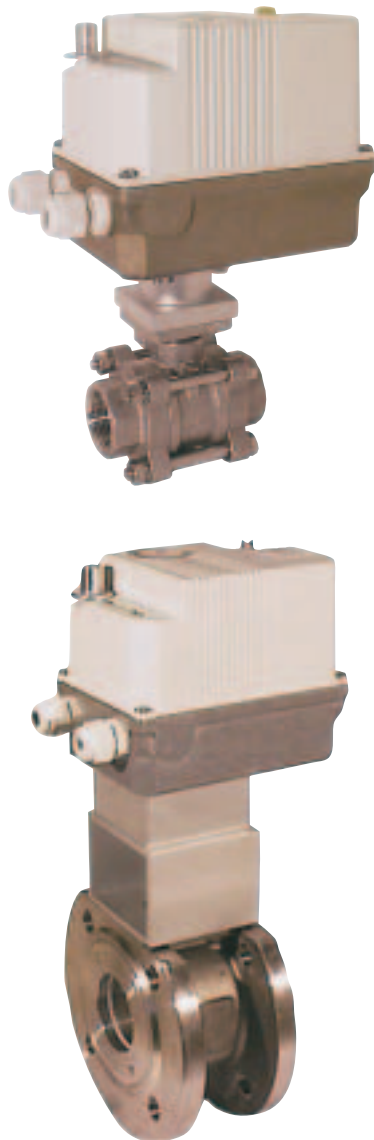


Ball Valves with Electrical Actuator

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_{DC}, 230 V_{AC}
- Brass, stainless steel, GG-25
- 2- and 3-way version
- T- and L-bore
 (for 3-way ball valve)



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 Nordring 22-24
 D-65719 Hofheim/Ts.
 ☎ (06192) 299-0
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 E-mail: info.de@kobold.com
 Internet: www.kobold.com

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.

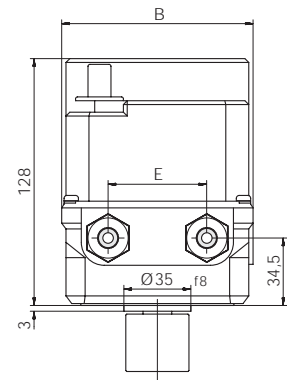
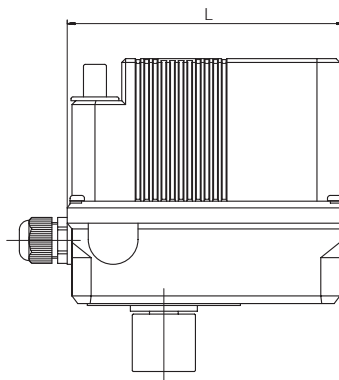
The valve stem is attached to the actuator end of a speed reducer that is driven by a series-connected electric motor. Two standard limit switches and the position indicator deliver electrical and visual feedback. You can manually reset the valve with the emergency manual operation facility if, for example,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

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

*except KUE-COxxx

Technical details

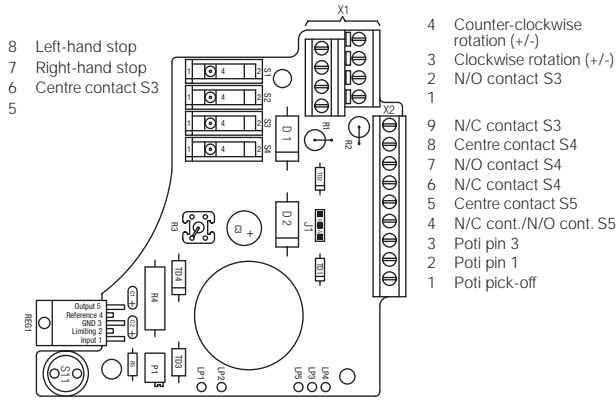
Supply voltages	230 V _{AC} 50 Hz ±10% 24 V _{DC}
Power consumption	6 to 15 VA (depending on model)
Protection type	IP 65 (as per DIN 40 050)
Rated torque	20 Nm (model ES 20) 40 Nm (model ES 50)
Protection	overload protection
Cable connection	terminal strips in the housing through two cable glands PG 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



