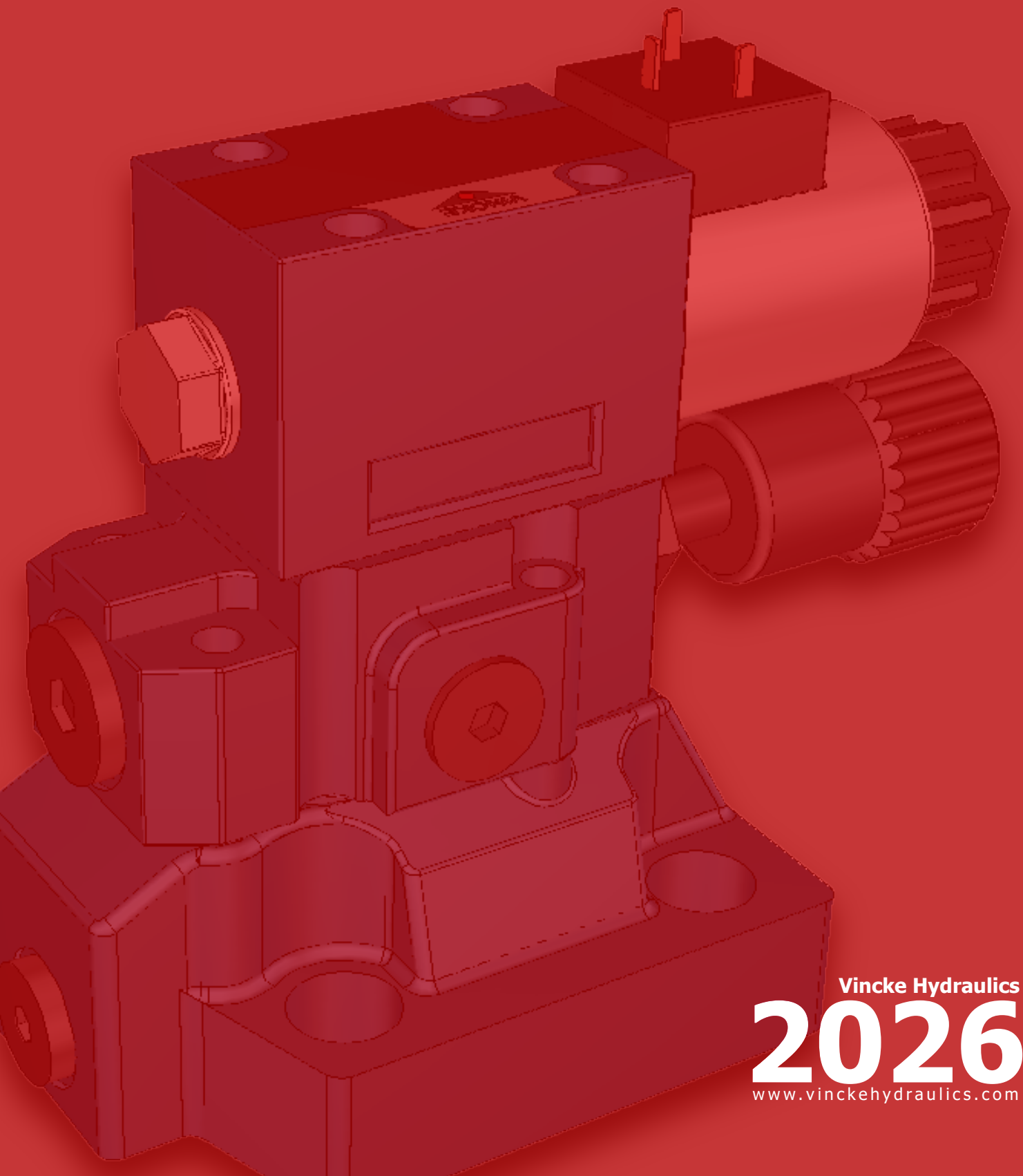
VINCKE

CETOP

Valves



Vincke Hydraulics

2026

www.vinckehydraulics.com

VINCKE
HYDRAULICS

01 VINCKE CETOP SOLENOIDS

02 VINCKE CETOP MODULARS VALVES

03 VINCKE PRESSURE CONTROL VALVES

ELECTRICAL OPERATED DIRECTIONAL CONTROL VALVE
Pág 3

SOLENOID VALVE WITH HAND CONTROL
Pág 12

PROPORTIONAL FLOW REGULATOR
Pág 15

PROPORTIONAL DIRECTIONAL VALVE
Pág 17

ELECTRO-HYDRAULIC DIRECTIONAL CONTROL VALVE
Pág 29

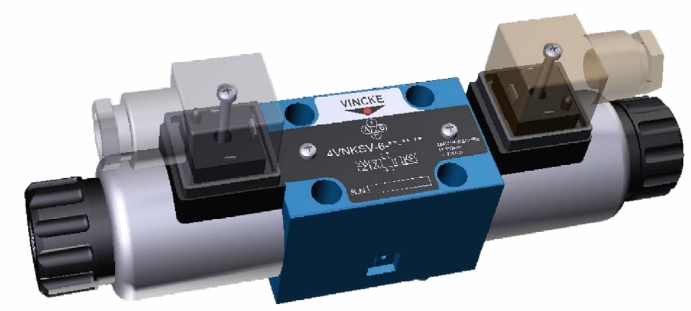
CETOP COILS
Pág 36

MANUAL EMERGENCY POSITIONER
Pág 38

MANUAL OPERATED DIRECTIONAL CONTROL VALVE
Pág 39

VINCKE
HYDRAULICS

BACK TO THE MAIN INDEX



Vincke solenoid valves is designed and tested under innovative concepts to satisfy the advanced needs of currents machines:
versatility, reduced power absorbed and safety ofuse.

Solenoid directional valves are used for changing flow direction in hydraulic systems.

Technical characteristics

Specification		06		10	
Working pressure (Mpa)	Oil ports P,A,B	35		31.5	
	Oil port T	16		16	
Max. Flow (L/min)		80		120	
Working fluid		Mineral oil: phosphate-ester			
Fluid temp. (°C)		-20~70			
Viscosity (mm ²/s)		2.8~100			
Working voltage (V)	DC	12		24	
	AC	110/50Hz		220/50Hz	
Max. Switch frequency (T/h)		15000 (DC)		7200 (AC)	
Insulation grade		IP65			
Weight (kg)	Single solenoid	1.45 (DC)	1.4 (AC)	5.1 (DC)	4.3 (AC)
	Double solenoid	1.95 (DC)	1.9 (AC)	6.7 (DC)	5.1 (AC)

Cleanliness

The maximum allowable cleanliness of the oil should be according to 9th degree of Standard Nas1638. It is suggested that the minimum filter rating should be ß10 ≥75.

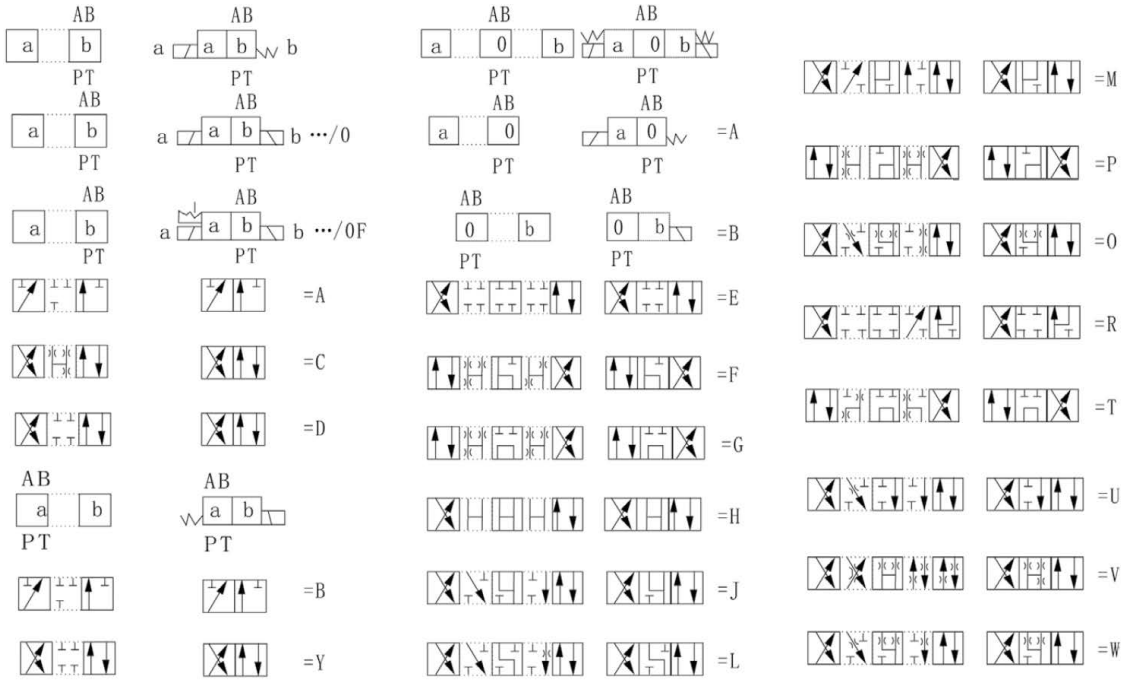
Ordering Code

4VNKSV – 6 – E – OF – DC24 – 4L

4 main ports
Nominal size 6 Cetop 3 or 10 Cetop 5
Type of spool E,J,D,C,HA,E etc.
With spring return = no code
Without spring return = O
Without spring return with detent =OF

