

## 3 way ball valve S4

Electric actuator ER20 GF3 / GF4



symbolic photo

### **General:**

- Material: PVC-U / PP / PVDF
- Seal material: EPDM / FPM
- Ball seating joint: PTFE
- Dimensions:
  - DN10 (DN15 / d16 / d3/8")
  - DN15 d20 d1/2"
  - DN20 (DN25 / d25 / d3/4")
  - DN25 d32 d1"
  - DN32 (DN40 / d40 / d1 1/4")
  - DN40 d50 d1 1/2"
  - DN50 d63 d2"
- Ball: T- or L-bore

### **Connector types:**

#### PVC-U

- Solvent socket DIN

#### PP

- Fusion socket DIN

#### PVDF

- Fusion socket DIN

*Further connector types on request*

### **Operating pressure:**

- PVC-U / PVDF PN16
- PP PN10

### **Technical Features:**

#### Ball valve

- All sides blocked ball
- Double shaft sealing

#### Electric actuator

- Visual position indicator
- Manual override
- Protection IP66
- Anti condensation heater
- Electronic torque limiter
- Voltage
  - 15 – 30V AC 50/60 Hz (12 – 48V DC)
  - 100 – 240V AC 50/60 Hz (100 – 350V DC)
- Operating time 12s

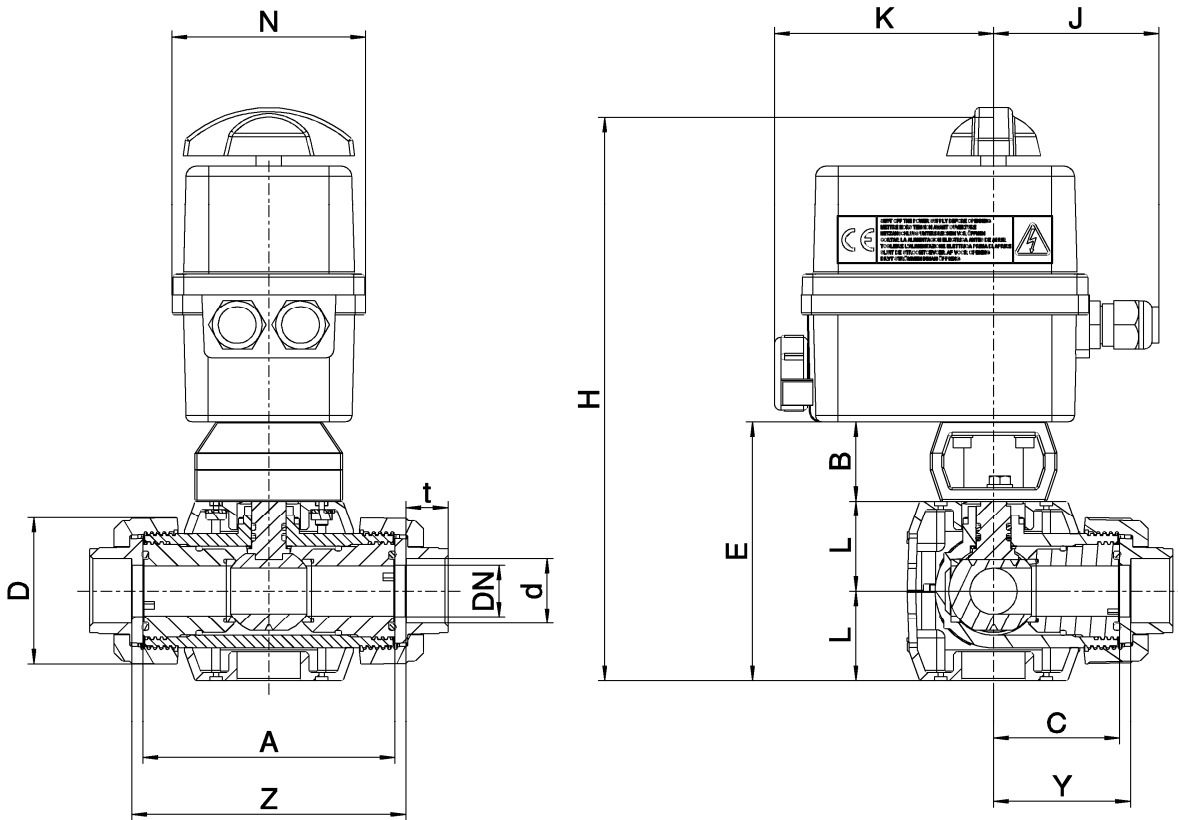
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**Dimensions:**

