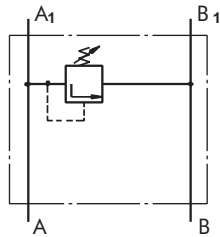
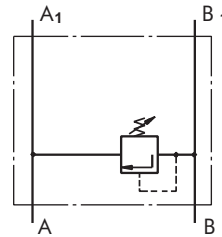


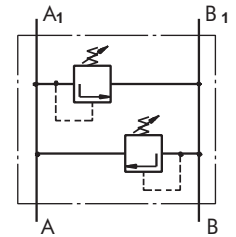
**CROSSOVER RELIEF VALVES**



Single Crossover Relief Valve type KPE ...



Single Crossover Relief Valve type KPE ...



Dual Crossover Relief Valve type KPD ...

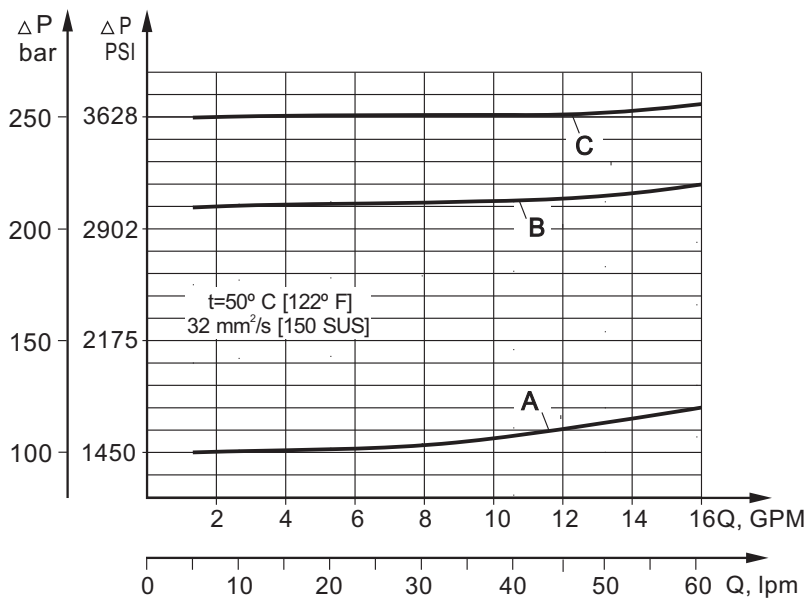
**SPECIFICATION DATA**

Parameters	Type			
	KPER	KPDR	KPES	KPDS
Flow Rate , lpm [GPM]	60 [15.85]			
Pressure Range* , bar [PSI]	30 ÷ 100; [435÷1450]	50 ÷ 210; [725÷3050]	80 ÷ 300 [1160÷4350]	
Weight , kg [lb]	1,55 [3.42]		1,50 [3.31]	

\*Pressure Settings are at flow rate of 5 lpm [1.32 GPM] and viscosity 32 mm<sup>2</sup>/s [150 SUS] (50 °C [122° F]).

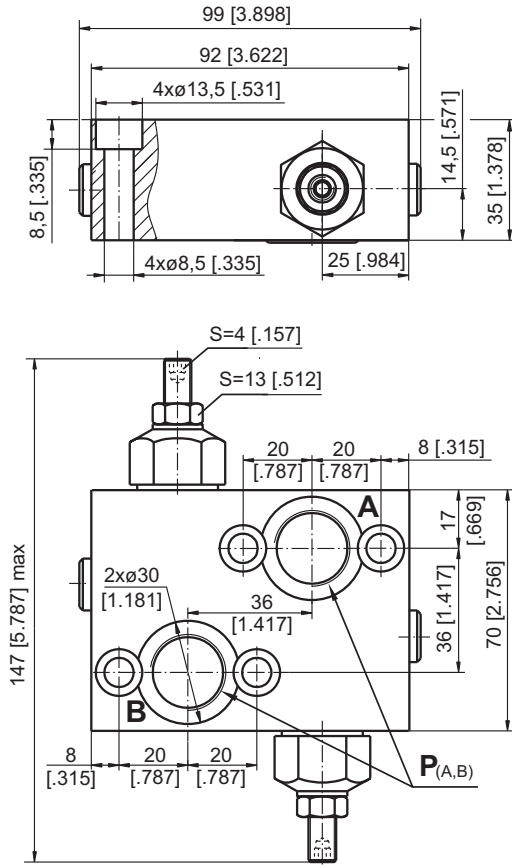
**Rated Pressure**

- A → 100 bar [1450 PSI]
- B → 210 bar [3050 PSI]
- C → 250 bar [3625 PSI]



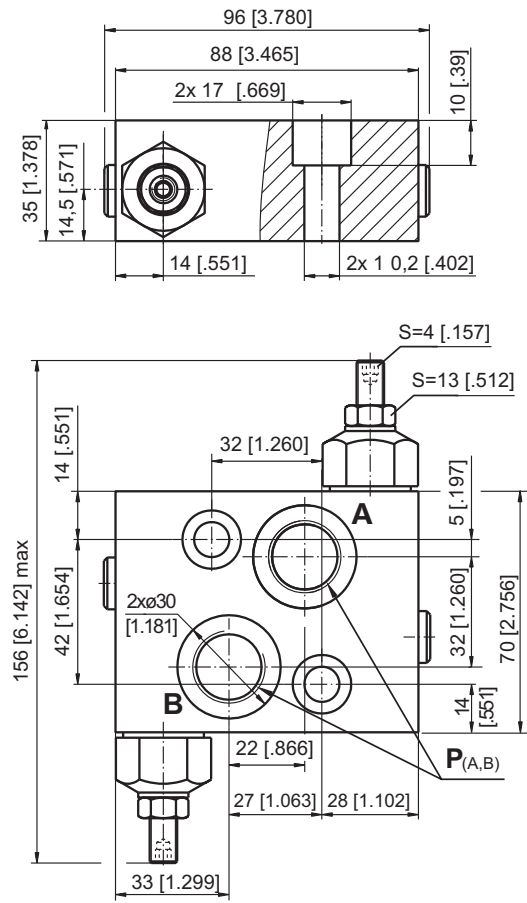
**VALVES FOR MP, MR, MH  
HYDRAULIC MOTORS**

