

## Main applications

General purpose valve for isolation in vacuum applications where space or design constraints prevent the use of standard vacuum flanges



## Ordering information

### Valve with manual actuator

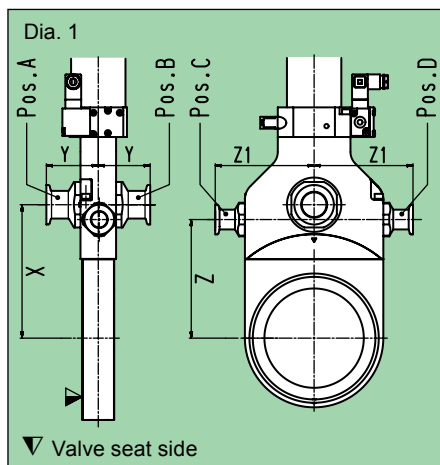
DN 50: toggle lever  
DN 63–100: push rod

| DN  |      | Ordering numbers  |               |
|-----|------|-------------------|---------------|
| mm  | inch | with toggle lever | with push rod |
| 50  | 2    | 08234-FA06        | –             |
| 63  | 2½   | –                 | 08136-FA03    |
| 80  | 3    | –                 | 08138-FA03    |
| 100 | 4    | –                 | 08140-FA03    |

### Valve with pneumatic actuator double acting

| DN  |      | Ordering numbers (* specify control voltage) |   |   |  |
|-----|------|--|---|---|--|
| mm  | inch | w/o solenoid valve<br>w/o position indicator | w/o solenoid valve<br>with position indicator | with solenoid valve<br>w/o position indicator | with solenoid valve<br>with position indicator |
| 50  | 2    | 08234-FA14                                   | 08234-FA24                                    | 08234-FA34 *                                  | 08234-FA44 *                                   |
| 63  | 2½   | 08136-FA14                                   | 08136-FA24                                    | 08136-FA34 *                                  | 08136-FA44 *                                   |
| 80  | 3    | 08138-FA14                                   | 08138-FA24                                    | 08138-FA34 *                                  | 08138-FA44 *                                   |
| 100 | 4    | 08140-FA14                                   | 08140-FA24                                    | 08140-FA34 *                                  | 08140-FA44 *                                   |

## Options



### Actuator

- Other solenoid valve voltage (standard: 24 VDC)

### Valve

- Other sealing materials
- Nominal diameters DN 16, 25, 40
- Ports for venting or for gauges for DN 63–100 (Dia. 1), possible in positions A, B, C and D  
Recommended ports: ISO-KF 16 for DN 63, ISO-KF 25 for DN 80/100, dimensions on request
- Ports for roughing (by-pass)

### Ordering information for options:

Ordering No. of valve-X (e. g. 08140-FA44-X, X = port ISO-KF 25 in position A)

## Spare parts

- Seals  
on request (specify fabrication number of valve)

