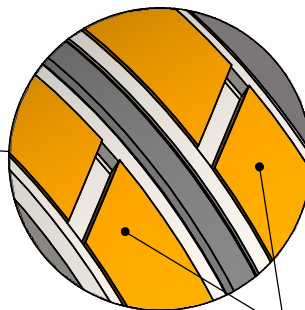
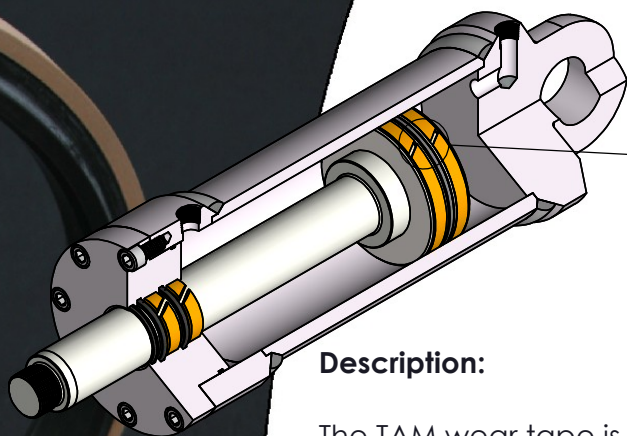




T-LON® "TAM"
Wear Tape

Description:

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

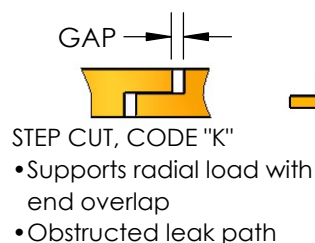
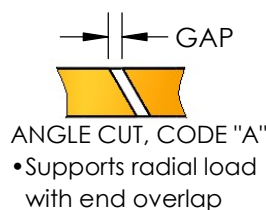
Advantages:

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

Calculating length of strips with proper gap:

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

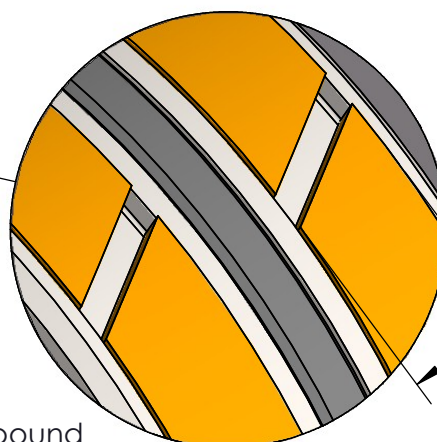
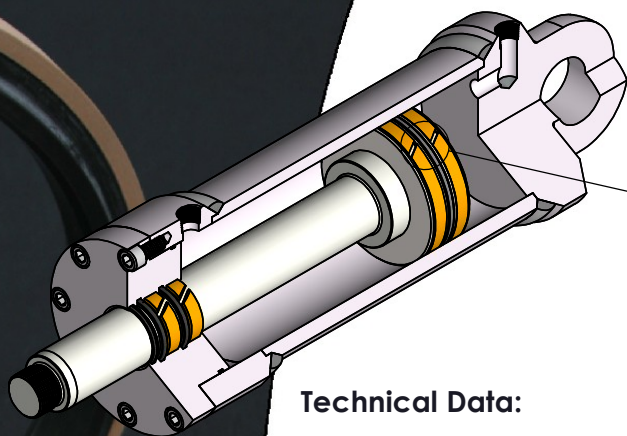
- ID = Rod Diameter / Piston Groove Diameter (mm)
- T = Tape Thickness (mm)
- π = Pi (3.1416)
- E = Expansion (.03 Average)
- G = Gap
0.8 mm for temp < 120°C
2.0 mm for temp > 120°C



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 15 m/s
- Radial Load: See Calculation (Max velocity and radial load cannot be used together)
- Temp. Range: -240°C to 285°C (Above 120°C, 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:

