High-Performance Seals

O-Ring Size Chart

An O-ring is a solid-rubber seal shaped like a doughnut or torus. When compressed between mating surfaces, an O-ring blocks the passage of liquids or gases. O-rings are available in a wide range of standard and non-standard sizes that are suitable for nearly all sealing applications.

Two dimensions describe the size of an O-ring: its inside diameter (ID) and its cross-sectional diameter (CS) (see Figure 1).

Understanding O-ring Sizes and Tolerances

Standard Sizes

The standard sizes used and the other major O-ring manufacturers in the United States are defined by Aerospace Standard AS568B, *Aerospace Size Standard for O-rings*. That document, published by the Society of Automotive Engineers (SAE), lists the sizes of O-rings in six series or groups in both inches and millimeters. The first five series are based on cross-sectional diameter. The sixth series includes 20 sizes for boss seals. The standard sizes are also used for most military specifications.

Cross-sectional diameters range from 0.040 to 0.275 inch. Inside diameters range from 0.029 to 25.940 inches. SCS,Inc.also has hundreds of molds or non-standard sizes.offers O-rings in all 369 standard sizes, shown on the enclosed chart.

Metric Sizes

Standard metric sizes for O-rings are defined by International Standard ISO 3601-1:2002: *Fluid power systems—O-rings—Part 1: Inside diameters, cross-sections, tolerances and size identification code*. That standard groups metric sizes into two series, G and A.

The G series is used for general purpose applications and includes a wide range of inside diameters. The A series is used for aerospace applications where tighter tolerances are recommended. The G series has 445 sizes and the the A series has 383 sizes.

The International Organization for Standardization issued ISO 3601-1 in 1978 and revised it in 1988 and 2002. Another major revision is being developed to bring ISO sizes in line with the sizes in Aerospace Standard AS568B. Currently, ISO sizes do not use a dash numbering system like the Aerospace Standard. ISO cross-sectional diameters differ from the Aerospace Standard by less than 0.001 inch. Therefore, many AS568B sizes are interchange-able with an ISO size. Be sure to consult ISO 3601-1 for specific dimensions, as inside diameters may differ.

If SCS, Inc. does not have a mold for a non-standard size or a particular ISO size, we can make one foryou.

Dimensional Tolerances

The tolerances of AS568B, introduced in 2001, are a combination of the former Class I and Class II tolerances of AS568. Below is a brief history of that standard.

In 1958, the SAE issued Aerospace Recommended Practice ARP568, *Uniform Dash Numbering System for O-rings*. In 1971, the SAE replaced ARP568 with Aerospace Standard AS568. AS568 called for two classes of tolerances for inside diameters. Class II was for O-rings made of higher-shrinkage elastomers, such as fluorocarbon and fluorosilicone. Class I was for O-rings made of other elastomers. Class II permitted wider tolerances than Class I.

O-ring sealing is based on the volume relationship between the O-ring and the gland. Slightly wider dimensional tolerances, especially for larger diameter O-rings, make no significant difference in the O-ring volume. Therefore, seals made to Class II tolerances have proved as effective as seals made to Class I tolerances.

For that reason, Aerospace Standard AS568A used a single set of tolerances for inside diameters. For O-rings with IDs less than 0.5 inch, AS568A used the former Class I tolerances. For larger O-rings, AS568A used the Class II tolerances. In 2001, AS568B was issued to modernize the scope and notes of the standard without affecting the dimensions, tolerances, or dash numbers.

The tolerances from AS568B are being incorporated into all U.S. military specifications and drawings as they are revised. In the future, we expect most AN, MS, and NAS tolerances to match AS568B. Also, many companies have revised their own standards to match AS568B.

Choosing the Correct Cross-Sectional Diameter

You may choose O-rings from several standard cross-sectional diameters for your application.

For all applications, O-rings with a larger cross-sectional diameter tend to have better resistance to compression set. They also have less volume swell in fluids and are less likely to leak if their surface is scratched. O-rings with smaller cross-sectional diameters have better physical properties, are more resistant to explosive decompression, and require less space.

For many dynamic applications, there is some choice of cross-sectional diameters. Larger cross-sectional diameters are more resistant to rolling in a groove but have more friction. For reciprocating applications, O-rings with small cross-sectional diameters have less friction but tend to slide and roll in a groove. This can lead to leaks caused by spiral failure of the O-ring.

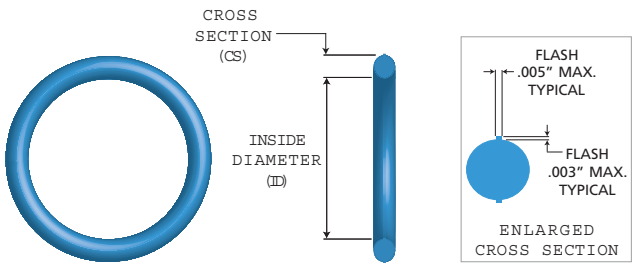
O-rings with smaller cross-sectional diameters have better physical properties, are more resistant to explosive decompression, and require less space.

