

SPECIFICATIONS

DMV-D .../6 Two normally closed safety shut off valves in one housing. Fast opening, fast closing. Main flow adjustable with valve 2.

DMV-DLE .../6 Two normally closed safety shut off valves in one housing. Valve 1 fast opening, fast closing. Valve 2 slow opening, fast closing. Main flow and initial lift adjustable.

Body size **Flange Size**
DMV 701 1/2" - 1" NPT
DMV 702 1" - 2" NPT
DMV 703 1" - 2" NPT

Gases
natural gas, propane, other noncorrosive gases and air

Maximum Operating Pressure
7 psi

Ambient / Fluid Temperature
-40 °F to +150 °F

Electrical Ratings
110 to 120 Vac / 50 to 60 Hz
220 to 240 Vac / 50 to 60 Hz
24 Vdc

Power Consumption
DMV 701: 45 VA
DMV 702: 65 VA
DMV 703: 90 VA

Electrical Connection
DIN-Connector

Operating Time
100 % duty cycle

Classification Valve V1
Safety Shut Off Valve: UL 429, FM 7400

Classification Valve V2
Safety Shut Off Valve: UL 429, FM 7400

Closing Time
< 1 second

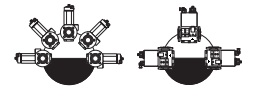
Opening Time
DMV-D: V1 & V2 < 1 sec.
DMV-DLE: V1 < 1 sec.; V2 about 20 sec. (70 °F)

Main Flow Setting (DMV-D & DMV-DLE)
adjustable on V2: 10 to 100% of total flow

Initial Lift Adjustment (DMV-DLE)
adjustable on V2: 0 to 70 % of total flow

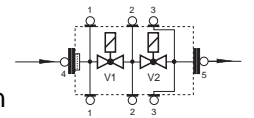
Materials in contact with Gas
housing: Aluminium, Steel
sealings on valve seats: NBR-based rubber

Mounting Position
solenoid upright vertical
to solenoid horizontal



Strainer
23 Mesh, installed in the housing upstream V1

Test Port
G 1/8 ISO 228 taps available on both sides upstream V1, between V1 and V2, downstream V2, and on both flanges

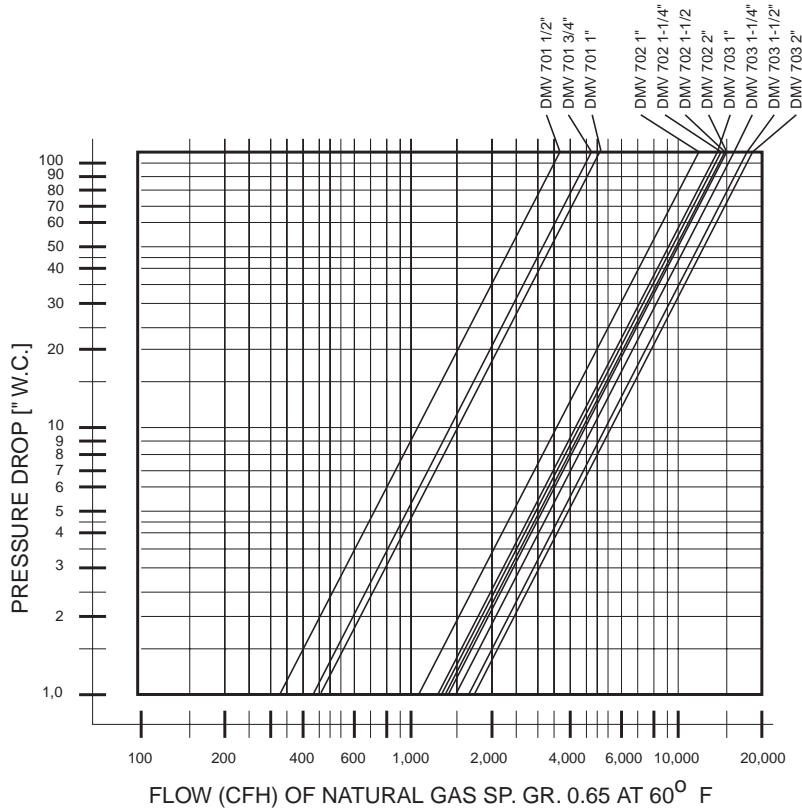


Position Indication
Visual Indicator standard;
Closed Position Indicator CPI 400 w/ visual indication and electrical switch (SPDT) optional

