



**Kugelhahn  
Ball Valve**

**M1**

**PVDF**

**ARA**<sup>®</sup>  
**PNEUMATIK**

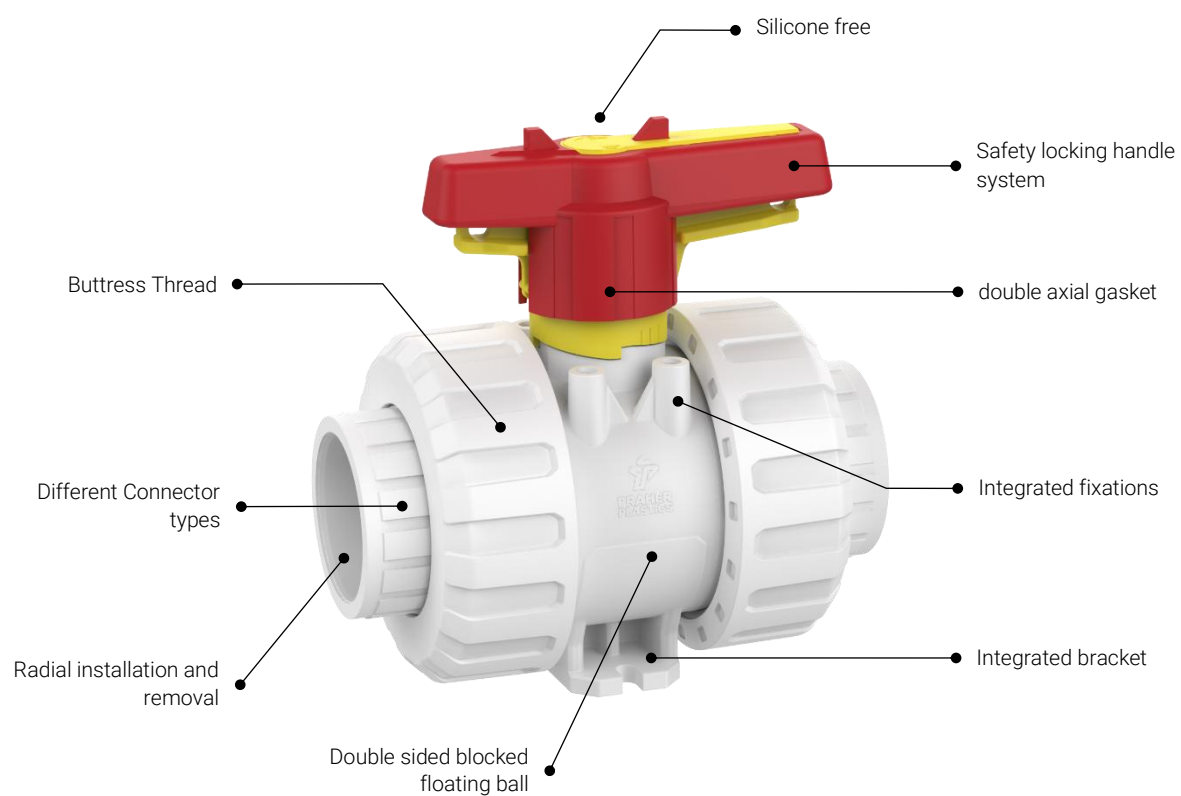
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**DATENBLATT  
DATASHEET**

# 2-Wege Kugelhahn M1

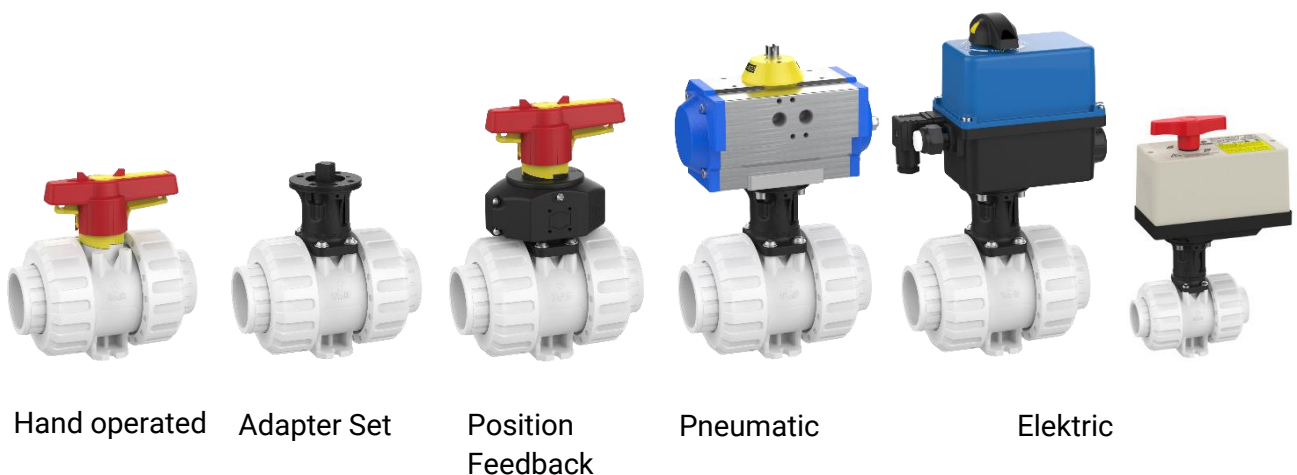


# Overview

## General

|                    |                                                                                           |                                                       |
|--------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------|
| Material           | Body material<br>Seal material<br>Ball seating joint                                      | PVDF<br>FPM<br>PTFE                                   |
| Dimensions         | DN10 – DN80<br>d16 – d110<br>3/8" – 4"                                                    |                                                       |
| Connector types    | Fusion socket<br>Fusion spigot<br>Fusion spigot long<br>Threaded socket<br>Backing flange | metric<br>metric<br>metric<br>BSP / NPT<br>DIN / ANSI |
| Operating pressure | DN10 – DN80 d110                                                                          | PN16                                                  |

## Range summery

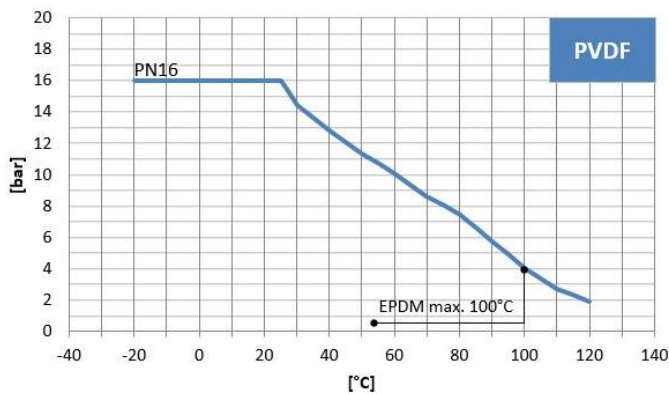


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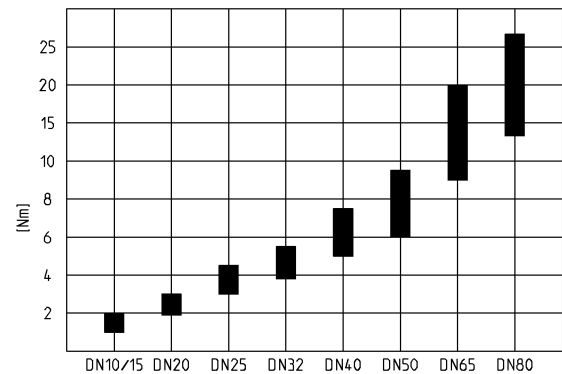
# Technical data

## Pressure – temperature – diagram

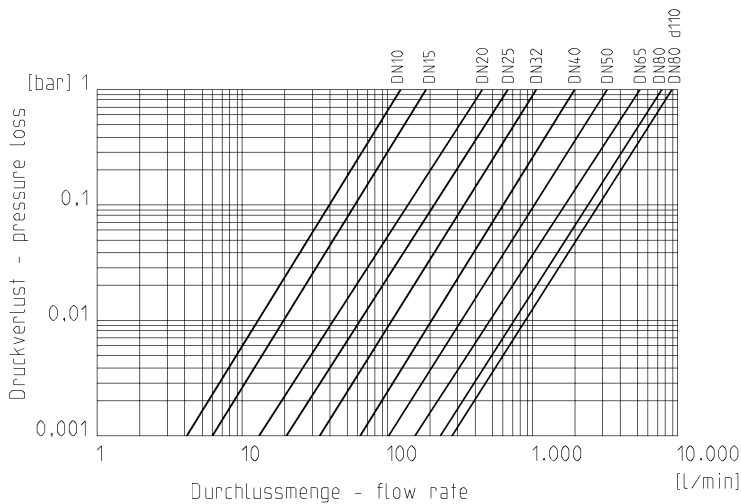


The values of the pressure-temperature-diagram are based on a service life of 25 years at static pressure load and apply to water-like media.

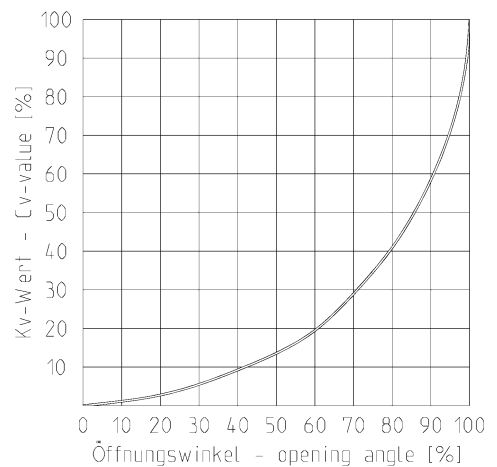
## Torque at the shaft



## Flow rate – pressure loss



## Flow characteristics

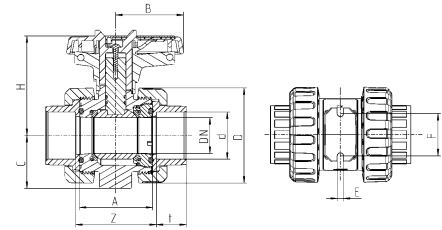


## Cv-value-table

| pressure loss | DN10<br>d16 | DN15<br>d20 | DN20<br>d25 | DN25<br>d32 | DN32<br>d40 | DN40<br>d50 | DN50<br>d63 | DN65<br>d75 | DN80<br>d90 | DN80<br>d110 |
|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| 0,001 bar     | 4,1         | 6,0         | 13,9        | 20,6        | 34,2        | 62,6        | 102,5       | 164,4       | 237,1       | 179,8        |
| 1,0 bar       | 130         | 190         | 440         | 650         | 1080        | 1980        | 3240        | 5200        | 7500        | 8850         |

Specification in l/min

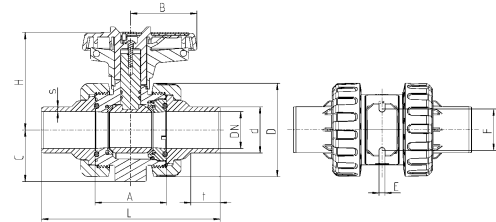
# Dimensions hand operated



## Connector type

### PVDF fusion socket metric (dimensions in mm)

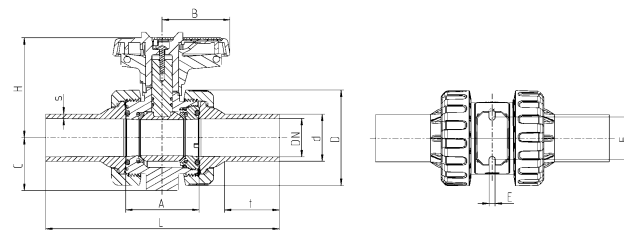
| DN | 10   | 15   | 20  | 25   | 32   | 40    | 50    | 65    | 80    | 80    |
|----|------|------|-----|------|------|-------|-------|-------|-------|-------|
| d  | 16   | 20   | 25  | 32   | 40   | 50    | 63    | 75    | 90    | 110   |
| A  | 61,5 | 61,5 | 69  | 73   | 83   | 94    | 109   | 131,5 | 156,5 | 156,5 |
| B  | 39,5 | 39,5 | 51  | 51   | 63,5 | 72    | 84    | 110   | 132   | 132   |
| C  | 33   | 33   | 40  | 43,5 | 51   | 56,5  | 64,5  | 85    | 100   | 100   |
| D  | 56,5 | 56,5 | 67  | 73,5 | 90   | 105,5 | 124,5 | 157,5 | 192,5 | 192,5 |
| E  | 5,4  | 5,4  | 5,4 | 6,4  | 6,4  | 6,4   | 6,4   | 8,3   | 10,3  | 10,3  |
| F  | 34   | 34   | 36  | 38   | 40   | 45    | 50    | 65    | 80    | 80    |
| H  | 71,5 | 71,5 | 78  | 80   | 98,5 | 106,5 | 113,5 | 143   | 161   | 161   |
| t  | 14,5 | 16   | 17  | 19,5 | 22   | 25    | 29    | 35    | 38,5  | 44    |
| Z  | 69,5 | 67   | 78  | 84   | 97   | 113   | 136   | 158,5 | 205   | 163   |
| PN | 16   | 16   | 16  | 16   | 16   | 16    | 16    | 16    | 16    | 16    |



## Connector type

### PVDF fusion spigot metric (dimensions in mm)

| DN | 10   | 15    | 20    | 25   | 32   | 40    | 50    | 65    | 80    | 80    |
|----|------|-------|-------|------|------|-------|-------|-------|-------|-------|
| d  | 16   | 20    | 25    | 32   | 40   | 50    | 63    | 75    | 90    | 110   |
| A  | 61,5 | 61,5  | 69    | 73   | 83   | 94    | 109   | 131,5 | 156,5 | 156,5 |
| B  | 39,5 | 39,5  | 51    | 51   | 63,5 | 72    | 84    | 110   | 132   | 132   |
| C  | 33   | 33    | 40    | 43,5 | 51   | 56,5  | 64,5  | 85    | 100   | 100   |
| D  | 56,5 | 56,5  | 67    | 73,5 | 90   | 105,5 | 124,5 | 157,5 | 192,5 | 192,5 |
| E  | 5,4  | 5,4   | 5,4   | 6,4  | 6,4  | 6,4   | 6,4   | 8,3   | 10,3  | 10,3  |
| F  | 34   | 34    | 36    | 38   | 40   | 45    | 50    | 65    | 80    | 80    |
| H  | 71,5 | 71,5  | 78    | 80   | 98,5 | 106,5 | 113,5 | 143   | 161   | 161   |
| L  | 114  | 124,5 | 144,5 | 155  | 172  | 193   | 223   | 278   | 290,5 | 316,5 |
| s  | 1,9  | 1,9   | 1,9   | 2,4  | 2,4  | 3     | 3     | 3,6   | 4,3   | 5,3   |
| t  | 13   | 13,5  | 15,5  | 18,5 | 20,5 | 23,5  | 28,5  | 32    | 36    | 40    |
| PN | 16   | 16    | 16    | 16   | 16   | 16    | 16    | 16    | 16    | 16    |

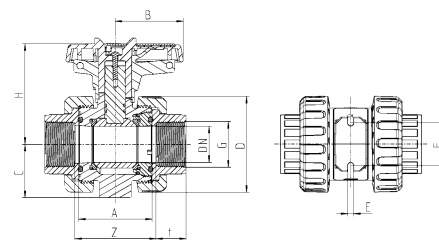


## Connector type

### PVDF fusion spigot long metric (dimensions in mm)

| DN | 15   | 20   | 25    | 32   | 40    | 50    |
|----|------|------|-------|------|-------|-------|
| d  | 20   | 25   | 32    | 40   | 50    | 63    |
| A  | 61,5 | 69   | 73    | 83   | 94    | 109   |
| B  | 39,5 | 51   | 51    | 63,5 | 72    | 84    |
| C  | 33   | 40   | 43,5  | 51   | 56,5  | 64,5  |
| D  | 56,5 | 67   | 73,5  | 90   | 105,5 | 124,5 |
| E  | 5,4  | 5,4  | 6,4   | 6,4  | 6,4   | 6,4   |
| F  | 34   | 36   | 38    | 40   | 45    | 50    |
| H  | 71,5 | 78   | 80    | 98,5 | 106,5 | 113,5 |
| L  | 192  | 212  | 222,5 | 241  | 262   | 292   |
| s  | 1,9  | 1,9  | 2,4   | 2,4  | 3     | 3     |
| t  | 47,5 | 49,5 | 52    | 55   | 58    | 63    |
| PN | 16   | 16   | 16    | 16   | 16    | 16    |

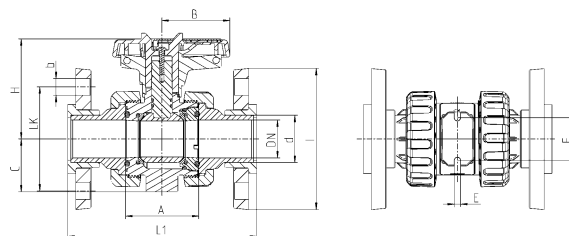
# Dimension hand operated



## Connector type

PVDF threaded socket BSP / NPT (dimensions in mm)

| DN   | 10   | 15   | 20   | 25   | 32     | 40     | 50    |
|------|------|------|------|------|--------|--------|-------|
| inch | 3/8" | 1/2" | 3/4" | 1"   | 1 1/4" | 1 1/2" | 2"    |
| A    | 61,5 | 61,5 | 69   | 73   | 83     | 94     | 109   |
| B    | 39,5 | 39,5 | 51   | 51   | 63,5   | 72     | 84    |
| C    | 33   | 33   | 40   | 43,5 | 51     | 56,5   | 64,5  |
| D    | 56,5 | 56,5 | 67   | 73,5 | 90     | 105,5  | 124,5 |
| E    | 5,4  | 5,4  | 5,4  | 6,4  | 6,4    | 6,4    | 6,4   |
| F    | 34   | 34   | 36   | 38   | 40     | 45     | 50    |
| H    | 71,5 | 71,5 | 78   | 80   | 98,5   | 106,5  | 113,5 |
| t    | 16   | 16   | 19,5 | 22,5 | 26     | 30,5   | 37    |
| Z    | 66   | 67,5 | 75   | 80   | 89     | 102    | 120   |
| PN   | 16   | 16   | 16   | 16   | 16     | 16     | 16    |



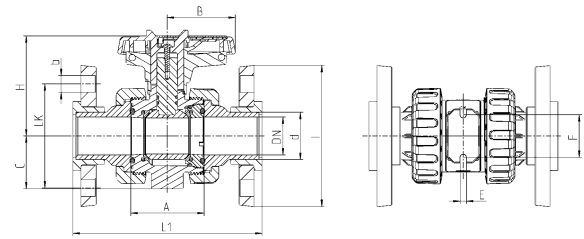
## Connector type

PP-GF backing flange DIN with steel insert

(dimensiones in mm)

| DN | 15   | 20  | 25   | 32   | 40    | 50    | 65    | 80    | 80    |
|----|------|-----|------|------|-------|-------|-------|-------|-------|
| d  | 20   | 25  | 32   | 40   | 50    | 63    | 75    | 90    | 110   |
| A  | 61,5 | 69  | 73   | 83   | 94    | 109   | 131,5 | 156,5 | 156,5 |
| B  | 39,5 | 51  | 51   | 63,5 | 72    | 84    | 110   | 132   | 132   |
| b  | 14   | 14  | 14   | 18   | 18    | 18    | 18    | 18    | 18    |
| C  | 33   | 40  | 43,5 | 51   | 56,5  | 64,5  | 85    | 100   | 100   |
| E  | 5,4  | 5,4 | 6,4  | 6,4  | 6,4   | 6,4   | 8,3   | 10,3  | 10,3  |
| F  | 34   | 36  | 38   | 40   | 45    | 50    | 65    | 80    | 80    |
| H  | 71,5 | 78  | 80   | 98,5 | 106,5 | 113,5 | 143   | 161   | 161   |
| I  | 95   | 108 | 115  | 140  | 150   | 165   | 186   | 202   | 220   |
| L1 | 203  | 225 | 236  | 253  | 274   | 308   | 420   | 380   | 437   |
| LK | 65   | 75  | 85   | 100  | 110   | 125   | 145   | 160   | 180   |
| PN | 16   | 16  | 16   | 16   | 16    | 16    | 16    | 16    | 16    |

# Dimensions hand operated



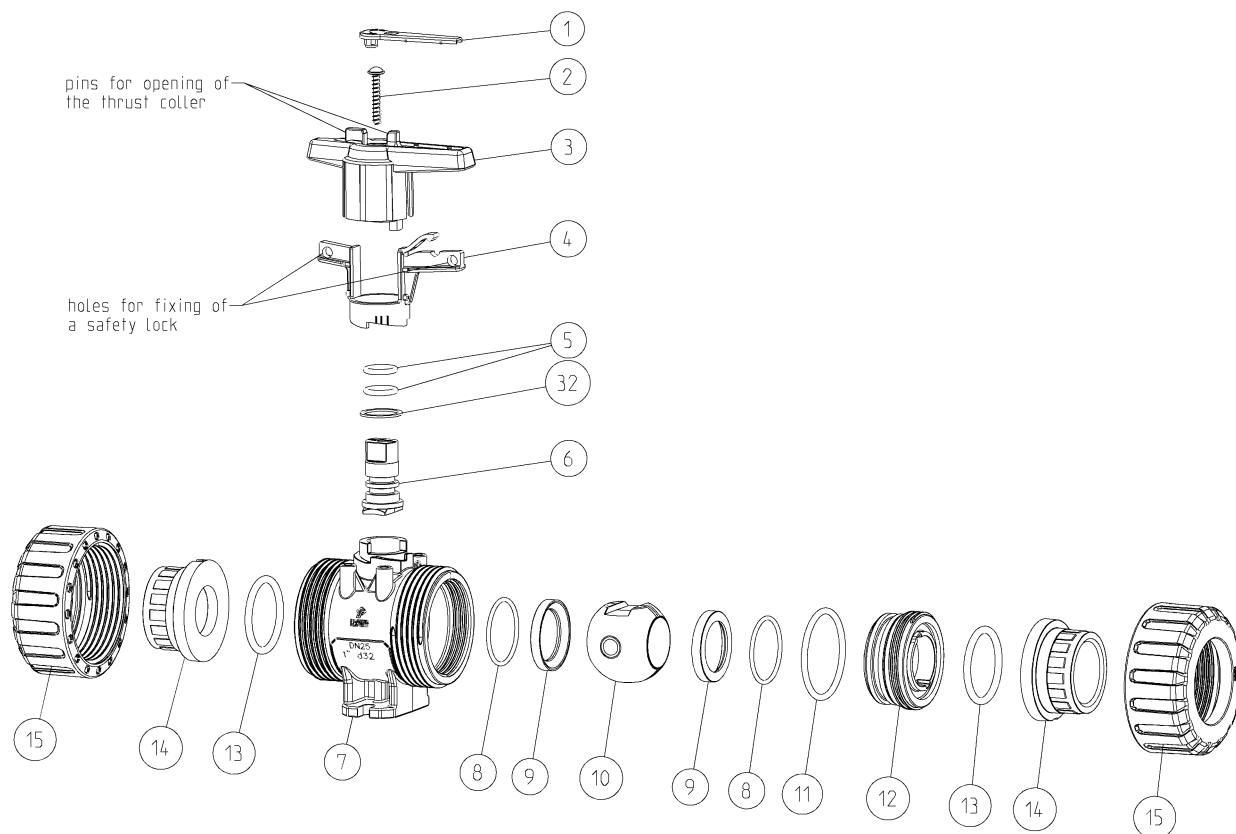
## Connector type

### PP-GF backing flange ANSI with steel insert

(dimensions in mm)

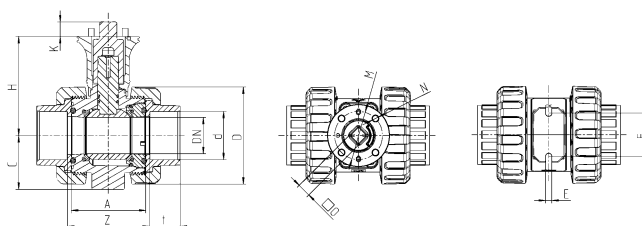
| DN   | 15   | 20   | 25   | 32     | 40     | 50    | 65     | 80    | 80    |
|------|------|------|------|--------|--------|-------|--------|-------|-------|
| d    | 20   | 25   | 32   | 40     | 50     | 63    | 75     | 90    | 110   |
| inch | 1/2" | 3/4" | 1"   | 1 1/4" | 1 1/2" | 2"    | 2 1/2" | 3"    | 4"    |
| A    | 61,5 | 69   | 73   | 83     | 94     | 109   | 131,5  | 156,5 | 156,5 |
| B    | 39,5 | 51   | 51   | 63,5   | 72     | 84    | 110    | 132   | 132   |
| b    | 16   | 16   | 16   | 16     | 16     | 20    | 20     | 20    | 20    |
| C    | 33   | 40   | 43,5 | 51     | 56,5   | 64,5  | 85     | 100   | 100   |
| E    | 5,4  | 5,4  | 6,4  | 6,4    | 6,4    | 6,4   | 8,3    | 10,3  | 10,3  |
| F    | 34   | 36   | 38   | 40     | 45     | 50    | 65     | 80    | 80    |
| H    | 71,5 | 78   | 80   | 98,5   | 106,5  | 113,5 | 143    | 161   | 161   |
| I    | 95   | 102  | 114  | 130    | 133    | 162   | 184    | 194   | 229   |
| L1   | 203  | 225  | 236  | 253    | 274    | 308   | 420    | 380   | 437   |
| LK   | 60,4 | 69,8 | 79,3 | 89     | 98,5   | 120,6 | 139,7  | 152,4 | 190,5 |
| PN   | 16   | 16   | 16   | 16     | 16     | 16    | 16     | 16    | 16    |

# Exploded drawing hand operated



| No. | Description                                                           | Material                                |
|-----|-----------------------------------------------------------------------|-----------------------------------------|
| 01. | Labeling plate                                                        | PBT                                     |
| 02. | Screw                                                                 | A2                                      |
| 03. | Handle                                                                | PP-GF                                   |
| 04. | Spring loaded locking sleeve                                          | PBT                                     |
| 05. | O-ring                                                                | FPM                                     |
| 06. | Shaft                                                                 | PVDF                                    |
| 07. | Body                                                                  | PVDF                                    |
| 08. | O-ring                                                                | FPM                                     |
| 09. | Ball seating joint                                                    | PTFE                                    |
| 10. | Ball                                                                  | PVDF                                    |
| 11. | O-ring                                                                | FPM                                     |
| 12. | Thrust collar                                                         | PVDF                                    |
| 13. | O-ring                                                                | FPM                                     |
| 14. | Connector type<br>fusion socket /-spigot<br>threaded socket<br>Flange | PVDF<br>PVDF<br>PP-GF with steel insert |
| 15. | Union nut                                                             | PVDF                                    |
| 32. | Washer                                                                | PTFE                                    |

