JETSEAL®

OMEGA SEALS
JM SERIES

JETCAT No. 02

JETSEAL, INC.

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OMEGA SEALS, SERIES JMI & JME

The seal to choose for the most demanding high pressure gas applications, the Omega is also the *ne plus ultra* of vacuum seals. Its broad-angle-peak contact feature concentrates its substantial load to force a deformable coating material into surface grooves and asperities better than any other seal.

The M series is similar to the type of seal that has been employed in liquid-gas fuel rocket motors for decades because of its virtually zero-leakage, its performance, its clean (lowest media entrapment, easy-cleaning) simple design and its strong pressure-energization characteristics. At JETSEAL we form Omega seals, rather than machining them from forged rings, so there are no “rocket-science” prices to pay for this excellent technology.

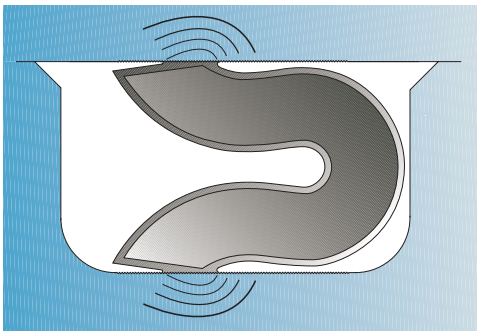


Fig. 1. Reaction forces deform soft plating upon installation.

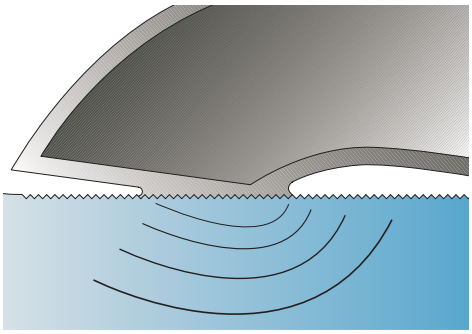
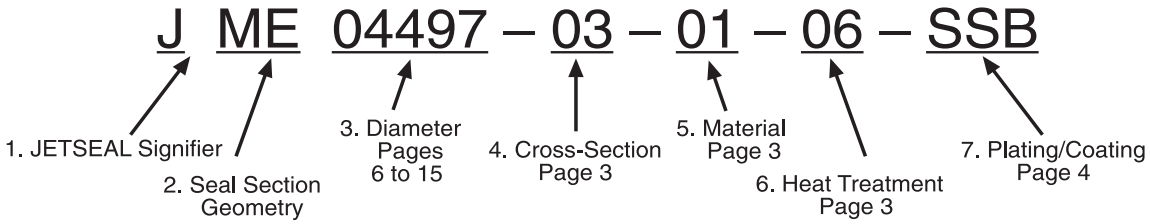


Fig. 2. Enlarged view showing extrusion of plating into toolmarks.

Here is how to order the seal to suit your application using the *JETSEAL intelligent part numbering system for standard Omega Seals:*

Example of Intelligent P/N (part number whose characters signify discrete properties of the product).



JETSEAL INTELLIGENT PART NUMBERING SYSTEM

1. J Prefix indicates seal P/N defines seal in English units.
I prefix indicates ISO metric system units (see separate catalog section).

2. Seal section geometry:

MI	=	Omega Seal, Internal Pressure
ME	=	Omega Seal, External Pressure

3. Diameter code: Expressed in one-thousandths of an inch, *e.g.*

02707	=	2.707 inches
99500	=	99.500 inches

For JMI seals, the maximum external diameter is encoded. For JME seals, the minimum internal diameter is used. These are the most critical diameters in each case. (Non-standard seals are described by numerical part numbers with non-significant digits.)

P/N JME 04497-03-01-06-SSB, above, defines an external pressure M Series Omega Seal with an inside diameter of 4.497-4.503, a free height of .092-.090, material thickness .025, alloy 718, precipitation heat treated and plated with silver. 0010-.0015 thick.

4. **Cross-section codes:**

Code	Nominal Section	Free Height	Material Thickness	Cavity Depth	Cavity Corner Rad. (Max)
01	3/64	.046 .048	.012	.043 .045	.016
02	1/16	.066 .064	.017	.050 .052	.016
03	3/32	.092 .090	.025	.076 .078	.016
04	1/8	.126 .124	.031	.106 .110	.016
06	3/16	.190 .186	.045	.161 .163	.016
08	1/4	.252 .248	.060	.215 .217	.016
12	3/8	.378 .372	.090	.323 .325	.016
16	1/2	.503 .497	.120	.431 .433	.016

5. **Material codes:**

Code	Material	Specification	Temperature Limit (°F)[1]	Remarks
01	Alloy 718	AMS 5596 AMS 5589	1200	Superior performance (NACE approved H.T. available)
02	Alloy X-750	AMS 5598 AMS 5582	1100	Excellent performance Lower load/Springback
03	Waspaloy	AMS 5544	1350	Superior creep, stress relaxation above 1200°F
04	Cres 304	AMS 5511 AMS 5560	800	Effective within reduced temp. range. Low springback
05	Elgiloy	AMS 5876	900	Excellent H_2 embrittlement resistance
06	Incoloy 909®	AMS 5892	1200	Low expansion alloy

[1] Temperatures may be exceeded for certain applications; especially short duration.

6. **Heat treatment codes:**

Codes	Heat Treatment	Remarks
01	Solution & Precipitation	Alloy 718: General applications
03	Solution & Precipitation (NACE)	Special H.T. for sour gas(Hydrogen Sulfide) service
04	Solution, Stabilization & Precipitation	Waspaloy; Creep & Relaxation resistance.
05	Solution & Precipitation(H_2)	Alloy 718: High temperature H_2 gas service.
06	Precipitation only	Interstage annealing may be employed

7. **Typical performance[1]:**

Cross Section	Max Operating Pressure (PSID)	Compression Inches (ref)	Seating force[2,3] (lbf per inch circ)	Springback[2] (inches)
01 (3/64)	24,600	.007	600	.003
02 (1/16)	32,600	.014	700	.004
03 (3/32)	37,300	.014	600	.006
04 (1/8)	28,300	.017	1300	.008
06 (3/16)	26,100	.026	1320	.012
08 (1/4)	25,900	.034	1300	.015
12 (3/8)	25,900	.051	1300	.021
16 (1/2)	25,900	.068	1300	.028

[1] Values listed are for Alloy 718. Use correction factors for other materials and elevated temperatures, from table in introductory catalog section.
[2] Seating force increases and springback may decrease for small diameter to cross-section ratios. If these parameters are critical for your application, please consult JETSEAL's technical support staff for further information.
[3] Unpressurized, at nominal deflection.

7. **Plating and coating codes for Omega seals:**

Code	Plating/Coating	Thickness, inch	Remarks
– – –	None		
S S A	Silver	.0005 – .0010	Inert gas annealed @ 950° F
S S B	Silver	.0010 – .0015	Inert gas annealed @ 950° F
S S C	Silver	.0015 – .0020	Inert gas annealed @ 950° F
S S D	Silver	.0020 – .0025	Inert gas annealed @ 950° F
S A A	Silver w/gold u/lay	.0005 – .0010	Inert gas annealed @ 950° F (Thickness does not incl.u/lay)
S A B	Silver w/gold u/lay	.0010 – .0015	Inert gas annealed @ 950° F (Thickness does not incl.u/lay)
S A C	Silver w/gold u/lay	.0015 – .0020	Inert gas annealed @ 950° F (Thickness does not incl.u/lay)
N I A	Soft nickel	.0005 – .0010	Inert gas annealed @ 1200° F
N I B	Soft nickel	.0010 – .0015	Inert gas annealed @ 1200° F
N I C	Soft nickel	.0015 – .0020	Inert gas annealed @ 1200° F
N A A	Soft nickel w/gold u/lay	.0005 – .0010	Inert gas annealed @ 1200° F
N A B	Soft nickel w/gold u/lay	.0010 – .0015	Inert gas annealed @ 1200° F
N A C	Soft nickel w/gold u/lay	.0015 – .0020	Inert gas annealed @ 1200° F
A A A	Gold	.0005 – .0010	Inert gas annealed @ 1200° F
A A B	Gold	.0010 – .0015	Inert gas annealed @ 1200° F
C U A	Copper	.0005 – .0010	Inert gas annealed @ 1200° F
C U B	Copper	.0010 – .0015	Inert gas annealed @ 1200° F
C U C	Copper	.0015 – .0020	Inert gas annealed @ 1200° F
C A A	Copper w/gold u/lay	.0005 – .0010	Inert gas annealed @ 1200° F
C A B	Copper w/gold u/lay	.0010 – .0015	Inert gas annealed @ 1200° F
C A C	Copper w/gold u/lay	.0015 – .0020	Inert gas annealed @ 1200° F

Note: Omega Seals have lapped substrate sealing surfaces.

Specification of geometrical tolerances:

Depending on their diameter to cross-section and material thickness ratios, JETSEAL standard metallic seal rings range from moderate to high flexibility when deflected across a diametral plane or perpendicular to such plane. It is necessary, therefore, to allow reasonably large roundness and flatness tolerances for these metallic seals in the unrestrained condition.

For example, a small section JMI or JME Omega Seal, twenty or more inches in diameter becomes visibly oval when suspended from a point on its diameter, simply due to the effects of gravitational acceleration on its own mass. When laid "flat" on a surface table, this seal may arch slightly above the surface due to extremely slight variations in the symmetry of its cross-section within specified tolerances. Such "non-conformances" may be eliminated by the touch of a finger and have no bearing on the performance of the seal in its installed, restrained, state.

