coax® data sheet - coaxial valve

type FCF 50 - FCF 150

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
- flow rate
- media
- media temperature
- ambient temperature
- type of actuation

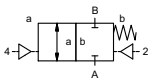
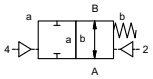
details needed for pneumatic actuation
- nominal voltage
- type of protection
- actuation pressure range min/max
- pilot valve type

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

2/2-way valve	**externally controlled**	
pressure range	PN 0-40 bar	
orifice[1]	DN 50 / 65 / 80 / 100 / 125 / 150 mm	
connection	flange	
function	valve normally closed symbol **NC**	
	valve normally open symbol **NO**	
operating principle	pressure balanced, with spring return	
body material	⓪ aluminium	② steel galvanized (upon request)
	③	⑤
	④	⑥ stainless steel (upon request)
valve seat	synthetic materials on metal	
seal materials	NBR, PU	PTFE, FPM, PE

general specifications		**options**
ports	FCF	flanges PN 16 / 40
function		NC NO
pressure range	bar	0-16 / 0-40
Kv value[2]		see table
vacuum	leak rate	< 10^{-4} mbar•l•s^{-1}
pressure-vacuum	$P_1 \Leftrightarrow P_2$	pressure side max. 40 bar vacuum side leak rate upon request
back pressure	$P_2 > P_1$	available (max. 16 bar)
media	emulsion - oil - neutral gases	other medias upon request
abrasive media		
damping	opening	
	closing	by throttles on pilot valve
flow direction	A ⇨ B	as marked bi-directional upon request
switching cycles[3]		see table
switching time[4]		see table
media temperature	°C	direct mounted pilot valve 60 > 60 °C upon request
ambient temperature	°C	direct mounted pilot valve 50 > 50 °C upon request
flush ports		
leak ports		
limit switches		inductive
manual override		via pilot valve
approvals		upon request
mounting		
weight[5]		see table
additional equipment		

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
	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, 2 positions x180° / wire diameter 6-8 mm
optional	M12x1	connector acc. DESINA connector acc. VDMA
additional equipment		illuminated 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	4-8
air consumption[6]		see table
cycle speed		main valve speed variable by throttleson pilot valve
control		preferably 5/2 way pilot valve
pilot valve interface		NAMUR acc. VDI / VDE 3845
actuator ports	2/4	G 1/4 NPT 1/4

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

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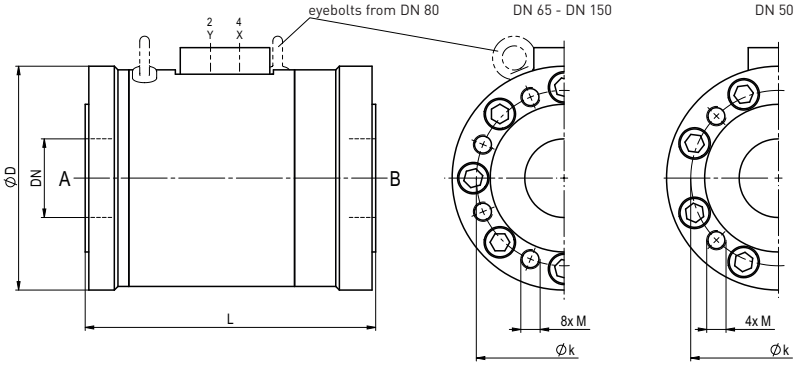
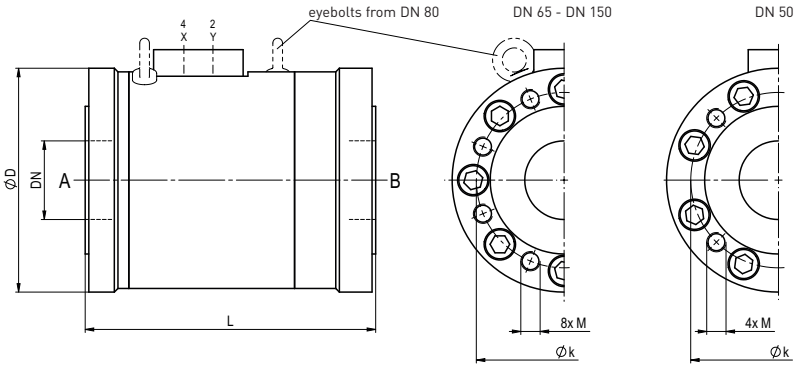
type FCF 50 - FCF 150

function: **NC**
closed when not energized

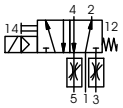


type		FCF 50	FCF 65	FCF 80	FCF 100	FCF 125	FCF 150
[1] orifice		DN 50 mm	DN 65 mm	DN 80 mm	DN 100 mm	DN 125 mm	DN 150 mm
[2] Kv value	m³/h	80	125	170	290	400	550
[3] switching cycles	1/min	50	50	50	40	30	20
[4] switching time	ms opening	150-3000	250-3000	350-3000	450-3000	700-3000	600-3000
	ms closing	150-3000	400-3000	350-3000	300-3000	450-3000	600-3000
[5] weight	kg	8	13	15	26	38	58
[6] air consumption	cm³/Hub	47	77	120	285	515	640
constructive length	L	200	240	260	350	400	450
flanges PN 16	ØD	165	185	200	230	260	295
DIN EN 1092-1	Øk	125	145	160	180	210	240
	M	M16	M16	M16	M16	M16	M20
flanges PN 40	ØD	165	185	200	235	270	300
DIN EN 1092-1	Øk	125	145	160	190	220	250
	M	M16	M16	M16	M20	M24	M24

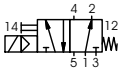
function: **NO**
open when not energized



pneumatic specifications



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