

## Petersen® 261 Series Hot Tappers

### Tap into pipes without interrupting service

### Insert inflatable stopper plugs into live lines

Hot tapping is a process by which a nozzle or hot tap saddle is added to a pressurized pipeline to allow flow into or out of the pipeline, install instruments, sampling probes or an inflatable pipe plug. All hot taps should be designed, fabricated, inspected, and tested in accordance with the original code of construction, typically the ASME Code Section VIII Division 1 and API Recommended Practice RP 2201, "Procedures for Welding or Hot Tapping on Equipment in Service." The hot tapping machine and nozzle design should be checked for weight and thermal load capacity of the pipeline. Welding a hot tap nozzle to the pipeline requires consideration given to dissipating the heat to avoid damaging the pipeline or combustion of the fluid inside the vessel.

We recommend using larger size hole saws over 3" for plastic pipe only. Carbide grit hole-saws generally are better for ductile steel. Do not use worn hole saws as they may fatigue and break the arbor. Use the table below for drill speeds. Never exceed 550 RPM for bi-metal or 400 RPM for carbide grit hole saws for any size. Do not exceed 100 psi max. (6.8 bar). The packing seal on the Hot Tapper uses Viton O-rings but because they could leak if warm, it is not recommended that the hot tapper be used with temperatures that may injure the operator.



1/4" to 6" Hot Tap Kit (bi-metal)

**Model 261-0020-K Hot Tapper Kit for 1/4" - 2"** (12.7-50.8mm) with bi-metal hole saws

**Model 261-0020-KC Hot Tapper Kit for 1/4" - 2"** (12.7-50.8mm) with carbide grit hole saws

Actual hole sizes: 1/4", 1/2", 5/8", 7/8", 1-1/8", 1-3/8", 1-7/8"

**Model 261-0060-K Hot Tapper Kit for 1/4" - 6"** (12.7-152.4mm) with bi-metal hole saws

**Model 261-0060-KC Hot Tapper Kit for 1/4" - 6"** (12.7-152.4mm) with carbide grit hole saws

Actual hole sizes: 1/4", 1/2", 5/8", 7/8", 1-1/8", 1-3/8", 1-7/8", 2-3/8", 2-7/8", 3-3/8", 3-7/8", 4-3/4", 5-1/2"

(Model 261-0060-KC has a 5 3/4" carbide grit and a 5 1/2" bi-metal hole saw)

**Single Size Hot Tappers** (for 3/4" to 6" carbide grit hot tappers, add suffix "C" to the item number below)

Pilot drill	1/4"
261-0005	1/2"
261-0007	3/4"
261-0010	1"
261-0012	1-1/4"
261-0015	1-1/2"
261-0020	2"
261-0025	2-1/2"
261-0030	3"
261-0035	3-1/2"
261-0040	4"
261-0050	5"
261-0060	6"



Do Not exceed 100 psi max. (8.27 bar).  
Do Not exceed 140°F fluid temperature.  
Do Not exceed 550 RPM (bi-metal) with any size drill.  
Do Not exceed 400 RPM (carbide grit) with any size drill.

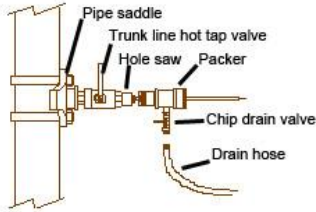
Accessories available upon request: pipe saddles, pipe valves, drill, flanges, hose, and inflatable stopper plugs.

Recommended Drill Speeds (RPM)								
Actual Hole Size	Mild Steel	Cast Iron	Stainless Steel		Actual Hole Size	Mild Steel	Cast Iron	Stainless Steel
1/2"	550	440	295		2-3/8"	135	90	70
5/8"	530	365	275		2-7/8"	115	75	55
7/8"	350	235	175		3-3/8"	95	65	45
1-1/8"	275	180	140		3-7/8"	85	55	40
1-3/8"	250	165	125		4-3/4"	65	40	30
1-7/8"	170	115	85		5-1/2"	55	35	25
					5-3/4"	n/a	n/a	n/a

## HOT TAPPING INSTRUCTIONS

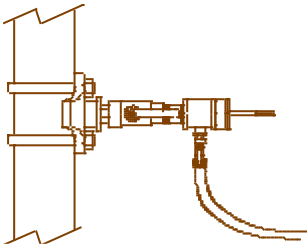
With Petersen® Hot Tapping Equipment

### Assembly (Trunk line)



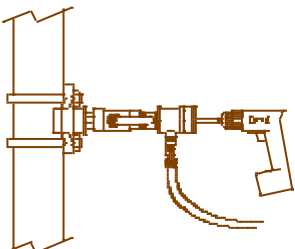
1. Attach pipe saddle to pipe trunk line per manufacturers instructions.
2. Attach trunk line hot tap valve to saddle per manufacturers instructions. Extra care is recommended on these joints as resealing after hot tapping would require relieving trunk line pressure.
3. Install coupon retention spring wire #910-0000. Cut to 7/8" to 1", insert into drill bit holes and center, bend each end evenly and sharply to prevent slipping out. Twist bent ends about 45° from each other. The drilled hole pushes the wires into the drill flutes and will spring out to capture the coupon.
4. Attach desired hole saw and pilot bit to Hot Tapper, tighten set screws to prevent units from separating during drilling operation.
5. Attach Hot Tapper unit tightly to trunk line hot tap valve; to prevent leakage of trunk line product.
6. Attach a drain hose to the Hot Tapper chip drain valve.

