INSTALLATION INSTRUCTIONS

TPS Stainless Steel Tapping Sleeve

4”-30” Pipe Diameters

Mechanical Joint, Line Stop, and Ring Flange Tapping Sleeves

Step 1. Prepare pipe surface by thoroughly cleaning surface of all rust, dirt, scale, and debris. Verify that the tapping sleeve is the proper diameter range for the main pipe on which it is to be installed. Use a pipe diameter tape to confirm main pipe diameter. Installer shall confirm that pipe wall integrity is sufficient to support tapping sleeve gasket compressive loading. Please consult a piping engineer or the factory if there is any doubt in this matter.

Step 2. Lubricate the pipe surface, all tapping sleeve gasket surfaces, and the spanner plate surfaces, with a mixture of soapy water. Do not use grease or pipe lubricant except where otherwise specifically instructed. **For AC Pipe, Ductile Iron and Cast Iron Pipe, lubricate all surfaces with NSF approved pipe lube.**

Step 3. Per Figure 1, the lower shell on the 4”, 6”, and 8” sizes may be hinged away for assembly to the main pipe. Units larger than 8” require disassembly prior to installation, and cannot be hinged. The sleeve may be assembled to the pipe in the vertical position, then tuck the upper gasket edges beneath the lower shell, install bolts, and hand tighten. **Make sure that the upper gasket end tapers are laying flat against the main pipe**. Bolt heads may be oriented in either direction. Hand tighten all nuts and washers uniformly, then move sleeve to final (i.e. horizontal) position before beginning torque take-up. Sleeve must be assembled and installed in final position prior to tightening bolts to final torque. Note: Test port must be oriented in upright position to vent properly during pressure test. Tighten bolts, in a staggered pattern, per tightening patterns shown below in Fig. 3 to final torque, in two stages. First tighten to approximately 50% of final torque, then, tighten to 100% of final torque. Do not rotate assembled sleeve on conductor pipe after assembly. **After 15 minutes recheck bolt torque and continue with tapping process. Take care to insure that spanner shell gaps are even on both sides of the sleeve or else the sleeve will not seal properly.**

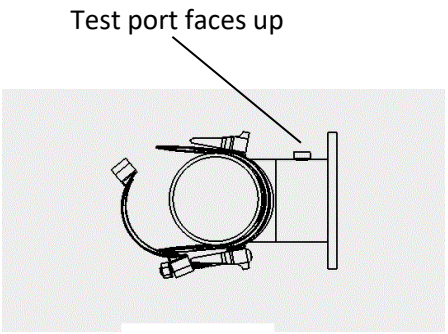


Fig. 1

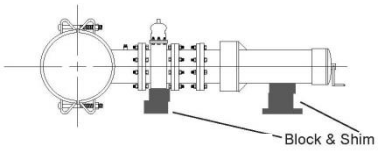


Fig. 2

Step 4. After assembly, inspect the aperture seal to confirm proper seating between the sleeve and conductor pipe outer surface.

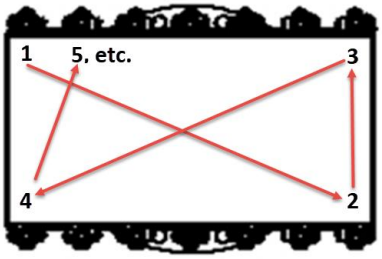
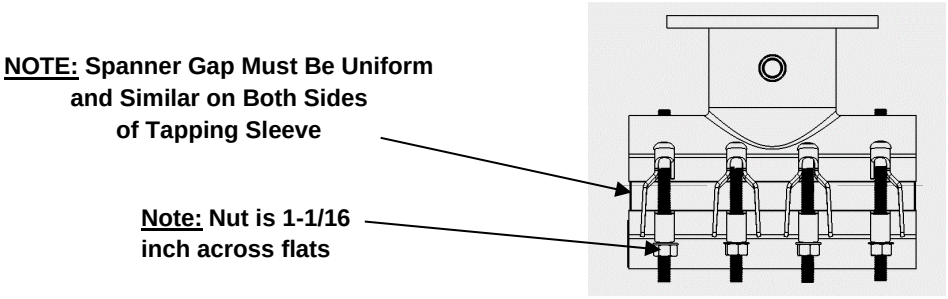


Fig 3. Tapping Sleeve Bolt Tightening Sequences/Patterns

Mechanical Joint (MJ) Instructions: When connecting the outlet branch of a Mechanical Joint (MJ) tapping sleeve to a mechanical joint valve, evenly tighten the bolts using a cross tightening sequence, until the valve surface bottoms out against the tapping sleeve MJ flange. This insures proper gasket seal and flange alignment.

