



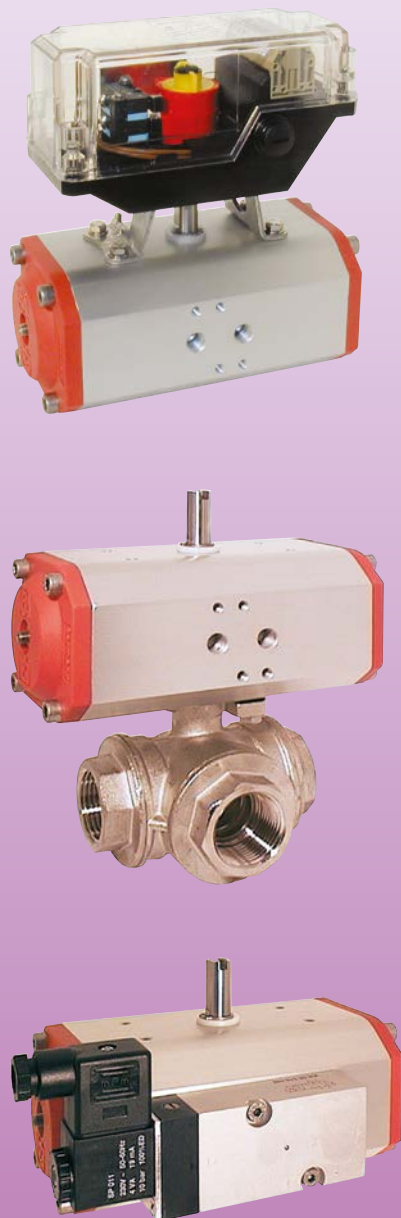
Ball Valves with Pneumatic Actuator

screw thread and flange connection,
welded connection



measuring
•
monitoring
•
analysing

**KUP-KA, ZA, VH,
VN, PD, VO, VK**



- p_{\max} : PN64; t_{\max} : 160 °C
- Connections:
screw thread G 1/4 ... G 4
welded connection DN 15 ... DN 100
flanges DN 15 ... DN 200
- Pilot pressure: 6 ... 8 bar
- Double-acting or spring return
- Brass, stainless steel, GG-25
- 2- and 3-way version
- T and L bore
(with 3-way ball valve)



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Description

The actuator is a double-piston actuator, specially designed for operating ball valves and flaps. Two versions are available: double-acting and spring return (single-acting). The double piston design allows high torque with small external dimensions. You can adjust the angular stroke by $\pm 6^\circ$ with the standard end position.

Design

The force from the reciprocating pistons is transmitted to a pinion by two racks attached to the pistons. This arrangement delivers a linear torque characteristic across the full stroke.

Principle of operation double-acting

The space between both pistons is pressurised through point »A« forcing the pistons apart. The force of both pistons is transmitted through the racks to the pinion »C«. When pressure is applied at connection »B« and »A« is vented, both external chambers are pressurised and the pistons are forced together. You can set the angular stroke by undoing lock nuts »E« and adjusting the final stroke position setting screws »D«.

Principle of operation single-acting

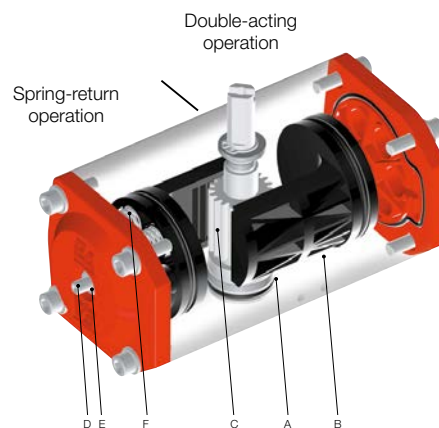
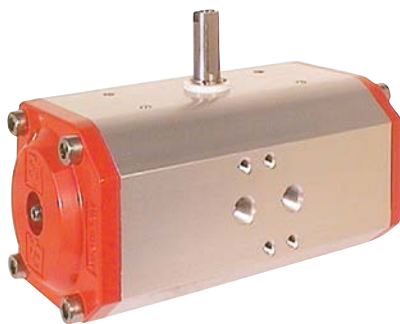
The space between both pistons is pressurised through point »A« – forcing the pistons apart and forcing the springs together. The force of both pistons is transmitted through the racks to the pinion »C«. If no pressure is applied at connection »B« and »A« is vented, the pistons are forced to their home positions by the spring resistance. You can set the angular stroke by undoing lock nuts »E« and adjusting the final stroke position setting screws »D«.

Technical Details

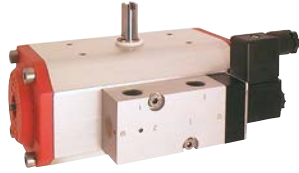
| | |
|----------------------|--|
| Design: | double-piston rotary actuator, maintenance-free, pneumatic double acting or single-acting with spring return |
| Mounting: | four or eight DIN ISO 5211 female threads on the bottom, pinion as per DIN 3337, interface for solenoid valves and signal transmitter as per NAMUR |
| Materials | |
| Body: | aluminium alloy (anodised) |
| Cap: | plastic, fibre-reinforced or aluminium |
| Piston: | special plastic, fibre-reinforced or aluminium |
| Pinion: | stainless steel or steel, zinc-coated |
| Bearings: | smooth plastic |
| Gaskets: | NBR |
| Nuts and bolts: | stainless steel |
| Pilot media: | filtered air, to PNEUROP/ISO-class 4 standard at least |
| Temperature range: | ambient temperature -20 °C... +85 °C |
| Rotation: | 90° (adjustable $\pm 6^\circ$) |
| Torque moment range: | 5...300 Nm (depending on size used) |
| Pilot pressure: | 2...10 bar |
| Options: | 3/2- or 5/2-way electrical solenoid valve/mechanical limit switch |