**DUAL VALVE KPDR**

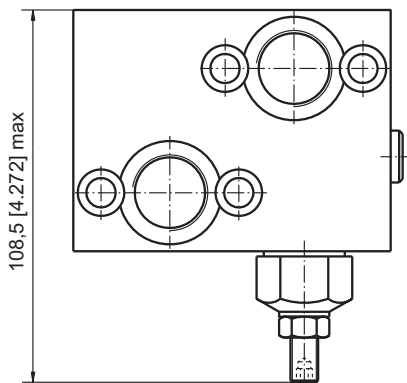


**VALVES FOR MS  
HYDRAULIC MOTORS**

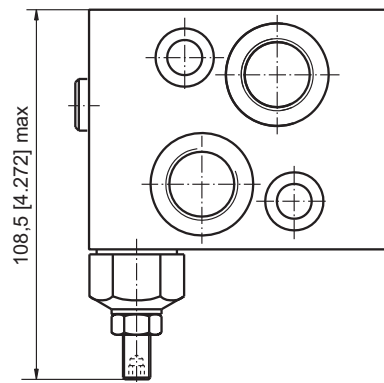
**DUAL VALVE KPDS**



**SINGLE VALVE KPER**



**SINGLE VALVE KPES**

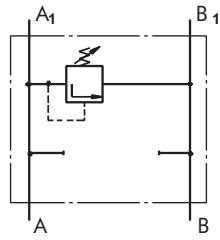


	Thread Ports - P <sub>(A,B)</sub>
-	G1/2 20 [.79] depth
M	M22x1,5 20 [.79] depth
A	7/8 - 14 UNF O-ring 20 [.79] depth

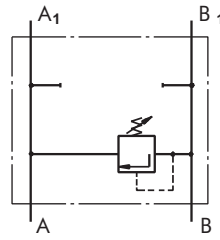
**Note : KPCR and KPER** Blocks are installed directly on MP, MR and MH Motors with four screws M8x35 - 8.8 DIN 912 or 5/16-18 UNC, 1.5 long ANSI B 18.3 . Tightening torque 2,0<sup>+0,5</sup> daNm [177<sup>+44</sup> lb-in].

**KPDS and KPES** Blocks are installed directly on MS Motors with two screws M10x35 - 8.8 DIN 912 or 3/8-16 UNC, 1.5 long ANSI B 18.3 . Tightening torque 3,5 daNm [310 lb-in].

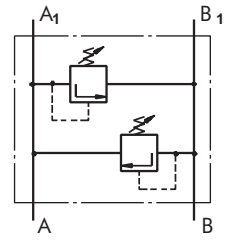
**VALVES FOR MT HYDRAULIC MOTORS**



Single Crossover  
Relief Valve  
type KPEAT ...



Single Crossover  
Relief Valve  
type KPEBT ...



Dual Crossover  
Relief Valve  
type KPDT ...

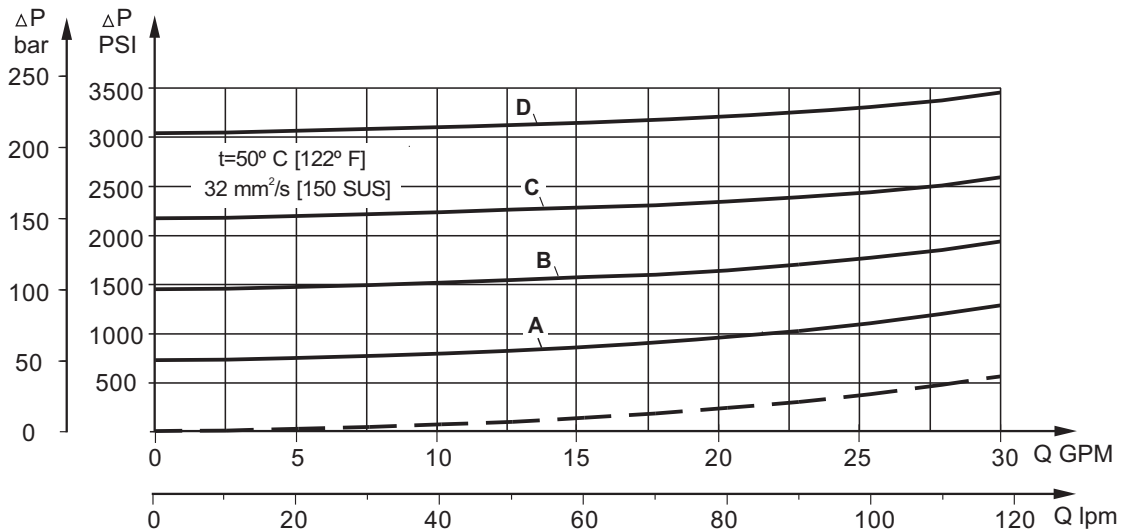
**SPECIFICATION DATA**

Parameters	Type	
	KPE...T	KPDT
Flow Rate , lpm [GPM]	120 [32]	
Pressure Range* , bar [PSI]	80÷210 [1160÷3050]	
Weight , kg [lb]	5,10 [11.24]	5,54 [12.21]

