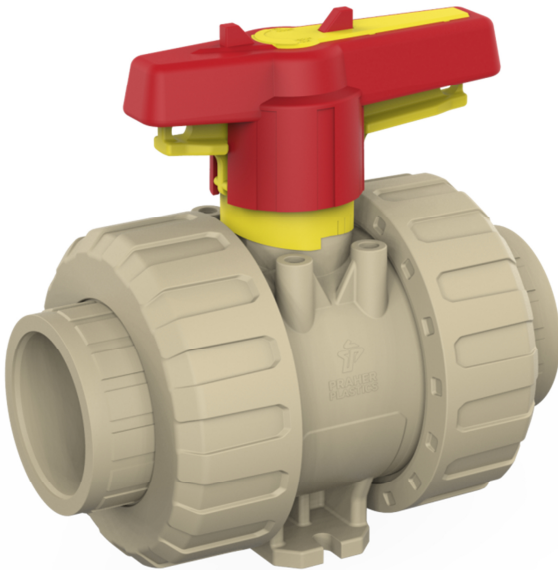


## 2 way ball valve M1 manual with integrated Praher Labeling System



### General:

- Body material: PP-H / PVDF
- Seal material: EPDM / FPM
- Ball seating joint: PTFE
- Dimensions: DN10 – DN80  
d16 – d110  
d3/8" – d4"

### Connector types:

#### PP-H

- Fusion socket: DIN / ASTM
- Fusion spigot: DIN
- Threaded socket: BSP / NPT
- PE fusion spigot: DIN
- PE fusion socket: DIN
- Backing flange: DIN / ANSI

#### PVDF

- Fusion socket: DIN / ASTM
- Fusion spigot: DIN
- Threaded socket: BSP / NPT
- Backing flange: DIN / ANSI

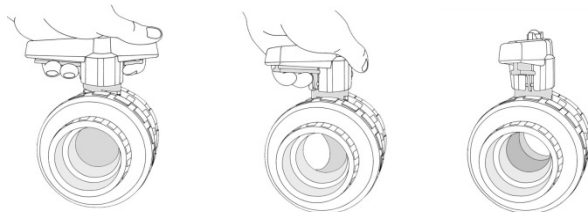
### Operating pressure:

- PP-H DN10 – DN80: PN10
- PVDF DN10 – DN80: PN16

### Technical features:

- Silicone free
- Union with buttress thread
- Safety locking handle
- 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

### **SAFETY LOCKABLE HANDLE SYSTEM**

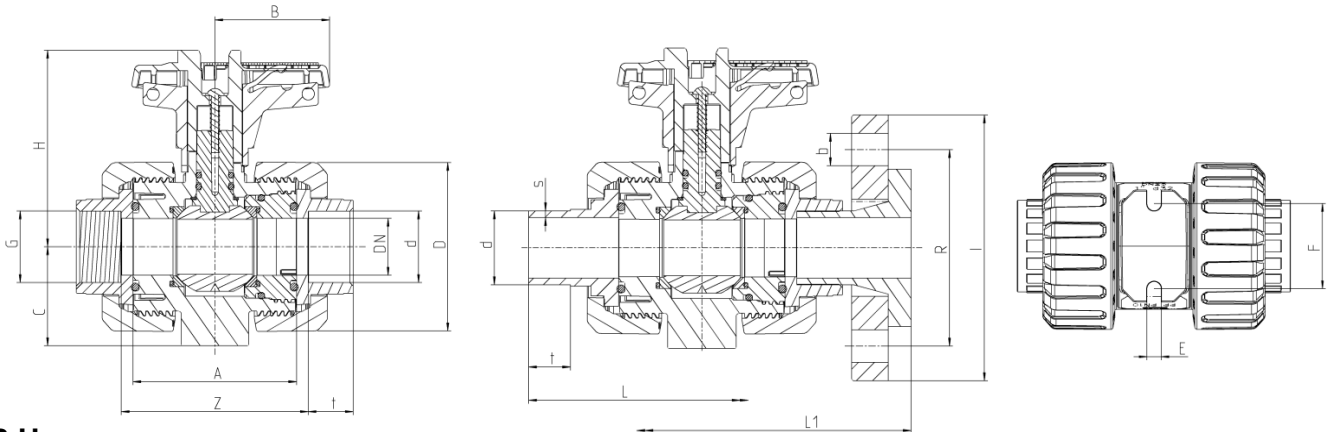


This document does not constitute a guarantee, it is for initial information purposes only. The product range is continually upgraded, the designs and types therefore only reflect the state of the art at the time of printing. Subject to technical modifications!

