BIERI
SWISS HYDRAULICS

Seated valves	Type BV700
NG 6 up to 700 bar	up to 25 l/min

Features
- Leakage free
- High availability
- 100% duty cycle
- Porting NG 6 according to DIN 24340
- Positive overlap

Function and design
The seated valves are direct operated. Depending on the desired control function up to four valve cartridges are used. The poppets which are situated in the cartridge are pressed on the valve seat via springs or are opened via tappets. Hardened poppets and valve seats ensure long life. Pressure compensated poppets reduce the operating power.

Type of operation
Depending on requirement either one or two dry DC-solenoid, pneumatic or hydraulic control or a manual control lever is mounted onto the valve block.

Technical data

Hydraulic fluid	mineral oil according to DIN 51524 (other fluids on request)			
Fluid temperature range	NBR: -30 to 80 °C FPM: -20 to 80 °C			
Ambient temperature range	-30 to 50 °C			
Viscosity range	5 to 400 mm^2/s (optimal: 10 to 68)			
Porting	NG 6 according to DIN 24340 ISO 4401 / CETOP RP 121 H			
Operating pressure max. connection P, A, B	700 bar			
Pressure admissible max. connection T	350 bar			
Flow rate max.	25 l/min			
Filtration	according to NAS 1638, class 6 or ISO/DIN 4406 15/12			
Weight	see dimension drawings			
Duty cycle	100%			
Power	solenoid	12	VDC	30 W
	solenoid	24	VDC	31 W
	solenoid	107	VDC	37 W
	solenoid	196	VDC	40 W
Power tolerance	+/- 10 %			
Degree of protection according to DIN 40050	IP 65			
Switching time	40–120 ms			
Surface finish of the valves	steel: blued			

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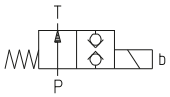
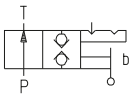
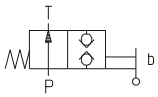
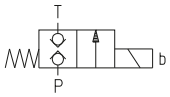
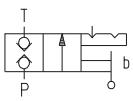
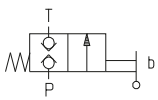
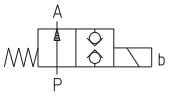
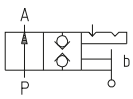
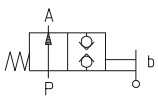
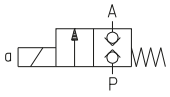
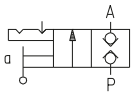
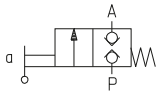
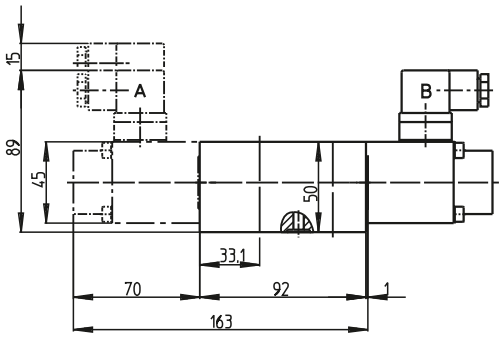
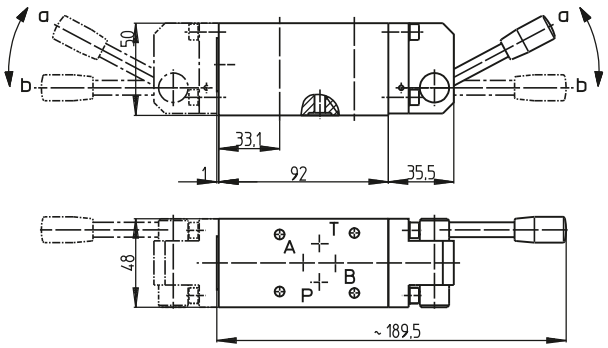
NG 6 up to 700 bar	up to 25 l/min

