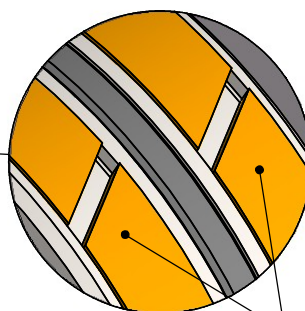
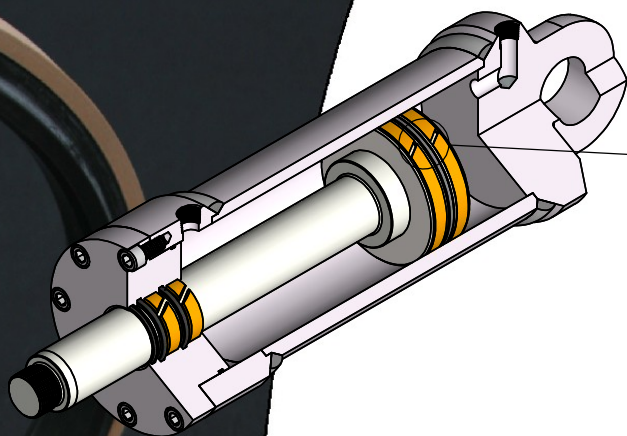




T-LON® "TAI"
Wear Tape

Advantages:

- Low friction
- Improve concentricity
- Prevent large extrusion gaps that cause seal failure
- Prevent galling
- Prevent squealing typically with Nylon bearings in certain applications

Description:

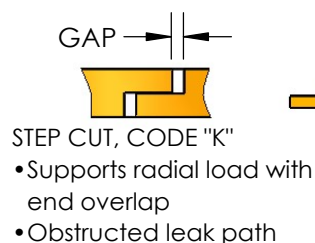
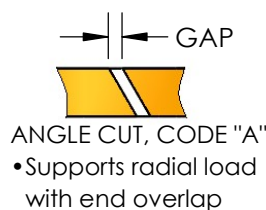
The TAI wear tape is skived filled PTFE film to guide a rod or piston to avoid metal on metal contact in dry or lubricated applications. A gap should intentionally be calculated in the cut length to allow fluid flow to and from the seal gland and prevent pressure trap or hydrolock between the seal and wear ring.

The TAI PTFE wear tape can be ordered cut to length with any of the following cuts: butt, angle (scarf), or step cut.

Calculating length of strips with proper gap:

$$\text{Length (in)} = (\text{ID} + \text{T}) \times (\pi - \text{E}) - \text{G}$$

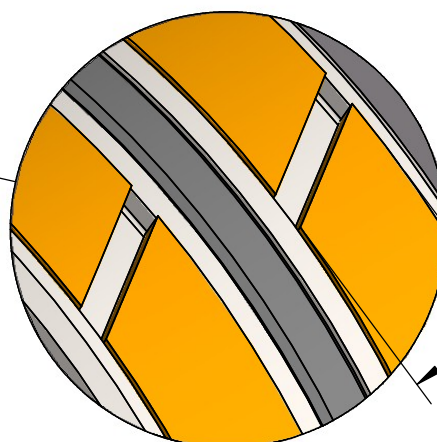
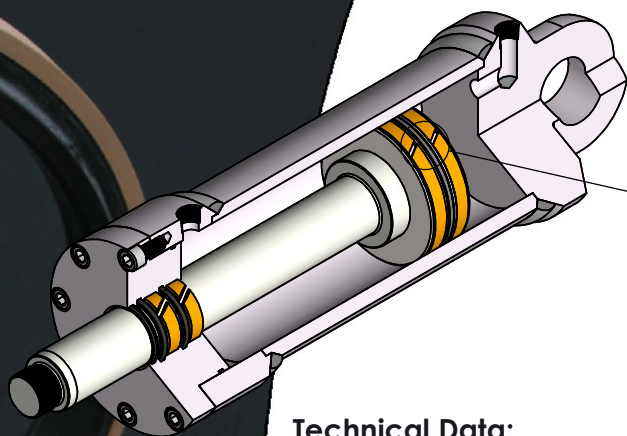
- ID = Rod Diameter / Piston Groove Diameter (in)
- T = Tape Thickness (in)
- π = Pi (3.1416)
- E = Expansion (.03 Average)
- G = Gap
0.030" for temp <250°F
0.080" for temp >250°F



Applications:

- Shocks and Struts
- Mobile Hydraulic Cylinders
- Pneumatic Piston Cylinders
- Agriculture Equipment
- Hydraulic Valves and Pumps
- Filling Machines
- Testing Machinery





Wear Tape Width

Technical Data:

The T-LON® PTFE wear tape compound and width determines allowable radial load and velocity ranges

- Velocity: Up to 50 ft/s
- Radial Load: See Calculation (Max velocity and radial load cannot be used together)
- Temp. Range: -400°F to 550°F (Above 250°F, compressive strength decreases reducing radial load capability)

Most Common:

CAR/GRAPHITE FILLED PTFE ("15")

- High compressive strength/wear resistance
- Chemical resistant and used in applications with minimal to no lubrication

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

- High compressive strength/wear resistance (More bronze content improves these properties).
- Low abrasive features

GLASS/MoS2 FILLED PTFE ("31")

