

# Poppet Valves

Heavy duty poppet valves  
G<sup>3</sup>/<sub>8</sub>" G<sup>1</sup>/<sub>2</sub>" - 2/2, 3/2

Catalogue 2136GB-ca



# Heavy duty poppet valves

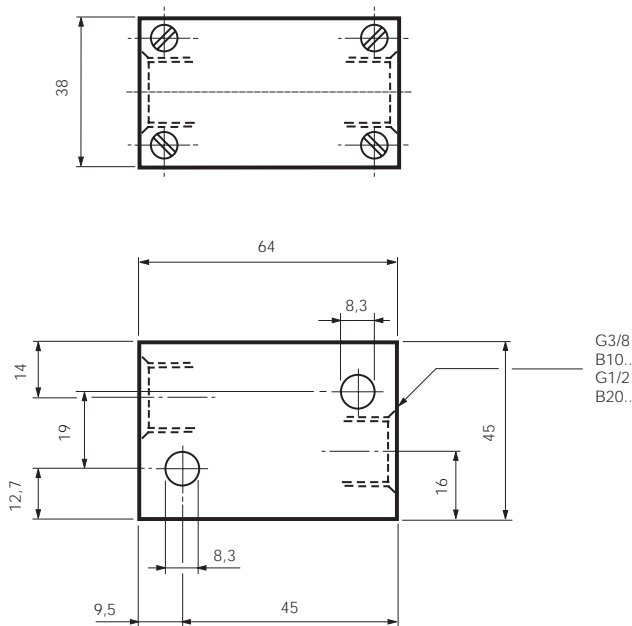
## Heavy duty poppet valves 2/2 & 3/2 - G<sup>3/8</sup>" & G<sup>1/2</sup>"

Utilising the well proven poppet principle to give high flow rates with short valve travel, both the 2/2 and 3/2 valves in the range are available in G<sup>3/8</sup>" and G<sup>1/2</sup>" port sizes. This means that each actuator is available in four configurations i.e. <sup>3/8</sup>" ports 2/2 or 3/2 and G<sup>1/2</sup>" ports 2/2 or 3/2. All valves are normally closed.

The bodies are of block form construction for ease of mounting. Springs are stainless steel; internal seals being of nitrile rubber. The 2/2 body allows air in one direction only, 3/2 versions having the facility of exhausting air through the actuator unit. This exhaust vent is unthreaded on all valves except the pilot and solenoid types which allows the piping away of exhaust air.

All mechanisms are spring returned.

## Basic body dimensions



## Specification

### Material

|                |                   |
|----------------|-------------------|
| body           | Zinc die cast     |
| Roller         | Zinc plated steel |
| Mechanical arm | Zinc plated steel |
| Poppet         | Brass             |
| Seals          | Nitrile           |
| Spring         | Stainless steel   |

## Operating information

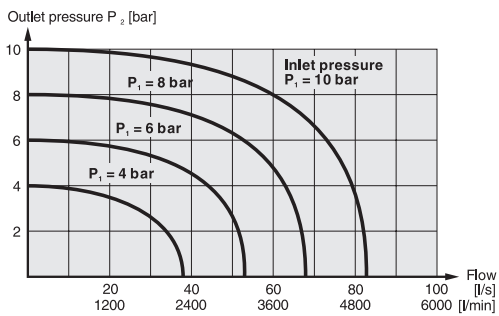
|  |                  |                    |
|--|------------------|--------------------|
| Working pressure                           | 0-10 bar         |                    |
| Working temperature                        | -10 °C to +80 °C |                    |
| Flow capacities in accordance with ISO6358 |                  |                    |
| Flow;                                      | <b>B102-B103</b> | <b>B202-B203</b>   |
|  | C=7,54           | C=10,75 NI/s x bar |
|  | b=0,29           | b=0,24             |
|  | Qn=33 l/s        | Qn=43 l/s          |
|  | Qmax=54 l/s      | Qmax=75 l/s        |
|  | Cv=2,65          | Cv=3,20            |

## Options and additional information

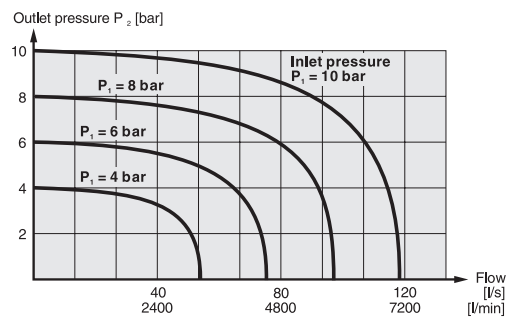
### Flow characteristics

Flow capacities in accordance with ISO6358  
 Flow measured with valve on manifold  
 All pressures = effective pressure

