

# HOT TAPPING

The ability to safely tie-in to a pressurized system while under full operating conditions.



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Hot Taps can be performed on most any type of pipe, ranging from carbon steel to PVC. Taps are done on lines containing water, oil, gases, fuels, steam, and many other chemicals. Pressures up to 1440 psig at 100° can be Hot Tapped safely with no interruption of service.

## LINE MATERIAL

- Asbestos-Cement
- Stainless Steel
- Steel Cylinder
- Carbon Steel
- Ductile Iron
- Cast Iron
- Copper
- LPG
- PVC

## LINE CONTENTS

- Crude Oil
- Gasoline
- Water
- Steam

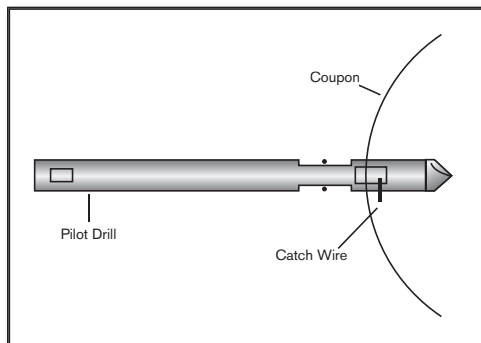


Figure 1

KOPPL uses the latest technology in coupon retention available. When a Hot Tap is performed, the double wired pilot drill retains the coupon and it is recovered when the Hot Tap is completed. (Figure 1)

Typical Hot Tap installation consists of a tapping saddle, gate valve, and Hot Tapping Machine. The installation is tested, the valve is opened, and the cutter and pilot drill advanced. When the cut is completed, the cutter and pilot drill are retracted, the valve is closed and the Hot Tap Machine removed. (Figure 2)

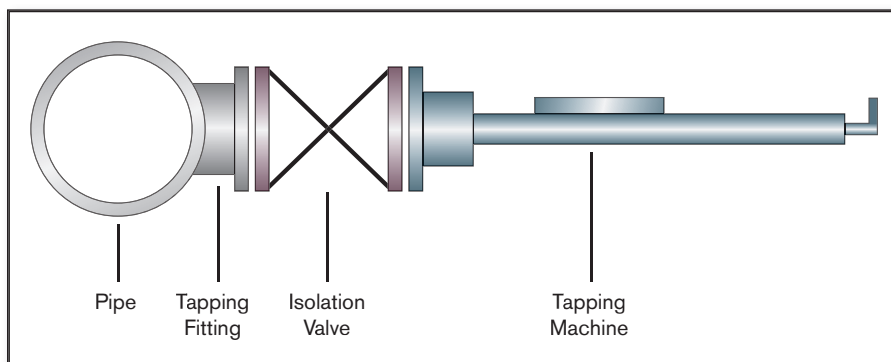


Figure 2



# HOT TAPPING

**Adding new connections to your piping is not the only use for Hot Taps. Some of the many uses include:**

- Product Sampling Point
- Pressure Control Switch Installation
- Flow Meter Installation
- Inspection of a pipeline
- Thermo-well Sensor Installation
- Determine product in a pipeline
- Draining of pipelines
- Air Relief Point

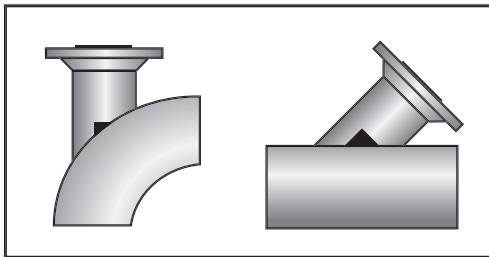


Figure 1

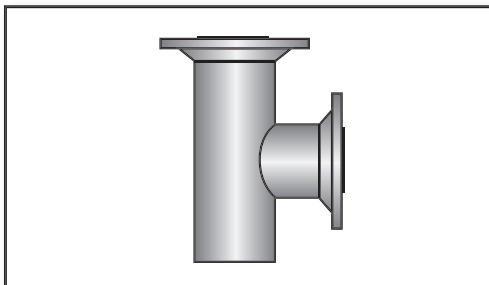


Figure 2

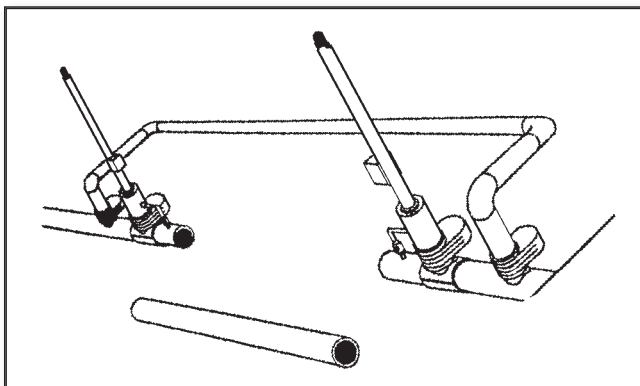


Figure 3

KOPPL has the ability to tie into your system in many different ways. Angle taps, valveless connections, long travel taps, and other methods are available to complete your connection in the most efficient manner possible.

