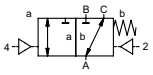
# coaxial valve

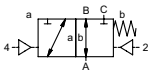
## type VMK 20 DR
## VFK 20 DR

**5-VMK 20 DR**
**5-VFK 20 DR**
**valve type with pilot valve**

| | |
|---|---|
| **3/2 way valve** | **externally controlled** |
| **pressure range** | PN 0-100 bar |
| **orifice** | DN 20 mm |
| **connection** | thread/flange |
| **function** | valve<br>normally closed (A ►B)<br>symbol **NC** |




valve
normally open (A ►B)
symbol **NO**




| | | |
|---|---|---|
| **design** | pressure balanced, with spring return, switching overlap | |
| **body materials** | ① brass | ② steel, galvanized |
| | ③ brass, nickel plated | ⑤ without non-ferr. metals |
| | ④ steel, nickel plated | ⑥ stainless steel |
| **valve seat** | synthetic resin on metal | |
| **seal materials** | NBR | PTFE, FPM, CR, EPDM |

⚠ Above stated body materials refer to the valve port connections that get in contact with the media only!

**details needed for main valve**
- orifice
- port
- function NC/NO
- operating pressure
- inlet pressure at A, B or C
- flow rate
- media
- media temperature
- ambient temperature
- type of actuation

**details needed for pneumatic actuation**
- nominal voltage
- type of protection
- actuation pressure range min/max
- low wattage coil, actuation pressure range 4-7 bar
- pilot valve type

**details needed for hydraulic actuation**
- actuation pressure range min/max
- hydraulic control valve function

## general specifications

| | | | options |
|---|---|---|---|
| **ports** | VMK | threads G 3/4 - G 1 1/4 | special threads |
| | VFK | flanges PN 16 / 40 / 100 | special flanges |
| **function** | | NC | NO |
| **pressure range** | bar | 0-16 / 0-40 / 0-64 / 0-100 | |
| | | A ⇨ B max. 100 / B ⇨ A max. 16 / A ⇨ C max. 100 / C ⇨ A max. 100 | |
| **Kv value** | m³/h | 8,3 | |
| **vacuum** | leak rate | | < $10^{-6}$ mbar•l•$s^{-1}$ |
| **pressure-vacuum** | $P_1$⇔ $P_2$ | | pressure side max. 100 bar<br>vacuum side leak rate upon request |
| **back pressure** | $P_2 > P_1$ | see pressure range | |
| **media** | | gaseous - liquid - highly viscous - gelatinous - pasty - contaminated | |
| **abrasive media** | | | version available |
| **damping** | opening | | |
| | closing | by throttles on pilot valve | |
| **flow direction** | | see pressure range | |
| **switching cycles** | 1/min | 200 | |
| **switching time** | ms | opening 50-3000 closing 50-3000 | |
| **media temperature** | °C | direct mounted pilot valve 60 | remote mounted pilot valve outside tempe- |
| **ambient temperature** | | direct mounted pilot valve 50 | ratur range of media max. 160 °C |
| **flush ports** | °C | | available |
| **leak ports** | | | available |
| **limit switches** | | | inductive / mechanical upon request |
| **manual override** | | via pilot valve | |
| **approvals** | | | LR/GL/WAZ |
| **mounting** | | | mounting brackets |
| **weight** | kg | VMK 5,8 VFK 7,2 | |
| **additional equipment** | | | upon request |

## electrical specifications

| | | | options |
|---|---|---|---|
| **nominal voltage** | $U_n$ | DC 24 V | special voltage upon request |
| | $U_n$ | AC 230 V 50 Hz | special voltage upon request |
| **power consumption** | DC | 4,8 W | 2,5 W |
| | AC | pick up 11,0 VA holding 8,5 VA | |
| **protection** | IP65 (P54) | acc. DIN 40050 | |
| **energized duty rating** | ED | 100% | |
| **connection** | | plug acc. DIN EN 175301-803 form B, 4 positions x90° / wire diameter 6-8 mm | |
| **optional** | M12x1 | connector acc. DESINA | connector acc. VDMA |
| **additional equipment** | | iluminated plug with varistor | |
| **max. temperature** | media | 60°C | |
| | ambient | 50°C | |
| **explosion proof** | E Ex e II T5 | nominal voltage $U_n$ | DC 24 V 3,25 W |
| | | power consumption | AC 230 V 50 Hz 2,90 W |

