

09/2022



! 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
- pilot valve type

details needed for hydraulic actuation

- actuation pressure range min/max
- hydraulic control valve function

! 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. To avoid hydraulic shocks in pipelines, the flow velocities must be taken into account when designing valves for liquids.

specifications not highlighted are standard
 specifications highlighted in grey are optional

3/2 way valve

pressure range
orifice
connection
function

operating principle
body material

valve seat
seal materials

ports
function
pressure range

Kv value
vacuum
pressure-vacuum

back pressure
media
abrasive media
damping

flow direction
switching cycles
switching time

media temperature
ambient temperature
flush ports
leak ports
limit switches
manual override
approvals
mounting
weight
additional equipment

nominal voltage
power consumption
protection
energized duty rating
connection
optional
additional equipment
max. temperature

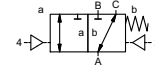
explosion proof

actuation pressure range
air consumption
cycle speed
control
pilot valve interface
actuator ports

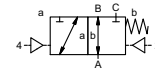
actuation pressure range
control
actuator ports
by media

externally controlled

pressure range
DN 20 mm
thread/flange
valve
normally closed (A ► B)
symbol **NC**



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



pressure balanced, with spring return, intersecting switch-over
① brass
② steel galvanized
③ brass, nickel plated
④ steel, nickel plated
⑤ without non-ferr. Metals
⑥ stainless steel

synthetic materials on metal
NBR PTFE, FPM, CR, EPDM

general specifications **options**

| | | |
|---------------------------------|--|--|
| VMK | threads G 3/4 - G 1 1/4 | special threads |
| VFK | flanges PN 16 / 40 / 100 | special flanges |
| | NC | NO |
| bar | 0-16 / 0-40 / 0-63 / 0-100 | |
| | A ⇒ B max. 100 / B ⇒ A max. 16 / A ⇒ C max. 100 / C ⇒ A max. 100 | |
| m ³ /h | 8.3 | |
| leak rate | | < 10 ⁻⁶ mbar•L•s ⁻¹ |
| P ₁ ⇔ P ₂ | | pressure side max. 100 bar vacuum side leak rate upon request |
| P ₂ > P ₁ | see pressure range gaseous - liquid - highly viscous - gelatinous - pasty - contaminated | available |
| opening | | |
| closing | by throttles on pilot valve | |
| | see pressure range | |
| 1/min | 200 | |
| ms | opening 50-3000 closing 50-3000 | |
| °C | direct mounted pilot valve 60 | remote mounted pilot valve outside |
| °C | direct mounted pilot valve 50 | temperatur range of media max. 160 °C |
| | | available |
| | | available |
| | | inductive / mechanical upon request |
| | via pilot valve | |
| | | LR/DNV/WAZ |
| | | mounting brackets |
| kg | VMK 5.8 VFK 7.2 | upon request |

electrical specifications **options**

| | | |
|----------------|--|--|
| U _n | DC 24 V | special voltage upon request |
| U _n | AC 230 V 50 Hz | special voltage upon request |
| DC | 4.8 W | 2.5 W [actuation pressure range 4-7 bar] |
| AC | pick up 11.0 VA holding 8.5 VA | |
| IP65 (P54) | acc. DIN 40050 | |
| ED | 100% | |
| | plug acc. DIN EN 175301-803 form B, 2 positions x180° / wire diameter 6-8 mm | |
| M12x1 | connector acc. DESINA | connector acc. VDMA |
| | illuminated plug with varistor | |
| media | 60°C | |
| ambient | 50°C | |
| 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**

| | | |
|-------------------------|--|-------|
| bar | 4-8 | |
| cm ³ /stroke | 11 | |
| | main valve speed variable by throttleson pilot valve | |
| | preferably 5/2 way pilot valve | |
| | co-ax / Namur | ISO 1 |
| 2/4 | G 1/8 | G 1/4 |

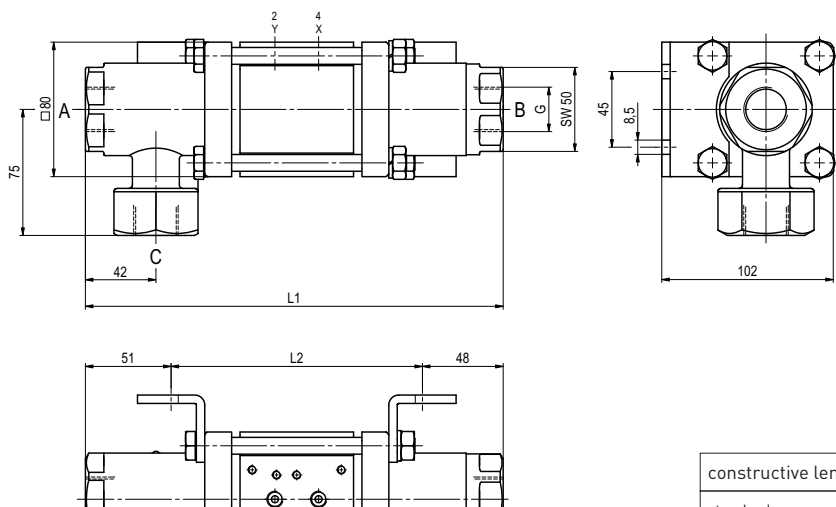
hydraulic specifications **options**

| | | |
|-----|----------------------------------|---------|
| bar | 15-30 / 30-60 | |
| | preferably 4/2 way control valve | |
| X/Y | G 1/4 | NPT 1/4 |

coax® data sheet - coaxial valve

type VMK 20 DR
VFK 20 DR

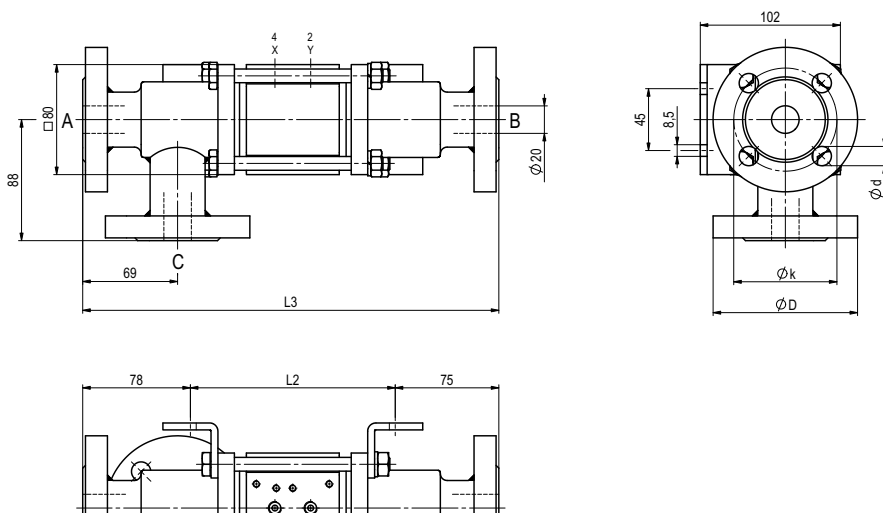
function: **NC**
closed when not energized (A ► B)



| constructive length | L1 | L2 | L3 |
|------------------------------------|-----|-----|-----|
| standard | 248 | 149 | 302 |
| with inductive limit switches | 267 | 168 | 321 |
| with force-feed lubrication nipple | 286 | 187 | 340 |
| with mechanical limit switches | 282 | 183 | 336 |

| 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 |

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



pneumatic specifications

