

2 way ball valve M1 with electric actuator



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
- Fusion spigot DIN
- Backing flange DIN / ANSI

PVDF

- Fusion socket DIN
- Fusion spigot DIN
- Backing flange DIN / ANSI

Operating pressure:

- PP-H DN10 – DN80 d110 PN10
- PVDF DN10 – DN80 d110 PN16

Technical features:

Ball valve

- Silicone free
- Union with buttress thread
- Double axial gasket
- Floating ball
- Double sided blocked ball
- Adjustable ball seating joint
- Integrated bottom mounting stand
- Radial installation or removal
- Maintenance free

Actuator

- Adjustable limit switch
- Mechanical travel stops
- Secured manual override
- Protection IP65
- Torque limiter
- Position feedback

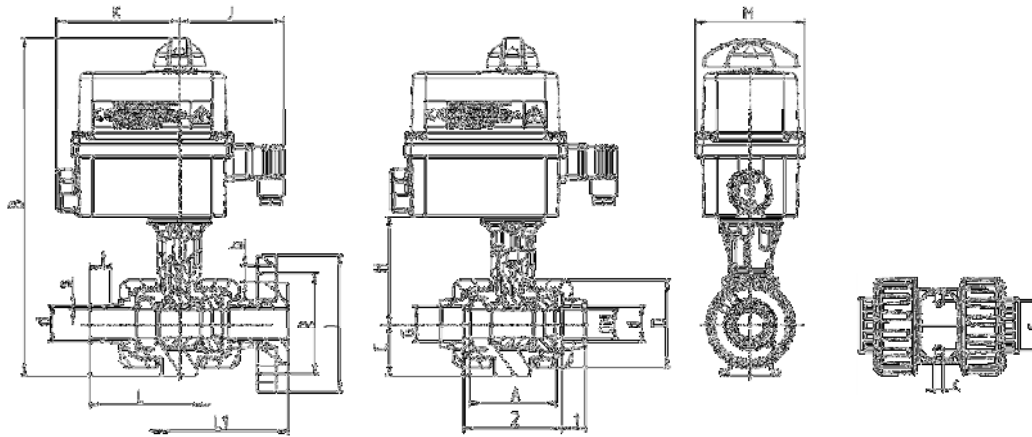
Further technical details on page 6

Accessories:

- Clamping / spacing element

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PVDF

Connector type

PVDF fusion socket / fusion spigot (SDR21) / threaded 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
G ¹ TSO	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	-
A	61,5	61,5	69	73	83	94	108,5	131,5	156,5	156,5
B	266	266	278,5	285	300	313	328	400	445	445
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
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
t ² F _{SO}	14,5	16	17	19,5	22	25	29	35	38,5	44
t ³ F _{FSP}	13	14	15,5	18	20,5	23	27	31,5	36	40
s ³ F _{FSP}	1,9 ^{+0,4}	1,9 ^{+0,4}	1,9 ^{+0,4}	2,4 ^{+0,5}	2,4 ^{+0,5}	3 ^{+0,5}	3 ^{+0,5}	3,6 ^{+0,6}	4,3 ^{+0,7}	5,3 ^{+0,8}
Z ² F _{SO}	69,5	67	78	84	97	113	136	158,5	205	163
Z ¹ TSO	66	67,5	75	80	89	102	120	142,5	174,5	-
L ³ F _{FSP}	114	124	143	152	171	190	221	278	290,5	318,5
PN	16	16	16	16	16	16	16	16	16	16

dimensions in mm

¹ TSO = Threaded socket
² FSO = fusion socket

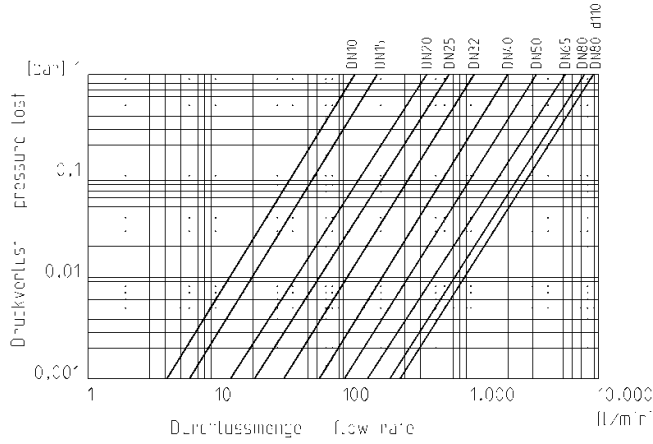
³ FSP = fusions spigot
 - = currently not realised

