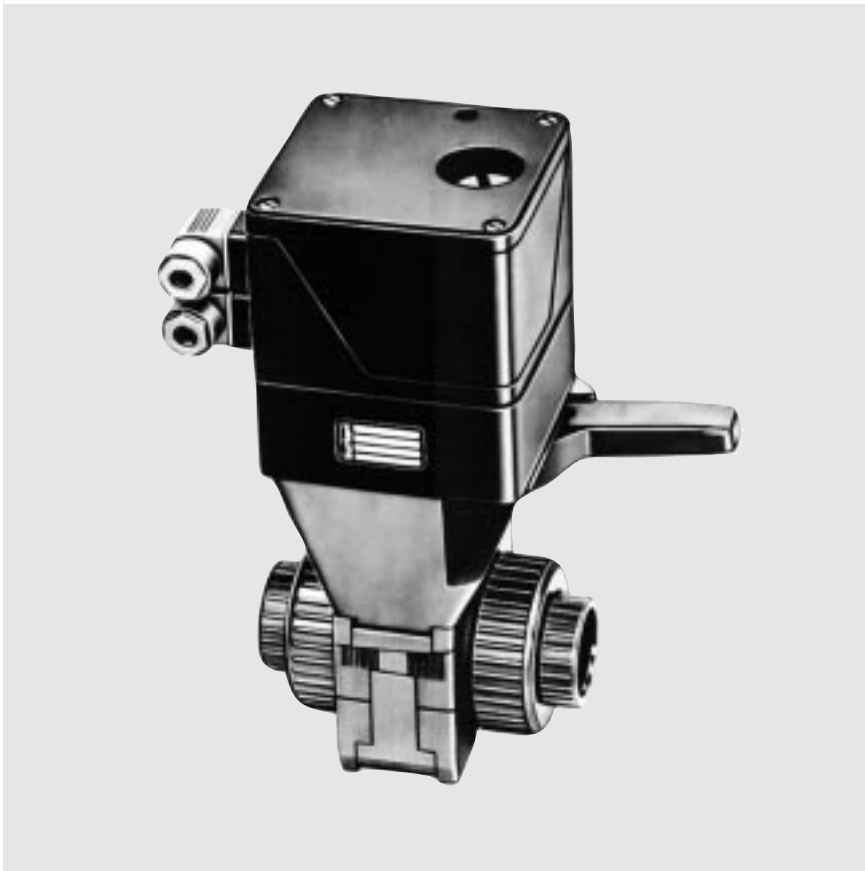


Valve body material PVC



Advantages/Benefits

- ▶ G 1 or 2, socket union, solvent spigots
- ▶ 2- and 3-way with motorized actuator
- ▶ Waterhammer-free opening and closing
- ▶ Short rotation times
- ▶ Simple installation
- ▶ Manual override and optical position indication standard
- ▶ Great variety of options

Design/Function

The standard version of the motorized ball valve Type 145 is available with lockable manual override (2-way), optical position indication and motor protection against thermal overload.

The PVC enclosure is available with a variety of different connections.

The motor is provided with an automatic brake for precise end-position switch-off. The epoxy encapsulation of the motor enclosure transfers the heat away efficiently.

Applications

- Acids up to medium concentration
- Alkalis, alkaline washing and bleaching lyes
- Salt solutions
- Oils with additives
- Water treatment systems
- Systems for process technology
- Osmosis systems
- Dosing and filling systems for aggressive fluids
- Agriculture

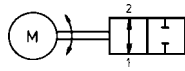
# 2- and 3-way Ball Valve, 2-position, with Motorized Rotary Actuator

# Type 145

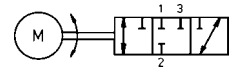
## Technical Data

### Circuit Function

**I** 2-way ball valve, flow direction as required.



**U** 3-way ball valve, in central position all connections closed, flow direction as required.



### Specifications

Orifice DN [mm]	Kv-Value Water [m³/h]	Pressure Range [bar]	Weight [kg]
<b>2-way ball valve</b>			
10	4,26	0-10	4,6
15	11,1	0-10	4,6
20	21,0	0-10	4,7
25	42,0	0-10	4,9
32	60,0	0-10	5,1
40	96,0	0-10	5,5
50	186,0	0-10	6,3
<b>3-way ball drive</b>			
15	5,3	0-10	4,7
20	10,0	0-10	4,7
25	18,0	0-10	5,0
32	30,5	0-10	5,2

All pressures quoted are gauge pressures with respect to the prevailing atmospheric pressure.

