

## Ball Valves with Electrical Actuator

Screw-on and Flange Connection, Weld Ends



- $p_{max.}$  PN 16
- $t_{max.}$  +160 °C
- Connections:  
Screw thread G 1/4 to G 2 1/2  
Weld ends DN 15 to DN 50  
Flanges DN 15 to DN 50
- 24 V<sub>DC</sub>, 230 V<sub>AC</sub>
- Brass, stainless steel, GG-25
- 2- and 3-way version
- T- and L-bore  
(for 3-way ball valve)



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Models:  
KUE-  
KA, VN, VH,  
ZA, PD, CO,  
VO, VK



**Description**

The electrical actuator is specially designed to operate 2-way and 3-way ball valves and butterfly isolating valves. It is noted for its compact design, with the gear section fully isolated from electrical components and cable connections.

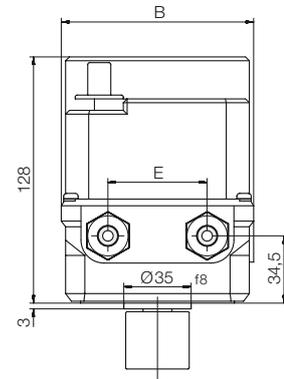
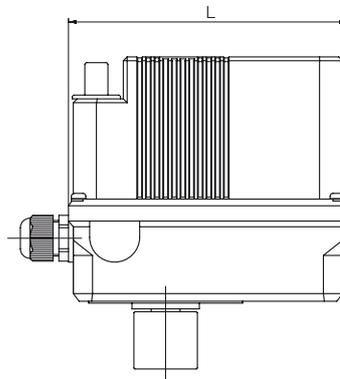
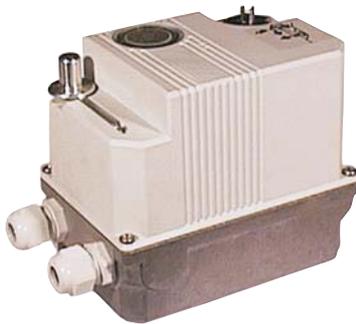
The valve stem is attached to the actuator end of a speed reducer that is driven by a series-connected electric motor. Two standard limit switches and the position indicator deliver electrical and visual feedback. You can manually reset the valve with the emergency manual operation facility if, for example, the power fails.

Actuator, adapter and valve are perfectly matched and supplied as a complete unit for faultless operation

\*except KUE-COxxx

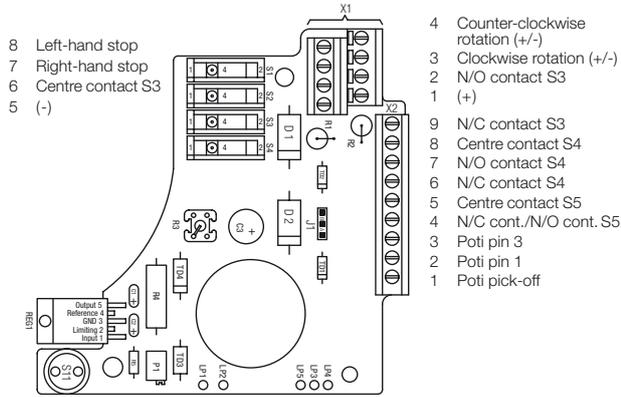
**Technical Details**

- Supply voltages: 230 V<sub>AC</sub> 50 Hz ±10 %  
24 V<sub>DC</sub>
- Power consumption: 6 to 15 VA (depending on model)
- Protection type: IP 65 (as per DIN 40 050)
- Rated torque: 20 Nm (model ES 20)  
40 Nm (model ES 50)
- Protection: overload protection
- Cable connection: terminal strips in the housing through two cable glands PG metric thread 11
- Temperature range: -15 °C to +60 °C
- Case material: aluminium alloy
- Cap material: polycarbonate
- Mounting position: any
- Adjustment of end stops: two limit switches in the end position, adjustable switching cams
- Standard equipment: two additional limit switches, optical position indicator, emergency manual operation

