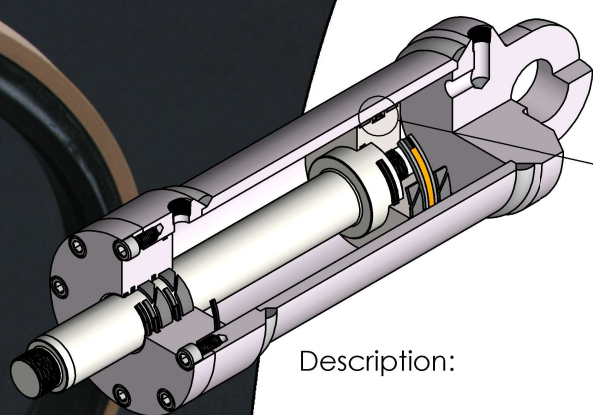
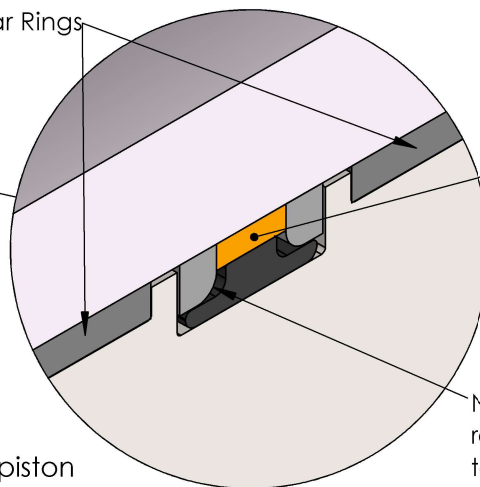


T-LON® "TLI4" Inch Series Cap-T Piston Seal



Wear Rings



T-LON® "TLI4" Seal

Note back-up ring
radius facing
towards the seal
center

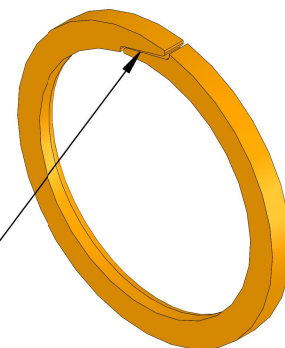
Description:

Rigorously tested statically and dynamically, the TLI4 hydraulic piston seal is a proven reliable seal for both low and high pressure systems. The unique patented JZ-cut on the back-up rings was a creative solution to prevent seal degradation, loader nibbling, and extrusion during operation

The TLI4 seal is a double-acting filled T-LON® PTFE compound with a T-shaped elastomer energizer and two high compressive strength back-up rings designed for extreme pressures in reciprocating applications. The filled PTFE seal ring is manufactured with an interference fit with the bore and optimum compression with the T-shaped energizer. This offers excellent sealability at low pressures and high pressures when the cylinder experiences ballooning. The two **back-up rings must be installed with the inner radius facing the center of the seal** and are designed assymetrical to prevent loader damage during the life of the seal.

Load Holding/Low Pressure Static Leakage: The dynamic sealing ring material plays a critical role. Using a polyurethane ("PU") or Bronze T-SMART® ("D") cap ring tested best performance.

Patented
JZ-cut



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 530mm diameter

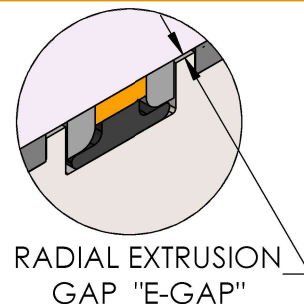
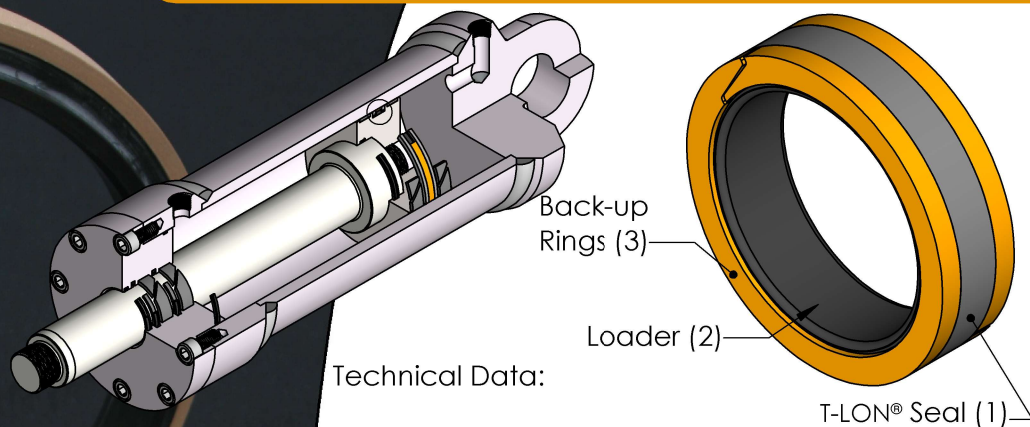
Applications:

