

TOTAL PIPING SOLUTIONS, INC.
TRIPLE-TAP[®]

Extended Range Stainless Steel
Mechanical Joint (MJ) Tapping Sleeve
Engineering Technical Specification

Controlled Document: ENGTS-04/112321

November 2021

TRIPLE TAP® Extended Range Stainless Steel MJ 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" Branch Diameter with AWWA C111 Mechanical Joint Mating Flange –
Up to **250 PSI Maximum Working Pressure, 375 PSI test pressure, for aperture seal only conditions.**

16" Branch Diameter with AWWA C11 Mechanical Joint mating Flange-
Up to **200 PSI Maximum Working Pressure, 300 PSI test pressure, for aperture seal only conditions.**

4" through 12" Diameter Tapping Sleeves
175 PSI Maximum Working Pressure, 300 PSI test pressure for full circumferential seal. Provides 1.5x safety factor.

Refer to individual product label for specific product pressure rating
2. Temperature Rating: Maximum Continuous Working Temperature Range is 150 Degrees 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 12 inch diameters – 11 gage thickness
14 to 16 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.
6. Sealing Compatibility: TPS Triple Tap® Stainless Steel Tapping Sleeves are designed to seal on the pipe branch and accommodate a pipeline full beam break.
(See applicable pressure ratings in specification settings.)
7. 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 (using ½" undersize cutter) in size-on-size line taps.

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TRIPLE TAP® Extended Range Stainless Steel MJ 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. Branch outlet configured with Mechanical Joint branch tube, gasket, and flange sized per ANSI/AWWA C111/A21.11 Standard
5. Design sealing features are similar to cast ductile iron sleeves.
6. 3/4" NPT test outlet to allow hydrostatic pressure test before tapping the pipe.
7. Larger diameter tapping sleeves incorporate shell tightening assembly per US Patent No. 8,857,858.
8. Fluoropolymer coated Stainless Steel fasteners for torque and tension control.
9. Nitrile Butadiene Rubber (NBR) gaskets comply with NSF-61 specifications
10. Note: See Materials of Construction diagram for additional information.
11. Always refer to the product label for pressure range and pressure rating conditions.

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Table of Pipeline Diameters

Nominal Diameter	Lower Diameter	Upper Diameter	Branch Sizes	CTS	IPS	DI	Pit Cast	AC100	AC150	AC200
4	4.45	5.13	4	5.13	4.50	4.80	5.00			
4 o.s.	4.74	5.36	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 o.s.	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 o.s.	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 o.s.	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 o.s.	13.65	14.42	4,6,8,10,12		14.00			14.04	14.38	14.38
14	15.22	16.16	4,6,8,10,12		16.00	15.30	15.65	15.80		
14 o.s.	16.18	16.92	4,6,8,10,12						16.73	16.88
16	17.25	18.18	4,6,8,10,12,16		18.00	17.40	17.80	17.94		
16 o.s.	18.42	19.23	4,6,8,10,12,16						18.97	19.19
18.	19.37	20.25	4,6,8,10,12,16		20.00	19.50	19.92			
20	21.40	22.22	4,6,8,10,12,16			21.60	22.06			
24	23.25	24.25	4,6,8,10,12,16		24.00					
24 o.s.	25.60	26.40	4,6,8,10,12,16			25.80	26.32			
30	29.50	30.35	4,6,8,10,12,16		30.00					

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

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



This product is proudly made in the USA.

Product Warnings:



The image shows an orange rectangular tag with the TPS logo at the top. Below the logo is the title "Installation Instructions and Warning Tag for Tapping Sleeve". A technical diagram illustrates the tapping sleeve assembly on a pipe, with an arrow pointing to a "Permanent Block & Shim" at the base of the tapping valve. Below the diagram is a "Caution" statement. At the bottom of the tag are three warning boxes, each with a warning symbol and text.

TPS
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.

