

2/2-way valve C3

X, Y, Z actuated

DN25 - DN150 PN 320

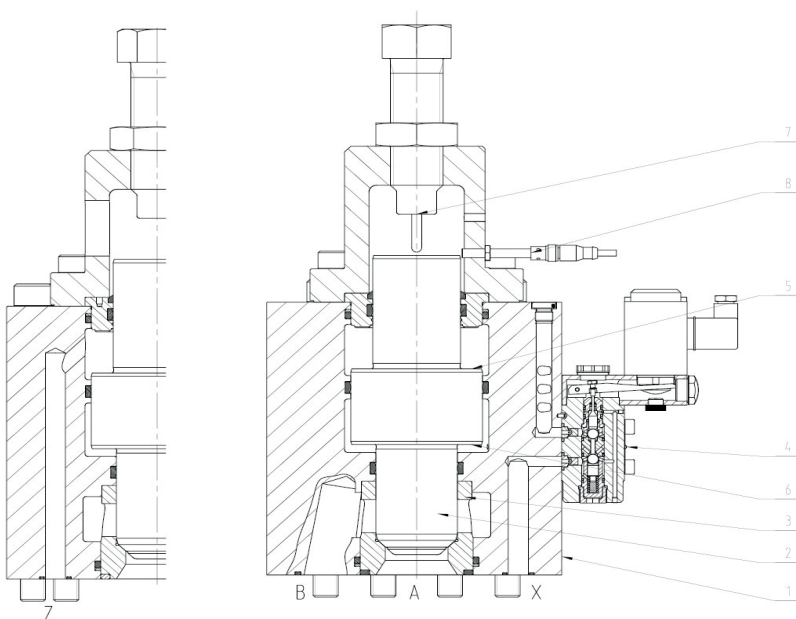
Features

- Hydraulically actuated directional seat valve controlling liquid media.
- Actively controllable 2/2-way valve with a 3-stage control logic provides safe opening and closing
- The valve is actuated via a 3/2-way pilot valve
- Function variants possible via the interconnection of the Z-line
- Valve piston and seat are coupled and close hydraulically „leak-free“.
- Valve pistons are sealed via seals within the body, thus no inner leakages develop
- The valve cross-section can be set via the stroke limitation and be locked mechanically
- Valve fastening structural plate form with a Hauhinco connection diagram
- Optically and with an optional proximity switch, the valve position can be monitored
- Optionally, a locking device can be selected for the stroke limitation

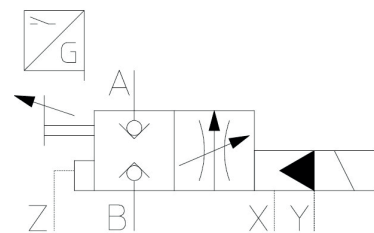
Function

The valve piston (2) guided within the valve body (1) is pressed into the valve seat (3) by the hydraulic power generated by the control pressure (X) on the closing area (5), provided the opening area (6) is depressurised by the pilot valve (4). Thus, the lines (A, B) are separated. By switching the pilot valve (4), also the opening area (6) of the valve piston (2) is pressurised and lifts off the valve seat (3), the valve piston (2) moves into the opened position up to the mechanical end position and to the stroke limitation (7). Thus, the lines (A, B) are connected. Control channel (Z) is assigned to the closing area and control channel (X) to the opening area. The valve can be opened and closed actively by means of control pressure (X, Y), independent of the pressure along the work lines (A, B). The area ratios „opening area/closing area“ and „closing area/cable area (A, B)“, ensure a safe opening and closing of the valve. Depending on the design of the pilot valve (4), the basic valve position normally closed (NC) or normally open (NO) is provided. The position of the valve piston (2) can be monitored by the proximity switch (8).

Example 2/2-way valve C3 - X,Y, Z - actuated



Symbol



Control surfaces, hydraulic forces
 A channel: Area A1, open valve passively
 B channel: Area A2, open valve passively
 Control surface (6): A3, open valve actively
 Control surface (5): A4, close valve actively