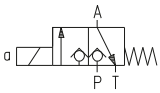
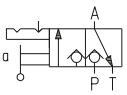
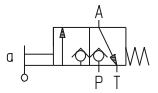
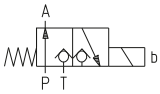
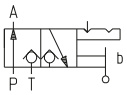
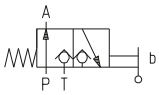
Function	Solenoid operated	AS	Manual operated detent HR	AS	Manual operated spring return HF	AS
2/2-WS		A		A		A
2/2-WO		A		A		A
2/2-VS		A		A		A
2/2-VO		A		A		A

Weight 2,4 kg



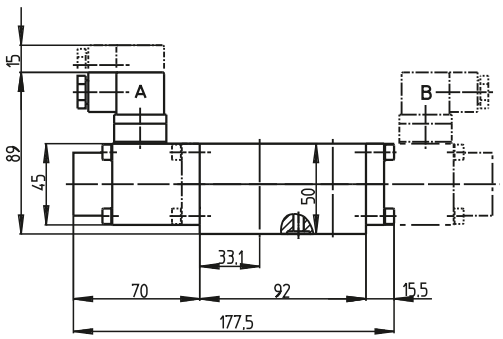
Weight 1,9 kg



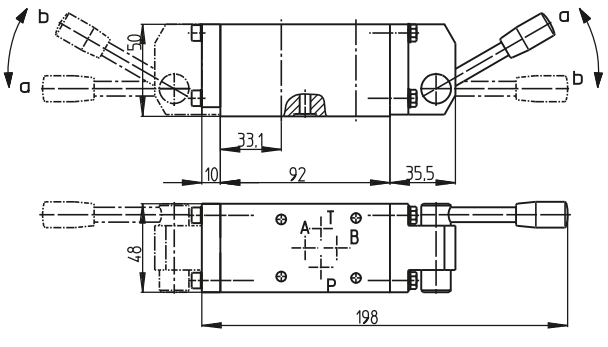
Function	Solenoid operated	AS	Manual operated detent HR	AS	Manual operated spring return HF	AS
3/2-L		A		A		A
3/2-N		A		A		A

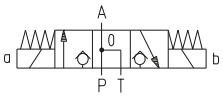
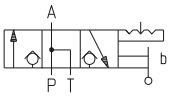
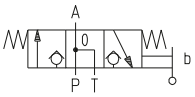
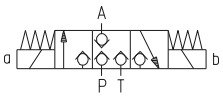
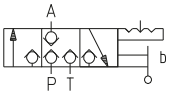
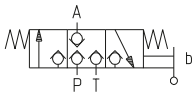
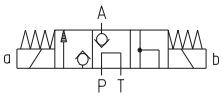
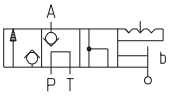
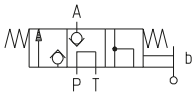
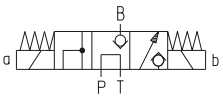
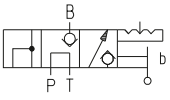
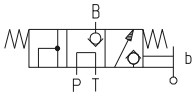
Valves type L and N with negative overlap.