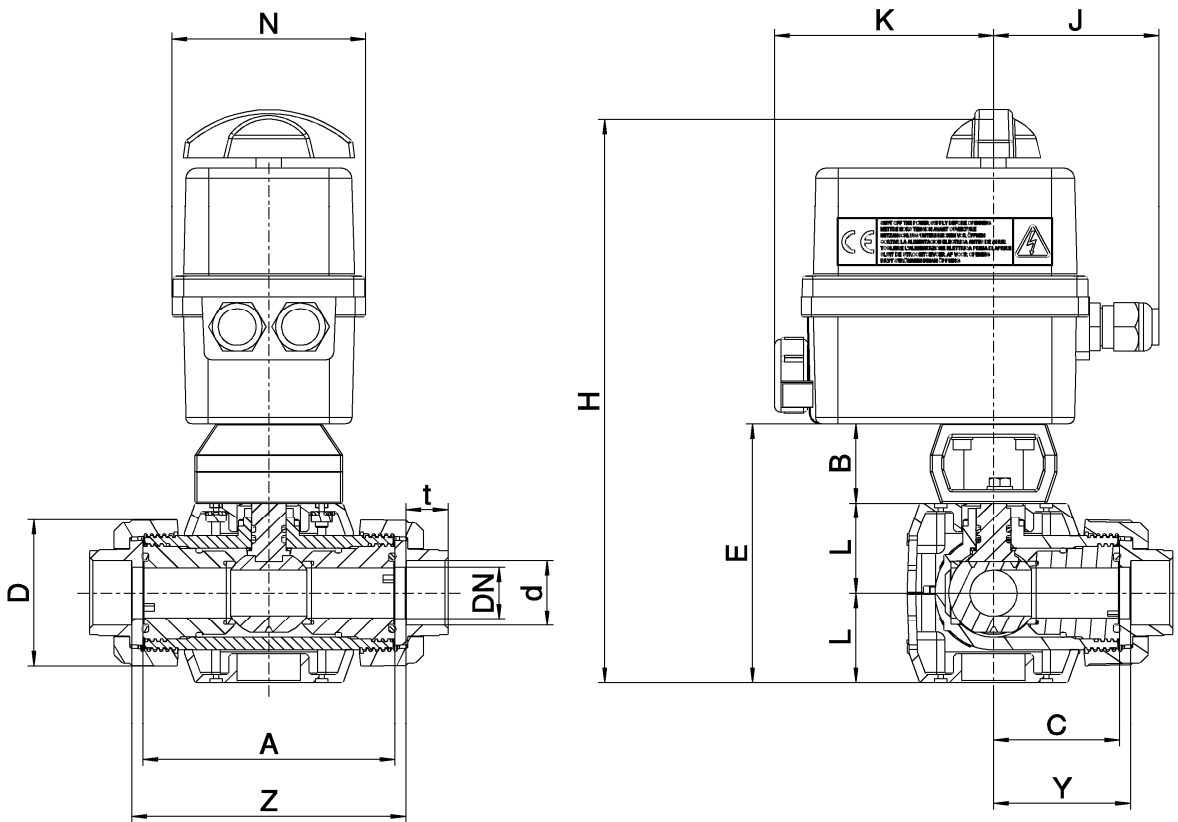


**3 way ball valve S4 PVC-U ER20 GF3 / GF4**  
**Connector types**  
 PVC-U solvent socket

	DN	10	15	20	25	32	40	50
	d	16	20	25	32	40	50	63
<b>Ball valve PVC-U</b>	A	100	100	120	120	162	162	181
	B	38	38	38	38	48	48	48
	C	50	50	60	60	81	81	90,5
	D	53	53	70	70	101	101	124,5
	E	105	105	122	122	160	160	178
	H	257	257	274	274	312	312	330
	L	33,5	33,5	42	42	56	56	65
	Y	53	53	63	63,5	84,5	85,5	96,5
	Z	106	106	126	126	169	171	192
	t	16,5	16,5	20	22,5	27,5	31,5	38,5
PN	16	16	16	16	16	16	16	
<b>actuator</b>	J	79	79	79	79	79	79	79
	K	107	107	107	107	107	107	107
	N	92	92	92	92	92	92	92

