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T-Lon PTFE Sanitary Solutions

T-Lon Products, Inc has manufactured PTFE sanitary sealing solutions since 1979. With the strict guidelines in food and medical processing, T-Lon's PTFE compounds meet the demanding environments and regulations placed on gaskets.

Why use PTFE for sanitary gasket applications?

1. Wide application temperature range, -450°F to 550°F
2. CIP(Clean-in-place)/SIP(Sanitize-in-place) compatible
3. Chemically Inert to media
4. Compliance to FDA / EU Standards
5. Compliance to USP Class VI
6. Tough properties for repeated duty cycles

Standard PTFE solutions for sanitary gaskets use T-LON 01 that can handle the harsh chemicals and moderate temperature range and T-LON 53 to improve long term sealability and increase the temperature range

T-LON 01 (Virgin PTFE)

- Typically used -100°F to 500°F
- Color: White

T-LON 53 (Modified PTFE)

- Typically used -400°F to 500°F
- Color: Transparent White



X-ray Inspectable / Metal Detectable Compounds

The FDA **Food Safety Modernization Act (FSMA)** mandated standards to practice food safety prevention in processing. This created a rise in in-process x-ray inspections and a demand for sealing compounds. T-Lon's development team successfully implemented T-LON 49, T-LON E4, and T-LON E5 to help processors comply to these new standards.

T-LON 49 (Stainless steel filled PTFE)

- Typically used -320°F to 550°F
- Seals long term without re-tightening
- Metal detectable (magnetic)
- X-ray inspectable
- Color: Gray

T-LON E4 (Stainless steel filled PTFE with additional anti-static and x-ray detectable additive)

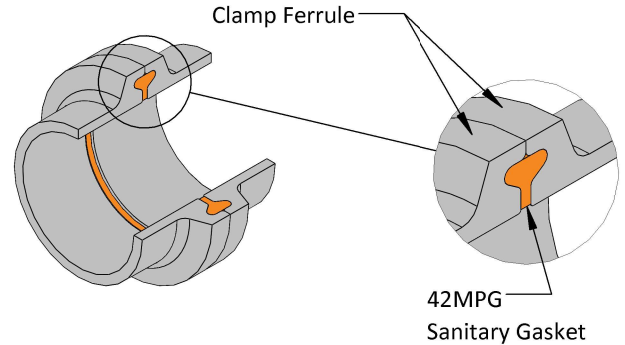
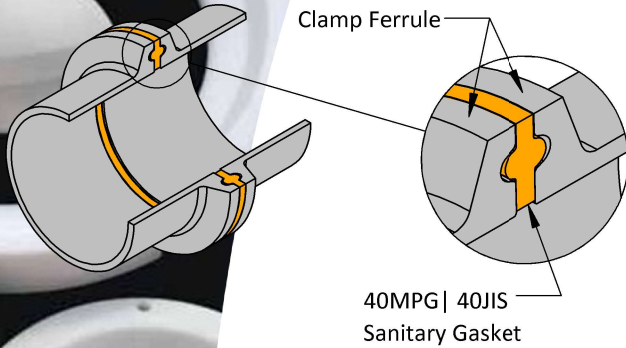
- Typically used -320°F to 550°F
- Seals long term without re-tightening
- Metal detectable (magnetic)
- Additional X-ray inspectable additive
- Conductive for anti-static app's
- Color: Black

T-LON E5 (Stainless steel filled PTFE with additional x-ray detectable additive)

- Typically used -320°F to 550°F
- Seals long term without re-tightening
- Metal detectable (magnetic)
- Additional X-ray inspectable additive
- Color: Blue



Tri-Clamp Gaskets



T-LON offers FDA compliant standard and custom tri-clamp sanitary gaskets. Tri-clamp sanitary gaskets can be made using materials that comply with FDA 21 CFR 177.1550 and USP class VI testing protocol. Virgin PTFE and PTFE compounds designed for metal detectability, x-ray detectability, and anti-static are readily available.

Tri-clamp sanitary gaskets are used widely in Food, Dairy, Beverage, Biotech, Pharmaceutical, and all other Sanitary Process industries to seal tri-clamp connections in sanitary pipe lines.

