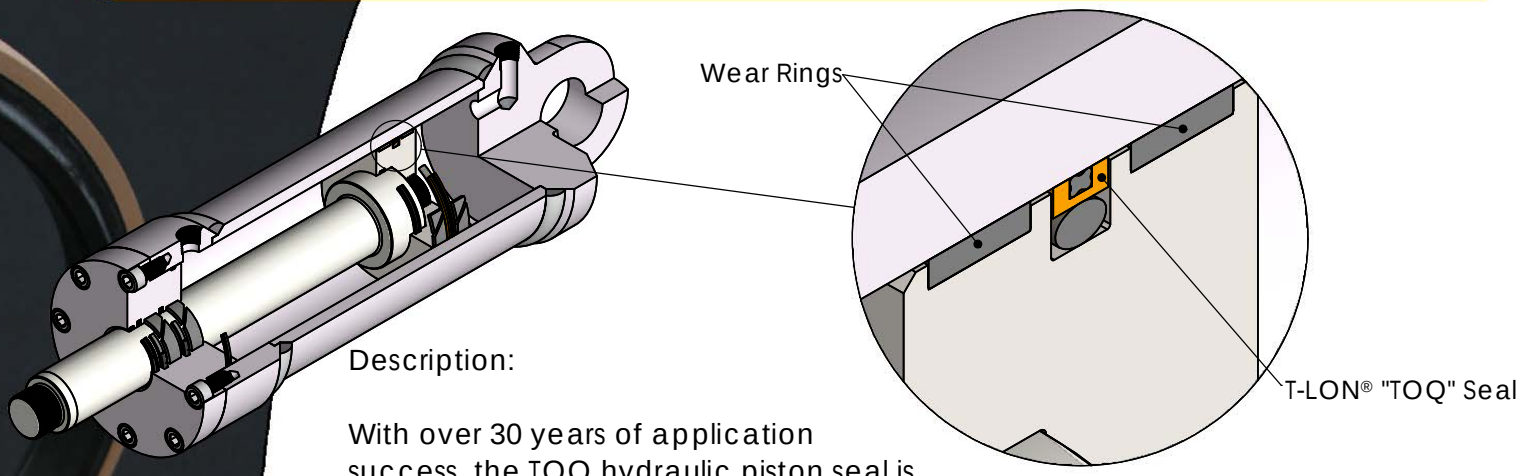
T-LON® "TOQ" Series Piston Seals



Description:

With over 30 years of application success, the TOQ hydraulic piston seal is a proven reliable low-leak seal for both low and high pressure systems.

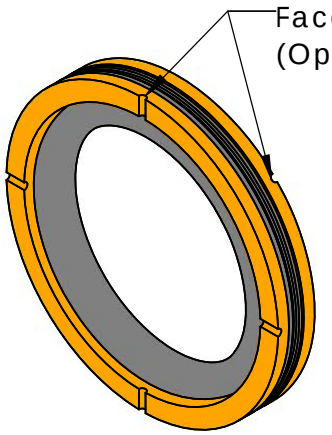
The TOQ seal is a double-acting filled T-LON® PTFE compound with a square elastomer energizer offering premium seal stability in reciprocating applications along with an x-ring elastomer energizer on the OD to minimize leakage (helps seal low molecular weight gases). The filled PTFE seal ring is manufactured with an interference fit with the bore and optimum compression with the square and x-ring energizers. This offers excellent sealability at low pressures and high pressures when the cylinder experiences ballooning. The square energizer helps prevent the seal from rocking often experienced with a standard o-ring.

Advantages:

- Low seal drag/friction (Minimize energy loss)
- No Stick-slip (Smooth Operation)
- Long seal life from T-LON® filled PTFE compounds
- Available for cylinders up to 45" diameter

Face Grooves (Optional):

For applications of high pressure rise rates, pressure spikes, and rapid change of direction, the seal is apt to experience blow-by. To prevent blow-by and to energize the seal rapidly, face grooves are added to both sides of the seal.