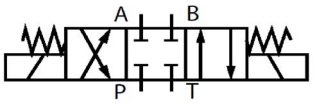
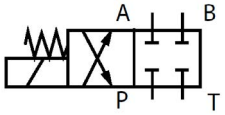
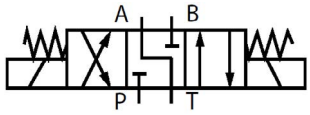
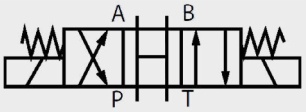
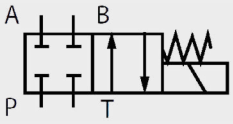
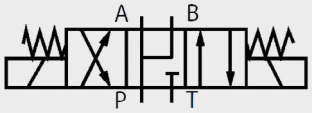
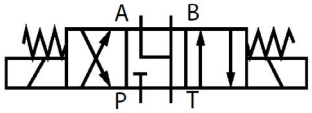
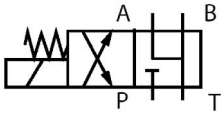
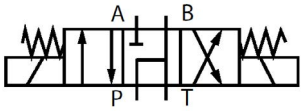
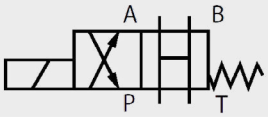
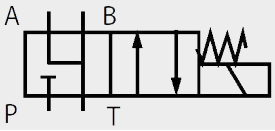
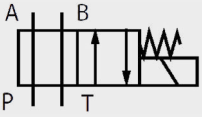
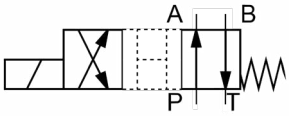
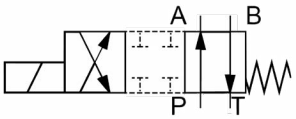
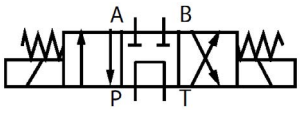
Electrical Connection:
4L= DIN connector+led
4X= DIN connector without led
DC 24 or DC12
AC220 AC110 AC24

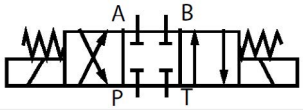
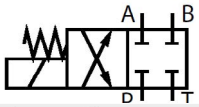
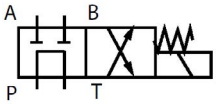
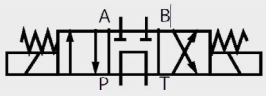
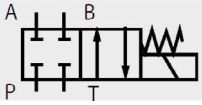
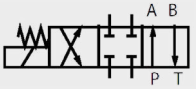
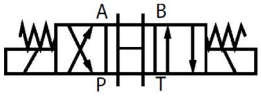
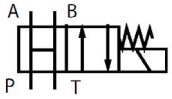
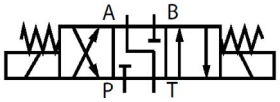
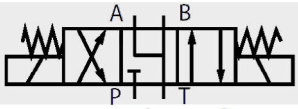
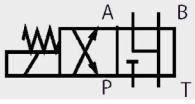
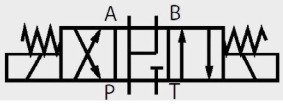
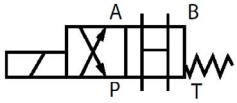
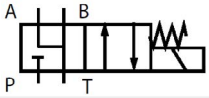
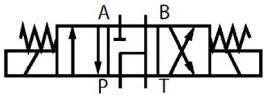
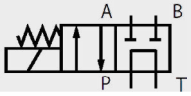
Code Symbol



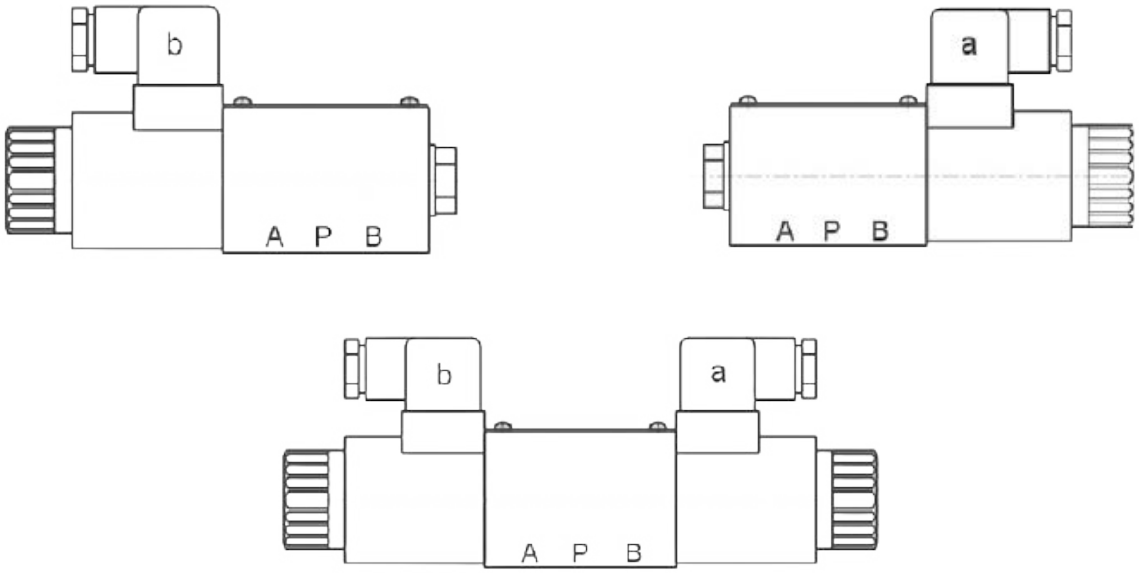
1) Exemple:
Spool symbol H with spool A and coil side A, ordering code HA
Solenoid directional valves are used for changing flow direction in hydraulic systems.

Code symbol

4VNKSV-6					
6-E		6-EA		6-L	
6-H		6-EB		6-M	
6-J		6-JA		6-P	
6-HA		6-JB		6-HB	
6-C		6-D		6-G	

4VNKSV-10					
10-E		10-EA		10-GB	
10-G		10-EB		10-D	
10-H		10-HB		10-L	
10-J		10-JA		10-M	
10-HA		10-JB		10-P	
10-C		10-GA			

Cetop 3

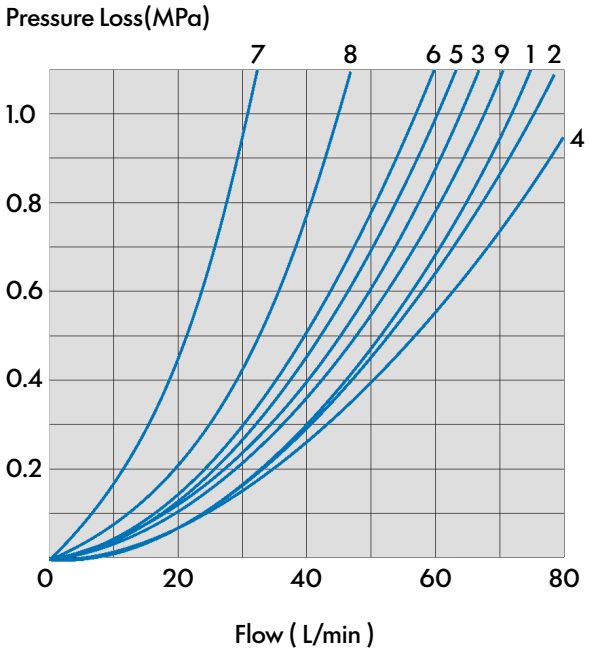


Specification Performance curve

Mesured at v=41mm ^{2}/s and t=50°C

Function Code	Direction			
	P > A	P > B	A > T	B > T
C	1	1	3	1
D	5	5	3	3
E	3	3	1	1
F	1	3	1	1
G	6	6	9	9
H	2	4	2	2
J	1	1	2	1
L	3	3	4	9
M	2	3	3	3
P	3	1	1	1

8. Spool symbol G in the neutral position P >T

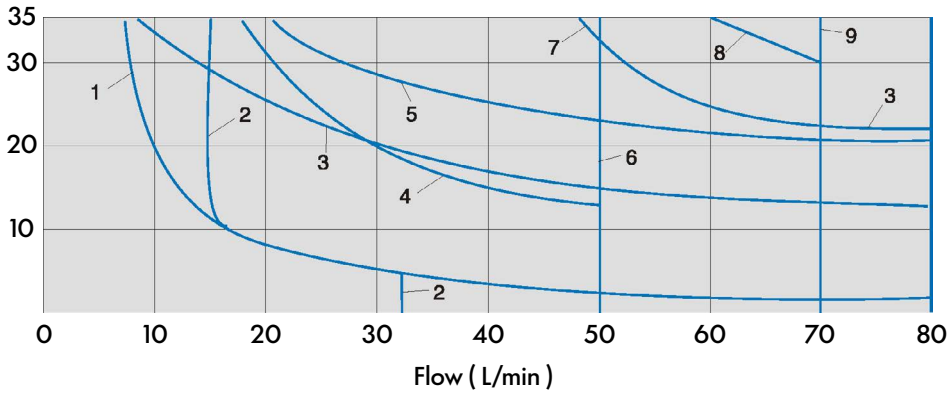


Specification Working Limits

DC24 12 110		AC 220 110 24 50HZ	
Curve	Symbol	Curve	Symbol
4	F P	14	F M
5	J	15	G
6	G H	16	H
7	L	17	E H/OF E/OF J M L
8	C D	18	C D
9	M		
10	E H/OF E/OF		

With regard to the four-way valve, the normal flow data as show is get from the regular use of two directions of the flow. See tables. If only one flow direction is needed, the maximum flow may be very small in the serious condition.

