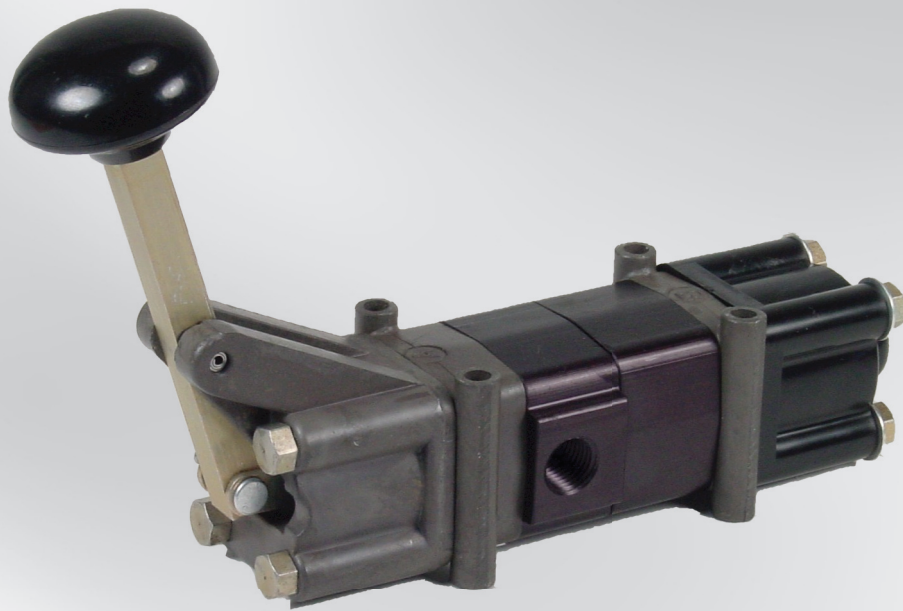


AVENTICS 

TYPE D PILOTAIR[®] VALVES
PNEUMATIC DIRECTIONAL CONTROL VALVES

Rexroth
Pneumatics



**“D” Pilotair[®] Valves
Index and Descriptions**

INDEX AND DESCRIPTIONS

The Type “D” PILOTAIR Valve line includes the following basic valves:

Two-way.....	Page 37
Three-way, open Exhaust	Page 38
Three-way Valve, Tapped Exhaust, Closed Center	Page 39
Four-way Valve, Open Exhaust, Closed Center	Page 40
Four-way Valve, Tapped Exhaust, Closed Center	Page 41
Four-way Valve, Open Exhaust, Exhaust Center	Page 42
Four-way Valve, Tapped Exhaust, Exhaust Center	Page 43
Four-way Valve, Tapped Exhaust, Open Center	Page 43

The above valves can be operated by any of the following operators, all which have several variations of spring return and holding functions.

Lever	Solenoid*
Button	Pedal
Button, Panel Mounting	Treadle
Cam	Low Pressure
Air Pilot Cylinder	Pilot Cylinder

Select the type of valve operation required and then determine the type or types of operators to be used. Tabulations on pages 35 thru 41 list the part numbers to be used for ordering the most commonly used combinations. Also include the complete description of the valve to eliminate the possibility of error.

Example: Part Number PD4-31-1007, 1/2” Three-way Valve, Open Exhaust, Pilot Cylinder Operator “A” End, Cam Operator “B” End, No Return Springs (page 36).

See page 44 for ordering combination not listed in these tabulations.

OPERATORS

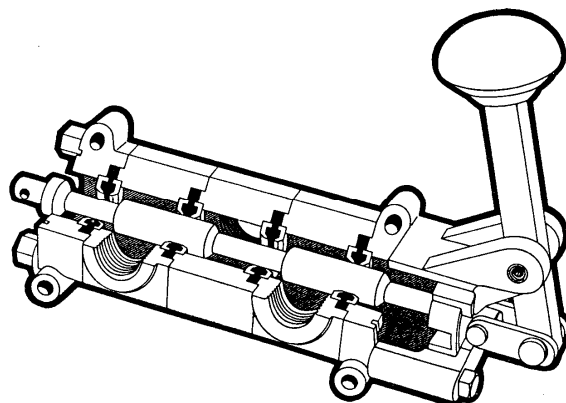
Passages through the Type “D” PILOTAIR Valve are opened and closed by an operator or operators moving a spool to a fixed position at either end of its travel. Some valves have a third or center position midway between these two fixed positions. Any of the available operators may be used on either two or three-position valves. The spring return functions, however, will vary according to the number of positions. Operators can be furnished with No Spring Return, Full Return Springs or Centering Springs.

NO SPRING RETURN -Used on either two-or three-position valves. Operators with no spring return remain in position when the operating force is removed. Only manually-operated valves used singly can be used without return springs. Remote-controlled or mechanically-operated valves used singly must have return springs to return the spool for the next operation. When two operators are used on one valve, the spool is returned by the opposite operator. Lever or Button Operators without spring return may also be used with a detent kit on the opposite end.

FULL RETURN SPRING - Used on tow-position valves. When the operating force is removed, the spool is return to its normal extreme position. The spring may be a part of the operator or assembled on the opposite end of the valve, depending on whether the valve is normally-open or normally-closed.

CENTER SPRINGS - Used on three-position valves. Centering spring hold the spool in its center position. This return function can be used on either single-operator or double-operator valves.

**Piped Solenoid Operators also available. See page 42.*

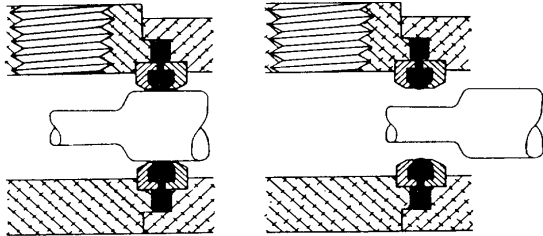


“D” Pilotair® Valves

Features and specifications

POSTIVE SEALING - A unique seal design made from an oil-resistant material developed in the AVENTICS laboratories gives the Type “D” PILOTAIR Valve long service life with minimum maintenance at high operating pressures. In the presence of lubrication oil, this material swells minutely to compensate for seal wear.

Triple support construction gives an interference fit



between the spool and seal to provide sealing effectiveness beyond that of conventional O-ring sealed valves. This same construction ensures that the seals remain in position and are protected from damage by the moving spool.

VERSATILE - There is no standard assembly of the Type “D” PILOTAIR Valve. The directional valve you need is easily tailed to your installation - at standard model prices. Any of nine basic valves may be operated by one or two of eight basic operators. The Type “D” PILOTAIR Valve may have an operator on either or both ends. Various operator spring return and holding functions are available. The valve operators, mounting bracket or any of the port segments may be rotated in 90 degree increments to fit most any installation problem.

Most valves are made from common parts to simplify repair and stocking. No special tools are required to service or modify Type “D” PILOTAIR Valves.

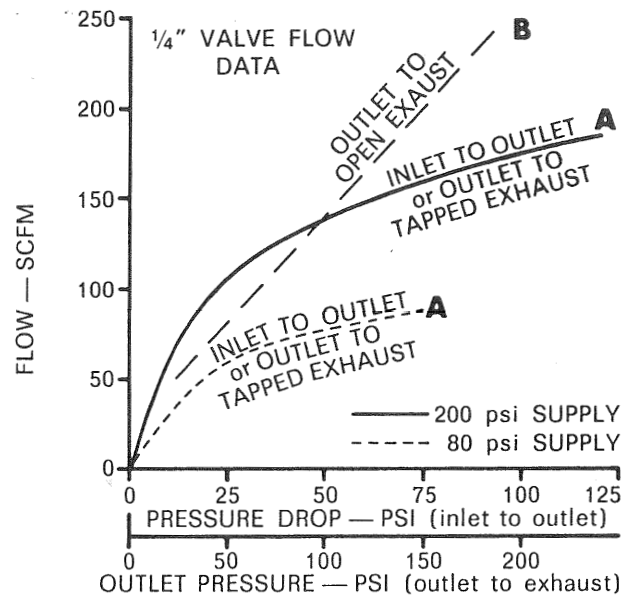
The type “D” PILOTAIR Valve can be used for functions other than directional control (see “Pilot Cylinder Operator” and “Low Pressure Pilot Cylinder” on pages 35 and 36).

DEPENDABLE - Dependability is always a AVENTICS feature. Design simplicity provides long service life with a minimum of maintenance. Uncomplicated parts simplify service problems. The Type “D” PILOTAIR Valve has been proven in millions of cycles in many types of applications.

The Type “D” PILOTAIR Valve operates in any position. Maximum operating pressure of the valve is 250 psi (17.2 bar) (solenoid pilot operator 150 psi (10.3 bar)). Standard operating temperature range is -20°F to +160°F (-29° to +71°C). Special seals are available for -65°F to +300°F operation.

DURABLE - The Type “D” PILOTAIR Valve is constructed of corrosion-resistant materials. All valve bodies and operator housings are anodized aluminum. The spool is stainless steel. Most other internal parts are cadmium plated.

CAPACITY - As shown by the charts, the Type “D” PILOTAIR Valve is designed to provide maximum capacity flow to speed operations and to provide full power.

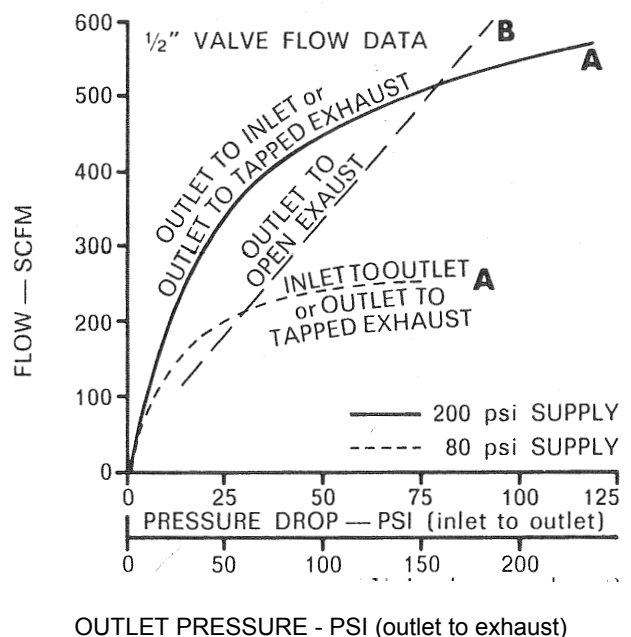


“A” FLOW FACTOR = .83

$C_v = 1.47$

“B” FLOW FACTOR = 1.2

$C_v = 2.12$



To determine flow from inlet to outlet for any pressure drop (permissible difference between inlet and outlet pressure), project up from the Pressure Drop scale to the dotted curve for 80 psi (5.5 bar) supply and to the solid curve for 200 psi (13.8 bar). At this intersection, project to the left for the resulting flow on the vertical scale. To determine flow from outlet to exhaust, project up from the Outlet Pressure scale to the dash-line curve and then to the left for the resulting flow.

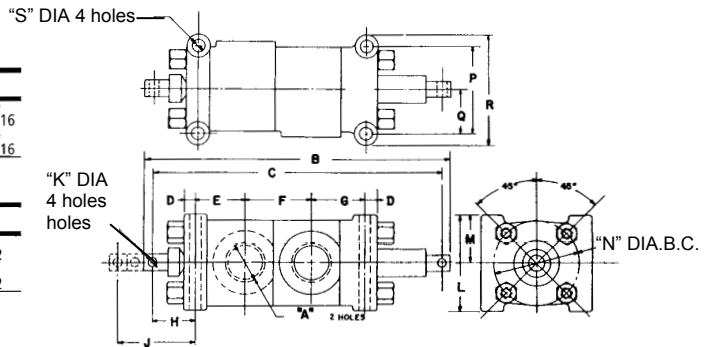
“D” Pilotair[®] Valves
Basic Valve Portions Dimensions

BASIC VALVE
(two-way and three-way open exhaust)

A	B	C	D	E	F	G	H	J
1/4"	5 11/16	5 3/8	3/16	13/16	1	7/8	1	1 11/16
1/2"	6 11/16	6 9/16	1/4	1 1/16	1 7/16	1 3/16	1 5/16	1 11/16

K	L	M	N	P	Q	R	S
1/8	1 7/8	15/16	1 5/8	1 5/8	13/16	2	7/32
3/16	2 1/8	1 1/16	1 7/8	1 15/16	31/32	2 7/16	9/32

Net Weight 1/4" -- 15 oz (0.43 Kg);
1/2" -- 1 lb. 13

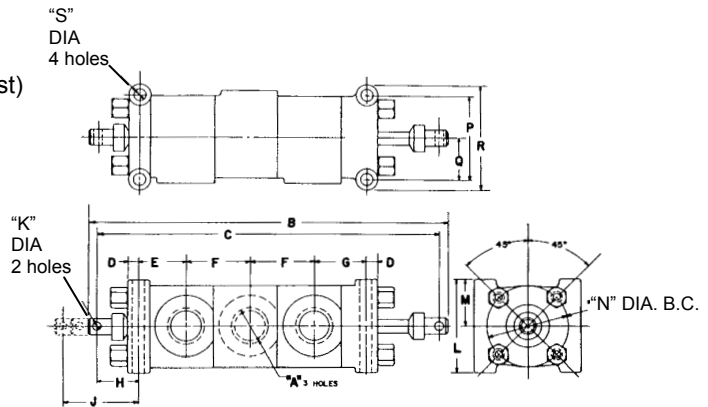


BASIC VALVE
(three-way, tapped exhaust and four-way, open exhaust)

A	B	C	D	E	F	G	H	J
1/4"	6 11/16	6 3/8	3/16	13/16	1	7/8	1	1 11/16
1/2"	8 1/8	7 3/4	1/4	1 1/16	1 7/16	1 3/16	1 5/16	1 11/16

K	L	M	N	P	Q	R	S
1/8	1 7/8	15/16	1 5/8	1 5/8	13/16	2	7/32
3/16	2 1/8	1 1/16	1 7/8	1 15/16	31/32	2 7/16	9/32

Net Weight: 1/4" -- 1 lb. 3 oz. (0.54 Kg);
1/2" -- 2 lb. 5 oz. (1.05 Kg)

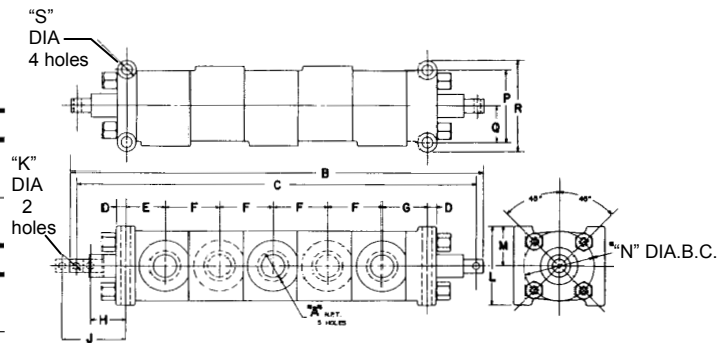


BASIC VALVE
(four-way, tapped exhaust)

A	B	C	D	E	F	G	H	J
1/4"	8 11/16	8 3/8	3/16	13/16	1	7/8	1	1 11/16
1/2"	10 31/32	10 19/32	1/4	1 1/16	1 7/16	1 3/16	1 5/16	1 11/16

K	L	M	N	P	Q	R	S
1/8	1 7/8	15/16	1 5/8	1 5/8	13/16	2	7/32
3/16	2 1/8	1 1/16	1 7/8	1 15/16	31/32	2 7/16	9/32

Net Weight: 1/4" -- 1 lb. 11 oz. (0.77 Kg);
1/2" -- 3 lb. 1 oz. (1.39 Kg)

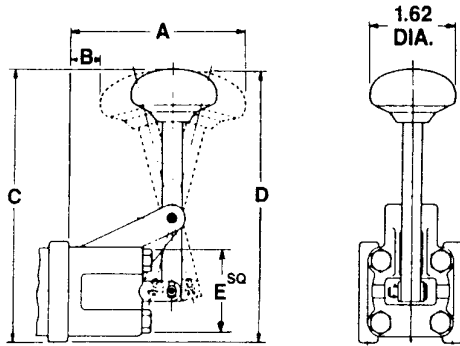


NOTE A -- The attachment holes in each end of the spool may not be in line as shown.

