



## *Packaged Gas Division*

# *Technical Service Bulletin*

***Perma-Cyl® 4-way valve change***

***Date:*** August 14, 2013

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***Issue:*** Recently Chart changed the Swagelok™ 5-way valve to a Swagelok™ 4-way valve. Due to the difference in geometry between the two valves, the piping is slightly different.

***Models Affected:*** All Perma-Cyl's that currently utilize the 5-way valve will now have a 4-way valve.

***Solution:*** This document will illustrate the difference between the two valves and the proper way to install the new 4-way valve.

***Description:***

A few ways to differentiate between the two valves is that the 5-way has a plug in the top port and has a machined boss on the opposite side of the handle (see picture below on left).



**Previous design 5-way valve**

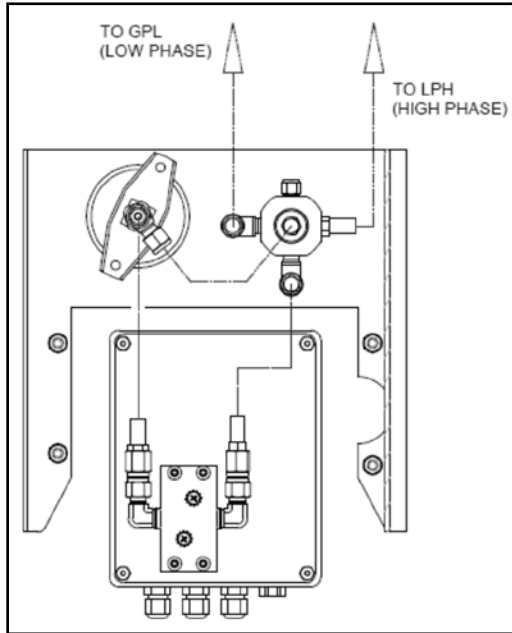


**New design 4-way valve**

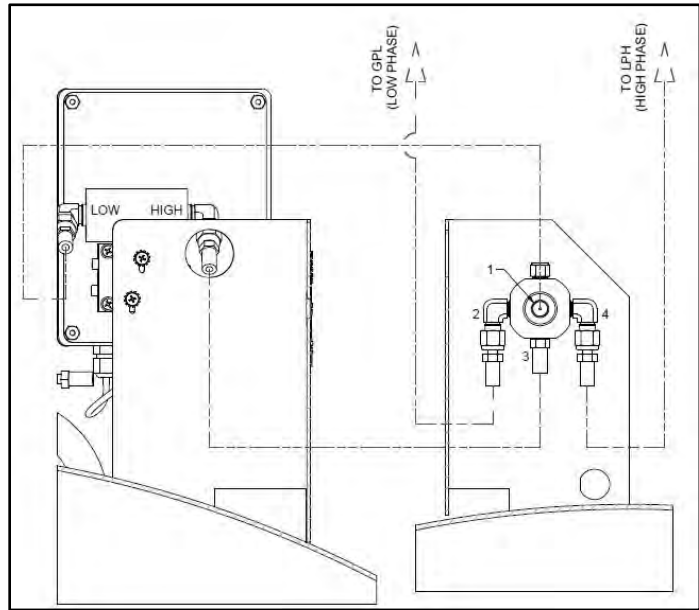
The next page displays diagrams showing the routing of the hoses for both the previous Swagelok™ 5-way valve and new Swagelok™ 4-way valve.



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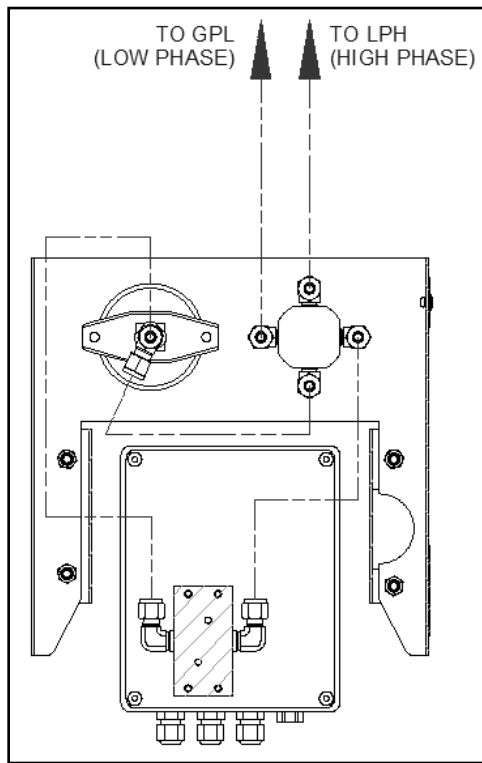


*Perma-Cyl 1000 thru 3000*

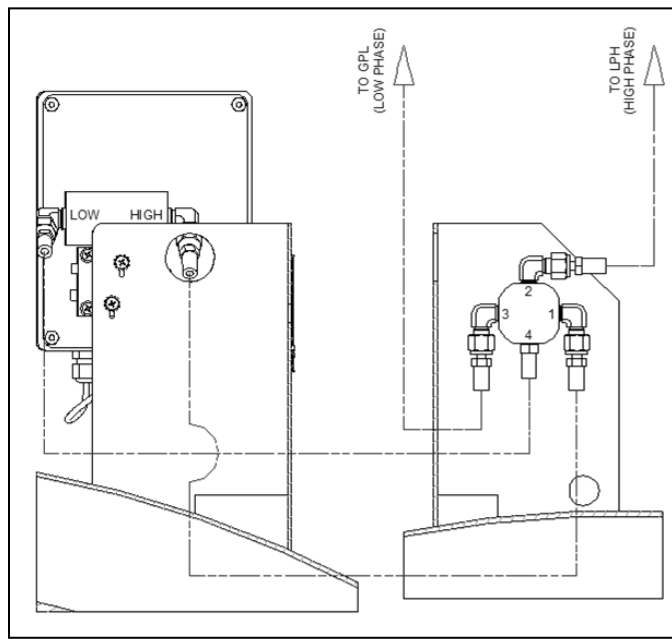


*Perma-Cyl 300 thru 700*

### **Swagelok™ 5-Way Valve Piping Diagram**



*Perma-Cyl 1000 thru 3000*



*Perma-Cyl 300 thru 700*

### **Swagelok™ 4-Way Valve Piping Diagram**



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Chart's continuous attention to product improvement and customer satisfaction has resulted in this design modification. If you have concerns or questions relative to this action, please contact your Chart Customer Service Representative at (800) 400-4683. Thank you for depending on Chart to provide high product quality and service.