

**TOTAL PIPING SOLUTIONS, INC.**

**TRIPLE-TAP<sup>®</sup>**

**Extended Range Stainless Steel**

**Line Stop Tapping Sleeve**

**Technical Specifications**

**Controlled Document: ENGTS-03/050818**

**May 2018**

## **TRIPLE TAP® Extended Range Stainless Steel Line Stop Tapping Sleeve Specifications**

1. **Pressure Rating:**

The pressure rating of a tapping sleeve assembly is limited by the pressure rating of the flange assembled to the tapping sleeve and/or the pressure rating of the pipe on which the tapping sleeve is installed. Hence, there are different pressure ratings depending upon the installation conditions. Below is a guide for the maximum pressure rating based on flange type and installation conditions.

4" to 12" Diameter with ANSI Class 150 flange - 175 PSI maximum working pressure, 265 PSI test pressure for full circumferential seal. Provides a 1.5x safety factor.  
260 PSI maximum working pressure, 390 psi test pressure for outlet/branch seal only.  
Provides 1.5x safety factor.

14" to 18" IPS Diameter with ANSI Class 150 flange - 175 PSI maximum working pressure, 265 PSI test pressure for full circumferential seal. Provides a 1.5x safety factor.  
225 PSI maximum working pressure, 350 PSI test pressure for outlet/branch seal only.  
Provides 1.5x safety factor.

18" DI to 24" DI Diameter with ANSI Class 150 flange: 175 PSI maximum working pressure, 265 PSI test pressure for outlet/branch seal only. Provides a 1.5x safety factor.
2. **Temperature Rating:**

Maximum continuous working temperature range is 180° F.  
Please contact factory if higher temperature service is required.
3. **Gasket:**

NSF-61 Approved NBR Rubber – For water service
4. **Shell:**

18-8 Stainless Steel, Passivated for Corrosion Protection.  
4 to 8-inch diameters - 12 gage thickness  
10 to 30-inch diameters – 10 gage thickness
5. **Conductor Pipe:**

TPS Triple Tap® Stainless Steel Tapping Sleeves are designed to be a universal product for use with Steel, Cast Iron, Ductile Iron, PVC, High Density Polyethylene, Asbestos Cement, and copper main conductor pipe materials. 4"-16" Dia. Tapping sleeves with up to 12" Branch are approved for use on all pipe materials including HDPE.  
Tapping sleeves with 14" & 16" Outlets as well as all 19.37"-30.35" diameter tapping sleeves are not qualified for use on High Density Polyethylene pipe at this time.
6. **Sealing Compatibility:**

TPS Triple Tap® Stainless Tapping Sleeves are designed to seal on the pipe branch and are designed to accommodate a pipeline full break occurring typically in ductile or cast-iron pipe at the point where the maximum material has been circumferentially removed from the drilled hole in size-on-size line taps.

**NOTE:** 19.37"-30.35" Dia. Tapping Sleeves are only rated for outlet sealing only. Beam break test not required as outlets/branches are smaller than conductor pipe.

## **TRIPLE TAP® Extended Range Stainless Steel** **Line Stop Tapping Sleeve Benefits**

1. Accommodates a maximum of 0.9 inch of diameter range.
2. No special tools required to install the sleeve.
3. Seals on the branch aperture and seals 360° around the pipe in case of a beam break.  
(See appropriate pressure ratings in specification section)
4. Larger diameter tapping sleeves incorporate shell tightening assembly per  
US Patent No. 8,857,858.
5. Completion plug diameters sized to pass thru standard valve bore (if required).
6. 3/4" test outlet to allow hydrostatic pressure test before tapping the pipe.
7. Available with both stainless steel and carbon steel flanges.
8. Debris cover includes O-ring seal for final assembly and closure.
9. Fluoropolymer coated Stainless Steel fasteners for torque and tension control.
10. Nitrile Butadiene Rubber (NBR) gaskets comply with NSF-61 specifications
11. Note: See Materials of Construction diagram for additional information.