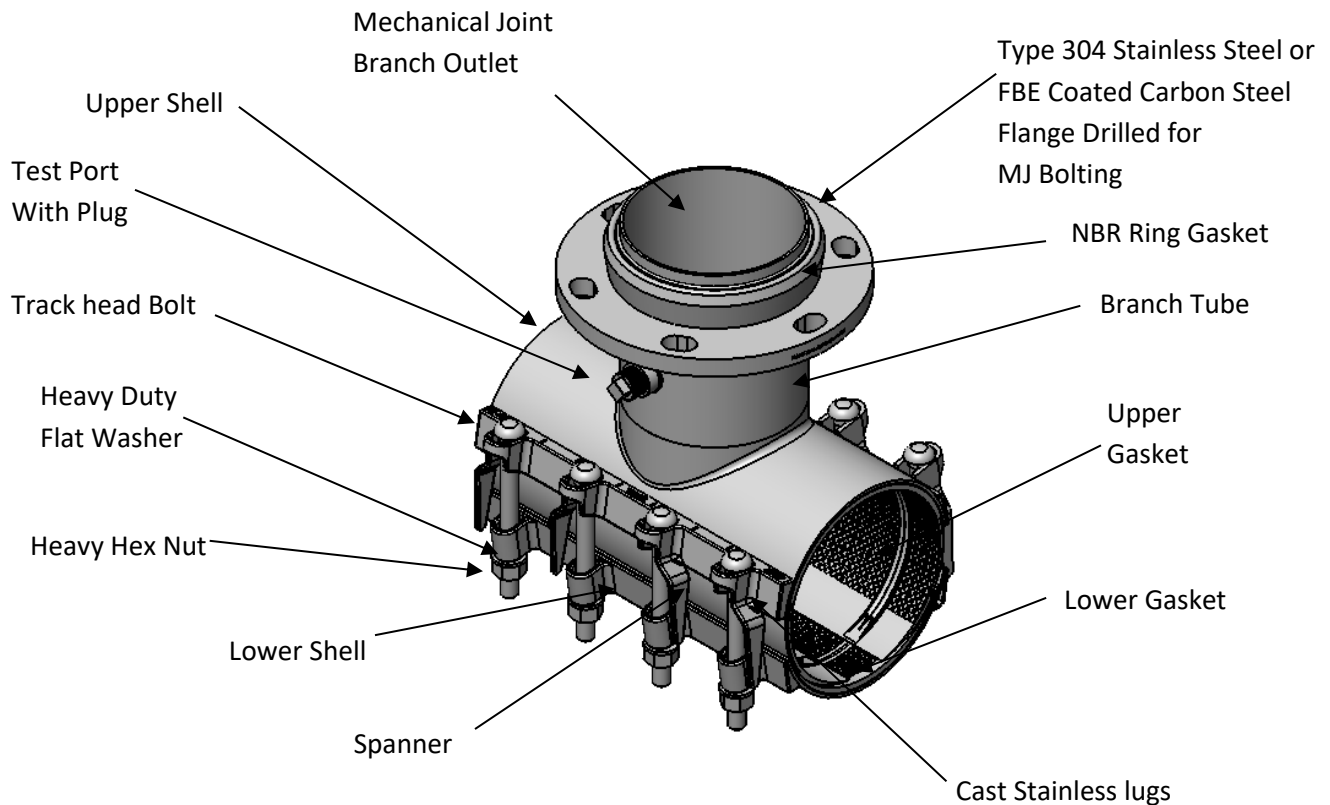
Tapping Sleeve Reuse:

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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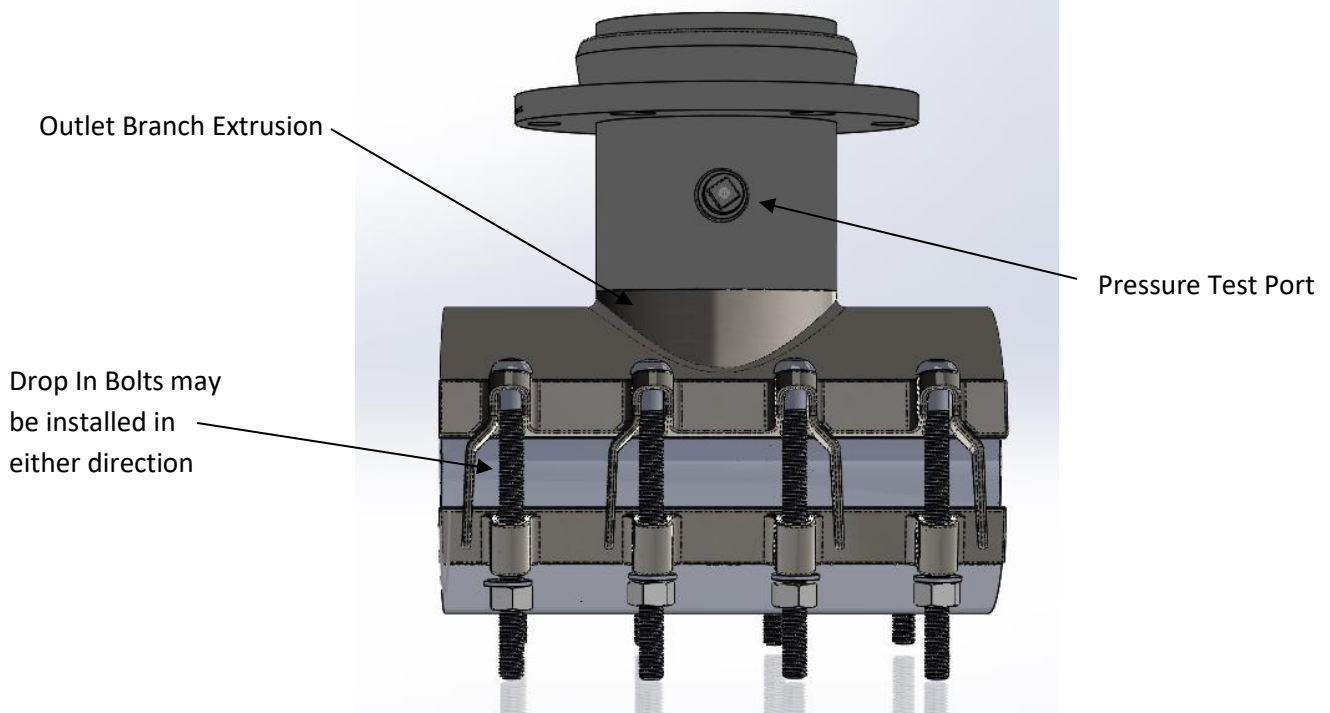
Triple Tap® Extended Range Stainless Steel MJ Tapping Sleeve Specifications