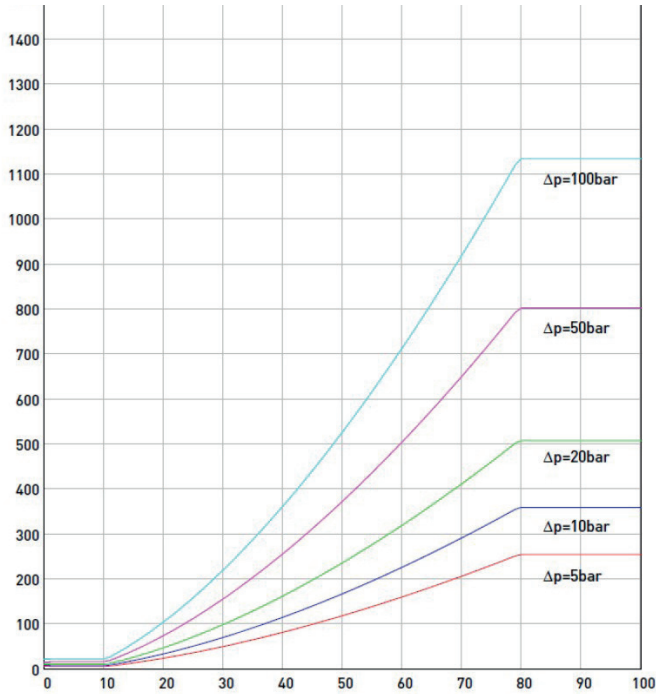
Technical data

measured with HFA medium 97/3%, at 20°C

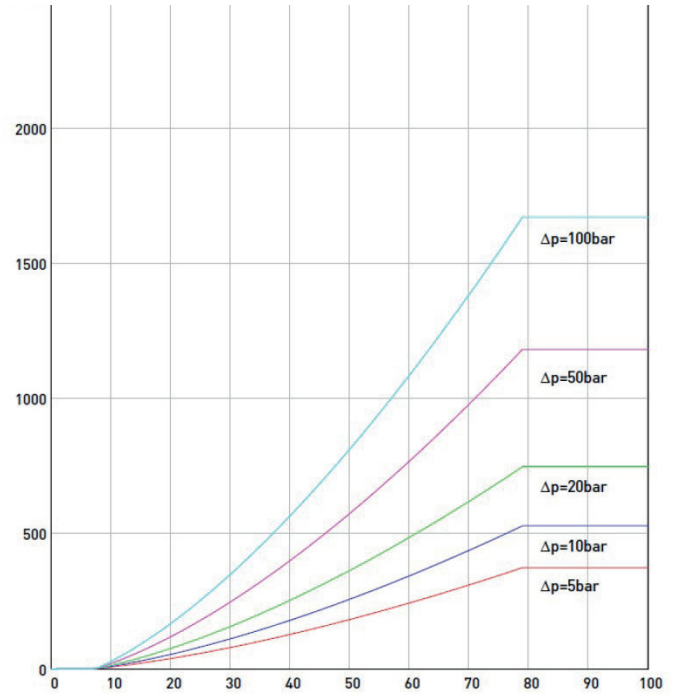
General	
Weight	see Order information
Installation position	any
Ambient temperature	-10 to 50°C (hydraulic fluids, heed standard requirements)
Material Valve parts	Stainless steel, bronze
Material Seals	NBR, PTFE, PUR
Hydraulic	
Hydraulic pressure connector A, B	≤ 320 bar, higher pressure stages on request
Hydraulic pressure connector X	≥ 50 bar ≥ hydraulic pressure at the connector A, B ≤ 320 bar
Hydraulic pressure connector Y	≤ 10 bar
Direction of flow	any, preferred direction of flow B→A
Druckflüssigkeit	Water, HFA
- Medium - Quality	see Hauhinco media requirement, water, HFA
- Medium - Temperature range	5 - 40°C
- filter fineness connector A, B	Filter fineness 100µm
- filter fineness connector X	Filter fineness 25µm
Druckflüssigkeit	Mineralöl, HLP nach DIN 51624-2
- Medium - Temperaturbereich	5 to 50°C
- Medium - Qualität	Reinheitsklasse -/19/16 nach ISO 4406
- Viskosität	0,6 bis 100 mm ² /s
Use of other pressure fluids on request.	
Electric	
Magnet	
- Voltage	24 VDC
- Power consumption	see Order information
- Operating time	100% OT
- Degree of protection acc. to EN60529	IP65
Inductive proximity switch	
- Output	NO contact, PNP
- Voltage	10 – 30 VDC
- Current	0,150 A
- Switching distance	2,0 mm
- Electrical connection	Three wire, plug connection M12x1

2/2-way valve C3, X, Y, Z actuated, PN 320, DN25 - DN125

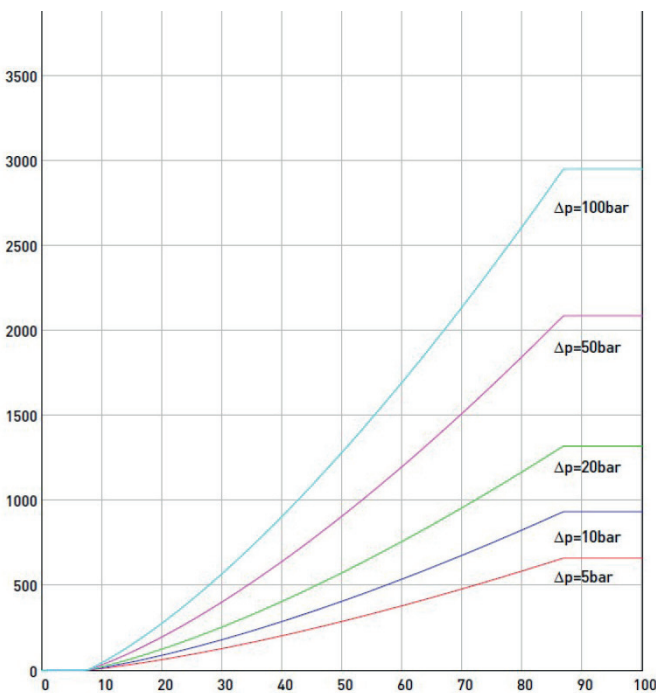
$\Delta p - q_v$ characteristic curves DN25



