

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

PN 500
DN16 – 100

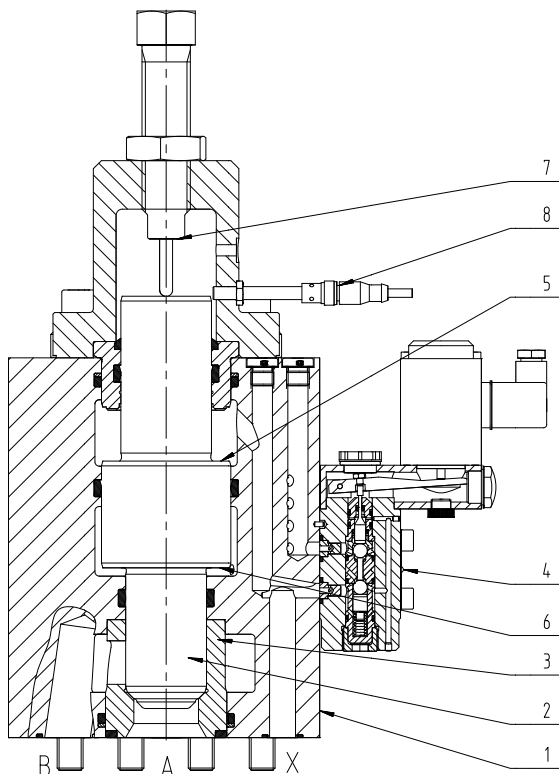
Features

- 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
- 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
- Valve fastening structural plate form with a Hauhinco connection diagram
- The valve cross-section can be set via the stroke limitation and be locked mechanically
- 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 of 2/2-way valve

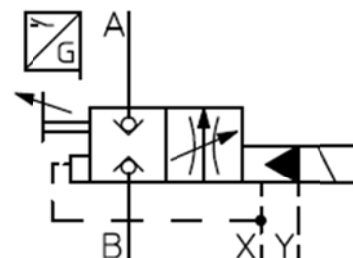
The valve piston (2) guided within the valve body (1) is pressed into the valve seat (3) by the hydraulic power generated by the control pressure (X) on the closing area (5), provided the opening area (6) is depressurised by the pilot valve (4). Thus, the lines (A, B) are separated. By switching the 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. 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 - actuated:



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



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Technical data

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

general

Weight	see Valve data
Installation position	any
Ambient temperature	-10 to 50°C (hydraulic fluids, heed standard requirements)
Material of the valve parts	Stainless steel, bronze
Sealing material	NBR, PTFE, PUR

hydraulic

hydraulic pressure connector A, B	≤ 500 bar
hydraulic pressure connector X	≥ 50 bar ≥ hydraulic pressure at the connector A, B ≤ 500 bar
hydraulic pressure connector Y	≤ 10 bar
Direction of flow	any, preferred direction of flow B→A
Area ratios	A3 > A4, A4 > A1 + A2
Pressure fluid	Water, HFA
- Medium - Quality	see Hauhinco media requirement, water, HFA
- Medium - Temperature range	5 – 40°C
- min filter fineness connector A, B	Filter fineness 100µm
- min filter fineness connector X	Filter fineness 25µm
Pressure fluid	Mineral oil HLP according to DIN51624-2
- Medium - Quality	Cleanliness class -/19/16 according to ISO 4406
- Medium - Temperature range	5 – 50°C
- Viscosity	0.6 to 100 mm ² /s

Use of other pressure fluids on request.

