

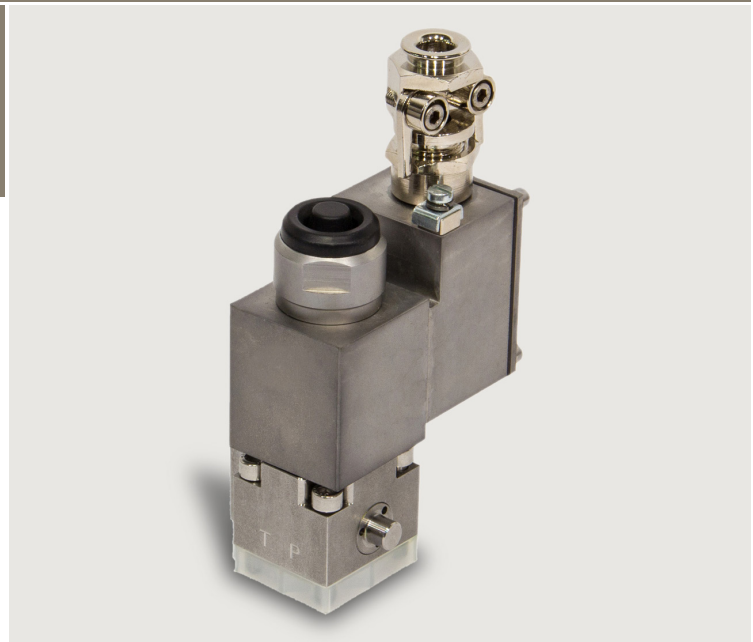
Directional poppet valves ATEX

Type WVHX-4B

NG 4 Bieri
up to 12 l/min, up to **700 bar**



Features

- Directly operated
- Seat tight
- Good corrosion resistance
- Explosion-proof



CE  II 2G EX IIC T4 Gb

Applications

- Hydraulic systems in hazardous areas, in which devices of the marking **CE  II 2G EX IIC T4 Gb (Valve)** and **CE  Ex eb mb IIC T4 Gb (Solenoid coil)** are needed.

Design

- With hardened balls and seats
- Solenoid coil turnable (90° steps) and replaceable
- Mounting on single subplates as “stand-alone” valves or in valve banks with subplates (see technical data sheets EAP-4B and APH/X-4B)
- As 2/2, 3/2 or 4/2* valve with solenoid actuation
- With sealed emergency manual override

* pilot-operated

Technical Data

Hydraulic fluid	mineral oil according to DIN 51524 with ignition temperatures up to 185 °C (other fluids on request)
Fluid temperature range	-20 up to 80 °C (both, fluid entrance and exit)
Ambient temperature range	-20 up to 55 °C (valve banks with min. clearance 14 mm) -20 up to 65 °C („stand-alone“ valve)
Viscosity range	5 to 400 mm ² /s
Porting	NG 4 according to Bieri standard
Max. operating pressure	700 bar pressure difference from P to A, B to T must be adhered! ($p_p \geq p_A$ (p_B) $\geq p_T$)
Max. flow rate	12 l/min
Filtration (recommendation)	according to NAS 1638 class 6 resp. ISO/DIN 4406 17/15/12
Duty cycle DC	100%
Solenoid voltage (nominal power)	24 VDC (17 W)
Voltage tolerance	+/- 10%
Switching time	40 - 120 ms
Degree of protection	IP 63 according to EN 60529 / DIN 40050 (solenoid IP 66)
Weight	see overview “Product informations”
Material	corrosion-resistant steel and aluminium (coil housing: ZnNi - corrosion protection)

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Type code

Example	WV	H	X	4B	2	/	2	WS	24	V	A		00
Directional poppet valves													
Size													Design 00 ... 99 For internal purposes
ATEX			X										
Nominal size													
Connection Bieri													
Number of ports													
Number of positions													
Control function													
Control method													
Seal material													