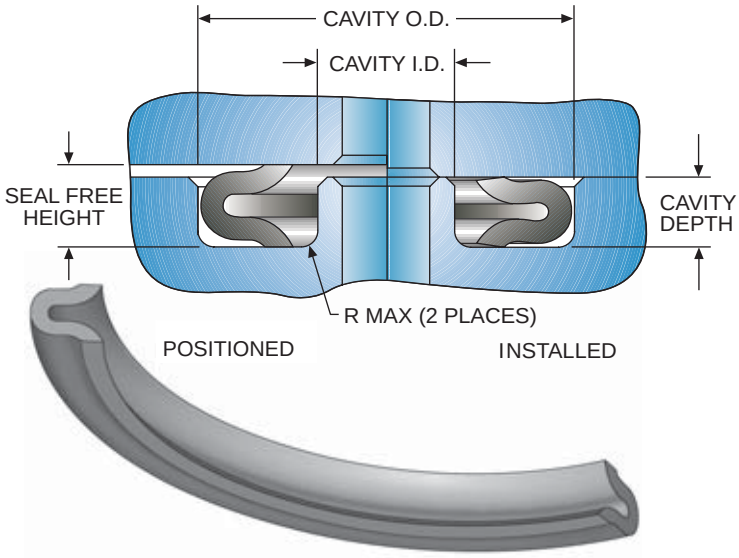
The tolerances shown in the following table are standard for all JETSEAL metallic seals in the unrestrained condition and are additional to feature tolerances. In the restrained condition, JETSEAL Series M Omega Seals conform to the feature size tolerances shown elsewhere in this manual.

Mean Diameter range (in)	Roundness (in)	Flatness (in)
To 1.000	.015	.005
1.001 – 2.000	.020	.010
2.001 – 3.500	.030	.015
3.501 – 7.500	.050	.025
7.501 – 10.000	.065	.035
10.001 – 15.000	.085	.050
15.001 – 20.000	.115	.060
20.001 – 30.000	.150	.070
30.001 – 35.000	.200	.100
35.001 – 40.000	.250	.125
40.001 – 50.000	.300	.150

Seals with non-circular geometry:

JETSEAL metallic seals may be supplied shaped to match the contour of virtually any groove, provided that practical constraints on corner radius forming are respected. The following guidelines are considered safe for M series Omega seals.

Minimum Inside Corner (bend) Radius								
Cross-Section	01	02	03	04	06	08	12	16
Radius	.200	.300	.500	.600	.800	1.000	1.500	2.000



- Recommended for maximum sealing efficiency for high pressure gas and vacuum applications.
- High deflection capability.
- Suitable replacement for both Spring-Energized Metal C-Ring and Delta seal.
- See page 3 for all dimensions and tolerances other than those for diameters.
- Seal diameters are average. See roundness table on Page 5.
- See page 3 for installation loads performance data.
- Standard sizes are presented. Non-standard diameters may be derived by interpolation. Tooling engineering charges may apply.
- Inner cavity wall optional.
- Groove inside corner radius may be increased as desired, provided that (groove) cavity I.D. is reduced by 2 x such increase.

P/N: JMI _ _ _ _ _ – _ _ – _ _ – _ _ – _ _ _

seal type	diameter code derived from seal O.D., Pages 6 to 10	cross-section Page 3	material Page 3	heat treatment Page 3	plating Page 4

THESE ARE THE RECOMMENDED SEAL SIZES, HOWEVER, IT DOES NOT GUARANTEE TOOLING AVAILABILITY

FREE HEIGHT .047					FREE HEIGHT .065				
SEAL DIA. CODE	CAVITY I.D. (MAX)	CAVITY O.D. +.002 -.000	SEAL I.D. (MIN)	SEAL O.D. +.000 -.005	SEAL DIA. CODE	CAVITY I.D. (MAX)	CAVITY O.D. +.005 -.000	SEAL I.D. (MIN)	SEAL O.D. +.000 -.008
00461	.293	.468	.330	.461					
00493	.325	.500	.362	.493					
00524	.356	.531	.393	.524					
00553	.387	.562	.424	.553					
00586	.418	.593	.455	.586					
00618	.450	.625	.487	.618					
00649	.481	.656	.518	.649					
00680	.512	.687	.549	.680					
00711	.543	.718	.581	.711					
00743	.575	.750	.613	.743					
00774	.606	.781	.643	.774					
00805	.637	.812	.674	.805					
00836	.668	.843	.705	.836					
00868	.700	.875	.737	.868					
00899	.731	.906	.768	.899					
00930	.763	.938	.800	.930					
00962	.794	.969	.831	.962					
00993	.826	1.000	.863	.993	00993	.820	1.000	.863	.993
01025	.857	1.032	.894	1.025	01025	.852	1.032	.894	1.025
01056	.888	1.063	.925	1.056	01056	.883	1.063	.925	1.056
01087	.919	1.094	.956	1.087	01087	.914	1.094	.956	1.087
01118	.951	1.125	.988	1.118	01118	.945	1.125	.988	1.118
01150	.982	1.156	1.019	1.150	01150	.976	1.156	1.019	1.150
01181	1.013	1.188	1.050	1.181	01181	1.008	1.188	1.050	1.181
01244	1.076	1.250	1.113	1.244	01244	1.070	1.250	1.113	1.244
01306	1.138	1.313	1.175	1.306	01306	1.133	1.313	1.175	1.306
01369	1.201	1.375	1.238	1.369	01369	1.195	1.375	1.238	1.369
01431	1.263	1.438	1.300	1.431	01431	1.258	1.438	1.300	1.431
01494	1.326	1.500	1.363	1.494	01494	1.320	1.500	1.363	1.494
01556	1.388	1.563	1.425	1.556	01556	1.383	1.563	1.425	1.556

On this page, seal diameter code is common for both free heights. Seal dimensions in inches, prior to plating or coating

THESE ARE THE RECOMMENDED SEAL SIZES, HOWEVER, IT DOES NOT GUARANTEE TOOLING AVAILABILITY

SEAL DIA. CODE	FREE HEIGHT .065				FREE HEIGHT .091				FREE HEIGHT .125			
	CAVITY I.D.	CAVITY O.D.	SEAL I.D.	SEAL O.D.	CAVITY I.D.	CAVITY O.D.	SEAL I.D.	SEAL O.D.	CAVITY I.D.	CAVITY O.D.	SEAL I.D.	SEAL O.D.
	(MAX)	+.005 -.000	(MIN)	+.000 -.008	(MAX)	+.005 -.000	(MIN)	+.000 -.008	(MAX)	+.005 -.000	(MIN)	+.000 -.008
01618	1.445	1.625	1.488	1.618								
01680	1.507	1.687	1.540	1.680								
01743	1.570	1.750	1.603	1.743								
01805	1.632	1.812	1.665	1.805								
01868	1.795	1.875	1.728	1.868								
01930	1.757	1.937	1.790	1.930								
01993	1.820	2.000	1.853	1.993	1.740	2.000	1.777	1.993				
02055	1.882	2.062	1.915	2.055	1.803	2.062	1.840	2.055				
02118	1.945	2.125	1.978	2.118	1.865	2.125	1.902	2.118				
02180	2.007	2.187	2.043	2.180	1.927	2.187	1.964	2.180				
02243	2.070	2.250	2.105	2.243	1.990	2.250	2.207	2.243				
02305	2.132	2.312	2.168	2.305	2.052	2.312	2.089	2.305				
02368	2.195	2.375	2.228	2.368	2.115	2.375	2.152	2.368				
02430	2.258	2.437	2.293	2.430	2.177	2.437	2.214	2.430				
02493	2.320	2.500	2.355	2.493	2.240	2.500	2.277	2.493				
02555	2.382	2.562	2.418	2.555	2.302	2.562	2.339	2.555				
02618	2.445	2.625	2.480	2.618	2.365	2.625	2.402	2.618				
02680	2.507	2.687	2.543	2.680	2.427	2.687	2.464	2.680				
02743	2.570	2.750	2.605	2.743	2.490	2.750	2.527	2.743				
02805	2.632	2.812	2.468	2.805	2.552	2.812	2.589	2.805				
02468	2.695	2.875	2.730	2.868	2.615	2.875	2.652	2.868				
02930	2.757	2.937	2.793	2.930	2.677	2.937	2.714	2.930				
02993	2.820	3.000	2.855	2.993	2.740	3.000	2.777	2.993	2.680	3.000	2.733	2.993
03055	2.882	3.062	2.915	3.055	2.803	3.062	2.840	3.055	2.742	3.062	2.795	3.055
03118	2.945	3.125	2.980	3.118	2.865	3.125	2.902	3.118	2.805	3.125	2.858	3.118
03180	3.007	3.187	3.043	3.180	2.927	3.187	2.964	3.180	2.867	3.187	2.920	3.180
03243	3.070	3.250	3.105	3.243	2.990	3.250	3.027	3.243	2.930	3.250	2.983	3.243
03305	3.132	3.312	3.168	3.305	3.052	3.312	3.089	3.305	2.992	3.312	3.045	3.305
03368	3.195	3.375	3.230	3.368	3.115	3.375	3.152	3.368	3.055	3.375	3.108	3.368
03430	3.257	3.437	3.293	3.430	3.177	3.437	3.214	3.430	3.117	3.437	3.170	3.430
03493	3.320	3.500	3.355	3.493	3.240	3.500	3.277	3.493	3.180	3.500	3.233	3.493
03555	3.382	3.562	3.418	3.555	3.302	3.562	3.339	3.555	3.242	3.562	3.295	3.555
03618	3.445	3.625	3.480	3.618	3.165	3.625	3.402	3.618	3.305	3.625	3.358	3.618
03680	3.507	3.687	3.543	3.680	3.427	3.687	3.464	3.680	3.367	3.687	3.420	3.680
03743	3.570	3.750	3.605	3.743	3.490	3.750	3.527	3.743	3.430	3.750	3.483	3.743
03805	3.632	3.812	3.668	3.805	3.552	3.812	3.589	3.805	3.492	3.812	3.545	3.805
03868	3.695	3.875	3.730	3.868	3.615	3.875	3.652	3.868	3.555	3.875	3.608	3.868
03930	3.757	3.937	3.793	3.930	3.677	3.937	3.714	3.930	3.617	3.937	3.670	3.930
03993	3.820	4.000	3.855	3.993	3.740	4.000	3.777	3.993	3.680	4.000	3.733	3.993
04118	3.945	4.125	3.980	4.118	3.865	4.125	3.902	4.118	3.805	4.125	3.858	4.118
04243	4.070	4.250	4.105	4.243	3.990	4.250	4.027	4.243	3.930	4.250	3.983	4.243
04368	4.195	4.375	4.230	4.368	4.115	4.375	4.152	4.368	4.055	4.375	4.108	4.368
04493	4.320	4.500	4.355	4.493	4.240	4.500	4.277	4.493	4.180	4.500	4.233	4.493
04618	4.445	4.625	4.480	4.618	4.365	4.625	4.402	4.618	4.305	4.625	4.358	4.618
04743	4.570	4.750	4.605	4.743	4.490	4.750	4.527	4.743	4.430	4.750	4.483	4.743
04868	4.695	4.875	4.730	4.868	4.615	4.875	4.652	4.868	4.555	4.875	4.608	4.868
04993	4.820	5.000	4.855	4.993	4.740	5.000	4.777	4.993	4.680	5.000	4.733	4.993
05118	4.945	5.125	4.980	5.118	4.865	5.125	4.902	5.118	4.805	5.125	4.858	5.118