### Testing for Leaks Prior to Hot Tapping



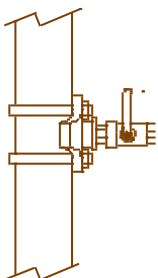
1. Pressurize drain hose with a fluid which is compatible with the trunk line fluid.
2. **CAUTION:** Do Not pressurize drain hose beyond 10% over trunk line pressure, the hose manufacturers recommendations, or higher than 100 psi. (Which ever is the lower pressure.)
3. Open both valves slowly and check for leaks, should leaks occur, immediately reduce pressure. (Any leaks should be repaired prior to Hot Tapping.)
4. Upon completion of leak testing, depressurize drain hose and place the end of hose in a location suitable to accept discharge of drill chips and trunk line product.

### Hot Tapping



1. Attach drill, air ratchet, or manual wrench to Hot Tapper, follow related manufacturers operating instructions.
2. Open chip drain valve and fully open trunk line tap valve.
3. Insert Tapper to contact trunk line and drill at recommended RPM.

### Removal



1. Retract drill from trunk line tap valve. **CAUTION:** Do Not retract 1/2" drill bits out of drill packer or trunk line product will escape.
2. Fully close trunk line tap valve.
3. Remove drill, hose, and Hot Tapper from trunk line hot tap valve.
4. The trunk line tap valve is now ready for service, attaching lines, or plug launch cylinder.

### HOT TAP PLUG INSERTION SYSTEMS

Please refer to the Petersen® insertion system instructions for more detailed information

## Petersen® Hot Tapper Spare Parts List

Arbor, Hex for hole saws $\leq$ 1-1/8"	910-8001	
Arbor, Hex for hole saws $\geq$ 1-1/2"	910-8002	
Drill Shaft, 7/16" x 18"	910-9120	
Drill Shaft, 7/16" x 24"	910-9124	
Drill Pilot 1/4" RD, 7/16" & 5/8" hex 4" long with coupon retainer	910-8003	
Drill Bit, 1/2" x 20"	910-8011	
Packing Gland, 3/4" mnpt x 1/2" ID	910-8103	
O-ring #206, 0.484" ID x 0.139" Viton 75 Duro	914-0206-1875	
Saw, Hole 5/8"	910-9031 bi-metal	or 910-9031C carbide
Saw, Hole 7/8"	910-9041 bi-metal	or 910-9041C carbide
Saw, Hole 1-1/8"	910-9061 bi-metal	or 910-9061C carbide
Saw, Hole 1-3/8"	910-9071 bi-metal	or 910-9071C carbide
Saw, Hole 1-7/8"	910-9081 bi-metal	or 910-9081C carbide
Bell Adaptor, 3/4" fnpt to 1" mnpt	912-2140-010007B	
Bell Adaptor, 3/4" fnpt to 1-1/4" mnpt	912-2140-012007B	
Bell Adaptor, 3/4" fnpt to 1-1/2" mnpt	912-2140-015007B	
Bell Adaptor, 3/4" fnpt to 2" mnpt	912-2140-020007B	

### Additional items included in 6" Kit

Saw, Hole 2-3/8"	910-9083 bi-metal	or 910-9083C carbide
Saw, Hole 2-7/8"	910-9084 bi-metal	or 910-9084C carbide
Saw, Hole 3-3/8"	910-9085 bi-metal	or 910-9085C carbide
Saw, Hole 3-7/8"	910-9087 bi-metal	or 910-9087C carbide
Saw, Hole 4-3/4"	910-9089 bi-metal	or 910-9089C carbide
Saw, Hole 5-1/2" Deep cut	910-9091 bi-metal	
Saw, Hole 5-3/4" carbide	910-9091C carbide	
Bell Adaptor, 2" fnpt to 2-1/2" mnpt	912-2140-025020B	
Bell Adaptor, 2" fnpt to 3" mnpt	912-2140-030020B	
Bell Adaptor, 2" fnpt to 3-1/2" mnpt	912-2140-035020B	
Bell Adaptor, 2" fnpt to 4" mnpt	912-2140-040020B	
Bell Adaptor, 2" fnpt to 5" mnpt	912-2140-050020B	
Bell Adaptor, 2" fnpt to 6" mnpt	912-2140-060020B	



1/2" to 6" Hot Tap Kit