Working pressure (MPa)

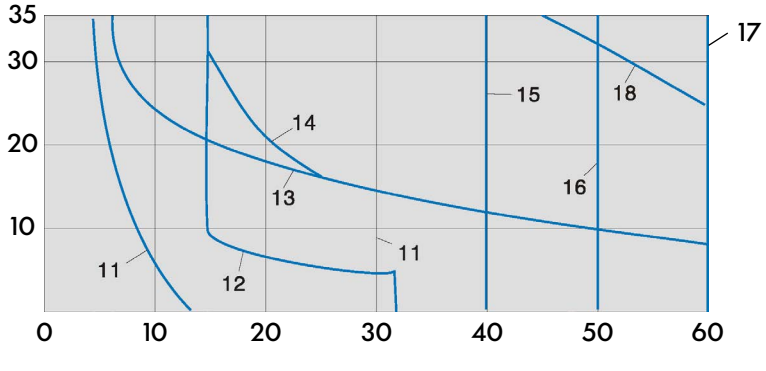


Flow (L/min)

1) No manual emergency operation

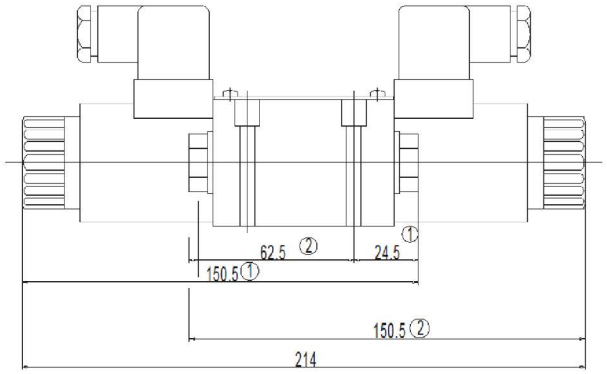
2) Oil return from actuator to oli tank

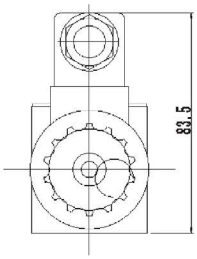
Working pressure (MPa)

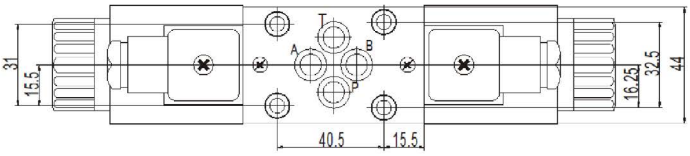


Flow (L/min)

External Dimensions

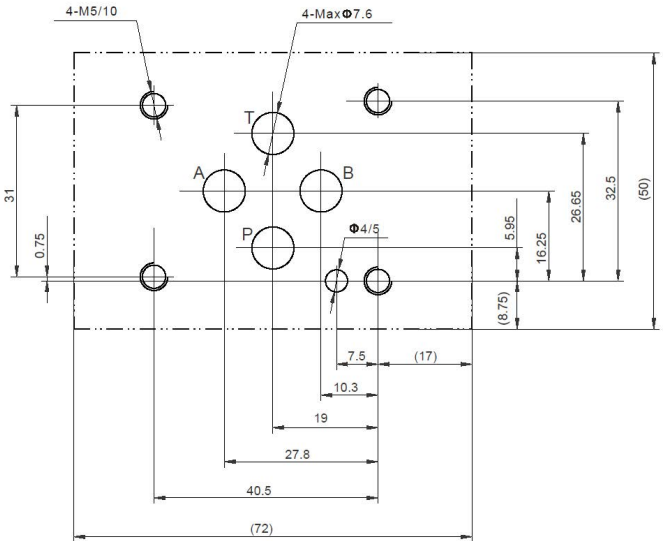






① ②
Two positions Electrical operated directional control valve

Size of Subplate Oil Port



Mounting screw	Amount	Tighten torque
M5x45 - 10.9	4	9Nm

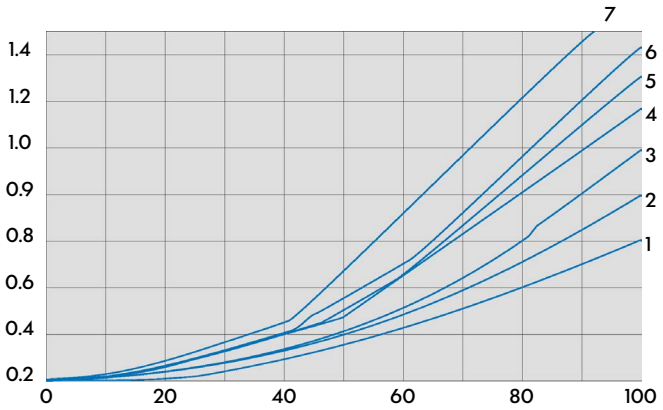
Supplementary explanation
1. When installing the product, considering horizontal position firstly.
2. The medium used in the hydraulic system must be filtered, its accuracy at least 20 μ m.
3. Screw should be according to the parameters in catalogue.
4. The surface, connecting with the valve, should be Ra0.8 roughness, and 0.01/100mm flatness.

Cetop 5

SPECIFICATION PERFORMANCE CURVE
Measured at v=41mm^2/s and t=50°C

Function Code	Direction			
	P > A	P > B	A > T	B > T
C D	2	2	3	3
E	2	2	4	4
F	2	3	3	5
G	3	3	4	6
H	1	1	4	5
L	1	1	4	5
M	1	1	5	1
P	3	2	5	3

Pressure loss (MPa)

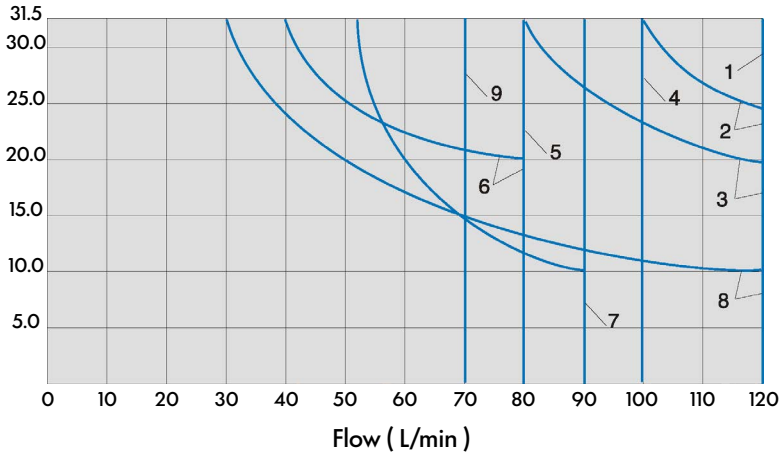


8. Spool symbol G in the neutral position P >T

Specification Working Limits

With regard to the four-way valve, the normal flow data as shown is get from the regular use of two directions of the flow (e.g. P to A, and simultaneous return flow from B to T). See tables, if only one flow direction is needed, for example: when a four port valve which is closed up port A or port B, used as a three-way valve, the maximum flow may be very small in the serious condition.

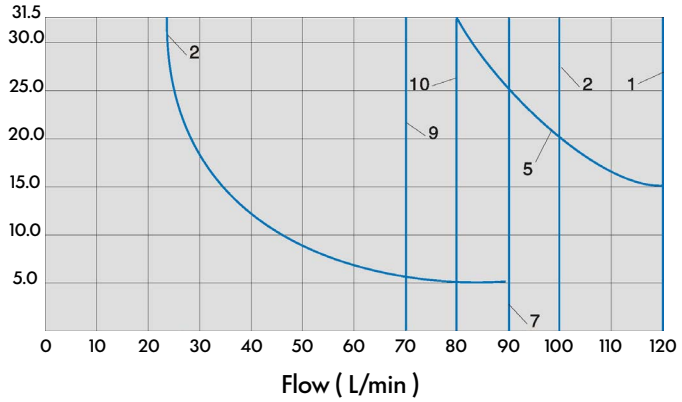
Working pressure (MPa) DC Solenoid operation



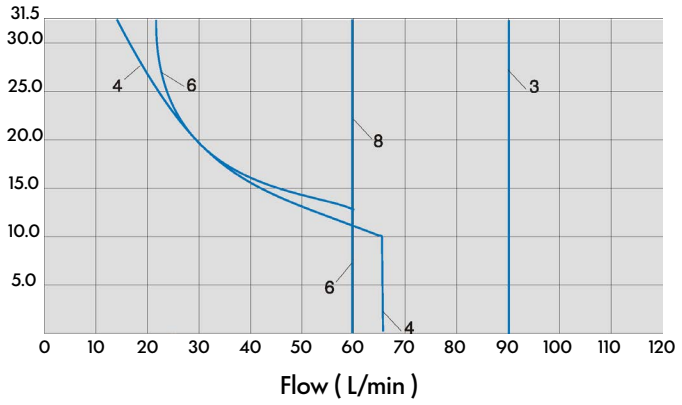
Curve	Symbol
1	C D H/OF E/OF M
2	E
4	L J H
6	G
7	F P