Custom profiles and sizes available upon request.

Advantages:

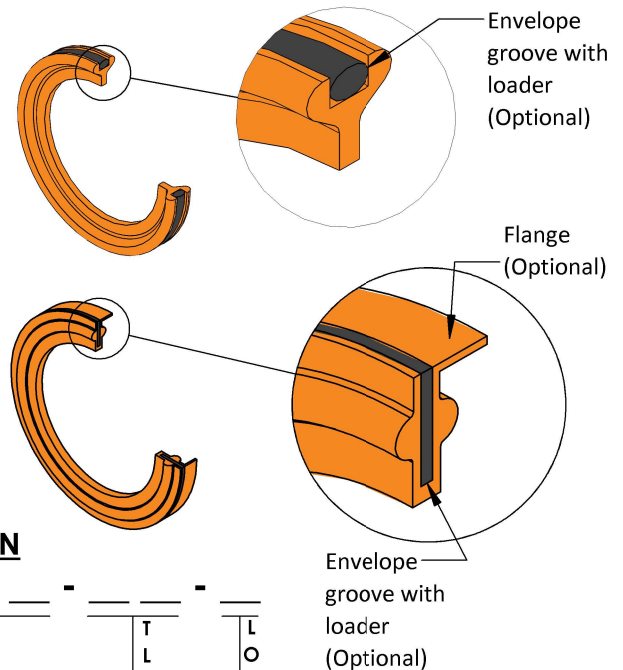
- Ideal for CIP/SIP Applications
- Chemically Inert
- Wide Temperature Range

Envelope Grooves (Optional):

Benefit from the chemical/thermal resistance from the PTFE and the elastomeric characteristics of EPDM or FKM.

Flange (Optional):

A flange can be added to the 40MPG | 40JIS style gaskets to help aid in installation.



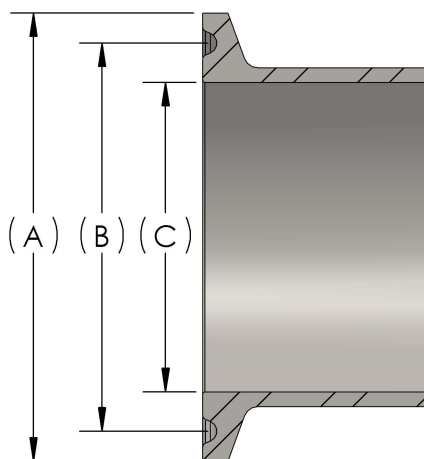
ORDERING INFORMATION

SERIES	ENVIRONMENTAL	FLANGE	SIZE	T-LON MATERIAL	LOADER
40MPG 40JIS 42MPG (SEE SHT 4)	OPTION	OPTION	Examples: "0050" = 1/2" "0075" = 3/4" "0100" = 1" "0400" = 4" (SEE SHT 4)		OMIT IF NO LOADER REQ'D "E" = EPDM "V" = FKM
OMIT IF NO ENVELOPE GROOVES REQ'D "E" = ENVELOPE GROOVES		OMIT IF NO FLANGE IS REQ'D "F" = FLANGE		"01" = VIRGIN PTFE "53" = VIRGIN MOD. PTFE "49" = X-ray/Metal Detectable PTFE, Gray "E4" = Anti-static & X-ray/Metal Detectable PTFE, Black "E5" = X-ray/Metal Detectable PTFE, Blue	

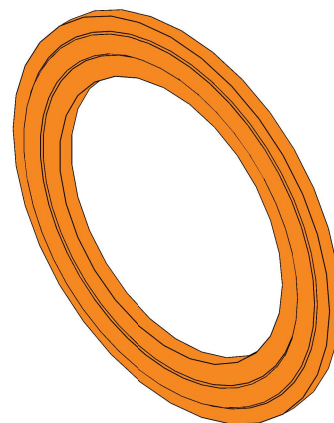
Tri-Clamp Gasket Series, Sizes, and Ferrule Dimensions

40MPG Series, ASME BPE, (in)