### Operating Data (Valve)

#### Seal Materials/Fluids Handled/Temp.- Range

**EPDM** Alkalis, acids up to medium concentration, alkaline washing and bleaching lyes  
0 to +50 °C

**FPM** Oxidizing acids, oxidizing substances, salt solutions, oils with additives.  
0 to +50 °C

For more detailed information please refer to resistance chart (Leaflet-No. 1896009).

**Port connection** G 1, G 2, socket union ø 20, 25, 32, 40, 50, 63 mm solvent spigot ø 20, 25, 32, 40 mm

### Body Material

PVC

### Installation/Accessories

**Installation** as required

**Electrical connection**

- cable plug to DIN 43 650 (supplied as standard)
- PG-cable gland to DIN 46 320

### Operating Data (Actuator)

**Operating voltages** 110, 230 V/50 Hz - 60 Hz, 230 V/50 Hz, 24 V=

**Power consumption** AC 55 W, DC 20 W for nominal voltage and nominal torque

**Rotation angle** 7 s/90 °

**Service life** 200 000 cycles in maintenance-free operation

**Rating** with plug or PG-cable gland IP 65

**Limit switch** single-pole switch, max. 250 V/10 A

**Potentiometer** R = 1 kΩ, max. 2 W at 70 °C ambient temperature

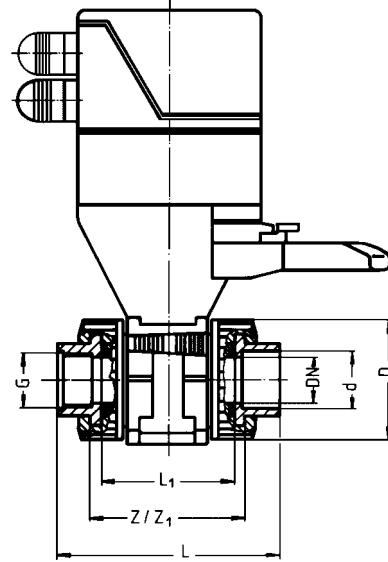
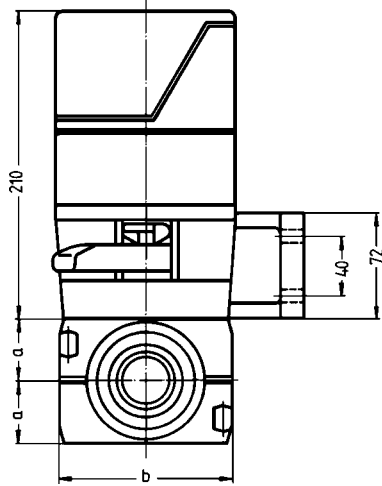
**Standard version** motor brake for precise end-position switch-off (after-run < 1°) and reactionless actuator manual override (2-way only) optical position indication thermal-switch provides motor protection

