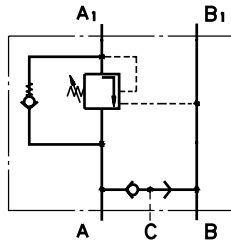
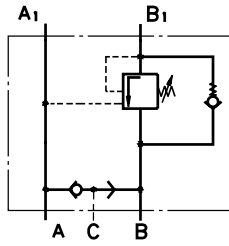


# VALVES FOR HYDRAULIC MOTORS

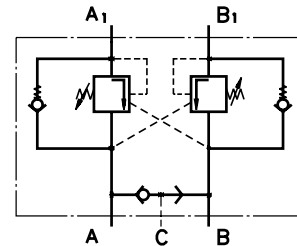
## OVERCENTER VALVES WITH BRAKE CONTROL



Single Overcenter Valves with Brake Control  
type KPBR ... EA



Single Overcenter Valves with Brake Control  
type KPBR ... EB



Dual Overcenter Valves with Brake Control  
type KPBR ... D

### CONTENTS

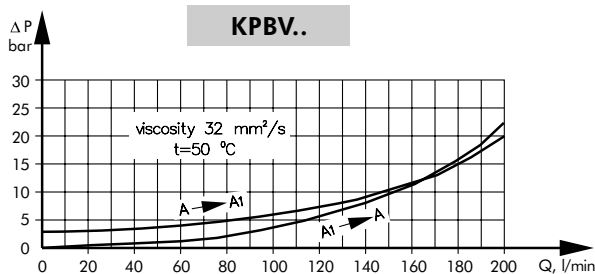
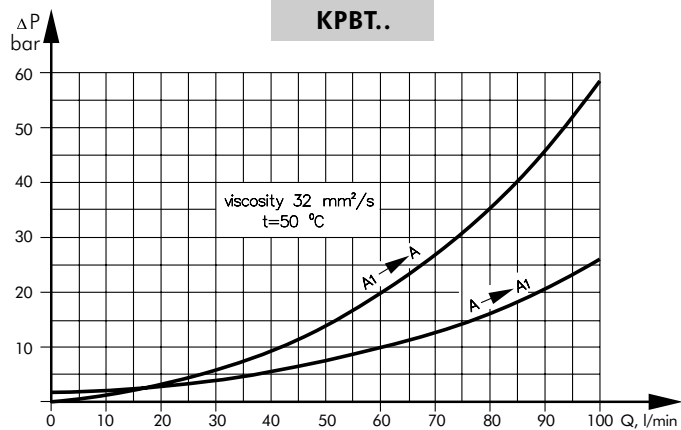
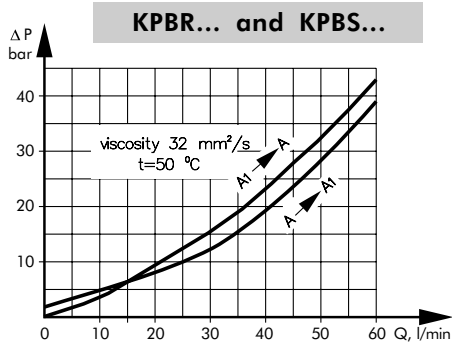
Valves for MP, MR and MH type KPBR ... 15	Crossover Relief Valves ..... 21
Valves for MS type KPBS ..... 16	Valves for MP, MR and MH type KP..R ... 22
Valves for MT type KPBT ..... 17	Valves for MS type KP..S ..... 22
Valves for MV type KPBV ..... 18	Valves for MT type KP..T ..... 23
Switch valves type KPWR and KPWS .... 19	Valves for MV type KP..V ..... 24
Switch valves type KPWT and KPWW ..... 20	Order Code ..... 26

### SPECIFICATION DATA

Parameters	Type							
	KPBR...E	KPBS...E	KPBR...D	KPBS...D	KPBT...E	KPBT...D	KPBV...E	KPBV...D
Flow Rate , l/min	60				100		200	
Rated Pressure* , bar	70÷250				70÷250		70÷250	
Pilot Ratio	4,25:1				4,25:1		4,25:1	
Weight , kg	3,300	3,340	3,350	3,390	5,400	5,800	9,200	9,750

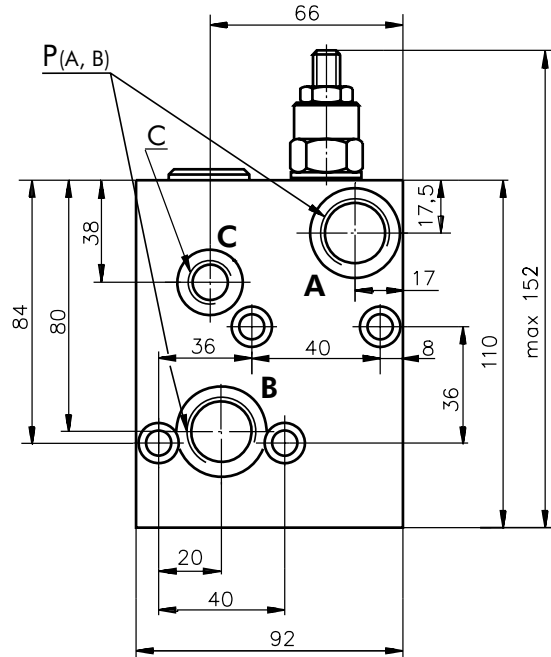
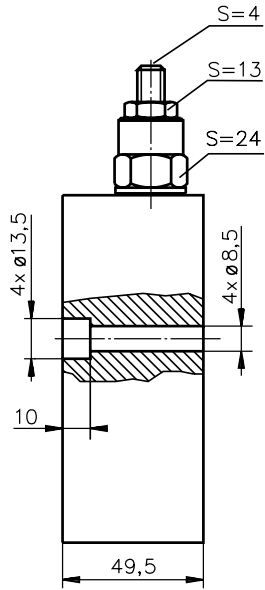
\*Pressure Settings are at flow rate of 5 lpm and viscosity 32 mm<sup>2</sup>/s (50 °C).