Weight 2,4 kg

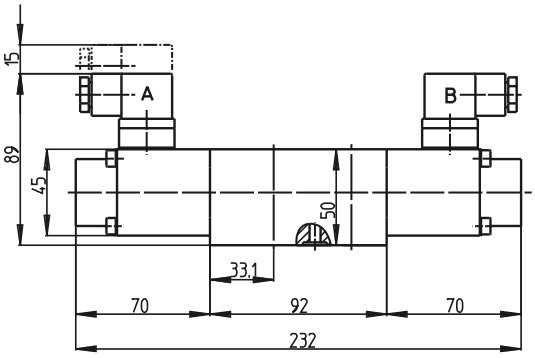


Weight 1,9 kg

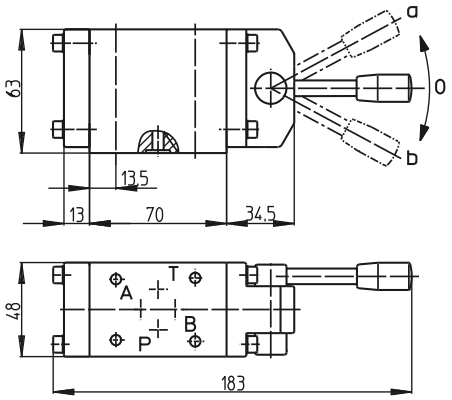


Function	Solenoid operated	AS	Manual operated detent HR	AS	Manual operated spring return HF	AS
3/3-F		A		A		A
3/3-K		A		A		A
3/3-G		A		A		A
3/3-GB		A		A		A

F, K: Weight 3,1 kg

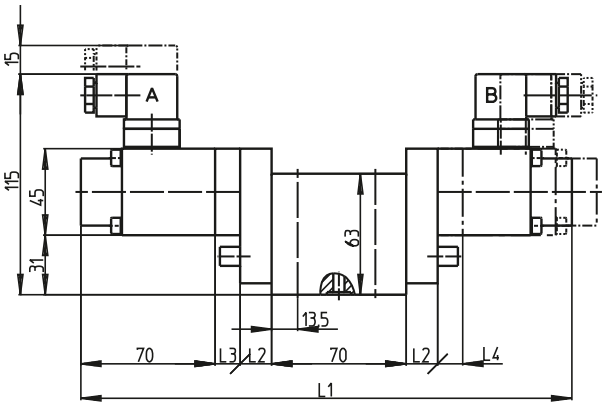


F, K, G, GB: Weight 1,9 kg

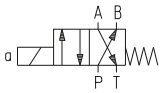
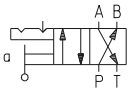
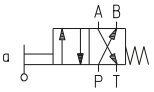
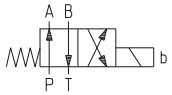
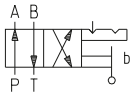
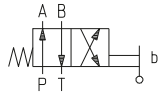


G, GB: Weight 3,4 kg

Function	L1	L2	L3	L4
G	256	16,5	13	0
GB	256	16,5	0	13

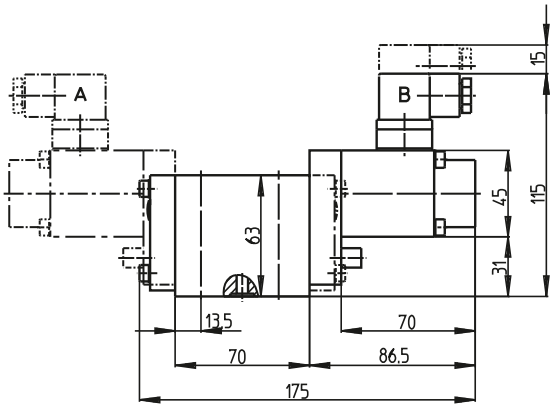


Seated valves	Type BV700
NG 6 up to 700 bar	up to 25 l/min

Function	Solenoid operated	AS	Manual operated detent HR	AS	Manual operated spring return HF	AS
4/2-C		A		A		A
4/2-D		A		A		A

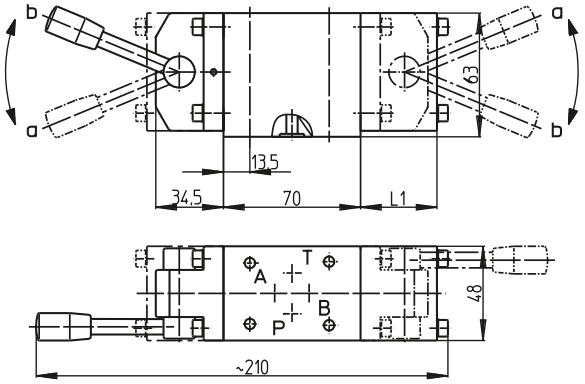
Valves type C and D with negative overlap.

