



# MODULAR VALVE BLOCK MVB 100/200

Nominal size DN 15

Nominal size 1/2"

Nominal pressure PN 6 bar



## Characteristics MVB 100

- Ideal for realising dosing and distribution functions in confined spaces
- High economic efficiency due to low space requirement and minimal installation work
- Modular extendible to any number of control heads
- High availability due to standardised components
- Simple and service-friendly structure with a minimum number of connection points
- Long service life of membranes and actuators

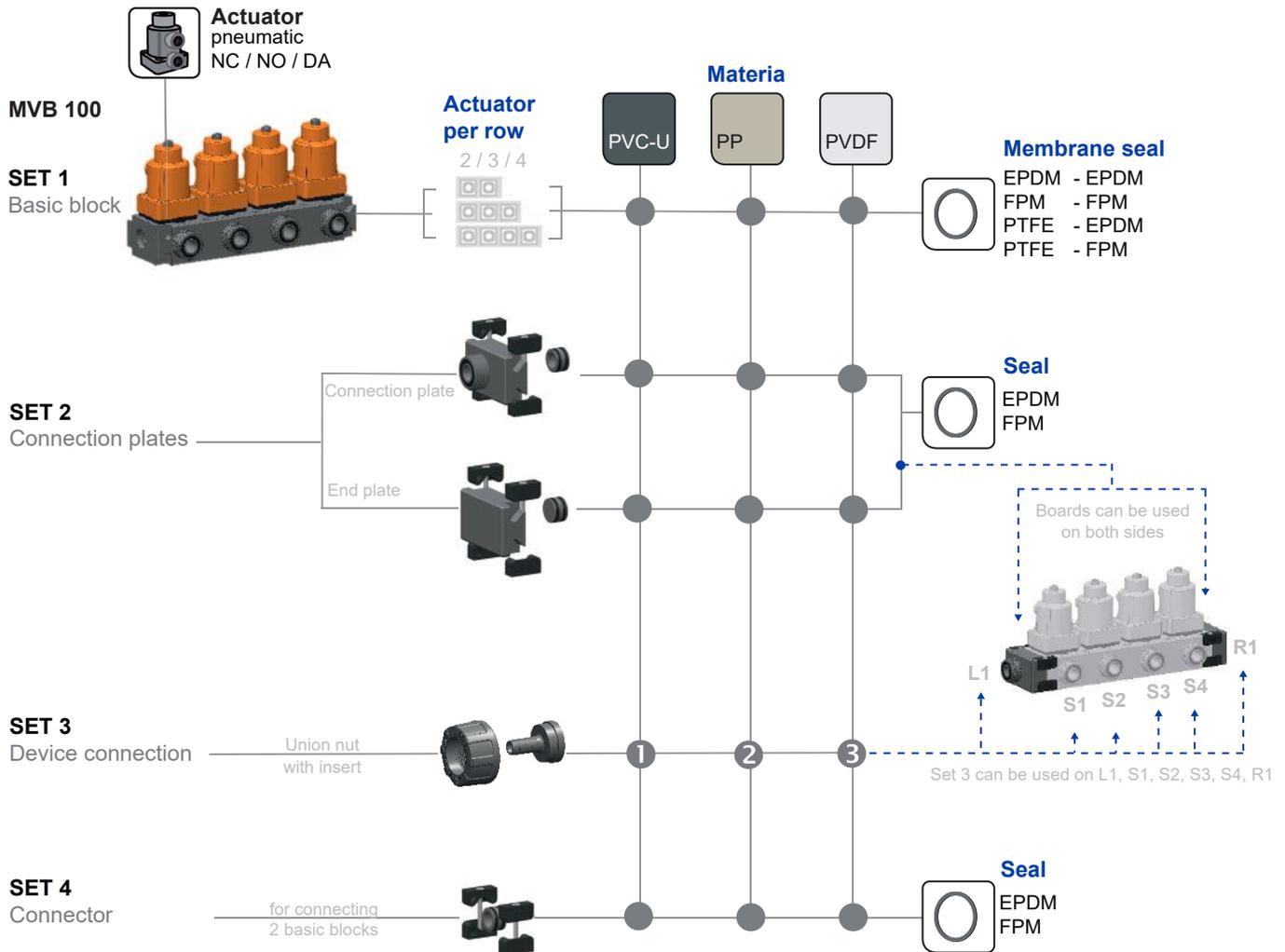


## Characteristics MVB 200

- As MVB 100 with an additional quick-rinsing function by a second row of valves
- Increase in plant availability due to the reduction of auxiliary times (rinsing processes)