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

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

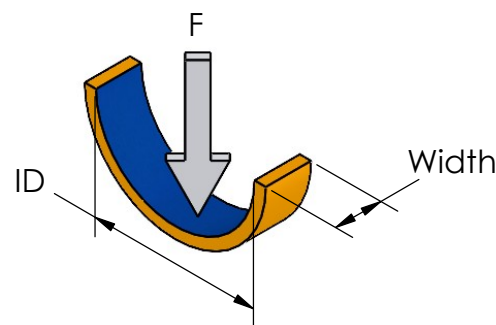
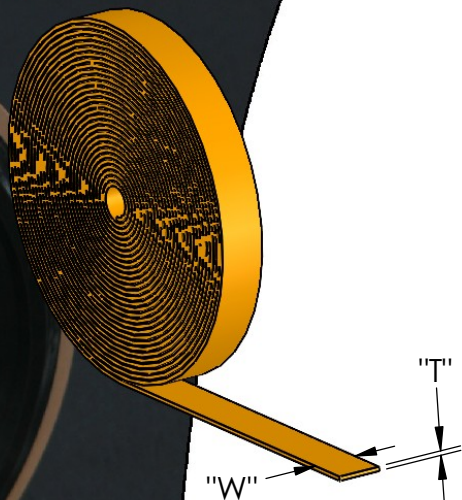
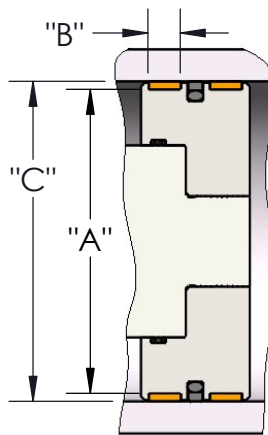


Table 1: Compressive Strengths

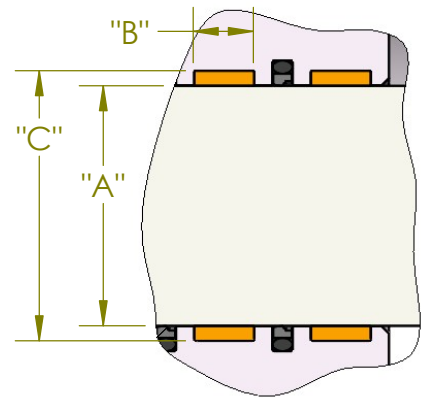
T-LON MAT'L		Compressive Strength "C" @ 1% Strain and 23°C (MPa)
-15	25% Carbon Graphite PTFE	9
-21	40% Bronze PTFE	8.5
-22	60% Bronze PTFE	10.5
-31	15% Glass / 5% MoS2 PTFE	8.5



Piston Configuration:



Rod Configuration:



T-LON® "TAM" Series Wear Tape

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

Available Thickness Range: 0.13mm - 4.00mm

Available Width Range: 1.5mm - 215.0mm

Size (Thickness)	Thickness (T)	Tolerance
TAM-050-XXXX	0.50	+ .00 / - .05
TAM-100-XXXX	1.00	+ .00 / - .05
TAM-150-XXXX	1.50	+ .00 / - .08
TAM-200-XXXX	2.00	+ .00 / - .10
TAM-250-XXXX	2.50	+ .00 / - .13
TAM-300-XXXX	3.00	+ .00 / - .13
TAM-350-XXXX	3.50	+ .00 / - .15
TAM-400-XXXX	4.00	+ .00 / - .15

Size (Width)	Width (W)	Tolerance
TAM-XXX-0250	UP TO 25.0	+ .00 / - .25
TAM-XXX-0500	UP TO 50.0	+ .00 / - .50
TAM-XXX-0750	UP TO 75.0	+ .00 / - .75
TAM-XXX-1000	UP TO 100.0	+ .00 / - 1.00
TAM-XXX-1250	UP TO 125.0	+ .00 / - 1.50
TAM-XXX-1500	UP TO 150.0	+ .00 / - 2.00
TAM-XXX-1750	UP TO 175.0	+ .00 / - 2.50
TAM-XXX-2150	UP TO 215.0	+ .00 / - 3.00

Gland dimensions for "TAM" Series (dimensions in mm)

"Piston Configuration"		
Bore Dia. (C)	Groove Dia. (A)	Groove Width (B)
+ .05 / - .00	+ .00 / - .05	+ .20 / - .00
C	C - 2(T)	W + .20mm

"Rod Configuration"		
Rod Dia. (A)	Groove Dia. (C)	Groove Width (B)
+ .00 / - .05	+ .05 / - .00	+ .20 / - .00
A	A + 2(T)	W + .20mm

ORDERING INFORMATION

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

TAM - _____

T
A
P
K
E

"150" = 1.50mm Thick
"400" = 4.00mm Thick

"0090" = 9.0mm Wide
"0200" = 20.0mm 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