“D” Pilotair® Valves

Valve Operator Selections (Operator code numbers shown on page 46)
Dimensions

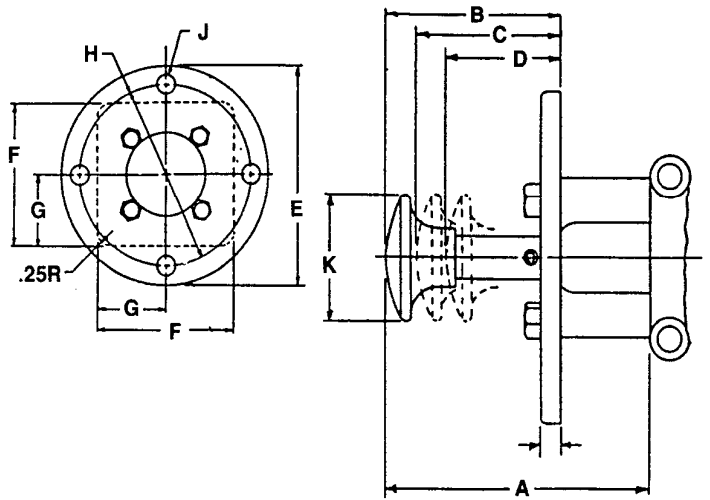
LEVER OPERATOR



Size	A	B	C	D	E
1/4"	3.38	.56	5.12	5.06	1.65

For manual operation. May be for push or pull operation on two- or three-position valves. May also be used with detent kit. Net Weight: 1/4" - 9 oz. (0.26 Kg.); 1/2" - 14 oz. (0.40 Kg.)

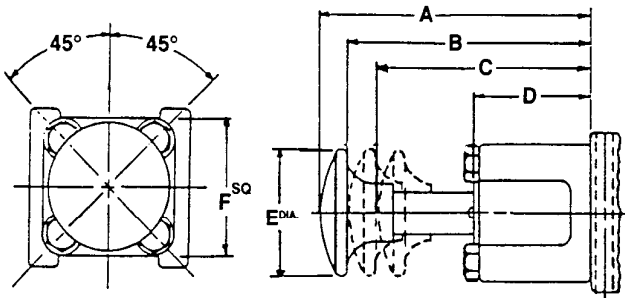
BUTTON OPERATORS WITH FLANGE MOUNTING



Size	A	B	C	D	E	F	G	H	J	K
1/4"	3.62	2.47	2.12	1.78	3.38	2.19	1.09	2.75	.28	1.50
1/2"	3.56	2.50	2.12	1.75	3.94	2.56	1.28	3.25	.34	1.50

Same as button operator except it contains a mounting flange for panel installation. Net Weight: 1/4" - 7 oz. (0.20 Kg.); 1/2" - 9 oz. (0.26 Kg.)

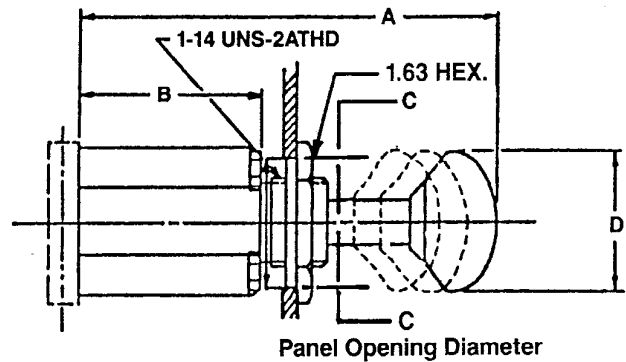
BUTTON OPERATOR



Size	A	B	C	D	E	F
1/4"	3.62	3.28	2.94	1.47	1.50	1.65
1/2"	3.56	3.19	2.81	1.41	1.50	1.95

Finger operation. Generally used on two-position valves with full return spring. May also be used on three-position valves with or without return springs for push or pull operation. May also be used with detent kit. Net Weight: 1/4" - 5 oz. (0.14 Kg.); 1/2" - 7 oz. (0.20 Kg.)

NOSE MOUNT OPERATOR

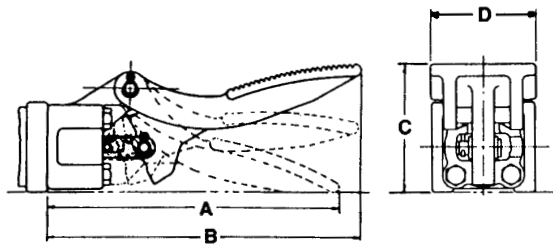


Mounts in control panel hole (1/2" DIA). Two and three position integral detents, no additional detent kits required. 1/4" valve size only. 1/4" - 10 oz. (0.28 Kg.)

“D” Pilotair[®] Valves

Valve Operator Selections (Operator code numbers shown on page 46)
Dimensions

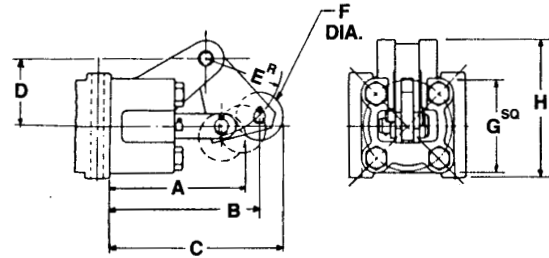
FOOT PEDAL OPERATOR



Size	A	B	C	D
1/4"	7.00	7.47	2.81	2.50
1/2"	7.00	7.47	3.06	2.50

Toe-operated. Must have return spring when used as only operator. When used with another operator it should have no return spring. Net Weight: 1/4" - 1 lb. 2 oz. (0.51 Kg.); 1/2" - 1 lb. 4 oz. (0.57 Kg.)

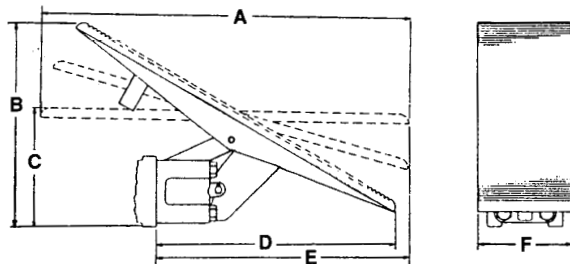
CAM OPERATOR



Size	A	B	C	D	E	F	G	H
1/4"	2.69	3.12	3.38	1.38	1.63	.50	1.65	2.56
1/2"	2.81	3.22	3.56	1.38	1.69	1.00	1.95	2.81

Mechanically-operated. Must be used with full return spring or operator on opposite end to return spool. Net Weight: 1/4" - 6 oz. (0.17 Kg.); 1/2" - 8 oz. (0.23 Kg.)

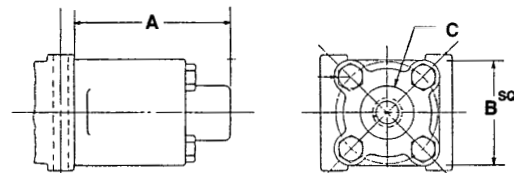
FOOT TREADLE OPERATOR



Size	A	B	C	D	E	F
1/4"	9.75	5.47	3.19	6.25	6.69	2.50
1/2"	9.75	5.75	3.44	6.25	6.69	2.50

Foot-operated. May be used with no return spring or with centering springs. Ordinarily would not be used with another operator. Net Weight: 1/4" - 1 lb. 4 oz. (0.57 Kg.); 1/2" - 1 lb. 11 oz. (0.77 Kg.)

PILOT CYLINDER OPERATOR



Size	A	B	C
1/4"	3.00	1.65	1/4-18 N.P.T.
1/2"	2.94	1.95	1/4-18 N.P.T.

45 psi (3.1 bar) minimum with spring, 12 psi (0.83 bar) minimum without spring.

Remote pneumatic operation. Must have return spring when used as only operator. When used with another operator it may be used with no return spring or with centering springs. Net Weight: 1/4" - 8 oz. (0.23 Kg.); 1/2" - 8 oz. (0.23 Kg.)

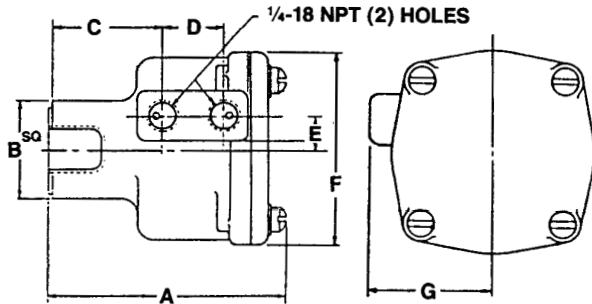
AUTOMATIC DRAIN VALVE - The Pilot Cylinder Operated Type "D" PILOTAIR Valve has been utilized to operate as an automatic drain valve. For more information, see "Air Line Conditioning Units" Section, Catalog SC-500.

“D” Pilotair® Valves

Valve Operator Selections (Operator code numbers shown on page 46)

Dimensions

LOW PRESSURE PILOT CYLINDER



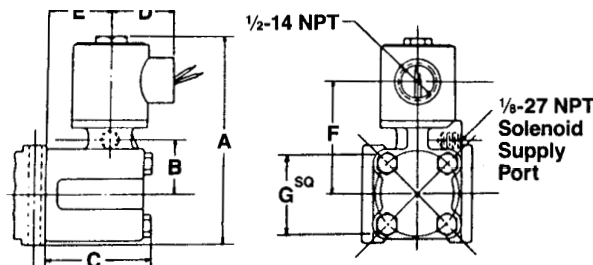
Size	A	B	C	D	E	F	G
1/4"	4.50	1.62	2.04	1.16	.62	3.62	2.22
1/2"	4.44	1.88	2.03	1.16	.62	3.62	2.22

120 psi (8.3 bar) maximum, 9 psi (0.62 bar) minimum with spring, 3 psi (0.21 bar) minimum without spring.

Pneumatically-operated by low control pressure. May have full spring return or be dual-piloted. Either side of pilot piston diaphragm is pressurized to position spool when dual-piloted. May also be used with another operator with no return spring or with centering springs. Net Weight: 1/4" - 1 lb. 13 oz. (0.82 Kg.); 1/2" - 1 lb. 14 oz. (0.85 bar)

RELAY VALVE - The Low Pressure Pilot Cylinder Operated Type “D” PILOTAIR Valve has been utilized as a pressure relay valve. By piping the outlet pressure to the underside of the diaphragm, control air pressure is duplicated in the outlet line. Relay Valves repeat large quantities of air at pressures corresponding with the control pressure applied to them. They are used to increase speed of operation by reducing transmission time and flow requirements in long control lines. For more information see “Accessory Valve” Section, Catalog SC-400.

SOLENOID CONTROLLED OPERATOR

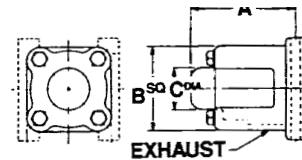


Size	A	B	C	D	E	F	G
1/4"	4.44	1.19	2.38	1.58	1.44	2.50	1.65
1/2"	4.56	1.19	2.31	1.58	1.38	2.50	1.95

150 psi (6.3 bar) maximum, 45 psi (3.1 bar) minimum with spring, 12 psi (0.83 bar) minimum without spring.

Solenoid controlled air pilot operated. Uses an external pilot pressure to operate its piston. Pilot port tapped 1/8" NPT and is either connected to the supply port of the valve or to an independent supply pressure. Must have return spring when used as only operator. When used with another operator it may be used with no return spring or with centering springs. Molded weatherproof coils standard. Tabulations on pages 35 thru 41 list 120V and 240V models. Other coil voltages and explosion-proof models available (see pg. 44) Net Weight: 1/4" - 1 lb. 4 oz. (0.57 Kg.); 1/2" - 1 lb. 7 oz. (0.65 Kg.)

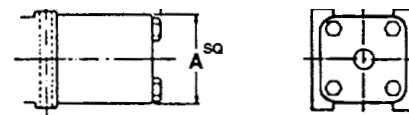
END COVER KIT



Size	A	B	C
1/4"	1.84	1.65	.81
1/2"	1.81	1.95	.94

Used to protect the open end of a valve from foreign matter or damage and to house return springs when used. Net Weight: 1/4" - 5 oz. (0.14 Kg.); 1/2" - 6 oz. (0.17 Kg.)

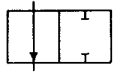
DETENT KIT



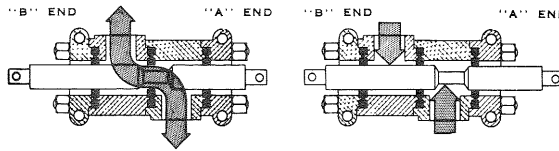
Size	A	B
1/4"	1.75	2.38
1/2"	2.00	2.28

Available for lever and button operators with no return spring. Holds the spook in position in severe vibration application or provides “position-feel”. Available in two - and three-position. Net Weight: 1/4" - 10 oz. (0.28 bar), 1/2" - 12 oz. (0.34 bar)

“D” Pilotair[®] Valves
Two-Way Valves-Complete Assembly Model Numbers



PD2 = 1/4" Valve
 PD4 = 1/2" Valve



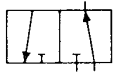
OPERATOR		OPERATOR WITH						
		NO SPRING RETURN			FULL SPRING RETURN			
		No End Cover	With End Cover	With Detent	NORMALLY OPEN		NORMALLY CLOSED	
No End Cover	With End Cover				No End Cover	With End Cover		
LEVER	Push To Open Pull To Close	PD2-20-0001 PD4-20-0001	PD2-20-9801 PD4-20-9801	PD2-20-9001 PD4-20-9001				
LEVER	Pull To Open Push To Close	PD2-20-0100 PD4-20-0100	PD2-20-0198 PD4-20-0198	PD2-20-0190 PD4-20-0190				
LEVER	Push To Operate				PD2-20-0155 PD4-20-0155			PD2-20-5501 PD4-20-5501
LEVER	Pull To Operate				PD2-20-0002 PD4-20-0002	PD2-20-0200 PD4-20-0200		PD2-20-0298 PD4-20-0298
BUTTON	Push To Open Pull To Close	PD2-20-0400 PD4-20-0400	PD2-20-0498 PD4-20-0498	PD2-20-0490 PD4-20-0490				
BUTTON	Pull To Open Push To Close	PD2-20-0004 PD4-20-0004	PD2-20-9804 PD4-20-9804	PD2-20-9004 PD4-20-9004				
BUTTON	Push To Operate				PD2-20-0005 PD4-20-0005	PD2-20-9805 PD4-20-9805	PD2-20-0500 PD4-20-0500	PD2-20-0598 PD4-20-0598
BUTTON	Pull To Operate					PD2-20-0455 PD4-20-0455		PD2-20-5504 PD4-20-5504
BUTTON W/FLANGE	Push To Open Pull To Close	PD2-20-8700 PD4-20-8700	PD2-20-8798 PD4-20-8798	PD2-20-8790 PD4-20-8790				
BUTTON W/FLANGE	Pull To Open Push To Close	PD2-20-0087 PD4-20-0087	PD2-20-9887 PD4-20-9887	PD2-20-9087 PD4-20-9087				
BUTTON W/FLANGE	Push To Operate				PD2-20-0088 PD4-20-0088	PD2-20-9888 PD4-20-9888	PD2-20-8800 PD4-20-8800	PD2-20-8898 PD4-20-8898
BUTTON W/FLANGE	Pull To Operate					PD2-20-8755 PD4-20-8755		PD2-20-5587 PD4-20-5587
CAM					PD2-20-0008 PD4-20-0008	PD2-20-9808 PD4-20-9808	PD2-20-0800 PD4-20-0800	PD2-20-0898 PD4-20-0898
PILOT CYLINDER					PD2-20-0011 PD4-20-0011	PD2-20-9811 PD4-20-9811	PD2-20-1100 PD4-20-1100	PD2-20-1198 PD4-20-1198
SOLENOID* (120V, 60C)					PD2-20-0014 PD4-20-0014	PD2-20-9814 PD4-20-9814	PD2-20-1400 PD4-20-1400	PD2-20-1498 PD4-20-1498
SOLENOID* (240V, 60C)					PD2-20-0017 PD4-20-0017	PD2-20-9817 PD4-20-9817	PD2-20-1700 PD4-20-1700	PD2-20-1798 PD4-20-1798
FOOT PEDAL					PD2-20-0023 PD4-20-0023	PD2-20-9823 PD4-20-9823	PD2-20-2300 PD4-20-2300	PD2-20-2398 PD4-20-2398
FOOT TREADLE		PD2-20-5200 PD4-20-5200	PD2-20-5298 PD4-20-5298					
LOW PRESSURE PILOT CYLINDER		PD2-20-1900 PD4-20-1900	PD2-20-1998 PD4-20-1998		PD2-20-0020 PD4-20-0020	PD2-20-9820 PD4-20-9820	PD2-20-2000 PD4-20-2000	PD2-20-2098 PD4-20-2098

