



Pneumatic Division
Richland, Michigan 49083

Installation & Service Instructions
V690P

DX ISO 5599-1 Valve Installation

ISSUED: January, 2004

Supersedes: None

Doc.# V-690P, NPR# 030987

⚠ WARNING

To avoid unpredictable system behavior that can cause personal injury and property damage:

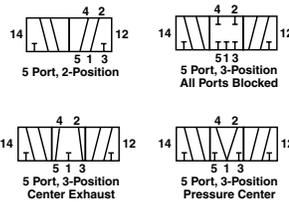
- Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
- Disconnect air supply and depressurize all air lines connected to this product before installation, servicing, or conversion.
- Operate within the manufacturer's specified pressure, temperature, and other conditions listed in these instructions.
- Medium must be moisture-free if ambient temperature is below freezing.
- Service according to procedures listed in these instructions.
- Installation, service, and conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversion, air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or the product does not operate properly, do not put into use.
- Warnings and specifications on the product should not be covered by paint, etc. If masking is not possible, contact your local representative for replacement labels.

Introduction

Follow these instructions when installing, operating, or servicing the product.

Port Identification / Connections / Symbols

Port No.	Single Pressure	Dual Pressure
1	Inlet	Exhaust
2	Outlet	Outlet
3	Exhaust	Inlet
4	Outlet	Outlet
5	Exhaust	Inlet
12, 14	Pilot ports for External Pilot or Remote Pilot	



Valves may be used for single outlet (3-Way) by plugging an outlet port.

NOTE: The operator identification describes the ports that are connected when the operator is energized: operator 12 connects port 1 to port 2; operator 14 connects port 1 to port 4. Other ports may also be connected, or blocked – see symbols on the valve.

NOTE: For dual pressure, the higher pressure is to be at port 3 for single air operated valves. Solenoid types may have the highest pressure at either port 3 or 5, as specified.

⚠ CAUTION: It is recommended that double solenoid and double remote air pilot operated 2-Position valves be mounted so that the axis of the valve spool is in the horizontal plane.

Application Limits

These products are intended for use in general purpose compressed air systems only.

Pressure Range:

Vacuum
2 to 10 bar (29.4 to 145 PSIG). For pressure under 2 bar, external pilot supply must be connected.

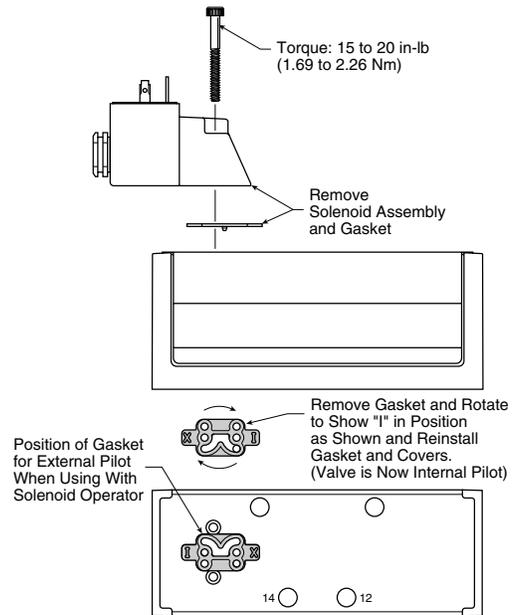
Ambient Temperature Range: -10°C to 60°C (14°F to 140°F)

Voltage Range: Rated Voltage +10%, -15%

⚠ CAUTION: Solenoid versions of this valve contain solid state components that can be damaged by transient voltage spikes, over-voltage or high temperature. To protect against premature solenoid failure, please read and adhere to the following:

If this solenoid operated valve is used in a circuit with other inductive loads. The solenoid should be electrically protected with a voltage suppression device (e.g. transient voltage suppressor or varistor) that has a minimum rating of 1.6 times the rated voltage of the solenoid valve and sufficient capacity to dissipate the energy of other inductive loads.