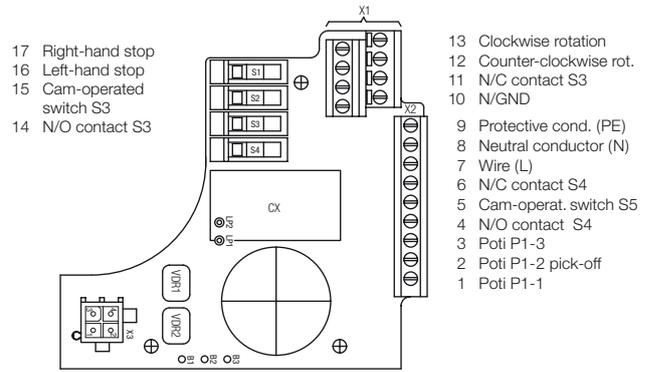


Terminal connection diagrams

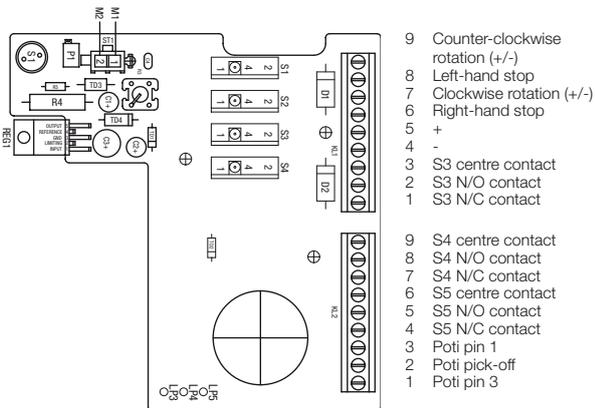
Model ES 20 / 24 V<sub>DC</sub>



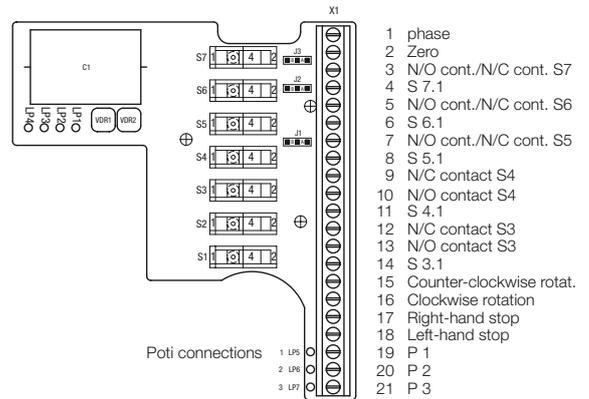
Model ES 20 / 230 V<sub>AC</sub>



Model ES 50 / 24 V<sub>DC</sub>



Model ES 50 / 230 V<sub>AC</sub>



**Design**

Two-piece threaded joint construction with full cylindrical bore and mounting pad for actuator mounting. With stamping as per ISO 5200 approval certificate A4.

Operation: directly controlled by a reversible electric motor, with gear reduction unit between motor and valve assembly, with emergency manual operation a. optical position indicator

Voltage rating: 230 V<sub>AC</sub> 50 Hz ±10% or 24 V<sub>DC</sub>

Mounting position: any; preferably with electric motor in upright position

Protection type: IP 65 (as per DIN 40 050)

Adjustment of end stops: two limit switches in the end position

Operating time: 15 s\*/90° angle of rotation

Power consumption: 15 VA

\* with alternating current actuators only

**Technical Details valve**

Connections: female thread Rp 1/2 to Rp 2 1/2 (as per DIN 2999)

