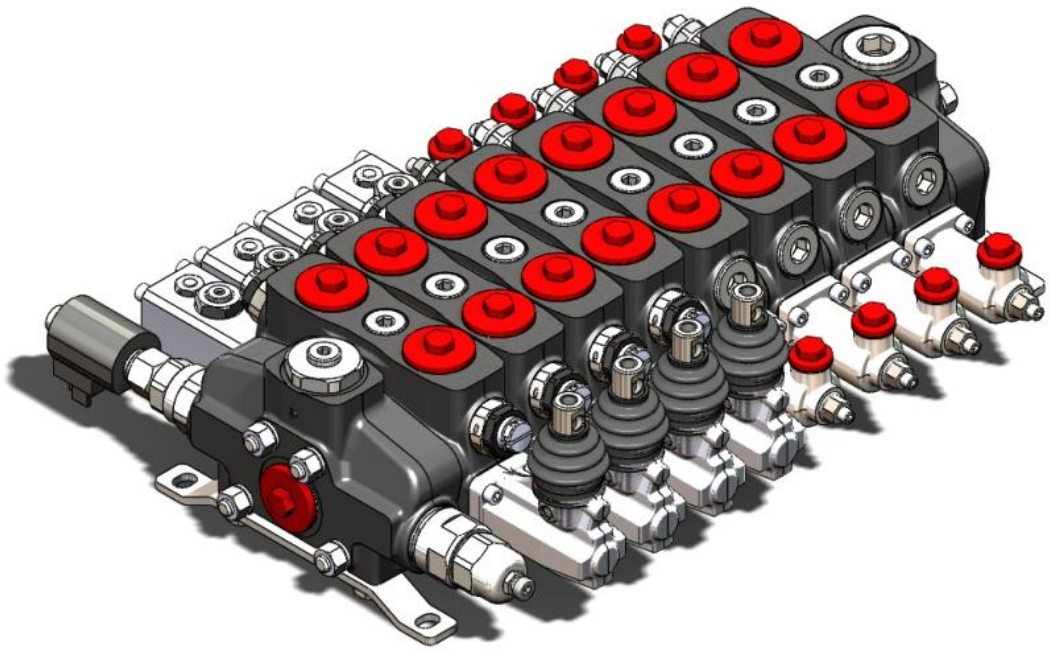
RENMAN®

HYDRAULIC EQUIPMENTS

1 to 12 sectional directional control valve



- Fitted with a main pressure relief valve and a load check valve on every working section.
- Available with parallel circuit.
- Optional carry-over
- Variety of port valves (auxiliary valves)
- Available manual, pneumatic, and hydraulic spool control kits.

NEW PRODUCT

NEW PRODUCT

KS180

WORKING CONDTIONS

This catalogue shows technical specifications and diagrams measured with mineral oil of 32 mm^2/s – 32 cSt at 40 °C – 104 °F temperature.

Nominal flow rating		160 l/min	42 US gpm
Operating pressure (max.)		315 bar	4600 psi
Back pressure (max.)	outlet port T	25 bar	360 psi
Internal leakage (max.) A(B)→T	Δp = 100 bar (1450 psi) fluid and valve at 40 °C (104 °F)	15 cm^3/min	0.91 in^3/min
Fluid		Mineral based oil	
Fluid temperature	with NBR	from -20 °C to 80 °C	from -4 °F to 176 °F
	with FPM	from -20 °C to 100 °C	from -4 °F to 212 °F
Viscosity	operating range	from 15 to 75 mm^2/s	from 15 to 75 cSt
	min.	12 mm^2/s	12 cSt
	max.	400 mm^2/s	400 cSt
Max contamination level		-/19/16 - ISO 4406	NAS 1683 - class 10
Ambient temperature for working conditions	with mechanical devices	from -40 °C to 60 °C	from -40 °F to 140 °F
	with pneumatic and hydraulic devices	from -30 °C to 60 °C	from -22 °F to 140 °F
	with electric devices	from -20 °C to 50 °C	from -4 °F to 122 °F