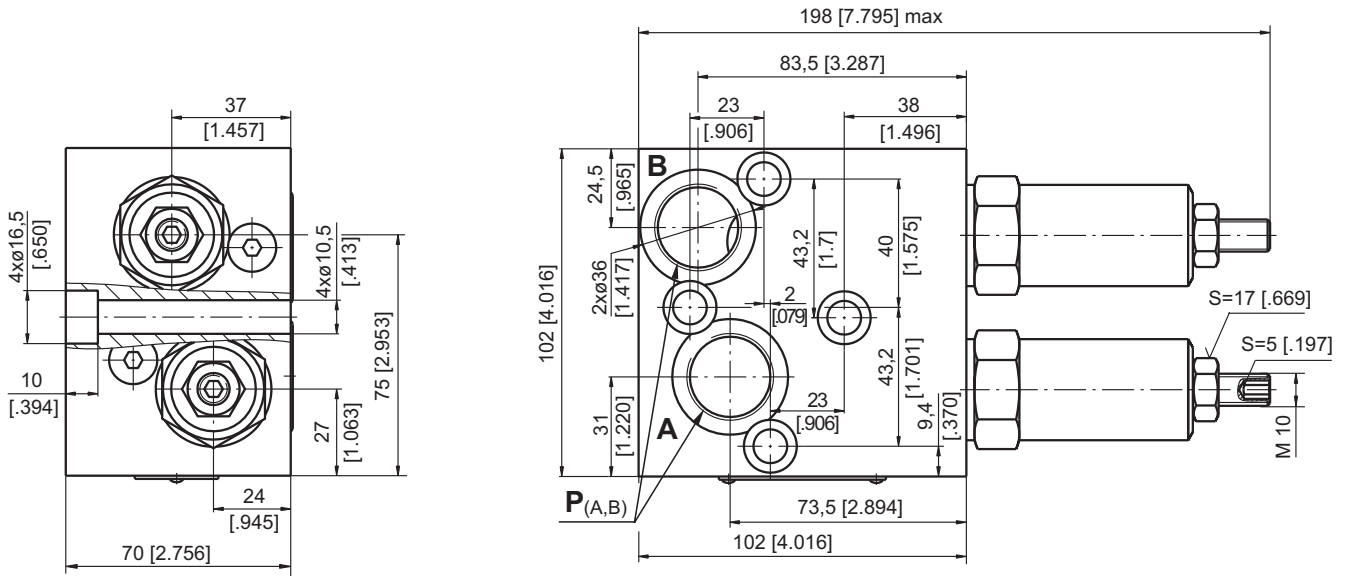
\*Pressure Settings are at flow rate of 5 lpm [1.32 GPM] and viscosity 32 mm<sup>2</sup>/s [150 SUS] (50 °C [122° F]).

**Rated Pressure**

- A → 50 bar [725 PSI]
- B → 100 bar [1450 PSI]
- C → 150 bar [2175 PSI]
- D → 210 bar [3045 PSI]

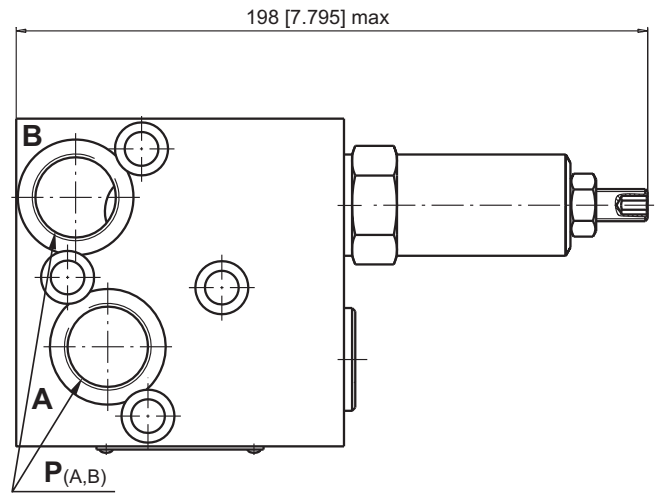
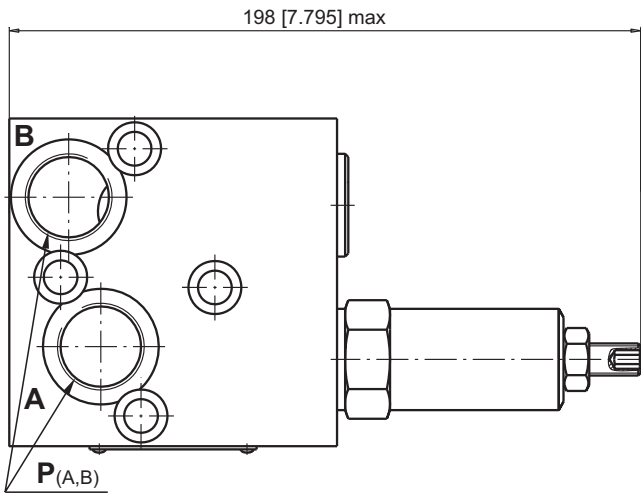


**DUAL VALVE KPDT...**



**SINGLE VALVE KPEAT...**

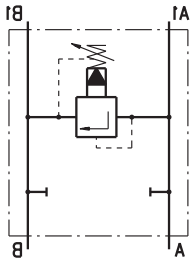
**SINGLE VALVE KPEBT...**



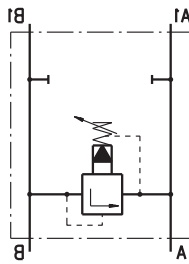
Thread Ports - P <sub>(A,B)</sub>	
-	G3/4 20 [.79] depth
M	M27x2 20 [.79] depth
A	1 <sup>1</sup> / <sub>16</sub> -12 UN O-ring 20 [.79] depth

**Note :** KPDT and KPE...T Blocks are installed directly on MT Motors with four screws M10x70 - 8.8 DIN 912. Tightening torque 3,5 daNm [310 lb-in].