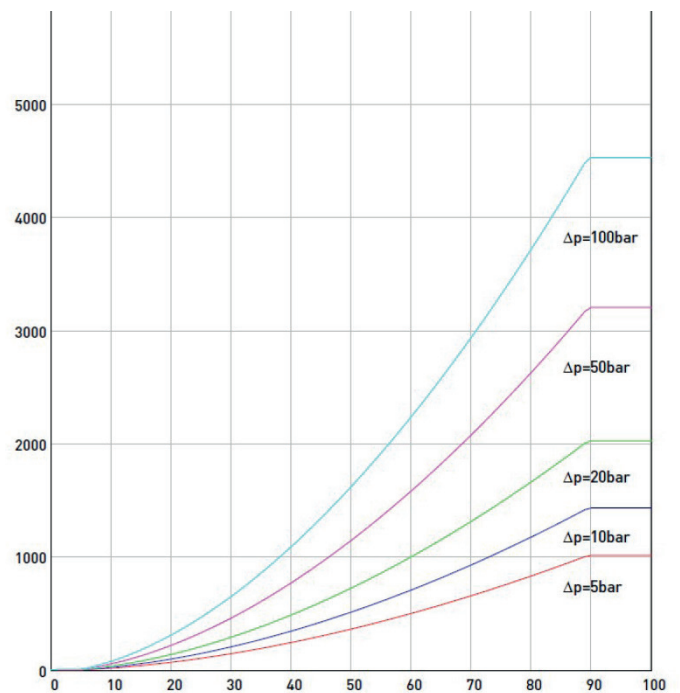
$\Delta p - q_v$ characteristic curves DN32



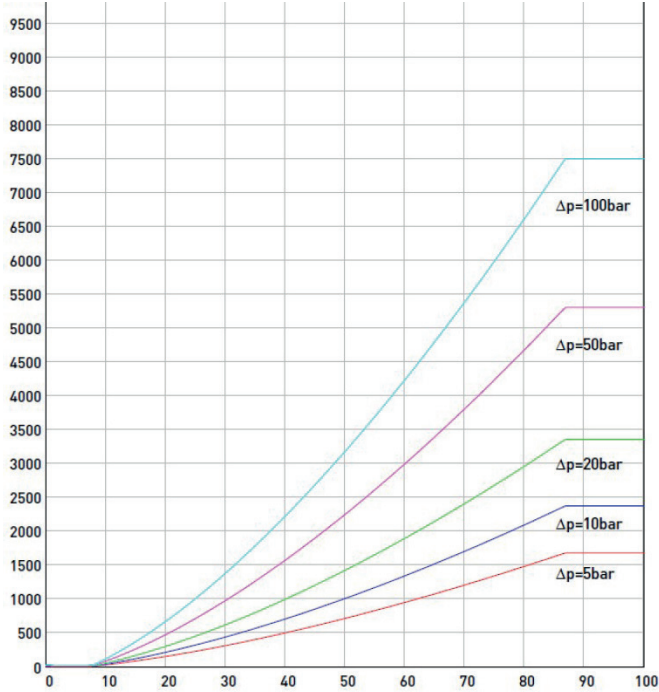
$\Delta p - q_v$ characteristic curves DN40



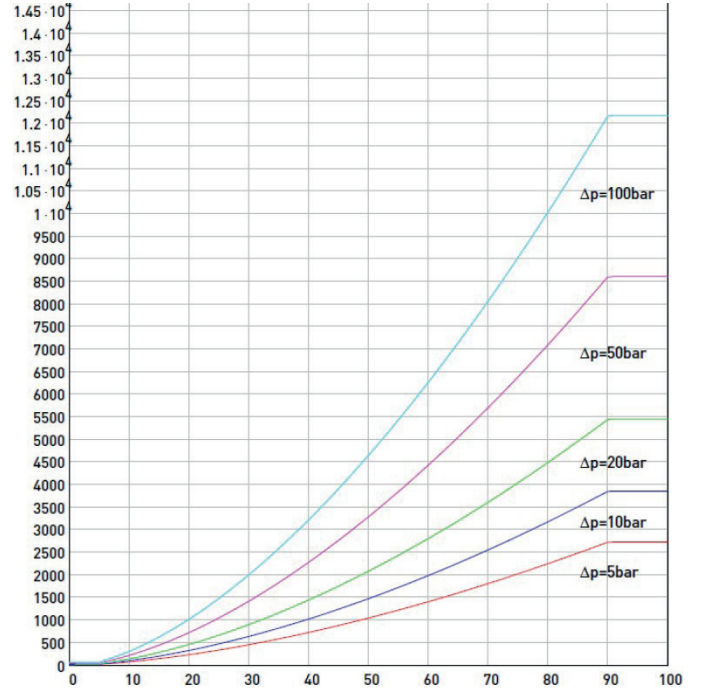
$\Delta p - q_v$ characteristic curves DN50



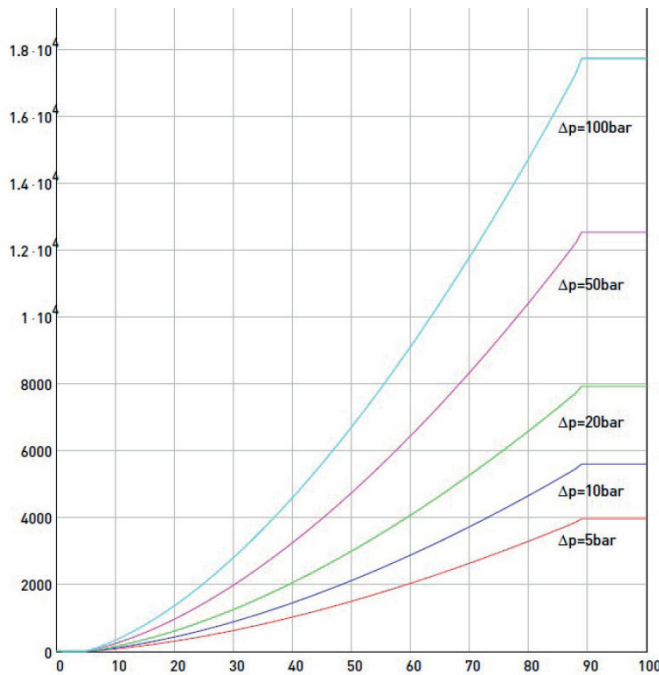
$\Delta p - q_v$ characteristic curves DN65



