

TOTAL PIPING SOLUTIONS, INC.

TRIPLE-TAP[®]

**Extended Range Stainless Steel
Technical Specification**

Controlled Document: ENGTS-01/110618

November 2018

TRIPLE TAP® Extended Range Stainless Steel Tapping Sleeve Specifications

1. Pressure Rating: The Triple Tap Tapping Sleeve can achieve a maximum allowable working pressure (MAOP) of 250 psi (Test Pressure 375 psi).

Note: The working pressure 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. For any installation the working pressure may also be limited by the condition of the mains pipe, type of and extent of damage, service conditions, environmental conditions, and quality of installation.
2. Flange/Outlet Options: AWWA C207 or C228 Class D Flange
AWWA C111 Mechanical Joint Mating Flange
ANSI Class 150 flange
3. Temperature Rating: Maximum Continuous Working Temperature Range is 180 Degrees F. Please contact factory if higher temperature service is required.
4. Gasket: NSF-61 Approved NBR Rubber – For water service
5. Shell: 18-8 Stainless Steel, Passivated for Corrosion Protection.
4 to 8 inch diameters - 12 gage thickness
10 to 12 inch diameters – 11 gage thickness
14 to 16 inch diameters – 10 gage thickness
6. 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.
7. Sealing Compatibility: TPS Triple Tap® Stainless Tapping Sleeves are designed to seal on the pipe branch and accommodate a pipeline full beam break (see applicable pressure ratings in specification settings)
8. Pipeline Full Beam Break Conditions: TPS Stainless Tapping Sleeves 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.

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TRIPLE TAP® Extended Range Stainless Steel 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. AWWA C207 & C228 Flanged outlets are recessed per MSS SP-60 to accept tapping valve.
5. Design features are similar to cast ductile iron sleeves.
6. 3/4" NPT test outlet to allow hydrostatic pressure test before tapping the pipe.
7. Available with carbon steel flanges upon request.
8. Available with Mechanical Joint, or Line-Stop Outlet with Completion Plug, upon request
9. Larger diameter tapping sleeves incorporate shell tightening assembly per **US Patents No. 8,857,858**, and unique sealing features per **US Patent No. 9,217,530**.
10. Fluoropolymer coated Stainless Steel fasteners for torque and tension control.
11. Nitrile Butadiene Rubber (NBR) gaskets comply with NSF-61 specifications
12. Note: See Materials of Construction diagram for additional information

This product is proudly made in the USA.



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	5.10	2,3,4		4.50	4.80	5.00			
4" os	4.74	5.36	2,3,4			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	4,6		6.63	6.90	7.10	7.40	7.37	
6" os	6.84	7.65	4,6			6.90	7.10	7.40	7.37	7.60
8"	8.54	9.44	4,6,8		8.63	9.05	9.30			
8" os	8.98	9.84	4,6,8			9.05	9.30	9.57	9.62	9.79
10"	10.64	11.46	4,6,8,10		10.75	11.10	11.40			
10" os	11.34	12.16	4,6,8,10				11.40	11.77	12.12	12.12
12"	12.62	13.56	4,6,8,10,12		12.75	13.20	13.50			
12" os	13.65	14.42	4,6,8,10,12					14.04	14.38	14.38
14"	15.22	16.16	4,6,8,10,12, **14		16.00	15.30	15.65	15.80		
14" os	16.18	16.92	4,6,8,10,12, **14						16.73	16.88
16"	17.25	18.18	4,6,8,10,12 **14,**16		18.00	17.40	17.80	17.94		
16" os	18.42	19.23	4,6,8,10,12 **14,**16						18.97	19.19
18"	19.37	20.25	4,6,8,10,12 **14,**16		20.00	19.50	19.92			
20"	21.40	22.22	4,6,8,10,12 **14,**16			21.60	22.06			
24"	23.25	24.25	4,6,8,10,12 **14,**16		24.00					
24" os	25.60	26.40	4,6,8,10,12 **14,**16			25.80	26.32			
30"	29.50	30.35	4,6,8,10,12 **14,**16		30.00					

** Designated Flanges have ANSI/ASME B16.5 drilling pattern

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

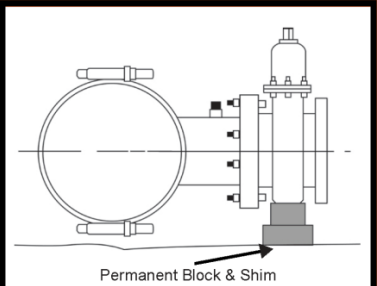
ANSI/AWWA C207-13 Steel Pipe Flanges for Waterworks Service

ANSI/AWWA C228-14 Stainless-Steel Pipe Flange Joints 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.