On this page, seal diameter code is common for all free heights. Seal dimensions in Inches, prior to plating or coating

THESE ARE THE RECOMMENDED SEAL SIZES, HOWEVER, IT DOES NOT GUARANTEE TOOLING AVAILABILITY

FREE HEIGHT .125					FREE HEIGHT .188					FREE HEIGHT .250				
SEAL DIA. CODE	CAVITY I.D. (MAX)	CAVITY O.D. +.005 -.000	SEAL I.D. (MIN)	SEAL O.D. +.000 -.008	SEAL DIA. CODE	CAVITY I.D. (MAX)	CAVITY O.D. +.005 -.000	SEAL I.D. (MIN)	SEAL O.D. +.000 -.008	SEAL DIA. CODE	CAVITY (MAX)	CAVITY +.005 -.000	SEAL (MIN)	SEAL +.000 -.008
05243	4.930	5.250	4.983	5.243	04760	4.280	4.780	4.340	4.760	04865	4.280	4.880	4.350	4.865
05368	5.055	5.375	5.108	5.368	04885	4.405	4.905	4.465	4.885	04990	4.405	5.005	4.475	4.990
05493	5.180	5.500	5.233	5.493	05010	4.530	5.030	4.590	5.010	05115	4.530	5.130	4.600	5.115
05618	5.305	5.625	5.358	5.618	05135	4.655	5.155	4.715	5.135	05240	4.655	5.255	4.725	5.240
05743	5.430	5.750	5.483	5.743	05260	4.780	5.280	4.840	5.260	05365	4.780	5.380	4.850	5.365
05868	5.555	5.875	5.608	5.868	05385	4.905	5.405	4.965	5.385	05490	4.905	5.505	4.975	5.490
05993	5.680	6.000	5.733	5.993	05510	5.030	5.530	5.090	5.510	05615	5.030	5.630	5.100	5.615
06118	5.805	6.125	5.858	6.118	05635	5.155	5.655	5.215	5.635	05740	5.155	5.755	5.225	5.740
06243	5.930	6.250	5.983	6.243	05760	5.280	5.780	5.340	5.760	05865	5.280	5.880	5.350	5.865
06368	6.055	6.375	6.108	6.368	05885	5.405	5.905	5.465	5.885	05990	5.405	6.005	5.475	5.990
06493	6.180	6.500	6.233	6.493	06010	5.530	6.030	5.590	6.010	06115	5.530	6.130	5.600	6.115
06618	6.305	6.625	6.358	6.618	06135	5.655	6.155	5.715	6.135	06240	5.655	6.255	5.725	6.240
06743	6.430	6.750	6.483	6.743	06260	5.780	6.280	5.840	6.260	06365	5.780	6.380	5.850	6.365
06868	6.555	6.875	6.608	6.868	06385	5.905	6.405	5.965	6.385	06490	5.905	6.505	5.975	6.490
06993	6.680	7.000	6.733	6.993	06510	6.030	6.530	6.090	6.510	06615	6.030	6.630	6.100	6.615
	(MAX)	**+.006 -.000**	**(MIN)**	**+.000 -.012**		**(MAX)**	**+.006 -.000**	**(MIN)**	**+.000 -.012**		**(MAX)**	**+.006 -.000**	**(MIN)**	**+.000 -.012**
07118	6.805	7.125	6.858	7.118	06635	6.155	6.655	6.215	6.635	06740	6.155	6.755	6.225	6.740
07243	6.930	7.250	6.983	7.243	06760	6.280	6.780	6.340	6.760	06865	6.280	6.880	6.350	6.865
07368	7.055	7.375	7.108	7.368	06885	6.405	6.905	6.465	6.885	06990	6.405	7.005	6.475	6.990
07493	7.180	7.500	7.233	7.493	07010	6.530	7.030	6.590	7.010	07115	6.530	7.130	6.600	7.115
07618	7.305	7.625	7.358	7.618	07135	6.655	7.155	6.715	7.135	07240	6.655	7.255	6.725	7.240
07743	7.430	7.750	7.483	7.743	07260	6.780	7.280	6.840	7.260	07365	6.780	7.380	6.850	7.365
07868	7.555	7.875	7.608	7.868	07385	6.905	7.405	6.965	7.385	07490	6.905	7.505	6.975	7.490
07993	7.680	8.000	7.733	7.993	07510	7.030	7.530	7.090	7.510	07615	7.030	7.630	7.100	7.615
08118	7.805	8.125	7.858	8.118	07635	7.155	7.655	7.215	7.635	07740	7.155	7.755	7.225	7.740
08243	7.930	8.250	7.983	8.243	07760	7.280	7.780	7.340	7.760	07865	7.280	7.880	7.350	7.865
08493	8.180	8.500	8.233	8.493	08010	7.530	8.030	7.590	8.010	08115	7.530	8.130	7.600	8.115
08743	8.430	8.750	8.483	8.743	08260	7.780	8.280	7.840	8.260	08365	7.780	8.380	7.850	8.365
08993	8.680	9.000	8.733	8.993	08510	8.030	8.530	8.090	8.510	08615	8.030	8.630	8.100	8.615
09243	8.930	9.250	8.983	9.243	08760	8.280	8.780	8.340	8.760	08865	8.280	8.880	8.350	8.865
09493	9.180	9.500	9.233	9.493	09010	8.530	9.030	8.590	9.010	09115	8.530	9.130	8.600	9.115
09743	9.430	9.750	9.483	9.743	09260	8.780	9.280	8.840	9.260	09365	8.780	9.380	8.850	9.365
	(MAX)	**+.007 -.000**	**(MIN)**	**+.000 -.015**		**(MAX)**	**+.007 -.000**	**(MIN)**	**+.000 -.015**		**(MAX)**	**+.007 -.000**	**(MIN)**	**+.000 -.015**
09993	9.680	10.000	9.733	9.993	09510	9.030	9.530	9.090	9.510	09615	9.030	9.630	9.100	9.615
10243	9.930	10.250	9.983	10.243	09760	9.280	9.780	9.340	9.760	09865	9.280	9.880	9.350	9.865
10493	10.180	10.500	10.233	10.493	10010	9.530	10.030	9.590	10.010	10115	9.530	10.130	9.600	10.115
10743	10.430	10.750	10.483	10.743	10260	9.780	10.280	9.840	10.260	10365	9.780	10.380	9.850	10.365
10993	10.680	11.000	10.733	10.993	10510	10.030	10.530	10.090	10.510	10615	10.030	10.630	10.100	10.615
11243	10.930	11.250	10.983	11.243	10760	10.280	10.780	10.340	10.760	10865	10.280	10.880	10.350	10.865
11493	11.180	11.500	11.233	11.493	11010	10.530	11.030	10.590	11.010	11115	10.530	11.130	10.600	11.115
11743	11.430	11.750	11.483	11.743	11260	10.780	11.280	10.840	11.260	11365	10.780	11.380	10.850	11.365
11993	11.680	12.000	11.733	11.993	11510	11.030	11.530	11.090	11.510	11615	11.030	11.630	11.100	11.615
12243	11.930	12.250	11.983	12.243	11760	11.280	11.780	11.340	11.760	11865	11.280	11.880	11.350	11.866
12493	12.180	12.500	12.233	12.493	12010	11.530	12.030	11.590	12.010	12115	11.530	12.130	11.600	12.115
12743	12.430	12.750	12.483	12.743	12260	11.780	12.280	11.840	12.260	12365	11.780	12.380	11.850	12.365
12993	12.680	13.000	12.733	12.993	12510	12.030	12.530	12.090	12.510	12615	12.030	12.630	12.100	12.615
13243	12.930	13.250	12.983	13.243	12760	12.280	12.780	12.340	12.760	12865	12.280	12.880	12.350	12.865