Note – for different conditions please contact Sales department

STANDARD THREADS

Reference standard

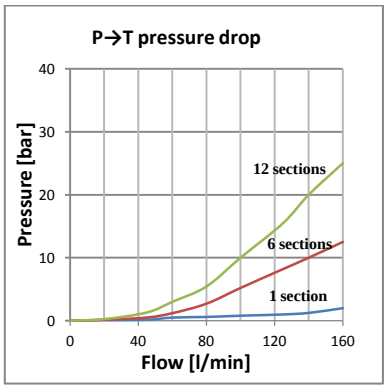
		BSP	**UN-UNF**	**NPTF**
THREAD ACCORDING TO		ISO 228/1	ISO 263	ANSI B1.20.3
		BS 2779	ANSI B1.1 unified	
CAVITY DIMENSION ACCORDING TO	ISO	1179	11926-1	
	SAE		J1926-1	J476a
	DIN	3852-2		

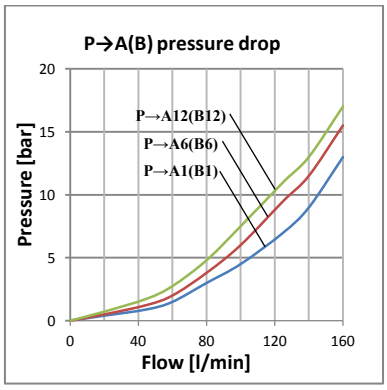
Ports

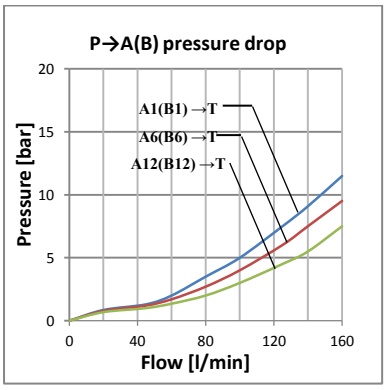
	BSP		**UN-UNF**
Order code	G34	G1	SAE
Inlet P	G 3/4	G 1	1 5/16-12 (SAE16)
Ports A and B	G 3/4		1 1/16-12 (SAE12)
Outlet T and carry-over C	G 1		1 5/16-12 (SAE16)
Hydraulic pilots	G 1/4		9/16-18 (SAE6)
Pneumatic pilots	NPTF 1/8-27		