# 2- and 3-way Ball Valve, 2-position, with Motorized Rotary Actuator

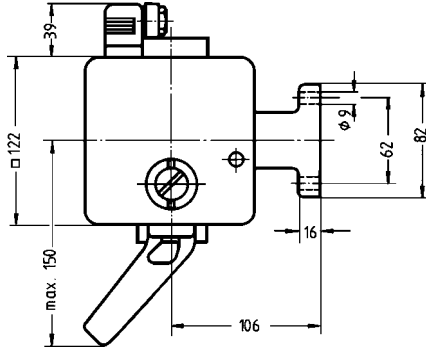
Type 145

## Dimensions in mm

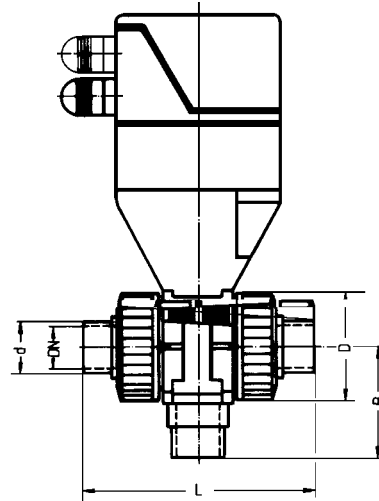
2-way Ball Valve  
Radially removable  
Side view



2-way Ball Valve  
Top View



3-way Ball Valve  
Standard length (for side view and top  
view see "radially removable")



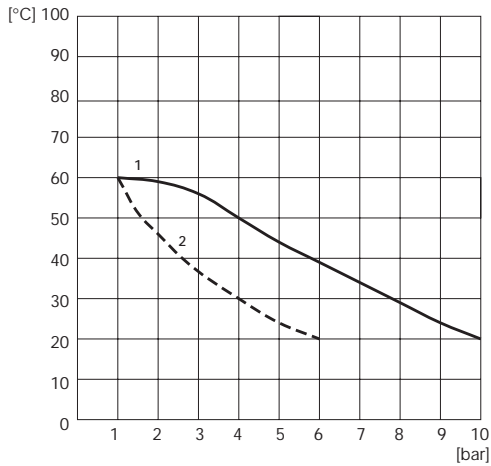
3-way ball valve not available with manual  
override

Orifice DN [mm]	a	b	d	G	2-way radially removable L	3-way standard length L	L1	Z	Z1	D	B
10	24	118	16	-	99	113	63	71	71	46	57
15	24	118	20	-	102	124	63	70	73	46	62
20	28	118	25	-	120	144	75	82	85	56	72
25	34	118	32	G 1	131	154	79	87	91	67	77
32	42,5	118	40	-	150	174	89	98	104	82	87
40	50	118	50	-	163	-	95	101	117	98	-
50	61	130	63	G 2	197	-	115	121	143	120	-

# 2- and 3-way Ball Valve, 2-position, with Motorized Rotary Actuator

Type 145

## Pressure-Temperature-Diagram

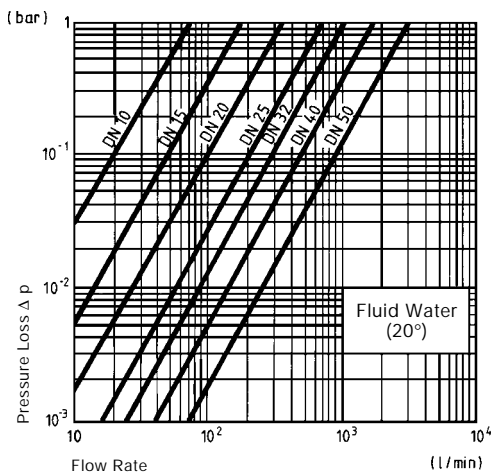


Safe (curve 1) and hazardous (curve 2) fluids handled to DIN 2403.

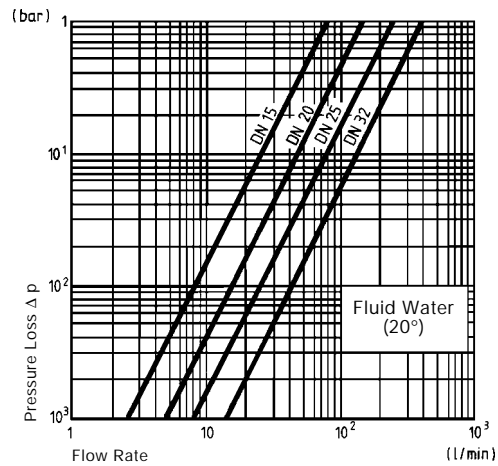
Duration of use in 50 years.