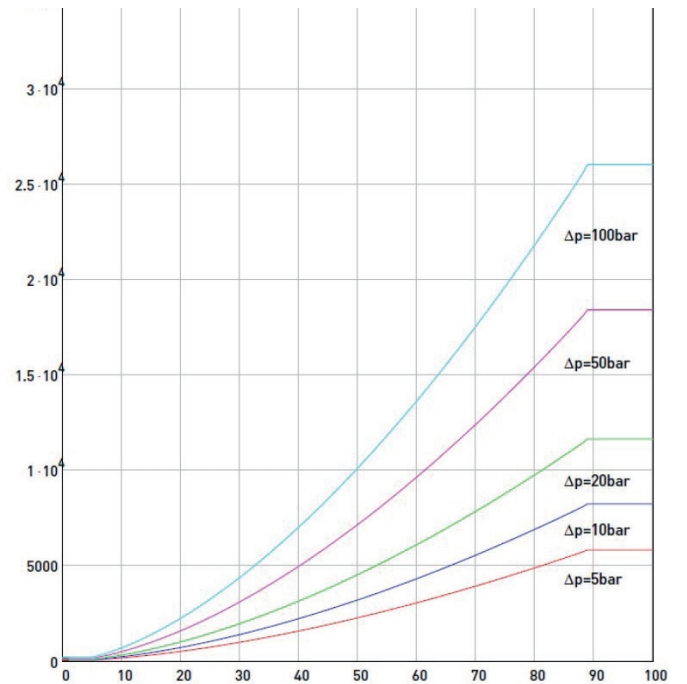
$\Delta p - q_v$ characteristic curves DN80