## Features

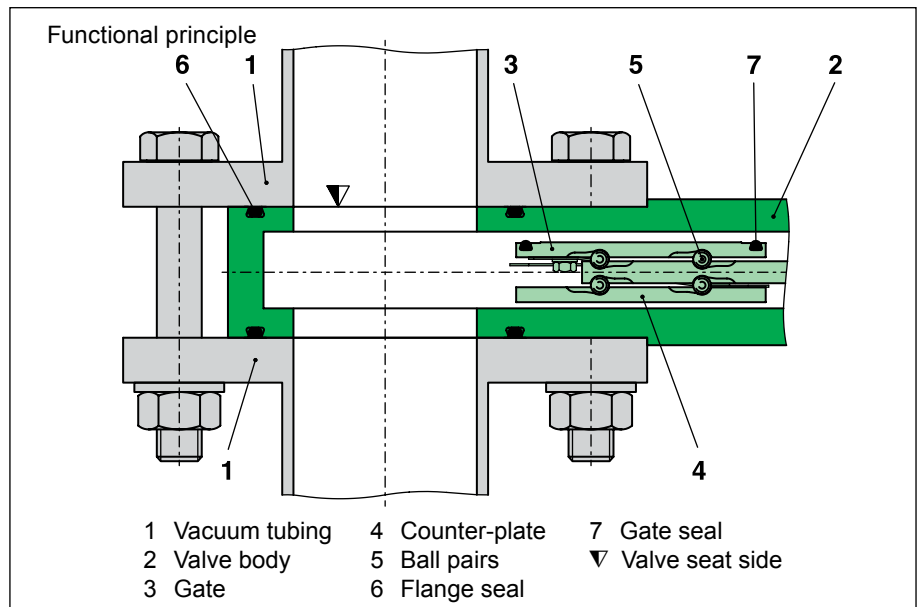
Body material: aluminum

Space saving due to direct mounting between DIN flanges or sealing surfaces

Flanges with DIN centering insert

DN 50 with vulcanized seal (no dead volumes at the gate seal): see glossary

VATLOCK configuration: see glossary



## Technical data

|                                    |  |
|------------------------------------|--|
| Leak rate: valve body, valve seat  | <math>1 \cdot 10^{-9}</math> mbar ls <sup>-1</sup> |
| Pressure range                     | 1 · 10 <sup>-7</sup> mbar to 1.6 bar (abs)         |
| Differential pressure on the gate  |  |
| – DN 50 / DN 63–100                | ≤ 1.0 bar / ≤ 1.6 bar                              |
| Differential pressure at opening   | ≤ 30 mbar  |
| Cycles until first service         |  |
| – DN 50                            | 50000  |
| – DN 63–100                        | 200000   |
| Temperature <sup>1)</sup>          |  |
| – Valve body    DN 50              | ≤ 100 °C   |
| DN 63–100                          | ≤ 120 °C   |
| – Manual and pneumatic actuator    | ≤ 80 °C  |
| – Solenoid valve                   | ≤ 50 °C  |
| – Position indicator               | ≤ 80 °C  |
| Heating and cooling rate           | ≤ 30 °C h <sup>-1</sup>                            |
| Material                           |  |
| – Valve body    DN 50              | EN AW-6082 (3.2315)                                |
| DN 63–100                          | EN AW-5083 (3.3547), -6061 (3.3211)                |
| – Mechanism    DN 50               | AISI 301 (1.4310)                                  |
| DN 63–100                          | AISI 304 (1.4301)                                  |
| Seal: bonnet, gate                 | FKM (Viton®)                                       |
| Feedthrough                        | shaft feedthrough                                  |
| Mounting position                  | any  |
| Solenoid valve                     | 24 VDC, 5.4 W (others on request)                  |
| Position indicator: contact rating |  |
| – Voltage        DN 50             | ≤ 50 VAC/DC  |
| DN 63–100                          | ≤ 250 VAC, ≤ 50 VDC                                |
| – Current        DN 50             | ≤ 0.1 A  |
| DN 63–100                          | ≤ 2 A, ≤ 1.2 A                                     |
| – Power          DN 50             | max. 10 W  |
| Valve position indication          | visual (mechanical)                                |

<sup>1)</sup> Maximum values: depending on operating conditions and sealing materials

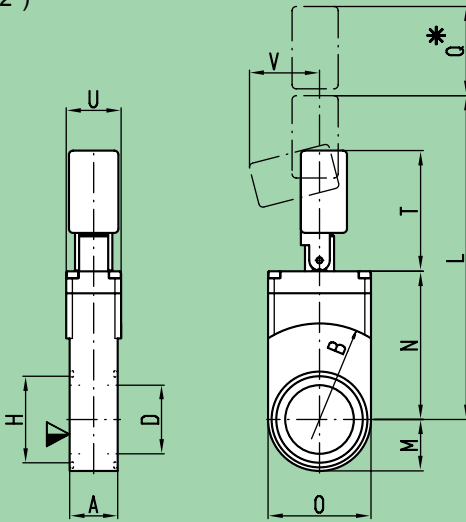
Further technical data on next page →

Continued Technical data

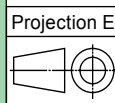
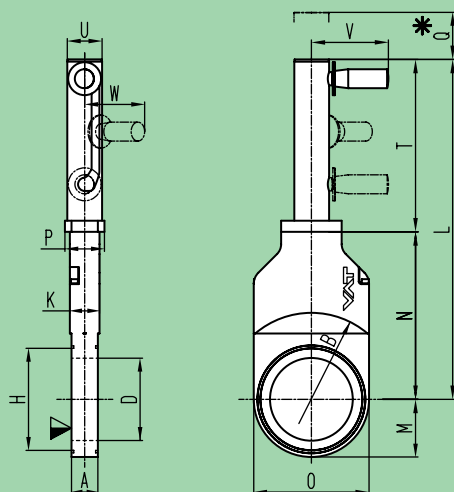
| DN<br>(nominal I.D.) |      | Conductance<br>(molecular flow)<br>(depending on<br>A-dimension) | Valve with<br>manual actuator |     | Valve with pneumatic actuator                 |        |                                   |                 |                            |        |     |
|----------------------|------|--|-------------------------------|-----|---|--------|-----------------------------------|-----------------|----------------------------|--------|-----|
|                      |      |  | Weight                        |     | Compressed air<br>min. – max.<br>overpressure |        | Volume of pneu-<br>matic actuator |                 | Closing or<br>opening time | Weight |     |
| mm                   | inch | ls <sup>-1</sup>   | kg                            | lbs | bar   | psi    | l                                 | ft <sup>3</sup> | s                          | kg     | lbs |
| 50                   | 2    | 410  | 0.7                           | 1.5 | 4.5–7   | 65–102 | 0.07                              | 0.002           | 1.2                        | 1.2    | 2.7 |
| 63                   | 2½   | 1000   | 1.5                           | 3.3 | 4–7   | 58–102 | 0.16                              | 0.0056          | 1.5                        | 1.5    | 3.3 |
| 80                   | 3    | 2000   | 2.3                           | 5.1 | 4–7   | 58–102 | 0.20                              | 0.0071          | 1.7                        | 2.3    | 5.1 |
| 100                  | 4    | 3800   | 3                             | 6.6 | 4–7   | 58–102 | 0.22                              | 0.0078          | 2                          | 3      | 6.6 |

