

TOTAL PIPING SOLUTIONS, INC.

**TRIPLE-TAP[®] Extended Range
Stainless Steel Push Plug Line Stop
Tapping Sleeve Technical
Specifications**

Controlled Document: ENGTS-05/050818

May 2018

TRIPLE TAP® Extended Range Stainless Steel Push Plug 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" Dia meter 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 Dia meter 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 Dia meter 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 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


TRIPLE TAP® Extended Range Stainless Steel Push Plug 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. Other patents pending
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 ASME B16.21 ring gasket 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.

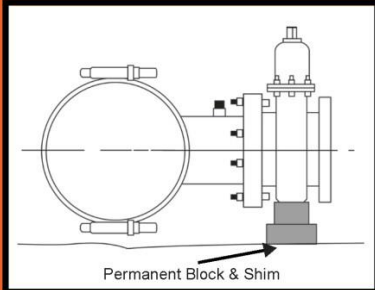
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Product Warnings:



Installation Instructions and Warning
Tag for Tapping Sleeve



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.

 WARNING	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.
 WARNING	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.
 WARNING	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.

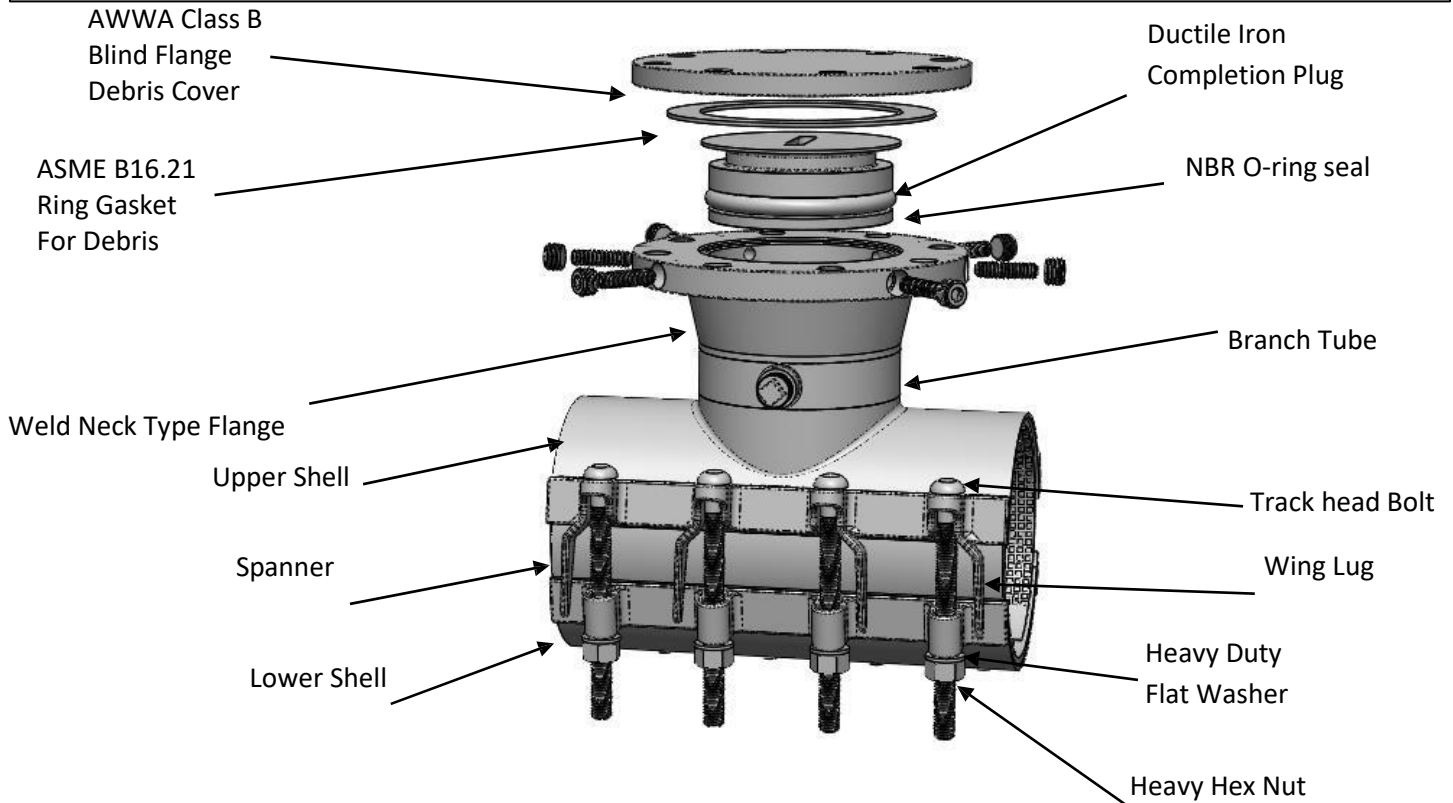
Tapping Sleeve Reuse:

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 Push Plug Line Stop Tapping Sleeve Specifications

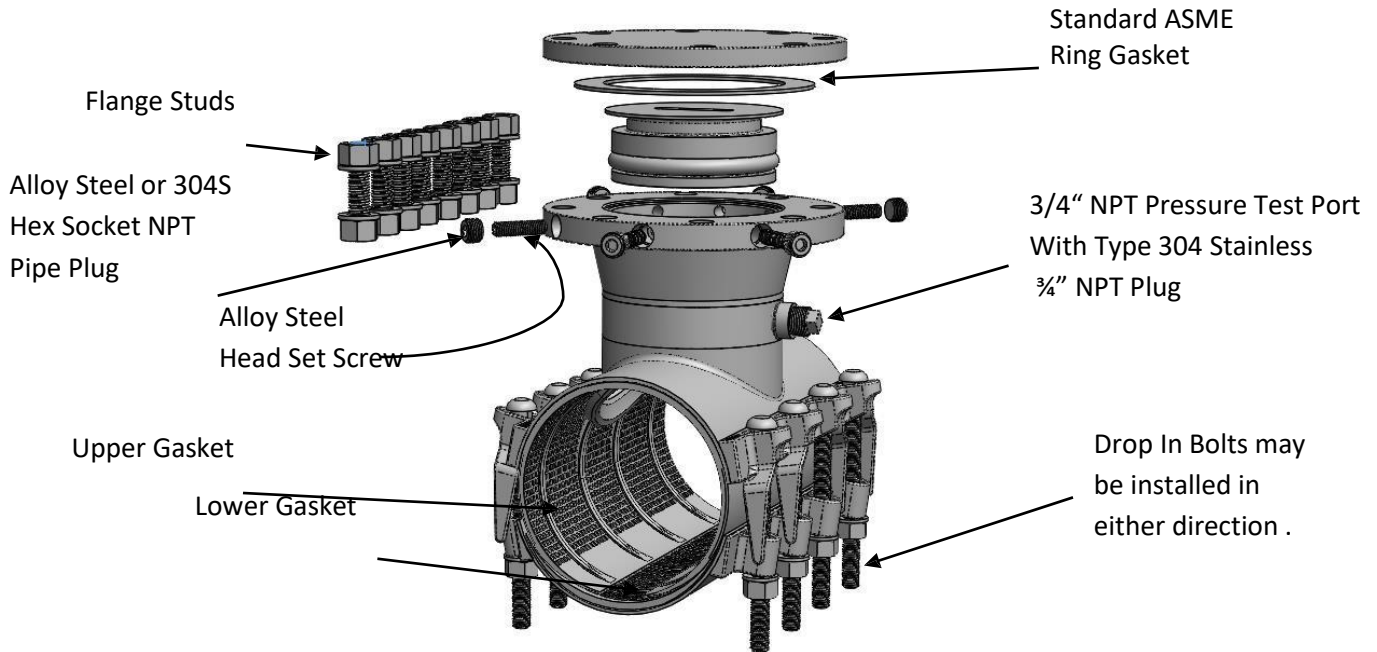


Flange:	Epoxy Coated Carbon Steel or 18-8 Type 304 Stainless Steel, Bolt holes drilled to ANSI B16.5.
Completion Plug	ASTM A536 Grade 65-45-12 Ductile Iron, lubricated
Branch Tube:	18-8 Stainless Steel
Upper Shell:	10, 11 or 12 Gage 18-8 Type 304 Stainless Steel depending on diameter
Lower Shell:	10,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