## Diagram of Pressure Loss

2-way Ball Valve

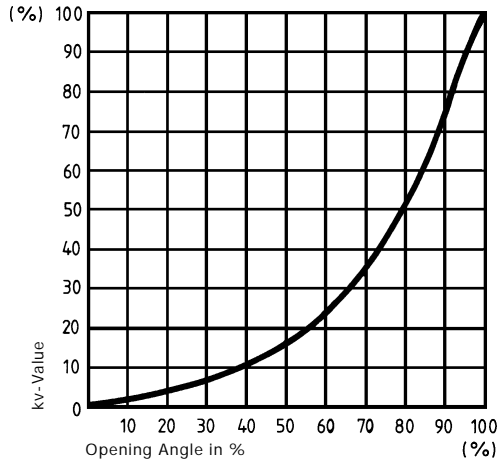


3-way Ball Valve

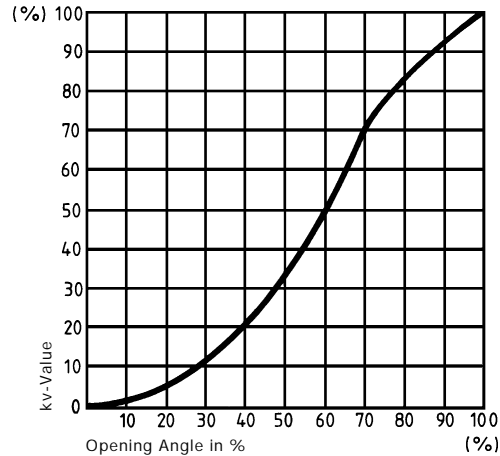


## Flow Characteristics

2-way Ball Valve



