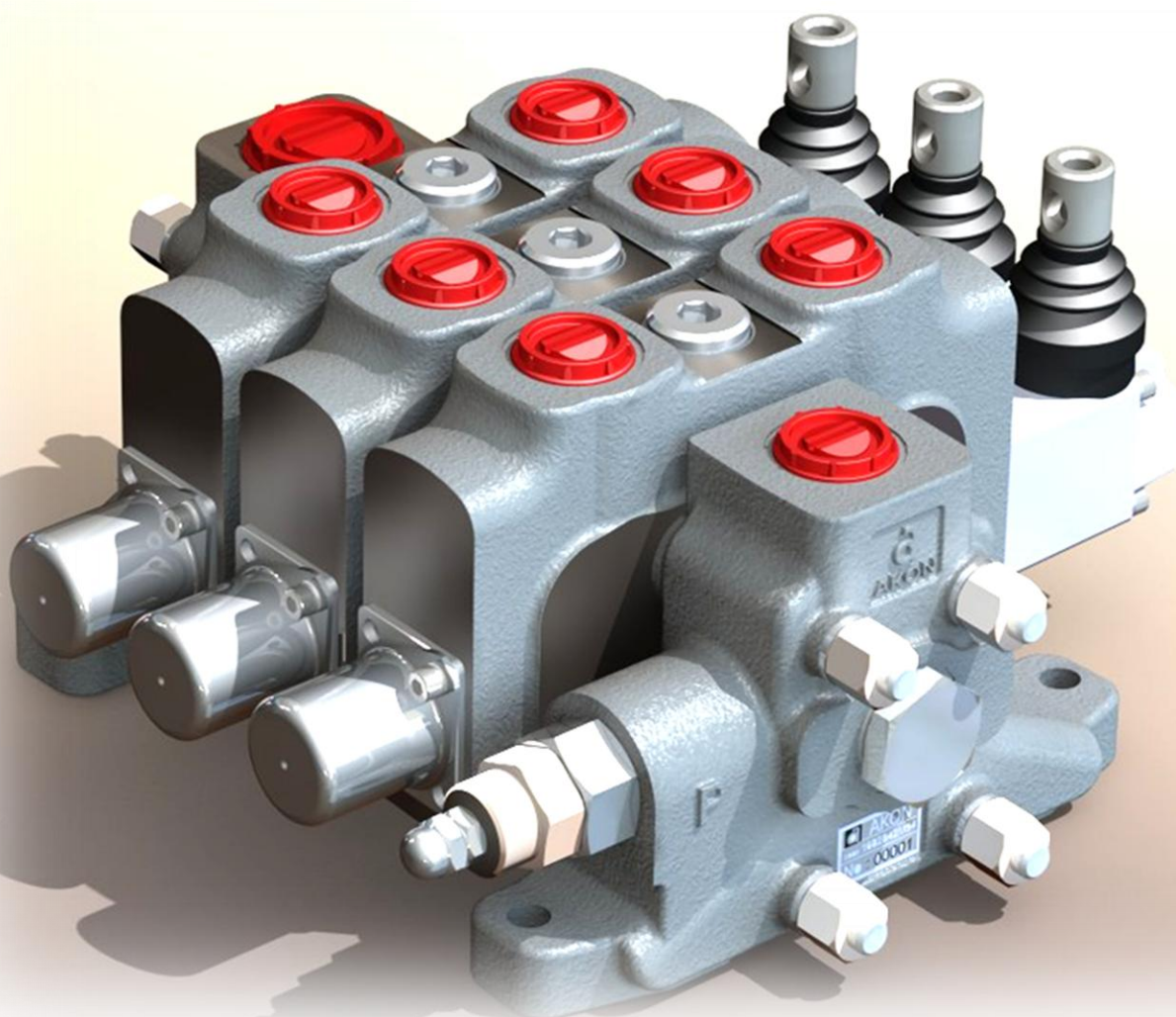




SECTIONAL VALVE

KV 20



GENERAL FEATURES

Standard Material Specifications

- High strength cast iron
- Hard chrome plated interchangeable spools
- Steel spring caps
- Aluminum lever caps
- NBR seals

Standard Features

- Parallel circuit
- Adjustable main relief valve
- Load hold check valve in each section
- Double action

Optional Features

- Series, tandem circuits
- Variety of spool types
- Closed center
- Carry-over option
- Service valves
- Single action