$\Delta p - q_v$ characteristic curves DN100

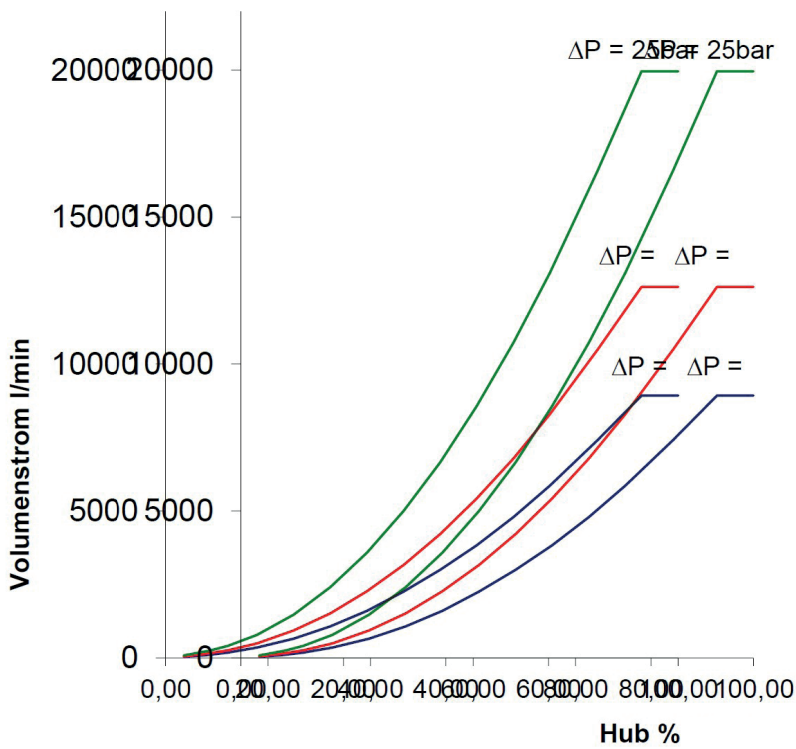


$\Delta p - q_v$ characteristic curves DN125

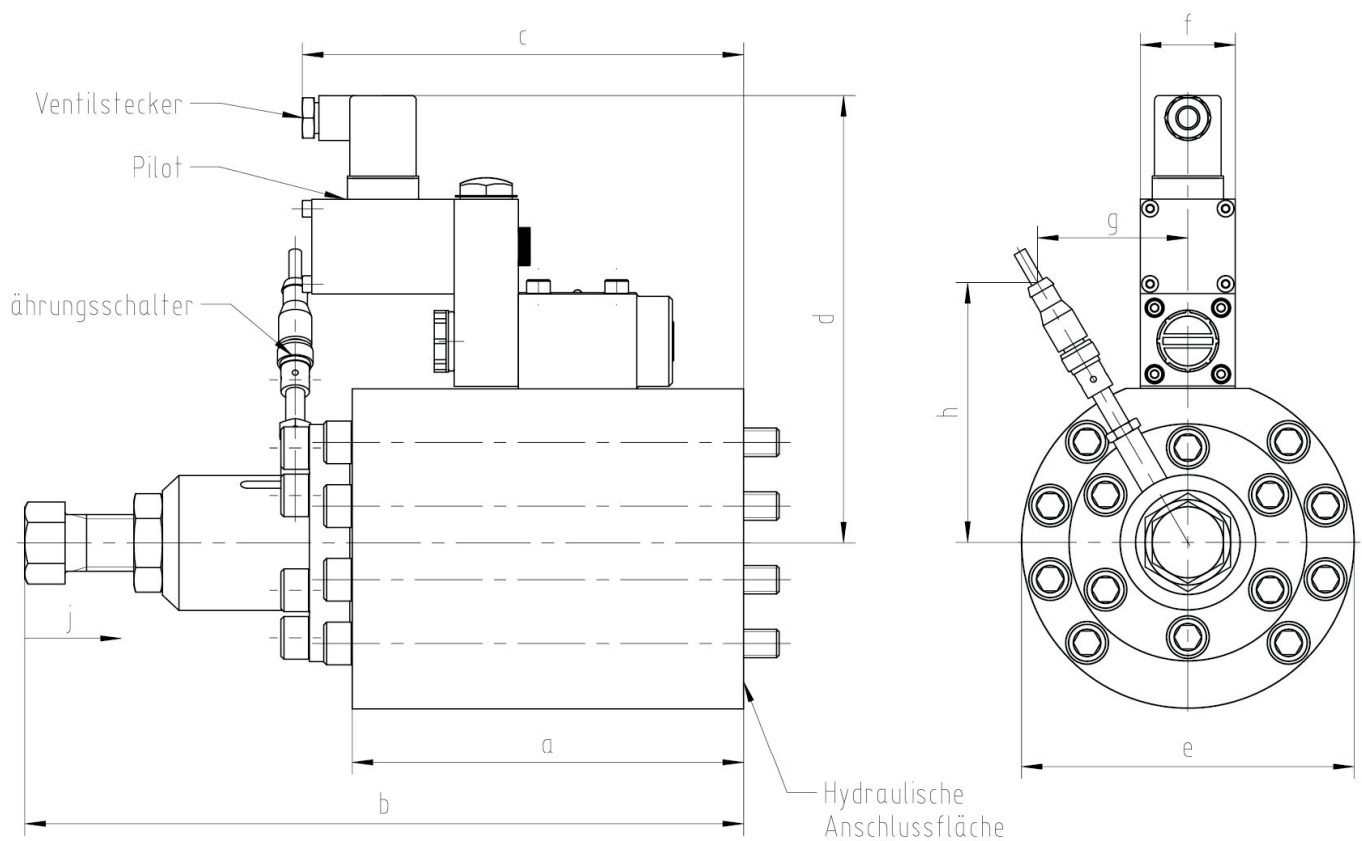


2/2-way valve C3, X, Y, Z actuated, PN 320, DN150

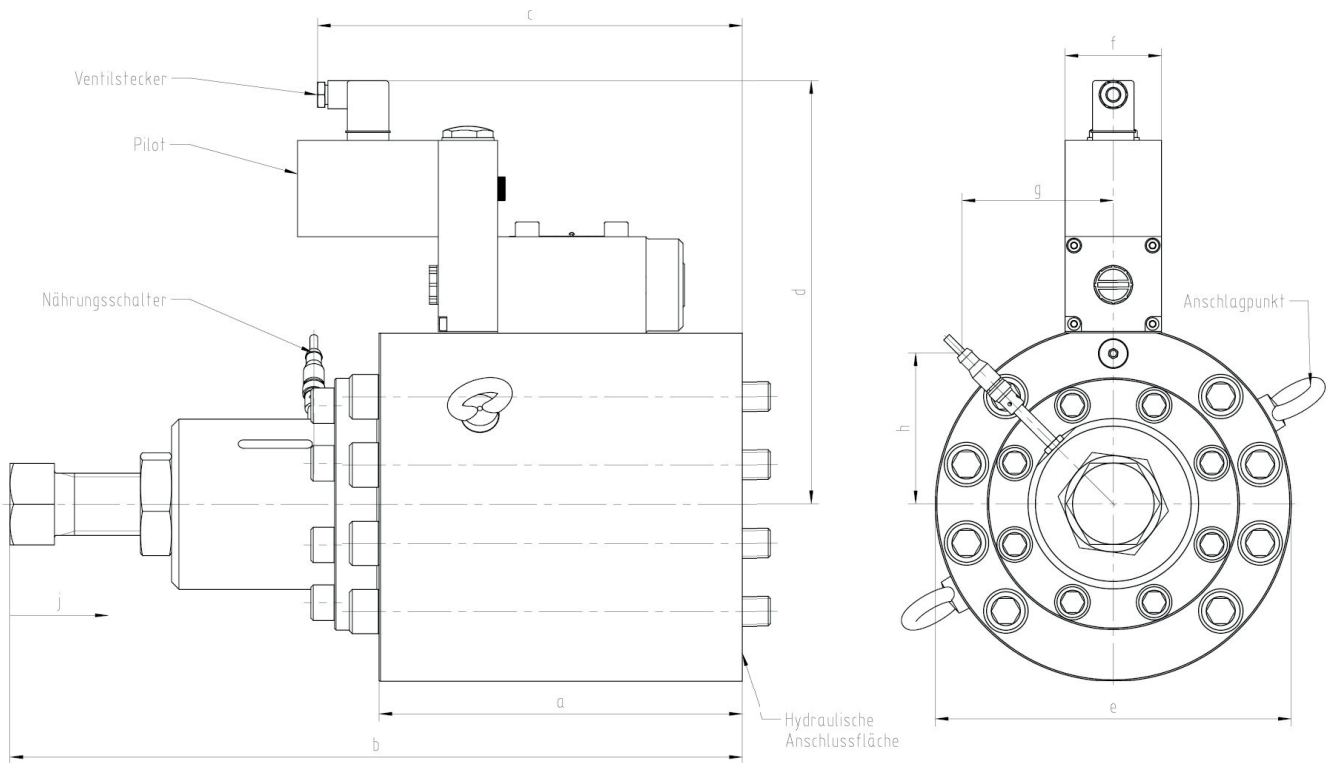
$\Delta p - q_v$ characteristic curves DN150



