



AEROSPACE STANDARD

AS4873**REV. A**

Issued 1997-06
Reaffirmed 2007-12
Stabilized 2014-05

Superseded by AS5857

Gland Design, Elastomeric O-Ring Seals, Static Radial and Face
800 psi Maximum Service

RATIONALE

AS4873 is determined to contain historical and stable technology. A replacement standard (AS5857) is available.

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1. SCOPE:

This document establishes standard gland dimensions for low pressure static radial O-ring seal applications and provides recommendations for modifying these glands in special applications. No provisions are made in this document for anti-extrusion devices.

1.1 Purpose:

The purpose of this document is to provide the aerospace industry with standardized dimensional criteria for static radial elastomeric O-ring seal glands for a service pressure of 800 psi maximum. This document supplements ARP1231.

2. REFERENCES:

2.1 Applicable Documents

The following publications form a part of this specification to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this specification and references cited herein, the text of this specification takes precedence. Nothing in this specification, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

2.1.1 SAE Publications: Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

AS568	Aerospace Size Standard for O-rings
ARP1231	Gland Design, Elastomeric O-ring Seals, General Considerations and Military Standard MS33581

2.1.2 ANSI Publications: Available from ANSI, 11 West 42nd Street, New York, NY 10036-8002.

ANSI B46.1 - 1962 Surface Texture

3. GENERAL REQUIREMENTS

3.2 Gland Configurations:

3.2.1 Standard Glands: Figure 1 and Table 1 depicts rod and bore-mounted radial and face seal O-ring seal glands. Standard dimensions for these glands are tabulated in Figure 2. These dimensions are designed for use with seals conforming to AS568 tolerances except for the deviations in this document if any. Dimensions are computed in accordance with the criteria defined in Section 4 of this document and in ARP1231.

3.2.2 Exemption: Standard glands are not provided for the larger diameter bore-mounted applications. In these larger sizes, Diameter D becomes larger than the outside of the O-ring seal. This condition makes the installation of a seal impractical. Bore-mounted seal glands have been provided up to those sizes where diameter D is equal to or greater than the seal ID plus 1/2 (seal OD - seal ID).

3.2.3 Modified Glands: The standard gland dimensions may be modified to achieve an optimum sealing configuration. In selecting or computing gland dimensions, the criteria defined in ARP1231 and in Section 4 of this document should be consulted.

3.3 Surface Texture:

3.3.1 Figure 1 defines the preferred surface texture to be used with the glands described in this document. The 63 and 40 μ in textures are satisfactory for most low pressure static applications. A 32 μ in texture may be required if there is relative motion between seal and gland sealing surfaces during operation. However, if this relative motion becomes excessive, the applications should be considered dynamic and ARP1233 consulted.

4. DESIGN CRITERIA:

4.1 O-ring Seal Stretch:

4.1.1 Minimum Stretch: Static seals should be stretched a minimum of 2% at installation into the gland. This assures a snug fit in a short time for elastomers such as fluorocarbons which are slow to return to size after stretching.

4.1.2 Maximum Stretch: The as-installed seal stretch should be held to a low value consistent with the need for a 2% minimum stretch and with the gland dimensional tolerances needed for manufacture. Excessive stretches can cause stress cracking during operation particularly with nitrile seals. The maximum stretch resulting from the standard gland dimensions in Figure 2 varies from 2.5 to 10% depending on size. Of the sizes listed, 85% have a maximum stretch of less than 5%. Consideration should be given to reducing the seal stretch when there is a possibility of seal stress cracking.