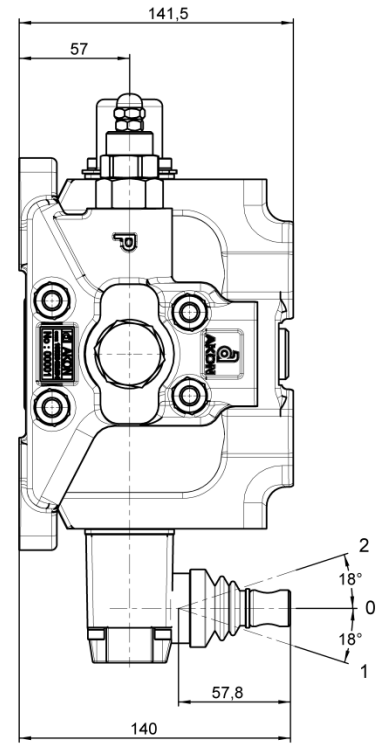
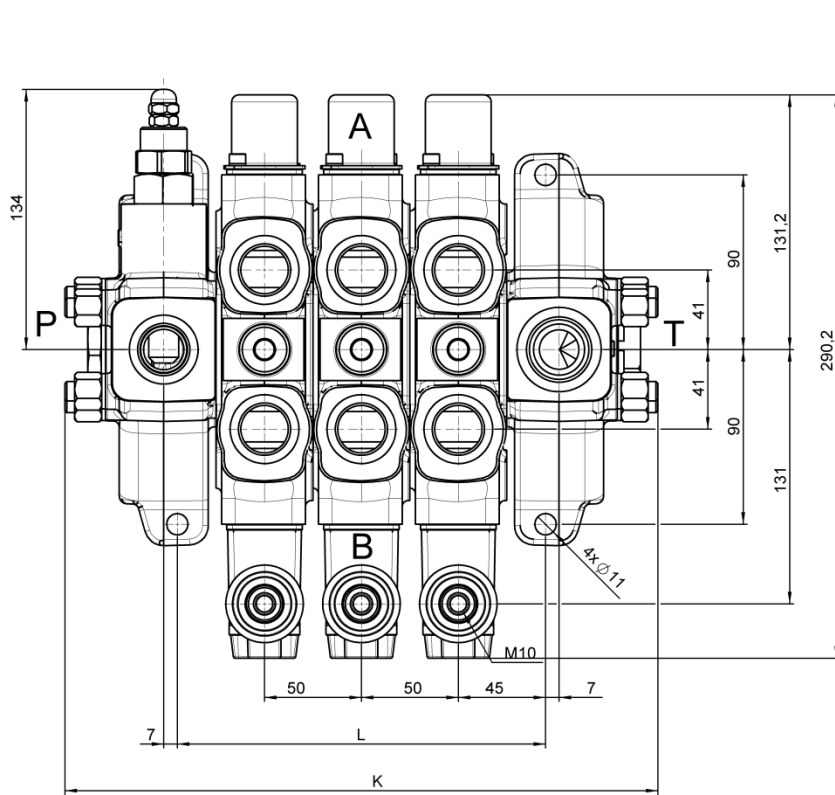
TECHNICAL SPECIFICATIONS

Number of spools	1-10 (Please ask for special orders more than 10 spools)
Nominal flow	150lt/min
Max. Operating pressure	320 Bar
Max. Back pressure	30 Bar
Tie rod tightening torque	30 Nm
Internal leakage (at 100 Bar; 32 cSt,	4 to 9 cc/min

WORKING CONDITIONS

Recommended oil viscosity range	10 cSt to 75 cSt
Recommended oil filtering	$\beta_{10} \geq 75$
Recommended fluid temperature range	-20 to +80
Environmental temperature range	-35 to +60
Max. Contamination level	Class 9 (NAS 1638) 19/16 (ISO 4406)

DIMENSIONAL DATA

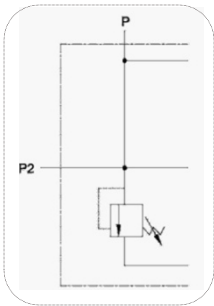
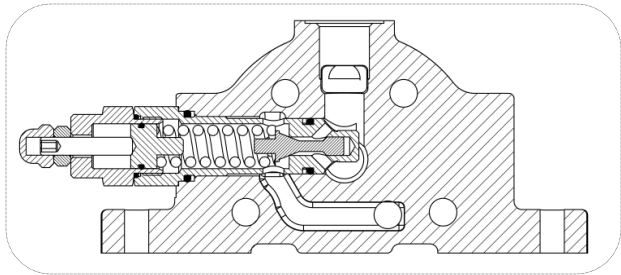


<i>Type</i>	<i>L (mm)</i>	<i>K (mm)</i>	<i>W (kg)</i>
<i>KV 20/1</i>	<i>114</i>	<i>206</i>	<i>14,90</i>
<i>KV 20/2</i>	<i>164</i>	<i>256</i>	<i>21,80</i>
<i>KV 20/3</i>	<i>214</i>	<i>306</i>	<i>28,30</i>
<i>KV 20/4</i>	<i>264</i>	<i>356</i>	<i>34,80</i>
<i>KV 20/5</i>	<i>314</i>	<i>406</i>	<i>41,30</i>
<i>KV 20/6</i>	<i>364</i>	<i>456</i>	<i>47,80</i>
<i>KV 20/7</i>	<i>414</i>	<i>406</i>	<i>54,30</i>
<i>KV 20/8</i>	<i>464</i>	<i>556</i>	<i>60,80</i>
<i>KV 20/9</i>	<i>514</i>	<i>606</i>	<i>67,30</i>

INLET COVER

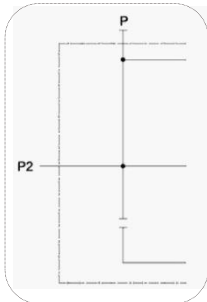
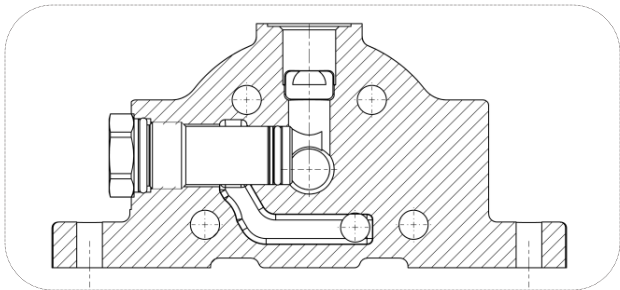
STANDARD THREADS	
CODE	P
C	G ¾
D	G 1