Approvals
UL Recognized Component: File No. MH16727 (YIOZ2)
FM Approved: Report J.I. 1Z6A0.AF
AGA/CGA: pending

CAPACITY

Capacity in cfh at pressure drop of 1 inch water column; natural gas, sp. gr. = 0.64						
	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
DMV 701/6	345	429	457	-	-	-
DMV 702/6	-	-	1065	1277	1368	1430
DMV 703/6	-	-	1230	1532	1698	1795



INSTALLATION

- Read these instructions carefully.
- Failure to follow them and/or improper installation may cause explosion, property damage and injuries.
- Installation must be done with the supervision of a licensed burner technician.
- The system must meet all applicable national and local code requirements.
- Check the ratings given in the specifications and on the DMV to make sure that it is suitable for your application.

- Never perform work if gas pressure or power is applied, or in the presence of an open flame.
- Protect surfaces. Make sure that seals and O-rings are clean and in good condition.
- Once installed, perform a complete checkout including a gas leak test.
- Label all wires prior to disconnection when servicing the DMV. Wiring errors can cause improper and dangerous operation.
- Verify proper operation after servicing.

- The main gas supply must be shut off before starting the installation.
- Read these installation instructions carefully.
- Examine the DMV for shipping damage.
- The inside of the DMV, the flanges, and piping must be clean and free of dirt.
- Remove all dirt and debris before installing the DMV. Failure to remove dirt/debris could result in valve damage or improper performance.

Recommended Procedure to Mount the Flanges

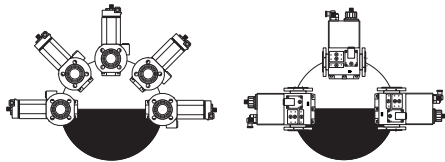
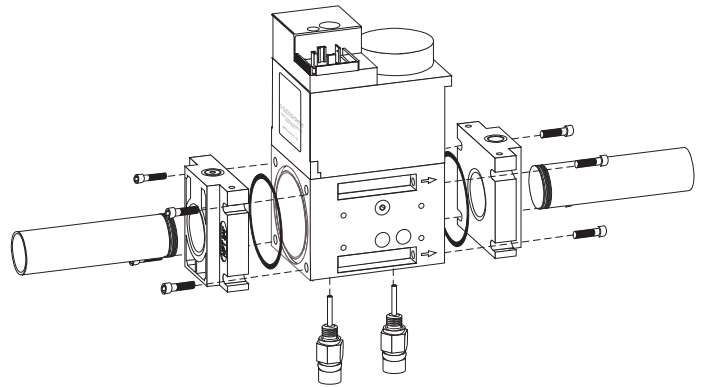
- Use new, properly reamed and threaded pipe free of chips.
- Apply good quality pipe sealant, putting a moderate

amount on the male threads only. If pipe sealant lodges on the valve seat, it will prevent proper operation. If using LP gas, use pipe sealant rated for use with LP gas.

- Do not thread pipe too far. Valve distortion and/or malfunction may result from excess pipe in the DMV body.
- Apply counter pressure when screwing the pipe into the flanges.
- Apply a parallel jaw wrench only to the flats on the flange.
- Do not overtighten the pipe. Follow the maximum torque values listed below.

1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	NPT pipe
375	560	750	875	940	1190	[lb-in]

- Unpack the DMV 701 (702/703) and remove the 8 M6 (M8) socket cap head screws using a 5 mm (6 mm) Allen wrench.
- Remove the two white protective plastic covers from the DMV body.
- Make sure the O-rings and the grooves are clean and in good condition.
- Install the DMV with the gas flow matching the direction indicated by the arrows on the casting.
- **CAUTION:** If the flow is not in the same direction of the arrows, the valves may not operate properly.
- Mount the DMV only with the solenoid vertical upright to horizontal.