 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.

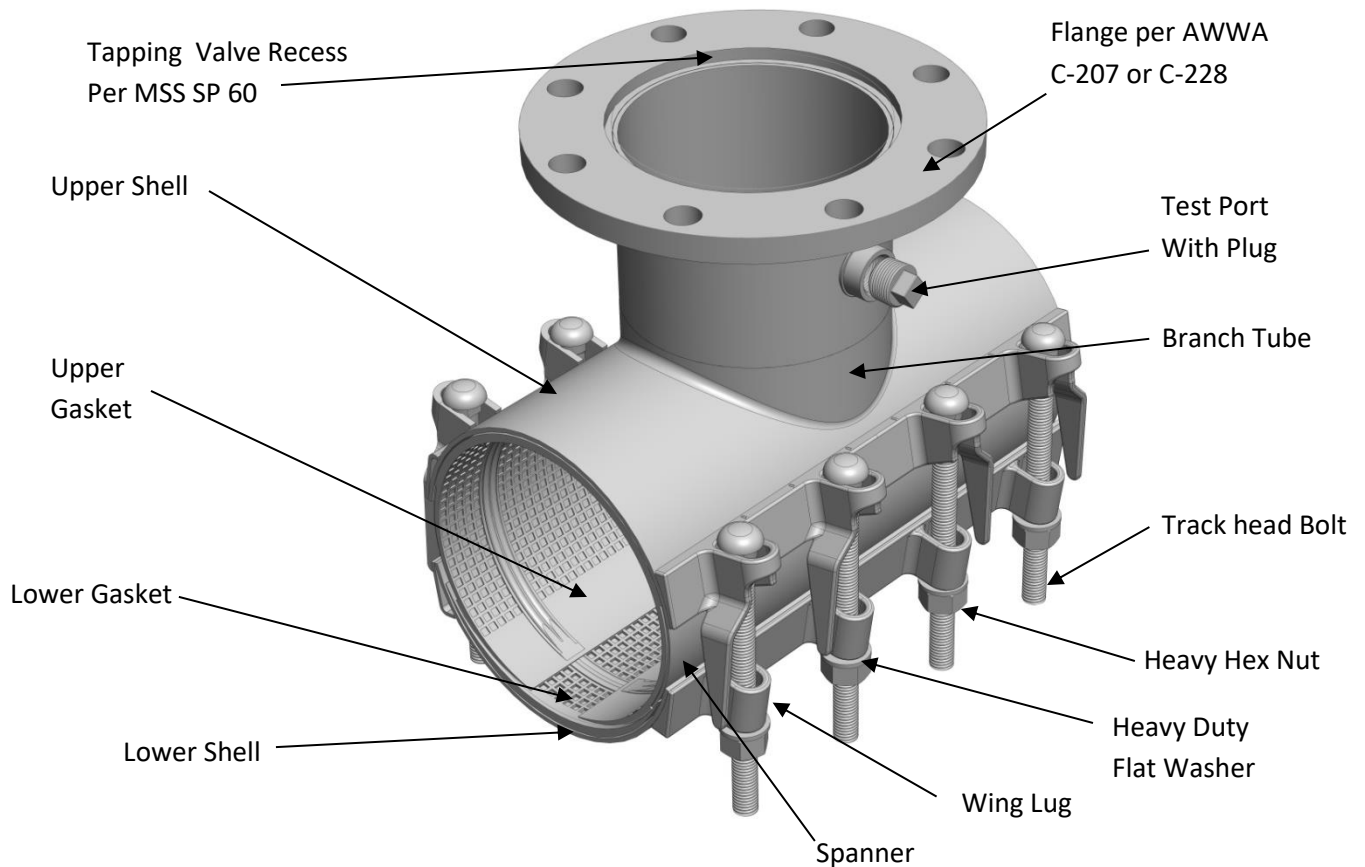
Note on Tapping Sleeve Reuse:

