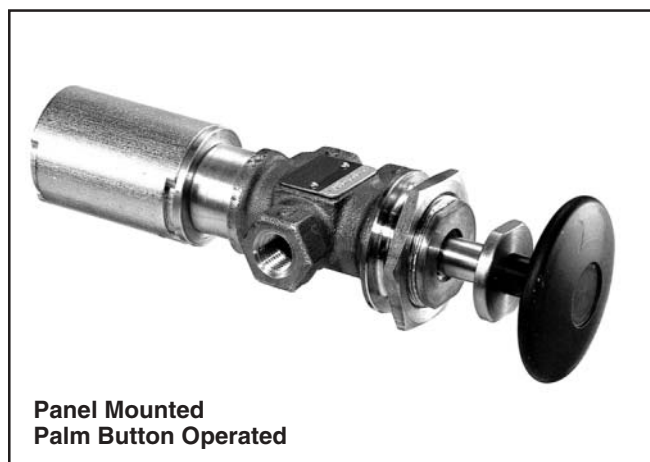




## Engineering Data

**Temperature rating:** -15°F to 200°F (-26° to 93°C)

**Cv flow rating:** See Engineering Data.

**Lubrication:** For best results and service life use clean, moisture-free lubricated air.

## Pressure Limitations

| Media               | Port Size | PSI (kPa)               |            |
|---------------------|-----------|-------------------------|------------|
|                     |           | 3-Way                   | 4-Way      |
| Air and Hydraulic ‡ | 1/4       | 200 (1380)              | 180 (1240) |
|                     | 3/8       | 175 (1210)              | 170 (1170) |
|                     | 1/2       | 160 (1100)              | 150 (1030) |
|                     | 3/4       | 150 (1030)              | 150 (1030) |
| Vacuum              | All       | Within 1" Hg of perfect |            |
| Other               |           | Consult Factory         |            |

‡ For compatible inert gas and hydraulic media, see Engineering Data.

## Function

Knob operated 2-Way\*, 3-Way and 4-Way, 2-Position control valves for panel mounting, manually shifted and spring returned. 2-Way valves are used for ON-OFF control; 3-Way and 4-Way valves are used for single-acting and double-acting cylinder control respectively. For other functions, see Optional Functions page.



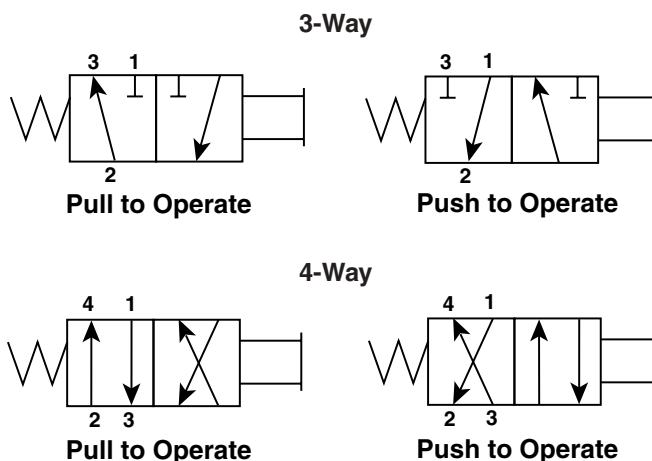
Install guards on all hand operated valves if accidental operation can cause personal injury.

## Features

Enclosed spring end section is field convertible to opposite (Push or Pull) action. Universal panel mounting adaptor adjusts to varying panel thickness to hold valve securely. Maximum panel thickness and appropriate Greenlee Punch Number are listed in table on page 6.

\*For 2-Way normally open or normally closed service, use 3-Way valve plugging appropriate port per Section A of chart on Optional Functions page for Push to Operate and Section B of the chart for Pull to Operate.

