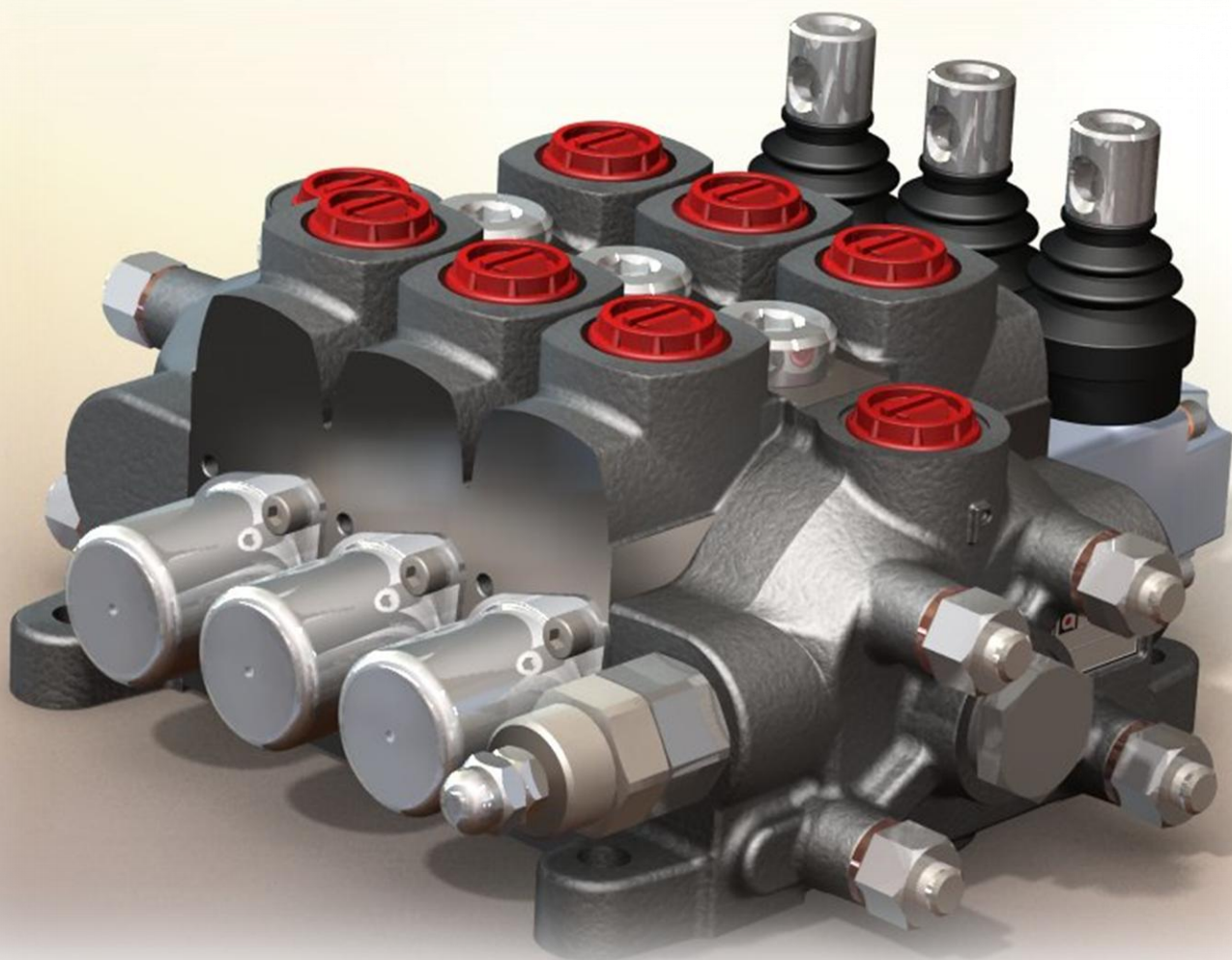




# *SECTIONAL VALVE*

*KV 15*



**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

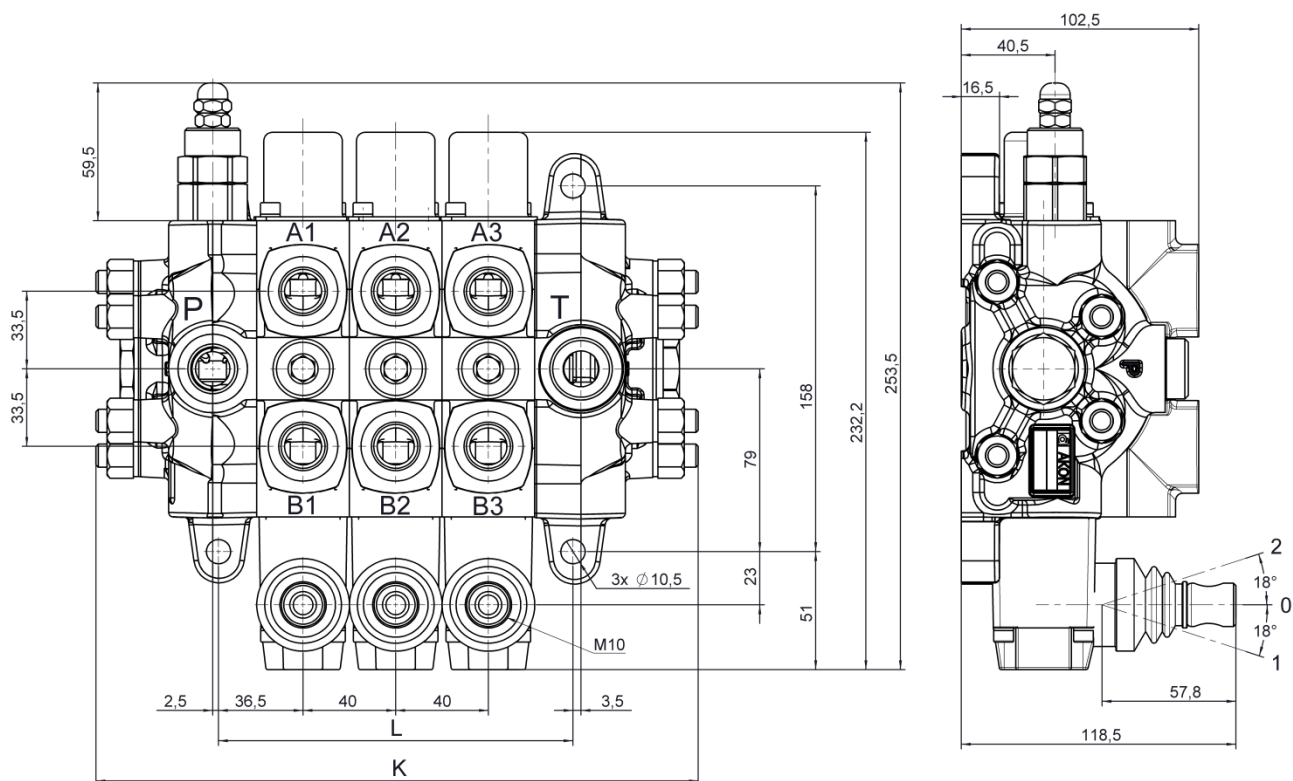
**TECHNICAL SPECIFICATIONS**

|                                       |                                                          |
|---------------------------------------|----------------------------------------------------------|
| Number of spools                      | 1-10 (Please ask for special orders more than 10 spools) |
| Nominal flow                          | 80lt/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)<br>19/16 (ISO 4406) |

## DIMENSIONAL DATA

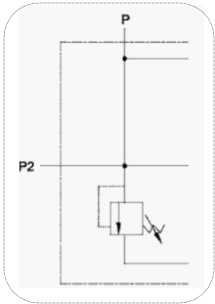