### PRESSURE LOSSES



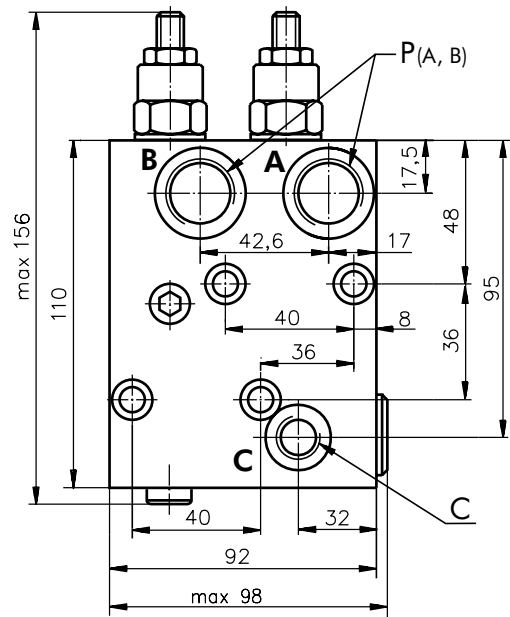
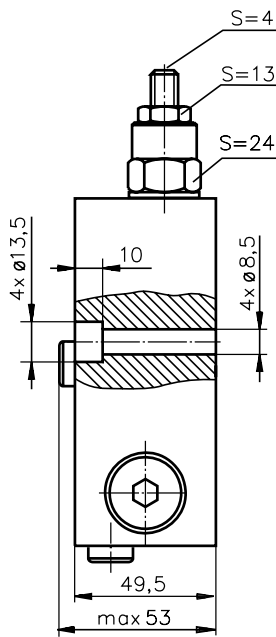
**VALVES FOR MP, MR, MH HYDRAULIC MOTORS**

**SINGLE VALVE KPBR-250/1/E...**



**P<sub>(A, B)</sub>** : G1/2 (M22x1,5), 17 mm depth  
**C** : G1/4 (M14x1,5), 14 mm depth

**DUAL VALVE KPBR-250/1/D...**

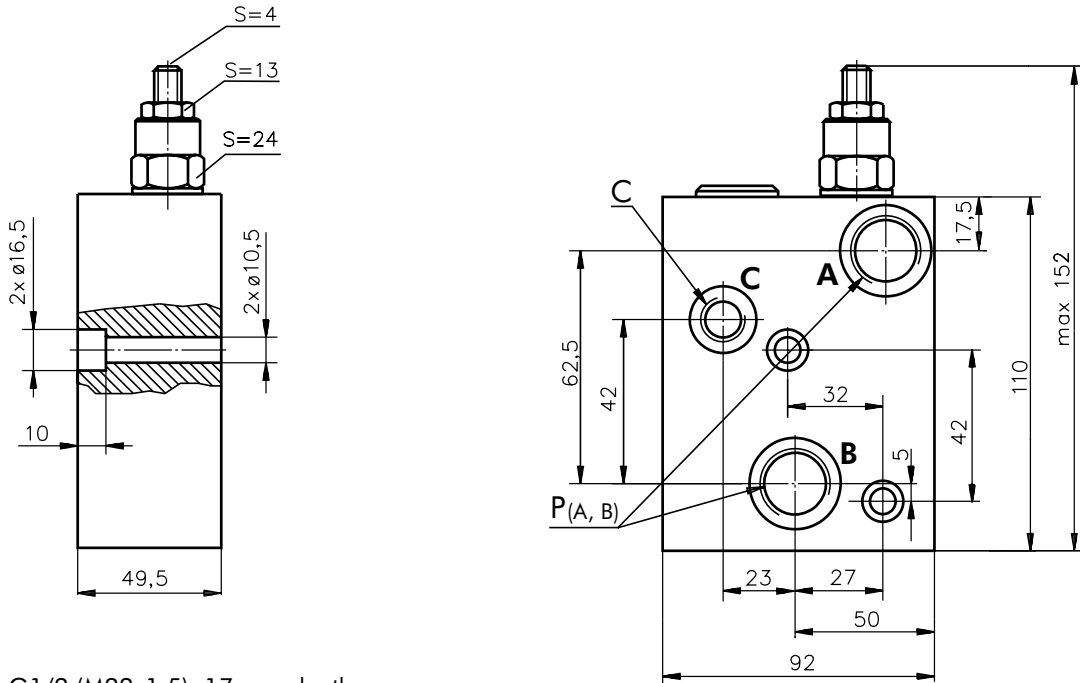


**P<sub>(A, B)</sub>** : G1/2 (M22x1,5), 17 mm depth  
**C** : G1/4 (M14x1,5), 14 mm depth

**Note** : KPBR Blocks are installed directly on MP and MR Motors with four bolts M8x50 - 8.8 DIN 912.  
 Tightening torque  $1,7^{+0,2}$  daNm.