MAIN RELIEF VALVE



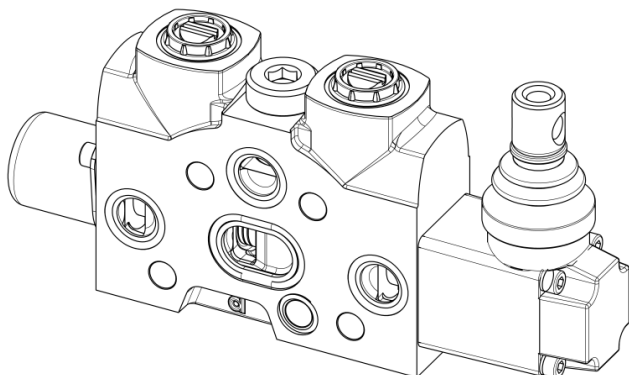
CODE : R

NO MAIN RELIEF VALVE



CODE : Y

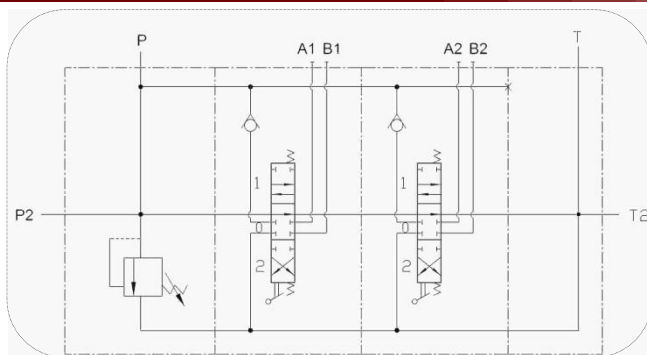
WORKING SECTION



STANDARD THREADS

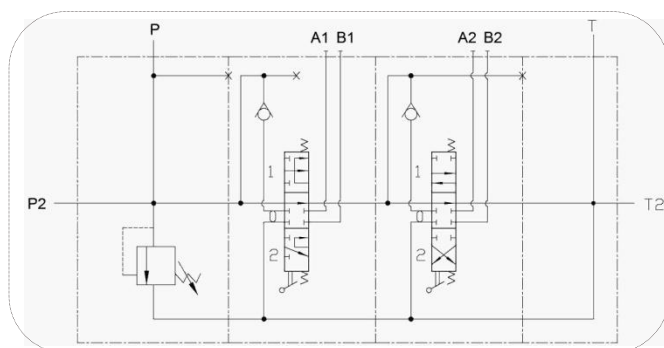
CODE	A/B
C	G $\frac{3}{4}$
D	G 1

PARALLEL CIRCUIT



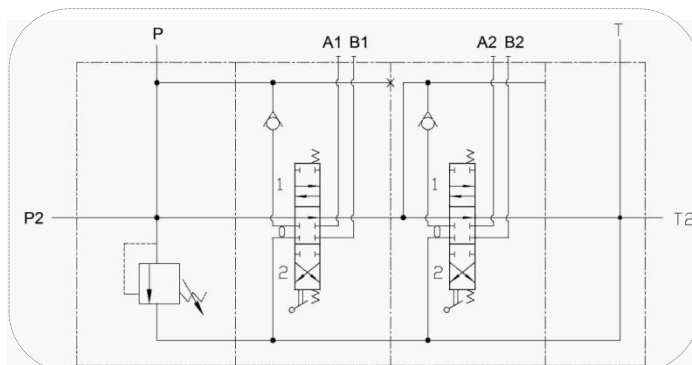
NO CODE

SERIES CIRCUIT



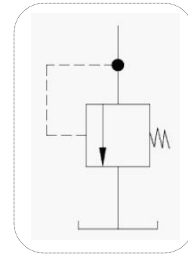
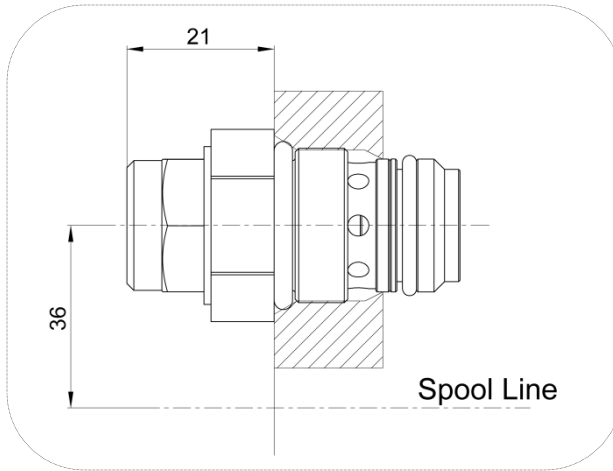
CODE : S

TANDEM CIRCUIT

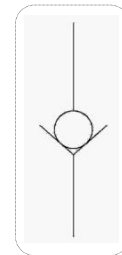
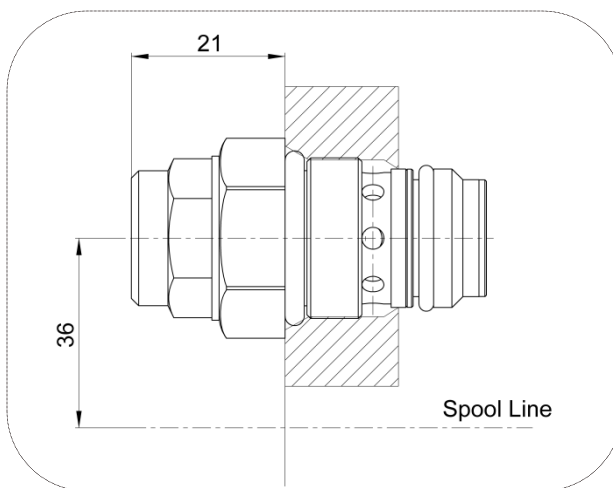