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

Pneumatic actuator



3/2-way solenoid valve for single-acting actuators



Technical Details

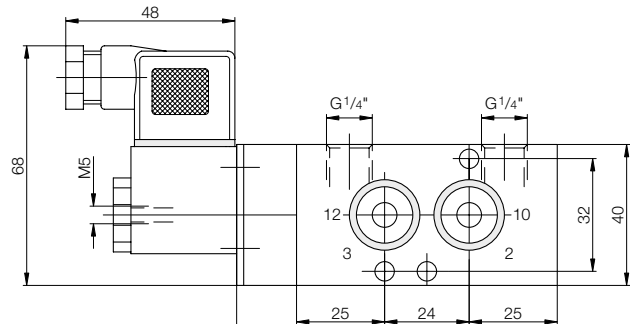
Design: servo assisted slide valve with emergency manual operation, flange as per NAMUR

Control functions: 3/2-way

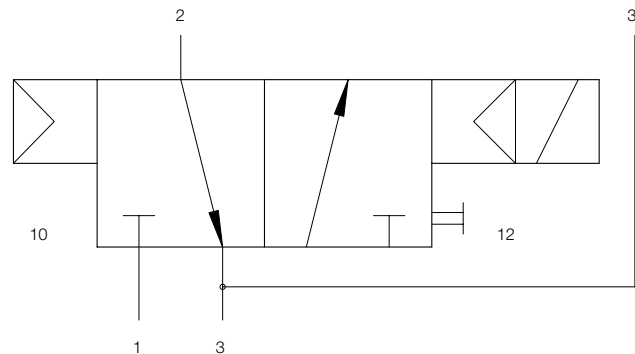
Materials

Body: aluminium (anodised)
 Internal parts: brass and plastic
 Gaskets: NBR
 Voltage rating: 24 V_{DC}, 230 V_{AC} 50 Hz
 24 V_{DC} EEx m IIT4, 230 V_{AC} EEx m IIT4
 Electr. connection: connector as per DIN 43650
 Power consumption: DC voltage 4.2 W
 A.C. voltage: 7.0/4.0 VA
 Duty cycle: 100%
 Pilot media: filtered air
 Pressure range: 1.5 ... 10 bar
 Temperature range: -20 °C ... +70 °C

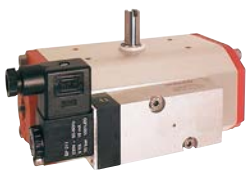
Dimensions [mm]



Diagram



5/2-way solenoid valve for double acting actuators



Technical Details

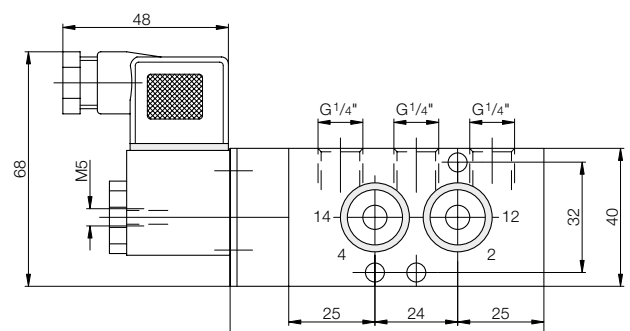
Design: servogesteuertes Schieberventil mit Handnotbetätigung, Flansch nach NAMUR

Control functions: 5/2-Wege

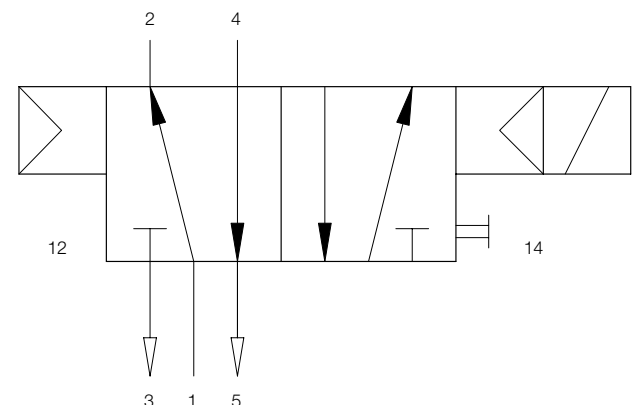
Materials

Body: Aluminium (eloxiert)
 Internal parts: Messing und Kunststoff
 Gaskets: NBR
 Voltage rating: 24 V_{DC}, 230 V_{AC} 50 Hz
 24 V_{DC} EEx m IIT4, 230 V_{AC} EEx m IIT4
 Electr. connection: Gerätesteckdose nach DIN 43650
 Power consumption: Gleichspannung 4,2 W
 A.C. voltage: 7.0/4.0 VA
 Duty cycle: 100%
 Pilot media: filtered air
 Pressure range: 1.5 ... 10 bar
 Temperature range: -20 °C ... +70 °C

Dimensions [mm]