Piloting Conversion



⚠ WARNING

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

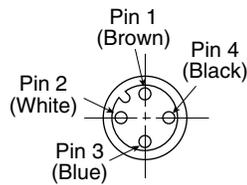
This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application, including consequences of any failure and review the information concerning the product or systems in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

DX ISO 5599-1 Auto Valve Installation 4-Pin, M12 Electrical Connector

Wiring Data:

Pin #1	Free
Pin #2	24VDC, Side 12
Pin #3	0V Common
Pin #4	24VDC, Side 14

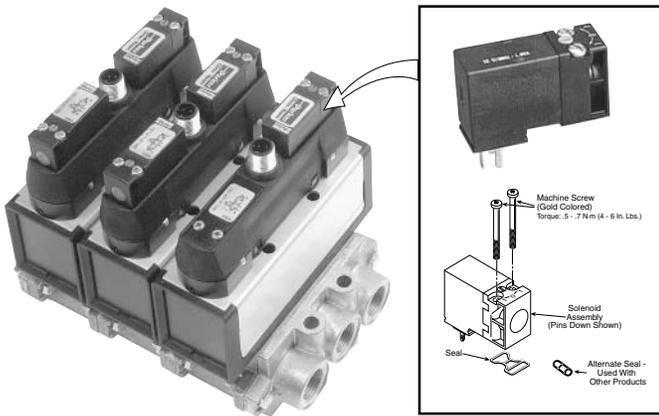


⚠ CAUTION: An interruption of 10 milliseconds or greater to the power supplied to the solenoid of a solenoid operated valve may cause the valve to shift. Provision must be made to prevent power interruption of this duration to avoid unintended, potentially hazardous, consequences.

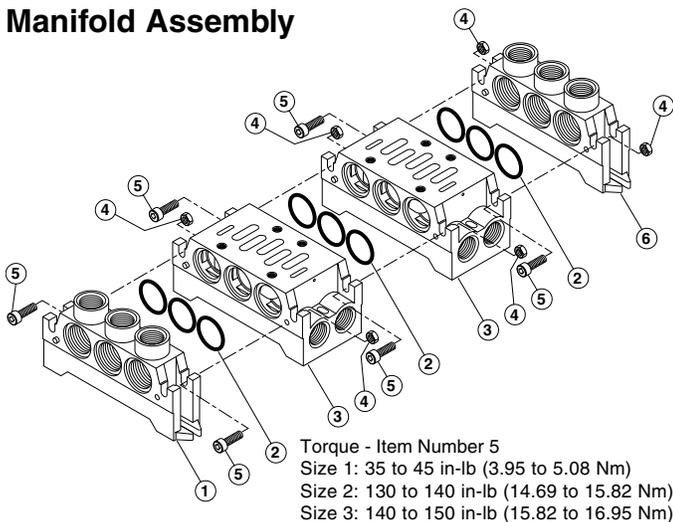
15mm Solenoid Replacement Kit (For Solenoid Operator Option "96")

Voltage		Power (VA 60Hz/W)	Holding (mA)	Inrush (mA)	Override Non-Locking
Code	DC				
M	24	2.3W	94	—	PS3541B49P

Data tested with LED and Surge Suppression.
Voltage rated +10 / -15%.