In general, tighter tolerance components or rigid components with smooth or ground surface finishes can use O-rings with the smallest cross-sectional diameter regardless of the pressure. Parts with looser tolerances or less rigid components, such as large plastic housings, should use O-rings with larger cross-sectional diameters. Those plastic housings could flex under high pressure or expand when heated, reducing the actual squeeze on the seal.

AS568	Inches				mm			
Size	ID	±	CS	±	ID	±	CS	±
-001	0.029	0.004	0.040	0.003	0.74	0.10	1.02	0.08
-002	0.042	0.004	0.050	0.003	1.07	0.10	1.27	0.08
-003	0.056	0.004	0.060	0.003	1.42	0.10	1.52	0.08
-004	0.070	0.005	0.070	0.003	1.78	0.13	1.78	0.08
-005	0.101	0.005	0.070	0.003	2.57	0.13	1.78	0.08
-006	0.114	0.005	0.070	0.003	2.90	0.13	1.78	0.08
-007	0.145	0.005	0.070	0.003	3.68	0.13	1.78	0.08
-008	0.176	0.005	0.070	0.003	4.47	0.13	1.78	0.08
-009	0.208	0.005	0.070	0.003	5.28	0.13	1.78	0.08
-010	0.239	0.005	0.070	0.003	6.07	0.13	1.78	0.08
-011	0.301	0.005	0.070	0.003	7.65	0.13	1.78	0.08
-012	0.364	0.005	0.070	0.003	9.25	0.13	1.78	0.08
-013	0.426	0.005	0.070	0.003	10.82	0.13	1.78	0.08
-014	0.489	0.005	0.070	0.003	12.42	0.13	1.78	0.08
-015	0.551	0.007	0.070	0.003	14.00	0.18	1.78	0.08
-016	0.614	0.009	0.070	0.003	15.60	0.23	1.78	0.08
-017	0.676	0.009	0.070	0.003	17.17	0.23	1.78	0.08
-018	0.739	0.009	0.070	0.003	18.77	0.23	1.78	0.08
-019	0.801	0.009	0.070	0.003	20.35	0.23	1.78	0.08
-020	0.864	0.009	0.070	0.003	21.95	0.23	1.78	0.08
-021	0.926	0.009	0.070	0.003	23.52	0.23	1.78	0.08
-022	0.989	0.010	0.070	0.003	25.12	0.25	1.78	0.08
-023	1.051	0.010	0.070	0.003	26.70	0.25	1.78	0.08
-024	1.114	0.010	0.070	0.003	28.30	0.25	1.78	0.08
-025	1.176	0.011	0.070	0.003	29.87	0.28	1.78	0.08
-026	1.239	0.011	0.070	0.003	31.47	0.28	1.78	0.08
-027	1.301	0.011	0.070	0.003	33.05	0.28	1.78	0.08
-028	1.364	0.013	0.070	0.003	34.65	0.33	1.78	0.08
-029	1.489	0.013	0.070	0.003	37.82	0.33	1.78	0.08
-030	1.614	0.013	0.070	0.003	41.00	0.33	1.78	0.08
-031	1.739	0.015	0.070	0.003	44.17	0.38	1.78	0.08
-032	1.864	0.015	0.070	0.003	47.35	0.38	1.78	0.08
-033	1.989	0.018	0.070	0.003	50.52	0.46	1.78	0.08
-034	2.114	0.018	0.070	0.003	53.70	0.46	1.78	0.08
-035	2.239	0.018	0.070	0.003	56.87	0.46	1.78	0.08
-036	2.364	0.018	0.070	0.003	60.05	0.46	1.78	0.08
-037	2.489	0.018	0.070	0.003	63.22	0.46	1.78	0.08
-038	2.614	0.020	0.070	0.003	66.40	0.51	1.78	0.08
-039	2.739	0.020	0.070	0.003	69.57	0.51	1.78	0.08
-040	2.864	0.020	0.070	0.003	72.75	0.51	1.78	0.08
-041	2.989	0.024	0.070	0.003	75.92	0.61	1.78	0.08
-042	3.239	0.024	0.070	0.003	82.27	0.61	1.78	0.08
-043	3.489	0.024	0.070	0.003	88.62	0.61	1.78	0.08
-044	3.739	0.027	0.070	0.003	94.97	0.69	1.78	0.08
-045	3.989	0.027	0.070	0.003	101.32	0.69	1.78	0.08
-046	4.239	0.030	0.070	0.003	107.67	0.76	1.78	0.08
-047	4.489	0.030	0.070	0.003	114.02	0.76	1.78	0.08
-048	4.739	0.030	0.070	0.003	120.37	0.76	1.78	0.08
-049	4.989	0.037	0.070	0.003	126.72	0.94	1.78	0.08
-050	5.239	0.037	0.070	0.003	133.07	0.94	1.78	0.08