(1) Return circuit (independent of area radio)

Working pressure (MPa) DC Solenoid operation

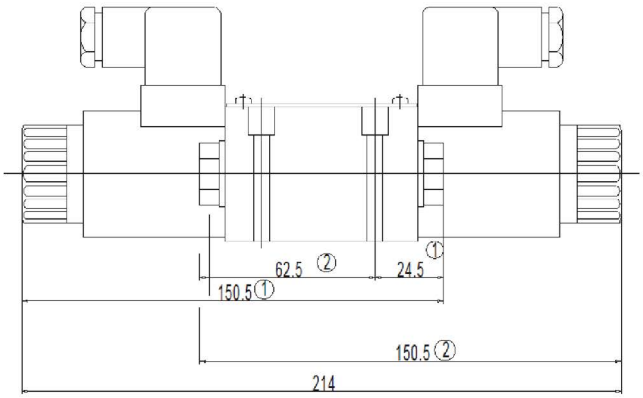


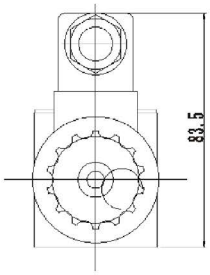
Working pressure (MPa) DC Solenoid operation

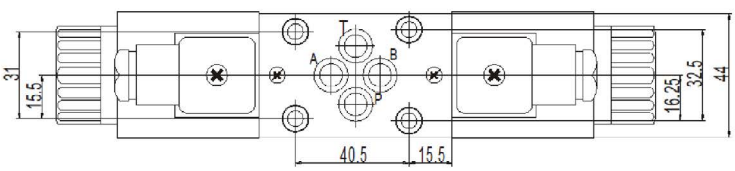


110V 220V	
Curve	Symbol
1	C D E/OF
2	E
3	L M
5	J
6	G
7	F P
8	H

External Dimensions



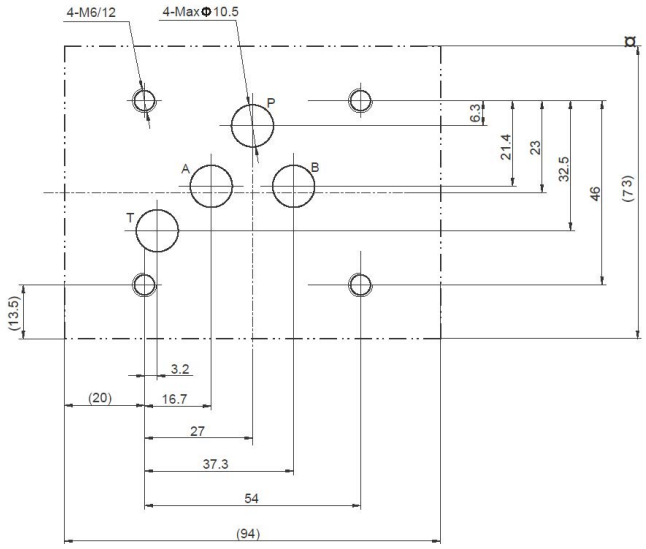




① ②

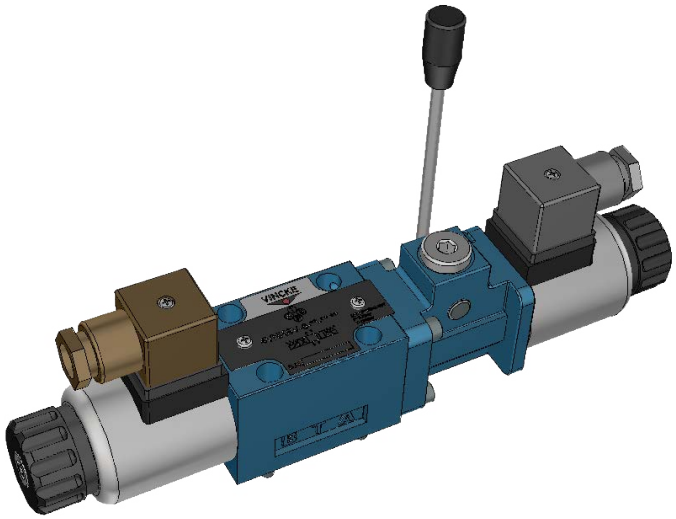
Two positions Electrical operated directional control valve

Size of Subplate Oil Port



Mounting screw	Amount	Tighten torque
M6x50 - 10.9	4	15Nm

Supplementary explanation
1. When installing the product, considering horizontal position firstly.
2. The medium used in the hydraulic system must be filtered, its accuracy at least 20 μ m.
3. Screw should be according to the parameters in catalogue.
4. The surface, connecting with the valve, should be Ra0.8 roughness, and 0.01/100mm flatness.



4VNKSV can work as standard solenoid directional valve.
Also can control the spool movement with hand level on power-off condition.

Technical Characteristics

Model		Cetop 3 / NG6	
Working pressure (Mpa)	Oil ports P,A,B	35	
	Oil port T	10	
Max. Flow rate (L/min)		80	
Installation		Any, recommended horizontal oil	
Working Fluid		Mineral hydraulic oil; phosphate ester hydraulic oil	
Fluid temp. (°C)		-20~70	
Fluid Viscosity (mm ²/s)		2.8~100	
Working voltage (V)	DC	12-24	
	AC	110/50Hz	
Max. Switch frequency (T/h)		15000 (DC)	7200 (AC)
Protection grade		IP65	

Cleanliness

NAS1638 Class 9, recommended filtration precision Min $ß_{10} \geq 75$.

Ordering Code

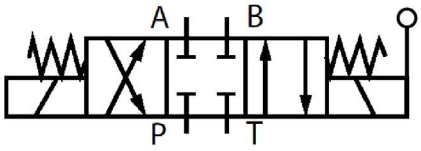
4VNKSV – 6 – *HL – DC24 – 4L - * - * - *

- Solenoid valve with hand control
- Nominal size 6 Cetop 3
- Spool type CHL, EHL, LHL etc.
- DC 24 or 12 DC
  AC220 AC110
- Z5L Dinconnector with LED
- Seal material
  omit NBR
  V FPM
- Omit without damping
  08 ⌀0.8 Damping
  10 ⌀1.0 Damping
  12 ⌀1.2 Damping
- Omit with concealed
  emergency push rod

