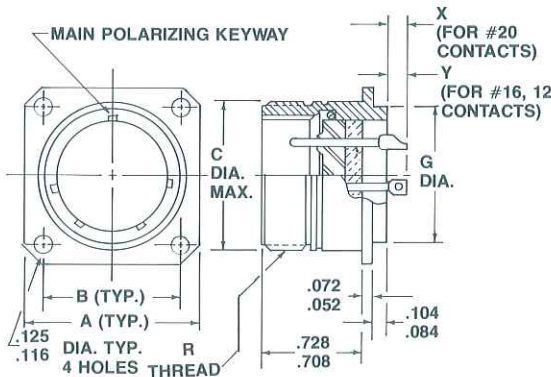
HSC SERIES 400000

SECTION 40-2

40500***-**T-**P** (NAS 1681)

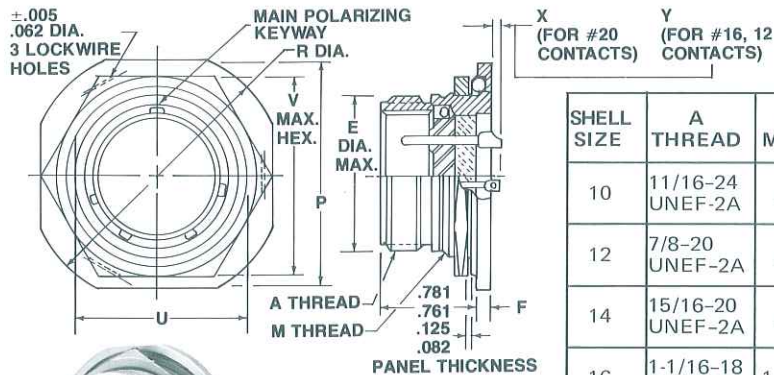


SHELL SIZE	A THREAD	E	F MAX.	G	X	Y
10	11/16-24 UNEF-2A	.562 .556	.696	.850 .830	.194 .134	.224 .164
12	7/8-20 UNEF-2A	.750 .744	.875	1.055 1.035	↑	↑
14	15/16-20 UNEF-2A	.812 .806	.936	1.100 1.080		
16	1-1/16-18 UNEF-2A	.937 .931	1.062	1.220 1.200		
18	1-3/16-18 UNEF-2A	1.062 1.056	1.187	1.350 1.330	↓	↓
22	1-7/16-18 UNEF-2A	1.312 1.306	1.437	1.600 1.580	.194 .134	.224 .164



41000***-**T-**P** (NAS 1683)

SHELL SIZE	A ±.005	B ±.005	C MAX	G	R THREAD	X	Y
10	.937	.719	.696	.562 .556	11/16-24 UNEF-2A	.194 .134	.224 .164
12	1.031	.812	.875	.750 .744	7/8-20 UNEF-2A	↑	↑
14	1.125	.906	.936	.812 .806	15/16-20 UNEF-2A		
16	1.250	.969	1.062	.937 .931	1-1/16-18 UNEF-2A		
18	1.343	1.062	1.187	1.062 1.056	1-3/16-18 UNEF-2A	↓	↓
22	1.562	1.250	1.437	1.312 1.306	1-7/16-18 UNEF-2A	.194 .134	.224 .164

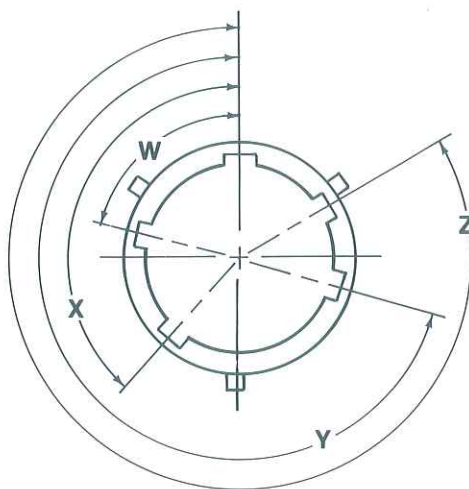


42000***-**T-**P** (NAS 1682)