Size	Flange Dia. (A)	Bead Groove Dia. (B)	I.D. Bore (C)
0100	1.984	1.718	0.870
0150	1.984	1.718	1.370
0200	2.516	2.218	1.870
0250	3.047	2.781	2.370
0300	3.579	3.281	2.870
0400	4.682	4.344	3.834
0600	6.562	6.156	5.782
0800	8.602	8.156	7.782
1000	10.570	10.156	9.760
1200	12.570	12.156	11.760

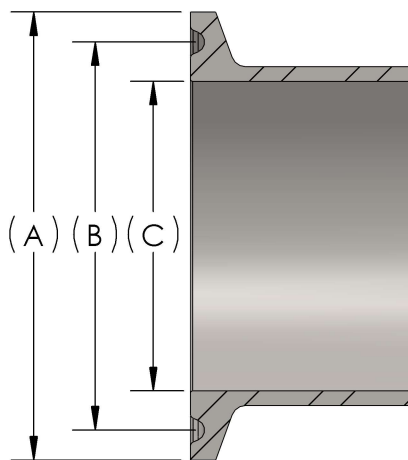


"40MPG" Sanitary Gaskets

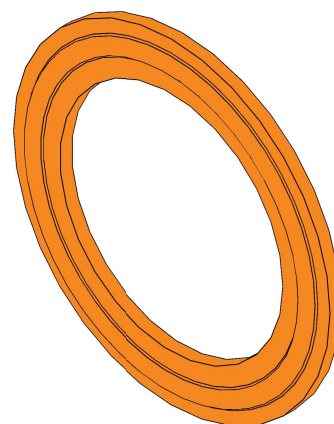


40JIS Series, JIS G3447, (in[mm])

Size	Flange Dia. (A)	Bead Groove Dia. (B)	I.D. Bore (C)
0100	1.988 [50.5]	1.713 [43.5]	0.906 [23]
0150	1.988 [50.5]	1.713 [43.5]	1.406 [35.7]
0200	2.520 [64]	2.224 [56.5]	1.882 [47.8]
0250	3.051 [77.5]	2.776 [70.5]	2.343 [59.5]
0300	3.583 [91]	3.287 [83.5]	2.846 [72.3]
0400	4.685 [119]	4.331 [110]	3.843 [97.6]

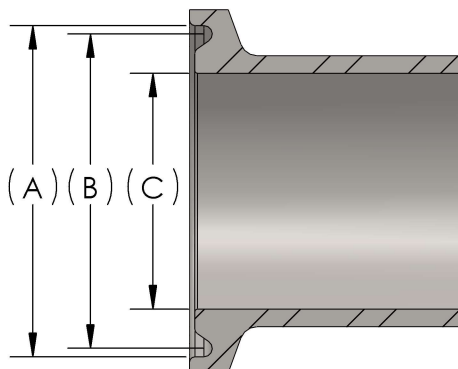


"40JIS" Sanitary Gaskets

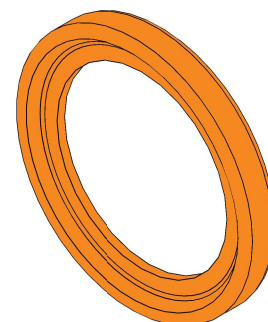


42MPG Series, ASME BPE, (in)

Size	Ref. Dia. (A)	Bead Groove Dia.	I.D. Bore (C)
0050	0.862	0.800	0.370
0075	0.862	0.800	0.620



"42MPG" Sanitary Gaskets



FOR OTHER SIZES AND CUSTOM DESIGNS CONTACT T-LON FOR A QUOTE.

