

**2 way ball valve M1** manual  
with integrated Praher Labeling System



**General:**

- Material: PVC-U
- Seal material: EPDM / FPM
- Ball seating joint: PTFE
- Dimensions: DN10 – DN80  
d16 – d100  
d3/8" – d4"

**Connection types:**

- Solvent socket DIN / ASTM / JIS
- Solvent spigot DIN
- Threaded socket BSP / NPT
- PE fusion spigot DIN
- PE fusion socket DIN
- Fixed flange DIN / ANSI / JIS

**Operating pressure:**

PVC DN10 – DN80 PN16

**Technical features:**

- Silicone free
- Buttress thread
- Safety locking handle system
- Double axial gasket
- Floating ball
- Double sided blocked ball
- Adjustable ball seating joint
- Integrated fixations for bracket mounting
- Integrated bottom mounting stand
- Radial installation or removal
- Maintenance free

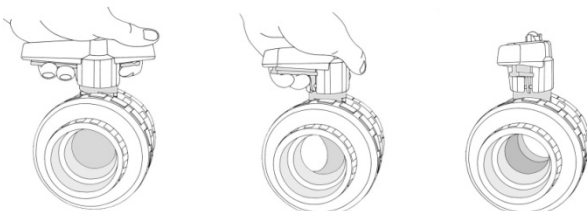
**Accessories:**

- Clamping / spacing element
- Adapter set\*
- Position feedback for ball valve hand and automatic operated\*

\*see data sheet „M1 with Adapterset“ and „M1 with position indication“

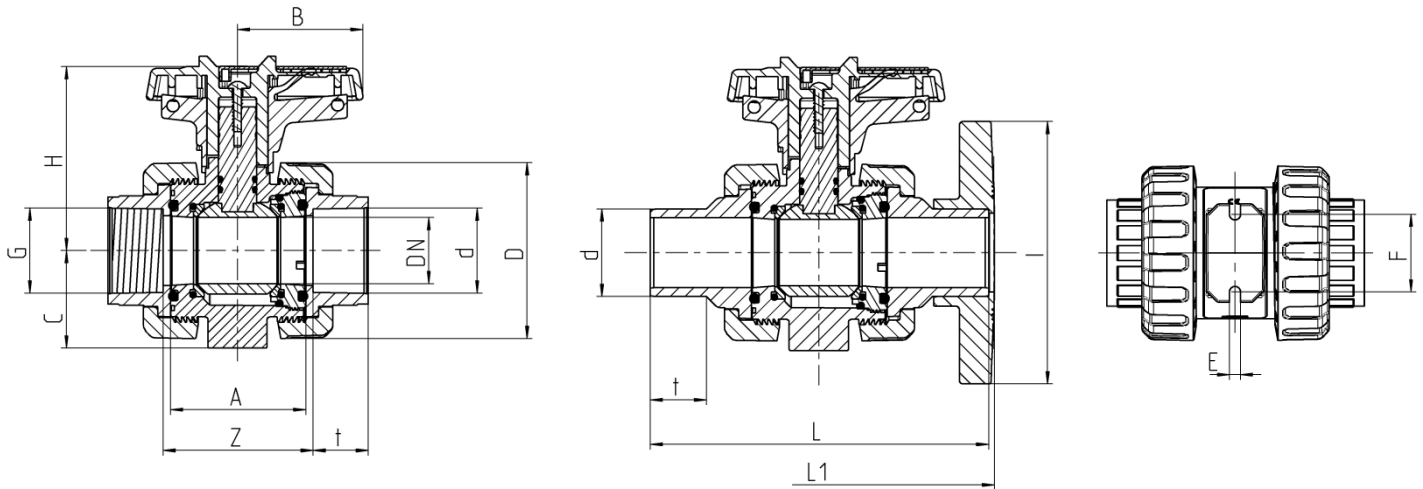
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**SAFETY LOCKABLE HANDLE SYSTEM**