CODE : T

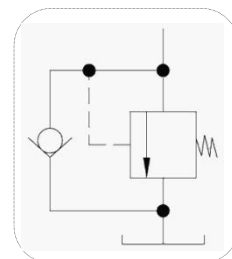
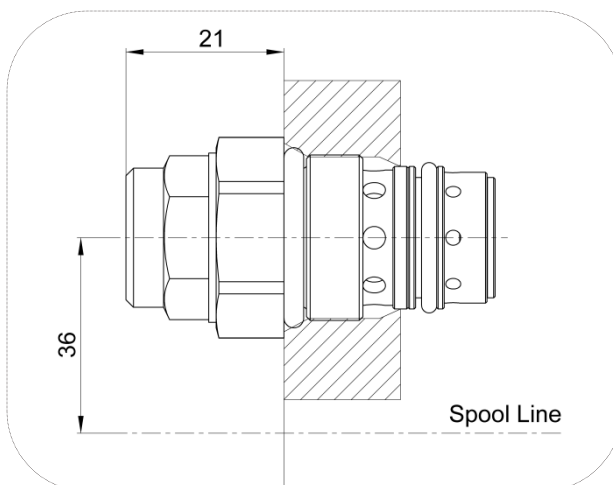
ANTISHOCK VALVES



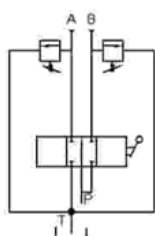
ANTICAVITATION VALVES



ANTISHOCK ANTICAVITATION VALVES

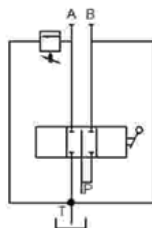


SERVICE VALVES CODING



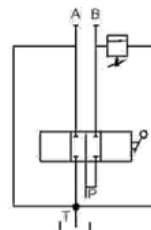
CODE: V1

Antishock
valves in
ports A
and B



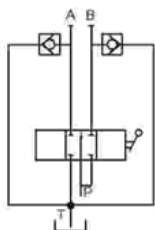
CODE: V2

Antishock
valve in
port A



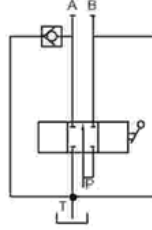
CODE: V3

Antishock
valve in
port B



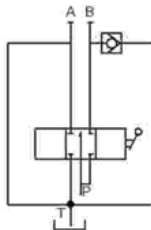
CODE: V4

Anticavitation
valves in
ports A and
B



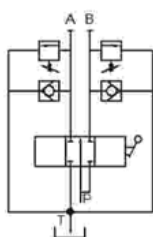
CODE: V5

Anticavitation
valve in
port A



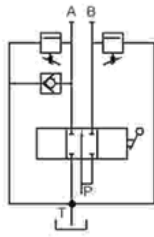
CODE: V6

Anticavitation
valve in
port B



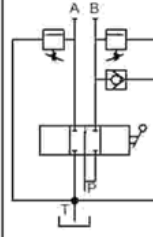
CODE: V7

Antishock &
Anticavitation
valves in
ports A and
B



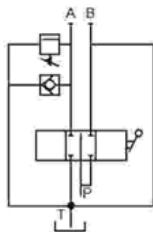
CODE: V8

Antishock &
Anticavitation
valve in port A
and
Antishock valve in
port B



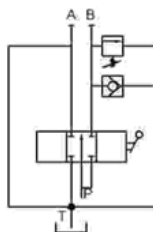
CODE: V9

Antishock &
Anticavitation
valve in port B
and
Antishock valve in
port A



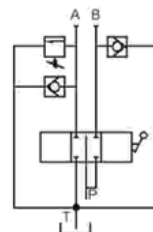
CODE: V10

Antishock &
Anticavitation
valve in port A



CODE: V11

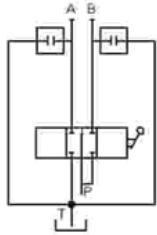
Antishock &
Anticavitation
valve in port B



CODE: V12

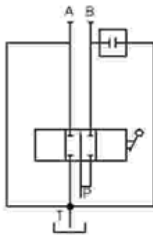
Antishock &
Anticavitation
valve in port A
and
Anticavitation
valve in port B