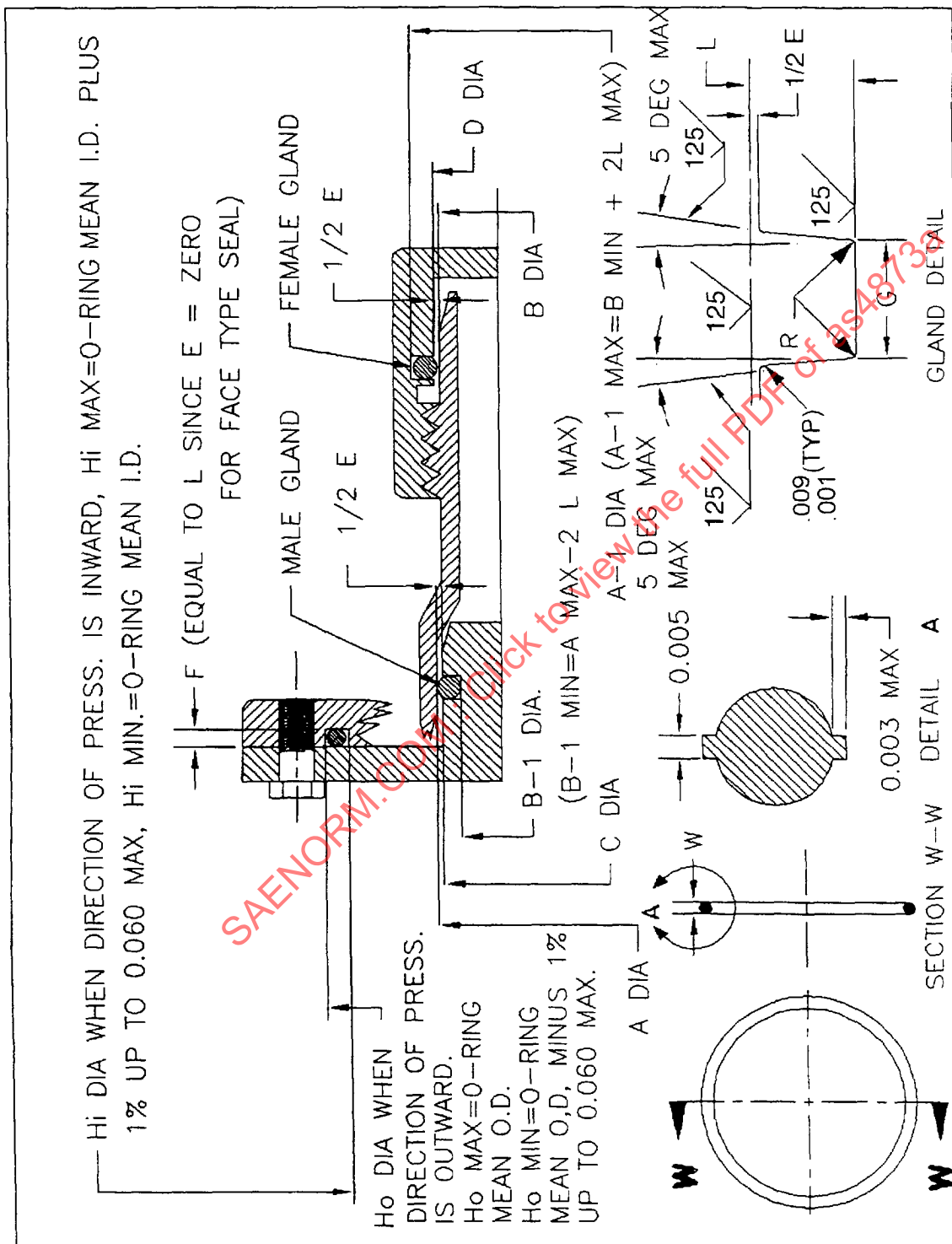


FIGURE 1

TABLE 1 - Standard Gland Dimensions in Inches

O-ring Size	W Cross Section Nominal	W Cross Section Actual	L Gland Depth	Squeeze Actual	Squeeze %	E Diametral Clearance (a & c)	G Fuel & Engine Oil Uses	G Vacuum & Gases	R Groove Radius	Eccentricity Max (b)
4 through 50	1/16	0.070 ±.003	0.050 to 0.054	0.013 to 0.023	19 to 32	0.002 to 0.010	0.101 to 0.107	0.082 to 0.088	0.005 to 0.015	0.002
110 through 178	3/32	0.103 ±.003	0.074 to 0.080	0.020 to 0.032	20 to 30	0.002 to 0.010	0.136 to 0.142	0.117 to 0.123	0.005 to 0.015	0.002
210 through 284	1/8	0.139 ±.004	0.101 to 0.107	0.028 to 0.042	20 to 30	0.003 to 0.011	0.177 to 0.187	0.157 to 0.163	0.010 to 0.025	0.003
325 through 395	3/16	0.210 ±.005	0.152 to 0.162	0.043 to 0.063	21 to 30	0.003 to 0.011	0.270 to 0.290	0.247 to 0.253	0.020 to 0.035	0.004
425 through 475	1/4	0.275 ±.006	0.201 to 0.211	0.058 to 0.080	21 to 29	0.004 to 0.012	0.342 to 0.362	0.322 to 0.328	0.020 to 0.035	0.005

- a. Clearance gap must be held to a minimum consistent with design requirements for temperature range variation.
- b. Total indicator reading between groove and adjacent bearing surface.
- c. Reduce maximum diametral clearance 50% when using Silicone O-rings.

O-Ring Size	Dimensions				A	A-1	B	B-1	C	D	G	Ho	F
					BORE ID (Male Gland)	GROOVE ID (Female Gland)	OD (Female Gland Sleeve)	GROOVE OD (Male Gland)	OD (Male Gland)	BORE ID (Female Gland)	GROOVE WIDTH	OD FACE GROOVE (Use for Internal Pressure only)	DEPTH FACE GROOVE
	ID	±	W	Mean OD (Ref)	+ .005 - .000	- .000 +	+ .000 - .005	+ .000 -	+ .000 - .003	+ .003 - .000		+ .000 -	
4	0.070	.004		0.210	0.206	0.181	0.081	0.106	0.204	0.083		0.210	.002
5	.101	.004		.241	.237	.212	.112	.137	.235	.114		.241	.002
6	.114	.005		.254	.250	.225	.125	.150	.248	.127		.254	.003
7	.145	.005		.285	.281	.256	.156	.181	.279	.158		.285	.003
8	.176	.005		.316	.312	.287	.187	.212	.310	.189		.316	.003
9	.208	.005		.348	.344	.319	.219	.244	.342	.221		.348	.003
10	.239	.005		.379	.375	.350	.250	.275	.373	.252		.379	.004
11	.301	.005		.441	.437	.412	.312	.337	.435	.314		.441	.004
12	.364	.005		.504	.500	.475	.375	.400	.498	.377		.504	.005
13	.426	.005		.566	.562	.537	.437	.462	.560	.439		.566	.006
14	.489	.005		.629	.625	.600	.500	.525	.623	.502		.629	.006
15	.551	.005		.691	.687	.662	.562	.587	.685	.564		.691	.007
16	.614	.005		.754	.750	.725	.625	.650	.748	.627		.754	.008