Diagram

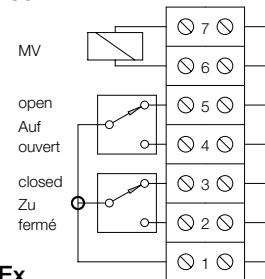


Electric-mechanic limit switches in a protective casing

IP65



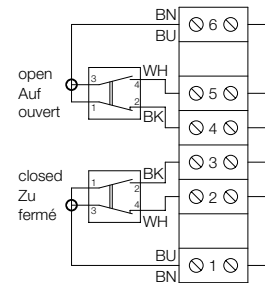
Wiring diagram for IP65



EEx



Wiring diagram for EEx



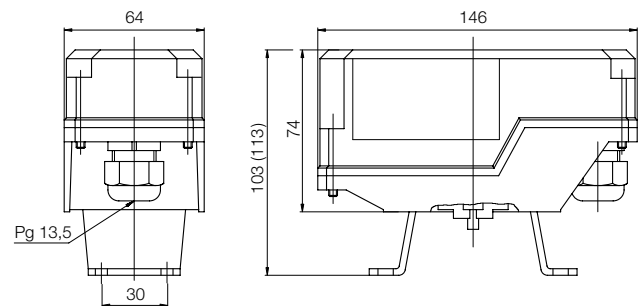
Technical Details

Design: 2 electromechanical microswitches in a protective casing
 Protection type: IP65 as per DIN 40050
 EEx d IIC T6 to EN 50014

Materials

Housing: Vestamid®, black
 Cover: Macrolon®, transparent (IP65)
 Vestamid®, black (EEx)
 Voltage rating: max. 250 V
 Electrical connection: cable gland, conduit thread PG 13,5
 Contact rating: max. 16 A (IP65)
 max. 6 A (EEx)
 Switching function: two N/O / N/C contacts
 Temperature: -20 °C ... +100 °C (IP65)
 -20 °C ... +85 °C (EEx)

Dimensions





Design

Two-piece threaded joint body design with full cylindrical bore and mounting pad for actuator mounting. With stamping as per ISO 5200 instructions A4.

- Operation: pneumatic single- or double-acting
- Pilot pressure: 6... 8 bar
- Pilot media: filtered air
- Mounting position: any
- Options: 3/2- or 5/2-way solenoid valve electric /mechanic limit switches

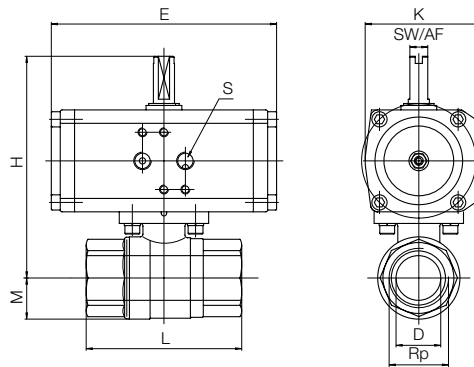
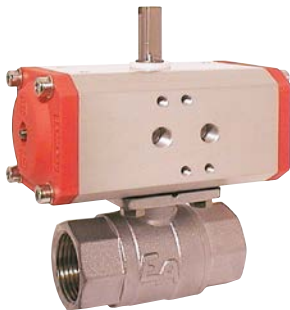
KUP-KA

Technical Details Flow Fitting

- Connections: female thread Rp 1/2 ... Rp 4 (nach DIN 2999)
- Temperature range: -30 °C ... +120 °C
- Nominal pressure: PN 16

Materials

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



Dimensions

| Screw thread [Rp] | D [mm] | L [mm] | H ¹⁾ [mm] | H ²⁾ [mm] | M [mm] | E ¹⁾ [mm] | E ²⁾ [mm] | K ¹⁾ [mm] | K ²⁾ [mm] | S [G] | SW/AF ¹⁾ [mm] | SW/AF ²⁾ [mm] | Weight ¹⁾³⁾ [kg] | Weight ²⁾³⁾ [kg] |
|-------------------|--------|--------|----------------------|----------------------|--------|----------------------|----------------------|----------------------|----------------------|-------|--------------------------|--------------------------|-----------------------------|-----------------------------|
| 1/2 | 15 | 65 | 116 | 116 | 16 | 126 | 126 | 65 | 65 | 1/8 | 10 | 10 | 1.2 | 1.2 |
| 3/4 | 20 | 75 | 121 | 121 | 19 | 126 | 126 | 65 | 65 | 1/8 | 10 | 10 | 1.3 | 1.3 |
| 1 | 24 | 86 | 124 | 138 | 23 | 126 | 163 | 65 | 78 | 1/8 | 10 | 10 | 1.6 | 2.1 |
| 1 1/4 | 30 | 95 | 129 | 143 | 28 | 126 | 163 | 65 | 78 | 1/8 | 10 | 10 | 1.8 | 2.4 |
| 1 1/2 | 38 | 100 | 157 | 171 | 35 | 163 | 193 | 78 | 86 | 1/8 | 10 | 10 | 2.5 | 4.2 |
| 2 | 47 | 120 | 164 | 178 | 42 | 163 | 193 | 78 | 86 | 1/8 | 10 | 10 | 3.4 | 5.1 |
| 2 1/2 | 64 | 195 | 197 | 212 | 57 | 193 | 231 | 100 | 115 | 1/4 | 10 | 10 | 6.4 | 7.6 |
| 3 | 76 | 188 | 207 | 222 | 68 | 193 | 231 | 100 | 115 | 1/4 | 10 | 10 | 9.3 | 10.5 |
| 4 | 95 | 225 | 242 | 270 | 78 | 231 | 260 | 115 | 143 | 1/4 | 10 | 19 | - | - |

¹⁾ Double-acting actuator ²⁾ Single-acting actuator ³⁾ Weight without springs

Order Details (example: KUP-KA R15 C A 0)

| Model | Connection size | Actuation | Solenoid valve | Limit switch |
|--------|--|---|--|-------------------------------------|
| KUP-KA | R15 = Rp 1/2 R20 = Rp 3/4 R25 = Rp 1 R32 = Rp 1 1/4 R40 = Rp 1 1/2 R50 = Rp 2 R65 = Rp 2 1/2 R80 = Rp 3 R1H = Rp 4 | C = single-acting, default CLOSED O = single-acting, default OPEN D = double-acting | A = without B = 3/2-way (24 V _{DC}) C = 3/2-way (230 V _{AC}) | 0 = without 2 = 2 limit switches |
| | | | F = 5/2-way (24 V _{DC}) G = 5/2-way (230 V _{AC}) | |



2-Way Stainless Steel Ball Valve with Pneumatic Actuator Model KUP-ZA

Design

Three-piece threaded joint body design with full cylindrical bore.

