

# Directional seated valve bank type BVZP

The valve bank type BVZP consist of a connection block (with ports P and R), the directional seated valves type VZP installed on sub-plates and connected in parallel plus the end plate. The whole valve bank is held together with two tension rods.

Depending on the type, the sub-plate feature optional functions e.g. restrictor check valves and/or pressure reduction valves covering only the corresponding valve section. Pressure switches may be incorporated directly at the valve section.

These valve banks may be either directly connected to a pipe system via the connection block (with or without pressure limiting valve) or installed directly onto hydraulic power packs (type HK, HC, MP, and FP) or other valve banks utilizing an adapter plate. Various end plates featuring e.g. with/without pressure switch for gallery P widen the field of application for this valve banks. All this, together with our hydraulic power packs enables hydraulic control systems with low spatial requirements.



**Nomenclature:** Directional seated valve, zero leakage

**Design:** Valve bank  
 • For pipe connection  
 • Combination with hydraulic power packs

**Actuation:** Solenoid

**$P_{max}$ :** 450 bar

**$Q_{max}$ :** 15 lpm

## Basic types and general parameters

Basic type and size	Flow	Oper. pressure	Tapped ports
	$Q_{max}$ (lpm)	$P_{max}$ (bar)	(BSPP) A, B, P, R, M
BVZP 1	15	450	G 1/4

## Order coding example

**BVZP 1 A -1/400 - H 12 F 2/0**

- G 33/22 - 1- 1- G 24
  - Solenoid voltage
  - Port size, here G 1/4 (BSPP)
  - End plate
  - Valve section
  - Connection block / adapter plate
  - Basic type

## Connection blocks / adapter plates

Basic type	Brief description	Symbol
A-1/...	For pipe connection, with tool adjustable pressure limiting valve (/...- pressure specification in bar)	
F	For direct mounting onto hydraulic power packs with connection block (type HK, HC, MP, MPN, KA, FP), prepared for retrofitting of one or two pressure switches connected to gallery P	

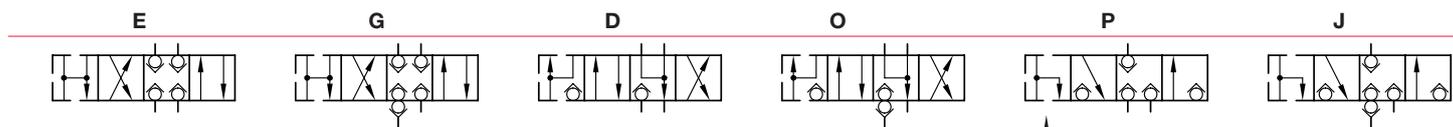
## Additional versions von connection blocks / adapter plates

- Connection block for pipe connection with pressure limiting valve and/or accumulator drain valve prepared for retrofitting of a pressure switch
- Connection block for pipe connection with manually adjustable pressure limiting valve
- Connection block for pipe connection without pressure limiting valve
- Connection blocks for direct mounting on to hydraulic power packs with 3-way prop. flow control valve and optional sequence valve in gallery R