## 2 way ball valve M1 manual with integrated Praher Labeling System

### Dimensions:



### PVC-U

#### Connection types

PVC Solvent socket / Solvent spigot / Threaded socket / Fixed flange

PE Fusion spigot / Fusion socket

DN	10	15	20	25	32	40	50	65	80	80
d	16	20	25	32	40	50	63	75	90	110
<b>G</b> TSO <sup>1</sup>	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
<b>A</b>	45	45	53,5	54	62	78	87	111,5	135,5	135,5
<b>B</b>	39,5	39,5	51	51	63,5	72	84	110	132	132
<b>C</b>	33	33	40	43	51	56	64	85	100	100
<b>D</b>	55,5	55,5	62	70	84	101	115	149	182	182
<b>E</b>	5,5	5,5	5,5	6,5	6,5	6,5	6,5	8,3	10,3	10,3
<b>F</b>	34	34	36	38	40	45	50	65	80	80
<b>H</b>	70,5	70,5	77	79,5	98	105,5	114	142	153	153
<b>I</b>	-	97	105	125	140	150	165	185	200	-
<b>t</b> SSO <sup>2</sup>	16	16,5	19,5	23	26,5	31,5	38,5	44,5	56,5	61
<b>t</b> SSP <sup>3</sup>	17	16,5	19,5	23	26,5	31,5	38,5	44,5	54	-
<b>t</b> FSP <sup>4</sup> PE	13	14	15,5	18,5	15	29	31	32	30	-
<b>t</b> FSO <sup>5</sup> PE	14,5	16	17	19	21,5	25	29,5	34,5	38	42
<b>Z</b> SSO <sup>2</sup>	51	50	59,5	60	68,5	86	98	122	152,5	162
<b>Z</b> TSO <sup>1</sup>	48	50	60	60	68	87	98	122	156	-
<b>Z</b> FSP <sup>5</sup> PE	52,5	50	62	64,5	75	97	110,5	139,5	181,5	185,5
<b>L</b> SSP <sup>3</sup>	98	123,5	143,5	153,5	173,5	193,5	223,5	259,5	297	-
<b>L</b> FSP <sup>4</sup> PE	95	106,5	126,5	131	120	162,5	175	227	265,5	-
<b>L1</b> FF <sup>6</sup>	-	130	150	160	180	200	230	266	307,5	-
<b>PN</b>	16	16	16	16	16	16	16	16	16	16