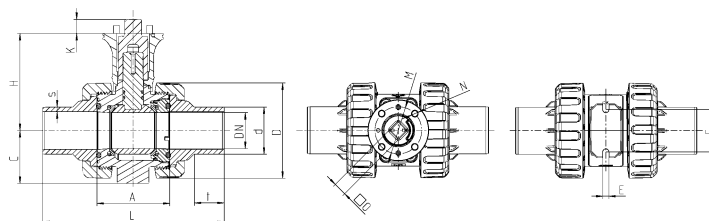
# Dimensions adapter set



## Connector type

### PVDF fusion socket metric (dimensions in mm)

| DN         | 10   | 15   | 20   | 25   | 32  | 40    | 50    | 65    | 80    | 80    |
|------------|------|------|------|------|-----|-------|-------|-------|-------|-------|
| d          | 16   | 20   | 25   | 32   | 40  | 50    | 63    | 75    | 90    | 110   |
| ISO flange | F04  | F04  | F04  | F04  | F05 | F05   | F05   | F07   | F07   | F07   |
| A          | 61,5 | 61,5 | 69   | 73   | 83  | 94    | 109   | 131,5 | 156,5 | 156,5 |
| C          | 33   | 33   | 40   | 43,5 | 51  | 56,5  | 64,5  | 85    | 100   | 100   |
| D          | 56,5 | 56,5 | 67   | 73,5 | 90  | 105,5 | 124,5 | 157,5 | 192,5 | 192,5 |
| E          | 5,4  | 5,4  | 5,4  | 6,4  | 6,4 | 6,4   | 6,4   | 8,3   | 10,3  | 10,3  |
| F          | 34   | 34   | 36   | 38   | 40  | 45    | 50    | 65    | 80    | 80    |
| H          | 81   | 81   | 86,5 | 89,5 | 97  | 104,5 | 111,5 | 138,5 | 168   | 168   |
| K          | 11   | 11   | 11   | 11   | 15  | 15    | 15    | 18    | 18    | 18    |
| M          | 42   | 42   | 42   | 42   | 50  | 50    | 50    | 70    | 70    | 70    |
| N          | 5,5  | 5,5  | 5,5  | 5,5  | 6,5 | 6,5   | 6,5   | 8,5   | 8,5   | 8,5   |
| O          | 11   | 11   | 11   | 11   | 14  | 14    | 14    | 17    | 17    | 17    |
| t          | 14,5 | 16   | 17   | 19,5 | 22  | 25    | 29    | 35    | 38,5  | 44    |
| Z          | 69,5 | 67   | 78   | 84   | 97  | 113   | 136   | 158,5 | 205   | 163   |
| PN         | 16   | 16   | 16   | 16   | 16  | 16    | 16    | 16    | 16    | 16    |



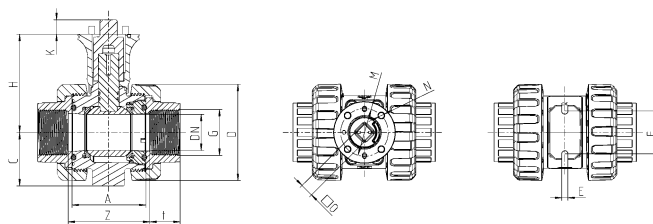
## Connector type

### PVDF fusion spigot metric

(dimensions in mm)

| DN         | 10   | 15    | 20    | 25   | 32   | 40    | 50    | 65    | 80    | 80    |
|------------|------|-------|-------|------|------|-------|-------|-------|-------|-------|
| d          | 16   | 20    | 25    | 32   | 40   | 50    | 63    | 75    | 90    | 110   |
| ISO flange | F04  | F04   | F04   | F04  | F05  | F05   | F05   | F07   | F07   | F07   |
| A          | 61,5 | 61,5  | 69    | 73   | 83   | 94    | 109   | 131,5 | 156,5 | 156,5 |
| C          | 33   | 33    | 40    | 43,5 | 51   | 56,5  | 64,5  | 85    | 100   | 100   |
| D          | 56,5 | 56,5  | 67    | 73,5 | 90   | 105,5 | 124,5 | 157,5 | 192,5 | 192,5 |
| E          | 5,4  | 5,4   | 5,4   | 6,4  | 6,4  | 6,4   | 6,4   | 8,3   | 10,3  | 10,3  |
| F          | 34   | 34    | 36    | 38   | 40   | 45    | 50    | 65    | 80    | 80    |
| H          | 81   | 81    | 86,5  | 89,5 | 97   | 104,5 | 111,5 | 138,5 | 168   | 168   |
| K          | 11   | 11    | 11    | 11   | 15   | 15    | 15    | 18    | 18    | 18    |
| L          | 114  | 124,5 | 144,5 | 155  | 172  | 193   | 223   | 278   | 290,5 | 316,5 |
| M          | 42   | 42    | 42    | 42   | 50   | 50    | 50    | 70    | 70    | 70    |
| N          | 5,5  | 5,5   | 5,5   | 5,5  | 6,5  | 6,5   | 6,5   | 8,5   | 8,5   | 8,5   |
| O          | 11   | 11    | 11    | 11   | 14   | 14    | 14    | 17    | 17    | 17    |
| s          | 1,9  | 1,9   | 1,9   | 2,4  | 2,4  | 3     | 3     | 3,6   | 4,3   | 5,3   |
| t          | 13   | 13,5  | 15,5  | 18,5 | 20,5 | 23,5  | 28,5  | 32    | 36    | 40    |
| PN         | 16   | 16    | 16    | 16   | 16   | 16    | 16    | 16    | 16    | 16    |

# Dimensions adapter set

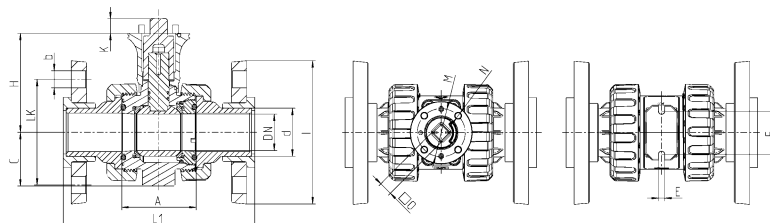


## Connector type

### PVDF threaded socket BSP / NPT

(dimensions in mm)

| DN         | 10   | 15   | 20   | 25   | 32     | 40     | 50    |
|------------|------|------|------|------|--------|--------|-------|
| inch       | 3/8" | 1/2" | 3/4" | 1"   | 1 1/4" | 1 1/2" | 2"    |
| ISO flange | F04  | F04  | F04  | F04  | F05    | F05    | F05   |
| A          | 61,5 | 61,5 | 69   | 73   | 83     | 94     | 109   |
| C          | 33   | 33   | 40   | 43,5 | 51     | 56,5   | 64,5  |
| D          | 56,5 | 56,5 | 67   | 73,5 | 90     | 105,5  | 124,5 |
| E          | 5,4  | 5,4  | 5,4  | 6,4  | 6,4    | 6,4    | 6,4   |
| F          | 34   | 34   | 36   | 38   | 40     | 45     | 50    |
| H          | 81   | 81   | 86,5 | 89,5 | 97     | 104,5  | 111,5 |
| K          | 11   | 11   | 11   | 11   | 15     | 15     | 15    |
| M          | 42   | 42   | 42   | 42   | 50     | 50     | 50    |
| N          | 5,5  | 5,5  | 5,5  | 5,5  | 6,5    | 6,5    | 6,5   |
| O          | 11   | 11   | 11   | 11   | 14     | 14     | 14    |
| t          | 16   | 16   | 19,5 | 22,5 | 26     | 30,5   | 37    |
| Z          | 66   | 67,5 | 75   | 80   | 89     | 102    | 120   |
| PN         | 16   | 16   | 16   | 16   | 16     | 16     | 16    |



## Connector type

### PP-GF backing flange DIN with steel insert

(dimensions in mm)

| DN         | 15   | 20   | 25   | 32  | 40    | 50    | 65    | 80    | 80    |
|------------|------|------|------|-----|-------|-------|-------|-------|-------|
| d          | 20   | 25   | 32   | 40  | 50    | 63    | 75    | 90    | 110   |
| ISO flange | F04  | F04  | F04  | F05 | F05   | F05   | F07   | F07   | F07   |
| A          | 61,5 | 69   | 73   | 83  | 94    | 109   | 131,5 | 156,5 | 156,5 |
| b          | 14   | 14   | 14   | 18  | 18    | 18    | 18    | 18    | 18    |
| C          | 33   | 40   | 43,5 | 51  | 56,5  | 64,5  | 85    | 100   | 100   |
| E          | 5,4  | 5,4  | 6,4  | 6,4 | 6,4   | 6,4   | 8,3   | 10,3  | 10,3  |
| F          | 34   | 36   | 38   | 40  | 45    | 50    | 65    | 80    | 80    |
| H          | 81   | 86,5 | 89,5 | 97  | 104,5 | 111,5 | 138,5 | 168   | 168   |
| I          | 95   | 108  | 115  | 140 | 150   | 165   | 186   | 202   | 220   |
| K          | 11   | 11   | 11   | 15  | 15    | 15    | 18    | 18    | 18    |
| L1         | 203  | 225  | 236  | 253 | 274   | 308   | 420   | 380   | 437   |
| LK         | 65   | 75   | 85   | 100 | 110   | 125   | 145   | 160   | 180   |
| M          | 42   | 42   | 42   | 50  | 50    | 50    | 70    | 70    | 70    |
| N          | 5,5  | 5,5  | 5,5  | 6,5 | 6,5   | 6,5   | 8,5   | 8,5   | 8,5   |
| O          | 11   | 11   | 11   | 14  | 14    | 14    | 17    | 17    | 17    |
| PN         | 16   | 16   | 16   | 16  | 16    | 16    | 16    | 16    | 16    |

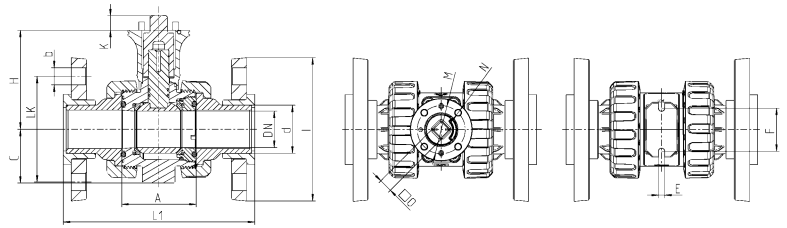
# Dimensions adapter set

## Connector type

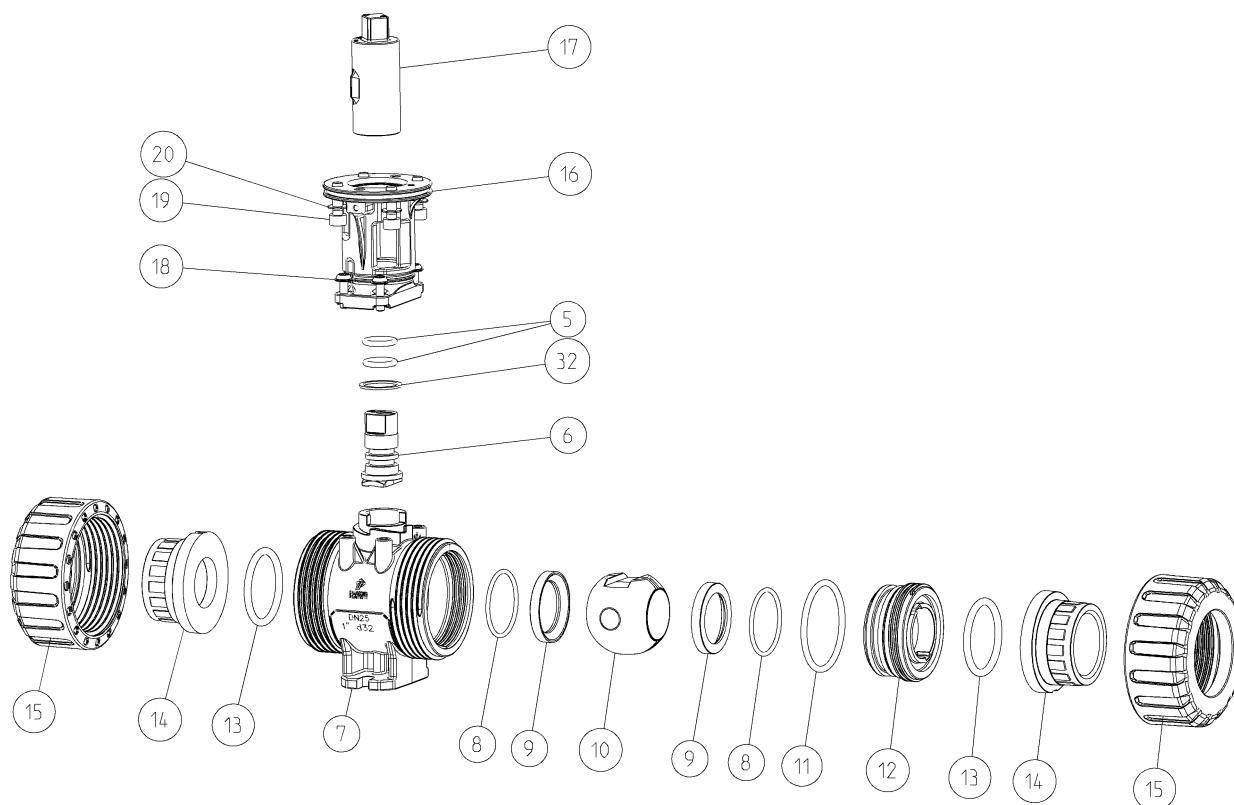
### PP-GF backing flange ANSI with steel insert

(dimensions in mm)

| DN         | 15   | 20   | 25   | 32     | 40     | 50    | 65     | 80    | 80    |
|------------|------|------|------|--------|--------|-------|--------|-------|-------|
| d          | 20   | 25   | 32   | 40     | 50     | 63    | 75     | 90    | 110   |
| inch       | 1/2" | 3/4" | 1"   | 1 1/4" | 1 1/2" | 2"    | 2 1/2" | 3"    | 4"    |
| ISO flange | F04  | F04  | F04  | F05    | F05    | F05   | F07    | F07   | F07   |
| A          | 61,5 | 69   | 73   | 83     | 94     | 109   | 131,5  | 156,5 | 156,5 |
| b          | 16   | 16   | 16   | 16     | 16     | 20    | 20     | 20    | 20    |
| C          | 33   | 40   | 43,5 | 51     | 56,5   | 64,5  | 85     | 100   | 100   |
| E          | 5,4  | 5,4  | 6,4  | 6,4    | 6,4    | 6,4   | 8,3    | 10,3  | 10,3  |
| F          | 34   | 36   | 38   | 40     | 45     | 50    | 65     | 80    | 80    |
| H          | 81   | 86,5 | 89,5 | 97     | 104,5  | 111,5 | 138,5  | 168   | 168   |
| I          | 95   | 102  | 114  | 130    | 133    | 162   | 174    | 194   | 229   |
| K          | 11   | 11   | 11   | 11     | 15     | 15    | 15     | 18    | 18    |
| L1         | 203  | 225  | 236  | 253    | 274    | 308   | 420    | 380   | 437   |
| LK         | 60,4 | 69,8 | 79,3 | 89     | 98,5   | 120,6 | 139,7  | 152,4 | 190,5 |
| M          | 42   | 42   | 42   | 50     | 50     | 50    | 70     | 70    | 70    |
| N          | 5,5  | 5,5  | 5,5  | 6,5    | 6,5    | 6,5   | 8,5    | 8,5   | 8,5   |
| O          | 11   | 11   | 11   | 14     | 14     | 14    | 17     | 17    | 17    |
| PN         | 16   | 16   | 16   | 16     | 16     | 16    | 16     | 16    | 16    |



# Exploded drawing adapter set



| No. | Description            | Material                |
|-----|------------------------|-------------------------|
| 05. | O-ring                 | FPM                     |
| 06. | Shaft                  | PVDF                    |
| 07. | Body                   | PVDF                    |
| 08. | O-ring                 | FPM                     |
| 09. | Ball seating joint     | PTFE                    |
| 10. | Ball                   | PVDF                    |
| 11. | O-ring                 | FPM                     |
| 12. | Thrust collar          | PVDF                    |
| 13. | O-ring                 | FPM                     |
| 14. | Connector types        |                         |
|     | fusion socket /-spigot | PVDF                    |
|     | threaded socket        | PVDF                    |
|     | Flange                 | PP-GF with steel insert |
| 15. | Union nut              | PVDF                    |
| 16. | Bracket                | PA-GF                   |
| 17. | Coupling shaft         | PA-GF                   |
| 18. | Screw                  | A2                      |
| 19. | Screw                  | A4                      |
| 20. | Toothed washer         | A2 / A4 from DN65       |
| 32. | Washer                 | PTFE                    |

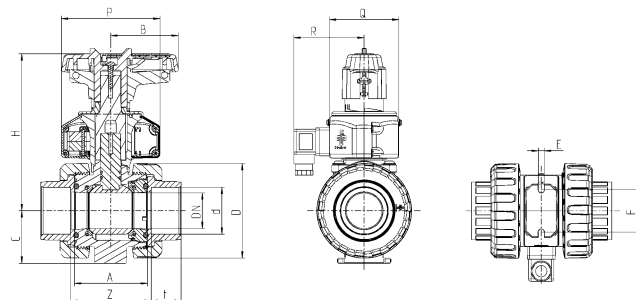
# Dimensions position feedback

## Connector type

### PVDF fusion socket metric

(dimensions in mm)

| DN | 10   | 15   | 20   | 25   | 32    | 40    | 50    | 65    | 80    | 80    |
|----|------|------|------|------|-------|-------|-------|-------|-------|-------|
| d  | 16   | 20   | 25   | 32   | 40    | 50    | 63    | 75    | 90    | 110   |
| A  | 61,5 | 61,5 | 69   | 73   | 83    | 94    | 109   | 131,5 | 156,5 | 156,5 |
| B  | 39,5 | 39,5 | 51   | 51   | 63,5  | 72    | 84    | 110   | 132   | 132   |
| C  | 33   | 33   | 40   | 43,5 | 51    | 56,5  | 64,5  | 85    | 100   | 100   |
| D  | 56,5 | 56,5 | 67   | 73,5 | 90    | 105,5 | 124,5 | 157,5 | 192,5 | 192,5 |
| E  | 5,4  | 5,4  | 5,4  | 6,4  | 6,4   | 6,4   | 6,4   | 8,3   | 10,3  | 10,3  |
| F  | 34   | 34   | 36   | 38   | 40    | 45    | 50    | 65    | 80    | 80    |
| H  | 127  | 127  | 138  | 141  | 159,5 | 168,5 | 177,5 | 215   | 246,5 | 246,5 |
| P  | 98   | 98   | 102  | 102  | 105   | 105   | 105   | 116   | 116   | 116   |
| Q  | 64   | 64   | 64   | 64   | 74    | 74    | 74    | 99    | 99    | 99    |
| R  | 70   | 70   | 70   | 70   | 75    | 75    | 75    | 88    | 88    | 88    |
| t  | 14,5 | 16   | 17,5 | 19,5 | 22    | 25,5  | 29    | 34,5  | 38,5  | 42    |
| Z  | 69,5 | 67   | 78   | 84   | 97    | 113   | 136   | 158,5 | 205   | 163   |
| PN | 16   | 16   | 16   | 16   | 16    | 16    | 16    | 16    | 16    | 16    |

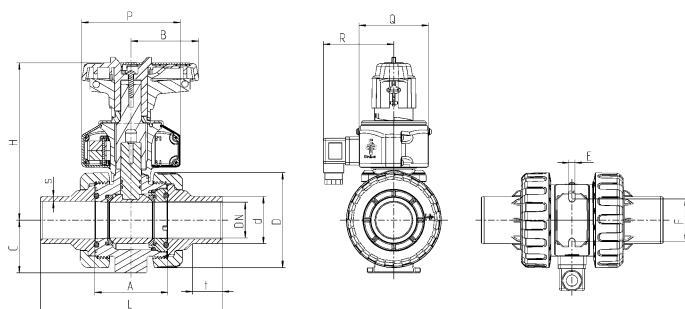


## Connector type

### PVDF fusion spigot metric

(dimensions in mm)

| DN | 10   | 15    | 20    | 25   | 32    | 40    | 50    | 65    | 80    | 80    |
|----|------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| d  | 16   | 20    | 25    | 32   | 40    | 50    | 63    | 75    | 90    | 110   |
| A  | 61,5 | 61,5  | 69    | 73   | 83    | 94    | 109   | 131,5 | 156,5 | 156,5 |
| B  | 39,5 | 39,5  | 51    | 51   | 63,5  | 72    | 84    | 110   | 132   | 132   |
| C  | 33   | 33    | 40    | 43,5 | 51    | 56,5  | 64,5  | 85    | 100   | 100   |
| D  | 56,5 | 56,5  | 67    | 73,5 | 90    | 105,5 | 124,5 | 157,5 | 192,5 | 192,5 |
| E  | 5,4  | 5,4   | 5,4   | 6,4  | 6,4   | 6,4   | 6,4   | 8,3   | 10,3  | 10,3  |
| F  | 34   | 34    | 36    | 38   | 40    | 45    | 50    | 65    | 80    | 80    |
| H  | 127  | 127   | 138   | 141  | 159,5 | 168,5 | 177,5 | 215   | 246,5 | 246,5 |
| L  | 114  | 124,5 | 144,5 | 155  | 172   | 193   | 223   | 278   | 290,5 | 316,5 |
| P  | 98   | 98    | 102   | 102  | 105   | 105   | 105   | 116   | 116   | 116   |
| Q  | 64   | 64    | 64    | 64   | 74    | 74    | 74    | 99    | 99    | 99    |
| R  | 70   | 70    | 70    | 70   | 75    | 75    | 75    | 88    | 88    | 88    |
| s  | 1,9  | 1,9   | 1,9   | 2,4  | 2,4   | 3     | 3     | 3,6   | 4,3   | 5,3   |
| t  | 13   | 13,5  | 15,5  | 18,5 | 20,5  | 23,5  | 28,5  | 32    | 36    | 40    |
| PN | 16   | 16    | 16    | 16   | 16    | 16    | 16    | 16    | 16    | 16    |



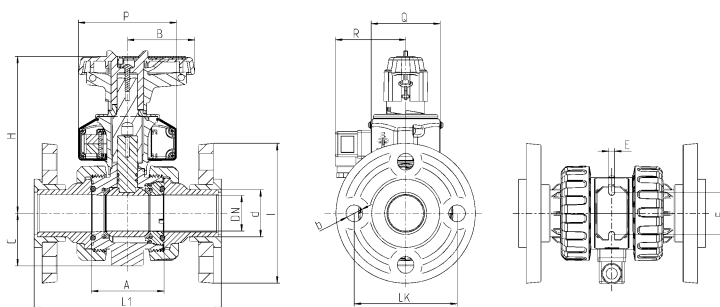
# Dimensions position feedback

## Connector type

### PP-GF backing flange DIN with steel insert

(dimensions in mm)

| DN | 15   | 20  | 25   | 32    | 40    | 50    |
|----|------|-----|------|-------|-------|-------|
| d  | 20   | 25  | 32   | 40    | 50    | 63    |
| A  | 61,5 | 69  | 73   | 83    | 94    | 109   |
| B  | 39,5 | 51  | 51   | 63,5  | 72    | 84    |
| b  | 14   | 14  | 14   | 18    | 18    | 18    |
| C  | 33   | 40  | 43,5 | 51    | 56,5  | 64,5  |
| E  | 5,4  | 5,4 | 6,4  | 6,4   | 6,4   | 6,4   |
| F  | 34   | 36  | 38   | 40    | 45    | 50    |
| H  | 127  | 138 | 141  | 159,5 | 168,5 | 177,5 |
| I  | 95   | 108 | 115  | 140   | 150   | 165   |
| L1 | 203  | 225 | 236  | 253   | 274   | 308   |
| LK | 65   | 75  | 85   | 100   | 110   | 125   |
| P  | 98   | 102 | 102  | 105   | 105   | 105   |
| Q  | 64   | 64  | 64   | 74    | 74    | 74    |
| R  | 70   | 70  | 70   | 75    | 75    | 75    |
| PN | 16   | 16  | 16   | 16    | 16    | 16    |

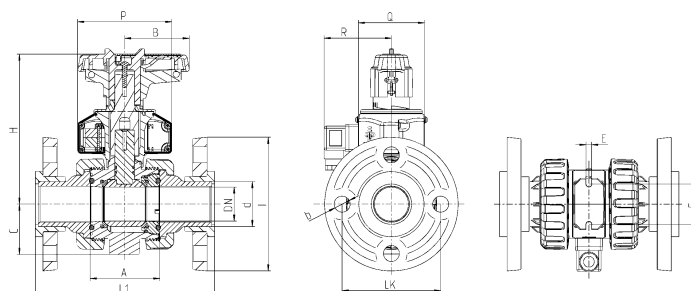


## Connector type

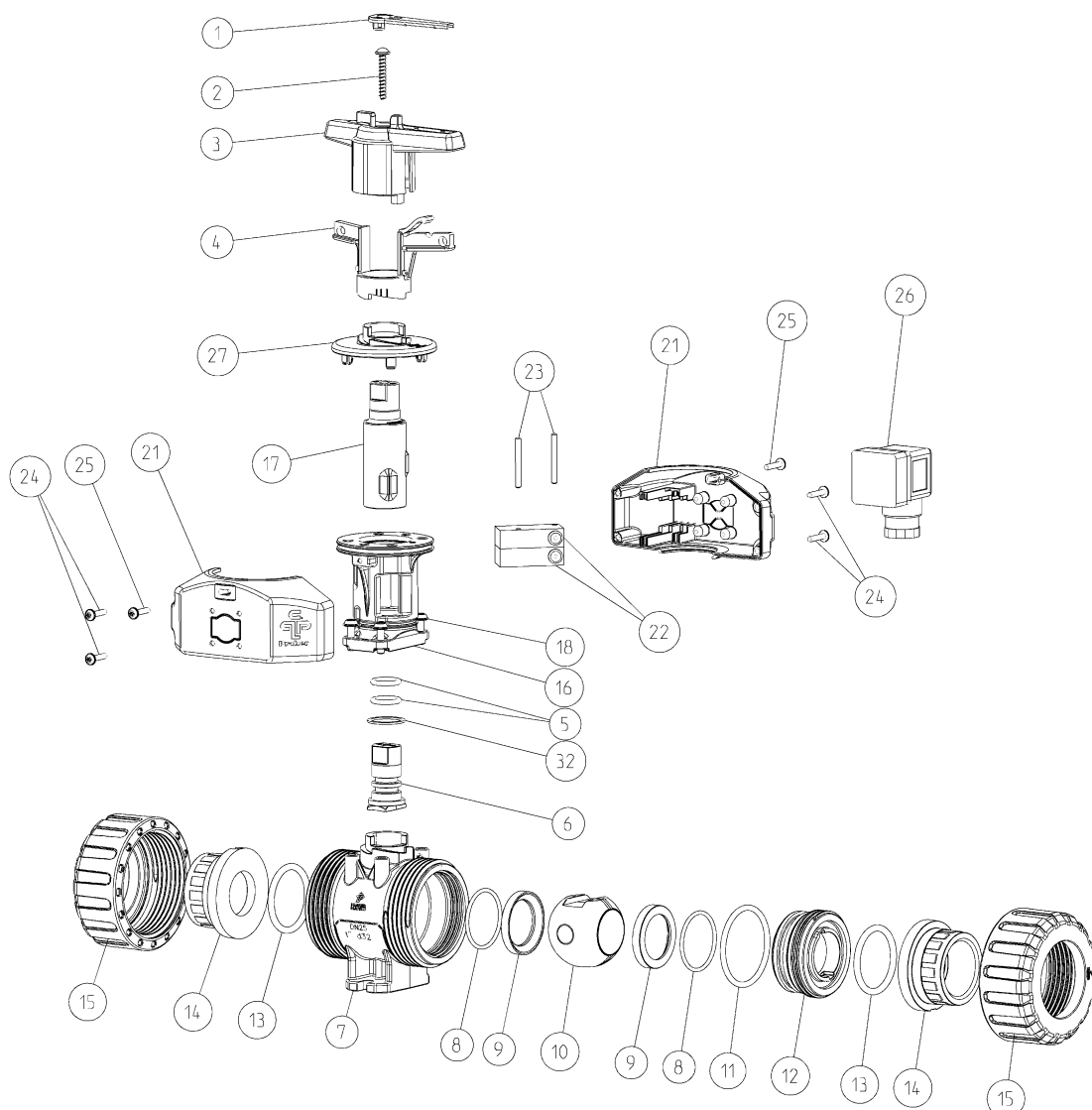
### PP-GF backing flange ANSI with steel insert