17	.676	.005		.816	.812	.787	.687	.712	.810	.689		.816	.008
18	.739	.005		.879	.875	.850	.750	.775	.873	.752		.879	.009
19	.801	.005		.941	.937	.912	.812	.837	.935	.814		.941	.009
20	.864	.006		1.004	1.000	.975	.875	.900	.998	.877	0.101	1.004	.010
			0.070 ± .003								+ .006 - .000 (0.082 for vacuum and gases)		0.050 + .004 - .000
21	.926	.006		1.066	1.062	1.037	.937	.962	1.060	.939		1.066	.011
22	.989	.006		1.129	1.125	1.100	1.000	1.025	1.123	1.002		1.129	.011
23	1.051	.006		1.191	1.187	1.162	1.062	1.087	1.185	1.064		1.191	.012
24	1.114	.006		1.254	1.250	1.225	1.125	1.150	1.248	1.127		1.254	.013
25	1.176	.006		1.316	1.312	1.287	1.187	1.212	1.310	1.189		1.316	.013
26	1.239	.006		1.379	1.375	1.350	1.250	1.275	1.373	1.252		1.379	.014
27	1.301	.006		1.441	1.437	1.412	1.312	1.337	1.435	1.314		1.441	.014
28	1.364	.006		1.504	1.500	1.475	1.375	1.400	1.498	1.377		1.504	.015
29	1.426	.010		1.566	1.562	1.537	1.437	1.462	1.560	1.439		1.566	.016
30	1.489	.010		1.629	1.625	1.600	1.500	1.525	1.623	1.502		1.629	.016
31	1.551	.010		1.691	1.687	1.662	1.562	1.587	1.685	1.564		1.691	.018
32	1.614	.010		1.754	1.750	1.725	1.625	1.650	1.748	1.627		1.754	.018
33	1.739	.010		1.879	1.875	1.850	1.750	1.775	1.873	1.752		1.879	.019
34	1.801	.010		1.941	1.937	1.912	1.812	1.837	1.935	1.814		1.941	.020
35	1.864	.010		2.004	2.000	1.975	1.875	1.900	1.998	1.877		2.004	.020
36	1.926	.010		2.066	2.062	2.037	1.937	1.962	2.060	1.939		2.066	.021
37	1.989	.010		2.129	2.125	2.100	2.000	2.025	2.123	2.002		2.129	.021
38	2.051	.010		2.191	2.187	2.162	2.062	2.087	2.185	2.064		2.191	.023
39	2.114	.010		2.254	2.250	2.225	2.125	2.150	2.248	2.127		2.254	.023
40	2.176	.010		2.316	2.312	2.287	2.187	2.212	2.310	2.189		2.316	.024
41	2.239	.010		2.379	2.375	2.350	2.250	2.275	2.373	2.252		2.379	.024
42	2.301	.010		2.441	2.437	2.412	2.312	2.337	2.435	2.314		2.441	.025
43	2.364	.010		2.504	2.500	2.475	2.375	2.400	2.498	2.377		2.504	.025
44	2.426	.010		2.566	2.562	2.537	2.437	2.462	2.560	2.439		2.566	.026
45	2.489	.010		2.629	2.625	2.600	2.500	2.525	2.623	2.502		2.629	.026
46	2.551	.010		2.691	2.687	2.662	2.562	2.587	2.685	2.564		2.691	.028
47	2.614	.010		2.754	2.750	2.725	2.625	2.650	2.748	2.627		2.754	.028
48	2.676	.015		2.816	2.812	2.787	2.687	2.712	2.810	2.689		2.816	.029
49	2.739	.015		2.879	2.875	2.850	2.750	2.775	2.873	2.752		2.879	.029
50	2.801	.015		2.941	2.937	2.912	2.812	2.837	2.935	2.814		2.941	.030
51	2.864	.015		3.004	3.000	2.975	2.875	2.900	2.998	2.877		3.004	.030