PERFORMANCE DATA

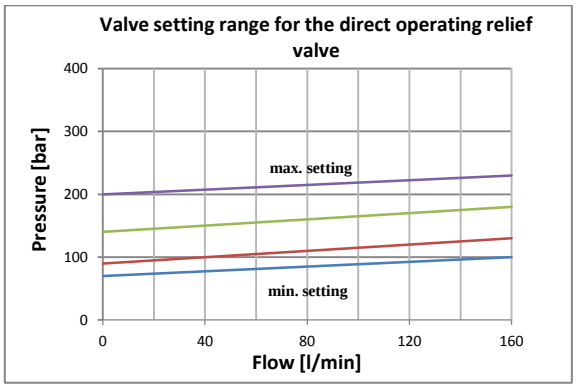
General

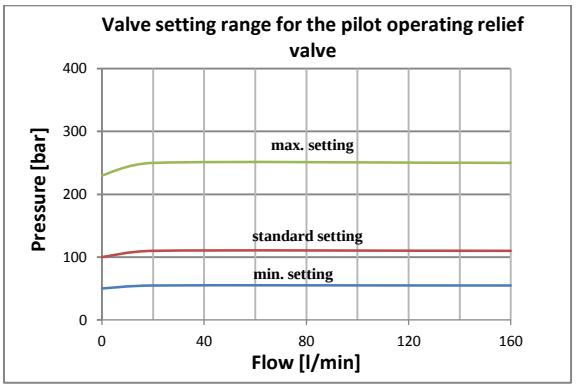




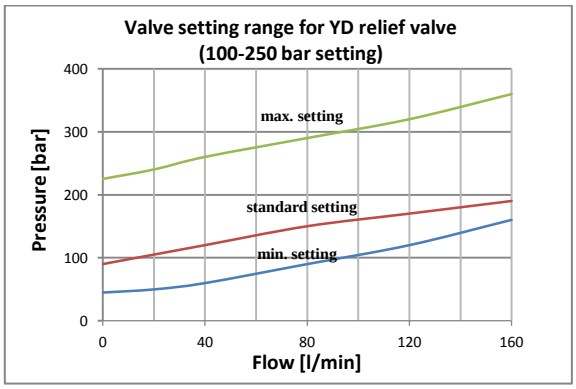


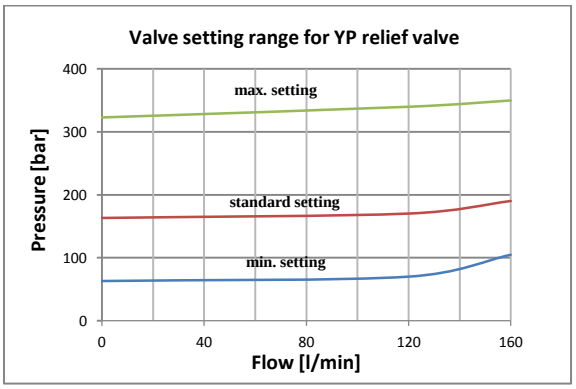
Main pressure relief valve





Auxiliary valves

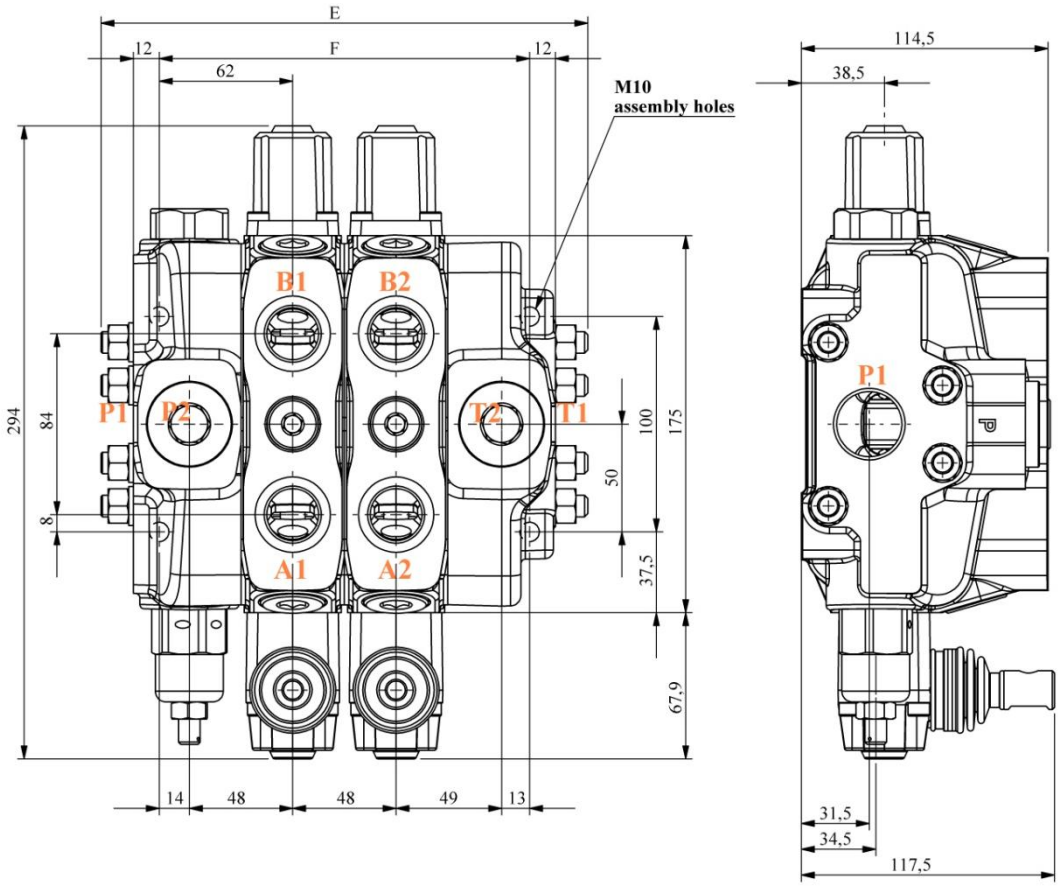




NEW PRODUCT

KS180

DIMENSIONAL DATA

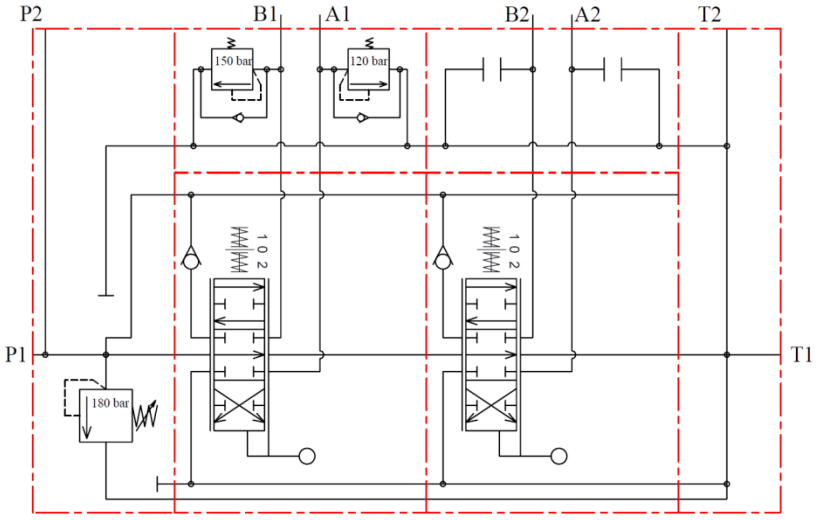


Type	E		F	
	mm	*in*	mm	*in*
KS180	176	*6,93*	124	*4,88*