Operation: pneumatic single- or double-acting
 Pilot pressure: 6...8 bar
 Pilot media: filtered air
 Mounting position: any
 Options: 3/2- or 5/2-way solenoid valve electric /mechanic limit switches

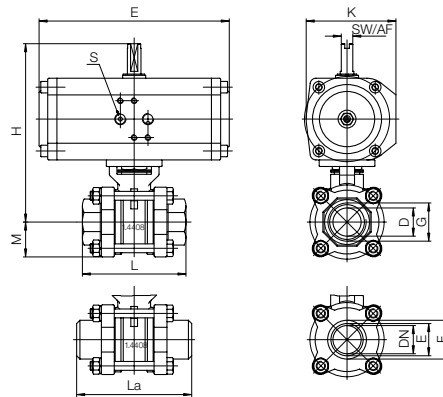
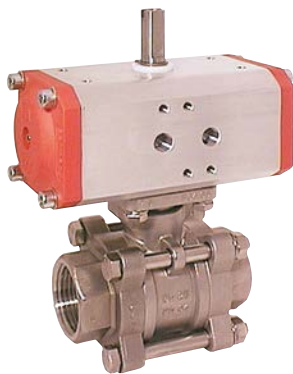
KUP-ZA

Technical Details Flow Fitting

Connections: female thread G 1/2... G 4
 welded connection DN 15... DN 100
 Temperature range: -30 °C...+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



Dimensions

| Screw thread [G] | DN [mm] | Ø D [mm] | L [mm] | Ø E [mm] | Ø F [mm] | La [mm] | H ¹⁾ [mm] | H ²⁾ [mm] | M [mm] | E ¹⁾ [mm] | E ²⁾ [mm] | K ¹⁾ [mm] | K ²⁾ [mm] | S [G] | SW/AF ¹⁾ [mm] | SW/AF ²⁾ [mm] | Weight ¹⁾³⁾ [kg] | Weight ²⁾³⁾ [kg] |
|------------------|---------|----------|--------|----------|----------|---------|----------------------|----------------------|--------|----------------------|----------------------|----------------------|----------------------|-------|--------------------------|--------------------------|-----------------------------|-----------------------------|
| 1/2 | 15 | 15 | 75 | 18 | 21.3 | 75 | 134 | 148 | 22.5 | 126 | 163 | 65 | 78 | 1/8 | 10 | 10 | 1.5 | 2.0 |
| 3/4 | 20 | 20 | 80 | 26 | 26.9 | 90 | 139 | 153 | 27.0 | 126 | 163 | 65 | 78 | 1/8 | 10 | 10 | 1.8 | 2.3 |
| 1 | 25 | 25 | 90 | 28 | 33.7 | 100 | 161 | 175 | 30.0 | 163 | 197 | 78 | 86 | 1/8 | 10 | 10 | 2.5 | 3.0 |
| 1 1/4 | 32 | 32 | 110 | 36 | 42.0 | 110 | 166 | 180 | 36.5 | 163 | 197 | 78 | 86 | 1/8 | 10 | 10 | 3.5 | 3.5 |
| 1 1/2 | 40 | 40 | 120 | 43 | 48.3 | 125 | 193 | 205 | 40.5 | 197 | 193 | 86 | 100 | 1/8 | 10 | 10 | 4.5 | 6.2 |
| 2 | 50 | 50 | 140 | 54 | 60.3 | 150 | 200 | 227 | 50.0 | 197 | 231 | 86 | 115 | 1/8 | 10 | 10 | 7.7 | 8.9 |
| 2 1/2 | 65 | 65 | 185 | 70 | 76.1 | 190 | 230 | 273 | 72.5 | 193 | 266 | 100 | 143 | 1/4 | 10 | 19 | 12.9 | - |
| 3 | 80 | 80 | 205 | 82 | 88.9 | 220 | 256 | 284 | 89.0 | 231 | 266 | 115 | 143 | 1/4 | 10 | 19 | 19.1 | - |
| 4 | 100 | 100 | 240 | 106 | 114.3 | 270 | 307 | - | 102.0 | 266 | - | 143 | - | 1/4 | 19 | - | 27.4 | - |

¹⁾ Double-acting actuator ²⁾ Single-acting actuator ³⁾ Weight without springs

Order Details (example: KUP-ZA R15 C A 0)

| Model | Connection size | Actuation | Solenoid valve | Limit switch | |
|--------|-------------------|--|--|---|---|
| KUP-ZA | female thread | R15 = G 1/2 R20 = G 3/4 R25 = G 1 R32 = G 1 1/4 R40 = G 1 1/2 R50 = G 2 R65 = G 2 1/2 R80 = G 3 R1H = G 4 | C = single-acting, default CLOSED O = single-acting, default OPEN | A = without B = 3/2-way (24 V _{DC}) C = 3/2-way (230 V _{AC}) D = 3/2-way (24 V _{DC} EEx m II T4) E = 3/2-way (230 V _{AC} EEx m II T4) | 0 = without 2 = 2 limit switches 3 = 2 limit switches EEx d II C T6 |
| | welded connection | W15 = DN 15 W20 = DN 20 W25 = DN 25 W32 = DN 32 W40 = DN 40 W50 = DN 50 W65 = DN 65 W80 = DN 80 W1H = DN 100 | D = double-acting | F = 5/2-way (24 V _{DC}) G = 5/2-way (230 V _{AC}) H = 5/2-way (24 V _{DC} EEx m II T4) K = 5/2-way (230 V _{AC} EEx m II T4) | |

Design

Two-piece threaded joint body design with full cylindrical bore.