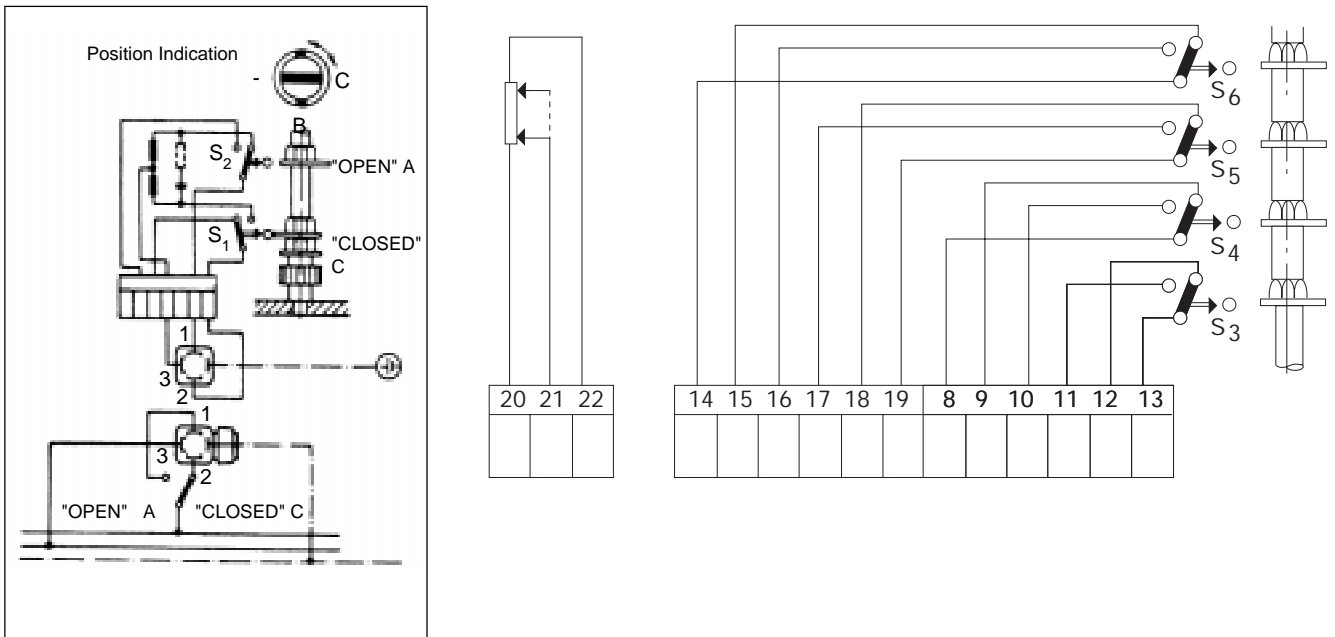
3-way Ball Valve



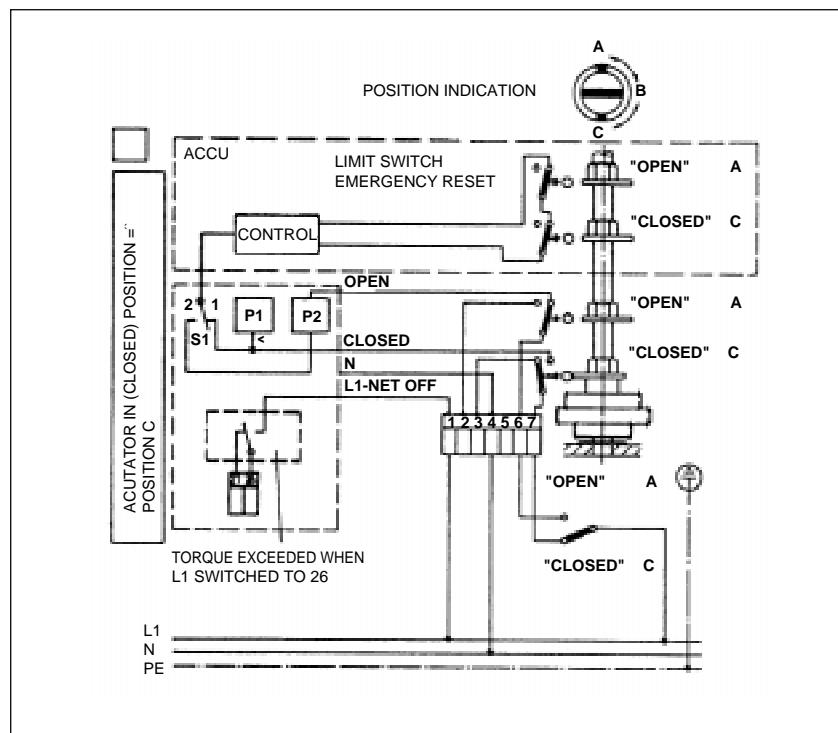
# 2- and 3-way Ball Valve, 2-position, with Motorized Rotary Actuator

