

LINE STOPPING

Extending and modifying your existing pressurized system while it's under full operating conditions.

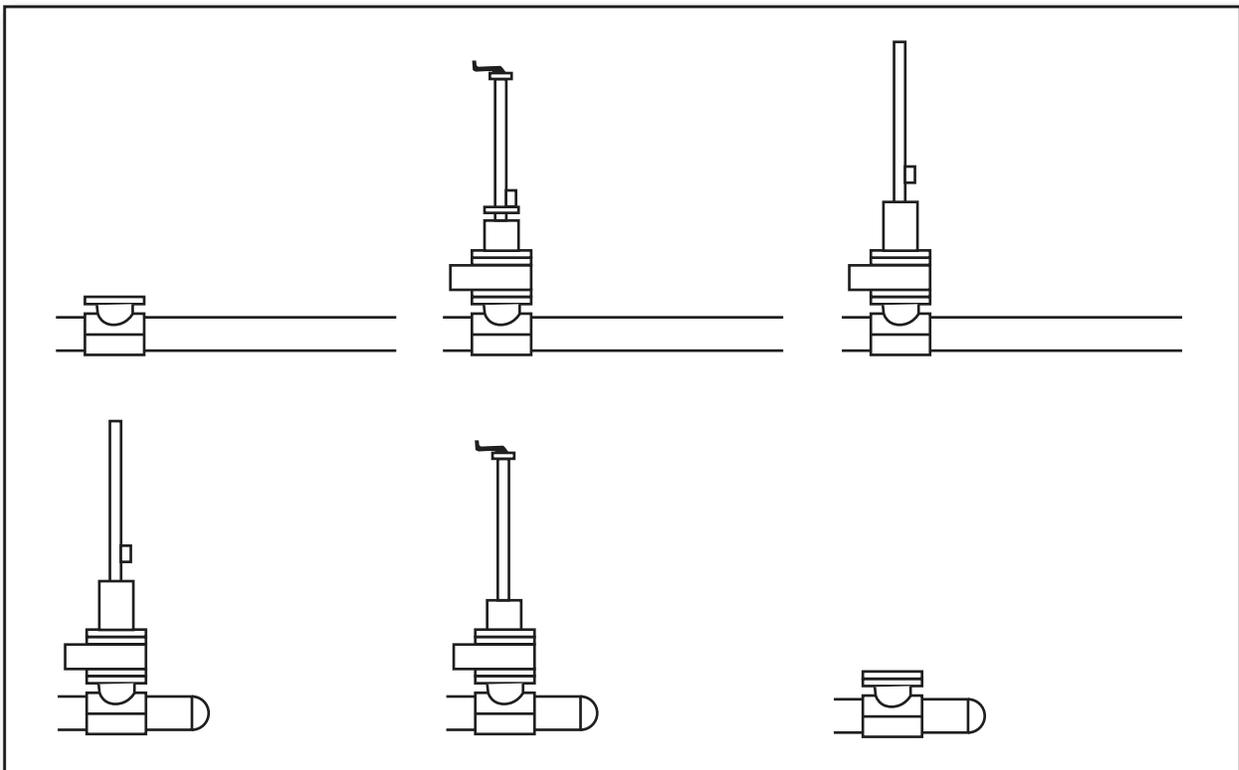


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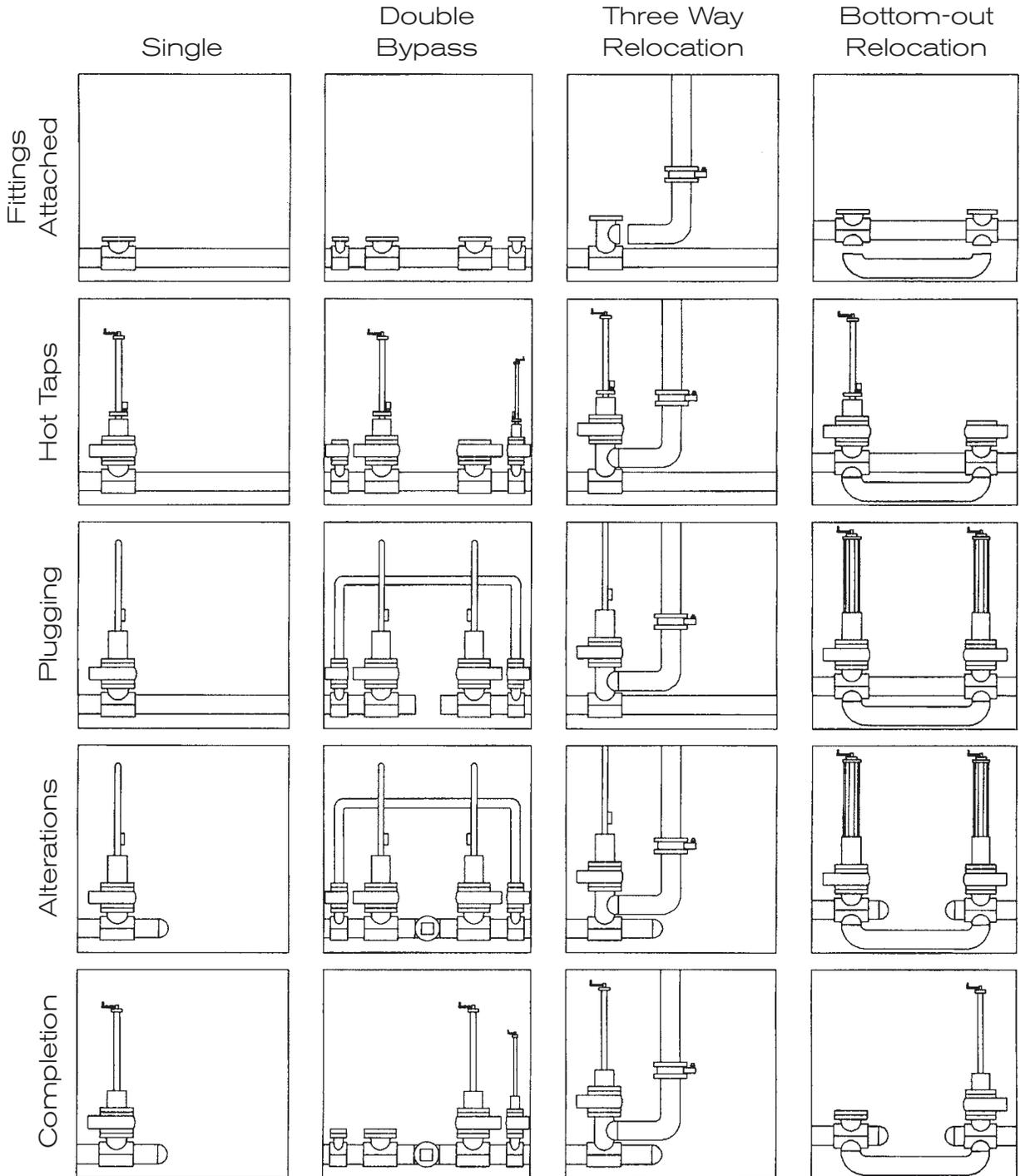
Line Stops are used to temporarily shut down a pipeline system to complete modifications or repairs. They allow a system to operate as usual without any interruption of service. Line Stops can be performed on almost any kind of pipe with pressures up to 900 psi @ 60°.

The Line Stop operation consists of a special flanged fitting, a temporary valve, and our actuator. The fitting is installed and tested, the temporary valve is installed, and the hot tap is completed. After the hot tap, we install the line stop actuator and insert the stopping head into the line.

When the necessary work has been accomplished, the stopping head is removed, and the completion plug is set. The completion plug seals at the flange on the fitting and allows us to remove our temporary gate valve. A blind flange is installed and the operation is complete.



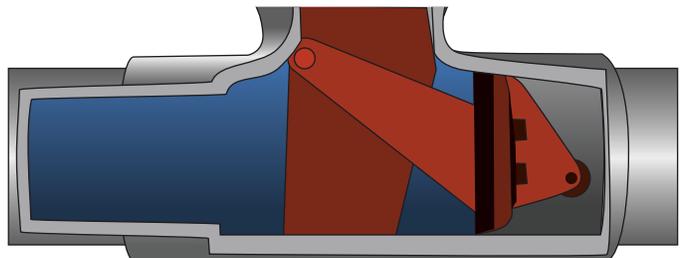
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THE LINE STOPPING HEAD

The KOPPL High Pressure Plugging Head can perform line stops on various products with pressures up to 900 psig at 100° and temperatures up to 375° at 300 psig. The head is inserted into the line with our line stop actuator. When the pivot wheel contacts the bottom of the pipe, the head and sealing element roll into position and creates a seal, allowing you to perform work downstream.



High Pressure Plugging Head holding pressure in blue shaded area.