SERVICE VALVES CODING



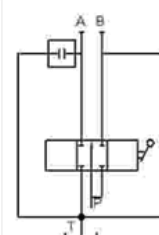
CODE: V13

Cavity-Plug in
ports A and B



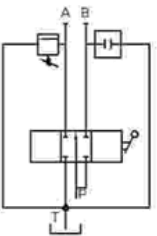
CODE: V14

Cavity-Plug in
port B



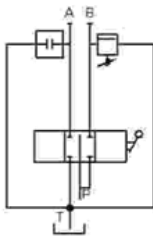
CODE: V15

Cavity-Plug in
port A



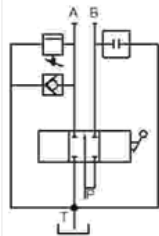
CODE: V17

Antishock valve in
port A
and Cavity-plug in
port B



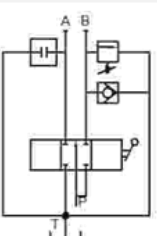
CODE: V18

Cavity-plug in port
A and Antishock
valve in port B



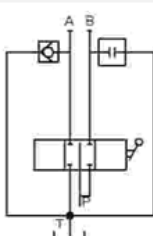
CODE: V19

Antishock &
Anticavitation valve
in port A and
Cavity-plug in port B



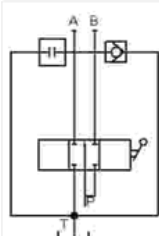
CODE: V20

Cavity-plug in port
A and Antishock &
Anticavitation
valve in port B



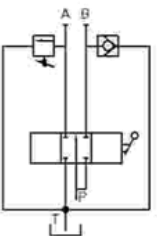
CODE: V21

Anticavitation
valve in port A
and Cavity-plug in
port B



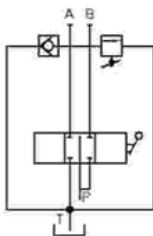
CODE: V22

Cavity-plug in port
A and
Anticavitation
valve in port B



CODE: V27

Antishock valve in
port A and
Anticavitation
valve in port B



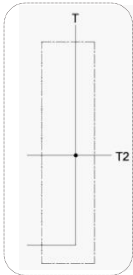
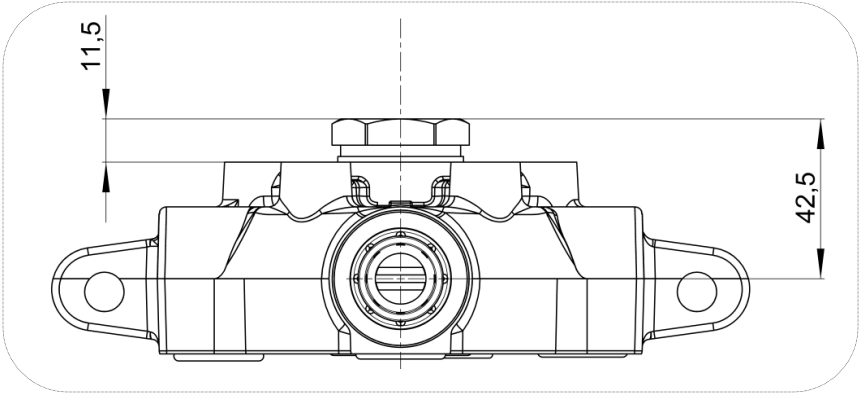
CODE: V28

Anticavitation
valve in port A and
Antishock valve in
port B

OUTLET SECTION

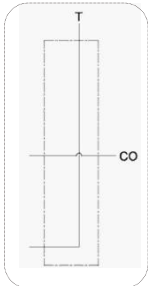
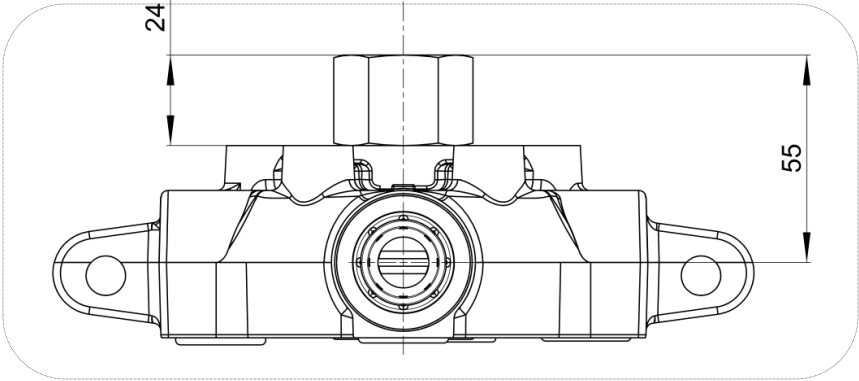
STANDARD THREADS	
CODE	T
D	G 1

STANDARD



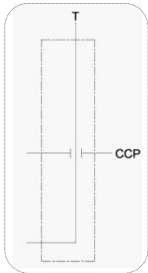
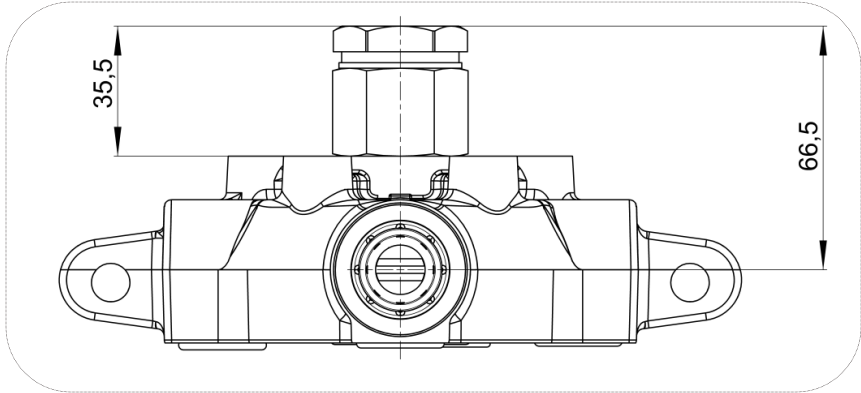
NO CODE