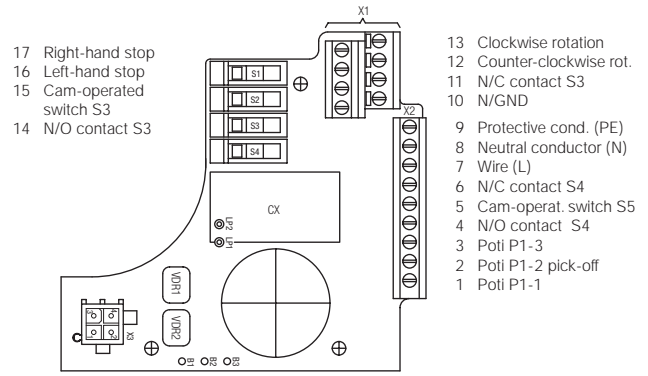


Terminal connection diagrams

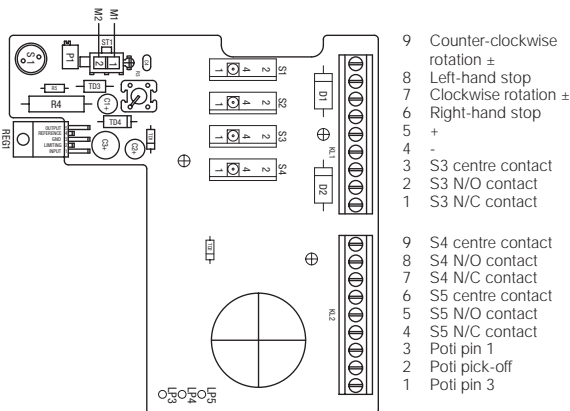
Model ES 20 / 24 V_{DC}



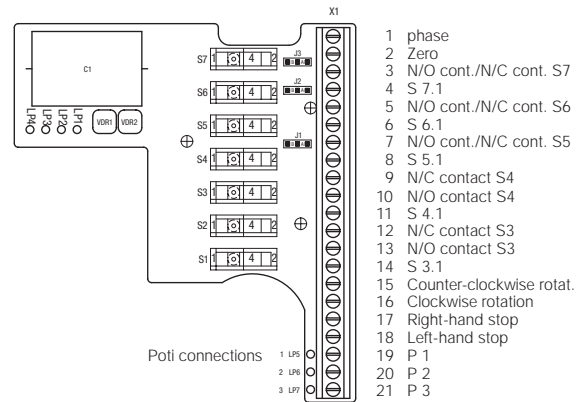
Model ES 20 / 230 V_{AC}



Model ES 50 / 24 V_{DC}



Model ES 50 / 230 V_{AC}





Design

Two-piece threaded joint construction with full cylindric 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_{AC} 50 Hz ±10% or 24 V_{DC}
- 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 sec*/90° angle of rotation
- Power consumption 15 VA

* with alternating current actuators only

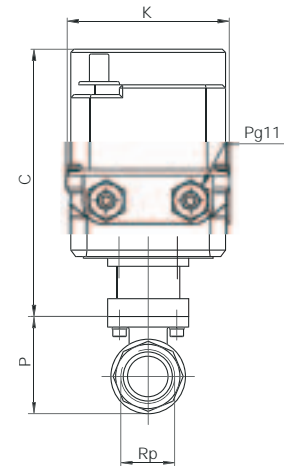
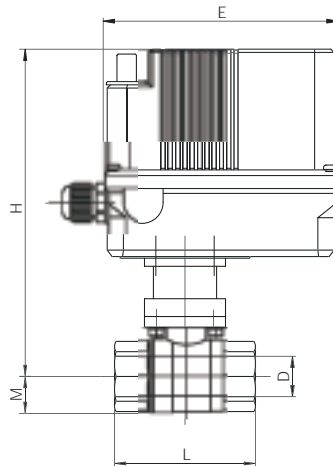
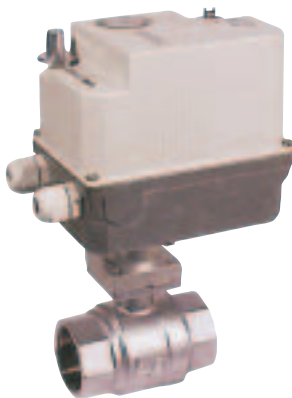
Technical details valve

- 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 _{AC}	Order no. 24 V _{DC}	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 _{AC} 50 Hz ±10% or 24 V _{DC}
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 sec/90° angle of rotation
Power consumption	15 VA

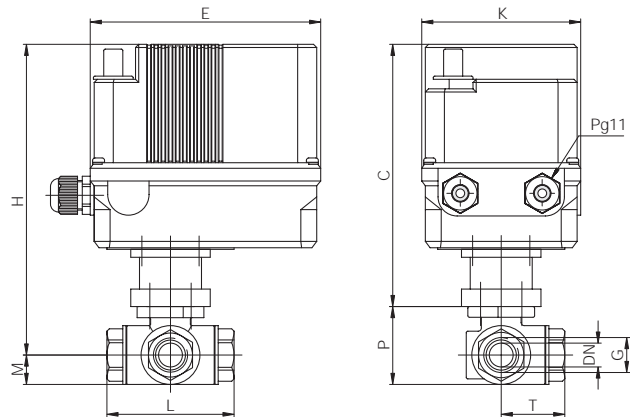
Technical details valve

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	0 = 230 V _{AC} 3 = 24 V _{DC}
	L = L-bore	5 = standard 6 = 7 =	R32 = G 1 1/4 R40 = G 1 1/2 R50 = G 2	