Temperature range: -30°C to +120°C

Nominal pressure: PN 16

**Materials**

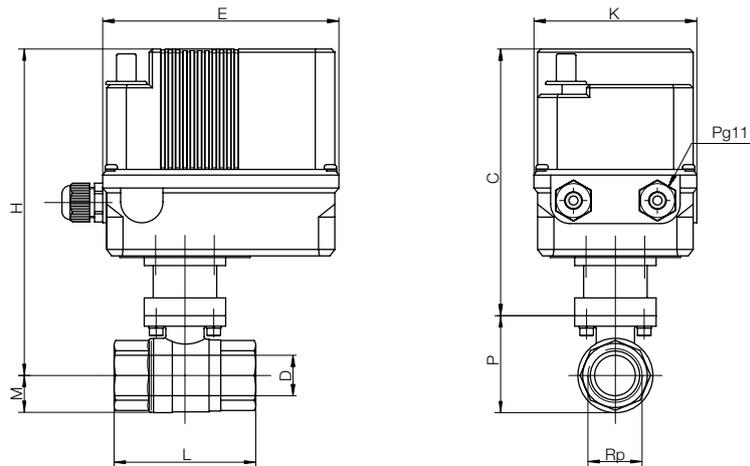
Body: brass, nickel-plated

Ball: brass, hard chrome-plated

Ball gaskets: PTFE/FKM

Spindle gasket: FKM

**KUE-KA**



**Dimensions and Order Details** (example: KUE-KAR 150)

Screw thread [Rp]	Order no. 230 V <sub>AC</sub>	Order no. 24 V <sub>DC</sub>	D [mm]	L [mm]	M [mm]	H [mm]	E [mm]	P [mm]	C [mm]	K [mm]	Weight [kg]
1/2	KUE-KAR 150	KUE-KAR 153	15	65	16	193	145	45	164	100	2.6
3/4	KUE-KAR 200	KUE-KAR 203	20	75	19	198	145	53	164	100	2.7
1	KUE-KAR 250	KUE-KAR 253	24	86	23	201	145	60	164	100	3.0
1 1/4	KUE-KAR 320	KUE-KAR 323	30	95	28	206	145	70	164	100	3.3
1 1/2	KUE-KAR 400	KUE-KAR 403	38	100	35	220	145	91	164	100	3.4
2	KUE-KAR 500	KUE-KAR 503	47	120	42	227	145	105	164	100	4.3



**Design**

Four-piece threaded joint construction, with mounting pad for actuator mounting, full cylindric bore, T- or L-bore, universal sealing. Does not prevent crossover flow.

- Operation: directly controlled by a reversible electr. motor, with gear reduction unit between motor and valve assembly, with emergency manual operation and optical position indicator
- Position: please specify with order! (see table)
- Voltage rating: 230 V<sub>AC</sub> 50 Hz ±10% or 24 V<sub>DC</sub>
- Mounting position: any; preferably with electric motor in upright position
- Protection type: IP 65 (as per DIN 40 050)
- Adjustm. of end stops: two limit switches in the end position
- Operating time: 15 s/90° angle of rotation
- Power consumption: 15 VA

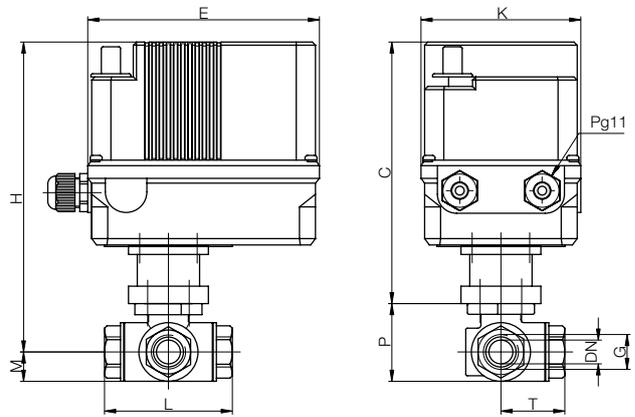
**Technical Details valve**

- Connections: female thread G 1/4 to G 2
- Temperature range: -20°C to +150°C
- Nominal pressure: PN 16

**Materials**

- Body: brass, nickel-plated
- Ball: brass, hard chrome-plated
- Ball gaskets: PTFE
- Spindle gasket: PTFE and FKM