Bevel Seat Gaskets

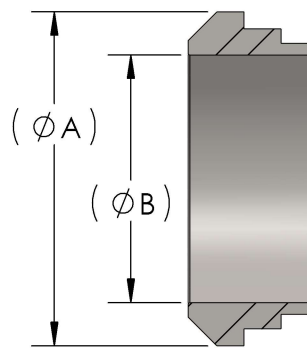
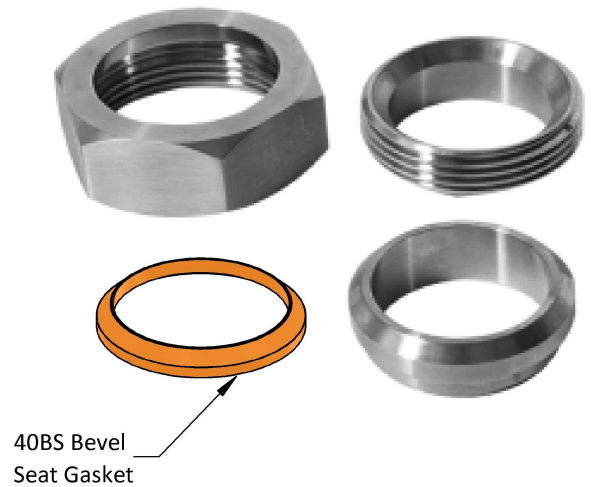
Bevel seat gaskets can be made using materials that comply with FDA 21 CFR 177.1550 and USP class VI testing protocol. Virgin PTFE and PTFE compounds designed for metal detectability, x-ray detectability, and anti-static are readily available.

Bevel seat gaskets are used widely in Food, Dairy, Beverage, Biotech, Pharmaceutical, and all other Sanitary Process industries to seal bevel seat fittings in sanitary pipe lines.

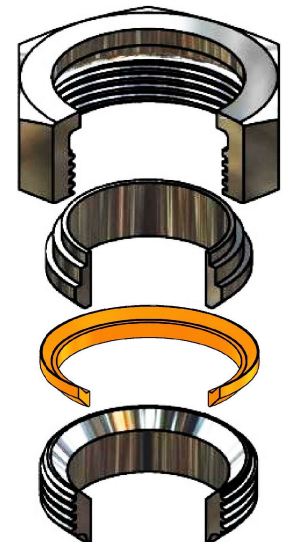
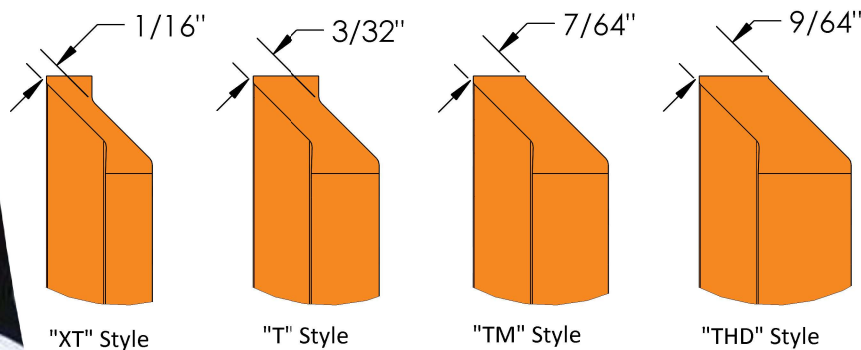
Advantages:

- Ideal for CIP/SIP Applications
- Chemically Inert
- Wide Temperature Range

Four different styles, "XT" | "T" | "TM" | "THD" as shown below, are offered depending on user assembly stack-up preference



40BS Series, (in)		
Size	Ferrule O.D. (A)	I.D. Bore (B)
0100	1.316	0.870
0150	1.848	1.370
0200	2.380	1.870
0250	2.912	2.370
0300	3.444	2.870
0400	4.508	3.834



ORDERING INFORMATION

40BS - - - - -			
S E R I E S	S I Z E	S T Y L E	T L O N M A T E R I A L
40BS	Examples: "0200" = 2" "0400" = 4"	Examples: "XT" "T" "TM" "THD"	

"01" = VIRGIN PTFE
 "53" = VIRGIN MOD. PTFE
 "49" = X-ray/Metal Detectable PTFE, Gray
 "E4" = Anti-static & X-ray/Metal Detectable PTFE, Black
 "E5" = X-ray/Metal Detectable PTFE, Blue