FIGURE 2 - Standard Gland Dimensions in Inches

O-Ring Size	Dimensions				A	A-1	B	B-1	C	D	G	H _o	F
					BORE ID (Male Gland)	GROOVE ID (Female Gland)	OD (Female Gland Sleeve)	GROOVE OD (Male Gland)	OD (Male Gland)	BORE ID (Female Gland)	GROOVE WIDTH	OD FACE GROOVE (Use for Internal Pressure only)	DEPTH FACE GROOVE
	ID	±	W	Mean OD (Ref)	+0.005 -0.006	-0.006 +	+0.000 -0.003	+0.004 -	+0.000 -0.003	+0.003 -0.008		+0.009 -	
41	2.989	.015		3.129	3.125	3.100	3.000	3.025	3.123	3.002		3.129	.031
42	3.239	.015	0.070	3.379	3.375	3.350	3.250	3.275	3.373	3.252	0.101	3.379	.034
43	3.489	.015	±0.003	3.629	3.625	3.600	3.500	3.525	3.623	3.502	+0.006	3.629	.036
44	3.739	.015		3.879	3.875	3.850	3.750	3.775	3.873	3.752	-0.000	3.879	.039
45	3.989	.015		4.129	4.125	4.100	4.000	4.025	4.123	4.002	(0.082 +0.006	4.129	.041
46	4.239	.015		4.379	4.375	4.350	4.250	4.275	4.373	4.252	-0.000	4.379	.044
47	4.489	.015		4.629	4.625	4.600	4.500	4.525	4.623	4.502	for vacuum	4.629	.046
48	4.739	.015		4.879	4.875	4.850	4.750	4.775	4.873	4.752	and gases)	4.879	.049
49	4.989	.023		5.129	5.125	5.100	5.000	5.025	5.123	5.002		5.129	.051
50	5.239	.023		5.379	5.375	5.350	5.250	5.275	5.373	5.252		5.379	.054
110	0.562	.005		0.568	0.562	0.523	0.375	0.414	0.560	0.377		0.568	.006
111	.424	.005		.630	.624	.585	.437	.476	.622	.439		.630	.006
112	.487	.005		.693	.687	.648	.500	.539	.685	.501		.693	.007
113	.549	.005		.755	.749	.710	.562	.601	.747	.564		.755	.008
114	.612	.005		.818	.812	.773	.625	.664	.810	.627		.818	.008
115	.674	.005		.880	.874	.835	.687	.726	.872	.689		.880	.009
116	.737	.005		.943	.937	.898	.750	.789	.935	.752		.943	.009
117	.799	.006		1.005	.999	.960	.812	.851	.997	.814		1.005	.010
118	.862	.006		1.068	1.062	1.023	.875	.914	1.060	.877		1.068	.011
119	.924	.006		1.130	1.124	1.085	.937	.976	1.122	.939		1.130	.011
120	.987	.006		1.193	1.187	1.148	1.000	1.039	1.185	1.002		1.193	.012
121	1.049	.006		1.255	1.249	1.210	1.062	1.101	1.247	1.064		1.255	.013
122	1.112	.006		1.318	1.312	1.273	1.125	1.164	1.310	1.127		1.318	.013
123	1.174	.006		1.380	1.374	1.335	1.187	1.226	1.372	1.189		1.380	.014
124	1.237	.006		1.443	1.437	1.398	1.250	1.289	1.435	1.252		1.443	.014
125	1.299	.006		1.505	1.499	1.460	1.312	1.351	1.497	1.314		1.505	.015
126	1.362	.006	0.103	1.568	1.562	1.523	1.375	1.414	1.560	1.377	0.136	1.568	.016
127	1.424	.006	±0.003	1.630	1.624	1.585	1.437	1.476	1.622	1.439	+0.006	1.630	.016
128	1.487	.010		1.693	1.687	1.648	1.500	1.539	1.685	1.502	-0.000	1.693	.017
129	1.549	.010		1.755	1.749	1.710	1.562	1.601	1.747	1.564	(0.117 +0.006	1.755	.017
130	1.612	.010		1.818	1.812	1.773	1.625	1.664	1.810	1.627	-0.000	1.818	.018
131	1.674	.010		1.880	1.874	1.835	1.687	1.726	1.872	1.689	for vacuum	1.880	.019
132	1.737	.010		1.943	1.937	1.898	1.750	1.789	1.935	1.752	and gases)	1.943	.019
133	1.799	.010		2.005	1.999	1.960	1.812	1.851	1.997	1.814		2.005	.020
134	1.862	.010		2.068	2.062	2.023	1.875	1.914	2.060	1.877		2.068	.021
135	1.925	.010		2.131	2.125	2.086	1.938	1.977	2.123	1.940		2.131	.021
136	1.987	.010		2.193	2.187	2.148	2.000	2.039	2.185	2.002		2.193	.022
137	2.050	.010		2.256	2.250	2.211	2.063	2.102	2.248	2.065		2.256	.023
138	2.112	.010		2.318	2.312	2.273	2.125	2.164	2.310	2.127		2.318	.023
139	2.175	.010		2.381	2.375	2.336	2.188	2.227	2.373	2.190		2.381	.024
140	2.237	.010		2.443	2.437	2.398	2.250	2.289	2.435	2.252		2.443	.024
141	2.300	.010		2.506	2.500	2.461	2.313	2.352	2.498	2.315		2.506	.025
142	2.362	.010		2.568	2.562	2.523	2.375	2.414	2.560	2.377		2.568	.026
143	2.425	.010		2.631	2.625	2.586	2.438	2.477	2.623	2.440		2.631	.026
144	2.487	.010		2.693	2.687	2.648	2.500	2.539	2.685	2.502		2.693	.027