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



### Dimensions:



### PP-H

#### Connector types

PP-H fusion socket / fusion spigot (SDR11)/ threaded socket / backing flange DIN ANSI

PE fusion socket / fusion spigot (SDR11 / SDR17 on request)

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"	-
<b>A</b>	61,5	61,5	69	73	83	94	109	131,5	156,5	156,5
<b>B</b>	40	40	51,5	51,5	64	73	85	110	132	132
<b>C</b>	33	33	40	43,5	51	56,5	64,5	85	100	100
<b>D</b>	58	58	68,5	75,5	92	108	127,5	160	196,5	196,5
<b>E</b>	5,4	5,4	5,4	6,4	6,4	6,4	6,4	8,3	10,3	10,3
<b>F</b>	34	34	36	38	40	45	50	65	80	80
<b>H</b>	74,5	74,5	83	85,5	104,5	113	121,5	151,5	167	167
<b>I</b> DIN	-	95	108	115	140	150	165	-	-	-
<b>R</b> DIN	-	65	75	85	100	110	125	-	-	-
<b>b</b> DIN	-	4 x 14	4 x 14	4 x 14	4 x 18	4 x 18	4 x 18	-	-	-
<b>I</b> ANSI	-	95	102	114	130	133	162	-	-	-
<b>R</b> ANSI	-	60,45	69,85	79,25	88,9	98,55	120,65	-	-	-
<b>b</b> ANSI	-	4 x 16	4 x 16	4 x 16	4 x 16	4 x 16	4 x 20	-	-	-
<b>t</b> FSO <sup>2</sup>	14,5	16	17,5	19,5	22	25,5	29	34,5	38,5	42
<b>t</b> FSP <sup>3</sup>	13	14	15,5	18	20,5	23,5	27,5	31	36	40
<b>s</b> FSP <sup>3</sup>	1,8	1,9	2,3	2,9	3,7	4,6	5,8	6,8 <sup>+0,9</sup>	8,2 <sup>+1,1</sup>	10 <sup>+1,2</sup>
<b>t</b> FSP <sup>4</sup> PE	13	13,5	15,5	18	15	29	31	32	30	35,5
<b>s</b> FSP <sup>4</sup> PE	1,8	1,9	2,3	2,9	3,7	4,6	5,8	6,8 <sup>+0,9</sup>	8,2 <sup>+1,1</sup>	10 <sup>+1,2</sup>
<b>t</b> FSO <sup>5</sup> PE	14,5	16	17	19,5	22	25	29	34,5	38	42
<b>Z</b> FSO <sup>2</sup>	69,5	66,5	78	84	97	114	136,5	162	206,5	207,5
<b>Z</b> TSO <sup>1</sup>	66,5	66,5	74	80	89	103	119	142	173,5	-
<b>Z</b> FSO <sup>5</sup> PE	68,5	66,5	79	83	96	112	137	159,5	202,5	204,5
<b>L</b> FSP <sup>3</sup>	113,5	124	143	151	171	191	221	275	292	316,5
<b>L</b> FSP <sup>4</sup> PE	111,5	123	141,5	150	141	179	197	247	286,5	316
<b>L1</b> BF <sup>6</sup>	-	168	185	190	206	321	385	-	-	-
<b>PN</b>	10	10	10	10	10	10	10	10	10	10

Dimensions in mm

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

<sup>2</sup> FSO = fusion socket

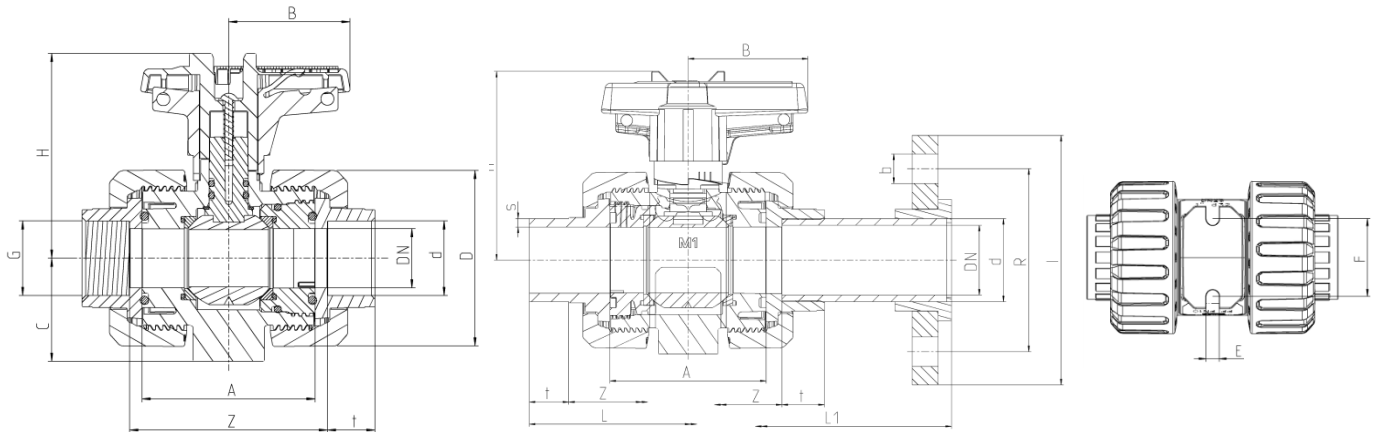
<sup>3</sup> FSP = fusion spigot

<sup>4</sup> FSP = fusion spigot PE

<sup>5</sup> FSO = fusion socket PE

<sup>6</sup> BF = backing flange DIN

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



### PVDF

#### Connector types

PVDF fusion socket / fusion spigot (SDR21) / threaded socket / backing flange DIN ANSI