**TOTAL PIPING SOLUTIONS, Inc.**  
**1760 Haskell Road**  
**P. O. Box 525**  
**Olean, NY 14760**  
**(716)372-0160**



# Triple Tap® Extended Range Stainless Steel Tapping Sleeve

## Table of Pipeline Diameters

Nominal Diameter	Lower Diameter	Upper Diameter	Available Branch Sizes	CTS	IPS	DIP	Pit Cast	AC 100	AC 150	AC 200
4"	4.45	5.13	4**		4.50	4.80	5.00			
4" os	4.74	5.61	4**			4.80	5.00	5.26	5.32	
5"	5.50	6.20	4**	6.13	5.56					5.57
6"	6.55	7.42	6**		6.63	6.90	7.10	7.40	7.37	
6" os	6.84	7.65	6**			6.90	7.10	7.40	7.37	7.60
8"	8.54	9.44	8**		8.63	9.05	9.30			
8" os	8.98	9.84	8**			9.05	9.30	9.57	9.62	9.79
10"	10.64	11.46	8,10*		10.75	11.10	11.40			
10" os	11.34	12.16	8,10*				11.40	11.77	12.12	12.12
12"	12.62	13.56	8,12		12.75	13.20	13.50			
12" os	13.65	14.42	8,12		14.00			14.04	14.38	14.38
14"	15.22	16.16	12		16.00	15.30	15.65	15.80		
14" os	16.18	16.92	12						16.73	16.88
16"	17.25	18.18	12		18.00	17.40	17.80	17.94		
16" os	18.42	19.23	12						18.97	19.19
18"	19.37	20.25	12		20.00	19.50	19.92			
20"	21.40	22.22	12			21.60	22.06			
24"	23.25	24.25	12		24.00					
24" os	25.60	26.40	12			25.80	26.32			

**Note:** For Size on Size Outlets 1/2" Undersize Shell Cutter is Required

\* Available with a Size on Size Type H Flange or 8" Type H Flange

\*\*10" branch with 12" Flange available.

**This product is proudly made in the USA.**

### Applicable Standards:

**ASTM A380-06** Standard Practice for Cleaning, Descaling, and Passivation of Stainless Steel Parts Equipment and Systems

**ASTM A967-05** Standard Specification for Chemical Passivation Treatments for Stainless Steel Parts.

**ANSI/AWWA C223-07** Fabricated Steel and Stainless Steel Tapping Sleeves

**MSS SP-60-2004** Connecting Flange Joint Between Tapping Sleeves and Tapping Valves

**NSF/ANSI STANDARD 61** - Drinking Water System Components

**ASTM D2000 - 12** Standard Classification System for Rubber Products...

**MSS SP-113-2012** Connecting Joints between Tapping Machines and Tapping Valves

**MSS SP-124-2012** Fabricated Tapping Sleeves

**ASTM D 2241 – 04a** Standard Specification for Poly(Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series)

**ANSI/AWWA C900-07** Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings 4 In. Through 12 In. for Water Transmission and Distribution

**ANSI/AWWA C906-07** Polyethylene (PE) Pressure Pipe and Fittings, 4 In.

Through 63 In. for Water Transmission and Distribution

**ANSI/AWWA C110/A21.10-08** Ductile Iron and Gray-iron Fittings

**ANSI/AWWA C111/A21.11-07** Rubber Gasketed Joints for Ductile Iron Pressure Pipe and Fittings

**ANSI/ASME B16.5** Pipe Flanges and Flanged Fittings

**ANSI/AWWA C228-08** Stainless Steel Pipe Flanges for Water Service


**ANSI/AWWA C207-13** Steel Pipe Flanges for Water Service

## Product Warnings:

  
Installation Instructions and Warning  
Tag for Tapping Sleeve

  
Permanent Block & Shim

**Caution :** Permanently block and shim tapping valve to insure weight load of pipe, valve, and tapping machine are not exerted on the tapping sleeve outlet. Failure to properly block and shim will cause line content leakage, tapping sleeve damage, property damage, and/or serious personal injury.