**KUE-VN**



**Dimensions**

Screw thread [G]	DN [mm]	L [mm]	H [mm]	M [mm]	T [mm]	E [mm]	K [mm]	P [mm]	C [mm]	Weight [kg]
1/4	8	67.0	195.0	17.0	33.5	145	100	48	164	2.7
3/8	10	67.0	195.0	17.0	33.5	145	100	48	164	2.7
1/2	15	77.0	196.0	20.0	38.5	145	100	52	164	2.8
3/4	20	87.0	205.0	24.0	43.5	145	100	65	164	3.2
1	25	105.0	212.0	30.0	52.5	145	100	78	164	3.9
1 1/4	32	122.5	219.0	36.0	61.3	145	100	91	164	5.0
1 1/2	40	138.5	227.0	43.0	69.3	169	124	106	164	7.9
2	50	166.0	233.5	55.5	83.0	169	124	125	164	11.7

**Order Details** (example: KUE-VN T 1 R08 0)

Order no.	3-way version	Position (see also KUG-VN, page 9)	Connection size	Voltage
KUE-VN	T = T-bore	1 = standard 2 = 3 = 4 =	R08 = G 1/4 R10 = G 3/8 R15 = G 1/2 R20 = G 3/4 R25 = G 1 R32 = G 1 1/4 R40 = G 1 1/2 R50 = G 2	0 = 230 V <sub>AC</sub> 3 = 24 V <sub>DC</sub>
	L = L-bore	5 = standard 6 = 7 =		



**Design**

Two-piece threaded joint construction with full cylindrical bore.  
 Operation: directly controlled by a reversible electric motor, with gear reduction unit between motor and valve assembly, with emergency manual operation and optical position indicator  
 Voltage rating: 230 V<sub>AC</sub> 50 Hz ± 10% or 24 V<sub>DC</sub>  
 Mounting position: any; preferably with electric motor in upright position  
 Protection type: IP 65 (as per DIN 40 050)  
 Adjustment of end stops: two limit switches in the end position  
 Operating time: 15 s\*/90° angle of rotation  
 Power consumption: 15 VA

\* with alternating current actuators only

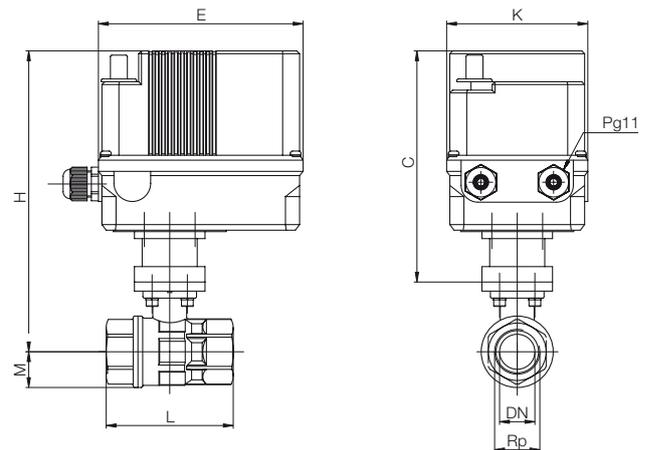
**Technical Details valve**

Connections: female thread Rp 1/2 to Rp 2 (as per DIN 2999)  
 Temperature range: -30°C to +120°C  
 Nominal pressure: PN 16

**Materials**

Body: stainless steel 1.4401  
 Ball: stainless steel 1.4401  
 Ball gaskets: PTFE/FKM  
 Spindle gasket: PTFE/FKM

**KUE-VH**



**Dimensions and Order Details** (example: KUE-VHR 150)

Screw thread [Rp]	Order no. 230 V <sub>AC</sub>	Order no. 24 V <sub>DC</sub>	DN [mm]	L [mm]	H [mm]	M [mm]	K [mm]	E [mm]	C [mm]	Weight [kg]
1/2	KUE-VHR 150	KUE-VHR 153	15	67	197.3	17.3	100	145	181	3.3
3/4	KUE-VHR 200	KUE-VHR 203	20	78	206.0	21.0	100	145	181	3.4
1	KUE-VHR 250	KUE-VHR 253	25	90	226.8	25.8	100	145	181	3.7
1 1/4	KUE-VHR 320	KUE-VHR 323	32	100	255.3	32.3	100	145	181	4.0
1 1/2	KUE-VHR 400	KUE-VHR 403	40	112	268.5	38.5	100	145	181	4.7
2	KUE-VHR 500	KUE-VHR 503	50	135	285.5	48.5	100	145	181	6.0

**Design**

Three-piece threaded joint construction with full cylindrical bore.