Fig. 1

O-Ring Details



AS568	Inches				mm			
Size	ID	±	CS	±	ID	±	CS	±
-102	0.049	0.005	0.103	0.003	1.24	0.13	2.62	0.08
-103	0.081	0.005	0.103	0.003	2.06	0.13	2.62	0.08
-104	0.112	0.005	0.103	0.003	2.84	0.13	2.62	0.08
-105	0.143	0.005	0.103	0.003	3.63	0.13	2.62	0.08
-106	0.174	0.005	0.103	0.003	4.42	0.13	2.62	0.08
-107	0.206	0.005	0.103	0.003	5.23	0.13	2.62	0.08
-108	0.237	0.005	0.103	0.003	6.02	0.13	2.62	0.08
-109	0.299	0.005	0.103	0.003	7.59	0.13	2.62	0.08
-110	0.362	0.005	0.103	0.003	9.19	0.13	2.62	0.08
-111	0.424	0.005	0.103	0.003	10.77	0.13	2.62	0.08
-112	0.487	0.005	0.103	0.003	12.37	0.13	2.62	0.08
-113	0.549	0.007	0.103	0.003	13.94	0.18	2.62	0.08
-114	0.612	0.009	0.103	0.003	15.54	0.23	2.62	0.08
-115	0.674	0.009	0.103	0.003	17.12	0.23	2.62	0.08
-116	0.737	0.009	0.103	0.003	18.72	0.23	2.62	0.08
-117	0.799	0.010	0.103	0.003	20.29	0.25	2.62	0.08
-118	0.862	0.010	0.103	0.003	21.89	0.25	2.62	0.08
-119	0.924	0.010	0.103	0.003	23.47	0.25	2.62	0.08
-120	0.987	0.010	0.103	0.003	25.07	0.25	2.62	0.08
-121	1.049	0.010	0.103	0.003	26.64	0.25	2.62	0.08
-122	1.112	0.010	0.103	0.003	28.24	0.25	2.62	0.08
-123	1.174	0.012	0.103	0.003	29.82	0.30	2.62	0.08
-124	1.237	0.012	0.103	0.003	31.42	0.30	2.62	0.08
-125	1.299	0.012	0.103	0.003	32.99	0.30	2.62	0.08
-126	1.362	0.012	0.103	0.003	34.59	0.30	2.62	0.08
-127	1.424	0.012	0.103	0.003	36.17	0.30	2.62	0.08
-128	1.487	0.012	0.103	0.003	37.77	0.30	2.62	0.08
-129	1.549	0.015	0.103	0.003	39.34	0.38	2.62	0.08
-130	1.612	0.015	0.103	0.003	40.94	0.38	2.62	0.08
-131	1.674	0.015	0.103	0.003	42.52	0.38	2.62	0.08
-132	1.737	0.015	0.103	0.003	44.12	0.38	2.62	0.08
-133	1.799	0.015	0.103	0.003	45.69	0.38	2.62	0.08
-134	1.862	0.015	0.103	0.003	47.29	0.38	2.62	0.08
-135	1.925	0.017	0.103	0.003	48.90	0.43	2.62	0.08
-136	1.987	0.017	0.103	0.003	50.47	0.43	2.62	0.08
-137	2.050	0.017	0.103	0.003	52.07	0.43	2.62	0.08
-138	2.112	0.017	0.103	0.003	53.64	0.43	2.62	0.08
-139	2.175	0.017	0.103	0.003	55.25	0.43	2.62	0.08
-140	2.237	0.017	0.103	0.003	56.82	0.43	2.62	0.08
-141	2.300	0.020	0.103	0.003	58.42	0.51	2.62	0.08
-142	2.362	0.020	0.103	0.003	59.99	0.51	2.62	0.08
-143	2.425	0.020	0.103	0.003	61.60	0.51	2.62	0.08
-144	2.487	0.020	0.103	0.003	63.17	0.51	2.62	0.08
-145	2.550	0.020	0.103	0.003	64.77	0.51	2.62	0.08
-146	2.612	0.020	0.103	0.003	66.34	0.51	2.62	0.08
-147	2.675	0.022	0.103	0.003	67.95	0.56	2.62	0.08
-148	2.737	0.022	0.103	0.003	69.52	0.56	2.62	0.08
-149	2.800	0.022	0.103	0.003	71.12	0.56	2.62	0.08
-150	2.862	0.022	0.103	0.003	72.69	0.56	2.62	0.08
-151	2.987	0.024	0.103	0.003	75.87	0.61	2.62	0.08
-152	3.237	0.024	0.103	0.003	82.22	0.61	2.62	0.08
-153	3.487	0.024	0.103	0.003	88.57	0.61	2.62	0.08
-154	3.737	0.028	0.103	0.003	94.92	0.71	2.62	0.08
-155	3.987	0.028	0.103	0.003	101.27	0.71	2.62	0.08
-156	4.237	0.030	0.103	0.003	107.62	0.76	2.62	0.08
-157	4.487	0.030	0.103	0.003	113.97	0.76	2.62	0.08
-158	4.737	0.030	0.103	0.003	120.32	0.76	2.62	0.08
-159	4.987	0.035	0.103	0.003	126.67	0.89	2.62	0.08
-160	5.237	0.035	0.103	0.003	133.02	0.89	2.62	0.08
-161	5.487	0.035	0.103	0.003	139.37	0.89	2.62	0.08
-162	5.737	0.035	0.103	0.003	145.72	0.89	2.62	0.08
-163	5.987	0.035	0.103	0.003	152.07	0.89	2.62	0.08
-164	6.237	0.040	0.103	0.003	158.42	1.02	2.62	0.08
-165	6.487	0.040	0.103	0.003	164.77	1.02	2.62	0.08