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"	-
<b>A</b>	61,5	61,5	69	73	83	94	108,5	131,5	156,5	156,5
<b>B</b>	40	40	51,5	51,5	64	73	85	110	132	132
<b>C</b>	33	33	40	43,5	51	56,5	64,5	85	100	100
<b>D</b>	56,5	56,5	67	73,5	90	105,5	124,5	157,5	192,5	192,5
<b>E</b>	5,4	5,4	5,4	6,4	6,4	6,4	6,4	8,3	10,3	10,3
<b>F</b>	34	34	36	38	40	45	50	65	80	80
<b>H</b>	74,5	74,5	83	85,5	104,5	113	121,5	151,5	167	167
<b>I</b> DIN	-	95	108	115	140	150	165	-	-	-
<b>R</b> DIN	-	65	75	85	100	110	125	-	-	-
<b>b</b> DIN	-	4 x 14	4 x 14	4 x 14	4 x 18	4 x 18	4 x 18	-	-	-
<b>I</b> ANSI	-	95	102	114	130	133	162	-	-	-
<b>R</b> ANSI	-	60,45	69,85	79,25	88,9	98,55	120,65	-	-	-
<b>b</b> ANSI	-	4 x 16	4 x 16	4 x 16	4 x 16	4 x 16	4 x 20	-	-	-
<b>t</b> FSO <sup>2</sup>	14,5	16	17	19,5	22	25	29	35	38,5	44
<b>t</b> FSP <sup>3</sup>	13	14	15,5	18	20,5	23	27	31,5	36	40
<b>s</b> FSP <sup>3</sup>	1,9	1,9	1,9	2,4	2,4	3	3	3,6 <sup>+0,6</sup>	4,3 <sup>+0,7</sup>	5,3 <sup>+0,8</sup>
<b>Z</b> FSO <sup>2</sup>	69,5	67	78	84	97	113	136	158,5	205	163
<b>Z</b> TSO <sup>1</sup>	66	67,5	75	80	89	102	120	142,5	174,5	-
<b>L</b> FSP <sup>3</sup>	114	124	143	152	171	190	221	278	290,5	318,5
<b>L</b> BF <sup>4</sup>	-	168	185	190	206	321	385	-	-	-
<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> FSO = fusion socket