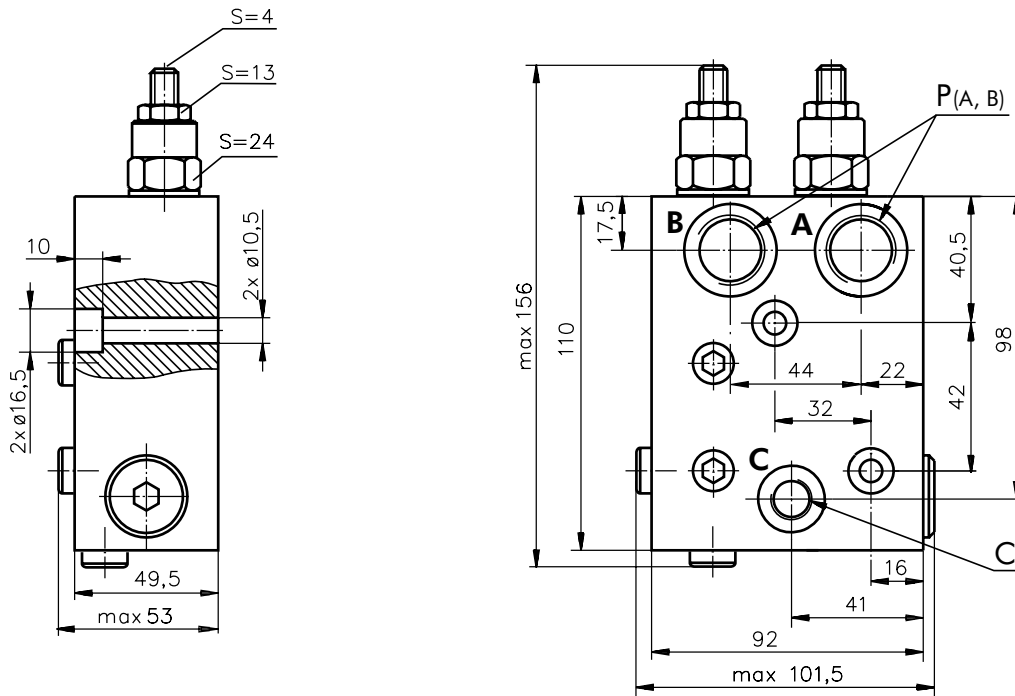
**VALVES FOR MS HYDRAULIC MOTORS**

**SINGLE VALVE KPBS-250/1/E...**



**P<sub>(A,B)</sub>** : G1/2 (M22x1,5), 17 mm depth  
**C** : G1/4 (M14x1,5), 14 mm depth

**DUAL VALVE KPBS-250/1/D...**



**P<sub>(A,B)</sub>** : G1/2 (M22x1,5), 17 mm depth  
**C** : G1/4 (M14x1,5), 14 mm depth

**Note** : KPBS Blocks are installed directly on MS Motors with two bolts M10x50 - 8.8 DIN 912.  
 Tightening torque 3,5<sup>+0,3</sup> daNm.



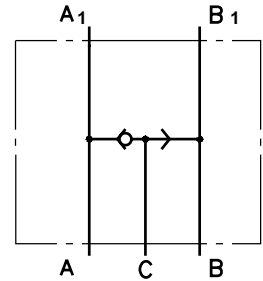




**SWITCH VALVE**

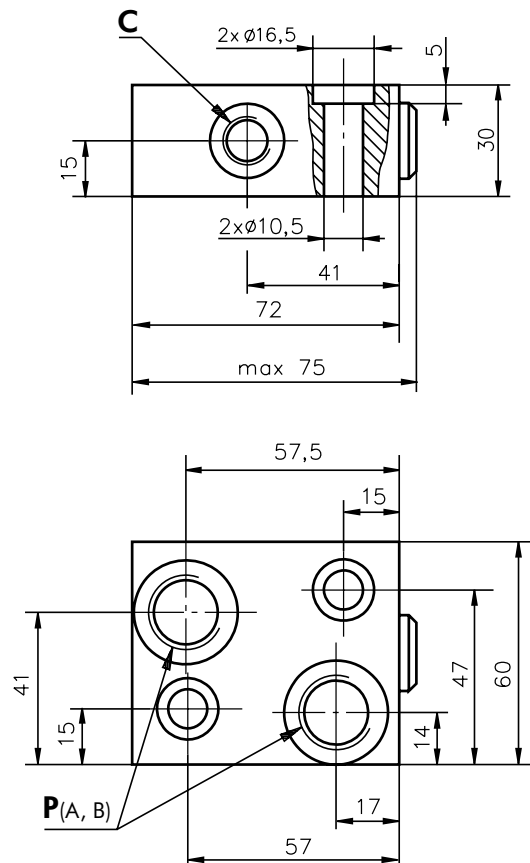
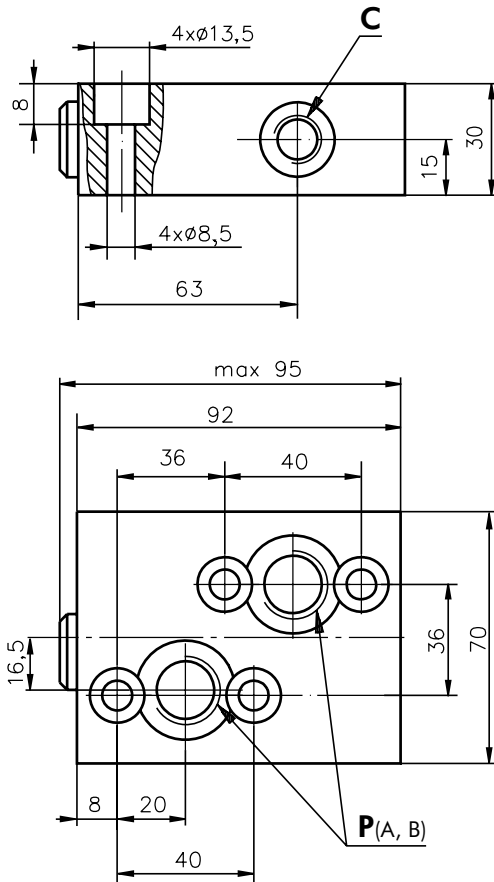
**SPECIFICATION DATA**

Parameters	Type	
	KPWR	KPWS
Flow Rate , l/min	60	
Rated Pressure , bar	250	
Weight , kg	0,850	0,670



**VALVE FOR MP, MR, MH HYDRAULIC MOTORS  
KPWR**

**VALVE FOR MS HYDRAULIC MOTORS  
KPWS**



**P(A, B):** G1/2 (M22x1,5), 17 mm depth  
**C :** G1/4 (M14x1,5), 14 mm depth

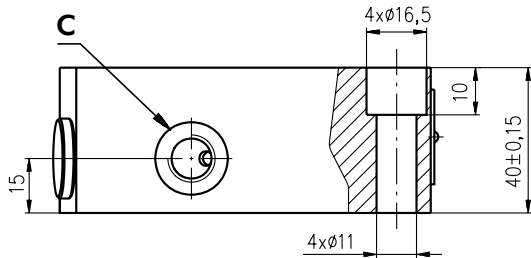
**Note :** KPWR Blocks are installed directly on MP and MR Motors with four bolts M8x35 - 8.8 DIN 912. Tightening torque  $1,7^{+0,2}$  daNm.  
 KPWS Blocks are installed directly on MS Motors with two bolts M10x35 - 8.8 DIN 912. Tightening torque  $3,5^{+0,3}$  daNm.