## Pictograph Modular valve block MVB 100/200



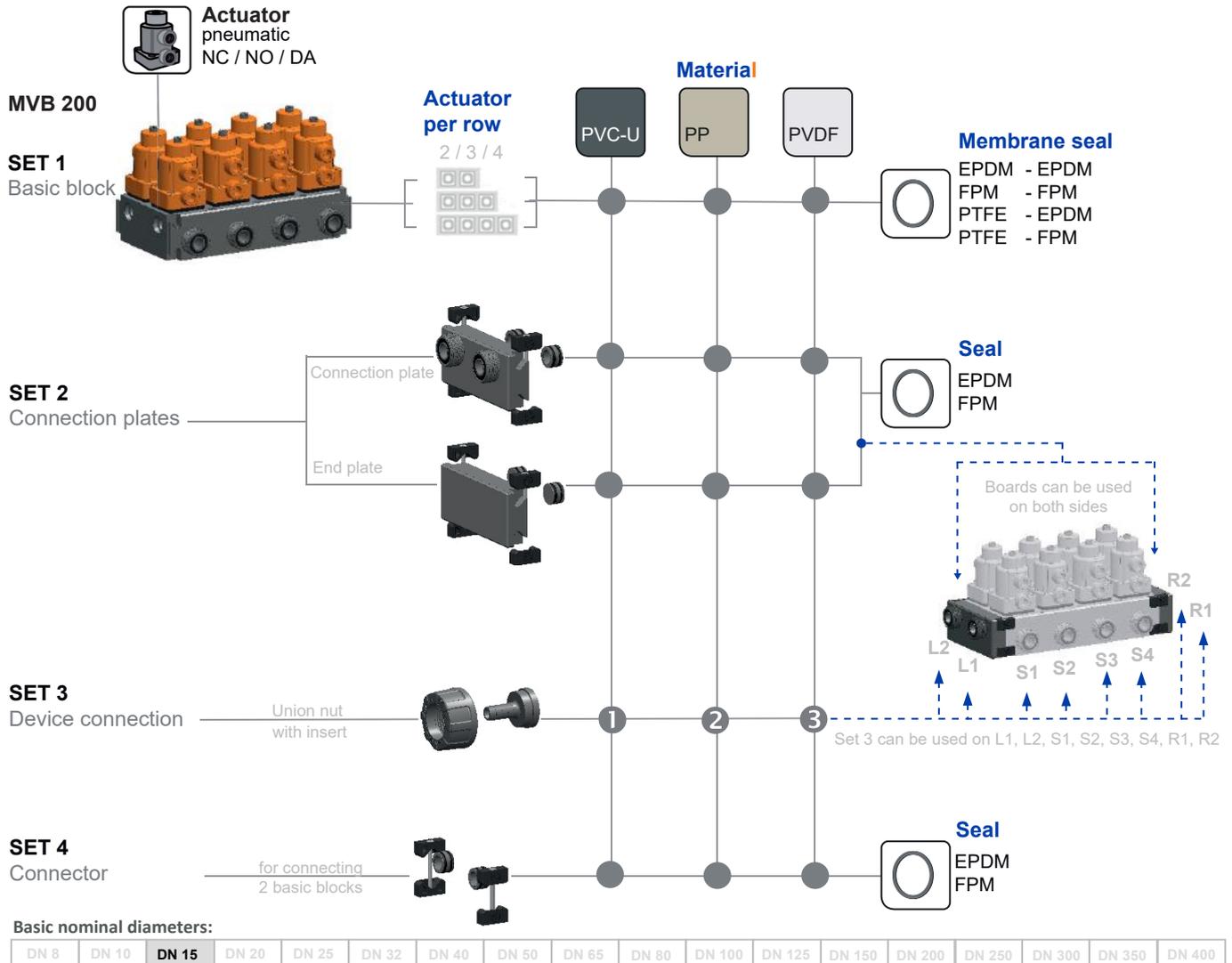
Basic nominal diameters:

DN 8	DN 10	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200	DN 250	DN 300	DN 350	DN 400
------	-------	-------	-------	-------	-------	-------	-------	-------	-------	--------	--------	--------	--------	--------	--------	--------	--------

### Connection material (process connection)

- |          |              |  |
|----------|--------------|--|
| <b>1</b> | <b>PVC-U</b> | Socket <b>DIN, ANSI, BS, JIS</b><br>Female thread Rp, NPT<br>Hose nozzle 10 mm, 13 mm<br>Blind lid<br><b>1.4571</b> Female thread Rp<br><b>PE100</b> Spigot <b>DIN</b> |
| <b>2</b> | <b>PP</b>    | Socket <b>DIN</b><br>Female thread Rp<br>Spigot (IR)<br>Hose nozzle 10 mm, 13 mm<br>Blind lid  |
| <b>3</b> | <b>PVDF</b>  | Socket <b>DIN</b><br>Spigot (IR)<br>Hose nozzle 10 mm, 13 mm<br>Blind lid  |