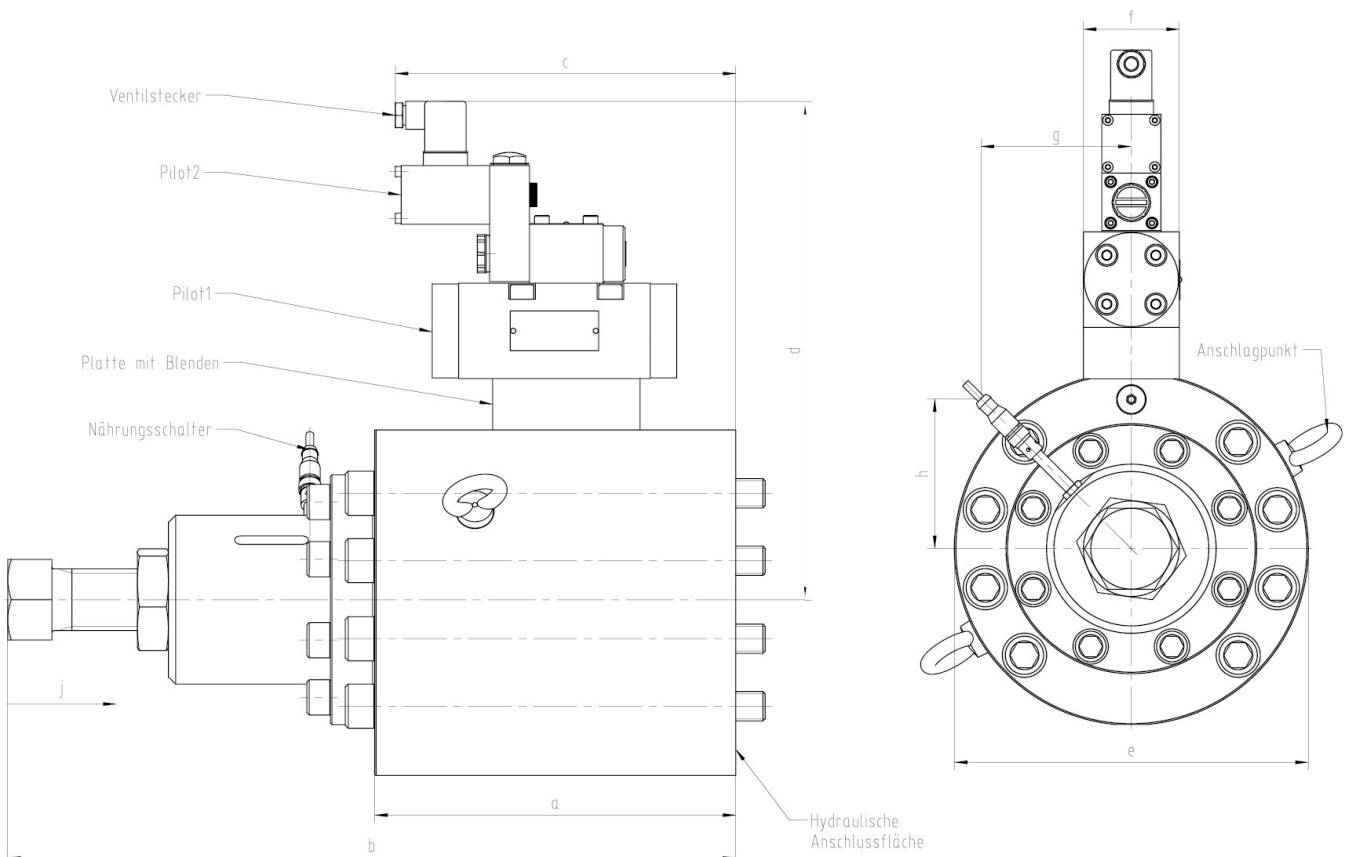
Single-stage pilot control, 2/2-way valve C3, X, Y, Z actuated, PN 320, DN25 - DN32



Single-stage pilot control, 2/2-way valve C3, X, Y, Z actuated, PN 320, DN40 - DN125



Two-stage pilot control, 2/2-way valve C3, X, Y, Z actuated, PN 320, DN80 - DN150