dimensions in mm

### 3 way ball valve S4 Electric actuator ER20 GF3 / GF4



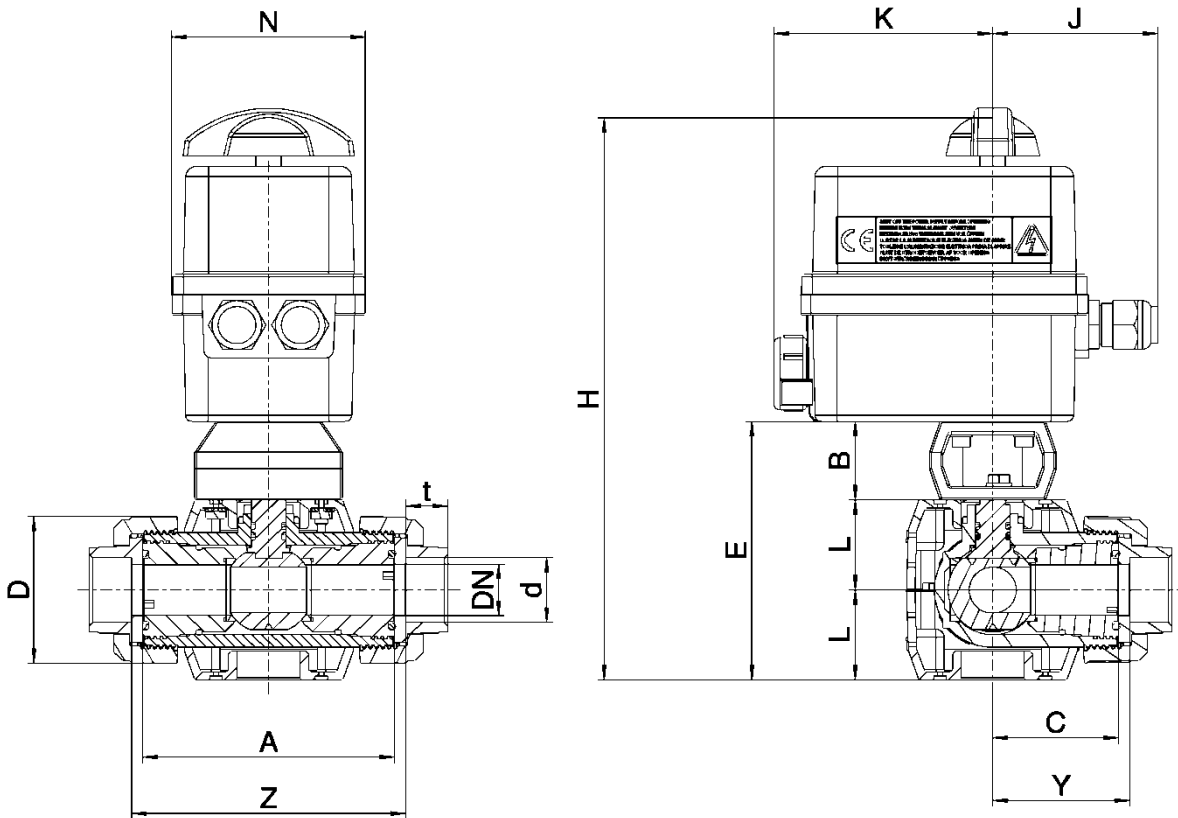
### 3 way ball valve S4 PP ER20 GF3 / GF4 Connector types PP fusion socket

