



product range

valves



| | |
|---|----------------|
| müller co-ax gmbh - the company | 4 |
| coaxial valves - the technology | 8 |
| coaxial valves | 11 |
| 2/2- and 3/2-way valves | |
| direct actuated and externally controlled | |
| orifice | DN 8 - 250 |
| pressure range | PN 0 - 100 bar |
| certified valves DVGW, ATEX, TÜV | 21 |
| 2/2- and 3/2-way valves | |
| direct actuated | |
| orifice | DN 1,5 - 50 |
| pressure range | PN 0 - 500 bar |
| cartridge valves | 27 |
| 2/2-way valves | |
| externally controlled | |
| orifice | DN 10 - 15 |
| pressure range | PN 0 - 150 bar |
| lateral valves | 29 |
| 2/2- and 3/2-way valves | |
| direct actuated | |
| orifice | DN 12 - 50 |
| pressure range | PN 0 - 10 bar |
| high pressure valves | 31 |
| 2/2- and 3/2-way valves | |
| direct actuated and externally controlled | |
| orifice | DN 1,5 - 50 |
| pressure range | PN 0 - 500 bar |
| manifolds & modules | 41 |
| coaxial and cartridge valves | |
| direct actuated and externally controlled | |
| orifice | DN 8 - 32 |
| pressure range | PN 0 - 100 bar |
| control valves | 47 |
| pressure limitation (manual and proportional externally controlled) | |
| pressure reduction (manual and proportional externally controlled) | |
| pressure control (proportional externally controlled) | |
| positioning (stepping motor actuated) | |
| special valves | 53 |
| 2/2- and 3/2-way valves | |
| direct actuated and externally controlled | |
| orifice | DN 5 - 80 |
| pressure range | PN 0 - 500 bar |

The müller coax group

Your strong global partner

Around

350

employees

8

subsidiaries

44

countries

30+

distribution partners

Production and
development in

Forchtenberg

The müller coax group is the world's leading valve manufacturer in the coaxial valve technology and high pressure valves. Made in Germany – developed and produced exclusively in Germany at the headquarters in Forchtenberg, our valves impress customers worldwide in a range of industries. With individuality, customer focus and over 60 years of market knowledge, with müller coax you will experience a valve manufacturer that takes on new challenges and develops customized solutions.

Hydrogen as an alternative energy source of the future harbours great potential and our valve technology helps you to unlock this potential like no other can.

EXTREMLY
adaptable

PRESSURE RANGE

0 bar - 500 bar

TEMPERATURE

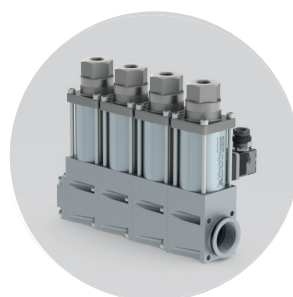
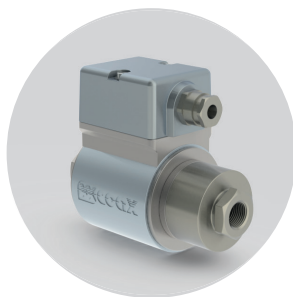
-196°C bis +400°C

KV-VALUE

0,06m³/h - 650m³/h

ORIFICE

1mm - 250mm



WELCOME TO THE WORLD OF EXTREME

coax valves on the job

Construction industry and transport

coaxial valve technology

Machine and plant construction



Energy & gas technology



Machine & plant construction



Marine



tion

Energy and gas technology

Company

Aerospace

Marine



CAN
OR
MORE



Construction & transporation



SCAN
FOR
MORE



Aerospace



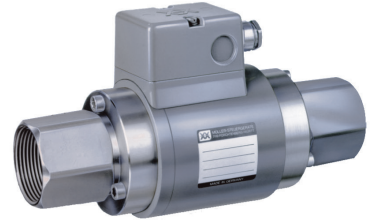
SCAN
FOR
MORE

coaxial valves - the technology

coaxial valves have formed a tried and tested element in the control of vacuums and gaseous, liquid, abrasive, highly viscous, contaminated and aggressive media.

The product diversity ranges from simple switching valves through application-specific special valves to complete modules.

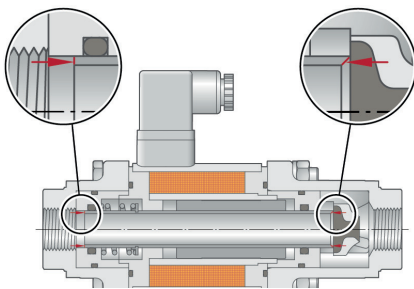
Using a wide selection of orifice sizes, port connections, seal and seat configurations, our experienced application engineers tailor valves for maximum performance in a virtually unlimited range of applications.



coaxial valves offer many decisive advantages:

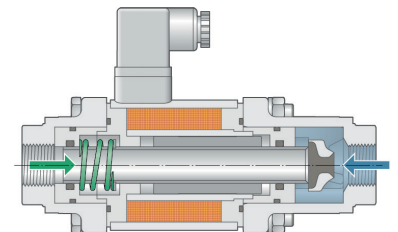
pressure balanced design / operating from 0 bar

The coaxial design keeps forces within the valve balanced regardless of system pressure and delta P. Whether controlling vacuum or high pressure - performance remains precise and dependable. Unlike conventional valves, coaxial valves require no minimum pressure differential in order to function.



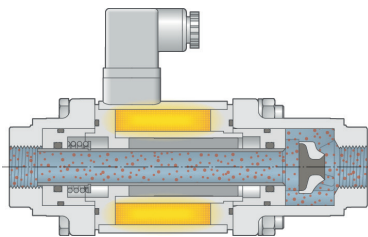
back pressure tight

When the valve is closed, the pressure at the outlet side can be higher without any leakage.



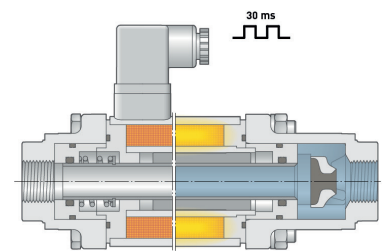
maintenance free / resistant to dirt

The unique coaxial valve design minimizes wear of the valve seat even where extremely contaminated media is involved. Due to the special design with only a single moving part, no stem seal or external actuator / operator, coaxial valves do not require any maintenance. Even under extreme conditions, coaxial valves have up to 10 times longer lifetimes than conventional valves.



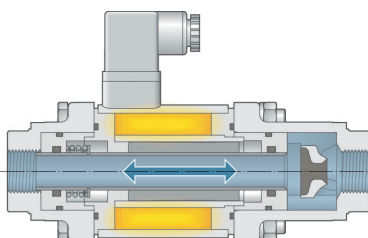
fast actuation

Pressure balanced design provides fast, repeatable operation in less than 30 milliseconds making coaxial valves some of the fastest valves you can specify.



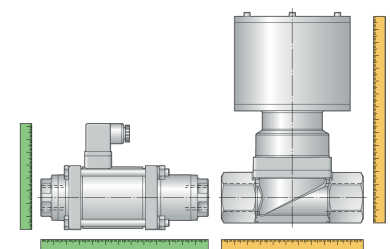
bi-directional operation

The valve design allows the medium to flow through in both directions, eliminating the need for multiple valves.

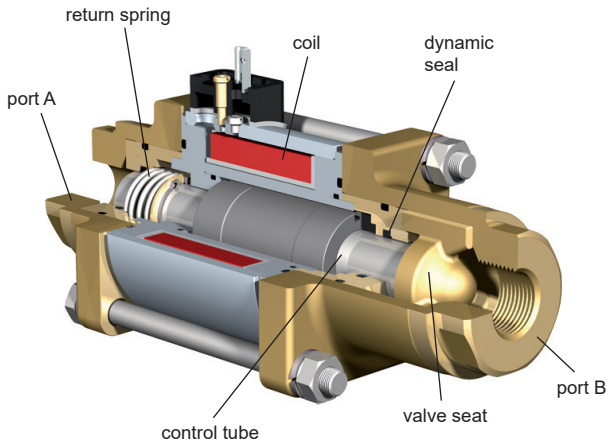


compact size

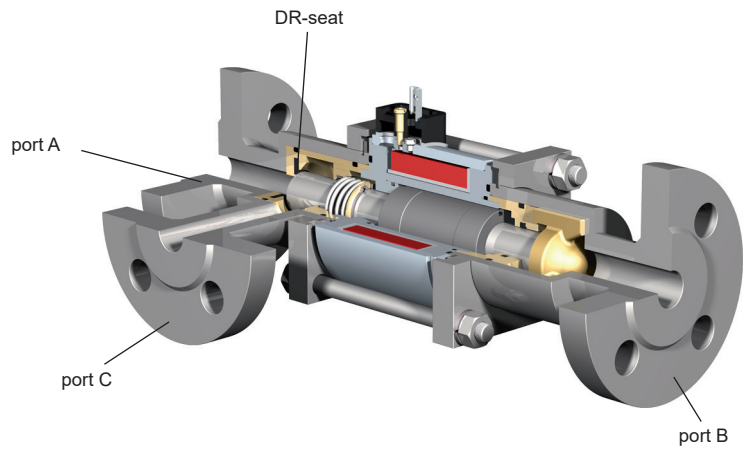
The coaxial valve design provides a compact package by eliminating bulky actuators.



2/2-way coaxial valve
threaded port connection

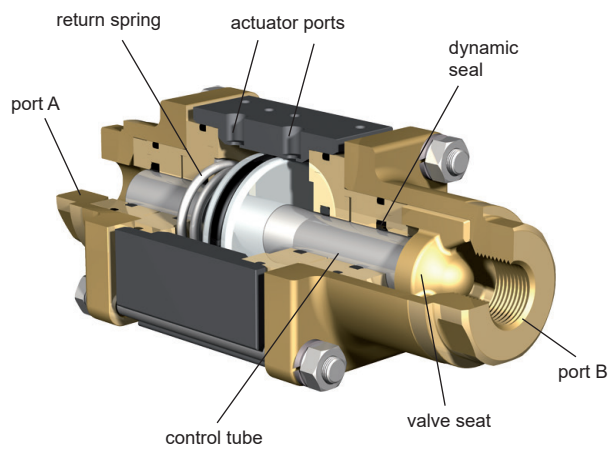


3/2-way coaxial valve
flanged port connection

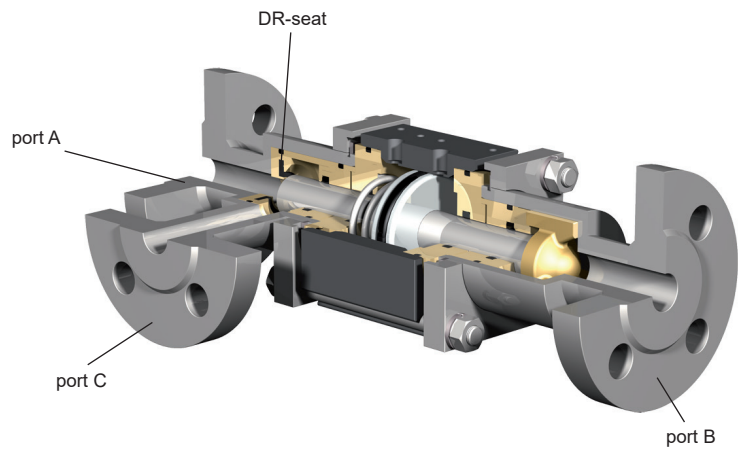


externally controlled

2/2-way coaxial valve
threaded port connection

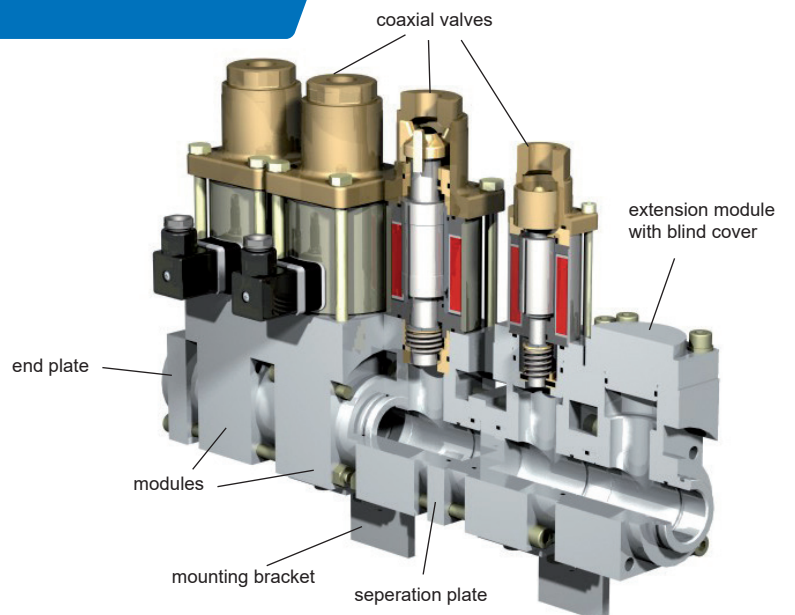


3/2-way coaxial valve
flanged port connection



modular system

1- up to 8-station
direct actuated version





Quality & Certificates

100 % quality testing = 100 % reliability

We conduct 100 % testing of the valves in our own testing laboratory. We use high-quality materials and modern technology to make our products extremely reliable. We have a comprehensive quality management system, verified by multiple system certificates.

- › **DIN EN ISO 9001: 2015**
- › **Pressure Equipment Directive 2014/68/EU**
Module A2, Module B, Module D, Module H/H1
- › **Certified welder in accordance with**
AD 2000 data sheet HP0 and DIN EN ISO 3834-2
- › **RoHS Directive 2011/65/EU**
- › **REACH**
- › **IECEX QAR**
- › **ATEX QAN**

In addition, multiple product certifications confirm that our valves are reliable in use.

coax® valves have ATEX and SIL 3 certificates, among others, and are certified for use in explosion-hazard and safety-relevant areas, including Zone 0.

Upon request, our valves can undergo acceptance by the ship classification association DNV-GL, LR, BV, ABS, RINA or CCS. We furthermore meet the material requirements of NACE MR 0175.

- › **DVGW**
- › **TÜV**
- › **ATEX**
- › **IECEX**
- › **SIL 3**
- › **UL/CSA**
- › **EAC**

Our Experts Experience Customer Focus

With a global network of partners, we are always close to our customers. We understand their markets and their needs.

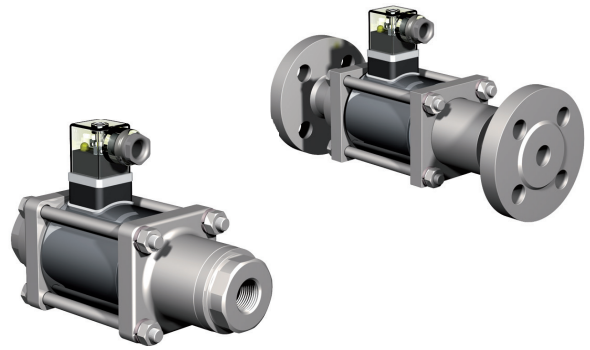
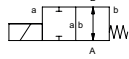
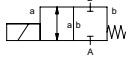
To know exactly what is most important to you, our distribution experts work closely alongside you. That helps us keep your needs in mind at all times. It also gives you the assurance that you are getting what you really need.

2/2-way valve
 direct actuated
 orifice
 pressure range
 ports

DN 10 - 80
 PN 0 - 100 bar
 threaded / flanged

function NC
 valve normally closed

function NO
 valve normally open



specifications

| | |
|-----------------------|---|
| design | pressure balanced, with spring return |
| function | NC - normally closed |
| | NO - normally open |
| body materials | aluminium, brass, galvanized steel, nickel plated brass, nickel plated steel, without non-ferrous metals, stainless steel |
| seal materials | NBR, PTFE, FPM, CR, EPDM, special materials |
| media | gaseous, liquid, highly viscous, contaminated |
| actuation | DC direct-current magnet |
| | AC direct-current magnet, with integrated / separate rectifier |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection | plug acc. DIN EN 175301-803, form A, LED |
| insulation class | H - 180 °C |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇒ B |
| | B ⇒ A (Δp 16 bar max.) |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | special threads, special flanges, function NO, damping, limit switches, manual override, approvals, mounting, |
| | special voltage, connector M12x1, terminal box, ATEX zone 2 cat. 3 max 80°C |



coaxial

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇒ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|-------------------|------------------|------------------------|----------------|--------------------|---------------------|---------------------------------------|
| MK 10 | DN 8 | G 1/4 - G 3/4 | - | 0 - 100 | 1,6 m³/h | -10 °C ... +120 °C | -10 °C ... +80 °C | 135 / 20 |
| MK 10 | DN 10 | G 1/4 - G 3/4 | - | 0 - 16 / 40 | 2,5 m³/h | -20 °C ... +120 °C | -10 °C ... +80 °C | 25 / 25 |
| MK 10 | DN 10 | G 1/4 - G 3/4 | - | 0 - 63 | 2,3 m³/h | -10 °C ... +120 °C | -10 °C ... +80 °C | 135 / 20 |
| MK / FK 15 | DN 15 | G 3/8 - G 3/4 | PN 16 / 40 / 100 | 0 - 16 / 40 / 63 / 100 | 6,0 m³/h | -20 °C ... +160 °C | -20 °C ... +80 °C | 80 / 80 |
| MK / FK 20 | DN 20 | G 3/4 - G 1 1/4 | PN 16 / 40 / 100 | 0 - 16 / 40 / 63 / 100 | 8,4 m³/h | -20 °C ... +160 °C | -20 °C ... +80 °C | 110 / 110 |
| MK / FK 25 | DN 25 | G 1 - G 1 1/2 | PN 16 / 40 / 100 | 0 - 16 / 40 / 63 / 100 | 13,0 m³/h | -20 °C ... +160 °C | -20 °C ... +80 °C | 130 / 130 |
| MK / FK 32 | DN 32 | G 1 1/4 - G 1 1/2 | PN 16 / 40 / 100 | 0 - 16 / 40 / 63 / 100 | 17,4 m³/h | -20 °C ... +160 °C | -20 °C ... +80 °C | 440 / 250 |
| MK / FK 40 | DN 40 | G 1 1/2 - G 2 | PN 16 / 40 / 100 | 0 - 16 / 40 / 63 | 21,8 m³/h | -20 °C ... +160 °C | -20 °C ... +80 °C | 520 / 150 |
| MK / FK 50 | DN 50 | G 2 | PN 16 | 0 - 16 | 38,0 m³/h | -20 °C ... +120 °C | -20 °C ... +80 °C | 400 / 400 |
| FK 65 | DN 65 | - | PN 16 | 0 - 16 | 62,0 m³/h | -20 °C ... +80 °C | -20 °C ... +80 °C | 600 / 800 |
| FK 80 | DN 80 | - | PN 16 | 0 - 16 | 92,0 m³/h | -20 °C ... +80 °C | -20 °C ... +80 °C | 600 / 800 |