Order information 2/2-way valve C3, X, Y, Z actuated

Included in the scope of supply

Mounting screws for the 2/2-way valve assembly

Mounting screws for the pilot valves 1 and 2

Cable socket for the magnet

Single-stage pilot control

Nominal size	Weight [kg]	max. Pressure [bar]	Basic position	Dimensions [mm]									Article number valve C3
				a	b	c	d	e	f	g	h	j	
DN25		320	NC	147	270	186	184	130	40	63	108	19	6600270
DN25		320	NO	147	270	186	184	130	40	63	108	19	6600270
DN32	22,0	320	NC	165	303	186	189	140	40	64	110	22	6266967
DN32	22,0	320	NO	165	303	186	189	140	40	64	110	22	6266967
DN40	39,0	320	NC	182	344	214	222	176	50	93	93	24	6160956
DN40	39,0	320	NO	182	344	214	222	176	50	93	93	24	6160956
DN50	60,0	320	NC	235	446	240	235	196	50	97	97	31,5	6066844
DN50	60,0	320	NO	235	446	240	235	196	50	97	97	31,5	6066844
DN65	89,0	320	NC	245	494	251	256	240	50	102	102	37	6161006
DN65	89,0	320	NO	245	494	251	256	240	50	102	102	37	6161006
DN80	165,0	320	NC	295	585	272	280	294	50	109	109	40	6160999
DN80	165,0	320	NO	295	585	272	280	294	50	109	109	40	6160999
DN100	291,0	320	NC	342	705	330	345	370	65	82	142	55	6066666
DN100	291,0	320	NO	342	705	330	345	370	65	82	142	55	6066666
DN125	568,0	320	NC	393	793	363	398	466	65	90	155	60	6063772
DN125	568,0	320	NO	393	793	363	398	466	65	90	155	60	6063772

Order example

Item	Designation	Article number	Item	Designation	Article number
1	2/2 Wegeventil DN50- PN320-X, Y, Z actuated- 24VDC-NC single-stage pilot control	6066666	1	Inductive proximity switch, Output – PNP, NO contact, Voltage 10 – 30 VDC	5127726
1	Pilot valve DN10	6235530			

Pilot valve

Position monitoring

	Nominal size	Basic position	Actuation	Current	Article number valve	Designation	Article number monitoring
	DN3	A→T NO	Electromagnet, voltage 24V DC, Cable socket magnet DIN43650 – form A: max. 100VA, LED display + Z-diode, IP65	1,0 A	6545599	Inductive proximity switch, Output – PNP, NO contact, Voltage 10 – 30 VDC	5127726
	DN3	P→A NO		1,0 A	6545602		
	DN3	A→T NO		1,0 A	6545599		
	DN3	P→A NO		1,0 A	6545602		
	DN6	A→T NO		1,5 A	6546749		
	DN6	P→A NO		1,5 A	6546773		
	DN6	A→T NO		1,5 A	6546749		
	DN6	P→A NO		1,5 A	6546773		
	DN6	A→T NO		1,5 A	6546749		
	DN6	P→A NO		1,5 A	6546773		
	DN6	A→T NO		1,5 A	6235530		
	DN6	P→A NO		1,5 A	6235549		
	DN10	A→T NO		2,5 A	6235530		
	DN10	P→A NO		2,5 A	6235549		
	DN10	A→T NO	2,5 A	6235530			
	DN10	P→A NO	2,5 A	6235549			

Order information 2/2-way valve C3, X, Y, Z actuated

Included in the scope of supply

Mounting screws for the 2/2-way valve assembly

Mounting screws for the pilot valves 1 and 2

Cable socket for the magnet

Two-stage pilot control

Nominal size	Weight [kg]	max. Pressure [bar]	Basic position	Dimensions [mm]										Article number valve C3
				a	b	c	d	e	f	g	h	j		
DN80	170,0	320	NC	295	585	252	364	294	65	109	109	40	6160999	
DN80	170,0	320	NO	295	585	252	364	294	65	109	109	40	6160999	
DN100	292,0	320	NC	342	705	274	398	370	65	82	142	55	6066666	
DN100	292,0	320	NO	342	705	274	398	370	65	82	142	55	6066666	
DN125	570,0	320	NC	393	793	307	450	466	65	90	155	60	6063772	
DN125	570,0	320	NO	393	793	307	450	466	65	90	155	60	6063772	
DN150	905,0	320	NC	480	925	326	489	550	65	97	167	70	6163637	
DN150	905,0	320	NO	480	925	326	489	550	65	97	167	70	6163637	

Position monitoring

Designation	Article number monitoring
Inductive proximity switch, Output – PNP, NO contact, Voltage 10 – 30 VDC	5127726

Pilot valve 1 Hydraulically actuated, X, Y internally

Pilot valve 2

Nominal size	Basic position	Article number valve	Article number plate	Article number cover	Nominal size	Basic position	Actuation	Article number valve
DN6	A→T NO	6264808	6569668	6561136	DN6	A→T NO		6546749
DN6	P→A NO	6264816	6569668	6561136	DN6	A→T NO	Electromagnet, voltage 24 VDC, current 1,0 A (DN6 1,5A), Cable socket magnet DIN43650 – form A: max. 100VA, LED display + Z-diode, IP65	6546749
DN12	A→T NO	6266975	6569641	6569927	DN3	A→T NO		6545599
DN12	P→A NO	6266983	6569641	6569927	DN3	A→T NO		6545599
DN12	A→T NO	6266975	6569641	6569927	DN3	A→T NO		6545599
DN12	P→A NO	6266983	6569641	6569927	DN3	A→T NO		6545599
DN12	A→T NO	6266975	6569641	6569927	DN3	A→T NO		6545599
DN12	P→A NO	6266983	6569641	6569927	DN3	A→T NO		6545599

Item	Designation	Article number	Item	Designation	Article number
1	2/2-way valve DN150-PN320-X,Y,Z actuated-24VDC-NC two-stage pilot control	6163637	2	Cover	6569927
1	Pilot valve 1, DN12	6266983	1	Pilot valve 2, DN3	6545599
1	Plate	6569641	1	Inductive proximity switch, Output – PNP, NO contact, Voltage 10 – 30 VDC	5127726