- Good wear resistance for parts with rougher surface finish
- Chemical resistant and used in applications with minimal to no lubrication

Calculating Tape Width using Bearing Stress Calculation:

$$\text{Width (in)} = \frac{F \times FS}{ID \times C}$$

- F = Radial Force (lb)
- FS = Factor of Safety (2 Min. recommended)
- ID = Rod Diameter / Piston Groove Diameter (in)
- C = Wear Tape Compressive Strength (psi, See Table 1)

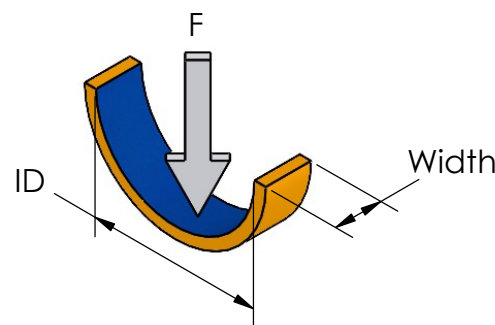
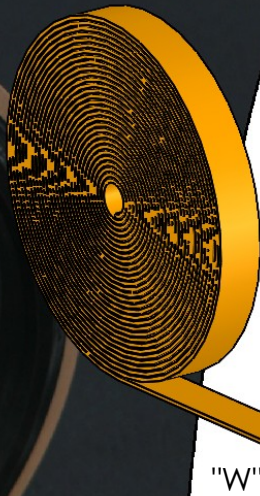
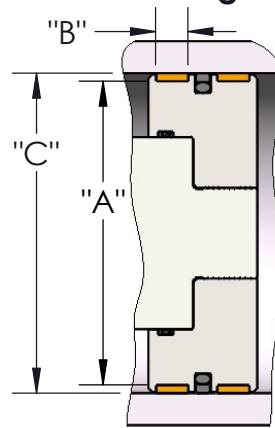


Table 1: Compressive Strengths

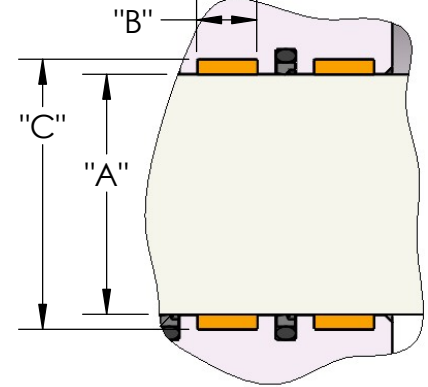
T-LON MAT'L		Compressive Strength "C" @ 1% Strain and 73°F (psi)
-15	25% Carbon Graphite PTFE	1300
-21	40% Bronze PTFE	1200
-22	60% Bronze PTFE	1500
-31	15% Glass / 5% MoS2 PTFE	1200



Piston Configuration:



Rod Configuration:



T-LON® "TAI" Series Wear Tape

**Tape dimensions and tolerances for "TAI" Series
(More Sizes and Tighter Tolerance "T" Available Upon Request)**

Available Thickness Range: 0.005" - 0.157"

Available Width Range: 0.060" - 8.500"

Size (Thickness)	Thickness (T)	Tolerance
TAI-015-XXXX	0.015	+.000/-.002
TAI-031-XXXX	0.031	+.000/-.002
TAI-047-XXXX	0.047	+.000/-.003
TAI-063-XXXX	0.063	+.000/-.003
TAI-078-XXXX	0.078	+.000/-.004
TAI-094-XXXX	0.094	+.000/-.005
TAI-109-XXXX	0.109	+.000/-.005
TAI-125-XXXX	0.125	+.000/-.006

Size (Width)	Width (W)	Tolerance
TAI-XXX-1000	UP TO 1"	+.000/-.010
TAI-XXX-2000	UP TO 2"	+.000/-.020
TAI-XXX-3000	UP TO 3"	+.000/-.030
TAI-XXX-4000	UP TO 4"	+.000/-.040
TAI-XXX-5000	UP TO 5"	+.000/-.060
TAI-XXX-6000	UP TO 6"	+.000/-.080
TAI-XXX-7000	UP TO 7"	+.000/-.100
TAI-XXX-8500	UP TO 8.5"	+.000/-.120

Gland dimensions for "TAI" Series

"Piston Configuration"		
Bore Dia. (C)	Groove Dia. (A)	Groove Width (B)
+.002 / -.000	+.000 / -.002	+.010 / -.000
C	C - 2(T)	W + .010"

"Rod Configuration"		
Rod Dia. (A)	Groove Dia. (C)	Groove Width (B)
+.000 / -.002	+.002 / -.000	+.010 / -.000
A	A + 2(T)	W + .010"

ORDERING INFORMATION

For cut-to-length options, contact T-Lon sales

TAI - _____ - _____ - _____

T
A
P
E

"063" = .063" Thick
"125" = .125" Thick

"0250" = 0.250" Wide
"2125" = 2.125" Wide

T
A
P
E

"W"

M
A
T
E
R
I
A
L

"15" = 25% CAR/GRAPHITE PTFE
"21" = 40% BRONZE PTFE
"22" = 60% BRONZE PTFE
"31" = 15% GLASS/ 5% MoS2 PTFE