length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|------------|-----------------|-----------------|--------------------------|----------------------------|---------------------------|-----------------|
| MK 10 | thread | 159,5 mm | 159,5 mm | - | - | - |
| MK / FK 15 | thread / flange | 184 mm / 241 mm | 224 mm / 281 mm | 224 mm / 281 mm | 224 mm / 281 mm | 224 mm / 281 mm |
| MK / FK 20 | thread / flange | 215 mm / 269 mm | 259 mm / 313 mm | 259 mm / 313 mm | 259 mm / 313 mm | 259 mm / 313 mm |
| MK / FK 25 | thread / flange | 246 mm / 302 mm | 287 mm / 343 mm | 287 mm / 343 mm | 287 mm / 343 mm | 299 mm / 355 mm |
| MK / FK 32 | thread / flange | 258 mm / 324 mm | 299 mm / 365 mm | 299 mm / 365 mm | 299 mm / 365 mm | 299 mm / 365 mm |
| MK / FK 40 | thread / flange | 258 mm / 324 mm | 299 mm / 365 mm | 299 mm / 365 mm | 299 mm / 365 mm | 299 mm / 365 mm |
| MK / FK 50 | thread / flange | 365 mm / 438 mm | 365 mm / 438 mm | 365 mm / 438 mm | 365 mm / 438 mm | 365 mm / 438 mm |
| FK 65 | flange | 551 mm | 551 mm | 551 mm | - | - |
| FK 80 | flange | 573 mm | 573 mm | 573 mm | - | - |

series MK / FK DR coaxial valves

3/2-way valve

direct actuated

orifice

DN 10 - 80

pressure range

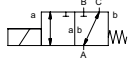
PN 0 - 40 bar

ports

threaded / flanged

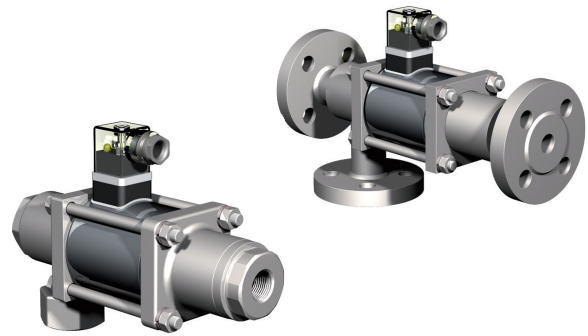
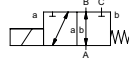
function NC

valve normally closed



function NO

valve normally open



specifications

| | |
|-----------------------|---|
| design | pressure balanced, with spring return, switching overlap |
| function | DR NC - normally closed (A ⇌ B) |
| | DR NO - normally open (A ⇌ B) |
| body materials | aluminium, brass, galvanized steel, nickel plated brass, nickel plated steel, without non-ferrous metals, stainless steel |
| seal materials | NBR, PTFE, FPM, CR, EPDM, special materials |
| media | gaseous, liquid, highly viscous, contaminated |
| actuation | DC direct-current magnet |
| | AC direct-current magnet, with integrated / separate rectifier |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection | plug acc. DIN EN 175301-803, form A, LED |
| insulation class | H - 180 °C |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇌ B / A ⇌ C |
| | B ⇌ A (Δp 16 bar max.) |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | special threads, special flanges, function NO, damping, limit switches, manual override, approvals, mounting, |
| | special voltage, connector M12x1, terminal box, ATEX zone 2 cat. 3 max 80 °C |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇌ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|---------------|--------------|-------------------|---------------|----------------------|----------------|--------------------|---------------------|---------------------------------------|
| MK 10 DR | DN 8 | G 1/4 - G 3/4 | - | 0 - 100 | 1,4 m³/h | -10 °C ... +80 °C | -10 °C ... +80 °C | 135 / 20 |
| MK 10 DR | DN 10 | G 1/4 - G 3/4 | - | 0 - 16 / 25 | 2,6 m³/h | -20 °C ... +120 °C | -10 °C ... +80 °C | 40 / 25 |
| MK 10 DR | DN 10 | G 1/4 - G 3/4 | - | 0 - 40 | 2,2 m³/h | -10 °C ... +80 °C | -10 °C ... +80 °C | 135 / 20 |
| MK / FK 15 DR | DN 15 | G 3/8 - G 3/4 | PN 16 / 40 | 0 - 16 / 40 | 4,3 m³/h | -20 °C ... +160 °C | -20 °C ... +80 °C | 80 / 80 |
| MK / FK 20 DR | DN 20 | G 3/4 - G 1 1/4 | PN 16 / 40 | 0 - 16 / 40 | 6,7 m³/h | -20 °C ... +160 °C | -20 °C ... +80 °C | 110 / 110 |
| MK / FK 25 DR | DN 25 | G 1 - G 1 1/2 | PN 16 / 40 | 0 - 16 / 40 | 11,2 m³/h | -20 °C ... +160 °C | -20 °C ... +80 °C | 130 / 130 |
| MK / FK 32 DR | DN 32 | G 1 1/4 - G 1 1/2 | PN 16 / 40 | 0 - 16 / 40 | 14,1 m³/h | -20 °C ... +160 °C | -20 °C ... +80 °C | 440 / 250 |
| MK / FK 40 DR | DN 40 | G 1 1/2 - G 2 | PN 16 | 0 - 16 | 18,4 m³/h | -20 °C ... +160 °C | -20 °C ... +80 °C | 520 / 150 |
| MK / FK 50 DR | DN 50 | G 2 | PN 16 | 0 - 16 | 28,2 m³/h | -20 °C ... +120 °C | -20 °C ... +80 °C | 400 / 400 |
| FK 65 DR | DN 65 | - | PN 16 | 0 - 16 | 40,0 m³/h | -20 °C ... +80 °C | -20 °C ... +80 °C | 600 / 800 |
| FK 80 DR | DN 80 | - | PN 16 | 0 - 16 | 55,0 m³/h | -20 °C ... +80 °C | -20 °C ... +80 °C | 600 / 800 |

length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|---------------|-----------------|-----------------|--------------------------|----------------------------|---------------------------|-----------------|
| MK 10 DR | thread | 166,5 mm | - | - | - | - |
| MK / FK 15 DR | thread / flange | 209 mm / 265 mm | 249 mm / 305 mm | 249 mm / 305 mm | 249 mm / 305 mm | 249 mm / 305 mm |
| MK / FK 20 DR | thread / flange | 247 mm / 301 mm | 291 mm / 345 mm | 291 mm / 345 mm | 291 mm / 345 mm | 291 mm / 345 mm |
| MK / FK 25 DR | thread / flange | 281 mm / 337 mm | 322 mm / 378 mm | 322 mm / 378 mm | 322 mm / 378 mm | 334 mm / 390 mm |
| MK / FK 32 DR | thread / flange | 332 mm / 394 mm | 373 mm / 435 mm | 373 mm / 435 mm | 373 mm / 435 mm | 373 mm / 435 mm |
| MK / FK 40 DR | thread / flange | 332 mm / 394 mm | 373 mm / 435 mm | 373 mm / 435 mm | 373 mm / 435 mm | 373 mm / 435 mm |
| MK / FK 50 DR | thread / flange | 453 mm / 553 mm | 453 mm / 553 mm | 453 mm / 553 mm | 453 mm / 553 mm | 453 mm / 553 mm |
| FK 65 DR | flange | 586 mm | 586 mm | 586 mm | - | - |
| FK 80 DR | flange | 633 mm | 633 mm | 633 mm | - | - |

The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.

2/2-way valve

externally controlled

orifice

DN 8

pressure range

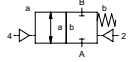
PN 0 - 40 bar

ports

threaded

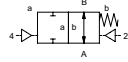
function **NC**

valve normally closed



function **NO**

valve normally open



specifications

| | |
|-----------------------------------|---|
| design | pressure balanced, with spring return |
| function | NC - normally closed NO - normally open |
| body materials | brass, stainless steel |
| seal materials | NBR, FPM, PE, PU, PTFE |
| media | emulsions, oils, neutral gases |
| actuation | pneumatic actuation via 3/2-way pilot valve |
| pilot valve interface | co-ax |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection pilot valve | plug acc. DIN EN 175301-803 form B, LED |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇌ B B ⇌ A (without actuation pressure Δp 16 bar max.) |
| vacuum | leak rate < 10^{-6} mbar•l•s ⁻¹ |
| options / accessories | function NO, limit switches, manual override, mounting, special voltage, connector M12x1, explosion proof ATEX zone 1 and 2 cat. 3, pilot valve |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇌ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------|---------------|----------------------|-----------------------|-------------------|---------------------|---------------------------------------|
| CFM 08 | DN 8 | G 3/8 | - | 0 - 40 | 1,6 m ³ /h | -20 °C ... +60 °C | -20 °C ... +60 °C | 70 / 80 |
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length

| co-ax type | ports | standard | 1 limit switch | 2 limit switches | 1 limit switch mechanical | manual override |
|------------|--------|----------|----------------|------------------|---------------------------|-----------------|
| CFM 08 | thread | 80 mm | 80 mm | 80 mm | - | via pilot valve |
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type MCF coaxial valves

2/2-way valve

externally controlled

orifice

DN 8

pressure range

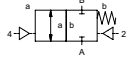
PN 0 - 100 bar

ports

threaded

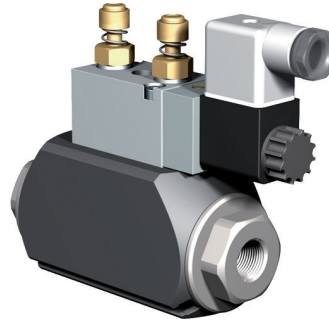
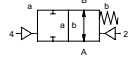
function NC

valve normally closed



function NO

valve normally open



specifications

| | |
|-----------------------------------|--|
| design | pressure balanced, with spring return |
| function | NC - normally closed NO - normally open |
| body materials | brass |
| seal materials | NBR, FPM, PTFE |
| media | emulsions, oils, neutral gases |
| actuation | pneumatic actuation via 5/2-way pilot valve |
| pilot valve interface | co-ax |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection pilot valve | plug acc. DIN EN 175301-803 form B, LED |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇌ B B ⇌ A (without actuation pressure Δp 16 bar max.) |
| vacuum | leak rate < 10^{-6} mbar•l•s ⁻¹ |
| options / accessories | function NO, damping, limit switches, manual override, mounting, special voltage, connector M12x1, explosion proof ATEX zone 1 and 2 cat. 3, pilot valve |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇌ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------|---------------|----------------------|----------------|--------------------|---------------------|---------------------------------------|
| MCF 08 | DN 8 | G 3/8 | - | 0 - 100 | 1,6 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 30-3000 / 30-3000 |
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length

| co-ax type | ports | standard | 1 limit switch | 2 limit switches | 1 limit switch mechanical | manual override |
|------------|--------|----------|----------------|------------------|---------------------------|-----------------|
| MCF 08 | thread | 120 mm | 120 mm | 120 mm | - | via pilot valve |
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The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.

2/2-way valve

externally controlled

orifice

DN 10 - 50

pressure range

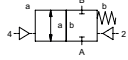
PN 0 - 100 bar

ports

threaded / flanged

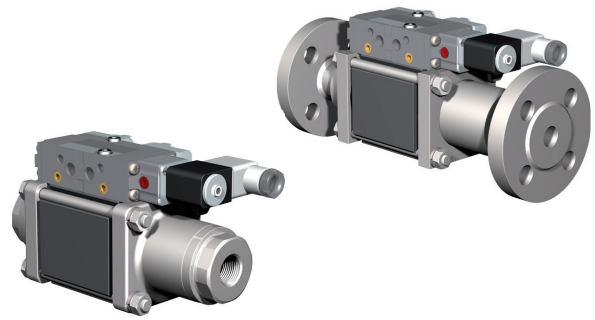
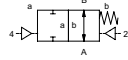
function NC

valve normally closed



function NO

valve normally open



specifications

| | |
|-----------------------------------|---|
| design | pressure balanced, with spring return |
| function | NC - normally closed |
| | NO - normally open |
| body materials | brass, galvanized steel, nickel plated brass, nickel plated steel, without non-ferrous metals, stainless steel |
| seal materials | NBR, PTFE, FPM, CR, EPDM, special materials |
| media | gaseous, liquid, highly viscous, contaminated |
| actuation | pneumatic actuation via 5/2-way pilot valve, hydraulic actuation via 4/2-way control valve |
| pilot valve interface | NAMUR / ISO 1 |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection pilot valve | plug acc. DIN EN 175301-803 form B, LED |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇒ B |
| | B ⇒ A (without actuation pressure Δp 16 bar max.) |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | special threads, special flanges, function NO, flush ports, leak ports, limit switches, manual override, approvals, mounting, special voltage, connector M12x1, explosion proof ATEX zone 1 and 2 cat. 3, pilot valve |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇒ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|--------------|--------------|-------------------|------------------|------------------------|----------------|--------------------|---------------------|---------------------------------------|
| VMK 10 | DN 10 | G 1/4 - G 3/4 | - | 0 - 16 / 40 / 63 / 100 | 2,5 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 30-3000 / 50-3000 |
| VMK / VFK 15 | DN 15 | G 3/8 - G 3/4 | PN 16 / 40 / 100 | 0 - 16 / 40 / 63 / 100 | 5,7 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 50-3000 / 50-3000 |
| VMK / VFK 20 | DN 20 | G 3/4 - G 1 1/4 | PN 16 / 40 / 100 | 0 - 16 / 40 / 63 / 100 | 8,8 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 50-3000 / 50-3000 |
| VMK / VFK 25 | DN 25 | G 1 - G 1 1/2 | PN 16 / 40 / 100 | 0 - 16 / 40 / 63 / 100 | 13,3 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 50-3000 / 50-3000 |
| VMK / VFK 32 | DN 32 | G 1 1/4 - G 1 1/2 | PN 16 / 40 / 100 | 0 - 16 / 40 / 63 / 100 | 20,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 100-3000 / 100-3000 |
| VMK / VFK 40 | DN 40 | G 1 1/2 - G 2 | PN 100 | 0 - 63 / 100 | 31,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 100-3000 / 100-3000 |
| VMK / VFK 50 | DN 50 | G 2 | PN 64 / 100 | 0 - 63 / 100 | 43,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 150-3000 / 150-3000 |
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length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|--------------|-----------------|-----------------|--------------------------|----------------------------|---------------------------|-----------------|
| VMK 10 | thread | 159,5 mm | 179,5 mm | 179,5 mm | - | via pilot valve |
| VMK / VFK 15 | thread / flange | 186 mm / 243 mm | 212 mm / 269 mm | 212 mm / 269 mm | 212 mm / 269 mm | via pilot valve |
| VMK / VFK 20 | thread / flange | 216 mm / 270 mm | 235 mm / 289 mm | 235 mm / 289 mm | 250 mm / 304 mm | via pilot valve |
| VMK / VFK 25 | thread / flange | 246 mm / 302 mm | 260 mm / 316 mm | 260 mm / 316 mm | 270 mm / 326 mm | via pilot valve |
| VMK / VFK 32 | thread / flange | 269 mm / 325 mm | 276 mm / 332 mm | 276 mm / 332 mm | 304 mm / 360 mm | via pilot valve |
| VMK / VFK 40 | thread / flange | 312 mm / 385 mm | 312 mm / 385 mm | 312 mm / 385 mm | - | via pilot valve |
| VMK / VFK 50 | thread / flange | 312 mm / 385 mm | 312 mm / 385 mm | 312 mm / 385 mm | - | via pilot valve |
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series VMK / VFK DR coaxial valves

3/2-way valve

externally controlled

orifice

DN 10 - 50

pressure range

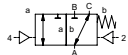
PN 0 - 100 bar

ports

threaded / flanged

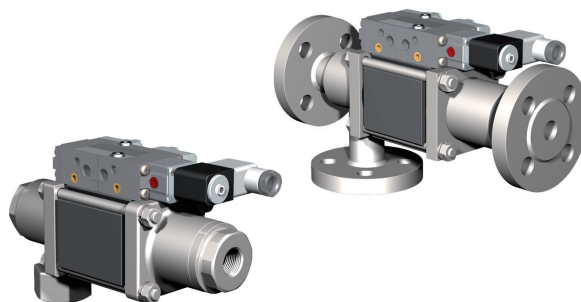
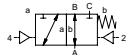
function NC

valve normally closed



function NO

valve normally open



specifications

| | |
|-----------------------------------|---|
| design | pressure balanced, with spring return, switching overlap |
| function | DR NC - normally closed (A ⇌ B) DR NO - normally open (A ⇌ B) |
| body materials | brass, galvanized steel, nickel plated brass, nickel plated steel, without non-ferrous metals, stainless steel |
| seal materials | NBR, PTFE, FPM, CR, EPDM, special materials |
| media | gaseous, liquid, highly viscous, contaminated |
| actuation | pneumatic actuation via 5/2-way pilot valve, hydraulic actuation via 4/2-way control valve |
| pilot valve interface | NAMUR / ISO 1 |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection pilot valve | plug acc. DIN EN 175301-803 form B, LED |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇌ B / A ⇌ C B ⇌ A (without actuation pressure Δp 16 bar max.) |
| vacuum | leak rate < 10^{-6} mbar·l·s ⁻¹ |
| options / accessories | special threads, special flanges, function NO, flush ports, leak ports, limit switches, manual override, approvals, mounting, special voltage, connector M12x1, explosion proof ATEX zone 1 and 2 cat. 3, pilot valve |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇌ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|-----------------|--------------|-------------------|------------------|------------------------|----------------|--------------------|---------------------|---------------------------------------|
| VMK 10 DR | DN 10 | G 1/4 - G 3/4 | - | 0 - 16 / 40 / 63 / 100 | 2,5 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 30-3000 / 50-3000 |
| VMK / VFK 15 DR | DN 15 | G 3/8 - G 3/4 | PN 16 / 40 / 100 | 0 - 16 / 40 / 63 / 100 | 5,6 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 50-3000 / 50-3000 |
| VMK / VFK 20 DR | DN 20 | G 3/4 - G 1 1/4 | PN 16 / 40 / 100 | 0 - 16 / 40 / 63 / 100 | 8,3 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 50-3000 / 50-3000 |
| VMK / VFK 25 DR | DN 25 | G 1 - G 1 1/2 | PN 16 / 40 / 100 | 0 - 16 / 40 / 63 / 100 | 13,3 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 50-3000 / 50-3000 |
| VMK / VFK 32 DR | DN 32 | G 1 1/4 - G 1 1/2 | PN 16 / 40 / 100 | 0 - 16 / 40 / 63 / 100 | 18,9 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 100-3000 / 100-3000 |
| VMK / VFK 40 DR | DN 40 | G 1 1/2 - G 2 | PN 100 | 0 - 63 / 100 | 31,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 100-3000 / 100-3000 |
| VMK / VFK 50 DR | DN 50 | G 2 | PN 64 / 100 | 0 - 63 / 100 | 43,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 150-3000 / 150-3000 |
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length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|-----------------|-----------------|-----------------|--------------------------|----------------------------|---------------------------|-----------------|
| VMK 10 DR | thread | 166,5 mm | 186,5 mm | 186,5 mm | - | via pilot valve |
| VMK / VFK 15 DR | thread / flange | 211 mm / 267 mm | 237 mm / 293 mm | 237 mm / 293 mm | 237 mm / 293 mm | via pilot valve |
| VMK / VFK 20 DR | thread / flange | 248 mm / 302 mm | 267 mm / 321 mm | 267 mm / 321 mm | 282 mm / 336 mm | via pilot valve |
| VMK / VFK 25 DR | thread / flange | 281 mm / 337 mm | 295 mm / 351 mm | 295 mm / 351 mm | 305 mm / 361 mm | via pilot valve |
| VMK / VFK 32 DR | thread / flange | 304 mm / 365 mm | 311 mm / 372 mm | 311 mm / 372 mm | 339 mm / 400 mm | via pilot valve |
| VMK / VFK 40 DR | thread / flange | 400 mm / 500 mm | 400 mm / 500 mm | 400 mm / 500 mm | - | via pilot valve |
| VMK / VFK 50 DR | thread / flange | 400 mm / 500 mm | 400 mm / 500 mm | 400 mm / 500 mm | - | via pilot valve |
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2/2-way valve

