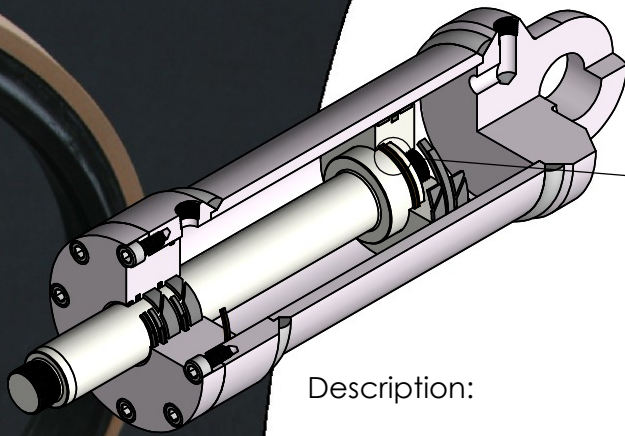
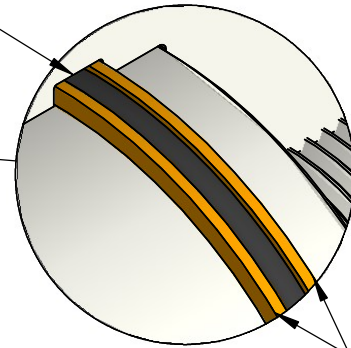




Elastomer
O-ring



T-LON® "27595"
Back-up Rings

Description:

The 27595 PTFE back-up rings are proven components used for sealing both low and high pressure systems. Any system pushing the pressure limits on an elastomer seal, 27595 back-up rings are an inexpensive option to increase seal pressure capabilities or increase radial extrusion gaps behind the seal.

The 27595 back-up rings come standard in T-LON® 01 (Virgin PTFE) but can be made from any filled T-LON® PTFE compound or plastic/metal to increase the pressure capabilities.

Consider 27595 back-up rings with elastomer o-rings under the following conditions:

- Pressure above 1000psi (7MPa)
- Radial Extrusion gap > .005" (.13mm)
- High Reciprocating Stroke Frequency
- High Temperatures
- Medium with Contamination
- Pressure Shock Loads (Fast Pressure Changes)

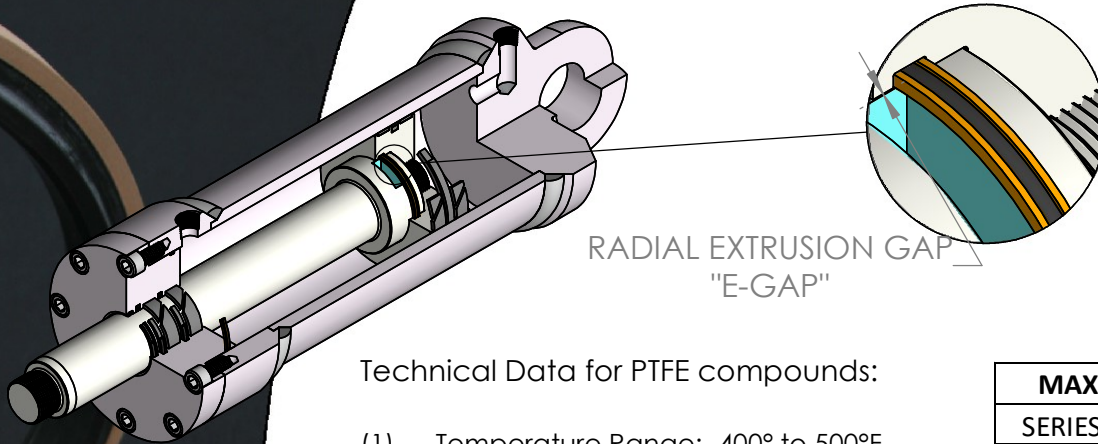
Advantages:

- Inexpensive option
- Increase pressure rating of standard o-rings
- Available for cylinders up to 45" diameter

Applications:

- Mobile Hydraulic Cylinders
- Pneumatic Piston Cylinders
- Agriculture Equipment
- Hydraulic Valves and Pumps
- Filling Machines
- Testing Machinery
- Any sealing application





RADIAL EXTRUSION GAP
"E-GAP"

Technical Data for PTFE compounds:

- (1) Temperature Range: -400° to 500°F
- (2) T-LON® seal compound determines allowable pressure
 - Pressure: Up to 5800 psi
(Function of e-gap and T-LON® compound)
 - Surface Speed: Up to 6 ft/s

Most Common:

Virgin PTFE ("01")

- Most cost effective
- Most flexible for assembly ease

BRONZE FILLED PTFE ("21" or "22")

- Highest Extrusion Resistance of PTFE Compounds (Higher bronze content increases extrusion/wear resistance; I.E. larger e-gap allowable)
- Low abrasion characteristics

Also Available for Extreme Pressures of 10,000 psi and above:

PEEK Compounds ("91" or "92")

Polyamide Compounds ("1N" or "6N")

ACETAL ("1D")

MAXIMUM E-GAP (Virgin PTFE)***			
SERIES	1,450 PSI	2,900 PSI	5,800
-000	0.008	0.004	0.0015
-100	0.008	0.004	0.0015
-200	0.008	0.004	0.0015
-300	0.010	0.005	0.0025
-400	0.015	0.008	0.0035

***USE PISTON WEAR RINGS SO E-GAP DOES NOT EXCEED TABLED VALUES

MAXIMUM E-GAP (Shore 70A O-rings) REFERENCE ONLY***			
O-Ring CS (in)	500 PSI	1,000 PSI	1,500 PSI
0.070	0.003	0.002	0.001
0.103	0.004	0.003	0.002
0.139	0.004	0.003	0.002
0.210	0.005	0.004	0.003
0.275	0.006	0.004	0.003

***IF THE APPLICATION DEMANDS HIGHER PRESSURES/E-GAPS, 27595 BACK-UP RINGS ARE RECOMMENDED.

ORDERING INFORMATION

27595 - -

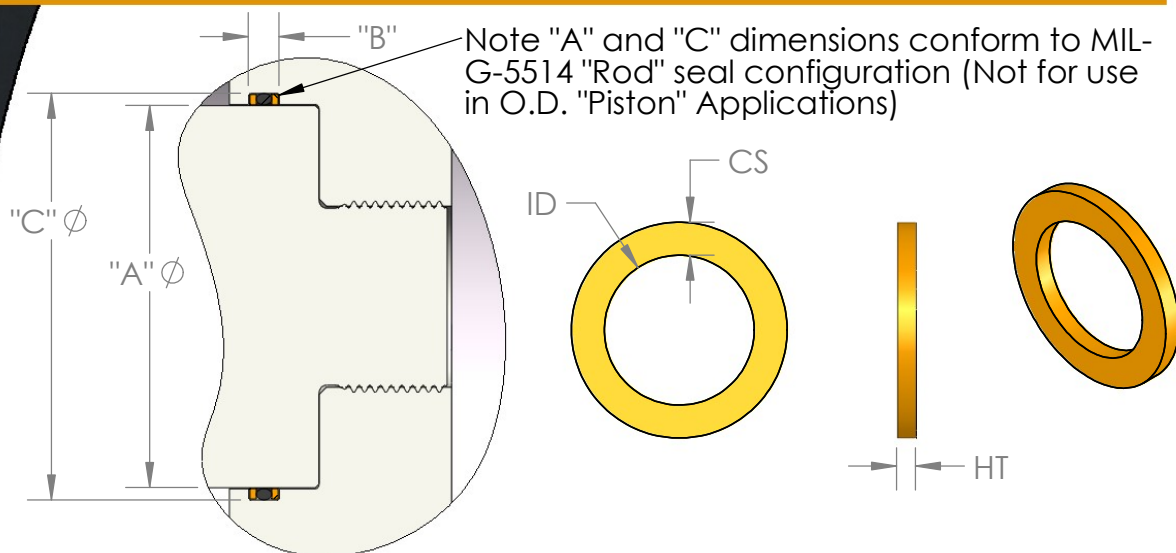
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"115" = 100 SERIES, -115 SIZE
"332" = 300 SERIES, -332 SIZE