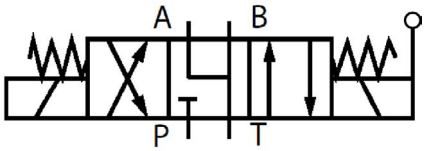
Code Symbol

4VNKSV-6-*HL

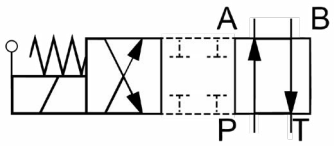
6-EHL



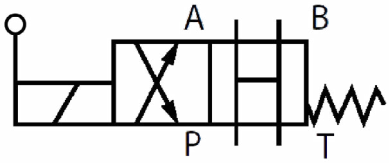
6-JHL



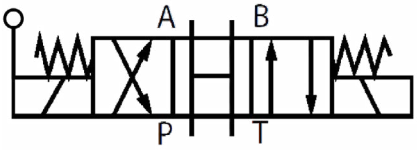
6-DHL



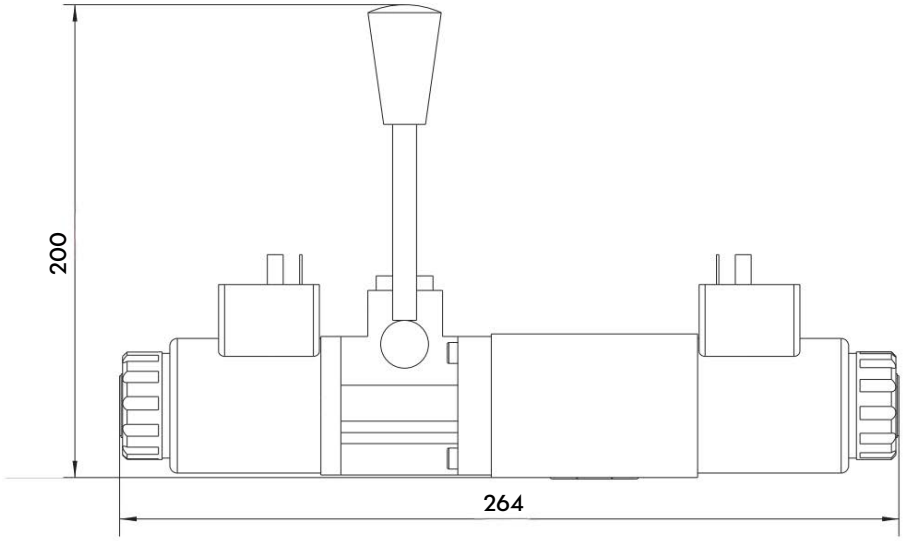
6-HAHL

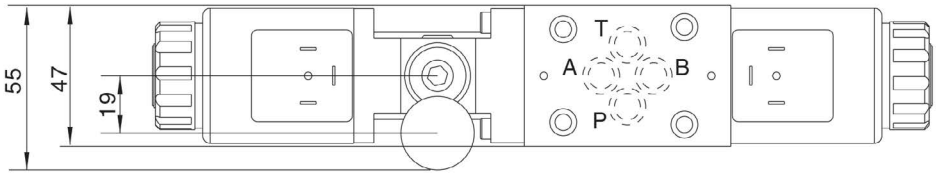


6-HHL

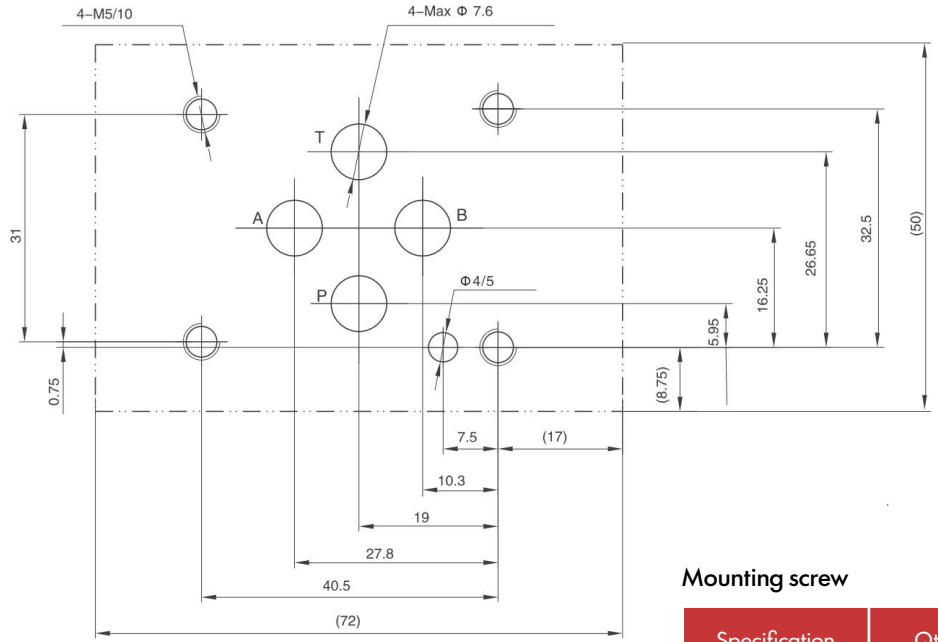


External Dimensions



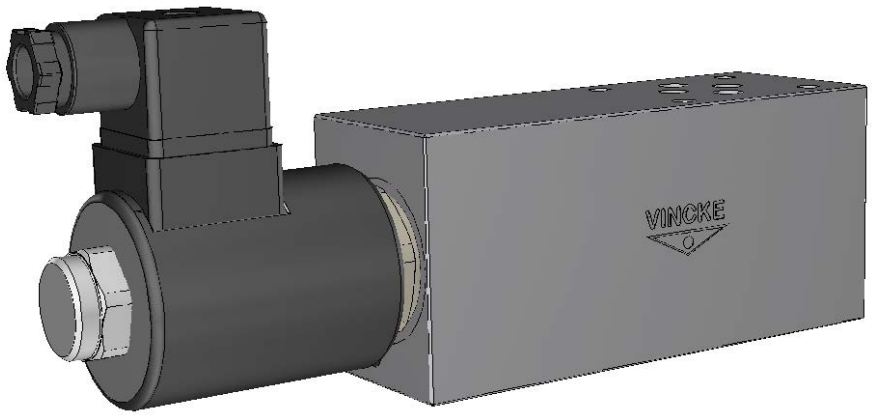


Size of Subplate Oil Port



Mounting screw

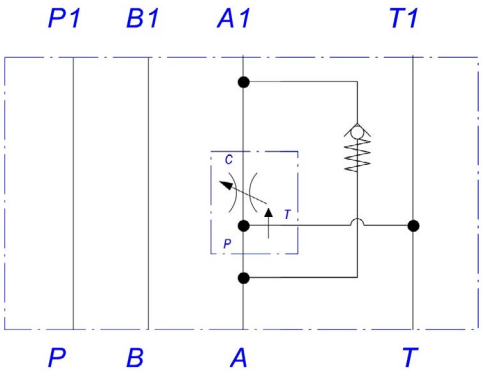
Specification	Qty	Torque
M5x45 - 10.9	4	9Nm



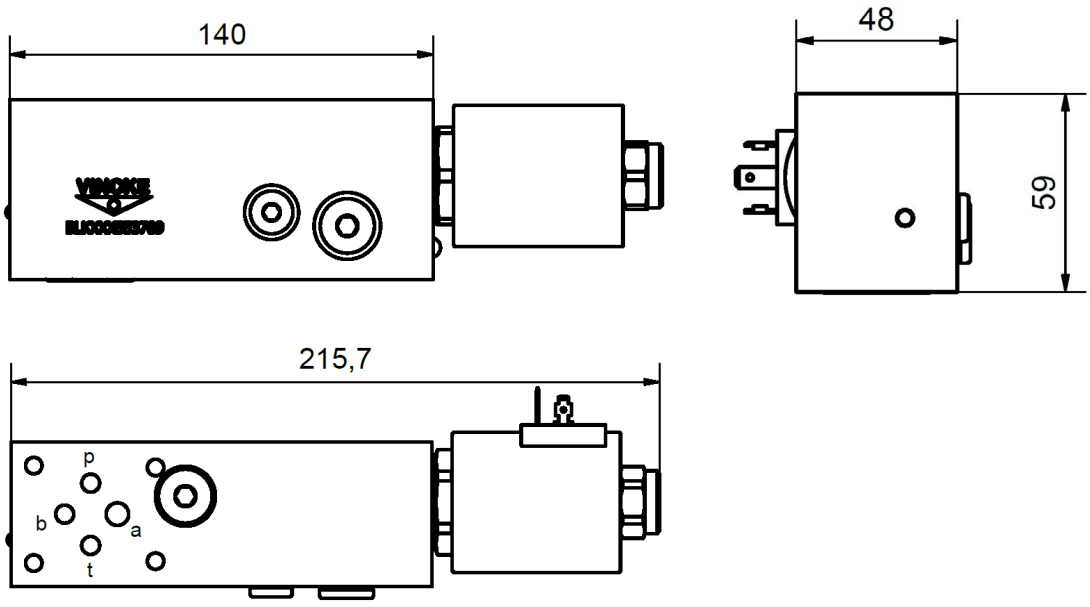
Technical Characteristics

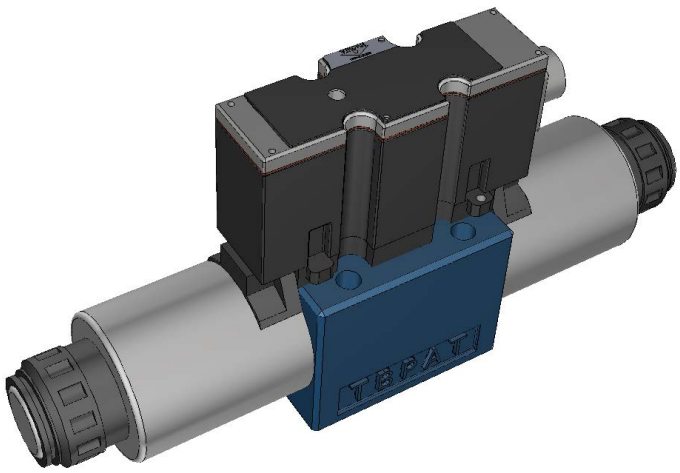
Model	Cetop 3 / NG6
Flow Range:	See curves for various versions
Max. System Pressure:	241 bar
Leakage:	250 cc/min @ 207 bar
Hysteresis:	±5
Viscosity Range:	3 to 647 cSt
Filtration:	ISO 18/16/13
Media Operating Temp. Range	-30°C +100°C
Weight:	34Kg
Operating Fluid Media:	General Purpose Hydraulic Fluid
Cartridge Torque Requirements	50Nm
Coil Nut Torque Requeriments	3-4Nm
External surfaces:	Zinc plated / zincate
Standard seals:	NBR 70 Shore A

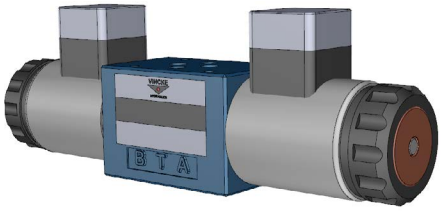
Hydraulic Symbol



External Dimensions







Technical Specification

Model	4VNKPV	4VNKPV-IE
Installing position	Optional, preferably horizontal	
Storage temperature range (°C)	-20~80	
Ambient temperature range (°C)	-20~70	-20~50

Hydraulic

		4VNKPV	4VNKPV-IE
Operating pressure (bar)	Ports A, B, P	315	
	Port T	210	
Nominal flow When q_{vnom} at Δp=10 bar (L/min)	DN6	7, 17 and 30	
	DN10	30, 60	
Flow (Max. Permissible) (L/min)	DN6	42 (with double flow42) 80	
	DN10	75 (with double flow75) 140	
Pressure fluid	Mineral Oil (HL, HLP) to DIN 51 524;For other fluid please consult with us		
Fluid temp. Range (°C)	-20~80 (+40-+50 is preference)		
Viscosity range (mm^2/s)	-20~380 (30 ~ 46 is preference)		
Hysteresis (%)	≤5		
Reversal error (%)	≤1		
Response sensitivity (%)	≤0.5		

Cleanliness

Maximum permissible degree of pressure fluid contamination to NAS 1683 to class 9 Recommended filter $ß_{10} \geq 75$.