(dimensions in mm)

| DN   | 15   | 20   | 25   | 32     | 40     | 50    |
|------|------|------|------|--------|--------|-------|
| d    | 20   | 25   | 32   | 40     | 50     | 63    |
| inch | 1/2" | 3/4" | 1"   | 1 1/4" | 1 1/2" | 2"    |
| A    | 61,5 | 69   | 73   | 83     | 94     | 109   |
| B    | 39,5 | 51   | 51   | 63,5   | 72     | 84    |
| b    | 16   | 16   | 16   | 16     | 16     | 20    |
| C    | 33   | 40   | 43,5 | 51     | 56,5   | 64,5  |
| E    | 5,4  | 5,4  | 6,4  | 6,4    | 6,4    | 6,4   |
| F    | 34   | 36   | 38   | 40     | 45     | 50    |
| H    | 127  | 138  | 141  | 159,5  | 168,5  | 177,5 |
| I    | 102  | 114  | 130  | 133    | 162    | 184   |
| L1   | 95   | 102  | 114  | 130    | 133    | 162   |
| LK   | 60,4 | 69,8 | 79,3 | 89     | 98,5   | 120,6 |
| P    | 98   | 102  | 102  | 105    | 105    | 105   |
| Q    | 64   | 64   | 64   | 74     | 74     | 74    |
| R    | 70   | 70   | 70   | 75     | 75     | 75    |
| PN   | 16   | 16   | 16   | 16     | 16     | 16    |



# Exploded drawing position feedback



| No. | Description                  | Material                | No. | Description       | Material |
|-----|------------------------------|-------------------------|-----|-------------------|----------|
| 01. | Labeling plate               | PBT                     | 15. | Union nut         | PVDF     |
| 02. | Screw                        | A2                      | 16. | Bracket           | PA-GF    |
| 03. | Handle                       | PP-GF                   | 17. | Coupling shaft    | PA-GF    |
| 04. | Spring loaded locking sleeve | PBT                     | 18. | Screw             | A2       |
| 05. | O-ring                       | FPM                     | 19. | Screw             | A2       |
| 06. | Shaft                        | PVDF                    | 20. | Toothed washer    | A2       |
| 07. | Body                         | PVDF                    | 21. | Half shells       | ABS      |
| 08. | O-ring                       | FPM                     | 22. | Limit switch IP67 | -        |
| 09. | Ball seating joint           | PTFE                    | 23. | Pin               | A2       |
| 10. | Ball                         | PVDF                    | 24. | Screw             | A2       |
| 11. | O-ring                       | FPM                     | 25. | Locking screw     | A2       |
| 12. | Thrust collar                | PVDF                    | 26. | Device plug IP65  | -        |
| 13. | O-ring                       | FPM                     | 27. | Cover             | ABS      |
| 14. | Connector types              |                         | 32. | Washer            | PTFE     |
|     | Fusion socket /-spigot       | PVDF                    |     |                   |          |
|     | Flange                       | PP-GF with steel insert |     |                   |          |

# Technical position feedback

| Limit switch mechanical                 |                        |                      |
|-----------------------------------------|------------------------|----------------------|
| Type                                    | (Ag-Ni) NO/NC*         | (Au) NO*/NC*         |
| Voltage max.                            | 15-250V AC (15-30V DC) | 5-250V AC (5-30V DC) |
| Current max.                            | 100mA-5A               | 1mA-3A               |
| Protection limit switch                 | IP67                   |                      |
| Protection DIN-plug                     | IP65                   |                      |
| Ambient temperature                     | -10°C bis +50°C        |                      |
| Electric wiring                         | NO                     | NC                   |
| A pressed .. open<br>B pressed.. closed |                        |                      |

\* on request

| Limit switch inductiv   |                 |                                                                      |
|-------------------------|-----------------|----------------------------------------------------------------------|
| Type                    | NPN*/PNP        | NAMUR<br>EMV acc. IEC / EN 60947-5-2:2004; NE 21<br>DIN EN 60947-5-6 |
| Voltage max.            | 10-30V DC       | 8V DC                                                                |
| Current max.            | 0-100mA         | NAMUR intrinsically safe                                             |
| Protection limit switch | IP67            |                                                                      |
| Protection DIN-plug     | IP65            |                                                                      |
| Ambient temperature     | -10°C bis +50°C |                                                                      |
| Electric wiring         |                 |                                                                      |

\* on request

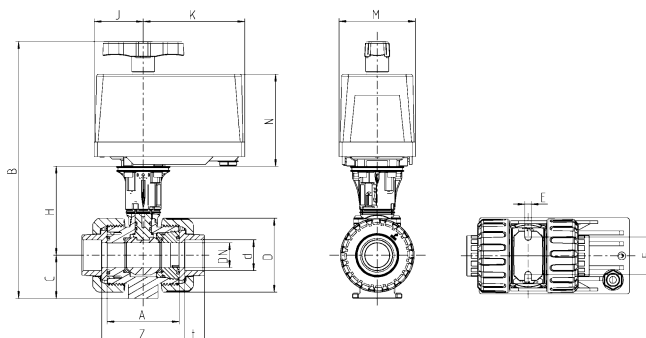
# Dimensions electric EO 510

## Connector types

### PVDF fusion socket metric

(dimensions in mm)

| DN       | 10            | 15    | 20    | 25    |
|----------|---------------|-------|-------|-------|
| d        | 16            | 20    | 25    | 32    |
| A        | 61,5          | 61,5  | 69    | 73    |
| C        | 33            | 33    | 40    | 43,5  |
| D        | 56,5          | 56,5  | 67    | 73,5  |
| E        | 5,4           | 5,4   | 5,4   | 6,4   |
| F        | 34            | 34    | 36    | 38    |
| H        | 81            | 81    | 86,5  | 89,5  |
| t        | 14,5          | 16    | 17    | 19,5  |
| Z        | 69,5          | 67    | 78    | 84    |
| PN       | 16            | 16    | 16    | 16    |
| actuator | EO510 ECO/IND |       |       |       |
| B        | 239           | 239   | 251,5 | 257   |
| J        | 49,5          | 49,5  | 49,5  | 49,5  |
| K        | 102,5         | 102,5 | 102,5 | 102,5 |
| M        | 77            | 77    | 77    | 77    |
| N        | 93            | 93    | 93    | 93    |

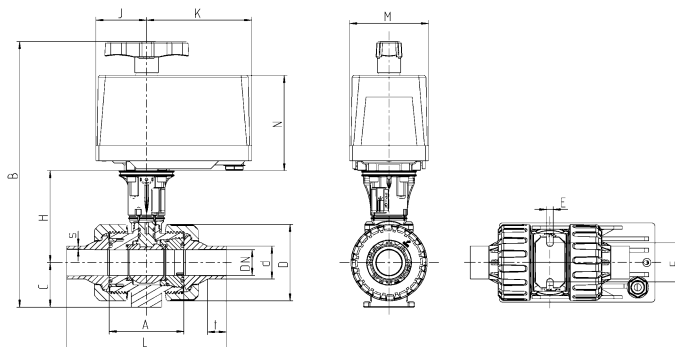


## Connector types

### PVDF fusion spigot metric

(dimensions in mm)

| DN       | 10            | 15    | 20    | 25    |
|----------|---------------|-------|-------|-------|
| d        | 16            | 20    | 25    | 32    |
| inch     | 3/8"          | 1/2"  | 3/4"  | 1"    |
| A        | 61,5          | 61,5  | 69    | 73    |
| C        | 33            | 33    | 40    | 43,5  |
| D        | 56,5          | 56,5  | 67    | 73,5  |
| E        | 5,4           | 5,4   | 5,4   | 6,4   |
| F        | 34            | 34    | 36    | 38    |
| H        | 81            | 81    | 86,5  | 89,5  |
| L        | 114           | 124,5 | 144,5 | 155   |
| s        | 1,9           | 1,9   | 1,9   | 2,4   |
| t        | 13            | 13,5  | 15,5  | 18,5  |
| PN       | 16            | 16    | 16    | 16    |
| actuator | EO510 ECO/IND |       |       |       |
| B        | 239           | 239   | 251,5 | 257   |
| J        | 49,5          | 49,5  | 49,5  | 49,5  |
| K        | 102,5         | 102,5 | 102,5 | 102,5 |
| M        | 77            | 77    | 77    | 77    |
| N        | 93            | 93    | 93    | 93    |



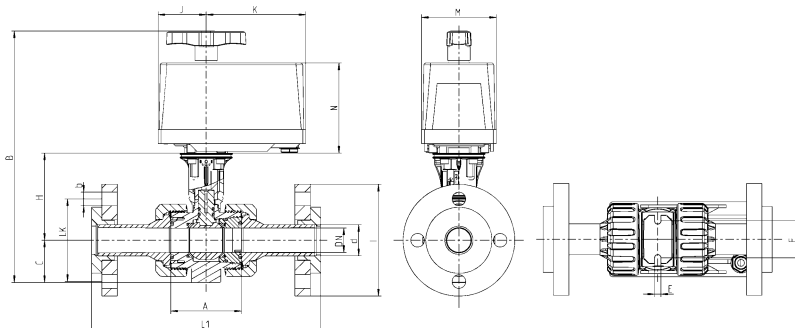
# Dimensions electric EO 510

## Connector types

### PP-GF backing flange DIN with steel insert

(dimensions in mm)

|          |               |       |       |
|----------|---------------|-------|-------|
| DN       | 15            | 20    | 25    |
| d        | 20            | 25    | 32    |
| A        | 61,5          | 69    | 73    |
| b        | 14            | 14    | 14    |
| C        | 33            | 40    | 43,5  |
| E        | 5,4           | 5,4   | 6,4   |
| F        | 34            | 36    | 38    |
| H        | 81            | 86,5  | 89,5  |
| I        | 95            | 108   | 115   |
| L1       | 203           | 225   | 236   |
| LK       | 65            | 75    | 85    |
| PN       | 10            | 10    | 10    |
| actuator | EO510 ECO/IND |       |       |
| B        | 239           | 251,5 | 257   |
| J        | 49,5          | 49,5  | 49,5  |
| K        | 102,5         | 102,5 | 102,5 |
| M        | 77            | 77    | 77    |
| N        | 93            | 93    | 93    |

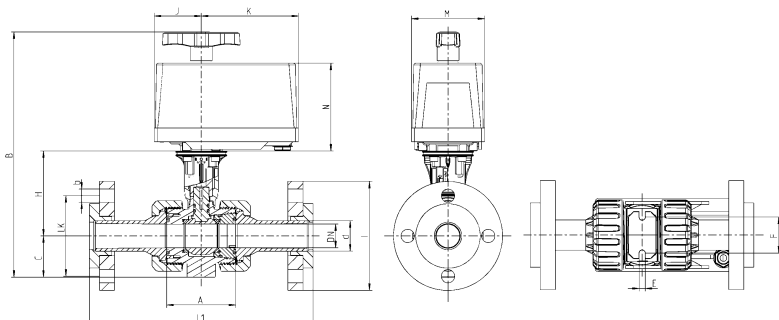


## Connector types

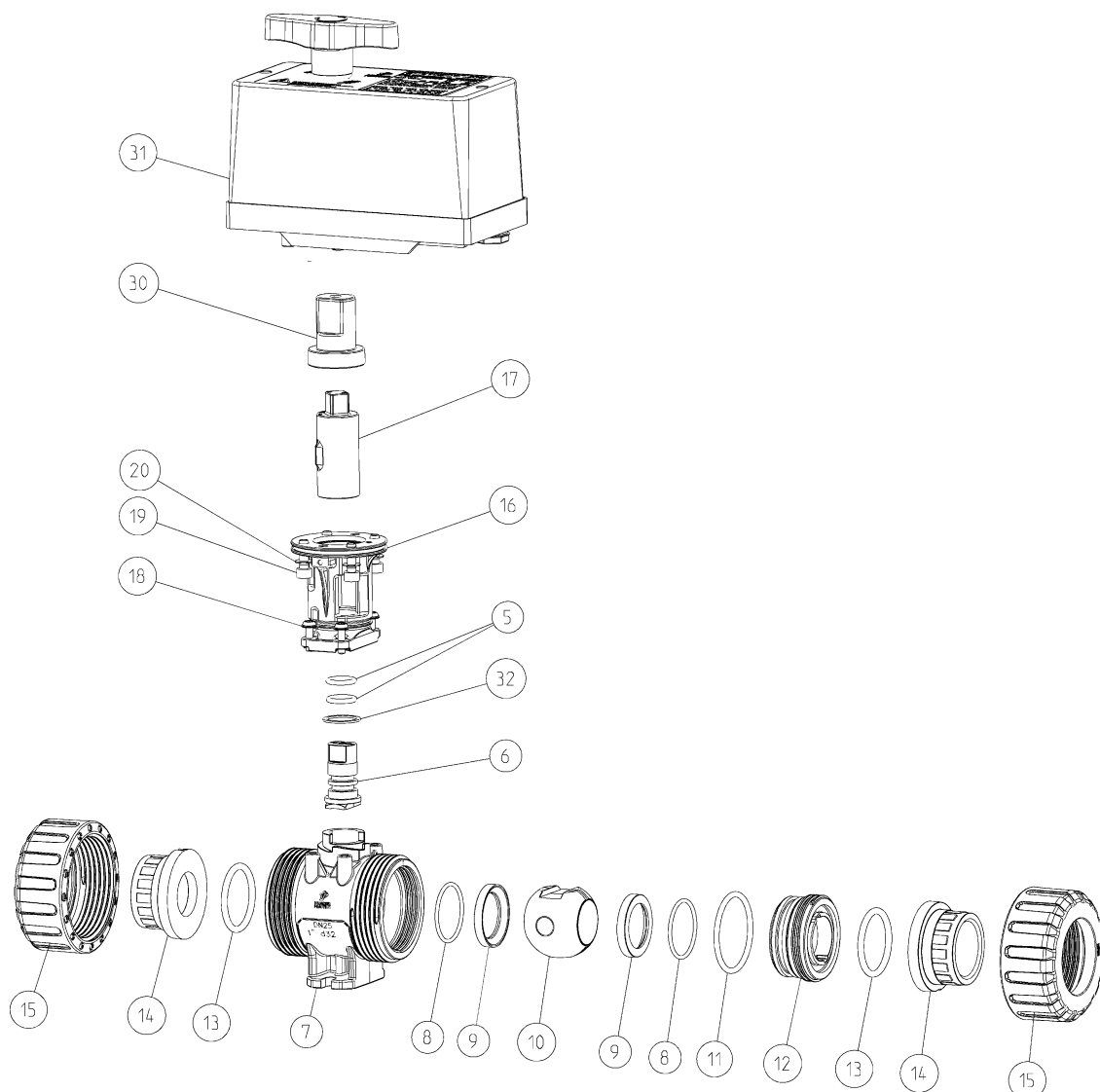
### PP-GF backing flange ANSI with steel insert

(dimensions in mm)

|          |               |       |       |
|----------|---------------|-------|-------|
| DN       | 15            | 20    | 25    |
| d        | 20            | 25    | 32    |
| A        | 61,5          | 69    | 73    |
| b        | 16            | 16    | 16    |
| C        | 33            | 40    | 43,5  |
| E        | 5,4           | 5,4   | 6,4   |
| F        | 34            | 36    | 38    |
| H        | 81            | 86,5  | 89,5  |
| I        | 95            | 102   | 114   |
| L1       | 203           | 225   | 236   |
| LK       | 60,4          | 69,8  | 79,3  |
| PN       | 10            | 10    | 10    |
| actuator | EO510 ECO/IND |       |       |
| B        | 239           | 251,5 | 257   |
| J        | 49,5          | 49,5  | 49,5  |
| K        | 102,5         | 102,5 | 102,5 |
| M        | 77            | 77    | 77    |
| N        | 93            | 93    | 93    |



# Exploded drawing electric EO 510

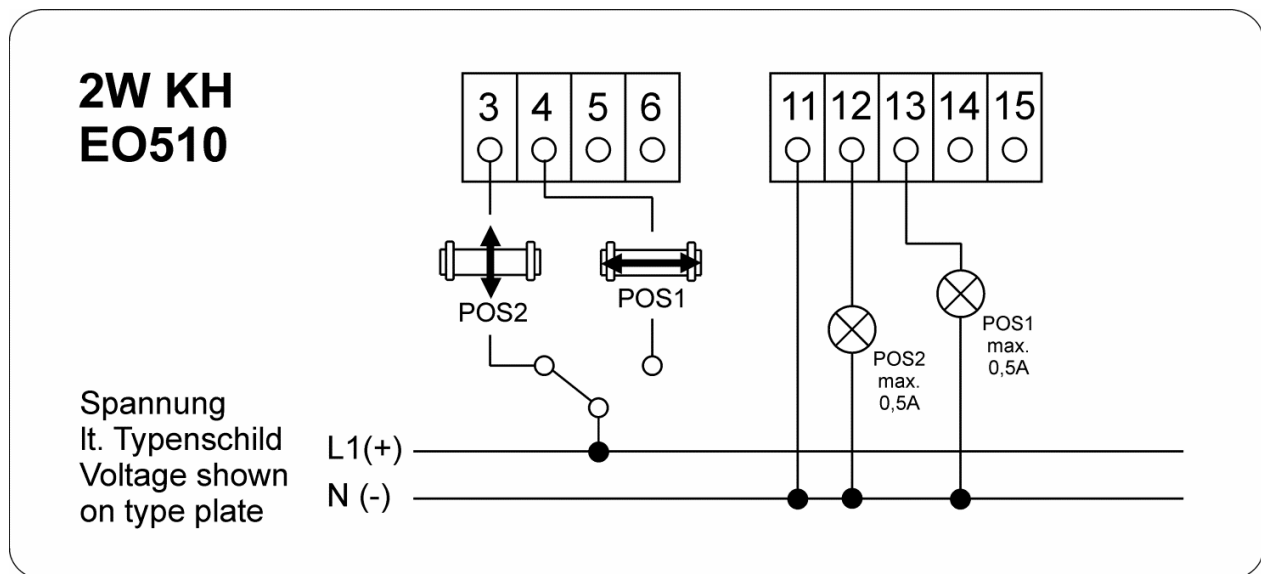


| No. | Description            | Material                | No. | Description     | Material |
|-----|------------------------|-------------------------|-----|-----------------|----------|
| 05. | O-ring                 | FPM                     | 15. | Union nut       | PVDF     |
| 06. | Shaft                  | PVDF                    | 16. | Bracket         | PA-GF    |
| 07. | Body                   | PVDF                    | 17. | Coupling shaft  | PA-GF    |
| 08. | O-ring                 | FPM                     | 18. | Screw           | A2       |
| 09. | Ball seating joint     | PTFE                    | 19. | Screw           | A2       |
| 10. | Ball                   | PVDF                    | 20. | Toothed washer  | A2       |
| 11. | O-ring                 | FPM                     | 30. | Coupling        | PA-GF    |
| 12. | Thrust collar          | PVDF                    | 31. | actuator EO 510 | -        |
| 13. | O-ring                 | FPM                     | 32. | Washer          | PTFE     |
| 14. | Connector type         |                         |     |                 |          |
|     | Fusion socket /-spigot | PVDF                    |     |                 |          |
|     | Threaded socket        | PVDF                    |     |                 |          |
|     | Flange                 | PP-GF with steel insert |     |                 |          |

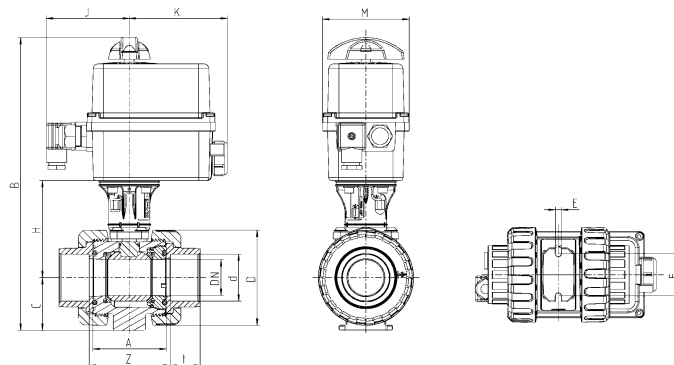
# Technical data electric EO 510

| Electric actuator EO510 |                                    |                      |
|-------------------------|------------------------------------|----------------------|
| Type                    | EO510 ECO-230                      | EO510 IND-24         |
| Nominal torque          | 7 Nm                               |                      |
| Peak torque             | 9 Nm                               |                      |
| Voltage                 | 230V AC                            | 12 - 24V DC / 24V AC |
| Frequency range         | 50 / 60Hz                          | DC / 50 / 60HZ       |
| Operating time          | 22 sec 90°                         | 12 sec 90°           |
| Power consumption       | 4W                                 |                      |
| Rotation angle          | 360° adjusted to 90°               |                      |
| Duty cycle              | 60% / max. 20 min                  |                      |
| Protection              | IP65                               |                      |
| Ambient temperature     | 0°C to + 50°C                      |                      |
| Weight                  | 0,7 kg                             |                      |
| Position indicator      | optically (manual override handle) |                      |
| Manual override         | integrated                         |                      |

## Electric connection:



# Dimensions electric EO ER

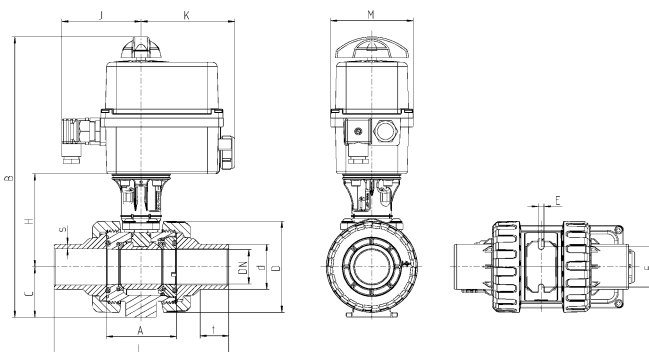


## Connector type

### PVDF fusion socket metric

(dimensions in mm)

| DN       | 10   | 15   | 20    | 25   | 32  | 40    | 50    | 65    | 80    | 80    |
|----------|------|------|-------|------|-----|-------|-------|-------|-------|-------|
| d        | 16   | 20   | 25    | 32   | 40  | 50    | 63    | 75    | 90    | 110   |
| A        | 61,5 | 61,5 | 69    | 73   | 83  | 94    | 109   | 131,5 | 156,5 | 156,5 |
| C        | 33   | 33   | 40    | 43,5 | 51  | 56,5  | 64,5  | 85    | 100   | 100   |
| D        | 56,5 | 56,5 | 67    | 73,5 | 90  | 105,5 | 124,5 | 157,5 | 192,5 | 192,5 |
| E        | 5,4  | 5,4  | 5,4   | 6,4  | 6,4 | 6,4   | 6,4   | 8,3   | 10,3  | 10,3  |
| F        | 34   | 34   | 36    | 38   | 40  | 45    | 50    | 65    | 80    | 80    |
| H        | 81   | 81   | 86,5  | 89,5 | 97  | 104,5 | 111,5 | 138,5 | 168   | 168   |
| t        | 14,5 | 16   | 17,5  | 19,5 | 22  | 25,5  | 29    | 34,5  | 38,5  | 42    |
| Z        | 69,5 | 97   | 78    | 84   | 97  | 113   | 136   | 158,5 | 205   | 163   |
| PN       | 16   | 16   | 16    | 16   | 16  | 16    | 16    | 16    | 16    | 16    |
| actuator | ER20 |      |       |      |     |       |       | ER60  |       |       |
| B        | 266  | 266  | 278,5 | 285  | 300 | 313   | 328   | 400   | 445   | 445   |
| J        | 90   | 90   | 90    | 90   | 90  | 90    | 90    | 98    | 98    | 98    |
| K        | 107  | 107  | 107   | 107  | 107 | 107   | 107   | 107   | 107   | 107   |
| M        | 92   | 92   | 92    | 92   | 92  | 92    | 92    | 128   | 128   | 128   |



