

# Manual Control Valve (MCV) Series

The **Becker™** Manual Control Valve (MCV) Series provides manual operation of pneumatic valve actuators. The MCV Series is well suited for maintenance and manual operation of control valves, and it allows the user to override the primary control instrumentation and move the control valve actuator to any position. The unique safety button feature of the MCV helps mitigate against unintentional operation.

## Operational Design and Features

- Ideal for operation of control valve actuators during routine maintenance or emergency situations
- Helpful in facilitating troubleshooting of control instrumentation as well as valve actuators
- Reliable, with a maintenance-free design
- Safer, with a unique safety button feature that prevents accidental operation
- Compatible with almost all pneumatic valve actuators
- Available with handle lock out provision and limit switch

## Broad Compatibility

- RPDA actuators
- RPSR actuators
- SYDA actuators
- SYSR actuators
- LPDA actuators
- LPSR actuators
- LD actuators
- RSD actuators
- Other OEM pneumatic valve actuators

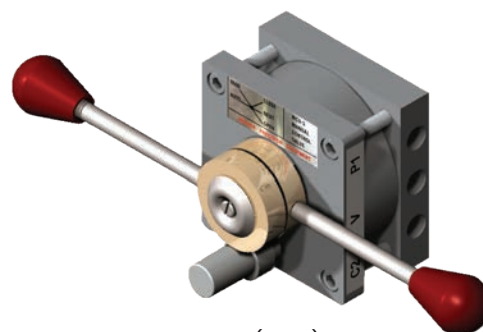
## Limit Switches

A proximity limit switch is available for remote indication of the MCV status. The limit switch will notify remote control operators when the MCV has been switched to manual mode.

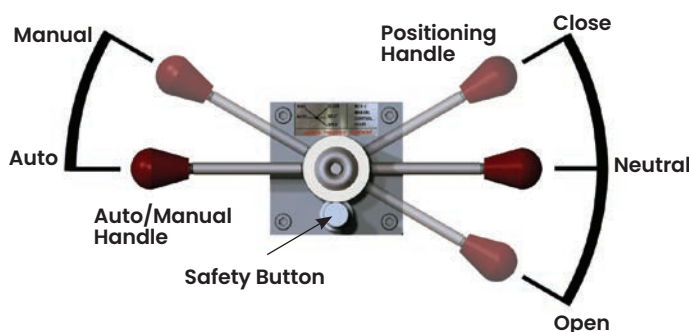
## Available Models

The MCV Series is available in two different models: MCV-3L and MCV-3M – to accommodate power gas pressures up to 250 psig (1724 kPa).

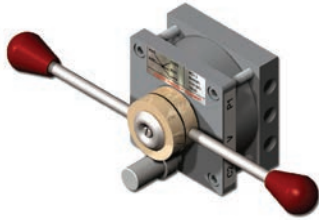
|          |        |          |
|----------|--------|----------|
| 250 psig | MCV-3M | 1724 kPa |
| 150 psig | MCV-3L | 1034 kPa |
| 0 psig   |        | 0 kPa    |



**Figure 1 – Manual Control Valve (MCV)**  
The MCV Series provides convenient manual operation of control valve actuators for routine maintenance or emergency situations.



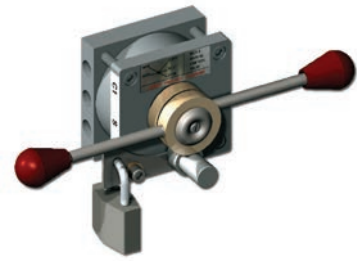
**Figure 2 – MCV Handle Operating Positions**  
The MCV Series uses a two-handle system and a safety button to provide safer operation of pneumatically operated valves. The auto/manual handle is located on the left and cannot be operated without depressing the safety button. Once the auto/manual handle is moved into the manual position, all other control instrumentation are isolated. The user can then use the positioning handle located on the right side to move the pneumatically operated valve to any desired position.



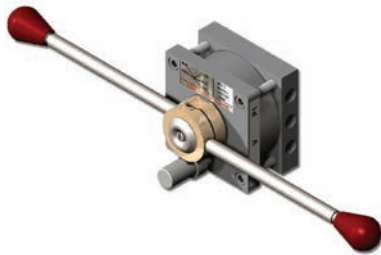
**Figure 3.1 – Model MCV-3L**  
MCV-3L is the standard MCV. It is capable of accepting power gas up to 150 psig (1034 kPa).



**Figure 3.3 – MCV Optional Positioning Handle Locking Provision**  
All MCV models are available with an optional positioning handle locking provision. This locking option allows the user to lock the control valve in either the full-open or full-closed position. This feature is useful during maintenance to provide lock out capabilities when it is desired to leave a valve in the full-open or full-closed position.



**Figure 3.4 – MCV Standard Button Locking Provision**  
All MCVs include the safety button locking provision. This locking option allows the user to lock the MCV to prevent unauthorized use. The safety button locking provision provides an additional degree of security.



**Figure 3.2 – Model MCV-3M**  
MCV-3M is used for power gas between 150 psig (1034 kPa) and 250 psig (1724 kPa). It incorporates longer handles necessary for operation with higher pressure power gas.

## Other Options

Baker Hughes offers a variety of overrides for valve actuators. Manual and automatic overrides are available to suit application requirements.

- Electrical overrides (solenoid valves)
- Pressure overrides
- Manual handwheel overrides
- Hydraulic pump override for large valves

## Materials of Construction

|              |   |
|--------------|---|
| Body         | Carbon steel                                      |
| Body bolts   | 316 stainless steel                               |
| Body O-rings | Buna-n  |
| Handle knobs | Plastic   |
| Handles      | 316 stainless steel                               |
| Internals    | Precision-lapped carbon steel and cast iron       |
| Weight       | 10 lbs (4.5 kg)                                   |
| Mounting     | Face mount  |
| Dimensions   | 11.625" x 4" x 4.25"<br>(295 mm x 102mm x 108 mm) |
| Coating      | Epoxy   |
| Options      | Locking provision<br>Limit switches               |

## Specifications

|                            |   |
|----------------------------|---|
| Type                       | Rotary-lapped ports with communication channels<br>Manual operation required for pneumatic pressure to operate<br>Five position, six ports with safety button to prevent accidental operation |
| Operating Pressure         | MCV-3L: $P_{\text{power}} \leq 150 \text{ psig (1034 kPa)}$<br>MCV-3M: $P_{\text{power}} \leq 250 \text{ psig (1724 kPa)}$  |
| Maximum Allowable Pressure | 500 psig (3447 kPa)   |
| Operating Temperature      | $-10^{\circ}\text{F} \leq T \leq +160^{\circ}\text{F}$<br>( $-23.3^{\circ}\text{C} \leq T \leq +71.1^{\circ}\text{C}$ )   |
| Ports                      | All body ports 1/4" FNPT  |
| Flow Capacity              | $C_v = 0.35$  |
| Shutoff Class              | API 6D / ISO 5208 Rate D  |

**Baker Hughes** 

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