FLUKE®
Calibration

PK-VLV-ABORT-100M, PK-VLV-ISO-40M, PK-VLV-ISO-100M

Valves

Instructions

Introduction

These instructions explain the PK-VLV-ABORT-100M, PK-VLV-ISO-40M, and PK-VLV-ISO-100M (the Valve). Applicable combinations of these valves are included in System Mode interconnect kits for the latest models of Fluke Calibration Pressure Controllers. For System Mode (two or more Controllers connected together to act as a single Controller), contact Fluke Calibration for assistance to configure all required items.

- The Valve housing can get warm if used for a prolonged time or with non-pulse width modulated power supplies. The Controller provides the optimal valve voltage.
- The Valves consist of a valve mounted to a manifold and an electrical connection cable.

How to Contact Fluke Calibration

To contact Fluke Calibration, call one of the following telephone numbers:

- Technical Support USA: 1-877-355-3225
- Calibration/Repair USA: 1-877-355-3225
- Canada: 1-800-36-FLUKE (1-800-363-5853)
- Europe: +31-40-2675-200
- Japan: +81-3-6714-3114
- Singapore: +65-6799-5566
- China: +86-400-810-3435
- Brazil: +55-11-3759-7600
- Anywhere in the world: +1-425-446-6110

To see product information and download the latest manual supplements, visit Fluke Calibration's website at www.flukecal.com.
To register your product, visit http://flukecal.com/register-product.

Shipping Contents

The Valves ship with the Valve assemblies and the Instructions.

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PK-VLV-ABORT-100M

The PK-VLV-ABORT-100M accessory is a normally-open valve on a stainless steel manifold. A sheet metal shield protects the user from high-velocity vented gas from the Valve's OUT port. A 2 m (6.5 ft) cable with connectors is included. See Figure 1.

⚠Warning

To prevent personal injury:

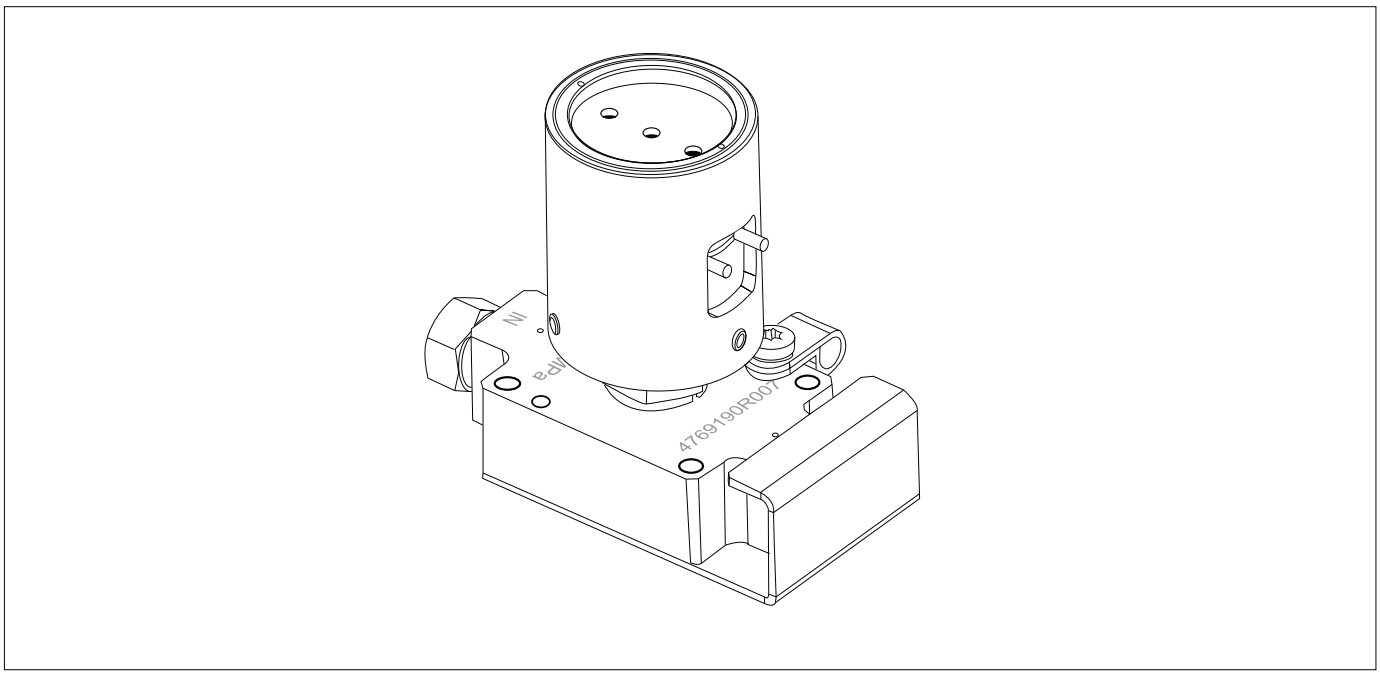
- **Never operate the Valve with the blast shield removed from the venting port (OUT).**
- **Always wear safety glasses when working with pressurized equipment.**

The Valve is rated for a MWP of 110 MPa (16 000 psi).