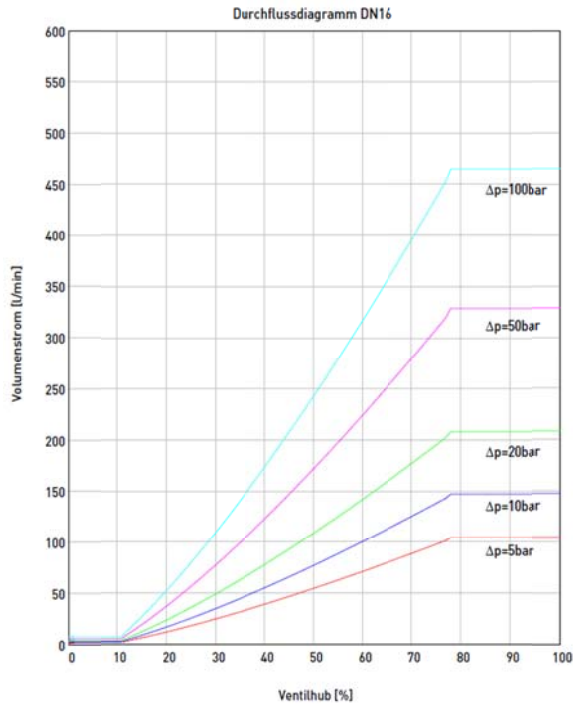
electric

<u>Magnet</u>	
Voltage	24 VDC
Power consumption	see Valve data
Operating time	100% OT
Degree of protection acc. to EN60529	IP65
<u>Inductive proximity switch</u>	
Output	NO contact, PNP
Voltage	10 – 30 VDC
Current	0.150 A
Switching distance	2 mm
Electrical connection	Three wire, plug connection M12x1

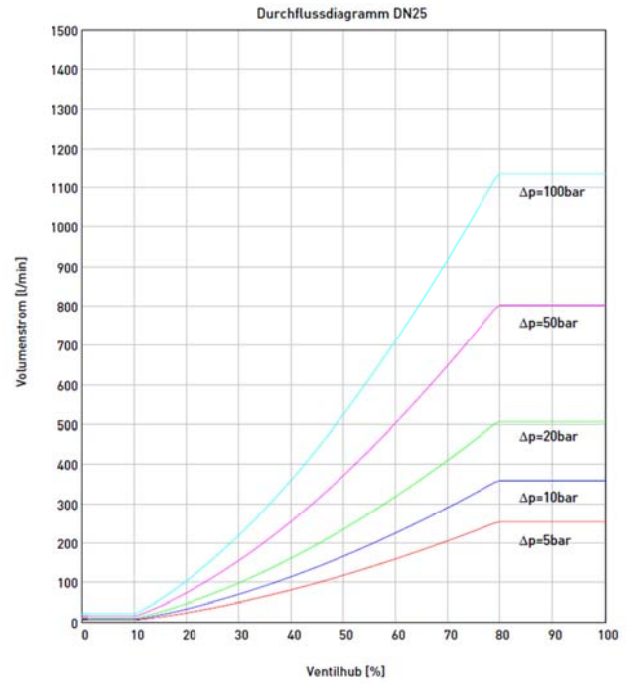
2/2-way valve C3, DN16 – 100 | PN500 – X,Y

Valve characteristics

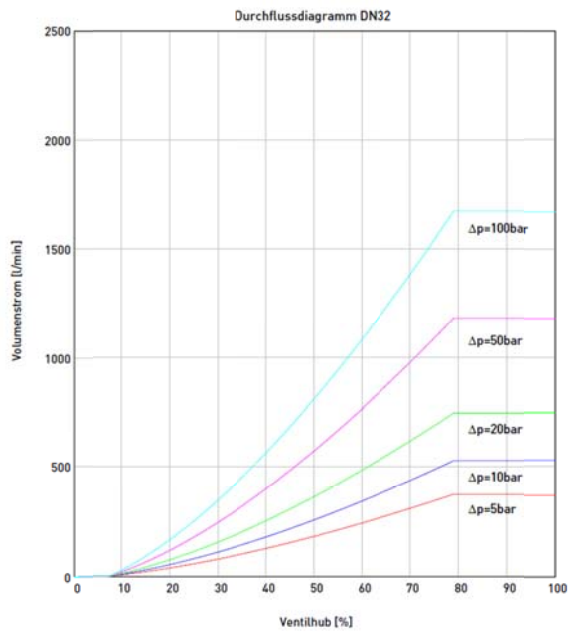
$\Delta p - q_v$ characteristic curves DN 16