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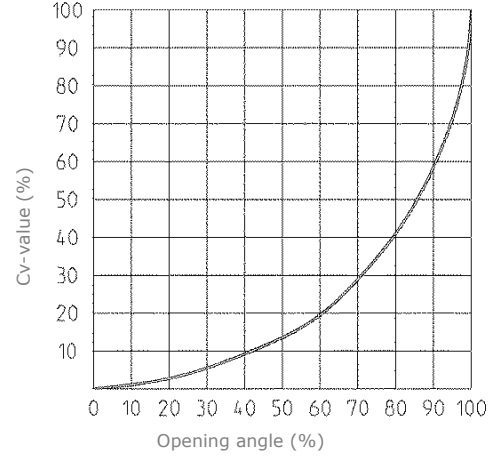


Diagrams:

Pressure loss diagram



Flow characteristics

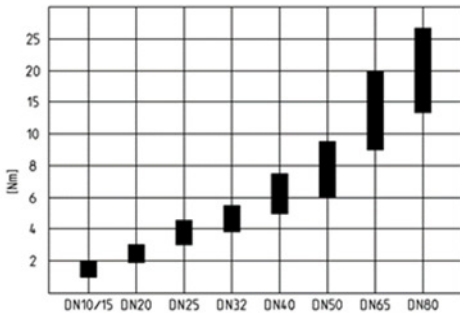


Cv value table

Pressure loss	DN10 d16	DN15 d20	DN20 d25	DN25 d32	DN32 d40	DN40 d50	DN50 d63	DN65 d75	DN80 d90	DN110 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