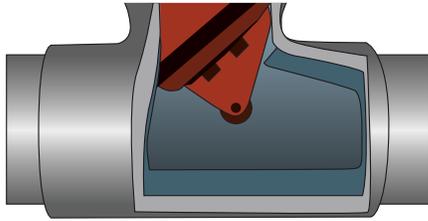


Koppl Small Line Stop
Equipment and Fittings



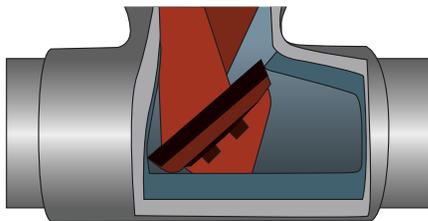
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LINE STOP HEAD INSERTION



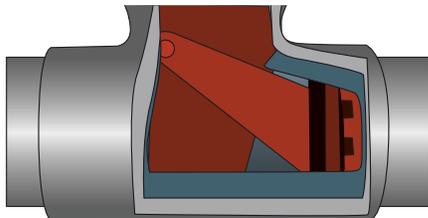
Step 1

The KOPPL Line Stopping Head is being inserted into the line. When the wheel reaches the bottom of the pipe, the head will pivot and roll into position.



Step 2

The Line Stopping Head has reached the bottom of the pipe and is now rolling into position. The seal will gradually be created as the sealing element touches the interior wall of the pipe.



Step 3

The head and sealing element are now in its final position and a seal has been created. The pipeline will be bled off and the modification can begin.

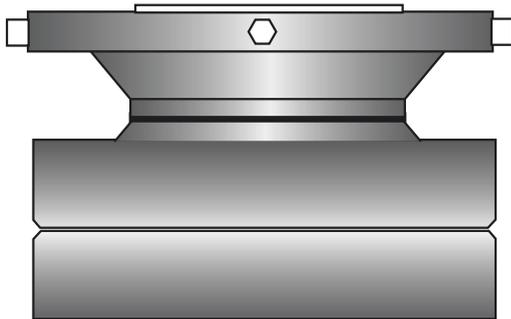


THE KOPPL-STOP™ FLANGE SYSTEM

The Koppl-Stop™ Flange is used when a permanent valve does not need to be left on the system. It is mainly used when performing a line stop operation or hot taps through Save-a-Valve fittings. Here is how it works:

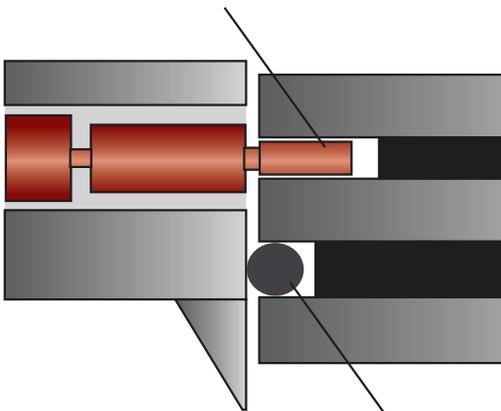


Completion Plug



Koppl-Stop™ Flange

The Completion Plug is secured by segments that are advanced into a groove on the plug.



O-Ring creates a seal.

1. The fitting with the Koppl-Stop™ Flange is installed on the pipeline.
2. The temporary valve is installed and tested.
3. The hot tap is performed and the coupon removed.
4. When the necessary work is performed, the completion plug setting unit is installed on the valve.
5. The completion plug is installed in the flange. This creates a seal, allowing our valve to be removed with no loss of product.
6. After the valve is removed, a blind flange is installed and the operation is complete.

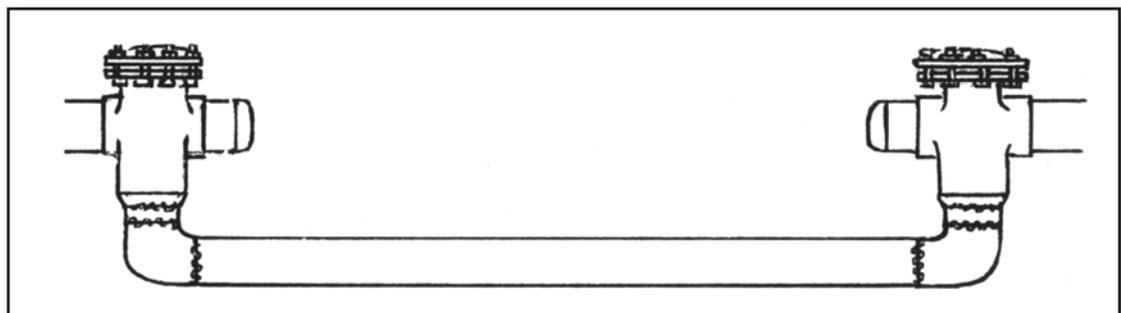
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CYLINDER STYLE LINE STOPS

Cylinder style stopping heads are another method used to stop off pipelines. This method allows line stops to be performed on lines that may have scale or other type of corrosion build up on the inside wall, or when the inside diameter is uncertain. Cylinder style stopping heads create their seal on the cut that is made when we complete the hot tap.