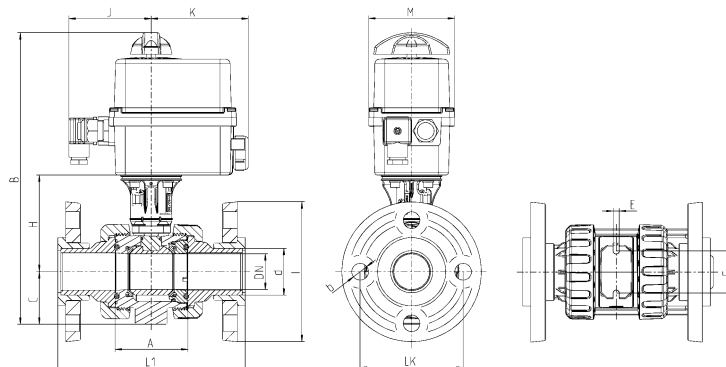
## Connector type

### PVDF fusion spigot metric

(dimensions in mm)

| DN       | 10   | 15    | 20    | 25   | 32   | 40    | 50    | 65    | 80    | 80    |
|----------|------|-------|-------|------|------|-------|-------|-------|-------|-------|
| d        | 16   | 20    | 25    | 32   | 40   | 50    | 63    | 75    | 90    | 110   |
| A        | 61,5 | 61,5  | 69    | 73   | 83   | 94    | 109   | 131,5 | 156,5 | 156,5 |
| C        | 33   | 33    | 40    | 43,5 | 51   | 56,5  | 64,5  | 85    | 100   | 100   |
| D        | 56,5 | 56,5  | 67    | 73,5 | 90   | 105,5 | 124,5 | 157,5 | 192,5 | 192,5 |
| E        | 5,4  | 5,4   | 5,4   | 6,4  | 6,4  | 6,4   | 6,4   | 8,3   | 10,3  | 10,3  |
| F        | 34   | 34    | 36    | 38   | 40   | 45    | 50    | 65    | 80    | 80    |
| H        | 81   | 81    | 86,5  | 89,5 | 97   | 104,5 | 111,5 | 138,5 | 168   | 168   |
| L        | 114  | 124,5 | 144,5 | 155  | 172  | 193   | 223   | 278   | 290,5 | 316,5 |
| s        | 1,9  | 1,9   | 1,9   | 2,4  | 2,4  | 3     | 3     | 3,6   | 4,3   | 5,3   |
| t        | 13   | 13,5  | 15,5  | 18,5 | 20,5 | 23,5  | 28,5  | 32    | 36    | 40    |
| PN       | 16   | 16    | 16    | 16   | 16   | 16    | 16    | 16    | 16    | 16    |
| actuator | ER20 |       |       |      |      |       |       | ER60  |       |       |
| B        | 266  | 266   | 278,5 | 285  | 300  | 313   | 328   | 400   | 445   | 445   |
| J        | 90   | 90    | 90    | 90   | 90   | 90    | 90    | 98    | 98    | 98    |
| K        | 107  | 107   | 107   | 107  | 107  | 107   | 107   | 107   | 107   | 107   |
| M        | 92   | 92    | 92    | 92   | 92   | 92    | 92    | 128   | 128   | 128   |

# Dimensions electric EO ER

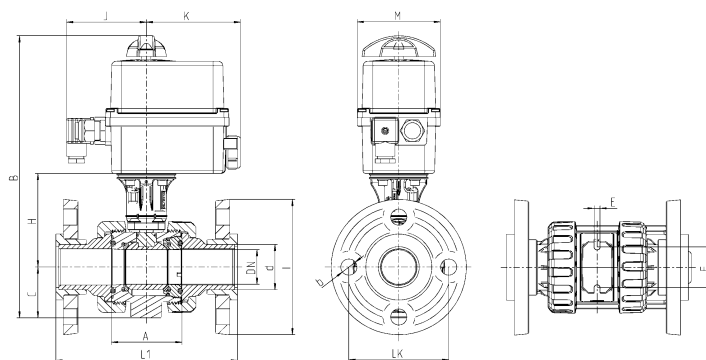


## Connector type

### PP-GF backing flange DIN with steel insert

(dimensions in mm)

| DN       | 15   | 20    | 25   | 32  | 40    | 50    | 65    | 80    | 80    |
|----------|------|-------|------|-----|-------|-------|-------|-------|-------|
| d        | 20   | 25    | 32   | 40  | 50    | 63    | 75    | 90    | 110   |
| A        | 61,5 | 69    | 73   | 83  | 94    | 109   | 131,5 | 156,5 | 156,5 |
| b        | 14   | 14    | 14   | 18  | 18    | 18    | 18    | 18    | 18    |
| C        | 33   | 40    | 43,5 | 51  | 56,5  | 64,5  | 85    | 100   | 100   |
| E        | 5,4  | 5,4   | 6,4  | 6,4 | 6,4   | 6,4   | 8,3   | 10,3  | 10,3  |
| F        | 34   | 36    | 38   | 40  | 45    | 50    | 65    | 80    | 80    |
| H        | 81   | 86,5  | 89,5 | 97  | 104,5 | 111,5 | 138,5 | 168   | 168   |
| I        | 95   | 108   | 115  | 140 | 150   | 165   | 186   | 202   | 220   |
| L1       | 203  | 225   | 236  | 253 | 274   | 308   | 420   | 380   | 437   |
| LK       | 65   | 75    | 85   | 100 | 110   | 125   | 145   | 160   | 180   |
| PN       | 16   | 16    | 16   | 16  | 16    | 16    | 16    | 16    | 16    |
| actuator | ER20 |       |      |     |       |       | ER60  |       |       |
| B        | 266  | 278,5 | 285  | 300 | 313   | 328   | 400   | 445   | 445   |
| J        | 90   | 90    | 90   | 90  | 90    | 90    | 98    | 98    | 98    |
| K        | 107  | 107   | 107  | 107 | 107   | 107   | 107   | 107   | 107   |
| M        | 92   | 92    | 92   | 92  | 92    | 92    | 128   | 128   | 128   |



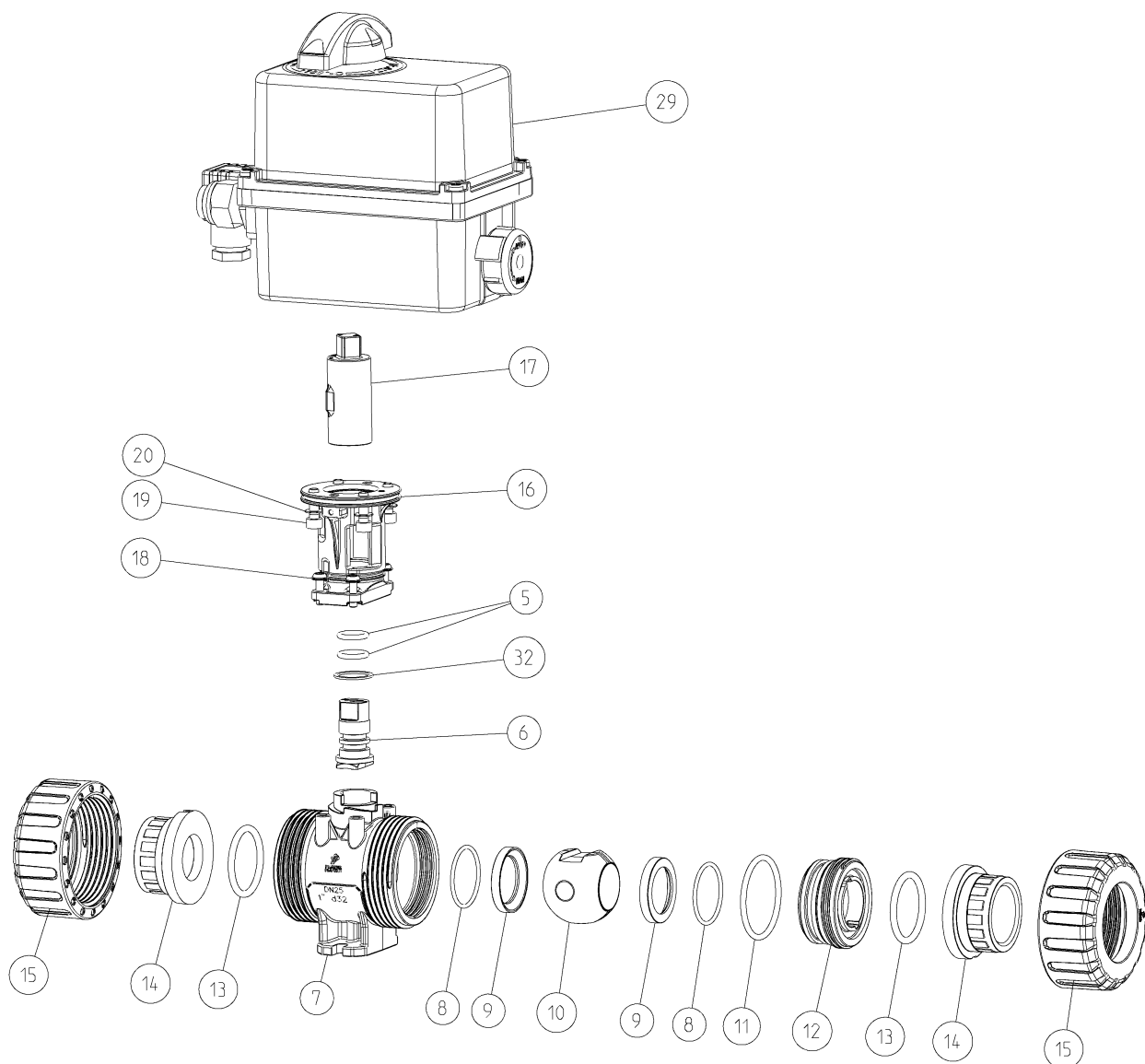
## Connector type

### PP-GF backing flange ANSI with steel insert

(dimensions in mm)

| DN       | 15   | 20    | 25   | 32     | 40     | 50    | 65     | 80    | 80    |
|----------|------|-------|------|--------|--------|-------|--------|-------|-------|
| d        | 20   | 25    | 32   | 40     | 50     | 63    | 75     | 90    | 110   |
| inch     | 1/2" | 3/4"  | 1"   | 1 1/4" | 1 1/2" | 2"    | 2 1/2" | 3"    | 4"    |
| A        | 61,5 | 69    | 73   | 83     | 94     | 109   | 131,5  | 156,5 | 156,5 |
| b        | 16   | 16    | 16   | 16     | 16     | 20    | 20     | 20    | 20    |
| C        | 33   | 40    | 43,5 | 51     | 56,5   | 64,5  | 85     | 100   | 100   |
| E        | 5,4  | 5,4   | 6,4  | 6,4    | 6,4    | 6,4   | 8,3    | 10,3  | 10,3  |
| F        | 34   | 36    | 38   | 40     | 45     | 50    | 65     | 80    | 80    |
| H        | 81   | 86,5  | 89,5 | 97     | 104,5  | 111,5 | 138,5  | 168   | 168   |
| I        | 95   | 102   | 114  | 130    | 133    | 162   | 184    | 194   | 229   |
| L1       | 203  | 225   | 236  | 253    | 274    | 308   | 420    | 380   | 437   |
| LK       | 60,4 | 69,8  | 79,3 | 89     | 98,5   | 120,6 | 139,7  | 152,4 | 190,5 |
| PN       | 16   | 16    | 16   | 16     | 16     | 16    | 16     | 16    | 16    |
| actuator | ER20 |       |      |        |        |       | ER60   |       |       |
| B        | 266  | 278,5 | 285  | 300    | 313    | 328   | 400    | 445   | 445   |
| J        | 90   | 90    | 90   | 90     | 90     | 90    | 98     | 98    | 98    |
| K        | 107  | 107   | 107  | 107    | 107    | 107   | 107    | 107   | 107   |
| M        | 92   | 92    | 92   | 92     | 92     | 92    | 128    | 128   | 128   |

# Exploded drawing electric EO ER

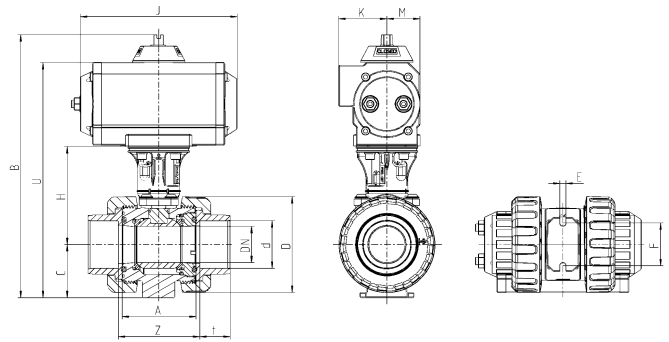


| No. | Description            | Material                | No. | Description               | Material          |
|-----|------------------------|-------------------------|-----|---------------------------|-------------------|
| 05. | O-ring                 | FPM                     | 15. | Union nut                 | PVDF              |
| 06. | Shaft                  | PVDF                    | 16. | Bracket                   | PA-GF             |
| 07. | Body                   | PVDF                    | 17. | Coupling shaft            | PA-GF             |
| 08. | O-ring                 | FPM                     | 18. | Screw                     | A2                |
| 09. | Ball seating joint     | PTFE                    | 19. | Screw                     | A4                |
| 10. | Ball                   | PVDF                    | 20. | Toothed washer            | A2 / A4 from DN65 |
| 11. | O-ring                 | FPM                     | 29. | Actuator                  | -                 |
| 12. | Thrust collar          | PVDF                    |     | Premier / Posi / Failsafe |                   |
| 13. | O-ring                 | FPM                     | 32. | Washer                    | PTFE              |
| 14. | Connector types        |                         |     |                           |                   |
|     | Fusion socket /-spigot | PVDF                    |     |                           |                   |
|     | Flange                 | PP-GF with steel insert |     |                           |                   |

## Technical data electric EO ER

| electric actuator   |                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                  |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                | ER20                                                                                                                                                                                                                                                                               | ER60                                                                                                                                                                                                                                                                             |
| Torque              | 20 Nm                                                                                                                                                                                                                                                                              | 60 Nm                                                                                                                                                                                                                                                                            |
| Voltage             | <p>Premier<br/>24V 50/60Hz (24V DC)<br/>100 - 240V 50/60Hz (100 – 350V DC)</p> <p>Posi<br/>15 – 30V AC 50/60 Hz (12V – 48V DC)<br/>100V – 240V AC 50/60 Hz (100 – 230V DC)</p> <p>Failsafe<br/>15 – 30V AC 50/60 Hz (24V – 48V DC)<br/>100V – 240V AC 50/60 Hz (100 – 230V DC)</p> | <p>Premier<br/>24V 50/60Hz (24V DC)<br/>90 - 240V 50/60Hz (90 – 350V DC)</p> <p>Posi<br/>15 – 30V AC 50/60 Hz (12V – 48V DC)<br/>100V – 240V AC 50/60 Hz (100 – 230V DC)</p> <p>Failsafe<br/>15 – 30V AC 50/60 Hz (24V – 48V DC)<br/>100V – 240V AC 50/60 Hz (100 – 230V DC)</p> |
| Operating time      | <p>Premier: 13s<br/>Failsafe / Posi: 11s</p>                                                                                                                                                                                                                                       | <p>Premier: 15s<br/>Failsafe / Posi: 12s</p>                                                                                                                                                                                                                                     |
| Power               | 15W                                                                                                                                                                                                                                                                                | 45W                                                                                                                                                                                                                                                                              |
| ISO flange          | F03-F04-F05                                                                                                                                                                                                                                                                        | F05-F07                                                                                                                                                                                                                                                                          |
| Star drive nut      | 14                                                                                                                                                                                                                                                                                 | 22                                                                                                                                                                                                                                                                               |
| Rotation angle      | 90°                                                                                                                                                                                                                                                                                | 90°                                                                                                                                                                                                                                                                              |
| Duration duty       | 30%                                                                                                                                                                                                                                                                                | 50%                                                                                                                                                                                                                                                                              |
| Protection          | <p>Premier: IP65<br/>Failsafe / Posi: IP66</p>                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                  |
| Ambient temperature | <p>Premier / Posi: -10°C bis +55°C<br/>Failsafe: -10°C bis +40°C</p>                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                  |
| Weight              | 1 kg                                                                                                                                                                                                                                                                               | 2,1 kg                                                                                                                                                                                                                                                                           |

# Dimensions pneumatic



## Connector type

### PVDF fusion socket metric

(dimensions in mm)

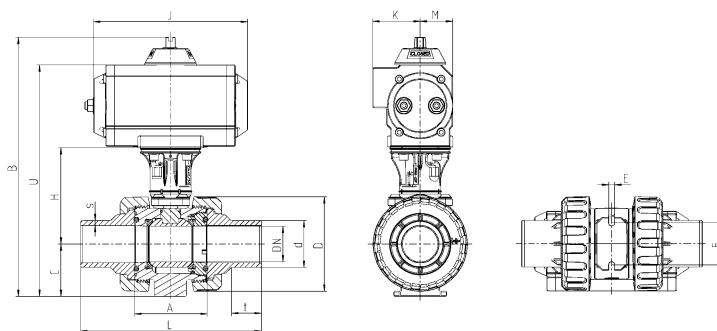
| DN       | 10       | 15   | 20    | 25   | 32     | 40    | 50     | 65     | 80     | 80    |
|----------|----------|------|-------|------|--------|-------|--------|--------|--------|-------|
| d        | 16       | 20   | 25    | 32   | 40     | 50    | 63     | 75     | 90     | 110   |
| A        | 61,5     | 61,5 | 69    | 73   | 83     | 94    | 109    | 131,5  | 156,5  | 156,5 |
| C        | 33       | 33   | 40    | 43,5 | 51     | 56,5  | 64,5   | 85     | 100    | 100   |
| D        | 56,5     | 56,5 | 67    | 73,5 | 90     | 105,5 | 124,5  | 157,5  | 192,5  | 192,5 |
| E        | 5,4      | 5,4  | 5,4   | 6,4  | 6,4    | 6,4   | 6,4    | 8,3    | 10,3   | 10,3  |
| F        | 34       | 34   | 36    | 38   | 40     | 45    | 50     | 65     | 80     | 80    |
| H        | 81       | 81   | 86,5  | 89,5 | 97     | 104,5 | 111,5  | 138,5  | 168    | 168   |
| t        | 14,5     | 16   | 17,5  | 19,5 | 22     | 25,5  | 29     | 34,5   | 38,5   | 42    |
| Z        | 69,5     | 67   | 78    | 84   | 97     | 113   | 136    | 158,5  | 205    | 163   |
| PN       | 16       | 16   | 16    | 16   | 16     | 16    | 16     | 16     | 16     | 16    |
| actuator | UT05DA*  |      |       |      | UT15DA |       |        | UT20DA |        |       |
| B        | 214      | 214  | 226,5 | 233  | 269    | 282   | 297    | 366,5  | 411    | 411   |
| J        | 119      | 119  | 119   | 119  | 165    | 165   | 165    | 178    | 178    | 178   |
| K        | 40       | 40   | 40    | 40   | 50     | 50    | 50     | 53     | 53     | 53    |
| M        | 27       | 27   | 27    | 27   | 35     | 35    | 35     | 43     | 43     | 43    |
| U        | 185      | 185  | 197,5 | 204  | 239    | 252   | 267    | 336,5  | 381    | 381   |
| actuator | UT05SR** |      |       |      | UT15SR |       | UT17SR | UT30SR | UT35SR |       |
| B        | 214      | 214  | 226,5 | 233  | 269    | 282   | 297    | 385,5  | 463,5  | 463,5 |
| J        | 119      | 119  | 119   | 119  | 165    | 165   | 197    | 230    | 246    | 246   |
| K        | 40       | 40   | 40    | 40   | 50     | 50    | 50     | 61,5   | 72,5   | 72,5  |
| M        | 27       | 27   | 27    | 27   | 35     | 35    | 35     | 52     | 65,5   | 65,5  |
| U        | 185      | 185  | 197,5 | 204  | 239    | 252   | 267    | 355,5  | 434    | 434   |

\*DA ... double acting (PO-DA)

\*\*SR ... spring return (PO-NC / PO-NO)

We recommend using a damper and supporting the actuator accordingly when installing the valve in a vertical position  
Additional information and dimensions for solenoid valve and position feedback see accessories and spare parts

# Dimensions pneumatic



## Connector type

### PVDF fusion spigot metric

(dimensions in mm)

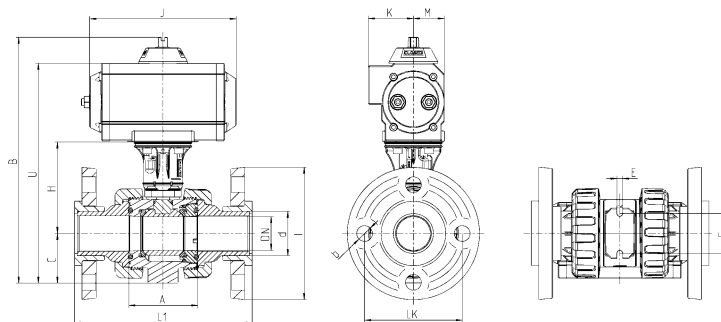
| DN       | 10     | 15    | 20    | 25   | 32     | 40    | 50     | 65    | 80    | 80    |
|----------|--------|-------|-------|------|--------|-------|--------|-------|-------|-------|
| d        | 16     | 20    | 25    | 32   | 40     | 50    | 63     | 75    | 90    | 110   |
| A        | 61,5   | 61,5  | 69    | 73   | 83     | 94    | 109    | 131,5 | 156,5 | 156,5 |
| C        | 33     | 33    | 40    | 43,5 | 51     | 56,5  | 64,5   | 85    | 100   | 100   |
| D        | 56,5   | 56,5  | 67    | 73,5 | 90     | 105,5 | 124,5  | 157,5 | 192,5 | 192,5 |
| E        | 5,4    | 5,4   | 5,4   | 6,4  | 6,4    | 6,4   | 6,4    | 8,3   | 10,3  | 10,3  |
| F        | 34     | 34    | 36    | 38   | 40     | 45    | 50     | 65    | 80    | 80    |
| H        | 81     | 81    | 86,5  | 89,5 | 97     | 104,5 | 111,5  | 138,5 | 168   | 168   |
| L        | 114    | 124,5 | 144,5 | 155  | 172    | 193   | 223    | 278   | 290,5 | 316,5 |
| s        | 1,9    | 1,9   | 1,9   | 2,4  | 2,4    | 3     | 3      | 3,6   | 4,3   | 5,3   |
| t        | 13     | 13,5  | 15,5  | 18,5 | 20,5   | 23,5  | 28,5   | 32    | 36    | 40    |
| PN       | 16     | 16    | 16    | 16   | 16     | 16    | 16     | 16    | 16    | 16    |
| actuator | UT05DA |       |       |      | UT15DA |       |        |       |       |       |
| B        | 214    | 214   | 226,5 | 233  | 269    | 282   | 297    | 366,5 | 411   | 411   |
| J        | 119    | 119   | 119   | 119  | 165    | 165   | 165    | 178   | 178   | 178   |
| K        | 40     | 40    | 40    | 40   | 50     | 50    | 50     | 53    | 53    | 53    |
| M        | 27     | 27    | 27    | 27   | 35     | 35    | 35     | 43    | 43    | 43    |
| U        | 185    | 185   | 197,5 | 204  | 239    | 252   | 267    | 336,5 | 381   | 381   |
| actuator | UT05SR |       |       |      | UT15SR |       | UT17SR |       |       |       |
| B        | 214    | 214   | 226,5 | 233  | 269    | 282   | 297    | 385,5 | 463,5 | 463,5 |
| J        | 119    | 119   | 119   | 119  | 165    | 165   | 197    | 230   | 246   | 246   |
| K        | 40     | 40    | 40    | 40   | 50     | 50    | 50     | 61,5  | 72,5  | 72,5  |
| M        | 27     | 27    | 27    | 27   | 35     | 35    | 35     | 52    | 65,5  | 65,5  |
| U        | 185    | 185   | 197,5 | 204  | 239    | 252   | 267    | 355,5 | 434   | 434   |

\*DA ... double acting (PO-DA)

\*\*SR ... spring return (PO-NC / PO-NO)

We recommend using a damper and supporting the actuator accordingly when installing the valve in a vertical position  
Additional information and dimensions for solenoid valve and position feedback see accessories and spare part

# Dimensions pneumatic



## Connector types

### PP-GF backing flange DIN with steel insert

(dimensions in mm)

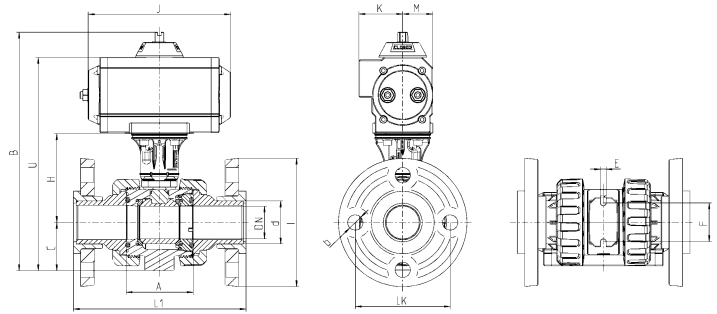
| DN       | 15     | 20    | 25   | 32     | 40    | 50     | 65     | 80     | 80    |
|----------|--------|-------|------|--------|-------|--------|--------|--------|-------|
| d        | 20     | 25    | 32   | 40     | 50    | 63     | 75     | 90     | 110   |
| A        | 61,5   | 69    | 73   | 83     | 94    | 109    | 131,5  | 156,5  | 156,5 |
| b        | 14     | 14    | 14   | 18     | 18    | 18     | 18     | 18     | 18    |
| C        | 33     | 40    | 43,5 | 51     | 56,5  | 64,5   | 85     | 100    | 100   |
| E        | 5,4    | 5,4   | 6,4  | 6,4    | 6,4   | 6,4    | 8,3    | 10,3   | 10,3  |
| F        | 34     | 36    | 38   | 40     | 45    | 50     | 65     | 80     | 80    |
| H        | 81     | 86,5  | 89,5 | 97     | 104,5 | 111,5  | 138,5  | 168    | 168   |
| I        | 95     | 108   | 115  | 140    | 150   | 165    | 186    | 202    | 220   |
| L1       | 203    | 225   | 236  | 253    | 274   | 308    | 420    | 380    | 437   |
| LK       | 65     | 75    | 85   | 100    | 110   | 125    | 145    | 160    | 180   |
| PN       | 16     | 16    | 16   | 16     | 16    | 16     | 16     | 16     | 16    |
| actuator | UT05DA |       |      | UT15DA |       |        | UT20DA |        |       |
| B        | 214    | 226,5 | 233  | 269    | 282   | 297    | 366,5  | 411    | 411   |
| J        | 119    | 119   | 119  | 165    | 165   | 165    | 178    | 178    | 178   |
| K        | 40     | 40    | 40   | 50     | 50    | 50     | 53     | 53     | 53    |
| M        | 27     | 27    | 27   | 35     | 35    | 35     | 43     | 43     | 43    |
| U        | 185    | 197,5 | 204  | 239    | 252   | 267    | 336,5  | 381    | 381   |
| actuator | UT05SR |       |      | UT15SR |       | UT17SR | UT30SR | UT35SR |       |
| B        | 214    | 226,5 | 233  | 269    | 282   | 297    | 385,5  | 463,5  | 463,5 |
| J        | 119    | 119   | 119  | 165    | 165   | 197    | 230    | 246    | 246   |
| K        | 40     | 40    | 40   | 50     | 50    | 50     | 61,5   | 72,5   | 72,5  |
| M        | 27     | 27    | 27   | 35     | 35    | 35     | 52     | 65,5   | 65,5  |
| U        | 185    | 197,5 | 204  | 239    | 252   | 267    | 355,5  | 434    | 434   |

\*DA ... double acting (PO-DA)

\*\*SR ... spring return (PO-NC / PO-NO)

We recommend using a damper and supporting the actuator accordingly when installing the valve in a vertical position  
Additional information and dimensions for solenoid valve and position feedback see accessories and spare parts

## Dimensions pneumatic



### Connector type

### PP-GF backing flange ANSI with steel insert

(dimensions in mm)