Seal dimensions in inches, prior to plating or coating

THESE ARE THE RECOMMENDED SEAL SIZES, HOWEVER, IT DOES NOT GUARANTEE TOOLING AVAILABILITY

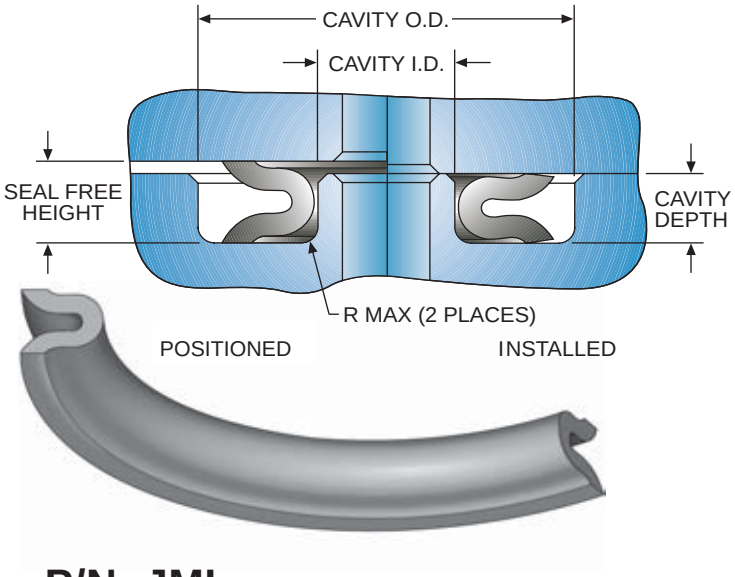
FREE HEIGHT .125					FREE HEIGHT .188					FREE HEIGHT .250				
SEAL DIA. CODE	CAVITY I.D. (MAX)	CAVITY O.D. +.008 -.000	SEAL I.D. (MIN)	SEAL O.D. +.000 -.020	SEAL DIA. CODE	CAVITY I.D. (MAX)	CAVITY O.D. +.008 -.000	SEAL I.D. (MIN)	SEAL O.D. +.000 -.020	SEAL DIA. CODE	CAVITY I.D. (MAX)	CAVITY O.D. +.008 -.000	SEAL I.D. (MIN)	SEAL O.D. +.000 -.020
13493	13.180	13.500	13.233	13.493	13040	12.550	13.060	12.625	13.040	13140	12.550	13.160	12.640	13.140
13743	13.430	13.750	13.483	13.743	13290	12.800	13.310	12.875	13.290	13390	12.800	13.410	12.890	13.390
13993	13.680	14.000	13.733	13.993	13540	13.050	13.560	13.125	13.540	13640	13.050	13.660	13.140	13.640
14243	13.930	14.250	13.983	14.243	13790	13.300	13.810	13.375	13.790	13890	13.300	13.910	13.390	13.890
14493	14.180	14.500	14.233	14.493	14040	13.550	14.060	13.625	14.040	14140	13.550	14.160	13.640	14.140
14743	14.430	14.750	14.483	14.743	14290	13.800	14.310	13.875	14.290	14390	13.800	14.410	13.890	14.390
14993	14.680	15.000	14.733	14.993	14540	14.050	14.560	14.125	14.540	14640	14.050	14.660	14.140	14.640
15243	14.930	15.250	14.983	15.243	14790	14.300	14.810	14.375	14.790	14890	14.300	14.910	14.390	14.890
15493	15.180	15.500	15.233	15.493	15040	14.550	15.060	14.625	15.040	15140	14.550	15.160	14.640	15.140
15743	15.430	15.750	15.483	15.743	15290	14.800	15.310	14.875	15.290	15390	14.800	15.410	14.890	15.390
15993	15.680	16.000	15.733	15.993	15540	15.050	15.560	15.125	15.540	15640	15.050	15.660	15.140	15.640
16243	15.930	16.250	15.983	16.243	15790	15.300	15.810	15.375	15.790	15890	15.300	15.910	15.390	15.890
16493	16.180	16.500	16.233	16.493	16040	15.550	16.060	15.625	16.040	16140	15.550	16.160	15.640	16.140
16743	16.430	16.750	16.483	16.743	16290	15.800	16.310	15.875	16.290	16390	15.800	16.410	15.890	16.390
16993	16.680	17.000	16.733	16.993	16540	16.050	16.560	16.125	16.540	16640	16.050	16.660	16.140	16.640
17243	16.930	17.250	16.983	17.243	16790	16.300	16.810	16.375	16.790	16890	16.300	16.910	16.390	16.890
17493	17.180	17.500	17.233	17.493	17040	16.550	17.060	16.625	17.040	17140	16.550	17.160	16.640	17.140
17743	17.430	17.750	17.483	17.743	17290	16.800	17.310	16.875	17.290	17390	16.800	17.410	16.890	17.390
17993	17.680	18.000	17.733	17.993	17540	17.050	17.560	17.125	17.540	17640	17.050	17.660	17.140	17.640
18243	17.930	18.250	17.983	18.243	17790	17.300	17.810	17.375	17.790	17890	17.300	17.910	17.390	17.890
18493	18.180	18.500	18.233	18.493	18040	17.550	18.060	17.625	18.040	18140	17.550	18.160	17.640	18.140
18743	18.430	18.750	18.483	18.743	18290	17.800	18.310	17.875	18.290	18390	17.800	18.410	17.890	18.390
18993	18.680	19.000	18.733	18.993	18540	18.050	18.560	18.125	18.540	18640	18.050	18.660	18.140	18.640
19243	18.930	19.250	18.983	19.243	18790	18.300	18.810	18.375	18.790	18890	18.300	18.910	18.390	18.890
19493	19.180	19.500	19.233	19.493	19040	18.550	19.060	18.625	19.040	19140	18.550	19.160	18.640	19.140
19743	19.430	19.750	19.483	19.743	19290	18.800	19.310	18.875	19.290	19390	18.800	19.410	18.890	19.390
19993	19.680	20.000	19.733	19.993	19540	19.050	19.560	19.125	19.540	19640	19.050	19.660	19.140	19.640
20243	19.930	20.250	19.983	20.243	19800	19.300	19.820	19.375	19.800	19890	19.900	19.920	19.390	19.890
20493	20.180	20.500	20.233	20.493	20050	19.550	20.070	19.625	20.050	20140	19.550	20.170	19.640	20.140
20743	20.430	20.750	20.483	20.743	20300	19.800	20.320	19.875	20.300	20400	19.800	20.420	19.890	20.400
	(MAX)	**+.010 -.000**	**(MIN)**	**+.000 -.030**		**(MAX)**	**+.010 -.000**	**(MIN)**	**+.000 -.030**		**(MAX)**	**+.010 -.000**	**(MIN)**	**+.000 -.030**
20993	20.680	21.000	20.733	20.993	20550	20.050	20.570	20.125	20.550	20650	20.050	20.670	20.140	20.650
21243	20.930	21.250	20.983	21.243	20800	20.300	20.820	20.375	20.800	20900	20.300	20.920	20.390	20.900
21493	21.180	21.500	21.233	21.493	21050	20.550	21.070	20.625	21.050	21150	20.550	21.170	20.640	21.150
21743	21.430	21.750	21.483	21.743	21300	20.800	21.320	20.875	21.300	21400	20.800	21.420	20.890	21.400
21993	21.680	22.000	21.733	21.993	21550	21.050	21.570	21.125	21.550	21650	21.050	21.670	21.140	21.650
22243	21.930	22.250	21.983	22.243	21800	21.300	21.820	21.375	21.800	21900	21.300	21.920	21.390	21.900
22249	22.180	22.500	22.233	22.493	22050	21.550	22.070	21.625	22.050	22150	21.550	22.170	21.640	22.150
22743	22.430	22.750	22.483	22.743	22300	21.800	22.320	21.875	22.300	22400	21.800	22.420	21.890	22.400
22993	22.680	23.000	22.733	22.993	22550	22.050	22.570	22.125	22.550	22650	22.050	22.670	22.140	22.650
23243	22.930	23.250	22.983	23.243	22800	22.300	22.820	22.375	22.800	22900	22.300	22.920	22.390	22.900

Seal dimensions in inches, prior to plating. Dimensions for .125 & .188 sizes beyond the charted range may be obtained by extrapolation; O.D. tolerances and O.D. dimensional increments increasing by .010 every 10 inches.