 <b>WARNING</b>	This product is not intended for use on natural gas piping or any other type of gas piping. To do so could result in escaping gas that could ignite and cause property damage, serious injury or death.
 <b>NATURAL GAS</b> <b>NO!</b>	
 <b>WARNING</b>	This is a non-restraining product. If pipe pullout can occur, proper anchoring of the pipe joint is required. Failure to anchor the pipe could result in the escape of line content, and may cause property damage, serious injury or death.
 <b>WARNING</b>	This product is intended for use on HDPE SDR-17 or greater wall thicknesses, and shall be used for buried service only. The TPS Triple Tap product line is not approved for above ground applications on HDPE or other plastic pipe.

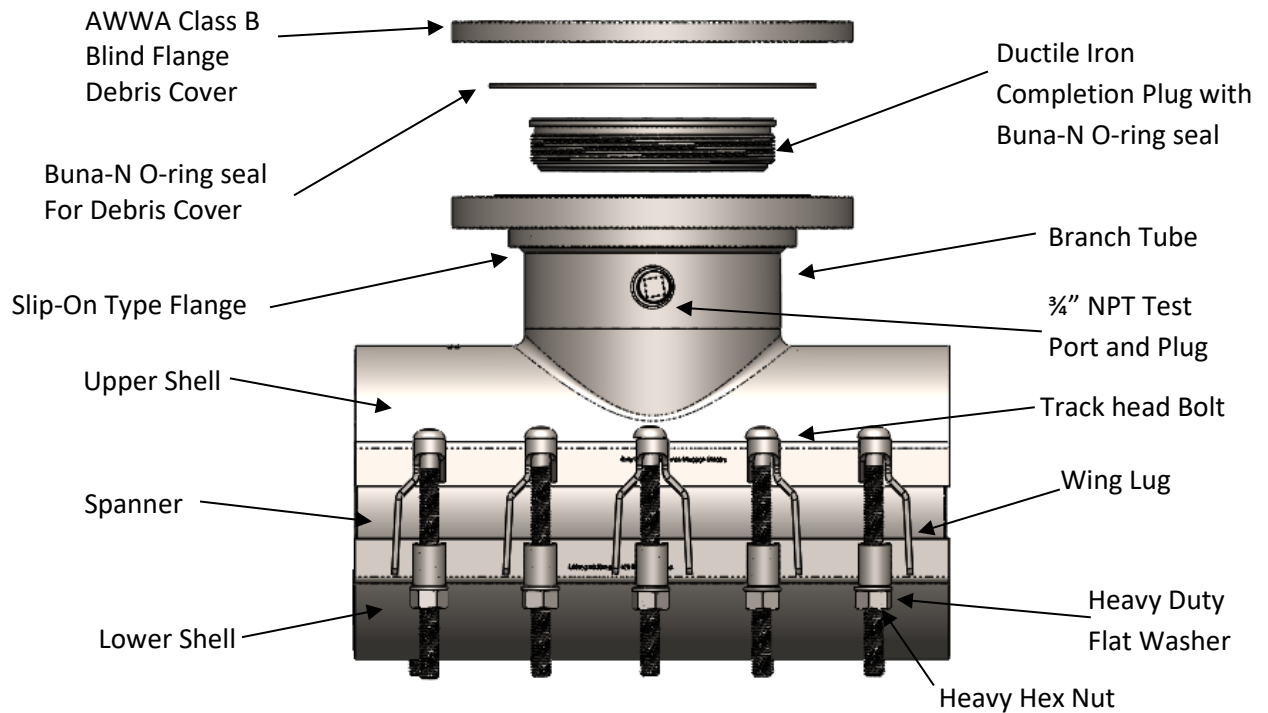
### Tapping Sleeve Reuse:

Due to spanner forming (creasing) and other permanent set deformations incurred in installation, tapping sleeves must not be reused until refurbished with new bolts and new gaskets at TPS.