## pneumatic specifications

| | | | options |
|---|---|---|---|
| **actuation pressure range** | bar | 4-10 | |
| **air consumption** | cm³/stroke | 11 | |
| **cycle speed** | | main valve speed variable by throttleson pilot valve | |
| **control** | | preferably 5/2 way pilot valve | |
| **pilot valve interface** | | co-ax / NAMUR | ISO 1 |
| **actuator ports** | 2/4 | G 1/8 | G 1/4 |

## hydraulic specifications

| | | | options |
|---|---|---|---|
| **actuation pressure range** | bar | 10-30 / 30-60 | |
| **control** | | preferably 4/2 way control valve | |
| **actuator ports** | X/Y | G 1/4 | NPT 1/4 |
| **by media** | | | |

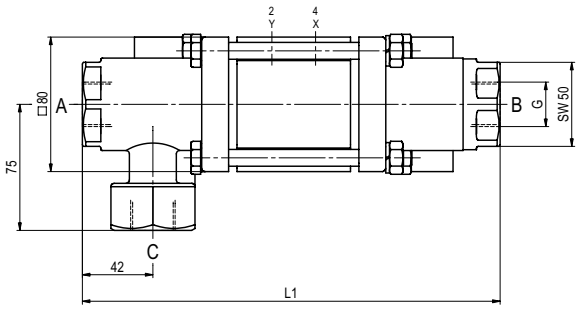
⚠ The valves' technical design is based on media and application requirements. This can lead to deviations from the general specifications shown on the data sheet with regards to the design, sealing materials and characteristics.

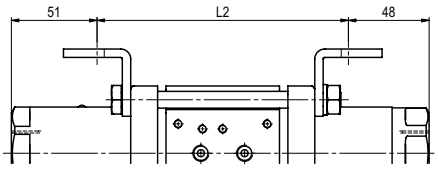
⚠ If order or application specifications are incomplete or imprecise there exists a risk of an incorrect technical design of the valve for the required application. As a consequence, the physical and / or chemical properties of the materials or seals used, may not be suitable for the intended application.

- specifications not highlighted are standard
  specifications highlighted in grey are optional

# type **VMK 20 DR**

function: **NC**
closed when not energized (A ►B)



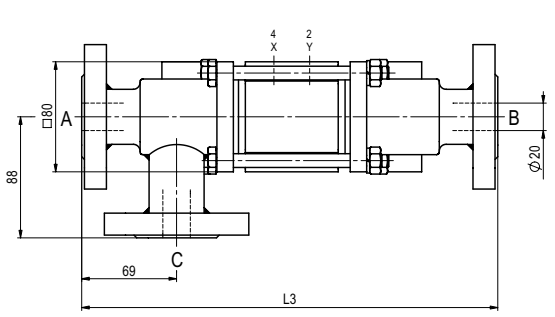



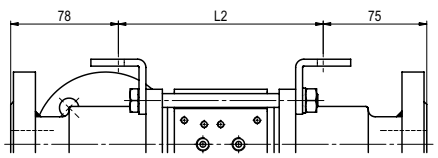

| constructive length | $L_1$ | $L_2$ | $L_3$ |
|---|---|---|---|
| standard | 248 | 149 | 302 |
| with 1/2 inductive limit switches | 267 | 168 | 321 |
| with force-feed lubrication nipple | 286 | 187 | 340 |
| with mechanical limit switches | 269 | 170 | 323 |

| flanges PN | DIN | ØD | Øk | Ød |
|---|---|---|---|---|
| 16 | EN 1092-1 | 105 | 75 | 14 |
| 40 | EN 1092-1 | 105 | 75 | 14 |
| 100 | EN 1092-1 | 130 | 90 | 18 |

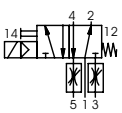
# type **VFK 20 DR**

function: **NO**
open when not energized (A ►B)

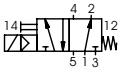



**pneumatic actuation**




5/2 way pilot valve
flow rate 700 l/min
pressure range 3-10 bar G 1/8




5/2 way pilot valve ISO 1
flow rate 700 l/min
pressure range 3-10 bar G 1/4