Operation: directly controlled by a reversible electric motor, with gear reduction unit between motor and valve assembly, with emergency manual operation and optical position indicator

Voltage rating: 230 V<sub>AC</sub> 50 Hz ±10 % or 24 V<sub>DC</sub>

Mounting position: any; preferably with electric motor in upright position

Protection type: IP 65 (as per DIN 40 050)

Adjustment of end stops: two limit switches in the end position

Operating time: 15 s\*/90° angle of rotation

Power consumption: 15 VA

\* with alternating current actuators only

**Technical Details valve**

Connections: female thread G 1/2 to G 2  
weld ends DN 15 to DN 80

Temperature range: -30°C to +110°C

Nominal pressure: PN 16

**Materials**

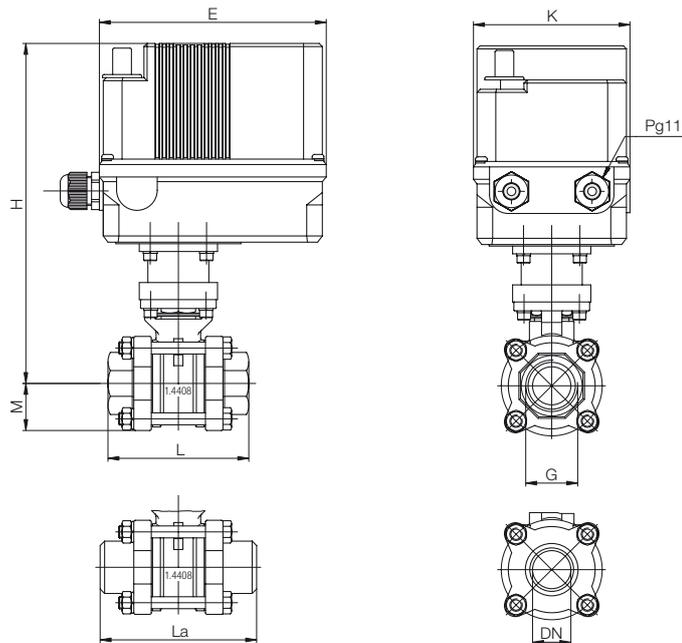
Body: stainless steel 1.4408

Ball: stainless steel 1.4408

Ball gaskets: PTFE glass-fibre-reinforced

Spindle gasket: PTFE/FKM

**KUE-ZA**



**Dimensions and Order Details** (example: KUE-ZAR 150)

Screw thread [G]	DN [mm]	Order no. 230 V <sub>AC</sub>		Order no. 24 V <sub>DC</sub>		L [mm]	La [mm]	M [mm]	H [mm]	E [mm]	K [mm]	Weight [kg]
		Female thread	Weld ends	Female thread	Weld ends							
1/2	15	KUE-ZAR 150	KUE-ZAW 150	KUE-ZAR 153	KUE-ZAW 153	75	75	22.5	206.5	145	100	2.9
3/4	20	KUE-ZAR 200	KUE-ZAW 200	KUE-ZAR 203	KUE-ZAW 203	80	90	27.0	209.5	145	100	3.2
1	25	KUE-ZAR 250	KUE-ZAW 250	KUE-ZAR 253	KUE-ZAW 253	90	100	30.0	218.0	145	100	3.9
1 1/4	32	KUE-ZAR 320	KUE-ZAW 320	KUE-ZAR 323	KUE-ZAW 323	110	110	36.5	223.0	145	100	4.4
1 1/2	40	KUE-ZAR 400	KUE-ZAW 400	KUE-ZAR 403	KUE-ZAW 403	120	125	40.5	237.5	145	100	6.6
2	50	KUE-ZAR 500	KUE-ZAW 500	KUE-ZAR 503	KUE-ZAW 503	140	150	50.0	247.0	145	100	8.1



**Design**

Four-piece threaded joint construction with mounting pad for actuator mounting, reduced cylindric bore, T- or L-bore, universal sealing. Does not prevent crossover flow.