FIGURE 2 (Continued)

O-Ring Size	Dimensions				A	A-1	B	B-1	C	D	G	H _o	F
					BORE ID (Male Chord)	GROOVE ID (Female Chord)	OD (Female Chord)	GROOVE OD (Male Chord)	OD (Male Chord)	BORE ID (Female Chord)	GROOVE WIDTH	OD FACE GROOVE (Use for Internal Pressure only)	DEPTH FACE GROOVE
	ID	±	W	Mean OD (Ref)	+0.005 -0.000	-0.000	+0.000 -0.005	+0.000	+0.000 -0.003	+0.003 -0.000		+0.000	
145	2.550	.015		2.756	2.750	2.711	2.563	2.602	2.748	2.565		2.756	.028
146	2.612	.015		2.818	2.812	2.773	2.625	2.664	2.810	2.627		2.818	.028
147	2.675	.015		2.881	2.875	2.836	2.688	2.727	2.873	2.690		2.881	.029
148	2.737	.015		2.943	2.937	2.898	2.750	2.789	2.935	2.752		2.943	.029
149	2.800	.015		3.006	3.000	2.961	2.831	2.852	2.998	2.815		3.006	.030
150	2.862	.015		3.068	3.062	3.023	2.875	2.914	3.060	2.877		3.068	.031
151	2.987	.015		3.193	3.187	3.148	3.000	3.039	3.185	3.002		3.193	.032
152	3.237	.015		3.443	3.437	3.398	3.250	3.289	3.435	3.252		3.443	.034
153	3.487	.015		3.693	3.687	3.648	3.500	3.539	3.685	3.502		3.693	.037
154	3.737	.015		3.943	3.937	3.898	3.750	3.789	3.935	3.752		3.943	.039
155	3.987	.015	0.103 ±0.003	4.193	4.187	4.148	4.000	4.039	4.185	4.002	0.136 +0.006 -0.000 (0.117 +0.006 -0.000 for vacuum and gases)	4.193	.04
156	4.237	.015		4.443	4.437	4.398	4.250	4.289	4.435	4.252		4.443	.04
157	4.487	.015		4.693	4.687	4.648	4.500	4.539	4.685	4.502		4.693	.04
158	4.737	.015		4.943	4.937	4.898	4.750	4.789	4.935	4.752		4.943	.04
159	4.987	.015		5.193	5.187	5.148	5.000	5.039	5.185	5.002		5.193	.052
160	5.237	.023		5.443	5.437	5.398	5.250	5.289	5.435	5.252		5.443	.054
161	5.487	.023		5.693	5.687	5.648	5.500	5.539	5.685	5.502		5.693	.057
162	5.737	.023		5.943	5.937	5.898	5.750	5.789	5.935	5.752		5.943	.060
163	5.987	.023		6.193	6.187	6.148	6.000	6.039	6.185	6.002		6.193	.060
164	6.237	.023		6.443	6.437	6.412	6.250	6.275	6.435	6.252		6.443	.060
165	6.487	.023		6.693	6.687	6.662	6.500	6.525	6.685	6.502		6.693	.060
166	6.737	.023		6.943	6.937	6.912	6.750	6.775	6.935	6.752		6.943	.060
167	6.987	.023		7.193	7.187	7.162	7.000	7.025	7.185	7.002		7.193	.060
168	7.237	.030		7.443	7.437	7.412	7.250	7.275	7.435	7.252		7.443	.060
169	7.487	.030		7.693	7.687	7.662	7.500	7.525	7.685	7.502		7.693	.060
170	7.737	.030		7.943	7.937	7.912	7.750	7.775	7.935	7.752		7.943	.060
171	7.987	.030		8.193	8.187	8.162	8.000	8.025	8.185	8.002		8.193	.060
172	8.237	.030		8.443	8.437	8.412	8.250	8.275	8.435	8.252		8.443	.060
173	8.487	.030		8.693	8.687	8.662	8.500	8.525	8.685	8.502		8.693	.060
174	8.737	.030		8.943	8.937	8.912	8.750	8.775	8.935	8.752		8.943	.060
175	8.987	.030		9.193	9.187	9.162	9.000	9.025	9.185	9.002		9.193	.060
176	9.237	.030		9.443	9.437	9.412	9.250	9.275	9.435	9.252		9.443	.060
177	9.487	.030		9.693	9.687	9.662	9.500	9.525	9.685	9.502		9.693	.060
178	9.737	.030		9.943	9.937	9.912	9.750	9.775	9.935	9.752		9.943	.060
210	0.734	.006	.139 ±0.004	1.012	1.000	0.952	0.750	0.798	0.997	0.753	0.177	1.012	.010
211	.796	.006		1.074	1.062	1.014	.812	.860	1.059	.815	+0.010	1.074	.011
212	.858	.006		1.137	1.125	1.077	.875	.923	1.122	.878	-0.000	1.137	.011
213	.921	.006		1.199	1.187	1.139	.937	.985	1.184	.940	(0.157 +0.006 -0.000 for vacuum and gases)	1.199	.012
214	.984	.006		1.262	1.250	1.202	1.000	1.048	1.247	1.003		1.262	.013
215	1.046	.006		1.324	1.312	1.264	1.062	1.110	1.309	1.065		1.324	.013
216	1.109	.006		1.387	1.375	1.327	1.125	1.173	1.372	1.128		1.387	.014
217	1.171	.006		1.449	1.437	1.389	1.187	1.235	1.434	1.190		1.449	.014
218	1.234	.006		1.512	1.500	1.452	1.250	1.298	1.497	1.253		1.512	.015
219	1.296	.006		1.574	1.562	1.514	1.312	1.360	1.559	1.315		1.574	.015