OPERATOR ON "B" END:		OPERATOR ON "A" END:							
		Lever	Button	Button (with flange mtg.)	Cam	Pilot Cylinder	Solenoid* (115V, 60C.)	Solenoid* (220V, 60C.)	Pedal
Cam	PD2-20-0107 PD4-20-0107	PD2-20-0407 PD4-20-0407	PD2-20-8707 PD4-20-8707	PD2-20-0707 PD4-20-0707	PD2-20-1007 PD4-20-1007	PD2-20-1307 PD4-20-1307	PD2-20-1607 PD4-20-1607	PD2-20-2207 PD4-20-2207	PD2-20-1907 PD4-20-1907
Pilot Cylinder	PD2-20-0110 PD4-20-0110	PD2-20-0410 PD4-20-0410	PD2-20-8710 PD4-20-8710	PD2-20-0710 PD4-20-0710	PD2-20-1010 PD4-20-1010	PD2-20-1310 PD4-20-1310	PD2-20-1610 PD4-20-1610	PD2-20-2210 PD4-20-2210	PD2-20-1910 PD4-20-1910
Solenoid* (120V, 60C)	PD2-20-0113 PD4-20-0113	PD2-20-0413 PD4-20-0413	PD2-20-8713 PD4-20-8713	PD2-20-0713 PD4-20-0713	PD2-20-1013 PD4-20-1013	PD2-20-1313 PD4-20-1313		PD2-20-2213 PD4-20-2213	PD2-20-1913 PD4-20-1913
Solenoid* (240V, 60C)	PD2-20-0116 PD4-20-0116	PD2-20-0416 PD4-20-0416	PD2-20-8716 PD4-20-8716	PD2-20-0716 PD4-20-0716	PD2-20-1016 PD4-20-1016		PD2-20-1616 PD4-20-1616	PD2-20-2216 PD4-20-2216	PD2-20-1916 PD4-20-1916

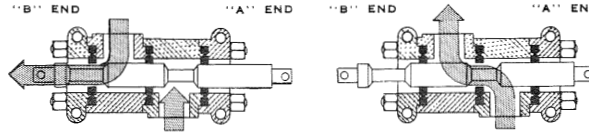
*Solenoid controlled, air pilot operated
 †Operator on "A" end, when effective, opens the valve
 ‡Operator on "B" end, when effective, closes the valve

Note: see pages 49-51 for model number cross reference to current part number.

“D” Pilotair® Valves
Three-Way Valves - Open Exhaust - Complete Assembly Model Numbers



PD2 = 1/4" Valve
 PD4 = 1/2" Valve



SINGLE OPERATOR

OPERATOR	OPERATOR WITH						
	NO SPRING RETURN			FULL SPRING RETURN			
	No End Cover	With End Cover	With Detent	NORMALLY OPEN		NORMALLY CLOSED	
				No End Cover	With End Cover	No End Cover	With End Cover
LEVER Push To Open Pull To Close	PD2-31-0001 PD4-31-0001	PD2-31-9801 PD4-31-9801	PD2-31-9001 PD4-31-9001				
LEVER Pull To Open Push To Close	PD2-31-0100 PD4-31-0100	PD2-31-0198 PD4-31-0198	PD2-31-0190 PD4-31-0190				
LEVER Push To Operate					PD2-31-0155 PD4-31-0155		PD2-31-5501 PD4-31-5501
LEVER Pull To Operate				PD2-31-0002 PD4-31-0002	PD2-31-9802 PD4-31-9802	PD2-31-0200 PD4-31-0200	PD2-31-0298 PD4-31-0298
BUTTON Push To Open Pull To Close	PD2-31-0400 PD4-31-0400	PD2-31-0498 PD4-31-0498	PD2-31-0490 PD4-31-0490				
BUTTON Pull To Open Push To Close	PD2-31-0004 PD4-31-0004	PD2-31-9804 PD4-31-9804	PD2-31-9004 PD4-31-9004				
BUTTON Push To Operate				PD2-31-0005 PD4-31-0005	PD2-31-9805 PD4-31-9805	PD2-31-0500 PD4-31-0500	PD2-31-0598 PD4-31-0598
BUTTON Pull To Operate					PD2-31-0455 PD4-31-0455		PD2-31-5504 PD4-31-5504
BUTTON W FLANGE Push To Open Pull To Close	PD2-31-8700 PD4-31-8700	PD2-31-8798 PD4-31-8798	PD2-31-8790 PD4-31-8790				
BUTTON W FLANGE Pull To Open Push To Close	PD2-31-0087 PD4-31-0087	PD2-31-9887 PD4-31-9887	PD2-31-9087 PD4-31-9087				
BUTTON W FLANGE Push To Operate				PD2-31-0088 PD4-31-0088	PD2-31-9888 PD4-31-9888	PD2-31-0800 PD4-31-0800	PD2-31-0898 PD4-31-0898
BUTTON W FLANGE Pull To Operate					PD2-31-8755 PD4-31-8755		PD2-31-5587 PD4-31-5587
CAM				PD2-31-0008 PD4-31-0008	PD2-31-9808 PD4-31-9808	PD2-31-0800 PD4-31-0800	PD2-31-0898 PD4-31-0898
PILOT CYLINDER				PD2-31-0011 PD4-31-0011	PD2-31-9811 PD4-31-9811	PD2-31-1100 PD4-31-1100	PD2-31-1198 PD4-31-1198
SOLENOID* (120V., 60C)				PD2-31-0014 PD4-31-0014	PD2-31-9814 PD4-31-9814	PD2-31-1400 PD4-31-1400	PD2-31-1498 PD4-31-1498
SOLENOID* (240V., 60C)				PD2-31-0017 PD4-31-0017	PD2-31-9817 PD4-31-9817	PD2-31-1700 PD4-31-1700	PD2-31-1798 PD4-31-1798
FOOT PEDAL				PD2-31-0023 PD4-31-0023	PD2-31-9823 PD4-31-9823	PD2-31-2300 PD4-31-2300	PD2-31-2398 PD4-31-2398
FOOT TREADLE	PD2-31-5200 PD4-31-5200	PD2-31-5298 PD4-31-5298					
LOW PRESSURE PILOT CYLINDER	PD2-31-1900 PD4-31-1900	PD2-31-1998 PD4-31-1998		PD2-31-0020 PD4-31-0020	PD2-31-9820 PD4-31-9820	PD2-31-2000 PD4-31-2000	PD2-31-2098 PD4-31-2098

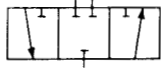
TWO OPERATORS WITH NO SPRING RETURN

OPERATOR ON "B" END:	OPERATOR ON "A" END:								
	* Lever	Button	Button (with flange mtg.)	Cam	Pilot Cylinder	Solenoid* (115V., 60C.)	Solenoid* (220V., 60C.)	Pedal	Low Pressure Pilot Cylinder
Cam	PD2-31-0107 PD4-31-0107	PD2-31-0407 PD4-31-0407	PD2-31-8707 PD4-31-8707	PD2-31-0707 PD4-31-0707	PD2-31-1007 PD4-31-1007	PD2-31-1307 PD4-31-1307	PD2-31-1607 PD4-31-1607	PD2-31-2207 PD4-31-2207	PD2-31-1907 PD4-31-1907
Pilot Cylinder	PD2-31-0110 PD4-31-0110	PD2-31-0410 PD4-31-0410	PD2-31-8710 PD4-31-8710	PD2-31-0710 PD4-31-0710	PD2-31-1010 PD4-31-1010	PD2-31-1310 PD4-31-1310	PD2-31-1610 PD4-31-1610	PD2-31-2210 PD4-31-2210	PD2-31-1910 PD4-31-1910
Solenoid* (120V., 60C)	PD2-31-0113 PD4-31-0113	PD2-31-0413 PD4-31-0413	PD2-31-8713 PD4-31-8713	PD2-31-0713 PD4-31-0713	PD2-31-1013 PD4-31-1013	PD2-31-1313 PD4-31-1313		PD2-31-2213 PD4-31-2213	PD2-31-1913 PD4-31-1913
Solenoid* (240V., 60C)	PD2-31-0116 PD4-31-0116	PD2-31-0416 PD4-31-0416	PD2-31-8716 PD4-31-8716	PD2-31-0716 PD4-31-0716	PD2-31-1016 PD4-31-1016		PD2-31-1616 PD4-31-1616	PD2-31-2216 PD4-31-2216	PD2-31-1916 PD4-31-1916

*Solenoid controlled, air pilot operated
 †Operator on "A" end, when effective, opens the valve
 ‡Operator on "B" end, when effective, closes the valve and vents outlet

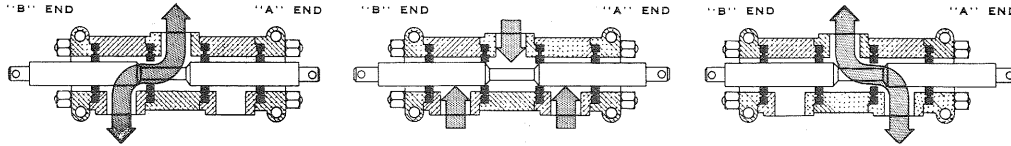
Note: see pages 49-51 for model number cross reference to current part number.

“D” Pilotair[®] Valves
Three-Way Valves - Tapped Exhaust - Complete Assembly Model Numbers



CLOSED CENTER POSITION

PD2 = 1/4" Valve
 PD4 = 1/2" Valve



OPERATOR	OPERATOR WITH					
	NO SPRING RETURN			FULL SPRING RETURN		CENTERING SPRINGS
	No End Cover	With End Cover	With Detent †	No End Cover	With End Cover	
Lever	PD2 32-0100 PD4 32-0100	PD2 32-0198 PD4 32-0198	PD2 32-0191 PD4 32-0191	PD2 32-0002 PD4 32-0002	PD2 32-9802 PD4 32-9802	PD2 32-0354 PD4 32-0354
Button	PD2 32-0400 PD4 32-0400	PD2 32-0498 PD4 32-0498	PD2 32-0491 PD4 32-0491	PD2 32-0500 PD4 32-0500	PD2 32-0598 PD4 32-0598	PD2 32-0654 PD4 32-0654
Button (with flange mounting)	PD2 32-8700 PD4 32-8700	PD2 32-8798 PD4 32-8798	PD2 32-8791 PD4 32-8791	PD2 32-8800 PD4 32-8800	PD2 32-8898 PD4 32-8898	PD2 32-8954 PD4 32-8954
Cam				PD2 32-0800 PD4 32-0800	PD2 32-0898 PD4 32-0898	
Pilot Cylinder				PD2 32-1100 PD4 32-1100	PD2 32-1198 PD4 32-1198	
Solenoid* (120V, 60C)				PD2 32-1400 PD4 32-1400	PD2 32-1498 PD4 32-1498	
Solenoid* (240V, 60C)				PD2 32-1700 PD4 32-1700	PD2 32-1798 PD4 32-1798	
Foot Pedal				PD2 32-2300 PD4 32-2300	PD2 32-2398 PD4 32-2398	
Foot Treadle	PD2 32-5200 PD4 32-5200	PD2 32-5298 PD4 32-5298				PD2 32-5354 PD4 32-5354
Low Pressure Pilot Cylinder	PD2 32-1900 PD4 32-1900	PD2 32-1998 PD4 32-1998		PD2 32-2000 PD4 32-2000	PD2 32-2098 PD4 32-2098	PD2 32-2154 PD4 32-2154

OPERATOR ON "B" END	OPERATOR ON "A" END							
	Lever	Button	Button (with flange mtg.)	Cam	Pilot Cylinder	Solenoid* (115V, 60C)	Solenoid* (220V, 60C)	Low Pressure Pilot Cylinder
Cam	PD2 32-0309 PD4 32-0309	PD2 32-0609 PD4 32-0609	PD2 32-8909 PD4 32-8909	PD2 32-0909 PD4 32-0909	PD2 32-1209 PD4 32-1209	PD2 32-1509 PD4 32-1509	PD2 32-1809 PD4 32-1809	PD2 32-2109 PD4 32-2109
Pilot Cylinder	PD2 32-0312 PD4 32-0312	PD2 32-0612 PD4 32-0612	PD2 32-8912 PD4 32-8912	PD2 32-0912 PD4 32-0912	PD2 32-1212 PD4 32-1212	PD2 32-1512 PD4 32-1512	PD2 32-1812 PD4 32-1812	PD2 32-2112 PD4 32-2112
Solenoid* (120V, 60C)	PD2 32-0315 PD4 32-0315	PD2 32-0615 PD4 32-0615	PD2 32-8915 PD4 32-8915	PD2 32-0915 PD4 32-0915	PD2 32-1215 PD4 32-1215	PD2 32-1515 PD4 32-1515		PD2 32-2115 PD4 32-2115
Solenoid* (240V, 60C)	PD2 32-0318 PD4 32-0318	PD2 32-0618 PD4 32-0618	PD2 32-8918 PD4 32-8918	PD2 32-0918 PD4 32-0918	PD2 32-1218 PD4 32-1218		PD2 32-1818 PD4 32-1818	PD2 32-2118 PD4 32-2118

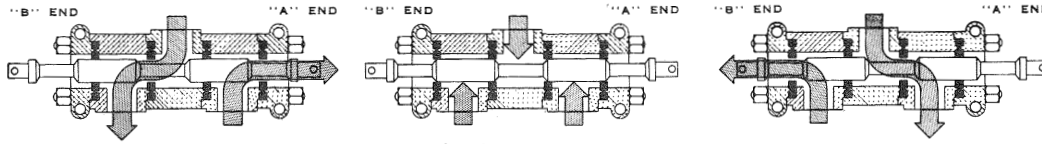
OPERATOR ON "B" END	OPERATOR ON "A" END								
	Lever	Button	Button (with flange mtg.)	Cam	Pilot Cylinder	Solenoid* (115V, 60C)	Solenoid* (220V, 60C)	Pedal	Low Pressure Pilot Cylinder
Cam	PD2 32-0107 PD4 32-0107	PD2 32-0407 PD4 32-0407	PD2 32-8707 PD4 32-8707	PD2 32-0707 PD4 32-0707	PD2 32-1007 PD4 32-1007	PD2 32-1307 PD4 32-1307	PD2 32-1607 PD4 32-1607	PD2 32-2207 PD4 32-2207	PD2 32-1907 PD4 32-1907
Pilot Cylinder	PD2 32-0110 PD4 32-0110	PD2 32-0410 PD4 32-0410	PD2 32-8710 PD4 32-8710	PD2 32-0710 PD4 32-0710	PD2 32-1010 PD4 32-1010	PD2 32-1310 PD4 32-1310	PD2 32-1610 PD4 32-1610	PD2 32-2210 PD4 32-2210	PD2 32-1910 PD4 32-1910
Solenoid* (120V, 60C)	PD2 32-0113 PD4 32-0113	PD2 32-0413 PD4 32-0413	PD2 32-8713 PD4 32-8713	PD2 32-0713 PD4 32-0713	PD2 32-1013 PD4 32-1013	PD2 32-1313 PD4 32-1313		PD2 32-2213 PD4 32-2213	PD2 32-1913 PD4 32-1913
Solenoid* (240V, 60C)	PD2 32-0116 PD4 32-0116	PD2 32-0416 PD4 32-0416	PD2 32-8716 PD4 32-8716	PD2 32-0716 PD4 32-0716	PD2 32-1016 PD4 32-1016		PD2 32-1616 PD4 32-1616	PD2 32-2216 PD4 32-2216	PD2 32-1916 PD4 32-1916

*Solenoid controlled, air pilot operated
 †Three-position detent

Note: see pages 49-51 for model number cross reference to current part number.