Dimensions in mm

<sup>1</sup> TSO = Threaded socket

<sup>2</sup> SSO = Solvent socket

<sup>3</sup> SSP = Solvent spigot

<sup>4</sup> FSP = Fusion spigot

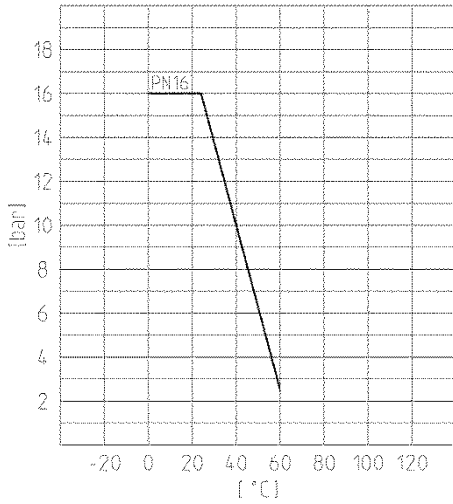
<sup>5</sup> FSO = Fusion socket

<sup>6</sup> FF = Fixed flange

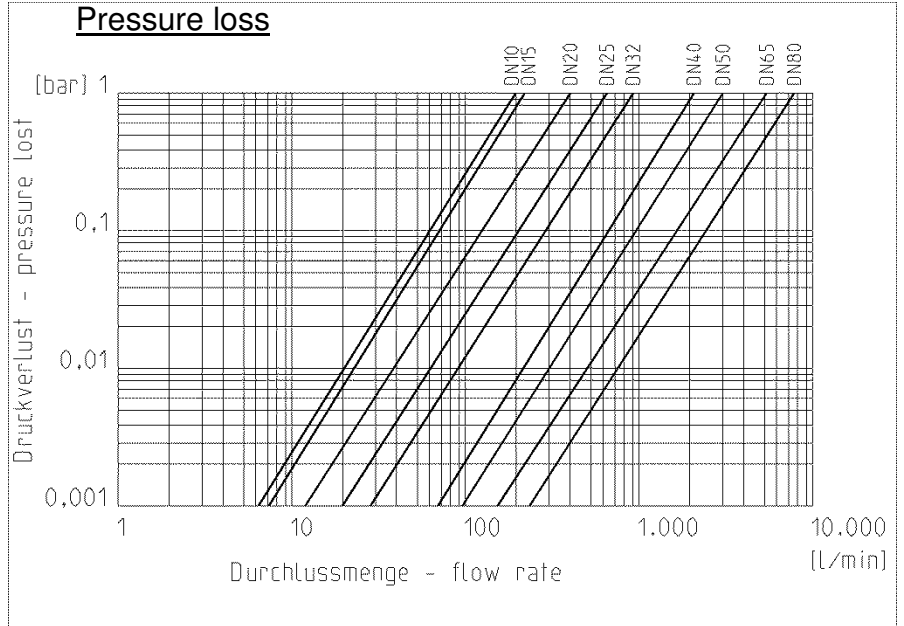
- = currently not released

**Diagrams:**

**Pressure - Temperature**



**Pressure loss**

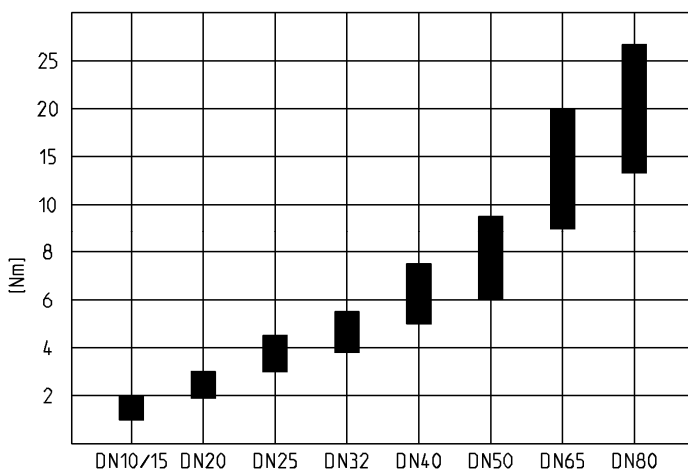


**Cv value table**

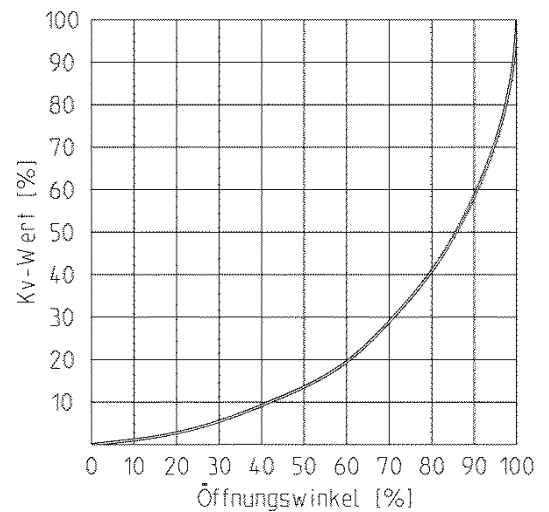
Pressure loss	DN10 d16	DN15 d20	DN20 d25	DN25 d32	DN32 d40	DN40 d50	DN50 d63	DN65 d75	DN80 d90	DN80 d110
<b>0,001 bar</b>	6,2	7,1	12,6	19,9	28,4	67	94,8	162,8	240,3	240,3
<b>1 bar</b>	198	225	400	630	900	2120	3000	5150	7600	7600