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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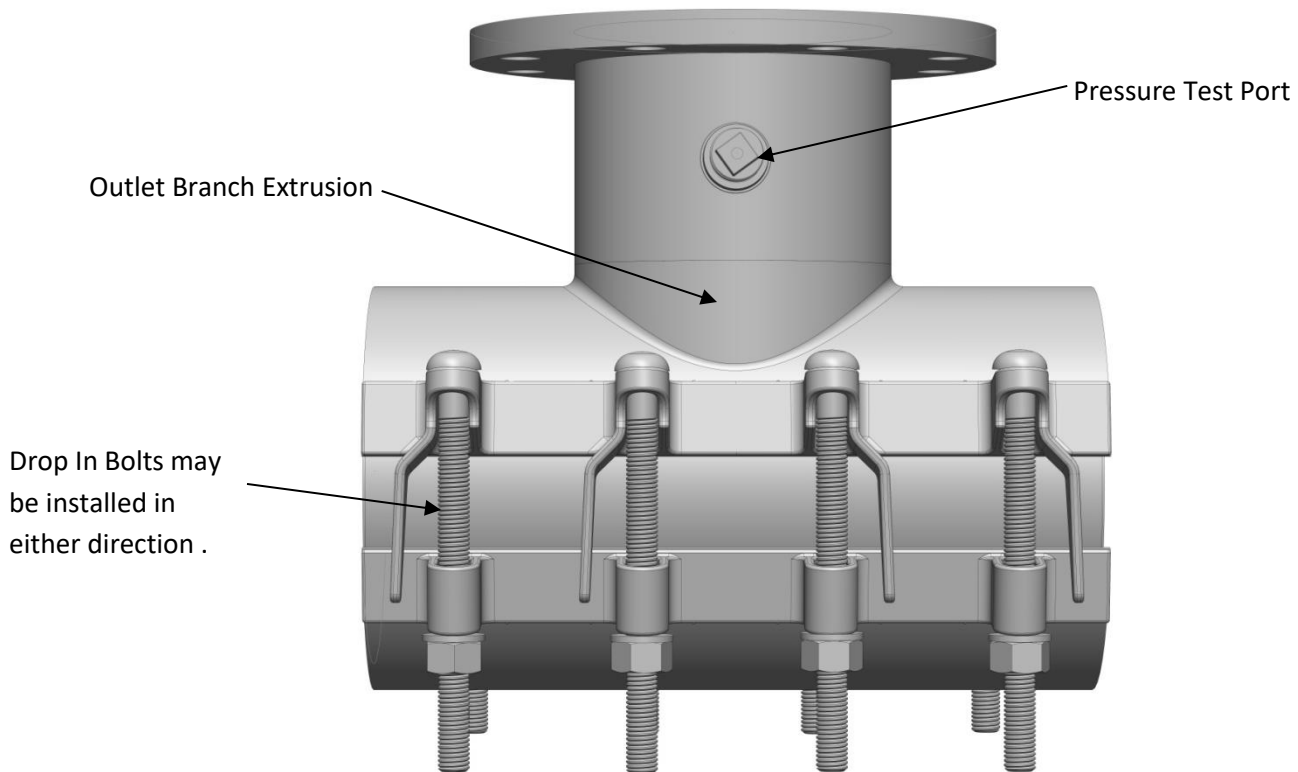
Triple Tap® Extended Range Stainless Steel Tapping Sleeve Specifications