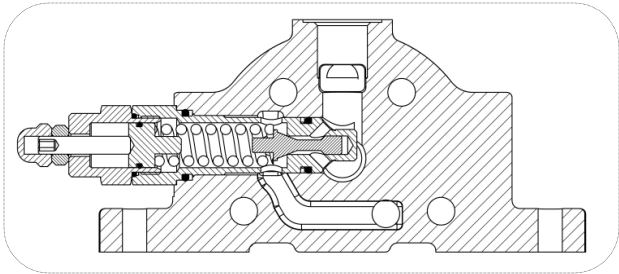


| Type    | L (mm) | K (mm) | W (kg) |
|---------|--------|--------|--------|
| KV 15/1 | 73     | 180    | 9,25   |
| KV 15/2 | 113    | 220    | 12,30  |
| KV 15/3 | 153    | 260    | 15,35  |
| KV 15/4 | 193    | 300    | 18,40  |
| KV 15/5 | 233    | 340    | 21,45  |
| KV 15/6 | 273    | 380    | 24,50  |
| KV 15/7 | 313    | 420    | 27,55  |
| KV 15/8 | 353    | 460    | 30,60  |
| KV 15/9 | 393    | 500    | 33,65  |

**INLET COVER**

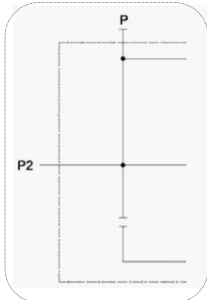
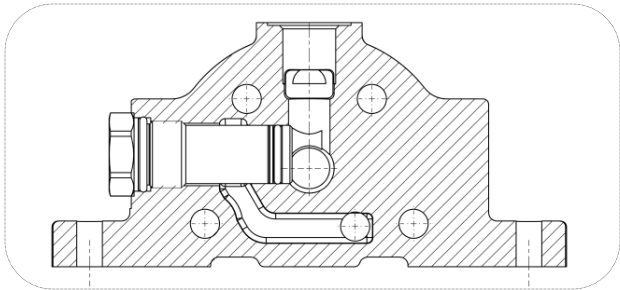
| STANDARD THREADS |     |
|------------------|-----|
| CODE             | P   |
| B                | G ½ |
| C                | G ¾ |