Design
00 ... 99
For internal purposes

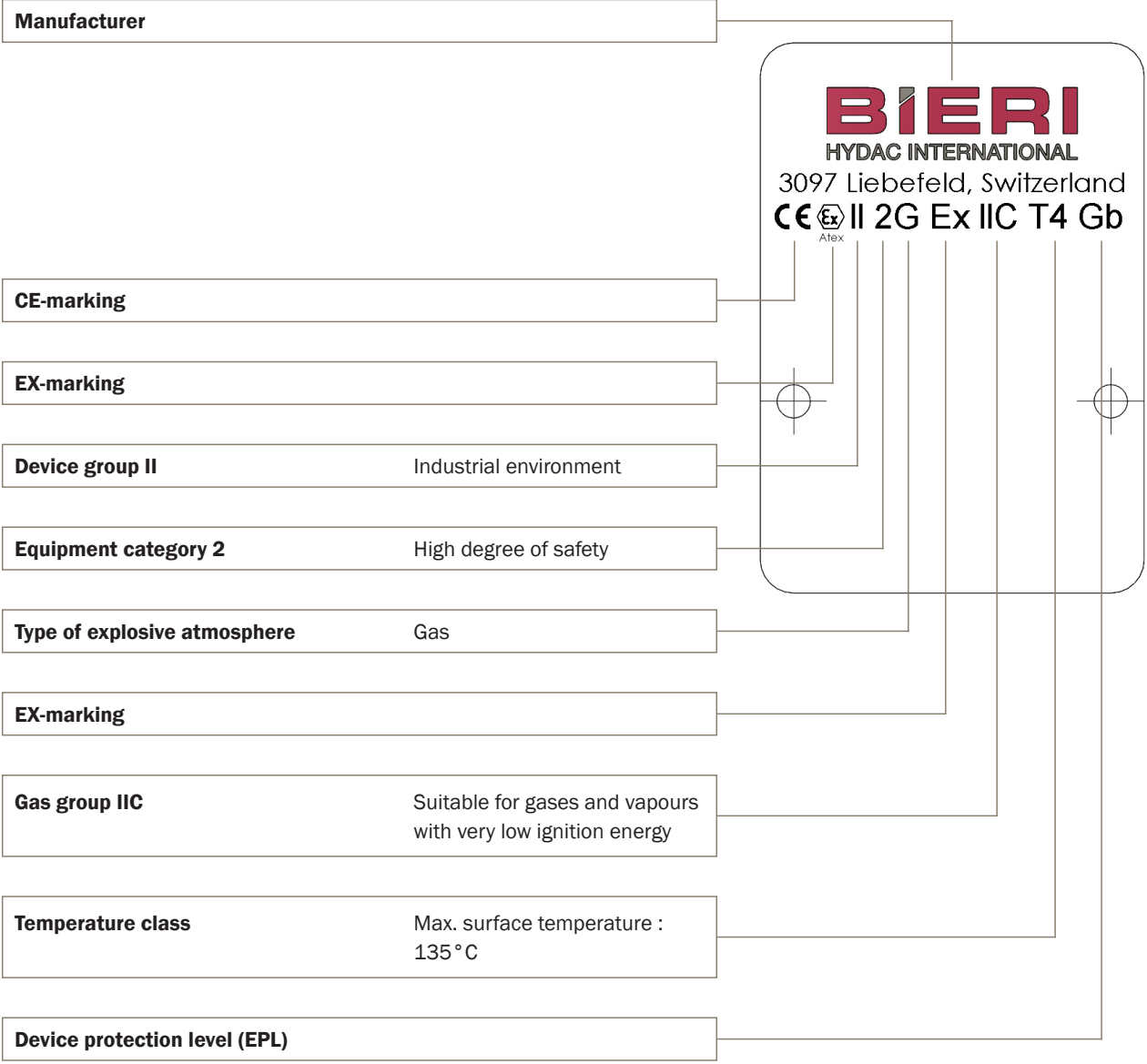
Index
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For internal purposes

Design revision
For internal purposes

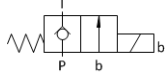
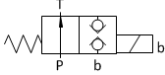

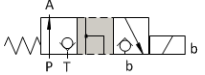
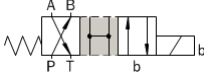
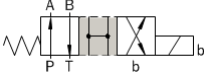
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Type plate



Product informations

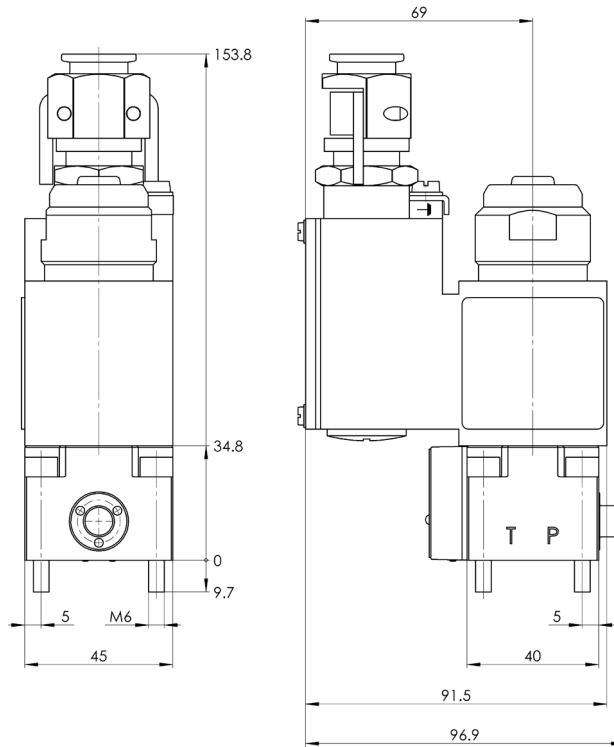
Valve type	2/2			
Control function	WO	WS		
Part No.	3986173	3986174		
Symbol				
Weight	1,9 kg	1,9 kg		
Valve type	3/2		4/2	
Control function	L	N	C	D
Part No.	3986220	3986223	3986215	3986218
Symbol				
Weight	1,9 kg	1,9 kg	2,2 kg	2,2 kg