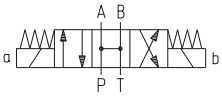
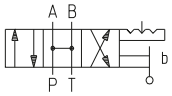
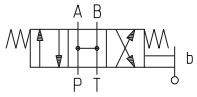
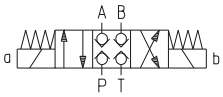
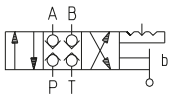
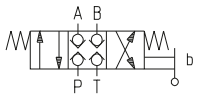
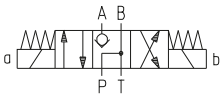
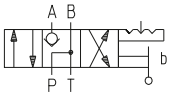
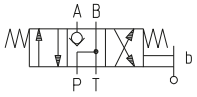
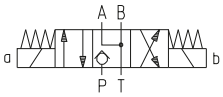
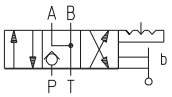
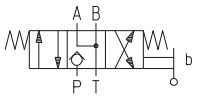
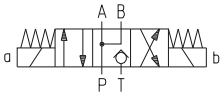
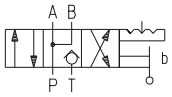
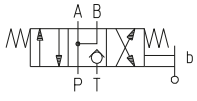
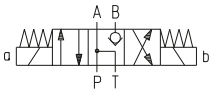
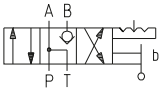
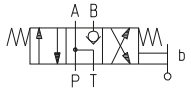
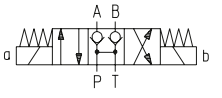
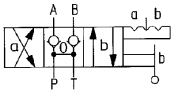
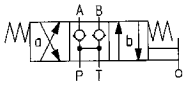
Weight 2,6 kg



Weight 2,1 kg

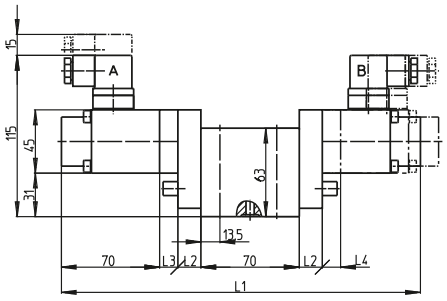
manual operated	L1
detent HR	13
spring return HF	39



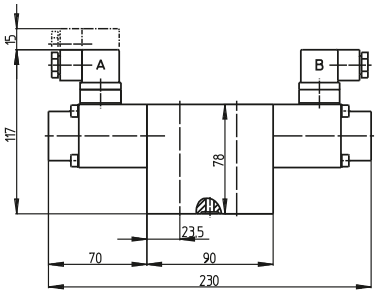
Function	Solenoid operated	AS	Manual operated detent HR	AS	Manual operated spring return HF	AS
4/3-H		A		A		A
4/3-E		A		A		A
4/3-P		A		A		A
4/3-J		A		A		A
4/3-M		A		A		A
4/3-R		A		A		A
4/3-U		B		B		B

H, E, P, J, M, R: Weight 3,4 kg

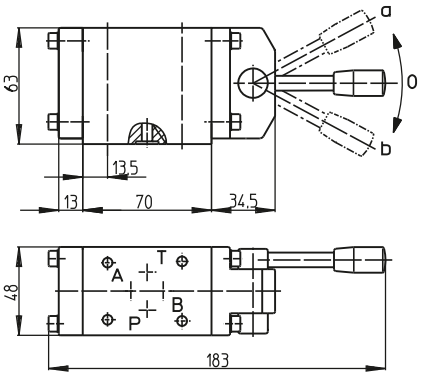
Function	L1	L2	L3	L4
H, E, P, J, M	243	16,5	0	0
P	256	16,5	13	0
R	256	16,5	0	13