Operation: pneumatic single- or double-acting

Pilot pressure: 6...8 bar

Pilot media: filtered air

Mounting position: any

Options: 3/2- or 5/2-way solenoid valve electric /mechanic limit switches

Technical Details Flow Fitting

Connections: female thread G 1/2... G 2

Temperature range: -20 °C...+110 °C

Nominal pressure: PN 16

Materials

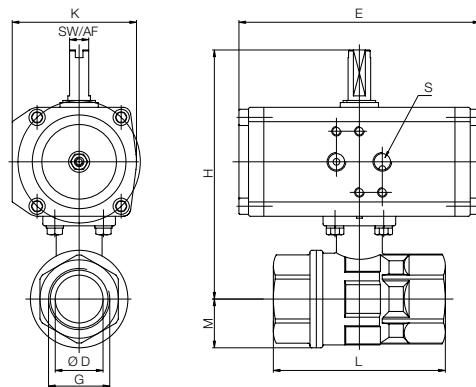
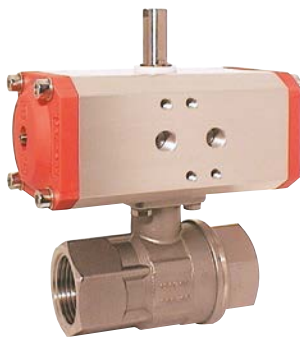
Body: stainless steel 1.4408

Ball: stainless steel 1.4401

Ball gaskets: PTFE

Spindle gasket: PTFE/FKM

KUP-VH



Dimensions

| Screw thread [G] | Ø D [mm] | L [mm] | H ¹⁾ [mm] | H ²⁾ [mm] | M [mm] | E ¹⁾ [mm] | E ²⁾ [mm] | K ¹⁾ [mm] | K ²⁾ [mm] | S [G] | SW/AF [mm] | Weight ¹⁾³⁾ [kg] | Weight ²⁾³⁾ [kg] |
|------------------|----------|--------|----------------------|----------------------|--------|----------------------|----------------------|----------------------|----------------------|-------|------------|-----------------------------|-----------------------------|
| 1/2 | 15 | 67 | 118 | 132 | 17 | 126 | 163 | 65 | 78 | 1/8 | 10 | 1.2 | 1.7 |
| 3/4 | 20 | 78 | 120 | 134 | 21 | 126 | 163 | 65 | 78 | 1/8 | 10 | 1.4 | 2.0 |
| 1 | 24 | 90 | 130 | 144 | 26 | 126 | 163 | 65 | 78 | 1/8 | 10 | 1.9 | 2.4 |
| 1 1/4 | 32 | 100 | 134 | 162 | 32 | 126 | 197 | 65 | 86 | 1/8 | 10 | 2.2 | 2.8 |
| 1 1/2 | 40 | 112 | 162 | 188 | 39 | 163 | 193 | 78 | 100 | 1/8 | 10 | 3.6 | 5.2 |
| 2 | 50 | 135 | 171 | 197 | 49 | 163 | 193 | 78 | 100 | 1/8 | 10 | 4.8 | 6.5 |

¹⁾ Double-acting actuator ²⁾ Single-acting actuator ³⁾ Weight without springs

Order Details (example: KUP-VH R15 C A 0)

| Model | Connection size | Actuation | Solenoid valve | Limit switch |
|--------|--|---|--|-------------------------------------|
| KUP-VH | R15 = G 1/2 R20 = G 3/4 R25 = G 1 R32 = G 1 1/4 R40 = G 1 1/2 R50 = G 2 | C = single-acting, default CLOSED O = single-acting, default OPEN D = double-acting | A = without | 0 = without 2 = 2 limit switches |
| | | | B = 3/2-way (24 V _{DC}) C = 3/2-way (230 V _{AC}) F = 5/2-way (24 V _{DC}) G = 5/2-way (230 V _{AC}) | |



3-Way Brass Ball Valve with Pneumatic Actuator Model KUP-VN

Design

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

Operation: pneumatic single- or double-acting
 Position: specify with order! (see table)
 Pilot pressure: 6...8 bar
 Pilot media: filtered air
 Mounting position: any
 Options: 3/2- or 5/2-way solenoid valve electric /mechanic limit switches

Technical Details Flow Fitting

Connections: female thread G 1/2... G 2
 Temperature range: -20 °C...+150 °C
 Nominal pressure: PN 16 (up to G 1)
 PN 10 (from G 1 1/4)

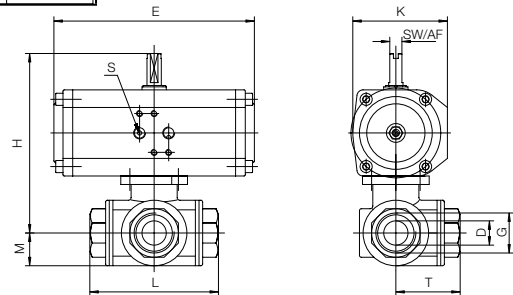
Materials

Body: brass, nickel-plated
 Ball: brass, hart chrome-plated
 Ball gaskets: PTFE
 Spindle gasket: PTFE/FKM

Positions

| | T-bore | | | | L-bore | | |
|-----------------------------|--------|--|--|--|--------|--|--|
| Handle or actuator mounting | | | | | | | |
| 0° position | | | | | | | |
| 90° position | | | | | | | |