## Dimensions

**Valve with manual actuator: toggle lever**  
DN 50 (2")



**Valve with manual actuator: push rod**  
DN 63–100 (2½"–4")



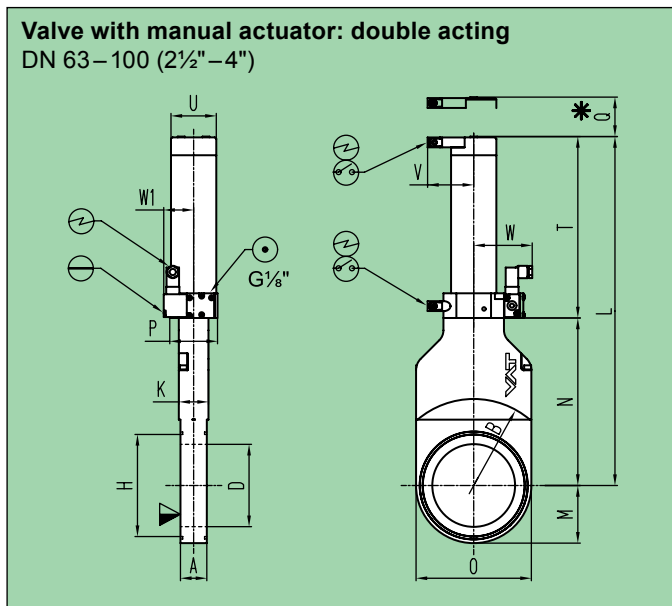
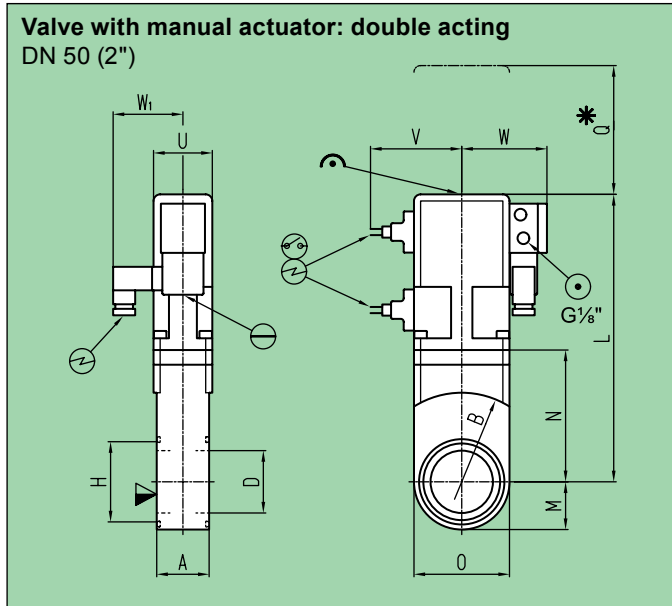
▼ Valve seat side