Angaben in l/min (PN16 Rohr)

**Torque**



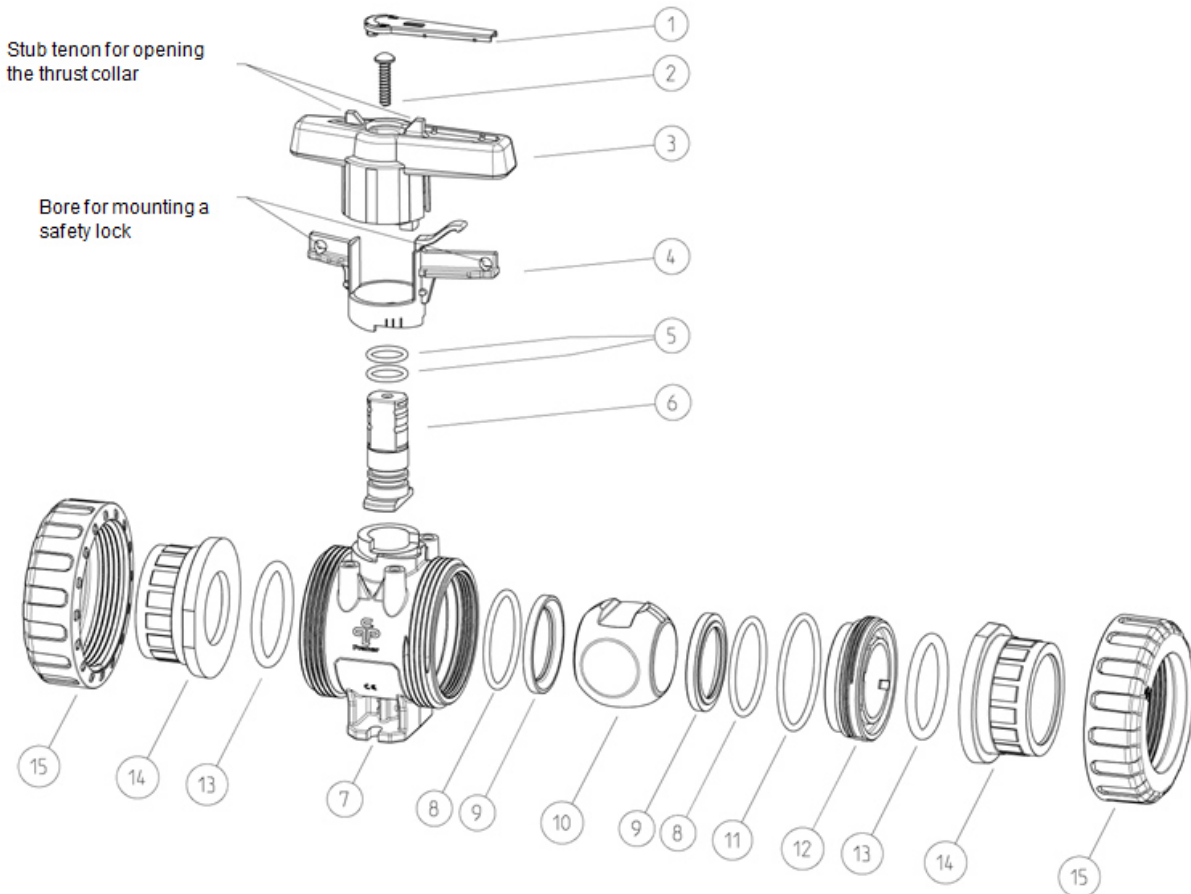
**Flow characteristic**



**2 way ball valve M1 manual**  
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**Exploded drawing:**

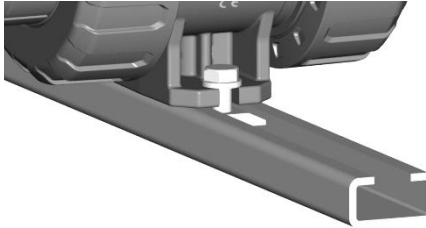
- |   |                            |
|---|----------------------------|
| <b>01.</b> Labeling plate               | <b>10.</b> Ball            |
| <b>02.</b> Screw                        | <b>11.</b> O-Ring          |
| <b>03.</b> Handle                       | <b>12.</b> Thrust collar   |
| <b>04.</b> Spring loaded locking sleeve | <b>13.</b> O-Ring          |
| <b>05.</b> O-Ring                       | <b>14.</b> Connector types |
| <b>06.</b> Shaft                        | Solvent socket / - spigot  |
| <b>07.</b> Body                         | Threaded socket            |
| <b>08.</b> O-Ring                       | Fusion socket /- spigot    |
| <b>09.</b> Ball seating joint           | <b>15.</b> Union nut       |



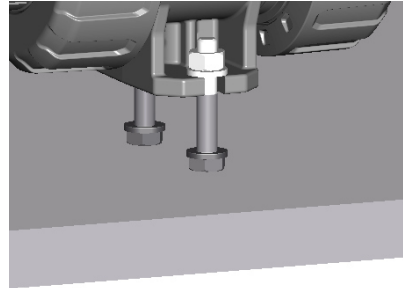