This is the typical configuration for a Hot Tap performed at an angle. An angle block is used as a guide for our pilot drill and is welded dead center of the tapping outlet. **(Figure 1)**

“Save-a-Valve” Fitting installation. This fitting is used when valves are not required at the point of connection. A temporary valve is used to make the Hot Tap, then removed. All this accomplished with no interruption of service. **(Figure 2)**

Hot Taps are being used for a bypass connection during a line stop operation. Flow continues in the pipeline while necessary modifications are made. **(Figure 3)**



## THE BASICS

Hot Tapping is the ability to safely tie into a pressurized system while it is on stream and under pressure. Typical connections consist of a tapping fitting, isolation valve, and hot tapping machine. **(Figure 1)**

The hole saw is advanced through the valve, to the pipe. The machine is engaged and the cut begins. When the cut is finished, the machine is disengaged and retracted beyond the gate of the valve. The valve is closed and the machine is removed.

The coupon is retained by using a wired pilot drill. The wire on the pilot toggles, thus catching the coupon and preventing it from falling off. **(Figure 2)**

Elbow taps, angle taps, and taps perpendicular to the pipe are all feasible means of connecting to your existing pipeline system. **(Figure 3)**

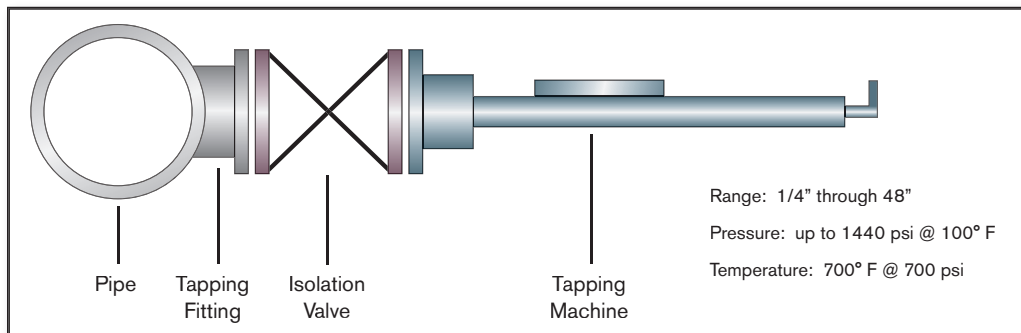


Figure 1

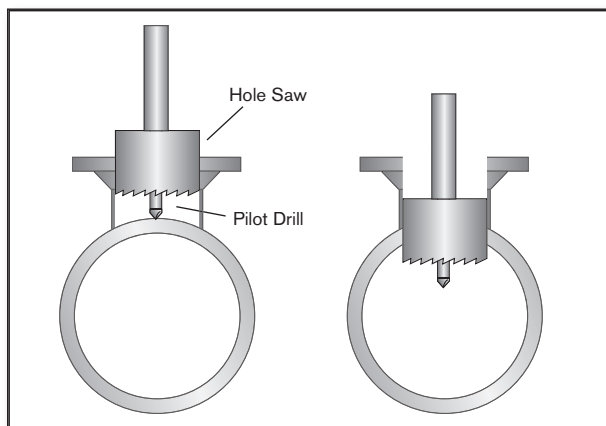


Figure 2

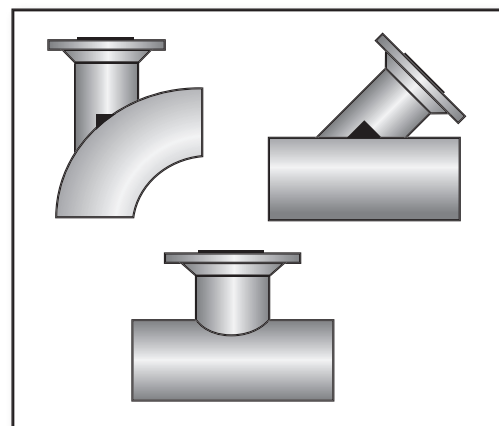


Figure 3

## STANDARD CUTTER SIZES FOR HOT TAPPING

Listed below are the standard cutter sizes used when performing hot taps. This list is meant for reference only and does not reflect the actual size used on any particular hot tap. Various conditions will determine the size necessary to complete the hot tap successfully.

If a certain cutter size is required, please specify that size when ordering your hot tap.