<sup>3</sup> FSP = fusion spigot

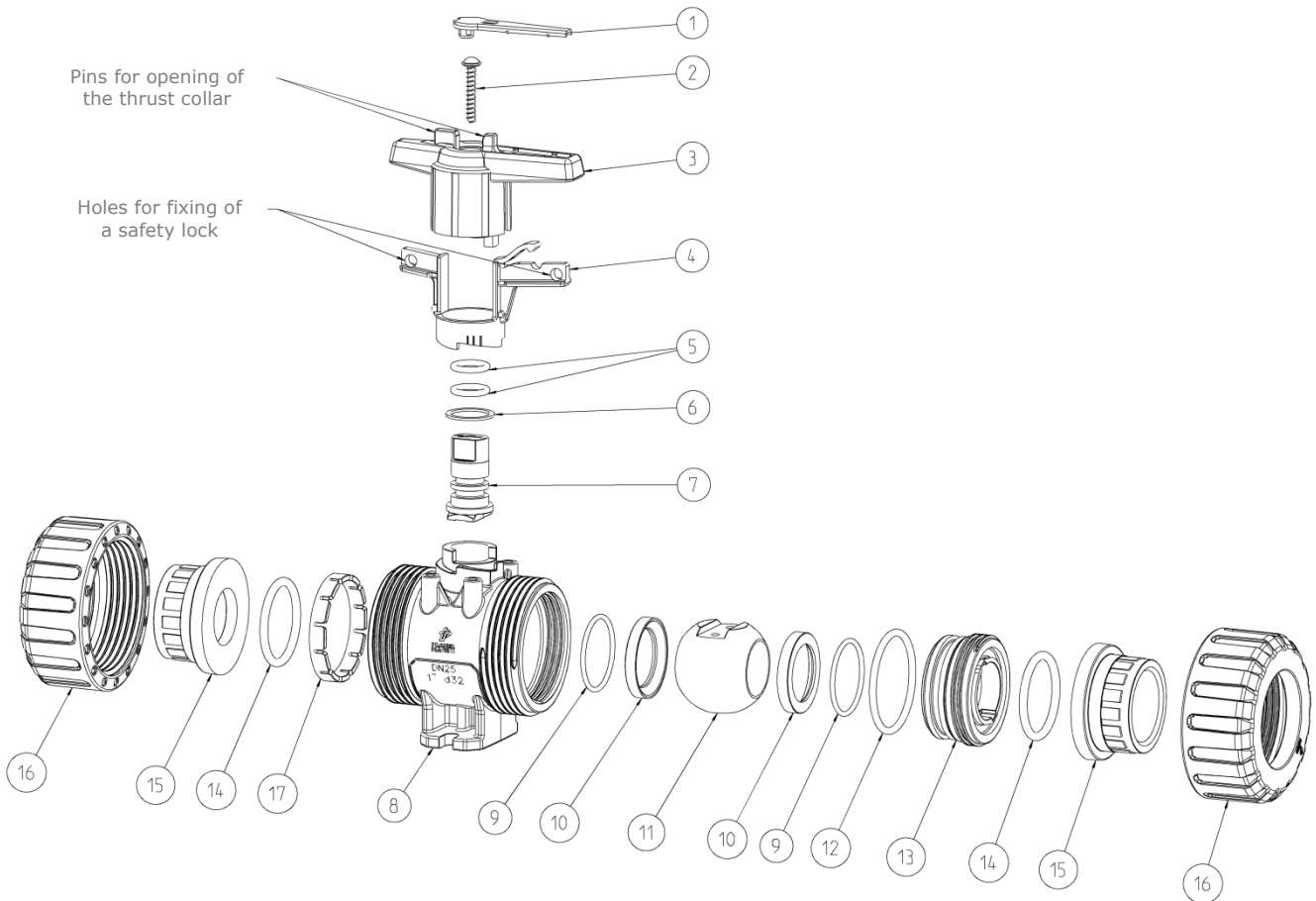
<sup>4</sup> BF = backing flange

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



### Exploded drawing:

- |                                  |   |
|----------------------------------|---|
| 01. Labeling plate               | 10. Ball seating joint  |
| 02. Screw                        | 11. Ball  |
| 03. Handle                       | 12. O-Ring  |
| 04. Spring loaded locking sleeve | 13. Thrust collar   |
| 05. O-Ring                       | 14. O-Ring  |
| 06. Teflon washer                | 15. Connector ( <i>socket as pictured or spigot, threaded, flange</i> ) |
| 07. Shaft                        | 16. Union   |
| 08. Body                         | 17. Reinforcement ring (only for PP-H)                                  |
| 09. O-Ring                       |   |