## 2 ball valve M1 manually with integrated Praher Labeling System

### Bottom mounting stand – mounting possibilities:

- Assembly rail



- Plate



- Masonry / Concrete
  - Hanger screw and dowel required



### PLS – Praher Labeling System



#### Technical features:

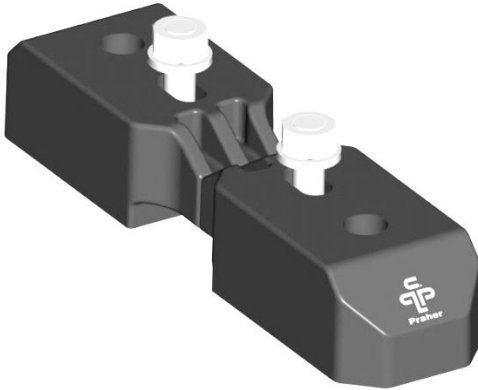
- Clear and durable label
- Convenient marking by touch-up pen or laser engraving
- Standard version available with yellow plate; other colors available in red, blue and green
- Simple and easy to change
- Corrosion-resistant
- No effect on the function of the handle

## 2 way ball valve M1 manual with integrated Praher Labeling System



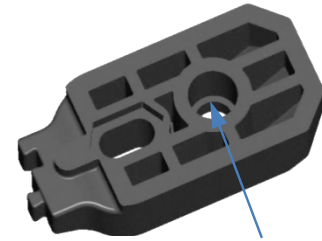
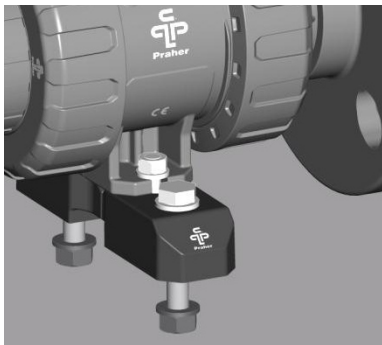
### Accessories

#### Clamping / spacing element:



#### Technical features:

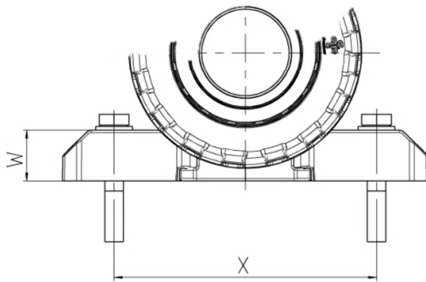
- Using for fixing as:
  - Clamping element
    - floors, walls, ceilings
    - plate
  - Spacing element  
*(screws additionally necessary)*
    - for flange connection
- Bore for threaded bush