Use the Valve to vent pressure from a tee (not included) that is in-line between the TEST port of the Controller and the Device Under Test (DUT). Typically, the Valve only opens in emergencies or if there is a power outage. Connect the IN port of the Valve to the open port of the tee. The IN port is a DH500 connection (cone and threaded fitting compatible with Autoclave F250C and HiP HF4) and a DH500 gland and collar is supplied for the IN port. If mounting the valve, the mounting hole pattern is 34 mm x 44 mm (1.33 in x 1.73 in) and is intended for M4 screws. Make sure that the Valve does not face the operator because full-pressure venting is loud and startling.

Connect the Valve cable to DRV4 on the rear panel of the Controller. To enable the Abort Valve, on the Controller's front panel go to **Setup>Instrument Setup>External Valves** and set **Abort Valve** to **Installed**. The Valve will be automatically operated by the Controller in any of these conditions:

- ABORT button is pushed
- The remote command ABORT is used
- The Controller's Master ON/OFF switch is turned OFF.



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Figure 1. PK-VLV-ABORT-100M

PK-VLV-ISO-40M

The PK-VLV-ISO-40M accessory is a normally-closed valve on a stainless steel manifold. The Valve has 1/4 NPT Female connections. A 2 m (6.5 ft) cable with connectors is included. See Figure 2.

The valve is rated for a MWP of 44 MPa (6400 psi).

Use the Valve to isolate pressure in-line between the TEST port of the Controller and the DUT or other controller(s), or as a Supply Isolation Valve (isolate a gas supply to the Controller's SUPPLY port). The Valve is rated to the MWP on both ports and is bi-directional.

When you connect the Valve between a DUT and Controller, the Controller connects to the H port on the manifold. The DUT is connected to the L port on the manifold.

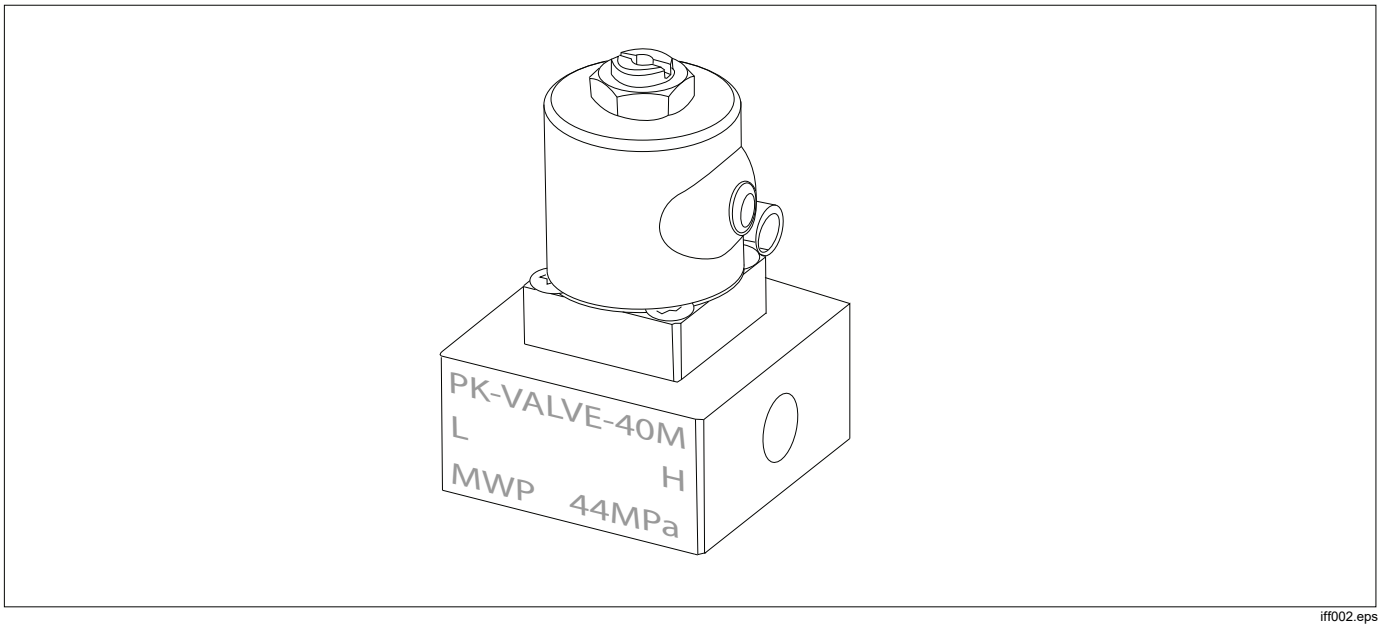
When you connect the Valve between two controllers, the TEST port of the higher pressure Controller connects to the H port on the manifold. The TEST port of the lower pressure controller connects to the L port on the manifold.