## Symbols

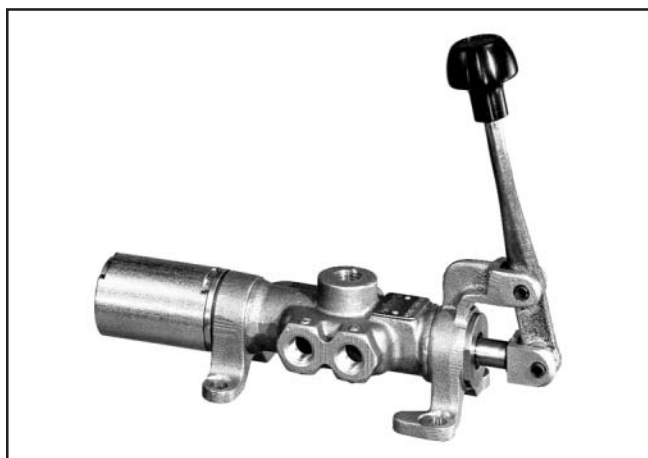


## How to Order

Select valve model number from tables for desired operation. Example: M065 246 59 to obtain a 1/4" pipe ported, 4-Way, 2-Position, palm button operated, spring return valve for panel mounting.

| Description                                              | Port Size | Model Number |
|----------------------------------------------------------|-----------|--------------|
| 3-Way<br>Palm Button<br>Push to Operate<br>Panel Mounted | 1/4       | M065 218 59  |
|                                                          | 3/8       | M065 318 59  |
|                                                          | 1/2       | M065 418 59  |
|                                                          | 3/4       | M065 618 59  |
| 4-Way<br>Palm Button<br>Push to Operate<br>Panel Mounted | 1/4       | M065 246 59  |
|                                                          | 3/8       | M065 346 59  |
|                                                          | 1/2       | M065 446 59  |
|                                                          | 3/4       | M065 646 59  |

| Description                                       | Port Size | Model Number |
|---------------------------------------------------|-----------|--------------|
| 3-Way<br>Knob<br>Push to Operate<br>Panel Mounted | 1/4       | M065 218 51  |
|                                                   | 3/8       | M065 318 51  |
|                                                   | 1/2       | M065 418 51  |
|                                                   | 3/4       | M065 618 51  |
| 4-Way<br>Knob<br>Push to Operate<br>Panel Mounted | 1/4       | M065 246 51  |
|                                                   | 3/8       | M065 346 51  |
|                                                   | 1/2       | M065 446 51  |
|                                                   | 3/4       | M065 646 51  |
| 3-Way<br>Knob<br>Pull to Operate<br>Panel Mounted | 1/4       | M064 218 51  |
|                                                   | 3/8       | M064 318 51  |
|                                                   | 1/2       | M064 418 51  |
|                                                   | 3/4       | M064 618 51  |
| 4-Way<br>Knob<br>Pull to Operate<br>Panel Mounted | 1/4       | M064 246 51  |
|                                                   | 3/8       | M064 346 51  |
|                                                   | 1/2       | M064 446 51  |
|                                                   | 3/4       | M064 656 51  |



## Function

Lever operated 2-Way\*, 3-Way and 4-Way, 2-Position control valves, manually shifted and spring returned. 2-Way valves are used for ON-OFF control; 3-Way and 4-Way valves are used for single-acting and double-acting cylinder control, respectively. For other functions, see Optional Functions.



*Install guards on all hand operated valves if accidental operation can cause personal injury.*

## Features

Lever operated valves are offered for Push or Pull to Operate. Enclosed spring end section is field convertible to opposite (Push or Pull) action.

*\* For 2-Way, normally open or normally closed service, use 3-Way valve plugging appropriate port, per Section B of the chart on Optional Functions page.*