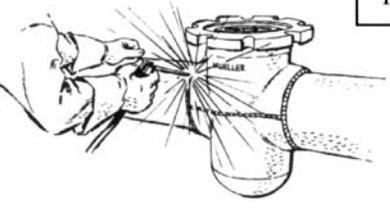
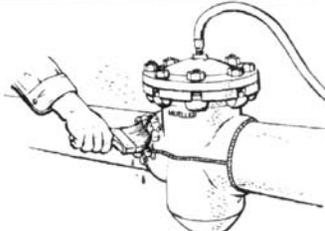
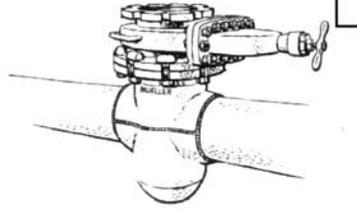
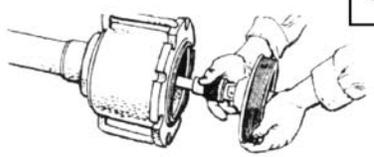
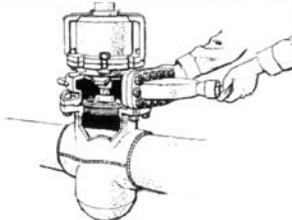
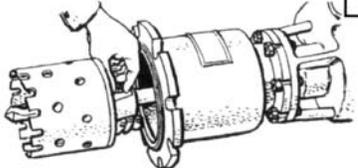
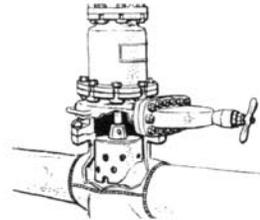
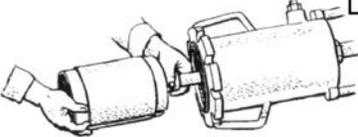
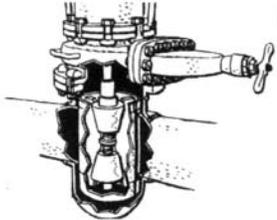
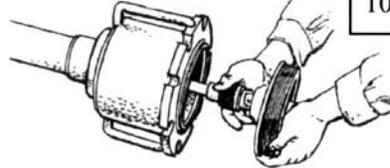
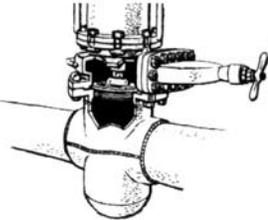
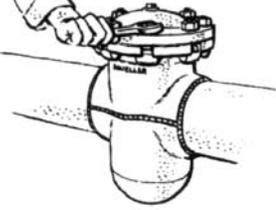
Typical Mueller Line Stop Fittings use a threaded completion plug to create a primary seal, with an O-ring used for a secondary seal. A gasket and blind flange is installed to complete the fitting. **(Figure 1)**

Using special by-pass cylinder stoppers, service can be maintained while a new line is added. The old line can then be moved or capped off with no loss of product or interruption of service. **(Figure 2)**



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INSTALLATION AND STOPPING SEQUENCE

 <p>1</p> <p>Weld fitting to line</p>	 <p>2</p> <p>Pressure test welds as required</p>	 <p>3</p> <p>Install temporary gate valve</p>
 <p>4</p> <p>Assemble completion plug and line up tool to completion machine</p>	 <p>5</p> <p>Attach completion machine and align gate valve as needed</p>	 <p>6</p> <p>Attach cutter, driver, and pilot drill to hot tapping machine</p>
 <p>7</p> <p>Complete hot tap through the pipe to accommodate stopper</p>	 <p>8</p> <p>Attach stopper plug to the line stopping machine</p>	 <p>9</p> <p>Insert stopper into fitting and expand. Stopper seals on cut edge</p>
 <p>10</p> <p>Prepare completion machine to install completion plug in fitting</p>	 <p>11</p> <p>Insert completion plug into flange on fitting to create seal</p>	 <p>12</p> <p>Remove valve, install blind flange and complete project as needed</p>