	DN	10	15	20	25	32	40	50
	d	16	20	25	32	40	50	63
Ball valve PP	A	98	98	118	118	159	159	177
	B	38	38	38	38	48	48	48
	C	49	49	59	59	79,5	79,5	88,5
	D	53	53	71	71	100	100	120,5
	E	105	105	122	122	160	160	178
	H	257	257	274	274	312	312	330
	L	33,5	33,5	42,5	42,5	56,5	56,5	65
	Y	55	53,5	65,5	66	89,5	91	104
	Z	136	136	163	163	220	229	263
	t	13	14,5	16,5	18	20,5	23,5	27,5
PN	10	10	10	10	10	10	10	
actuator	J	79	79	79	79	79	79	79
	K	107	107	107	107	107	107	107
	N	92	92	92	92	92	92	92

dimensions in mm

### 3 way ball valve S4

Electric actuator ER20 GF3 / GF4



### 3 way ball valve S4 PVDF ER20 GF3 / GF4

Connector types  
PVDF fusion socket

	DN	10	15	20	25	32	40	50
	d	16	20	25	32	40	50	63
Ball valve PVDF	A	98	98	117	117	158	158	176
	B	38	38	38	38	48	48	48
	C	49	49	59	59	79	79	88
	D	52,5	52,5	70	70	98,5	98,5	118
	E	105	105	122	122	160	160	178
	H	257	257	274	274	312	312	330
	L	33,5	33,5	42,5	42,5	56,5	56,5	65
	Y	55	53,5	65,5	66	89,5	90,5	103,5
	Z	136	136	162	167	219	228	262
	t	13	14,5	16,5	18	20,5	23,5	27,5
	PN	16	16	16	16	16	16	16
actuator	J	79	79	79	79	79	79	79
	K	107	107	107	107	107	107	107
	N	92	92	92	92	92	92	92