**MAIN RELIEF VALVE**



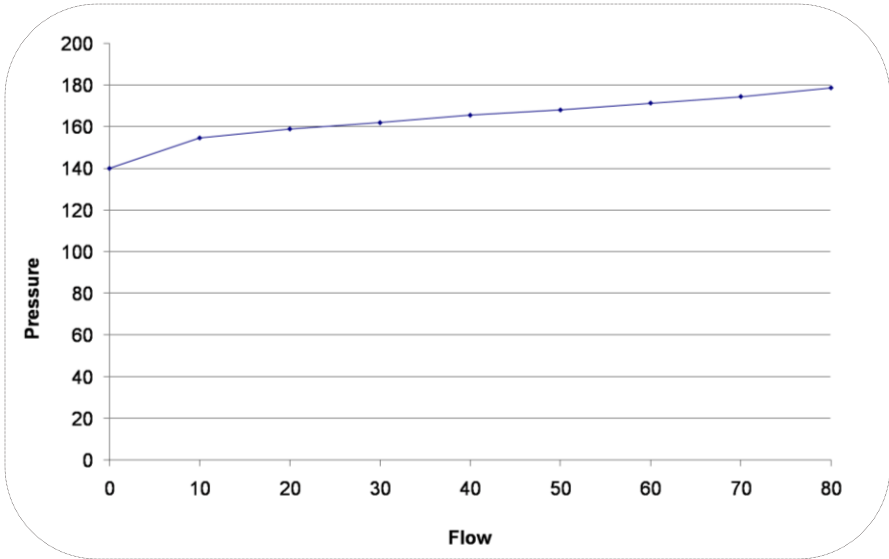
**CODE : R**

**NO MAIN RELIEF VALVE**

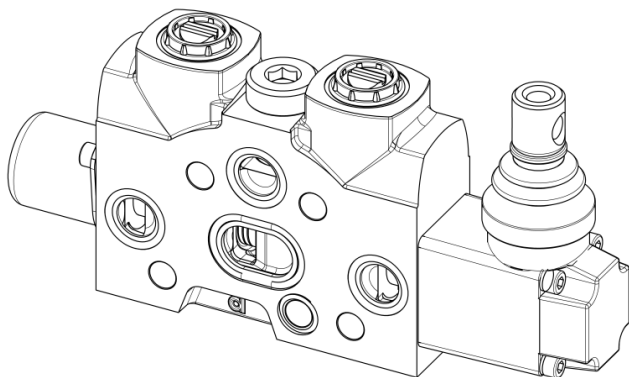


**CODE : Y**

**RELIEF VALVE PERFORMANCE DATA**



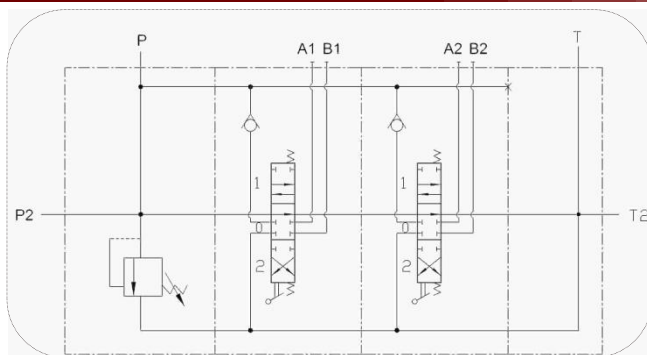
## WORKING SECTION



### STANDARD THREADS

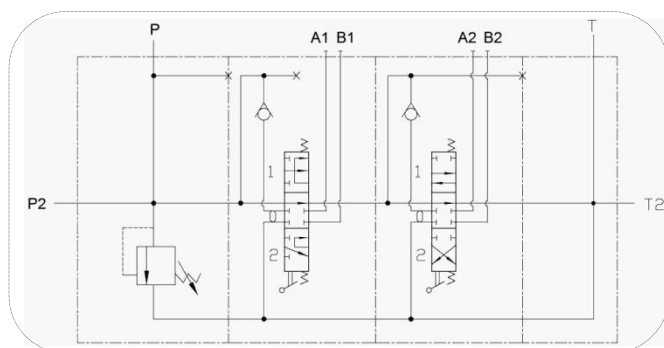
| CODE | A/B |
|------|-----|
| B    | G ½ |
| C    | G ¾ |

## PARALLEL CIRCUIT



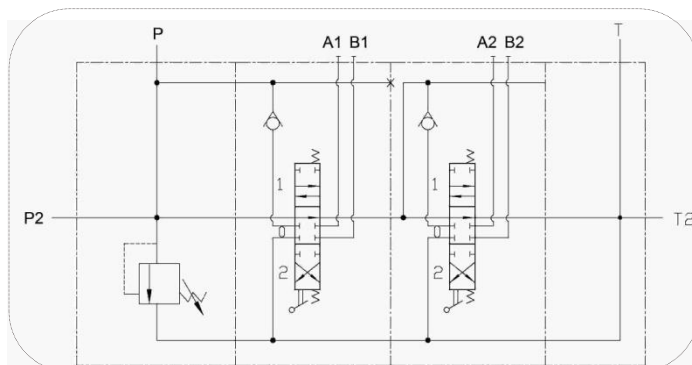
**NO CODE**

## SERIES CIRCUIT



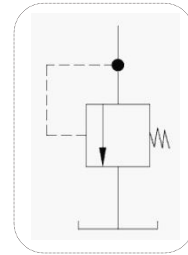
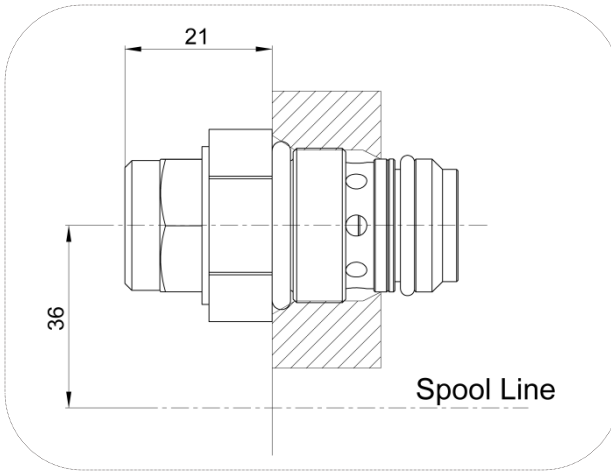
**CODE : S**