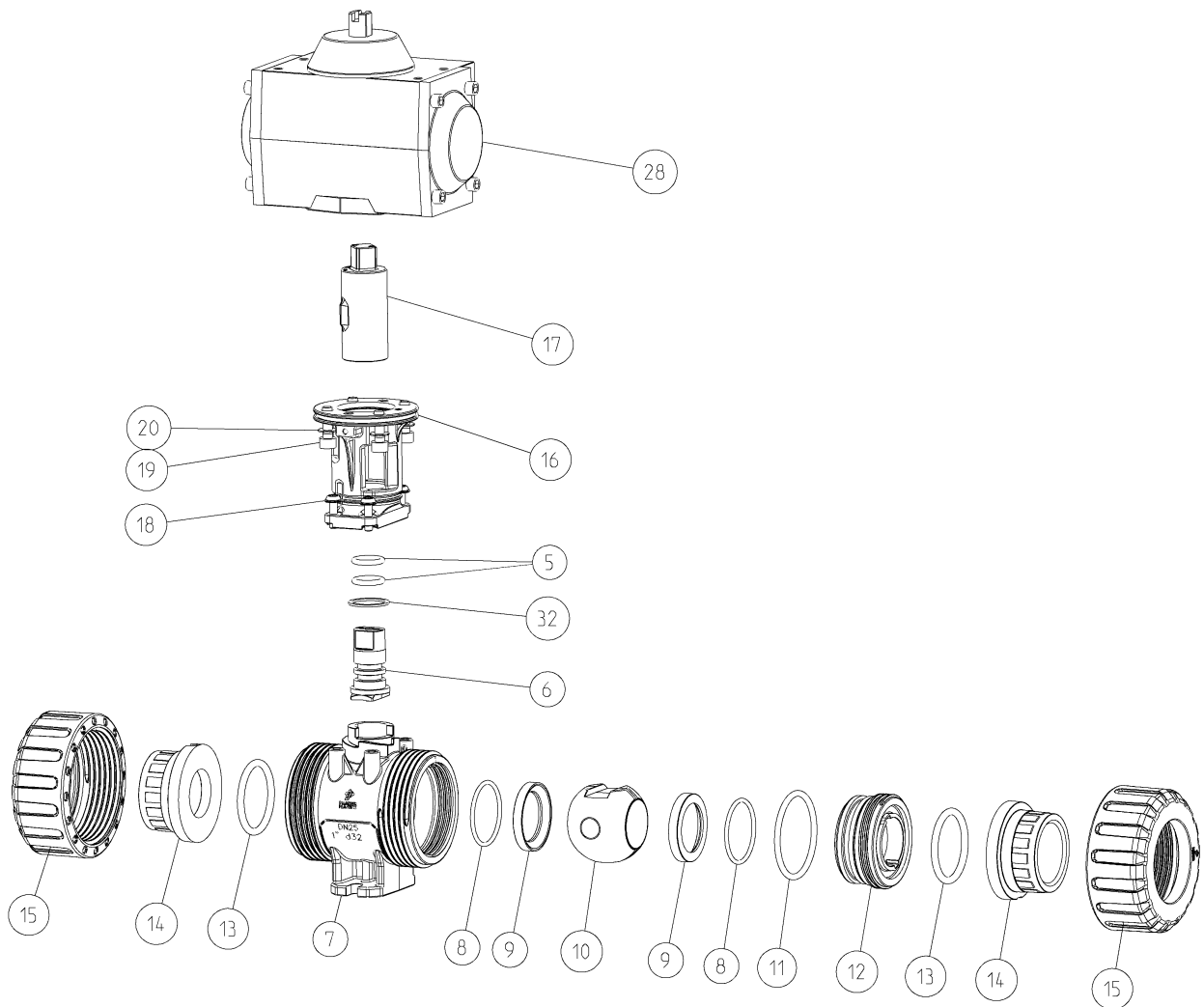
|          |        |       |      |        |       |        |        |        |       |
|----------|--------|-------|------|--------|-------|--------|--------|--------|-------|
| DN       | 15     | 20    | 25   | 32     | 40    | 50     | 65     | 80     | 80    |
| d        | 20     | 25    | 32   | 40     | 50    | 63     | 75     | 90     | 110   |
| A        | 61,5   | 69    | 73   | 83     | 94    | 109    | 131,5  | 156,5  | 156,5 |
| b        | 16     | 16    | 16   | 16     | 16    | 20     | 20     | 20     | 20    |
| C        | 33     | 40    | 43,5 | 51     | 56,5  | 64,5   | 85     | 100    | 100   |
| E        | 5,4    | 5,4   | 6,4  | 6,4    | 6,4   | 6,4    | 8,3    | 10,3   | 10,3  |
| F        | 34     | 36    | 38   | 40     | 45    | 50     | 65     | 80     | 80    |
| H        | 81     | 86,5  | 89,5 | 97     | 104,5 | 111,5  | 138,5  | 168    | 168   |
| I        | 95     | 102   | 114  | 130    | 133   | 162    | 184    | 194    | 229   |
| L1       | 203    | 225   | 236  | 253    | 274   | 308    | 420    | 380    | 437   |
| LK       | 60,4   | 69,8  | 79,3 | 89     | 98,5  | 120,6  | 139,7  | 152,4  | 190,5 |
| PN       | 16     | 16    | 16   | 16     | 16    | 16     | 16     | 16     | 16    |
| actuator | UT05DA |       |      | UT15DA |       |        | UT20DA |        |       |
| B        | 214    | 226,5 | 233  | 269    | 282   | 297    | 366,5  | 411    | 411   |
| J        | 119    | 119   | 119  | 165    | 165   | 165    | 178    | 178    | 178   |
| K        | 40     | 40    | 40   | 50     | 50    | 50     | 53     | 53     | 53    |
| M        | 27     | 27    | 27   | 35     | 35    | 35     | 43     | 43     | 43    |
| U        | 185    | 197,5 | 204  | 239    | 252   | 267    | 336,5  | 381    | 381   |
| actuator | UT05SR |       |      | UT15SR |       | UT17SR | UT30SR | UT35SR |       |
| B        | 214    | 226,5 | 233  | 269    | 282   | 297    | 385,5  | 463,5  | 463,5 |
| J        | 119    | 119   | 119  | 165    | 165   | 197    | 230    | 246    | 246   |
| K        | 40     | 40    | 40   | 50     | 50    | 50     | 61,5   | 72,5   | 72,5  |
| M        | 27     | 27    | 27   | 35     | 35    | 35     | 52     | 65,5   | 65,5  |
| U        | 185    | 197,5 | 204  | 239    | 252   | 267    | 335,5  | 434    | 434   |

\*DA ... double acting (PO-DA)

\*\*SR ... spring return (PO-NC / PO-NO)

We recommend using a damper and supporting the actuator accordingly when installing the valve in a vertical position  
Additional information and dimensions for solenoid valve and position feedback see accessories and spare parts

# Exploded drawing pneumatic



| No. | Description            | Material                | No. | Description    | Material          |
|-----|------------------------|-------------------------|-----|----------------|-------------------|
| 05. | O-ring                 | FPM                     | 15. | Union nut      | PVDF              |
| 06. | Shaft                  | PVDF                    | 16. | Bracket        | PA-GF             |
| 07. | Body                   | PVDF                    | 17. | Coupling shaft | PA-GF             |
| 08. | O-ring                 | FPM                     | 18. | Screw          | A2                |
| 09. | Ball seating joint     | PTFE                    | 19. | Screw          | A4                |
| 10. | Ball                   | PVDF                    | 20. | Toothed washer | A2 / A4 from DN65 |
| 11. | O-ring                 | FPM                     | 28. | Actuator       | -                 |
| 12. | Thrust collar          | PVDF                    | 32. | Washer         | PTFE              |
| 13. | O-ring                 | FPM                     |     |                |                   |
| 14. | Connector types        |                         |     |                |                   |
|     | Fusion socket /-spigot | PVDF                    |     |                |                   |
|     | Flange                 | PP-GF with steel insert |     |                |                   |

# Technical data pneumatic

## Technical features of pneumatic actuator

### Description actuator:

Piston actuation with two opposed pistons, power transmission with tooth rack, seal elastic

### Material actuator:

- o Body: aluminium anodized
- o End caps: aluminium epoxy powder
- o Screw / nuts: stainless steel

**Ambient temperature:** -20°C to +80°C

### Control fluid:

Filtered air according to PNEUROP/ISO class 4 – Thread ¼"

**Mounting:** in every possible direction

### Control function / control pressure:

DA: double acting / max. 10 bar

SR: spring return / max. 8 bar

### Rotation angle:

90°; adjustment in both directions from -10° to +10° (UT15 and bigger)

### Control function:

- o actuator – valve: ISO 5211
- o actuator – valve: NAMUR (VDI/VDE 3845)
- o actuator – limit switch box: NAMUR (VDI/VDE 3845)

## AIR CONSUMPTION (FULL CYCLE)

### DA DOUBLE ACTING

| Antrieb | UT05 DA | UT15 DA | UT20 DA |
|---------|---------|---------|---------|
| N. Lt.  | 0,22    | 0,41    | 0,71    |

## AIR CONSUMPTION (FULL CYCLE)

### SR SPRING RETURN

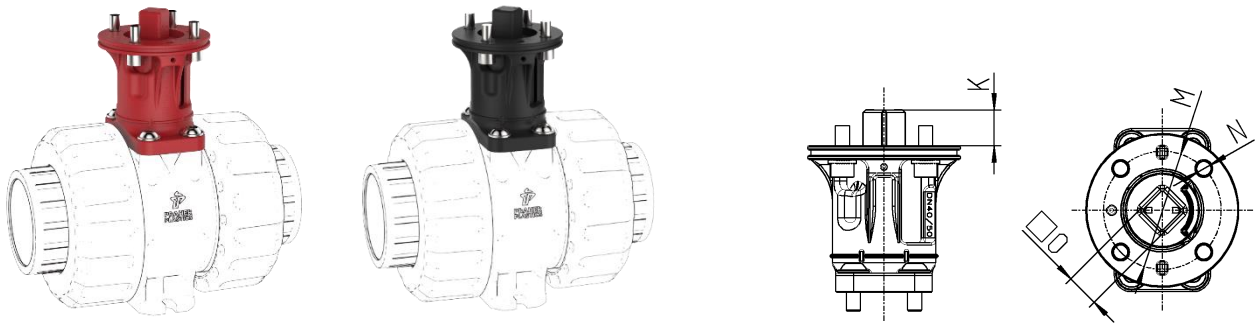
| Antrieb | UT05 SR | UT15 SR | UT17 SR | UT30 SR | UT35 SR |
|---------|---------|---------|---------|---------|---------|
| N. Lt.  | 0,13    | 0,18    | 0,25    | 0,65    | 1,2     |

# Accessories / spare parts

## Adapter set for automation electric or pneumatic

Consist of:

- Bracket for mounting of actuator and position feedback
- Coupling for actuator
- Screws for mounting on ball valve and actuator



dimensions in mm

| DN | 10  | 15  | 20  | 25  | 32  | 40  | 50  | 65  | 80  | 80  |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| d  | 16  | 20  | 25  | 32  | 40  | 50  | 63  | 75  | 90  | 110 |
| K  | 11  | 11  | 11  | 11  | 15  | 15  | 15  | 18  | 18  | 18  |
| M  | 42  | 42  | 42  | 42  | 50  | 50  | 50  | 70  | 70  | 70  |
| N  | 5,5 | 5,5 | 5,5 | 5,5 | 6,5 | 6,5 | 6,5 | 8,5 | 8,5 | 8,5 |
| O  | 11  | 11  | 11  | 11  | 14  | 14  | 14  | 17  | 17  | 17  |

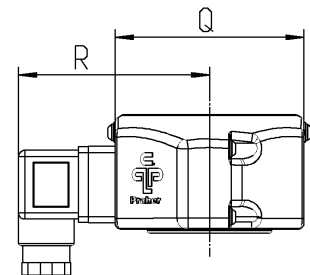
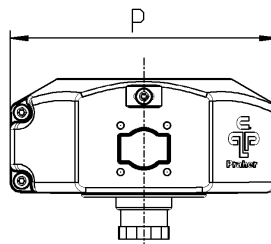
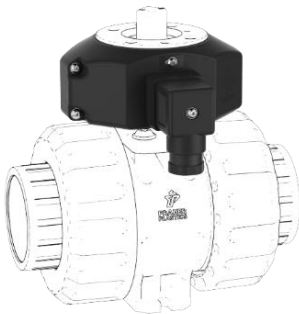
|                                |  |  |
|--------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Material                       | PP-GF                                                                               | PA-GF                                                                                 |
| Product line                   | chemical resistance                                                                 | high durability                                                                       |
| Acid resistance                | ++                                                                                  | 0                                                                                     |
| Tensile modulus of elasticity  | +                                                                                   | ++                                                                                    |
| Flexural modulus of elasticity | +                                                                                   | +++                                                                                   |
| Notch impact strength (23°C)   | +                                                                                   | +                                                                                     |
| Main applications              | Electrolysis<br>Acid applications<br>Chrome, Copper, hydrofluoric acid              | Water applications<br>Ultrafiltration<br>Semiconductor industry                       |
| Recommended installation       | Horizontal                                                                          | Horizontal<br>Vertical (support the actuator)                                         |
| Recommended maintenance        | Short maintenance intervals                                                         | Regular inspections                                                                   |
| Recommended accessories        | Silencer for pneumatic actuator                                                     |                                                                                       |
| M1 Ball Valve                  | PVC-U / PP-H / PVDF                                                                 |                                                                                       |
| ISO 5211                       | F04 / F05 / F07                                                                     |                                                                                       |

# Accessories / spare parts

## Half shell set with position feedback for hand operated and automatic ball valves

Consist of:

- Half shells including limit switch mechanical or inductive
- Device plug
- Screws for half shells
- Locking screws for adjusting position feedback



dimensions in mm

| DN | 10 | 15 | 20  | 25  | 32  | 40  | 50  | 65  | 80  | 80  |
|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|
| d  | 16 | 20 | 25  | 32  | 40  | 50  | 63  | 75  | 90  | 110 |
| P  | 98 | 98 | 102 | 102 | 105 | 105 | 105 | 116 | 116 | 116 |
| Q  | 64 | 64 | 64  | 64  | 74  | 74  | 74  | 99  | 99  | 99  |
| R  | 70 | 70 | 70  | 70  | 75  | 75  | 75  | 88  | 88  | 88  |

## Feedback set for hand operated ball valve DN10 – DN80 d110



Consist of:

- Half shells including limit switch mechanical or inductive
- Cover
- Coupling for handle
- Device plug
- Screws for half shells
- Locking screws for adjusting position feedback
- Screws for mounting on the ball valve

# Accessories / spare parts

## Feedback set for automatic ball valve DN10 – DN80 d110



Consist of:

- Half shells including limit switch mechanical or inductive
- Coupling for actuator
- Device plug
- Screws for half shells
- Locking screws for adjusting position feedback
- Screws for mounting on the ball valve and actuator

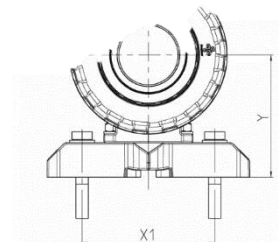
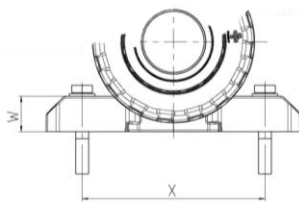
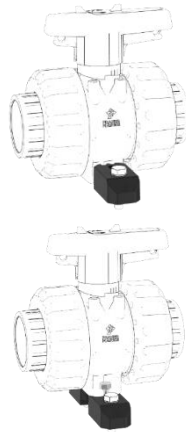
## Clamping and spacing element

Use for mounting as a clamping element

- Floor / ceiling / wall
- Plate
- Additional screws necessary

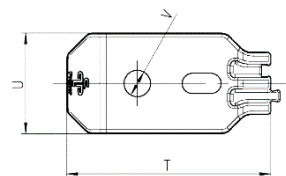
Use for mounting as a spacing element

- for flange connection
- additional screws necessary



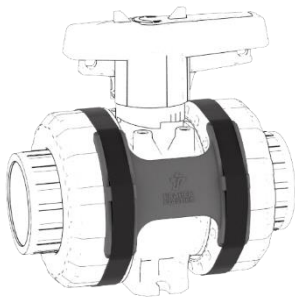
dimensions in mm

| DN | 10  | 15  | 20  | 25  | 32  | 40  | 50  |
|----|-----|-----|-----|-----|-----|-----|-----|
| d  | 16  | 20  | 25  | 32  | 40  | 50  | 63  |
| T  | 54  | 54  | 54  | 65  | 65  | 65  | 65  |
| U  | 25  | 25  | 25  | 32  | 32  | 32  | 32  |
| V  | 6,5 | 6,5 | 6,5 | 8,5 | 8,5 | 8,5 | 8,5 |
| W  | 16  | 16  | 16  | 22  | 22  | 22  | 22  |
| X  | 90  | 90  | 94  | 107 | 109 | 114 | 119 |
| X1 | 70  | 70  | 70  | 85  | 85  | 85  | 85  |
| Y  | 49  | 49  | 56  | 65  | 73  | 78  | 86  |



# Accessories / spare parts

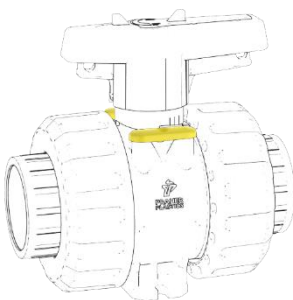
## Union nut locking for ball valve DN10 – DN80 d110



Consist of:

- Plate for PVC-U or PP-H / PVDF ball valve
- Velcro straps for fixation

## Cover for ball valve DN10 – DN80 d110

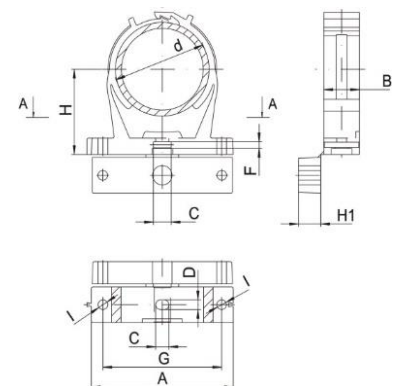


Consist of:

- Cover for PVC-U, PP-H and PVDF ball valve
- Pack unit 50 pieces
- Including eyelet for marking



## Pipe clip type B



dimensions in mm

| d  | 20 - 23<br>1/2" | 25 - 28<br>3/4" | 31 - 35<br>1" | 39 - 43<br>1 1/4" | 47 - 51<br>1 1/2" | 60 - 65<br>2" | 72 - 80<br>2 1/2" | 87 - 95<br>3" |
|----|-----------------|-----------------|---------------|-------------------|-------------------|---------------|-------------------|---------------|
| A  | 56              | 61              | 67            | 80                | 84,5              | 96,5          | 126               | 137           |
| B  | 14              | 16              | 16            | 17,5              | 20                | 24            | 26                | 26            |
| C  | 9               | 9               | 9             | 9                 | 9                 | 9             | 12                | 12            |
| D  | 6,5             | 6,5             | 6,5           | 6,5               | 6,5               | 6,5           | 8,5               | 8,5           |
| F  | 3,5             | 3,5             | 3,5           | 3,5               | 3,5               | 3,5           | 4,3               | 4,3           |
| G  | 41              | 47              | 52            | 64                | 70                | 80            | 106               | 117           |
| H  | 27              | 30              | 31,5          | 37                | 41                | 49            | 70                | 80            |
| H1 | 6               | 10              | 11,5          | 14                | 15                | 15            | 15                | 20            |
| I  | 6,5             | 6,5             | 6,5           | 6,5               | 6,5               | 6,5           | 8,5               | 8,5           |

# Accessories / spare parts

## PLS – Praher Labeling System

### Features

- Clear and durable label
- Convenient marking by touch-up pen or laser engraving
- Standard version in yellow, blue, green and red
- Simple and easy to change
- Corrosion-resistant
- No effect on the function of the handle



## Limit switch box for pneumatic actuator

### General

- Limit switch box with two mechanical switches
- Protection IP65
- Cable gland M20\*1,5

### Material

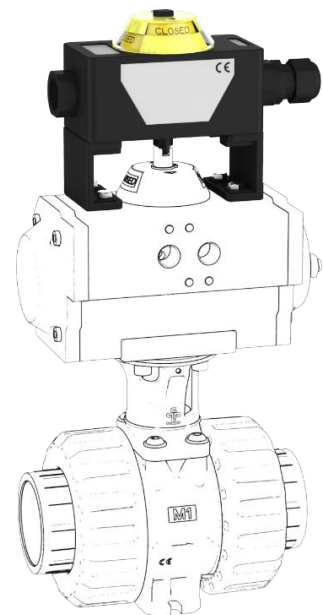
- Body: polycarbonat black
- Cover: polycarbonat clear
- Mounting bracket and screws: stainless steel
- Seals: EPDM

### Voltage

- 1 – 250V

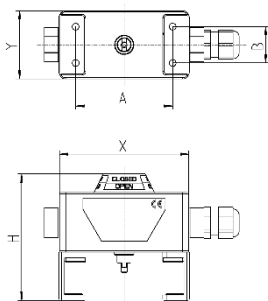
### Current

- 16 A (250V AC)
- 2,5 A (24 DC)



dimensions in mm

| A  | B  | H   | X   | Y  |
|----|----|-----|-----|----|
| 80 | 30 | 110 | 107 | 56 |



# Accessories / spare parts

## Solenoid valve

### General

- Solenoid valve NAMUR with combined 5/2- and 3/2- ways function and standard coil
- Easy switch from 5/2- to 3/2- ways by turning the sealing plate
- Manual override as standard
- Protection IP65

### Material

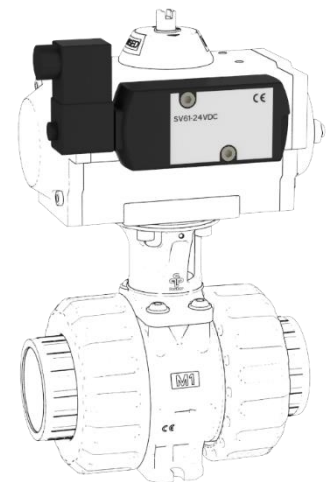
- Body: aluminium anodized
- Piston: aluminium
- Seals: NBR
- Screws and spring: stainless steel

### Voltage

- 24 V DC (3W)
- 230 V AC (5VA)

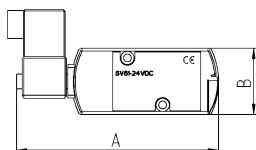
### Accessories

- Flow control silencer
- Silencer



dimensions in mm

| A   | B  | C  |
|-----|----|----|
| 139 | 45 | 33 |



# Accessories / spare parts

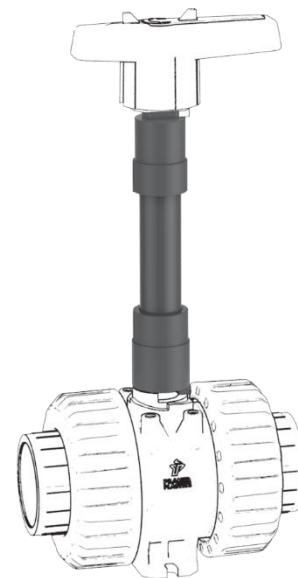
## Handle elongation

|                            |                  |
|----------------------------|------------------|
| Material:                  | PVC-U            |
| Dimensions:                | DN10 – DN80 d110 |
| Standard pipe length:      | 200 mm           |
| Max. pipe length possible: | 1 m              |

### Features

- Simple assembly by gluing the handle- and shaft-coupling with a metric pipe
- Marking on handle- and shaft-coupling for alignment to the ball valve
- Subsequent installation in existing installation possible
- Direction arrows on the handle coupling show the flow direction of the ball valve when handle is removed

Further details see data sheet for handle extension 2W and 3W ball valve



## 2-Wege modularer Industriekugelhahn M1, silikonfrei

### 2-way modular ball valve M1, silicone free



#### Kugelhahn 2W M1 metrisch

- PVDF-Schweißmuffe
- Sitzdichtung: PTFE
- einzeln verpackt

#### Ball Valve 2W M1 metric

- PVDF fusion socket ends
- seat-sealing: PTFE
- single packed

Code  
60M

| d   | DN | PN | VE<br>Pack | FPM    |
|-----|----|----|------------|--------|
| 16  | 10 | 16 | 9          | 124091 |
| 20  | 15 | 16 | 9          | 124092 |
| 25  | 20 | 16 | 8          | 124093 |
| 32  | 25 | 16 | 8          | 124094 |
| 40  | 32 | 16 | 8          | 124095 |
| 50  | 40 | 16 | 6          | 124096 |
| 63  | 50 | 16 | 4          | 124097 |
| 75  | 65 | 16 | 1          | 124292 |
| 90  | 80 | 16 | 1          | 124293 |
| 110 | 80 | 16 | 1          | 124294 |



#### Kugelhahn 2W M1 metrisch

- PVDF-Schweißstutzen
- Sitzdichtung: PTFE
- einzeln verpackt

#### Ball Valve 2W M1 metric

- PVDF fusion spigot
- seat-sealing: PTFE
- single packed

Code  
60M

| d   | DN | PN | VE<br>Pack | FPM    |
|-----|----|----|------------|--------|
| 16  | 10 | 16 | 9          | 124105 |
| 20  | 15 | 16 | 9          | 124106 |
| 25  | 20 | 16 | 8          | 124107 |
| 32  | 25 | 16 | 8          | 124108 |
| 40  | 32 | 16 | 8          | 124109 |
| 50  | 40 | 16 | 6          | 124110 |
| 63  | 50 | 16 | 4          | 124111 |
| 75  | 65 | 16 | 1          | 124295 |
| 90  | 80 | 16 | 1          | 124296 |
| 110 | 80 | 16 | 1          | 124297 |



#### Kugelhahn 2W M1 BSP

- Gewindemuffe R
- Sitzdichtung: PTFE
- einzeln verpackt

#### Ball Valve 2W M1 BSP

- female thread socket ends R
- seat-sealing: PTFE
- single packed

Code  
60M

| d      | DN | PN | VE<br>Pack | FPM    |
|--------|----|----|------------|--------|
| 3/8"   | 10 | 16 | 9          | 210390 |
| 1/2"   | 15 | 16 | 9          | 210391 |
| 3/4"   | 20 | 16 | 8          | 210392 |
| 1"     | 25 | 16 | 8          | 210393 |
| 1 1/4" | 32 | 16 | 8          | 210394 |
| 1 1/2" | 40 | 16 | 6          | 210395 |
| 2"     | 50 | 16 | 4          | 210396 |



#### Kugelhahn 2W M1 NPT

- Gewindemuffe R
- Sitzdichtung: PTFE
- einzeln verpackt

#### Ball Valve 2W M1 NPT

- female thread socket ends R
- seat-sealing: PTFE
- single packed

Code  
60M

| d      | DN | PN | VE<br>Pack | FPM    |
|--------|----|----|------------|--------|
| 3/8"   | 10 | 16 | 9          | 210397 |
| 1/2"   | 15 | 16 | 9          | 210398 |
| 3/4"   | 20 | 16 | 8          | 210399 |
| 1"     | 25 | 16 | 8          | 210400 |
| 1 1/4" | 32 | 16 | 8          | 210401 |
| 1 1/2" | 40 | 16 | 6          | 210402 |
| 2"     | 50 | 16 | 4          | 210403 |