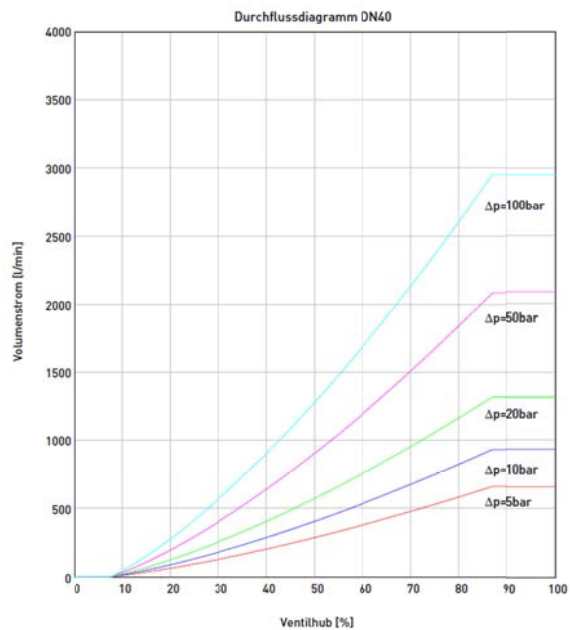
$\Delta p - q_v$ characteristic curves DN 25



$\Delta p - q_v$ characteristic curves DN 32



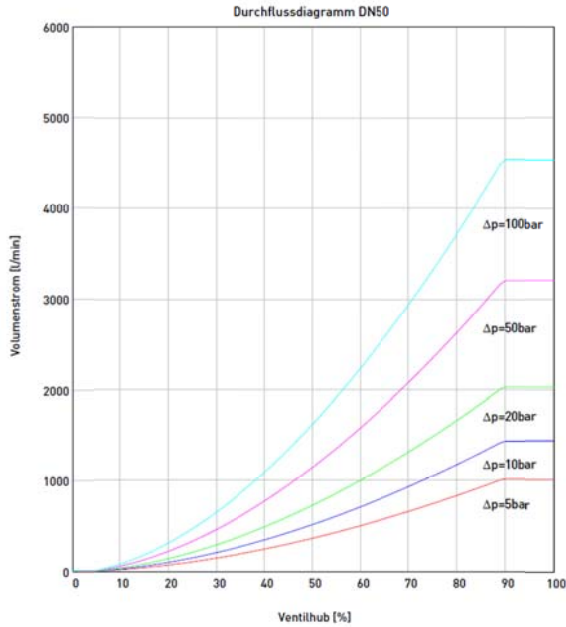
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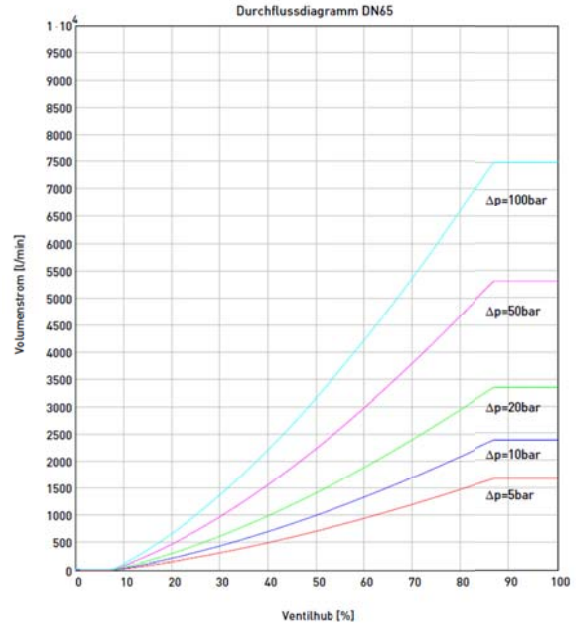
2/2-way valve C3, DN16 – 100 | PN500 – X,Y

Valve characteristics

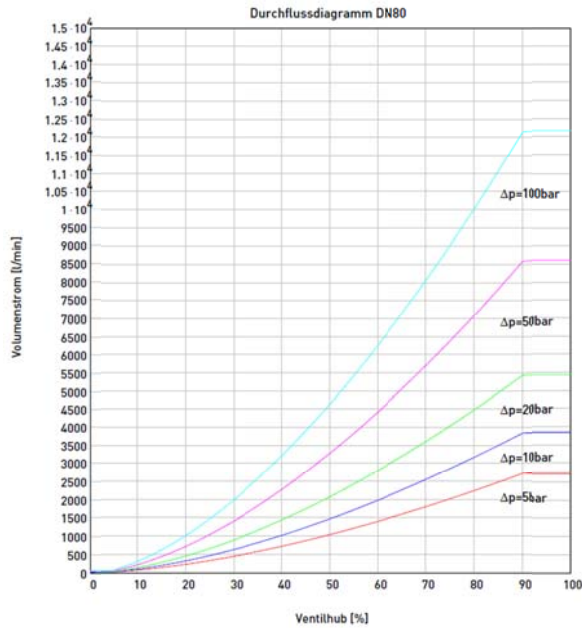
$\Delta p - q_v$ characteristic curves DN 50