"01" = VIRGIN PTFE
"22" = 60% BRONZE PTFE



Reference Groove Dimensions for O-rings with "27595" back-up rings

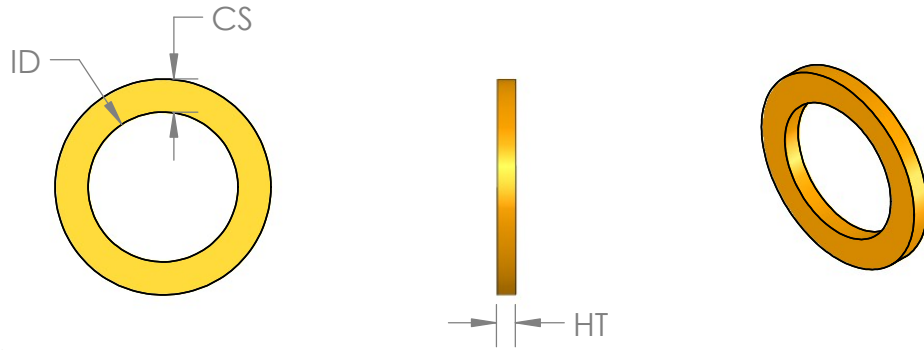
AS568 O-ring Dash #	Gland Width "B" No Backup Ring		Gland Width "B" One Backup Ring		Gland Width "B" Two Backup Rings	
	Min	Max	Min	Max	Min	Max
-004 to -009	0.098	0.103	0.154	0.164	0.210	0.220
-010 to -028	0.094	0.099	0.150	0.160	0.207	0.217
-110 to -149	0.141	0.151	0.183	0.193	0.245	0.255
-210 to -247	0.188	0.198	0.235	0.245	0.304	0.314
-325 to -349	0.281	0.291	0.334	0.344	0.424	0.434
-424 to -460	0.375	0.385	0.475	0.485	0.579	0.589

T-LON® "27595" Series Solid Back-up Ring Sizes (More Available Upon Request)

Backup Ring Dash Size	OD Ref.	ID		CS ±.002	HT ±.002
		Nominal	Tol. ±		
004	0.188	0.080	0.003	0.054	0.050
005	0.219	0.111	0.003	0.054	0.050
006	0.233	0.125	0.003	0.054	0.050
007	0.264	0.156	0.003	0.054	0.050
008	0.295	0.187	0.003	0.054	0.050
009	0.327	0.219	0.003	0.054	0.050
010	0.358	0.250	0.003	0.054	0.050
011	0.420	0.312	0.003	0.054	0.050
012	0.483	0.375	0.003	0.054	0.050
013	0.548	0.440	0.003	0.054	0.050
014	0.611	0.503	0.003	0.054	0.050
015	0.673	0.565	0.003	0.054	0.050
016	0.736	0.628	0.003	0.054	0.050
017	0.798	0.690	0.003	0.054	0.050
018	0.861	0.753	0.003	0.054	0.050
019	0.923	0.815	0.003	0.054	0.050
020	0.989	0.881	0.003	0.054	0.050
021	1.051	0.943	0.003	0.054	0.050

Backup Ring Dash Size	OD Ref.	ID		CS ±.002	HT ±.002
		Nominal	Tol. ±		
022	1.114	1.006	0.003	0.054	0.050
023	1.176	1.068	0.003	0.054	0.050
024	1.239	1.131	0.003	0.054	0.050
025	1.301	1.193	0.003	0.054	0.050
026	1.364	1.256	0.003	0.054	0.050
027	1.426	1.318	0.003	0.054	0.050
028	1.489	1.381	0.003	0.054	0.050
110	0.548	0.374	0.003	0.087	0.050
111	0.611	0.437	0.003	0.087	0.050
112	0.673	0.499	0.003	0.087	0.050
113	0.736	0.562	0.003	0.087	0.050
114	0.798	0.624	0.003	0.087	0.050
115	0.861	0.687	0.003	0.087	0.050
116	0.923	0.749	0.003	0.087	0.050
117	0.989	0.815	0.003	0.087	0.050
118	1.051	0.877	0.003	0.087	0.050
119	1.114	0.940	0.003	0.087	0.050
120	1.176	1.002	0.003	0.087	0.050