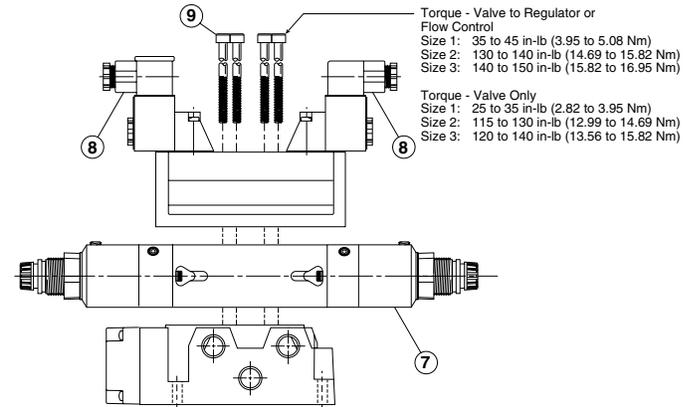
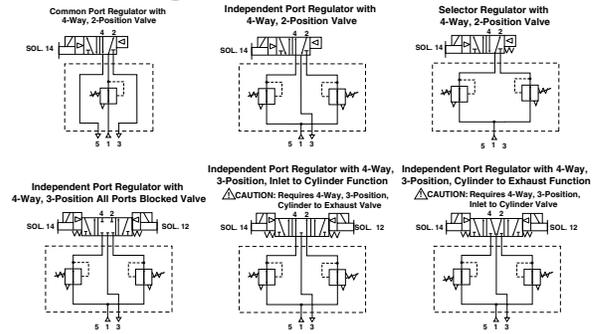


Manifold Assembly



Item Number	Description
1	Left End Plate
2	O-ring
3	Manifold
4	Nut
5	Screw
6	Right End Plate
7	Sandwich Regulator
8	Solenoid
9	Sandwich Regulator Bolt

Sandwich Regulator



Service Kits DX1, DX2, DX3

Kit Number	Description	Items Included (Qty.)
D1BD1	ISO 1 Isolation Disc Kit, Compact	Not Shown (3 per kit)
D2BD2	ISO 2 Isolation Disc Kit, Compact	Not Shown (3 per kit)
P2N-VK0P	ISO 1 Isolation Disc Kit, VDMA	Not Shown (3 per kit)
P2N-WK0P	ISO 2 Isolation Disc Kit, VDMA	Not Shown (3 per kit)
P2N-AA5B	ISO 1 Blanking Plate Kit	Not Shown
P2N-BA5B	ISO 2 Blanking Plate Kit	Not Shown
P2N-CA5B	ISO 3 Blanking Plate Kit	Not Shown
EP1DX	ISO 1 End Plate Kit	1 (1), 2 (3), 4 (2), 5 (2), 6 (1)
EP2DX	ISO 2 End Plate	1 (1), 2 (3), 4 (2), 5 (2), 6 (1)
SFR1DX	ISO 1 Common Pressure Regulator	Not Shown
SFR2DX	ISO 2 Common Pressure Regulator	Not Shown
DFR1DX	ISO 1 Dual Independent Regulator	7 (1)
DFR2DX	ISO 2 Dual Independent Regulator	7 (1)
SFC1DX	ISO 1 Sandwich Flow Control	Not Shown
SFC2DX	ISO 2 Sandwich Flow Control	Not Shown
2EV135J	120VAC Solenoid	8 (1)
2EV133M	24VDC Solenoid	8 (1)
RBK1DX	ISO 1 Regulator Bolt Kit	9 (4)
RBK2DX	ISO 2 Regulator Bolt Kit	9 (4)
FBK1DX	ISO 1 Flow Control Bolt Kit	Not Shown (4 per kit)
FBK2DX	ISO 2 Flow Control Bolt Kit	Not Shown (4 per kit)
CBK1DX	ISO 1 Reg. & Flow Control Bolt Kit	Not Shown (4 per kit)
CBK2DX	ISO 2 Reg. & Flow Control Bolt Kit	Not Shown (4 per kit)
DX1M2MB	ISO 1 Manifold to Manifold Bolt Kit	4 (10), 5 (10)
DX2M2MB	ISO 2 Manifold to Manifold Bolt Kit	4 (10), 5 (10)

Manifold to Manifold Assembly

- Lay Right End Plate (when looking at Cylinder Ports) Port Side down.
- Place O-rings in gasket track.
- Place Manifold on top and tighten using Screw and Nut (both sides).
- Repeat Steps 2 and 3 until all manifold slices are assembled.
- Attach Left End Plate.
- Lay Manifold on flat surface and check for straightness. Tighten all bolts per torque specifications.