FIGURE 2 (Continued)

O-Ring Size	Dimensions				A		A-1		B		B-1		C	D	G	H _o	F
					BORE ID (Male Gland)		GROOVE ID (Female Gland)		OD (Female Gland Sleeve)		GROOVE OD (Male Gland)		OD (Male Gland)	BORE ID (Female Gland)	GROOVE WIDTH	OD FACE GROOVE (Use for Internal Pressure only)	DEPTH FACE GROOVE
	ID	±	W	Mod OD (Ref)	+0.05 -0.08	-0.08	+	+0.00 -0.05	+0.00	-	+0.00 -0.03	+0.03 -0.00				+0.00	
220	1.359	.006		1.637	1.625	1.577		1.375	1.423		1.622	1.378				1.637	.016
221	1.421	.006		1.699	1.687	1.639		1.437	1.485		1.684	1.440				1.699	.017
222	1.484	.006		1.762	1.750	1.702		1.500	1.548		1.747	1.503				1.762	.018
223	1.609	.010		1.887	1.875	1.827		1.625	1.673		1.872	1.628				1.887	.019
224	1.734	.010		2.012	2.000	1.952		1.750	1.798		1.997	1.753				2.012	.020
225	1.859	.010		2.137	2.125	2.077		1.875	1.923		2.122	1.878				2.137	.021
226	1.984	.010		2.262	2.250	2.202		2.000	2.048		2.247	2.003				2.262	.023
227	2.109	.010		2.387	2.375	2.327		2.125	2.173		2.372	2.128				2.387	.024
228	2.234	.010		2.512	2.500	2.452		2.250	2.298		2.497	2.253				2.512	.025
229	2.359	.010		2.637	2.625	2.577		2.375	2.423		2.622	2.378				2.637	.026
230	2.484	.010		2.762	2.750	2.702		2.500	2.548		2.747	2.503				2.762	.028
231	2.609	.010	0.139 ±0.004	2.887	2.875	2.827	.007	2.625	2.673	.007	2.872	2.628	0.177 ±0.010			2.887	.029
232	2.734	.015		3.012	3.000	2.952		2.750	2.798		2.997	2.753				3.012	.030
233	2.859	.015		3.137	3.125	3.077		2.875	2.923		3.122	2.878				3.137	.031
234	2.984	.015		3.262	3.250	3.202		3.000	3.048		3.247	3.003	(0.157 ±0.006 for vacuum and gases)			3.262	.033
235	3.109	.015		3.387	3.375	3.327		3.125	3.173		3.372	3.128				3.387	.034
236	3.234	.015		3.512	3.500	3.452		3.250	3.298		3.497	3.253				3.512	.035
237	3.359	.015		3.637	3.625	3.577		3.375	3.423		3.622	3.378				3.637	.036
238	3.484	.015		3.762	3.750	3.702		3.500	3.548		3.747	3.503				3.762	.038
239	3.609	.015		3.887	3.875	3.827		3.625	3.673		3.872	3.628				3.887	.039
240	3.734	.015		4.012	4.000	3.952		3.750	3.798		3.997	3.753				4.012	.040
241	3.859	.015		4.137	4.125	4.077		3.875	3.923		4.122	3.878				4.137	.041
242	3.984	.015		4.262	4.250	4.202		4.000	4.048		4.247	4.003				4.262	.043
243	4.109	.015		4.387	4.375	4.327		4.125	4.173		4.372	4.128				4.387	.044
244	4.234	.015		4.512	4.500	4.452		4.250	4.298		4.497	4.253				4.512	.045
245	4.359	.015		4.637	4.625	4.577		4.375	4.423		4.622	4.378				4.637	.046
246	4.484	.015		4.762	4.750	4.702		4.500	4.548		4.747	4.503				4.762	.048
247	4.609	.015		4.887	4.875	4.827		4.625	4.673		4.872	4.628				4.887	.049
248	4.734	.015		5.012	5.000	4.952		4.750	4.798		4.997	4.753				5.012	.050
249	4.859	.015		5.137	5.125	5.077		4.875	4.923		5.122	4.878				5.137	.051
250	4.984	.015		5.262	5.250	5.202		5.000	5.048		5.247	5.003				5.262	.053
251	5.109	.023		5.387	5.375	5.327		5.125	5.173		5.372	5.128				5.387	.054
252	5.234	.023		5.512	5.500	5.452		5.250	5.298		5.497	5.253				5.512	.055
253	5.359	.023		5.637	5.625	5.577		5.375	5.423		5.622	5.378				5.637	.056
254	5.484	.023		5.762	5.750	5.702		5.500	5.548		5.747	5.503				5.762	.057
255	5.609	.023		5.887	5.875	5.827		5.625	5.673		5.872	5.628				5.887	.059
256	5.734	.023		6.012	6.000	5.952		5.750	5.798		5.997	5.753				6.012	.060
257	5.859	.023		6.137	6.125	6.077		5.875	5.923		6.122	5.878				6.137	.060
258	5.984	.023		6.262	6.250	6.202		6.000	6.048		6.247	6.003				6.262	.060
259	6.234	.023		6.512	6.500	6.452		6.250	6.298		6.497	6.253				6.512	.060
260	6.484	.023		6.762	6.750	6.702		6.500	6.548		6.747	6.503				6.762	.060
261	6.734	.023		7.012	7.000	6.952		6.750	6.798		6.997	6.753				7.012	.060
262	6.984	.030		7.262	7.250	7.202		7.000	7.048		7.247	7.003				7.262	.060
263	7.234	.030		7.512	7.500	7.452		7.250	7.298		7.497	7.253				7.512	.060
264	7.484	.030		7.762	7.750	7.702		7.500	7.548		7.747	7.503				7.762	.060