## Engineering Data

**Temperature rating:** -15°F to 200°F (-26° to 93°C)

**Cv flow rating:** See Flow Capacities.

**Lubrication:** For best results and service life use clean, moisture-free lubricated air.

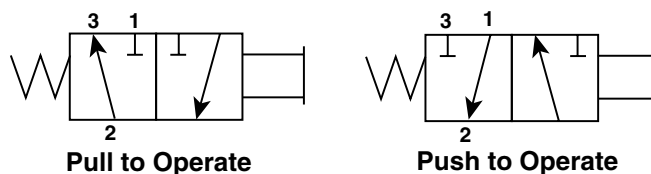
## Pressure Limitations

| Media               | Port Size | PSI (kPa)               |            |
|---------------------|-----------|-------------------------|------------|
|                     |           | 3-Way                   | 4-Way      |
| Air and Hydraulic ‡ | 1/4       | 225 (1550)              | 225 (1550) |
|                     | 3/8       | 225 (1550)              | 225 (1550) |
|                     | 1/2       | 215 (1480)              | 215 (1480) |
|                     | 3/4       | 200 (1380)              | 200 (1380) |
|                     | 1         | 200 (1380)              | 200 (1380) |
| Vacuum              | All       | Within 1" Hg of perfect |            |
| Other               |           | Consult Factory         |            |

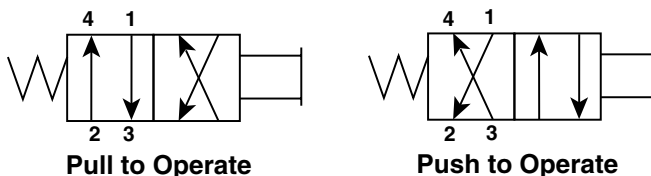
‡ For compatible inert gas and hydraulic media, see Engineering Data.

## Symbols

### 3-Way



### 4-Way



## How to Order

Select valve model number from table for desired operation.

Example: Order M095 418 43 to obtain a 1/2" pipe ported 3-Way, 2-Position, lever, Push to Operate, spring return valve.

| Description                                     | Port Size | Model Number |
|-------------------------------------------------|-----------|--------------|
| 3-Way Lever<br>Pull to Operate<br>Spring Return | 1/4       | M096 218 43  |
|                                                 | 3/8       | M096 318 43  |
|                                                 | 1/2       | M096 418 43  |
|                                                 | 3/4       | M096 618 43  |
|                                                 | 1         | M096 818 43  |
| 4-Way Lever<br>Pull to Operate<br>Spring Return | 1/4       | M096 246 43  |
|                                                 | 3/8       | M096 346 43  |
|                                                 | 1/2       | M096 446 43  |
|                                                 | 3/4       | M096 646 43  |
|                                                 | 1         | M096 846 43  |

| Description                                     | Port Size | Model Number |
|-------------------------------------------------|-----------|--------------|
| 3-Way Lever<br>Push to Operate<br>Spring Return | 1/4       | M095 218 43  |
|                                                 | 3/8       | M095 318 43  |
|                                                 | 1/2       | M095 418 43  |
|                                                 | 3/4       | M095 618 43  |
|                                                 | 1         | M095 818 43  |
| 4-Way Lever<br>Push to Operate<br>Spring Return | 1/4       | M095 246 43  |
|                                                 | 3/8       | M095 346 43  |
|                                                 | 1/2       | M095 446 43  |
|                                                 | 3/4       | M095 646 43  |
|                                                 | 1         | M095 846 43  |



## Engineering Data

**Temperature rating:** -15°F to 200°F (-26° to 93°C)

**Cv flow rating:** See Flow Capacities.

**Lubrication:** For best results and service life use clean, moisture-free lubricated air.

## Pressure Limitations

| Media               | Port Size | PSI (kPa)               |            |
|---------------------|-----------|-------------------------|------------|
|                     |           | 3-Way                   | 4-Way      |
| Air and Hydraulic ‡ | 1/4       | 225 (1550)              | 225 (1550) |
|                     | 3/8       | 225 (1550)              | 225 (1550) |
|                     | 1/2       | 215 (1480)              | 215 (1480) |
|                     | 3/4       | 200 (1380)              | 200 (1380) |
|                     | 1         | 200 (1380)              | 200 (1380) |
| Vacuum              | All       | Within 1" Hg of perfect |            |
| Other               |           | Consult Factory         |            |

‡ For compatible inert gas and hydraulic media, see Engineering Data.

## How to Order

Select valve model number from table for desired operation.