dimensions in mm

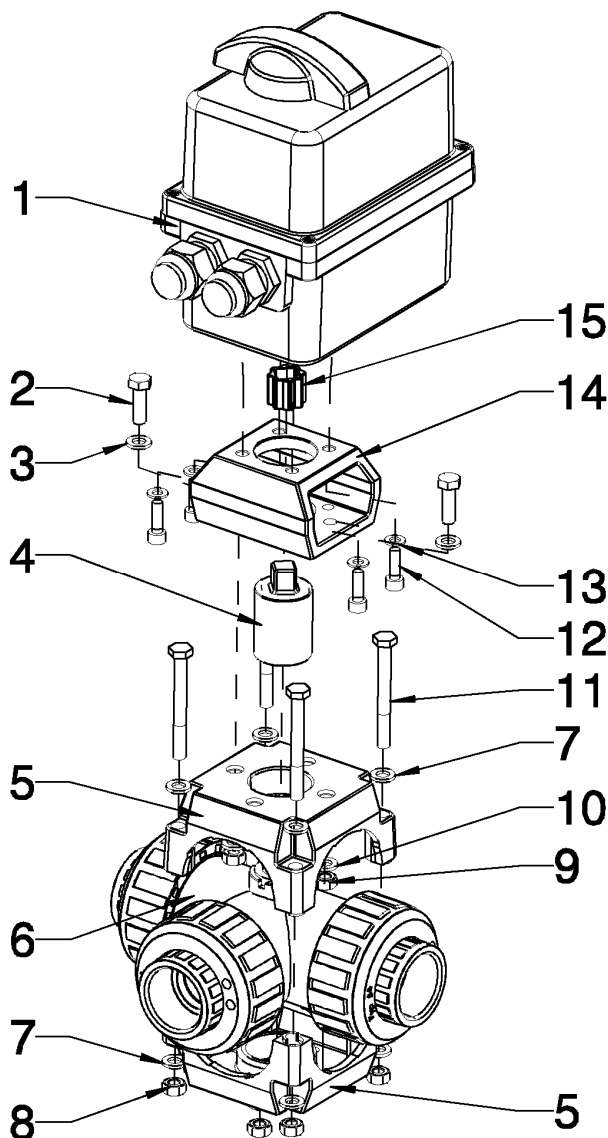
### 3 way ball valve S4

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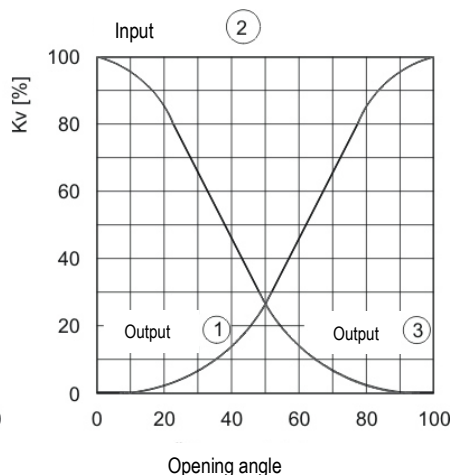
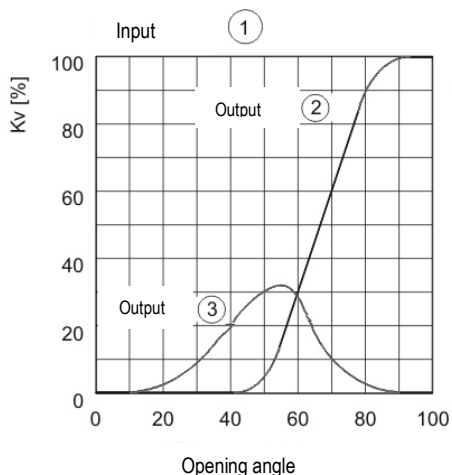
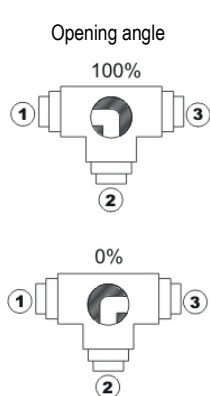
**Exploded drawing:**

1. Electric actuator ER20 GF3
2. Hexagon screw
3. Washer
4. Clutch
5. Valve bracket
6. 3 way ball valve
7. Washer
8. Hexagon nut
9. Hexagon nut
10. Washer
11. Hexagon screw
12. Hexagon socket screw
13. Toothed washer
14. Console
15. Reduction



**Diagrams:**

**Flow characteristics**

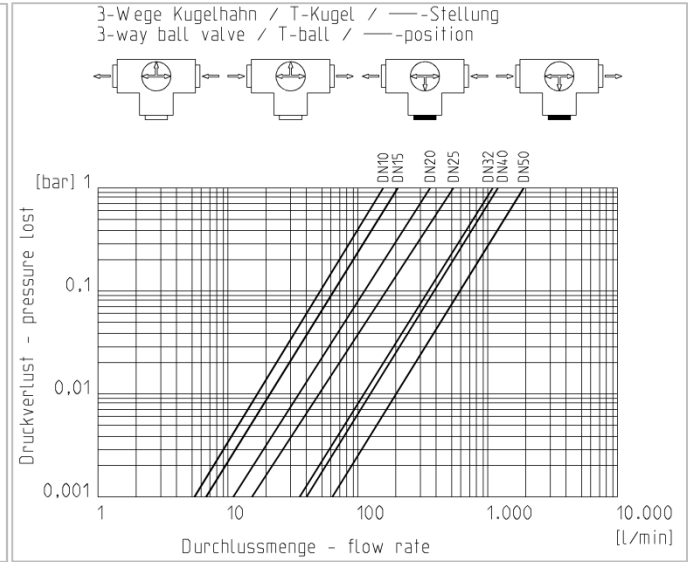
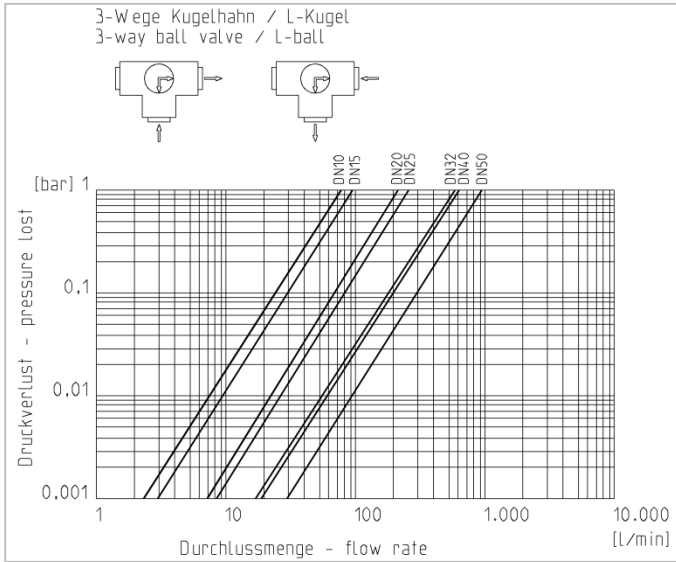