**SWITCH VALVE (continued)**

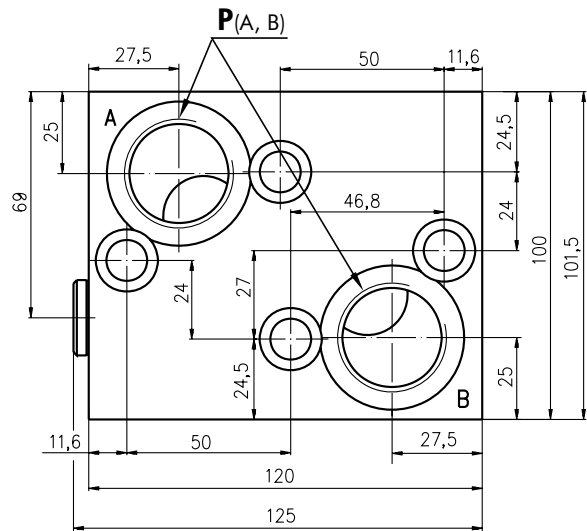
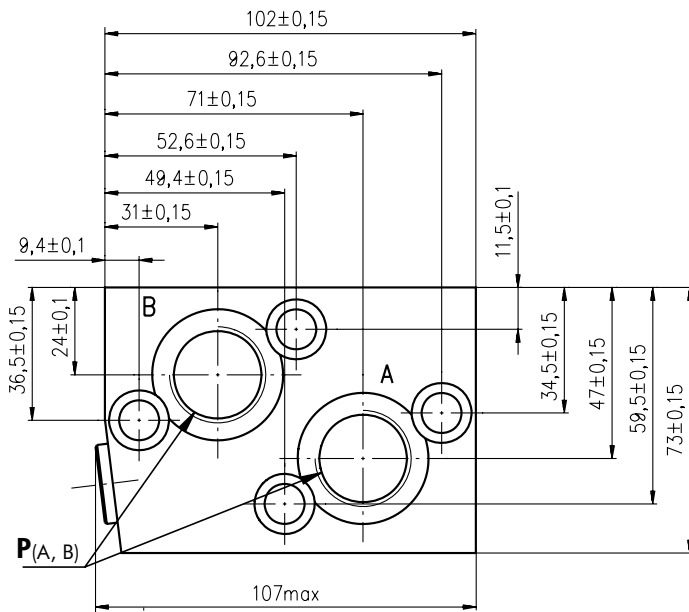
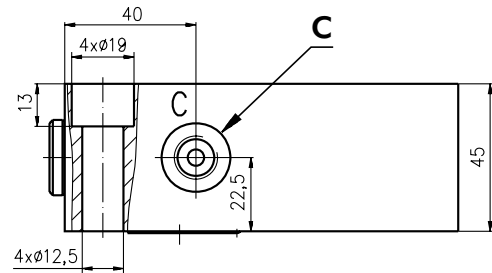
**SPECIFICATION DATA**

Parameters	Type	
	KPWT	KPWV
Flow Rate , l/min	100	200
Rated Pressure , bar	250	
Weight , kg	1,800	3,150

**VALVE FOR MT HYDRAULIC MOTORS  
KPWT**



**VALVE FOR MV HYDRAULIC MOTORS  
KPWV**

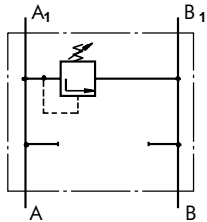


**P<sub>(A, B)</sub>**: G3/4 (M27x2), 17 mm depth  
**C** : G1/4 (M14x1,5), 14 mm depth

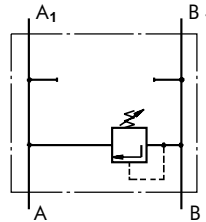
**P<sub>(A, B)</sub>** : G1-A (M33x2), 20 mm depth  
**C** : G1/4 (M14x1,5), 14 mm depth

**Note** : KPWT Blocks are installed directly on MT Motors with four bolts M10x40 - 8.8 DIN 912.  
 Tightening torque  $3,5^{+0,3}$  daNm.  
 KPWV Blocks are installed directly on MV Motors with four bolts M12x45 - 8.8 DIN 912.  
 Tightening torque  $6,5^{+0,5}$  daNm.

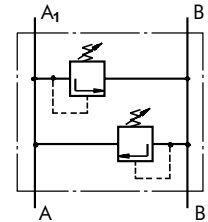
**CROSSOVER RELIEF VALVES**



Single Crossover  
Relief Valve  
type KPEA ...



Single Crossover  
Relief Valve  
type KPEB ...



Dual Crossover  
Relief Valve  
type KPD ...