T-LON® "27595" Series Solid Back-up Ring

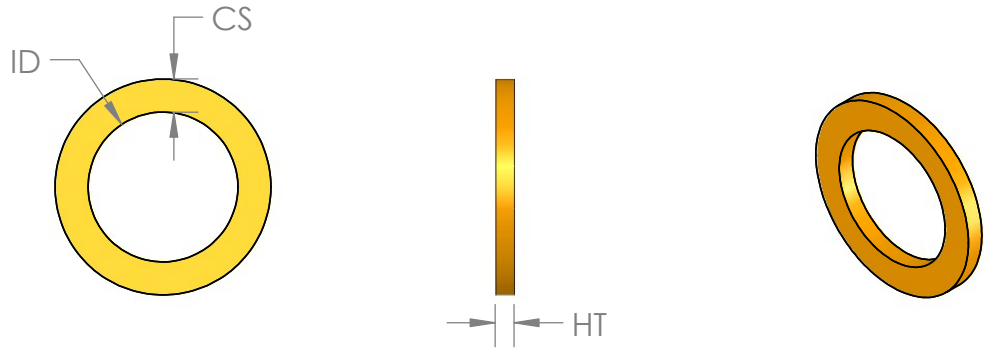


T-LON® "27595" Series Solid Back-up Ring Sizes (More Available Upon Request)

Backup Ring Dash Size	OD Ref.	ID		CS ±.002	HT ±.002
		Nominal	Tol. ±		
121	1.239	1.065	0.003	0.087	0.050
122	1.301	1.127	0.003	0.087	0.050
123	1.364	1.190	0.003	0.087	0.050
124	1.426	1.252	0.003	0.087	0.050
125	1.489	1.315	0.003	0.087	0.050
126	1.551	1.377	0.003	0.087	0.050
127	1.614	1.440	0.003	0.087	0.050
128	1.676	1.502	0.003	0.087	0.050
129	1.739	1.565	0.003	0.087	0.050
130	1.803	1.629	0.003	0.087	0.050
131	1.865	1.691	0.003	0.087	0.050
132	1.928	1.754	0.003	0.087	0.050
133	1.990	1.816	0.003	0.087	0.050
134	2.053	1.879	0.003	0.087	0.050
135	2.116	1.942	0.003	0.087	0.050
136	2.178	2.004	0.003	0.087	0.050
137	2.241	2.067	0.003	0.087	0.050
138	2.303	2.129	0.003	0.087	0.050
139	2.366	2.192	0.003	0.087	0.050
140	2.428	2.254	0.003	0.087	0.050
141	2.491	2.317	0.003	0.087	0.050
142	2.553	2.379	0.003	0.087	0.050
143	2.616	2.442	0.003	0.087	0.050
144	2.678	2.504	0.003	0.087	0.050
145	2.741	2.567	0.003	0.087	0.050
146	2.803	2.629	0.003	0.087	0.050
147	2.866	2.692	0.003	0.087	0.050
148	2.928	2.754	0.003	0.087	0.050
149	2.991	2.817	0.003	0.087	0.050
210	0.991	0.753	0.003	0.119	0.050
211	1.053	0.815	0.003	0.119	0.050
212	1.116	0.878	0.003	0.119	0.050
213	1.178	0.940	0.003	0.119	0.050
214	1.241	1.003	0.003	0.119	0.050

Backup Ring Dash Size	OD Ref.	ID		CS ±.002	HT ±.002
		Nominal	Tol. ±		
215	1.303	1.065	0.003	0.119	0.050
216	1.366	1.128	0.003	0.119	0.050
217	1.428	1.190	0.003	0.119	0.050
218	1.491	1.253	0.003	0.119	0.050
219	1.553	1.315	0.003	0.119	0.050
220	1.616	1.378	0.003	0.119	0.050
221	1.678	1.440	0.003	0.119	0.050
222	1.741	1.503	0.003	0.119	0.050
223	1.867	1.629	0.003	0.119	0.050
224	1.992	1.754	0.003	0.119	0.050
225	2.118	1.880	0.003	0.119	0.050
226	2.243	2.005	0.003	0.119	0.050
227	2.368	2.130	0.003	0.119	0.050
228	2.493	2.255	0.003	0.119	0.050
229	2.618	2.380	0.003	0.119	0.050
230	2.743	2.505	0.003	0.119	0.050
231	2.868	2.630	0.003	0.119	0.050
232	2.993	2.755	0.003	0.119	0.050
233	3.118	2.880	0.003	0.119	0.050
234	3.243	3.005	0.003	0.119	0.050
235	3.368	3.130	0.003	0.119	0.050
236	3.493	3.255	0.003	0.119	0.050
237	3.618	3.380	0.003	0.119	0.050
238	3.743	3.505	0.003	0.119	0.050
239	3.868	3.630	0.003	0.119	0.050
240	3.993	3.755	0.003	0.119	0.050
241	4.118	3.880	0.004	0.119	0.050
242	4.243	4.005	0.004	0.119	0.050
243	4.368	4.130	0.004	0.119	0.050
244	4.493	4.255	0.004	0.119	0.050
245	4.618	4.380	0.004	0.119	0.050
246	4.743	4.505	0.004	0.119	0.050
247	4.868	4.630	0.004	0.119	0.050