O-Ring Size Chart

AS568	Inches				mm			
Size	ID	±	CS	±	ID	±	CS	±
-166	6.737	0.040	0.103	0.003	171.12	1.02	2.62	0.08
-167	6.987	0.040	0.103	0.003	177.47	1.02	2.62	0.08
-168	7.237	0.045	0.103	0.003	183.82	1.14	2.62	0.08
-169	7.487	0.045	0.103	0.003	190.17	1.14	2.62	0.08
-170	7.737	0.045	0.103	0.003	196.52	1.14	2.62	0.08
-171	7.987	0.045	0.103	0.003	202.87	1.14	2.62	0.08
-172	8.237	0.050	0.103	0.003	209.22	1.27	2.62	0.08
-173	8.487	0.050	0.103	0.003	215.57	1.27	2.62	0.08
-174	8.737	0.050	0.103	0.003	221.92	1.27	2.62	0.08
-175	8.987	0.050	0.103	0.003	228.27	1.27	2.62	0.08
-176	9.237	0.055	0.103	0.003	234.62	1.40	2.62	0.08
-177	9.487	0.055	0.103	0.003	240.97	1.40	2.62	0.08
-178	9.737	0.055	0.103	0.003	247.32	1.40	2.62	0.08
-201	0.171	0.005	0.139	0.004	4.34	0.13	3.53	0.10
-202	0.234	0.005	0.139	0.004	5.94	0.13	3.53	0.10
-203	0.296	0.005	0.139	0.004	7.52	0.13	3.53	0.10
-204	0.359	0.005	0.139	0.004	9.12	0.13	3.53	0.10
-205	0.421	0.005	0.139	0.004	10.69	0.13	3.53	0.10
-206	0.484	0.005	0.139	0.004	12.29	0.13	3.53	0.10
-207	0.546	0.007	0.139	0.004	13.87	0.18	3.53	0.10
-208	0.609	0.009	0.139	0.004	15.47	0.23	3.53	0.10
-209	0.671	0.009	0.139	0.004	17.04	0.23	3.53	0.10
-210	0.734	0.010	0.139	0.004	18.64	0.25	3.53	0.10
-211	0.796	0.010	0.139	0.004	20.22	0.25	3.53	0.10
-212	0.859	0.010	0.139	0.004	21.82	0.25	3.53	0.10
-213	0.921	0.010	0.139	0.004	23.39	0.25	3.53	0.10
-214	0.984	0.010	0.139	0.004	24.99	0.25	3.53	0.10
-215	1.046	0.010	0.139	0.004	26.57	0.25	3.53	0.10
-216	1.109	0.012	0.139	0.004	28.17	0.30	3.53	0.10
-217	1.171	0.012	0.139	0.004	29.74	0.30	3.53	0.10
-218	1.234	0.012	0.139	0.004	31.34	0.30	3.53	0.10
-219	1.296	0.012	0.139	0.004	32.92	0.30	3.53	0.10
-220	1.359	0.012	0.139	0.004	34.52	0.30	3.53	0.10
-221	1.421	0.012	0.139	0.004	36.09	0.30	3.53	0.10
-222	1.484	0.015	0.139	0.004	37.69	0.38	3.53	0.10
-223	1.609	0.015	0.139	0.004	40.87	0.38	3.53	0.10
-224	1.734	0.015	0.139	0.004	44.04	0.38	3.53	0.10
-225	1.859	0.018	0.139	0.004	47.22	0.46	3.53	0.10
-226	1.984	0.018	0.139	0.004	50.39	0.46	3.53	0.10
-227	2.109	0.018	0.139	0.004	53.57	0.46	3.53	0.10
-228	2.234	0.020	0.139	0.004	56.74	0.51	3.53	0.10
-229	2.359	0.020	0.139	0.004	59.92	0.51	3.53	0.10
-230	2.484	0.020	0.139	0.004	63.09	0.51	3.53	0.10
-231	2.609	0.020	0.139	0.004	66.27	0.51	3.53	0.10
-232	2.734	0.024	0.139	0.004	69.44	0.61	3.53	0.10
-233	2.859	0.024	0.139	0.004	72.62	0.61	3.53	0.10
-234	2.984	0.024	0.139	0.004	75.79	0.61	3.53	0.10
-235	3.109	0.024	0.139	0.004	78.97	0.61	3.53	0.10
-236	3.234	0.024	0.139	0.004	82.14	0.61	3.53	0.10
-237	3.359	0.024	0.139	0.004	85.32	0.61	3.53	0.10
-238	3.484	0.024	0.139	0.004	88.49	0.61	3.53	0.10
-239	3.609	0.028	0.139	0.004	91.67	0.71	3.53	0.10
-240	3.734	0.028	0.139	0.004	94.84	0.71	3.53	0.10
-241	3.859	0.028	0.139	0.004	98.02	0.71	3.53	0.10
-242	3.984	0.028	0.139	0.004	101.19	0.71	3.53	0.10
-243	4.109	0.028	0.139	0.004	104.37	0.71	3.53	0.10
-244	4.234	0.030	0.139	0.004	107.54	0.76	3.53	0.10
-245	4.359	0.030	0.139	0.004	110.72	0.76	3.53	0.10
-246	4.484	0.030	0.139	0.004	113.89	0.76	3.53	0.10
-247	4.609	0.030	0.139	0.004	117.07	0.76	3.53	0.10
-248	4.734	0.030	0.139	0.004	120.24	0.76	3.53	0.10
-249	4.859	0.035	0.139	0.004	123.42	0.89	3.53	0.10
-250	4.984	0.035	0.139	0.004	126.59	0.89	3.53	0.10
-251	5.109	0.035	0.139	0.004	129.77	0.89	3.53	0.10