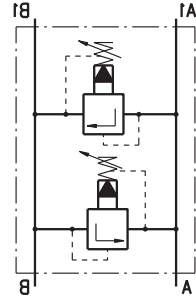
**VALVES FOR MV HYDRAULIC MOTORS**



Single Crossover Relief Valve type KPEAV ...



Single Crossover Relief Valve type KPEBV ...



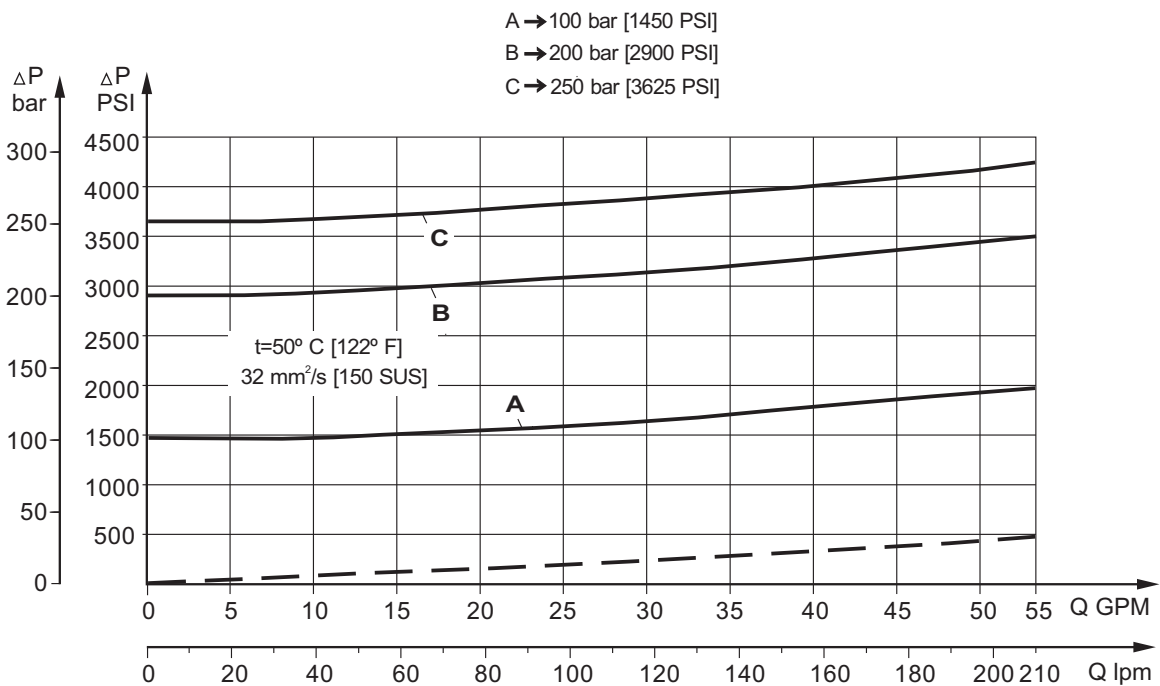
Dual Crossover Relief Valve type KPDRV ...

**SPECIFICATION DATA**

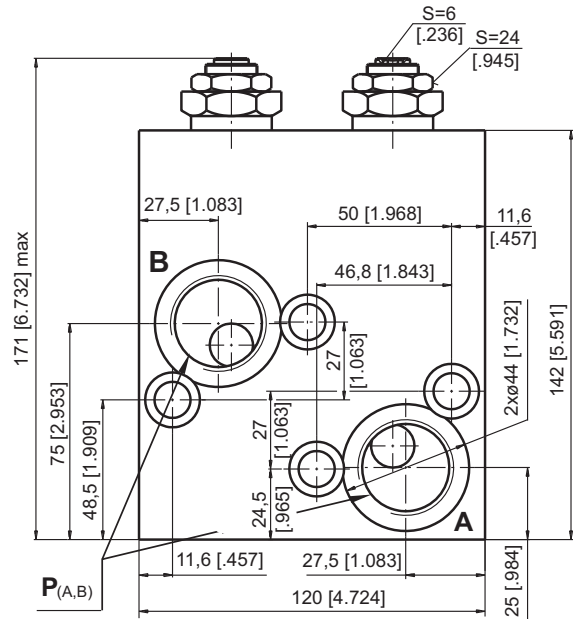
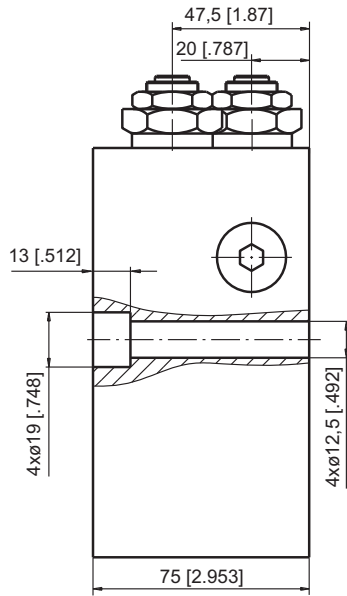
Parameters	Type		
	KPEAV	KPEBV	KPDRV
Flow Rate , lpm [GPM]	200 [53]		
Pressure Range* , bar [PSI]	10÷100; 20÷250 [145÷1450]; [290÷3625]		
Weight , kg [lb]	4,90 [10.8]	7,10 [15.65]	8,00 [17.64]

\*Pressure Settings are at flow rate of 5 lpm [1.3 GPM] and viscosity 32 mm<sup>2</sup>/s [150 SUS] (50 °C [122° F]).