- Heavy Duty Hydraulic Cylinders
- Agriculture Equipment
- Excavators
- Testing Machinery



1110 Richards Rd • Hartland, WI 53029
Telephone 262 / 367-2333 • FAX 262 / 367-8159

T-LON® "TLI4" Inch Series Cap-T Piston Seal



Technical Data:

- (1) **T-LON® seal compound** determines velocity and seal life

- Velocity: Up to 5 ft/s [1.5 m/s]
 - Pressure: Up to 10,000 psi [69 MPa]
- (Function of E-gap and Temperature. Max velocity and pressure cannot be used together)

Most Common:

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

BRONZE FILLED PTFE ("21")

- Good sealability and wear resistance

BRONZE FILLED T-SMART® PTFE("D4")

- Excellent sealability and wear resistance
- Drift/Low Pressure Static Leak Resistant
- Snapback during install - eliminates resizing

Polyurethane ("PU")

- Excellent sealability and wear resistance
- Drift/Low Pressure Static Leak Resistant
- Snapback during install - eliminates resizing
- High friction limits speed and pressure rating

MAXIMUM E-GAP(in)***	
5000 PSI [35 Mpa]	8700 PSI [60 Mpa]
0.020" [0.50 mm]	0.012" [0.30 mm]

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

- (2) **Loader compound**

determines temperature and chemical compatibility

Standard:

Low-Temp NBR

- Working Temp. Range -65°F to 275°F [-54°C to 135°C]
- Commonly used with greases, aliphatic hydrocarbon mineral and vegetable oils, and various hydraulic fluids

- (3) **Back-up rings** prevent seal extrusion and allow larger e-gaps. Note temperature and chemical limitations

Standard:

MoS2 Filled Polyamide

- Working Temp. Range -65°F to 275°F [-54°C to 135°C]
- Commonly used with greases, aliphatic hydrocarbon mineral and vegetable oils, and various hydraulic fluids. Avoid water based fluids.

Available:

Acetal (POM)