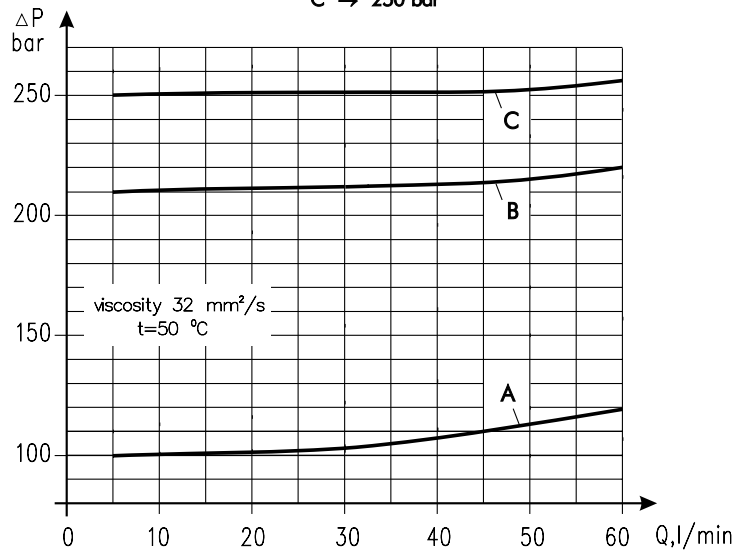
**SPECIFICATION DATA**

Parameters	Type			
	KPER	KPDR	KPES	KPDS
Flow Rate , l/min	60			
Rated Pressure*, bar	30 to 100; 50 to 210; 80 to 300			
Weight , kg	1,55		1,50	

\*Pressure Settings are at flow rate of 5 l/min and viscosity 32 mm<sup>2</sup>/s (50 °C).

**RATED PRESSURE**

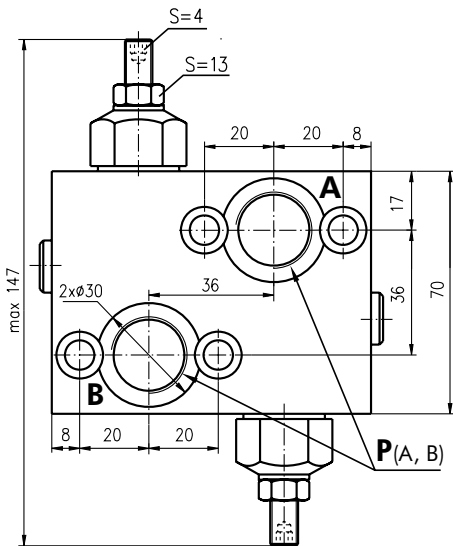
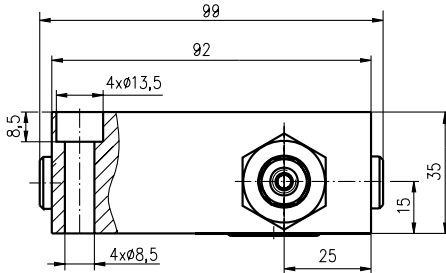
- A → 100 bar
- B → 210 bar
- C → 250 bar



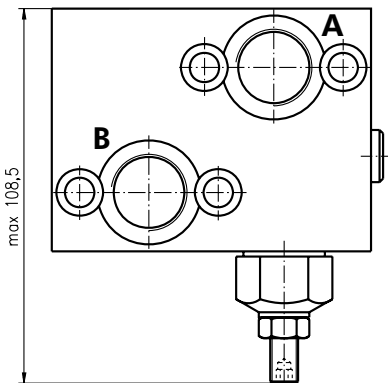


**VALVES FOR MP, MR, MH  
HYDRAULIC MOTORS**

**DUAL VALVE KPDR/...**



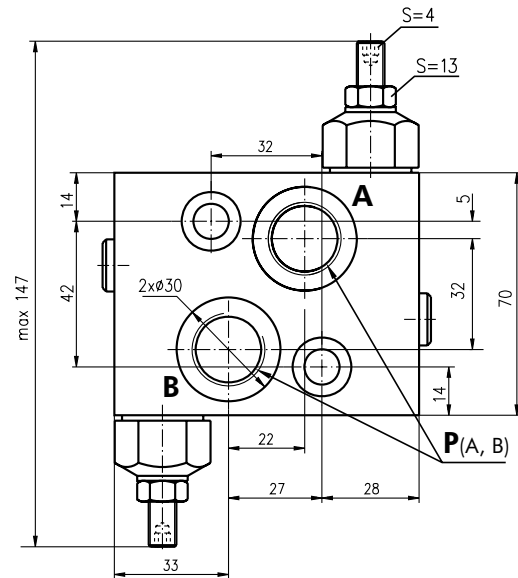
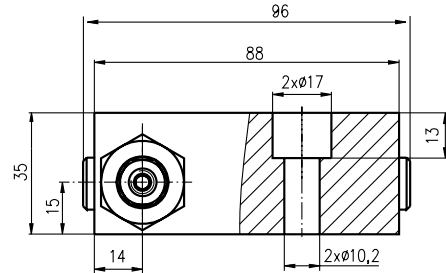
**SINGLE VALVES KPER/...**



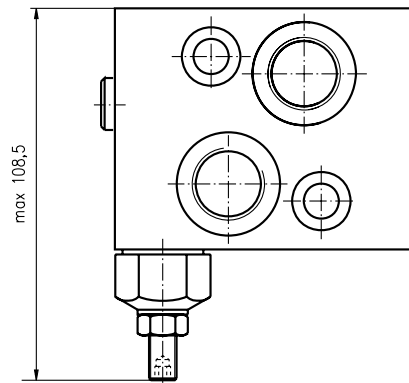
$P_{(A, B)}$ : G1/2 (M22x1,5), 20 mm depth

**VALVES FOR MS  
HYDRAULIC MOTORS**

**DUAL VALVE KPDS/...**



**SINGLE VALVES KPES/...**



$P_{(A, B)}$ : G1/2 (M22x1,5), 20 mm depth

**Note:** -KPDR (KPER) Blocks are installed directly on MP and MR Motors with four bolts M8x35-8.8 DIN 912. Tightening torque  $1,7^{+0,2}$  daNm.

-KPDS (KPES) Blocks are installed directly on MS Motors with two bolts M10x35-8.8 DIN 912. Tightening torque  $3,5^{+0,3}$  daNm.