- Operation: directly controlled by a reversible electric motor, with gear reduction unit between motor and valve assembly, with emergency manual operation and optical position indicator
- Position: please specify with order! (see table)
- Voltage rating: 230 V<sub>AC</sub> 50 Hz ±10% or 24 V<sub>DC</sub>
- Mounting position: any; preferably with electric motor in upright position
- Protection type: IP 65 (as per DIN 40 050)
- Adjustm. of end stops: two limit switches in the end position
- Operating time: 15 s/90° angle of rotation
- Power consumption: 15 VA

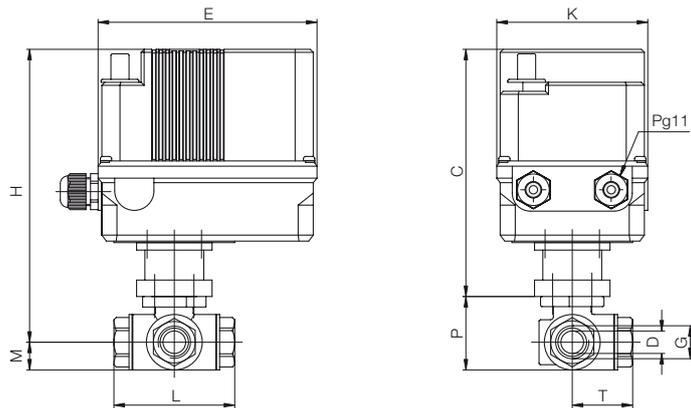
**Technical Details valve**

- Connections: female thread G 1/2 to G 1 1/4
- Temperature range: -30°C to +110°C
- Nominal pressure: PN 16

**Materials**

- Body: stainless steel 1.4408
- Ball: stainless steel 1.4401
- Ball gaskets: PTFE
- Spindle gasket: PTFE/FKM

**KUE-PD**



**Dimensions**

Screw thread [G]	Ø D [mm]	L [mm]	H [mm]	M [mm]	T [mm]	E [mm]	K [mm]	P [mm]	C [mm]	Weight [kg]
1/2	11	79	195.0	18.0	40	145	100	49.0	164	2.9
3/4	16	88	204.0	22.5	44	145	100	62.5	164	3.3
1	20	108	208.0	26.0	55	169	124	70.0	164	5.1
1 1/4	25	124	218.5	33.5	61	169	124	88.0	164	6.0

**Order Details** (example: KUE-PD T 1 R15 0)

Order no.	3-way version	Position (see also KUG-PD, page 16)	Connection size	Voltage
KUE-PD	T = T-bore	1 = standard 2 = 3 = 4 =	R15 = G 1/2 R20 = G 3/4 R25 = G 1 R32 = G 1 1/4	0 = 230 V <sub>AC</sub> 3 = 24 V <sub>DC</sub>
	L = L-bore	5 = standard 6 = 7 =		



**Design**

Two-piece threaded joint construction with full cylindrical bore.

Operation: directly controlled by an electric motor, with gear reduction unit between motor and valve assembly, with two additional limit switches for feedback and standard optical position indicator

Voltage rating: 230 V<sub>AC</sub> 50 Hz

Mounting position: any; preferably with electric motor in upright position

Protection type: IP 55 (as per DIN 40 050)