Applications:

- Accumulators
- Mobile Hydraulic Cylinders
- Lift Cylinders
- Agriculture Equipment
- Holding Cylinders
- Filling Machines
- Testing Machinery

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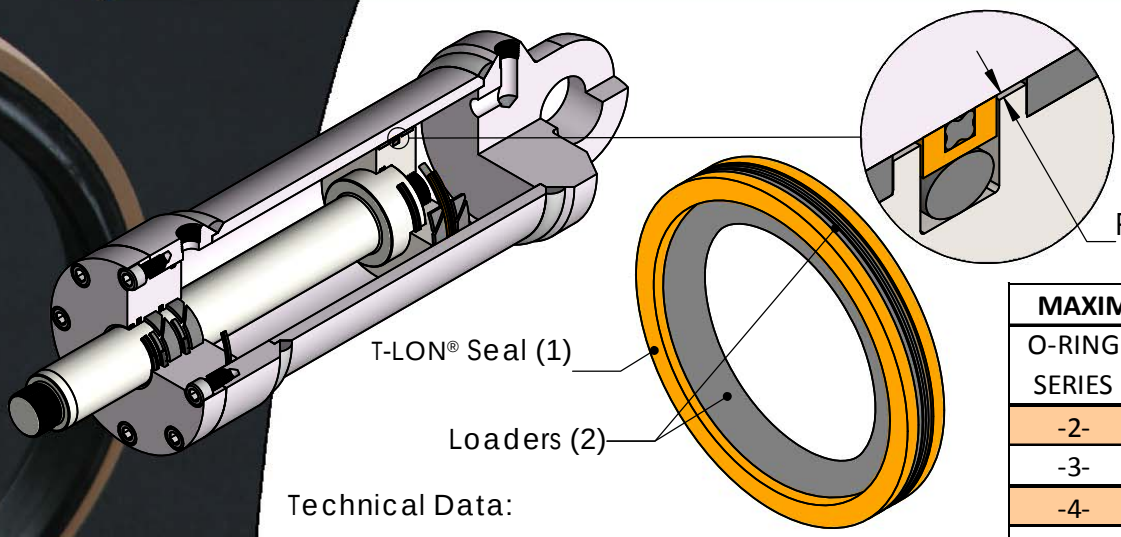

MAXIMUM E-GAP (40% BRZ PTFE)***			
O-RING SERIES	1500 PSI (in)	3000 PSI (in)	5800 PSI (in)
-2-	0.01	0.006	0.004
-3-	0.012	0.008	0.006
-4-	0.012	0.008	0.006
-4HD-	0.012	0.008	0.006

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

Technical Data:

(1) T-LON® seal compound determines allowable pressure and velocity ranges
- Velocity: Up to 10 ft/s
- Pressure: Up to 8500 psi

(Function of e-gap and T-LON® compound. Max velocity and pressure cannot be used together)

Most Common:

BRONZE FILLED PTFE ("21" or "22")
- Highest Extrusion Resistance (Higher bronze content increases extrusion/wear resistance; I.E. larger e-gap allowable)
- Good sealability

GLASS/MoS2 FILLED PTFE ("31")
- Good wear resistance for tubes with rougher surface finish
- More chemical resistant and used in applications when seal could run dry

(2) Loader compound determines temperature and chemical compatibility

Most Common:

NBR SHORE 70 A ("P")
- Working Temp. Range -30°F to 230°F (250°F intermittent)
- Commonly used with greases, aliphatic hydrocarbon mineral and vegetable oils, and various hydraulic fluids

FKM SHORE 75 A ("V")
- Working Temp. Range -10°F to 400°F
- Commonly used in higher temperature applications or with acids, alcohols, fuels, and transmission fluids.

ORDERING INFORMATION

TOQ - ____ - ____ - ____ - ____ - ____ - ____

- BORE Ø: "0150" = 1.50", "1050" = 10.50"
- SQ LOADER SERIES: "3" = 300 SERIES AS568A (3/16")
- TLON MATERIAL: "21" = 40% BRONZE PTFE; "22" = 60% BRONZE PTFE; "31" = 15% GLASS/ 5% MoS2 PTFE
- GROOVE OPTION: OMIT IF NO FACE GROOVES REQ'D; "G" = ADD FACE GROOVES
- PACKAGING: OMIT IF NO LOADERS REQ'D; "B" = BULK PACKAGE COMPONENTS; "I" = INDIVIDUALLY PACKAGE SEALS
- LOADER MATL: OMIT IF NO LOADERS REQ'D; "P" = STANDARD NBR 70A; "V" = FKM 75A