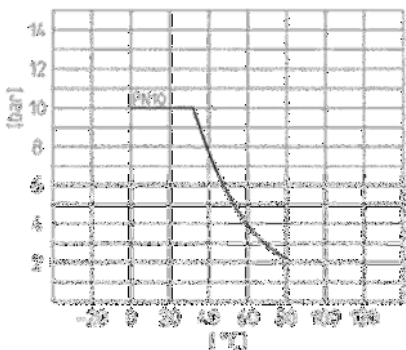
Specifications in l/min

Torque

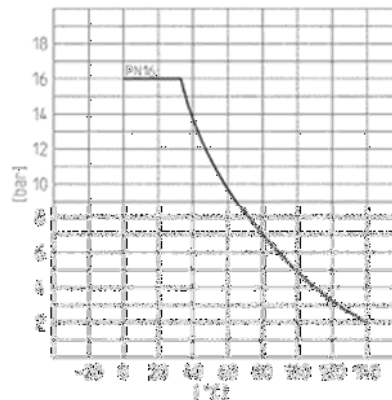


Pressure-Temperature

PP



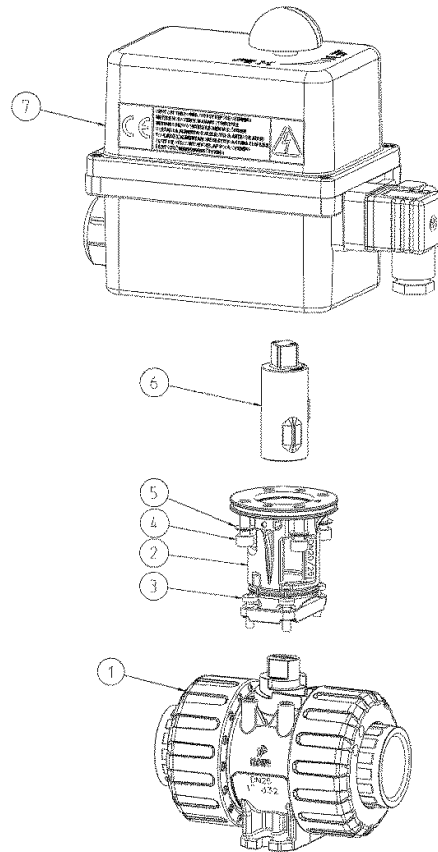
PVDF



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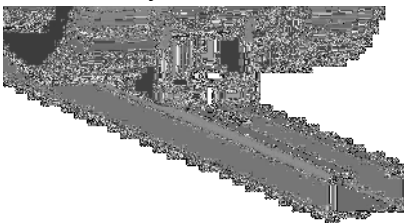
Exploded drawing:

- 01. ball valve
- 02. bracket (material: PA-GFK)
- 03. screw
- 04. hexagon socket screw
- 05. toother washer
- 06. coupling - actuator (material: PA-GFK)
- 07. actuator

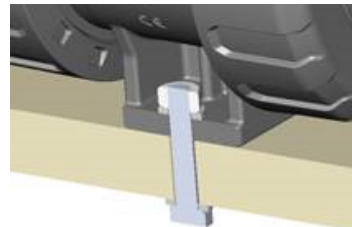


Bottom mounting stand – mounting possibilities:

- Assembly rail



- Plate



- Masonry / Concrete
 - Hanger screw and dowel required



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

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with electric actuator



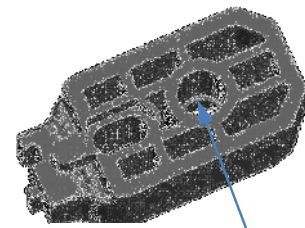
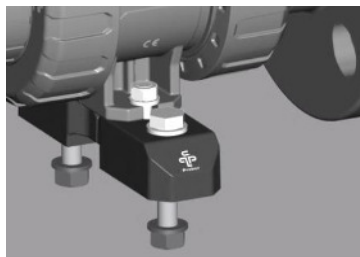
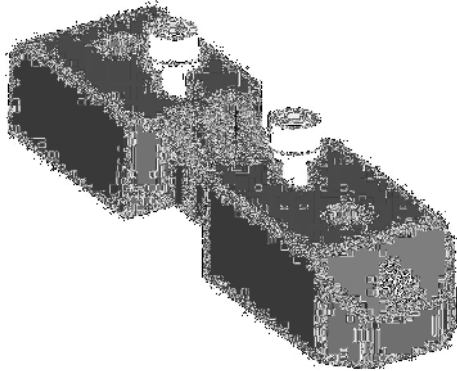
Technical data electric actuator:

Electric actuator		
Type	ER20	ER60
Torque	20Nm	60Nm
Voltage	90 - 240V 50/60Hz (90 – 350V DC) 24V 50/60Hz (24V DC)	
Operating time	13s	15s
Power	15W	45W
ISO Flange	F03-F04-F05	F05-F07
Star drive nut	14	22
Limit switch	2 limit switches preadjusted	
	2 indicators	
Mechanical stop	90°	
Duration duty	30%	
Rotation angle	90°	
Protection	IP65	
Ambient temperature	-10°C bis +55°C	
Weight	1 kg	2,1 kg

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ACCESSORIES

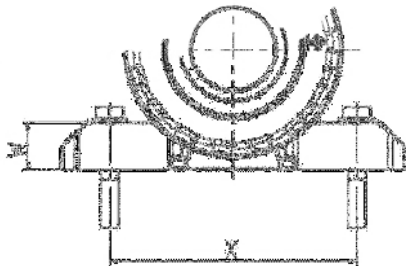
Clamping / spacing element:



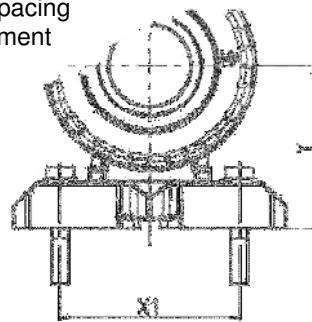
Bore for threaded bush

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