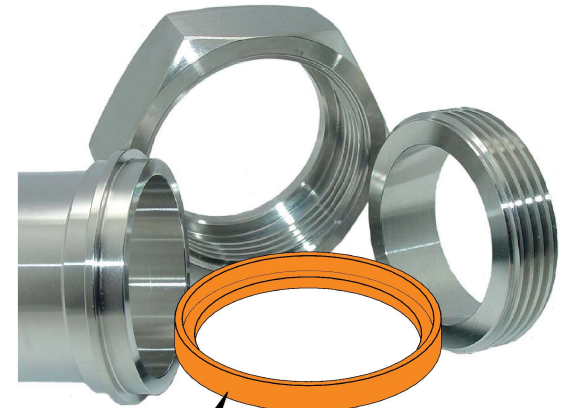
John Perry Gaskets

John Perry gaskets can be made using materials that comply with FDA 21 CFR 177.1550 and USP class VI testing protocol. Virgin PTFE and PTFE compounds designed for metal detectability, x-ray detectability, and anti-static are readily available.

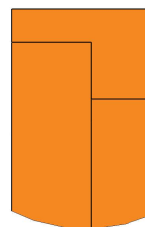
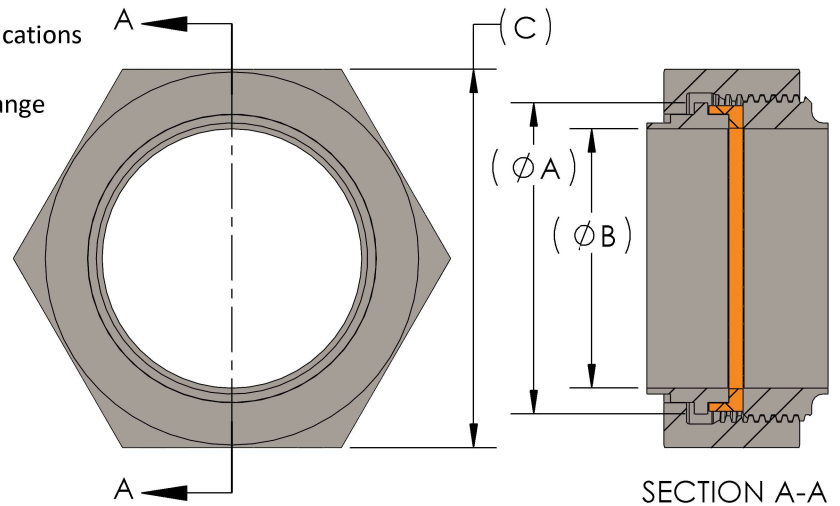
John Perry gaskets are used widely in Food, Dairy, Beverage, Biotech, Pharmaceutical, and all other Sanitary Process industries to seal John Perry fittings in sanitary pipe lines.

Advantages:

- Ideal for CIP/SIP Applications
- Chemically Inert
- Wide Temperature Range



40JPG John Perry Gasket



"40JPG" Cross-Section

ORDERING INFORMATION

40JPG - - - - -

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40JPG

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Examples:
"0200" = 2"
"0400" = 4"

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O
N
M
A
T
E
R
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A
L

"01" = VIRGIN PTFE
 "53" = VIRGIN MOD. PTFE
 "49" = X-ray/Metal Detectable PTFE, Gray
 "E4" = Anti-static & X-ray/Metal Detectable PTFE, Black
 "E5" = X-ray/Metal Detectable PTFE, Blue

40JPG Series, (in)			
Size	Ferrule O.D. (A)	I.D. Bore (B)	Nut Hex. (C)
0100	1.316	0.870	1.812
0150	1.848	1.370	2.406
0200	2.380	1.870	3.000
0250	2.912	2.370	3.594
0300	3.444	2.870	4.188
0400	4.508	3.834	5.438

I-Line Gaskets

I-Line gaskets can be made using materials that comply with FDA 21 CFR 177.1550 and USP class VI testing protocol. Virgin PTFE and PTFE compounds designed for metal detectability, x-ray detectability, and anti-static are readily available.