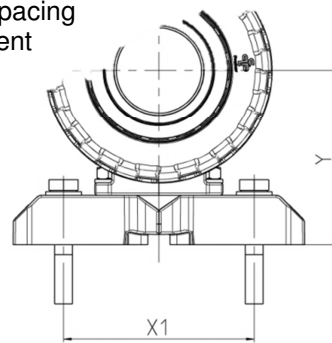
Bore for threaded bush

#### Dimensions:

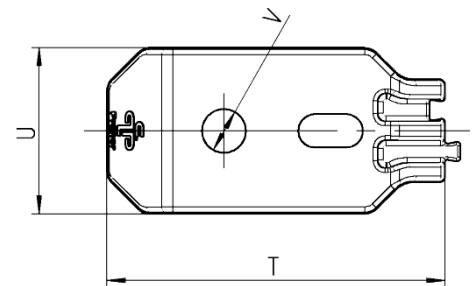
Use as clamping  
element



Use as spacing  
element



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



Dimensions in mm



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FRECALL 1800 46 47 03



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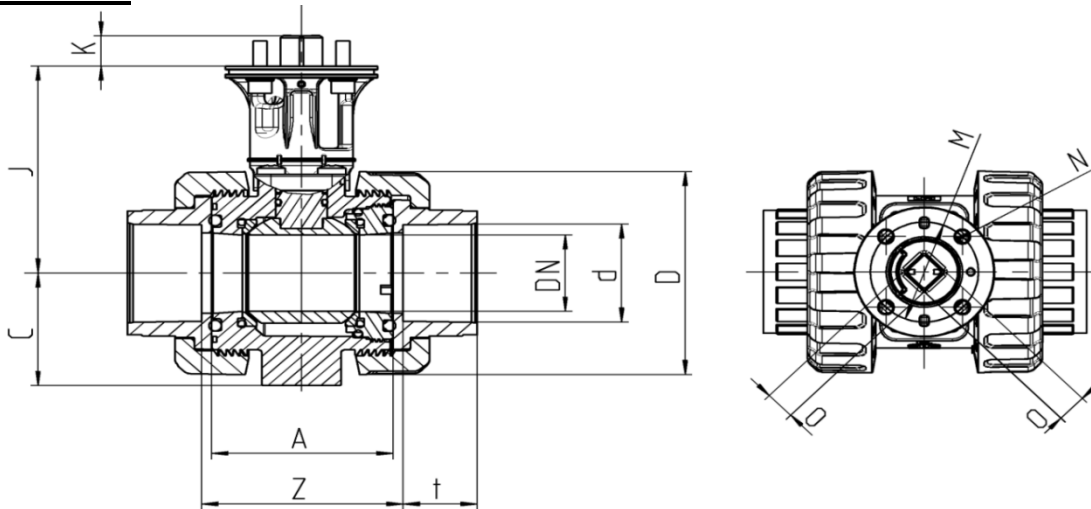
**Adapter set for automatisation:**



**Technical features:**

- Adapter set for mounting of actuator and position feedback
- Coupling – actuator
- Material bracket and coupling: PA-GF
- Includes stainless steel bolts

**Dimensions:**



**Connector type**  
PVC solvent socket

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	45	45	53,5	54	62	78	87	111,5	135,5	135,5
C	33	33	40	43	51	56	64	85	100	100
D	55,5	55,5	62	70	84	101	115	149	182	182
J	80	80	85,5	88	97	103	109,5	136,5	159,5	159,5
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	11	14	14	17	17	17
t	16	16,5	19,5	23	26,5	31,5	38,5	44,5	56,5	61
Z	51	50	59,5	60	68,5	86	98	122	152,5	162
PN	16	16	16	16	16	16	16	16	16	16