externally controlled

orifice

DN 40 - 250

pressure range

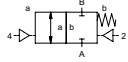
PN 0 - 40 bar

ports

threaded / flanged

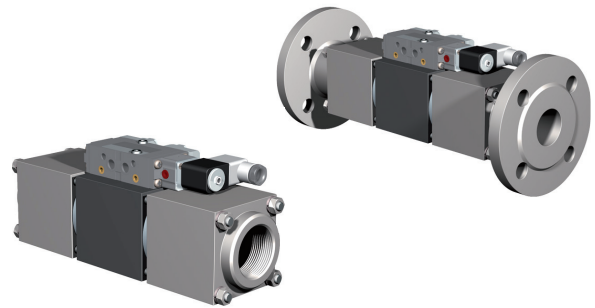
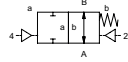
function NC

valve normally closed



function NO

valve normally open



specifications

| | |
|-----------------------------------|---|
| design | pressure balanced, with spring return |
| function | NC - normally closed NO - normally open |
| body materials | aluminium, galvanized steel, nickel plated steel, without non-ferrous metals, stainless steel |
| seal materials | NBR, PTFE, FPM, CR, EPDM, special materials |
| media | gaseous, liquid, highly viscous, contaminated |
| actuation | pneumatic actuation via 5/2-way pilot valve, hydraulic actuation via 4/2-way control valve |
| pilot valve interface | NAMUR / ISO 1 |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection pilot valve | plug acc. DIN EN 175301-803 form B, LED |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇒ B / A ⇒ C B ⇒ A (without actuation pressure Δp 16 bar max.) |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | special threads, special flanges, function NO, flush ports, leak ports, limit switches, manual override, approvals, mounting, special voltage, connector M12x1, explosion proof ATEX zone 1 and 2 cat. 3, pilot valve |



coaxial

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇒ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------------|--------------|----------------|---------------|----------------------|----------------|--------------------|---------------------|---------------------------------------|
| VSV-M / VSV-F 40 | DN 40 | G 1 1/2 - G 2 | PN 16 / 40 | 0 - 16 / 40 | 31,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 100-3000 / 100-3000 |
| VSV-M / VSV-F 50 | DN 50 | G 2 | PN 16 / 40 | 0 - 16 / 40 | 43,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 150-3000 / 150-3000 |
| VSV-F 65 | DN 65 | - | PN 16 / 40 | 0 - 16 / 40 | 68,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 200-3000 / 200-3000 |
| VSV-F 80 | DN 80 | - | PN 16 / 40 | 0 - 16 / 40 | 90,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 200-3000 / 200-3000 |
| VSV-F 100 | DN 100 | - | PN 16 / 40 | 0 - 16 / 40 | 140,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 300-3000 / 300-3000 |
| VSV-F 125 | DN 125 | - | PN 16 / 40 | 0 - 16 / 40 | 198,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 400-3000 / 400-3000 |
| VSV-F 150 | DN 150 | - | PN 16 / 40 | 0 - 16 / 40 | 274,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 600-3000 / 600-3000 |
| VSV-F 200 | DN 200 | - | PN 16 | 0 - 16 | 450,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 800-3000 / 800-3000 |
| VSV-F 250 | DN 250 | - | PN 16 | 0 - 16 | 650,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 1500-3000 / 1500-3000 |

length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|------------------|-----------------|-----------------|--------------------------|----------------------------|---------------------------|-----------------|
| VSV-M / VSV-F 40 | thread / flange | 277 mm / 363 mm | 312 mm / 417 mm | 312 mm / 417 mm | 304 mm / 390 mm | via pilot valve |
| VSV-M / VSV-F 50 | thread / flange | 304 mm / 404 mm | 330 mm / 430 mm | 330 mm / 430 mm | 344 mm / 444 mm | via pilot valve |
| VSV-F 65 | flange | 538 mm | 538 mm | 538 mm | - | via pilot valve |
| VSV-F 80 | flange | 580 mm | 580 mm | 580 mm | - | via pilot valve |
| VSV-F 100 | flange | 600 mm | 600 mm | 600 mm | - | via pilot valve |
| VSV-F 125 | flange | 697 mm | 697 mm | 697 mm | - | via pilot valve |
| VSV-F 150 | flange | 771 mm | 771 mm | 771 mm | - | via pilot valve |
| VSV-F 200 | flange | 925 mm | 925 mm | 925 mm | - | via pilot valve |
| VSV-F 250 | flange | 1035 mm | 1035 mm | 1035 mm | - | via pilot valve |

The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.

series VSV-M / VSV-F DR coaxial valves

3/2-way valve

externally controlled

orifice

DN 40 - 150

pressure range

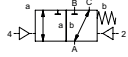
PN 0 - 40 bar

ports

threaded / flanged

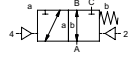
function NC

valve normally closed



function NO

valve normally open



specifications

| | |
|-----------------------------------|---|
| design | pressure balanced, with spring return, switching overlap |
| function | DR NC - normally closed (A ⇒ B) |
| | DR NO - normally open (A ⇒ B) |
| body materials | aluminium, galvanized steel, nickel plated steel, without non-ferrous metals, stainless steel |
| seal materials | NBR, PTFE, FPM, CR, EPDM, special materials |
| media | gaseous, liquid, highly viscous, contaminated |
| actuation | pneumatic actuation via 5/2-way pilot valve, hydraulic actuation via 4/2-way control valve |
| pilot valve interface | NAMUR / ISO 1 |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection pilot valve | plug acc. DIN EN 175301-803 form B, LED |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇒ B / A ⇒ C |
| | B ⇒ A (without actuation pressure Δp 16 bar max.) |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | special threads, special flanges, function NO, flush ports, leak ports, limit switches, manual override, approvals, mounting, special voltage, connector M12x1, explosion proof ATEX zone 1 and 2 cat. 3, pilot valve |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇒ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|---------------------|--------------|----------------|---------------|----------------------|----------------|--------------------|---------------------|---------------------------------------|
| VSV-M / VSV-F 40 DR | DN 40 | G 1 1/2 - G 2 | PN 16 / 40 | 0 - 16 / 40 | 29,1 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 100-3000 / 100-3000 |
| VSV-M / VSV-F 50 DR | DN 50 | G 2 | PN 16 / 40 | 0 - 16 / 40 | 43,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 150-3000 / 150-3000 |
| VSV-F 65 DR | DN 65 | - | PN 16 / 40 | 0 - 16 / 40 | 68,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 200-3000 / 200-3000 |
| VSV-F 80 DR | DN 80 | - | PN 16 / 40 | 0 - 16 / 40 | 90,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 250-3000 / 250-3000 |
| VSV-F 100 DR | DN 100 | - | PN 16 / 40 | 0 - 16 / 40 | 140,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 300-3000 / 300-3000 |
| VSV-F 125 DR | DN 125 | - | PN 16 | 0 - 16 | 198,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 400-3000 / 400-3000 |
| VSV-F 150 DR | DN 150 | - | PN 16 | 0 - 16 | 274,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 600-3000 / 600-3000 |
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length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|---------------------|-----------------|-----------------|--------------------------|----------------------------|---------------------------|-----------------|
| VSV-M / VSV-F 40 DR | thread / flange | 291 mm / 377 mm | 338 mm / 424 mm | 338 mm / 424 mm | - | via pilot valve |
| VSV-M / VSV-F 50 DR | thread / flange | 328 mm / 428 mm | 354 mm / 454 mm | 354 mm / 454 mm | - | via pilot valve |
| VSV-F 65 DR | flange | 573 mm | 573 mm | 573 mm | - | via pilot valve |
| VSV-F 80 DR | flange | 640 mm | 640 mm | 640 mm | - | via pilot valve |
| VSV-F 100 DR | flange | 673 mm | 673 mm | 673 mm | - | via pilot valve |
| VSV-F 125 DR | flange | 790 mm | 790 mm | 790 mm | - | via pilot valve |
| VSV-F 150 DR | flange | 889 mm | 889 mm | 889 mm | - | via pilot valve |
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The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.

2/2-way valve

externally controlled

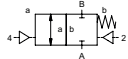
orifice DN 65 - 125

pressure range PN 0 - 40 bar

ports flanged

function NC

valve normally closed



specifications

| | |
|-----------------------------------|--|
| design | pressure balanced, with spring return |
| function | NC - normally closed |
| body materials | aluminium / aluminium hardcoated |
| seal materials | NBR, PU, PTFE, FPM, PE, special materials |
| media | emulsions, oils, neutral gases |
| actuation | pneumatic actuation via 5/2-way pilot valve, hydraulic actuation via 4/2-way control valve |
| pilot valve interface | NAMUR / ISO 1 |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection pilot valve | plug acc. DIN EN 175301-803 form B, LED |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇒ B B ⇒ A (without actuation pressure Δp 16 bar max.) |
| vacuum | leak rate < 10 ⁻⁴ mbar•l•s ⁻¹ |
| options / accessories | manual override, approvals, sensor / manometer connection, special voltage, connector M12x1, explosion proof ATEX zone 1 and 2 cat. 3, pilot valve |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇒ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------|---------------|----------------------|----------------|--------------------|---------------------|---------------------------------------|
| FCF-K 65 | DN 65 | - | PN 16 / 40 | 0 - 16 / 40 | 125,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 250-3000 / 400-3000 |
| FCF-K 80 | DN 80 | - | PN 16 / 40 | 0 - 16 / 40 | 170,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 350-3000 / 350-3000 |
| FCF-K 100 | DN 100 | - | PN 16 / 40 | 0 - 16 / 40 | 220,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 450-3000 / 300-3000 |
| FCF-K 125 | DN 125 | - | PN 16 / 40 | 0 - 16 / 40 | 315,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 700-3000 / 450-3000 |
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length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|------------|--------|----------|--------------------------|----------------------------|---------------------------|-----------------|
| FCF-K 65 | flange | 170 mm | - | - | - | via pilot valve |
| FCF-K 80 | flange | 180 mm | - | - | - | via pilot valve |
| FCF-K 100 | flange | 240 mm | - | - | - | via pilot valve |
| FCF-K 125 | flange | 300 mm | - | - | - | via pilot valve |
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The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.



series FCF coaxial valves

2/2-way valve

externally controlled

orifice

DN 65 - 125

pressure range

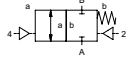
PN 0 - 40 bar

ports

flanged

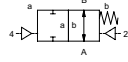
function NC

valve normally closed



function NO

valve normally open



specifications

| | |
|-----------------------------------|---|
| design | pressure balanced, with spring return |
| function | NC - normally closed |
| | NO - normally open |
| body materials | aluminium / aluminium hardcoated |
| seal materials | NBR, PU, PTFE, FPM, PE, special materials |
| media | emulsions, oils, neutral gases |
| actuation | pneumatic actuation via 5/2-way pilot valve, hydraulic actuation via 4/2-way control valve |
| pilot valve interface | NAMUR / ISO 1 |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection pilot valve | plug acc. DIN EN 175301-803 form B, LED |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇒ B |
| | B ⇒ A (without actuation pressure Δp 16 bar max.) |
| vacuum | leak rate < 10^{-4} mbar·l·s ⁻¹ |
| options / accessories | function NO, limit switches, manual override, approvals, sensor / manometer connection, special voltage, connector M12x1, explosion proof ATEX zone 1 and 2 cat. 3, pilot valve |

technical data

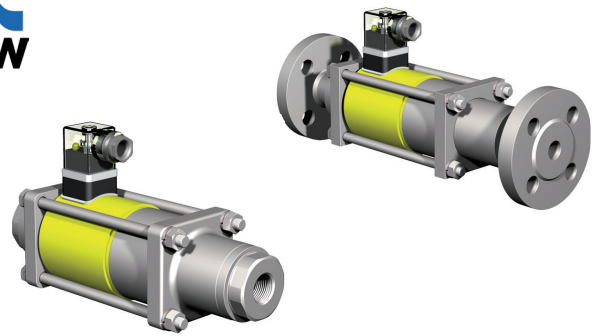
| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇒ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------|---------------|----------------------|----------------|--------------------|---------------------|---------------------------------------|
| FCF 25 | DN 25 | - | PN 16 / 40 | 0 - 16 / 40 | 27,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 50-3000 / 50-3000 |
| FCF 50 | DN 50 | - | PN 16 / 40 | 0 - 16 / 40 | 80,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 150-3000 / 150-3000 |
| FCF 65 | DN 65 | - | PN 16 / 40 | 0 - 16 / 40 | 125,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 250-3000 / 400-3000 |
| FCF 80 | DN 80 | - | PN 16 / 40 | 0 - 16 / 40 | 170,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 350-3000 / 350-3000 |
| FCF 100 | DN 100 | - | PN 16 / 40 | 0 - 16 / 40 | 290,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 450-3000 / 300-3000 |
| FCF 125 | DN 125 | - | PN 16 / 40 | 0 - 16 / 40 | 400,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 700-3000 / 450-3000 |
| FCF 150 | DN 150 | - | PN 16 / 40 | 0 - 16 / 40 | 400,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 600-3000 / 600-3000 |
| | | | | | | | | |
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length

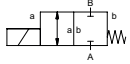
| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|------------|--------|----------|--------------------------|----------------------------|---------------------------|-----------------|
| FCF 25 | flange | 170 mm | 170 mm | 170 mm | - | via pilot valve |
| FCF 50 | flange | 200 mm | 200 mm | 200 mm | - | via pilot valve |
| FCF 65 | flange | 240 mm | 240 mm | 240 mm | - | via pilot valve |
| FCF 80 | flange | 260 mm | 260 mm | 260 mm | - | via pilot valve |
| FCF 100 | flange | 350 mm | 350 mm | 350 mm | - | via pilot valve |
| FCF 125 | flange | 400 mm | 400 mm | 400 mm | - | via pilot valve |
| FCF 150 | flange | 450 mm | 450 mm | 450 mm | - | via pilot valve |
| | | | | | | |
| | | | | | | |

The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.

2/2-way valve
 direct actuated
 orifice DN 15 - 25
 pressure range PN 0 - 40 bar
 ports threaded / flanged



function NC
 valve normally closed



specifications

| | |
|-----------------------|--|
| test designation | DIN DVGW acc. DIN 3394 part 1 DVGW-Ex - G 260/I |
| design | pressure balanced, with spring return |
| function | NC - normally closed |
| body materials | nickel plated steel |
| seal materials | PTFE, FPM, special materials |
| media | combustible gases acc. G260 |
| actuation | DC direct-current magnet AC direct-current magnet, with integrated / separate rectifier |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection | plug acc. DIN EN 175301-803, form A, LED / M16x1,5 terminal box |
| insulation class | H - 180 °C |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇒ B B ⇒ A (Δp 16 bar max.) |
| options / accessories | limit switches, approvals, mounting, special voltage, terminal box, explosion proof, circuit amplifier |



certified

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇒ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|-----------------------|--------------|-----------------|---------------|----------------------|----------------|-------------------|---------------------|---------------------------------------|
| MK / FK 15 DVGW | DN 15 | G 3/8 - G 3/4 | PN 40 | 0 - 40 | 4,8 m³/h | -15 °C ... +80 °C | -15 °C ... +80 °C | 80 / 80 |
| MK / FK 15 DVGW Ex | DN 15 | G 3/8 - G 3/4 | PN 40 | 0 - 16 | 6,0 m³/h | -15 °C ... +40 °C | -15 °C ... +40 °C | 80 / 80 |
| MK / FK 20 DVGW | DN 20 | G 3/4 - G 1 1/4 | PN 40 | 0 - 40 | 8,4 m³/h | -15 °C ... +80 °C | -15 °C ... +80 °C | 110 / 110 |
| MK / FK 20 DVGW Ex | DN 20 | G 3/4 - G 1 1/4 | PN 40 | 0 - 16 | 8,4 m³/h | -15 °C ... +40 °C | -15 °C ... +40 °C | 110 / 110 |
| MK / FK 25 DVGW | DN 25 | G 1 - G 1 1/2 | PN 40 | 0 - 40 | 13,0 m³/h | -15 °C ... +80 °C | -15 °C ... +80 °C | 130 / 130 |
| MK / FK 25 DVGW Ex | DN 25 | G 1 - G 1 1/2 | PN 40 | 0 - 16 | 13,0 m³/h | -15 °C ... +40 °C | -15 °C ... +40 °C | 130 / 130 |
| MK / FK 25 DVGW Ex HT | DN 25 | G 1 - G 1 1/2 | PN 40 | 0 - 16 | 13,0 m³/h | -15 °C ... +70 °C | -15 °C ... +70 °C | 130 / 130 |

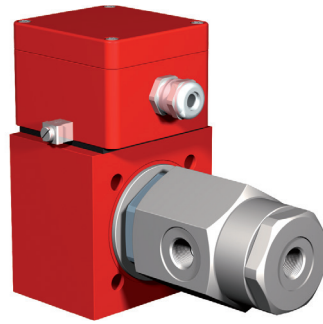
length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|--------------------|-----------------|-----------------|--------------------------|----------------------------|---------------------------|-----------------|
| MK / FK 15 DVGW | thread / flange | 224 mm / 281 mm | 224 mm / 281 mm | 224 mm / 281 mm | - | 224 mm / 281 mm |
| MK / FK 15 DVGW Ex | thread / flange | 234 mm / 291 mm | 234 mm / 291 mm | 234 mm / 291 mm | - | 224 mm / 281 mm |
| MK / FK 20 DVGW | thread / flange | 259 mm / 313 mm | 259 mm / 313 mm | 259 mm / 313 mm | - | 259 mm / 313 mm |
| MK / FK 20 DVGW Ex | thread / flange | 259 mm / 313 mm | 259 mm / 313 mm | 259 mm / 313 mm | - | 259 mm / 313 mm |
| MK / FK 25 DVGW | thread / flange | 299 mm / 355 mm | 299 mm / 355 mm | 299 mm / 355 mm | - | 299 mm / 355 mm |
| MK / FK 25 DVGW Ex | thread / flange | 299 mm / 355 mm | 299 mm / 355 mm | 299 mm / 355 mm | - | 299 mm / 355 mm |

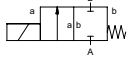
type KBS Ex certified valves

2/2-way valve
direct actuated
orifice
pressure range
ports

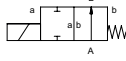
DN 1,5 - 3
PN 0 - 500 bar
threaded



function **NC**
valve normally closed



function **NO**
valve normally open



specifications

| | |
|-----------------------|--|
| ex-protective classes | II 2 G Eex me II T4 and II 2 D IP 65 T 130°C PTB 02 ATEX 2120 x |
| design | direct acting, with spring return |
| function | NC - normally closed NO - normally open |
| body materials | brass, nickel plated brass, stainless steel |
| seal materials | NBR, FPM, special materials |
| media | gaseous, liquid |
| actuation | DC direct-current magnet AC direct-current magnet, with integrated / separate rectifier |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection | M16x1,5 terminal box |
| insulation class | H - 180 °C |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇒ B |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | special threads, function NO, approvals, mounting, special voltage |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇒ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------|---------------|----------------------|----------------|-------------------|---------------------|---------------------------------------|
| KBS 15 Ex | DN 1,5 | G 3/8 | - | 0 - 150 / 500 (NO) | 1,1 l/min | -20 °C ... +40 °C | -20 °C ... +40 °C | 250 / 160 |
| KBS 15 Ex | DN 2 | G 3/8 | - | 0 - 100 / 300 (NO) | 1,3 l/min | -20 °C ... +40 °C | -20 °C ... +40 °C | 250 / 160 |
| KBS 15 Ex | DN 3 | G 3/8 | - | 0 - 40 / 100 (NO) | 5,2 l/min | -20 °C ... +40 °C | -20 °C ... +40 °C | 250 / 160 |
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length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|----------------|--------|----------|--------------------------|----------------------------|---------------------------|-----------------|
| KBS 15 Ex (NC) | thread | 182 mm | - | - | - | - |
| KBS 15 Ex (NO) | thread | 195,5 mm | - | - | - | - |
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The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.