**Rated Pressure**

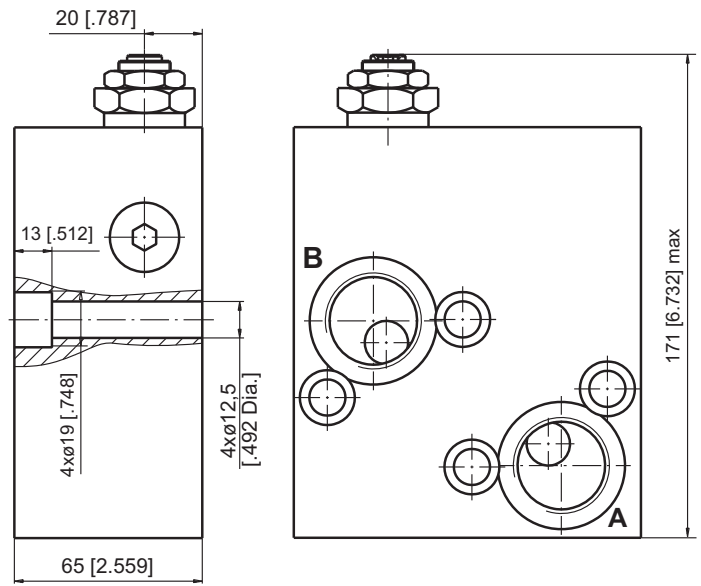
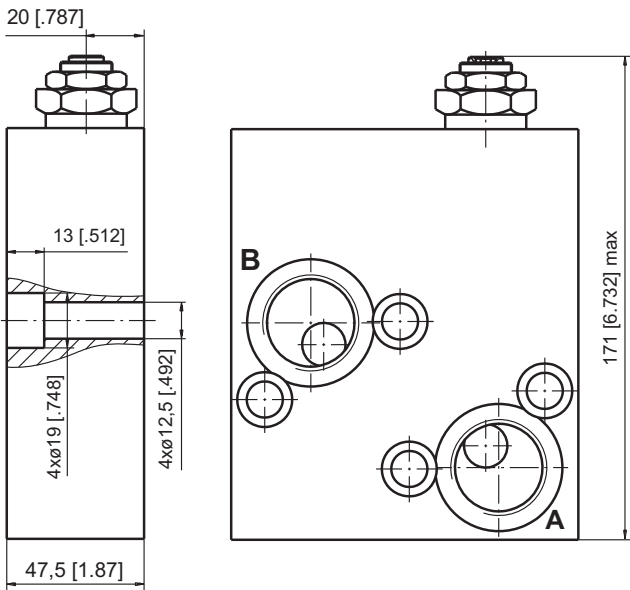


**DUAL VALVE KPDV**



**SINGLE VALVE KPEAV**

**SINGLE VALVE KPEBV**

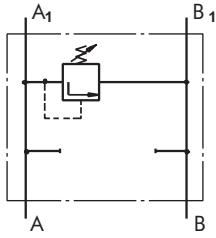


mm [in]

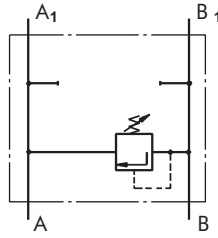
	Thread Ports - P <sub>(A,B)</sub>
-	G1-A 20 [.79] depth
M	M33x2 20 [.79] depth
A	1 <sup>5</sup> / <sub>16</sub> -12 UN O-ring 20 [.79] depth

**Note :** KPDV Blocks are installed directly on MV Motors with four screws M12x75 - 8.8 DIN 912.  
**KPEAV** Blocks are installed directly on MV Motors with four screws M12x50 - 8.8 DIN 912.  
**KPEBV** Blocks are installed directly on MV Motors with four screws M12x65 - 8.8 DIN 912.  
 Tightening torque 7,5 daNm [665 lb-in].

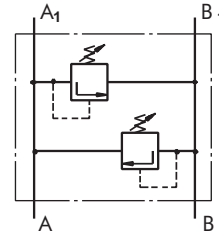
**VALVES FOR RW and HW HYDRAULIC MOTORS**



Single Crossover  
Relief Valve  
type KPEAW ...



Single Crossover  
Relief Valve  
type KPEBW ...



Dual Crossover  
Relief Valve  
type KPDW ...