CARRY-OVER PLUG



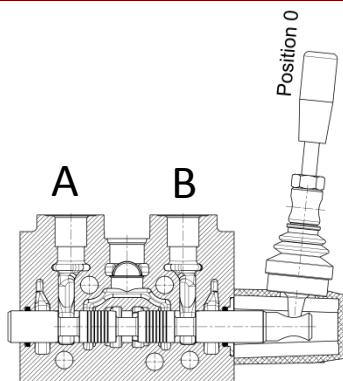
CODE : H

CLOSED CENTER PLUG

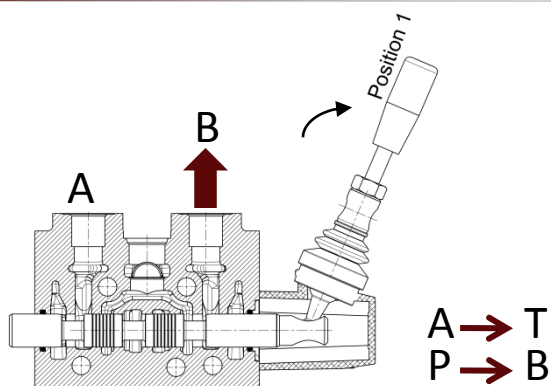


CODE : K

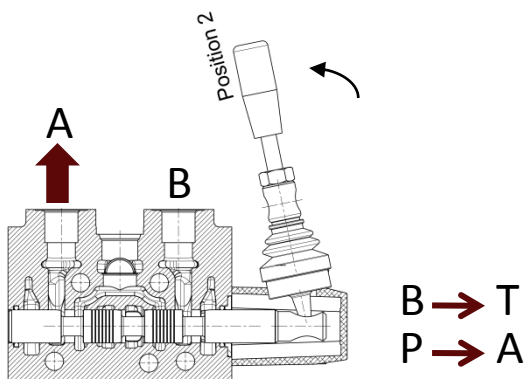
SPOOL CONTROL POSITIONS



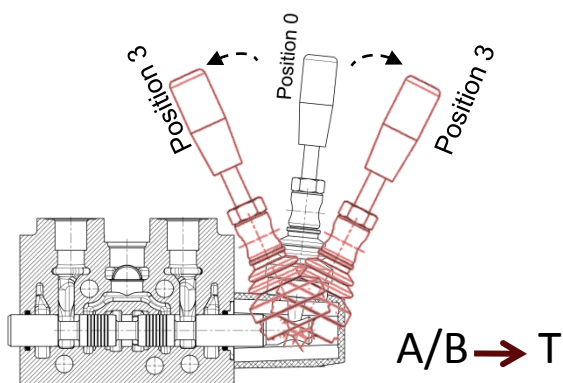
Spool-neutral position;
POSITION 0



Spool-out position;
POSITION 1



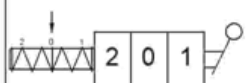
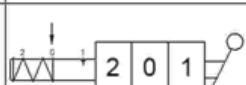
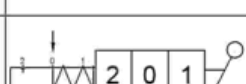
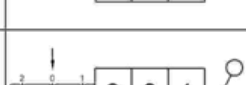
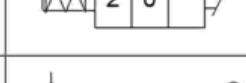
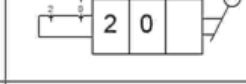
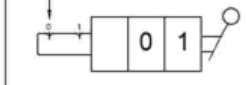
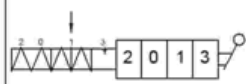
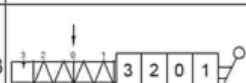
Spool-in position;
POSITION 2

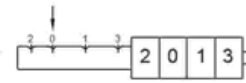
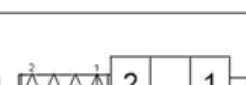
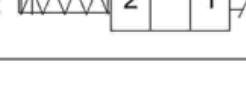
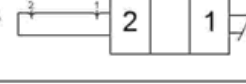
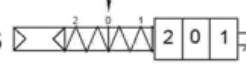
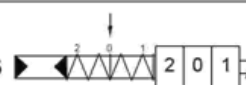
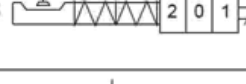
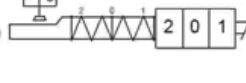
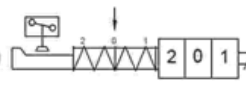


4 positions and 4th position can be
spool-in or spool-out position
optionally;

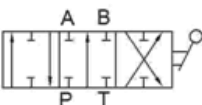
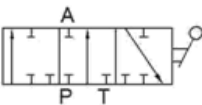
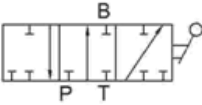
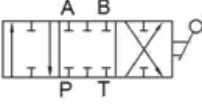
POSITION 3

POOL CONTROL CODING FOR KV20

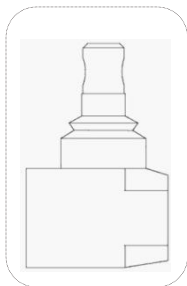
SC1		3 positions spring centered
SC2		3 positions spring centered, detent in 1st position
SC3		3 positions spring centered, detent in 2nd position
SC4		3 positions, detent in all positions
SC5		2 positions spring centered
SC6		2 positions spring centered
SC7		2 positions, detent in both positions
SC8		2 positions, detent in both positions
SC9		4 positions spring centered, detent in 3rd position
SC23		4 positions spring centered, detent in 3rd position
SC10		4 positions, detent in all positions
SC21		4 positions, all spring centered
SC22		4 positions, all spring centered

SC24		4 positions, detent in all positions
SC11		2 positions spring centered in 1st position
SC12		2 positions spring centered in 2nd position
SC13		2 positions, detent in both positions
SC15		3 positions pneumatic control
SC16		3 positions hydraulic control
SC17		3 positions electro-hydraulic control
SC18		3 positions microswitch operated in both positions
SC19		3 positions microswitch operated in 1st position
SC20		3 positions microswitch operated in 2nd position
SC28		3 positions, spring centered and detent with spring in all positions
SC29		Hydraulic Kick-out