#### B102



#### B202



## Electrical Information

|                   |                         |        |
|-------------------|-------------------------|--------|
| Power consumption | Inrush                  | Hold   |
|                   | AC                      | 9 VA   |
|                   | DC                      | 4 Watt |
| Rating            | 100% continuous         |        |
| Isolation class   | F                       |        |
| Protection class  | IP 65 (P 54) DIN 40 050 |        |
| Connection        | DIN 43 650 Form B       |        |
| Solenoid response | 25 millisecs at 7 bar   |        |

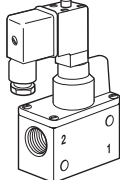




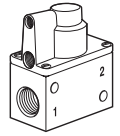




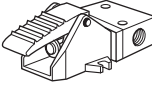




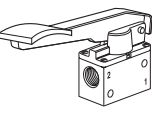




|        |       |     |
|--------|-------|-----|
|        | ~     | DC  |
| Suffix | 50 Hz | =   |
| S      | 110   | 75  |
| SA     | 240   | 160 |
| TA     | 24    | 12  |
| TF     | -     | 24  |
| TL     | 220   | 150 |
|        | 60 Hz |     |
| SC     | 110   | 72  |
| TK     | 220   | 145 |

### External pilot supply option

Solenoid pilot operated valves have an external pilot air supply, but provision for external pilot is provided. To use with external supply remove the plug situated between the body and the housing and place in the internal supply counterbore to shut off that channel, then remove the nylon plug from the external pilot supply port, connecting an air supply as desired. Orientation of the solenoid coil may be altered by removing the four holding screws and repositioning as required.

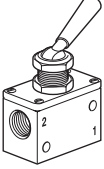
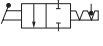
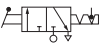
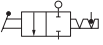
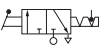
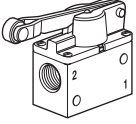
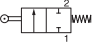
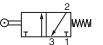
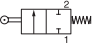
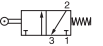
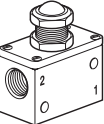
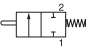
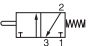
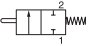
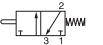
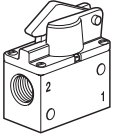
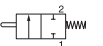
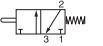
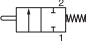
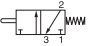
# Heavy duty poppet valves

## Main data for mechanically operated valves, Heavy duty poppet Series (NC only)

|  | Symbol  | Type | Connection | Actuator       | Return | Operating force at 6 bar, N | Weight Kg | Order code   |
|--|---|------|------------|----------------|--------|-----------------------------|-----------|--------------|
|   |    | 2/2  | G3/8       | Solenoid pilot | Spring |                             |           | <b>DB122</b> |
|  |    | 3/2  | G3/8       | Solenoid pilot | Spring |                             |           | <b>DB123</b> |
|  |    | 2/2  | G1/2       | Solenoid pilot | Spring |                             |           | <b>DB222</b> |
|  |    | 3/2  | G1/2       | Solenoid pilot | Spring |                             |           | <b>DB223</b> |
|   |    | 2/2  | G3/8       | Air pilot      | Spring |                             |           | <b>B102P</b> |
|  |    | 3/2  | G3/8       | Air pilot      | Spring |                             |           | <b>B103P</b> |
|  |    | 2/2  | G1/2       | Air pilot      | Spring |                             |           | <b>B202P</b> |
|  |   | 3/2  | G1/2       | Air pilot      | Spring |                             |           | <b>B203P</b> |
|  |  | 2/2  | G3/8       | Foot pedal     | Spring |                             |           | <b>B102F</b> |
|  |  | 3/2  | G3/8       | Foot pedal     | Spring |                             |           | <b>B103F</b> |
|  |  | 2/2  | G1/2       | Foot pedal     | Spring |                             |           | <b>B202F</b> |
|  |  | 3/2  | G1/2       | Foot pedal     | Spring |                             |           | <b>B203F</b> |
|  |  | 2/2  | G3/8       | Hand lever     | Spring |                             |           | <b>B102E</b> |
|  |  | 3/2  | G3/8       | Hand lever     | Spring |                             |           | <b>B103E</b> |
|  |  | 2/2  | G1/2       | Hand lever     | Spring |                             |           | <b>B202E</b> |
|  |  | 3/2  | G1/2       | Hand lever     | Spring |                             |           | <b>B203E</b> |