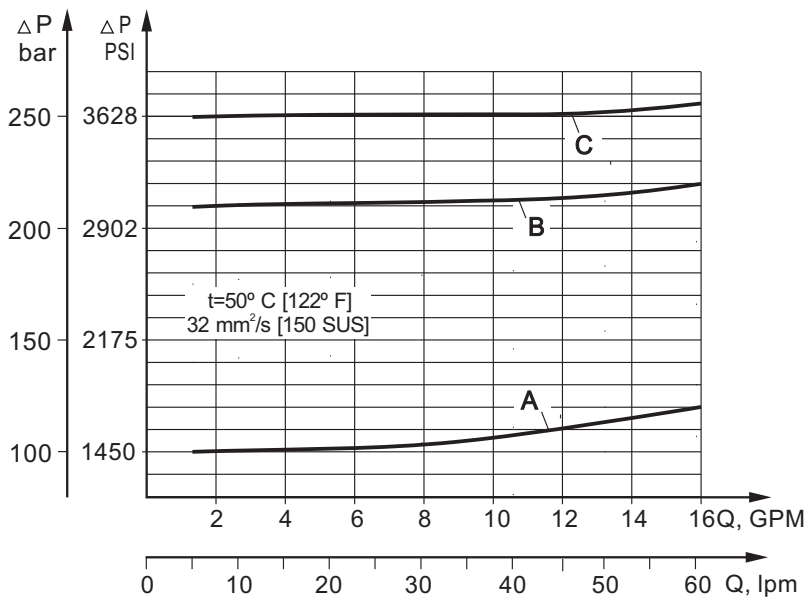
**SPECIFICATION DATA**

Parameters	Type	
	KPE...W	KPDW
Flow Rate , lpm [GPM]	60 [15.85]	
Pressure Range* , bar [PSI]	5 ÷ 40; 30 ÷ 100; 80 ÷ 250 [75÷580]; [435÷1450]; [1160÷3625]	
Weight , kg [lb]	2,700 [5.95]	2,800 [6.17]

\*Pressure Settings are at flow rate of 5 lpm [1.32 GPM]  
and viscosity 32 mm<sup>2</sup>/s [150 SUS] (50 °C [122° F]).

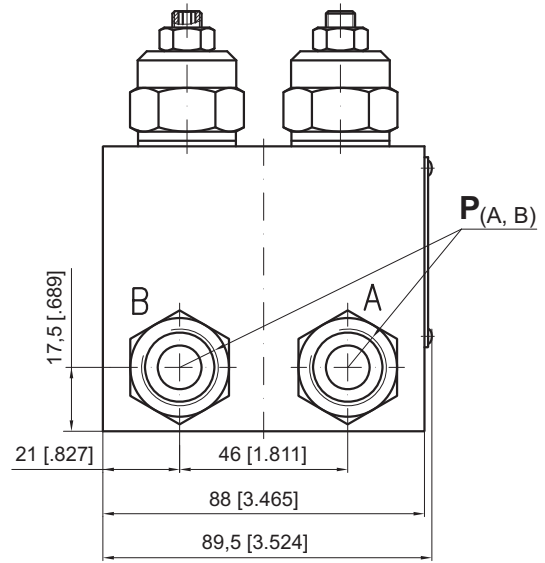
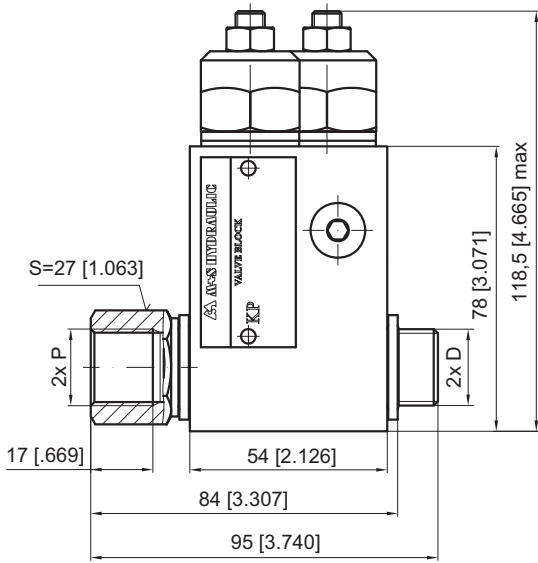
**Rated Pressure**

- A → 100 bar [1450 PSI]
- B → 210 bar [3050 PSI]
- C → 250 bar [3625 PSI]

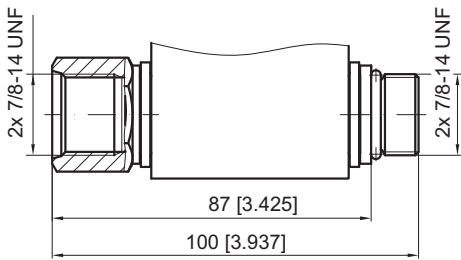


**VALVES FOR RW and HW HYDRAULIC MOTORS**

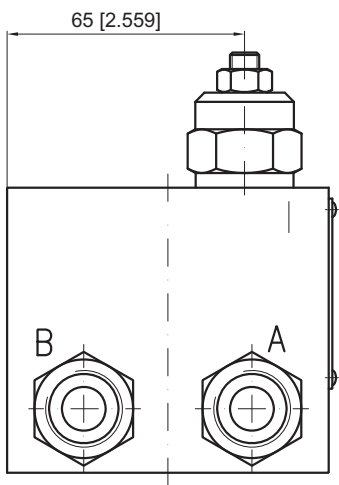
**DUAL VALVE KPDW...**



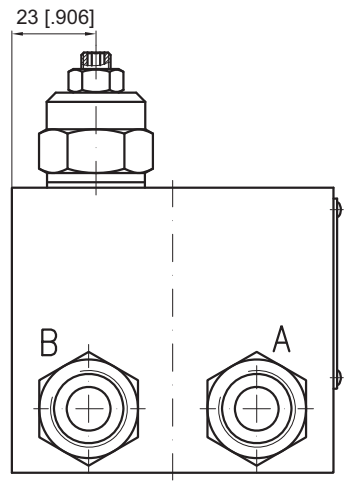
**KPDW-...A**



**SINGLE VALVE KPEAW...**



**SINGLE VALVE KPEBW...**



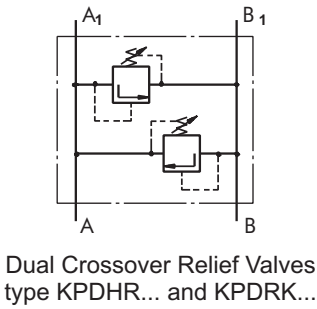
	Thread Ports - P <sub>(A,B)</sub>	Thread Ports - D
-	G1/2 16 [.63] depth	G1/2 12 [.47] length
M	M22x1,5 16 [.63] depth	M22x1,5 12 [.47] length
A	7/8 - 14 UNF O-ring 16 [.63] depth	7/8 - 14 UNF O-ring 13 [.51] length