## Pictograph Modular valve block MVB 100/200



### Connection material (process connection)

- |          |              |  |
|----------|--------------|--|
| <b>1</b> | <b>PVC-U</b> | Socket <b>DIN, ANSI, BS, JIS</b><br>Female thread Rp, NPT<br>Hose nozzle 10 mm, 13 mm<br>Blind lid<br>1.4571<br>PE100<br>Spigot <b>DIN</b> |
| <b>2</b> | <b>PP</b>    | Socket <b>DIN</b><br>Female thread Rp<br>Spigot (IR)<br>Hose nozzle 10 mm, 13 mm<br>Blind lid  |
| <b>3</b> | <b>PVDF</b>  | Socket <b>DIN</b><br>Spigot (IR)<br>Hose nozzle 10 mm, 13 mm   |

## Modular valve block MVB 100/200

### Use

- Chemical and environmental technology

### Application

- For dosing, mixing, distributing and rinsing fluids

### Flow medium

- Neutral and aggressive fluids or fluids containing solid particles, provided that the valve components coming into contact with the fluids are resistant at the operating temperature in accordance with the ASV resistance guide.

### ASV resistance guide

[www.asv-stuebbe.de/pdf\\_resistance/300051.pdf](http://www.asv-stuebbe.de/pdf_resistance/300051.pdf)

### Testing

- Requirements and testing according to DIN EN ISO 16138 and ISO 9393

### Process temperature

- see graphics "Pressure/temperature diagram MVB 100"  
see graphics "Pressure/temperature diagram MVB 200"

### Process pressure

- see graphics "Pressure/temperature diagram MVB 100"  
see graphics "Pressure/temperature diagram MVB 200"

### Nominal pressure (H<sub>2</sub>O, 20 °C)

- PN 6 bar

### Control medium

- max. 40 °C
- max. 7 bar
- see graphics "Control curve"

### Filling volume

- 0.02 dm<sup>3</sup> (opening)
- 0.04 dm<sup>3</sup> (closing)

### Size

- DN 15

### Actuation

- medium controlled

### Actuator

- NC, NO, DA, pneumatic

### Material with medium contact

#### Valve bar:

- PVC-U
- PP
- PVDF

#### Diaphragm:

- EPDM
- FPM
- PTFE  
(EPDM diaphragm, PTFE-coated on the medium side)

#### Sealing:

- FPM
- EPDM

#### Inserts:

- PVC-U
- PP
- PVDF
- stainless steel (1.4571)
- PE100

### Note

Please observe that the material PTFE is classified as resistant to several media, however, is not diffusion-tight, in particular, if used as film such as, for example, the ASV diaphragms.

### Material without medium contact

#### Actuator:

- PP glass fibre reinforced

#### Screws:

- stainless steel (1.4301)



## Modular valve block MVB 100/200

### Compressed air connection

- with visual position indicator
- Compressed air on connection A, valve closes  
Compressed air on connection B, valve opens
- also see graphics "Compressed air connection"

### Device connection

- see graphics  
"Pictograph, modular valve block MVB 100"  
see graphics  
"Pictograph, modular valve block MVB 200"

### kv value

- 2,7 m<sup>3</sup> (MVB 100)
- 2,2 m<sup>3</sup> (MVB 200)

### Screw torques

- Component No. 18 Cheese head screw: 2.5 Nm
- Component No. 13 Countersunk screw: 2.0 Nm
- also see graphics "Components for MVB 100"  
also see graphics "Components for MVB 200"

### Mounting position

- as required

### Colour

#### Valve bar:

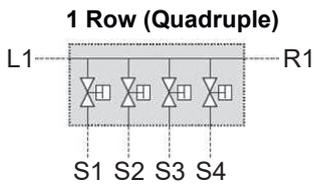
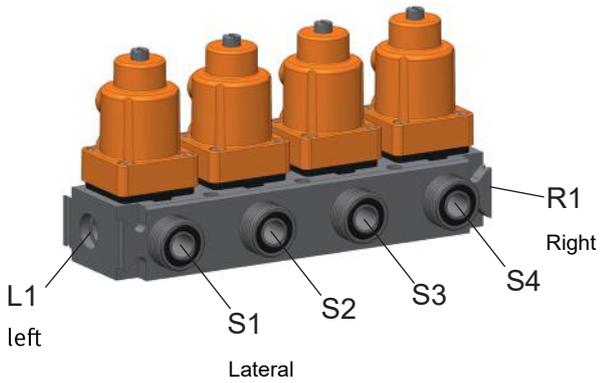
- PVC-U, grey, RAL 7011
- PP, grey, RAL 7032
- PVDF, opaque, yellowish-white

#### Actuator:

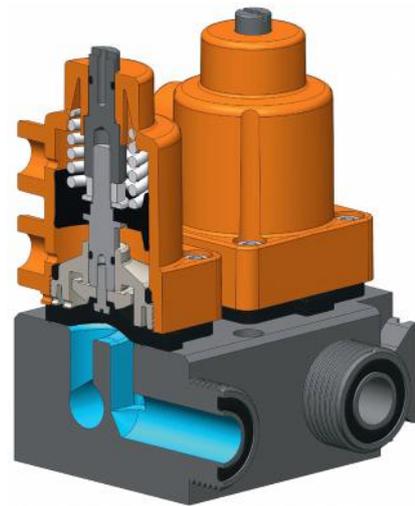
- PP glass fibre reinforced, orange, RAL 2004