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## Electric actuator ER20 GF3 / GF4

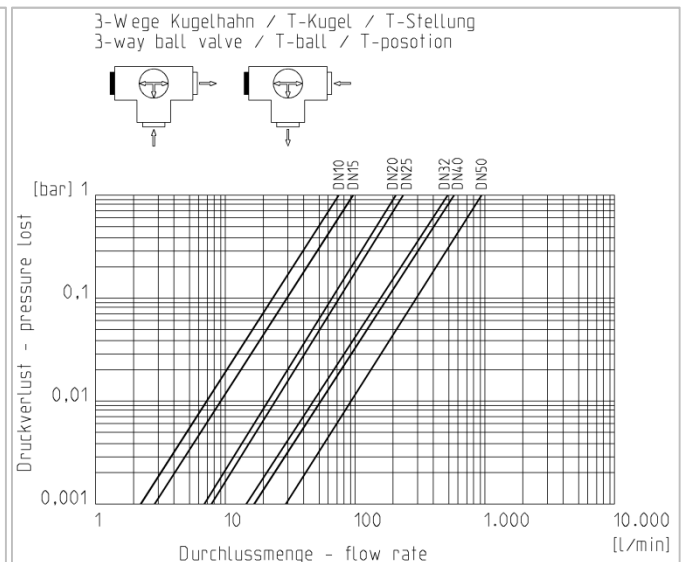
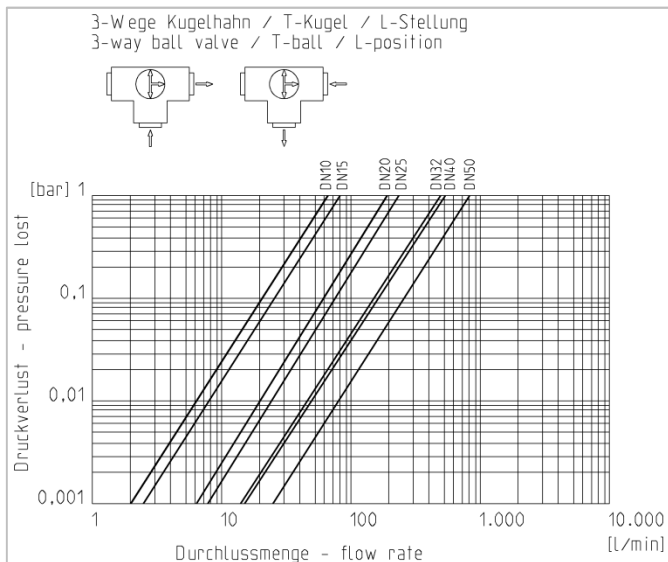


### Pressure loss diagram



DN10	DN15	DN20	DN25	DN32	DN40	DN50	Pressure loss	DN10	DN15	DN20	DN25	DN32	DN40	DN50
2,4	2,9	6,9	8,3	17,8	19,3	29,4	<b>0,001 bar</b>	5,3	6,5	11,4	16,3	35,6	40	61,3
75	93	218	261	562	610	930	<b>1 bar</b>	166	207	360	515	1127	1265	1940

l/min



DN10	DN15	DN20	DN25	DN32	DN40	DN50	Pressure loss	DN10	DN15	DN20	DN25	DN32	DN40	DN50
2	2,5	6,2	7,6	15	16	25,5	<b>0,001 bar</b>	2,3	2,9	6,6	7,6	15,5	17,6	29,1
64	80	195	240	473	507	805	<b>1 bar</b>	72	90	210	240	490	555	920