Dimensions in mm



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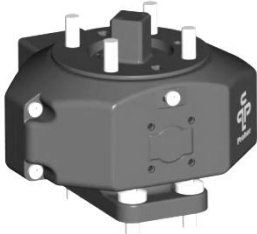
## 2 way ball valve M1 manual with integrated Praher Labeling System

### Position feedback:

#### For manual ball valve



#### For automatic ball valve

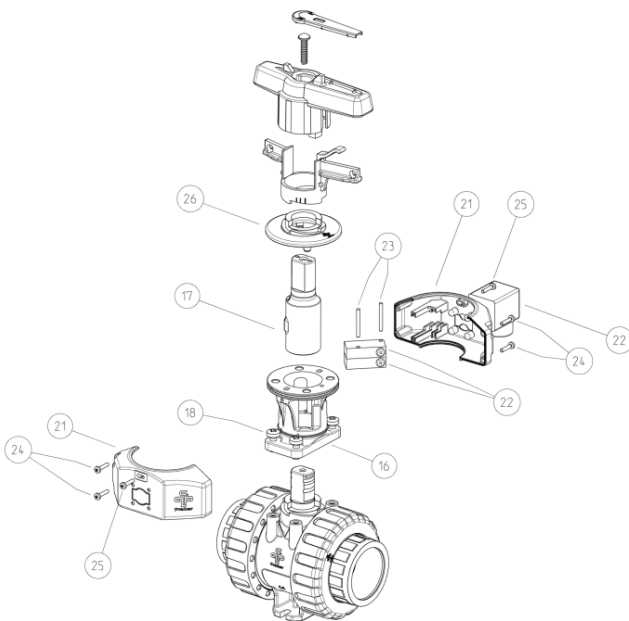


### Technical features:

- Limit switch IP67
  - mechanical
    - Ag-Ni NO
    - Ag-Ni NC (on request)
    - Au NO (on request)
    - Au NC (on request)
  - inductive (on request)
    - NPN/PNP
  - Namur (on request)
- adjustable
- incl. stainless steel bolts
- incl. device plug

### Exploded drawings:

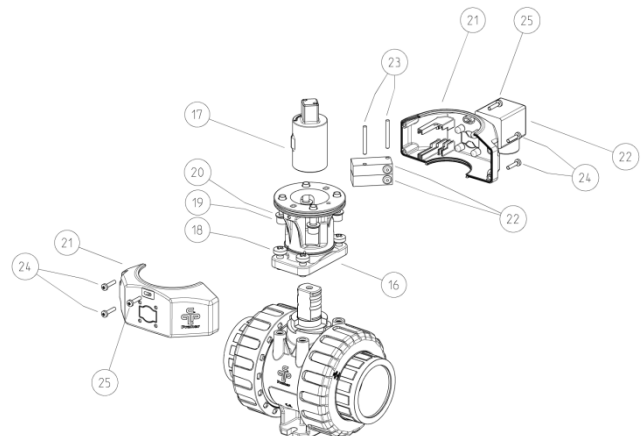
#### Ball valve manual with position feedback



- 16. Bracket (material : PA-GF)
- 17. Coupling shaft (material: PA-GF)
- 18. Screw
- 19. Hexagon socket screw

- 20. Toothed washer
- 22. Limit switch
- 24. Screw
- 26. Cover

#### Ball valve with adapter set for automatic version and position feedback



- 21. Half-shells (material: ABS)
- 23. Pin
- 25. Locking screw for adjusting position feedback



**Technical data 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	Operating: -10°C bis +50°C	
Electrical wiring	<b>NO</b>	<b>NC</b>

\* on request

Limit switch inductive		
Type	NPN*/PNP*	NAMUR* EMV acc. IEC / EN 60947-5-2:2004; NE 21 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	Operating: -10°C bis +50°C	
Electrical wiring		

\* on request

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