# Modular valve block MVB 100/200

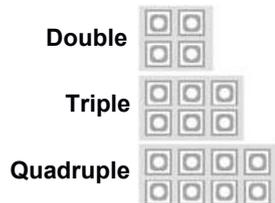
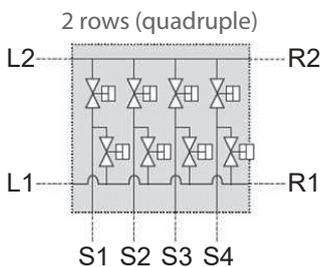
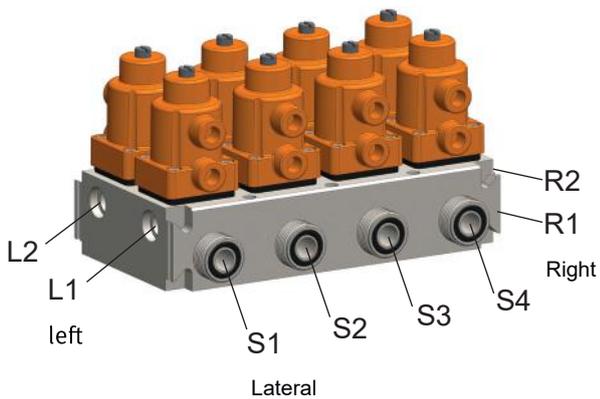
Connection MVB 100



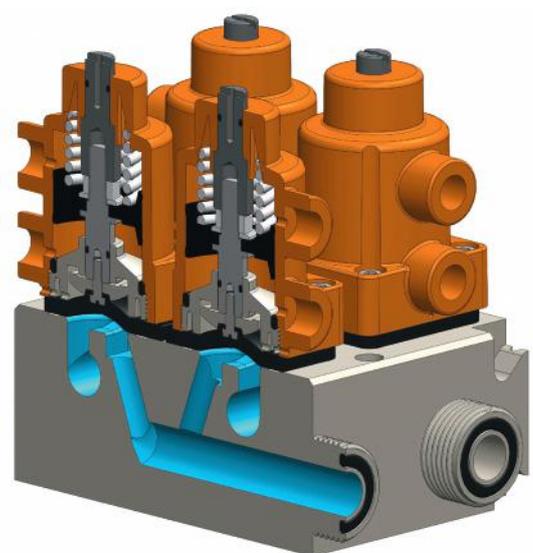
Sectional drawing MVB 100



Connection MVB 200

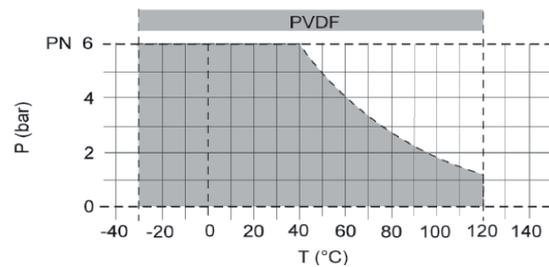
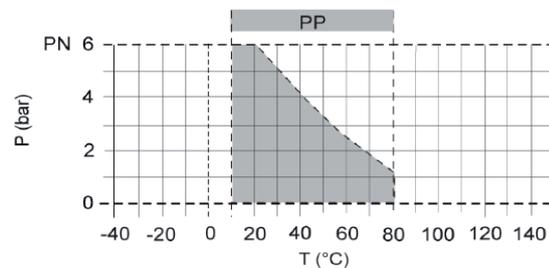
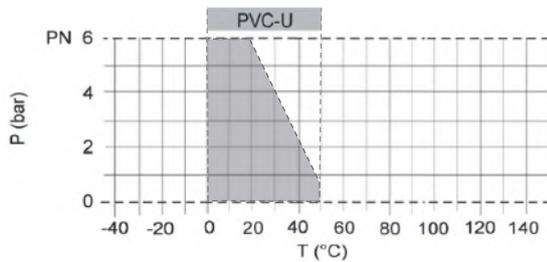