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_{AC} 50 Hz ± 10% or 24 V_{DC}

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 sec*/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

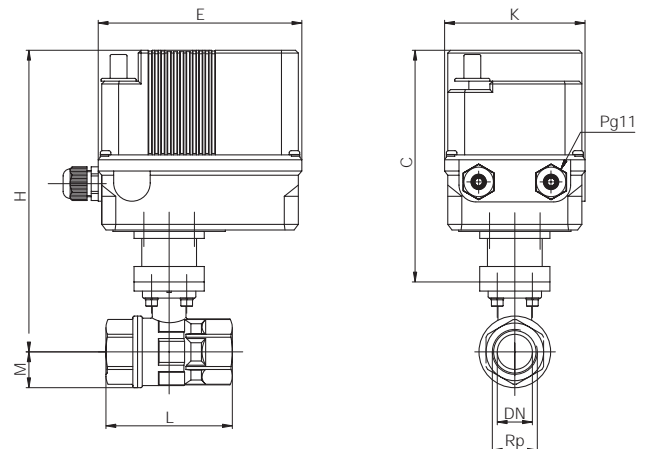
Body stainless steel 1.4401

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 _{AC}	Order no. 24 V _{DC}	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_{AC} 50 Hz ±10% or 24 V_{DC}
 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 sec*/90° angle of rotation
 Power consumption 15 VA

* with alternating current actuators only

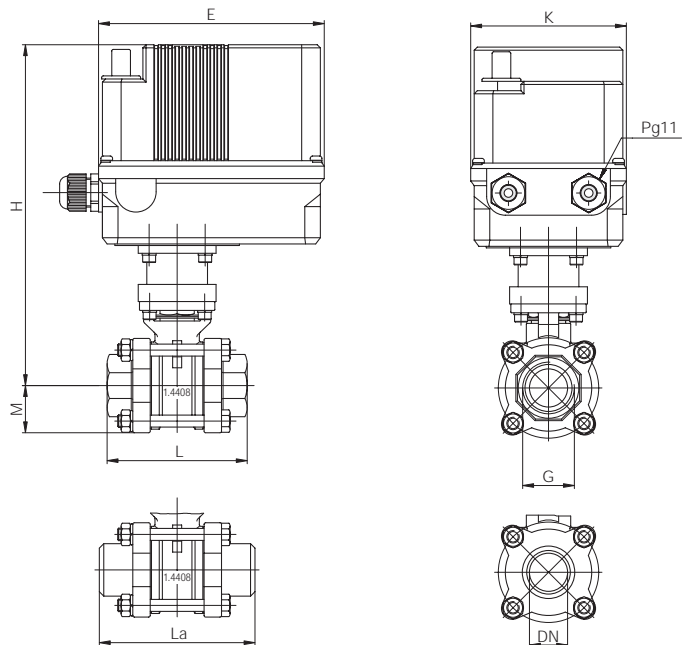
Technical details valve

Connections female thread G 1/2 to G 2
 weld ends DN 15 to DN 50
 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 _{AC}		Order no. 24 V _{DC}		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_{AC} 50 Hz ±10% or 24 V_{DC}
- 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 sec/90° angle of rotation
- Power consumption 15 VA

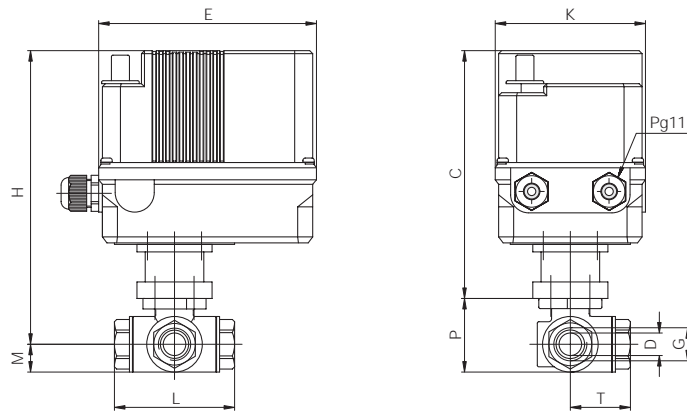
Technical details valve

- 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 18)	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 _{AC} 3 = 24 V _{DC}
	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_{AC} 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