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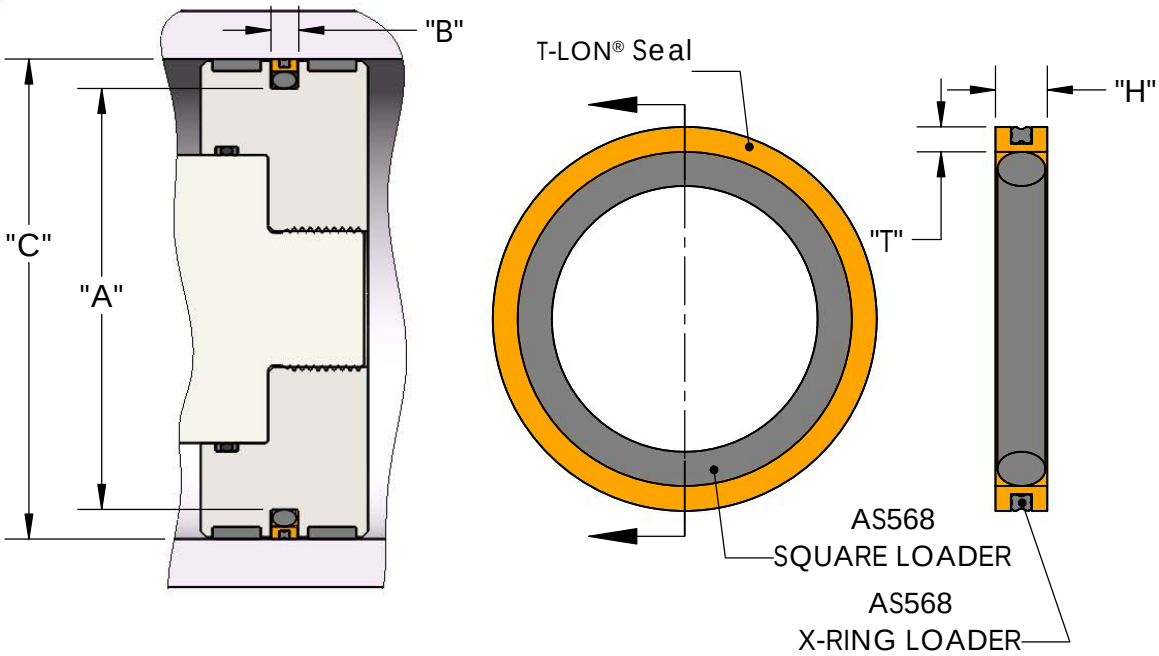

T-LON® "TOQ" Series Piston Seal Sizes (More Available Upon Request)

Groove dimensions for "TOQ" Series

Size	Bore Dia (C)	TOL	Groove Dimension			O-Ring Loader No.	X-Ring Loader No.
			Dia (A)	TOL	Width (B) ±.002		
0075-2	0.750	+0.003 / -.000	0.317	+.000 / -.003	0.165	-203	-016
0100-2	1.000		0.567			-207	-020
0125-2	1.250		0.817			-211	-024
0150-2	1.500		1.067			-215	-028
0200-3	2.000		1.390		0.248	-324	-032
0225-3	2.250		1.640			-326	-034
0250-3	2.500		1.890			-328	-036
0275-3	2.750		2.140			-330	-038
0300-3	3.000		2.390			-332	-040
0325-4	3.250		2.423		0.319	-408	-151
0350-4	3.500		2.673			-410	-152
0375-4	3.750		2.923			-412	-153
0400-4	4.000		3.173			-414	-154
0425-4	4.250		3.423			-416	-155
0450-4	4.500		3.673			-418	-156
0475-4	4.750		3.923			-420	-157
0500-4	5.000		4.173			-422	-158
0550-4HD	5.500	+.005 / -.000	4.535	+.000 / -.005		-425	-160
0600-4HD	6.000		5.035			-429	-162
0650-4HD	6.500		5.535			-433	-164
0700-4HD	7.000		6.035			-437	-166
0750-4HD	7.500		6.535			-439	-168
0800-4HD	8.000		7.035			-441	-170
0900-4HD	9.000		8.035			-445	-174