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## Triple Tap® Extended Range Stainless Steel Line Stop Tapping Sleeve Specifications

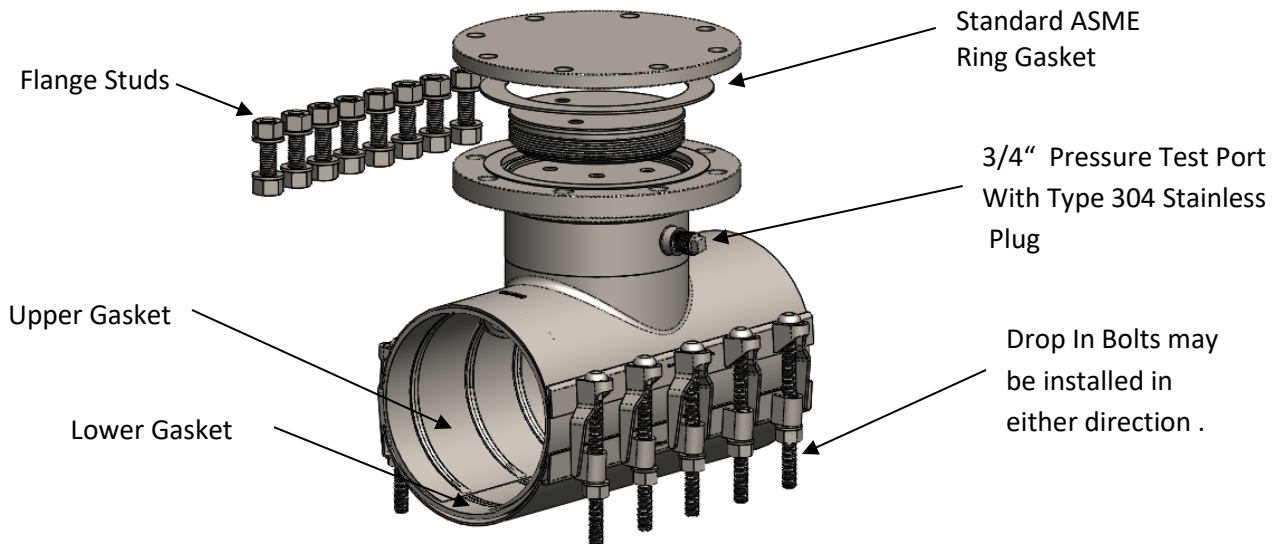


<b>Flange:</b>	Epoxy Coated Carbon Steel or 18-8 Type 304 Stainless Steel, Slip On, Bolt holes drilled to ANSI B16.5.
<b>Completion Plug</b>	ASTM A536 Grade 65-45-12 Ductile Iron, lubricated
<b>Branch Tube:</b>	18-8 Stainless Steel
<b>Upper Shell:</b>	10, 11 or 12 Gage 18-8 Type 304 Stainless Steel depending on diameter
<b>Lower Shell:</b>	10, 11 or 12 Gage 18-8 Type 304 Stainless Steel depending on diameter
<b>Upper Gasket</b>	Patent pending one piece matte gasket with integrated aperture seal and circumferential seal beads for a 360 degree seal.
<b>Lower Gasket</b>	Matte gasket with matching circumferential seal beads for a 360 degree seal.
<b>Alignment Lugs:</b>	18-8 Type 304 Stainless Steel
<b>Gaskets:</b>	Material: Nitrile Butadiene Rubber (NBR) Approved NSF-61
<b>Spanners:</b>	18-8 Type 304 Stainless Steel bridging spanner integrally molded into gasket,
<b>Test Port:</b>	18-8 Type 304 Stainless Steel ¾ Inch NPT Female Vent Port with 18-8 Stainless Steel Pipe Plug

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## Triple Tap® Extended Range Stainless Steel Line Stop Tapping Sleeve Specifications