## TANDEM CIRCUIT

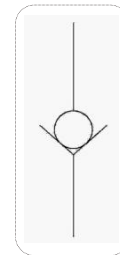
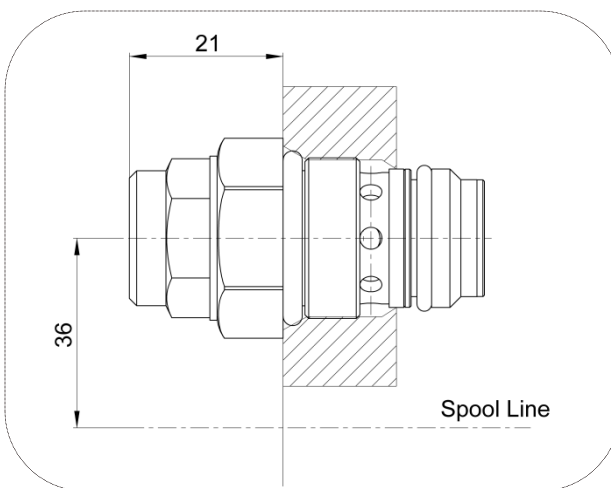


**CODE : T**

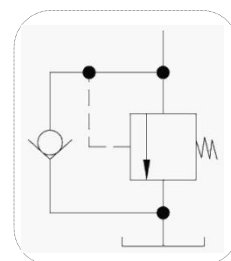
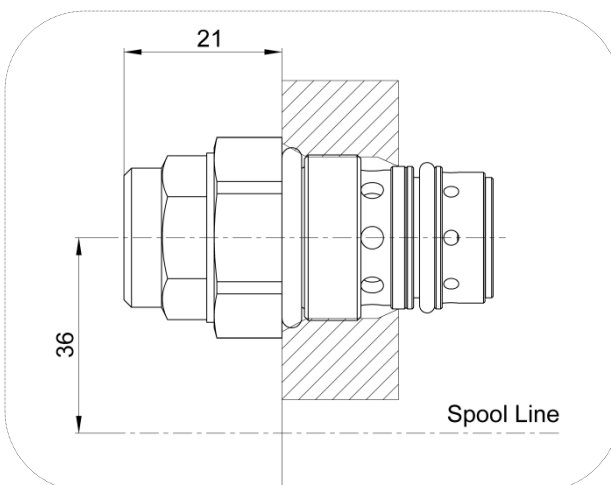
## ANTISHOCK VALVES



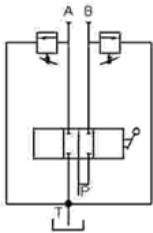
## ANTICAVITATION VALVES



## ANTISHOCK ANTICAVITATION VALVES

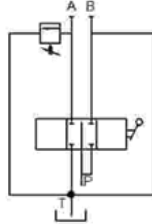


## SERVICE VALVES CODING



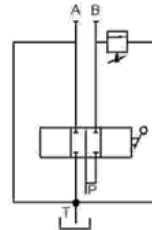
**CODE: V1**

Antishock  
valves in  
ports A  
and B



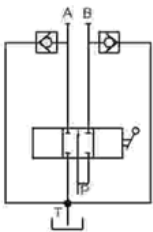
**CODE: V2**

Antishock  
valve in  
port A



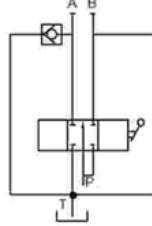
**CODE: V3**

Antishock  
valve in  
port B



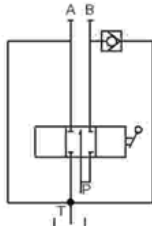
**CODE: V4**

Anticavitation  
valves in  
ports A and  
B



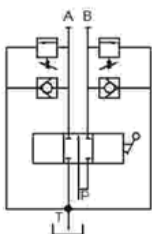
**CODE: V5**

Anticavitation  
valve in  
port A



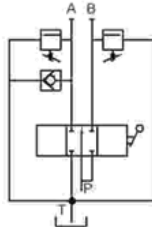
**CODE: V6**

Anticavitation  
valve in  
port B



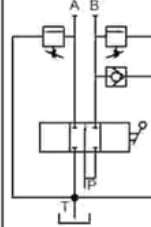
**CODE: V7**

Antishock &  
Anticavitation  
valves in  
ports A and  
B



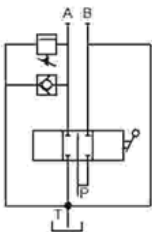
**CODE: V8**

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



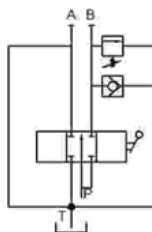
**CODE: V9**

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



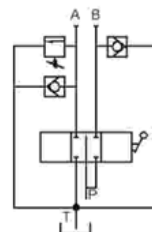
**CODE: V10**

Antishock &  
Anticavitation  
valve in port A



**CODE: V11**

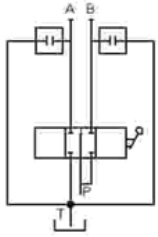
Antishock &  
Anticavitation  
valve in port B