AS568	Inches				mm			
Size	ID	±	CS	±	ID	±	CS	±
-252	5.234	0.035	0.139	0.004	132.94	0.89	3.53	0.10
-253	5.359	0.035	0.139	0.004	136.12	0.89	3.53	0.10
-254	5.484	0.035	0.139	0.004	139.29	0.89	3.53	0.10
-255	5.609	0.035	0.139	0.004	142.47	0.89	3.53	0.10
-256	5.734	0.035	0.139	0.004	145.64	0.89	3.53	0.10
-257	5.859	0.035	0.139	0.004	148.82	0.89	3.53	0.10
-258	5.984	0.035	0.139	0.004	151.99	0.89	3.53	0.10
-259	6.234	0.040	0.139	0.004	158.34	1.02	3.53	0.10
-260	6.484	0.040	0.139	0.004	164.69	1.02	3.53	0.10
-261	6.734	0.040	0.139	0.004	171.04	1.02	3.53	0.10
-262	6.984	0.040	0.139	0.004	177.39	1.02	3.53	0.10
-263	7.234	0.045	0.139	0.004	183.74	1.14	3.53	0.10
-264	7.484	0.045	0.139	0.004	190.09	1.14	3.53	0.10
-265	7.734	0.045	0.139	0.004	196.44	1.14	3.53	0.10
-266	7.984	0.045	0.139	0.004	202.79	1.14	3.53	0.10
-267	8.234	0.050	0.139	0.004	209.14	1.27	3.53	0.10
-268	8.484	0.050	0.139	0.004	215.49	1.27	3.53	0.10
-269	8.734	0.050	0.139	0.004	221.84	1.27	3.53	0.10
-270	8.984	0.050	0.139	0.004	228.19	1.27	3.53	0.10
-271	9.234	0.055	0.139	0.004	234.54	1.40	3.53	0.10
-272	9.484	0.055	0.139	0.004	240.89	1.40	3.53	0.10
-273	9.734	0.055	0.139	0.004	247.24	1.40	3.53	0.10
-274	9.984	0.055	0.139	0.004	253.59	1.40	3.53	0.10
-275	10.484	0.055	0.139	0.004	266.29	1.40	3.53	0.10
-276	10.984	0.065	0.139	0.004	278.99	1.65	3.53	0.10
-277	11.484	0.065	0.139	0.004	291.69	1.65	3.53	0.10
-278	11.984	0.065	0.139	0.004	304.39	1.65	3.53	0.10
-279	12.984	0.065	0.139	0.004	329.79	1.65	3.53	0.10
-280	13.984	0.065	0.139	0.004	355.19	1.65	3.53	0.10
-281	14.984	0.065	0.139	0.004	380.59	1.65	3.53	0.10
-282	15.955	0.075	0.139	0.004	405.26	1.91	3.53	0.10
-283	16.955	0.080	0.139	0.004	430.66	2.03	3.53	0.10
-284	17.955	0.085	0.139	0.004	456.06	2.16	3.53	0.10
-309	0.412	0.005	0.210	0.005	10.46	0.13	5.33	0.13
-310	0.475	0.005	0.210	0.005	12.07	0.13	5.33	0.13
-311	0.537	0.007	0.210	0.005	13.64	0.18	5.33	0.13
-312	0.600	0.009	0.210	0.005	15.24	0.23	5.33	0.13
-313	0.662	0.009	0.210	0.005	16.81	0.23	5.33	0.13
-314	0.725	0.010	0.210	0.005	18.42	0.25	5.33	0.13
-315	0.787	0.010	0.210	0.005	19.99	0.25	5.33	0.13
-316	0.850	0.010	0.210	0.005	21.59	0.25	5.33	0.13
-317	0.912	0.010	0.210	0.005	23.16	0.25	5.33	0.13
-318	0.975	0.010	0.210	0.005	24.77	0.25	5.33	0.13
-319	1.037	0.010	0.210	0.005	26.34	0.25	5.33	0.13
-320	1.100	0.012	0.210	0.005	27.94	0.30	5.33	0.13
-321	1.162	0.012	0.210	0.005	29.51	0.30	5.33	0.13
-322	1.225	0.012	0.210	0.005	31.12	0.30	5.33	0.13
-323	1.287	0.012	0.210	0.005	32.69	0.30	5.33	0.13
-324	1.350	0.012	0.210	0.005	34.29	0.30	5.33	0.13
-325	1.475	0.015	0.210	0.005	37.47	0.38	5.33	0.13
-326	1.600	0.015	0.210	0.005	40.64	0.38	5.33	0.13
-327	1.725	0.015	0.210	0.005	43.82	0.38	5.33	0.13
-328	1.850	0.015	0.210	0.005	46.99	0.38	5.33	0.13
-329	1.975	0.018	0.210	0.005	50.17	0.46	5.33	0.13
-330	2.100	0.018	0.210	0.005	53.34	0.46	5.33	0.13
-331	2.225	0.018	0.210	0.005	56.52	0.46	5.33	0.13
-332	2.350	0.018	0.210	0.005	59.69	0.46	5.33	0.13
-333	2.475	0.020	0.210	0.005	62.87	0.51	5.33	0.13
-334	2.600	0.020	0.210	0.005	66.04	0.51	5.33	0.13
-335	2.725	0.020	0.210	0.005	69.22	0.51	5.33	0.13
-336	2.850	0.020	0.210	0.005	72.39	0.51	5.33	0.13
-337	2.975	0.024	0.210	0.005	75.57	0.61	5.33	0.13
-338	3.100	0.024	0.210	0.005	78.74	0.61	5.33	0.13
-339	3.225	0.024	0.210	0.005	81.92	0.61	5.33	0.13