Type WVHX-4B

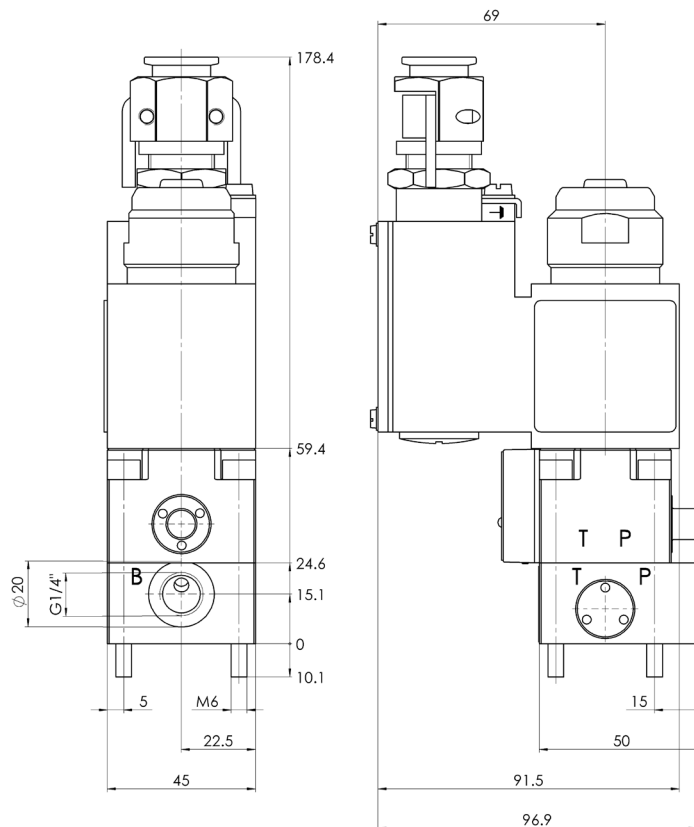
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Dimensional drawings

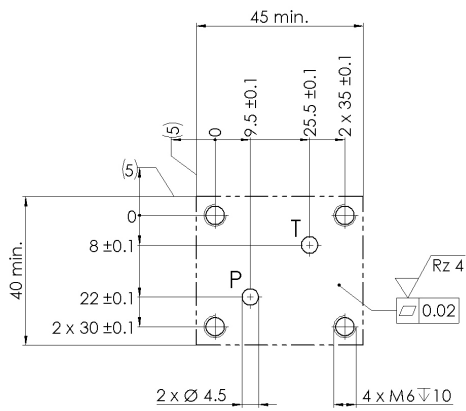
2/2 and 3/2 directional poppet valves



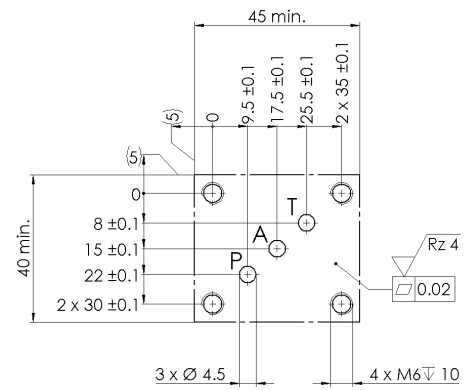
4/2 directional poppet valves



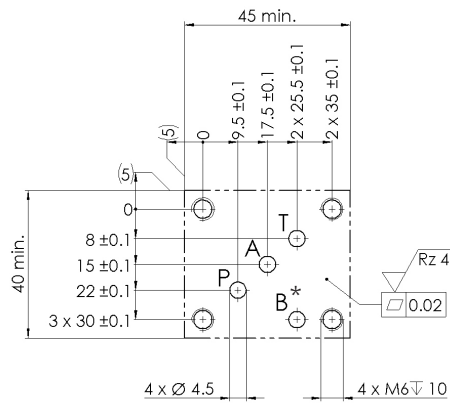
Drilling pattern 2/2 directional poppet valves