SHELL SIZE	A THREAD	E MAX	F	M THREAD	P	R	U	V MAX	X	Y
10	11/16-24 UNEF-2A	.696	.137 .097	3/4-20 UNEF-2A	1.104 1.073	1.192 1.162	.723 .713	.953	.180 .120	.210 .150
12	7/8-20 UNEF-2A	.875	↑	15/16-20 UNEF-2A	1.291 1.260	1.380 1.349	.910 .900	1.140	↑	↑
14	15/16-20 UNEF-2A	.936	↓	1-20 UNEF-2A	1.391 1.360	1.516 1.485	.973 .963	1.205		
16	1-1/16-18 UNEF-2A	1.062	↓	1-1/8-18 UNEF-2A	1.516 1.485	1.641 1.610	1.098 1.088	1.329	↓	↓
18	1-3/16-18 UNEF-2A	1.187	.137 .097	1-1/4-18 UNEF-2A	1.641 1.610	1.766 1.735	1.222 1.212	1.455	.180 .120	.210 .150
22	1-7/16-18 UNEF-2A	1.437	.148 .128	1-1/2-18 UNEF-2A	1.954 1.923	2.078 2.047	1.472 1.462	1.705	.169 .109	.199 .139

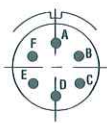
**ALTERNATE INSERT POSITIONS
BAYONET PIN SHELL SERIES**

No. of Contacts	Contact Arrangement	ALTERNATE INSERT POSITIONS (Degrees)				
		Normal	W	X	Y	Z
3	12-3	0	—	—	180	—
5	14-5	0	40	92	184	273
6	10-6	0	90	—	—	—
8	12-8	0	90	112	203	292
	16-8	0	54	152	180	331
10	12-10	0	60	155	270	295
11	18-11	0	62	119	241	340
12	14-12	0	43	90	—	—
15	14-15	0	17	110	155	234
16	20-16	0	238	318	333	347
19	14-19	0	30	165	315	—
	24-19	0	30	165	315	—
21	22-21	0	16	135	175	349
26	16-26	0	60	—	275	338
31	24-31	0	90	225	—	—
32	18-32	0	85	138	222	265
39	20-39	0	63	144	252	333
41	20-41	0	45	126	225	—
	22-41	0	39	—	—	—
55	22-55	0	30	142	226	314
61	24-61	0	90	180	270	324

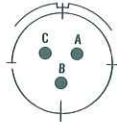


**MASTER KEYWAY POSITION
ENGAGING FACE OF PIN INSERT
(SOCKET INSERT OPPOSITE)
INSERT ARRANGEMENT
DOES NOT ROTATE WITH SHELL**