AS568	Inches				mm			
Size	ID	±	CS	±	ID	±	CS	±
-340	3.350	0.024	0.210	0.005	85.09	0.61	5.33	0.13
-341	3.475	0.024	0.210	0.005	88.27	0.61	5.33	0.13
-342	3.600	0.028	0.210	0.005	91.44	0.71	5.33	0.13
-343	3.725	0.028	0.210	0.005	94.62	0.71	5.33	0.13
-344	3.850	0.028	0.210	0.005	97.79	0.71	5.33	0.13
-345	3.975	0.028	0.210	0.005	100.97	0.71	5.33	0.13
-346	4.100	0.028	0.210	0.005	104.14	0.71	5.33	0.13
-347	4.225	0.030	0.210	0.005	107.32	0.76	5.33	0.13
-348	4.350	0.030	0.210	0.005	110.49	0.76	5.33	0.13
-349	4.475	0.030	0.210	0.005	113.67	0.76	5.33	0.13
-350	4.600	0.030	0.210	0.005	116.84	0.76	5.33	0.13
-351	4.725	0.030	0.210	0.005	120.02	0.76	5.33	0.13
-352	4.850	0.030	0.210	0.005	123.19	0.76	5.33	0.13
-353	4.975	0.037	0.210	0.005	126.37	0.94	5.33	0.13
-354	5.100	0.037	0.210	0.005	129.54	0.94	5.33	0.13
-355	5.225	0.037	0.210	0.005	132.72	0.94	5.33	0.13
-356	5.350	0.037	0.210	0.005	135.89	0.94	5.33	0.13
-357	5.475	0.037	0.210	0.005	139.07	0.94	5.33	0.13
-358	5.600	0.037	0.210	0.005	142.24	0.94	5.33	0.13
-359	5.725	0.037	0.210	0.005	145.42	0.94	5.33	0.13
-360	5.850	0.037	0.210	0.005	148.59	0.94	5.33	0.13
-361	5.975	0.037	0.210	0.005	151.77	0.94	5.33	0.13
-362	6.225	0.040	0.210	0.005	158.12	1.02	5.33	0.13
-363	6.475	0.040	0.210	0.005	164.47	1.02	5.33	0.13
-364	6.725	0.040	0.210	0.005	170.82	1.02	5.33	0.13
-365	6.975	0.040	0.210	0.005	177.17	1.02	5.33	0.13
-366	7.225	0.045	0.210	0.005	183.52	1.14	5.33	0.13
-367	7.475	0.045	0.210	0.005	189.87	1.14	5.33	0.13
-368	7.725	0.045	0.210	0.005	196.22	1.14	5.33	0.13
-369	7.975	0.045	0.210	0.005	202.57	1.14	5.33	0.13
-370	8.225	0.050	0.210	0.005	208.92	1.27	5.33	0.13
-371	8.475	0.050	0.210	0.005	215.27	1.27	5.33	0.13
-372	8.725	0.050	0.210	0.005	221.62	1.27	5.33	0.13
-373	8.975	0.050	0.210	0.005	227.97	1.27	5.33	0.13
-374	9.225	0.055	0.210	0.005	234.32	1.40	5.33	0.13
-375	9.475	0.055	0.210	0.005	240.67	1.40	5.33	0.13
-376	9.725	0.055	0.210	0.005	247.02	1.40	5.33	0.13
-377	9.975	0.055	0.210	0.005	253.37	1.40	5.33	0.13
-378	10.475	0.060	0.210	0.005	266.07	1.52	5.33	0.13
-379	10.975	0.060	0.210	0.005	278.77	1.52	5.33	0.13
-380	11.475	0.065	0.210	0.005	291.47	1.65	5.33	0.13
-381	11.975	0.065	0.210	0.005	304.17	1.65	5.33	0.13
-382	12.975	0.065	0.210	0.005	329.57	1.65	5.33	0.13
-383	13.975	0.070	0.210	0.005	354.97	1.78	5.33	0.13
-384	14.975	0.070	0.210	0.005	380.37	1.78	5.33	0.13
-385	15.955	0.075	0.210	0.005	405.26	1.91	5.33	0.13
-386	16.955	0.080	0.210	0.005	430.66	2.03	5.33	0.13
-387	17.955	0.085	0.210	0.005	456.06	2.16	5.33	0.13
-388	18.955	0.090	0.210	0.005	481.46	2.29	5.33	0.13
-389	19.955	0.095	0.210	0.005	506.86	2.41	5.33	0.13
-390	20.955	0.095	0.210	0.005	532.26	2.41	5.33	0.13
-391	21.955	0.100	0.210	0.005	557.66	2.54	5.33	0.13
-392	22.940	0.105	0.210	0.005	582.68	2.67	5.33	0.13
-393	23.940	0.110	0.210	0.005	608.08	2.79	5.33	0.13
-394	24.940	0.115	0.210	0.005	633.48	2.92	5.33	0.13
-395	25.940	0.120	0.210	0.005	658.88	3.05	5.33	0.13
-425	4.475	0.033	0.275	0.006	113.67	0.84	6.99	0.15
-426	4.600	0.033	0.275	0.006	116.84	0.84	6.99	0.15
-427	4.725	0.033	0.275	0.006	120.02	0.84	6.99	0.15
-428	4.850	0.033	0.275	0.006	123.19	0.84	6.99	0.15
-429	4.975	0.037	0.275	0.006	126.37	0.94	6.99	0.15
-430	5.100	0.037	0.275	0.006	129.54	0.94	6.99	0.15
-431	5.225	0.037	0.275	0.006	132.72	0.94	6.99	0.15
-432	5.350	0.037	0.275	0.006	135.89	0.94	6.99	0.15