Electrical

Model			4VNKPV	4VNKPV-IE
Voltage type			Direct Voltage	
4VNKPV-IE Command signal	Voltage input "A1"	(V)	±10	±10
	Current Input "F1"	(mA)	4~20	4~20
Max. current per solenoid (A)			2.5	2.5
Solenoid coil Resistance (Ω)	Cold value at 20 °C		6DN2	10DN2
	Max. Warm value		6DN3	10DN3
Duty Cycle (%)			100	
Max. Coil temperature[2] (°C)			up to 150	
Hysteresis (%)			≤5	
Electrical connection			socket as per DIN EN 175 301-803 and ISO 4400with component plug to DIN EN 175301-803 and ISO 4400	socket as per DIN EN 43 563-AM6-3 with component plug to DIN 43 563-BF6-3/ Pg11
Insulation of valve to DIN 40 050			IP 65	

Control Electronics

4VNKPV (type)	Analogue amplifier in Eurocard format[3]		Details refer to proportional amplifier	
	Digital amplifier in Eurocard format[3]		Details refer to proportional amplifier	
4VNKPV-IE (type)	Analogue command value module		Integrated into the valves	
Supply voltage	Nominal voltage	VDC	24	
	4VNKPV-IE	V	21/22	19
	4VNKPV[1]	V	35	
Amplifier current consumption	$/_{max}$	A	1.8	1.8
	Max. impulse current	A	3	3

1 With HOYEA control amplifier. 2)Due to the occurring surface temperature of the solenoid coils, the European Standards DIN EN 563 and DIN EN 982. 3)separate order.

Ordering Code

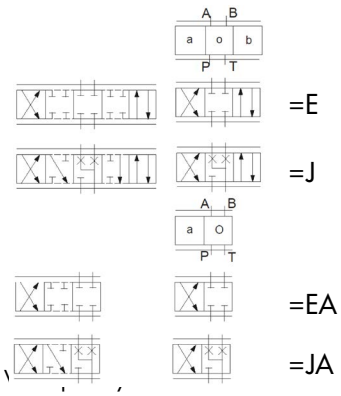
4VNKPV-IE-6-*-*-*-24DC-*-*-*-*-*

Proportional directional valve (4VNKPV/-IE)

No code Without integrated electronics
IE With integrated electronics

Nominal size 6 Cetop 3, 10 Cetop 5

Spool symbols



P → A: q_{vmax} B → T:$q_{vmax}/2$

P → B: $q_{vmax}/2$ A → T:q_{vmax}

Note:
With spools 3C40 and 2B40B, in the neutral position , there is a connection from A to T and B to T with approx. 3 % of the relevant nominal cross section.

Further details in clear text

Nitrile rubber sealing
Omit
V NBR seals suitable for mineral oil (HL, HLP) to DIN 51 524

No code 4VNKPV(type)
4VNKPV-IE(type)
A1 Command valueinput ±10V
F1 Command value input4~20mA

Electrical connection For
4VNKPV(type)
[2]K4 with plug component DIN EN 175301-803 see page A. 1.3
4VNKPV-IE(type)
[2]K31 with plug component DIN 43 650-AM2
See page A.1.4

Special protection
No code Without special protection
[1]J Seawater-resistant (only for DN6)

24V 24VDC

2X Component series 20 to 29
(20 to 29 unchanged installation and connection dimensions)

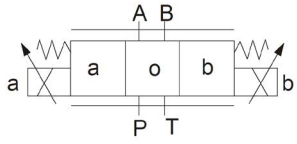
Nominal flow at valve pressure differential ·P = 10 bar

	DN 6
07	7 L/min
17	17 L/min
30	30 L/min
	DN 10
30	30 L/min
60	60 L/min

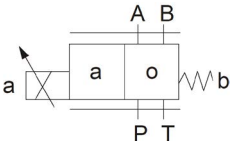
1.Other types of electrical protection on request
2.Only for DN6 for versian 3C40 se a water re sistant only state K 31 !

Model Description

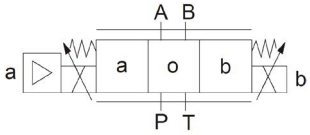
Model 4VNKPV···



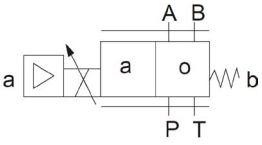
Model 4VNKPV···EA (AJ)



Model 4VNKPV-IE···



Model 4VNKPV-IE···EA (AJ)



Structure and Fuction Description, Section

The 4/2-way and 4/3-way proportional directional valves are designed as direct operated components for subplate mounting. They are actuated by means of proportional solenoid with central removable coil. The solenoid are controlled either by external control electronics (type 4VNKPV) or integrated control electronics (type VNKPV-IE).

Design:
The valves basically consist of:
-Body (1) with mounting surface

-Control spool (2) with compression springs (3 and 4)

-Solenoids (5 and 6) with central coil

-Optional integrated electronics (7)

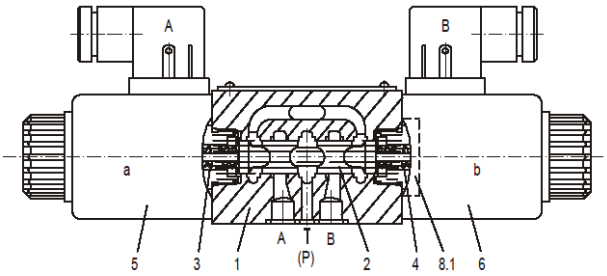
Function:
-When solenoids (5 and 6) do not work, the control spool (2) is held in the central position by compression springs (3 and 4)

-Direct actuation of the control spool (2) by energising a proportional
solenoid E.g. When the solenoid "b" power is on (6)

-The control spool (2) is moved to the left in proportion to the electrical input signal
-connection from P to A and B to T via orifice-like crosssections with progressive flow characteristics

-When the solenoid power is off (6)
-The control spool (2) is returned to the central position by compression spring (3)

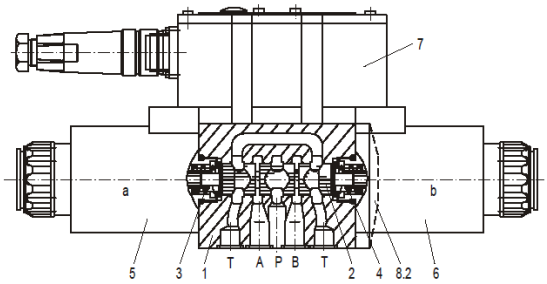
Model VNKPV-02···2x/···



In theory, the function of this valve is the same to the valve with 3 positions. However, the valves with 2 positions are only fitted with solenoid " ".

For DN6 valve, there is a plug (8.1) fixed in the second solenoid,but for DN10, it is a cover (8.2) instead.

Model VNKPV-IE-03···2x/···

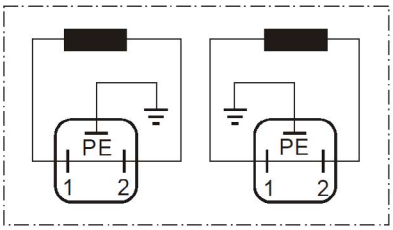


Note for type VNKPV-02 2X/ :
Draining of tank line is to be avoided.
With the appropriate installation conditions, a back pressure valve is to be installed (back pressure approx. 2 bar).

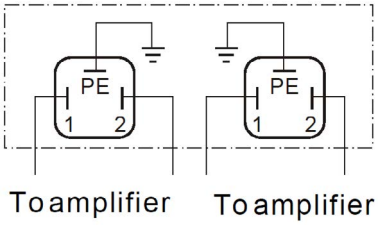
Electrical Connection, Plug-in Connectors

VNKPV type (Without integrated electronics not for version "J"= sea water-r esistant)

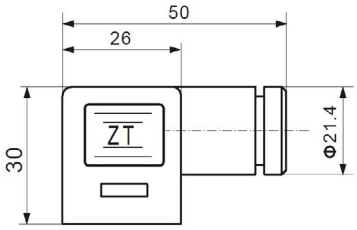
Connection on component plug



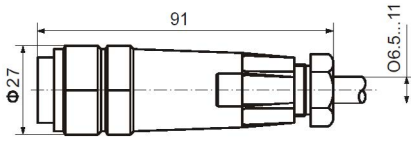
Connection on plug-in connector

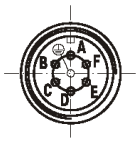


Plug-in connector: CECC 75 301-803-A002FAH3D08-
G/DIN EN 175 301-803 and ISO 4400



For type VNKPV-IE (with integrated electronics (OBE) and for version "J" = sea water-resistant) Plug-in connector see the block circuit diagram below