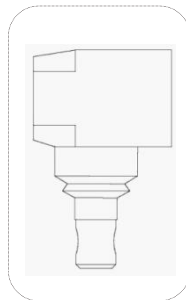
SPOOL TYPES CODING FOR KV 20

ST1		3 position Double acting spool
ST2		3 position Single acting on A side
ST3		3 position Single acting on B side
ST4		3 position Closed center spool
ST11		3 position Double acting spool A and B to tank
ST9		4 position Double acting with float on 4th position
ST10		4 position Double acting, regenerative in 4th position
ST5		3 position Single acting spool A open to tank
ST6		3 position Single acting spool B open to tank
ST7		3 position Double acting spool A to tank, B blocked
ST8		3 position Double acting spool B to tank, A blocked
ST12		3 position Double acting spool P open to A and B in 2nd position

LEVER TYPES CODING FOR KV 20

**NO CODE**

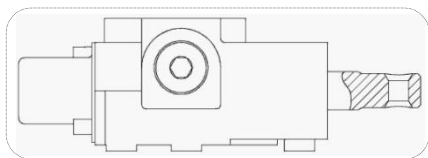
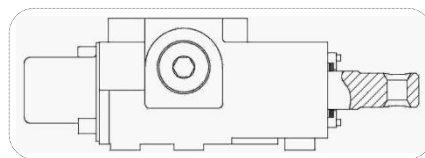
Standard Lever

**CODE : K1**

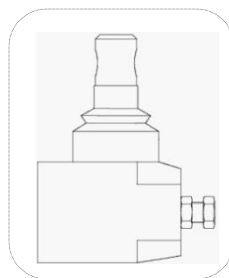
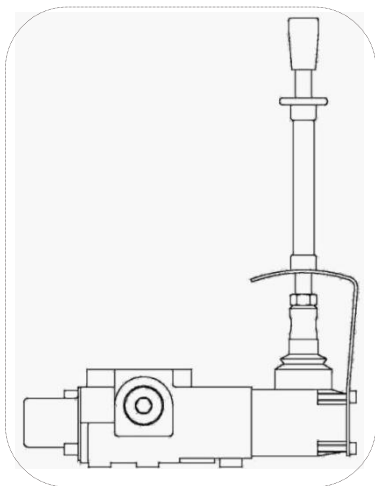
Reverse Lever

CODE : K2

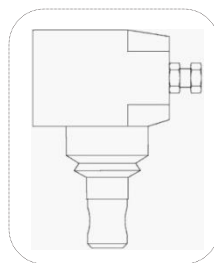
No Lever

**CODE : K3**Without Lever with
dustproof plate**CODE : K4**

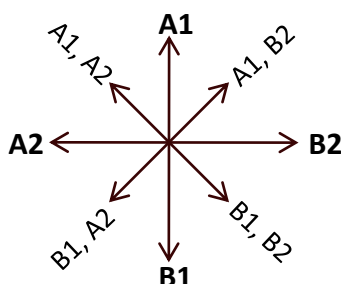
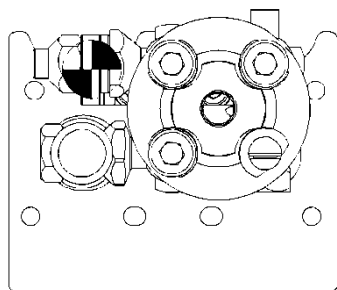
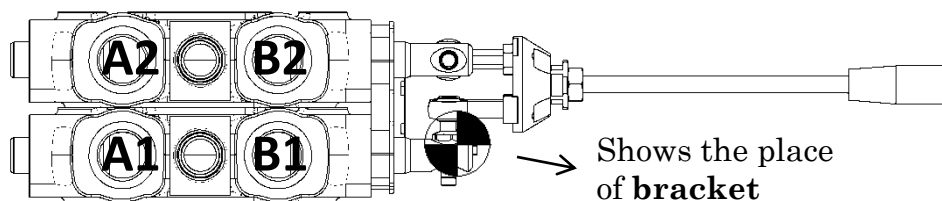
Safety Lever

**CODE : K5**

With Spool Limiter

**CODE : K6**Reverse Lever with
Spool Limiter

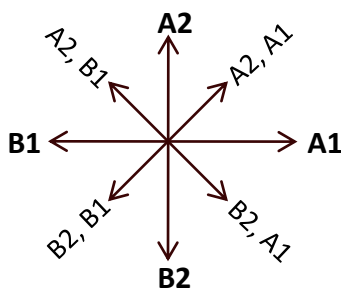
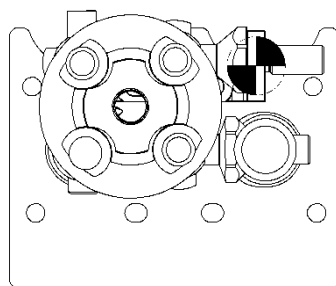
LEVER TYPES CODING FOR KV 20



CODE : K7-A

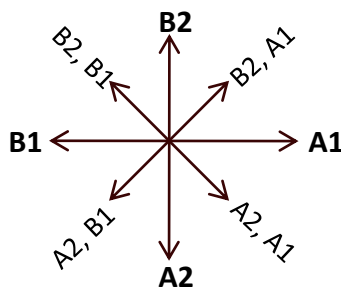
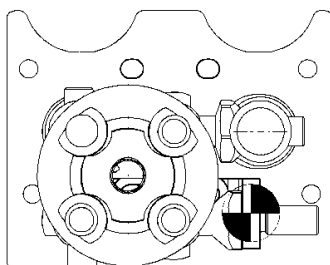
Manual joystick for 2 spools,
bracket placed on top-left