Sectional drawing MVB 200



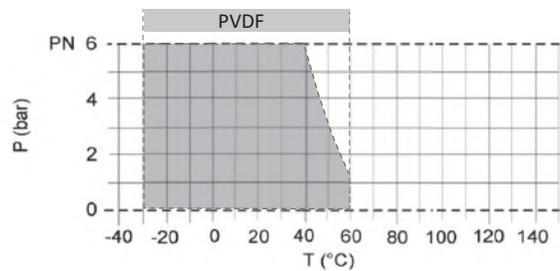
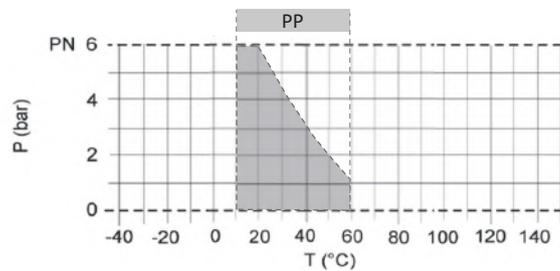
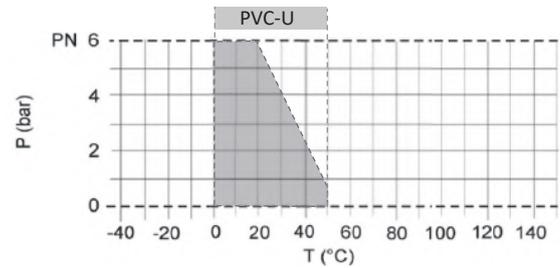
## Modular valve block MVB 100/200

Pressure/temperature diagram MVB 100



Description	
<b>P</b>	Operating pressure
<b>T</b>	Temperature

Pressure/temperature diagram MVB 200



Description	
<b>P</b>	Operating pressure
<b>T</b>	Temperature

MVB 200 Special version with increased pressure/temperature stability (analogue to MVB 100) is available upon request.

The pressure/temperature limits of the materials are valid for the stated nominal pressures and a service life of 25 years.

These values are guide values for flow medium types which do not negatively impact the physical and chemical characteristics of the valve material. It may be necessary to take diminution factors into consideration.

The operating life of the wear parts depends on the conditions of use.

## Modular valve block MVB 100/200

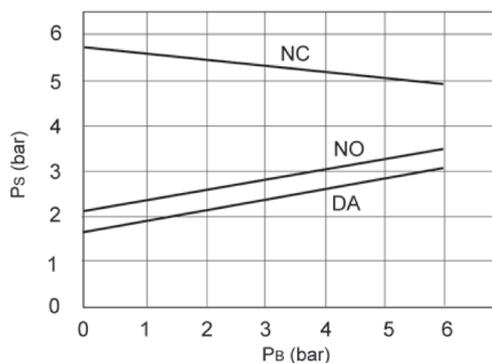
### Membrane valve

Diaphragm valve diaphragms are wear parts. Each diaphragm is subject to mechanical wear and wear caused by the medium. Therefore it is very important to regularly check the condition of the diaphragms and ensure that they are replaced in time in order to ensure the functional reliability of the valve.

We recommend carrying out this check after the following maximum number of actuations:

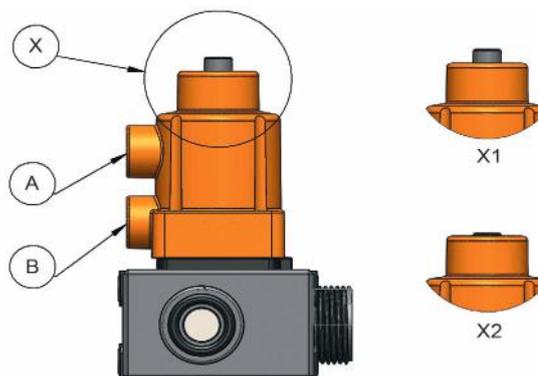
Diaphragm material	Maximum number of actuations
<b>EPDM</b>	200,000
<b>FPM</b>	200,000
<b>PTFE(EPDM)</b>	200,000

### Control curve



	Description
<b>P<sub>B</sub></b>	Operating pressure
<b>P<sub>S</sub></b>	Control pressure
<b>NC</b>	Normally closed
<b>NO</b>	Normally open
<b>DA</b>	Double Acting

### Compressed air connection



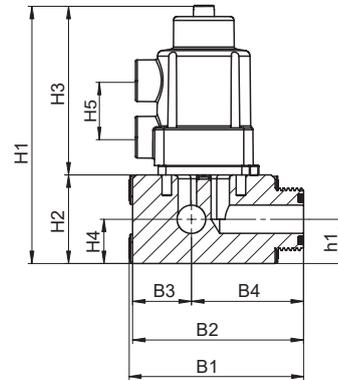
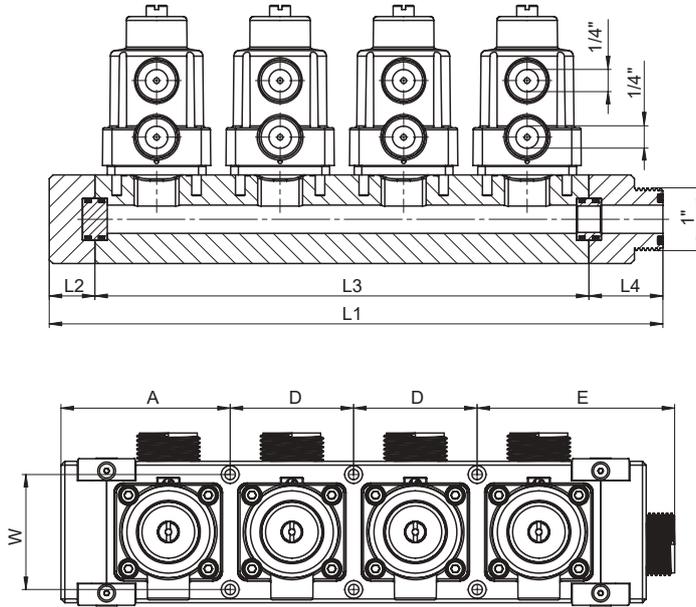
Compressed air on connection A, valve closes  
Compressed air on connection B, valve opens