**Note :** KPDW and KPE..W Blocks assembly to RW or HW motors is done with two screws (thread D) included in the valve set. Tightening torque 8 daNm [710 lb-in].



**CROSSOVER RELIEF VALVES**

**SPECIFICATION DATA**

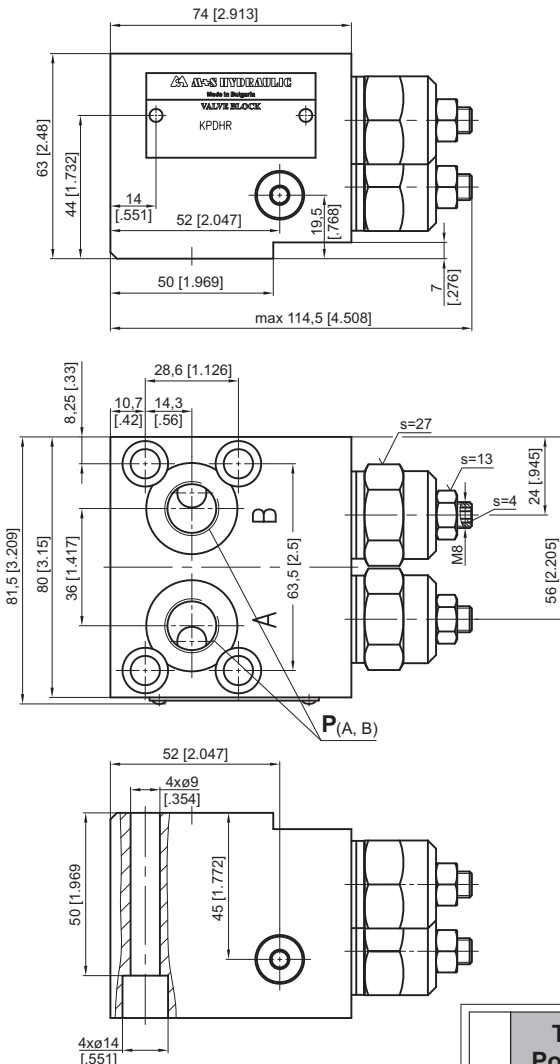


Parameters	Type					
	KPDHR			KPDRK		
Flow Rate, lpm [GPM]	60 [15.85]					
Pressure bar	5÷40	30÷100	80÷250	10÷40	30÷100	80÷250
Range*, [PSI]	[70÷580]	[435÷1450]	[1160÷3625]	[145÷580]	[435÷1450]	[1160÷3625]
Weight, kg [lb]	2,420 [5.34]			1,600 [3.53]		

\*Pressure Settings are at flow rate of 5 lpm [1.3 GPM] and viscosity 32 mm<sup>2</sup>/s [150 SUS] (50 °C [122° F]).