IMPORTANT! Tapping sleeve outlet must not be permitted to rotate on conductor pipe after bolts tightened to torque. The overhung load of the tapping valve and tapping machine must be supported to prevent sleeve rotation damage and gasket rollover. See Figure 2 for suggested blocking locations.



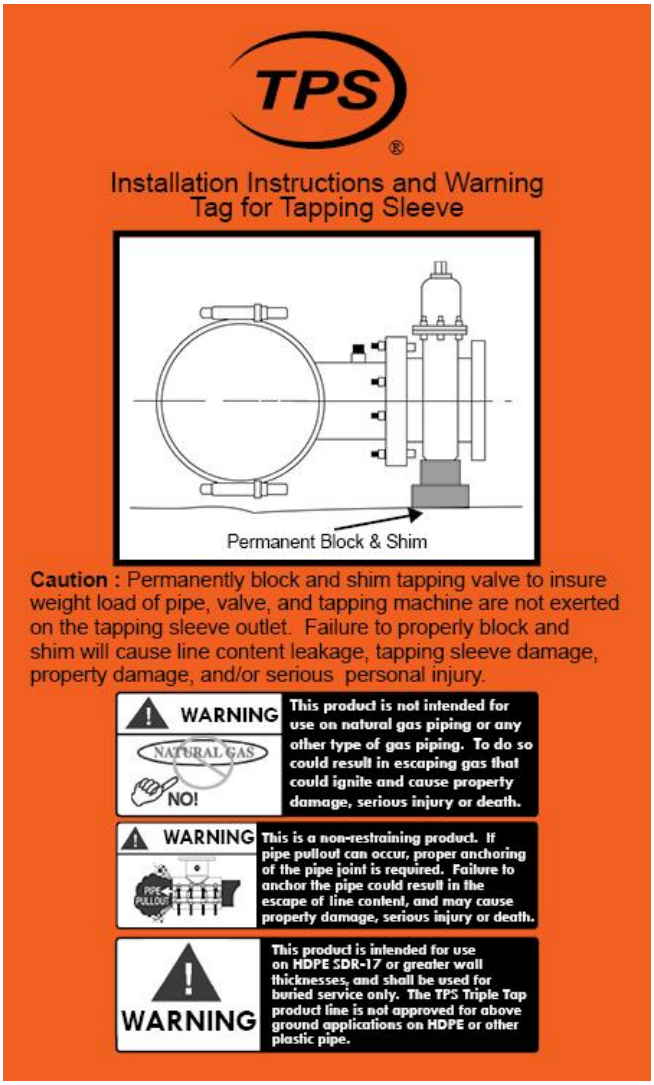
Instructions For Line Stop Tapping Sleeves: Assemble tapping sleeve to conductor pipe according to preceding instructions. Factory installed completion plug lubricant may age during long term (longer than 6 months) tapping sleeve storage prior to installation. Installer must confirm that the completion plug o-ring, threads, flange gland, and internal threads are liberally lubricated with a pipe joint lubricant approved to NSF Standard 61. Protect completion plug threads and o-ring from dirt and contamination while set aside during tapping operation. Upon completing the installation, tighten completion plug until o-ring is seated. Then install the ring gasket and debris protection blind flange with included bolt and nut hardware. Note: Debris protection blind flange is not working pressure rated.

Step 5. Install tapping valve per AWWA Manual M-44.

Hydraulic Pressure Test: After the tapping sleeve is installed to main conductor pipe, and tapping valve installed, but prior to performing the line tap, hydrostatically test the assembly seals. Remove the test plug and apply a hydraulic pressure test in accordance with the line working pressure plus an appropriate safety factor. Hydrostatic Test pressure shall not exceed 275 PSI.

Test pressure may alternatively be applied thru the line tapping machine.

No compressed gases shall be used to perform this pressure test.



BOLT TORQUE REQUIREMENTS

See Individual Product Label for Torque Requirement

INSTALLATION NOTES

Note 1: Maximum pressure rating for the tapping sleeve is 175 PSI with AWWA Class D Flange, 200 PSI (1.4 MPa) with MJ Outlet, or pressure rating of conductor pipe, whichever is lower.
Note 2: Maximum Tapping Sleeve Operating Temperature: 180 Deg. F
Note 3: Maximum Tapping Sleeve Installation/Operating Temperature for PE/HDPE Pipe: 85 Deg. F
Note 4: Full Port Cutters May Be Used with Tapping Sleeves.
Note 5: Use of a pipe diameter tape is strongly recommended to verify main conductor pipe diameter prior to final installation.
Note 6: Nut Size is 1-1/16 across flats. Use of appropriate socket wrench is recommended. Pneumatic/Air powered tools may be used to torque bolts as long as tightening sequence and multistage torque application steps are followed.
Note 7: 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.

Table 1: Tapping Sleeve 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		14.00			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"	23.38	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 ONLY.