AS568	Inches				mm			
Size	ID	±	CS	±	ID	±	CS	±
-433	5.475	0.037	0.275	0.006	139.07	0.94	6.99	0.15
-434	5.600	0.037	0.275	0.006	142.24	0.94	6.99	0.15
-435	5.725	0.037	0.275	0.006	145.42	0.94	6.99	0.15
-436	5.850	0.037	0.275	0.006	148.59	0.94	6.99	0.15
-437	5.975	0.037	0.275	0.006	151.77	0.94	6.99	0.15
-438	6.225	0.040	0.275	0.006	158.12	1.02	6.99	0.15
-439	6.475	0.040	0.275	0.006	164.47	1.02	6.99	0.15
-440	6.725	0.040	0.275	0.006	170.82	1.02	6.99	0.15
-441	6.975	0.040	0.275	0.006	177.17	1.02	6.99	0.15
-442	7.225	0.045	0.275	0.006	183.52	1.14	6.99	0.15
-443	7.475	0.045	0.275	0.006	189.87	1.14	6.99	0.15
-444	7.725	0.045	0.275	0.006	196.22	1.14	6.99	0.15
-445	7.975	0.045	0.275	0.006	202.57	1.14	6.99	0.15
-446	8.475	0.055	0.275	0.006	215.27	1.40	6.99	0.15
-447	8.975	0.055	0.275	0.006	227.97	1.40	6.99	0.15
-448	9.475	0.055	0.275	0.006	240.67	1.40	6.99	0.15
-449	9.975	0.055	0.275	0.006	253.37	1.40	6.99	0.15
-450	10.475	0.060	0.275	0.006	266.07	1.52	6.99	0.15
-451	10.975	0.060	0.275	0.006	278.77	1.52	6.99	0.15
-452	11.475	0.060	0.275	0.006	291.47	1.52	6.99	0.15
-453	11.975	0.060	0.275	0.006	304.17	1.52	6.99	0.15
-454	12.475	0.060	0.275	0.006	316.87	1.52	6.99	0.15
-455	12.975	0.060	0.275	0.006	329.57	1.52	6.99	0.15
-456	13.475	0.070	0.275	0.006	342.27	1.78	6.99	0.15
-457	13.975	0.070	0.275	0.006	354.97	1.78	6.99	0.15
-458	14.475	0.070	0.275	0.006	367.67	1.78	6.99	0.15
-459	14.975	0.070	0.275	0.006	380.37	1.78	6.99	0.15
-460	15.475	0.070	0.275	0.006	393.07	1.78	6.99	0.15
-461	15.955	0.075	0.275	0.006	405.26	1.91	6.99	0.15
-462	16.455	0.075	0.275	0.006	417.96	1.91	6.99	0.15
-463	16.955	0.080	0.275	0.006	430.66	2.03	6.99	0.15
-464	17.455	0.085	0.275	0.006	443.36	2.16	6.99	0.15
-465	17.955	0.085	0.275	0.006	456.06	2.16	6.99	0.15
-466	18.455	0.085	0.275	0.006	468.76	2.16	6.99	0.15
-467	18.955	0.090	0.275	0.006	481.46	2.29	6.99	0.15
-468	19.455	0.090	0.275	0.006	494.16	2.29	6.99	0.15
-469	19.955	0.095	0.275	0.006	506.86	2.41	6.99	0.15
-470	20.955	0.095	0.275	0.006	532.26	2.41	6.99	0.15
-471	21.955	0.100	0.275	0.006	557.66	2.54	6.99	0.15
-472	22.940	0.105	0.275	0.006	582.68	2.67	6.99	0.15
-473	23.940	0.110	0.275	0.006	608.08	2.79	6.99	0.15
-474	24.940	0.115	0.275	0.006	633.48	2.92	6.99	0.15
-475	25.940	0.120	0.275	0.006	658.88	3.05	6.99	0.15
-901	0.185	0.005	0.056	0.003	4.70	0.13	1.42	0.08
-902	0.239	0.005	0.064	0.003	6.07	0.13	1.63	0.08
-903	0.301	0.005	0.064	0.003	7.65	0.13	1.63	0.08
-904	0.351	0.005	0.072	0.003	8.92	0.13	1.83	0.08
-905	0.414	0.005	0.072	0.003	10.52	0.13	1.83	0.08
-906	0.468	0.005	0.078	0.003	11.89	0.13	1.98	0.08
-907	0.530	0.007	0.082	0.003	13.46	0.18	2.08	0.08
-908	0.644	0.009	0.087	0.003	16.36	0.23	2.21	0.08
-909	0.706	0.009	0.097	0.003	17.93	0.23	2.46	0.08
-910	0.755	0.009	0.097	0.003	19.18	0.23	2.46	0.08
-911	0.863	0.009	0.116	0.004	21.92	0.23	2.95	0.10
-912	0.924	0.009	0.116	0.004	23.47	0.23	2.95	0.10
-913	0.986	0.010	0.116	0.004	25.04	0.25	2.95	0.10
-914	1.047	0.010	0.116	0.004	26.59	0.25	2.95	0.10
-916	1.171	0.010	0.116	0.004	29.74	0.25	2.95	0.10
-918	1.355	0.012	0.116	0.004	34.42	0.30	2.95	0.10
-920	1.475	0.014	0.118	0.004	37.47	0.36	3.00	0.10
-924	1.720	0.014	0.118	0.004	43.69	0.36	3.00	0.10
-928	2.090	0.018	0.118	0.004	53.09	0.46	3.00	0.10
-932	2.337	0.018	0.118	0.004	59.36	0.46	3.00	0.10