2/2-way valve

direct actuated

orifice

DN 2 - 50

pressure range

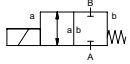
PN 0 - 100 bar

ports

threaded / flanged

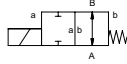
function NC

valve normally closed

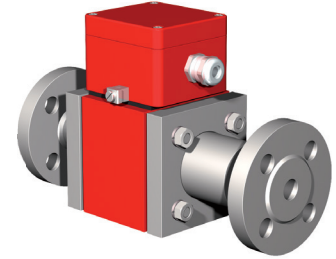
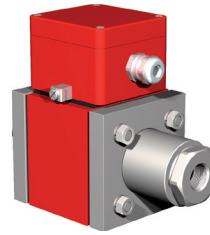


function NO

valve normally open



ATEX 



specifications

| | |
|-----------------------|--|
| ex-protective classes | II 2 G Eex me II T4 and II 2 D IP 65 T 130°C PTB 02 ATEX 2120 x |
| design | pressure balanced, with spring return |
| function | NC - normally closed NO - normally open (only MK/FK) |
| body materials | brass, galvanized steel, nickel plated steel, without non-ferrous metals, stainless steel |
| seal materials | NBR, PTFE, FPM, CR, EPDM, special materials |
| media | gaseous, liquid, highly viscous, contaminated |
| actuation | DC direct-current magnet AC direct-current magnet, with integrated / separate rectifier |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection | M16x1,5 terminal box |
| insulation class | H - 180 °C |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇒ B B ⇒ A (Δp 16 bar max.) |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | special threads, special flanges, function NO, damping, limit switches (NAMUR), manual override, approvals, special voltage |



certified

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇒ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|---------------|--------------|-------------------|------------------|------------------------|----------------|-------------------|---------------------|---------------------------------------|
| KB 15 Ex | DN 2 | G 3/8 | - | 0 - 100 | 1,7 l/min | -20 °C ... +40 °C | -20 °C ... +40 °C | 100 / 175 |
| KB 15 Ex | DN 3 | G 3/8 | - | 0 - 50 | 4,1 l/min | -20 °C ... +40 °C | -20 °C ... +40 °C | 100 / 175 |
| KB 15 Ex | DN 4 | G 3/8 | - | 0 - 30 | 11,0 l/min | -20 °C ... +40 °C | -20 °C ... +40 °C | 100 / 175 |
| KB 15 Ex | DN 5 | G 3/8 | - | 0 - 16 | 13,5 l/min | -20 °C ... +40 °C | -20 °C ... +40 °C | 100 / 175 |
| KB 15 Ex | DN 6 | G 3/8 | - | 0 - 10 | 17,4 l/min | -20 °C ... +40 °C | -20 °C ... +40 °C | 100 / 175 |
| KB 15 Ex | DN 8 | G 3/8 | - | 0 - 10 | 24,0 l/min | -20 °C ... +40 °C | -20 °C ... +40 °C | 100 / 175 |
| MK 10 Ex | DN 10 | G 1/4 - G 3/4 | - | 0 - 16 | 2,5 m³/h | -20 °C ... +40 °C | -20 °C ... +40 °C | 80 / 140 |
| MK / FK 15 Ex | DN 15 | G 3/8 - G 3/4 | PN 16 / 40 / 100 | 0 - 16 / 40 / 63 / 100 | 6,0 m³/h | -20 °C ... +40 °C | -20 °C ... +40 °C | 80 / 80 |
| MK / FK 20 Ex | DN 20 | G 3/4 - G 1 1/4 | PN 16 / 40 / 100 | 0 - 16 / 40 / 63 / 100 | 8,4 m³/h | -20 °C ... +40 °C | -20 °C ... +40 °C | 110 / 110 |
| MK / FK 25 Ex | DN 25 | G 1 - G 1 1/2 | PN 16 / 40 / 100 | 0 - 16 / 40 / 63 / 100 | 13,0 m³/h | -20 °C ... +70 °C | -20 °C ... +70 °C | 130 / 130 |
| MK / FK 32 Ex | DN 32 | G 1 1/4 - G 1 1/2 | PN 16 / 40 / 100 | 0 - 16 / 40 / 63 | 17,4 m³/h | -20 °C ... +40 °C | -20 °C ... +40 °C | 440 / 250 |
| MK / FK 40 Ex | DN 40 | G 1 1/2 - G 2 | PN 16 / 40 / 100 | 0 - 16 / 40 / 63 | 21,8 m³/h | -20 °C ... +40 °C | -20 °C ... +40 °C | 520 / 150 |
| MK / FK 50 Ex | DN 50 | G 2 | PN 16 | 0 - 16 | 38,0 m³/h | -20 °C ... +40 °C | -20 °C ... +40 °C | 400 / 400 |

length

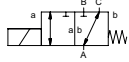
| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|---------------|-----------------|-----------------|--------------------------|----------------------------|---------------------------|-----------------|
| KB 15 Ex | thread | 135 mm | - | - | - | - |
| MK 10 Ex | thread | 159,5 mm | 159,5 mm | 159,5 mm | - | - |
| MK / FK 15 Ex | thread / flange | 185 mm / 242 mm | 234 mm / 291 mm | 234 mm / 291 mm | - | 224 mm / 281 mm |
| MK / FK 20 Ex | thread / flange | 215 mm / 269 mm | 259 mm / 313 mm | 259 mm / 313 mm | - | 259 mm / 313 mm |
| MK / FK 25 Ex | thread / flange | 246 mm / 302 mm | 299 mm / 355 mm | 299 mm / 355 mm | - | 299 mm / 355 mm |
| MK / FK 32 Ex | thread / flange | 258 mm / 324 mm | 299 mm / 365 mm | 299 mm / 365 mm | - | 299 mm / 365 mm |
| MK / FK 40 Ex | thread / flange | 258 mm / 324 mm | 299 mm / 365 mm | 299 mm / 365 mm | - | 299 mm / 365 mm |
| MK / FK 50 Ex | thread / flange | 365 mm / 438 mm | 365 mm / 438 mm | 365 mm / 438 mm | - | 365 mm / 438 mm |

series MK / FK DR Ex certified valves

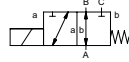
3/2-way valve
direct actuated
orifice
pressure range
ports

DN 10 - 50
PN 0 - 40 bar
threaded / flanged

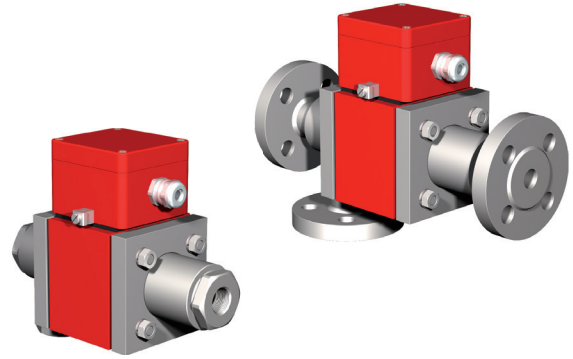
function **NC**
valve normally closed



function **NO**
valve normally open



ATEX 



specifications

| | |
|-----------------------|--|
| ex-protective classes | II 2 G Eex me II T4 and II 2 D IP 65 T 130°C PTB 02 ATEX 2120 x |
| design | pressure balanced, with spring return, switching overlap |
| function | DR NC - normally closed (A ⇒ B) DR NO - normally open (A ⇒ B) |
| body materials | brass, galvanized steel, nickel plated steel, without non-ferrous metals, stainless steel |
| seal materials | NBR, PTFE, FPM, CR, EPDM, special materials |
| media | gaseous, liquid, highly viscous, contaminated |
| actuation | DC direct-current magnet AC direct-current magnet, with integrated / separate rectifier |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection | M16x1,5 terminal box |
| insulation class | H - 180 °C |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇒ B / A ⇒ C B ⇒ A (Δp 16 bar max.) |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | special threads, special flanges, function NO, damping, limit switches (NAMUR), manual override, approvals, special voltage |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇒ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------------|--------------|-------------------|---------------|----------------------|----------------|-------------------|---------------------|---------------------------------------|
| MK 10 DR Ex | DN 10 | G 1/4 - G 3/4 | - | 0 - 16 | 2,6 m³/h | -20 °C ... +40 °C | -20 °C ... +40 °C | 80 / 140 |
| MK / FK 15 DR Ex | DN 15 | G 3/8 - G 3/4 | PN 16 / 40 | 0 - 16 / 40 | 4,3 m³/h | -20 °C ... +40 °C | -20 °C ... +40 °C | 80 / 80 |
| MK / FK 20 DR Ex | DN 20 | G 3/4 - G 1 1/4 | PN 16 / 40 | 0 - 16 / 40 | 6,7 m³/h | -20 °C ... +40 °C | -20 °C ... +40 °C | 110 / 110 |
| MK / FK 25 DR Ex | DN 25 | G 1 - G 1 1/2 | PN 16 / 40 | 0 - 16 / 40 | 11,2 m³/h | -20 °C ... +70 °C | -20 °C ... +70 °C | 130 / 130 |
| MK / FK 32 DR Ex | DN 32 | G 1 1/4 - G 1 1/2 | PN 16 / 40 | 0 - 16 / 40 | 14,1 m³/h | -20 °C ... +40 °C | -20 °C ... +40 °C | 440 / 250 |
| MK / FK 40 DR Ex | DN 40 | G 1 1/2 - G 2 | PN 16 | 0 - 16 | 18,4 m³/h | -20 °C ... +40 °C | -20 °C ... +40 °C | 520 / 150 |
| MK / FK 50 DR Ex | DN 50 | G 2 | PN 16 | 0 - 16 | 28,2 m³/h | -20 °C ... +40 °C | -20 °C ... +40 °C | 400 / 400 |
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| | | | | | | | | |

length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|------------------|-----------------|-----------------|--------------------------|----------------------------|---------------------------|-----------------|
| MK 10 DR Ex | thread | 166,5 mm | - | - | - | - |
| MK / FK 15 DR Ex | thread / flange | 210 mm / 266 mm | 259 mm / 315 mm | 259 mm / 315 mm | - | - |
| MK / FK 20 DR Ex | thread / flange | 247 mm / 301 mm | 291 mm / 345 mm | 291 mm / 345 mm | - | - |
| MK / FK 25 DR Ex | thread / flange | 281 mm / 337 mm | 334 mm / 390 mm | 334 mm / 390 mm | - | - |
| MK / FK 32 DR Ex | thread / flange | 332 mm / 394 mm | 373 mm / 435 mm | 373 mm / 435 mm | - | 373 mm / 435 mm |
| MK / FK 40 DR Ex | thread / flange | 332 mm / 394 mm | 373 mm / 435 mm | 373 mm / 435 mm | - | 373 mm / 435 mm |
| MK / FK 50 DR Ex | thread / flange | 453 mm / 553 mm | 453 mm / 553 mm | 453 mm / 553 mm | - | 453 mm / 553 mm |
| | | | | | | |
| | | | | | | |

The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.

2/2-way valve

direct actuated

orifice

DN 10 - 25

pressure range

PN 0 - 40 bar

ports

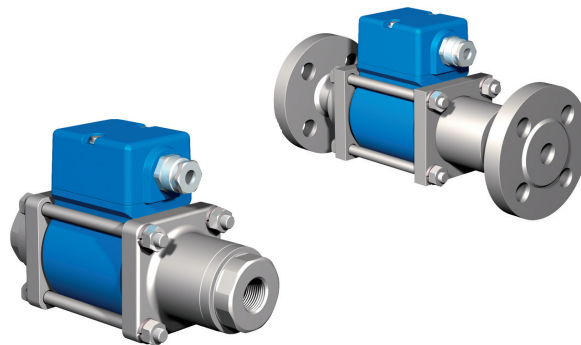
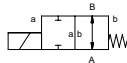
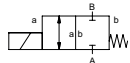
threaded / flanged

function NC

valve normally closed

function NO

valve normally open



specifications

| | |
|-----------------------|--|
| certificates | DIN EN ISO 23553-1 E DIN 32725 |
| design | pressure balanced, with spring return |
| function | NC - normally closed NO - normally open |
| body materials | brass, galvanized steel |
| seal materials | FPM, PTFE |
| media | liquid fuels |
| actuation | DC direct-current magnet AC direct-current magnet, with integrated / separate rectifier |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection | plug acc. DIN EN 175301-803, form A, / M16x1,5 terminal box |
| insulation class | H - 180 °C |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇒ B B ⇒ A (Δp 16 bar max.) |
| options / accessories | function NO, limit switches, mounting |



certified

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇒ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|----------------|--------------|-----------------|---------------|----------------------|----------------|--------------------|---------------------|---------------------------------------|
| MK 10 TÜV | DN 10 | G 1/4 - G 3/4 | - | 0 - 40 | 2,5 m³/h | -10 °C ... +140 °C | -10 °C ... +60 °C | 135 / 20 |
| MK / FK 15 TÜV | DN 15 | G 3/8 - G 3/4 | PN 40 | 0 - 40 | 6,0 m³/h | -10 °C ... +140 °C | -10 °C ... +60 °C | 80 / 80 |
| MK / FK 20 TÜV | DN 20 | G 3/4 - G 1 1/4 | PN 40 | 0 - 40 | 8,4 m³/h | -10 °C ... +140 °C | -10 °C ... +60 °C | 110 / 110 |
| FK 25 TÜV | DN 25 | - | PN 40 | 0 - 40 | 13,0 m³/h | -10 °C ... +140 °C | -10 °C ... +60 °C | 130 / 130 |
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length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|----------------|-----------------|-----------------|--------------------------|----------------------------|---------------------------|-----------------|
| MK 10 TÜV | thread | 159,5 mm | - | - | - | - |
| MK / FK 15 TÜV | thread / flange | 184 mm / 241 mm | - | - | 204 mm / 261 mm | - |
| MK / FK 20 TÜV | thread / flange | 215 mm / 269 mm | - | - | 235 mm / 289 mm | - |
| FK 25 TÜV | flange | 302 mm | - | - | 355 mm | - |
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The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.

series MK / FK DR TÜV certified valves

3/2-way valve

direct actuated

orifice

DN 15 - 25

pressure range

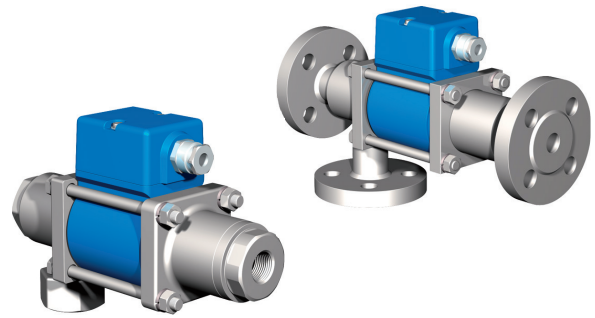
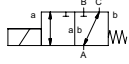
PN 0 - 40 bar

ports

threaded / flanged

function NC

valve normally closed



specifications

| | |
|-----------------------|---|
| certificates | DIN EN ISO 23553-1 E DIN 32725 |
| design | pressure balanced, with spring return, switching overlap |
| function | DR NC - normally closed (A ⇌ B) |
| body materials | galvanized steel |
| seal materials | FPM, PTFE |
| media | liquid fuels |
| actuation | DC direct-current magnet AC direct-current magnet, with separate rectifier |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection | M16x1,5 terminal box |
| insulation class | H - 180 °C |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇌ B / A ⇌ C B ⇌ A (Δp 16 bar max.) |
| options / accessories | limit switches, mounting |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇌ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|-------------------|--------------|-----------------|---------------|----------------------|----------------|--------------------|---------------------|---------------------------------------|
| MK / FK 15 DR TÜV | DN 15 | G 3/8 - G 3/4 | PN 40 | 0 - 40 | 4,3 m³/h | -10 °C ... +140 °C | -10 °C ... +60 °C | 80 / 80 |
| MK / FK 20 DR TÜV | DN 20 | G 3/4 - G 1 1/4 | PN 40 | 0 - 40 | 6,7 m³/h | -10 °C ... +140 °C | -10 °C ... +60 °C | 110 / 110 |
| FK 25 DR TÜV | DN 25 | - | PN 40 | 0 - 40 | 11,2 m³/h | -10 °C ... +140 °C | -10 °C ... +60 °C | 130 / 130 |
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length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|-------------------|-----------------|-----------------|--------------------------|----------------------------|---------------------------|-----------------|
| MK / FK 15 DR TÜV | thread / flange | 209 mm / 265 mm | - | - | 229 mm / 285 mm | - |
| MK / FK 20 DR TÜV | thread / flange | 247 mm / 301 mm | - | - | 267 mm / 321 mm | - |
| FK 25 DR TÜV | flange | 337 mm | - | - | 390 mm | - |
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The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.