“D” Pilotair® Valves
Four-Way Valves - Open Exhaust - Closed Center
Complete Assembly Model Numbers

PD2 = 1/4" Valve
 PD4 = 1/2" Valve



SINGLE OPERATOR

OPERATOR	OPERATOR WITH					
	NO SPRING RETURN			FULL SPRING RETURN		CENTERING SPRINGS
	No End Cover	With End Cover	With Detent†	No End Cover	With End Cover	
Lever	PD2-41-0100 PD4-41-0100	PD2-41-0198 PD4-41-0198	PD2-41-0191 PD4-41-0191	PD2-41-0002 PD4-41-0002	PD2-41-9802 PD4-41-9802	PD2-41-0354 PD4-41-0354
Button	PD2-41-0400 PD4-41-0400	PD2-41-0498 PD4-41-0498	PD2-41-0491 PD4-41-0491	PD2-41-0500 PD4-41-0500	PD2-41-0598 PD4-41-0598	PD2-41-0654 PD4-41-0654
Button (with flange mounting)	PD2-41-8700 PD4-41-8700	PD2-41-8798 PD4-41-8798	PD2-41-8791 PD4-41-8791	PD2-41-8800 PD4-41-8800	PD2-41-8898 PD4-41-8898	PD2-41-8954 PD4-41-8954
Cam				PD2-41-0800 PD4-41-0800	PD2-41-0898 PD4-41-0898	
Pilot Cylinder				PD2-41-1100 PD4-41-1100	PD2-41-1198 PD4-41-1198	
Solenoid* (120V, 60C)				PD2-41-1400 PD4-41-1400	PD2-41-1498 PD4-41-1498	
Solenoid* (240V, 60C)				PD2-41-1700 PD4-41-1700	PD2-41-1798 PD4-41-1798	
Foot Pedal				PD2-41-2300 PD4-41-2300	PD2-41-2398 PD4-41-2398	
Foot Treadle	PD2-41-5200 PD4-41-5200	PD2-41-5298 PD4-41-5298				PD2-41-5354 PD4-41-5354
Low Pressure Pilot Cylinder	PD2-41-1900 PD4-41-1900	PD2-41-1998 PD4-41-1998		PD2-41-2000 PD4-41-2000	PD2-41-2098 PD4-41-2098	PD2-41-2154 PD4-41-2154

TWO OPERATORS WITH CENTERING SPRINGS

OPERATOR ON "B" END	OPERATOR ON "A" END							
	Lever	Button	Button (with flange mtg.)	Cam	Pilot Cylinder	Solenoid* (115V, 60C.)	Solenoid* (220V, 60C.)	Low Pressure Pilot Cylinder
Cam	PD2-41-0309 PD4-41-0309	PD2-41-0609 PD4-41-0609	PD2-41-8909 PD4-41-8909	PD2-41-0909 PD4-41-0909	PD2-41-1209 PD4-41-1209	PD2-41-1509 PD4-41-1509	PD2-41-1809 PD4-41-1809	PD2-41-2109 PD4-41-2109
Pilot Cylinder	PD2-41-0312 PD4-41-0312	PD2-41-0612 PD4-41-0612	PD2-41-8912 PD4-41-8912	PD2-41-0912 PD4-41-0912	PD2-41-1212 PD4-41-1212	PD2-41-1512 PD4-41-1512	PD2-41-1812 PD4-41-1812	PD2-41-2112 PD4-41-2112
Solenoid* (120V, 60C)	PD2-41-0315 PD4-41-0315	PD2-41-0615 PD4-41-0615	PD2-41-8915 PD4-41-8915	PD2-41-0915 PD4-41-0915	PD2-41-1215 PD4-41-1215	PD2-41-1515 PD4-41-1515		PD2-41-2115 PD4-41-2115
Solenoid* (240V, 60C)	PD2-41-0318 PD4-41-0318	PD2-41-0618 PD4-41-0618	PD2-41-8918 PD4-41-8918	PD2-41-0918 PD4-41-0918	PD2-41-1218 PD4-41-1218		PD2-41-1818 PD4-41-1818	PD2-41-2118 PD4-41-2118

TWO OPERATORS WITH NO SPRING RETURN

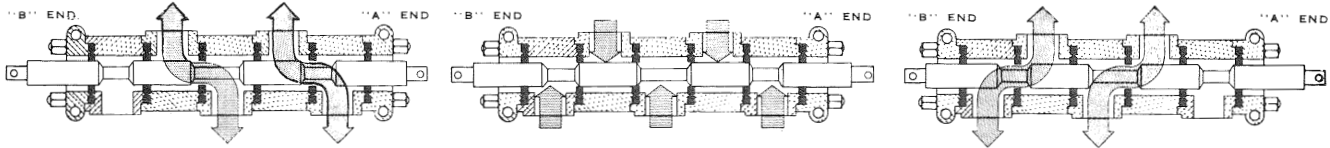
OPERATOR ON "B" END	OPERATOR ON "A" END								
	Lever	Button	Button (with flange mtg.)	Cam	Pilot Cylinder	Solenoid* (115V, 60C.)	Solenoid* (220V, 60C.)	Pedal	Low Pressure Pilot Cylinder
Cam	PD2-41-0107 PD4-41-0107	PD2-41-0407 PD4-41-0407	PD2-41-8707 PD4-41-8707	PD2-41-0707 PD4-41-0707	PD2-41-1007 PD4-41-1007	PD2-41-1307 PD4-41-1307	PD2-41-1607 PD4-41-1607	PD2-41-2207 PD4-41-2207	PD2-41-1907 PD4-41-1907
Pilot Cylinder	PD2-41-0110 PD4-41-0110	PD2-41-0410 PD4-41-0410	PD2-41-8710 PD4-41-8710	PD2-41-0710 PD4-41-0710	PD2-41-1010 PD4-41-1010	PD2-41-1310 PD4-41-1310	PD2-41-1610 PD4-41-1610	PD2-41-2210 PD4-41-2210	PD2-41-1910 PD4-41-1910
Solenoid* (120V, 60C)	PD2-41-0113 PD4-41-0113	PD2-41-0413 PD4-41-0413	PD2-41-8713 PD4-41-8713	PD2-41-0713 PD4-41-0713	PD2-41-1013 PD4-41-1013	PD2-41-1313 PD4-41-1313		PD2-41-2213 PD4-41-2213	PD2-41-1913 PD4-41-1913
Solenoid* (240V, 60C)	PD2-41-0116 PD4-41-0116	PD2-41-0416 PD4-41-0416	PD2-41-8716 PD4-41-8716	PD2-41-0716 PD4-41-0716	PD2-41-1016 PD4-41-1016		PD2-41-1616 PD4-41-1616	PD2-41-2216 PD4-41-2216	PD2-41-1916 PD4-41-1916

*Solenoid controlled, air pilot operated
 †Three-position detent

Note: see pages 49-51 for model number cross reference to current part number.

“D” Pilotair[®] Valves
Four-Way Valves - Tapped Exhaust - Closed Center
Complete Assembly Model Numbers

PD2 = 1/4" Valve
 PD4 = 1/2" Valve



SINGLE OPERATOR

OPERATOR	OPERATOR WITH					
	NO SPRING RETURN			FULL SPRING RETURN		CENTERING SPRINGS
	No End Cover	With End Cover	With Detent †	No End Cover	With End Cover	
Lever	PD2-42-0100 PD4-42-0100	PD2-42-0198 PD4-42-0198	PD2-42-0191 PD4-42-0191	PD2-42-0002 PD4-42-0002	PD2-42-9802 PD4-42-9802	PD2-42-0354 PD4-42-0354
Button	PD2-42-0400 PD4-42-0400	PD2-42-0498 PD4-42-0498	PD2-42-0491 PD4-42-0491	PD2-42-0500 PD4-42-0500	PD2-42-0598 PD4-42-0598	PD2-42-0654 PD4-42-0654
Button (with flange mounting)	PD2-42-8700 PD4-42-8700	PD2-42-8798 PD4-42-8798	PD2-42-8791 PD4-42-8791	PD2-42-8800 PD4-42-8800	PD2-42-8898 PD4-42-8898	PD2-42-8954 PD4-42-8954
Cam				PD2-42-0800 PD4-42-0800	PD2-42-0898 PD4-42-0898	
Pilot Cylinder				PD2-42-1100 PD4-42-1100	PD2-42-1198 PD4-42-1198	
Solenoid* (120V.,60C)				PD2-42-1400 PD4-42-1400	PD2-42-1498 PD4-42-1498	
Solenoid* (240V.,60C)				PD2-42-1700 PD4-42-1700	PD2-42-1798 PD4-42-1798	
Foot Pedal				PD2-42-2300 PD4-42-2300	PD2-42-2398 PD4-42-2398	
Foot Treadle	PD2-42-5200 PD4-42-5200	PD2-42-5298 PD4-42-5298				PD2-42-5354 PD4-42-5354
Low Pressure Pilot Cylinder	PD2-42-1900 PD4-42-1900	PD2-42-1998 PD4-42-1998		PD2-42-2000 PD4-42-2000	PD2-42-2098 PD4-42-2098	PD2-42-2154 PD4-42-2154

TWO OPERATORS WITH CENTERING SPRINGS

OPERATOR ON "B" END	OPERATOR ON "A" END							
	Lever	Button	Button (with flange mtg.)	Cam	Pilot Cylinder	Solenoid* (115V., 60C.)	Solenoid* (220V., 60C.)	Low Pressure Pilot Cylinder
Cam	PD2-42-0309 PD4-42-0309	PD2-42-0609 PD4-42-0609	PD2-42-8909 PD4-42-8909	PD2-42-0909 PD4-42-0909	PD2-42-1209 PD4-42-1209	PD2-42-1509 PD4-42-1509	PD2-42-1809 PD4-42-1809	PD2-42-2109 PD4-42-2109
Pilot Cylinder	PD2-42-0312 PD4-42-0312	PD2-42-0612 PD4-42-0612	PD2-42-8912 PD4-42-8912	PD2-42-0912 PD4-42-0912	PD2-42-1212 PD4-42-1212	PD2-42-1512 PD4-42-1512	PD2-42-1812 PD4-42-1812	PD2-42-2112 PD4-42-2112
Solenoid* (120V.,60C)	PD2-42-0315 PD4-42-0315	PD2-42-0615 PD4-42-0615	PD2-42-8915 PD4-42-8915	PD2-42-0915 PD4-42-0915	PD2-42-1215 PD4-42-1215	PD2-42-1515 PD4-42-1515		PD2-42-2115 PD4-42-2115
Solenoid* (240V.,60C)	PD2-42-0318 PD4-42-0318	PD2-42-0618 PD4-42-0618	PD2-42-8918 PD4-42-8918	PD2-42-0918 PD4-42-0918	PD2-42-1218 PD4-42-1218		PD2-42-1818 PD4-42-1818	PD2-42-2118 PD4-42-2118

TWO OPERATORS WITH NO SPRING RETURN

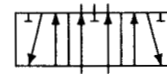
OPERATOR ON "B" END	OPERATOR ON "A" END								
	Lever	Button	Button (with flange mtg.)	Cam	Pilot Cylinder	Solenoid* (115V., 60C.)	Solenoid* (220V., 60C.)	Pedal	Low Pressure Pilot Cylinder
Cam	PD2-42-0107 PD4-42-0107	PD2-42-0407 PD4-42-0407	PD2-42-8707 PD4-42-8707	PD2-42-0707 PD4-42-0707	PD2-42-1007 PD4-42-1007	PD2-42-1307 PD4-42-1307	PD2-42-1607 PD4-42-1607	PD2-42-2207 PD4-42-2207	PD2-42-1907 PD4-42-1907
Pilot Cylinder	PD2-42-0110 PD4-42-0110	PD2-42-0410 PD4-42-0410	PD2-42-8710 PD4-42-8710	PD2-42-0710 PD4-42-0710	PD2-42-1010 PD4-42-1010	PD2-42-1310 PD4-42-1310	PD2-42-1610 PD4-42-1610	PD2-42-2210 PD4-42-2210	PD2-42-1910 PD4-42-1910
Solenoid* (120V.,60C)	PD2-42-0113 PD4-42-0113	PD2-42-0413 PD4-42-0413	PD2-42-8713 PD4-42-8713	PD2-42-0713 PD4-42-0713	PD2-42-1013 PD4-42-1013	PD2-42-1313 PD4-42-1313		PD2-42-2213 PD4-42-2213	PD2-42-1913 PD4-42-1913
Solenoid* (240V.,60C)	PD2-42-0116 PD4-42-0116	PD2-42-0416 PD4-42-0416	PD2-42-8716 PD4-42-8716	PD2-42-0716 PD4-42-0716	PD2-42-1016 PD4-42-1016		PD2-42-1616 PD4-42-1616	PD2-42-2216 PD4-42-2216	PD2-42-1916 PD4-42-1916

*Solenoid controlled, air pilot operated
 †Three-position detent

Note: see pages 49-51 for model number cross reference to current part number.