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Flange 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

Hex Socket Pipe Plugs: Alloy Steel or 304S Hex Socket NPT Pipe Plugs with Thread Sealant

Set Screws: Alloy steel set screws exceed ASTM F912 requirements

Test Port: 3/4 Inch NPT Welded 18-8 Type 304 Stainless Steel Test Port
with 3/4 Inch NPT Pipe Plug

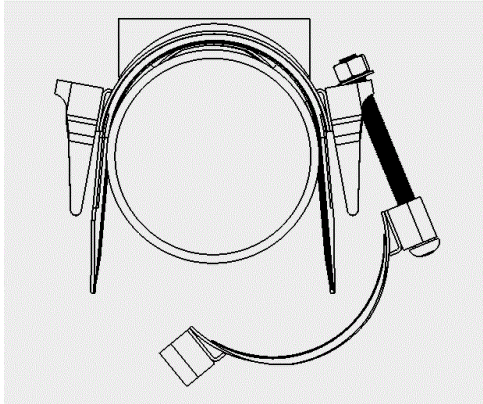
Debris Cover: AWWA Class B Blind Flange with ASME B16.21 Ring Gasket
Debris Cover is Black Epoxy Coated Per TPS Material Spec MS-1017

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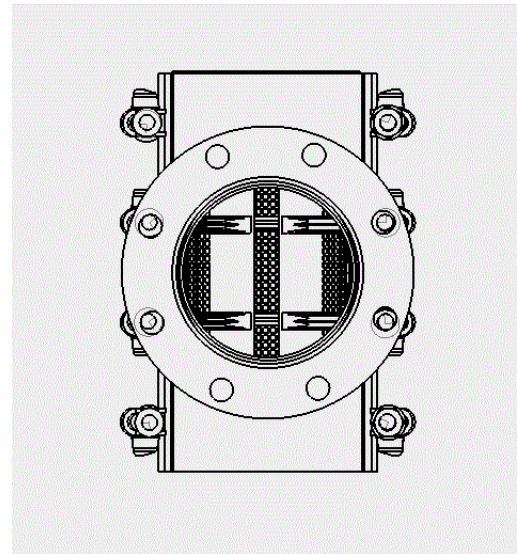


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Features:



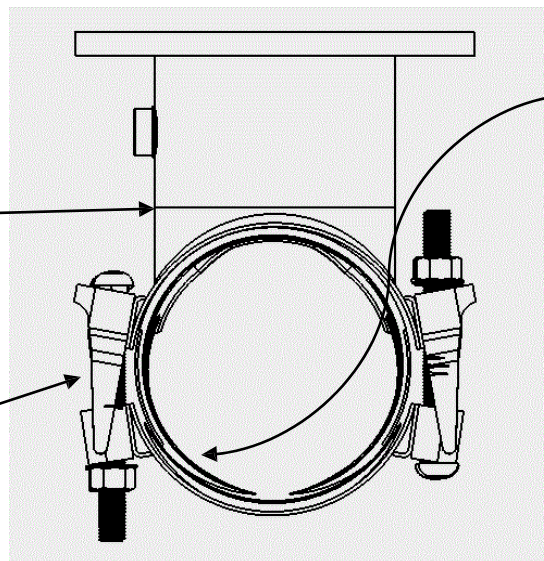
Hinge geometry provides extra opening/spreading range on 4" thru 8" diameter sizes.



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.



Special patent pending contoured seal beads and molded aperture seal provide for extended range capabilities. Patent applied for.

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