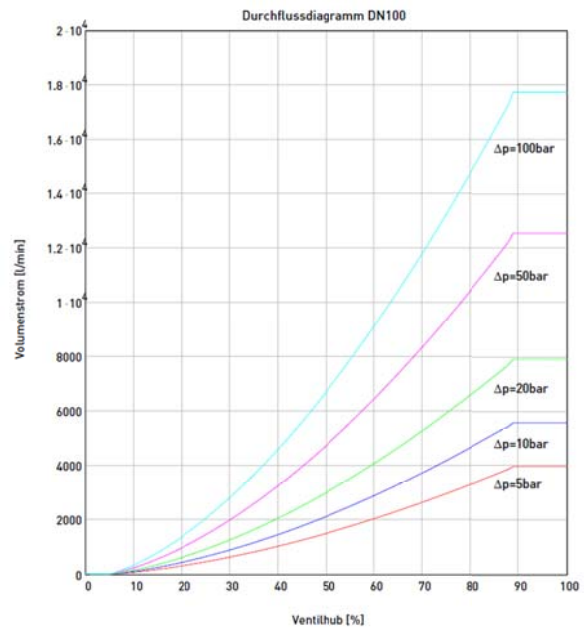
$\Delta p - q_v$ characteristic curves DN 65



$\Delta p - q_v$ characteristic curves DN 80



$\Delta p - q_v$ characteristic curves DN 100



Deutsch	Englisch
Durchflussdiagramm	Flow rate diagram
Volumenstrom	Volume flow
Ventilhub	Valve lift

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Valve data

Single-stage pilot control

Nominal value				DN16		DN25		DN32	
Weight		kg		13 kg		20 kg		35 kg	
2/2-way valve	hydraulic	NC	NO	NC	NO	NC	NO	NC	NO
	Art. No.			6600205		6165176		6148565	
	a			120	120	147	147	163	163
	b			210	210	270	270	320	320
	c			176	176	186	186	186	186
	d			179	179	189	189	208	208
	e			120	120	140	140	176	176
	f			40	40	40	40	40	40
	g			59	59	63	63	64	64
h			102	102	108	108	110	110	
j			14,5	14,5	19	19	22	22	
Conne- tion dia- gram	Art. No.			6578225		6573312		6560504	
Pilot- valve	DN			3		3		3	
	hydraulic	A→T NO	P→A NO	A→T NO	P→A NO	A→T NO	P→A NO	A→T NO	P→A NO
	Art. No.			6545769	6545777	6545769	6545777	6545769	6545777
	electric	Voltage 24V DC		1.0 A		1.0 A		1.0 A	
		Cable socket magnet DIN43650 – form A: max. 100VA, LED display + Z-diode, IP65							
Position monitor- ing	Art. No.	Inductive proximity switch, Art. No.: 5127726							
	electric	Output PNP, NO contact Voltage 10 – 30 VDC							

Single-stage pilot control

Nominal value		DN40		DN50		DN65		DN80	
Weight		52 kg		95 kg		141 kg		253 kg	
2/2-way valve	hydraulic	NC	NO	NC	NO	NC	NO	NC	NO
	Art. No.	6057772		6057780		6154751		6153917	
	a	182	182	235	235	245	245	295	295
	b	378	378	475	475	528	528	585	585
	c	214	214	240	240	287	287	308	308
	d	232	232	255	255	310	310	345	345
	e	196	196	240	240	294	294	370	370
	f	50	50	50	50	65	65	65	65
	g	93	93	97	97	102	102	109	109
h	93	93	97	97	102	102	109	109	
j	24	24	31,5	31,5	37	37	40	40	
Conne- tion dia- gram	Art. No.	6570127		6561233		6561306		6570577	
Pilot- valve	DN	6		6		10		10	
	hydraulic	A→T NO	P→A NO	A→T NO	P→A NO	A→T NO	P→A NO	A→T NO	P→A NO
	Art. No.	6546889	6546919	6546889	6546919	6254543	6254551	6254543	6254551
	electric	Voltage 24V DC		1.5 A		2.5 A		2.5 A	
		Cable socket magnet DIN43650 – form A: max. 100VA, LED display + Z-diode, IP65							
Position monitor- ing	Art. No.	Inductive proximity switch, Art. No.: 5127726							
	electric	Output PNP, NO contact Voltage 10 – 30 VDC							