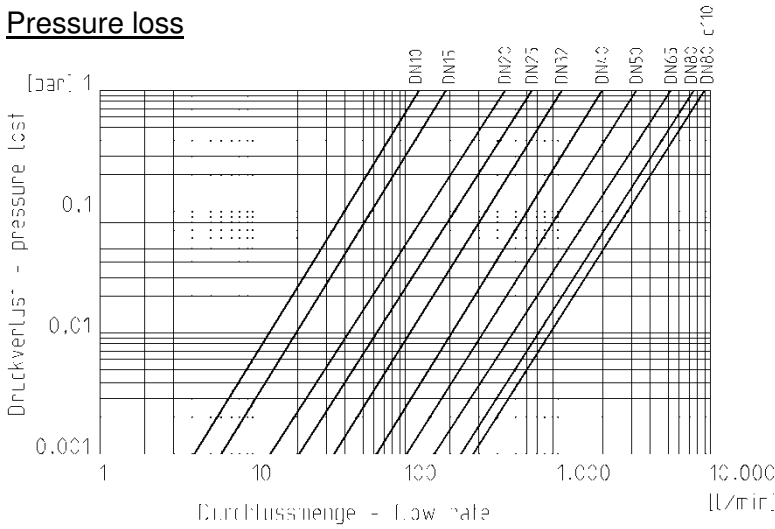


## 2 ball valve M1 manually with integrated Praher Labeling System

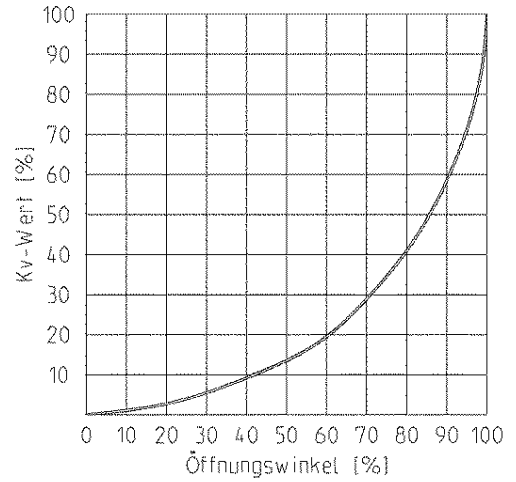


### Diagrams:

#### Pressure loss



#### Flow characteristics



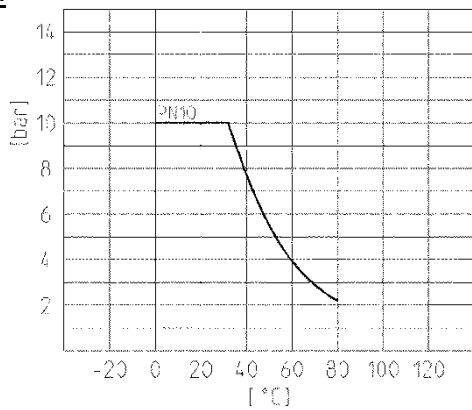
#### Cv Value Table

Druckverlust	DN10	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN80
	d16	d20	d25	d32	d40	d50	d63	d75	d90	d110
0,001 bar	4,1	6,0	13,9	20,6	34,2	62,6	102,5	164,4	237,1	279,8
1 bar	130	190	440	650	1080	1980	3240	5200	7500	8850

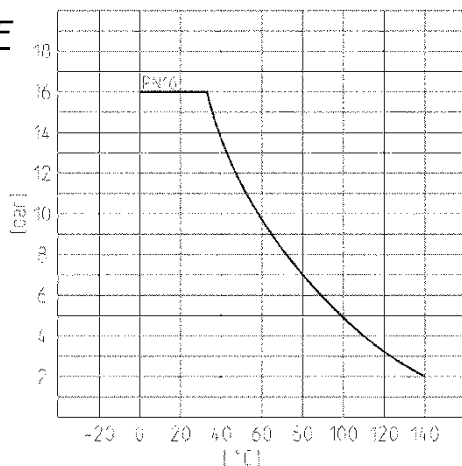
Angaben in l/min

#### Pressure - temperature

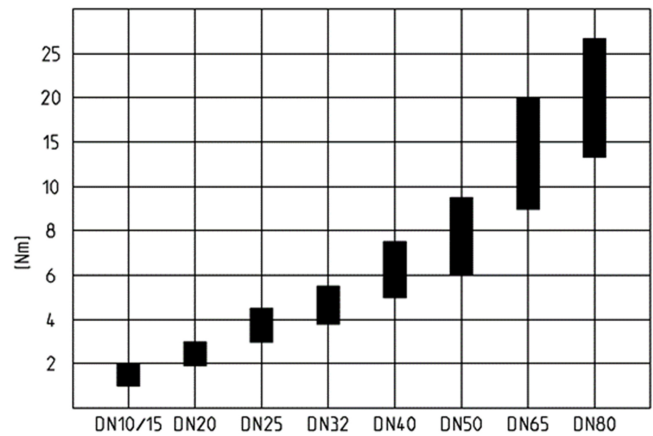
##### PP-H



##### PVDF



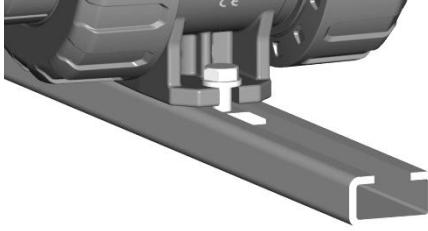
#### Torque



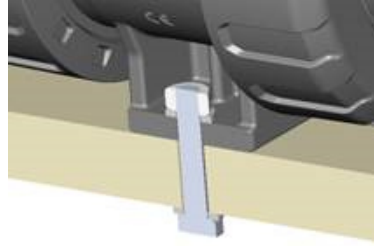
## 2 ball valve M1 manually with integrated Praher Labeling System

### Bottom mounting stand – mounting possibilities:

- Assembly rail



- Plate



- Masonry / Concrete
  - Hanger screw and dowel required



Further mounting possibilities with clamping/spacing element – see page 7.