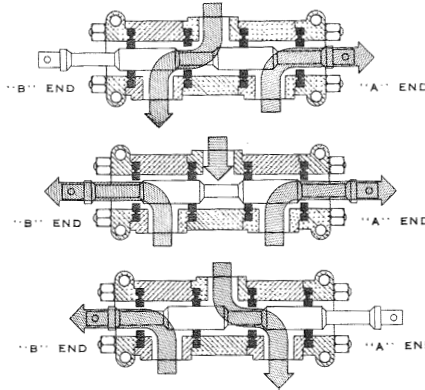
“D” Pilotair® Valves
Four-Way Valves - Open Exhaust - Exhaust Center
Complete Assembly Model Numbers

PD2 = 1/4" Valve
 PD4 = 1/2" Valve



EXHAUST CENTER POSITION

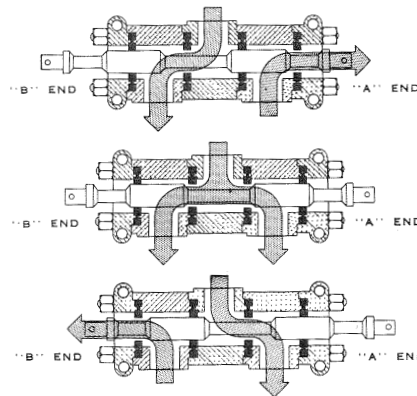
OPERATOR	OPERATOR WITH	
	No Spring Return	Centering Springs
	With Detent†	
Lever	PD2 43 0191 PD4 43 0191	PD2 43 0354 PD4 43 0354
Button	PD2 43 0491 PD4 43 0491	PD2 43 0654 PD4 43 0654
Button (with flange mounting)	PD2 43 8791 PD4 43 8791	PD2 43 8954 PD4 43 8954
Foot Treadle		PD2 43 5354 PD4 43 5354
Low Pressure Pilot Cylinder		PD2 43 2154 PD4 43 2154



OPERATOR ON "B" END	OPERATOR ON "A" END							
	Lever	Button	Button (with flange mtg.)	Cam	Pilot Cylinder	Solenoid* (115V., 60C.)	Solenoid* (220V., 60C.)	Low Pressure Pilot Cylinder
Cam	PD2 43 0309 PD4 43 0309	PD2 43 0609 PD4 43 0609	PD2 43 8909 PD4 43 8909	PD2 43 0909 PD4 43 0909	PD2 43 1209 PD4 43 1209	PD2 43 1509 PD4 43 1509	PD2 43 1809 PD4 43 1809	PD2 43 2109 PD4 43 2109
Pilot Cylinder	PD2 43 0312 PD4 43 0312	PD2 43 0612 PD4 43 0612	PD2 43 8912 PD4 43 8912	PD2 43 0912 PD4 43 0912	PD2 43 1212 PD4 43 1212	PD2 43 1512 PD4 43 1512	PD2 43 1812 PD4 43 1812	PD2 43 2112 PD4 43 2112
Solenoid* (120V., 60C)	PD2 43 0315 PD4 43 0315	PD2 43 0615 PD4 43 0615	PD2 43 8915 PD4 43 8915	PD2 43 0915 PD4 43 0915	PD2 43 1215 PD4 43 1215	PD2 43 1515 PD4 43 1515		PD2 43 2115 PD4 43 2115
Solenoid* (240V., 60C)	PD2 43 0318 PD4 43 0318	PD2 43 0618 PD4 43 0618	PD2 43 8918 PD4 43 8918	PD2 43 0918 PD4 43 0918	PD2 43 1218 PD4 43 1218		PD2 43 1818 PD4 43 1818	PD2 43 2118 PD4 43 2118

FOUR-WAY VALVES - OPEN EXHAUST - SUPPLIED CENTER
COMPLETE ASSEMBLY PIECE NUMBERS

OPERATOR	OPERATOR WITH	
	No Spring Return	Centering Springs
	With Detent†	
Lever	PD2 45 0191 PD4 45 0191	PD2 45 0354 PD4 45 0354
Button	PD2 45 0491 PD4 45 0491	PD2 45 0654 PD4 45 0654
Button (with flange mounting)	PD2 45 8791 PD4 45 8791	PD2 45 8954 PD4 45 8954
Foot Treadle		PD2 45 5354 PD4 45 5354
Low Pressure Pilot Cylinder		PD2 45 2154 PD4 45 2154



OPEN CENTER POSITION

OPERATOR ON "B" END	OPERATOR ON "A" END							
	Lever	Button	Button (with flange mtg.)	Cam	Pilot Cylinder	Solenoid* (115V., 60C.)	Solenoid* (220V., 60C.)	Low Pressure Pilot Cylinder
Cam	PD2 45 0309 PD4 45 0309	PD2 45 0609 PD4 45 0609	PD2 45 8909 PD4 45 8909	PD2 45 0909 PD4 45 0909	PD2 45 1209 PD4 45 1209	PD2 45 1509 PD4 45 1509	PD2 45 1809 PD4 45 1809	PD2 45 2109 PD4 45 2109
Pilot Cylinder	PD2 45 0312 PD4 45 0312	PD2 45 0612 PD4 45 0612	PD2 45 8912 PD4 45 8912	PD2 45 0912 PD4 45 0912	PD2 45 1212 PD4 45 1212	PD2 45 1512 PD4 45 1512	PD2 45 1812 PD4 45 1812	PD2 45 2112 PD4 45 2112
Solenoid* (120V., 60C)	PD2 45 0315 PD4 45 0315	PD2 45 0615 PD4 45 0615	PD2 45 8915 PD4 45 8915	PD2 45 0915 PD4 45 0915	PD2 45 1215 PD4 45 1215	PD2 45 1515 PD4 45 1515		PD2 45 2115 PD4 45 2115
Solenoid* (240V., 60C)	PD2 45 0318 PD4 45 0318	PD2 45 0618 PD4 45 0618	PD2 45 8918 PD4 45 8918	PD2 45 0918 PD4 45 0918	PD2 45 1218 PD4 45 1218		PD2 45 1818 PD4 45 1818	PD2 45 2118 PD4 45 2118

* Solenoid controlled, air pilot operated
 † Three-position detent

Note: see pages 49-51 for model number cross reference to current part number.

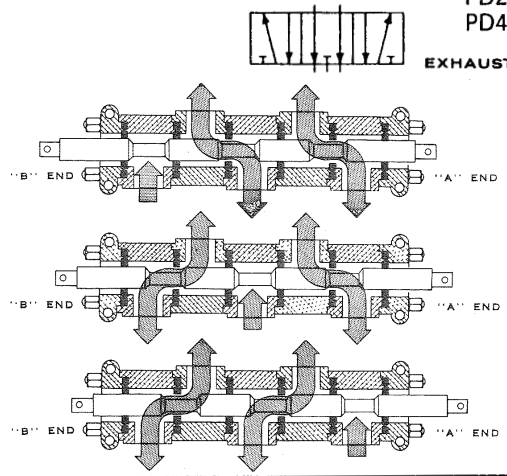
“D” Pilotair[®] Valves
Four-Way Valves - Tapped Exhaust - Exhaust Center
Complete Assembly Model Numbers

PD2 = 1/4" Valve
 PD4 = 1/2" Valve

EXHAUST CENTER POSITION

SINGLE OPERATOR

OPERATOR	OPERATOR WITH	
	No Spring Return With Detent†	Centering Springs
Lever	PD2-44-0191 PD4-44-0191	PD2-44-0354 PD4-44-0354
Button	PD2-44-0491 PD4-44-0491	PD2-44-0654 PD4-44-0654
Button (with flange mounting)	PD2-44-8791 PD4-44-8791	PD2-44-8954 PD4-44-8954
Foot Treadle		PD2-44-5354 PD4-44-5354
Low Pressure Pilot Cylinder		PD2-44-2154 PD4-44-2154



TWO OPERATORS WITH CENTERING SPRINGS

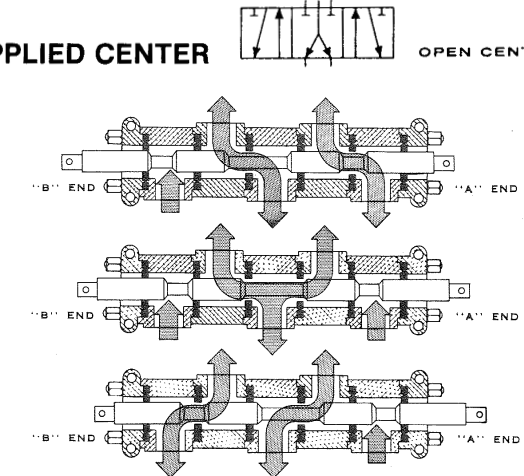
OPERATOR ON "B" END	OPERATOR ON "A" END							
	Lever	Button	Button (with flange mtg.)	Cam	Pilot Cylinder	Solenoid* (115V., 60C.)	Solenoid* (220V., 60C.)	Low Pressure Pilot Cylinder
Cam	PD2-44-0309 PD4-44-0309	PD2-44-0609 PD4-44-0609	PD2-44-8909 PD4-44-8909	PD2-44-0909 PD4-44-0909	PD2-44-1209 PD4-44-1209	PD2-44-1509 PD4-44-1509	PD2-44-1809 PD4-44-1809	PD2-44-2109 PD4-44-2109
Pilot Cylinder	PD2-44-0312 PD4-44-0312	PD2-44-0612 PD4-44-0612	PD2-44-8912 PD4-44-8912	PD2-44-0912 PD4-44-0912	PD2-44-1212 PD4-44-1212	PD2-44-1512 PD4-44-1512	PD2-44-1812 PD4-44-1812	PD2-44-2112 PD4-44-2112
Solenoid* (120V., 60C.)	PD2-44-0315 PD4-44-0315	PD2-44-0615 PD4-44-0615	PD2-44-8915 PD4-44-8915	PD2-44-0915 PD4-44-0915	PD2-44-1215 PD4-44-1215	PD2-44-1515 PD4-44-1515		PD2-44-2115 PD4-44-2115
Solenoid* (240V., 60C.)	PD2-44-0318 PD4-44-0318	PD2-44-0618 PD4-44-0618	PD2-44-8918 PD4-44-8918	PD2-44-0918 PD4-44-0918	PD2-44-1218 PD4-44-1218		PD2-44-1818 PD4-44-1818	PD2-44-2118 PD4-44-2118

FOUR-WAY VALVES - TAPPED EXHAUST - SUPPLIED CENTER
COMPLETE ASSEMBLY PIECE NUMBERS

OPEN CENTER POSITION

SINGLE OPERATOR

OPERATOR	OPERATOR WITH	
	No Spring Return With Detent†	Centering Springs
Lever	PD2-46-0191 PD4-46-0191	PD2-46-0354 PD4-46-0354
Button	PD2-46-0491 PD4-46-0491	PD2-46-0654 PD4-46-0654
Button (with flange mounting)	PD2-46-8791 PD4-46-8791	PD2-46-8954 PD4-46-8954
Foot Treadle		PD2-46-5354 PD4-46-5354
Low Pressure Pilot Cylinder		PD2-46-2154 PD4-46-2154



TWO OPERATORS WITH CENTERING SPRINGS

OPERATOR ON "B" END	OPERATOR ON "A" END							
	Lever	Button	Button (with flange mtg.)	Cam	Pilot Cylinder	Solenoid* (115V., 60C.)	Solenoid* (220V., 60C.)	Low Pressure Pilot Cylinder
Cam	PD2-46-0309 PD4-46-0309	PD2-46-0609 PD4-46-0609	PD2-46-8909 PD4-46-8909	PD2-46-0909 PD4-46-0909	PD2-46-1209 PD4-46-1209	PD2-46-1509 PD4-46-1509	PD2-46-1809 PD4-46-1809	PD2-46-2109 PD4-46-2109
Pilot Cylinder	PD2-46-0312 PD4-46-0312	PD2-46-0612 PD4-46-0612	PD2-46-8912 PD4-46-8912	PD2-46-0912 PD4-46-0912	PD2-46-1212 PD4-46-1212	PD2-46-1512 PD4-46-1512	PD2-46-1812 PD4-46-1812	PD2-46-2112 PD4-46-2112
Solenoid* (120V., 60C.)	PD2-46-0315 PD4-46-0315	PD2-46-0615 PD4-46-0615	PD2-46-8915 PD4-46-8915	PD2-46-0915 PD4-46-0915	PD2-46-1215 PD4-46-1215	PD2-46-1515 PD4-46-1515		PD2-46-2115 PD4-46-2115
Solenoid* (240V., 60C.)	PD2-46-0318 PD4-46-0318	PD2-46-0618 PD4-46-0618	PD2-46-8918 PD4-46-8918	PD2-46-0918 PD4-46-0918	PD2-46-1218 PD4-46-1218		PD2-46-1818 PD4-46-1818	PD2-46-2118 PD4-46-2118

*Solenoid controlled, air pilot operated
 †Three-position detent

Note: see pages 49-51 for model number cross reference to current part number.

“D” Pilotair® Valves
Model Codes For Valves Not Tabulated

EXAMPLE OF MODEL NUMBER SELECTION

BASIC VALVE: “PD-0” plus 5 digits (Ex: Four way, open exhaust)

“A” End Operator - 2 digit suffix (Lever with no return spring)

“B” End Operator - 2 digit suffix (Solenoid, full return spring)

Use for ordering prepped solenoid valve - see below.

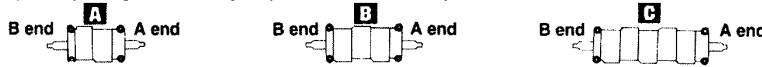
“00” indicates no solenoid piping.

PD-040041-0 0114

Porting (Ex: 1/2" NPT)
 PD-02 =1/4" NPT
 PD-04 =1/2" NPT
 PD-05 =1/4" BSPP
 PD-07 =1/2" BSPP

Select the Basic Valve Portion as shown below, add the desired Operator Kits [which must be coded in the suffix (see example above) when Factory assembly is desired.]

NOTE: SAE or other special porting available by request - consult factory.



BASIC VALVES (WITH SOLENOID PIPING AS SHOWN)

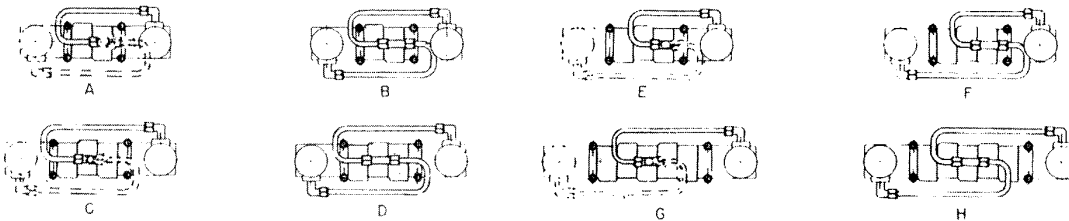
VIEW	VALVE TYPE	CODE NO.	1/4" PART NO.	1/2" PART NO.
A	Two-way valve	120	PD-020120-00000	PD-040120-00000
A	Three-way, open exhaust	131	PD-020131-00000	PD-040131-00000
E	Three-way, tapped exhaust	232	PD-020232-00000	PD-040232-00000
B	Two-way valve	320	PD-020320-00000	PD-040320-00000
B	Three-way, open exhaust	331	PD-020331-00000	PD-040331-00000
F	Three-way, tapped exhaust	432	PD-020432-00000	PD-040432-00000
C	Four-way, open exhaust, closed center	541	PD-020541-00000	PD-040541-00000
C	Four-way, open exhaust, exhaust center	543	PD-020543-00000	PD-040543-00000
C	Four-way, open exhaust, supplied center	545	PD-020545-00000	PD-040545-00000
D	Four-way, open exhaust, closed center	641	PD-020641-00000	PD-040641-00000
D	Four-way, open exhaust, exhaust center	643	PD-020643-00000	PD-040643-00000
D	Four-way, open exhaust, supplied center	645	PD-020645-00000	PD-040645-00000
G	Four-way, tapped exhaust, closed center	742	PD-020742-00000	PD-040742-00000
G	Four-way tapped, exhaust, exhaust center	744	PD-020744-00000	PD-040744-00000
G	Four-way tapped, exhaust, supplied center	746	PD-020746-00000	PD-040746-00000
H	Four-way tapped, exhaust, closed center	842	PD-020842-00000	PD-040842-00000
H	Four-way tapped, exhaust, exhaust center	844	PD-020844-00000	PD-040844-00000
H	Four-way tapped, exhaust, supplied center	846	PD-020846-00000	PD-040846-00000

VIEW	DESCRIPTION	CODE NUMBER	
		1/4"	1/2"
A	Two-way valve	PD-020020	PD-040020
A	Three-way, open exhaust	PD-020031	PD-040031
B	Three-way, tapped exhaust	PD-020032	PD-040032
B	Four-way, open exhaust, closed center	PD-020041	PD-040041
C	Four-way, tapped exhaust, closed center	PD-020042	PD-040042
B	Four-way, open exhaust, exhaust center	PD-020043	PD-040043
C	Four-way, tapped exhaust, exhaust center	PD-020044	PD-040044
B	Four-way, open exhaust, supplied center	PD-020045	PD-040045
C	Four-way, tapped exhaust, supplied center	PD-020046	PD-040046

BASIC VALVE - Solenoid operators with pilot pressure piping.