Type 145

## Basic Version, with Potentiometer and Additional Limit Switches



## Torque Limitation, Fail-Safe in Event of Power Failure



# 2- and 3-way Ball Valve, 2-position, with Motorized Rotary Actuator

# Type 145

## Ordering Chart (Other Versions on Request)

Circuit Function	Orifice DN [mm]	Flow Rate Water Kv-Value [m³/h]	Port Connection	Pressure Range [bar]	Body Material	Seal Material	Weight [kg]	Voltage/Frequency [V/Hz]	Order-No.				
I	15,0	11,1	20 mm <sup>1)</sup>	0-10	PVC	EPDM	4,6	024/=	067 209 J				
								110/50-60 <sup>3)</sup>	068 265 J				
								230/50-60 <sup>4)</sup>	053 193 L <sup>10)</sup>				
								230/50-60 <sup>3)</sup>	051 376 G				
								FPM	067 211 T				
								110/50-60 <sup>3)</sup>	068 283 D				
	230/50-60 <sup>3)</sup>	053 947 X											
	20,0	21,0	25 mm <sup>1)</sup>	0-10	PVC	EPDM	4,7	024/=	067 223 X				
								110/50-60 <sup>3)</sup>	068 304 J				
								230/50-60 <sup>3)</sup>	025 380 X				
								FPM	067 292 V				
								110/50-60 <sup>3)</sup>	068 367 Q				
230/50-60 <sup>3)</sup>								024 789 U					
25,0	42,0	32 mm <sup>1)</sup>	0-10	PVC	EPDM	4,9	024/=	025 557 L					
							110/50-60 <sup>3)</sup>	068 370 X					
							230/50 <sup>7)</sup>	025 797 M <sup>10)</sup>					
							230/50-60 <sup>3)</sup>	049 312 E					
							G 1	0-10	PVC	FPM	4,9	230/50-60 <sup>4)</sup>	078 264 K
							32 mm <sup>1)</sup>	0-10	PVC	FPM	4,9	024/= <sup>9)</sup>	079 609 X
		32,0	60,0	40 mm <sup>1)</sup>	0-10	PVC	EPDM	5,1	024/= <sup>3)</sup>	067 307 C			
									110/50-60 <sup>3)</sup>	068 449 K			
									230/50-60 <sup>3)</sup>	053 950 E			
									FPM	062 023 M <sup>10)</sup>			
									024/= <sup>6)</sup>	067 338 A			
									110/50-60 <sup>3)</sup>	068 465 B			
230/50-60 <sup>3)</sup>	053 949 H												
40,0	96,0	50 mm <sup>1)</sup>	0-10	PVC	EPDM	5,5	024/= <sup>3)</sup>	022 606 T					
							110/50-60 <sup>3)</sup>	068 466 C					
							230/50-60 <sup>3)</sup>	053 580 U					
							FPM	061 040 H					
							110/50-60 <sup>3)</sup>	068 479 R					
							230/50-60 <sup>3)</sup>	053 951 T					
50,0	186,0	63 mm <sup>1)</sup>	0-10	PVC	EPDM	6,3	024/= <sup>3)</sup>	058 909 P					
							110/50-60 <sup>3)</sup>	021 397 Q					
							230/50-60 <sup>3)</sup>	068 549 P <sup>10)</sup>					
							230/50-60 <sup>3)</sup>	049 155 H					
							G 2	0-10	PVC	FPM	6,3	230/50-60 <sup>3)</sup>	062 626 W
							63 mm <sup>1)</sup>		PVC	FPM	6,3	024/= <sup>3)</sup>	048 723 H
							110/50-60 <sup>1) 3)</sup>	068 482 V					
							230/50-60 <sup>3)</sup>	048 952 F					

<sup>1)</sup> solvent union DIN 8063, <sup>3)</sup> with 2 limit switches, <sup>4)</sup> with 4 limit switches, <sup>6)</sup> with 2 potentiometers, <sup>7)</sup> with 4 limit switches, torque limit fail-safe "closed", <sup>9)</sup> 28s/90° rotation time, <sup>10)</sup> PG-cable gland to DIN 46 320

# 2- and 3-way Ball Valve, 2-position, with Motorized Rotary Actuator

## Type 145

### Ordering Chart (Other Versions on Request)

Circuit Function	Orifice DN [mm]	Flow Rate Water Kv-Value [m <sup>3</sup> /h]	Port Connection	Pressure Range [bar]	Body Material	Seal Material	Weight [kg]	Voltage/Frequency [V/Hz]	Order-No.
U	15,0	5,3	20 mm <sup>2)</sup>	0-10	PVC	EPDM	4,7	230/50-60 <sup>4)8)</sup>	051 742 F <sup>10)</sup>
	20,0	10,0	25 mm <sup>2)</sup>	0-10	PVC	FPM	4,7	230/50-60 <sup>5)</sup>	087 484 B
	25,0	18,0	32 mm <sup>2)</sup>	0-10	PVC	EPDM	5,0	230/50-60 <sup>4)</sup>	058 708 V
	32,0	30,5	40 mm <sup>2)</sup>	0-10	PVC	EPDM	5,2	230/50-60 <sup>4)</sup>	058 903 H

<sup>2)</sup> solvent spigot, <sup>4)</sup> with 4 limit switches, <sup>5)</sup> with 6 limit switches, <sup>8)</sup> 14 s/90 ° rotation time, <sup>10)</sup> PG-cable gland to DIN 46 320

2- and 3-way Ball Valve, 2-position,  
with Motorized Rotary Actuator

Type 145