Power consumption: 2.5 W

Emergency manual operation: standard for G 1 1/2 and G 2 connection

Operating time: see table

**Technical Details valve**

Connections: female thread G 1/2 to G 2

Medium temperature: max. +120 °C

Nominal pressure: PN 6

**Materials**

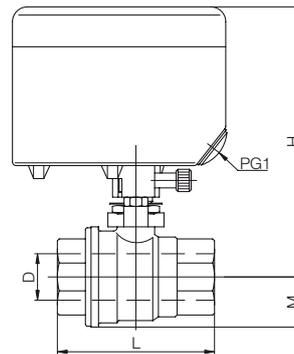
Body: brass, nickel-plated

Ball: brass, hard chrome-plated

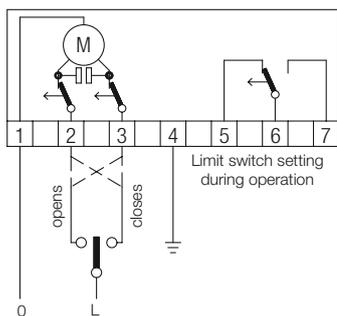
Ball gaskets: PTFE

Spindle gasket: FKM

**KUE-CO**



**Circuit diagram**



**Dimensions and Order Details** (example: KUE-COR 15N)

Screw thread [G]	Order no. without manual control	Order no. with manual control	D [mm]	L [mm]	M [mm]	H [mm]	Operating time [s/90°]	Weight [kg]
1/2	KUE-COR 15N	KUE-COR 15H	15	60	17.5	139	90	1.0
3/4	KUE-COR 20N	KUE-COR 20H	20	71	21.8	147	90	1.2
1	KUE-COR 25N	KUE-COR 25H	25	83	27.0	153	90	1.4
1 1/4	KUE-COR 32N	KUE-COR 32H	32	95	31.8	168	90	1.8
1 1/2	-	KUE-COR 40H*	40	97	36.8	263	105	3.0
2	-	KUE-COR 50H*	55	112	44.0	325	105	4.1

\*manual override, standard



**Design**

Two-piece threaded joint construction with full cylindric bore and mounting pad for actuator mounting, with stamping as per ISO5200 approval certificate A4.

Operation: directly controlled by a reversible electric motor, with gear reduction unit between motor and valve assembly, with emergency manual operation and optical position indicator

Voltage rating: 230 V<sub>AC</sub> 50 Hz ±10% or 24 V<sub>DC</sub>

Mounting position: any; preferably with electric motor in upright position

Protection type: IP 65 (as per DIN 40 050)

Adjustment of end stops: two limit switches in the end position

Operating time: 15 s/90° angle of rotation

Power consumption: 15 VA

**Technical Details valve**

Connections: flanges as per DIN 2533  
DN 25 to DN 50  
overall length as per DIN 3202-F4

Temperature range: -20°C to +120°C

Nominal pressure: PN 16 dimensioned, with threaded holes

**Materials**

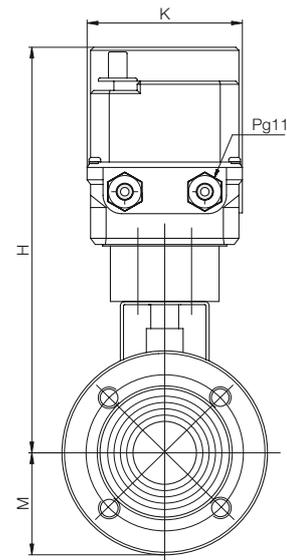
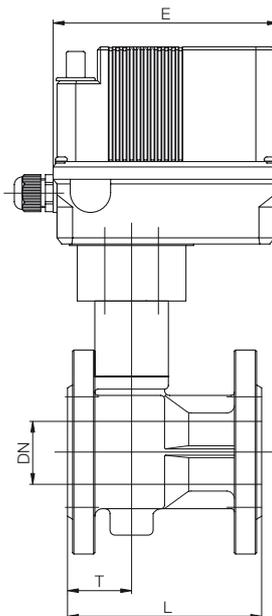
Body: cast iron GG-25

Ball: brass, hard-chrome plated  
(DN 40 and DN 50: st. steel 1.4301)

Ball gaskets: PTFE

Spindle gasket: PTFE/NBR

**KUE-VO**



**Dimensions and Order Details** (example: KUE-VOF 250)

Flange [DN]	Order no. 230 V <sub>AC</sub>	Order no. 24 V <sub>DC</sub>	M [mm]	L [mm]	T [mm]	H [mm]	K [mm]	E [mm]	Weight [kg]
25	KUE-VOF 250	KUE-VOF 253	57.5	125	42	254	100	145	5.5
32	KUE-VOF 320	KUE-VOF 323	70.0	130	47	270	100	145	7.3
40	KUE-VOF 400	KUE-VOF 403	75.0	140	49	277	124	169	9.8
50	KUE-VOF 500	KUE-VOF 503	82.5	150	52	285	124	169	11.3

**Design**

One-piece compact construction with full cylindric bore. Fire-safe version.