* If not specified this code will
be standard



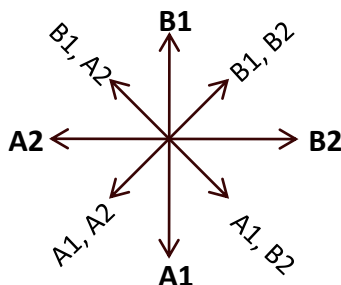
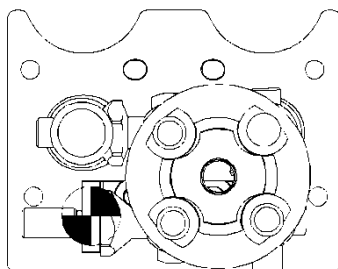
CODE : K7-B

Manual joystick for 2 spools,
bracket placed on top-right



CODE : K7-C

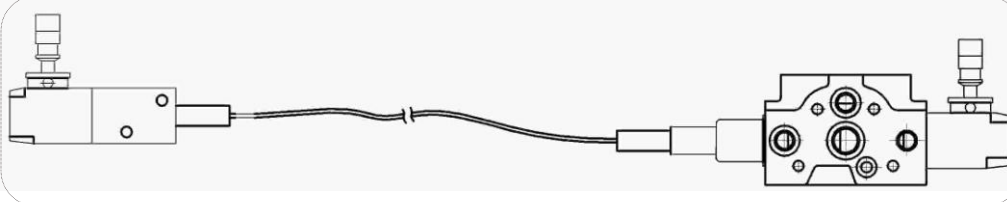
Manual joystick for 2 spools,
bracket placed on down-right



CODE : K7-D

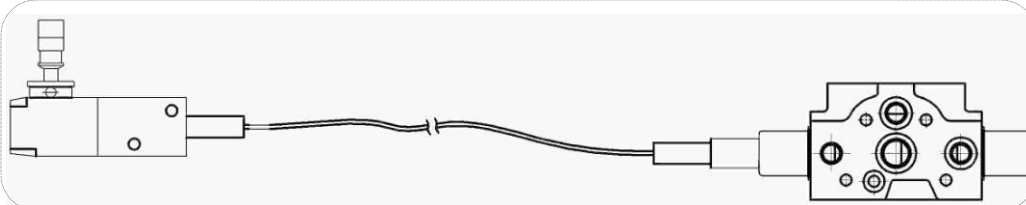
Manual joystick for 2 spools,
bracket placed on down-left.

LEVER TYPES CODING FOR KV 20



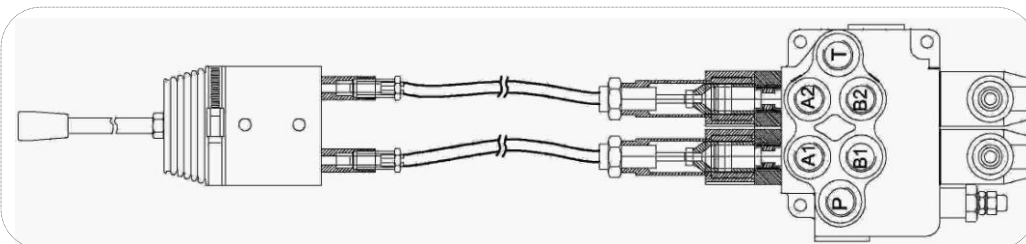
CODE : K8

Cable remote control on spring cap side



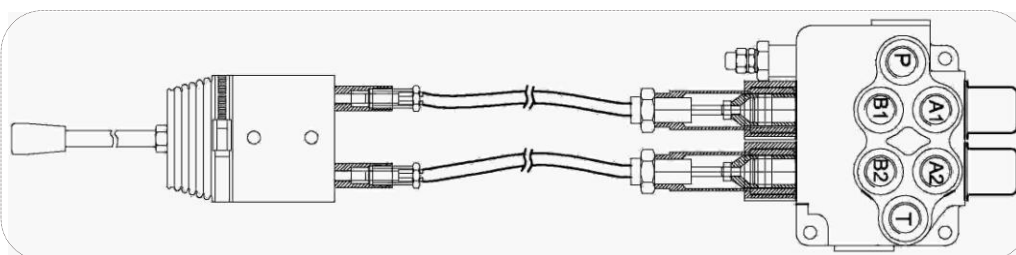
CODE : K9

Cable remote control on lever cap side



CODE : K10

Remote joystick control on spring cap side



CODE : K11

Remote joystick control on lever cap side

AN ORDERING EXAMPLE

INLET			FIRST SECTION			SECOND SECTION					THIRD SECTION				OUTLET																		
KV20	/	3	/	C	-	R(200)	/	D	SC4	-	ST1	/	D	-	SC4	-	ST1	-	K3	-	V2(A200)	/	D	-	SC1	-	SC15	-	ST4	/	D	-	H
1	2	3	4	3	5	6	3	5	6	7	8	3	5	5	6	3	9																



1	Valve Type	
2	Number Of Spools (from 1 to 8 spools)	
3	Port Threads (P, A/B, T)	C : G $\frac{3}{4}$ D : G 1
4	Main Relief Valve	Y : Without main relief valve R : With main relief valve (indicate pressure setting)
5	Spool Controls and Actuators	See page 11 (if necessary indicate more than one spool control or actuator)
6	Spool Types	See page 12
7	Lever Types	See page 13-15
8	Service Valves	See page 7-8 (indicate requested pressure setting for each port separately if required in both A and B ports)
9	Outlet	No code for standard H : High pressure carry-over K : Plugged for closed center