FIGURE 2 (Continued)

O-Ring Size	Dimensions				A	A-1	B	B-1	C	D	G	Ho	F
	ID	+L	W	Min OD (Ref)	+ .005 - .000	- .000 +	+ .000 - .005	+ .000 -	+ .000 - .003	+ .003 - .000		+ .000 -	
265	7.734	.030	0.139 +/- .004	8.012	8.000	7.952	7.750	7.798	7.997	7.753	0.177 + .010 - .000 (0.157 + .006 - .000 for vacuum and gases)	8.012	.060
266	7.984	.030		8.262	8.250	8.202	8.000	8.048	8.248	8.003		8.262	.060
267	8.234	.030		8.512	8.500	8.452	8.250	8.298	8.497	8.253		8.512	.060
268	8.484	.030		8.762	8.750	8.702	8.500	8.548	8.747	8.503		8.762	.060
269	8.734	.030		9.012	9.000	8.952	8.750	8.798	8.997	8.753		9.012	.060
270	8.984	.030		9.262	9.250	9.202	9.000	9.048	9.247	9.003		9.262	.060
271	9.234	.030		9.512	9.500	9.452	9.250	9.298	9.497	9.253		9.512	.060
272	9.484	.030		9.762	9.750	9.702	9.500	9.548	9.747	9.503		9.762	.060
273	9.734	.030		10.012	10.000	9.952	9.750	9.798	9.997	9.753		10.012	.060
274	9.984	.030		10.262	10.250	10.202	10.000	10.048	10.247	10.003		10.262	.060
275	10.484	.030	.210 +/- .005	10.762	10.750	10.702	10.500	10.548	10.747	10.503	for vacuum and gases)	10.762	.060
276	10.984	.030		11.262	11.250	11.202	11.000	11.048	11.247	11.003		11.262	.060
277	11.484	.030		11.762	11.750	11.702	11.500	11.548	11.747	11.503		11.762	.060
278	11.984	.030		12.262	12.250	12.202	12.000	12.048	12.247	12.003		12.262	.060
279	12.484	.030		13.262	13.250	13.202	13.000	13.048	13.247	13.003		13.262	.060
280	13.984	.030		14.262	14.250	14.202	14.000	14.048	14.247	14.003		14.262	.060
281	14.984	.030		15.262	15.250	15.202	15.000	15.048	15.247	15.003		15.262	.060
282	15.955	.045		16.233	16.250	16.222	16.000	16.028	16.247	16.003		16.262	.060
283	16.955	.045		17.233	17.250	17.222	17.000	17.028	17.247	17.003		17.262	.060
284	17.955	.045		18.233	18.250	18.222	18.000	18.028	18.247	18.003		18.262	.060
325	1.475	.010	.210 +/- .005	1.895	1.875	1.804	1.500	1.571	1.872	1.503	0.270 + .020 - .000 (0.247 + .006 - .000 for vacuum and gases)	1.895	.019
326	1.600	.010		2.020	2.000	1.929	1.625	1.696	1.997	1.628		2.020	.020
327	1.725	.010		2.145	2.125	2.054	1.750	1.821	2.122	1.753		2.145	.021
328	1.850	.010		2.270	2.250	2.179	1.875	1.946	2.247	1.878		2.270	.023
329	1.975	.010		2.395	2.375	2.304	2.000	2.071	2.372	2.003		2.395	.024
330	2.100	.010		2.520	2.500	2.429	2.125	2.196	2.497	2.128		2.520	.025
331	2.225	.010		2.645	2.625	2.554	2.250	2.321	2.622	2.253		2.645	.026
332	2.350	.010		2.770	2.750	2.679	2.375	2.446	2.747	2.378		2.770	.028
333	2.475	.010		2.895	2.875	2.804	2.500	2.571	2.872	2.503		2.895	.029
334	2.600	.010		3.020	3.000	2.929	2.625	2.696	2.997	2.628		3.020	.030
335	2.725	.015	.015	3.145	3.125	3.054	2.750	2.821	3.122	2.753	for vacuum and gases)	3.145	.031
336	2.850	.015		3.270	3.250	3.179	2.875	2.946	3.247	2.878		3.270	.033
337	2.975	.015		3.395	3.375	3.304	3.000	3.071	3.372	3.003		3.395	.034
338	3.100	.015		3.520	3.500	3.429	3.125	3.196	3.497	3.128		3.520	.035
339	3.225	.015		3.645	3.625	3.554	3.250	3.321	3.622	3.253		3.645	.036
340	3.350	.015		3.770	3.750	3.679	3.375	3.446	3.747	3.378		3.770	.038
341	3.475	.015		3.895	3.875	3.804	3.500	3.571	3.872	3.503		3.895	.039
342	3.600	.015		4.020	4.000	3.929	3.625	3.696	3.997	3.628		4.020	.040
343	3.725	.015		4.145	4.125	4.054	3.750	3.821	4.122	3.753		4.145	.041
344	3.850	.015		4.270	4.250	4.179	3.875	3.946	4.247	3.878		4.270	.043
345	3.975	.015	.015	4.395	4.375	4.304	4.000	4.071	4.372	4.003	for vacuum and gases)	4.395	.044
346	4.100	.015		4.520	4.500	4.429	4.125	4.196	4.497	4.128		4.520	.045
347	4.225	.015		4.645	4.625	4.554	4.250	4.321	4.622	4.253		4.645	.046
348	4.350	.015		4.770	4.750	4.679	4.375	4.446	4.747	4.378		4.770	.047
349	4.475	.015		4.895	4.875	4.804	4.500	4.571	4.872	4.503		4.895	.049