**CODE: V12**

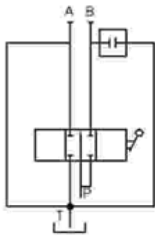
Antishock &  
Anticavitation  
valve in port A and  
Anticavitation  
valve in port B

# SERVICE VALVES CODING



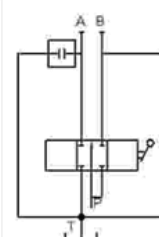
**CODE: V13**

Cavity-Plug in  
ports A and B



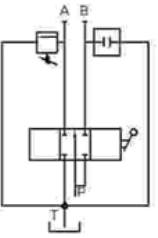
**CODE: V14**

Cavity-Plug in  
port B



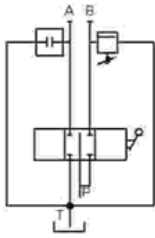
**CODE: V15**

Cavity-Plug in  
port A



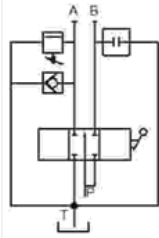
**CODE: V17**

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



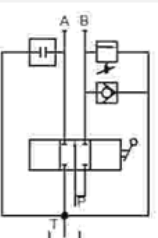
**CODE: V18**

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



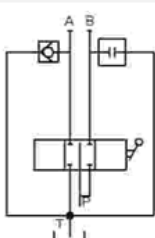
**CODE: V19**

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



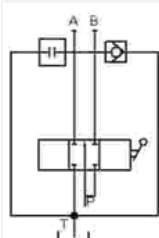
**CODE: V20**

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



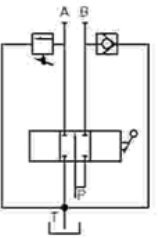
**CODE: V21**

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



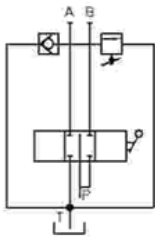
**CODE: V22**

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



**CODE: V27**

Antishock valve in  
port A and  
Anticavitation  
valve in port B



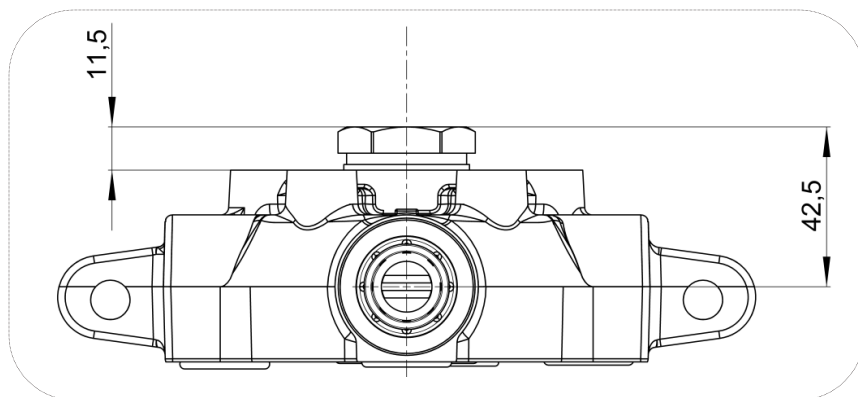
**CODE: V28**

Anticavitation  
valve in port A and  
Antishock valve in  
port B

# OUTLET SECTION

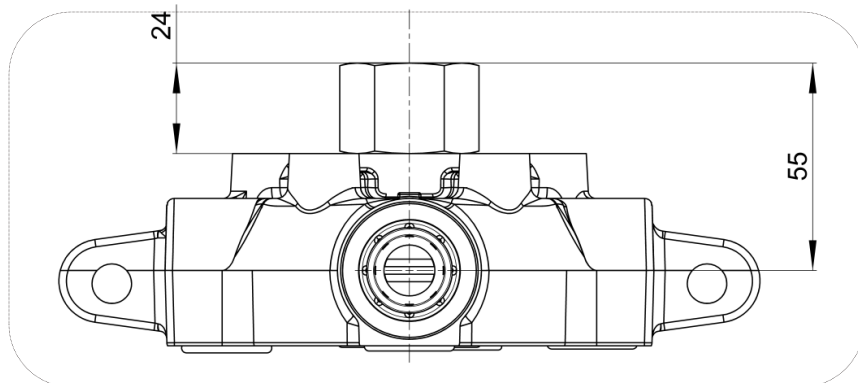
| STANDARD THREADS |     |
|------------------|-----|
| CODE             | T   |
| B                | G ½ |
| C                | G ¾ |

## STANDARD



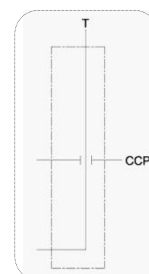
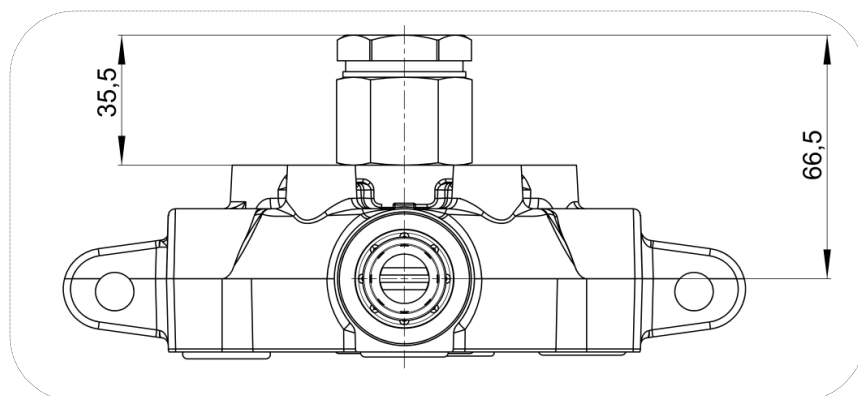
NO CODE