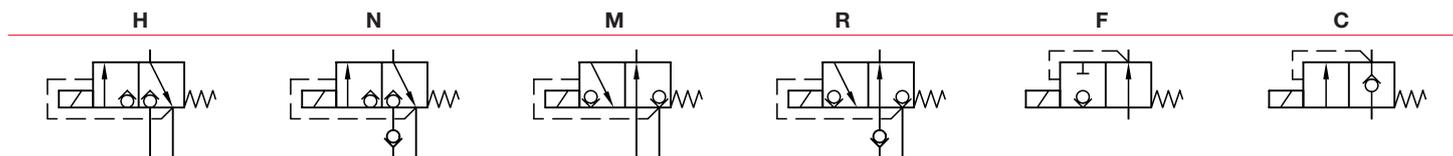
**Symbols**

max. 10 valve sections may be combined in a valve bank

**Cone seated valves with 4/3- or (3/3-) way function up to 400 bar**

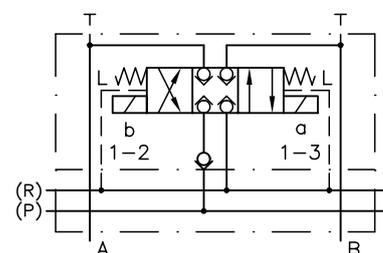


**Ball seated valves with 3/2- or (2/2-) way function up to 450 bar**

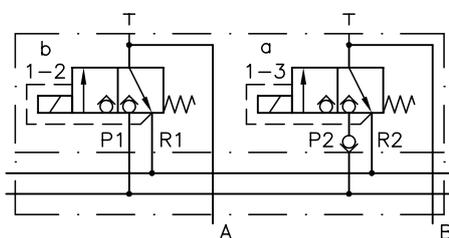


**Valve section (examples)**

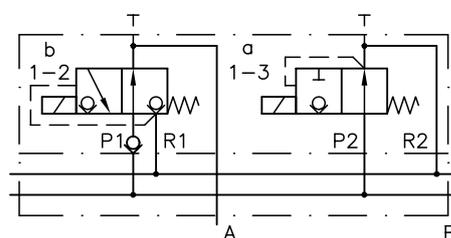
Example: -G22/0



Example: -H2N2/0



Example: -R2F2/0

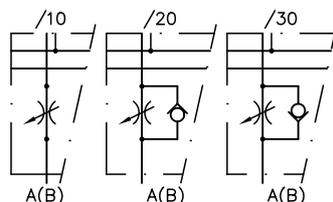


**Options for the valve section**

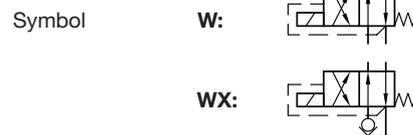
Sub-plate with throttle and restrictor check valves in the consumer port

Example: .../10; .../20; .../30

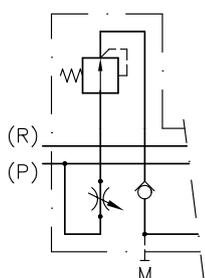
Sub-plate with throttle type Q 20 (/10) or restrictor check valve with free flow to the consumer type QR 20 (/20) or with free flow to the valve type QV 20 (/30)



Valve section with 4/2-way function, directional spool valve



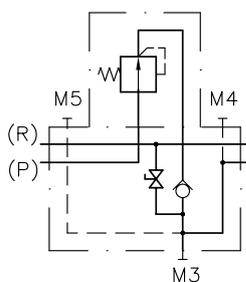
Pressure reducing valve reducing the pressure for one valve section only (connected in parallel)



Example: -.../CZ 5/100/5R

2-way pressure reducing valve type CDK 3 1) factory set to 100 bar with check valve and thread type throttle

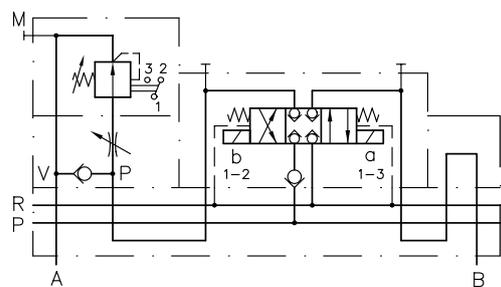
Pressure reducing valve reducing the pressure for all subsequent valves (connected in series)



Example: -CZ 2/150/4R/2

2-way pressure reducing valve type CDK 3 1) factory set to 150 bar with check valve

Pressure reducing valve with orifice/throttle and by-pass check valve in the consumer port



Example: .../6/ADK1R/200/4R...

Pressure reducing valve with tracked pressure switch, throttle and By-pass check valve in the consumer gallery

1) See also "Additional information"

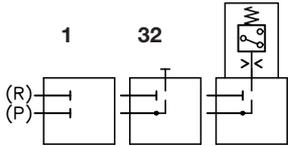
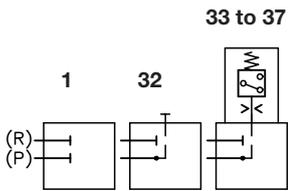
**Additional versions (valve section)**

- Individual valve with orifice in the gallery P and/or return pressure stop in the return gallery
- Individual valve type WH with sub-plate, may be integrated in a valve bank
- Sub-plate for 4/3-way valves with ancillary blocks at the consumer side featuring a pressure reducing valve with tracked pressure switch and throttles

**Solenoid voltage**

- 12V DC, 24V DC, 230V AC 50/60 Hz
- Other voltage on request
- Plug with LED, improving EMC, or with economy circuit (see also section “Additional information”)
- Version with plug M12-design and solenoid 8 Watt-design

**End plates**

Basic type	Brief description	Symbol
1	Standard end plate	
32	End plate prepared for retrofitting of a pressure switch type DG 3.. <sup>2)</sup>	
33 to 37	End plate with pressure switch type DG 3.. <sup>2)</sup>	

**Additional versions (end plates)**

- Adapter plates for mounting of valve banks type BWN(H)1 / BWH2 (see also section “Additional information”)

<sup>2)</sup> See also “Additional information”