### NOMINAL HOT TAP SIZE

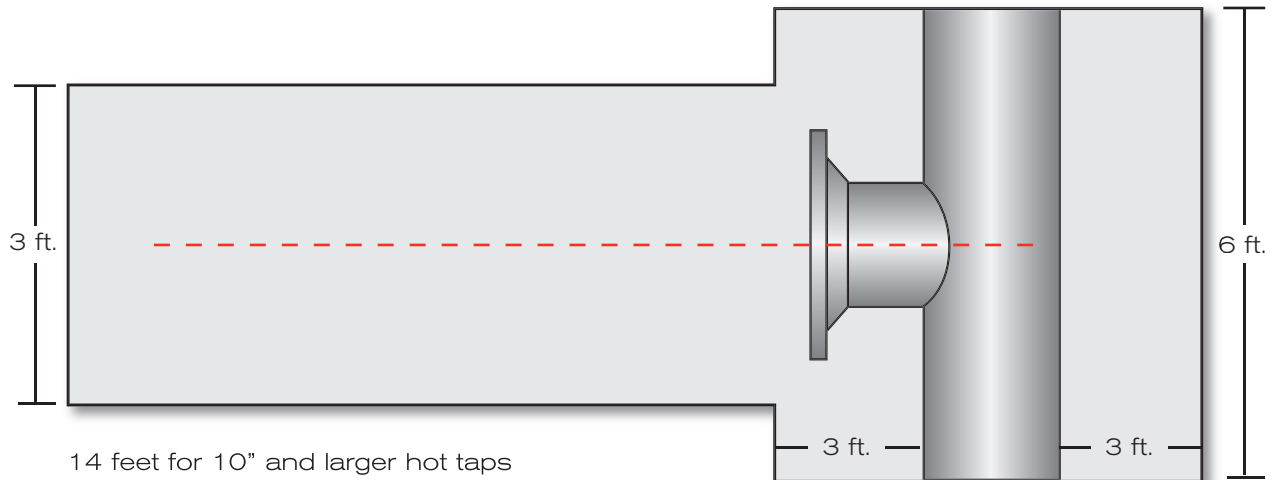
### NOMINAL CUTTER SIZE

3/4"	5/8"
1"	3/4"
1-1/4"	1-1/8"
1-1/2"	1-1/4"
2"	1-3/4"
2-1/2"	2-1/4"
3"	2-1/2"
4"	3-1/2"
6"	5-1/4"
8"	7-1/4"
10"	9-1/2"
12"	11-1/4"

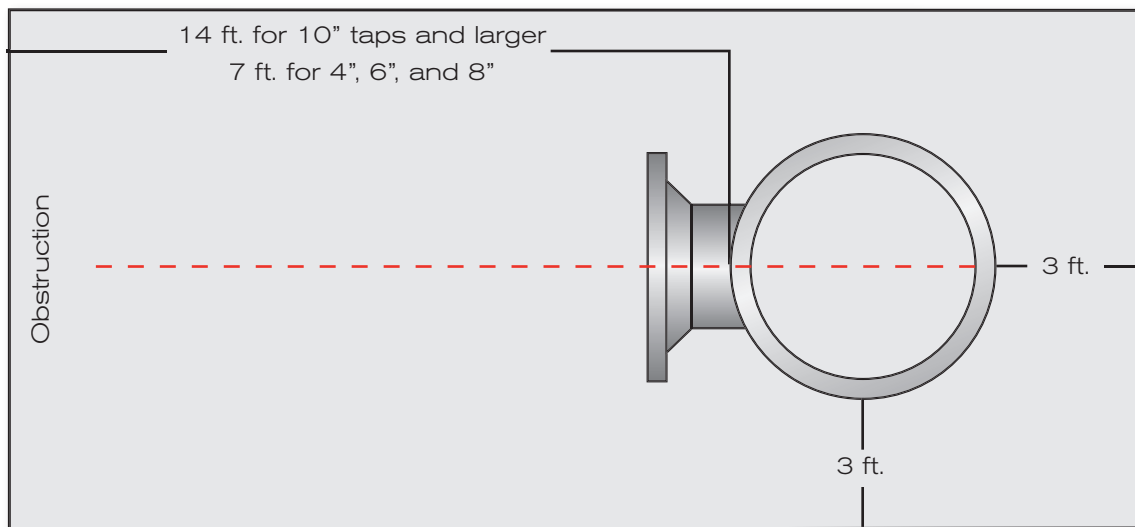


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## DIMENSIONS REQUIRED FOR HOT TAPPING



14 feet for 10" and larger hot taps  
7 feet for 4", 6", and 8" hot taps  
4 feet for 3" and smaller hot taps



Koppl Company maintains a large inventory of equipment that includes hot tapping machines of different sizes. If the above dimensions do not suit your needs, please contact your local Koppl representative. A jobsite visit can be scheduled to determine the best method of completing your hot tap at your particular location.