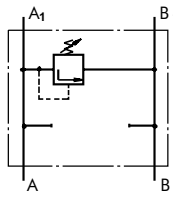
**VALVE FOR MT HYDRAULIC MOTORS**

**SPECIFICATION DATA**

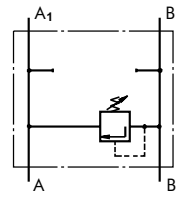


Parameters	Type	
	KPET	KPDT
Flow Rate , l/min	120	
Rated Pressure*, bar	80 to 210	
Weight , kg	5,10	5,54

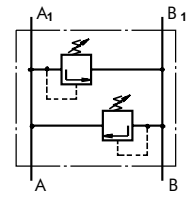
\*Pressure Settings are at flow rate of 5 l/min and viscosity 32 mm<sup>2</sup>/s (50 °C).



Single Crossover Relief Valve type KPEAT ...

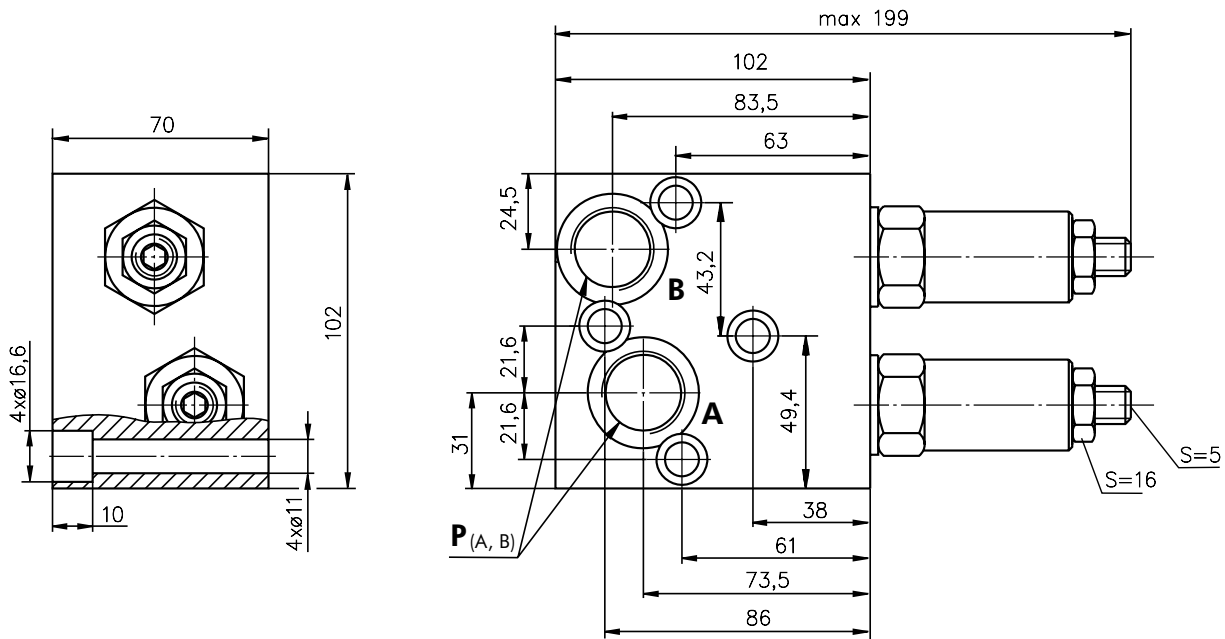


Single Crossover Relief Valve type KPEBT ...

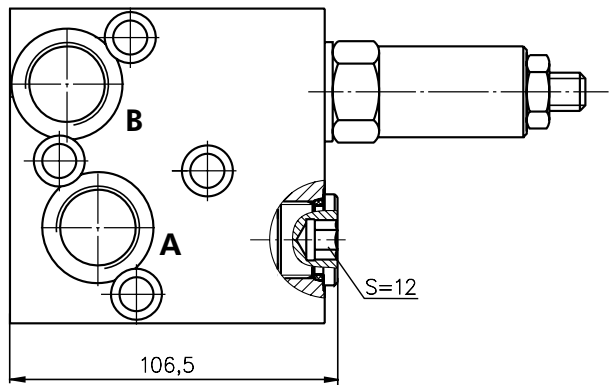


Dual Crossover Relief Valve type KPDT ...

**DUAL VALVE KPDT .../...**



**SINGLE VALVE KPET.../...**



P (A, B): G3/4 (M27x2), 20 mm depth

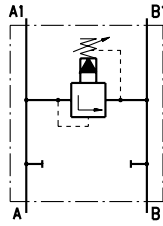
**Note :** KPDT (KPET) Blocks are installed directly on MT Motors with four bolts M10x70 - 8.8 DIN 912. Tightening torque 3,5<sup>+0,5</sup> daNm.

**VALVE FOR MV HYDRAULIC MOTORS**

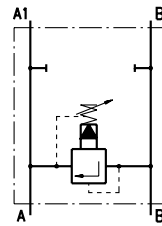
**SPECIFICATION DATA**

Parameters	Type		
	KPEAV	KPEBV	KPDV
Flow Rate , l/min	200		
Rated Pressure*, bar	10 to 100; 20 to 250		
Weight , kg	4,9	7,1	8,00

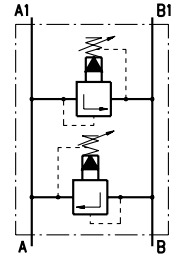
\*Pressure Settings are at flow rate of 5 l/min and viscosity 32 mm<sup>2</sup>/s (50 °C).



Single Crossover Relief Valve type KPEAV ...