**Order examples**

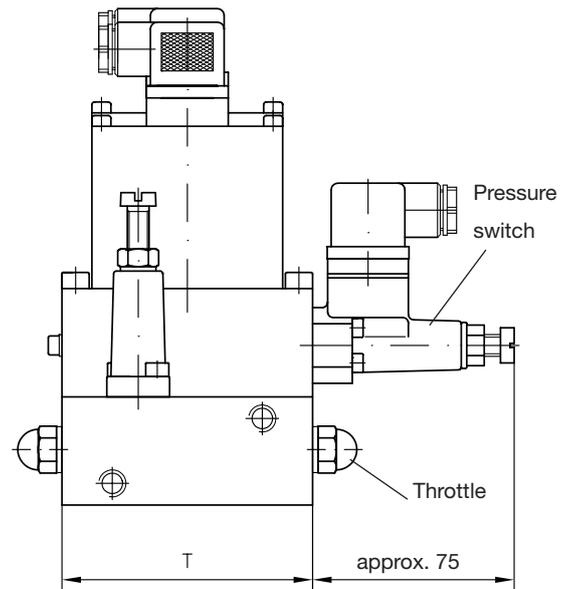
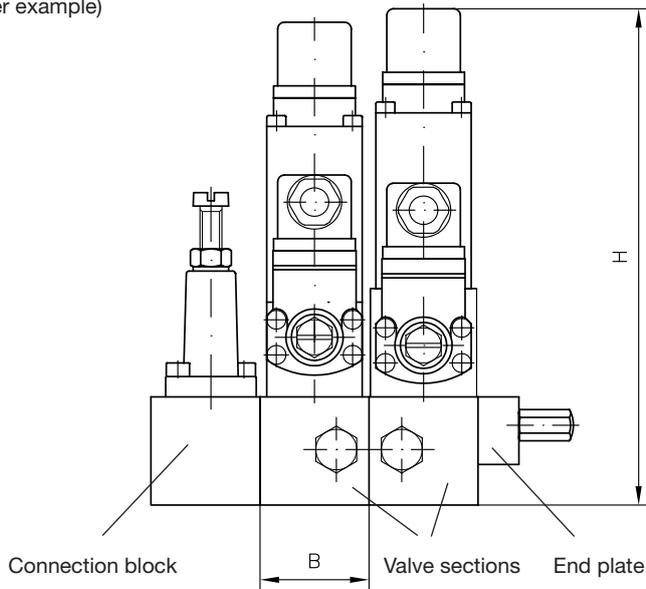
**BVZP1 A-1/200 - G 52/22**  
**- R5 M2/0 - 1 - 1 - G24**

Valve bank type BVZP, size 1, with connection block for pipe connection and tool adjustable pressure limiting valve, factory set to 200 bar (coding A-1/200), valve section 1 with flow pattern G, pressure switch type DG 35 at port A, (coding 5), prepared for retrofitting of a second pressure switch type DG 3.. at port B (coding 2), valve mounted on a sub-plate with restrictor check valves type QR 20 in ports A and B (coding 22),

Valve section 2 with flow pattern R, pressure switch type DG 35 (coding 5) at port A, flow pattern M, prepared for retrofitting of a pressure switch type DG 3.. (coding 2) at port B, valve mounted on a sub-plate without additional elements (coding 0), end plate (standard, coding 1), tapped ports G 1/4 (BSPP) (coding 1), solenoid voltage 24V DC

**Dimensions**

(see order example)