Operation: directly controlled by a reversible electric motor, with gear reduction unit between motor and valve assembly, with emergency manual operation and optical position indicator

Voltage rating: 230 V<sub>AC</sub> 50 Hz ±10 % or 24 V<sub>DC</sub>

Mounting position: any; preferably with electric motor in upright position

Protection type: IP 65 (as per DIN 40 050)

Adjustment of end stops: two limit switches in the end position

Operating time: 15 s/90° angle of rotation

Power consumption: 15 VA

**Technical Details valve**

Connections: flanges DN 15 to DN 50

Temperature range: -20°C to +160°C

Nominal pressure: PN 16 dimensioned, with threaded holes

**Materials**

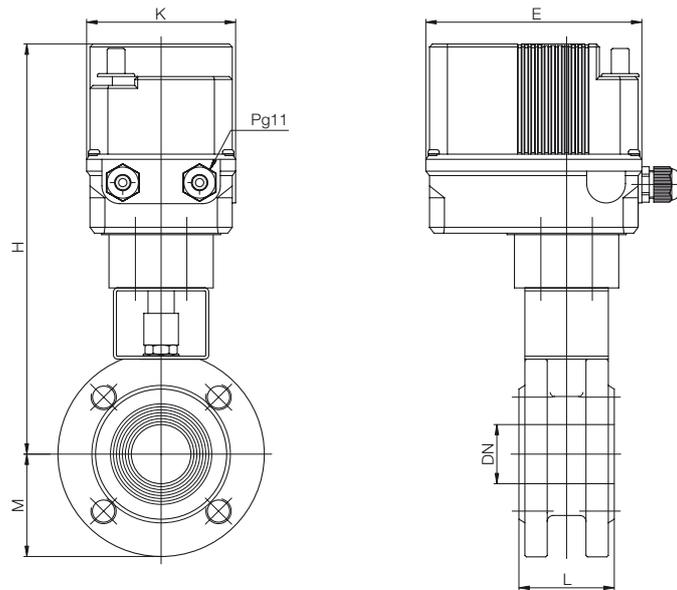
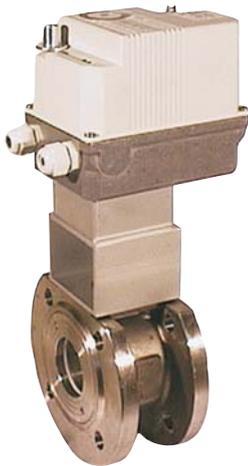
Body: stainless steel 1.4408/01

Ball: stainless steel 1.4401

Ball gaskets: PTFE

Spindle gasket: PTFE/FKM

**KUE-VK**



**Dimensions and Order Details** (example: KUE-VKF 150)

Flange [DN]	Order no. 230 V <sub>AC</sub>	Order no. 24 V <sub>DC</sub>	M [mm]	L [mm]	H [mm]	K [mm]	E [mm]	Weight [kg]
15	KUE-VKF 150	KUE-VKF 153	45.0	35.0	235	100	145	3.1
20	KUE-VKF 200	KUE-VKF 203	50.0	40.0	240	100	145	4.1
25	KUE-VKF 250	KUE-VKF 253	55.0	46.0	244	100	145	4.8
32	KUE-VKF 320	KUE-VKF 323	64.0	54.0	252	100	145	6.3
40	KUE-VKF 400	KUE-VKF 403	75.0	63.5	277	124	169	7.6
50	KUE-VKF 500	KUE-VKF 503	82.5	82.0	286	124	169	9.1

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