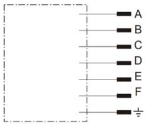




Plug-in connctor:
DIN 43 563-BF6-3/Pg11

Integrated electronics for type VNKPV-IE

Pin allocation of the component plug



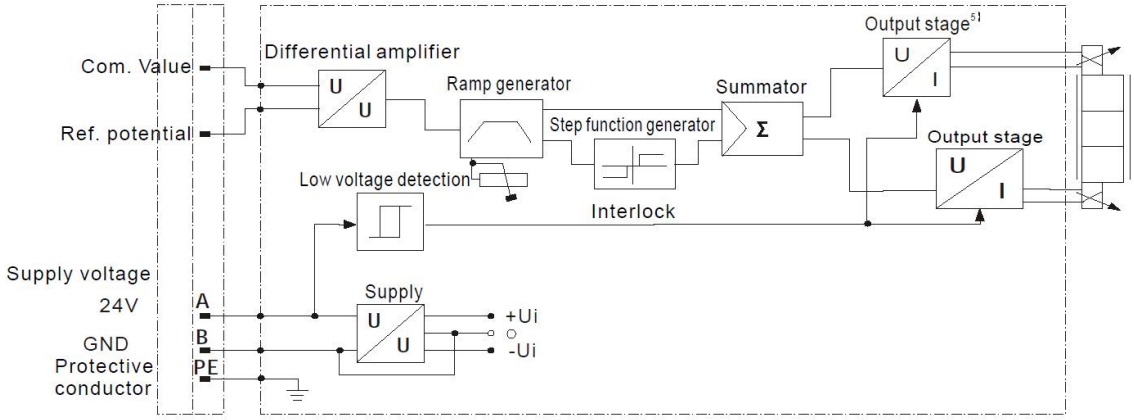
	Contact	Signal
Supply voltage	A B	24DC(19~35DC) GND
	C	n.c.(1)
Differential amplifier input	D E	Com. value (±10V/4-20mA) reference potential
	F	n.c.(1)

Com. value: Positive command value (0 to 10 V or 12 to
20 mA) at D and reference potential to E causes flow from P to A and B to T.
Negative command value (0 to 10 V or 12 to 4 mA) at D and reference potential to E causes flow from P to B and A to T.
For valves with a solenoid on side a (spool variants 2B2B and 2B40B) a positive command value at D and reference potential to E (NS 6: 4 to 20 mA and NS 10: 12 to 20 mA) causes flow from P to B and A to T.

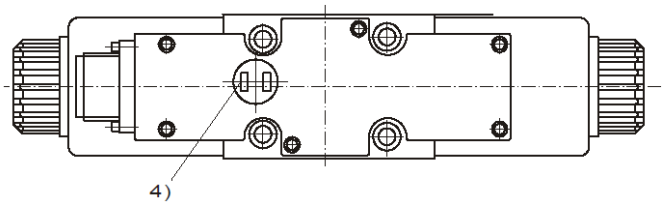
Recommendation:
-up to 25m cable lenght type LiYCY 5 x 0.75 mm^2
-up to 50 m cable length type LiYCY 5 x 1.0 mm^2
External diameter 6.5 to 11 mm
Connect screen to PE only on the supply side

Block Circuit Diagram / Connection Allocation

Interface	Integrated electronics	valve



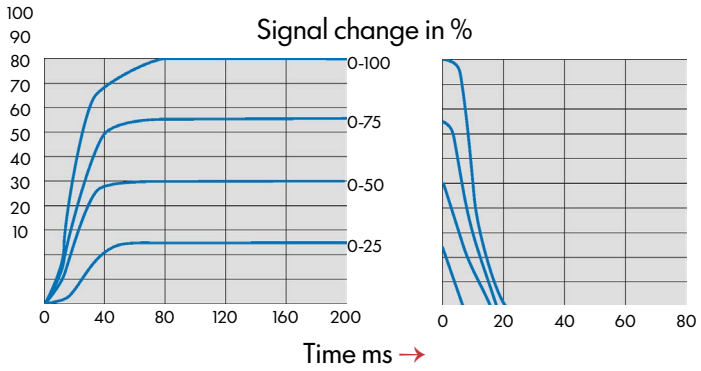
1) Contacts C and F must not be conected!
2)PE is conncted to the cooling body and the valve housing
3) Protective conductor screwed to the valve housing and cover
4) Ramp be externally adjusted from 0 to 2.5s; the same applies for Tup and Tdown
5)Output stages current regulated
6)Low voltage detection is not carried out for component type 4VNKPV-IE-03-2X



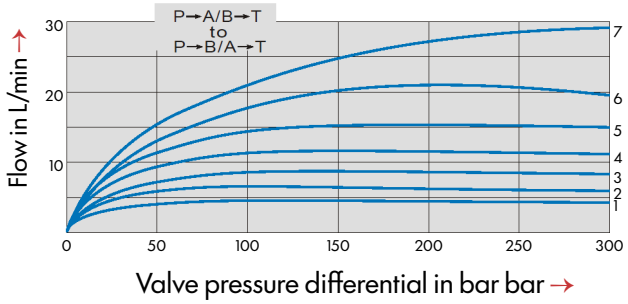
Characteristic Curves

Cetop 3 / NG6

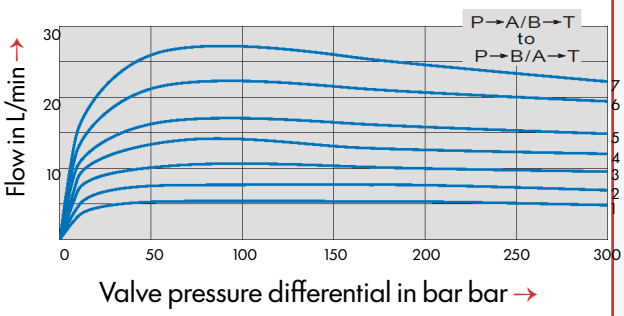
Transient functions with stepped form of electrical input signal



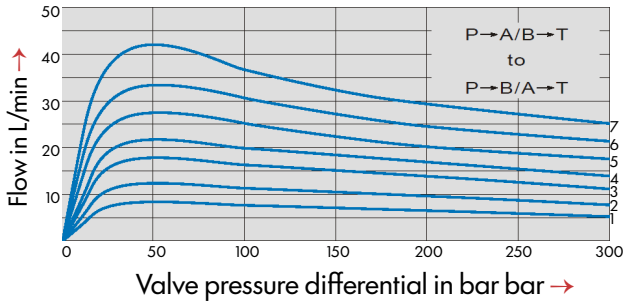
Performance limit, nominal flow 7 L/min



Performance limit, nominal flow 17 L/min



Performance limit, nominal flow 30 L/min

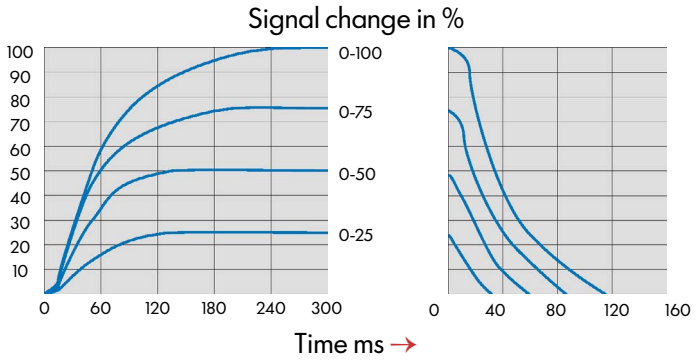


1. Com. Value=40%
2. Com. Value=50%
3. Com. Value=60%
4. Com. Value=70%
5. Com. Value=80%
6. Com. Value=90%
7. Com. Value=100%

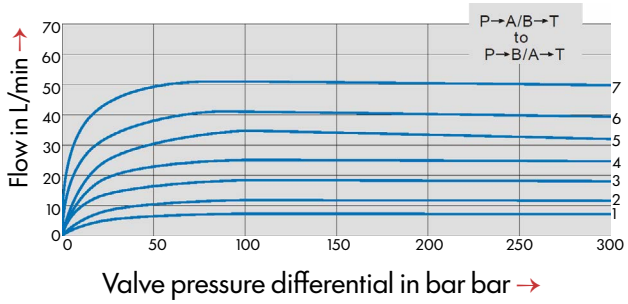
If the performance limits are exceeded, then the movement of spool will be unestable

Cetop 5 / NG10

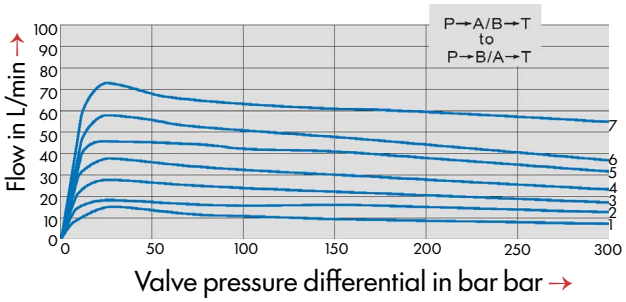
Transient functions with stepped form of electrical input signal



Performance limit, nominal flow 30 L/min



Performance limit, nominal flow 0 L/min

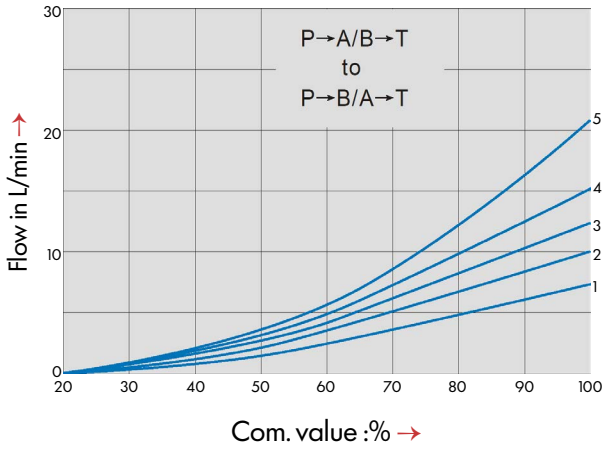


1. Com. Value=40%
2. Com. Value=50%
3. Com. Value=60%
4. Com. Value=70%
5. Com. Value=80%
6. Com. Value=90%
7. Com. Value=100%