KUP-VN



Dimensions

| Screw thread [G] | Ø D [mm] | L [mm] | H ¹⁾ [mm] | H ²⁾ [mm] | M [mm] | E ¹⁾ [mm] | E ²⁾ [mm] | K ¹⁾ [mm] | K ²⁾ [mm] | S ¹⁾ [G] | S ²⁾ [G] | T [mm] | SW/AF [mm] | Weight ¹⁾³⁾ [kg] | Weight ²⁾³⁾ [kg] |
|------------------|----------|--------|----------------------|----------------------|--------|----------------------|----------------------|----------------------|----------------------|---------------------|---------------------|--------|------------|-----------------------------|-----------------------------|
| 1/4 | 8 | 67.0 | 135 | 135 | 17.0 | 126 | 126 | 65 | 65 | 1/8 | 1/8 | 33,5 | 10 | 1.5 | 1.5 |
| 3/8 | 10 | 77.0 | 135 | 135 | 17.0 | 126 | 126 | 65 | 65 | 1/8 | 1/8 | 33,5 | 10 | 1.5 | 1.5 |
| 1/2 | 15 | 77.0 | 139 | 153 | 20.0 | 126 | 163 | 65 | 78 | 1/8 | 1/8 | 38,5 | 10 | 1.6 | 2.1 |
| 3/4 | 20 | 87.0 | 152 | 166 | 24.0 | 126 | 163 | 64 | 78 | 1/8 | 1/8 | 43,5 | 10 | 1.9 | 2.4 |
| 1 | 25 | 105.0 | 179 | 193 | 30.0 | 163 | 197 | 78 | 86 | 1/8 | 1/8 | 52,5 | 10 | 3.1 | 3.1 |
| 1 1/4 | 32 | 122.5 | 192 | 206 | 36.0 | 163 | 197 | 78 | 86 | 1/8 | 1/8 | 61,3 | 10 | 4.1 | 5.8 |
| 1 1/2 | 40 | 138.5 | 221 | 233 | 43.0 | 197 | 193 | 86 | 100 | 1/8 | 1/4 | 69,3 | 10 | 7.6 | 7.6 |
| 2 | 50 | 166.0 | 240 | 267 | 55.5 | 197 | 231 | 86 | 115 | 1/8 | 1/4 | 83,0 | 10 | 11.4 | 12.6 |

¹⁾ Double-acting actuator ²⁾ Single-acting actuator ³⁾ Weight without springs

Order Details (example: KUP-VN T 1 R08 C A 0)

| Model | 3-way version | Position* | Connection size | Actuation | Solenoid valve | Limit switch |
|--------|---------------|-----------------------------|---|--|--|-------------------------------------|
| KUP-VN | T = T-bore | 1 = standard 2 3 4 | R08 = G 1/2 R10 = G 3/8 R15 = G 1/2 R20 = G 3/4 R25 = G 1 | C = single-acting, default CLOSED O = single-acting, default OPEN | A = without B = 3/2-way (24 V _{DC}) C = 3/2-way (230 V _{AC}) | 0 = without 2 = 2 limit switches |
| | L = L-bore | 5 = standard 6 7 | R32 = G 1 1/4 R40 = G 1 1/2 R50 = G 2 | D = double-acting | F = 5/2-way (24 V _{DC}) G = 5/2-way (230 V _{AC}) | |

* See above



Design

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

Operation: pneumatic single- or double-acting
 Position: specify with order! (see table)
 Pilot pressure: 6...8 bar
 Pilot media: filtered air
 Mounting position: any
 Options: 3/2- or 5/2-way solenoid valve electric /mechanic limit switches

Technical Details Flow Fitting

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

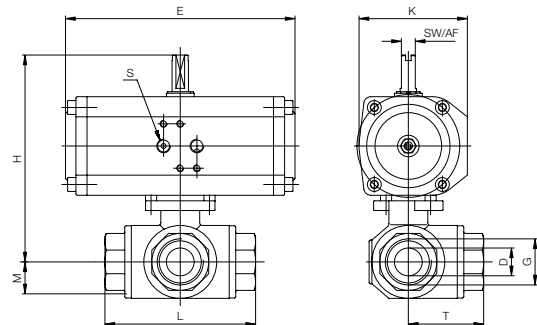
Materials

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

Positions

| | T-bore | | | | L-bore | | |
|-----------------------------|--------|--|--|--|--------|--|--|
| Handle or actuator mounting | | | | | | | |
| 0° position | | | | | | | |
| 90° position | | | | | | | |

KUP-PD



Dimensions

| Screw thread [G] | Ø D [mm] | L [mm] | H ¹⁾ [mm] | H ²⁾ [mm] | M [mm] | E ¹⁾ [mm] | E ²⁾ [mm] | K ¹⁾ [mm] | K ²⁾ [mm] | S ¹⁾ [G] | S ²⁾ [G] | T [mm] | SW/AF [mm] | Weight ¹⁾³⁾ [kg] | Weight ²⁾³⁾ [kg] |
|------------------|----------|--------|----------------------|----------------------|--------|----------------------|----------------------|----------------------|----------------------|---------------------|---------------------|--------|------------|-----------------------------|-----------------------------|
| 1/2 | 11 | 79 | 136 | 150 | 18.0 | 126 | 163 | 65 | 78 | 1/8 | 1/8 | 40.0 | 10 | 1.6 | 2.2 |
| 3/4 | 16 | 88 | 150 | 164 | 22.5 | 126 | 163 | 65 | 78 | 1/8 | 1/8 | 44.0 | 10 | 2.0 | 2.6 |
| 1 | 20 | 108 | 171 | 185 | 26.0 | 163 | 197 | 78 | 86 | 1/8 | 1/8 | 55.0 | 10 | 3.1 | 4.1 |
| 1 1/4 | 25 | 124 | 203 | 215 | 33.5 | 197 | 193 | 86 | 100 | 1/8 | 1/4 | 61.0 | 10 | 4.8 | 5.8 |
| 1 1/2 | 32 | 134 | 225 | 240 | 37.5 | 193 | 231 | 100 | 115 | 1/4 | 1/4 | 67.0 | 10 | 6.9 | 8.4 |
| 2 | 40 | 164 | 259 | 287 | 48.0 | 231 | 266 | 115 | 143 | 1/4 | 1/4 | 84.0 | 10 | 13.5 | 13.5 |