### Visual position indicator:

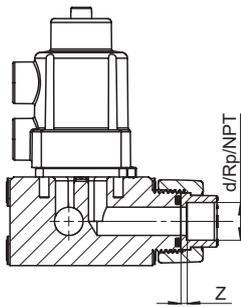
- X1 Valve is open
- X2 Valve is closed

## Modular valve block MVB 100/200

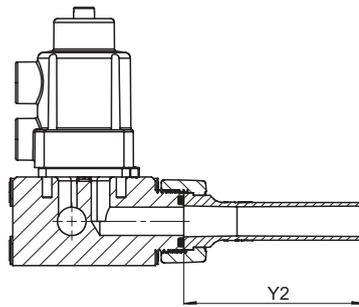
### Valve block MVB 100



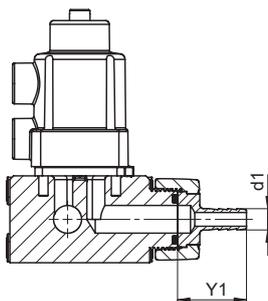
### Connection socket



### Connection spigot



### Connection DST (hose nozzle)

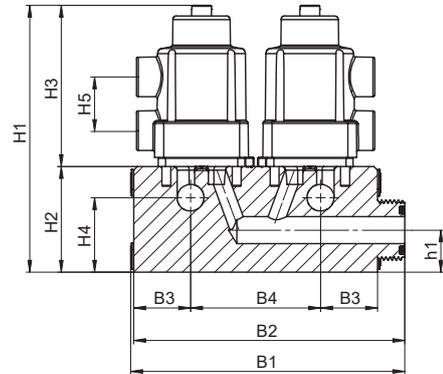
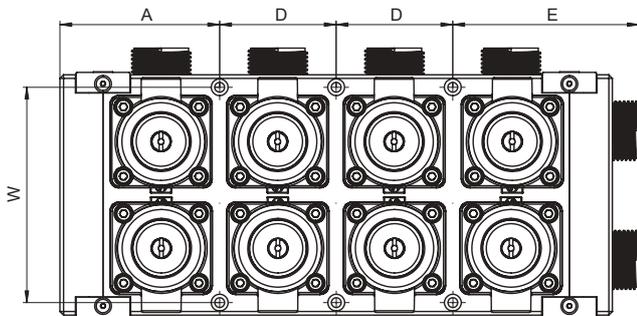
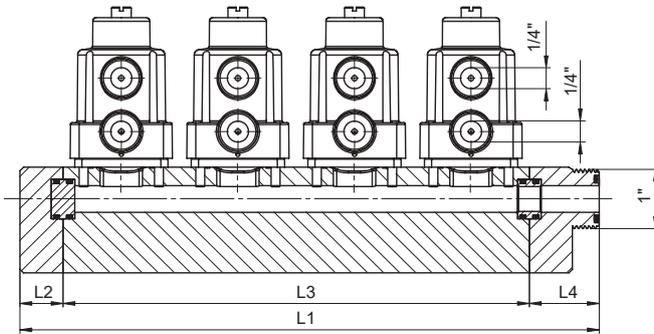


<b>d (mm)</b>	20	
<b>DN (mm)</b>	15	
<b>DN (inch)</b>	1/2	
A	89	
B1	92	
B2	90	
B3	31	
B4	59	
D	65	
E	104	
G *	1	
h1	23.5	
H1	137	
H2	47	
H3	90	
H4	23.5	
L1	2 Actuators/row 3 Actuators/row 4 Actuators/row	193 258 323
L2		24
L3	2 Actuators/row 3 Actuators/row 4 Actuators/row	130 195 260
L4		39
NPT *		1/2
Rp *		1/2
W		61
Y1	PVC-U/PP/PVDF (d1=11.6), Hose DN 10 PVC-U/PP/PVDF (d1=16.0), Hose DN 13	37 40
Y2	PE spigot PP spigot PVDF spigot	95 54 53
Z	PVC-U/PP/PVDF socket DIN PVC-U socket ANSI PVC-U socket BS PVC-U socket JIS	3 3 3 4

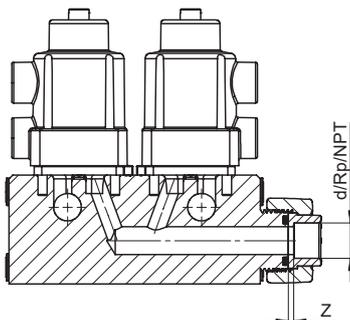
all dimensions in mm / \* dimensions in inch