Select the Basic Valve Portion as shown below, add the desired Solenoid Operator Kits (which must be coded in the suffix when Factory assembly is desired).

SINGLE SOLENOID VALVES DOUBLE SOLENOID VALVES SINGLE SOLENOID VALVES DOUBLE SOLENOID VALVES



The Basic Valve for a Piped Solenoid Operator has the special tapped body segment already assembled in the valve; Shaded areas indicate material furnished. Tubing is cut to length and formed and fittings are furnished, but tubing and fittings are not assembled to the valve. Dotted lines indicate alternate piping arrangement (the alternate tube, when required, is provided), depending on the location of the solenoid operator. The Basic Valve will be furnished less operators when suffix is not coded.

Note: see pages 49-51 for model number cross reference to current part number.

“D” Pilotair® Pneumatic Directional Control Valves Operator selection codes

DESCRIPTION	SEE NOTE NO.	CODE NO.
Lever, Full Return Spring	2	02
Lever with Centering Spring	3	03
Button, No Spring Return	-	04
Button, Full Return Spring	2	05
Button with Centering Spring	3	06
Cam, No Spring Return	4	07
Cam, Full Return Spring	2	08
Cam with Centering Spring	5	09
Pilot Cylinder, No Spring Return	4	10
Pilot Cylinder, Full Return Spring	2	11
Pilot Cylinder with Centering Spring	5	12
Solenoid (120V, 60 Cycle), No Return Spring	4	13
Solenoid (120V, 60 Cycle), Full Return Spring	2	14
Solenoid (120V, 60 Cycle), with Centering Spring	5	15
Solenoid (240V, 60 Cycle), No Return Spring	4	16
Solenoid (240V, 60 Cycle), Full Return Spring	2	17
Solenoid (240V, 60 Cycle), with Centering Spring	5	18
Pilot Cylinder (Low Pressure), No Spring Return	6	19
Pilot Cylinder (Low Pressure), Full Return Spring	2	20
Pilot Cylinder (Low Pressure) with Centering Spring	5 & 6	21
Foot Pedal, No Spring Return	4	22
Foot Pedal, Full Return Spring	2	23
Nose Mount, Spring Return	2 & 7	36
Nose Mount, 2-Position Detent	7	37
Nose Mount, 3-Position Detent	7	38
Foot Treadle, No Spring Return	-	52
Foot Treadle with Centering Spring	3	53
End Cover with Centering Spring	4	54
End Cover with Return Spring	4	55
Solenoid (480V, 60 cycle) No Spring Return	1 & 4	57
Solenoid (480V, 60 cycle) Full Return Spring	1 & 2	58
Solenoid (480V, 60 cycle) with Centering Spring	1 & 5	59
Solenoid (125V DC) No Spring Return	1 & 4	63
Solenoid (125V DC) Full Spring Return	1 & 2	64
Solenoid (125V DC) with Centering Spring	1 & 5	65
Solenoid (150V DC) No Spring Return	1 & 4	66
Solenoid (150V DC) Full Spring Return	1 & 2	67
Solenoid (150V DC) with Centering Spring	1 & 5	68
Solenoid (24V DC) No Spring Return	1 & 4	69
Solenoid (24V DC) Full Return Spring	1 & 2	70
Solenoid (24V DC) with Centering Spring	1 & 5	71
Solenoid (12V DC) No Spring Return	1 & 4	72
Solenoid (12V DC) Full Return Spring	1 & 2	73
Solenoid (12V DC) with Centering Spring	1 & 5	74
Solenoid (90V DC) No Spring Return	1 & 4	75
Solenoid (90V DC) Full Return Spring	1 & 2	76
Solenoid (90V DC) with Centering Spring	1 & 5	77
Solenoid (40V DC) No Spring Return	1 & 4	78
Solenoid (40V DC) Full Return Spring	1 & 2	79
Solenoid (40V DC) with Centering Spring	1 & 5	80
Solenoid (6V DC) No Spring Return	1 & 4	81
Solenoid (6V DC) Full Return Spring	1 & 2	82
Solenoid (6V DC) with Centering Spring	1 & 5	83
Solenoid (12V DC Explosion Proof) No Spring Return	1 & 4	84
Solenoid (12V DC Explosion Proof) Full Spring Return	1 & 2	85
Solenoid (12V DC Explosion Proof) with Centering Spring	1 & 5	86
Button, Panel-Mounted, No Spring Return	-	87
Button, Panel-Mounted, Full Return Spring	2	88
Button, Panel-Mounted, with Centering Spring	3	89
Detent Kit, Two-Position	4	90
Detent Kit, Three-Position	4	91
Solenoid (120V, 60 cycle) No Spring Return (Explosion Proof)	1 & 4	92
Solenoid (120V, 60 cycle) Full Return Spring (Explosion Proof)	1 & 2	93
Solenoid (120V, 60 cycle) with Centering Spring (Explosion Proof)	1 & 5	94
Solenoid (240V, 60 cycle) No Spring Return (Explosion Proof)	1 & 4	95
Solenoid (240V, 60 cycle) Full Return Spring (Explosion Proof)	1 & 2	96
Solenoid (240V, 60 cycle) with Centering Spring (Explosion Proof)	1 & 5	97
End Cover Kit	-	98

Notes:

- Molded waterproof coils standard in all valves.
- Not normally used when valve is to have two operators. Use an operator with no spring return or one with centering spring. Installation on the "A" End of two- or three-way valve makes normally closed valve. Installation on the "B" End makes normally open valve.

- When used as only operator on valve, specify Centering Spring Kit (Code 54) for other end. When used with another operator, operator must be one with centering spring.
- To be used only on valve with another operator.
- To be used only with another operator having centering spring.
- Cannot be used with low pressure pilot operator on opposite end.
- For 1/4" valves only.

**“D” Pilotair® Valves
Basic Valve
Solenoid Operator Conversion Kits**

**BASIC VALVE
SOLENOID OPERATOR CONVERSION KITS**

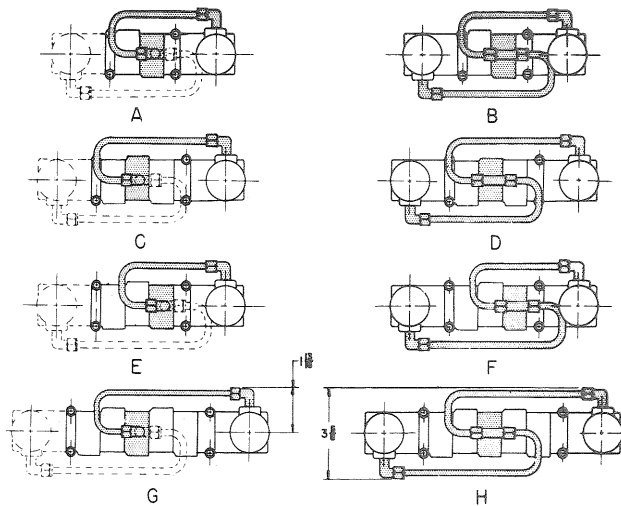
To Convert Basic Valve Portion to a Piped Solenoid Operator; Select one of the following Part Numbers

VIEW	VALVE TYPE	¼" PART NO.	¼" MODEL NO.	½" PART NO.	½" MODEL NO.
A	Two-way and Three-way, Open Exhaust	R431009140	PD-020100-K0000	R431008385	PD-040100-K0000
E	Three-Way, Tapped Exhaust	R431009130	PD-020200-K0000	R431009235	PD-040200-K0000
B	Two-Way and Three-Way, Open Exhaust	R431009129	PD-020300-K0000	R431009236	PD-040300-K0000
F	Three-Way, Tapped Exhaust	R431009128	PD-020400-K0000	R431008401	PD-040400-K0000
C	Four-Way, Open Exhaust	R431009127	PD-020500-K0000	R431008407	PD-040500-K0000
D	Four-Way, Open Exhaust	R431009126	PD-020600-K0000	R431008421	PD-040600-K0000
G	Four-Way, Tapped Exhaust	R431009238	PD-020700-K0000	R431009237	PD-040700-K0000
H	Four-Way, Tapped Exhaust	R431009239	PD-020800-K0000	R431008438	PD-040800-K0000

Conversion Kits include tubing cut to length and formed required fittings, and special tapped body segment. Shaded areas indicate material furnished (when a different length is required, this tube is also in the kit.) Dotted lines indicate alternate piping arrangement, depending on the location of the solenoid operator.

Single Solenoid Valves

Double Solenoid Valves



“D” Pilotair® Valves
Repair Kits

MINOR REPAIR KITS FOR “D” PILOTAIR VALVE PORTIONS

NEW KIT P/N	OLD KIT P/N	DESCRIPTION
		¼"
R431007355	P -068829-00000	Kit, Minor Repair F/PD2-20,31 Valve
R431007356	P -068830-00000	Kit, Minor Repair F/PD2-32,41,43,845 Valve
R431007357	P -068831-00000	Kit, Minor Repair F/PD2-42,44,846 Valve

NEW KIT P/N	OLD KIT P/N	DESCRIPTION
		½"
R431007363	P -068837-00000	Kit, Minor Repair F/PD4-20,31 Valve
R431007364	P -068838-00212	Kit, Minor Repair F/PD4-32,41,43, & 45 Valve
R431007365	P -068839-00215	Kit, Minor Repair F/PD4-42, 44, & 46 Valve

The above minor kits contain seal retainers, and a tube of grease for the indicated models.

MAJOR REPAIR KITS FOR “D” PILOTAIR VALVE PORTIONS

NEW KIT P/N	OLD KIT P/N	DESCRIPTION
		¼"
R431007349	P -068823-00000	Kit, Major Repair F/PD2-20 Valve
R431007350	P -068824-00000	Kit, Major Repair F/PD2-31 Valve
R431007351	P -068825-00000	Kit, Major Repair F/PD2-32 Valve
R431006513	P -064877-00000	Kit, Major Repair F/PD2-41 Valve
R431007352	P -068826-00000	Kit, Major Repair F/PD2-42 Valve
R431006514	P -064878-00000	Kit, Major Repair F/PD2-43 Valve
R431007353	P -068827-00000	Kit, Major Repair F/PD2-44 Valve
R431006515	P -064879-00000	Kit, Major Repair F/PD2-45 Valve
R431007354	P -068828-00000	Kit, Major Repair F/PD2-46 Valve

NEW KIT P/N	OLD KIT P/N	DESCRIPTION
		½"
R431007358	P -068832-00000	Kit, Major Repair F/ PD4-20 Valve
R431007319	P -068539-00000	Kit, Major Repair F/PD4-31 Valve
R431007359	P -068833-00000	Kit, Major Repair F/PD4-32 Valve
R431007320	P -068540-00000	Kit, Major Repair F/PD4-41 Valve
R431007360	P -068834-00000	Kit, Major Repair F/PD4-42 Valve
R431007321	P -068541-00000	Kit Major Repair F/PD4-43 Valve
R431007361	P -068835-00000	Kit, Major Repair F/PD4-44 Valve
R431007322	P -068542-00000	Kit, Major Repair F/PD4-45 Valve
R431007362	P -068836-00000	Kit, Major Repair F/PD4-46 Valve

The above major kits contain the minor repair kit plus a stainless steel spool.

With the above kits and parts, the elastomer seals and some common wear parts in the basic valve portion of the assemblies can be repaired. On severely worn or damaged valves, additional parts may be required.

The basic valve portion kits do not contain any parts for the mechanical operator portions of the valves. The mechanical operator portion of the valves should be repaired when necessary, with individually selected parts and tested before being put in service. Refer to Service Manual SM-700.7501 for additional part information and service instructions on the Type “D” PILOTAIR pneumatic directional valves.

OPTIONAL COILS

New Part No.	Old Part No.	Coil Voltage
R431005915	P -061920-00000	(120 Volts - 6- Hz)
R431005916	P -061920-00001	(240 Volts - 60 Hz)
R431005917	P -061920-00002	(480 Volts - 60 Hz)
R431005918	P -061920-00003	(24 Volts DC)
R431005919	P -061920-00004	(12 Volts DC)
R431009115	P -061920-00005	(90 Volts DC)
R431009107	P -061920-00007	(6 Volts DC)
R431009117	P -061920-00011	(12 Volts - 60 Hz)

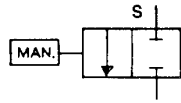
REPAIR PARTS FOR SOLENOID OPERATORS

New Part No.	Old Part No.	Description
R431005645	P -060969-00000	Kit, Minor Solenoid Repair - PD2 - and PD4 - Valves (Includes Plunger, Spring Base Gasket)
R431002033	P -049708-00212	O-ring, Pilot Piston (Standard) - PD2 - Valves
R431002035	P -049708-00215	O-ring, Pilot Piston (Standard) - PD4 - Valves

NOTE: PISTON O-ring is also used in operator codes - 10, -11, -12, and all solenoid operators.

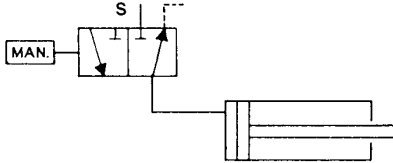
“D” Pilotair® Pneumatic Directional Control Valves Applications

TWO-WAY VALVE



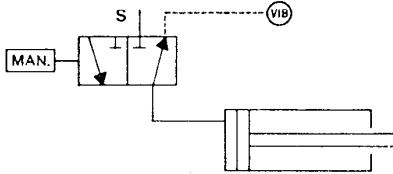
To control air flow in a line and not vent downstream pressure when the valve is closed. Segregating branches of a system is typical application.

THREE-WAY VALVE - OPEN EXHAUST



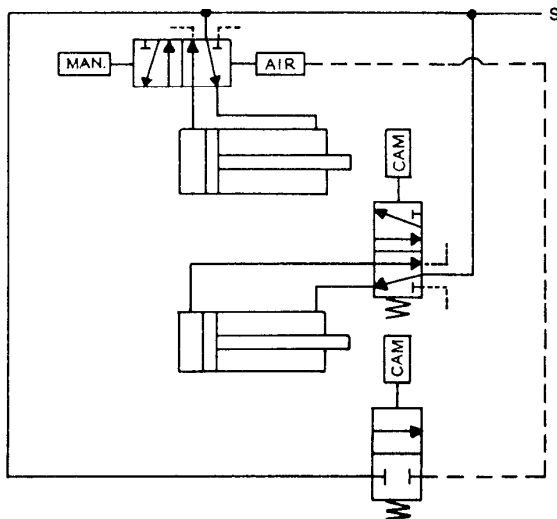
To control air flow in a line and to vent downstream pressure when the valve is closed. Operating a single-acting cylinder typical application.

THREE-WAY VALVE - TAPPED EXHAUST



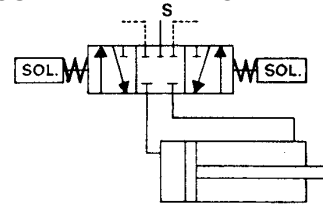
To control air flow in a line and to re-use air in the downstream line when the valve is closed. Using exhaust air to operate a vibrator or clean and eject work typical application.

THREE-WAY AND FOUR-WAY VALVES



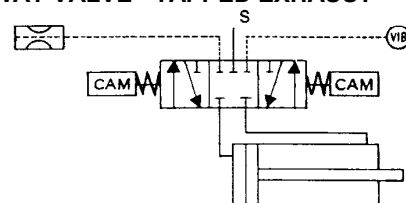
To ensure that one operation of a system is completed before the next operation begins.