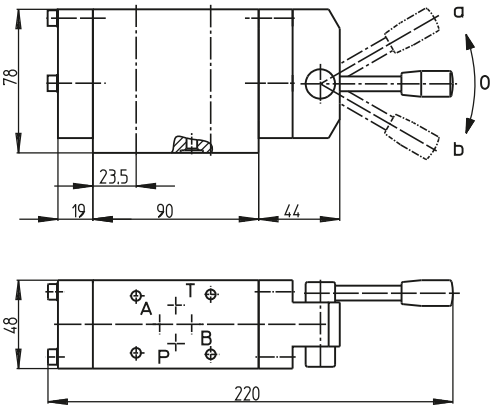
U. Weight 3,9 kg



H, E, P, J, M, R: Weight 1,9 kg

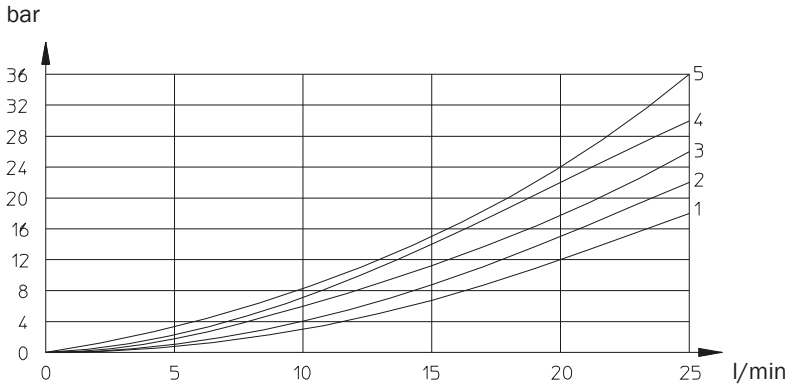


U. Weight 2,9 kg



Seated valves	Type BV700
NG 6 up to 700 bar	up to 25 l/min

Characteristic
measured at ν = 32 mm²/s, T = 40 °C



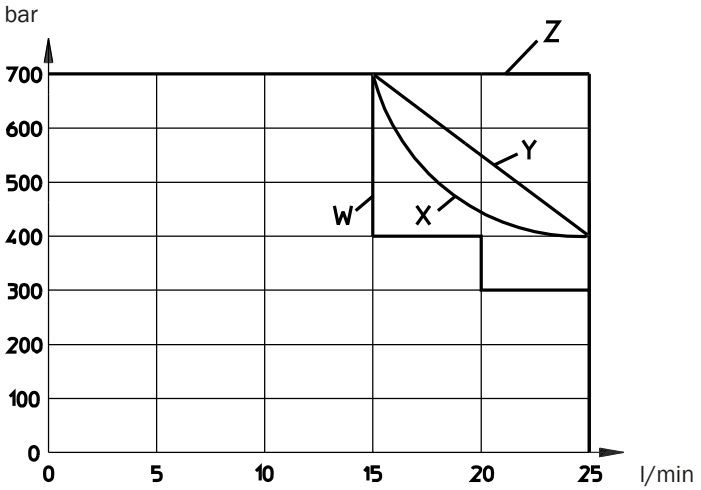
Solenoid operated valves

Direction of flow					
Function	**P-A**	**P-B**	**A-T**	**B-T**	**P-T**
C	3	3	2	2	
D	3	1	1	2	
E, J, M	3	2	2	3	
F	3		3		2
G	2		2		3
GB		3		3	4
H	1	1	1	1	2
K, L, N	2		3		
P	3	2	3	2	3
R	2	3	2	3	3
U	5	5	4	4	3
VO, VS	2				
WO, WS					2