- Clean the mounting surface of the flanges. Make sure they are in good condition.
- Attach the DMV to the flanges using the M6 (M8) socket cap screws supplied.

- Use a 5 mm (6 mm) Allen wrench for the DMV 701 (DMV 702/703) mounting screws.
- Tighten the screws in crisscross pattern.
- Do not overtighten the screws. Follow the maximum torque values listed below.

M6	M8	screw size
62	134	[lb-in] maximum torque

- After installation is completed perform a leak test to verify that no leakage occurs.

POSITION INDICATION

Valve position indication is required by various authorities having jurisdiction.

Two indicators, one of which might be the CPI 400, are shipped with, but not attached to, the DMV series valve to insure that the indicators are not damaged during shipment. Therefore install the indicators onto the DMV after mounting the DMV into the gas train and before the DMV is put into service.

- **CAUTION:** The valves must be de-energized and their gas supply shut off before installing the Position Indicators.

Installation

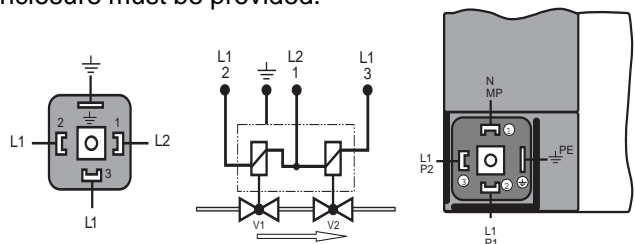
- Remove the two plugs and O-rings in the bottom of the valve with a 3/16" (5mm) hex key wrench. These are the taps were the Indicators go.

- Insert the Visual Indicator and its attached O-ring using a 5/8" (16 mm) open end wrench.
- Turn clockwise until the Visual Indicator is sufficiently tightened.
- DO NOT overtighten or you will destroy the rubber O-ring.
- Apply the adhesive-backed stickers supplied which show what the colors of the indicator signify to the DMV. The stickers should be applied on each side of the valve body so the operator can refer to either of them while viewing the Visual Indicator.
- After installation is completed perform a leak test to verify that no leakage occurs.
- For installation of a CPI 400 follow the instructions supplied with the CPI 400.

WIRING

- Disconnect all power to the valves before beginning the wiring to prevent electrical shock and equipment damage.
- Do not exceed the electrical ratings given in the specifications and on the DMV.
- Attach a flexible 1/2" NPT conduit to the DIN connector.
- Route the wires through the conduit and the DIN connector.
- Use 14 or 16 gauge wire suitable for at least 75 °C (167 °F).
- Connect the wiring to the appropriate screw terminals in the DIN connector.
- Plug the DIN connector onto the AMP terminals. Fasten the DIN connector with the screw supplied.

- **CAUTION:** All wiring must comply with local electrical codes, ordinances, and regulations. An ultimate electrical enclosure must be provided.

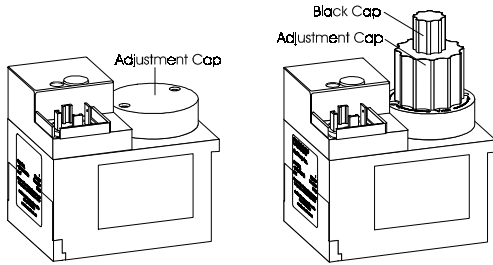


OPERATION

Main Flow Setting

The valves are supplied with the main flow adjustment fully open. To adjust the gas flow proceed as follows:

- **CAUTION:** Make sure the flow of gas does not create a hazard.
- Locate the flow adjustment cap on top of the DMV. There are two screws in the cap. The holding screw is recessed and has a blue sealing compound on it, while the pan head screw protrudes from the cap.
- **CAUTION:** Do not adjust or remove any screws or bolts which are sealed with a red or blue colored compound. Doing so will void all approvals and warranties.
- Loosen the pan head screw until you can manually rotate the flow adjustment cap for 1-1/2 to 2 turns.
- Turn the cap clockwise for less gas or counterclockwise for more gas.
- Check the flow at the burner with an orifice or flow meter until you have achieved the desired flow.
- Tighten the pan head screw on the adjustment cap.