Drilling pattern 3/2 directional poppet valves



Drilling pattern 4/2 directional poppet valves



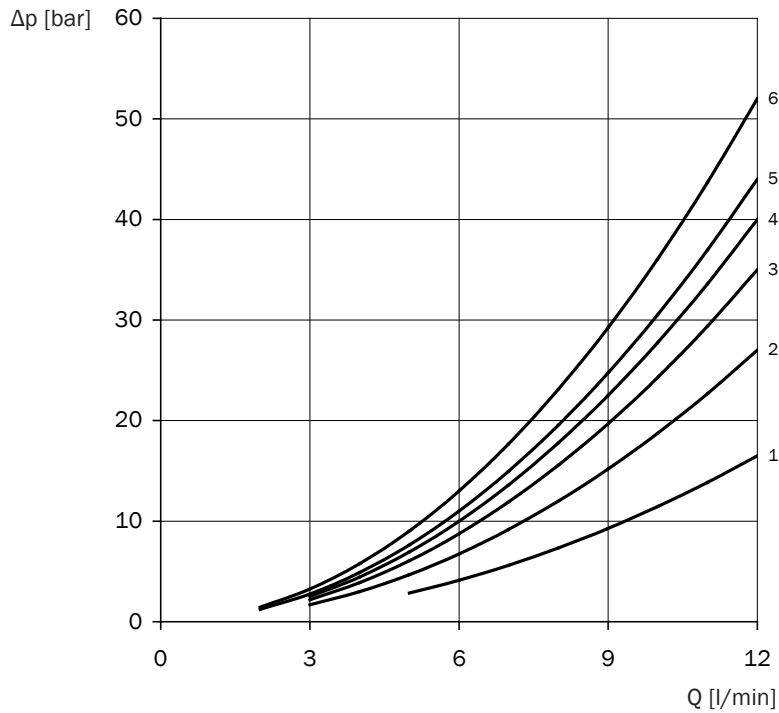
* The B hole in the connecting plate is only necessary if the pipe connection (delivered condition) is not used. When using the sub-base, the plug in the B-port of the valve must be removed.

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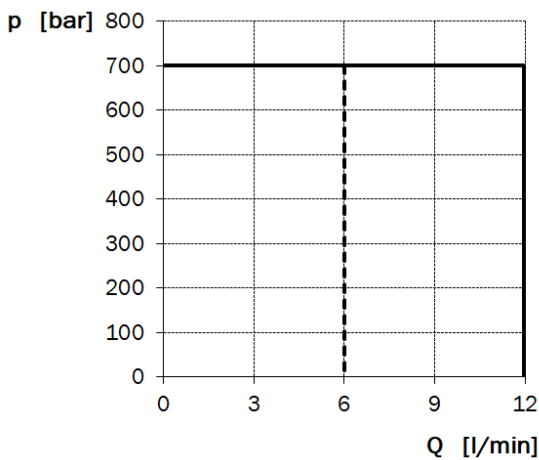
Pressure drop

($v = 32 \text{ mm}^2/\text{s}$)



Valve type	Control function	P - A	P - B	A - T	B - T	P - T
2/2	WO					1
2/2	WS					2
3/2	L	4		6		
3/2	N	3		4		
4/2	C	5	3	6	5	
4/2	D	5	5	5	6	

Hydraulic switching capacity



Hydraulic switching capacity at rated voltage and ambient temperature $T_a = 50^\circ \text{ C}$, $v = 32 \text{ mm}^2/\text{s}$

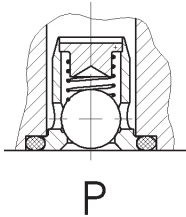
— C, D, L, N, WO
- - - WS

Accessories

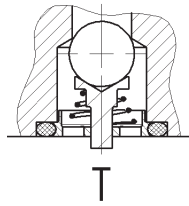
Item description	Type code	For valve type	Part No.
Check valve (fitting in connection P)	RVH700-4B-D6,5-X-A*00	All	3680704
Return pressure stop (fitting in connection T)	RDH700-4B-D6,5-X-A*00	All	3687580

Dimensional drawing

Check valve



Return pressure stop



Symbol

Check valve



Return pressure stop



Spare parts

Item description	Part No.
5 x O-Ring 5 x 1,5, FKM	3853409
5 x O-Ring 8 x 1,5, FKM	
4 x Socket head screw ISO 4762-M6 x 35 - A2-70	
4 x Socket head screw ISO 4762-M6 x 60 - A2	
1 x Seal cover plate (Port B for 4/2 valves)	3815254
1 x Ex-1516-005 Solenoid 24 VDC	

Further fastening elements, tie bolts, subplates and single subplates please see technical data sheets APH/X-4B or EAP-4B.