2KS180	224	*8,82*	172	*6,77*
3KS180	272	*10,71*	220	*8,66*
4KS180	320	*12,60*	268	*10,55*
5KS180	368	*14,49*	316	*12,44*
6KS180	416	*16,38*	364	*14,33*

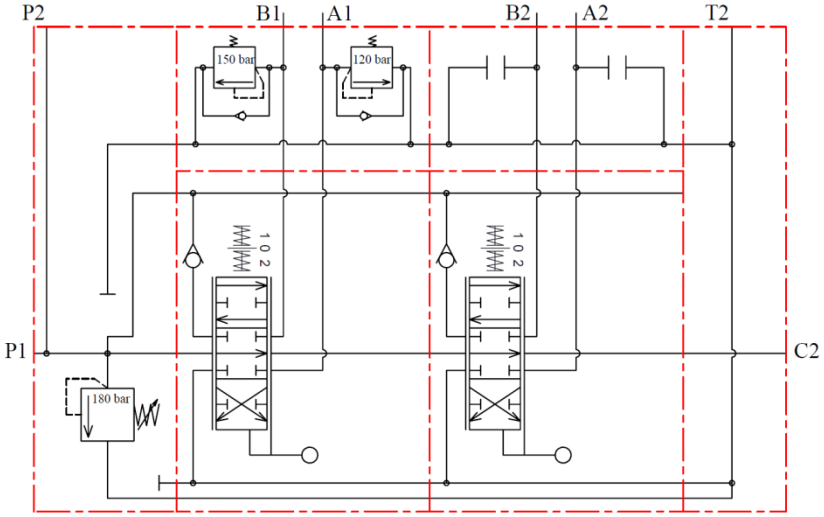
Type	E		F	
	mm	*in*	mm	*in*
7KS180	464	*18,27*	412	*16,22*
8KS180	512	*20,16*	460	*18,11*
9KS180	560	*22,05*	508	*20,00*
10KS180	608	*23,94*	556	*21,89*
11KS180	656	*25,83*	604	*23,78*
12KS180	704	*27,72*	652	*25,67*