¹⁾ Double-acting actuator ²⁾ Single-acting actuator ³⁾ Weight without springs

Order Details (example: KUP-PD T 1 R15 C A 0)

| Model | 3-way version | Position* | Connection size | Actuation | Solenoid valve | Limit switch |
|--------|---------------|-----------------------------|--|--|--|-------------------------------------|
| KUP-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 | C = single-acting, default CLOSED O = single-acting, default OPEN | A = without B = 3/2-way (24 V _{DC}) C = 3/2-way (230 V _{AC}) | 0 = without 2 = 2 limit switches |
| | L = L-bore | 5 = standard 6 7 | R40 = G 1 1/2 R50 = G 2 | D = double-acting | F = 5/2-way (24 V _{DC}) G = 5/2-way (230 V _{AC}) | |

* see above



2-Way Cast Iron Flange Ball Valve with Pneumatic Actuator Model KUP-VO

Design

Multipart body design with full cylindrical bore (DN 25 ... DN 125: single-part version; DN 150 ... DN 200: two-part version), with mounting pad for actuator as per ISO 5211.

Operation: pneumatic single- or double-acting
 Position: specify with order! (see table)
 Pilot pressure: 6 ... 8 bar
 Pilot media: filtered air
 Mounting position: any
 Options: 3/2- or 5/2-way solenoid valve electric /mechanic limit switches

KUP-VO

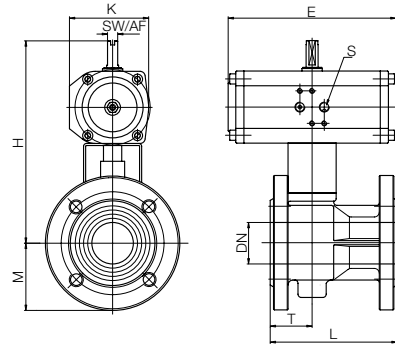


Technical Details Flow Fitting

Connections: flanges as per DIN 2533
 DN 25 ... DN 200
 overall length as per DIN 3202-F4/5
 Temperature range: -20 °C ... +160 °C
 Nominal pressure: PN 16 dimensioned, with threaded holes

Materials

Body: cast iron GG-25
 Ball: brass, hard-chrome plated
 Ball gaskets: PTFE
 Spindle gasket: PTFE/FKM



Dimensions

| Flange [DN] | L [mm] | H ¹⁾ [mm] | H ²⁾ [mm] | M [mm] | E ¹⁾ [mm] | E ²⁾ [mm] | K ¹⁾ [mm] | K ²⁾ [mm] | S ¹⁾ [G] | S ²⁾ [G] | T [mm] | SW/AF ¹⁾ [mm] | SW/AF ²⁾ [mm] | Weight ¹⁾³⁾ [kg] | Weight ²⁾³⁾ [kg] |
|-------------|--------|----------------------|----------------------|--------|----------------------|----------------------|----------------------|----------------------|---------------------|---------------------|--------|--------------------------|--------------------------|-----------------------------|-----------------------------|
| 25 | 125 | 166 | 194 | 58,0 | 126 | 197 | 65 | 86 | 1/8 | 1/8 | 42 | 10 | 10 | 4.2 | 4.7 |
| 32 | 130 | 187 | 201 | 70,0 | 163 | 197 | 78 | 86 | 1/8 | 1/4 | 47 | 10 | 10 | 6.4 | 8.1 |
| 40 | 140 | 216 | 242 | 75,0 | 163 | 193 | 78 | 100 | 1/8 | 1/4 | 49 | 10 | 10 | 7.7 | 9.4 |
| 50 | 150 | 236 | 251 | 83,0 | 197 | 193 | 86 | 100 | 1/8 | 1/4 | 52 | 10 | 10 | 9.9 | 12.3 |
| 65 | 170 | 262 | 277 | 93,0 | 193 | 231 | 100 | 115 | 1/4 | 1/4 | 65 | 10 | 10 | 14.5 | 15.3 |
| 80 | 180 | 288 | 316 | 100,0 | 231 | 266 | 115 | 143 | 1/4 | 1/4 | 66 | 10 | 19 | 18.2 | 20.4 |
| 100 | 190 | 335 | 355 | 110,0 | 266 | 300 | 143 | 137 | 1/4 | 1/4 | 89 | 19 | 20 | 26.2 | 28.6 |
| 125 | 200 | 357 | 377 | 125,0 | 266 | 300 | 143 | 137 | 1/4 | 1/4 | 100 | 19 | 20 | 39.1 | 40.9 |
| 150 | 210 | 440 | 478 | 142,5 | 300 | 380 | 137 | 172 | 1/4 | 1/4 | 105 | 20 | 28 | 52.9 | 60.1 |
| 200 | 400 | 520 | 577 | 170,0 | 380 | 478 | 172 | 224 | 1/4 | 1/4 | 200 | 28 | 32 | 113.1 | 128.2 |

¹⁾ Double-acting actuator ²⁾ Single-acting actuator ³⁾ Weight without springs

Order Details (example: KUP-VO F25 C A 0)

| Model | Connection size | Actuation | Solenoid valve | Limit switch |
|--------|--|---|----------------|-------------------------------------|
| KUP-VO | F25 = DN25 F32 = DN32 F40 = DN40 F50 = DN50 F65 = DN65 F80 = DN80 F1H = DN100 F1Z = DN125 F1F = DN150 F2H = DN200 | C = single-acting, CLOSED O = single-acting, OPEN | A = without | 0 = without 2 = 2 limit switches |
| | B = 3/2-way (24 V _{DC}) C = 3/2-way (230 V _{AC}) | | | |
| | D = double-acting | F = 5/2-way (24 V _{DC}) G = 5/2-way (230 V _{AC}) | | |



Design

Single-part body design with full cylindrical bore, with mounting pad for actuator as per ISO5211. Approval to TA-Luft (German Technical Instructions on Air Quality).