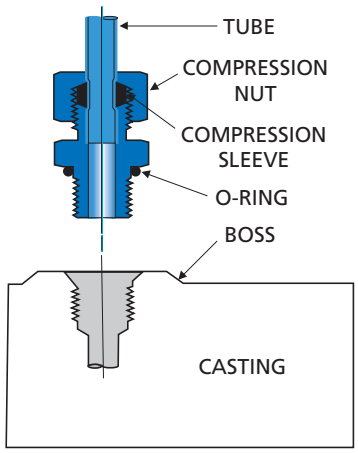
Boss Seals

A boss seal is an O-ring used for sealing a straight-thread tube fitting on a boss. A boss is a cylindrical projection on a casting or forging. The end of that projection is machined to provide a flat, smooth surface for sealing. Straight threads used with an O-ring provide a better seal than tapered threads used alone (see Figure 2).

The 900 series of dash-numbers identifies the 20 sizes of boss seals. Except for size -901, the two digits after the 9 identify the nominal tube size in 16ths of an inch. The tube size is its outside diameter (OD). For example, size -903 is intended for use with 3/16-inch tube. The one exception, size -901, is intended for use with 3/32-inch tube. 1/16-inch tube is not common in hydraulic applications.

Fig. 2

Tube Fitting With Boss Seal



Using the O-Ring Size Chart

To identify which AS568B standard O-ring size is appropriate for your application, you must know the required cross-sectional diameter and either the inside diameter or the outside diameter.

O-ring size chart is arranged by cross-sectional diameter and then inside diameter.
Each combination of cross-sectional diameter and inside diameter has been assigned a unique size (or dash number). Certain O-ring sizes for static seals, reciprocating seals, and rotary seals should be installed in grooves with different diameters.

Ordering O-rings

To order O-rings, please state the part number (size) and a compound number.
Parco's part numbers for standard-sized O-rings are in the format 0568-xxx. The 0568 refers to Aerospace Standard AS568B. The dash number (-xxx) is the standard O-ring size.
compound numbers are in the format xxxx-xx. The first four digits are the basic compound number. The next two digits are the hardness (durometer, Shore A).
For example, you may want to order O-rings with a cross-sectional diameter of 0.139 inch and an inside diameter of 0.984 inch (standard size -214). You may want those O-rings in popular 70

SCS, Inc. Delivers Faster

SCS, Inc. can provide sample O-rings within 10 working days. If you need sample parts even faster, We can deliver them in as few as three days through its Rapid Prototype Program.
For more information on O-rings or to obtain samples, please contact a SCS, Inc. custom service representative or one of our distributors. 1-877-905-SEAL (7325) or Visit us at www.sealandcylinder.com