HYDRAULIC CIRCUIT

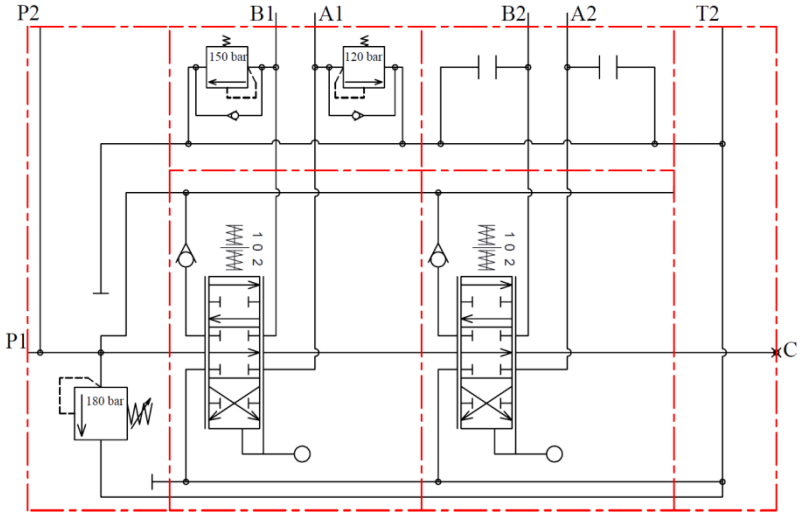
Open center configuration



Carry-over configuration



Closed center configuration



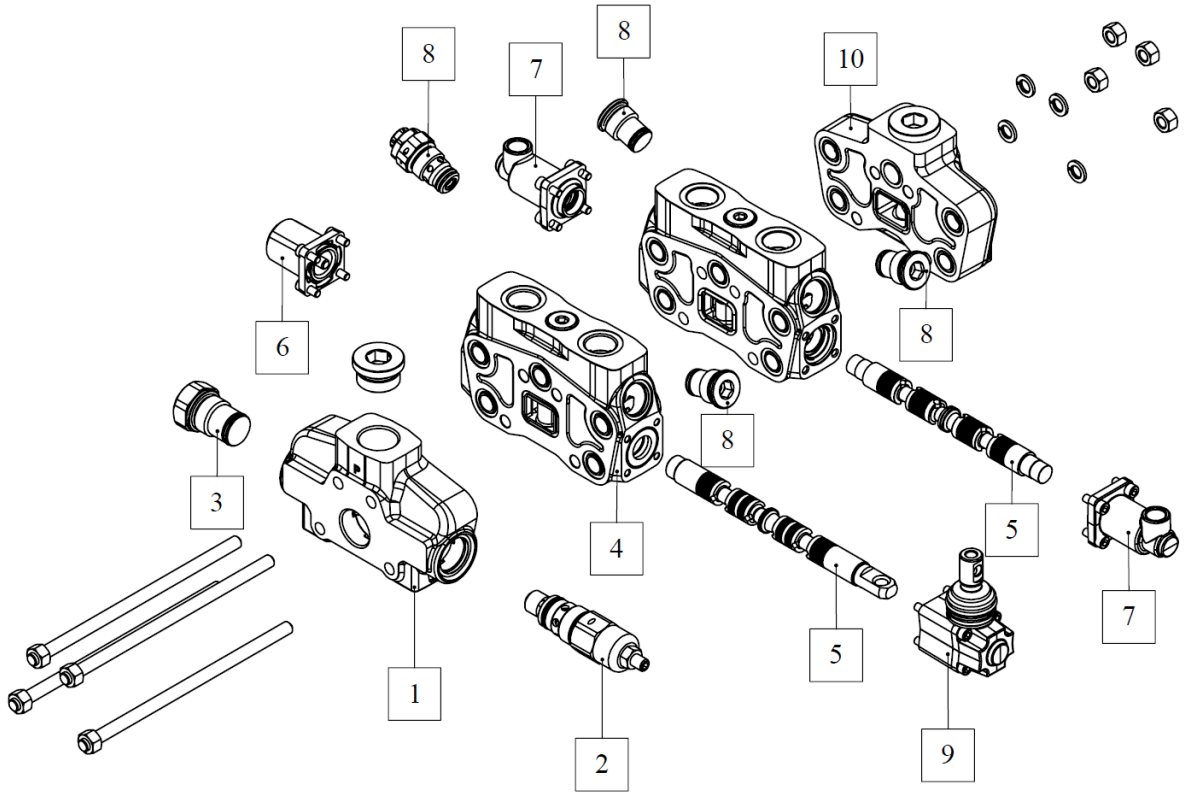
NEW PRODUCT

KS180

DESCRIPTION COMPOSITION

1 2 3 4 5 6 8 9 7 10 11

2/KS180/L1(D-120)-/PA1(AoByD-100)KZ1/PA1H(AoBo)/T1/G1



1 Inlet section

L1: Inlet section with side port
L2: Inlet section with upper port
R1: Right inlet section with side port
R2: Right inlet section with side port