FOUR-WAY VALVE - OPEN EXHAUST



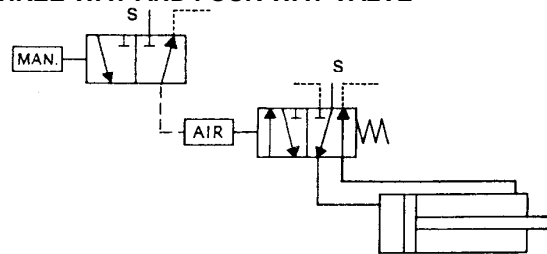
To control air flow from a common supply into one or the other of two lines allowing it to flow into one line while venting the other. Operation of double acting cylinder typical application.

FOUR-WAY VALVE - TAPPED EXHAUST



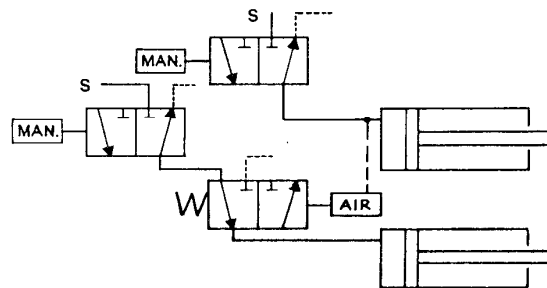
To control air flow from a common supply into one or the other of two lines. Allows air flow into one line while venting the exhaust air from the other into a separate line for reusing or remote venting.

THREE-WAY AND FOUR-WAY VALVE



To operate a double-acting cylinder from a remote control station.

THREE-WAY VALVE - OPEN EXHAUST



To prevent the operation of one branch of an air circuit while there is air pressure in another branch of the same system.

“D” Pilotair® Pneumatic Directional Control Valves

Model code (old part number) to current part number crossover

Model Code	Part No.	Model Code	Part No.	Model Code	Part No.	Model Code	Part No.
P-005014-00000	R431000479	P-049835-00077	R431002287	P-050861-00030	R434004510	P-063190-00000	R431006204
P-005014-00002	R431000480	P-049866-00015	R431002348	P-050861-00031	R431002790	P-064393-00000	R431006409
P-005042-00000	R431000482	P-049901-00044	R431002430	P-051363-00000	R431002905	P-064877-00000	R431006513
P-005042-00001	R431000483	P-049904-00071	R431002474	P-051364-00000	R431002906	P-064878-00000	R431006514
P-026346-00000	R431000600	P-049979-00000	R431002570	P-051500-00000	R431002910	P-064879-00000	R431006515
P-027240-00000	R431000773	P-049985-00001	R431002578	P-051635-00000	R431002933	P-065933-00000	R431006730
P-028996-00000	R431000925	P-049985-00003	R431002579	P-051636-00000	R431002934	P-065943-00000	R431006732
P-028996-00001	R431000926	P-049985-00005	R431002580	P-051677-00000	R431002936	P-066154-00000	R431009245
P-030275-00000	R431001046	P-049985-00007	R431002581	P-051732-00000	R431002943	P-066230-00000	R431006787
P-030304-00000	R431001051	P-049985-00009	R431002582	P-051838-00000	R431002944	P-066235-00000	R431006790
P-030305-00000	R431001052	P-049985-00011	R431002583	P-051925-00000	R431002954	P-066335-00000	R431006804
P-030844-00000	R434001336	P-049994-00001	R431002602	P-051958-00000	R431002955	P-066336-00000	R431006805
P-030868-00000	R434001341	P-049994-00003	R431002603	P-052028-00000	R431002957	P-066418-00000	R431006816
P-031245-00000	R434001853	P-050402-00000	R431002635	P-052033-00000	R431002961	P-066539-00000	R431006831
P-031488-00000	R434001844	P-050568-00000	R431002667	P-052046-00000	R431002966	P-066569-00000	R431006835
P-031659-00000	R434001934	P-050569-00000	R431002669	P-052075-00000	R431002968	P-066611-00001	R431006841
P-031772-00000	R434001918	P-050570-00000	R431002670	P-052079-00000	R431002969	P-066611-00002	R431006842
P-032002-00000	R431001277	P-050570-00001	R431002671	P-052081-00000	R431002970	P-066612-00000	R431006843
P-032060-00000	R431001282	P-050570-00002	R431002672	P-052124-00000	R431002972	P-066613-00000	R431006844
P-032108-00000	R434001744	P-050570-00003	R431002673	P-052617-00000	R431002986	P-066614-00000	R431006845
P-032149-00000	R434001747	P-050571-00000	R431002675	P-052901-00000	R431003036	P-066615-00000	R431006846
P-032150-00000	R434001735	P-050572-00000	R431002676	P-052928-00000	R431003037	P-066622-00001	R431006849
P-032488-00000	R431001356	P-050573-00000	R431002677	P-052995-00000	R431003072	P-066624-00000	R431006850
P-032625-00000	R431001375	P-050574-00000	R431002678	P-052996-00000	R431003073	P-066822-00000	R431006888
P-032627-00000	R431001377	P-050578-00000	R431002679	P-052996-00001	R431003074	P-066838-00000	R431006893
P-032628-00000	R431001378	P-050613-00000	R431002686	P-053001-00000	R431003080	P-066839-00000	R431006894
P-048122-00000	R431001515	P-050614-00000	R431002687	P-053071-00000	R431003095	P-066989-00000	R431006982
P-048246-00000	R431001565	P-050617-00000	R431002688	P-054592-00000	R431003390	P-066994-00000	R431006987
P-048402-00000	R431001612	P-050617-00002	R431002689	P-054592-00001	R431003391	P-067116-00000	R431007008
P-048402-00001	R431001613	P-050626-00000	R431002692	P-055448-00000	R431003735	P-067463-00000	R431007133
P-049247-00001	R431001731	P-050629-00000	R431002693	P-055517-00001	R431003796	P-067479-00000	R431007159
P-049528-00002	R431001845	P-050630-00002	R431002696	P-057566-00000	R431004178	P-067809-00001	R431007260
P-049578-00001	R431001867	P-050630-K0001	R431002700	P-057583-00001	R431004182	P-067896-00000	R431007262
P-049618-00002	R431001899	P-050633-00002	R431002702	P-057662-00002	R431004275	P-067897-00000	R431007263
P-049618-00003	R431001900	P-050719-00000	R431002731	P-058320-00000	R431004507	P-068539-00000	R431007319
P-049618-00004	R431001901	P-050721-00000	R431002732	P-058386-00000	R431004514	P-068540-00000	R431007320
P-049618-00005	R431001902	P-050722-00000	R431002733	P-059680-00000	R431005209	P-068541-00000	R431007321
P-049618-00009	R431001906	P-050723-00000	R431002734	P-059815-00000	R431005247	P-068542-00000	R431007322
P-049627-00000	R431001929	P-050724-00000	R431002735	P-060889-00000	R431005606	P-068818-00000	R431007347
P-049680-00004	R431001960	P-050726-00000	R431002737	P-060889-00004	R431005610	P-068823-00000	R431007349
P-049708-00215	R431002035	P-050727-00000	R431002739	P-060920-00000	R431005616	P-068824-00000	R431007350
P-049708-00218	R431002038	P-050728-00000	R431002740	P-061298-00001	R431005751	P-068825-00000	R431007351
P-049708-00232	R431002045	P-050729-00000	R431002741	P-061298-00002	R431005752	P-068826-00000	R431007352
P-049708-00233	R431002046	P-050731-00000	R431002742	P-061481-00000	R431005783	P-068827-00000	R431007353
P-049708-00334	R431002057	P-050734-00000	R431002744	P-061686-00000	R431005824	P-068828-00000	R431007354
P-049777-00000	R431002117	P-050736-00001	R431002748	P-061920-00000	R431005915	P-068829-00000	R431007355
P-049783-00212	R431002130	P-050736-00002	R431002749	P-061920-00001	R431005916	P-068830-00000	R431007356
P-049804-00002	R431002153	P-050740-00000	R431002750	P-061920-00002	R431005917	P-068831-00000	R431007357
P-049804-00006	R431002154	P-050860-00000	R431002776	P-061920-00003	R431005918	P-068832-00000	R431007358
P-049804-00008	R431002155	P-050861-00000	R431002779	P-061920-00004	R431005919	P-068833-00000	R431007359
P-049804-00014	R431002157	P-050861-00001	R431002780	P-061920-00028	R431005920	P-068834-00000	R431007360
P-049804-00084	R431002185	P-050861-00002	R431002781	P-062054-00000	R431005994	P-068835-00000	R431007361
P-049818-00004	R431002186	P-050861-00003	R431002782	P-062478-00000	R431006059	P-068836-00000	R431007362
P-049818-00005	R431002187	P-050861-00004	R431002783	P-062572-00000	R431006083	P-068837-00000	R431007363
P-049818-00018	R431002190	P-050861-00005	R431002784	P-062574-00000	R431006085	P-068838-00000	R431007364
P-049818-00019	R431002191	P-050861-00021	R431002787	P-062575-00000	R431006086	P-068839-00000	R431007365
P-049835-00005	R431002243	P-050861-00023	R431002788	P-062576-00000	R431006087	P-069096-00000	R431007406

“D” Pilotair® Pneumatic Directional Control Valves

Model code (old part number) to current part number crossover (cont.)

Model Code	Part No.	Model Code	Part No.	Model Code	Part No.	Model Code	Part No.
P-069290-00000	R431007438	PD-020031-00410	R431007807	PD-020032-09898	R431007893	PD-020045-05291	R431007991
P-069734-00000	R431007485	PD-020031-00490	R431009443	PD-020032-K0000	R431007894	PD-020045-K0000	R431007993
P-069738-K0000	R431007490	PD-020031-00500	R431007808	PD-020041-00011	R431009039	PD-020046-00191	R431007995
P-069753-00000	R431007499	PD-020031-00898	R431007810	PD-020041-00014	R431007898	PD-020046-00354	R431007996
P-069754-00000	R431007500	PD-020031-01010	R431007812	PD-020041-00100	R431007899	PD-020046-01212	R431007997
P-069756-00000	R431007501	PD-020031-01100	R431007813	PD-020041-00111	R431007900	PD-020046-03535	R431007998
P-069757-00000	R431007502	PD-020031-01110	R431007814	PD-020041-00191	R431007901	PD-020046-K0000	R431008001
P-069791-00000	R431007512	PD-020031-01187	R431007815	PD-020041-00198	R431007902	PD-020100-K0000	R431009140
P-069798-00000	R431007517	PD-020031-01198	R431007816	PD-020041-00312	R431007904	PD-020131-07001	R431008006
P-069804-00000	R431007518	PD-020031-01498	R431007820	PD-020041-00354	R431007905	PD-020131-07098	R431008007
P-069975-00000	R431007527	PD-020031-02098	R431007823	PD-020041-00898	R431007907	PD-020131-07301	R431008008
PD-020000-K0001	R431007748	PD-020031-02398	R431007825	PD-020041-01010	R431007908	PD-020131-K0000	R431008010
PD-020000-K0002	R431007749	PD-020031-05500	R434001062	PD-020041-01100	R431009257	PD-020200-K0000	R431009130
PD-020000-K0003	R431007750	PD-020031-05501	R431007827	PD-020041-01198	R431007910	PD-020300-K0000	R431009129
PD-020000-K0004	R431007751	PD-020031-07098	R431007829	PD-020041-01212	R431007911	PD-020400-K0000	R431009128
PD-020000-K0005	R431007752	PD-020031-07398	R431007830	PD-020041-01498	R431007914	PD-020500-K0000	R431009127
PD-020000-K0006	R431009217	PD-020031-08710	R431007832	PD-020041-01515	R431009040	PD-020541-00014	R431008018
PD-020000-K0008	R431007754	PD-020031-08790	R431007834	PD-020041-02098	R431007915	PD-020541-01400	R431008019
PD-020000-K0009	R431007755	PD-020031-08798	R431007835	PD-020041-05354	R431007919	PD-020541-07098	R431008020
PD-020000-K0010	R431007756	PD-020031-08898	R431007836	PD-020041-07098	R431007920	PD-020600-K0000	R431009126
PD-020000-K0011	R431007757	PD-020031-09087	R431007838	PD-020041-08898	R431007924	PD-020641-00000	R431008023
PD-020000-K0012	R431007758	PD-020031-09802	R431007839	PD-020041-K0000	R431007927	PD-020641-01313	R431009207
PD-020000-K0013	R431007759	PD-020031-09811	R431007840	PD-020042-00190	R431007931	PD-020643-07171	R431008029
PD-020000-K0014	R431007760	PD-020031-09814	R431007841	PD-020042-00191	R431007932	PD-020700-K0000	R431009238
PD-020000-K0015	R431007761	PD-020031-09820	R431007842	PD-020042-00354	R431007934	PD-020800-K0000	R431009239
PD-020000-K0018	R431009218	PD-020031-09870	R431007844	PD-020042-00898	R431007936	PD-040000-00078	R431008083
PD-020000-K0019	R431007762	PD-020031-09887	R431007846	PD-020042-01010	R431009357	PD-040000-K0001	R431008104
PD-020000-K0020	R431007763	PD-020031-K0000	R431007847	PD-020042-01198	R431007937	PD-040000-K0002	R431008105
PD-020000-K0021	R431007764	PD-020032-00002	R431007849	PD-020042-01313	R431007938	PD-040000-K0003	R431008106
PD-020000-K0022	R431009300	PD-020032-00011	R431007850	PD-020042-01515	R431007940	PD-040000-K0004	R431008107
PD-020000-K0023	R431007765	PD-020032-00020	R431007852	PD-020042-05298	R431007945	PD-040000-K0005	R431008108
PD-020000-K0038	R431008857	PD-020032-00191	R431007857	PD-020042-05354	R431007946	PD-040000-K0006	R431009219
PD-020000-K0052	R431007767	PD-020032-00198	R431007858	PD-020042-06969	R431007947	PD-040000-K0008	R431008109
PD-020000-K0053	R431007768	PD-020032-00354	R431007859	PD-020042-07171	R431007950	PD-040000-K0009	R431008110
PD-020000-K0054	R431007769	PD-020032-00410	R431007860	PD-020042-09292	R431007953	PD-040000-K0010	R431008111
PD-020000-K0055	R431007770	PD-020032-00598	R431007863	PD-020042-K0000	R431007955	PD-040000-K0011	R431008112
PD-020000-K0070	R431007774	PD-020032-01010	R431007867	PD-020043-00191	R431007957	PD-040000-K0012	R431008113
PD-020000-K0071	R431007775	PD-020032-01011	R431009038	PD-020043-00354	R431007960	PD-040000-K0013	R431008114
PD-020000-K0072	R431009035	PD-020032-01020	R434004531	PD-020043-01010	R431007961	PD-040000-K0014	R431008115
PD-020000-K0073	R431007776	PD-020032-01100	R431007868	PD-020043-01212	R431007963	PD-040000-K0015	R431008116
PD-020000-K0087	R431007778	PD-020032-01110	R431007869	PD-020043-01515	R431007964	PD-040000-K0018	R431008118
PD-020000-K0088	R431007779	PD-020032-01198	R431007870	PD-020043-05354	R431007965	PD-040000-K0019	R431008119
PD-020000-K0090	R431007780	PD-020032-01212	R431007871	PD-020043-05403	R431007966	PD-040000-K0020	R431008120
PD-020000-K0091	R431007781	PD-020032-01313	R431007873	PD-020043-07098	R431007967	PD-040000-K0021	R431008121
PD-020000-K0098	R431007782	PD-020032-01400	R431007874	PD-020043-07171	R431007968	PD-040000-K0023	R431008123
PD-020020-00011	R431007784	PD-020032-01498	R431007875	PD-020043-07474	R431007969	PD-040000-K0034	R431008124
PD-020020-01198	R431007789	PD-020032-01798	R431007876	PD-020043-K0000	R431007971	PD-040000-K0052	R431008125
PD-020020-01498	R431007791	PD-020032-02098	R431007878	PD-020044-00191	R431007973	PD-040000-K0053	R431008126
PD-020020-02098	R431009036	PD-020032-05354	R431007880	PD-020044-00315	R431009041	PD-040000-K0054	R431008127
PD-020020-07098	R434001002	PD-020032-07098	R431007883	PD-020044-00354	R431007974	PD-040000-K0055	R431008128
PD-020020-08898	R431009037	PD-020032-07398	R431007885	PD-020044-01212	R431007976	PD-040000-K0058	R431008129
PD-020020-09811	R431007795	PD-020032-08898	R431007887	PD-020044-01515	R431007977	PD-040000-K0070	R431008131
PD-020020-09888	R431007798	PD-020032-09398	R431009346	PD-020044-05354	R431007979	PD-040000-K0071	R431008132
PD-020020-K0000	R431007799	PD-020032-09811	R431007888	PD-020044-K0000	R431007983	PD-040000-K0072	R431008133
PD-020031-00011	R431007801	PD-020032-09814	R431007889	PD-020045-00191	R431007986	PD-040000-K0073	R431008134
PD-020031-00014	R431007802	PD-020032-09820	R431007890	PD-020045-01212	R431007989	PD-040000-K0087	R431008135
PD-020031-00298	R431007805	PD-020032-09823	R431007891	PD-020045-01515	R431007990	PD-040000-K0088	R431008136

“A” Pilotair® Pneumatic Directional Control Valves

Model code (old part number) to current part number crossover (cont.)