When you connect the Valve between a gas supply source and a Controller, the regulated gas supply connects to the H port on the manifold. The Controller's SUPPLY port connects to the L port on the manifold.

To mount the Valve, the mounting hole pattern on the bottom of the valve is 20.4 mm x 20.4 mm (0.8 in x 0.8 in) and is threaded for M4 x 0.7 screws.

To enable the Isolation Valve as an Isolation Valve:
1. Go to **Setup>Instrument Setup>External Valves>Isolation Valve** on the Controller's front panel and make sure that the Isolation Valve is set to **Installed**.
2. Connect the Valve cable to DRV3 on the rear panel of the Controller. The Valve will be automatically controlled by the Controller.

To enable the Isolation Valve as a Supply Isolation Valve, go to **Setup>Instrument Setup>External Valves>Supply Isolation Valve** on the Controller's front panel and make sure that the Supply Isolation Valve is set to the desired 24 V Driver number (DRV1, DRV2, DRV3 or DRV4). Connect the Valve cable to respective DRV number on the rear panel of the Controller. The Valve will not be automatically controlled by the Controller. Valve switching will have to be done by the user by front-panel operation, or by remote command(s). See the *8270A/8370A Operators Manual*.



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Figure 2. PK-VLV-ISO-40M

PK-VLV-ISO-100M

The PK-VLV-ISO-100M accessory is a normally-closed valve on a stainless steel manifold. The Valve has DH500 connections (two collars and two gland nuts are included). A 2 m (6.5 ft) cable with connectors is included. See Figure 3.

The valve is rated for a MWP of 110 MPa (16 000 psi).

Use the Valve to isolate pressure in-line between the TEST port of the Controller and the DUT or other controller(s), or as a Supply Isolation Valve (isolate a gas supply to the Controller's SUPPLY port). The Valve is rated to MWP on both ports, does not rely on pressure to close, and is bi-directional.

When you connect the Valve between a DUT and Controller, the Controller connects to the H port on the manifold. The DUT connects to the L port on the manifold.

When you connect the Valve between two controllers, the TEST port of the higher-pressure Controller connects to the H port on the manifold. The TEST port of the lower-pressure controller connects to the L port on the manifold.

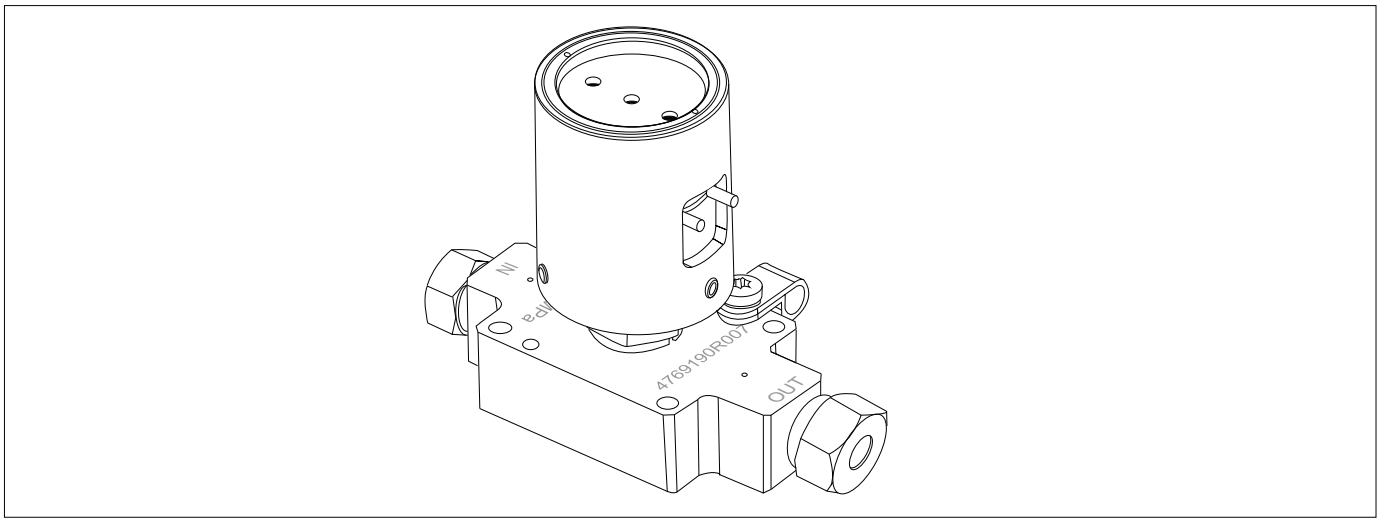
When you connect the Valve between a gas supply source and a Controller, the regulated gas supply connects to the H port on the manifold. The Controller's SUPPLY port connects to the L port on the manifold.