2/2-way valve C3, DN16 – 100 | PN500 – X,Y

Valve data

Two-stage pilot control

Nominal value		DN65		DN80		DN100			
Weight		142 kg		254 kg		469 kg		kg	
2/2-way valve	hydraulic	NC	NO	NC	NO	NC	NO	NC	NO
	Art.No.	6154751		6153917		6077250			
	a	245	245	295	295	340	340		
	b	528	528	585	585	705	705		
	c	231	231	252	252	277	277		
	d	364	364	400	400	451	451		
	e	294	294	370	370	466	466		
	f	65	65	65	65	65	65		
	g	102	102	109	109	82	82		
	h	102	102	109	109	142	142		
j	37	37	40	40	55	55			
Connection diagram	Art.No.	6561306		6570577		6577229			
Pilot-valve 1	DN	10		10		10			
	hydraulic	A→T NO	P→A NO	A→T NO	P→A NO	A→T NO	P→A NO	A→T NO	P→A NO
	Art. No.	6271820	6600028	6271820	6600028	6271820	6600028		
Hydraulically actuated, X, Y internally									
Plate		6569641		6569641		6569714			
Covers		6569927		6569927		6532292			
Pilot-valve 2	DN	3		3		3			
	hydraulic	A→T NO		A→T NO		A→T NO		A→T NO	
	Art.No.	6545769		6545769		6545769			
	Actuation	Electromagnet, voltage 24V DC, current 1.0A Cable socket magnet DIN43650 – form A: max. 100VA, LED display + Z-diode, IP65							
Position monitoring	Art.No.	Inductive proximity switch, Art. No.: 5127726							
	electric	Output PNP, NO contact							
		Voltage 10 – 30 VDC							