THESE ARE THE RECOMMENDED SEAL SIZES, HOWEVER, IT DOES NOT GUARANTEE TOOLING AVAILABILITY

FREE HEIGHT .250					FREE HEIGHT .375					FREE HEIGHT .500				
SEAL DIA. CODE	CAVITY I.D. (MAX)	CAVITY O.D. +.010 -.000	SEAL I.D. (MIN)	SEAL O.D. +.000 -.030	SEAL DIA. CODE	CAVITY I.D. (MAX)	CAVITY O.D. +.010 -.000	SEAL I.D. (MIN)	SEAL O.D. +.000 -.030	SEAL DIA. CODE	CAVITY I.D. (MAX)	CAVITY O.D. +.010 -.000	SEAL I.D. (MIN)	SEAL O.D. +.000 -.030
23650	23.050	23.670	23.140	23.650	23920	23.050	23.950	23.150	23.920	24220	23.050	24.250	23.170	24.220
24150	23.550	24.170	23.640	24.150	24420	23.550	24.450	23.650	24.420	24720	23.550	24.750	23.670	24.720
24650	24.050	24.670	24.140	24.650	24920	24.050	24.950	24.150	24.920	25220	24.050	25.250	24.170	25.220
25150	24.550	25.170	24.640	25.150	25420	24.550	25.450	24.650	25.420	25720	24.550	25.750	24.670	25.720
25650	25.050	25.670	25.140	25.650	25920	25.050	25.950	25.150	25.920	26220	25.050	26.250	25.170	26.220
26150	25.550	26.170	25.640	26.150	26420	25.550	26.450	25.650	26.420	26720	25.550	26.750	25.670	26.720
26650	26.050	26.670	26.140	26.650	26920	26.050	26.950	26.150	26.920	27220	26.050	27.250	26.170	27.220
27150	26.550	27.170	26.640	27.150	27420	26.550	27.450	26.650	27.420	27720	26.550	27.750	26.670	27.720
27650	27.050	27.670	27.140	27.650	27920	27.050	27.950	27.150	27.920	28220	27.050	28.250	27.170	28.220
28150	27.550	28.170	27.640	28.150	28420	27.550	28.450	27.650	28.420	28720	27.550	28.750	27.670	28.720
28650	28.050	28.670	28.140	28.650	28920	28.050	28.950	28.150	28.920	29220	28.050	29.250	28.170	29.220
29150	28.550	29.170	28.640	29.150	29420	28.550	29.450	28.650	29.420	29720	28.550	29.750	28.670	29.720
29650	29.050	29.670	29.140	29.650	29920	29.050	29.950	29.150	29.920	30220	29.050	30.250	29.170	30.220
30150	29.550	30.170	29.640	30.150	30420	29.550	30.450	29.650	30.420	30720	29.550	30.750	29.670	30.720
30650	30.050	30.670	30.140	30.650	30920	30.050	30.950	30.150	30.920	31220	30.050	31.250	30.170	31.220
	(MAX)	**+.015 -.000**	**(MIN)**	**+.000 -.040**		**(MAX)**	**+.015 -.000**	**(MIN)**	**+.000 -.040**		**(MAX)**	**+.015 -.000**	**(MIN)**	**+.000 -.040**
31160	30.550	31.180	30.640	31.160	31430	30.550	31.460	30.650	31.430	31730	30.550	31.760	30.670	31.730
31660	31.050	31.680	31.140	31.660	31930	31.050	31.960	31.150	31.930	32230	31.050	32.260	31.170	32.230
32160	31.550	32.180	31.640	32.160	32430	31.550	32.460	31.650	32.430	32730	31.550	32.760	31.670	32.730
32660	32.050	32.680	32.140	32.660	32930	32.050	32.960	32.150	32.930	33230	32.050	33.260	32.170	33.230
33160	32.550	33.180	32.640	33.160	33430	32.550	33.460	32.650	33.430	33730	32.550	33.760	32.670	33.730
33660	33.050	33.680	33.140	33.660	33930	33.050	33.960	33.150	33.930	34230	33.050	34.260	33.170	34.230
34160	33.550	34.180	33.640	34.160	34430	33.550	34.460	33.650	34.430	34730	33.550	34.760	33.670	34.730
34660	34.050	34.680	34.140	34.660	34930	34.050	34.960	34.150	34.930	35230	34.050	35.260	34.170	35.230
35160	34.550	35.180	34.640	35.160	35430	34.550	35.460	34.650	35.430	35730	34.550	35.760	34.670	35.730
35660	35.050	35.680	35.140	35.660	35930	35.050	35.960	35.150	35.930	36230	35.050	36.260	35.170	36.230
36160	35.550	36.180	35.640	36.160	36430	35.550	36.460	35.650	36.430	36730	35.550	36.760	35.670	36.730
36660	36.050	36.680	36.140	36.660	36930	36.050	36.960	36.150	36.930	37230	36.050	37.260	36.170	37.230
37160	36.550	37.180	36.640	37.160	37430	36.550	37.460	36.650	37.430	37730	36.550	37.760	36.670	37.730
37660	37.050	37.680	37.140	37.660	37930	37.050	37.960	37.150	37.930	38230	37.050	38.260	37.170	38.230
38160	37.550	38.180	37.640	38.160	38430	37.550	38.460	37.650	38.430	38730	37.550	38.760	37.670	38.730
38660	38.050	38.680	38.140	38.660	38930	38.050	38.960	38.150	38.930	39230	38.050	39.260	38.170	39.230
39160	38.550	39.180	38.640	39.160	39430	38.550	39.460	38.650	39.430	39730	38.550	39.760	38.670	39.730
39660	39.050	39.680	39.140	39.660	39930	39.050	39.960	39.150	39.930	40230	39.050	40.260	39.170	40.230
40160	39.550	40.180	39.640	40.160	40430	39.550	40.460	39.650	40.430	40730	39.550	40.760	39.670	40.730
40660	40.050	40.680	40.140	40.660	40930	40.050	40.960	40.150	40.930	41230	40.050	41.260	40.170	41.230
	(MAX)	**+.020 -.006**	**(MIN)**	**+.000 -.050**		**(MAX)**	**+.020 -.000**	**(MIN)**	**+.000 -.050**		**(MAX)**	**+.020 -.006**	**(MIN)**	**+.000 -.050**
41170	40.550	41.190	40.640	41.170	41440	40.550	41.470	40.650	41.440	41740	40.550	41.770	40.670	41.740
41670	41.050	41.690	41.140	41.670	41940	41.050	41.970	41.150	41.940	42240	41.050	42.270	41.170	42.240
42170	41.550	42.190	41.640	42.170	42440	41.550	42.470	41.650	42.440	42740	41.550	42.770	41.670	42.740
42670	42.050	42.690	42.140	42.670	42940	42.050	42.970	42.150	42.940	43240	42.050	43.270	42.170	43.240
43170	42.550	43.190	42.640	43.170	43440	42.550	43.470	42.650	43.440	43740	42.550	43.770	42.670	43.740
43670	43.050	43.690	43.140	43.670	43940	43.050	43.970	43.150	43.940	44240	43.050	44.270	43.170	44.240
44170	43.550	44.190	43.640	44.170	44440	43.550	44.470	43.650	44.440	44740	43.550	44.770	43.670	44.740
44670	44.050	44.690	44.140	44.670	44940	44.050	44.970	44.150	44.940	45240	44.050	45.270	44.170	45.240
45170	44.550	45.190	44.640	45.170	45440	44.550	45.470	44.650	45.440	45740	44.550	45.770	44.670	45.740
45670	45.050	45.690	45.140	45.670	45940	45.050	45.970	45.150	45.940	46240	45.050	46.270	45.170	46.240

Seal dimensions in inches, prior to plating. Dimensions for seals beyond the charted range may be obtained by extrapolation;
O.D. tolerances and O.D. dimensional increments increasing by .010 every 10 inches.
For sizes over 99.999 diameter consult JETSEAL's technical support staff.



- Recommended for maximum sealing efficiency for high pressure gas and vacuum applications.
- High deflection capability.
- Suitable replacement for both Spring-Energized Metal C-Ring and Delta seal.
- See page 3 for all dimensions and tolerances other than those for diameters.
- Seal diameters are average. See roundness table on page 5.
- See page 3 for installation loads performance data.
- Standard sizes are presented. Non-standard diameters may be derived by interpolation. Tooling engineering charges may apply.
- Outer cavity wall optional.
- Groove outside corner radius may be increased as desired, provided that (groove) cavity O.D. is reduced by 2 x such increase.

P/N: JMI _____ – _____ – _____ – _____ – _____ – _____ – _____ – _____

seal type	diameter code derived from seal I.D., Pages 11 to 15	cross-section Page 3	material Page 3	heat treatment Page 3	plating Page 4

THESE ARE THE RECOMMENDED SEAL SIZES, HOWEVER, IT DOES NOT GUARANTEE TOOLING AVAILABILITY

FREE HEIGHT .047					FREE HEIGHT .065				
SEAL DIA. CODE	CAVITY I.D. +.000 -.002	CAVITY O.D. (MIN)	SEAL I.D. +.005 -.000	SEAL O.D. (MAX)	SEAL DIA. CODE	CAVITY I.D. +.000 -.005	CAVITY O.D. (MIN)	SEAL I.D. +.008 -.000	SEAL O.D. (MAX)
00300	.293	.468	.300	.431					
00332	.325	.500	.332	.463					
00363	.356	.531	.363	.494					
00394	.387	.562	.394	.525					
00425	.418	.593	.425	.556					
00457	.450	.625	.457	.588					
00488	.481	.656	.488	.619					
00519	.512	.687	.519	.650					
00550	.543	.718	.550	.681					
00582	.575	.750	.582	.713					
00613	.606	.781	.613	.744					
00644	.637	.812	.644	.775					
00675	.668	.843	.675	.806					
00707	.700	.875	.707	.838					
00738	.731	.906	.738	.869					
00770	.763	.938	.770	.900					
00801	.794	.969	.801	.932					
00833	.826	1.000	.833	.963	00827	.820	1.000	.827	.958
00864	.857	1.032	.864	.995	00859	.852	1.032	.859	.990
00895	.888	1.063	.895	1.026	00890	.883	1.063	.890	1.021
00926	.919	1.094	.926	1.057	00921	.914	1.094	.921	1.052
00958	.951	1.125	.958	1.088	00952	.945	1.125	.952	1.083
00989	.982	1.156	.989	1.120	00983	.976	1.156	.983	1.115
01020	1.013	1.188	1.020	1.151	01015	1.008	1.188	1.015	1.146
01083	1.076	1.250	1.083	1.214	01077	1.070	1.250	1.077	1.209
01145	1.138	1.313	1.145	1.276	01140	1.133	1.313	1.140	1.271
01208	1.201	1.375	1.208	1.339	01202	1.195	1.375	1.202	1.334
01270	1.263	1.438	1.270	1.401	01265	1.258	1.438	1.265	1.396
01333	1.326	1.500	1.333	1.464	01327	1.320	1.500	1.327	1.459
01395	1.388	1.563	1.395	1.526	01390	1.383	1.563	1.390	1.521