2 Pressure relief valve

(svp): Relief valve blanking plug

Direct type D:

(D-80): Setting range from 63 to 125 bar (900 to 1800 psi), standard setting 80 bar (1160 psi).
(D-120): Setting range from 100 to 200 bar (1450 to 2900 psi), standard setting 175 bar (2500 psi).
(D-250): Setting range from 160 to 320 bar (2300 to 4650 psi), standard setting 250 bar (3600 psi).

Pilot operated type P:

(P-120): Setting range from 60 to 250 bar (870 to 3600 psi), standard setting 120 bar (1750 psi).

3 Inlet valve options

-: Blanking plug (omit in description)
F: Inlet anticavitational valve
L: Hydraulic pilot unloader valve

EL: Solenoid operated unloader valve:

ELN: Without emergency
ELP: Push-button emergency
ELV: Screw type emergency
ELT: Push and twist type with detent emergency

Coils for EL:

12VDC: Coil type KETA, ISO 4400 12 V DC
24VDC: Coil type KETA, ISO 4400 24 V DC

4 Working section

P: Parallel circuit with port valves arrangemen

5 Spools

A: Double acting, 3 positions, with A and B closed in neutral position.
Af: Same as A, more sensitive.
B: Single acting on A, 3 positions, B plugged.
C: Single acting on B, 3 positions, A plugged.
D: Double acting, 3 positions, with A and B open to tank in neutral position.
E: Double acting, 3 positions, with B open to tank in neutral position.
F: Double acting, 3 positions, with A open to tank in neutral position.

6 Spool positioners

1: With spring return in neutral position.
2: With detent in position 1 and spring return in neutral position.
3: With detent in position 2 and spring return in neutral position.
4: 2 positions, position 2 and spring return in neutral position.
5: 2 positions, position 1 and spring return in neutral position.
6: 2 positions, position 1 and spring return in position 2.
7: 2 positions, position 2 and spring return in position 1.
8: Detent in position neutral, 1 and 2.
9: 2 positions, detent in positions 1 and neutral.
10: 2 positions, detent in positions 2 and neutral.
11: 2 positions, detent in positions 1 and 2.

7 Complete controls

1H: Double side proportional hydraulic control with spring return to neutral

8 Auxiliary valves

o: Valve blanking plug

Antishock valve

YD-63: Setting range from 63 to 125 bar (900 to 1800 psi), standard setting 63 bar (900 psi).
YD-100: Setting range from 100 to 250 bar (1450 to 3600 psi), standard setting 100 bar (1450 psi).
YD-200: Setting range from 200 to 315 bar (2900 to 4600 psi), standard setting 200 bar (2900 psi).

Antishock and anticavitational valve

ZD-63: Setting range from 63 to 125 bar (900 to 1800 psi), standard setting 63 bar (900 psi).
ZD-100: Setting range from 100 to 250 bar (1450 to 3600 psi), standard setting 100 bar (1450 psi).
ZD-200: Setting range from 200 to 315 bar (2900 to 4600 psi), standard setting 200 bar (2900 psi).

Antishock pilot operated valve

YP: Setting range from 63 to 300 bar (900 to 4350 psi), standard setting 175 bar (2550 psi).

Antishock and anticavitational pilot operated valve

ZP: Setting range from 63 to 300 bar (900 to 4350 psi), standard setting 175 bar (2550 psi).

9 Manual control options

- : Without lever box, with dust-proof plate
KZ1: Standard lever box
V1: CD flexible cable connection

10 Outlet sections

T1: With side outlet.
T2: With upper outlet.
TC1: With closed center.
TC2: With upper outlet and side carry over.

11 Threading specifications

Specify thread type, please, refer to page 2 to see codes for it.