WILKERSON®
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Installation & Service Instructions
83-964-000

E08 and E12 Slow-Start / Quick Dump Valve

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⚠ 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.

Application Limits

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

Operating Pressure Range

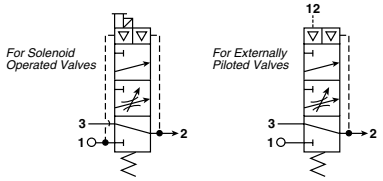
Operator Type		kPa	PSIG	bar
Solenoid, Air Pilot	Minimum Maximum	413 1034	60 150	4.1 10.3

Ambient Temperature Range

Operator Type		°C	°F
Solenoid	Minimum Maximum	0°C 60°C	32°F 140°F
Air Pilot	Minimum Maximum	0°C 60°C	32°F 140°F

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

ANSI Symbols



Installation

E08 and E12 valves should be installed with reasonable accessibility for service whenever possible. Keep pipe or tubing lengths to a minimum with inside clean and free of dirt and chips. Pipe joint compound should be used sparingly and applied only to the male pipe — never into the female port. Do not use PTFE tape to seal pipe joints — pieces have a tendency to break off and lodge inside the unit, possibly causing malfunction. Care should be taken to avoid undue strain on the valve.

Air applied to the valve must be filtered to realize maximum component life.

Life Expectancy - Normal multi-million cycle life expectancy of these valves is based on the use of properly filtered and lubricated air at room temperature. These valves are also designed to operate under non-lubricated conditions and will yield millions of maintenance free cycles.

Factory Pre-Lubrication - Valves are pre-lubricated at assembly with a petroleum based grease which has a lithium content.

In-Service Lubrication - In-service lubrication is not required; however, if lubrication is to be used, use an air line lubricant (compatible with Nitrile & Polyurethane seals) which will readily atomize and be of the medium aniline type. Aniline point range must be between 180° and 220°F. Viscosity at 100°F: 140 - 170 SUS.

⚠ **CAUTION: Do not use synthetic, reconstituted, or oils with an alcohol content or detergent additive.**

⚠ **CAUTION: Do not restrict the inlet of valves having an internal pilot supply. Pressure supply piping must be the same size as the inlet port or larger to insure that the pilot valve receives sufficient pressure supply during high flow conditions.**

⚠ 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 The Company, 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.

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EXTRA COPIES OF THESE INSTRUCTIONS ARE AVAILABLE FOR INCLUSION IN EQUIPMENT / MAINTENANCE MANUALS THAT UTILIZE THESE PRODUCTS. CONTACT YOUR LOCAL REPRESENTATIVE.

Function

The Slow-Start / Quick Dump valve is a 3-Port valve which supplies air in a controlled reliable manner to pneumatic systems and has the quick exhaust features of a dump valve. This valve replaces conventional main valves.

The Slow-Start / Quick Dump valve operates much like a standard 3-Way valve. When the valve is installed Port 2 is connected to Port 3 (downstream system is exhausted to atmosphere). When a signal (pneumatic or electric depending upon pilot operator) is received in Port 12, the connection between Port 2 and 3 is closed. At the same time, supply air from Port 1 is connected to Port 2 through the adjustable throttle (Flow Control Screw). When the downstream pressure reaches a specific point, the main poppet opens and permits full air flow through the valve. The table shows the relationship between the inlet pressure and the downstream pressure at which the main valve opens.

When the pilot signal is removed, the valve returns to its initial position and the downstream air is dumped rapidly through Port 3.

Installation

Inlet Pressure	Downstream Pressure for Full Flow
75 psig	50 psig
100 psig	55 psig
125 psig	60 psig
150 psig	65 psig

The Slow-Start / Quick Dump valve replaces an ordinary main valve; therefore, it is usually mounted between the air preparation unit and the system. The Slow-Start / Quick Dump valve is specifically designed to mount directly in line with the Series using modular body connectors.

Port Connections

1. Connect inlet air supply to Port 1.
2. Connect mufflers (or plumb exhaust) from Port 3.
3. Connect cylinder Port 2 to cylinder or other system devices to be supplied air.
4. Signal Connection – Slow-Start / Quick Dump valves may be remotely controlled electrically or pneumatically.
   a. For solenoid pilot operated valves, see the instructions under "WIRING INSTRUCTIONS."
   b. For air pilot operated valves, connect the air line to the pilot port 12, (M5 or 4mm tube).