\* Required for dismantling

|                        |            |                              |                              |                               |                               |
|------------------------|------------|------------------------------|------------------------------|-------------------------------|-------------------------------|
| DN                     | mm<br>inch | 50<br>2                      | 63<br>2½                     | 80<br>3                       | 100<br>4                      |
| A                      | mm<br>inch | 35<br>1.38                   | 32<br>1.26                   | 32<br>1.26                    | 32<br>1.26                    |
| B                      | mm<br>inch | 140<br>5.51                  | 160<br>6.30                  | 190<br>7.48                   | 210<br>8.27                   |
| D                      | mm<br>inch | 50<br>1.97                   | 65<br>2.56                   | 80<br>3.15                    | 100<br>3.94                   |
| H                      | mm<br>inch | 63<br>2.48                   | 88<br>3.46                   | 104<br>4.09                   | 124<br>4.88                   |
| I.D. × d <sup>1)</sup> |            | 63.09 × 3.53<br>2.48 × 0.139 | 88.49 × 3.53<br>3.49 × 0.139 | 104.37 × 3.53<br>4.11 × 0.139 | 123.42 × 3.53<br>4.86 × 0.139 |
| K                      | mm<br>inch | –                            | 36<br>1.42                   | 36<br>1.42                    | 36<br>1.42                    |
| L                      | mm<br>inch | 240<br>9.45                  | 329.50<br>12.97              | 363<br>14.29                  | 413<br>16.26                  |
| M                      | mm<br>inch | 37.50<br>1.48                | 50<br>1.97                   | 59<br>2.32                    | 70<br>2.76                    |
| N                      | mm<br>inch | 108<br>4.25                  | 155.50<br>6.12               | 173.50<br>6.83                | 203.50<br>8.01                |
| O                      | mm<br>inch | 75<br>2.95                   | 100<br>3.94                  | 118<br>4.65                   | 140<br>5.51                   |
| P                      | mm<br>inch | –                            | 48<br>1.89                   | 48<br>1.89                    | 48<br>1.89                    |
| Q                      | mm<br>inch | 65<br>2.56                   | 25<br>0.98                   | 25<br>0.98                    | 25<br>0.98                    |
| T                      | mm<br>inch | 93<br>3.67                   | 174<br>6.85                  | 189.50<br>7.46                | 209.50<br>8.25                |
| U                      | mm<br>inch | 40<br>1.57                   | 43<br>1.69                   | 43<br>1.69                    | 43<br>1.69                    |
| V                      | mm<br>inch | 55<br>2.17                   | 94<br>3.70                   | 94<br>3.70                    | 94<br>3.70                    |
| W                      | mm<br>inch | –                            | 75<br>2.95                   | 75<br>2.95                    | 75<br>2.95                    |

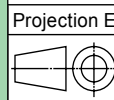
<sup>1)</sup> Dimensions of flange seal

## Dimensions



|                         |            |                              |                              |                               |                               |
|-------------------------|------------|------------------------------|------------------------------|-------------------------------|-------------------------------|
| DN                      | mm<br>inch | 50<br>2                      | 63<br>2½                     | 80<br>3                       | 100<br>4                      |
| A                       | mm<br>inch | 35<br>1.38                   | 32<br>1.26                   | 32<br>1.26                    | 32<br>1.26                    |
| B                       | mm<br>inch | 140<br>5.51                  | 160<br>6.30                  | 190<br>7.48                   | 210<br>8.27                   |
| D                       | mm<br>inch | 50<br>1.97                   | 65<br>2.56                   | 80<br>3.15                    | 100<br>3.94                   |
| H                       | mm<br>inch | 63<br>2.48                   | 88<br>3.46                   | 104<br>4.09                   | 124<br>4.88                   |
| I. D. × d <sup>1)</sup> |            | 63.09 × 3.53<br>2.48 × 0.139 | 88.49 × 3.53<br>3.49 × 0.139 | 104.37 × 3.53<br>4.11 × 0.139 | 123.42 × 3.53<br>4.86 × 0.139 |
| K                       | mm<br>inch | –                            | 36<br>1.42                   | 36<br>1.42                    | 36<br>1.42                    |
| L                       | mm<br>inch | 220<br>8.66                  | 341.50<br>13.44              | 375<br>14.76                  | 425<br>16.73                  |
| M                       | mm<br>inch | 37.50<br>1.48                | 50<br>1.97                   | 59<br>2.32                    | 70<br>2.76                    |
| N                       | mm<br>inch | 103<br>4.06                  | 155.50<br>6.12               | 173.50<br>6.83                | 203.50<br>8.01                |
| O                       | mm<br>inch | 75<br>2.95                   | 100<br>3.94                  | 118<br>4.65                   | 140<br>5.51                   |
| P                       | mm<br>inch | –                            | 58<br>2.28                   | 58<br>2.28                    | 58<br>2.28                    |
| Q                       | mm<br>inch | 65<br>2.56                   | 25<br>0.98                   | 25<br>0.98                    | 25<br>0.98                    |
| T                       | mm<br>inch | –                            | 186<br>7.32                  | 201.50<br>7.93                | 221.50<br>8.72                |
| U                       | mm<br>inch | 40<br>1.57                   | 55<br>2.17                   | 55<br>2.17                    | 55<br>2.17                    |
| V                       | mm<br>inch | 65<br>2.56                   | 56<br>2.20                   | 56<br>2.20                    | 56<br>2.20                    |
| W                       | mm<br>inch | 66<br>2.60                   | 72<br>2.83                   | 72<br>2.83                    | 72<br>2.83                    |
| W1                      | mm<br>inch | 50<br>1.97                   | 36.50<br>1.44                | 36.50<br>1.44                 | 36.50<br>1.44                 |

<sup>1)</sup> Dimensions of flange seal



- ▼ Valve seat side
- \* Required for dismantling
- ⊙ Compressed air connection
- ⊕ Electrical connection
- ⊖ Mechanical position indication
- ⊗ Position indicator
- ⊖ Emergency operation