Example: Order M032 218 84 to obtain a 1/4" pipe ported 3-Way, 2-Position, diaphragm operated, instrument air signal, spring return valve.

| Description                                                            | Port Size | Model Number |              |
|------------------------------------------------------------------------|-----------|--------------|--------------|
|                                                                        |           | With Bracket | Less Bracket |
| 3-Way<br>Single Diaphragm<br>20-60 psi Pilot Pressure<br>Spring Return | 1/4       | M084 218 30  | M087 218 30  |
|                                                                        | 3/8       | M084 318 30  | M087 318 30  |
|                                                                        | 1/2       | M084 418 30  | M087 418 30  |
|                                                                        | 3/4       | M084 618 30  | M087 618 30  |
|                                                                        | 1         | M084 818 30  | M087 818 30  |
| 4-Way<br>Single Diaphragm<br>20-60 psi Pilot Pressure<br>Spring Return | 1/4       | M084 246 30  | M087 246 30  |
|                                                                        | 3/8       | M084 346 30  | M087 346 30  |
|                                                                        | 1/2       | M084 446 30  | M087 446 30  |
|                                                                        | 3/4       | M084 646 30  | M087 646 30  |
|                                                                        | 1         | M084 846 30  | M087 846 30  |

## Function

Single diaphragm operated 2-Way\*, 3-Way and 4-Way, 2-Position control valves, pneumatic pilot signal shifted and spring returned. 2-Way valves are used for ON-OFF control; 3-Way and 4-Way valves are used for single-acting and double-acting cylinder control, respectively. For other functions, see Optional Functions.

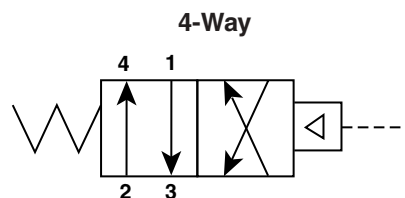
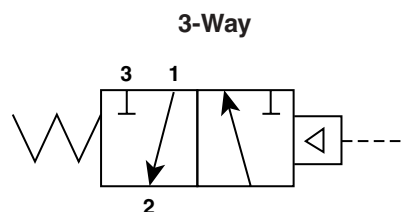
## Features

Standard single diaphragm operator is used for maintained pilot signal pressures of 20 to 60 psi (140 to 410 kPa)†. Optional operators feature a light-load spring for 15 psi (100 kPa) minimum air signal pressure. Single diaphragm operated valves may be controlled by a 3-Way pilot valve from a remote location.

\* For 2-Way, normally open or normally closed service, use 3-Way valve plugging appropriate port, per Section B of the chart on the Optional Functions page.

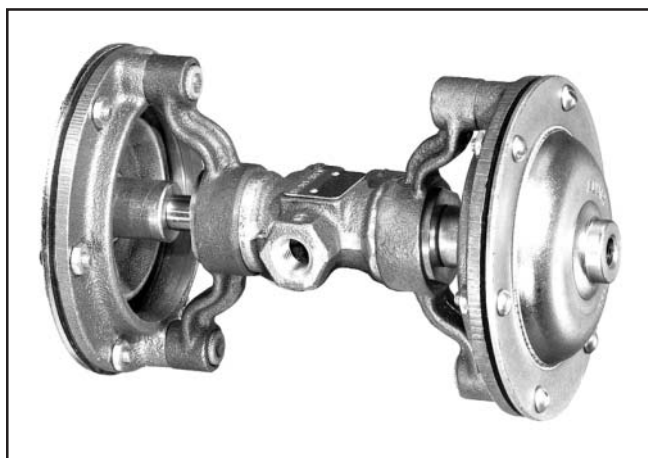
† For pilot signal pressure greater than 60 psi (410 kPa), use cylinder operated valves.