2/2-way valve

externally controlled

orifice

DN 10 - 15

pressure range

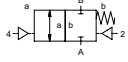
PN 0 - 100 bar

ports

threaded

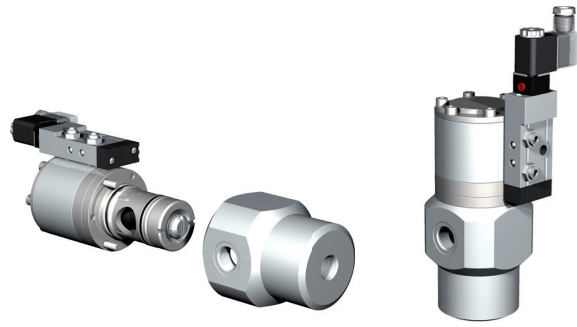
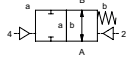
function NC

valve normally closed



function NO

valve normally open



specifications

| | |
|-----------------------------------|--|
| design | externally controlled, with spring return |
| function | NC - normally closed NO - normally open |
| body materials | aluminium, brass, stainless steel |
| seal materials | PU, NBR, PTFE, PE, FPM, EPDM, special materials |
| media | gaseous, liquid, highly viscous, contaminated |
| actuation | pneumatic actuation via 5/2-way pilot valve, hydraulic actuation via 4/2-way control valve |
| actuator ports | G 1/8 (pneumatic actuation), G 1/4 (hydraulic actuation, via adapter) |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection pilot valve | plug acc. DIN EN 175301-803 form B, LED |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇌ B B ⇌ A |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | valve body, function NO, leak ports, limit switches, manual override, approvals, mounting, special voltage, connector M12x1, explosion proof ATEX zone 1 and 2 cat. 3, pilot valve |



cartridge

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇌ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------|---------------|----------------------|----------------|--------------------|---------------------|---------------------------------------|
| PCD-1 10 | DN 10 | G 3/8 | - | 0 - 50 | 3,0 m³/h | -20 °C ... +150 °C | -20 °C ... +150 °C | 30-3000 / 30-3000 |
| PCD-2 10 | DN 10 | G 3/8 | - | 0 - 100 | 3,0 m³/h | -20 °C ... +150 °C | -20 °C ... +150 °C | 30-3000 / 30-3000 |
| PCD-3 10 | DN 10 | G 3/8 | - | 0 - 150 (0 - 200) | 3,0 m³/h | -20 °C ... +150 °C | -20 °C ... +150 °C | 30-3000 / 30-3000 |
| PCD-1 15 | DN 15 | G 1/2 - G 3/4 | - | 0 - 50 | 6,0 m³/h | -20 °C ... +150 °C | -20 °C ... +150 °C | 100-3000 / 100-3000 |
| PCD-2 15 | DN 15 | G 1/2 - G 3/4 | - | 0 - 100 | 6,0 m³/h | -20 °C ... +150 °C | -20 °C ... +150 °C | 100-3000 / 100-3000 |
| PCD-3 15 | DN 15 | G 1/2 - G 3/4 | - | 0 - 150 (0 - 200) | 6,0 m³/h | -20 °C ... +150 °C | -20 °C ... +150 °C | 100-3000 / 100-3000 |
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length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|------------|--------|----------|--------------------------|----------------------------|---------------------------|-----------------|
| PCD-1 10 | thread | 60 mm | 60 mm | 60 mm | - | via pilot valve |
| PCD-2 10 | thread | 60 mm | 60 mm | 60 mm | - | via pilot valve |
| PCD-1 15 | thread | 80 mm | 80 mm | 80 mm | - | via pilot valve |
| PCD-2 15 | thread | 80 mm | 80 mm | 80 mm | - | via pilot valve |
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series PCS cartridge valves

2/2-way valve

externally controlled

orifice

DN 10 - 15

pressure range

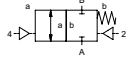
PN 0 - 150 bar

ports

threaded

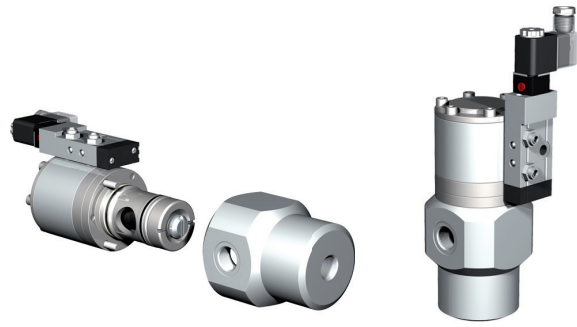
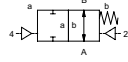
function NC

valve normally closed



function NO

valve normally open



specifications

| | |
|-----------------------------------|---|
| design | externally controlled, with spring return |
| function | NC - normally closed NO - normally open |
| body materials | aluminium, brass, stainless steel |
| seal materials | HNBR, FPM, EPDM, special materials |
| media | gaseous, liquid, highly viscous, contaminated |
| actuation | pneumatic actuation via 5/2-way pilot valve, hydraulic actuation via 4/2-way control valve |
| actuator ports | G 1/8 (pneumatic actuation), G 1/4 (hydraulic actuation, via adapter) |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection pilot valve | plug acc. DIN EN 175301-803 form B, LED |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇌ B B ⇌ A |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | valve body, function NO, leak ports, limit switches, manual override, approvals, mounting, special voltage, connector M12x1, explosion proof ATEX zone 1 and 2 cat. 3, pilot valve |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇌ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------|---------------|----------------------|----------------|--------------------|---------------------|---------------------------------------|
| PCS-1 10 | DN 10 | G 3/8 | - | 0 - 50 | 3,0 m³/h | -20 °C ... +150 °C | -20 °C ... +150 °C | 30-3000 / 30-3000 |
| PCS-2 10 | DN 10 | G 3/8 | - | 0 - 100 | 3,0 m³/h | -20 °C ... +150 °C | -20 °C ... +150 °C | 30-3000 / 30-3000 |
| PCS-3 10 | DN 10 | G 3/8 | - | 0 - 150 (0 - 200) | 3,0 m³/h | -20 °C ... +150 °C | -20 °C ... +150 °C | 30-3000 / 30-3000 |
| PCS-1 15 | DN 15 | G 1/2 - G 3/4 | - | 0 - 50 | 6,0 m³/h | -20 °C ... +150 °C | -20 °C ... +150 °C | 100-3000 / 100-3000 |
| PCS-2 15 | DN 15 | G 1/2 - G 3/4 | - | 0 - 100 | 6,0 m³/h | -20 °C ... +150 °C | -20 °C ... +150 °C | 100-3000 / 100-3000 |
| PCS-3 15 | DN 15 | G 1/2 - G 3/4 | - | 0 - 150 (0 - 200) | 6,0 m³/h | -20 °C ... +150 °C | -20 °C ... +150 °C | 100-3000 / 100-3000 |
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length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|------------|--------|----------|--------------------------|----------------------------|---------------------------|-----------------|
| PCS-1 10 | thread | 60 mm | 60 mm | 60 mm | - | via pilot valve |
| PCS-2 10 | thread | 60 mm | 60 mm | 60 mm | - | via pilot valve |
| PCS-1 15 | thread | 80 mm | 80 mm | 80 mm | - | via pilot valve |
| PCS-2 15 | thread | 80 mm | 80 mm | 80 mm | - | via pilot valve |
| PCS-3 15 | thread | 80 mm | 80 mm | 80 mm | - | via pilot valve |
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2/2-way valve

direct actuated

orifice

DN 15 - 50

pressure range

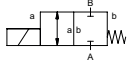
PN 0 - 10 bar

ports

threaded

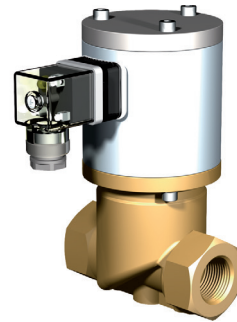
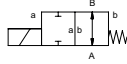
function NC

valve normally closed



function NO

valve normally open



specifications

| | |
|-----------------------|---|
| design | pressure balanced, with spring return |
| function | NC - normally closed NO - normally open |
| body materials | brass, nickel plated brass |
| seal materials | NBR, FPM |
| media | gaseous, liquid |
| actuation | DC direct-current magnet AC direct-current magnet, with integrated rectifier |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection | plug acc. DIN EN 175301-803, form A, LED |
| insulation class | H - 180 °C |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇌ B |
| vacuum | low vacuum |
| options / accessories | function NO, manual override, mounting, special voltage, terminal box |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇌ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|-------------------|---------------|----------------------|----------------|-------------------|---------------------|---------------------------------------|
| RSV 12 | DN 15 | G 1/2 - G 3/4 | - | 0 - 10 | 3,2 m³/h | -10 °C ... +80 °C | -10 °C ... +80 °C | 28 / 30 |
| RSV 20 | DN 20 | G 3/4 - G 1 | - | 0 - 10 | 6,8 m³/h | -10 °C ... +80 °C | -10 °C ... +80 °C | 120 / 160 |
| RSV 25 | DN 25 | G 1 1/4 | - | 0 - 10 | 7,5 m³/h | -10 °C ... +80 °C | -10 °C ... +80 °C | 130 / 200 |
| RSV 32 | DN 32 | G 1 1/4 - G 1 1/2 | - | 0 - 10 | 8,2 m³/h | -10 °C ... +80 °C | -10 °C ... +80 °C | 140 / 250 |
| RSV 40 | DN 40 | G 1 1/2 | - | 0 - 10 | 14,0 m³/h | -10 °C ... +80 °C | -10 °C ... +80 °C | 150 / 250 |
| RSV 50 | DN 50 | G 2 | - | 0 - 10 | 19,0 m³/h | -10 °C ... +80 °C | -10 °C ... +80 °C | 150 / 250 |
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length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|------------|--------|----------|--------------------------|----------------------------|---------------------------|-----------------|
| RSV 12 | thread | 80 mm | - | - | - | 80 mm |
| RSV 20 | thread | 97 mm | - | - | - | 97 mm |
| RSV 25 | thread | 120 mm | - | - | - | - |
| RSV 32 | thread | 120 mm | - | - | - | - |
| RSV 40 | thread | 160 mm | - | - | - | - |
| RSV 50 | thread | 160 mm | - | - | - | - |
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series DRV lateral valves

3/2-way valve

direct actuated

orifice

DN 12 - 25

pressure range

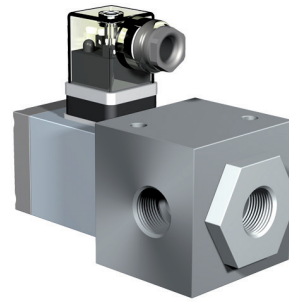
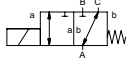
PN 0 - 2 bar

ports

threaded

function NC

valve normally closed



specifications

| | |
|-----------------------|---|
| design | pressure balanced, with spring return, switching overlap |
| function | DR NC - normally closed (A ⇌ B) |
| body materials | aluminium |
| seal materials | NBR, CR |
| media | gaseous |
| actuation | DC direct-current magnet AC direct-current magnet, with integrated rectifier |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection | plug acc. DIN EN 175301-803, form A, LED |
| insulation class | H - 180 °C |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇌ B / A ⇌ C B ⇌ A / C ⇌ A |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | special voltage |

technical data

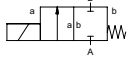
| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇌ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------|---------------|----------------------|----------------|-------------------|---------------------|---------------------------------------|
| DRV 12 | DN 12 | G 1/2 | - | 0 - 1 | 2,7 m³/h | -10 °C ... +80 °C | -10 °C ... +80 °C | 40 / 25 |
| DRV 20 | DN 20 | G 3/4 | - | 0 - 2 | 9,1 m³/h | -10 °C ... +80 °C | -10 °C ... +80 °C | 160 / 100 |
| DRV 25 | DN 25 | G 1 | - | 0 - 2 | 12,8 m³/h | -10 °C ... +80 °C | -10 °C ... +80 °C | 160 / 100 |
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length

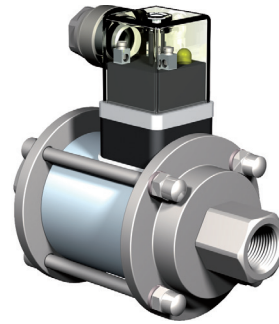
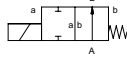
| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|------------|--------|----------|--------------------------|----------------------------|---------------------------|-----------------|
| DRV 12 | thread | 60 mm | - | - | - | - |
| DRV 20 | thread | 100 mm | - | - | - | - |
| DRV 25 | thread | 100 mm | - | - | - | - |
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2/2-way valve
 direct actuated
 orifice DN 2 - 6
 pressure range PN 0 - 130 bar
 ports threaded

function **NC**
 valve normally closed



function **NO**
 valve normally open



specifications

| | |
|-----------------------|--|
| design | direct acting, with spring return |
| function | NC - normally closed NO - normally open |
| body materials | stainless steel |
| seal materials | NBR, PTFE, FPM, EPDM |
| media | gaseous, liquid |
| actuation | DC direct-current magnet AC direct-current magnet, with integrated / separate rectifier |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection | plug acc. DIN EN 175301-803, form A, LED |
| insulation class | H - 180 °C |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇒ B |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | function NO, approvals, mounting, special voltage, connector M12x1 |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇒ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------|---------------|----------------------|----------------|-------------------|---------------------|---------------------------------------|
| A 45 | DN 2 | G 3/8 | - | 0 - 130 | 1,3 l/min | -10 °C ... +80 °C | -10 °C ... +80 °C | 20 / 45 |
| A 45 | DN 4 | G 3/8 | - | 0 - 40 / 60 (NO) | 5,3 l/min | -10 °C ... +80 °C | -10 °C ... +80 °C | 20 / 45 |
| A 45 | DN 6 | G 3/8 | - | 0 - 10 | 9,8 l/min | -10 °C ... +80 °C | -10 °C ... +80 °C | 20 / 45 |
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length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|------------|--------|----------|--------------------------|----------------------------|---------------------------|-----------------|
| A 45 | thread | 113 mm | - | - | - | - |
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The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.



high pressure

series KB high pressure valves

2/2-way valve

direct actuated

orifice

DN 2 - 14

pressure range

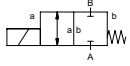
PN 0 - 400 bar

ports

threaded

function NC

valve normally closed



specifications

| | |
|-----------------------|---|
| design | direct acting, with spring return |
| function | NC - normally closed |
| body materials | nickel plated steel, stainless steel |
| seal materials | NBR, PTFE, FPM, special materials |
| media | gaseous, liquid |
| actuation | DC direct-current magnet AC direct-current magnet, with integrated / separate rectifier |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection | plug acc. DIN EN 175301-803, form A, LED |
| insulation class | H - 180 °C |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇌ B B ⇌ A (upon request) |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | special threads, 2-coil operation, approvals, mounting, special voltage, connector M12x1, terminal box, ATEX zone 2 cat. 3 max 80°C, special version to -196 °C available |

technical data

| co-ax type | orifice [mm] | ports threaded | pressure range [bar] 1-coil operation | pressure range [bar] 2-coil operation | Kv value A ⇌ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------|---------------------------------------|---------------------------------------|----------------|--------------------|---------------------|---------------------------------------|
| KB 15 | DN 2 | G 3/8 | 0 - 300 | 0 - 400 | 1,7 l/min | -20 °C ... +100 °C | -20 °C ... +80 °C | 60 / 170 |
| KB 15 | DN 3 | G 3/8 | 0 - 250 | 0 - 300 | 4,1 l/min | -20 °C ... +100 °C | -20 °C ... +80 °C | 60 / 170 |
| KB 15 | DN 4 | G 3/8 | 0 - 120 | 0 - 150 | 11,0 l/min | -20 °C ... +100 °C | -20 °C ... +80 °C | 60 / 170 |
| KB 15 | DN 5 | G 3/8 | 0 - 80 | 0 - 100 | 13,5 l/min | -20 °C ... +100 °C | -20 °C ... +80 °C | 60 / 170 |
| KB 15 | DN 6 | G 3/8 | 0 - 50 | 0 - 70 | 17,4 l/min | -20 °C ... +100 °C | -20 °C ... +80 °C | 60 / 170 |
| KB 15 | DN 8 | G 3/8 | 0 - 30 | 0 - 40 | 24,0 l/min | -20 °C ... +100 °C | -20 °C ... +80 °C | 60 / 170 |
| KB 20 | DN 8 | G 1/2 | 0 - 50 | - | 1,8 m³/h | -20 °C ... +100 °C | -20 °C ... +80 °C | 120 / 270 |
| KB 20 | DN 10 | G 1/2 | 0 - 35 | - | 2,5 m³/h | -20 °C ... +100 °C | -20 °C ... +80 °C | 120 / 270 |
| KB 20 | DN 12 | G 1/2 | 0 - 25 | - | 2,9 m³/h | -20 °C ... +100 °C | -20 °C ... +80 °C | 120 / 270 |
| KB 20 | DN 14 | G 1/2 | 0 - 15 | - | 3,2 m³/h | -20 °C ... +100 °C | -20 °C ... +80 °C | 120 / 270 |

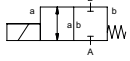
length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|------------|--------|----------|--------------------------|----------------------------|---------------------------|-----------------|
| KB 15 | thread | 135 mm | - | - | - | - |
| KB 20 | thread | 160 mm | - | - | - | - |
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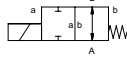
The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.

2/2-way valve
 direct actuated
 orifice DN 10
 pressure range PN 0 - 200 bar
 ports threaded

function **NC**
 valve normally closed



function **NO**
 valve normally open



specifications

| | |
|-----------------------|--|
| design | pressure balanced, with spring return |
| function | NC - normally closed NO - normally open |
| body materials | brass, stainless steel |
| seal materials | NBR, PTFE, FPM, CR, EPDM |
| media | gaseous, liquid |
| actuation | DC direct-current magnet AC direct-current magnet, with integrated / separate rectifier |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection | plug acc. DIN EN 175301-803, form A, LED |
| insulation class | H - 180 °C |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇒ B B ⇒ A (upon request) |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | function NO, limit switches, special voltage, connector M12x1, terminal box, ATEX zone 2 cat. 3 max 80°C |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇒ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------|---------------|----------------------|----------------|--------------------|---------------------|---------------------------------------|
| ECD-H 10 | DN 10 | G 3/8 | - | 0 - 200 / 150 (NO) | 1,5 m³/h | -20 °C ... +160 °C | -20 °C ... +60 °C | 250 / 110 |
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length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|------------|--------|----------|--------------------------|----------------------------|---------------------------|-----------------|
| ECD-H 10 | thread | 70 mm | - | - | - | - |
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The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.



high pressure

type ECD-H DR high pressure valves

3/2-way valve

direct actuated

orifice

DN 10

pressure range

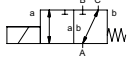
PN 0 - 150 bar

ports

threaded

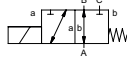
function **NC**

valve normally closed



function **NO**

valve normally open



specifications

| | |
|-----------------------|--|
| design | pressure balanced, with spring return, switching overlap |
| function | DR NC - normally closed (A ⇔ B) DR NO - normally open (A ⇔ B) |
| body materials | brass, stainless steel |
| seal materials | NBR, PTFE, FPM, CR, EPDM |
| media | gaseous, liquid |
| actuation | DC direct-current magnet AC direct-current magnet, with integrated / separate rectifier |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection | plug acc. DIN EN 175301-803, form A, LED |
| insulation class | H - 180 °C |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇔ B / A ⇔ C B ⇔ A / C ⇔ A (upon request) |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | function NO, limit switches, special voltage, connector M12x1, terminal box, ATEX zone 2 cat. 3 max 80°C |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇔ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|-------------|--------------|----------------|---------------|----------------------|----------------|--------------------|---------------------|---------------------------------------|
| ECD-H 10 DR | DN 10 | G 3/8 | - | 0 - 150 | 1,5 m³/h | -20 °C ... +160 °C | -20 °C ... +60 °C | 250 / 110 |
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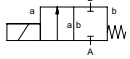
length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|-------------|--------|----------|--------------------------|----------------------------|---------------------------|-----------------|
| ECD-H 10 DR | thread | 70 mm | - | - | - | - |
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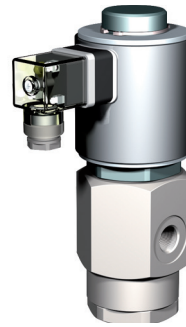
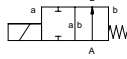
The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.