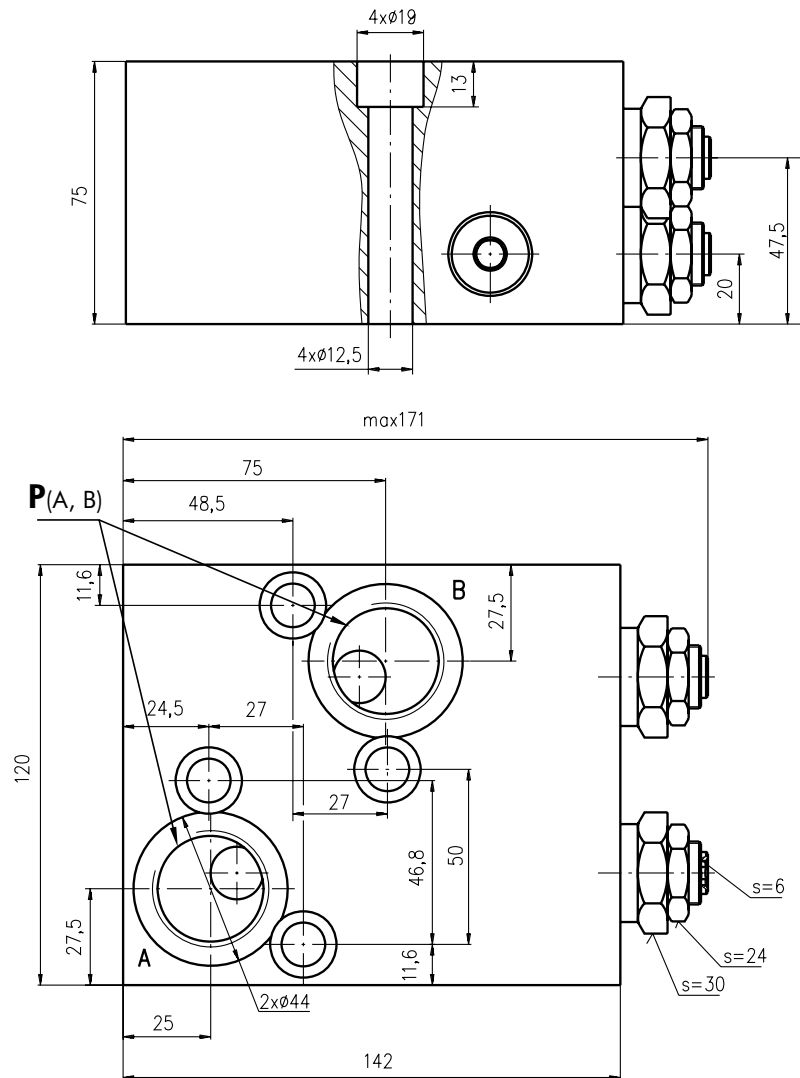


Single Crossover Relief Valve type KPEBV ...



Dual Crossover Relief Valve type KPDV ...

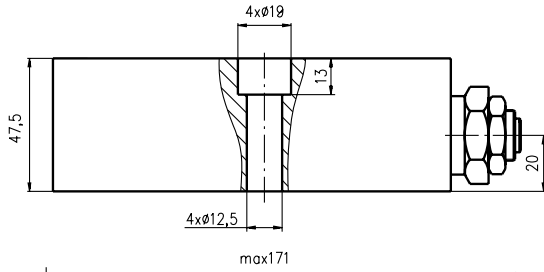
**DUAL VALVE KPDV .../...**



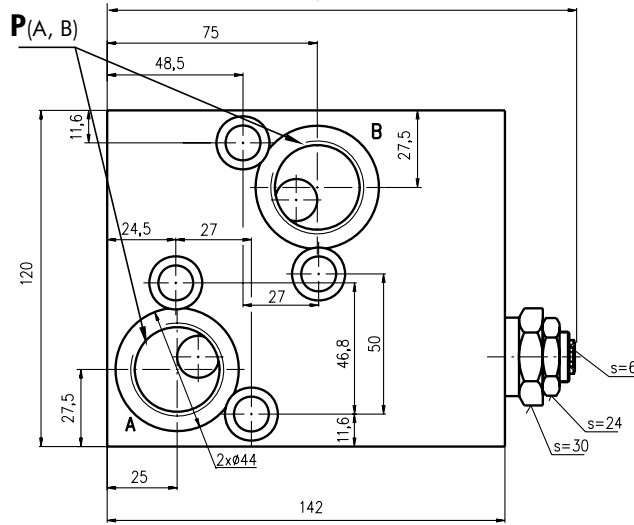
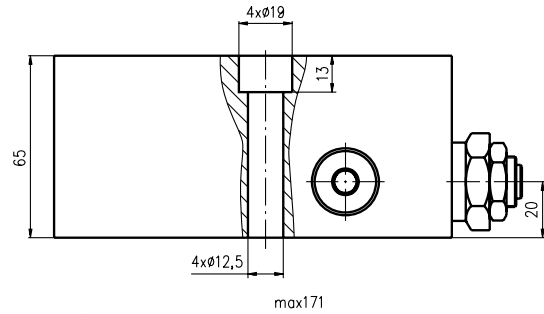
**P<sub>(A, B)</sub>** : G1-A (M33x2), 20 mm depth

**Note** :KPDV Blocks are installed directly on MV Motors with four bolts M12x75 - 8.8 DIN 912. Tightening torque 6,5<sup>+0,5</sup> daNm.