**Dimensions**

Basic type	H	B	T	m (kg) single section
BVZP 1	max. 182	40	92	2.9 ... 3.2 + 0.3

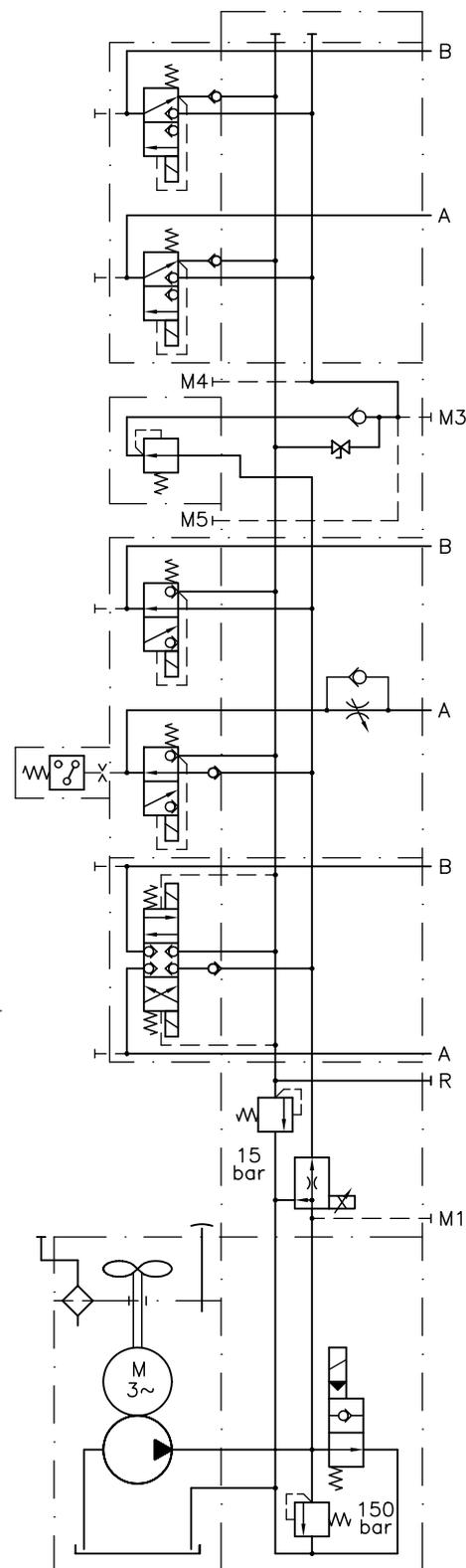
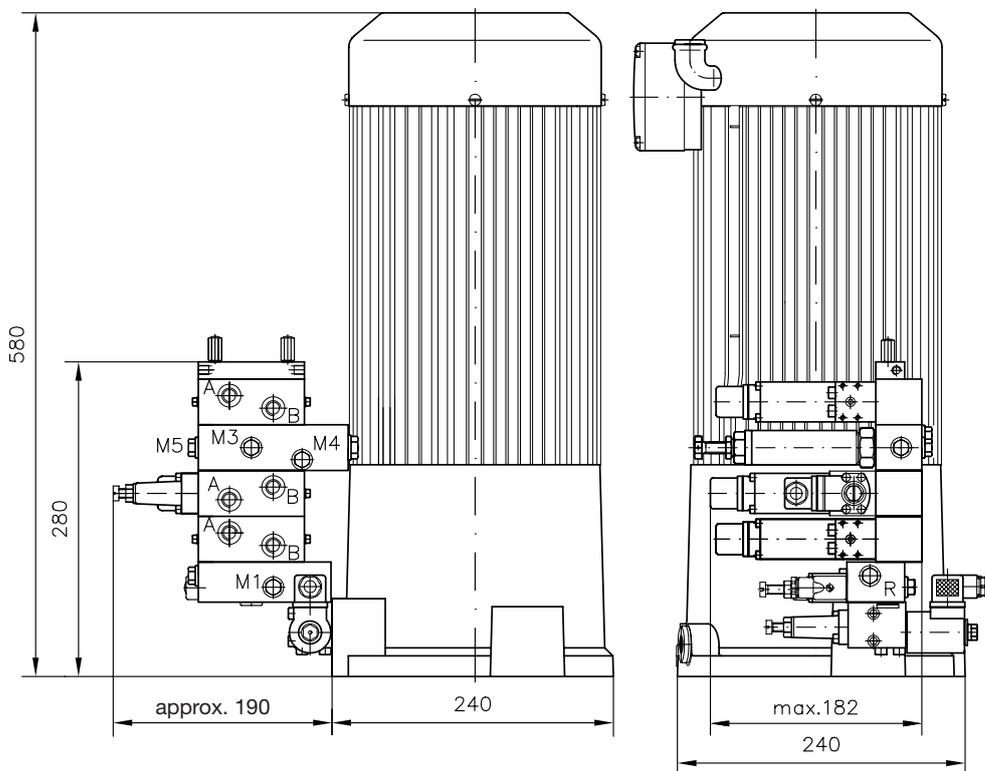
per mounted pressure switch

All dimensions in mm, subject to change without notice!

**Example circuit**HK 448/1 - H7,0 - AS1/150 - **BVZP1 FEH10F V15/G12 - G22/0 - R5 M2/20 - CZ5/80/5R - H12 H12/0 - 1 - 1 - G24**

Hydraulic power pack type HK, size 4; connection block with integrated idle circulation valve and pressure limiting valve

Valve bank type BVZP with 5 individually controlled valve functions housed in 3 valve sections, two functions are supplied with reduced pressure (pressure reducing valve section). The flow can be arbitrarily adjusted via a prop. flow control valve.

**Main parameter of the example circuit**
 $Q_{pu} = 7.0 \text{ lpm (at 1450 rpm)}$ 
 $p_{max pu} = 215 \text{ bar}$ 
 $p_{system} = 150 \text{ bar (setting of the pressure limiting valve)}$ 
 $V_{consum} = \text{approx. } 3.7 \text{ l}$ 
**Additional information**

- Valve banks type BVZP
- Directional seated valves type VZP1
- Valve banks type BWN, BWH
- Pressure switches type DG3., DG5E
- Pressure reducing valves type CDK type DK

D 7785 B  
D 7785 A  
D 7470 B/1  
D 5440, D 5440 E/1  
D 7745  
D 7941

- Slot type throttle type Q, QR, QV
- Plug with LED etc.
- See also "Turn-key solution out of the modular system"

D 7730  
D 7163

For page and section of the devices additionally listed, see type index