2/2-way valve
 direct actuated
 orifice DN 1,5 - 3
 pressure range PN 0 - 500 bar
 ports threaded

function **NC**
 valve normally closed



function **NO**
 valve normally open



specifications

| | |
|-----------------------|---|
| design | direct acting, with spring return |
| function | NC - normally closed NO - normally open |
| body materials | brass, nickel plated brass, stainless steel |
| seal materials | NBR, FPM |
| media | gaseous, liquid |
| actuation | DC direct-current magnet AC direct-current magnet, with integrated rectifier |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection | plug acc. DIN EN 175301-803, form A, LED |
| insulation class | H - 180 °C |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇌ B |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | special threads, function NO, approvals, mounting, special voltage, connector M12x1, terminal box |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇌ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------|---------------|----------------------|----------------|--------------------|---------------------|---------------------------------------|
| KBS 15 | DN 1,5 | G 3/8 | - | 0 - 500 / 500 (NO) | 1,1 l/min | -20 °C ... +100 °C | -20 °C ... +80 °C | 60 / 160 |
| KBS 15 | DN 2 | G 3/8 | - | 0 - 400 / 300 (NO) | 1,3 l/min | -20 °C ... +100 °C | -20 °C ... +80 °C | 60 / 160 |
| KBS 15 | DN 3 | G 3/8 | - | 0 - 250 / 100 (NO) | 5,2 l/min | -20 °C ... +100 °C | -20 °C ... +80 °C | 60 / 160 |
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length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|------------|--------|----------|--------------------------|----------------------------|---------------------------|-----------------|
| KBS 15 | thread | 60 mm | - | - | - | - |
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The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.



high pressure

type VMK-H10 high pressure valves

2/2-way valve

externally controlled

orifice

DN 10

pressure range

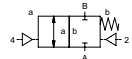
PN 0 - 200 bar

ports

threaded

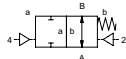
function NC

valve normally closed



function NO

valve normally open



specifications

| | |
|-----------------------------------|--|
| design | pressure balanced, with spring return |
| function | NC - normally closed NO - normally open |
| body materials | brass |
| seal materials | NBR |
| media | gaseous, liquid, highly viscous |
| actuation | pneumatic actuation via 5/2-way pilot valve, hydraulic actuation via 4/2-way control valve |
| pilot valve interface | NAMUR / ISO 1 |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection pilot valve | plug acc. DIN EN 175301-803 form B, LED |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇌ B B ⇌ A (without actuation pressure Δp 16 bar max.) |
| vacuum | leak rate < 10^{-6} mbar•l•s ⁻¹ |
| options / accessories | special threads, function NO, limit switches, manual override, special voltage, connector M12x1, explosion proof ATEX zone 1 and 2 cat. 3, pilot valve |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇌ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------|---------------|----------------------|-----------------------|--------------------|---------------------|---------------------------------------|
| VMK-H10 | DN 10 | G 3/8 - G 1/2 | - | 0 - 200 | 3,5 m ³ /h | -20 °C ... +160 °C | -20 °C ... +160 °C | 30-3000 / 50-3000 |
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length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|------------|--------|----------|--------------------------|----------------------------|---------------------------|-----------------|
| VMK-H10 | thread | 140 mm | 160 mm | 160 mm | - | via pilot valve |
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2/2-way valve

externally controlled

orifice

DN 15 - 50

pressure range

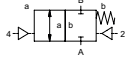
PN 0 - 200 bar

ports

threaded / flanged

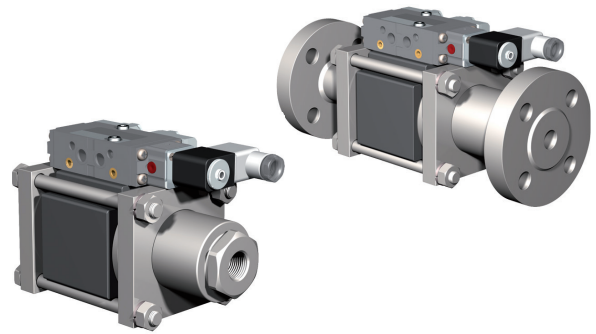
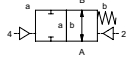
function NC

valve normally closed



function NO

valve normally open



specifications

| | |
|-----------------------------------|---|
| design | pressure balanced, with spring return |
| function | NC - normally closed |
| | NO - normally open |
| body materials | galvanized steel, nickel plated steel, without non-ferrous metals, stainless steel |
| seal materials | NBR, PTFE, FPM, CR, EPDM, special materials |
| media | gaseous, liquid, highly viscous, contaminated |
| actuation | pneumatic actuation via 5/2-way pilot valve, hydraulic actuation via 4/2-way control valve |
| pilot valve interface | NAMUR / ISO 1 |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection pilot valve | plug acc. DIN EN 175301-803 form B, LED |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇒ B |
| | B ⇒ A (without actuation pressure Δp 16 bar max.) |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | special threads, special flanges, function NO, flush ports, leak ports, limit switches, manual override, approvals, mounting, special voltage, connector M12x1, explosion proof ATEX zone 1 and 2 cat. 3, pilot valve |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇒ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------------|--------------|----------------|---------------|----------------------|----------------|--------------------|---------------------|---------------------------------------|
| VMK-H / VFK-H 15 | DN 15 | G 1/2 | PN 160 / 250 | 0 - 200 | 5,6 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 50-3000 / 50-3000 |
| VMK-H / VFK-H 20 | DN 20 | G 3/4 | PN 160 / 250 | 0 - 200 | 7,7 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 50-3000 / 50-3000 |
| VMK-H / VFK-H 25 | DN 25 | G 1 | PN 160 / 250 | 0 - 200 | 12,6 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 50-3000 / 50-3000 |
| VMK-H / VFK-H 40 | DN 40 | G 1 1/2 | PN 160 / 250 | 0 - 200 | 31,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 100-3000 / 100-3000 |
| VMK-H / VFK-H 50 | DN 50 | G 2 | PN 160 / 250 | 0 - 200 | 43,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 100-3000 / 100-3000 |
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high pressure

length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|------------------|-----------------|-----------------|--------------------------|----------------------------|---------------------------|-----------------|
| VMK-H / VFK-H 15 | thread / flange | 195 mm / 265 mm | 225 mm / 295 mm | 225 mm / 295 mm | 215 mm / 285 mm | via pilot valve |
| VMK-H / VFK-H 20 | thread / flange | 215 mm / 288 mm | 245 mm / 318 mm | 245 mm / 318 mm | - | via pilot valve |
| VMK-H / VFK-H 25 | thread / flange | 230 mm / 305 mm | 260 mm / 335 mm | 260 mm / 335 mm | - | via pilot valve |
| VMK-H / VFK-H 40 | thread / flange | 312 mm / 385 mm | 312 mm / 385 mm | 312 mm / 385 mm | - | via pilot valve |
| VMK-H / VFK-H 50 | thread / flange | 312 mm / 385 mm | 312 mm / 385 mm | 312 mm / 385 mm | - | via pilot valve |
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series VMK-H / VFK-H DR high pressure valves

3/2-way valve

externally controlled

orifice

DN 15 - 50

pressure range

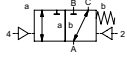
PN 0 - 200 bar

ports

threaded / flanged

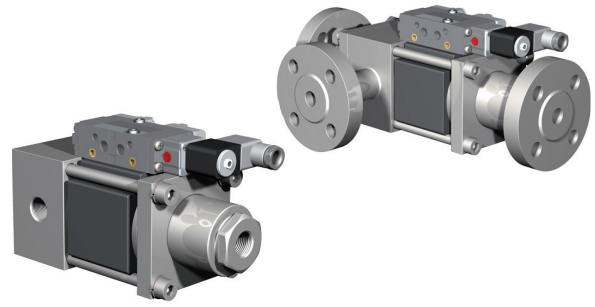
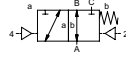
function **NC**

valve normally closed



function **NO**

valve normally open



specifications

| | |
|-----------------------------------|---|
| design | pressure balanced, with spring return, switching overlap |
| function | DR NC - normally closed (A ⇌ B) DR NO - normally open (A ⇌ C) |
| body materials | galvanized steel, nickel plated steel, without non-ferrous metals, stainless steel |
| seal materials | NBR, PTFE, FPM, CR, EPDM, special materials |
| media | gaseous, liquid, highly viscous, contaminated |
| actuation | pneumatic actuation via 5/2-way pilot valve, hydraulic actuation via 4/2-way control valve |
| pilot valve interface | NAMUR / ISO 1 |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection pilot valve | plug acc. DIN EN 175301-803 form B, LED |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇌ B / A ⇌ C B ⇌ A (without actuation pressure Δp 16 bar max.) |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | special threads, special flanges, function NO, flush ports, leak ports, limit switches, manual override, approvals, mounting, special voltage, connector M12x1, explosion proof ATEX zone 1 and 2 cat. 3, pilot valve |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇌ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|---------------------|--------------|----------------|---------------|----------------------|----------------|--------------------|---------------------|---------------------------------------|
| VMK-H / VFK-H 15 DR | DN 15 | G 1/2 | PN 160 / 250 | 0 - 200 | 4,4 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 50-3000 / 50-3000 |
| VMK-H / VFK-H 20 DR | DN 20 | G 3/4 | PN 160 / 250 | 0 - 200 | 7,6 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 50-3000 / 50-3000 |
| VMK-H / VFK-H 25 DR | DN 25 | G 1 | PN 160 / 250 | 0 - 200 | 10,8 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 50-3000 / 50-3000 |
| VMK-H / VFK-H 40 DR | DN 40 | G 1 1/2 | PN 160 / 250 | 0 - 200 | 31,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 100-3000 / 100-3000 |
| VMK-H / VFK-H 50 DR | DN 50 | G 2 | PN 160 / 250 | 0 - 200 | 43,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 100-3000 / 100-3000 |
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length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|---------------------|-----------------|-----------------|--------------------------|----------------------------|---------------------------|-----------------|
| VMK-H / VFK-H 15 DR | thread / flange | 225 mm / 313 mm | 255 mm / 343 mm | 255 mm / 343 mm | - | via pilot valve |
| VMK-H / VFK-H 20 DR | thread / flange | 257 mm / 365 mm | 287 mm / 395 mm | 287 mm / 395 mm | - | via pilot valve |
| VMK-H / VFK-H 25 DR | thread / flange | 265 mm / 370 mm | 295 mm / 400 mm | 295 mm / 400 mm | - | via pilot valve |
| VMK-H / VFK-H 40 DR | thread / flange | 400 mm / 500 mm | 400 mm / 500 mm | 400 mm / 500 mm | - | via pilot valve |
| VMK-H / VFK-H 50 DR | thread / flange | 400 mm / 500 mm | 400 mm / 500 mm | 400 mm / 500 mm | - | via pilot valve |
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2/2-way valve

externally controlled

orifice

DN 10 - 15

pressure range

PN 0 - 500 bar

ports

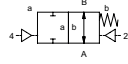
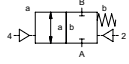
threaded

function NC

valve normally closed

function NO

valve normally open



specifications

| | |
|-----------------------------------|--|
| design | pressure balanced, with spring return |
| function | NC - normally closed NO - normally open |
| body materials | brass, stainless steel |
| seal materials | NBR, PTFE, FPM, CR, EPDM |
| media | gaseous, liquid |
| actuation | pneumatic actuation via 5/2-way pilot valve |
| actuator ports | G 1/8 |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection pilot valve | plug acc. DIN EN 175301-803 form B, LED |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇌ B B ⇌ A (upon request) |
| vacuum | leak rate < 10 ⁻⁴ mbar•l•s ⁻¹ |
| options / accessories | function NO, limit switches, special voltage, connector M12x1, explosion proof ATEX zone 1 and 2 cat. 3, pilot valve |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇌ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------|---------------|----------------------|----------------|--------------------|---------------------|---------------------------------------|
| PCD 10 | DN 10 | G 3/8 | - | 0 - 250 | 1,5 m³/h | -10 °C ... +150 °C | -10 °C ... +150 °C | 30-3000 / 30-3000 |
| PCD-H 10 | DN 10 | G 3/8 | - | 0 - 500 | 1,5 m³/h | -10 °C ... +150 °C | -10 °C ... +150 °C | 30-3000 / 30-3000 |
| PCD-H 15 | DN 15 | G 1/2 - G 3/4 | - | 0 - 500 | 3,5 m³/h | -10 °C ... +150 °C | -10 °C ... +150 °C | 30-3000 / 30-3000 |
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length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|------------|--------|----------|--------------------------|----------------------------|---------------------------|-----------------|
| PCD 10 | thread | 70 mm | - | - | - | via pilot valve |
| PCD-H 10 | thread | 80 mm | - | - | - | via pilot valve |
| PCD-H 15 | thread | 100 mm | - | - | - | via pilot valve |
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The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.



high pressure

series PCD / PCD-H DR high pressure valves

3/2-way valve

externally controlled

orifice

DN 10 - 15

pressure range

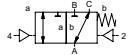
PN 0 - 500 bar

ports

threaded

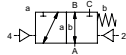
function **NC**

valve normally closed



function **NO**

valve normally open



specifications

| | |
|-----------------------------------|--|
| design | pressure balanced, with spring return, switching overlap |
| function | DR NC - normally closed (A ⇌ B) DR NO - normally open (A ⇌ B) |
| body materials | brass, stainless steel |
| seal materials | NBR, PTFE, FPM, CR, EPDM |
| media | gaseous, liquid |
| actuation | pneumatic actuation via 5/2-way pilot valve |
| actuator ports | G 1/8 |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection pilot valve | plug acc. DIN EN 175301-803 form B, LED |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇌ B / A ⇌ C B ⇌ A / C ⇌ A (upon request) |
| vacuum | leak rate < 10 ⁻⁴ mbar•l•s ⁻¹ |
| options / accessories | function NO, limit switches, special voltage, connector M12x1, explosion proof ATEX zone 1 and 2 cat. 3, pilot valve |

technical data

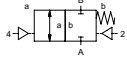
| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇌ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|-------------|--------------|----------------|---------------|----------------------|----------------|--------------------|---------------------|---------------------------------------|
| PCD 10 DR | DN 10 | G 3/8 | - | 0 - 250 | 1,5 m³/h | -10 °C ... +150 °C | -10 °C ... +150 °C | 30-3000 / 30-3000 |
| PCD-H 10 DR | DN 10 | G 3/8 | - | 0 - 500 | 1,5 m³/h | -10 °C ... +150 °C | -10 °C ... +150 °C | 30-3000 / 30-3000 |
| PCD-H 15 DR | DN 15 | G 1/2 - G 3/4 | - | 0 - 500 | 3,5 m³/h | -10 °C ... +150 °C | -10 °C ... +150 °C | 30-3000 / 30-3000 |
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length

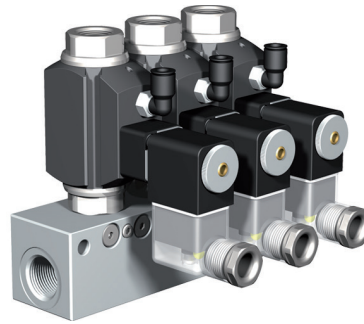
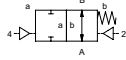
| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|-------------|--------|----------|--------------------------|----------------------------|---------------------------|-----------------|
| PCD 10 DR | thread | 70 mm | - | - | - | via pilot valve |
| PCD-H 10 DR | thread | 80 mm | - | - | - | via pilot valve |
| PCD-H 15 DR | thread | 100 mm | - | - | - | via pilot valve |
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2/2-way valve coaxial
externally controlled
orifice DN 8
pressure range PN 0 - 40 bar
ports threaded

function **NC**
valve normally closed



function **NO**
valve normally open



specifications

| | |
|-----------------------------------|---|
| design | pressure balanced, with spring return |
| function | NC - normally closed |
| | NO - normally open |
| body materials valve | brass |
| body materials manifold | aluminium |
| seal materials | NBR, FPM, PE, PU, PTFE |
| media | emulsions, oils, neutral gases |
| actuation | pneumatic actuation via 3/2-way pilot valve (5/2-way pilot valve separately) |
| pilot valve interface | co-ax |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection pilot valve | plug acc. DIN EN 175301-803 form B, LED |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇒ B |
| | B ⇒ A (without actuation pressure Δp 16 bar max.) |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | function NO, limit switches, manual override, mounting, special voltage, connector M12x1, explosion proof ATEX zone 1 and 2 cat. 3, pilot valve |

technical data

| co-ax type | orifice [mm] | valve ports threaded | manifold ports threaded | pressure range [bar] | Kv value A ⇒ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------------|-------------------------|----------------------|----------------|--------------------|---------------------|---------------------------------------|
| CFM 08 | DN 8 | G 3/8 | G 1/2 | 0 - 40 | 1,6 m³/h | -20 °C ... +120 °C | -20 °C ... +120 °C | 70 / 80 |
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length

| co-ax type | manifold 1-station | manifold 2-station | manifold 3-station | manifold 4-station | manifold 5-station | manifold 6-station | manifold 7-station | manifold 8-station | manifold segment |
|------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|------------------|
| CFM 08 | - | 100 mm | 140 mm | 180 mm | 215 mm | - | - | - | - |
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The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.



manifolds & modules

type MCF manifolds

2/2-way valve coaxial
externally controlled

orifice

DN 8

pressure range

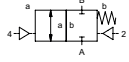
PN 0 - 100 bar

ports

threaded

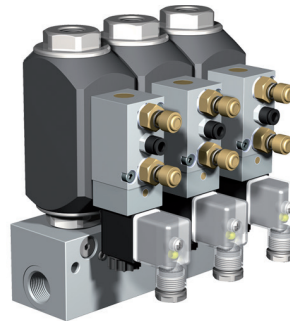
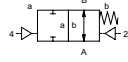
function **NC**

valve normally closed



function **NO**

valve normally open



specifications

| | |
|-----------------------------------|---|
| design | pressure balanced, with spring return |
| function | NC - normally closed NO - normally open |
| body materials valve | brass |
| body materials manifold | aluminium |
| seal materials | NBR, FPM, PTFE |
| media | emulsions, oils, neutral gases |
| actuation | pneumatic actuation via 5/2-way pilot valve |
| pilot valve interface | co-ax |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection pilot valve | plug acc. DIN EN 175301-803 form B, LED |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇌ B B ⇌ A (without actuation pressure Δp 16 bar max.) |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | function NO, limit switches, manual override, mounting, special voltage, connector M12x1, explosion proof ATEX zone 1 and 2 cat. 3, pilot valve |

technical data

| co-ax type | orifice [mm] | valve ports threaded | manifold ports threaded | pressure range [bar] | Kv value A ⇌ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------------|-------------------------|----------------------|-----------------------|--------------------|---------------------|---------------------------------------|
| MCF 08 | DN 8 | G 3/8 | G 1/2 | 0 - 100 | 1,6 m ³ /h | -20 °C ... +160 °C | -20 °C ... +160 °C | 30-3000 / 30-3000 |
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length

| co-ax type | manifold 1-station | manifold 2-station | manifold 3-station | manifold 4-station | manifold 5-station | manifold 6-station | manifold 7-station | manifold 8-station | manifold segment |
|------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|------------------|
| MCF 08 | - | 110 mm | 160 mm | 215 mm | 265 mm | - | - | - | - |
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The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.