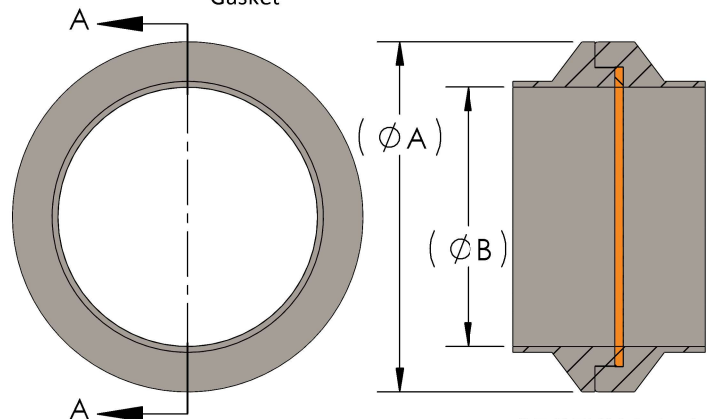
I-Line gaskets are used widely in Food, Dairy, Beverage, Biotech, Pharmaceutical, and all other Sanitary Process industries to seal I-Line fittings in sanitary pipe lines.

Advantages:

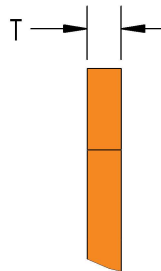
- Ideal for CIP/SIP Applications
- Chemically Inert
- Wide Temperature Range



40IT I-Line Gasket



SECTION A-A



"40IT" Cross-Section

40IT Series, (in)		
Size	Ferrule O.D. (A)	I.D. Bore (B)
100	2.000	0.870
150	2.000	1.370
200	2.645	1.870
250	3.312	2.370
300	3.875	2.870
400	4.875	3.834
600	7.500	5.782
800	9.500	7.782

ORDERING INFORMATION

40IT	SIZE	GASKET	T L O N
S E R I E S	E	A H S K "T"	M A T E R I A L
40IT	Examples: "200" = 2" "400" = 4"	Examples: "065" = .065" "094" = .094" "125" = .125"	

"01" = VIRGIN PTFE
 "53" = VIRGIN MOD. PTFE
 "49" = X-ray/Metal Detectable PTFE, Gray
 "E4" = Anti-static & X-ray/Metal Detectable PTFE, Black
 "E5" = X-ray/Metal Detectable PTFE, Blue

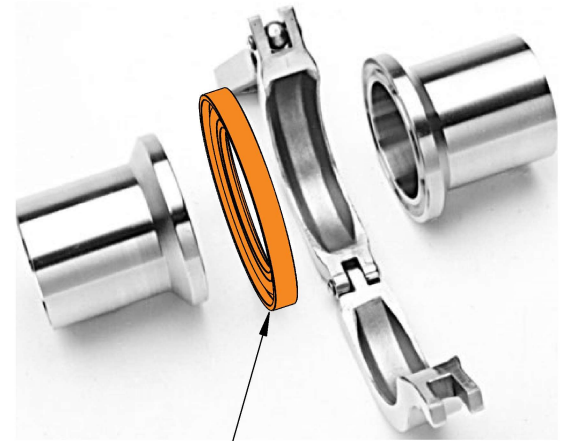
Q-Line Gaskets

Q-Line gaskets can be made using materials that comply with FDA 21 CFR 177.1550 and USP class VI testing protocol. Virgin PTFE and PTFE compounds designed for metal detectability, x-ray detectability, and anti-static are readily available.

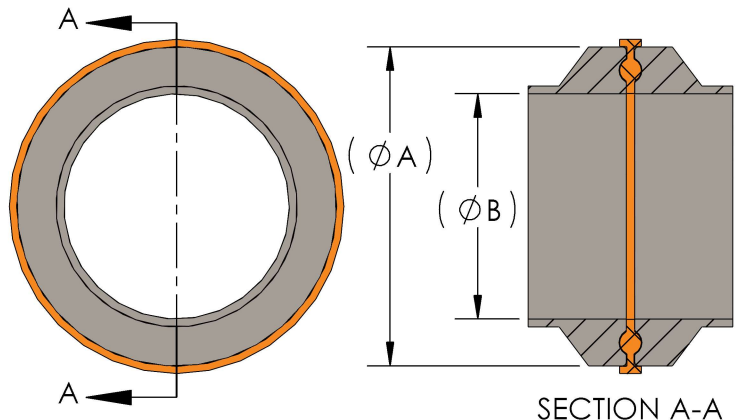
Q-Line gaskets are used widely in Food, Dairy, Beverage, Biotech, Pharmaceutical, and all other Sanitary Process industries to seal Q-Line fittings in sanitary pipe lines.