Seal dimensions in inches, prior to plating or coating

THESE ARE THE RECOMMENDED SEAL SIZES, HOWEVER, IT DOES NOT GUARANTEE TOOLING AVAILABILITY

FREE HEIGHT .065					FREE HEIGHT .091					FREE HEIGHT .125				
SEAL DIA. CODE	CAVITY I.D. +.000 -.003	CAVITY O.D. (MIN)	SEAL I.D. +.006 -.000	SEAL O.D. (MAX)	SEAL DIA. CODE	CAVITY I.D. +.000 -.003	CAVITY O.D. (MIN)	SEAL I.D. +.006 -.000	SEAL O.D. (MAX)	SEAL DIA. CODE	CAVITY I.D. +.000 -.003	CAVITY O.D. (MIN)	SEAL I.D. +.006 -.000	SEAL O.D. (MAX)
01452	1.445	1.625	1.452	1.582										
01514	1.507	1.687	1.514	1.644										
01577	1.570	1.750	1.577	1.707										
01639	1.632	1.812	1.639	1.769										
01702	1.695	1.875	1.702	1.832										
01764	1.757	1.937	1.764	1.894										
01827	1.820	2.000	1.827	1.957	01747	1.740	2.000	1.747	1.963					
01889	1.882	2.062	1.889	2.019	01810	1.802	2.062	1.809	2.025					
01952	1.945	2.125	1.952	2.082	01872	1.865	2.125	1.872	2.088					
02014	2.007	2.187	2.014	2.144	01934	1.927	2.187	1.934	2.150					
02077	2.070	2.250	2.077	2.207	01997	1.990	2.250	1.997	2.213					
02139	2.132	2.312	2.139	2.269	02059	2.052	2.312	2.059	2.275					
02202	2.195	2.375	2.202	2.332	02122	2.115	2.375	2.122	2.338					
02265	2.257	2.437	2.264	2.394	02184	2.177	2.437	2.184	2.400					
02327	2.320	2.500	2.327	2.457	02247	2.240	2.500	2.247	2.463					
02389	2.382	2.562	2.389	2.519	02309	2.302	2.562	2.309	2.525					
02452	2.445	2.625	2.452	2.582	02372	2.365	2.625	2.372	2.588					
02514	2.507	2.687	2.514	2.644	02434	2.427	2.687	2.434	2.650					
02577	2.570	2.750	2.577	2.707	02497	2.490	2.750	2.497	2.713					
02639	2.632	2.812	2.639	2.769	02559	2.552	2.812	2.559	2.775					
02702	2.695	2.875	2.702	2.832	02622	2.615	2.875	2.622	2.838					
02764	2.757	2.937	2.764	2.894	02684	2.677	2.937	2.684	2.900					
02827	2.820	3.000	2.827	2.957	02747	2.740	3.000	2.747	2.963	02687	2.680	3.000	2.687	2.947
02889	2.882	3.062	2.889	3.019	02809	2.802	3.062	2.809	3.025	02749	2.742	3.062	2.749	3.009
02952	2.945	3.125	2.952	3.082	02873	2.865	3.125	2.872	3.088	02812	2.805	3.125	2.812	3.072
03014	3.007	3.187	3.014	3.144	02934	2.927	3.187	2.934	3.150	02874	2.867	3.187	2.874	3.134
03077	3.070	3.250	3.077	3.207	02997	2.990	3.250	2.997	3.213	02937	2.930	3.250	2.937	3.197
03139	3.132	3.312	3.139	3.269	03059	3.052	3.312	3.059	3.275	02999	2.992	3.312	2.999	3.259
03202	3.195	3.375	3.202	3.332	03122	3.115	3.375	3.122	3.338	03062	3.055	3.375	3.062	3.322
03264	3.257	3.437	3.264	3.394	03184	3.177	3.437	3.184	3.400	03124	3.117	3.437	3.124	3.384
03327	3.320	3.500	3.327	3.457	03247	3.240	3.500	3.247	3.463	03187	3.180	3.500	3.187	3.447
03389	3.382	3.562	3.389	3.519	03309	3.302	3.562	3.309	3.525	03249	3.242	3.562	3.249	3.509
03452	3.445	3.625	3.452	3.582	03172	3.165	3.625	3.172	3.588	03312	3.305	3.625	3.312	3.572
03514	3.507	3.687	3.514	3.644	03434	3.427	3.687	3.434	3.650	03374	3.367	3.687	3.374	3.634
03577	3.570	3.750	3.577	3.707	03497	3.490	3.750	3.497	3.713	03437	3.430	3.750	3.437	3.697
03639	3.632	3.812	3.639	3.769	03559	3.552	3.812	3.559	3.775	03499	3.492	3.812	3.499	3.759
03702	3.695	3.875	3.702	3.832	03622	3.615	3.875	3.622	3.838	03562	3.555	3.875	3.562	3.822
03764	3.757	3.937	3.764	3.894	03684	3.677	3.937	3.684	3.900	03624	3.617	3.937	3.624	3.884
03827	3.820	4.000	3.827	3.957	03747	3.740	4.000	3.747	3.963	03687	3.680	4.000	3.687	3.947
03952	3.945	4.125	3.952	4.082	03872	3.865	4.125	3.872	4.088	03812	3.805	4.125	3.812	4.072
04077	4.070	4.250	4.077	4.207	03997	3.990	4.250	3.997	4.213	03937	3.930	4.250	3.937	4.197
04202	4.195	4.375	4.202	4.332	04122	4.115	4.375	4.122	4.338	04062	4.055	4.375	4.062	4.322
04327	4.320	4.500	4.327	4.457	04247	4.240	4.500	4.247	4.463	04187	4.180	4.500	4.187	4.447
04452	4.445	4.625	4.452	4.582	04372	4.365	4.625	4.372	4.588	04312	4.305	4.625	4.312	4.572
04577	4.570	4.750	4.577	4.707	04497	4.490	4.750	4.497	4.713	04437	4.430	4.750	4.437	4.697
04702	4.695	4.875	4.702	4.832	04622	4.615	4.875	4.622	4.838	04562	4.555	4.875	4.562	4.822
04827	4.820	5.000	4.827	4.957	04747	4.740	5.000	4.747	4.963	04687	4.680	5.000	4.687	4.947
04952	4.945	5.125	4.952	5.082	04872	4.865	5.125	4.872	5.088	04812	4.805	5.125	4.812	5.072