FIGURE 2 (Continued)

O-Ring Size	Dimensions				A	A-1	B	B-1	C	D	G	Ho	F
					BORE ID (Male Chord)	GROOVE ID (Female Chord)	OD (Female Chord Sleeve)	GROOVE OD (Male Chord)	OD (Male Chord)	BORE ID (Female Chord)	GROOVE WIDTH	OD FACE GROOVE (Use for Internal Pressure only)	DEPTH FACE GROOVE
	ID	+-	W	Mean OD (Ref)	+0.05 -0.00	-0.00	+0.00 -0.05	+0.00	-0.03	+0.03 -0.00		+0.00	
350	4.600	.015	0.210	5.020	5.000	4.929	4.625	4.696	4.997	4.628	0.270	5.020	0.152
351	4.725	.015	+/- .005	5.145	5.125	5.054	4.750	4.821	5.122	4.753	+0.020	5.145	+0.010
352	4.850	.015		5.270	5.250	5.179	4.875	4.946	5.247	4.878	-0.000	5.270	-0.000
353	4.975	.015		5.395	5.375	5.304	5.000	5.071	5.372	5.003	(0.247	5.395	0.152
354	5.100	.023		5.520	5.500	5.429	5.125	5.196	5.497	5.128	+0.006	5.520	0.152
355	5.225	.023		5.645	5.625	5.554	5.250	5.321	5.622	5.253	-0.000	5.645	0.152
356	5.350	.023		5.770	5.750	5.679	5.375	5.446	5.747	5.378	for vacuum and gases)	5.770	0.152
357	5.475	.023		5.895	5.875	5.804	5.500	5.571	5.872	5.503		5.895	0.152
358	5.600	.023		6.020	6.000	5.929	5.625	5.696	5.997	5.628		6.020	0.152
359	5.725	.023		6.145	6.125	6.054	5.750	5.821	6.122	5.753		6.145	0.152
360	5.850	.023		6.270	6.250	6.179	5.875	5.946	6.247	5.878		6.270	0.152
361	5.975	.023		6.395	6.375	6.304	6.000	6.071	6.372	6.003		6.395	0.152
362	6.100	.023		6.420	6.400	6.329	6.125	6.196	6.497	6.128		6.420	0.152
363	6.225	.023		6.545	6.525	6.454	6.250	6.321	6.622	6.253		6.545	0.152
364	6.350	.023		6.670	6.650	6.579	6.375	6.446	6.747	6.378		6.670	0.152
365	6.475	.023		6.795	6.775	6.704	6.500	6.571	6.872	6.503		6.795	0.152
366	6.600	.023		6.920	6.900	6.829	6.625	6.696	6.997	6.628		6.920	0.152
367	6.725	.023		7.045	7.025	6.954	6.750	6.821	7.122	6.753		7.045	0.152
368	6.850	.023		7.170	7.150	7.079	6.875	6.946	7.247	6.878		7.170	0.152
369	6.975	.023		7.295	7.275	7.204	7.000	7.071	7.372	7.003		7.295	0.152
370	7.100	.030		7.420	7.400	7.329	7.125	7.196	7.497	7.128		7.420	0.152
371	7.225	.030		7.545	7.525	7.454	7.250	7.321	7.622	7.253		7.545	0.152
372	7.350	.030		7.670	7.650	7.579	7.375	7.446	7.747	7.378		7.670	0.152
373	7.475	.030		7.795	7.775	7.704	7.500	7.571	7.872	7.503		7.795	0.152
374	7.600	.030		7.920	7.900	7.829	7.625	7.696	8.097	7.628		7.920	0.152
375	7.725	.030		8.045	8.025	7.954	7.750	7.821	8.122	7.753		8.045	0.152
376	7.850	.030		8.170	8.150	8.079	7.875	7.946	8.247	7.878		8.170	0.152
377	7.975	.030		8.295	8.275	8.204	8.000	8.071	8.372	8.003		8.295	0.152
378	8.100	.030		8.420	8.400	8.329	8.125	8.196	8.497	8.128		8.420	0.152
379	8.225	.030		8.545	8.525	8.454	8.250	8.321	8.622	8.253		8.545	0.152
380	8.350	.030		8.670	8.650	8.579	8.375	8.446	8.747	8.378		8.670	0.152
381	8.475	.030		8.795	8.775	8.704	8.500	8.571	8.872	8.503		8.795	0.152
382	8.600	.030		8.920	8.900	8.829	8.625	8.696	9.097	8.628		8.920	0.152
383	8.725	.030		9.045	9.025	8.954	8.750	8.821	9.122	8.753		9.045	0.152
384	8.850	.030		9.170	9.150	9.079	8.875	8.946	9.247	8.878		9.170	0.152
385	8.975	.030		9.295	9.275	9.204	9.000	9.071	9.372	9.003		9.295	0.152
386	9.100	.030		9.420	9.400	9.329	9.125	9.196	9.497	9.128		9.420	0.152
387	9.225	.030		9.545	9.525	9.454	9.250	9.321	9.622	9.253		9.545	0.152
388	9.350	.030		9.670	9.650	9.579	9.375	9.446	9.747	9.378		9.670	0.152
389	9.475	.030		9.795	9.775	9.704	9.500	9.571	9.872	9.503		9.795	0.152
390	9.600	.030		9.920	9.900	9.829	9.625	9.696	10.097	9.628		9.920	0.152
391	9.725	.030		10.045	10.025	9.954	9.750	9.821	10.122	9.753		10.045	0.152
392	9.850	.030		10.170	10.150	10.079	9.875	9.946	10.247	9.878		10.170	0.152
393	9.975	.030		10.295	10.275	10.204	10.000	10.071	10.372	10.003		10.295	0.152
394	10.100	.030		10.420	10.400	10.329	10.125	10.196	10.497	10.128		10.420	0.152
395	10.225	.030		10.545	10.525	10.454	10.250	10.321	10.622	10.253		10.545	0.152
396	10.350	.030		10.670	10.650	10.579	10.375	10.446	10.747	10.378		10.670	0.152
397	10.475	.030		10.795	10.775	10.704	10.500	10.571	10.872	10.503		10.795	0.152
398	10.600	.030		10.920	10.900	10.829	10.625	10.696	10.997	10.628		10.920	0.152
399	10.725	.030		11.045	11.025	10.954	10.750	10.821	11.122	10.753		11.045	0.152
400	10.850	.030		11.170	11.150	11.079	10.875	10.946	11.247	10.878		11.170	0.152
401	10.975	.030		11.295	11.275	11.204	11.000	11.071	11.372	11.003		11.295	0.152
402	11.100	.030		11.420	11.400	11.329	11.125	11.196	11.497	11.128		11.420	0.152
403	11.225	.030		11.545	11.525	11.454	11.250	11.321	11.622	11.253		11.545	0.152
404	11.350	.030		11.670	11.650	11.579	11.375	11.446	11.747	11.378		11.670	0.152
405	11.475	.030		11.795	11.775	11.704	11.500	11.571	11.872	11.503		11.795	0.152
406	11.600	.030		11.920	11.900	11.829	11.625	11.696	11.997	11.628		11.920	0.152
407	11.725	.030		12.045	12.025	11.954	11.750	11.821	12.122	11.753		12.045	0.152
408	11.850	.030		12.170	12.150	12.079	11.875	11.946	12.247	11.878		12.170	0.152
409	11.975	.030		12.295	12.275	12.204	12.000	12.071	12.372	12.003		12.295	0.152
410	12.100	.030		12.420	12.400	12.329	12.125	12.196	12.497	12.128		12.420	0.152
411	12.225	.030		12.545	12.525	12.454	12.250	12.321	12.622	12.253		12.545	0.152
412	12.350	.030		12.670	12.650	12.579	12.375	12.446	12.747	12.378		12.670	0.152
413	12.475	.030		12.795	12.775	12.704	12.500	12.571	12.872	12.503		12.795	0.152
414	12.600	.030		12.920	12.900	12.829	12.625	12.696	12.997	12.628		12.920	0.152
415	12.725	.030		13.045	13.025	12.954	12.750	12.821	13.122	12.753		13.045	0.152
416	12.850	.030		13.170	13.150	13.079	12.875	12.946	13.247	12.878		13.170	0.152
417	12.975	.030		13.295	13.275	13.204	13.000	13.071	13.372	13.003		13.295	0.152
418	13.100	.030		13.420	13.400	13.329	13.125	13.196	13.497	13.128		13.420	0.152
419	13.225	.030		13.545	13.525	13.454	13.250	13.321	13.622	13.253		13.545	0.152
420	13.350	.030		13.670	13.650	13.579	13.375	13.446	13.747	13.378		13.670	0.152
421	13.475	.030		13.795	13.775	13.704	13.500	13.571	13.872	13.503		13.795	0.152
422	13.600	.030		13.920	13.900	13.829	13.625	13.696	13.997	13.628		13.920	0.152
423	13.725	.030		14.045	14.025	13.954	13.750	13.821	14.122	13.753		14.045	0.152
424	13.850	.030		14.170	14.150	14.079	13.875	13.946	14.247	13.878		14.170	0.152
425	13.975	.030		14.295	14.275	14.204	14.000	14.071	14.372	14.003		14.295	0.152
426	14.100	.030		14.420	14.400	14.329	14.125	14.196	14.497	14.128		14.420	0.152
427	14.225	.030		14.545	14.525	14.454	14.250	14.321	14.622	14.253		14.545	0.152
428	14.350	.030		14.670	14.650	14.579	14.375	14.446	14.747	14.378		14.670	0.152
429	14.475	.030		14.795	14.775	14.704	14.500	14.571	14.872	14.503		14.795	0.152
430	14.600	.030		14.920	14.900	14.829	14.625	14.696	14.997	14.628		14.920	0.152
431	14.725	.030		15.045	15.025	14.954	14.750	14.821	15.122	14.753		15.045	0.152
432	14.850	.030		15.170	15.150	15.079	14.875	14.946	15.247	14.878		15.170	0.152
433	14.975	.030		15.295	15.275	15.204	15.000	15.071	15.372	15.003		15.295	0.152
434	15.100	.030		15.420	15.400	15.329	15.125	15.196	15.497	15.128		15.420	0.152
435	15.225	.030		15.545	15.525	15.454	15.250	15.321	15.622	15.253		15.545	0.152
436	15.350	.030		15.670	15.650	15.579	15.375	15.446	15.747	15.378		15.670	0.152
437	15.475	.030		15.795	15.775								