Wiring Instructions

⚠ **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.**

NOTE: In addition to the following instructions, follow all requirements for local and national electrical codes.

Attach an electrical cable with connector (that conforms to the DIN 43650, Form C pattern) to the terminals of the solenoid. For locations in a cabinet or other protected environment, the Snap-On connector with loose wires may be attached. In both cases, do not attach or remove the connectors until power is off.

Electrical Connection

Valves with 3-Pin male terminals should have power connected to the parallel terminals. Ground should be connected to the perpendicular terminal. Use only connectors that comply with DIN 43650, Form C (8mm blade spacing).

Override Operation

The flush non-locking manual override is located on the body of the solenoid pilot. To operate the override, place a small screwdriver in the slot of the override and turn approximately 45° in either direction until the solenoid pilot actuates. The solenoid pilot will remain actuated until the override is released. When released, the solenoid pilot de-actuates.

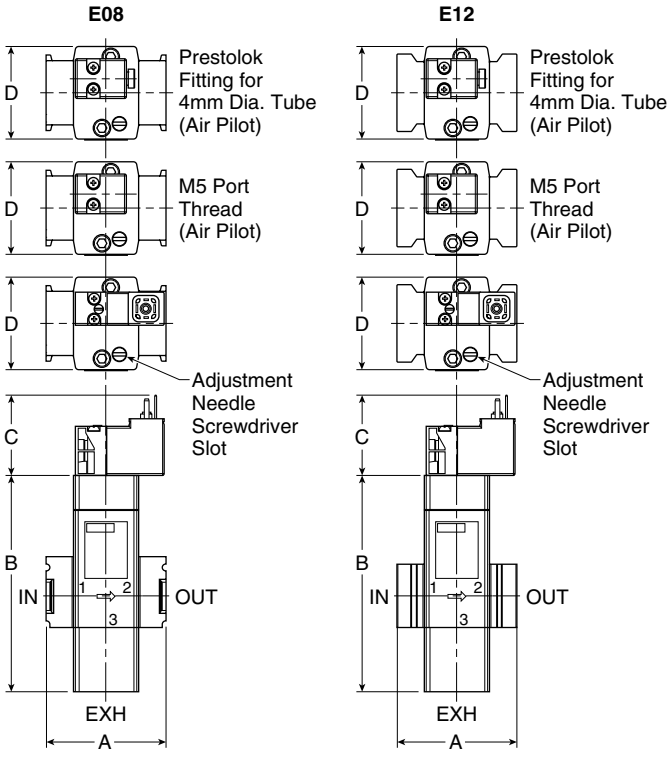
Solenoid Replacement

To replace the solenoid, remove the two mounting screws and replace with the correct voltage solenoid. Tighten new screws 5 to 6 in.lbs.

Voltage	Coil No.	Voltage	Coil No.
12/60	P025422B40	24VDC	P025422B49
24/60	P025422B42	120/60	P025422B53
12VDC	P025422B45	240/60	P025422B57

Accessories

Kit No.	Description
GPA-96-310	05 Series Modular Body Connectors
GPA-96-738	08 Joiner Set
VRP-96-780	3/8" Exhaust Muffler
VRP-96-306	Snap on Connector Kit with 0.5 meter wires
VRP-96-301	3-Pin Connector Kit - Unlighted
VRP-96-302	3-Pin Connector Kit - Lighted, 24VAC & DC
VRP-96-303	3-Pin Connector Kit - Lighted, 120VAC
VRP-96-300	3-Pin Connector Kit - Unlighted w/2 meter cord
VRP-96-304	3-Pin Connector Kit - Lighted, 24VAC & DC w/2 meter cord
VRP-96-305	3-Pin Connector Kit - Lighted, 120VAC w/2 meter cord



Dimensions:

Model	Port Size	Exhaust Port	A	B	C	D
E08	1/4"	3/8"	2.09" 53mm	3.53" 90mm	1.42" 36mm	1.65" 42mm
E12	3/8"	3/8"	2.13" 54mm	3.53" 90mm	1.42" 36mm	1.65" 42mm