# Modular valve block MVB 100/200

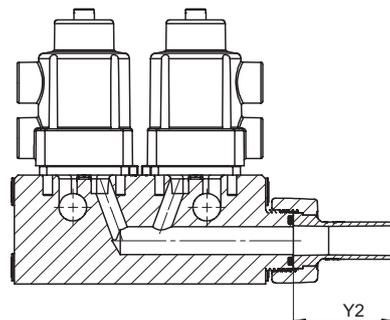
## Valve block MVB 200



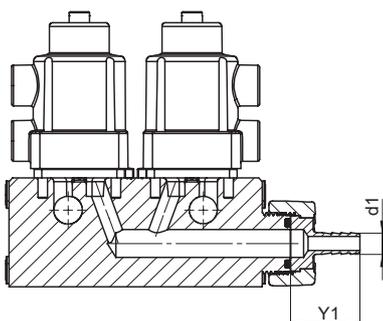
### Connection socket



### Connection spigot



### Connection DST (hose nozzle)

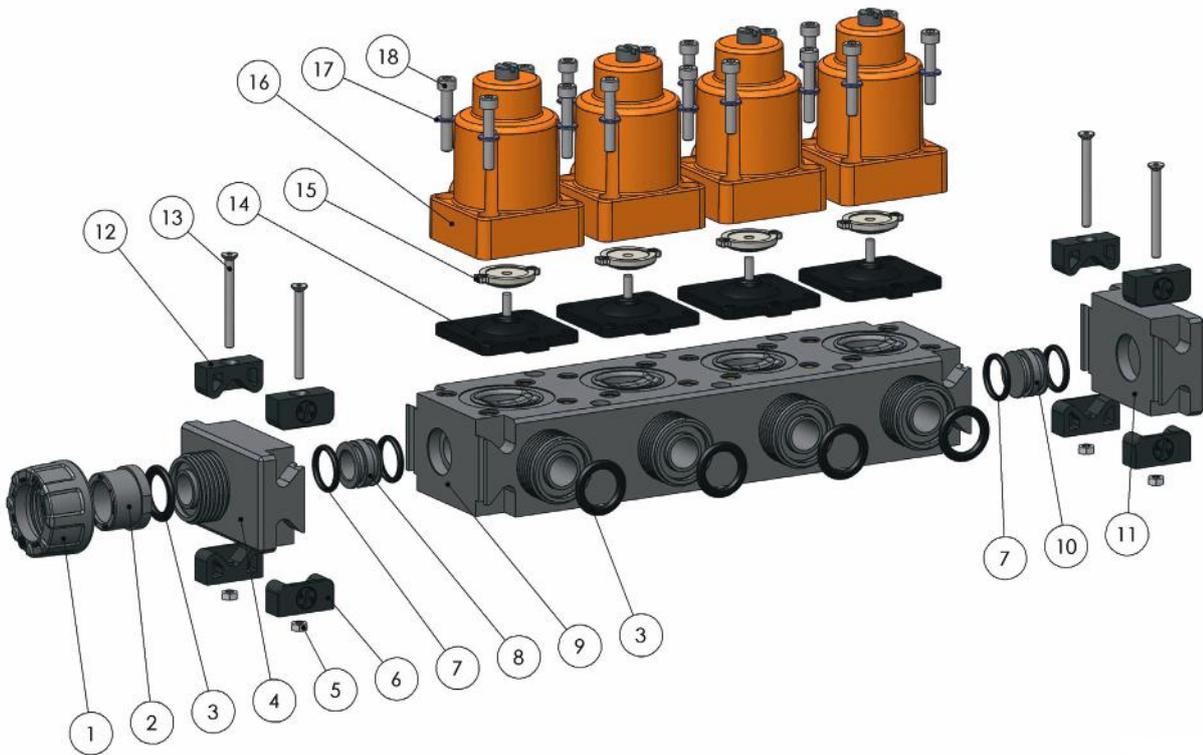


d (mm)	20	
DN (mm)	15	
DN (inch)	1/2	
A	89	
B1	152	
B2	150	
B3	31.5	
B4	72	
D	65	
E	104	
G *	1	
h1	23.5	
H1	149	
H2	59	
H3	90	
H4	41.5	
L1	2 Actuators/row 3 Actuators/row 4 Actuators/row	193 258 323
L2		24
L3	2 Actuators/row 3 Actuators/row 4 Actuators/row	130 195 260
L4		39
NPT *		1/2
Rp *		1/2
W		121
Y1	PVC-U/PP/PVDF (d1=11.6), Hose DN 10 PVC-U/PP/PVDF (d1=16.0), Hose DN 13	37 40
Y2	PE spigot PP spigot PVDF spigot	95 54 53
Z	PVC-U/PP/PVDF socket DIN PVC-U socket ANSI PVC-U socket BS PVC-U socket JIS	3 3 3 4