## 2-Wege modularer Industriekugelhahn M1, silikonfrei

### 2-way modular ball valve M1, silicone free



#### Kugelhahn 2W M1 DIN

- Losflansch
- Sitzdichtung: PTFE
- lang
- einzeln verpackt

#### Ball Valve 2W M1 DIN

- Backing flange
- seat-sealing: PTFE
- long
- single packed

Code  
60M

| d   | DN | PN | VE<br>Pack | FPM    |
|-----|----|----|------------|--------|
| 20  | 15 | 16 | 9          | 124177 |
| 25  | 20 | 16 | 8          | 124178 |
| 32  | 25 | 16 | 6          | 124179 |
| 40  | 32 | 16 | 4          | 124180 |
| 50  | 40 | 16 | 4          | 124181 |
| 63  | 50 | 16 | 2          | 124182 |
| 75  | 65 | 16 | 1          | 210611 |
| 90  | 80 | 16 | 1          | 210612 |
| 110 | 80 | 16 | 1          | 210613 |



#### Kugelhahn 2W M1 ANSI

- Losflansch
- Sitzdichtung: PTFE
- lang
- einzeln verpackt

#### Ball Valve 2W M1 ANSI

- Backing flange
- seat-sealing: PTFE
- long
- single packed

Code  
60M

| d      | DN | PN | VE<br>Pack | FPM    |
|--------|----|----|------------|--------|
| 1/2"   | 15 | 16 | 9          | 124183 |
| 3/4"   | 20 | 16 | 8          | 124184 |
| 1"     | 25 | 16 | 6          | 124185 |
| 1 1/4" | 32 | 16 | 4          | 124186 |
| 1 1/2" | 40 | 16 | 4          | 124187 |
| 2"     | 50 | 16 | 2          | 124188 |
| 2 1/2" | 65 | 16 | 1          | 210614 |
| 3"     | 80 | 16 | 1          | 210615 |
| 4"     | 80 | 16 | 1          | 210616 |

## 2-Wege modularer Industriekugelhahn M1 Adapterset, silikonfrei

### 2-way modular ball valve M1 Adapter Set, silicone free



#### Kugelhahn 2W M1 metrisch

- PVDF-Schweißmuffe
- Sitzdichtung: PTFE
- einzeln verpackt

#### Ball Valve 2W M1 metric

- PVDF fusion socket ends
- seat-sealing: PTFE
- single packed

Code  
60M

| d   | DN | PN | VE<br>Pack | FPM    |
|-----|----|----|------------|--------|
| 16  | 10 | 16 | 9          | 124747 |
| 20  | 15 | 16 | 9          | 124748 |
| 25  | 20 | 16 | 8          | 124749 |
| 32  | 25 | 16 | 8          | 124750 |
| 40  | 32 | 16 | 8          | 124751 |
| 50  | 40 | 16 | 6          | 124752 |
| 63  | 50 | 16 | 4          | 124753 |
| 75  | 65 | 16 | 1          | 124316 |
| 90  | 80 | 16 | 1          | 124317 |
| 110 | 80 | 16 | 1          | 124318 |



#### Kugelhahn 2W M1 metrisch

- PVDF-Schweißstutzen
- Sitzdichtung: PTFE
- einzeln verpackt

#### Ball Valve 2W M1 metric

- PVDF fusion spigot
- seat-sealing: PTFE
- single packed

Code  
60M

| d   | DN | PN | VE<br>Pack | FPM    |
|-----|----|----|------------|--------|
| 16  | 10 | 16 | 9          | 120725 |
| 20  | 15 | 16 | 9          | 120726 |
| 25  | 20 | 16 | 8          | 120727 |
| 32  | 25 | 16 | 8          | 120728 |
| 40  | 32 | 16 | 8          | 120729 |
| 50  | 40 | 16 | 6          | 120730 |
| 63  | 50 | 16 | 4          | 120731 |
| 75  | 65 | 16 | 1          | 210617 |
| 90  | 80 | 16 | 1          | 210618 |
| 110 | 80 | 16 | 1          | 210619 |



#### Kugelhahn 2W M1 BSP

- Gewindemuffe R
- Sitzdichtung: PTFE
- einzeln verpackt

#### Ball Valve 2W M1 BSP

- female thread socket ends R
- seat-sealing: PTFE
- single packed

Code  
60M

| d      | DN | PN | VE<br>Pack | FPM    |
|--------|----|----|------------|--------|
| 3/8"   | 10 | 16 | 9          | 210404 |
| 1/2"   | 15 | 16 | 9          | 210405 |
| 3/4"   | 20 | 16 | 8          | 210406 |
| 1"     | 25 | 16 | 8          | 210407 |
| 1 1/4" | 32 | 16 | 8          | 210408 |
| 1 1/2" | 40 | 16 | 6          | 210409 |
| 2"     | 50 | 16 | 4          | 210410 |



#### Kugelhahn 2W M1 NPT

- Gewindemuffe R
- Sitzdichtung: PTFE
- einzeln verpackt

#### Ball Valve 2W M1 NPT

- female thread socket ends R
- seat-sealing: PTFE
- single packed

Code  
60M

| d      | DN | PN | VE<br>Pack | FPM    |
|--------|----|----|------------|--------|
| 3/8"   | 10 | 16 | 9          | 210411 |
| 1/2"   | 15 | 16 | 9          | 210412 |
| 3/4"   | 20 | 16 | 8          | 210413 |
| 1"     | 25 | 16 | 8          | 210414 |
| 1 1/4" | 32 | 16 | 8          | 210415 |
| 1 1/2" | 40 | 16 | 6          | 210416 |
| 2"     | 50 | 16 | 4          | 210417 |

## 2-Wege modularer Industriekugelhahn M1 Adapterset, silikonfrei

### 2-way modular ball valve M1 Adapter Set, silicone free



#### Kugelhahn 2W M1 DIN

- Losflansch
- Sitzdichtung: PTFE
- lang
- einzeln verpackt

#### Ball Valve 2W M1 DIN

- Backing flange
- seat-sealing: PTFE
- long
- single packed

**Code**  
**60M**

| d   | DN | PN | VE<br>Pack | FPM    |
|-----|----|----|------------|--------|
| 20  | 15 | 16 | 9          | 210418 |
| 25  | 20 | 16 | 8          | 210419 |
| 32  | 25 | 16 | 6          | 210420 |
| 40  | 32 | 16 | 4          | 210421 |
| 50  | 40 | 16 | 4          | 210422 |
| 63  | 50 | 16 | 2          | 210423 |
| 75  | 65 | 16 | 1          | 210620 |
| 90  | 80 | 16 | 1          | 210621 |
| 110 | 80 | 16 | 1          | 210622 |



#### Kugelhahn 2W M1 ANSI

- Losflansch
- Sitzdichtung: PTFE
- lang
- einzeln verpackt

#### Ball Valve 2W M1 ANSI

- Backing flange
- seat-sealing: PTFE
- long
- single packed

**Code**  
**60M**

| d      | DN | PN | VE<br>Pack | FPM    |
|--------|----|----|------------|--------|
| 1/2"   | 15 | 16 | 9          | 210424 |
| 3/4"   | 20 | 16 | 8          | 210425 |
| 1"     | 25 | 16 | 6          | 210426 |
| 1 1/4" | 32 | 16 | 4          | 210427 |
| 1 1/2" | 40 | 16 | 4          | 210428 |
| 2"     | 50 | 16 | 2          | 210429 |
| 2 1/2" | 65 | 16 | 1          | 210623 |
| 3"     | 80 | 16 | 1          | 210624 |
| 4"     | 80 | 16 | 1          | 210625 |

## 2-Wege modularer Industriekugelhahn M1 mit Stellungsrückmeldung, silikonfrei

2-way modular ball valve M1 with position feedback, silicone free



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißmuffe
- Sitzdichtung: PTFE
- einzeln verpackt

### Ball Valve 2W M1 metric

- PVDF fusion socket ends
- seat-sealing: PTFE
- single packed

Code  
68M

| d   | DN | Schalter               | PN | VE<br>Pack | FPM    |
|-----|----|------------------------|----|------------|--------|
| 16  | 10 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 121795 |
| 20  | 15 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 121796 |
| 25  | 20 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 121797 |
| 32  | 25 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 121798 |
| 40  | 32 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 121799 |
| 50  | 40 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 121800 |
| 63  | 50 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 121801 |
| 75  | 65 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 124319 |
| 90  | 80 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 124320 |
| 110 | 80 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 124321 |



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißstutzen
- Sitzdichtung: PTFE
- einzeln verpackt

### Ball Valve 2W M1 metric

- PVDF fusion spigot
- seat-sealing: PTFE
- single packed

Code  
68M

| d   | DN | Schalter               | PN | VE<br>Pack | FPM    |
|-----|----|------------------------|----|------------|--------|
| 16  | 10 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 513266 |
| 20  | 15 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 513267 |
| 25  | 20 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 513268 |
| 32  | 25 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 513269 |
| 40  | 32 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 513270 |
| 50  | 40 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 513271 |
| 63  | 50 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 513272 |
| 75  | 65 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 513897 |
| 90  | 80 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 513898 |
| 110 | 80 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 513899 |



### Kugelhahn 2W M1 DIN

- Losflansch
- Sitzdichtung: PTFE
- lang
- einzeln verpackt

### Ball Valve 2W M1 DIN

- Backing flange
- seat-sealing: PTFE
- long
- single packed

Code  
68M

| d  | DN | Schalter               | PN | VE<br>Pack | FPM    |
|----|----|------------------------|----|------------|--------|
| 20 | 15 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 513273 |
| 25 | 20 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 513274 |
| 32 | 25 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 513275 |
| 40 | 32 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 513276 |
| 50 | 40 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 513277 |
| 63 | 50 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 513278 |



### Kugelhahn 2W M1 ANSI

- Losflansch
- Sitzdichtung: PTFE
- lang
- einzeln verpackt

### Ball Valve 2W M1 ANSI

- Backing flange
- seat-sealing: PTFE
- long
- single packed

Code  
68M

| d      | DN | Schalter               | PN | VE<br>Pack | FPM    |
|--------|----|------------------------|----|------------|--------|
| 1/2"   | 15 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 513279 |
| 3/4"   | 20 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 513280 |
| 1"     | 25 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 513281 |
| 1 1/4" | 32 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 513282 |
| 1 1/2" | 40 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 513283 |
| 2"     | 50 | pi NO Ag-Ni 15-250V AC | 16 | 1          | 513284 |

## 2-Wege modularer Industriekugelhahn M1 mit Stellungsrückmeldung, silikonfrei

2-way modular ball valve M1 with position feedback, silicone free



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißmuffe
- Sitzdichtung: PTFE
- einzeln verpackt

### Ball Valve 2W M1 metric

- PVDF fusion socket ends
- seat-sealing: PTFE
- single packed

Code  
68M

| d   | DN | Schalter         | PN | VE<br>Pack | FPM    |
|-----|----|------------------|----|------------|--------|
| 16  | 10 | pi PNP 10-30V DC | 16 | 1          | 513285 |
| 20  | 15 | pi PNP 10-30V DC | 16 | 1          | 513286 |
| 25  | 20 | pi PNP 10-30V DC | 16 | 1          | 513287 |
| 32  | 25 | pi PNP 10-30V DC | 16 | 1          | 513288 |
| 40  | 32 | pi PNP 10-30V DC | 16 | 1          | 513289 |
| 50  | 40 | pi PNP 10-30V DC | 16 | 1          | 513290 |
| 63  | 50 | pi PNP 10-30V DC | 16 | 1          | 513291 |
| 75  | 65 | pi PNP 10-30V DC | 16 | 1          | 513900 |
| 90  | 80 | pi PNP 10-30V DC | 16 | 1          | 513901 |
| 110 | 80 | pi PNP 10-30V DC | 16 | 1          | 513902 |



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißstutzen
- Sitzdichtung: PTFE
- einzeln verpackt

### Ball Valve 2W M1 metric

- PVDF fusion spigot
- seat-sealing: PTFE
- single packed

Code  
68M

| d   | DN | Schalter         | PN | VE<br>Pack | FPM    |
|-----|----|------------------|----|------------|--------|
| 16  | 10 | pi PNP 10-30V DC | 16 | 1          | 513292 |
| 20  | 15 | pi PNP 10-30V DC | 16 | 1          | 513293 |
| 25  | 20 | pi PNP 10-30V DC | 16 | 1          | 513294 |
| 32  | 25 | pi PNP 10-30V DC | 16 | 1          | 513295 |
| 40  | 32 | pi PNP 10-30V DC | 16 | 1          | 513296 |
| 50  | 40 | pi PNP 10-30V DC | 16 | 1          | 513297 |
| 63  | 50 | pi PNP 10-30V DC | 16 | 1          | 513298 |
| 75  | 65 | pi PNP 10-30V DC | 16 | 1          | 513903 |
| 90  | 80 | pi PNP 10-30V DC | 16 | 1          | 513904 |
| 110 | 80 | pi PNP 10-30V DC | 16 | 1          | 513905 |



### Kugelhahn 2W M1 DIN

- Losflansch
- Sitzdichtung: PTFE
- lang
- einzeln verpackt

### Ball Valve 2W M1 DIN

- Backing flange
- seat-sealing: PTFE
- long
- single packed

Code  
68M

| d  | DN | Schalter         | PN | VE<br>Pack | FPM    |
|----|----|------------------|----|------------|--------|
| 20 | 15 | pi PNP 10-30V DC | 16 | 1          | 513299 |
| 25 | 20 | pi PNP 10-30V DC | 16 | 1          | 513300 |
| 32 | 25 | pi PNP 10-30V DC | 16 | 1          | 513301 |
| 40 | 32 | pi PNP 10-30V DC | 16 | 1          | 513302 |
| 50 | 40 | pi PNP 10-30V DC | 16 | 1          | 513303 |
| 63 | 50 | pi PNP 10-30V DC | 16 | 1          | 513304 |



### Kugelhahn 2W M1 ANSI

- Losflansch
- Sitzdichtung: PTFE
- lang
- einzeln verpackt

### Ball Valve 2W M1 ANSI

- Backing flange
- seat-sealing: PTFE
- long
- single packed

Code  
68M

| d      | DN | Schalter         | PN | VE<br>Pack | FPM    |
|--------|----|------------------|----|------------|--------|
| 1/2"   | 15 | pi PNP 10-30V DC | 16 | 1          | 513305 |
| 3/4"   | 20 | pi PNP 10-30V DC | 16 | 1          | 513306 |
| 1"     | 25 | pi PNP 10-30V DC | 16 | 1          | 513307 |
| 1 1/4" | 32 | pi PNP 10-30V DC | 16 | 1          | 513308 |
| 1 1/2" | 40 | pi PNP 10-30V DC | 16 | 1          | 513309 |
| 2"     | 50 | pi PNP 10-30V DC | 16 | 1          | 513310 |

## 2-Wege modularer Industriekugelhahn M1 mit Elektroantrieb standard, silikonfrei

*2-way modular ball valve M1 with electric actuator standard, silicone free*



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißmuffe
- Sitzdichtung: PTFE
- EO

### Ball Valve 2W M1 metric

- PVDF fusion socket ends
- seat-sealing: PTFE
- EO

**Code  
68M**

| d   | DN | Typ  | Spannung<br>Voltage | PN | VE<br>Pack | FPM    |
|-----|----|------|---------------------|----|------------|--------|
| 16  | 10 | ER20 | 24V AC/DC           | 16 | 1          | 123784 |
| 20  | 15 | ER20 | 24V AC/DC           | 16 | 1          | 123785 |
| 25  | 20 | ER20 | 24V AC/DC           | 16 | 1          | 123786 |
| 32  | 25 | ER20 | 24V AC/DC           | 16 | 1          | 123787 |
| 40  | 32 | ER20 | 24V AC/DC           | 16 | 1          | 123788 |
| 50  | 40 | ER20 | 24V AC/DC           | 16 | 1          | 123789 |
| 63  | 50 | ER20 | 24V AC/DC           | 16 | 1          | 123790 |
| 75  | 65 | ER60 | 24V AC/DC           | 16 | 1          | 513906 |
| 90  | 80 | ER60 | 24V AC/DC           | 16 | 1          | 513907 |
| 110 | 80 | ER60 | 24V AC/DC           | 16 | 1          | 513908 |



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißmuffe
- Sitzdichtung: PTFE
- EO

### Ball Valve 2W M1 metric

- PVDF fusion socket ends
- seat-sealing: PTFE
- EO

**Code  
68M**

| d   | DN | Typ  | Spannung<br>Voltage | PN | VE<br>Pack | FPM    |
|-----|----|------|---------------------|----|------------|--------|
| 16  | 10 | ER20 | 90-240VAC           | 16 | 1          | 123791 |
| 20  | 15 | ER20 | 90-240VAC           | 16 | 1          | 123792 |
| 25  | 20 | ER20 | 90-240VAC           | 16 | 1          | 123793 |
| 32  | 25 | ER20 | 90-240VAC           | 16 | 1          | 123794 |
| 40  | 32 | ER20 | 90-240VAC           | 16 | 1          | 123795 |
| 50  | 40 | ER20 | 90-240VAC           | 16 | 1          | 123796 |
| 63  | 50 | ER20 | 90-240VAC           | 16 | 1          | 123797 |
| 75  | 65 | ER60 | 90-240VAC           | 16 | 1          | 124322 |
| 90  | 80 | ER60 | 90-240VAC           | 16 | 1          | 124323 |
| 110 | 80 | ER60 | 90-240VAC           | 16 | 1          | 124324 |



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißmuffe
- Sitzdichtung: PTFE
- EO

### Ball Valve 2W M1 metric

- PVDF fusion socket ends
- seat-sealing: PTFE
- EO

**Code  
68M**

| d  | DN | Typ | Spannung<br>Voltage | PN | VE<br>Pack | FPM    |
|----|----|-----|---------------------|----|------------|--------|
| 16 | 10 | 510 | IND 12-24V AC/DC    | 16 | 1          | 129962 |
| 20 | 15 | 510 | IND 12-24V AC/DC    | 16 | 1          | 129963 |
| 25 | 20 | 510 | IND 12-24V AC/DC    | 16 | 1          | 129964 |
| 32 | 25 | 510 | IND 12-24V AC/DC    | 16 | 1          | 129965 |



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißmuffe
- Sitzdichtung: PTFE
- EO

### Ball Valve 2W M1 metric

- PVDF fusion socket ends
- seat-sealing: PTFE
- EO

**Code  
68M**

| d  | DN | Typ | Spannung<br>Voltage | PN | VE<br>Pack | FPM    |
|----|----|-----|---------------------|----|------------|--------|
| 16 | 10 | 510 | ECO 230VAC          | 16 | 1          | 129958 |
| 20 | 15 | 510 | ECO 230VAC          | 16 | 1          | 129959 |
| 25 | 20 | 510 | ECO 230VAC          | 16 | 1          | 129960 |
| 32 | 25 | 510 | ECO 230VAC          | 16 | 1          | 129961 |

## 2-Wege modularer Industriekugelhahn M1 mit Elektroantrieb standard, silikonfrei

*2-way modular ball valve M1 with electric actuator standard, silicone free*



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißstutzen
- Sitzdichtung: PTFE
- EO

### Ball Valve 2W M1 metric

- PVDF fusion spigot
- seat-sealing: PTFE
- EO

**Code  
68M**

| d   | DN | Typ  | Spannung<br>Voltage | PN | VE<br>Pack | FPM    |
|-----|----|------|---------------------|----|------------|--------|
| 16  | 10 | ER20 | 24V AC/DC           | 16 | 1          | 513311 |
| 20  | 15 | ER20 | 24V AC/DC           | 16 | 1          | 513312 |
| 25  | 20 | ER20 | 24V AC/DC           | 16 | 1          | 513313 |
| 32  | 25 | ER20 | 24V AC/DC           | 16 | 1          | 513314 |
| 40  | 32 | ER20 | 24V AC/DC           | 16 | 1          | 513315 |
| 50  | 40 | ER20 | 24V AC/DC           | 16 | 1          | 513316 |
| 63  | 50 | ER20 | 24V AC/DC           | 16 | 1          | 513317 |
| 75  | 65 | ER60 | 24V AC/DC           | 16 | 1          | 513909 |
| 90  | 80 | ER60 | 24V AC/DC           | 16 | 1          | 513910 |
| 110 | 80 | ER60 | 24V AC/DC           | 16 | 1          | 513911 |



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißstutzen
- Sitzdichtung: PTFE
- EO

### Ball Valve 2W M1 metric

- PVDF fusion spigot
- seat-sealing: PTFE
- EO

**Code  
68M**

| d   | DN | Typ  | Spannung<br>Voltage | PN | VE<br>Pack | FPM    |
|-----|----|------|---------------------|----|------------|--------|
| 16  | 10 | ER20 | 90-240VAC           | 16 | 1          | 513318 |
| 20  | 15 | ER20 | 90-240VAC           | 16 | 1          | 513319 |
| 25  | 20 | ER20 | 90-240VAC           | 16 | 1          | 513320 |
| 32  | 25 | ER20 | 90-240VAC           | 16 | 1          | 513321 |
| 40  | 32 | ER20 | 90-240VAC           | 16 | 1          | 513322 |
| 50  | 40 | ER20 | 90-240VAC           | 16 | 1          | 513323 |
| 63  | 50 | ER20 | 90-240VAC           | 16 | 1          | 513324 |
| 75  | 65 | ER60 | 90-240VAC           | 16 | 1          | 513912 |
| 90  | 80 | ER60 | 90-240VAC           | 16 | 1          | 513913 |
| 110 | 80 | ER60 | 90-240VAC           | 16 | 1          | 513914 |



### Kugelhahn 2W M1 DIN

- Losflansch
- Sitzdichtung: PTFE
- lang
- EO

### Ball Valve 2W M1 DIN

- Backing flange
- seat-sealing: PTFE
- long
- EO

**Code  
68M**

| d   | DN | Typ  | Spannung<br>Voltage | PN | VE<br>Pack | FPM    |
|-----|----|------|---------------------|----|------------|--------|
| 20  | 15 | ER20 | 24V AC/DC           | 16 | 1          | 513325 |
| 25  | 20 | ER20 | 24V AC/DC           | 16 | 1          | 513326 |
| 32  | 25 | ER20 | 24V AC/DC           | 16 | 1          | 513327 |
| 40  | 32 | ER20 | 24V AC/DC           | 16 | 1          | 513328 |
| 50  | 40 | ER20 | 24V AC/DC           | 16 | 1          | 513329 |
| 63  | 50 | ER20 | 24V AC/DC           | 16 | 1          | 513330 |
| 75  | 65 | ER60 | 24V AC/DC           | 16 | 1          | 513915 |
| 90  | 80 | ER60 | 24V AC/DC           | 16 | 1          | 513916 |
| 110 | 80 | ER60 | 24V AC/DC           | 16 | 1          | 513917 |

## 2-Wege modularer Industriekugelhahn M1 mit Elektroantrieb standard, silikonfrei

*2-way modular ball valve M1 with electric actuator standard, silicone free*



### Kugelhahn 2W M1 DIN

- Losflansch
- Sitzdichtung: PTFE
- lang
- EO

### Ball Valve 2W M1 DIN

- Backing flange
- seat-sealing: PTFE
- long
- EO

**Code  
68M**

| d   | DN | Typ  | Spannung<br>Voltage | PN | VE<br>Pack | FPM    |
|-----|----|------|---------------------|----|------------|--------|
| 20  | 15 | ER20 | 90-240VAC           | 16 | 1          | 513331 |
| 25  | 20 | ER20 | 90-240VAC           | 16 | 1          | 513332 |
| 32  | 25 | ER20 | 90-240VAC           | 16 | 1          | 513333 |
| 40  | 32 | ER20 | 90-240VAC           | 16 | 1          | 513334 |
| 50  | 40 | ER20 | 90-240VAC           | 16 | 1          | 513335 |
| 63  | 50 | ER20 | 90-240VAC           | 16 | 1          | 513336 |
| 75  | 65 | ER60 | 90-240VAC           | 16 | 1          | 513918 |
| 90  | 80 | ER60 | 90-240VAC           | 16 | 1          | 513919 |
| 110 | 80 | ER60 | 90-240VAC           | 16 | 1          | 513920 |



### Kugelhahn 2W M1 ANSI

- Losflansch
- Sitzdichtung: PTFE
- lang
- EO

### Ball Valve 2W M1 ANSI

- Backing flange
- seat-sealing: PTFE
- long
- EO

**Code  
68M**

| d      | DN | Typ  | Spannung<br>Voltage | PN | VE<br>Pack | FPM    |
|--------|----|------|---------------------|----|------------|--------|
| 1/2"   | 15 | ER20 | 24V AC/DC           | 16 | 1          | 513337 |
| 3/4"   | 20 | ER20 | 24V AC/DC           | 16 | 1          | 513338 |
| 1"     | 25 | ER20 | 24V AC/DC           | 16 | 1          | 513339 |
| 1 1/4" | 32 | ER20 | 24V AC/DC           | 16 | 1          | 513340 |
| 1 1/2" | 40 | ER20 | 24V AC/DC           | 16 | 1          | 513341 |
| 2"     | 50 | ER20 | 24V AC/DC           | 16 | 1          | 513342 |
| 2 1/2" | 65 | ER60 | 24V AC/DC           | 16 | 1          | 513921 |
| 3"     | 80 | ER60 | 24V AC/DC           | 16 | 1          | 513922 |
| 4"     | 80 | ER60 | 24V AC/DC           | 16 | 1          | 513923 |



### Kugelhahn 2W M1 ANSI

- Losflansch
- Sitzdichtung: PTFE
- lang
- EO

### Ball Valve 2W M1 ANSI

- Backing flange
- seat-sealing: PTFE
- long
- EO

**Code  
68M**

| d      | DN | Typ  | Spannung<br>Voltage | PN | VE<br>Pack | FPM    |
|--------|----|------|---------------------|----|------------|--------|
| 1/2"   | 15 | ER20 | 90-240VAC           | 16 | 1          | 513343 |
| 3/4"   | 20 | ER20 | 90-240VAC           | 16 | 1          | 513344 |
| 1"     | 25 | ER20 | 90-240VAC           | 16 | 1          | 513345 |
| 1 1/4" | 32 | ER20 | 90-240VAC           | 16 | 1          | 513346 |
| 1 1/2" | 40 | ER20 | 90-240VAC           | 16 | 1          | 513347 |
| 2"     | 50 | ER20 | 90-240VAC           | 16 | 1          | 513348 |
| 2 1/2" | 65 | ER60 | 90-240VAC           | 16 | 1          | 513924 |
| 3"     | 80 | ER60 | 90-240VAC           | 16 | 1          | 513925 |
| 4"     | 80 | ER60 | 90-240VAC           | 16 | 1          | 513926 |

## 2-Wege modularer Industriekugelhahn M1 elektrisch mit Positioner, silikonfrei

*2-way modular ball valve M1 electric with positioner, silicone free*



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißmuffe
- Sitzdichtung: PTFE
- EO
- posi