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

Ordering example 1: 2/2-way valve DN25-PN500-X,Y actuated-24VDC-NO

Single-stage pilot control

1 item, 2/2-way valve - assembly, Art. No. 6165176

1 item, pilot valve, Art. No. 6545602

1 item proximity switch, Art. No. 5127726

Ordering example 2: 2/2-way valve DN100-PN320-X,Y actuated-24VDC-NC

Two-stage pilot control

1 item, 2/2-way valve - assembly, Art. No. 6077250

1 item, pilot valve 1, Art. No. 6271820

1 item, plate, Art. No. xxxxxxxx

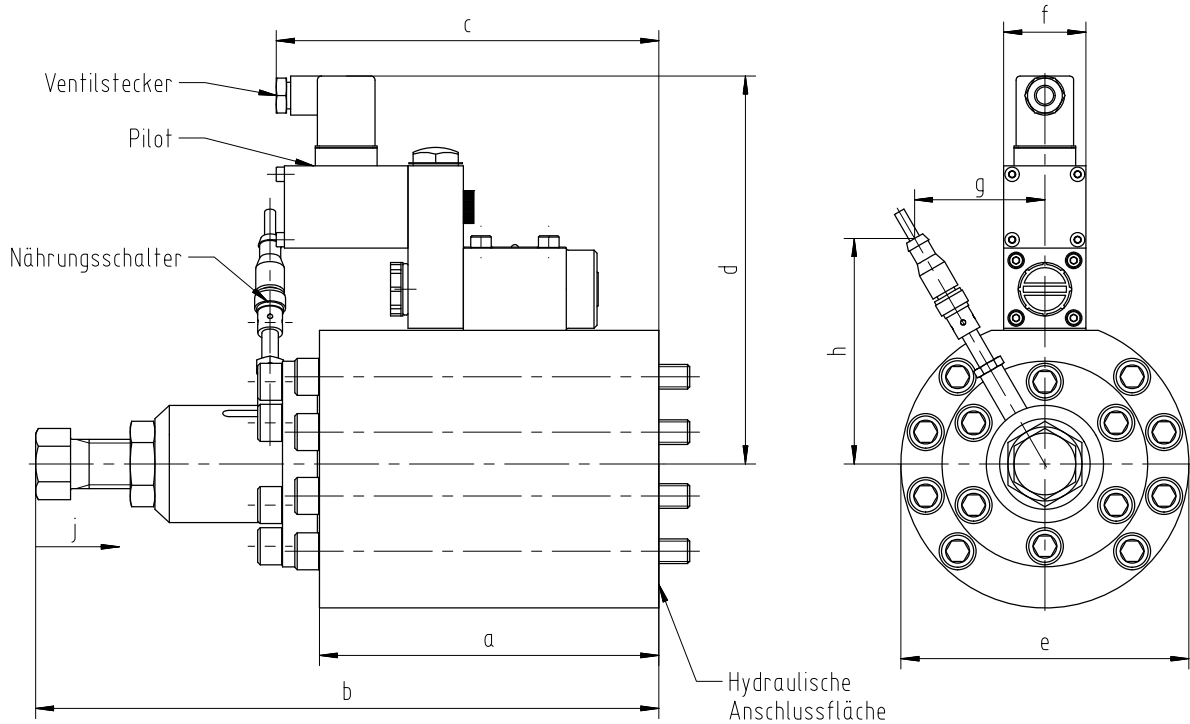
2 items, covers, Art. No. xxxxxxxx

1 item, pilot valve 2, Art. No. 6545599

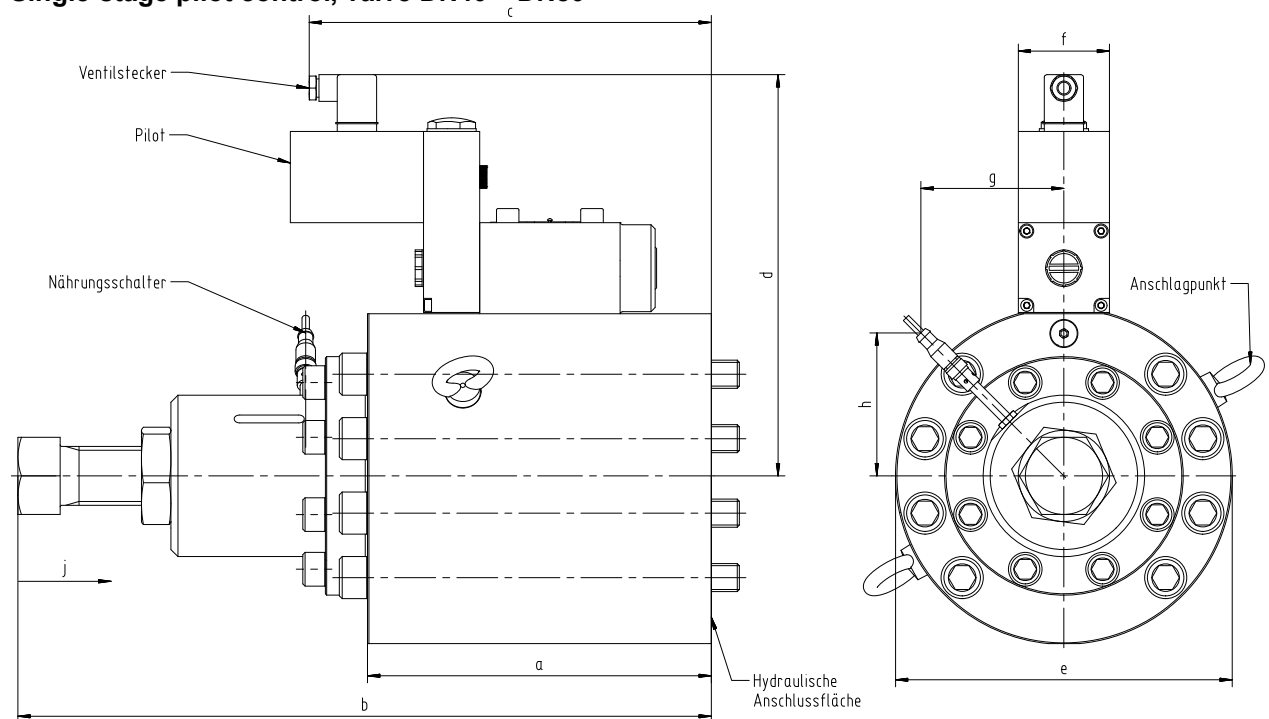
1 item, proximity switch, Art. No. 5127726