2/2-way valve coaxial

direct actuated

orifice

DN 10 - 25

pressure range

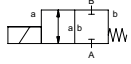
PN 0 - 100 bar

ports

threaded

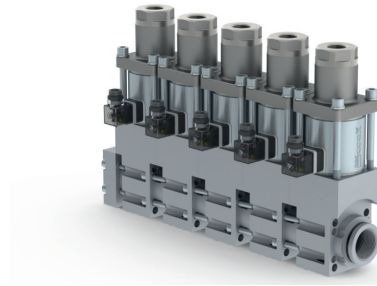
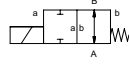
function NC

valve normally closed



function NO

valve normally open



specifications

| | |
|-----------------------|---|
| design | pressure balanced, with spring return |
| function | NC - normally closed |
| | NO - normally open |
| body materials valve | brass, galvanized steel, nickel plated brass, nickel plated steel, stainless steel |
| body materials module | aluminium, stainless steel |
| seal materials | NBR, PTFE, FPM, CR, EPDM, special materials |
| media | gaseous, liquid, highly viscous, contaminated |
| actuation | DC direct-current magnet |
| | AC direct-current magnet, with integrated rectifier |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection | plug acc. DIN EN 175301-803, form A, LED |
| insulation class | H - 180 °C |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇒ B |
| | B ⇒ A (Δp 16 bar max.) |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | special threads, function NO, damping, limit switches, manual override, mounting, special voltage, connector M12x1, |
| | terminal box, ATEX zone 2 cat. 3 max 80°C |

technical data

| co-ax type | orifice [mm] | valve ports threaded | manifold ports threaded | pressure range [bar] | Kv value A ⇒ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------------|-------------------------|------------------------|----------------|--------------------|---------------------|---------------------------------------|
| MK 10 | DN 10 | G 1/4 - G 3/4 | G 1 | 0 - 16 / 40 / 63 | 2,5 m³/h | -20 °C ... +120 °C | -10 °C ... +80 °C | 25 / 25 |
| MK 15 | DN 15 | G 3/8 - G 3/4 | G 1 | 0 - 16 / 40 / 63 / 100 | 6,0 m³/h | -20 °C ... +160 °C | -20 °C ... +80 °C | 80 / 80 |
| MK 20 | DN 20 | G 3/4 - G 1 1/4 | G 1 1/4 | 0 - 16 / 40 / 63 / 100 | 8,4 m³/h | -20 °C ... +160 °C | -20 °C ... +80 °C | 110 / 110 |
| MK 25 | DN 25 | G 1 - G 1 1/2 | G 1 1/2 | 0 - 16 / 40 / 63 / 100 | 13,0 m³/h | -20 °C ... +160 °C | -20 °C ... +80 °C | 130 / 130 |
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length

| co-ax type | module 1-station | module 2-station | module 3-station | module 4-station | module 5-station | module 6-station | module 7-station | module 8-station | module segment |
|------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------------|
| MK 10 | 75 mm | 128 mm | 181 mm | 234 mm | 287 mm | 340 mm | 393 mm | 446 mm | 53 mm |
| MK 15 | 110 mm | 182 mm | 254 mm | 326 mm | 398 mm | 470 mm | 542 mm | 614 mm | 72 mm |
| MK 20 | 125 mm | 209 mm | 293 mm | 377 mm | 461 mm | 545 mm | 629 mm | 713 mm | 84 mm |
| MK 25 | 145 mm | 239 mm | 333 mm | 427 mm | 521 mm | 615 mm | 709 mm | 803 mm | 94 mm |
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series VMK modules

2/2-way valve coaxial

externally controlled

orifice

DN 10 - 32

pressure range

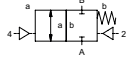
PN 0 - 100 bar

ports

threaded

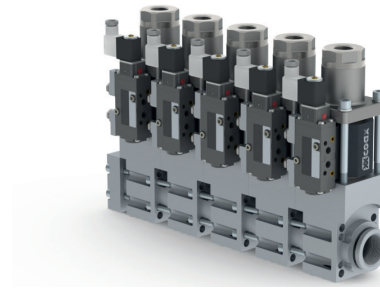
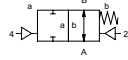
function NC

valve normally closed



function NO

valve normally open



specifications

| | |
|-----------------------------------|---|
| design | pressure balanced, with spring return |
| function | NC - normally closed |
| | NO - normally open |
| body materials valve | brass, galvanized steel, nickel plated brass, nickel plated steel, stainless steel |
| body materials module | aluminium, stainless steel |
| seal materials | NBR, PTFE, FPM, CR, EPDM, special materials |
| media | gaseous, liquid, highly viscous, contaminated |
| actuation | pneumatic actuation via 5/2-way pilot valve, hydraulic actuation via 4/2-way control valve |
| pilot valve interface | NAMUR / ISO 1 |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection pilot valve | plug acc. DIN EN 175301-803 form B, LED |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇒ B |
| | B ⇒ A (without actuation pressure Δp 16 bar max.) |
| vacuum | leak rate < 10^{-6} mbar•l•s ⁻¹ |
| options / accessories | special threads, function NO, flush ports, leak ports, limit switches, manual override, mounting, special voltage, connector M12x1, explosion proof ATEX zone 1 and 2 cat. 3, pilot valve |

technical data

| co-ax type | orifice [mm] | valve ports threaded | manifold ports threaded | pressure range [bar] | Kv value A ⇒ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------------|-------------------------|------------------------|----------------|--------------------|---------------------|---------------------------------------|
| VMK 10 | DN 10 | G 1/4 - G 3/4 | G 1 | 0 - 16 / 40 / 63 / 100 | 2,5 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 30-3000 / 50-3000 |
| VMK-H10 | DN 10 | G 3/8 - G 1/2 | G 1/2 | 0 - 200 | 3,5 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 30-3000 / 50-3000 |
| VMK 15 | DN 15 | G 3/8 - G 3/4 | G 1 | 0 - 16 / 40 / 63 / 100 | 5,7 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 50-3000 / 50-3000 |
| VMK 20 | DN 20 | G 3/4 - G 1 1/4 | G 1 1/4 | 0 - 16 / 40 / 63 / 100 | 8,8 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 50-3000 / 50-3000 |
| VMK 25 | DN 25 | G 1 - G 1 1/2 | G 1 1/2 | 0 - 16 / 40 / 63 / 100 | 13,3 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 50-3000 / 50-3000 |
| VMK 32 | DN 32 | G 1 1/4 - G 1 1/2 | G 1 1/2 | 0 - 16 / 40 / 63 / 100 | 20,0 m³/h | -20 °C ... +160 °C | -20 °C ... +160 °C | 100-3000 / 100-3000 |
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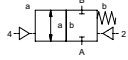
length

| co-ax type | module 1-station | module 2-station | module 3-station | module 4-station | module 5-station | module 6-station | module 7-station | module 8-station | module segment |
|------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------------|
| VMK 10 | 75 mm | 128 mm | 181 mm | 234 mm | 287 mm | 340 mm | 393 mm | 446 mm | 53 mm |
| VMK-H10 | 116 mm | 194 mm | 272 mm | 350 mm | 428 mm | 506 mm | 584 mm | 662 mm | 78 mm |
| VMK 15 | 110 mm | 182 mm | 254 mm | 326 mm | 398 mm | 470 mm | 542 mm | 614 mm | 72 mm |
| VMK 20 | 125 mm | 209 mm | 293 mm | 377 mm | 461 mm | 545 mm | 629 mm | 713 mm | 84 mm |
| VMK 25 | 145 mm | 239 mm | 333 mm | 427 mm | 521 mm | 615 mm | 709 mm | 803 mm | 94 mm |
| VMK 32 | 145 mm | 239 mm | 333 mm | 427 mm | 521 mm | 615 mm | 709 mm | 803 mm | 94 mm |
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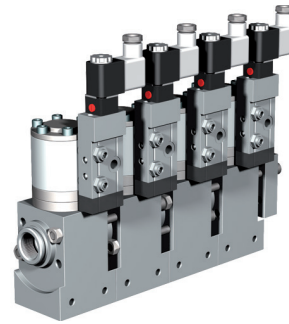
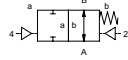
The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.

2/2-way valve cartridge
externally controlled
orifice DN 10 - 15
pressure range PN 0 - 100 bar
ports threaded

function **NC**
valve normally closed



function **NO**
valve normally open



specifications

| | |
|-----------------------------------|--|
| design | pressure balanced, with spring return |
| function | NC - normally closed NO - normally open |
| body materials valve | stainless steel |
| body materials module | aluminium |
| seal materials | PU, NBR, PTFE, PE, FPM, EPDM, special materials |
| media | gaseous, liquid, highly viscous, contaminated |
| actuation | pneumatic actuation via 5/2-way pilot valve, hydraulic actuation via 4/2-way control valve |
| actuator ports | G 1/8 (pneumatic actuation), G 1/4 (hydraulic actuation, via adapter) |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection pilot valve | plug acc. DIN EN 175301-803 form B, LED |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇌ B B ⇌ A |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | function NO, leak ports, limit switches, manual override, mounting, special voltage, connector M12x1, explosion proof ATEX zone 1 and 2 cat. 3, manual stroke adjustment, bypass with adjustable throttle, pilot valve |

technical data

| co-ax type | orifice [mm] | valve ports threaded | manifold ports threaded | pressure range [bar] | Kv value A ⇌ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------------|-------------------------|----------------------|----------------|--------------------|---------------------|---------------------------------------|
| PCD-1 10 | DN 10 | G 1/2 | G 3/4 | 0 - 50 | 3,0 m³/h | -20 °C ... +150 °C | -20 °C ... +150 °C | 30-3000 / 30-3000 |
| PCD-2 10 | DN 10 | G 1/2 | G 3/4 | 0 - 100 | 3,0 m³/h | -20 °C ... +150 °C | -20 °C ... +150 °C | 30-3000 / 30-3000 |
| PCD-1 15 | DN 15 | G 3/4 | G 1 | 0 - 50 | 6,0 m³/h | -20 °C ... +150 °C | -20 °C ... +150 °C | 100-3000 / 100-3000 |
| PCD-2 15 | DN 15 | G 3/4 | G 1 | 0 - 100 | 6,0 m³/h | -20 °C ... +150 °C | -20 °C ... +150 °C | 100-3000 / 100-3000 |
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length

| co-ax type | module 1-station | module 2-station | module 3-station | module 4-station | module 5-station | module 6-station | module 7-station | module 8-station | module segment |
|------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------------|
| PCD-1 10 | 106,5 mm | 176,5 mm | 246,5 mm | 316,5 mm | 386,5 mm | 456,5 mm | 526,5 mm | 596,5 mm | 70 mm |
| PCD-2 10 | 106,5 mm | 176,5 mm | 246,5 mm | 316,5 mm | 386,5 mm | 456,5 mm | 526,5 mm | 596,5 mm | 70 mm |
| PCD-1 15 | 130 mm | 222mm | 314 mm | 406 mm | 498 mm | 590 mm | 682 mm | 774 mm | 92 mm |
| PCD-2 15 | 130 mm | 222mm | 314 mm | 406 mm | 498 mm | 590 mm | 682 mm | 774 mm | 92 mm |
| | | | | | | | | | |
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The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.



series PCS modules

2/2-way valve cartridge

externally controlled

orifice

DN 10 - 15

pressure range

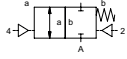
PN 0 - 100 bar

ports

threaded

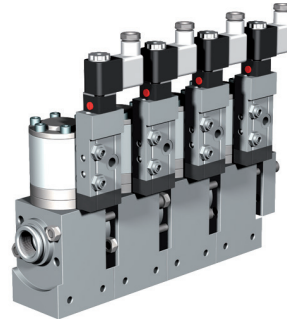
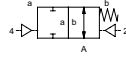
function **NC**

valve normally closed



function **NO**

valve normally open



specifications

| | |
|-----------------------------------|--|
| design | pressure balanced, with spring return |
| function | NC - normally closed |
| | NO - normally open |
| body materials valve | stainless steel |
| body materials module | aluminium |
| seal materials | HNBR, FPM, EPDM, special materials |
| media | gaseous, liquid, highly viscous, contaminated |
| actuation | pneumatic actuation via 5/2-way pilot valve, hydraulic actuation via 4/2-way control valve |
| actuator ports | G 1/8 (pneumatic actuation), G 1/4 (hydraulic actuation, via adapter) |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection pilot valve | plug acc. DIN EN 175301-803 form B, LED |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇌ B |
| | B ⇌ A |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | function NO, leak ports, limit switches, manual override, mounting, special voltage, connector M12x1, explosion proof ATEX zone 1 and 2 cat. 3, manual stroke adjustment, bypass with adjustable throttle, pilot valve |

technical data

| co-ax type | orifice [mm] | valve ports threaded | manifold ports threaded | pressure range [bar] | Kv value A ⇌ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------------|-------------------------|----------------------|----------------|--------------------|---------------------|---------------------------------------|
| PCS-1 10 | DN 10 | G 1/2 | G 3/4 | 0 - 50 | 3,0 m³/h | -20 °C ... +150 °C | -20 °C ... +150 °C | 30-3000 / 30-3000 |
| PCS-2 10 | DN 10 | G 1/2 | G 3/4 | 0 - 100 | 3,0 m³/h | -20 °C ... +150 °C | -20 °C ... +150 °C | 30-3000 / 30-3000 |
| PCS-1 15 | DN 15 | G 3/4 | G 1 | 0 - 50 | 6,0 m³/h | -20 °C ... +150 °C | -20 °C ... +150 °C | 100-3000 / 100-3000 |
| PCS-2 15 | DN 15 | G 3/4 | G 1 | 0 - 100 | 6,0 m³/h | -20 °C ... +150 °C | -20 °C ... +150 °C | 100-3000 / 100-3000 |
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length

| co-ax type | module 1-station | module 2-station | module 3-station | module 4-station | module 5-station | module 6-station | module 7-station | module 8-station | module segment |
|------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------------|
| PCS-1 10 | 106,5 mm | 176,5 mm | 246,5 mm | 316,5 mm | 386,5 mm | 456,5 mm | 526,5 mm | 596,5 mm | 70 mm |
| PCS-2 10 | 106,5 mm | 176,5 mm | 246,5 mm | 316,5 mm | 386,5 mm | 456,5 mm | 526,5 mm | 596,5 mm | 70 mm |
| PCS-1 15 | 130 mm | 222mm | 314 mm | 406 mm | 498 mm | 590 mm | 682 mm | 774 mm | 92 mm |
| PCS-2 15 | 130 mm | 222mm | 314 mm | 406 mm | 498 mm | 590 mm | 682 mm | 774 mm | 92 mm |
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pressure limitation valve

manual externally controlled

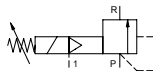
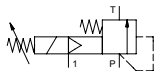
orifice DN 8 - 65

pressure range PN 0 - 200 bar

ports threaded / flanged

(3-) HPB 15 / 32 / 50

(3-) HPB 08 / 65



specifications

| | |
|-----------------------------------|---|
| design | externally controlled, with / without spring return |
| function | manual stepless pressure regulation |
| body materials | brass, galvanized steel |
| seal materials | NBR, PTFE, FPM, special materials |
| media | liquid, highly viscous, contaminated |
| control | via 3/2-way pilot valve during low pressure circulation mode, manual stepless pressure regulation |
| actuator ports | G 1/8 |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection pilot valve | plug acc. DIN EN 175301-803 form B, LED |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | P ⇒ T / P ⇒ R |
| options / accessories | SAE - connection, security valve, mounting, special voltage, connector M12x1, two pressure regulator, pilot valve |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure regulation range [bar] | Kv value | media temperature | ambient temperature | operating time [ms] |
|---------------------|--------------|----------------|---------------|---------------------------------|-----------|-------------------|---------------------|---------------------|
| (3-) HPB 08 | DN 8 | G 3/8 | - | 10 - 200 | 1,1 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 200 |
| (3-) HPB-H 12 - 160 | DN 12 | G 1 | DIN ISO 6162 | 10 - 160 | 5,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 900 |
| (3-) HPB-H 12 - 200 | DN 12 | G 1 | DIN ISO 6162 | 10 - 200 | 5,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 900 |
| (3-) HPB-N 15 | DN 15 | G 1 | DIN ISO 6162 | 1 - 16 | 6,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 900 |
| (3-) HPB-S 15 | DN 15 | G 1 | DIN ISO 6162 | 5 - 63 | 6,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 900 |
| (3-) HPB-H 15 | DN 15 | G 1 | DIN ISO 6162 | 5 - 120 | 6,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 900 |
| (3-) HPB-N 32 | DN 32 | G 1 1/2 | DIN ISO 6162 | 1 - 16 | 24,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 900 |
| (3-) HPB-S 32 | DN 32 | G 1 1/2 | DIN ISO 6162 | 5 - 63 | 24,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 900 |
| (3-) HPB-H 32 | DN 32 | G 1 1/2 | DIN ISO 6162 | 5 - 120 | 14,4 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 900 |
| (3-) HPB-S 50 | DN 50 | G 1 1/2 | DIN ISO 6162 | 5 - 63 | 48,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 900 |
| (3-) HPB 65 | DN 65 | - | PN 63 | 5 - 63 | 60,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 900 |

length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|---------------|-----------------|-----------------|--------------------------|----------------------------|---------------------------|-----------------|
| (3-) HPB 08 | thread | Ø 74 mm | - | - | - | via pilot valve |
| (3-) HPB-H 12 | thread / flange | 97 mm / 97 mm | - | - | - | via pilot valve |
| (3-) HPB 15 | thread / flange | 97 mm / 97 mm | - | - | - | via pilot valve |
| (3-) HPB 32 | thread / flange | 160 mm / 160 mm | - | - | - | via pilot valve |
| (3-) HPB-S 50 | thread / flange | 160 mm / 160 mm | - | - | - | via pilot valve |
| (3-) HPB 65 | flange | 210 mm | - | - | - | via pilot valve |



control

series SPB control valves - for pressure limitation (bypass)

pressure limitation valve

proportional externally controlled

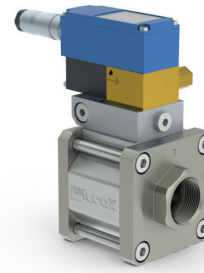
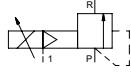
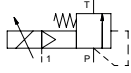
orifice DN 8 - 65

pressure range PN 0 - 200 bar

ports threaded / flanged

SPB 15 / 32 / 50

SPB 08 / 65



specifications

| | |
|-----------------------------------|--|
| design | externally controlled, with / without spring return |
| function | stepless pressure regulation via control signal |
| body materials | brass, galvanized steel |
| seal materials | NBR, PTFE, FPM, special materials |
| media | liquid, highly viscous, contaminated |
| control | via 3/2-way proportional valve / 0 - 10 V |
| actuator ports | G 1/8 |
| nominal voltage | DC 24 V |
| electrical connection pilot valve | plug with 7 contacts |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | P → T / P → R |
| | |
| | |
| | |
| | |
| | |
| options / accessories | SAE - connection, mounting, actuation pressure gauge, transmitter of set point value |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure regulation range [bar] | Kv value | media temperature | ambient temperature | operating time [ms] |
|----------------|--------------|----------------|---------------|---------------------------------|-----------|-------------------|---------------------|---------------------|
| SPB 08 | DN 8 | G 3/8 | - | 10 - 160 / 200 | 1,1 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 200 |
| SPB-H 12 - 160 | DN 12 | G 1 | DIN ISO 6162 | 10 - 160 | 5,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 900 |
| SPB-H 12 - 200 | DN 12 | G 1 | DIN ISO 6162 | 10 - 200 | 5,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 900 |
| SPB-N 15 | DN 15 | G 1 | DIN ISO 6162 | 1 - 16 | 6,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 900 |
| SPB-S 15 | DN 15 | G 1 | DIN ISO 6162 | 5 - 63 | 6,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 900 |
| SPB-H 15 | DN 15 | G 1 | DIN ISO 6162 | 5 - 120 | 6,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 900 |
| SPB-N 32 | DN 32 | G 1 1/2 | DIN ISO 6162 | 1 - 16 | 24,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 900 |
| SPB-S 32 | DN 32 | G 1 1/2 | DIN ISO 6162 | 5 - 63 | 24,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 900 |
| SPB-H 32 | DN 32 | G 1 1/2 | DIN ISO 6162 | 5 - 120 | 14,4 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 900 |
| SPB-S 50 | DN 50 | G 1 1/2 | DIN ISO 6162 | 5 - 63 | 48,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 900 |
| SPB 65 | DN 65 | - | PN 63 | 5 - 63 | 60,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 900 |
| | | | | | | | | |
| | | | | | | | | |

length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|------------|-----------------|-----------------|--------------------------|----------------------------|---------------------------|-----------------|
| SPB 08 | thread | Ø 74 mm | - | - | - | - |
| SPB-H 12 | thread / flange | 97 mm / 97 mm | - | - | - | - |
| SPB 15 | thread / flange | 97 mm / 97 mm | - | - | - | - |
| SPB 32 | thread / flange | 160 mm / 160 mm | - | - | - | - |
| SPB-S 50 | thread / flange | 160 mm / 160 mm | - | - | - | - |
| SPB 65 | flange | 210 mm | - | - | - | - |
| | | | | | | |
| | | | | | | |

The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.

pressure reduction valve
 manual externally controlled
 orifice DN 8 - 32
 pressure range PN 0 - 200 bar
 ports threaded