all dimensions in mm / \* dimensions in inch

## Modular valve block MVB 100/200

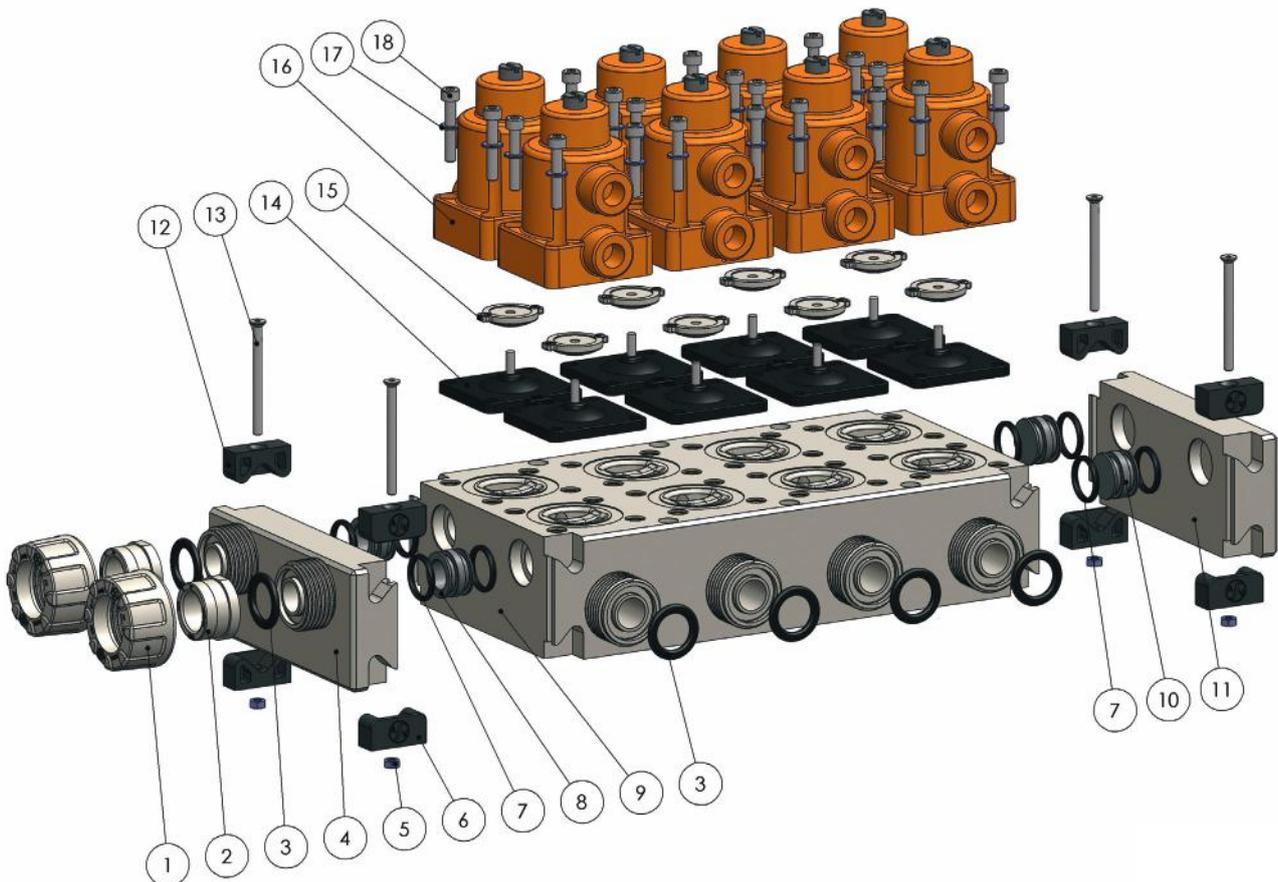
### Components MVB 100



	Quantity	Description
1	1	Union nut
2	1	Union end
3	5	O-ring
4	1	Connection plate AG
5	4	Hexagon nut
6	4	Clamping piece (bottom)
7	4	O-ring
8	1	Bar connector (open)
9	1	valve body
10	1	Bar connector (plug)
11	1	End plate
12	4	Clamping piece (top)
13	4	Countersunk screw
14	4	diaphragm
15	4	pressure piece
16	4	Actuator
17	16	washer
18	16	Cheese head screw

## Modular valve block MVB 100/200

### Components MVB 200



	Quantity	Description
1	2	Union nut
2	2	Union end
3	6	O-ring
4	1	Connection plate AG
5	4	Hexagon nut
6	4	Clamping piece (bottom)
7	4	O-ring
8	2	Bar connector (open)
9	1	valve body
10	2	Bar connector (plug)
11	1	End plate
12	4	Clamping piece (top)
13	4	Countersunk screw
14	8	diaphragm
15	8	pressure piece
16	8	Actuator
17	32	washer
18	32	Cheese head screw