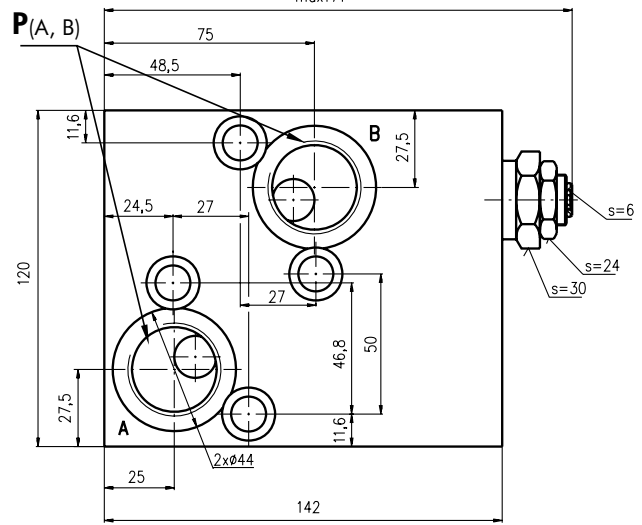
**SINGLE VALVE KPEAV .../...**



**SINGLE VALVE KPEBV .../...**



**P<sub>(A, B)</sub>** : G1-A (M33x2), 20 mm depth

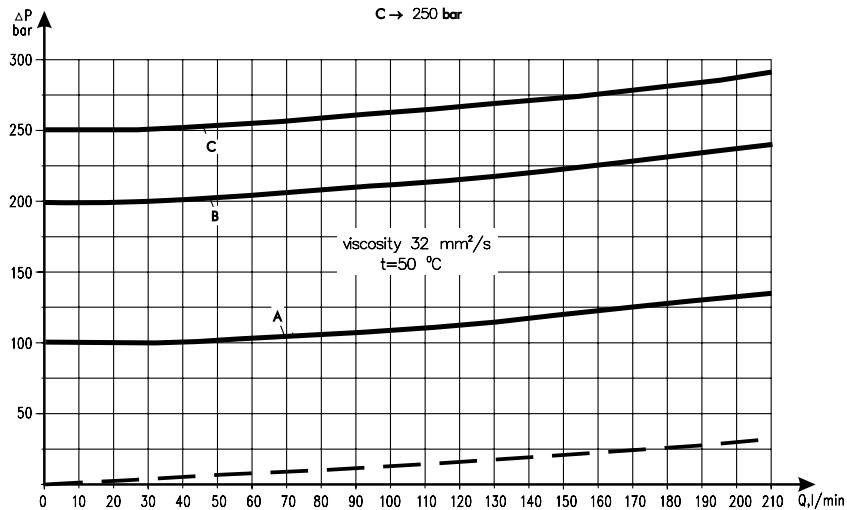


**P<sub>(A, B)</sub>** : G1-A (M33x2), 20 mm depth

**Note** :KPEAV Blocks are installed directly on MV Motors with four bolts M12x50 - 8.8 DIN 912.  
KPEBV Blocks are installed directly on MV Motors with four bolts M12x65 - 8.8 DIN 912.  
Tightening torque  $6,5^{+0,5}$  daNm.

**Rated Pressure**

A → 100 bar  
B → 200 bar  
C → 250 bar



**ORDER CODE - OVERCENTER VALVES WITH BRAKE CONTROL**

	1	2	3	4	5	6	7
<b>K P B</b>		-	/	/	-		

**Pos.1 - Housing Type**

- R** - Valve block for MP and MR Motors
- S** - Valve block for MS Motors
- T** - Valve block for MT Motors
- V** - Valve block for MV Motors

**Pos.2 - Rated Pressure, bar**

- 250** - 70÷250, Std Setting 250 bar@5 lpm

**Pos.3 - Pilot Ratio**

- 1** - 4,25 : 1

**Pos.4 - Number of Valves**

- D** - Two Valves - Dual
- EA** - One Valve on line A - Single
- EB** - One Valve on line B - Single

**Pos.5 - Ports**

- omit - BSPP (ISO 228)
- M** - Metric (ISO 262)

**Pos.6 - Option (Paint)\***

- omit - no Paint
- P** - Painted
- PC** - Corrosion Protected Paint

**Pos.7 - Design Series**

- omit - Factory specified

**NOTES:**

\* The color is by customer's request.

**ORDER CODE - SWITCH VALVES**

	1	2	3	4
<b>K P W</b>				

**Pos.1 - Housing Type**

- R** - Valve block for MP and MR Motors
- S** - Valve block for MS Motors
- T** - Valve block for MT Motors
- V** - Valve block for MV Motors

**Pos.2 - Ports**

- omit - BSPP (ISO 228)
- M** - Metric (ISO 262)

**Pos.3 - Option (Paint)\***

- omit - no Paint
- P** - Painted
- PC** - Corrosion Protected Paint

**Pos.4 - Design Series**

- omit - Factory specified

**NOTES:** \* The color is by customer's request.

**ORDER CODE - CROSSOVER RELIEF VALVES**

	1	2	3	4	5	6
<b>K P</b>			/			

**Pos.1 - Number of Valves**

- D** - Two Valves - Dual
- EA** - One Valve on line A - Single
- EB** - One Valve on line B - Single

**Pos.2 - Housing Type**

- R** - Valve block for MP, MR and MH Motors
- S** - Valve block for MS Motors
- T** - Valve block for MT Motors
- V** - Valve block for MV Motors

**Pos.3 - Max. pressure range, bar (see page 21 and 24)**

- 100\*** - 30÷100, Std Setting 100 bar@5 lpm
- 210\*** - 50÷210, Std Setting 210 bar@5 lpm
- 300\*** - 80÷300, Std Setting 250 bar@5 lpm
- 210\*\*** - 80÷210, Std Setting 210 bar@5 lpm
- 100\*\*\*** - 10÷100, Std Setting 100 bar@5 lpm
- 250\*\*\*** - 20÷250, Std Setting 250 bar@5 lpm

**Pos.4 - Ports**

- omit - BSPP (ISO 228)
- M** - Metric (ISO 262)

**Pos.5 - Option (Paint)\*\*\*\***

- omit - no Paint
- P** - Painted
- PC** - Corrosion Protected Paint

**Pos.6 - Design Series**

- omit - Factory specified

**NOTES:**

\* Useful for types **R** and **S** only .

\*\* Useful for types **T** only .

\*\*\* Useful for types **V** only .

\*\*\*\* The color is by customer's request.

The Valve Blocks are mangano-phosphatized as standard.