Model Code	Part No.	Model Code	Part No.	Model Code	Part No.	Model Code	Part No.
PD-040000-K0090	R431008137	PD-040032-00004	R431008218	PD-040041-02398	R431008289	PD-040044-01515	R431008365
PD-040000-K0091	R431008138	PD-040032-00111	R431008219	PD-040041-05354	R431008290	PD-040044-07171	R431008368
PD-040000-K0093	R431009042	PD-040032-00191	R431008220	PD-040041-06400	R431008293	PD-040044-09494	R431008369
PD-040000-K0098	R431008139	PD-040032-00198	R431008221	PD-040041-06969	R431009254	PD-040044-K0000	R431008370
PD-040020-00011	R431009464	PD-040032-00354	R431008223	PD-040041-07001	R431008294	PD-040045-00191	R431008372
PD-040020-00014	R431009043	PD-040032-00490	R431008225	PD-040041-07098	R431008295	PD-040045-01212	R431008374
PD-040020-00298	R431008145	PD-040032-00491	R434004865	PD-040041-07171	R431008296	PD-040045-02154	R431008376
PD-040020-00898	R431008148	PD-040032-00598	R431008226	PD-040041-07301	R431008297	PD-040045-05354	R431008377
PD-040020-01011	R431008150	PD-040032-00898	R431008227	PD-040041-07398	R431008298	PD-040045-K0000	R431008378
PD-040020-01100	R431008151	PD-040032-01010	R431008228	PD-040041-08790	R431008299	PD-040046-01010	R431009298
PD-040020-01198	R431008152	PD-040032-01100	R431008229	PD-040041-09494	R431008303	PD-040046-01212	R431008381
PD-040020-02098	R431009044	PD-040032-01198	R431008230	PD-040041-09820	R431009048	PD-040046-K0000	R431008383
PD-040020-07098	R431008159	PD-040032-01212	R431008231	PD-040041-09873	R431008305	PD-040100-K0000	R431008385
PD-040020-08790	R431008161	PD-040032-01313	R431008233	PD-040041-K0000	R431008306	PD-040120-01498	R431008387
PD-040020-08898	R431008163	PD-040032-01400	R431008234	PD-040042-00014	R431008308	PD-040131-01400	R431008389
PD-040020-09820	R431008166	PD-040032-01498	R431008235	PD-040042-00114	R431008310	PD-040131-01498	R431008390
PD-040020-K0000	R431008169	PD-040032-01515	R431009355	PD-040042-00173	R431008311	PD-040131-07098	R431008391
PD-040031-00001	R431009045	PD-040032-02098	R431008236	PD-040042-00190	R431008312	PD-040131-K0000	R431008392
PD-040031-00100	R431008172	PD-040032-02154	R431008858	PD-040042-00191	R431008313	PD-040200-K0000	R431009235
PD-040031-00110	R431008173	PD-040032-05290	R431008238	PD-040042-00198	R431008314	PD-040232-00000	R431008394
PD-040031-00113	R431008174	PD-040032-05354	R431008239	PD-040042-00254	R431008315	PD-040232-01798	R431008395
PD-040031-00190	R431008176	PD-040032-05501	R431008240	PD-040042-00315	R431008317	PD-040232-07301	R431008396
PD-040031-00198	R431008177	PD-040032-06401	R434004505	PD-040042-00321	R431009356	PD-040300-K0000	R431009236
PD-040031-00298	R431008178	PD-040032-07098	R431008242	PD-040042-00354	R431008318	PD-040400-K0000	R431008401
PD-040031-00490	R431008179	PD-040032-07398	R431008244	PD-040042-00410	R431008320	PD-040432-07171	R431008404
PD-040031-00598	R431008181	PD-040032-08501	R431009252	PD-040042-00490	R431008321	PD-040432-07474	R431008405
PD-040031-00898	R431008182	PD-040032-08898	R431008247	PD-040042-01010	R431008323	PD-040500-K0000	R431008407
PD-040031-01010	R431008183	PD-040032-09087	R431008248	PD-040042-01198	R431008324	PD-040541-00114	R431008409
PD-040031-01100	R431008184	PD-040032-09398	R431008249	PD-040042-01212	R431008325	PD-040541-00173	R431008410
PD-040031-01110	R431008185	PD-040032-09802	R431008250	PD-040042-01313	R431008326	PD-040541-01400	R431008411
PD-040031-01198	R431008186	PD-040032-09811	R431008251	PD-040042-01401	R431008327	PD-040541-01401	R431008412
PD-040031-01313	R431008187	PD-040032-K0000	R431008253	PD-040042-01498	R431008328	PD-040541-01498	R431008413
PD-040031-01400	R431008188	PD-040041-00001	R431008255	PD-040042-01515	R431008329	PD-040541-07098	R431008415
PD-040031-01401	R431008189	PD-040041-00014	R431008257	PD-040042-02098	R431008330	PD-040541-07301	R431008416
PD-040031-01404	R431008190	PD-040041-00098	R431008258	PD-040042-02154	R431009049	PD-040541-09873	R431008418
PD-040031-01498	R431008191	PD-040041-00110	R431008259	PD-040042-02398	R431008331	PD-040541-K0000	R431008419
PD-040031-01904	R431008194	PD-040041-00114	R431008260	PD-040042-05354	R431008334	PD-040600-K0000	R431008421
PD-040031-02098	R431008195	PD-040041-00155	R431008261	PD-040042-07098	R431008337	PD-040641-01313	R431008423
PD-040031-02398	R431008196	PD-040041-00173	R431008262	PD-040042-08790	R434004894	PD-040641-01515	R431008424
PD-040031-05501	R431009046	PD-040041-00190	R431008263	PD-040042-09802	R431008341	PD-040641-07171	R431008425
PD-040031-05804	R431008199	PD-040041-00191	R431008264	PD-040042-K0000	R431008343	PD-040641-07474	R431008426
PD-040031-07000	R431008201	PD-040041-00198	R431008265	PD-040043-00098	R434004863	PD-040643-07171	R431008428
PD-040031-07098	R431008202	PD-040041-00298	R431008266	PD-040043-00191	R431008346	PD-040643-09494	R431008429
PD-040031-07398	R431008203	PD-040041-00354	R431008269	PD-040043-00354	R431008347	PD-040700-K0000	R431009237
PD-040031-08790	R431008204	PD-040041-00374	R431008270	PD-040043-01010	R431008348	PD-040742-00114	R431008432
PD-040031-09001	R431008205	PD-040041-00490	R431008271	PD-040043-01100	R431009361	PD-040742-01401	R431008433
PD-040031-09004	R431009444	PD-040041-01010	R431008277	PD-040043-01212	R431008350	PD-040742-07098	R431008434
PD-040031-09087	R431008206	PD-040041-01100	R431008278	PD-040043-01515	R431008351	PD-040742-K0000	R431008436
PD-040031-09808	R431009367	PD-040041-01198	R431008279	PD-040043-02154	R431008352	PD-040800-K0000	R431008438
PD-040031-09811	R431008209	PD-040041-01212	R431008280	PD-040043-05354	R431008353	PD-040842-01515	R431008440
PD-040031-09814	R431008210	PD-040041-01313	R431008281	PD-040043-07171	R431008354	PD-040842-06969	R431008441
PD-040031-09820	R431008211	PD-040041-01400	R431008282	PD-040043-09494	R431008357	PD-070031-00111	R434004142
PD-040031-09870	R431008212	PD-040041-01401	R431008283	PD-040043-K0000	R431008358	PD-070032-00100	R434000882
PD-040031-09873	R431008213	PD-040041-01498	R431008284	PD-040044-00191	R431008361	PD-070032-00500	R434001131
PD-040031-09888	R434004839	PD-040041-01515	R431008285	PD-040044-00354	R431008363	PD-070043-01515	R434004942
PD-040031-09893	R434004585	PD-040041-02098	R431008287	PD-040044-01104	R434004928	PD-070232-06498	R434000885
PD-040031-K0000	R431008215	PD-040041-02154	R431009047	PD-040044-01212	R431008364		

NOTICE TO PRODUCT USERS

1. WARNING: FLUID MEDIA

AVENTICS pneumatic devices are designed and tested for use with filtered, clean, dry, chemical free air at pressures and temperatures within the specified limits of the device. For use with media other than air or for human life support systems, AVENTICS must be consulted. Hydraulic cylinders are designed for operation with filtered, clean, petroleum based hydraulic fluid; operation using fire-resistant or other special types of fluids may require special packing and seals. Consult the factory.

2. WARNING: MATERIAL COMPATIBILITY

Damage to product seals or other parts caused by the use of non-compatible lubricants, oil additives or synthetic lubricants in the air system compressor or line lubrication devices voids the AVENTICS warranty and can result in product failure or other malfunction. See lubrication recommendations below.

AIR LINE LUBRICANTS! In service higher than 18 cycles per minute or with continuous flow of air through the device, an air line lubricator is recommended.* (Do not use line lubrication with vacuum products.) However, the lubricator must be maintained since the oil will wash out the grease, and lack of lubrication will greatly shorten the life expectancy. The oils used in the lubricator must be compatible with the elastomers in the device. The elastomers are normally BUNA-N, NEOPRENE, VITON, SILICONE and HYTREL. AVENTICS recommends the use of only petroleum based oils without synthetic additives, and with an aniline point between 180° F and 210° F.

COMPRESSOR LUBRICANTS! All compressors (with the exception of special "oil free" units) pass oil mist or vapor from the internal crankcase lubricating system through to the compressed air. Since even small amounts of non-compatible lubricants can cause severe seal deterioration (which could result in component and system failure) special care should be taken in selecting compatible compressor lubricants.

3. WARNING: INSTALLATION AND MOUNTING

The user of these devices must conform to all applicable electrical, mechanical, piping and other codes in the installation, operation or repair of these devices.

INSTALLATION ! Do not attempt to install, operate or repair these devices without proper training in the technique of working on pneumatic or hydraulic systems and devices, unless under trained supervision.

Compressed air and hydraulic systems contain high levels of stored energy. Do not attempt to connect, disconnect or repair these products when a system is under pressure. Always exhaust or drain the pressure from a system before performing any service work. Failure to do so can result in serious personal injury.

MOUNTING! Devices should be mounted and positioned in such a manner that they cannot be accidentally operated.

4. WARNING: APPLICATION AND USE OF PRODUCTS

The possibility does exist for any device or accessory to fail to operate properly through misuse, wear or malfunction. The user must consider these possibilities and should provide appropriate safe guards in the application or system design to prevent personal injury or property damage in the event of a malfunction.

5. WARNING: CONVERSION, MAINTENANCE AND REPAIR

When a device is disassembled for conversion to a different configuration, maintenance or repair, the device must be tested for leakage and proper operation after being reassembled and prior to installation.

MAINTENANCE AND REPAIR! Maintenance periods should be scheduled in accordance with frequency of use and working conditions. All AVENTICS products should provide a minimum of 1,000,000 cycles of maintenance free service when used and lubricated as recommended. However, these products should be visually inspected for defects and given an "in system" operating performance and leakage test once a year. Where devices require a major repair as a result of the one million cycles, one year, or routine inspection, the device must be disassembled, cleaned, inspected, parts replaced as required, rebuilt and tested for leakage and proper operation prior to installation. See individual catalogs for specific cycle life estimates.

6. PRODUCT CHANGES

Product changes including specifications, features, designs and availability are subject to change at any time without notice. For critical dimensions or specifications, contact factory.

*Many AVENTICS pneumatic valves and cylinders can operate with or without air line lubrication; see individual sales catalogs for details.

-Refer to the appropriate service manual for parts and service information, most are available for download from www.aventics.com/us

LIMITATIONS OF WARRANTIES & REMEDIES

AVENTICS warrants its products sold by it to be free from defects in material and workmanship to the following: For twelve months after shipment AVENTICS will repair or replace (F.O.B. our works), at its option, any equipment which under normal conditions of use and service proves to be defective in material or workmanship at no charge to the purchaser. No charge will be made for labor with respect to defects covered by this Warranty, provided that the work is done by AVENTICS or any of its authorized service facilities. However, this Warranty does not cover expenses incurred in the removal and reinstallation of any product, nor any downtime incurred, whether or not proved defective.

All repairs and replacement parts provided under this Warranty policy will assume the identity, for warranty purposes, of the part replaced, and the warranty on such replacement parts will expire when the warranty on the original part would have expired. Claims must be submitted within thirty days of the failure or be subject to rejection.

This Warranty is not transferable beyond the first using purchaser. Specifically, excluded from this Warranty are failures caused by misuse, neglect, abuse, improper operation or filtration, extreme temperatures, or unauthorized service or parts. This Warranty also excludes the use of lubricants, fluids or air line additives that are not compatible with seals or diaphragms used in the products. This Warranty sets out the purchaser's exclusive remedies with respect to products covered by it, whether for negligence or otherwise. Neither, AVENTICS nor any of its affiliates will be liable for consequential or incidental damages or other losses or expenses incurred by reason of the use or sale of such products. Our liability (except as to title) arising out of the sale, use or operation of any product or parts, whether on warranty, contract or negligence (including claims for consequential or incidental damage) shall not in any event exceed the cost of replacing the defective products and, upon expiration of the warranted period as herein provided, all such liability is terminated. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, WHETHER FOR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE. No attempt to alter, amend or extend this Warranty shall be effective unless authorized in writing by an officer of AVENTICS Corporation.

AVENTICS reserves the right to discontinue manufacture of any product, or change product materials, design or specifications without notice.

AVENTICS Corporation

1953 Mercer Road
Lexington, KY 40514
Tel 859.254.8031
Fax 800.489.1488
www.aventics.com/us
info.us@aventics.com



AVENTICS Incorporated

5515 North Service Rd
Suite #100
Burlington, Ontario L7L 6A6
Tel 905.332.0399
Fax 905.332.8596
www.aventics.com/ca
info.ca@aventics.com



Further contacts:

www.aventics.com/en/contact

The data specified only serve to describe the product. No statements concerning a certain condition or suitability for a certain application can be derived from our information. The information given does not release the user from the obligation of own judgment and verification. It must be remembered that our products are subject to a natural process of wear and aging.