- Working Temp. Range -65°F to 275°F [-54°C to 135°C]
- Low water absorption

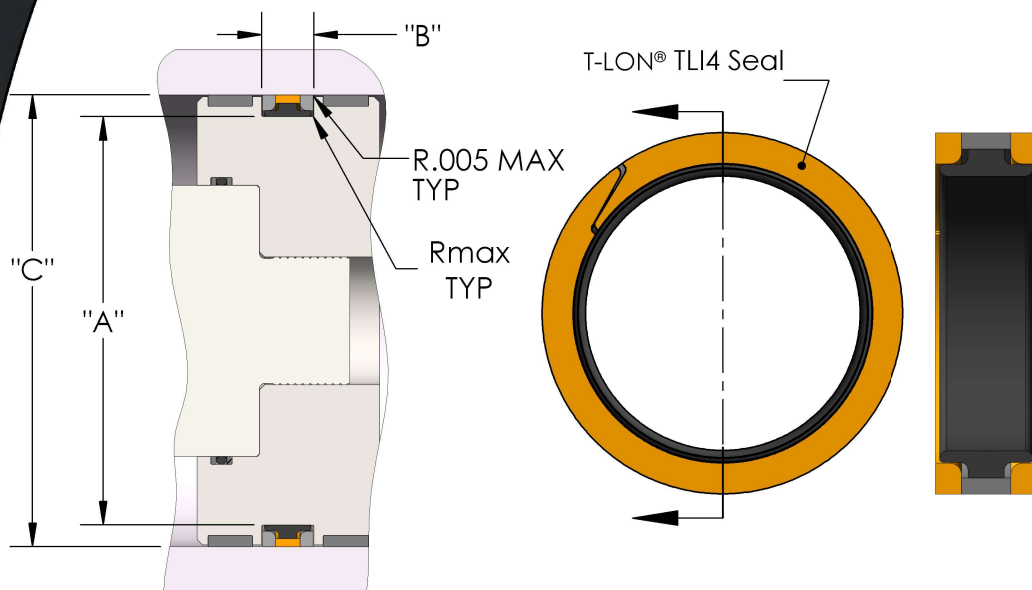
ORDERING INFORMATION

TLI4 -		-		-		-		-	
B	O	G	W	T	M	B	M	A	A
R	R	R	I	L	A	A	A	C	C
E	E	O	D	O	T	T	T	T	T
		V	H	N	E	R	R	R	R
		E		S	E	I	I	U	U
				A	A	A	A	P	P
				L	L	L	L	A	A
								L	L
								R	R
								I	I
								N	N
								G	G

Examples:
 "0500" = 5.00"
 "1250" = 12.50"
 "424" = .424"
 "579" = .579"
 "750" = .750"
 "21" = 40% BRONZE PTFE
 "31" = 15% GLASS/ 5%MoS2 PTFE
 "D4" = 40% BRONZE T-SMART® PTFE
 "PU" = POLYURETHANE

OMIT = MD Polyamide
 "D" = Machined Acetal

T-LON® "TLI4" Inch Series Cap-T Piston Seal



T-LON® "TLI4" Series Piston Seal Sizes (More Available Upon Request)
Groove dimensions for "TLI4" series

Size	Bore Dia (C)	Groove Dimensions			
		Dia. (A)	Width (B)		R _{max}
0100-424	1.000	+ .002 / -.000	0.625	0.424	0.020
0125-424	1.250		0.875		
0150-424	1.500		1.125		
0175-424	1.750		1.375		
0200-424	2.000		1.625		
0202-424	2.025		1.650		
0225-424	2.250		1.875		
0250-424	2.500	+ .003 / -.000	2.125	0.579	0.025
0275-424	2.750		2.375		
0300-579	3.000		2.520		
0325-579	3.250		2.770		
0350-579	3.500		3.020		
0375-579	3.750		3.270		
0400-579	4.000		3.520		
0425-579	4.250	+ .004 / -.000	3.770	0.750	0.035
0450-579	4.500		4.020		
0475-579	4.750		4.270		
0500-579	5.000		4.520		
0550-579	5.500		5.020		
0600-579	6.000		5.520		
0650-579	6.500		6.020		

Size	Bore Dia (C)	Groove Dimensions			
		Dia. (A)	Width (B)		R _{max}
0500-750	5.000	+ .004 / -.000	4.271	± .002	0.035
0525-750	5.250		4.521		
0550-750	5.500		4.771		
0575-750	5.750		5.021		
0600-750	6.000		5.271		
0625-750	6.250		5.521		
0650-750	6.500		5.771		
0675-750	6.750	+ .005 / -.000	6.021	± .002	0.035
0700-750	7.000		6.271		
0725-750	7.250		6.521		
0750-750	7.500		6.771		
0775-750	7.750		7.021		
0800-750	8.000		7.271		
0825-750	8.250		7.521		
0850-750	8.500	+ .006 / -.000	7.771	+ .002 / -.003	0.035
0875-750	8.750		8.021		
0900-750	9.000		8.271		
0950-750	9.500		8.771		
1000-750	10.000		9.271		
1100-750	11.000		10.271		
1200-750	12.000		11.271		
1250-750	12.500	+ .006 / -.000	11.771	+ .002 / -.003	0.035
1300-750	13.000		12.271		
1400-750	14.000		13.271		
1500-750	15.000		14.271		
1550-750	15.500		14.771		
1600-750	16.000		15.271		
1650-750	16.500		15.771		
1700-750	17.000	+ .006 / -.000	16.271	+ .002 / -.003	0.035
1750-750	17.500		16.771		
1800-750	18.000		17.271		
1850-750	18.500		17.771		
1900-750	19.000		18.271		
1950-750	19.500		18.771		
2000-750	20.000		19.271		