## ACCESSORIES

### PLS – Praher Labeling System



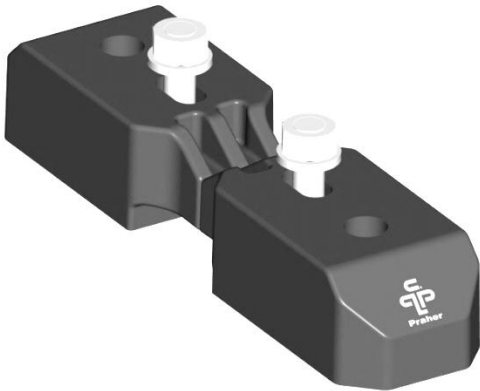
#### Technical features:

- 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

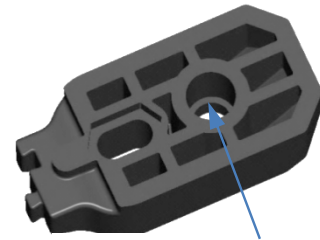
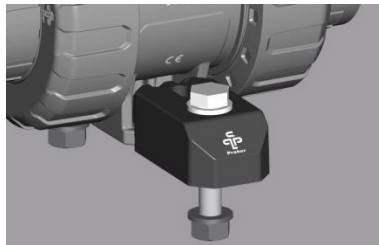
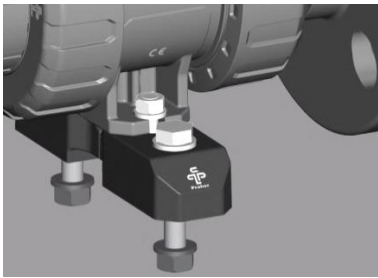


### Clamping / spacing element:



### Technical features:

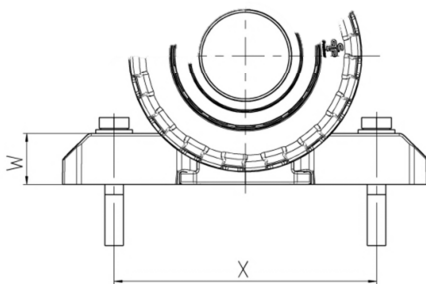
- Using for fixing as:
  - Clamping element
    - floors, walls, ceilings
    - plate
  - Spacing element  
(screws additionally necessary)
    - for flange connection
- Bore for threaded bush



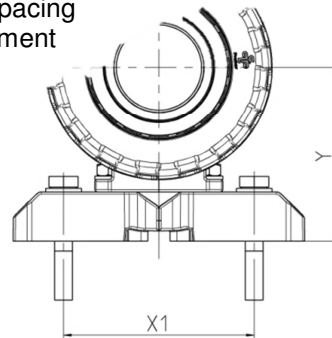
Bore for threaded bush

### Dimensions:

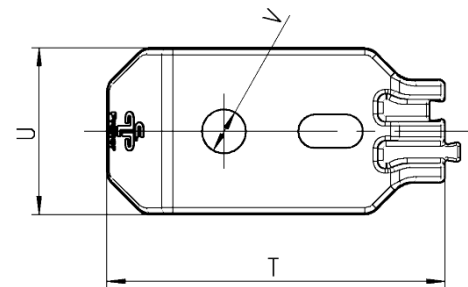
Use as clamping element



Use as spacing element



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



Dimensions in mm

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

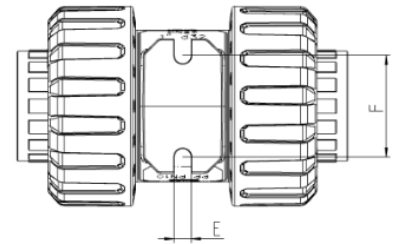
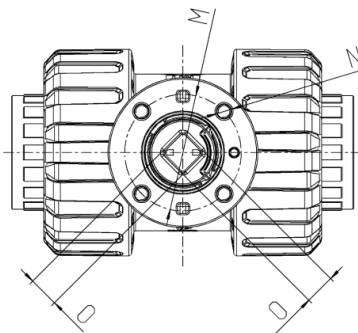
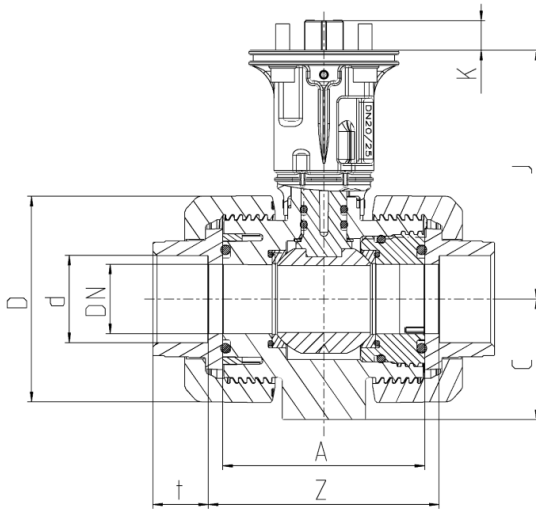


### Adapter set for automatization:



#### Technical features:

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



### PP-H

#### Connector type

#### PP-H fusion socket

DN	10	15	20	25	32	40	50	65	80	80
d	16	20	25	32	40	50	63	75	90/110	110
Flanschbild	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	58	58	68,5	75,5	92	108	127,5	160	196,5	196,5
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
J	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	17,5	19,5	22	25,5	29	34,5	38,5	42
Z	69,5	66,5	78	84	97	114	136,5	162	206,5	207,5
PN	10	10	10	10	10	10	10	10	10	10