## CARRY-OVER PLUG



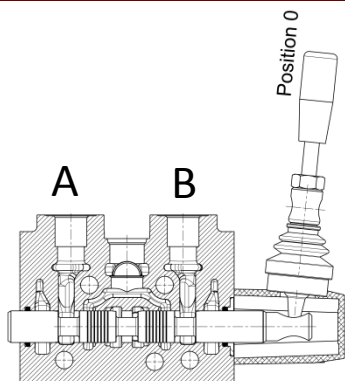
CODE : H

## CLOSED CENTER PLUG

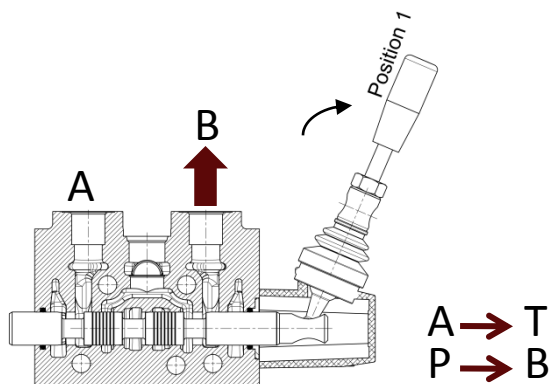


CODE : K

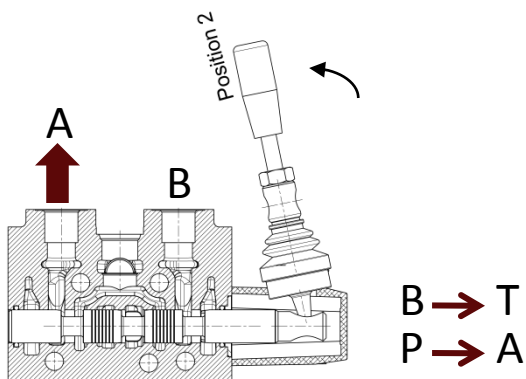
## SPOOL CONTROL POSITIONS



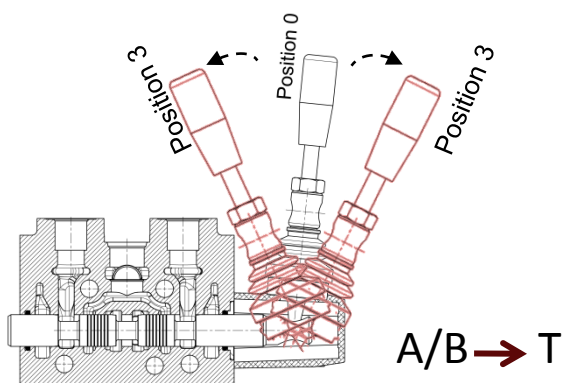
Spool-neutral position;  
**POSITION 0**



Spool-out position;  
**POSITION 1**



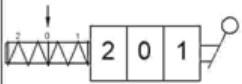
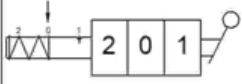
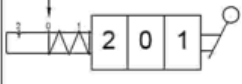
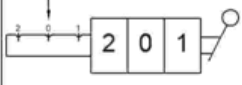
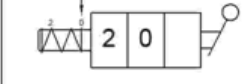
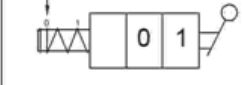
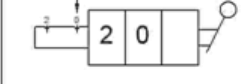
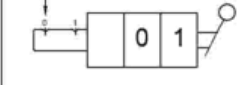
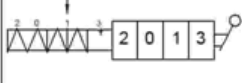
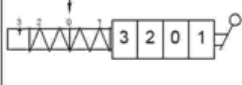
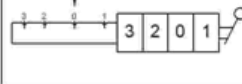
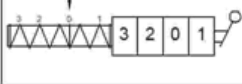
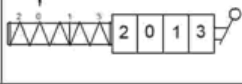
Spool-in position;  
**POSITION 2**

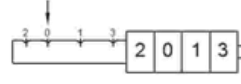
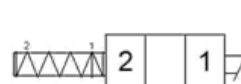
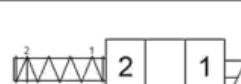
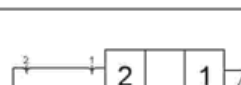
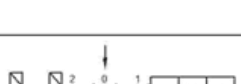
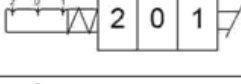


4 positions and 4th position can be  
spool-in or spool-out position  
optionally;

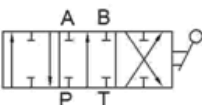
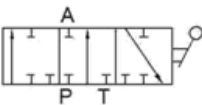
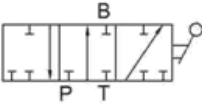
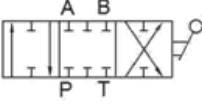
**POSITION 3**