Seal dimensions in inches, prior to plating or coating

THESE ARE THE RECOMMENDED SEAL SIZES, HOWEVER, IT DOES NOT GUARANTEE TOOLING AVAILABILITY

FREE HEIGHT .125					FREE HEIGHT .188					FREE HEIGHT .250				
SEAL DIA. CODE	CAVITY I.D. +.000 -.004	CAVITY O.D. (MIN)	SEAL I.D. +.008 -.000	SEAL O.D. (MAX)	SEAL DIA. CODE	CAVITY I.D. +.000 -.004	CAVITY O.D. (MIN)	SEAL I.D. +.008 -.000	SEAL O.D. (MAX)	SEAL DIA. CODE	CAVITY I.D. +.000 -.004	CAVITY O.D. (MIN)	SEAL I.D. +.008 -.000	SEAL O.D. (MAX)
04937	4.930	5.250	4.937	5.197	04287	4.280	4.780	4.287	4.707	04287	4.280	4.880	4.287	4.802
05062	5.055	5.375	5.062	5.322	04412	4.405	4.905	4.412	4.832	04412	4.405	5.005	4.412	4.927
05187	5.180	5.500	5.187	5.447	04537	4.530	5.030	4.537	4.957	04537	4.530	5.130	4.537	5.052
05312	5.305	5.625	5.312	5.572	04662	4.655	5.155	4.662	5.082	04662	4.655	5.255	4.662	5.177
05437	5.430	5.750	5.437	5.697	04787	4.780	5.280	4.787	5.207	04787	4.780	5.380	4.787	5.302
05562	5.555	5.875	5.562	5.822	04912	4.905	5.405	4.912	5.332	04912	4.905	5.505	4.912	5.427
05687	5.680	6.000	5.687	5.947	05037	5.030	5.530	5.037	5.457	05037	5.030	5.630	5.037	5.552
05812	5.805	6.125	5.812	6.072	05162	5.155	5.655	5.162	5.582	05162	5.155	5.755	5.162	5.677
05937	5.930	6.250	5.937	6.197	05287	5.280	5.780	5.287	5.707	05287	5.280	5.880	5.287	5.802
06062	6.055	6.375	6.062	6.322	05412	5.405	5.905	5.412	5.832	05412	5.405	6.005	5.412	5.927
06187	6.180	6.500	6.187	6.447	05537	5.530	6.030	5.537	5.957	05537	5.530	6.130	5.537	6.052
06312	6.305	6.625	6.312	6.572	05662	5.655	6.155	5.662	6.082	05672	5.655	6.255	5.672	6.177
06437	6.430	6.750	6.437	6.697	05787	5.780	6.280	5.787	6.207	05787	5.780	6.380	5.787	6.302
06562	6.555	6.875	6.562	6.822	05912	5.905	6.405	5.912	6.332	05912	5.905	6.505	5.912	6.427
06687	6.680	7.000	6.687	6.947	06037	6.030	6.530	6.037	6.457	06037	6.030	6.630	6.037	6.552
	+.000 -.006	**(MIN)**	**+.012 -.000**	**(MAX)**		**+.000 -.006**	**(MIN)**	**+.012 -.000**	**(MAX)**		**+.000 -.006**	**(MIN)**	**+.012 -.000**	**(MAX)**
06812	6.805	7.125	6.812	7.072	06162	6.155	6.655	6.162	6.582	06162	6.155	6.755	6.162	6.677
06937	6.930	7.250	6.937	7.197	06287	6.280	6.780	6.287	6.707	06287	6.280	6.880	6.287	6.802
07062	7.055	7.375	7.062	7.322	06412	6.405	6.905	6.412	6.832	06412	6.405	7.005	6.412	6.927
07187	7.180	7.500	7.187	7.447	06537	6.530	7.030	6.537	6.957	06537	6.530	7.130	6.537	7.052
07312	7.305	7.625	7.312	7.572	06662	6.655	7.155	6.662	7.082	06662	6.655	7.255	6.662	7.177
07437	7.430	7.750	7.437	7.697	06787	6.780	7.280	6.787	7.207	06787	6.780	7.380	6.787	7.302
07562	7.555	7.875	7.562	7.822	06912	6.905	7.405	6.912	7.332	06912	6.905	7.505	6.912	7.427
07687	7.680	8.000	7.687	7.947	07037	7.030	7.530	7.037	7.457	07037	7.030	7.630	7.037	7.552
07812	7.805	8.125	7.812	8.072	07162	7.155	7.655	7.162	7.582	07162	7.155	7.755	7.162	7.677
07937	7.930	8.250	7.937	8.197	07287	7.280	7.780	7.287	7.707	07287	7.280	7.880	7.287	7.802
08187	8.180	8.500	8.187	8.447	07537	7.530	8.030	7.537	7.957	07537	7.530	8.130	7.537	8.052
08437	8.430	8.750	8.437	8.697	07787	7.780	8.280	7.787	8.207	07787	7.780	8.380	7.787	8.302
08687	8.680	9.000	8.687	8.947	08037	8.030	8.530	8.037	8.457	08037	8.030	8.630	8.037	8.552
08937	8.930	9.250	8.937	9.197	08287	8.280	8.780	8.287	8.707	08287	8.280	8.880	8.287	8.802
09187	9.180	9.500	9.187	9.447	08537	8.530	9.030	8.537	8.957	08537	8.530	9.130	8.537	9.052
09437	9.430	9.750	9.437	9.697	08787	8.780	9.280	8.787	9.207	08787	8.780	9.380	8.787	9.302
	+.000 -.007	**(MIN)**	**+.015 -.000**	**(MAX)**		**+.000 -.007**	**(MIN)**	**+.015 -.000**	**(MAX)**		**+.000 -.007**	**(MIN)**	**+.015 -.000**	**(MAX)**
09687	9.680	10.000	9.687	9.947	09037	9.030	9.530	9.037	9.457	09037	9.030	9.630	9.037	9.552
09937	9.930	10.250	9.937	10.197	09287	9.280	9.780	9.287	9.707	09287	9.280	9.880	9.287	9.802
10187	10.180	10.500	10.187	10.447	09537	9.530	10.030	9.537	9.957	09537	9.530	10.130	9.537	10.052
10437	10.430	10.750	10.437	10.697	09787	9.780	10.280	9.787	10.207	09787	9.780	10.380	9.787	10.302
10687	10.680	11.000	10.687	10.947	10037	10.030	10.530	10.037	10.457	10037	10.030	10.630	10.037	10.552
10937	10.930	11.250	10.937	11.197	10287	10.280	10.780	10.287	10.707	10287	10.280	10.880	10.287	10.802
11187	11.180	11.500	11.187	11.447	10537	10.530	11.030	10.537	10.957	10537	10.530	11.130	10.537	11.052
11437	11.430	11.750	11.437	11.697	10787	10.780	11.280	10.787	11.207	10787	10.780	11.380	10.787	11.302
11687	11.680	12.000	11.687	11.947	11037	11.030	11.530	11.037	11.457	11037	11.030	11.630	11.037	11.552
11937	11.930	12.250	11.937	12.197	11287	11.280	11.780	11.287	11.707	11287	11.280	11.880	11.287	11.802
12187	12.180	12.500	12.187	12.447	11537	11.530	12.030	11.537	11.957	11537	11.530	12.130	11.537	12.052
12437	12.430	12.750	12.437	12.697	11787	11.780	12.280	11.787	12.207	11787	11.780	12.380	11.787	12.302
12687	12.680	13.000	12.687	12.947	12037	12.030	12.530	12.037	12.457	12037	12.030	12.630	12.037	12.552

Seal dimensions in inches, prior to plating or coating

THESE ARE THE RECOMMENDED SEAL SIZES, HOWEVER, IT DOES NOT GUARANTEE TOOLING AVAILABILITY

FREE HEIGHT .125					FREE HEIGHT .188					FREE HEIGHT .250				
SEAL DIA. CODE	CAVITY I.D. +.000 -.008	CAVITY O.D. (MIN)	SEAL I.D. +.020 -.000	SEAL O.D. (MAX)	SEAL DIA. CODE	CAVITY I.D. +.000 -.008	CAVITY O.D. (MIN)	SEAL I.D. +.020 -.000	SEAL O.D. (MAX)	SEAL DIA. CODE	CAVITY I.D. +.000 -.008	CAVITY O.D. (MIN)	SEAL I.D. +.020 -.000	SEAL O.D. (MAX)
13187	13.180	13.500	13.187	13.447	12557	12.550	13.060	12.557	12.982	12557	12.550	13.160	12.557	13.067
13437	13.430	13.750	13.437	13.697	12807	12.800	13.310	12.807	13.232	12807	12.800	13.410	12.807	13.317
13687	13.680	14.000	13.687	13.947	13057	13.050	13.560	13.057	13.482	13057	13.050	13.660	13.057	13.567
13937	13.930	14.250	13.937	14.197	13307	13.300	13.810	13.307	13.732	13307	13.300	13.910	13.307	13.817
14187	14.180	14.500	14.187	14.447	13557	13.550	14.060	13.557	13.982	13557	13.550	14.160	13.557	14.067
14437	14.430	14.750	14.437	14.697	13807	13.800	14.310	13.807	14.232	13807	13.800	14.410	13.807	14.317
14687	14.680	15.000	14.687	14.947	14057	14.050	14.560	14.057	14.482	14057	14.050	14.660	14.057	14.567
14937	14.930	15.250	14.937	15.197	14307	14.300	14.810	14.307	14.732	14307	14.300	14.910	14.307	14.817
15187	15.180	15.500	15.187	15.447	14557	14.550	15.060	14.557	14.982	14557	14.550	15.160	14.557	15.067
15437	15.430	15.750	15.437	15.697	14807	14.800	15.310	14.807	15.232	14807	14.800	15.410	14.807	15.317
15687	15.680	16.000	15.687	15.947	15057	15.050	15.560	15.057	15.482	15057	15.050	15.660	15.057	15.567
15937	15.930	16.250	15.937	16.197	15307	15.300	15.810	15.307	15.732	15307	15.300	15.910	15.307	15.817
16187	16.180	16.500	16.187	16.447	15557	15.550	16.060	15.557	15.982	15557	15.550	16.160	15.557	16.067
16437	16.430	16.750	16.437	16.697	15807	15.800	16.310	15.807	16.232	15807	15.800	16.410	15.807	16.317
16687	16.680	17.000	16.687	16.947	16057	16.050	16.560	16.057	16.482	16057	16.050	16.660	16.057	16.567
16937	16.930	17.250	16.937	17.197	16307	16.300	16.810	16.307	16.732	16307	16.300	16.910	16.307	16.817
17187	17.180	17.500	17.187	17.447	16557	16.550	17.060	16.557	16.982	16557	16.550	17.160	16.557	17.067
17437	17.430	17.750	17.437	17.697	16807	16.800	17.310	16.807	17.232	16807	16.800	17.410	16.807	17.317
17687	17.680	18.000	17.687	17.947	17057	17.050	17.560	17.057	17.482	17057	17.050	17.660	17.057	17.567
17937	17.930	18.250	17.937	18.197	17307	17.300	17.810	17.307	17.732	17307	17.300	17.910	17.307	17.817
18187	18.180	18.500	18.187	18.447	17557	17.550	18.060	17.557	17.982	17557	17.550	18.160	17.557	18.067
18437	18.430	18.750	18.437	18.697	17807	17.800	18.310	17.807	18.232	17807	17.800	18.410	17.807	18.317
18687	18.680	19.000	18.687	18.947	18057	18.050	18.560	18.057	18.482	18057	18.050	18.660	18.057	18.567
18937	18.930	19.250	18.937	19.197	18307	18.300	18.810	18.307	18.732	18307	18.300	18.910	18.307	18.817
19187	19.180	19.500	19.187	19.447	18557	18.550	19.060	18.557	18.982	18557	18.550	19.160	18.557	19.067
19437	19.430	19.750	19.437	19.697	18807	18.800	19.310	18.807	19.232	18807	18.800	19.410	18.807	19.317
19687	19.680	20.000	19.687	19.947	19057	19.050	19.560	19.057	19.482	19057	19.050	19.660	19.057	19.567
19937	19.930	20.250	19.937	20.197	19307	19.300	19.820	19.307	19.732	19307	19.300	19.920	19.307	19.817
20187	20.180	20.500	20.187	20.447	19557	19.550	20.070	19.557	19.982	19557	19.550	20.170	19.557	20.067
20437	20.430	20.750	20.437	20.697	19807	19.800	20.320	19.807	20.232	19807	19.800	20.420	19.807	20.317
	+.000 -.010	**(MIN)**	**+.030 -.000**	**(MAX)**		**+.000 -.010**	**(MIN)**	**+.030 -.000**	**(MAX)**		**+.000 -.010**	**(MIN)**	**+.030 -.000**	**(MAX)**
20687	20.680	21.000	20.687	20.947	20057	20.050	20.570	20.057	20.482	20057	20.050	20.670	20.057	20.567
20937	20.930	21.250	20.937	21.197	20307	20.300	20.820	20.307	20.732	20307	20.300	20.920	20.307	20.817
21187	21.180	21.500	21.187	21.447	20557	20.550	21.070	20.557	20.982	20557	20.550	21.170	20.557	21.067
21437	21.430	21.750	21.437	21.697	20807	20.800	21.320	20.807	21.232	20807	20.800	21.420	20.807	21.317
21687	21.680	22.000	21.687	21.947	21057	21.050	21.570	21.057	21.482	21057	21.050	21.670	21.057	21.567
21937	21.930	22.250	21.937	22.197	21307	21.300	21.820	21.307	21.732	21307	21.300	21.920	21.307	21.817
22187	22.180	22.500	22.187	22.447	21557	21.550	22.070	21.557	21.982	21557	21.550	22.170	21.557	22.067
22437	22.430	22.750	22.437	22.697	21807	21.800	22.320	21.807	22.232	21807	21.800	22.420	21.807	22.317
22687	22.680	23.000	22.687	22.947	22057	22.050	22.570	22.057	22.482	22057	22.050	22.670	22.057	22.567
22937	22.930	23.250	22.937	23.197	22307	22.300	22.820	22.307	22.732	22307	22.300	22.920	22.307	22.817
23187	23.180	23.500	23.187	23.447	22557	22.550	23.070	22.557	22.982	22557	22.550	23.170	22.557	23.067