To mount the Valve, the mounting hole pattern is 34 mm x 44 mm (1.33 in x 1.73 in) and is intended for M4 screws.

To enable the Isolation Valve as an Isolation Valve, go to **Setup>Instrument Setup>External Valves>Isolation Valve** on the Controller's front panel and make sure that the Isolation Valve is set to **Installed**. Connect the Valve cable to DRV3 on the rear panel of the Controller. The Valve will be automatically controlled by the Controller.

To enable the Isolation Valve as a Supply Isolation Valve, go to **Setup>Instrument Setup>External Valves>Supply Isolation Valve** on the Controller's front panel and make sure that the Supply Isolation Valve is set to the desired 24V Driver number (DRV1, DRV2, DRV3 or DRV4). Connect the Valve cable to respective DRV number on the rear panel of the Controller. The Valve will not be automatically controlled by the Controller. Use front-panel operation for valve switching or remote command(s). See the *8270A/8370A Operators Manual*.

To keep the Valve in adjustment, do not loosen the set screws or top spanner nut. Do not try to forcibly rotate the Valve housing.

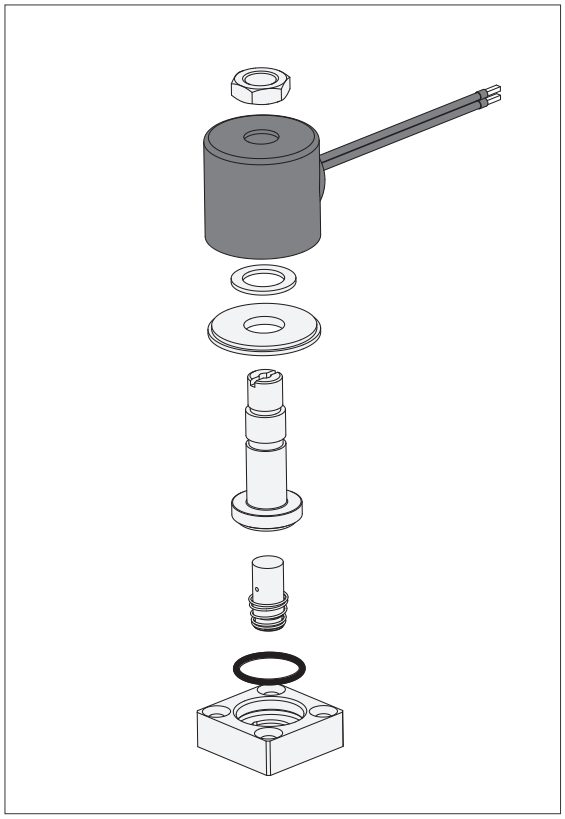


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Figure 3. PK-VLV-ISO-100M

Maintenance

The valve coils of the 40M Valves can be removed, then the valve stem can be removed to inspect and clean the valve plunger and seat.



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Figure 4. 40M Valve, Exploded View

The 100M Valves are factory adjusted and contain no user serviceable parts.

Specifications

PK-VLV-ISO-100M

Weight.....650 g
Dimensions .....100 mm W x 81 mm H x 42 mm D (3.94 in W x 3.18 in H x 1.65 in D)

PK-VLV-ISO-40M

Weight.....600 g
Dimensions .....48 mm W x 72 mm H x 48 mm D (1.88 in W x 2.83 in H x 1.88 in D)

PK-VLV-ABORT-100M

Weight.....650 g
Dimensions .....94 mm W x 81 mm H x 42 mm D (3.7 in W x 3.18 in H x 1.65 in D)

LIMITED WARRANTY AND LIMITATION OF LIABILITY

This Fluke product will be free from defects in material and workmanship for one year from the date of purchase. This warranty does not cover fuses, disposable batteries, or damage from accident, neglect, misuse, alteration, contamination, or abnormal conditions of operation or handling. Resellers are not authorized to extend any other warranty on Fluke's behalf. To obtain service during the warranty period, contact your nearest Fluke authorized service center to obtain return authorization information, then send the product to that Service Center with a description of the problem.

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