2/2-way valve C3, DN16 – 100 | PN500 – X,Y Dimension sheet

Single-stage pilot control, valve DN16 - DN32



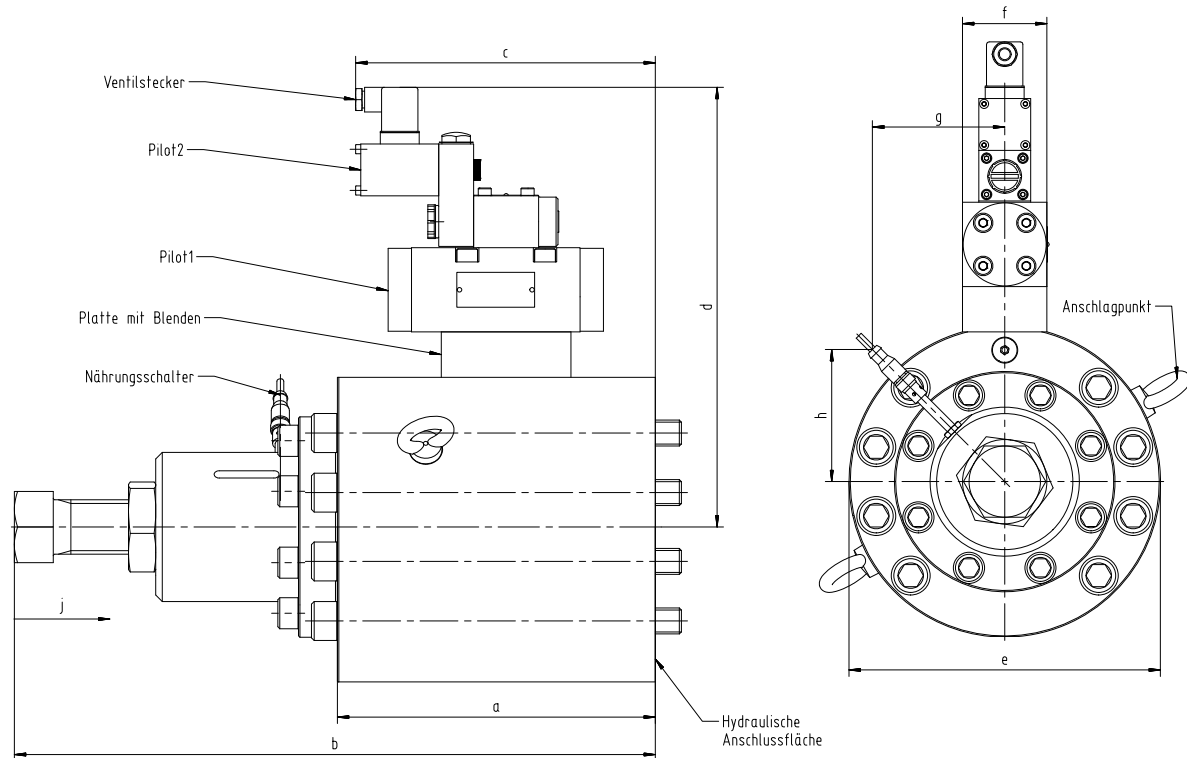
Single-stage pilot control, valve DN40 – DN80



2/2-way valve C3, DN16 – 100 | PN500 – X,Y

Dimension sheet

Two-stage pilot control, valve DN65 – DN100



Deutsch	Englisch
Ventilstecker	Valve connector
Pilot	Pilot
Näherungsschalter	Proximity switch
Hydraulische Anschlussfläche	Hydraulic terminal surface
Anschlagpunkt	Attachment point
Platte mit Blenden	Plate with covers