Flange:	Type 304 Stainless Steel 18-8 or Fusion Bonded Epoxy (FBE) Coated Carbon Steel
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	Patent pending 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 Stainless Steel
Gaskets:	Material: Nitrile Butadiene Rubber (NBR) Approved NSF-61,
Spanners:	18-8 Stainless Steel bridging spanner integrally molded into gasket,
Test Port:	18-8 Stainless Steel ¾ Inch NPT Female Vent Port with 18-8 Stainless Steel Pipe Plug



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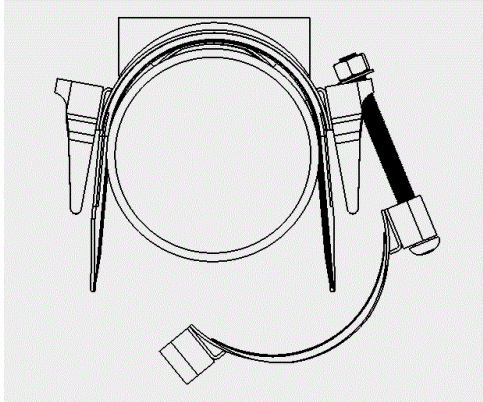
- Bolts:** Oval Neck Track head per ANSI/ASME B18.10
5/8-11 UNC Rolled Thread
18-8 Type 304 Stainless Steel per ASTM A-193 Grade B8
Finish: Double Fluoropolymer coating. Bolts installable in either direction.
- Nuts:** Heavy Hex Nut 5/8-11 UNC Rolled Thread
Type 316 High Temp Stainless Steel per ASTM A-194 Grade 8
Finish: Double Fluoropolymer coating to prevent galling.
- Washers:** Heavy Duty 5/8 Inch Washer
Material 18-8 Type 304 Stainless Steel
Double Fluoropolymer coating to prevent galling
- Test Port:** ¾ Inch Welded 18-8 Stainless Steel Test Port with ¾ Inch IPS Pipe Plug Installed

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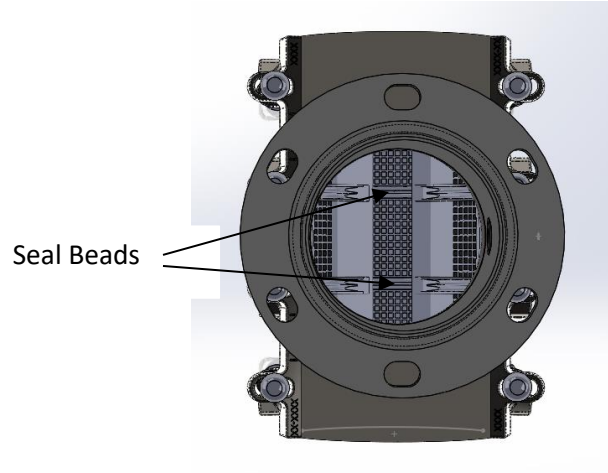


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Features:



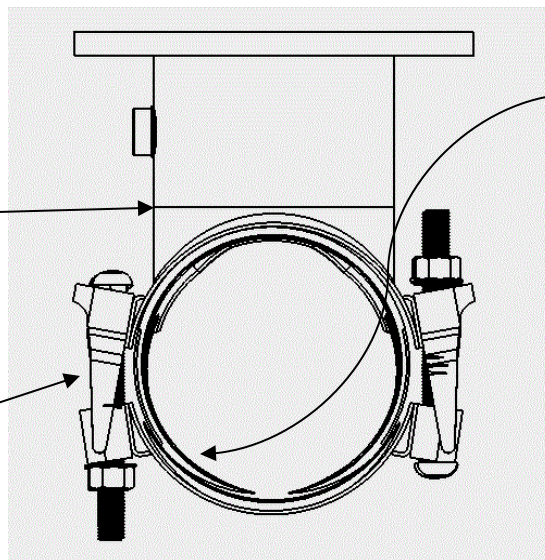
Hinge geometry provides extra opening/spreading range



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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