- Operation: pneumatic single- or double-acting
- Position: specify with order! (see table)
- Pilot pressure: 6...8 bar
- Pilot media: filtered air
- Mounting position: any
- Options: 3/2- or 5/2-way solenoid valve electric /mechanic limit switches

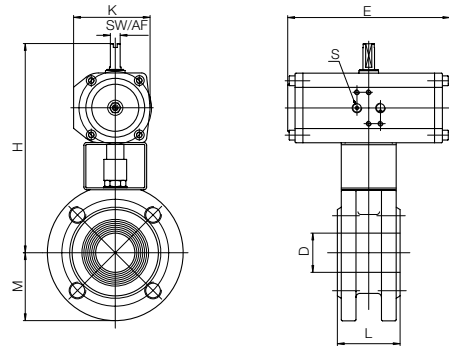
Technical Details Flow Fitting

- Connections: flanges as per DIN 2533
DN 15...DN 200
- Temperature range: -20°C...+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

KUP-VK



Dimensions

| Flange [DN] | D [mm] | L [mm] | H ¹⁾ [mm] | H ²⁾ [mm] | M [mm] | E ¹⁾ [mm] | E ²⁾ [mm] | K ¹⁾ [mm] | K ²⁾ [mm] | S ¹⁾ [G] | S ²⁾ [G] | SW/AF ¹⁾ [mm] | SW/AF ²⁾ [mm] | Weight ¹⁾³⁾ [kg] | Weight ²⁾³⁾ [kg] |
|-------------|--------|--------|----------------------|----------------------|--------|----------------------|----------------------|----------------------|----------------------|---------------------|---------------------|--------------------------|--------------------------|-----------------------------|-----------------------------|
| 15 | 15 | 35 | 149 | 163 | 45.0 | 126 | 163 | 65 | 78 | 1/8 | 1/8 | 10 | 10 | 2.2 | 2.4 |
| 20 | 20 | 40 | 153 | 167 | 50.0 | 126 | 163 | 65 | 78 | 1/8 | 1/8 | 10 | 10 | 2.8 | 3.3 |
| 25 | 25 | 46 | 168 | 196 | 55.0 | 126 | 197 | 65 | 86 | 1/8 | 1/8 | 10 | 10 | 3.6 | 4.1 |
| 32 | 32 | 54 | 189 | 203 | 64.0 | 163 | 197 | 78 | 86 | 1/8 | 1/8 | 10 | 10 | 5.6 | 7.3 |
| 40 | 40 | 63 | 214 | 240 | 75.0 | 163 | 193 | 78 | 100 | 1/8 | 1/4 | 10 | 10 | 5.7 | 7.4 |
| 50 | 50 | 82 | 237 | 249 | 82.5 | 197 | 193 | 86 | 100 | 1/8 | 1/4 | 10 | 10 | 8.8 | 10.0 |
| 65 | 65 | 103 | 264 | 279 | 92.0 | 193 | 231 | 100 | 115 | 1/4 | 1/4 | 10 | 10 | 8.9 | 12.2 |
| 80 | 80 | 122 | 288 | 309 | 100.0 | 231 | 266 | 115 | 143 | 1/4 | 1/4 | 10 | 19 | 17.8 | 18.3 |
| 100 | 100 | 153 | 333 | 373 | 110.0 | 266 | 300 | 143 | 137 | 1/4 | 1/4 | 19 | 20 | 25.4 | 29.5 |
| 125 | 125 | 196 | 325 | 395 | 127.0 | 266 | 300 | 143 | 137 | 1/4 | 1/4 | 19 | 20 | 42.0 | 45.7 |
| 150 | 150 | 232 | 440 | 478 | 152.0 | 300 | 380 | 137 | 172 | 1/4 | 1/4 | 20 | 28 | 57.1 | 64.3 |
| 200 | 200 | 317 | 552 | 579 | 200.0 | 380 | 478 | 172 | 224 | 1/4 | 1/4 | 28 | 32 | 94.7 | 111.3 |

¹⁾ Double-acting actuator ²⁾ Single-acting actuator ³⁾ Weight without springs

Order Details (example: KUP-VK F15 C A 0)

| Model | Connection size | Actuation | Solenoid valve | Limit switch |
|--------|--|--|---|-------------------------------------|
| KUP-VK | F15 = DN 15 F20 = DN 20 F25 = DN 25 F32 = DN 32 F40 = DN 40 F50 = DN 50 F65 = DN 65 F80 = DN 80 F1H = DN 100 F1Z = DN 125 F1F = DN 150 F2H = DN 200 | C = single-acting, default CLOSED O = single-acting, default OPEN | A = without | 0 = without 2 = 2 limit switches |
| | | | B = 3/2-way (24 V _{DC}) C = 3/2-way (230 V _{AC}) | |
| | | D = double-acting | F = 5/2-way (24 V _{DC}) G = 5/2-way (230 V _{AC}) | |