Order example

Order information 2/2-way valve C3, X, Y, Z actuated

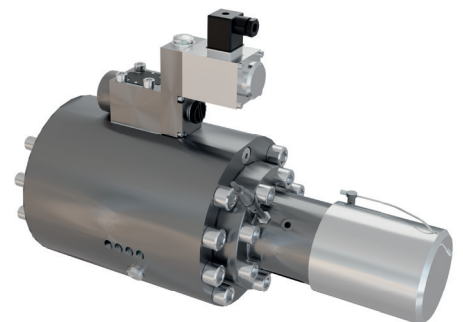
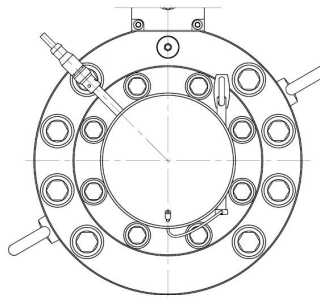
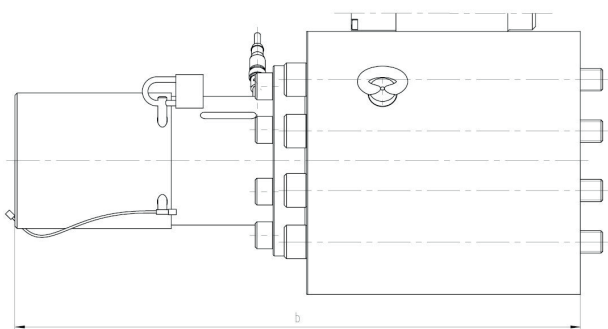
Single-stage pilot control, valve with a locking device

Nominal size	Weight [kg]	max. Pressure [bar]	Basic position	Dimensions [mm]									Article number valve C3
				a	b	c	d	e	f	g	h	j	
DN65	99,0	320	NC	245	506	251	256	240	50	102	102	37	6600175
DN65	99,0	320	NO	245	506	251	256	240	50	102	102	37	6600175
DN80	167,0	320	NC	295	598	272	281	294	50	109	109	40	6600184
DN80	167,0	320	NO	295	598	272	281	294	50	109	109	40	6600184
DN100	308,0	320	NC	342	725	330	345	370	65	82	142	55	6167748
DN100	308,0	320	NC	342	725	330	345	370	65	82	142	55	6167748
DN125	567,0	320	NC	393	804	363	398	466	65	90	155	60	6166393
DN125	567,0	320	NO	393	804	363	398	466	65	90	155	60	6166393

Two-stage pilot control, valve with a locking device

Nominal size	Weight [kg]	max. Pressure [bar]	Basic position	Dimensions [mm]									Article number valve C3
				a	b	c	d	e	f	g	h	j	
DN80	171,0	320	NC	295	598	272	340	294	50	109	109	40	6600184
DN80	171,0	320	NO	295	598	272	340	294	50	109	109	40	6600184
DN100	300,0	320	NC	342	725	274	398	370	65	82	142	55	6167748
DN100	300,0	320	NO	342	725	274	398	370	65	82	142	55	6167748
DN125	568,0	320	NC	393	804	307	451	466	65	90	155	60	6166393
DN125	568,0	320	NO	393	804	307	451	466	65	90	155	60	6166393
DN150	915,0	320	NC	480	950	326	489	550	65	168	97	70	6600186
DN150	915,0	320	NO	480	950	326	489	550	65	168	97	70	6600186

Valve DN16 – DN150 with a locking device



Pilot valve

Position monitoring

Nominal size	Basic position	Actuation	Current	Article number valve	Designation	Article number monitoring
DN6	A→T NO	Electromagnet, voltage 24V DC, Cable socket magnet DIN43650 – form A: max. 100VA, LED display + Z-diode, IP65	1,5 A	6546749	Inductive proximity switch, Output – PNP, NO contact, Voltage 10 – 30 VDC	5127726
DN6	P→A NO		1,5 A	6546773		
DN6	A→T NO		1,5 A	6546749		
DN6	P→A NO		1,5 A	6546773		
DN10	A→T NO		2,5 A	6235530		
DN10	P→A NO		2,5 A	6235549		
DN10	A→T NO		2,5 A	6235530		
DN10	P→A NO		2,5 A	6235549		

Pilot valve 1 Hydraulically actuated, X, Y internally

Pilot valve 2

Nominal size	Basic position	Article number valve	Article number plate	Article number cover	Nominal size	Basic position	Actuation	Article number valve
DN6	A→T NO	6264808	6569668	6561136	DN6	A→T NO	Electromagnet, voltage 24 VDC, current 1,0 A (DN6 1,5A), Cable socket magnet DIN43650 – form A: max. 100VA, LED display + Z-diode, IP65	6546749
DN6	P→A NO	6264816	6569668	6561136	DN6	A→T NO		6546749
DN12	A→T NO	6266975	6569641	6569927	DN3	A→T NO		6545599
DN12	P→A NO	6266983	6569641	6569927	DN3	A→T NO		6545599
DN12	A→T NO	6266975	6569641	6569927	DN3	A→T NO		6545599
DN12	P→A NO	6266983	6569641	6569927	DN3	A→T NO		6545599
DN12	A→T NO	6266975	6569641	6569927	DN3	A→T NO		6545599
DN12	P→A NO	6266983	6569641	6569927	DN3	A→T NO		6545599

Included in the scope of supply

Mounting screws for the 2/2-way valve assembly

Mounting screws for the pilot valves 1 and 2

Cable socket for the magnet