Manual operated valves

Direction of flow					
Function	**P-A**	**P-B**	**A-T**	**B-T**	**P-T**
C	2	3	2	1	
D	1	2	1	1	
E	1	1	2	1	
F	3		3		2
G	1		1		2
GB		2		2	3
H	1	1	1	1	1
J, M	3	2	2	3	
K	2		2		
L, N	2		3		
P	2	3	3	3	3
R	2	3	2	3	3
U, WS	5	5	4	4	3
VO, VS	2				
WO					2

Max. switching power
measured at ν = 32 mm²/s, T = 40 °C

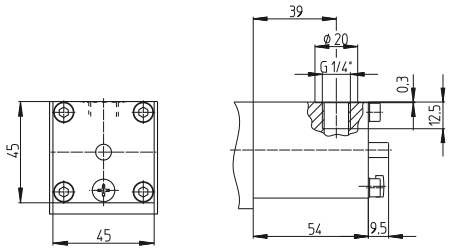


Function	Line
F, G, GB, H, J, M, P, R	X
C, D, K, L, N, VS, WO	Y
E, VO, WS	Z
U	W

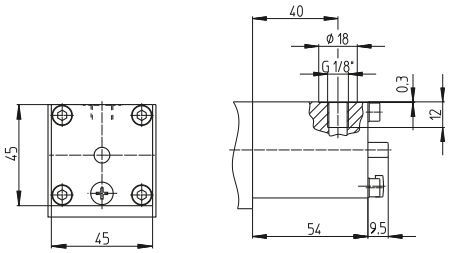
Seated valves	Type BV700
NG 6 up to 700 bar	up to 25 l/min

Dimension drawings

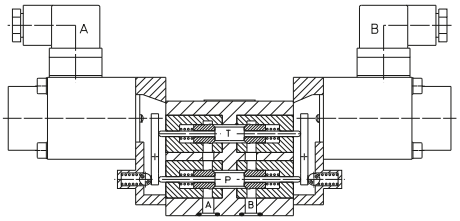
Hydraulic control

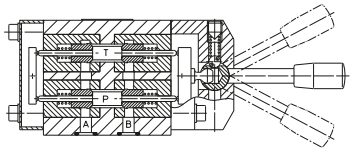


Pneumatic control

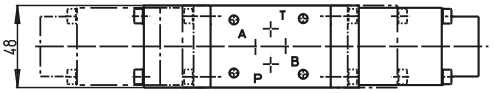


Sectional drawing





Valve width



Accessories

If supply voltage of 120 VAC (107 VDC) or 230 VAC (196 VDC) is used, the plugs must be fitted with rectifiers.

Plug with rectifier for A-solenoid (grey)	part no. 903438
Plug with rectifier for B-solenoid (black)	part no. 903439

For each valve the following is included:

4 pieces O-rings 9,25 x 1,78 mm 90° ShA	part no. 900195

For solenoid valves:

1 plug for A-solenoid (grey)	part no. 901764
and/or	
1 plug for B-solenoid (black)	part no. 901762

Tie bolts / fixing screws as well as subplates and multi-station subplates see technical data sheet AP / RP

Operating instructions see BA-BV700

Seated valves	Type BV700
NG 6 up to 700 bar	up to 25 l/min

Ordering code: Example

WV	700	-	6	-	4	/	2	-	C	-	24	-	P	-			00

Seated valve

Type BV700

Size 6

Ports 2, 3, 4

Positions 2, 3

Functions see table

Operated by

12	solenoid 12 VDC
24	solenoid 24 VDC
107	solenoid 107 VDC
196	solenoid 196 VDC
HF	manual, spring returned
HR	manual, detent
AIR	pneumatic control 3–7 bar
OIL	hydraulic control 100–630 bar

Seals

P (NBR)
V (FPM)

Design revision (AS)
see table
(capital letters A-Z;
identical letters
equal same
connecting
dimensions)

Part index
Please leave
it blank
(small letters a-z;
different letters
do not effect
interchangeability)

Special design
01 ... 99
(00 for
standard)

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