Dimensions in mm



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



### PVDF

Connector type

PVDF fusion socket

DN	10	15	20	25	32	40	50	65	80	80
d	16	20	25	32	40	50	63	75	90	110
Flanschbild	F04	F04	F04	F04	F05	F05	F05	F07	F07	F07
A	61,5	61,5	69	73	83	94	108,5	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
J	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	158,8	205	163
PN	16	16	16	16	16	16	16	16	16	16

*Dimensions in mm*

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

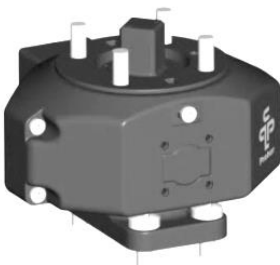


### Position feedback:

For manual ball valve



For automated ball valve

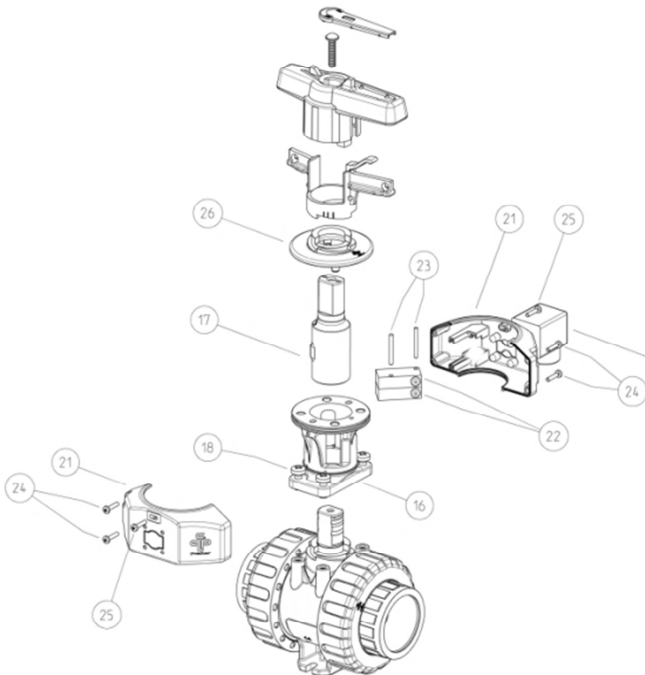


### Technical features:

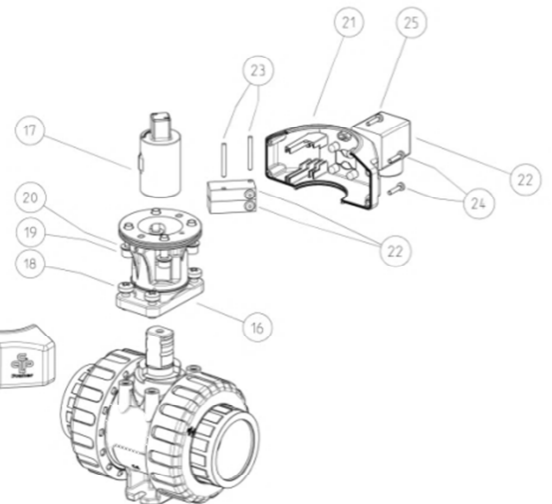
- Limit switch IP67
  - mechanical
    - Ag-Ni NO
    - Ag-Ni NC (on request)
    - Au NO (on request)
    - Au NC (on request)
  - inductive (on request)
    - NPN/PNP
  - Namur (on request)
- adjustable
- incl. stainless steel bolts
- incl. device plug

### Exploded drawings:

Ball valve manual with position feedback:



Ball valve with adapter set for automated version with position feedback

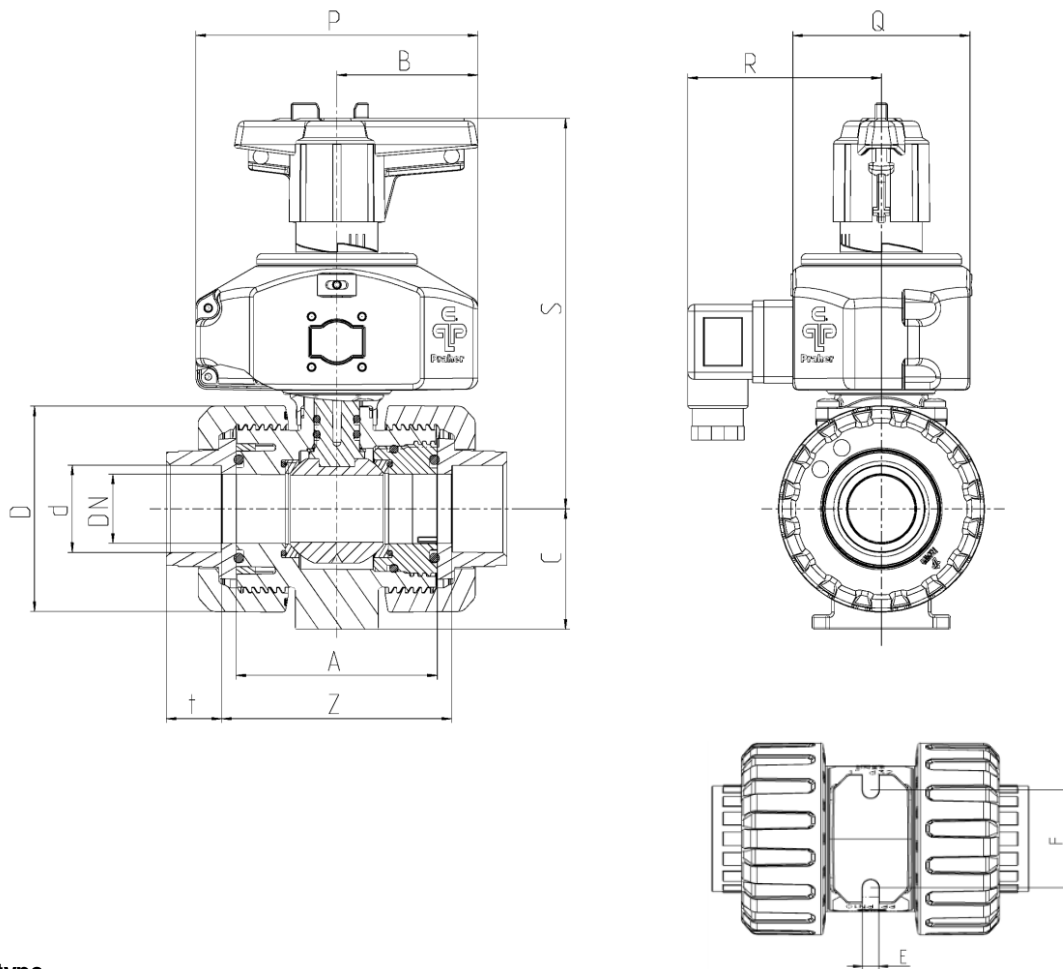


- 16. Bracket (material : PA-GF)
- 17. Coupling shaft (material: PA-GF)
- 18. Screw
- 19. Hexagon socket screw

- 20. Toothed washer
- 21. Half-shells (material: ABS)
- 22. Limit switch
- 23. Pin

- 24. Screw
- 25. Locking screw for adjusting position feedback
- 26. Cover

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



### PP-H

Connector type

PP-H fusion socket

DN	10	15	20	25	32	40	50	65	80	80
d	16	20	25	32	40	50	63	75	90	110
Flanschbild	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
B	40	40	51,5	51,5	64	73	85	110	132	132
C	33	33	40	43,5	51	56,5	64,5	85	100	100
D	58	58	68,5	75,5	92	108	127,5	160	196,5	196,5
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
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	127	127	138	141	159,5	168,5	177,5	215	246,5	246,5
t	14,5	16	17,5	19,5	22	25,5	29	34,5	38,5	42
Z	69,5	66,5	78	84	97	114	136,5	162	206,5	207,5
PN	10	10	10	10	10	10	10	10	10	10

Dimensions in mm

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



### PVDF

Connector type

PVDF fusion socket

DN	10	15	20	25	32	40	50	65	80	80
d	16	20	25	32	40	50	63	75	90	110
Flanschbild	F04	F04	F04	F04	F05	F05	F05	F07	F07	F07
<b>A</b>	61,5	61,5	69	73	83	94	108,5	131,5	156,5	156,5
<b>B</b>	40	40	51,5	51,5	64	73	85	110	132	132
<b>C</b>	33	33	40	43,5	51	56,5	64,5	85	100	100
<b>D</b>	56,5	56,5	67	73,5	90	105,5	124,5	157,5	192,5	192,5
<b>E</b>	5,4	5,4	5,4	6,4	6,4	6,4	6,4	8,3	10,3	10,3
<b>F</b>	34	34	36	38	40	45	50	65	80	80
<b>P</b>	98	98	102	102	105	105	105	116	116	116
<b>Q</b>	64	64	64	64	74	74	74	99	99	99
<b>R</b>	70	70	70	70	75	75	75	88	88	88
<b>S</b>	127	127	138	141	159,5	168,5	177,5	215	246,5	246,5
<b>t</b>	14,5	16	17	19,5	22	25	29	35	38,5	44
<b>Z</b>	69,5	67	78	84	97	113	136	158,5	205	163
<b>PN</b>	16	16	16	16	16	16	16	16	16	16

Dimensions in mm

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



### 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