**VALVES FOR HP AND HR HYDRAULIC MOTORS**

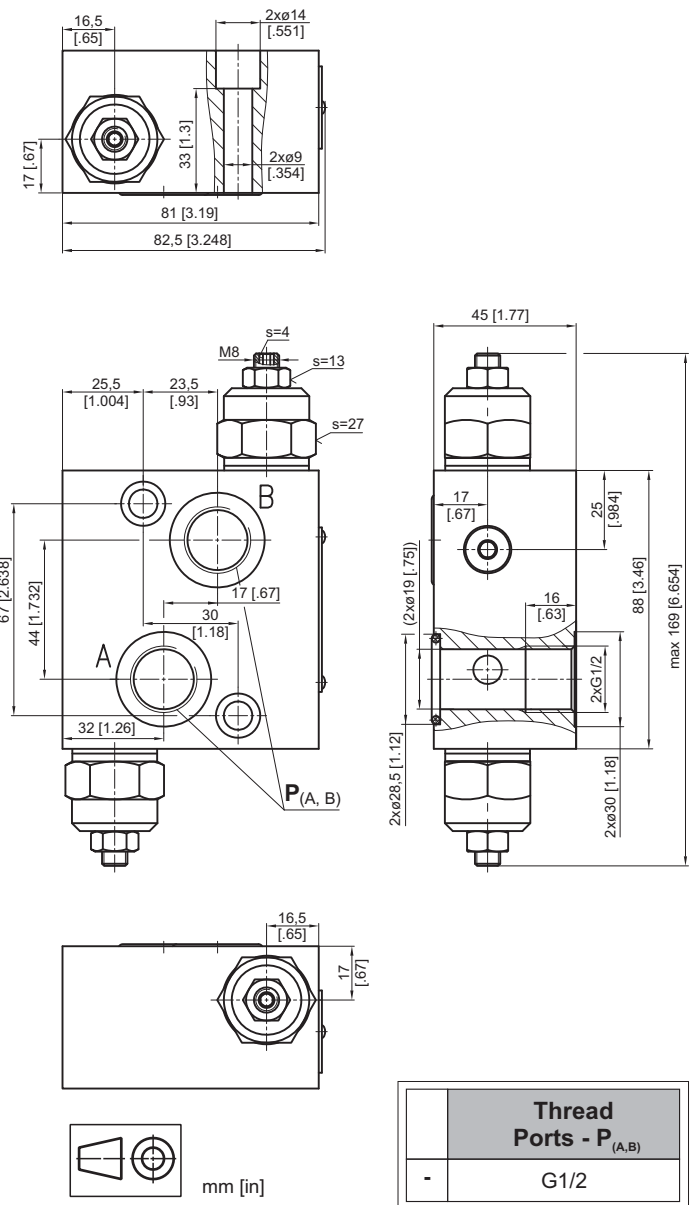
**DUAL VALVE KPDHR**



	Thread Ports - P <sub>(A,B)</sub>
-	G3/8
M	M18x1,5
A	3/4-16 UNF O-ring

**VALVES FOR RK HYDRAULIC MOTORS**

**DUAL VALVE KPDRK**



	Thread Ports - P <sub>(A,B)</sub>
-	G1/2

**Note :** KPDHR Blocks are installed directly on HP and HR Motors with four screws M8x60 - 8.8 DIN 912 or 5/16-18 UNC, 2.5 long ANSI B 18.3 .  
 KPDRK Blocks are installed directly on RK Motors with two screws M8x45 - 8.8 DIN 912 or 5/16-18 UNC, 1.75 long ANSI B 18.3 .  
 Tightening torque 2,0<sup>+0,5</sup> daNm [177<sup>+45</sup> lb-in].

**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, MR and MH Motors
- S** - Valve block for MS Motors
- W** - Valve block for RW and HW Motors
- T** - Valve block for MT Motors
- V** - Valve block for MV Motors
- HR** - Valve block for HP and HR Motors

**Pos.2 - Pressure Range, bar [PSI]**

**250** - 70÷250 [1015÷3625], Std Setting 250 bar@5 lpm

**Pos.3 - Pilot Ratio**

**1** - 4,25:1

**Pos.4 - Number of Valves**

- D** - Two Valves - Dual
- E** - One Valve - Single (for R and S only)
- AE** - One Valve on line A - Single (for T,V,W,HP and HR)
- BE** - One Valve on line B - Single (for T,V,W,HP and HR)

**Pos.5 - Threaded Ports**

- omit - BSPP thread - ISO 228
- M** - Metric thread - ISO 262
- A** - Unified inch screw threads ANSI B 1.1 - 1982

**Pos.6 - Option [Paint]\*\***

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

**Pos.7 - Design Series**

omit - Factory specified

**Notes:** \* Color at 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, MR and MH Motors
- S** - Valve block for MS Motors
- T** - Valve block for MT Motors
- V** - Valve block for MV Motors

**Pos.2 - Threaded Ports**

- omit - BSPP thread - ISO 228
- M** - Metric thread - ISO 262
- A** - Unified inch screw threads ANSI B 1.1 - 1982

**Pos.3 - Option [Paint]\*\***

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

**Pos.4 - Design Series**

omit - Factory specified

**Notes:** \* Color at customer's request.

**ORDER CODE - CROSSOVER RELIEF VALVE**

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

**Pos.1 - Number of Valves**

- D** - Two Valves - Dual
- E** - One Valve - Single (for R and S only)
- EA** - One Valve on line A - Single (for T, V and W only)
- EB** - One Valve on line B - Single (for T, V and W only)

**Pos.2 - Housing Type**

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

**Pos.3 - Pressure Range, bar [PSI]**

- 100\*** - 30÷100 [ 435÷1450], Std Setting 100 bar@5 lpm
- 210\*** - 50÷210 [ 725÷3050], Std Setting 210 bar@5 lpm
- 300\*** - 80÷300 [1160÷4350], Std Setting 250 bar@5 lpm
- 210\*\*** - 80÷210 [1160÷3050], Std Setting 210 bar@5 lpm
- 100\*\*\*** - 10÷100 [ 145÷1450], Std Setting 100 bar@5 lpm
- 250\*\*\*** - 20÷250 [ 290÷3625], Std Setting 250 bar@5 lpm

**Pos.4 - Threaded Ports**

- omit - BSPP thread - ISO 228
- M** - Metric thread - ISO 262
- A** - Unified inch screw threads ANSI B 1.1 - 1982

**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.  
 \*\*\*\* Color at customer's request.

The Valve Blocks are mangano phosphatized as standard.

**ORDER CODE - CROSSOVER RELIEF VALVE**

	1	2	3	4	5	6
<b>KP</b>				/		

**Pos.1 - Number of Valves**

**D** - Two Valves - Dual

**Pos.2 - Housing Type**

**HR** - Valve block for HR Motors

**RK** - Valve block for RK and GHM Motors

**Pos.3 - Pressure Range, bar [PSI]**

**40** - 10÷ 40 [ 145÷ 580], Std Setting 100 bar@5 lpm

**100** - 30÷100 [ 435÷1450], Std Setting 100 bar@5 lpm

**250** - 80÷250 [1160÷3625], Std Setting 250 bar@5 lpm

**Pos.4 - Threaded Ports**

omit - BSPP thread - ISO 228

**M** - Metric thread - ISO 262

**A** - Unified inch screw threads ANSI B 1.1 - 1982

**Pos.5 - Option [Paint]\***

omit - no Paint

**P** - Painted

**PC** - Corrosion Protected Paint

**Pos.6 - Design Series**

omit - Factory specified

**Notes:** \* Color at customer's request.

The Valve Blocks are mangano phosphatized as standard.