(3-) HPI / HPP PC



specifications

| | |
|-----------------------------------|--|
| design | externally controlled, with spring return |
| function | manual stepless pressure regulation |
| body materials | aluminium, brass, stainless steel |
| seal materials | NBR, PTFE, FPM, EPDM, special materials |
| media | gaseous, liquid, highly viscous, contaminated |
| control | via 3/2-way pilot valve during low pressure circulation mode, manual stepless pressure regulation |
| actuator ports | G 1/8 |
| nominal voltage | DC 24 V / AC 230 V |
| electrical connection pilot valve | plug acc. DIN EN 175301-803 form B, LED |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A → B |
| options / accessories | valve body, approvals, mounting, special voltage, connector M12x1, two pressure regulator, pilot valve |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure regulation range [bar] | Kv value max. | media temperature | ambient temperature | operating time [ms] |
|------------------|--------------|----------------|---------------|---------------------------------|---------------|-------------------|---------------------|---------------------|
| (3-) HPI 08 | DN 8 | G 3/8 | - | 10 - 200 | 1,3 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 100 |
| (3-) HPP-1 15 PC | DN 15 | G 1/2 - G 3/4 | - | 5 - 40 | 6,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 200 |
| (3-) HPP-2 15 PC | DN 15 | G 1/2 - G 3/4 | - | 5 - 80 | 6,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 200 |
| (3-) HPP-3 15 PC | DN 15 | G 1/2 - G 3/4 | - | 5 - 100 | 6,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 200 |
| (3-) HPI-1 32 | DN 32 | G 1 1/2 | - | 5 - 40 | 24,3 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 200 |
| (3-) HPI-2 32 | DN 32 | G 1 1/2 | - | 5 - 100 | 24,3 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 200 |

length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|------------------|--------|----------|--------------------------|----------------------------|---------------------------|-----------------|
| (3-) HPI 08 | thread | Ø 74 mm | - | - | - | via pilot valve |
| (3-) HPP-1 15 PC | thread | 80 mm | - | - | - | via pilot valve |
| (3-) HPP-2 15 PC | thread | 80 mm | - | - | - | via pilot valve |
| (3-) HPP-3 15 PC | thread | 80 mm | - | - | - | via pilot valve |
| (3-) HPI-1 32 | thread | Ø 129 mm | - | - | - | via pilot valve |
| (3-) HPI-2 32 | thread | Ø 129 mm | - | - | - | via pilot valve |



control

The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.

series SPI / SPP PC control valves - for pressure reduction (inline)

pressure reduction valve

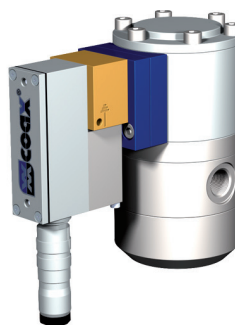
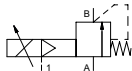
proportional externally controlled

orifice DN 8 - 32

pressure range PN 0 - 200 bar

ports threaded

SPI / SPP PC



specifications

| | |
|-----------------------------------|---|
| design | externally controlled, with spring return |
| function | stepless pressure regulation via control signal |
| body materials | aluminium, brass, stainless steel |
| seal materials | NBR, PTFE, FPM, EPDM, special materials |
| media | gaseous, liquid, highly viscous, contaminated |
| control | via 3/2-way proportional valve / 0 - 10 V |
| actuator ports | G 1/8 |
| nominal voltage | DC 24 V |
| electrical connection pilot valve | plug with 7 contacts |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| flow direction | A ⇒ B |
| | |
| | |
| | |
| | |
| options / accessories | valve body, approvals, mounting, transmitter of set point value |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure regulation range [bar] | Kv value max. | media temperature | ambient temperature | operating time [ms] |
|-------------|--------------|----------------|---------------|---------------------------------|---------------|-------------------|---------------------|---------------------|
| SPI 08 | DN 8 | G 3/8 | - | 10 - 200 | 1,3 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 100 |
| SPP-1 15 PC | DN 15 | G 1/2 - G 3/4 | - | 5 - 40 | 6,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 200 |
| SPP-2 15 PC | DN 15 | G 1/2 - G 3/4 | - | 5 - 80 | 6,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 200 |
| SPP-3 15 PC | DN 15 | G 1/2 - G 3/4 | - | 5 - 100 | 6,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 200 |
| SPI-1 32 | DN 32 | G 1 1/2 | - | 5 - 40 | 24,3 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 200 |
| SPI-2 32 | DN 32 | G 1 1/2 | - | 5 - 100 | 24,3 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 200 |
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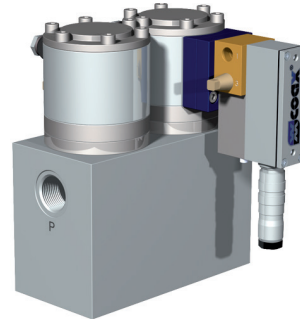
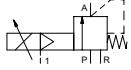
length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|-------------|--------|----------|--------------------------|----------------------------|---------------------------|-----------------|
| SPI 08 | thread | Ø 74 mm | - | - | - | - |
| SPP-1 15 PC | thread | 80 mm | - | - | - | - |
| SPP-2 15 PC | thread | 80 mm | - | - | - | - |
| SPP-3 15 PC | thread | 80 mm | - | - | - | - |
| SPI-1 32 | thread | Ø 129 mm | - | - | - | - |
| SPI-2 32 | thread | Ø 129 mm | - | - | - | - |
| | | | | | | |
| | | | | | | |

3/2-way pressure control valve
proportional externally controlled

orifice DN 15
pressure range PN 0 - 100 bar
ports threaded

SPP 15 DR



specifications

| | |
|-----------------------------------|---|
| design | externally controlled, with spring return, switching overlap |
| function | stepless pressure regulation via control signal |
| body materials | aluminium |
| seal materials | EPDM, PU, HNBR, FPM |
| media | gaseous, liquid |
| control | via 3/2-way proportional valve / 0 - 10 V |
| actuator ports | G 1/8 |
| nominal voltage | DC 24 V |
| electrical connection pilot valve | plug with 7 contacts |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % |
| options / accessories | valve body, approvals, mounting, transmitter of set point value |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure regulation range [bar] | Kv value max. | media temperature | ambient temperature | operating time [ms] |
|-------------|--------------|----------------|---------------|---------------------------------|---------------|-------------------|---------------------|---------------------|
| SPP-1 15 DR | DN 15 | G 3/4 | - | 5 - 40 | 6,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 200 |
| SPP-2 15 DR | DN 15 | G 3/4 | - | 5 - 100 | 6,0 m³/h | 0 °C ... +60 °C | 0 °C ... +50 °C | < 200 |

length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|-------------|--------|----------|--------------------------|----------------------------|---------------------------|-----------------|
| SPP-1 15 DR | thread | 165 mm | - | - | - | - |
| SPP-2 15 DR | thread | 165 mm | - | - | - | - |

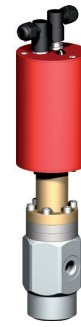


control

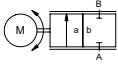
The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.

series RMQ control valves

positioning
 direct actuated
 orifice DN 1 - 32
 pressure range PN 0 - 63 bar
 ports threaded



RMQ



specifications

| | |
|-----------------------|---|
| design | direct actuated with integrated 3-point-regulation |
| function | stepless stroke regulation via control signal |
| body materials | aluminium, brass, stainless steel |
| seal materials | PU, HNBR, FPM, PTFE |
| media | gaseous, liquid, highly viscous |
| control signals | I _E 0-20 mA / 4-20 mA U _E 0 - 10 V |
| nominal voltage | AC / DC 24 V |
| electrical connection | concentric socket acc. DIN 40040 with 5 contacts, M12x1 |
| enclosure protection | IP 65 |
| energized duty rating | ED 100 % (after release from manufacturer) |
| | |
| | |
| | |
| | |
| | |
| | |
| options / accessories | approvals, mounting, actual value output |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure regulation range [bar] | Kv value A ⇌ B | media temperature | ambient temperature | operating time [s] |
|------------|--------------|-------------------|---------------|---------------------------------|----------------|-------------------|---------------------|--------------------|
| RMQ 10 | DN 1 | G 3/8 | - | 0 - 25 | 0,8 l/min | 0 °C ... +80 °C | 0 °C ... +70 °C | 3,5 |
| RMQ 10 | DN 2 | G 3/8 | - | 0 - 25 | 1,8 l/min | 0 °C ... +80 °C | 0 °C ... +70 °C | 5,0 |
| RMQ 10 | DN 3 | G 3/8 | - | 0 - 25 | 3,5 l/min | 0 °C ... +80 °C | 0 °C ... +70 °C | 5,0 |
| RMQ 10 | DN 4 | G 3/8 | - | 0 - 25 | 5,7 l/min | 0 °C ... +80 °C | 0 °C ... +70 °C | 7,0 |
| RMQ 10 | DN 5 | G 3/8 | - | 0 - 25 | 9,0 l/min | 0 °C ... +80 °C | 0 °C ... +70 °C | 8,5 |
| RMQ 10 | DN 6 | G 3/8 | - | 0 - 25 | 15,0 l/min | 0 °C ... +80 °C | 0 °C ... +70 °C | 12,0 |
| RMQ 10 | DN 8 | G 3/8 | - | 0 - 25 | 26,0 l/min | 0 °C ... +80 °C | 0 °C ... +70 °C | 16,0 |
| RMQ 10 | DN 10 | G 3/8 | - | 0 - 25 | 45,0 l/min | 0 °C ... +80 °C | 0 °C ... +70 °C | 7,5 |
| RMQ 15 | DN 15 | G 1/2 - G 3/4 | - | 0 - 25 | 5,9 m³/h | 0 °C ... +80 °C | 0 °C ... +70 °C | 13,0 |
| RMQ 20 | DN 20 | G 3/4 - G 1 | - | 0 - 16 / 63 | 7,3 m³/h | -20 °C ... +80 °C | 0 °C ... +70 °C | 3,0 |
| RMQ 32 | DN 32 | G 1 1/4 - G 1 1/2 | - | 0 - 16 / 63 | 20,0 m³/h | -20 °C ... +80 °C | 0 °C ... +70 °C | 3,5 |
| | | | | | | | | |

length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|------------|--------|----------|--------------------------|----------------------------|---------------------------|-----------------|
| RMQ 10 | thread | 60 mm | - | - | - | - |
| RMQ 15 | thread | 80 mm | - | - | - | - |
| RMQ 20 | thread | 217 mm | - | - | - | - |
| RMQ 32 | thread | 269 mm | - | - | - | - |
| | | | | | | |
| | | | | | | |
| | | | | | | |

2/2-way valve
externally controlled
orifice DN 15 - 100
pressure range PN 0 - 64 bar
ports flanged



special application: hot gas filtration / filter cleaning of coal gasification in coal power stations

special features: - fast opening and closing
- hermetically sealed to the outside
- extremely wear-resistant valve seats

specifications

| | |
|-----------------------|---|
| design | externally controlled, with spring return |
| function | NC - normally closed / NO - normally open (to DN 50) |
| body materials | nickel plated steel, stainless steel |
| seal materials | FPM, graphite, metal bellow (1.4571) |
| media | gaseous |
| actuation | pneumatic actuation via 5/2-way pilot valve |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | special flanges, function NO, limit switches, manual override, approvals, special voltage, connector M12x1, pilot valve |

technical data

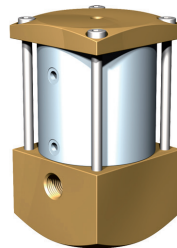
| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇌ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------|-----------------------|----------------------|----------------|--------------------|---------------------|---------------------------------------|
| V2 | DN 15 | - | PN 16 / 40 / 63 | 0 - 63 | 7,5 m³/h | -20 °C ... +400 °C | -20 °C ... +60 °C | 60 / 60 |
| V2 | DN 25 | - | PN 16 / 40 / 63 | 0 - 63 | 15,0 m³/h | -20 °C ... +400 °C | -20 °C ... +60 °C | 60 / 60 |
| V2 | DN 40 | - | PN 16 / 40 / 63 | 0 - 63 | 36,0 m³/h | -20 °C ... +400 °C | -20 °C ... +60 °C | 60 / 60 |
| V2 | DN 50 | - | PN 16 / 40 / 63 | 0 - 63 | 46,0 m³/h | -20 °C ... +400 °C | -20 °C ... +60 °C | 60 / 60 |
| V2 | DN 80 | - | PN 16 / 40 / 63 / 100 | 0 - 63 / 100 | 200,0 m³/h | -20 °C ... +250 °C | -20 °C ... +60 °C | 100 / 100 |
| V2 | DN 100 | - | PN 16 / 40 / 63 / 100 | 0 - 63 / 100 | 220,0 m³/h | -20 °C ... +250 °C | -20 °C ... +60 °C | 100 / 100 |

length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|---------------|--------|-----------------|--------------------------|----------------------------|---------------------------|-----------------|
| V2 DN 15 - 50 | flange | 140 mm / 140 mm | 140 mm / 140 mm | 140 mm / 140 mm | - | via pilot valve |
| V2 DN 80 | flange | 200 mm / 200 mm | 200 mm / 200 mm | 200 mm / 200 mm | - | via pilot valve |

type LVP 06 special valves

2/2-way valve
externally controlled
orifice DN 6
pressure range PN 0 - 500 bar
ports threaded



special application: gas filling technology, petrochemical process technology

special features: - simple and compact design
- high pressure range up to 500 bar

specifications

| | |
|-----------------------|--|
| design | externally controlled, with spring return |
| function | NC - normally closed / NO - normally open |
| body materials | brass |
| seal materials | EPDM, NBR, FPM |
| media | gaseous |
| actuation | pneumatic actuation via 3/2-way pilot valve up to PN 250 bar. > PN 250 bar via 5/2-way pilot valve |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | function NO, limit switches, manual override, approvals, mounting, adapter, pilot valve |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇌ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------|---------------|----------------------|----------------|-------------------|---------------------|---------------------------------------|
| LVP 06 | DN 6 | G 1/4 | - | 0 - 500 | 0,42 m³/h | -20 °C ... +80 °C | -20 °C ... +80 °C | 100-3000 / 100-3000 |

length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|------------|--------|----------|--------------------------|----------------------------|---------------------------|-----------------|
| LVP 06 | thread | 60 mm | 60 mm | 60 mm | - | via pilot valve |

The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.



special

type PCB-1 10 special valves

2/2-way valve

externally controlled

orifice DN 10

pressure range PN 0 - 25 bar

ports threaded



special application: glue application and bonding, coolant supply on machine tools up to 25 bar

special features: - hermetically sealed to the outside
- wear-resistant valve seats
- can be mounted in a block

specifications

| | |
|-----------------------|--|
| design | externally controlled, with spring return |
| function | NC - normally closed / NO - normally open |
| body materials | aluminium, stainless steel |
| seal materials | EPDM, NBR, FPM, metal bellow (1.4571) |
| media | gaseous, liquid, highly viscous, gelatinous, pasty, contaminated |
| actuation | pneumatic actuation via 5/2-way pilot valve |
| vacuum | leak rate <math> < 10^{-6} \text{ mbar} \cdot \text{l} \cdot \text{s}^{-1}</math> |
| options / accessories | special threads, function NO, leak ports, limit switches, manual override, approvals, special voltage, pilot valve |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇌ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------|---------------|----------------------|----------------|--------------------|---------------------|---------------------------------------|
| PCB-1 10 | DN 10 | G 3/8 | - | 0 - 25 | 3,0 m³/h | -20 °C ... +150 °C | -20 °C ... +150 °C | 30-3000 / 30-3000 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|------------|--------|----------|--------------------------|----------------------------|---------------------------|-----------------|
| PCB-1 10 | thread | 60 mm | 60 mm | 60 mm | - | via pilot valve |
| | | | | | | |

type PLB 05 special valves

2/2-way valve

externally controlled

orifice DN 5

pressure range PN 0 - 25 bar

ports threaded



special application: glue laminated timber, glue laminated beam, bonding technology

special features: - hermetically sealed to the outside
- wear-resistant valve seats
- can be mounted in a block

specifications

| | |
|-----------------------|---|
| design | externally controlled, with spring return |
| function | NC - normally closed |
| body materials | aluminium, stainless steel |
| seal materials | EPDM, NBR, FPM, metal bellow (1.4571) |
| media | liquid, pasty |
| actuation | pneumatic actuation via 5/2-way pilot valve |
| vacuum | low vacuum |
| options / accessories | pilot valve |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇌ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------|---------------|----------------------|----------------|-------------------|---------------------|---------------------------------------|
| PLB 05 | DN 5 | G 1/4 - G 3/8 | - | 0 - 25 | 1,08 m³/h | -20 °C ... +60 °C | -20 °C ... +60 °C | 50 / 50 |
| | | | | | | | | |

length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|------------|--------|----------|--------------------------|----------------------------|---------------------------|-----------------|
| PLB 05 | thread | 124 mm | - | - | - | - |
| | | | | | | |

The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.

3/2-way valve
 direct actuated
 orifice DN 10
 pressure range vacuum
 ports threaded



special application: vacuum engineering
special features: - pulse acting
 - bi-stable
 - insensitive to dirt

specifications

| | |
|-----------------------|---|
| design | pulse acting |
| body materials | aluminium |
| seal materials | NBR |
| media | gaseous |
| actuation | DC direct-current magnet |
| nominal voltage | DC 24 V |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | |

technical data

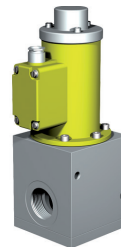
| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇌ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|----------------|---------------|----------------------|----------------|-------------------|---------------------|---------------------------------------|
| IV 10-3 | DN 10 | G 1/2 | - | vacuum max. 98% | - | -5 °C ... +60 °C | -5 °C ... +60 °C | 30 / 30 |

length

| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|------------|--------|----------|--------------------------|----------------------------|---------------------------|-----------------|
| IV 10-3 | thread | 142 mm | - | - | - | - |

type IV 16-3 special valves

3/2-way valve
 direct actuated
 orifice DN 20 - 32
 pressure range vacuum
 ports threaded



special application: vacuum engineering
special features: - pulse acting
 - bi-stable
 - insensitive to dirt

specifications

| | |
|-----------------------|---|
| design | pulse acting |
| body materials | aluminium |
| seal materials | NBR |
| media | gaseous |
| actuation | DC direct-current magnet |
| nominal voltage | DC 24 V |
| vacuum | leak rate < 10 ⁻⁶ mbar•l•s ⁻¹ |
| options / accessories | |

technical data

| co-ax type | orifice [mm] | ports threaded | ports flanged | pressure range [bar] | Kv value A ⇌ B | media temperature | ambient temperature | switching time [ms] opening / closing |
|------------|--------------|-------------------|---------------|----------------------|----------------|-------------------|---------------------|---------------------------------------|
| IV 16-3 | DN 20 | G 3/4 | - | vacuum max. 98% | - | -5 °C ... +60 °C | -5 °C ... +60 °C | 80 / 80 |
| IV 16-3 | DN 25 | G 1 | - | vacuum max. 98% | - | -5 °C ... +60 °C | -5 °C ... +60 °C | 80 / 80 |
| IV 16-3 | DN 32 | G 1 1/4 - G 1 1/2 | - | vacuum max. 98% | - | -5 °C ... +60 °C | -5 °C ... +60 °C | 80 / 80 |

length

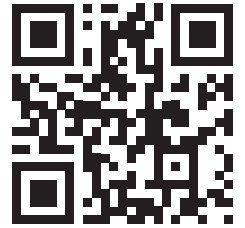
| co-ax type | ports | standard | 1 limit switch inductive | 2 limit switches inductive | 1 limit switch mechanical | manual override |
|------------|--------|----------|--------------------------|----------------------------|---------------------------|-----------------|
| IV 16-3 | thread | 273 mm | - | - | - | - |



special

The valve's technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.

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