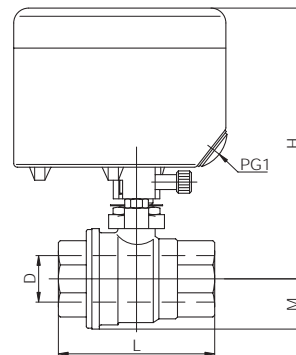
Technical details valve

Connections female thread G 1/2 to G 2
 Medium temperature max. +120 °C
 Nominal pressure PN 6

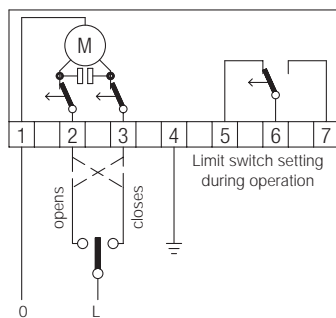
Materials

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

KUE-CO



Circuit diagram for G 1/2 to G 1 1/4 (90 s)



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 in sec/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_{AC} 50 Hz ±10% or 24 V_{DC}

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 sec/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

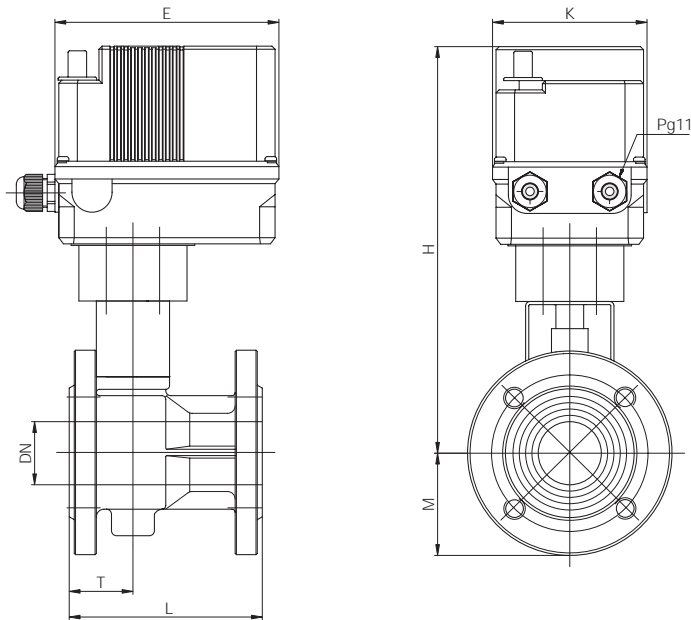
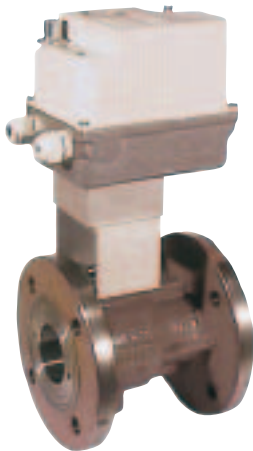
Body cast iron GG-25

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 _{AC}	Order no. 24 V _{DC}	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_{AC} 50 Hz ±10% or 24 V_{DC}

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 sec/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

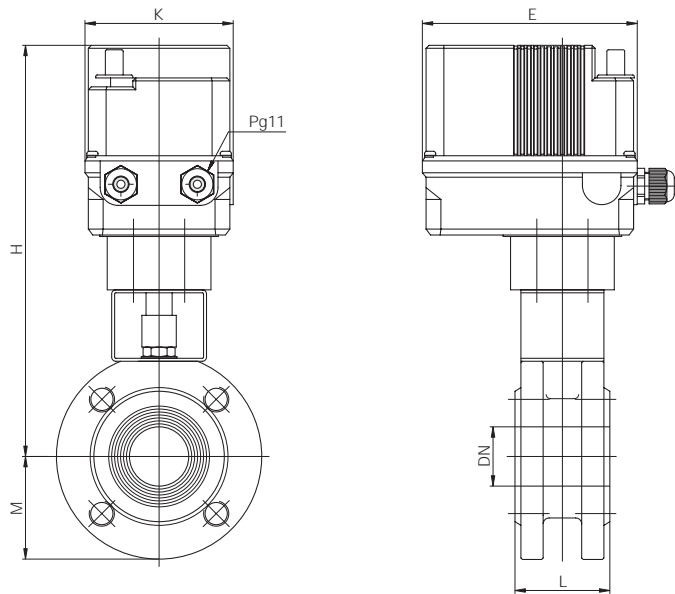
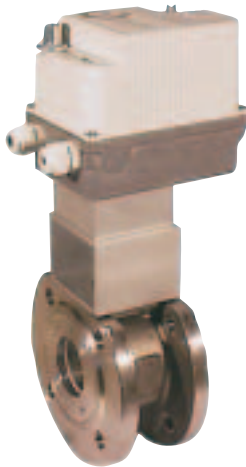
Body stainless steel 1.4408/01

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 _{AC}	Order no. 24 V _{DC}	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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