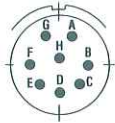
ENGAGING FACE OF PIN INSERT SHOWN



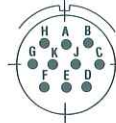
10-6P
6 SIZE 20



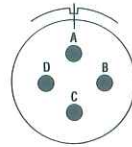
12-3P
3 SIZE 16



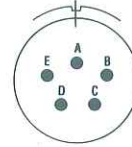
12-8P
8 SIZE 20



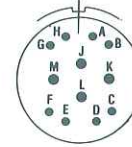
12-10P
10 SIZE 20



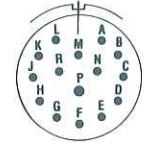
14-4P
4 SIZE 12



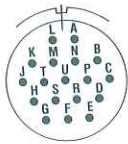
14-5P
5 SIZE 16



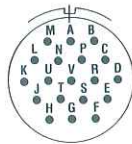
14-12P
4 SIZE 16
8 SIZE 20



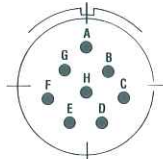
14-15P
1 SIZE 16
14 SIZE 20



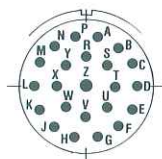
14-18P
18 SIZE 20



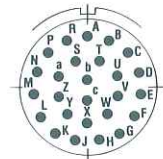
14-19P
19 SIZE 20



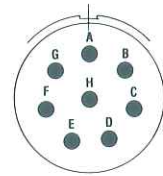
16-8P
8 SIZE 16



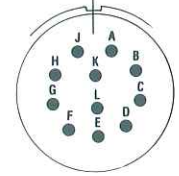
16-23P
1 SIZE 16
22 SIZE 20



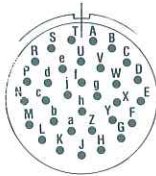
16-26P
26 SIZE 20



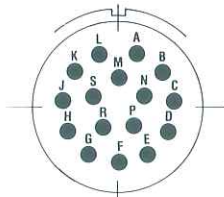
18-8
8 SIZE 12



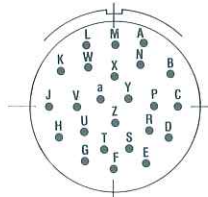
18-11
11 SIZE 16



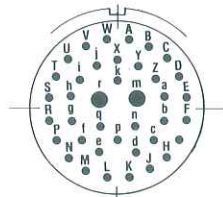
18-32
32 SIZE 20



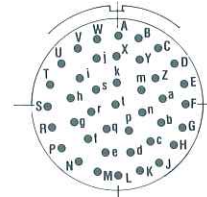
20-16P
16 SIZE 16



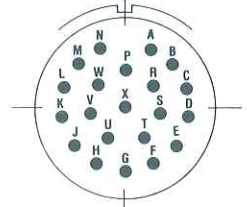
20-24
24 SIZE 20



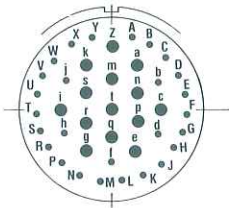
20-39P
2 SIZE 16
37 SIZE 20



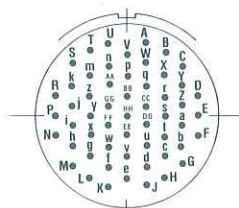
20-41P
41 SIZE 20



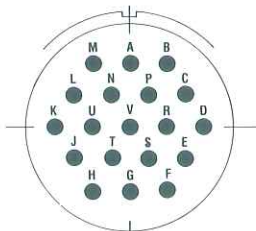
22-21P
21 SIZE 16



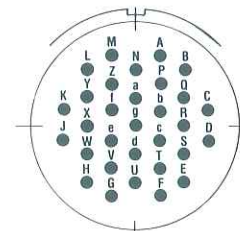
22-41P
27 SIZE 20
14 SIZE 16



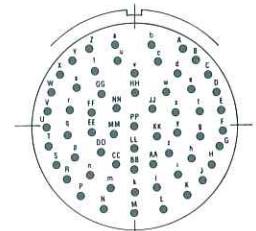
22-55P
55 SIZE 20



24-19
19 SIZE 12



24-31
31 SIZE 16

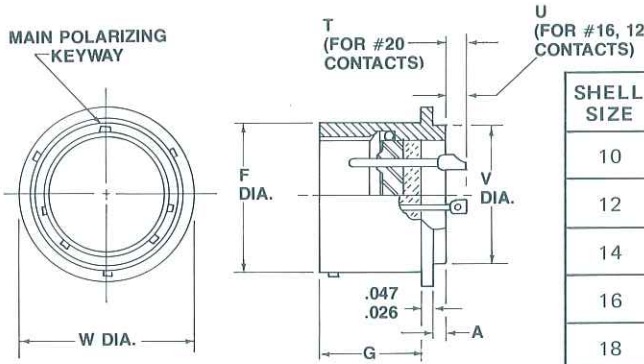


24-61
61 SIZE 20

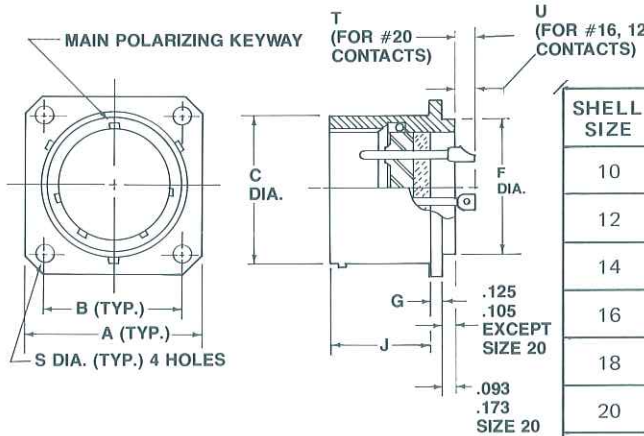
NAS 1599

HSC SERIES 400000

40000***-**B-**P**
(NAS 1678)