### Ball Valve 2W M1 metric

- PVDF fusion socket ends
- seat-sealing: PTFE
- EO
- posi

**Code  
68M**

| d  | DN | Typ  | Spannung<br>Voltage | PN | VE<br>Pack | FPM    |
|----|----|------|---------------------|----|------------|--------|
| 16 | 10 | ER20 | 15-30VAC            | 16 | 1          | 513349 |
| 20 | 15 | ER20 | 15-30VAC            | 16 | 1          | 513350 |
| 25 | 20 | ER20 | 15-30VAC            | 16 | 1          | 513351 |
| 32 | 25 | ER20 | 15-30VAC            | 16 | 1          | 513352 |
| 40 | 32 | ER20 | 15-30VAC            | 16 | 1          | 513353 |
| 50 | 40 | ER20 | 15-30VAC            | 16 | 1          | 513354 |
| 63 | 50 | ER20 | 15-30VAC            | 16 | 1          | 513355 |



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißmuffe
- Sitzdichtung: PTFE
- EO
- posi

### Ball Valve 2W M1 metric

- PVDF fusion socket ends
- seat-sealing: PTFE
- EO
- posi

**Code  
68M**

| d  | DN | Typ  | Spannung<br>Voltage | PN | VE<br>Pack | FPM    |
|----|----|------|---------------------|----|------------|--------|
| 16 | 10 | ER20 | 90-240VAC           | 16 | 1          | 513356 |
| 20 | 15 | ER20 | 90-240VAC           | 16 | 1          | 513357 |
| 25 | 20 | ER20 | 90-240VAC           | 16 | 1          | 513358 |
| 32 | 25 | ER20 | 90-240VAC           | 16 | 1          | 513359 |
| 40 | 32 | ER20 | 90-240VAC           | 16 | 1          | 513360 |
| 50 | 40 | ER20 | 90-240VAC           | 16 | 1          | 513361 |
| 63 | 50 | ER20 | 90-240VAC           | 16 | 1          | 513362 |



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißstutzen
- Sitzdichtung: PTFE
- EO
- posi

### Ball Valve 2W M1 metric

- PVDF fusion spigot
- seat-sealing: PTFE
- EO
- posi

**Code  
68M**

| d  | DN | Typ  | Spannung<br>Voltage | PN | VE<br>Pack | FPM    |
|----|----|------|---------------------|----|------------|--------|
| 16 | 10 | ER20 | 15-30VAC            | 16 | 1          | 513363 |
| 20 | 15 | ER20 | 15-30VAC            | 16 | 1          | 513364 |
| 25 | 20 | ER20 | 15-30VAC            | 16 | 1          | 513365 |
| 32 | 25 | ER20 | 15-30VAC            | 16 | 1          | 513366 |
| 40 | 32 | ER20 | 15-30VAC            | 16 | 1          | 513367 |
| 50 | 40 | ER20 | 15-30VAC            | 16 | 1          | 513368 |
| 63 | 50 | ER20 | 15-30VAC            | 16 | 1          | 513369 |



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißstutzen
- Sitzdichtung: PTFE
- EO
- posi

### Ball Valve 2W M1 metric

- PVDF fusion spigot
- seat-sealing: PTFE
- EO
- posi

**Code  
68M**

| d  | DN | Typ  | Spannung<br>Voltage | PN | VE<br>Pack | FPM    |
|----|----|------|---------------------|----|------------|--------|
| 16 | 10 | ER20 | 90-240VAC           | 16 | 1          | 513370 |
| 20 | 15 | ER20 | 90-240VAC           | 16 | 1          | 513371 |
| 25 | 20 | ER20 | 90-240VAC           | 16 | 1          | 513372 |
| 32 | 25 | ER20 | 90-240VAC           | 16 | 1          | 513373 |
| 40 | 32 | ER20 | 90-240VAC           | 16 | 1          | 513374 |
| 50 | 40 | ER20 | 90-240VAC           | 16 | 1          | 513375 |
| 63 | 50 | ER20 | 90-240VAC           | 16 | 1          | 513376 |

## 2-Wege modularer Industriekugelhahn M1 elektrisch mit Failsafe, silikonfrei

2-way modular ball valve M1 electric with failsafe, silicone free



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißmuffe
- Sitzdichtung: PTFE
- EO
- failsafe

### Ball Valve 2W M1 metric

- PVDF fusion socket ends
- seat-sealing: PTFE
- EO
- failsafe

Code  
68M

| d  | DN | Typ  | Spannung<br>Voltage | PN | VE<br>Pack | FPM    |
|----|----|------|---------------------|----|------------|--------|
| 16 | 10 | ER20 | 15-30VAC            | 16 | 1          | 513377 |
| 20 | 15 | ER20 | 15-30VAC            | 16 | 1          | 513378 |
| 25 | 20 | ER20 | 15-30VAC            | 16 | 1          | 513379 |
| 32 | 25 | ER20 | 15-30VAC            | 16 | 1          | 513380 |
| 40 | 32 | ER20 | 15-30VAC            | 16 | 1          | 513381 |
| 50 | 40 | ER20 | 15-30VAC            | 16 | 1          | 513382 |
| 63 | 50 | ER20 | 15-30VAC            | 16 | 1          | 513383 |



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißmuffe
- Sitzdichtung: PTFE
- EO
- failsafe

### Ball Valve 2W M1 metric

- PVDF fusion socket ends
- seat-sealing: PTFE
- EO
- failsafe

Code  
68M

| d  | DN | Typ  | Spannung<br>Voltage | PN | VE<br>Pack | FPM    |
|----|----|------|---------------------|----|------------|--------|
| 16 | 10 | ER20 | 90-240VAC           | 16 | 1          | 513384 |
| 20 | 15 | ER20 | 90-240VAC           | 16 | 1          | 513385 |
| 25 | 20 | ER20 | 90-240VAC           | 16 | 1          | 513386 |
| 32 | 25 | ER20 | 90-240VAC           | 16 | 1          | 513387 |
| 40 | 32 | ER20 | 90-240VAC           | 16 | 1          | 513388 |
| 50 | 40 | ER20 | 90-240VAC           | 16 | 1          | 513389 |
| 63 | 50 | ER20 | 90-240VAC           | 16 | 1          | 513390 |



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißstutzen
- Sitzdichtung: PTFE
- EO
- failsafe

### Ball Valve 2W M1 metric

- PVDF fusion spigot
- seat-sealing: PTFE
- EO
- failsafe

Code  
68M

| d  | DN | Typ  | Spannung<br>Voltage | PN | VE<br>Pack | FPM    |
|----|----|------|---------------------|----|------------|--------|
| 16 | 10 | ER20 | 15-30VAC            | 16 | 1          | 513391 |
| 20 | 15 | ER20 | 15-30VAC            | 16 | 1          | 513392 |
| 25 | 20 | ER20 | 15-30VAC            | 16 | 1          | 513393 |
| 32 | 25 | ER20 | 15-30VAC            | 16 | 1          | 513394 |
| 40 | 32 | ER20 | 15-30VAC            | 16 | 1          | 513395 |
| 50 | 40 | ER20 | 15-30VAC            | 16 | 1          | 513396 |
| 63 | 50 | ER20 | 15-30VAC            | 16 | 1          | 513397 |



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißstutzen
- Sitzdichtung: PTFE
- EO
- failsafe

### Ball Valve 2W M1 metric

- PVDF fusion spigot
- seat-sealing: PTFE
- EO
- failsafe

Code  
68M

| d  | DN | Typ  | Spannung<br>Voltage | PN | VE<br>Pack | FPM    |
|----|----|------|---------------------|----|------------|--------|
| 16 | 10 | ER20 | 90-240VAC           | 16 | 1          | 513398 |
| 20 | 15 | ER20 | 90-240VAC           | 16 | 1          | 513399 |
| 25 | 20 | ER20 | 90-240VAC           | 16 | 1          | 513400 |
| 32 | 25 | ER20 | 90-240VAC           | 16 | 1          | 513401 |
| 40 | 32 | ER20 | 90-240VAC           | 16 | 1          | 513402 |
| 50 | 40 | ER20 | 90-240VAC           | 16 | 1          | 513403 |
| 63 | 50 | ER20 | 90-240VAC           | 16 | 1          | 513404 |

# 2-Wege modularer Industriekugelhahn M1 mit Pneumatiktrieb standard, silikonfrei

## 2-way modular ball valve M1 with pneumatic actuator standard, silicone free



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißmuffe
- Sitzdichtung: PTFE
- PO-NC

### Ball Valve 2W M1 metric

- PVDF fusion socket ends
- seat-sealing: PTFE
- PO-NC

Code  
68M

| d   | DN | Typ    | PN | VE<br>Pack | FPM    |
|-----|----|--------|----|------------|--------|
| 16  | 10 | UT05-2 | 16 | 1          | 123812 |
| 20  | 15 | UT05-2 | 16 | 1          | 123813 |
| 25  | 20 | UT05-2 | 16 | 1          | 123814 |
| 32  | 25 | UT05-2 | 16 | 1          | 123815 |
| 40  | 32 | UT15-4 | 16 | 1          | 123816 |
| 50  | 40 | UT15-4 | 16 | 1          | 123817 |
| 63  | 50 | UT17-4 | 16 | 1          | 123818 |
| 75  | 65 | UT30-4 | 16 | 1          | 124325 |
| 90  | 80 | UT35-4 | 16 | 1          | 124326 |
| 110 | 80 | UT35-4 | 16 | 1          | 124327 |



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißmuffe
- Sitzdichtung: PTFE
- PO-NO

### Ball Valve 2W M1 metric

- PVDF fusion socket ends
- seat-sealing: PTFE
- PO-NO

Code  
68M

| d   | DN | Typ    | PN | VE<br>Pack | FPM    |
|-----|----|--------|----|------------|--------|
| 16  | 10 | UT05-2 | 16 | 1          | 123833 |
| 20  | 15 | UT05-2 | 16 | 1          | 123834 |
| 25  | 20 | UT05-2 | 16 | 1          | 123835 |
| 32  | 25 | UT05-2 | 16 | 1          | 123836 |
| 40  | 32 | UT15-4 | 16 | 1          | 123837 |
| 50  | 40 | UT15-4 | 16 | 1          | 123838 |
| 63  | 50 | UT17-4 | 16 | 1          | 123839 |
| 75  | 65 | UT30-4 | 16 | 1          | 513927 |
| 90  | 80 | UT35-4 | 16 | 1          | 513928 |
| 110 | 80 | UT35-4 | 16 | 1          | 513929 |



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißmuffe
- Sitzdichtung: PTFE
- PO-DA

### Ball Valve 2W M1 metric

- PVDF fusion socket ends
- seat-sealing: PTFE
- PO-DA

Code  
68M

| d   | DN | Typ    | PN | VE<br>Pack | FPM    |
|-----|----|--------|----|------------|--------|
| 16  | 10 | UT05DA | 16 | 1          | 123964 |
| 20  | 15 | UT05DA | 16 | 1          | 123965 |
| 25  | 20 | UT05DA | 16 | 1          | 123966 |
| 32  | 25 | UT05DA | 16 | 1          | 123967 |
| 40  | 32 | UT15DA | 16 | 1          | 123968 |
| 50  | 40 | UT15DA | 16 | 1          | 123969 |
| 63  | 50 | UT15DA | 16 | 1          | 123970 |
| 75  | 65 | UT20DA | 16 | 1          | 513930 |
| 90  | 80 | UT20DA | 16 | 1          | 513931 |
| 110 | 80 | UT20DA | 16 | 1          | 513932 |

# 2-Wege modularer Industriekugelhahn M1 mit Pneumatiktrieb standard, silikonfrei

## 2-way modular ball valve M1 with pneumatic actuator standard, silicone free



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißstutzen
- Sitzdichtung: PTFE
- PO-NC

### Ball Valve 2W M1 metric

- PVDF fusion spigot
- seat-sealing: PTFE
- PO-NC

Code  
68M

| d   | DN | Typ    | PN | VE<br>Pack | FPM    |
|-----|----|--------|----|------------|--------|
| 16  | 10 | UT05-2 | 16 | 1          | 513405 |
| 20  | 15 | UT05-2 | 16 | 1          | 513406 |
| 25  | 20 | UT05-2 | 16 | 1          | 513407 |
| 32  | 25 | UT05-2 | 16 | 1          | 513408 |
| 40  | 32 | UT15-4 | 16 | 1          | 513409 |
| 50  | 40 | UT15-4 | 16 | 1          | 513410 |
| 63  | 50 | UT17-4 | 16 | 1          | 513411 |
| 75  | 65 | UT30-4 | 16 | 1          | 513933 |
| 90  | 80 | UT35-4 | 16 | 1          | 513934 |
| 110 | 80 | UT35-4 | 16 | 1          | 513935 |



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißstutzen
- Sitzdichtung: PTFE
- PO-NO

### Ball Valve 2W M1 metric

- PVDF fusion spigot
- seat-sealing: PTFE
- PO-NO

Code  
68M

| d   | DN | Typ    | PN | VE<br>Pack | FPM    |
|-----|----|--------|----|------------|--------|
| 16  | 10 | UT05-2 | 16 | 1          | 513412 |
| 20  | 15 | UT05-2 | 16 | 1          | 513413 |
| 25  | 20 | UT05-2 | 16 | 1          | 513414 |
| 32  | 25 | UT05-2 | 16 | 1          | 513415 |
| 40  | 32 | UT15-4 | 16 | 1          | 513416 |
| 50  | 40 | UT15-4 | 16 | 1          | 513417 |
| 63  | 50 | UT17-4 | 16 | 1          | 513418 |
| 75  | 65 | UT30-4 | 16 | 1          | 513936 |
| 90  | 80 | UT35-4 | 16 | 1          | 513937 |
| 110 | 80 | UT35-4 | 16 | 1          | 513938 |



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißstutzen
- Sitzdichtung: PTFE
- PO-DA

### Ball Valve 2W M1 metric

- PVDF fusion spigot
- seat-sealing: PTFE
- PO-DA

Code  
68M

| d   | DN | Typ    | PN | VE<br>Pack | FPM    |
|-----|----|--------|----|------------|--------|
| 16  | 10 | UT05DA | 16 | 1          | 513419 |
| 20  | 15 | UT05DA | 16 | 1          | 513420 |
| 25  | 20 | UT05DA | 16 | 1          | 513421 |
| 32  | 25 | UT05DA | 16 | 1          | 513422 |
| 40  | 32 | UT15DA | 16 | 1          | 513423 |
| 50  | 40 | UT15DA | 16 | 1          | 513424 |
| 63  | 50 | UT15DA | 16 | 1          | 513425 |
| 75  | 65 | UT20DA | 16 | 1          | 513939 |
| 90  | 80 | UT20DA | 16 | 1          | 513940 |
| 110 | 80 | UT20DA | 16 | 1          | 513941 |

# 2-Wege modularer Industriekugelhahn M1 mit Pneumatiktrieb standard, silikonfrei

## 2-way modular ball valve M1 with pneumatic actuator standard, silicone free



### Kugelhahn 2W M1 DIN

- Losflansch
- Sitzdichtung: PTFE
- lang
- PO-NC

### Ball Valve 2W M1 DIN

- Backing flange
- seat-sealing: PTFE
- long
- PO-NC

Code  
68M

| d   | DN | Typ    | PN | VE<br>Pack | FPM    |
|-----|----|--------|----|------------|--------|
| 20  | 15 | UT05-2 | 16 | 1          | 513426 |
| 25  | 20 | UT05-2 | 16 | 1          | 513427 |
| 32  | 25 | UT05-2 | 16 | 1          | 513428 |
| 40  | 32 | UT15-4 | 16 | 1          | 513429 |
| 50  | 40 | UT15-4 | 16 | 1          | 513430 |
| 63  | 50 | UT17-4 | 16 | 1          | 513431 |
| 75  | 65 | UT30-4 | 16 | 1          | 513942 |
| 90  | 80 | UT35-4 | 16 | 1          | 513943 |
| 110 | 80 | UT35-4 | 16 | 1          | 513944 |



### Kugelhahn 2W M1 DIN

- Losflansch
- Sitzdichtung: PTFE
- lang
- PO-NO

### Ball Valve 2W M1 DIN

- Backing flange
- seat-sealing: PTFE
- long
- PO-NO

Code  
68M

| d   | DN | Typ    | PN | VE<br>Pack | FPM    |
|-----|----|--------|----|------------|--------|
| 20  | 15 | UT05-2 | 16 | 1          | 513432 |
| 25  | 20 | UT05-2 | 16 | 1          | 513433 |
| 32  | 25 | UT05-2 | 16 | 1          | 513434 |
| 40  | 32 | UT15-4 | 16 | 1          | 513435 |
| 50  | 40 | UT15-4 | 16 | 1          | 513436 |
| 63  | 50 | UT17-4 | 16 | 1          | 513437 |
| 75  | 65 | UT30-4 | 16 | 1          | 513945 |
| 90  | 80 | UT35-4 | 16 | 1          | 513946 |
| 110 | 80 | UT35-4 | 16 | 1          | 513947 |



### Kugelhahn 2W M1 DIN

- Losflansch
- Sitzdichtung: PTFE
- lang
- PO-DA

### Ball Valve 2W M1 DIN

- Backing flange
- seat-sealing: PTFE
- long
- PO-DA

Code  
68M

| d   | DN | Typ    | PN | VE<br>Pack | FPM    |
|-----|----|--------|----|------------|--------|
| 20  | 15 | UT05DA | 16 | 1          | 513438 |
| 25  | 20 | UT05DA | 16 | 1          | 513439 |
| 32  | 25 | UT05DA | 16 | 1          | 513440 |
| 40  | 32 | UT15DA | 16 | 1          | 513441 |
| 50  | 40 | UT15DA | 16 | 1          | 513442 |
| 63  | 50 | UT15DA | 16 | 1          | 513443 |
| 75  | 65 | UT20DA | 16 | 1          | 513948 |
| 90  | 80 | UT20DA | 16 | 1          | 513949 |
| 110 | 80 | UT20DA | 16 | 1          | 513950 |

# 2-Wege modularer Industriekugelhahn M1 mit Pneumatiktrieb standard, silikonfrei

## 2-way modular ball valve M1 with pneumatic actuator standard, silicone free



### Kugelhahn 2W M1 ANSI

- Losflansch
- Sitzdichtung: PTFE
- lang
- PO-NC

### Ball Valve 2W M1 ANSI

- Backing flange
- seat-sealing: PTFE
- long
- PO-NC

Code  
68M

| d      | DN | Typ    | PN | VE<br>Pack | FPM    |
|--------|----|--------|----|------------|--------|
| 1/2"   | 15 | UT05-2 | 16 | 1          | 513444 |
| 3/4"   | 20 | UT05-2 | 16 | 1          | 513445 |
| 1"     | 25 | UT05-2 | 16 | 1          | 513446 |
| 1 1/4" | 32 | UT15-4 | 16 | 1          | 513447 |
| 1 1/2" | 40 | UT15-4 | 16 | 1          | 513448 |
| 2"     | 50 | UT17-4 | 16 | 1          | 513449 |
| 2 1/2" | 65 | UT30-4 | 16 | 1          | 513951 |
| 3"     | 80 | UT35-4 | 16 | 1          | 513952 |
| 4"     | 80 | UT35-4 | 16 | 1          | 513953 |



### Kugelhahn 2W M1 ANSI

- Losflansch
- Sitzdichtung: PTFE
- lang
- PO-NO

### Ball Valve 2W M1 ANSI

- Backing flange
- seat-sealing: PTFE
- long
- PO-NO

Code  
68M

| d      | DN | Typ    | PN | VE<br>Pack | FPM    |
|--------|----|--------|----|------------|--------|
| 1/2"   | 15 | UT05-2 | 16 | 1          | 513450 |
| 3/4"   | 20 | UT05-2 | 16 | 1          | 513451 |
| 1"     | 25 | UT05-2 | 16 | 1          | 513452 |
| 1 1/4" | 32 | UT15-4 | 16 | 1          | 513453 |
| 1 1/2" | 40 | UT15-4 | 16 | 1          | 513454 |
| 2"     | 50 | UT17-4 | 16 | 1          | 513455 |
| 2 1/2" | 65 | UT30-4 | 16 | 1          | 513954 |
| 3"     | 80 | UT35-4 | 16 | 1          | 513955 |
| 4"     | 80 | UT35-4 | 16 | 1          | 513956 |



### Kugelhahn 2W M1 ANSI

- Losflansch
- Sitzdichtung: PTFE
- lang
- PO-DA

### Ball Valve 2W M1 ANSI

- Backing flange
- seat-sealing: PTFE
- long
- PO-DA

Code  
68M

| d      | DN | Typ    | PN | VE<br>Pack | FPM    |
|--------|----|--------|----|------------|--------|
| 1/2"   | 15 | UT05DA | 16 | 1          | 513456 |
| 3/4"   | 20 | UT05DA | 16 | 1          | 513457 |
| 1"     | 25 | UT05DA | 16 | 1          | 513458 |
| 1 1/4" | 32 | UT15DA | 16 | 1          | 513459 |
| 1 1/2" | 40 | UT15DA | 16 | 1          | 513460 |
| 2"     | 50 | UT15DA | 16 | 1          | 513461 |
| 2 1/2" | 65 | UT20DA | 16 | 1          | 513957 |
| 3"     | 80 | UT20DA | 16 | 1          | 513958 |
| 4"     | 80 | UT20DA | 16 | 1          | 513959 |

## 2-Wege modularer Industriekugelhahn M1 pneumatisch mit Stellungsrückmelder

2-way modular ball valve M1 pneumatic with position feedback, silicone free



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißmuffe
- Sitzdichtung: PTFE
- PO-NC
- pi-250V

### Ball Valve 2W M1 metric

- PVDF fusion socket ends
- seat-sealing: PTFE
- PO-NC
- pi-250V

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 16 | 10 | UT05-2 | 16 | 1          | 513462 |
| 20 | 15 | UT05-2 | 16 | 1          | 513463 |
| 25 | 20 | UT05-2 | 16 | 1          | 513464 |
| 32 | 25 | UT05-2 | 16 | 1          | 513465 |
| 40 | 32 | UT15-4 | 16 | 1          | 513466 |
| 50 | 40 | UT15-4 | 16 | 1          | 513467 |
| 63 | 50 | UT17-4 | 16 | 1          | 513468 |



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißmuffe
- Sitzdichtung: PTFE
- PO-NO
- pi-250V

### Ball Valve 2W M1 metric

- PVDF fusion socket ends
- seat-sealing: PTFE
- PO-NO
- pi-250V

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 16 | 10 | UT05-2 | 16 | 1          | 513469 |
| 20 | 15 | UT05-2 | 16 | 1          | 513470 |
| 25 | 20 | UT05-2 | 16 | 1          | 513471 |
| 32 | 25 | UT05-2 | 16 | 1          | 513472 |
| 40 | 32 | UT15-4 | 16 | 1          | 513473 |
| 50 | 40 | UT15-4 | 16 | 1          | 513474 |
| 63 | 50 | UT17-4 | 16 | 1          | 513475 |



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißmuffe
- Sitzdichtung: PTFE
- PO-DA
- pi-250V

### Ball Valve 2W M1 metric

- PVDF fusion socket ends
- seat-sealing: PTFE
- PO-DA
- pi-250V

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 16 | 10 | UT05DA | 16 | 1          | 513476 |
| 20 | 15 | UT05DA | 16 | 1          | 513477 |
| 25 | 20 | UT05DA | 16 | 1          | 513478 |
| 32 | 25 | UT05DA | 16 | 1          | 513479 |
| 40 | 32 | UT15DA | 16 | 1          | 513480 |
| 50 | 40 | UT15DA | 16 | 1          | 513481 |
| 63 | 50 | UT15DA | 16 | 1          | 513482 |



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißstutzen
- Sitzdichtung: PTFE
- PO-NC
- pi-250V

### Ball Valve 2W M1 metric

- PVDF fusion spigot
- seat-sealing: PTFE
- PO-NC
- pi-250V

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 16 | 10 | UT05-2 | 16 | 1          | 513483 |
| 20 | 15 | UT05-2 | 16 | 1          | 513484 |
| 25 | 20 | UT05-2 | 16 | 1          | 513485 |
| 32 | 25 | UT05-2 | 16 | 1          | 513486 |
| 40 | 32 | UT15-4 | 16 | 1          | 513487 |
| 50 | 40 | UT15-4 | 16 | 1          | 513488 |
| 63 | 50 | UT17-4 | 16 | 1          | 513489 |

# 2-Wege modularer Industriekugelhahn M1 pneumatisch mit Stellungsrückmelder

2-way modular ball valve M1 pneumatic with position feedback, silicone free



## Kugelhahn 2W M1 metrisch

- PVDF-Schweißstutzen
- Sitzdichtung: PTFE
- PO-NO
- pi-250V

## Ball Valve 2W M1 metric

- PVDF fusion spigot
- seat-sealing: PTFE
- PO-NO
- pi-250V

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 16 | 10 | UT05-2 | 16 | 1          | 513490 |
| 20 | 15 | UT05-2 | 16 | 1          | 513491 |
| 25 | 20 | UT05-2 | 16 | 1          | 513492 |
| 32 | 25 | UT05-2 | 16 | 1          | 513493 |
| 40 | 32 | UT15-4 | 16 | 1          | 513494 |
| 50 | 40 | UT15-4 | 16 | 1          | 513495 |
| 63 | 50 | UT17-4 | 16 | 1          | 513496 |



## Kugelhahn 2W M1 metrisch

- PVDF-Schweißstutzen
- Sitzdichtung: PTFE
- PO-DA
- pi-250V

## Ball Valve 2W M1 metric

- PVDF fusion spigot
- seat-sealing: PTFE
- PO-DA
- pi-250V

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 16 | 10 | UT05DA | 16 | 1          | 513497 |
| 20 | 15 | UT05DA | 16 | 1          | 513498 |
| 25 | 20 | UT05DA | 16 | 1          | 513499 |
| 32 | 25 | UT05DA | 16 | 1          | 513500 |
| 40 | 32 | UT15DA | 16 | 1          | 513501 |
| 50 | 40 | UT15DA | 16 | 1          | 513502 |
| 63 | 50 | UT15DA | 16 | 1          | 513503 |



## Kugelhahn 2W M1 DIN

- Losflansch
- Sitzdichtung: PTFE
- PO-NC
- lang
- pi-250V

## Ball Valve 2W M1 DIN

- Backing flange
- seat-sealing: PTFE
- PO-NC
- long
- pi-250V

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 20 | 15 | UT05-2 | 16 | 1          | 513504 |
| 25 | 20 | UT05-2 | 16 | 1          | 513505 |
| 32 | 25 | UT05-2 | 16 | 1          | 513506 |
| 40 | 32 | UT15-4 | 16 | 1          | 513507 |
| 50 | 40 | UT15-4 | 16 | 1          | 513508 |
| 63 | 50 | UT17-4 | 16 | 1          | 513509 |