Seal dimensions in inches, prior to plating. Dimensions for .125 & .188 sizes beyond the charted range may be obtained by extrapolation; I.D. tolerances and I.D. dimensional increments increasing by .010 every 10 inches.

THESE ARE THE RECOMMENDED SEAL SIZES, HOWEVER, IT DOES NOT GUARANTEE TOOLING AVAILABILITY

FREE HEIGHT .250					FREE HEIGHT .375					FREE HEIGHT .500				
SEAL DIA. CODE	CAVITY I.D. +.000 -.010	CAVITY O.D. (MIN)	SEAL I.D. +.030 -.000	SEAL O.D. (MAX)	SEAL DIA. CODE	CAVITY I.D. +.000 -.010	CAVITY O.D. (MIN)	SEAL I.D. +.030 -.000	SEAL O.D. (MAX)	SEAL DIA. CODE	CAVITY I.D. +.000 -.010	CAVITY O.D. (MIN)	SEAL I.D. +.030 -.000	SEAL O.D. (MAX)
23057	23.050	23.670	23.057	23.587	23057	23.050	23.950	23.057	23.847	23057	23.050	24.250	23.057	24.127
23557	23.550	24.170	23.557	24.087	23557	23.550	24.450	23.557	24.347	23557	23.550	24.750	23.557	24.627
24057	24.050	24.670	24.057	24.587	24057	24.050	24.950	24.057	24.847	24057	24.050	25.250	24.057	25.127
24557	24.550	25.170	24.557	25.087	24557	24.550	25.450	24.557	25.347	24557	24.550	25.750	24.557	25.627
25057	25.050	25.670	25.057	25.587	25057	25.050	25.950	25.057	25.847	25057	25.050	26.250	25.057	26.127
25557	25.550	26.170	25.557	26.087	25557	25.550	26.450	25.557	26.347	25557	25.550	26.750	25.557	26.627
26057	26.050	26.670	26.057	26.587	26057	26.050	26.950	26.057	26.847	26057	26.050	27.250	26.057	27.127
26557	26.550	27.170	26.557	27.087	26557	26.550	27.450	26.557	27.347	26557	26.550	27.750	26.557	27.627
27057	27.050	27.670	27.057	27.587	27057	27.050	27.950	27.057	27.847	27057	27.050	28.250	27.057	28.127
27557	27.550	28.170	27.557	28.087	27557	27.550	28.450	27.557	28.347	27557	27.550	28.750	27.557	28.627
28057	28.050	28.670	28.057	28.587	28057	28.050	28.950	28.057	28.847	28057	28.050	29.250	28.057	29.127
28557	28.550	29.170	28.557	29.087	28557	28.550	29.450	28.557	29.347	28557	28.550	29.750	28.557	29.627
29057	29.050	29.670	29.057	29.587	29057	29.050	29.950	29.057	29.847	29057	29.050	30.250	29.057	30.127
29557	29.550	30.170	29.557	30.087	29557	29.550	30.450	29.557	30.347	29557	29.550	30.750	29.557	30.627
30057	30.050	30.670	30.057	30.587	30057	30.050	30.950	30.057	30.847	30057	30.050	31.250	30.057	31.127
	+.000 -.015	**(MIN)**	**+.040 -.000**	**(MAX)**		**+.000 -.015**	**(MIN)**	**+.040 -.000**	**(MAX)**		**+.000 -.015**	**(MIN)**	**+.040 -.000**	**(MAX)**
30557	30.550	31.180	30.557	31.087	30557	30.550	31.460	30.557	31.347	30557	30.550	31.760	30.557	31.627
31057	31.050	31.680	31.057	31.587	31057	31.050	31.960	31.057	31.847	31057	31.050	32.260	31.057	32.127
31557	31.550	32.180	31.557	32.087	31557	31.550	32.460	31.557	32.347	31557	31.550	32.760	31.557	32.627
32057	32.050	32.680	32.057	32.587	32057	32.050	32.960	32.057	32.847	32057	32.050	33.260	32.057	33.127
32557	32.550	33.180	32.557	33.087	32557	32.550	33.460	32.557	33.347	32557	32.550	33.760	32.557	33.627
33057	33.050	33.680	33.057	33.587	33057	33.050	33.960	33.057	33.847	33057	33.050	34.260	33.057	34.127
33557	33.550	34.180	33.557	34.087	33557	33.550	34.460	33.557	34.347	33557	33.550	34.760	33.557	34.627
34057	34.050	34.680	34.057	34.587	34057	34.050	34.960	34.057	34.847	34057	34.050	35.260	34.057	35.127
34557	34.550	35.180	34.557	35.087	34557	34.550	35.460	34.557	35.347	34557	34.550	35.760	34.557	35.627
35057	35.050	35.680	35.057	35.587	35057	35.050	35.960	35.057	35.847	35057	35.050	36.260	35.057	36.127
35557	35.550	36.180	35.557	36.087	35557	35.550	36.460	35.557	36.347	35557	35.550	36.760	35.557	36.627
36057	36.050	36.680	36.057	36.587	36057	36.050	36.960	36.057	36.847	36057	36.050	37.260	36.057	37.127
36557	36.550	37.180	36.557	37.087	36557	36.550	37.460	36.557	37.347	36557	36.550	37.760	36.557	37.627
37057	37.050	37.680	37.057	37.587	37057	37.050	37.960	37.057	37.847	37057	37.050	38.260	37.057	38.127
37557	37.550	38.180	37.557	38.087	37557	37.550	38.460	37.557	38.347	37557	37.550	38.760	37.557	38.627
38057	38.050	38.680	38.057	38.587	38057	38.050	38.960	38.057	38.847	38057	38.050	39.260	38.057	39.127
38557	38.550	39.180	38.557	39.087	38557	38.550	39.460	38.557	39.347	38557	38.550	39.760	38.557	39.627
39057	39.050	39.680	39.057	39.587	39057	39.050	39.960	39.057	39.847	39057	39.050	40.260	39.057	40.127
39557	39.550	40.180	39.557	40.087	39557	39.550	40.460	39.557	40.347	39557	39.550	40.760	39.557	40.627
40057	40.050	40.680	40.057	40.587	40057	40.050	40.960	40.057	40.847	40057	40.050	41.260	40.057	41.127
	+.000 -.020	**(MIN)**	**+.050 -.000**	**(MAX)**		**+.000 -.020**	**(MIN)**	**+.050 -.000**	**(MAX)**		**+.000 -.020**	**(MIN)**	**+.050 -.000**	**(MAX)**
40557	40.550	41.190	40.557	41.087	40557	40.550	41.470	40.557	41.347	40557	40.550	41.770	40.557	41.627
41057	41.050	41.690	41.057	41.587	41057	41.050	41.970	41.057	41.847	41057	41.050	42.270	41.057	42.127
41557	41.550	42.190	41.557	42.087	41557	41.550	42.470	41.557	42.347	41557	41.550	42.770	41.557	42.627
42057	42.050	42.690	42.057	42.587	42057	42.050	42.970	42.057	42.847	42057	42.050	43.270	42.057	43.127
42557	42.550	43.190	42.557	43.087	42557	42.550	43.470	42.557	43.347	42557	42.550	43.770	42.557	43.627
43057	43.050	43.690	43.057	43.587	43057	43.050	43.970	43.057	43.847	43057	43.050	44.270	43.057	44.127
43557	43.550	44.190	43.557	44.087	43557	43.550	44.470	43.557	44.347	43557	43.550	44.770	43.557	44.627
44057	44.050	44.690	44.057	44.587	44057	44.050	44.970	44.057	44.847	44057	44.050	45.270	44.057	45.127
44557	44.550	45.190	44.557	45.087	44557	44.550	45.470	44.557	45.347	44557	44.550	45.770	44.557	45.627
45057	45.050	45.690	45.057	45.587	45057	45.050	45.970	45.057	45.847	45057	45.050	46.270	45.057	46.127

Seal dimensions in inches, prior to plating. Dimensions for Seals beyond the charted range may be obtained by extrapolation; I.D. tolerances and I.D. dimensional increments increasing by .010 every 10 inches.