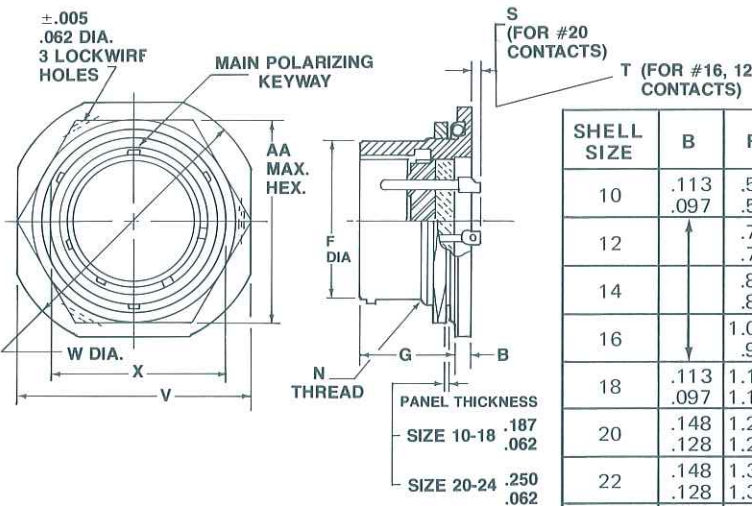


SHELL SIZE	A	F	G	T	U	V	W
10	.156 .116	.591 .585	.598 .578	.178 .118	.248 .188	.673 .667	.760 .740
12	↑	.751 .745	↑	↑	↑	.782 .776	.854 .834
14		.876 .870				.907 .901	.979 .959
16		1.001 .995	↓			1.032 1.026	1.104 1.084
18	↓	1.126 1.120	.598 .578	↓	↓	1.157 1.151	1.228 1.208
20	.156 .116	1.251 1.245	.660 .640	.178 .118	.248 .188	1.251 1.245	1.322 1.302
22	.188 .148	1.376 1.370	↑	.146 .086	.216 .156	1.376 1.370	1.448 1.428
24	.188 .148	1.501 1.495	.660 .640	.146 .086	.216 .156	1.501 1.495	1.574 1.554



41000***-**B-**P**
(NAS 1680)

SHELL SIZE	A MAX	B	C	F	G	J	S	T	U
10	.954	.719	.591 .585	.673 .667	.078 .046	.598 .578	.120	.178 .118	.248 .188
12	1.047	.812	.751 .745	.782 .776	↑	↑	↑	↑	↑
14	1.141	.906	.876 .870	.907 .901					
16	1.234	.969	1.001 .995	1.032 1.026	↓	↓			
18	1.328	1.062	1.126 1.120	1.157 1.151	.078 .046	.598 .578			
20	1.453	1.156	1.251 1.245	1.251 1.245	.110 .078	.660 .640	↓	.178 .118	.248 .188
22	1.578	1.250	1.376 1.370	1.376 1.370	↑	↑	.120	.146 .086	.216 .156
24	1.703	1.375	1.501 1.495	1.501 1.495	.110 .078	.660 .640	.147	.146 .086	.216 .156



42000***-**B-**P**
(NAS 1679)

SHELL SIZE	B	F	G	N THREAD UNEF-2A	S	T	V	W	X ±.005	AA MAX
10	.113 .097	.591 .585	.707 .691	11/16-24	.134 .074	.204 .144	1.078 1.047	1.203 1.172	.650	.892
12	↑	.751 .745	↑	7/8-20	↑	↑	1.266 1.235	1.391 1.360	.813	1.079
14		.876 .870		1-20			1.391 1.360	1.516 1.485	.937	1.205
16	↓	1.001 .995	↓	1-1/8-18	↓	↓	1.516 1.485	1.641 1.610	1.061	1.329
18	.113 .097	1.126 1.120	.707 .691	1-1/4-18	.134 .074	.204 .144	1.641 1.610	1.766 1.735	1.186	1.455
20	.148 .128	1.251 1.245	.772 .754	1-3/8-18	.099 .039	.169 .109	1.828 1.797	1.954 1.923	1.311	1.579
22	.148 .128	1.376 1.370	.772 .754	1-1/2-18	↑	↑	1.954 1.923	2.078 2.047	1.436	1.705
24	.148 .128	1.501 1.495	.803 .785	1-5/8-18	.099 .039	.169 .109	2.078 2.047	2.203 2.172	1.561	1.829