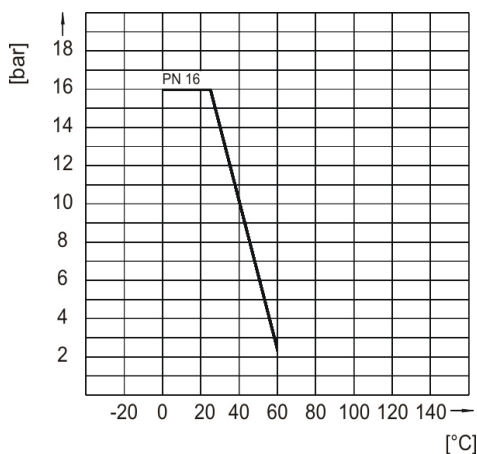
l/min

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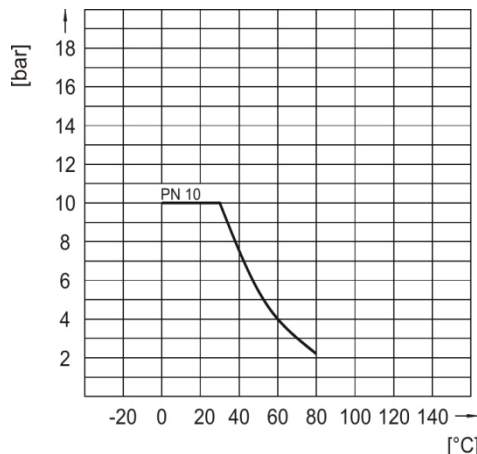
Electric actuator ER20 GF3 / GF4



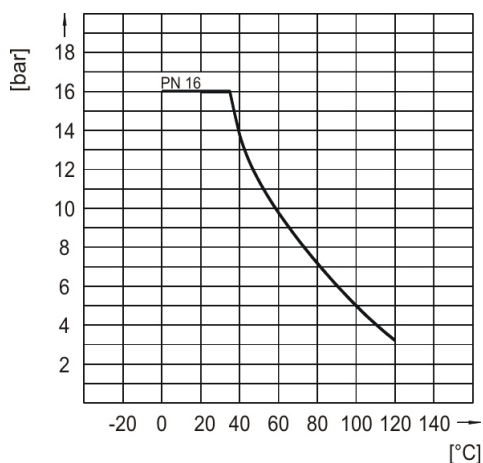
Pressure-temperature-diagram – PVC-U



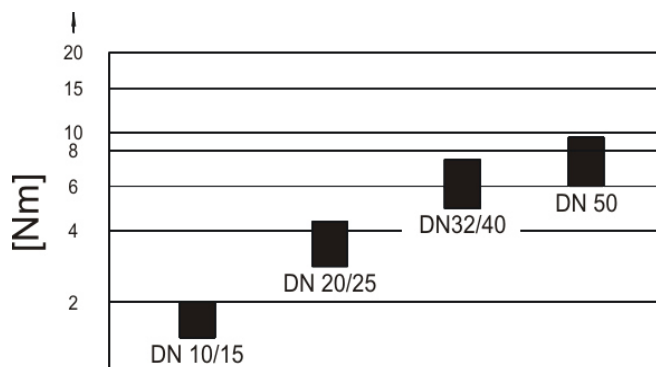
Pressure-temperature-diagram – PP



Pressure-temperature-diagram – PVDF



Torque



Technical data electric actuator

Electric actuator	
Type	ER20
Torque	20Nm
Voltage	<b>15-30V 50/60Hz (12-48V DC)</b> <b>100-240V 50/60Hz (100 – 350V DC)</b>
Operating time	12s
Power	15W
ISO flange	F03-F04-F05
Star drive nut	14
Duration	50%
Rotation angle	GF3 → 0 – 180° GF4 → 360°
Protection	IP66
Ambient temperature	-10°C bis +55°C