# SPOOL CONTROL CODING FOR KV15

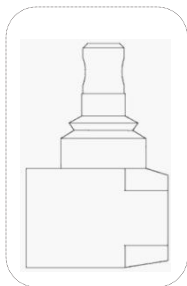
|      |                                                                                     |                                                     |
|------|-------------------------------------------------------------------------------------|-----------------------------------------------------|
| SC1  |    | 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                                                   |

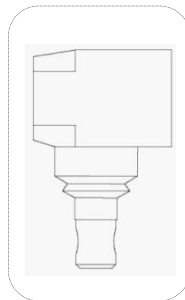
## SPPOOL TYPES CODING FOR KV 15

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

## LEVER TYPES CODING FOR KV 15

**NO CODE**

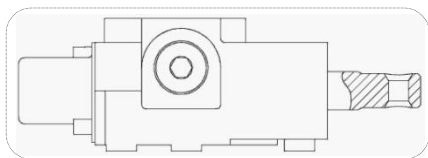
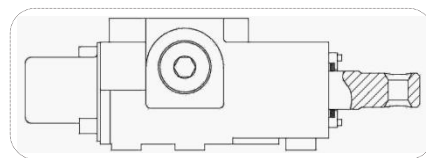
Standard Lever

**CODE : K1**

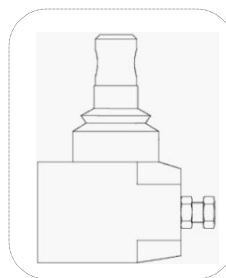
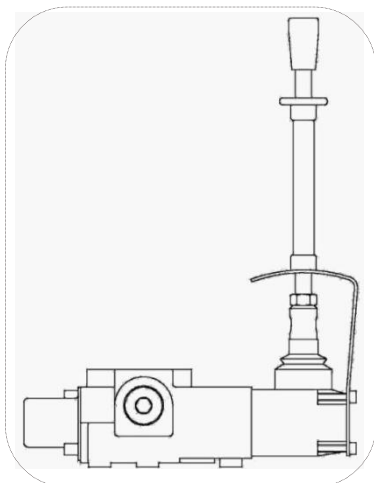
Reverse Lever

**CODE : K2**

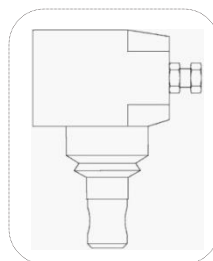
No Lever

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

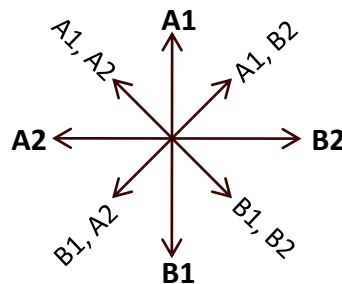
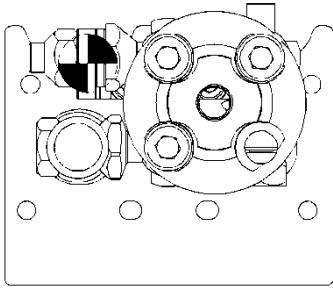
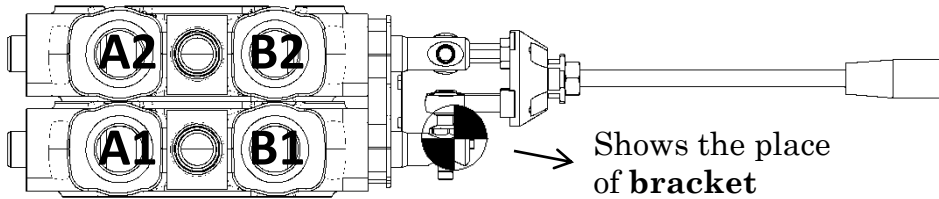
Safety Lever

**CODE : K5**

With Spool Limiter

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

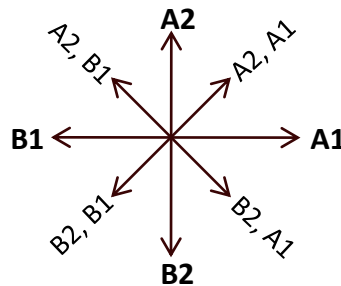
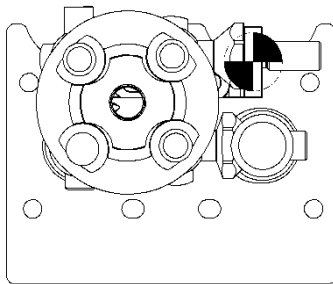
# LEVER TYPES CODING FOR KV 15



## CODE : K7-A

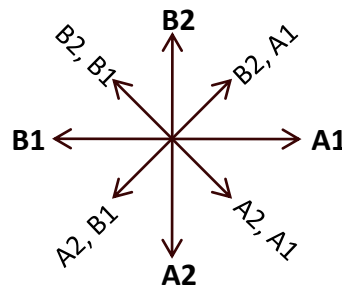
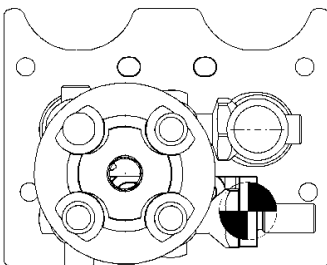
Manual joystick for 2 spools, bracket placed on top-left