## Symbols



**Note: Shaded units are no longer available.**

| Description                                                                                | Port Size | Model Number |              |
|--------------------------------------------------------------------------------------------|-----------|--------------|--------------|
|                                                                                            |           | With Bracket | Less Bracket |
| 3-Way<br>Single Diaphragm<br>Instrument Air<br>15 psi Min. Pilot Pressure<br>Spring Return | 1/4       | M084 218 32  | M087 218 32  |
|                                                                                            | 3/8       | M084 318 32  | M087 318 32  |
|                                                                                            | 1/2       | M084 418 32  | M087 418 32  |
|                                                                                            | 3/4       | M084 618 32  | M087 618 32  |
|                                                                                            | 1         | M084 818 32  | M087 818 32  |
| 4-Way<br>Single Diaphragm<br>Instrument Air<br>15 psi Min. Pilot Pressure<br>Spring Return | 1/4       | M084 246 32  | M087 246 32  |
|                                                                                            | 3/8       | M084 346 32  | M087 346 32  |
|                                                                                            | 1/2       | M084 446 32  | M087 446 32  |
|                                                                                            | 3/4       | M084 646 32  | M087 646 32  |
|                                                                                            | 1         | M084 846 32  | M087 846 32  |



## Engineering Data

**Temperature rating:** -15°F to 200°F (-26° to 93°C)

**Cv flow rating:** See Flow Capacities.

**Lubrication:** For best results and service life use clean, moisture-free lubricated air.

## Pressure Limitations

| Media               | Port Size | PSI (kPa)               |            |
|---------------------|-----------|-------------------------|------------|
|                     |           | 3-Way                   | 4-Way      |
| Air and Hydraulic ‡ | 1/4       | 225 (1550)              | 225 (1550) |
|                     | 3/8       | 225 (1550)              | 225 (1550) |
|                     | 1/2       | 215 (1480)              | 215 (1480) |
|                     | 3/4       | 200 (1380)              | 200 (1380) |
|                     | 1         | 200 (1380)              | 200 (1380) |
| Vacuum              | All       | Within 1" Hg of perfect |            |
| Other               |           | Consult Factory         |            |

‡ For compatible inert gas and hydraulic media, see Engineering Data.

## Function

Double diaphragm operated 2-Way\*, 3-Way and 4-Way, 2-Position control valves, pneumatic signal shifted and returned. 2-Way valves are used for ON-OFF control; 3-Way and 4-Way valves are used for single-acting and double-acting cylinder control, respectively. For other functions, see Optional Functions.

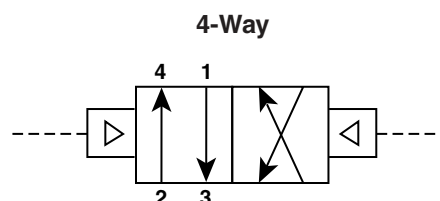
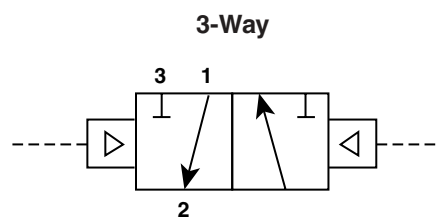
## Features

Double diaphragm operators are suitable for use with standard or low pressure momentary or maintained air pilot signals from 5 to 60 psi (30 to 410 kPa)†. Double diaphragm valves may be controlled by a single 4-Way pilot valve, or two coordinated 3-Way pilots.

\* For 2-Way, normally open or normally closed service, use 3-Way valve plugging appropriate port, per Section B of the chart on the Optional Functions page.

† For pilot signal pressure greater than 60 psi (410 kPa), use cylinder operated valves.

## Symbols



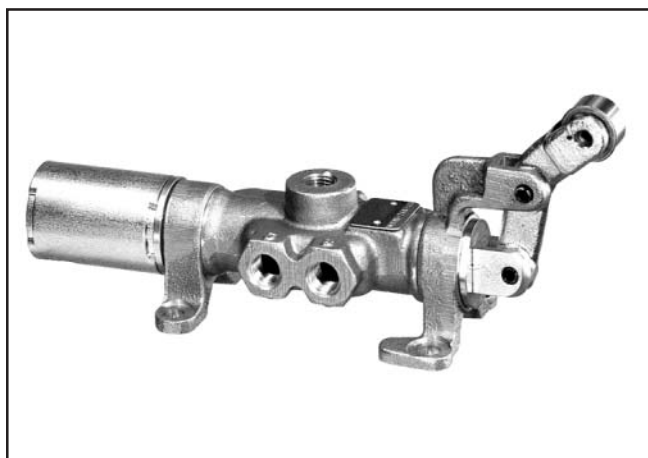
## How to Order

Select valve model number from table for desired operation.