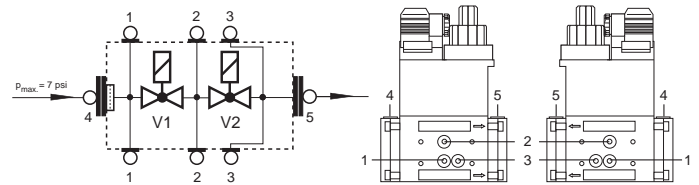
Initial Fast Lift Adjustment (DMV-DLE .../6 only)

The initial fast lift adjustment varies the initial gas flow through the valve as the valve seat begins to open. This adjustment can vary the initial flow between 0 % and 70% of the total gas flow. All DMV-DLE valves are shipped from the factory with no initial fast lift. To adjust the lift proceed as follows:

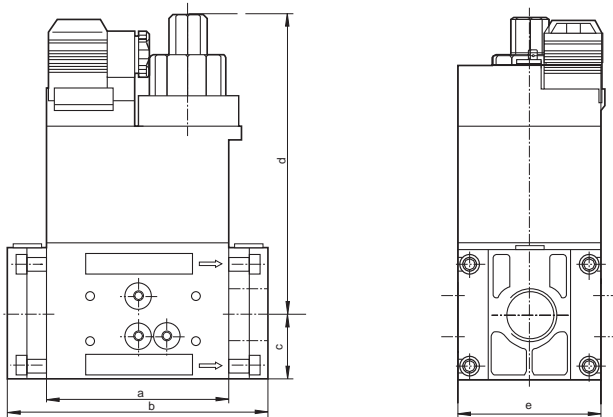
- Unscrew the small black cap on top of the flow adjustment cap to expose the initial lift adjustment knob.
- The black cap also serves as tool; turn the cap over and insert it into the corresponding slot on the adjustment knob.
- Turn the knob clockwise for a shorter initial lift or counterclockwise for a longer initial lift.
- Once the desired initial fast lift has been achieved, reinstall the black cap.

Test Port

The G 1/8 ISO 228 taps are available on both sides upstream V1, between V1 and V2, downstream V2, and on both flanges. The G 1/8 test nipple (Ordering Number: D 219 008) can be screwed in any of these pressure tap ports.



DIMENSIONS & FLANGES



Flange	NPT	Rp	for DMV.../6
1/2"	D 222 371	D 222 341	DMV 701
3/4"	D 222 368	D 222 342	DMV 701
1"	D 221 999	D 222 001	DMV 701
1"	D 222 369	D 222 343	DMV 702 & 703
1-1/4"	D 222 370	D 222 344	DMV 702 & 703
1-1/2"	D 222 003	D 221 884	DMV 702 & 703
2"	D 221 997	D 221 926	DMV 702 & 703

	A	B	C	D	E	Weight	Order #		
	[inches]					[lb]	120 Vac/ 60 Hz	230 Vac / 50 Hz	24 Vdc
DMV-D 701	3-5/8	5-5/8	1-3/8	5-3/8	2-7/8	4.6	D 224 842		
DMV-D 702	4-7/8	6-7/8	1-7/8	5-7/8	3-7/8	10.1	D 224 843		
DMV-D 703	4-7/8	6-7/8	1-7/8	7-1/2	3-7/8	12.1	D 224 844	available on request	
DMV-DLE 701	3-5/8	5-5/8	1-3/8	5-3/8	2-7/8	4.8	D 224 845		
DMV-DLE 702	4-7/8	7-7/8	1-7/8	5-7/8	3-7/8	10.3	D 224 846		
DMV-DLE 703	4-7/8	7-7/8	1-7/8	7-1/2	3-7/8	12.3	D 224 847		