Advantages:

- Ideal for CIP/SIP Applications
- Chemically Inert
- Wide Temperature Range



40QT Q-Line Gasket



"40QT" Cross-Section

40QT Series, (in)		
Size	Ferrule O.D. (A)	I.D. Bore (B)
100	2.000	0.870
150	2.000	1.370
200	2.648	1.870
250	3.313	2.370
300	3.870	2.870
400	4.870	3.834

ORDERING INFORMATION

40QT -

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40QT

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Examples:
"200" = 2"
"400" = 4"

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N
'
L

"01" = VIRGIN PTFE
 "53" = VIRGIN MOD. PTFE
 "49" = X-ray/Metal Detectable PTFE, Gray
 "E4" = Anti-static & X-ray/Metal Detectable PTFE, Black
 "E5" = X-ray/Metal Detectable PTFE, Blue

Valve Seats

T-Lon valve seats come in many shapes and sizes up to 20" in diameter. They can be made using materials that comply with FDA 21 CFR 177.1550 and USP class VI testing protocol. Virgin PTFE and PTFE compounds designed for metal detectability, x-ray detectability, and anti-static are readily available. Contact T-Lon to choose a compound appropriate for your application.

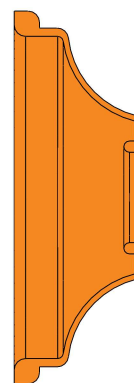
T-Lon valve seats are used widely in nearly every industry including Food & Beverage, Pharmaceutical, Oil&Gas, Agriculture, Construction, Industrial, and Aerospace. Designs often come from OEM's but T-Lon engineering offers design assistance for proper function and manufactureability. Depending on size and geometry, T-Lon offers cost-effective solutions by manufacturing valve seats either molding complete or molding with post-machining operations.

Examples:

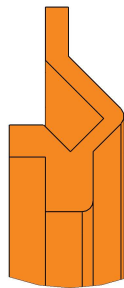
- Stem Seats
- Ball Valve Seats
- Butterfly Valve Seats
- Gate Valve Seats
- Diaphragms for Diaphragm Valves
- Needle Valve Seats

Advantages:

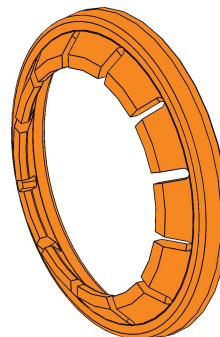
- Ideal for CIP/SIP Applications
- Chemically Inert
- Wide Temperature Range
- Low friction for valve actuation



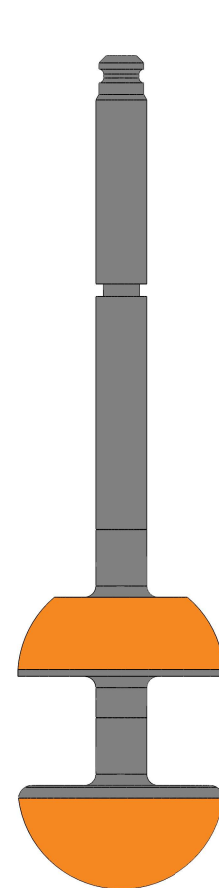
Diaphragm



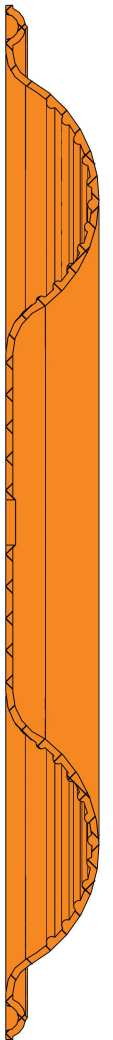
Butterfly Valve Seat



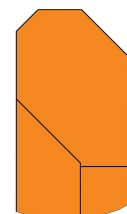
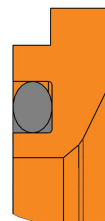
Stem Seat
Snap-on Design



Stem Seat
US Patent No,
11,035,486



Diaphragm



Ball Valve Seat Designs