## Kugelhahn 2W M1 DIN

- Losflansch
- Sitzdichtung: PTFE
- PO-NO
- lang
- pi-250V

## Ball Valve 2W M1 DIN

- Backing flange
- seat-sealing: PTFE
- PO-NO
- long
- pi-250V

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 20 | 15 | UT05-2 | 16 | 1          | 513510 |
| 25 | 20 | UT05-2 | 16 | 1          | 513511 |
| 32 | 25 | UT05-2 | 16 | 1          | 513512 |
| 40 | 32 | UT15-4 | 16 | 1          | 513513 |
| 50 | 40 | UT15-4 | 16 | 1          | 513514 |
| 63 | 50 | UT17-4 | 16 | 1          | 513515 |

## 2-Wege modularer Industriekugelhahn M1 pneumatisch mit Stellungsrückmelder

2-way modular ball valve M1 pneumatic with position feedback, silicone free



### Kugelhahn 2W M1 DIN

- Losflansch
- Sitzdichtung: PTFE
- PO-DA
- lang
- pi-250V

### Ball Valve 2W M1 DIN

- Backing flange
- seat-sealing: PTFE
- PO-DA
- long
- pi-250V

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 20 | 15 | UT05DA | 16 | 1          | 513516 |
| 25 | 20 | UT05DA | 16 | 1          | 513517 |
| 32 | 25 | UT05DA | 16 | 1          | 513518 |
| 40 | 32 | UT15DA | 16 | 1          | 513519 |
| 50 | 40 | UT15DA | 16 | 1          | 513520 |
| 63 | 50 | UT15DA | 16 | 1          | 513521 |



### Kugelhahn 2W M1 ANSI

- Losflansch
- Sitzdichtung: PTFE
- PO-NC
- lang
- pi-250V

### Ball Valve 2W M1 ANSI

- Backing flange
- seat-sealing: PTFE
- PO-NC
- long
- pi-250V

Code  
68M

| d      | DN | Typ    | PN | VE<br>Pack | FPM    |
|--------|----|--------|----|------------|--------|
| 1/2"   | 15 | UT05-2 | 16 | 1          | 513522 |
| 3/4"   | 20 | UT05-2 | 16 | 1          | 513523 |
| 1"     | 25 | UT05-2 | 16 | 1          | 513524 |
| 1 1/4" | 32 | UT15-4 | 16 | 1          | 513525 |
| 1 1/2" | 40 | UT15-4 | 16 | 1          | 513526 |
| 2"     | 50 | UT17-4 | 16 | 1          | 513527 |



### Kugelhahn 2W M1 ANSI

- Losflansch
- Sitzdichtung: PTFE
- PO-NO
- lang
- pi-250V

### Ball Valve 2W M1 ANSI

- Backing flange
- seat-sealing: PTFE
- PO-NO
- long
- pi-250V

Code  
68M

| d      | DN | Typ    | PN | VE<br>Pack | FPM    |
|--------|----|--------|----|------------|--------|
| 1/2"   | 15 | UT05-2 | 16 | 1          | 513528 |
| 3/4"   | 20 | UT05-2 | 16 | 1          | 513529 |
| 1"     | 25 | UT05-2 | 16 | 1          | 513530 |
| 1 1/4" | 32 | UT15-4 | 16 | 1          | 513531 |
| 1 1/2" | 40 | UT15-4 | 16 | 1          | 513532 |
| 2"     | 50 | UT17-4 | 16 | 1          | 513533 |



### Kugelhahn 2W M1 ANSI

- Losflansch
- Sitzdichtung: PTFE
- PO-DA
- lang
- pi-250V

### Ball Valve 2W M1 ANSI

- Backing flange
- seat-sealing: PTFE
- PO-DA
- long
- pi-250V

Code  
68M

| d      | DN | Typ    | PN | VE<br>Pack | FPM    |
|--------|----|--------|----|------------|--------|
| 1/2"   | 15 | UT05DA | 16 | 1          | 513534 |
| 3/4"   | 20 | UT05DA | 16 | 1          | 513535 |
| 1"     | 25 | UT05DA | 16 | 1          | 513536 |
| 1 1/4" | 32 | UT15DA | 16 | 1          | 513537 |
| 1 1/2" | 40 | UT15DA | 16 | 1          | 513538 |
| 2"     | 50 | UT15DA | 16 | 1          | 513539 |

## 2-Wege modularer Industriekugelhahn M1 pneumatisch mit Magnetventil, silikonfrei

2-way modular ball valve M1 pneumatic with solenoid valve, silicone free



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißmuffe
- Sitzdichtung: PTFE
- PO-NC
- 5/2-3/2-wege Magnetventil 24VDC

### Ball Valve 2W M1 metric

- PVDF fusion socket ends
- seat-sealing: PTFE
- PO-NC
- 5/2-3/2way Solenoid Valve 24VDC

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 16 | 10 | UT05-2 | 16 | 1          | 513540 |
| 20 | 15 | UT05-2 | 16 | 1          | 513541 |
| 25 | 20 | UT05-2 | 16 | 1          | 513542 |
| 32 | 25 | UT05-2 | 16 | 1          | 513543 |
| 40 | 32 | UT15-4 | 16 | 1          | 513544 |
| 50 | 40 | UT15-4 | 16 | 1          | 513545 |
| 63 | 50 | UT17-4 | 16 | 1          | 513546 |



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißmuffe
- Sitzdichtung: PTFE
- PO-NO
- 5/2-3/2-wege Magnetventil 24VDC

### Ball Valve 2W M1 metric

- PVDF fusion socket ends
- seat-sealing: PTFE
- PO-NO
- 5/2-3/2way Solenoid Valve 24VDC

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 16 | 10 | UT05-2 | 16 | 1          | 513547 |
| 20 | 15 | UT05-2 | 16 | 1          | 513548 |
| 25 | 20 | UT05-2 | 16 | 1          | 513549 |
| 32 | 25 | UT05-2 | 16 | 1          | 513550 |
| 40 | 32 | UT15-4 | 16 | 1          | 513551 |
| 50 | 40 | UT15-4 | 16 | 1          | 513552 |
| 63 | 50 | UT17-4 | 16 | 1          | 513553 |



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißmuffe
- Sitzdichtung: PTFE
- PO-DA
- 5/2-3/2-wege Magnetventil 24VDC

### Ball Valve 2W M1 metric

- PVDF fusion socket ends
- seat-sealing: PTFE
- PO-DA
- 5/2-3/2way Solenoid Valve 24VDC

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 16 | 10 | UT05DA | 16 | 1          | 513554 |
| 20 | 15 | UT05DA | 16 | 1          | 513555 |
| 25 | 20 | UT05DA | 16 | 1          | 513556 |
| 32 | 25 | UT05DA | 16 | 1          | 513557 |
| 40 | 32 | UT15DA | 16 | 1          | 513558 |
| 50 | 40 | UT15DA | 16 | 1          | 513559 |
| 63 | 50 | UT15DA | 16 | 1          | 513560 |



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißstutzen
- Sitzdichtung: PTFE
- PO-NC
- 5/2-3/2-wege Magnetventil 24VDC

### Ball Valve 2W M1 metric

- PVDF fusion spigot
- seat-sealing: PTFE
- PO-NC
- 5/2-3/2way Solenoid Valve 24VDC

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 16 | 10 | UT05-2 | 16 | 1          | 513561 |
| 20 | 15 | UT05-2 | 16 | 1          | 513562 |
| 25 | 20 | UT05-2 | 16 | 1          | 513563 |
| 32 | 25 | UT05-2 | 16 | 1          | 513564 |
| 40 | 32 | UT15-4 | 16 | 1          | 513565 |
| 50 | 40 | UT15-4 | 16 | 1          | 513566 |
| 63 | 50 | UT17-4 | 16 | 1          | 513567 |

## 2-Wege modularer Industriekugelhahn M1 pneumatisch mit Magnetventil, silikonfrei

2-way modular ball valve M1 pneumatic with solenoid valve, silicone free



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißstutzen
- Sitzdichtung: PTFE
- PO-NO
- 5/2-3/2-wege Magnetventil 24VDC

### Ball Valve 2W M1 metric

- PVDF fusion spigot
- seat-sealing: PTFE
- PO-NO
- 5/2-3/2way Solenoid Valve 24VDC

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 16 | 10 | UT05-2 | 16 | 1          | 513568 |
| 20 | 15 | UT05-2 | 16 | 1          | 513569 |
| 25 | 20 | UT05-2 | 16 | 1          | 513570 |
| 32 | 25 | UT05-2 | 16 | 1          | 513571 |
| 40 | 32 | UT15-4 | 16 | 1          | 513572 |
| 50 | 40 | UT15-4 | 16 | 1          | 513573 |
| 63 | 50 | UT17-4 | 16 | 1          | 513574 |



### Kugelhahn 2W M1 metrisch

- PVDF-Schweißstutzen
- Sitzdichtung: PTFE
- PO-DA
- 5/2-3/2-wege Magnetventil 24VDC

### Ball Valve 2W M1 metric

- PVDF fusion spigot
- seat-sealing: PTFE
- PO-DA
- 5/2-3/2way Solenoid Valve 24VDC

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 16 | 10 | UT05DA | 16 | 1          | 513575 |
| 20 | 15 | UT05DA | 16 | 1          | 513576 |
| 25 | 20 | UT05DA | 16 | 1          | 513577 |
| 32 | 25 | UT05DA | 16 | 1          | 513578 |
| 40 | 32 | UT15DA | 16 | 1          | 513579 |
| 50 | 40 | UT15DA | 16 | 1          | 513580 |
| 63 | 50 | UT15DA | 16 | 1          | 513581 |



### Kugelhahn 2W M1 DIN

- Losflansch
- Sitzdichtung: PTFE
- PO-NC
- lang
- 5/2-3/2-wege Magnetventil 24VDC

### Ball Valve 2W M1 DIN

- Backing flange
- seat-sealing: PTFE
- PO-NC
- long
- 5/2-3/2way Solenoid Valve 24VDC

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 20 | 15 | UT05-2 | 16 | 1          | 513582 |
| 25 | 20 | UT05-2 | 16 | 1          | 513583 |
| 32 | 25 | UT05-2 | 16 | 1          | 513584 |
| 40 | 32 | UT15-4 | 16 | 1          | 513585 |
| 50 | 40 | UT15-4 | 16 | 1          | 513586 |
| 63 | 50 | UT17-4 | 16 | 1          | 513587 |



### Kugelhahn 2W M1 DIN

- Losflansch
- Sitzdichtung: PTFE
- PO-NO
- lang
- 5/2-3/2-wege Magnetventil 24VDC

### Ball Valve 2W M1 DIN

- Backing flange
- seat-sealing: PTFE
- PO-NO
- long
- 5/2-3/2way Solenoid Valve 24VDC

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 20 | 15 | UT05-2 | 16 | 1          | 513588 |
| 25 | 20 | UT05-2 | 16 | 1          | 513589 |
| 32 | 25 | UT05-2 | 16 | 1          | 513590 |
| 40 | 32 | UT15-4 | 16 | 1          | 513591 |
| 50 | 40 | UT15-4 | 16 | 1          | 513592 |
| 63 | 50 | UT17-4 | 16 | 1          | 513593 |

## 2-Wege modularer Industriekugelhahn M1 pneumatisch mit Magnetventil, silikonfrei

*2-way modular ball valve M1 pneumatic with solenoid valve, silicone free*



### Kugelhahn 2W M1 DIN

- Losflansch
- Sitzdichtung: PTFE
- PO-DA
- lang
- 5/2-3/2-wege Magnetventil 24VDC

### Ball Valve 2W M1 DIN

- Backing flange
- seat-sealing: PTFE
- PO-DA
- long
- 5/2-3/2way Solenoid Valve 24VDC

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 20 | 15 | UT05DA | 16 | 1          | 513594 |
| 25 | 20 | UT05DA | 16 | 1          | 513595 |
| 32 | 25 | UT05DA | 16 | 1          | 513596 |
| 40 | 32 | UT15DA | 16 | 1          | 513597 |
| 50 | 40 | UT15DA | 16 | 1          | 513598 |
| 63 | 50 | UT15DA | 16 | 1          | 513599 |



### Kugelhahn 2W M1 ANSI

- Losflansch
- Sitzdichtung: PTFE
- PO-NC
- lang
- 5/2-3/2-wege Magnetventil 24VDC

### Ball Valve 2W M1 ANSI

- Backing flange
- seat-sealing: PTFE
- PO-NC
- long
- 5/2-3/2way Solenoid Valve 24VDC

Code  
68M

| d      | DN | Typ    | PN | VE<br>Pack | FPM    |
|--------|----|--------|----|------------|--------|
| 1/2"   | 15 | UT05-2 | 16 | 1          | 513600 |
| 3/4"   | 20 | UT05-2 | 16 | 1          | 513601 |
| 1"     | 25 | UT05-2 | 16 | 1          | 513602 |
| 1 1/4" | 32 | UT15-4 | 16 | 1          | 513603 |
| 1 1/2" | 40 | UT15-4 | 16 | 1          | 513604 |
| 2"     | 50 | UT17-4 | 16 | 1          | 513605 |



### Kugelhahn 2W M1 ANSI

- Losflansch
- Sitzdichtung: PTFE
- PO-NO
- lang
- 5/2-3/2-wege Magnetventil 24VDC

### Ball Valve 2W M1 ANSI

- Backing flange
- seat-sealing: PTFE
- PO-NO
- long
- 5/2-3/2way Solenoid Valve 24VDC

Code  
68M

| d      | DN | Typ    | PN | VE<br>Pack | FPM    |
|--------|----|--------|----|------------|--------|
| 1/2"   | 15 | UT05-2 | 16 | 1          | 513606 |
| 3/4"   | 20 | UT05-2 | 16 | 1          | 513607 |
| 1"     | 25 | UT05-2 | 16 | 1          | 513608 |
| 1 1/4" | 32 | UT15-4 | 16 | 1          | 513609 |
| 1 1/2" | 40 | UT15-4 | 16 | 1          | 513610 |
| 2"     | 50 | UT17-4 | 16 | 1          | 513611 |



### Kugelhahn 2W M1 ANSI

- Losflansch
- Sitzdichtung: PTFE
- PO-DA
- lang
- 5/2-3/2-wege Magnetventil 24VDC

### Ball Valve 2W M1 ANSI

- Backing flange
- seat-sealing: PTFE
- PO-DA
- long
- 5/2-3/2way Solenoid Valve 24VDC

Code  
68M

| d      | DN | Typ    | PN | VE<br>Pack | FPM    |
|--------|----|--------|----|------------|--------|
| 1/2"   | 15 | UT05DA | 16 | 1          | 513612 |
| 3/4"   | 20 | UT05DA | 16 | 1          | 513613 |
| 1"     | 25 | UT05DA | 16 | 1          | 513614 |
| 1 1/4" | 32 | UT15DA | 16 | 1          | 513615 |
| 1 1/2" | 40 | UT15DA | 16 | 1          | 513616 |
| 2"     | 50 | UT15DA | 16 | 1          | 513617 |

# 2-Wege modularer Industriekugelhahn M1 pneumatisch mit Stellungsrückmelder und Magnetventil

2-way modular ball valve M1 pneumatic with position feedback and solenoid valve, silicone free



## Kugelhahn 2W M1 metrisch

- PVDF-Schweißmuffe
- Sitzdichtung: PTFE
- PO-NC
- pi-250V, 5/2-3/2W MV 24VDC

## Ball Valve 2W M1 metric

- PVDF fusion socket ends
- seat-sealing: PTFE
- PO-NC
- pi-250V, 5/2-3/2W SV 24VDC

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 16 | 10 | UT05-2 | 16 | 1          | 513618 |
| 20 | 15 | UT05-2 | 16 | 1          | 513619 |
| 25 | 20 | UT05-2 | 16 | 1          | 513620 |
| 32 | 25 | UT05-2 | 16 | 1          | 513621 |
| 40 | 32 | UT15-4 | 16 | 1          | 513622 |
| 50 | 40 | UT15-4 | 16 | 1          | 513623 |
| 63 | 50 | UT17-4 | 16 | 1          | 513624 |



## Kugelhahn 2W M1 metrisch

- PVDF-Schweißmuffe
- Sitzdichtung: PTFE
- PO-NO
- pi-250V, 5/2-3/2W MV 24VDC

## Ball Valve 2W M1 metric

- PVDF fusion socket ends
- seat-sealing: PTFE
- PO-NO
- pi-250V, 5/2-3/2W SV 24VDC

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 16 | 10 | UT05-2 | 16 | 1          | 513625 |
| 20 | 15 | UT05-2 | 16 | 1          | 513626 |
| 25 | 20 | UT05-2 | 16 | 1          | 513627 |
| 32 | 25 | UT05-2 | 16 | 1          | 513628 |
| 40 | 32 | UT15-4 | 16 | 1          | 513629 |
| 50 | 40 | UT15-4 | 16 | 1          | 513630 |
| 63 | 50 | UT17-4 | 16 | 1          | 513631 |



## Kugelhahn 2W M1 metrisch

- PVDF-Schweißmuffe
- Sitzdichtung: PTFE
- PO-DA
- pi-250V, 5/2-3/2W MV 24VDC

## Ball Valve 2W M1 metric

- PVDF fusion socket ends
- seat-sealing: PTFE
- PO-DA
- pi-250V, 5/2-3/2W SV 24VDC

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 16 | 10 | UT05DA | 16 | 1          | 513632 |
| 20 | 15 | UT05DA | 16 | 1          | 513633 |
| 25 | 20 | UT05DA | 16 | 1          | 513634 |
| 32 | 25 | UT05DA | 16 | 1          | 513635 |
| 40 | 32 | UT15DA | 16 | 1          | 513636 |
| 50 | 40 | UT15DA | 16 | 1          | 513637 |
| 63 | 50 | UT15DA | 16 | 1          | 513638 |



## Kugelhahn 2W M1 metrisch

- PVDF-Schweißstutzen
- Sitzdichtung: PTFE
- PO-NC
- pi-250V, 5/2-3/2W MV 24VDC

## Ball Valve 2W M1 metric

- PVDF fusion spigot
- seat-sealing: PTFE
- PO-NC
- pi-250V, 5/2-3/2W SV 24VDC

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 16 | 10 | UT05-2 | 16 | 1          | 513639 |
| 20 | 15 | UT05-2 | 16 | 1          | 513640 |
| 25 | 20 | UT05-2 | 16 | 1          | 513641 |
| 32 | 25 | UT05-2 | 16 | 1          | 513642 |
| 40 | 32 | UT15-4 | 16 | 1          | 513643 |
| 50 | 40 | UT15-4 | 16 | 1          | 513644 |
| 63 | 50 | UT17-4 | 16 | 1          | 513645 |

# 2-Wege modularer Industriekugelhahn M1 pneumatisch mit Stellungsrückmelder und Magnetventil

2-way modular ball valve M1 pneumatic with position feedback and solenoid valve, silicone free



## Kugelhahn 2W M1 metrisch

- PVDF-Schweißstutzen
- Sitzdichtung: PTFE
- PO-NO
- pi-250V, 5/2-3/2W MV 24VDC

## Ball Valve 2W M1 metric

- PVDF fusion spigot
- seat-sealing: PTFE
- PO-NO
- pi-250V, 5/2-3/2W SV 24VDC

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 16 | 10 | UT05-2 | 16 | 1          | 513646 |
| 20 | 15 | UT05-2 | 16 | 1          | 513647 |
| 25 | 20 | UT05-2 | 16 | 1          | 513648 |
| 32 | 25 | UT05-2 | 16 | 1          | 513649 |
| 40 | 32 | UT15-4 | 16 | 1          | 513650 |
| 50 | 40 | UT15-4 | 16 | 1          | 513651 |
| 63 | 50 | UT17-4 | 16 | 1          | 513652 |



## Kugelhahn 2W M1 metrisch

- PVDF-Schweißstutzen
- Sitzdichtung: PTFE
- PO-DA
- pi-250V, 5/2-3/2W MV 24VDC

## Ball Valve 2W M1 metric

- PVDF fusion spigot
- seat-sealing: PTFE
- PO-DA
- pi-250V, 5/2-3/2W SV 24VDC

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 16 | 10 | UT05DA | 16 | 1          | 513653 |
| 20 | 15 | UT05DA | 16 | 1          | 513654 |
| 25 | 20 | UT05DA | 16 | 1          | 513655 |
| 32 | 25 | UT05DA | 16 | 1          | 513656 |
| 40 | 32 | UT15DA | 16 | 1          | 513657 |
| 50 | 40 | UT15DA | 16 | 1          | 513658 |
| 63 | 50 | UT15DA | 16 | 1          | 513659 |



## Kugelhahn 2W M1 DIN

- Losflansch
- Sitzdichtung: PTFE
- PO-NC
- lang
- pi-250V, 5/2-3/2W MV 24VDC

## Ball Valve 2W M1 DIN

- Backing flange
- seat-sealing: PTFE
- PO-NC
- long
- pi-250V, 5/2-3/2W SV 24VDC

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 20 | 15 | UT05-2 | 16 | 1          | 513660 |
| 25 | 20 | UT05-2 | 16 | 1          | 513661 |
| 32 | 25 | UT05-2 | 16 | 1          | 513662 |
| 40 | 32 | UT15-4 | 16 | 1          | 513663 |
| 50 | 40 | UT15-4 | 16 | 1          | 513664 |
| 63 | 50 | UT17-4 | 16 | 1          | 513665 |



## Kugelhahn 2W M1 DIN

- Losflansch
- Sitzdichtung: PTFE
- PO-NO
- lang
- pi-250V, 5/2-3/2W MV 24VDC

## Ball Valve 2W M1 DIN

- Backing flange
- seat-sealing: PTFE
- PO-NO
- long
- pi-250V, 5/2-3/2W SV 24VDC

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 20 | 15 | UT05-2 | 16 | 1          | 513666 |
| 25 | 20 | UT05-2 | 16 | 1          | 513667 |
| 32 | 25 | UT05-2 | 16 | 1          | 513668 |
| 40 | 32 | UT15-4 | 16 | 1          | 513669 |
| 50 | 40 | UT15-4 | 16 | 1          | 513670 |
| 63 | 50 | UT17-4 | 16 | 1          | 513671 |

# 2-Wege modularer Industriekugelhahn M1 pneumatisch mit Stellungsrückmelder und Magnetventil

2-way modular ball valve M1 pneumatic with position feedback and solenoid valve, silicone free



## Kugelhahn 2W M1 DIN

- Losflansch
- Sitzdichtung: PTFE
- PO-DA
- lang
- pi-250V, 5/2-3/2W MV 24VDC

## Ball Valve 2W M1 DIN

- Backing flange
- seat-sealing: PTFE
- PO-DA
- long
- pi-250V, 5/2-3/2W SV 24VDC

Code  
68M

| d  | DN | Typ    | PN | VE<br>Pack | FPM    |
|----|----|--------|----|------------|--------|
| 20 | 15 | UT05DA | 16 | 1          | 513672 |
| 25 | 20 | UT05DA | 16 | 1          | 513673 |
| 32 | 25 | UT05DA | 16 | 1          | 513674 |
| 40 | 32 | UT15DA | 16 | 1          | 513675 |
| 50 | 40 | UT15DA | 16 | 1          | 513676 |
| 63 | 50 | UT15DA | 16 | 1          | 513677 |



## Kugelhahn 2W M1 ANSI

- Losflansch
- Sitzdichtung: PTFE
- PO-NC
- lang
- pi-250V, 5/2-3/2W MV 24VDC

## Ball Valve 2W M1 ANSI

- Backing flange
- seat-sealing: PTFE
- PO-NC
- long
- pi-250V, 5/2-3/2W SV 24VDC

Code  
68M

| d      | DN | Typ    | PN | VE<br>Pack | FPM    |
|--------|----|--------|----|------------|--------|
| 1/2"   | 15 | UT05-2 | 16 | 1          | 513678 |
| 3/4"   | 20 | UT05-2 | 16 | 1          | 513679 |
| 1"     | 25 | UT05-2 | 16 | 1          | 513680 |
| 1 1/4" | 32 | UT15-4 | 16 | 1          | 513681 |
| 1 1/2" | 40 | UT15-4 | 16 | 1          | 513682 |
| 2"     | 50 | UT17-4 | 16 | 1          | 513683 |



## Kugelhahn 2W M1 ANSI

- Losflansch
- Sitzdichtung: PTFE
- PO-NO
- lang
- pi-250V, 5/2-3/2W MV 24VDC

## Ball Valve 2W M1 ANSI

- Backing flange
- seat-sealing: PTFE
- PO-NO
- long
- pi-250V, 5/2-3/2W SV 24VDC

Code  
68M

| d      | DN | Typ    | PN | VE<br>Pack | FPM    |
|--------|----|--------|----|------------|--------|
| 1/2"   | 15 | UT05-2 | 16 | 1          | 513684 |
| 3/4"   | 20 | UT05-2 | 16 | 1          | 513685 |
| 1"     | 25 | UT05-2 | 16 | 1          | 513686 |
| 1 1/4" | 32 | UT15-4 | 16 | 1          | 513687 |
| 1 1/2" | 40 | UT15-4 | 16 | 1          | 513688 |
| 2"     | 50 | UT17-4 | 16 | 1          | 513689 |



## Kugelhahn 2W M1 ANSI

- Losflansch
- Sitzdichtung: PTFE
- PO-DA
- lang
- pi-250V, 5/2-3/2W MV 24VDC

## Ball Valve 2W M1 ANSI

- Backing flange
- seat-sealing: PTFE
- PO-DA
- long
- pi-250V, 5/2-3/2W SV 24VDC

Code  
68M

| d      | DN | Typ    | PN | VE<br>Pack | FPM    |
|--------|----|--------|----|------------|--------|
| 1/2"   | 15 | UT05DA | 16 | 1          | 513690 |
| 3/4"   | 20 | UT05DA | 16 | 1          | 513691 |
| 1"     | 25 | UT05DA | 16 | 1          | 513692 |
| 1 1/4" | 32 | UT15DA | 16 | 1          | 513693 |
| 1 1/2" | 40 | UT15DA | 16 | 1          | 513694 |
| 2"     | 50 | UT15DA | 16 | 1          | 513695 |

# Laborkugelhahn mit Anschlussset Laboratory ball valve with accessories



## Laborkugelhahn BSP

- Innengewinde-Außengewinde
- Sitzdichtung: PTFE
- mit Zubehörset

## Sampling Valve BSP

- Female thread-male thread
- seat-sealing: PTFE
- with accessories

Code  
73

| d         | DN | PN | VE          | FPM     |
|-----------|----|----|-------------|---------|
| 1/4"-1/4" | 6  | 10 | Pack<br>100 | 122459A |



## Laborkugelhahn NPT

- Innengewinde-Außengewinde
- Sitzdichtung: PTFE
- mit Zubehörset

## Sampling Valve NPT

- Female thread-male thread
- seat-sealing: PTFE
- with accessories

Code  
73

| d         | DN | PN | VE          | FPM     |
|-----------|----|----|-------------|---------|
| 1/4"-1/4" | 6  | 10 | Pack<br>100 | 122460A |



M1 Ball Valve Series – Modularity for any application  
<https://youtu.be/aAF5omvfaoM>



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