\* If not specified this code will be standard



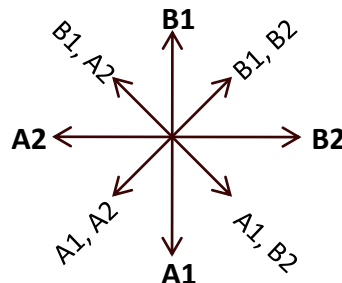
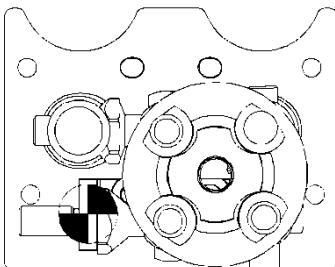
## CODE : K7-B

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



## CODE : K7-C

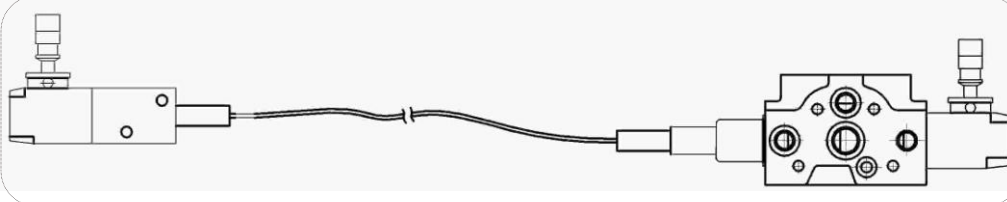
Manual joystick for 2 spools, bracket placed on down-right



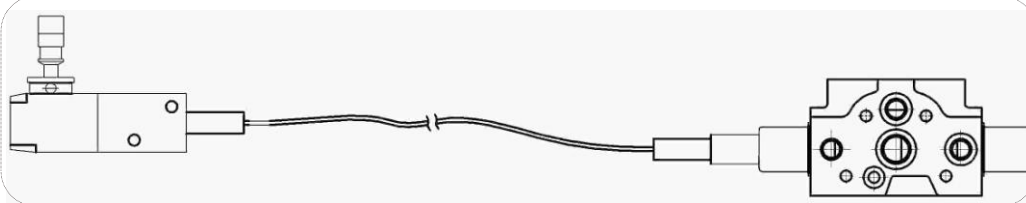
## CODE : K7-D

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

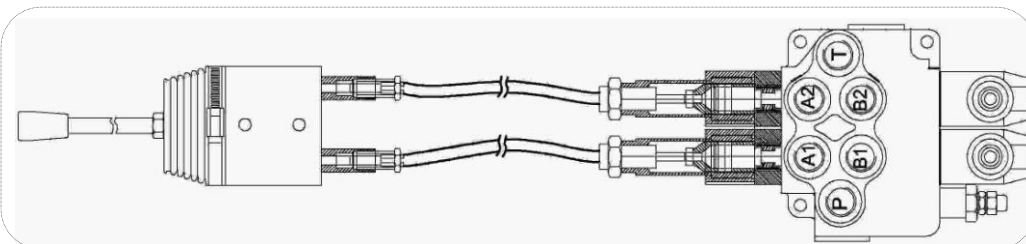
## LEVER TYPES CODING FOR KV 15

**CODE : K8**

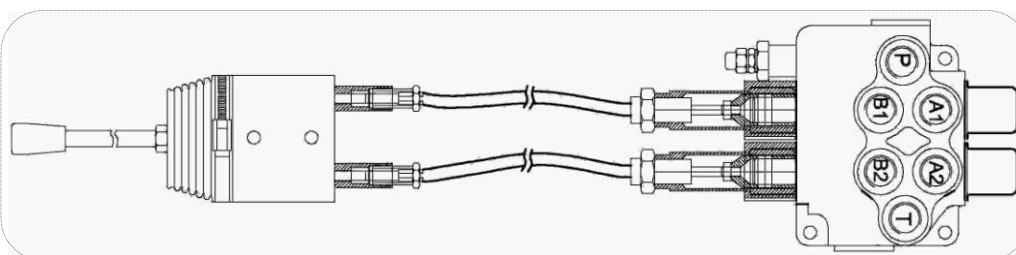
Cable remote  
control on spring  
cap side

**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 |   |     |   |    |   |          |   |   |   |     |   |      |   |     |   |   |   |   |
|------|---|-------|---|---------------|---|----------------|---|---|---|-----|---|---------------|---|---|---|--------|---|-----|---|----|---|----------|---|---|---|-----|---|------|---|-----|---|---|---|---|
| KV15 | / | 3     | / | C             | - | R(200)         | / | C | - | SC4 | - | ST1           | / | C | - | SC4    | - | ST1 | - | K3 | - | V2(A200) | / | C | - | SC1 | - | SC15 | - | ST4 | / | C | - | 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<br>(P, A/B, T)           | B : G ½<br>C : G ¾                                                                                                  |
| 4 | Main Relief Valve                     | Y : Without main relief valve<br>R : With main relief valve<br>(indicate pressure setting)                          |
| 5 | Spool Controls and Actuators          | See page 11<br>(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<br>(indicate requested pressure setting for each port separately<br>if required in both A and B ports) |
| 9 | Outlet                                | No code for standard<br>H : High pressure carry-over<br>K : Plugged for closed center                               |