- Studs:** Sized to match ASME B16.5 flange bolt specifications/requirements.
- Bolts:** Oval Neck Track head per ANSI/ASME B18.10  
5/8-11 UNC Rolled Thread  
18-8 Type 304 Stainless Steel per ASTM A-193 Grade B8  
Finish: Double Fluoropolymer coating. Bolts installable in either direction.
- Nuts:** Heavy Hex Nut 5/8-11 UNC Rolled Thread  
Type 316 High Temp Stainless Steel per ASTM A-194 Grade 8  
Finish: Double Fluoropolymer coated to prevent galling.
- Washers:** Heavy Duty 5/8 Inch Washer  
Material 18-8 Type 304 Stainless Steel  
Double Fluoropolymer coated to prevent galling
- Test Port:** ¾ Inch Welded 18-8 Type 304 Stainless Steel Test Port with ¾ Inch IPS Pipe Plug
- Debris Cover:** AWWA Class B Blind Flange -Black Epoxy Coated Per  
TPS Material Spec MS-1017

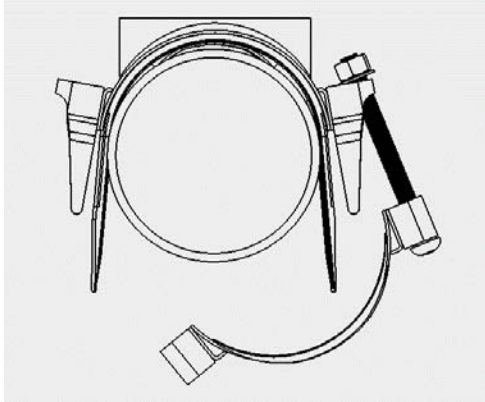
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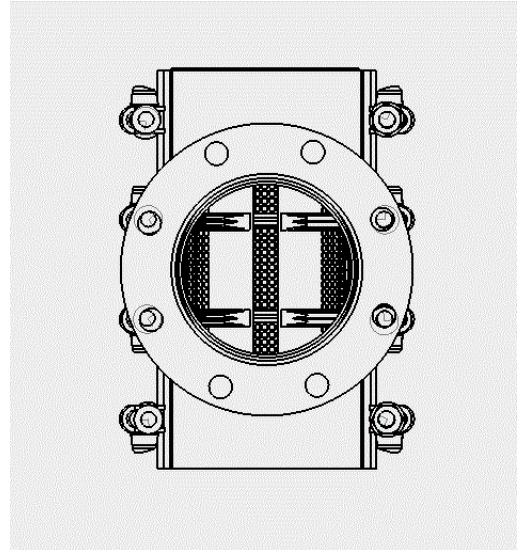


# Triple Tap® Extended Range Stainless Steel Line Stop Tapping Sleeve Specifications

## Features:



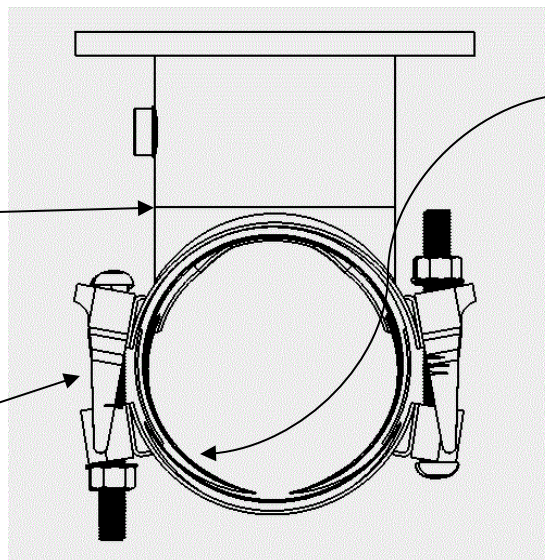
Hinge geometry provides extra opening/spreading range



Opposing seal beads in upper and lower gaskets provide secure 360 degree sealing against full break pipe. Shell, Aperture Seal and Seal Bead Geometry are Patent Pending.

Butt Weld 100 %  
Penetration for  
Fatigue Resistance

**Note:** Fasteners may be installed in either direction.



Specially contoured seal beads and molded aperture seal provide for extended range capabilities. Patent applied for.

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