# Heavy duty poppet valves

## Main data for mechanically operated valves, Heavy duty poppet Series (NC only)

|   | Symbol  | Type | Connection | Actuator        | Return | Operating force at 6 bar, N | Weight Kg | Order code   |
|---|---|------|------------|-----------------|--------|-----------------------------|-----------|--------------|
|    |    | 2/2  | G3/8       | Lever           |        |                             |           | <b>B102L</b> |
|   |    | 3/2  | G3/8       | Lock down Lever |        |                             |           | <b>B103L</b> |
|   |    | 2/2  | G1/2       | Lock down Lever |        |                             |           | <b>B202L</b> |
|   |    | 3/2  | G1/2       | Lock down Lever |        |                             |           | <b>B203L</b> |
|    |    | 2/2  | G3/8       | Roller-Lever    | Spring | 36                          | 0,642     | <b>B102R</b> |
|   |    | 3/2  | G3/8       | Roller-Lever    | Spring | 36                          | 0,630     | <b>B103R</b> |
|   |    | 2/2  | G1/2       | Roller-Lever    | Spring | 36                          | 0,614     | <b>B202R</b> |
|   |   | 3/2  | G1/2       | Roller-Lever    | Spring | 36                          | 0,604     | <b>B203R</b> |
|  |  | 2/2  | G3/8       | Ball            | Spring | 220                         | 0,542     | <b>B102C</b> |
|   |  | 3/2  | G3/8       | Ball            | Spring | 220                         | 0,532     | <b>B103C</b> |
|   |  | 2/2  | G1/2       | Ball            | Spring | 220                         | 0,530     | <b>B202C</b> |
|   |  | 3/2  | G1/2       | Ball            | Spring | 220                         | 0,520     | <b>B203C</b> |
|  |  | 2/2  | G3/8       | Cam             | Spring | 220                         | 0,586     | <b>B102M</b> |
|   |  | 3/2  | G3/8       | Cam             | Spring | 220                         | 0,576     | <b>B103M</b> |
|   |  | 2/2  | G1/2       | Cam             | Spring | 220                         | 0,530     | <b>B202M</b> |
|   |  | 3/2  | G1/2       | Cam             | Spring | 220                         | 0,520     | <b>B203M</b> |

# Heavy duty poppet valves

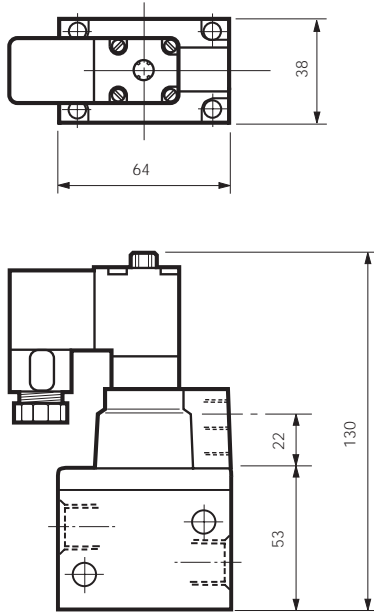
## Dimensions, Limit switches Heavy duty poppet

All dimensions in mm unless otherwise stated

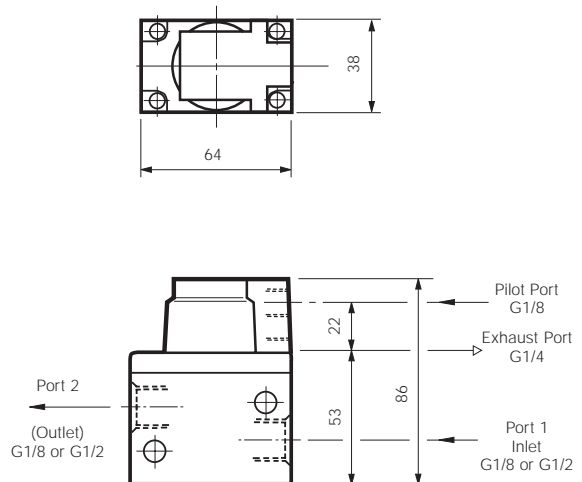
### Mechanically operated valves

#### 2/2, 3/2 valves

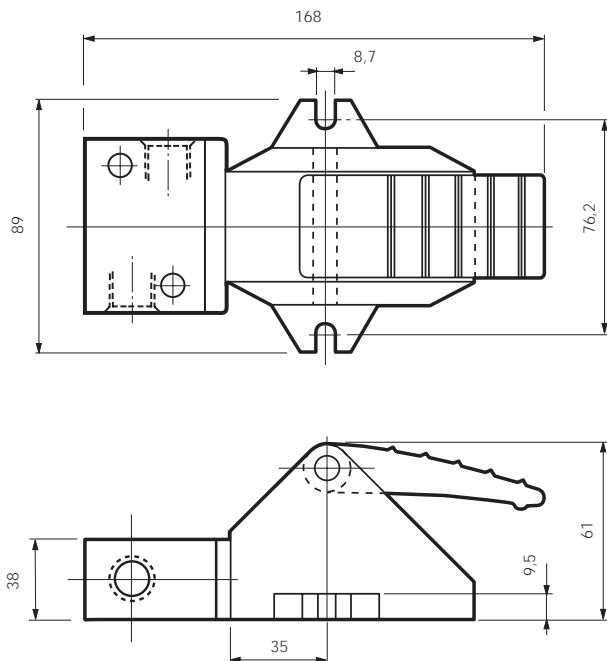
Solenoid pilot operated spring return  
DB122, DB123, DB222, DB223