T-LON® "27595" Series Solid Back-up Ring



T-LON® "27595" Series Solid Back-up Ring Sizes (More Available Upon Request)

Backup Ring Dash Size	OD REF	ID		CS ±.002	HT ±.002
		Nominal	Tol. ±		
325	1.865	1.497	0.003	0.184	0.073
326	1.990	1.622	0.003	0.184	0.073
327	2.116	1.748	0.003	0.184	0.073
328	2.241	1.873	0.003	0.184	0.073
329	2.366	1.998	0.003	0.184	0.073
330	2.491	2.123	0.003	0.184	0.073
331	2.616	2.248	0.003	0.184	0.073
332	2.741	2.373	0.003	0.184	0.073
333	2.866	2.498	0.003	0.184	0.073
334	2.991	2.623	0.003	0.184	0.073
335	3.116	2.748	0.003	0.184	0.073
336	3.241	2.873	0.003	0.184	0.073
337	3.366	2.998	0.003	0.184	0.073
338	3.491	3.123	0.003	0.184	0.073
339	3.616	3.248	0.003	0.184	0.073
340	3.741	3.373	0.003	0.184	0.073
341	3.866	3.498	0.003	0.184	0.073
342	3.991	3.623	0.003	0.184	0.073
343	4.116	3.748	0.004	0.184	0.073
344	4.241	3.873	0.004	0.184	0.073
345	4.366	3.998	0.004	0.184	0.073
346	4.491	4.123	0.004	0.184	0.073
347	4.616	4.248	0.004	0.184	0.073
348	4.741	4.373	0.004	0.184	0.073
349	4.866	4.498	0.004	0.184	0.073
425	4.974	4.502	0.004	0.236	0.108
426	5.099	4.627	0.005	0.236	0.108
427	5.224	4.752	0.005	0.236	0.108
428	5.349	4.877	0.005	0.236	0.108
429	5.474	5.002	0.005	0.236	0.108
430	5.599	5.127	0.005	0.236	0.108

Backup Ring Dash Size	OD REF	ID		CS ±.002	HT ±.002
		Nominal	Tol. ±		
431	5.724	5.252	0.005	0.236	0.108
432	5.849	5.377	0.005	0.236	0.108
433	5.974	5.502	0.005	0.236	0.108
434	6.099	5.627	0.006	0.236	0.108
435	6.224	5.752	0.006	0.236	0.108
436	6.349	5.877	0.006	0.236	0.108
437	6.474	6.002	0.006	0.236	0.108
438	6.724	6.252	0.006	0.236	0.108
439	6.974	6.502	0.006	0.236	0.108
440	7.224	6.752	0.007	0.236	0.108
441	7.474	7.002	0.007	0.236	0.108
442	7.724	7.252	0.007	0.236	0.108
443	7.974	7.502	0.007	0.236	0.108
444	8.224	7.752	0.008	0.236	0.108
445	8.474	8.002	0.008	0.236	0.108
446	8.974	8.502	0.008	0.236	0.108
447	9.474	9.002	0.009	0.236	0.108
448	9.974	9.502	0.009	0.236	0.108
449	10.474	10.002	0.010	0.236	0.108
450	10.974	10.502	0.010	0.236	0.108
451	11.474	11.002	0.011	0.236	0.108
452	11.974	11.502	0.011	0.236	0.108
453	12.474	12.002	0.012	0.236	0.108
454	12.974	12.502	0.012	0.236	0.108
455	13.474	13.002	0.013	0.236	0.108
456	13.974	13.502	0.013	0.236	0.108
457	14.474	14.002	0.014	0.236	0.108
458	14.974	14.502	0.014	0.236	0.108
459	15.474	15.002	0.015	0.236	0.108
460	15.974	15.502	0.015	0.236	0.108