- Flange:** Provided with 18-8 Type 304 Stainless Steel standard flange or optional Fusion Bonded Epoxy (FBE) Coated Carbon Steel flange, ANSI B16.1/B16.5 drilling with machined center recess for tapping valves in accordance with MSS SP-60. Flanges in accordance with ANSI/AWWA C207 & C228. Additional flange options include ANSI/ASME B16.5 Class 150 Flanges.
- Branch Tube:** 18-8 Stainless Steel Schedule 5 or Schedule 10 wall thickness.
- Upper Shell:** 10, 11 or 12 Gage 18-8 Stainless Steel depending on diameter.
- Lower Shell:** 10, 11 or 12 Gage 18-8 Stainless Steel depending on diameter
- Upper Gasket** *Patented* one piece matte gasket with integrated aperture seal and circumferential seal beads for a 360 degree seal.
- Lower Gasket** Matte gasket with matching circumferential seal beads for a 360 degree seal.
- Alignment Lugs:** 18-8 Type 304 Stainless Steel.
- Gaskets:** Material: Nitrile Butadiene Rubber (NBR) Approved NSF-61,
- Spanners:** 18-8 Type 304 Stainless Steel bridging spanner integrally molded into gasket,
- Test Port:** 18-8 Type 304 Stainless Steel ¼ Inch NPT Female Vent Port With 18-8 Type 304 Stainless Steel Pipe Plug.



Triple Tap® Extended Range Stainless Steel Tapping Sleeve Specifications



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 & retain torque

Washers: Heavy Duty 5/8 Inch Washer
Material 18-8 Type 304 Stainless Steel
Double Fluoropolymer coated to prevent galling & retain torque

****NOTE:** All Hardware available in Type 316 Stainless Steel upon Request

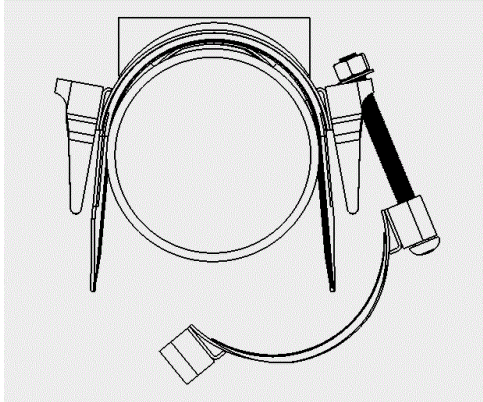
Test Port: 3/4 Inch NPT Welded 18-8 Type 304 Stainless Steel Test Port with 3/4 Inch IPS 18-8 Type 304 Stainless Steel Pipe Plug Installed.

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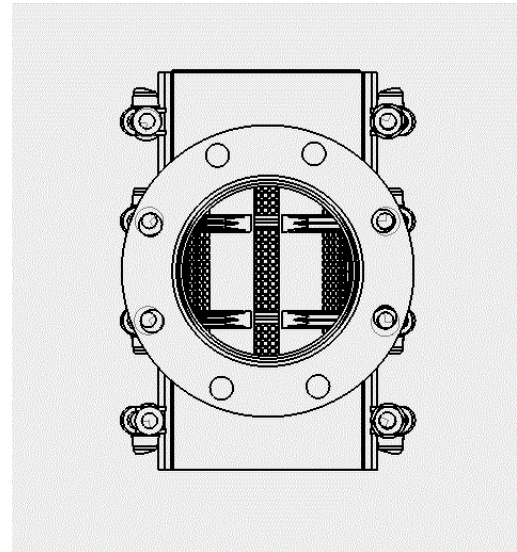


Triple Tap® Extended Range Stainless Steel Tapping Sleeve Specifications

Features:



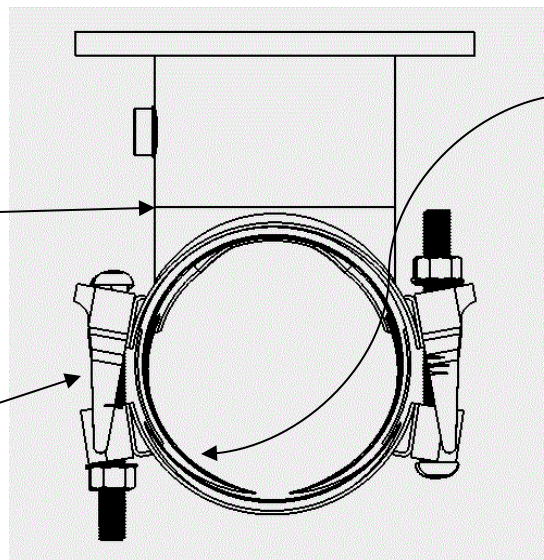
Hinge geometry provides extra opening/spreading range



Opposing seal beads in upper and lower gaskets provide secure 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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