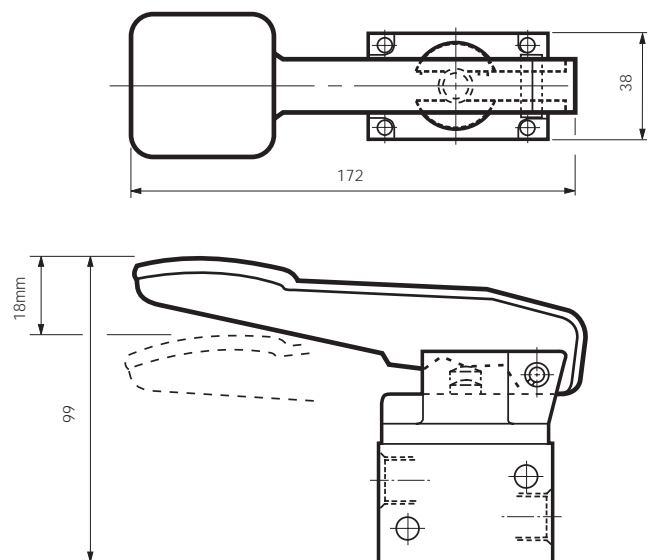
Air pilot operated spring return  
B102P, B103P, B202P, B203P



Foot pedal operated spring return  
B102F, B103F, B202F, B203F



Hand lever operated spring return  
B102E, B103E, B202E, B203E



# Heavy duty poppet valves

## Dimensions, Limit switches Heavy duty poppet

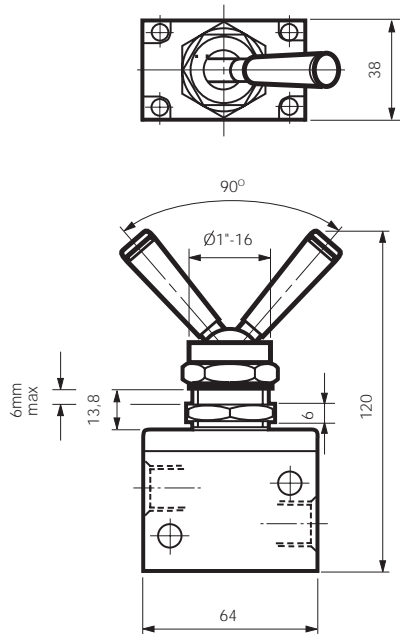
All dimensions in mm unless otherwise stated

### Mechanically operated valves

#### 2/2, 3/2 valves

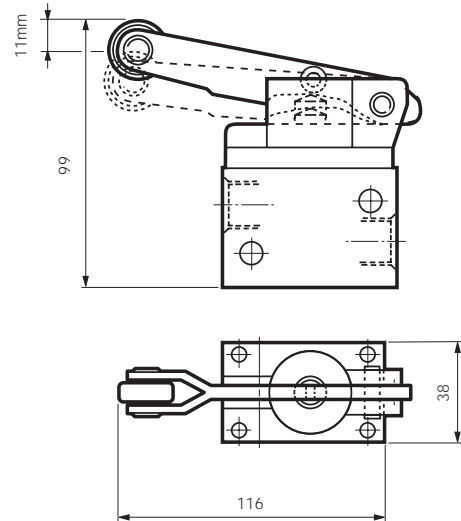
Lock down lever

B102L, B103L, B202L, B203L



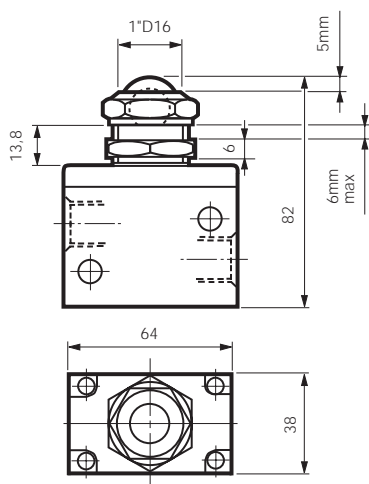
Roller lever operated spring return

B102R, B103R, B202R, B203R



Ball operated spring return

B102C, B103C, B202C, B203C



Cam operated spring return

B102M, B103M, B202M, B203M