Example: Order M033 346 33 to obtain a 3/8" pipe ported 4-Way, 2-Position, double diaphragm operated valve.

**Note:** Shaded units are no longer available.

| Description               | Port Size | Model Number |
|---------------------------|-----------|--------------|
| 3-Way<br>Double Diaphragm | 1/4       | M033 218 33  |
|                           | 3/8       | M033 318 33  |
|                           | 1/2       | M033 418 33  |
|                           | 3/4       | M033 618 33  |
|                           | 1         | M033 818 33  |
| 4-Way<br>Double Diaphragm | 1/4       | M033 246 33  |
|                           | 3/8       | M033 346 33  |
|                           | 1/2       | M033 446 33  |
|                           | 3/4       | M033 646 33  |
|                           | 1         | M033 846 33  |



## Engineering Data

**Temperature rating:** -15°F to 200°F (-26° to 93°C)

**Cv flow rating:** See Flow Capacities.

**Lubrication:** For best results and service life use clean, moisture-free lubricated air.

## Pressure Limitations

| Media               | Port Size | PSI (kPa)               |            |
|---------------------|-----------|-------------------------|------------|
|                     |           | 3-Way                   | 4-Way      |
| Air and Hydraulic ‡ | 1/4       | 225 (1550)              | 225 (1550) |
|                     | 3/8       | 225 (1550)              | 225 (1550) |
|                     | 1/2       | 215 (1480)              | 215 (1480) |
|                     | 3/4       | 200 (1380)              | 200 (1380) |
|                     | 1         | 200 (1380)              | 200 (1380) |
| Vacuum              | All       | Within 1" Hg of perfect |            |
| Other               |           | Consult Factory         |            |

‡ For compatible inert gas and hydraulic media, see Engineering Data.

## Function

Cam operated 2-Way\*, 3-Way and 4-Way, 2-Position control valves, mechanically shifted and spring returned. 2-Way valves are used for ON-OFF control; 3-Way and 4-Way valves are used for single-acting and double-acting cylinder control, respectively. For other functions, see Optional Functions.

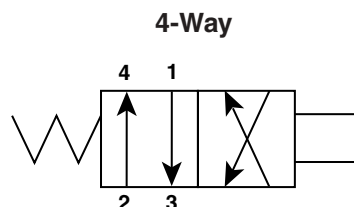
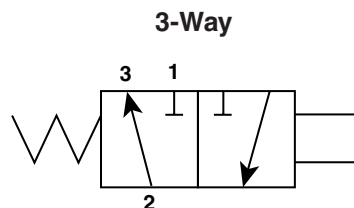
## Features

Cam follower operating arm is a heat treated steel forging, and the wide-faced roller is of needle bearing type to guarantee long trouble-free operation in severe service.

Cam roller is .88" (22.4 mm) diameter x .50" (12.7 mm) wide for 1/4" and 3/8" valves and 1.00" (25.4 mm) diameter x .62" (15.7 mm) wide for 1/2", 3/4" and 1" valves.

\* For 2-Way, normally open or normally closed service, use 3-Way valve plugging appropriate port, per Section B of the chart on the Optional Functions page.

## Symbols



## How to Order

Select valve model number from table for desired operation.

Example: Order M095 246 03 to obtain a 1/4" pipe ported 4-Way, 2-Position, cam operated, spring return valve.

| Description                            | Port Size | Model Number |
|----------------------------------------|-----------|--------------|
| 3-Way<br>Cam Operated<br>Spring Return | 1/4       | M095 218 03  |
|                                        | 3/8       | M095 318 03  |
|                                        | 1/2       | M095 418 03  |
|                                        | 3/4       | M095 618 03  |
|                                        | 1         | M095 818 03  |
| 4-Way<br>Cam Operated<br>Spring Return | 1/4       | M095 246 03  |
|                                        | 3/8       | M095 346 03  |
|                                        | 1/2       | M095 446 03  |
|                                        | 3/4       | M095 646 03  |
|                                        | 1         | M095 846 03  |