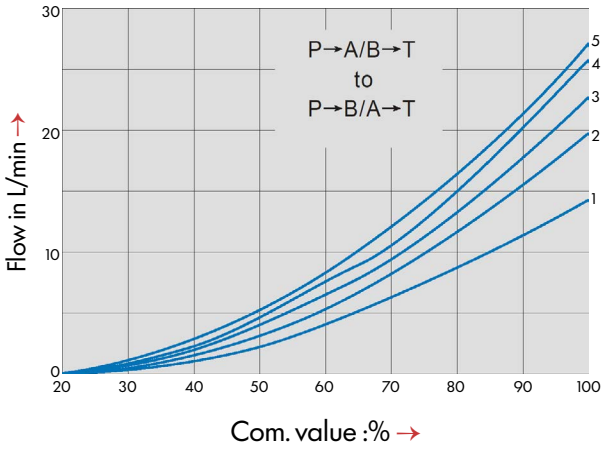
If the performance limits are exceeded, then the movement of spool will be unestable

Characteristic Curves (measured with HLP46,Qoil = 40± 5°C) Cetop 3 / DN6

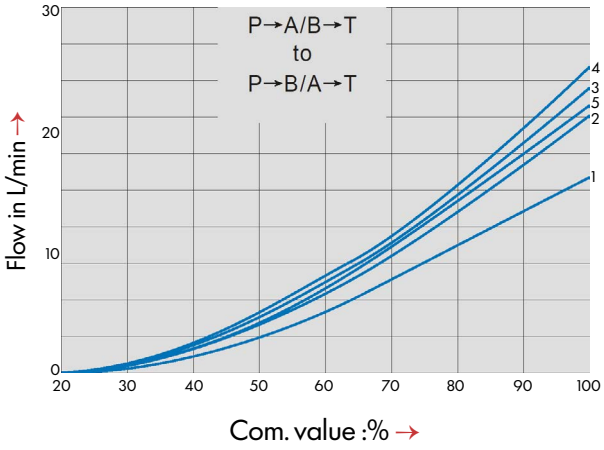
7 l/min nominal flow at differential pressure 10 bar



17 l/min nominal flow at differential pressure 10 bar



30 l/min nominal flow at differential pressure 10 bar

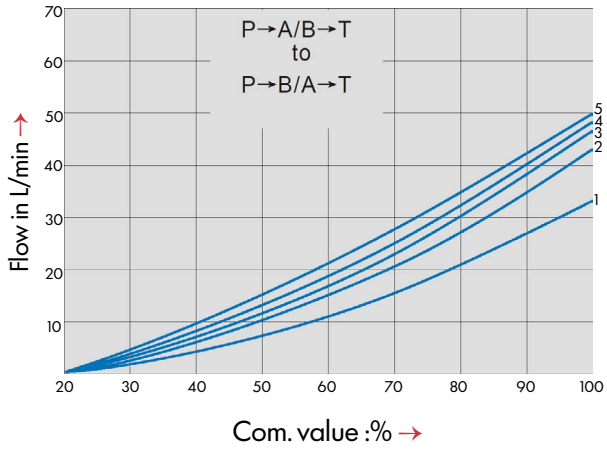


1. Δp=10bar Constant
2. Δp=20bar Constant
3. Δp=30bar Constant
4. Δp=50bar Constant
5. Δp=100bar Constant

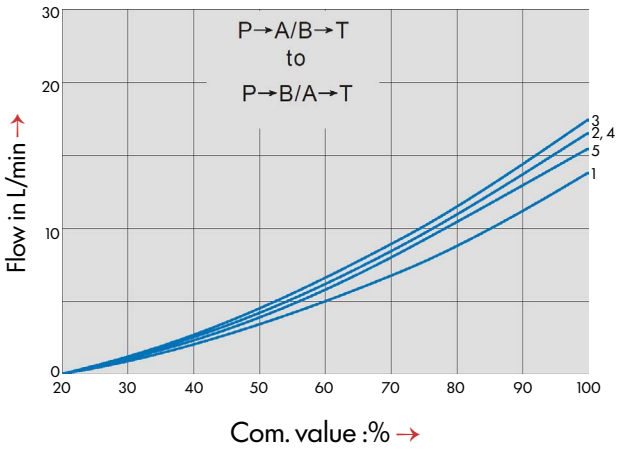
Δp= Valve pressure differential
(inlet pressure P_P minus load pressure P_L and minus return pressure P_T)

Characteristic Curves (measured with HLP46,Qoil = 40± 5°C) Cetop / DN10

30 l/min nominal flow at differential pressure 10 bar



60 l/min nominal flow at differential pressure 10 bar

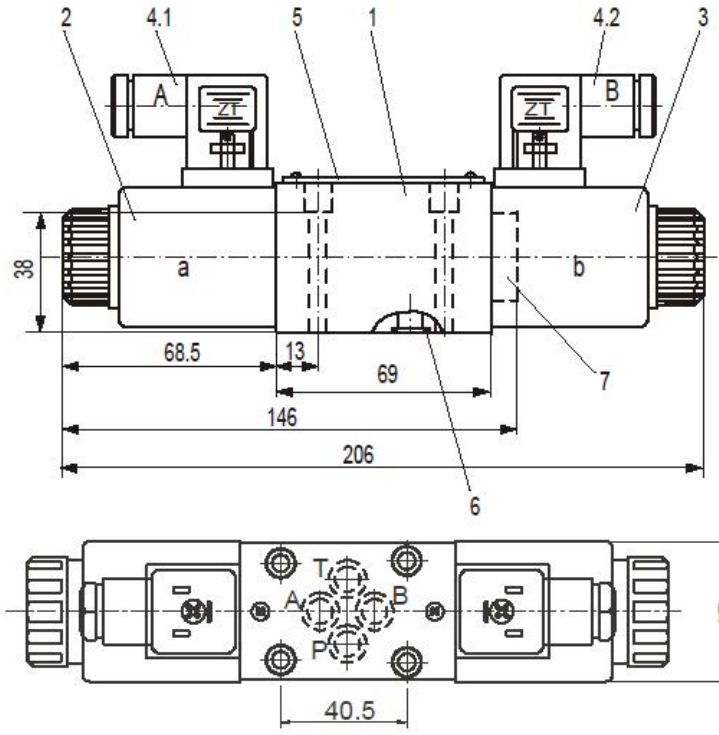


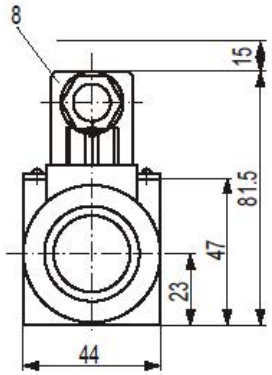
1. Δp=10bar Constant
2. Δp=20bar Constant
3. Δp=30bar Constant
4. Δp=50bar Constant
5. Δp=100bar Constant

Δp= Valve pressure differential
(inlet pressure P_P minus load pressure P_L and minus return pressure P_T)

Unit Dimensions

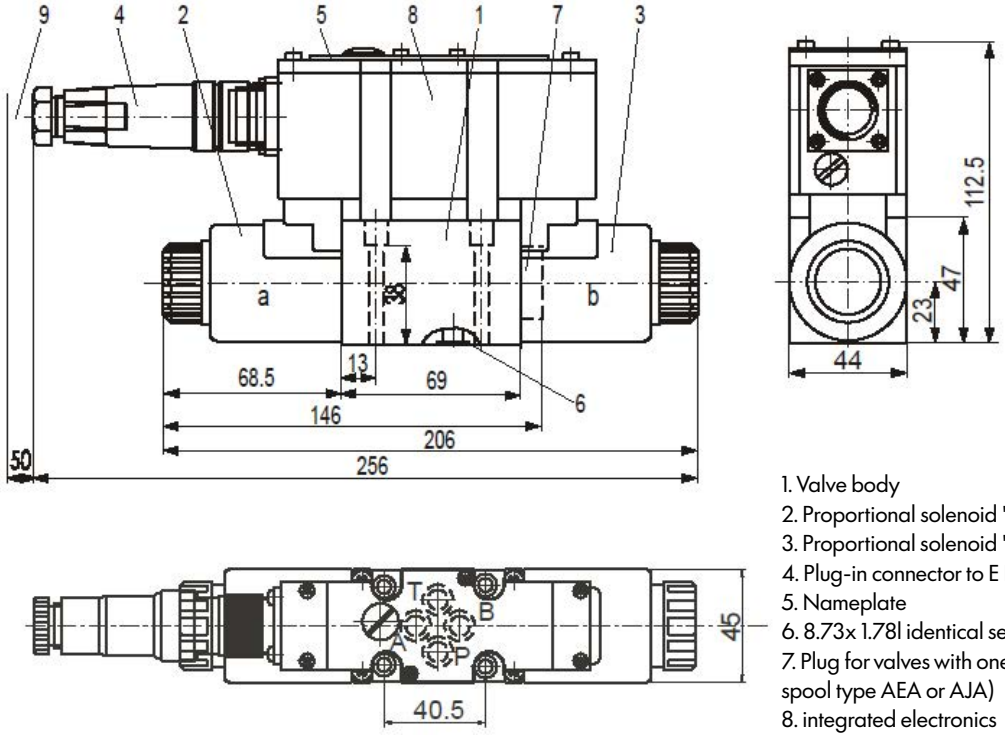
Cetop 3 / NG6





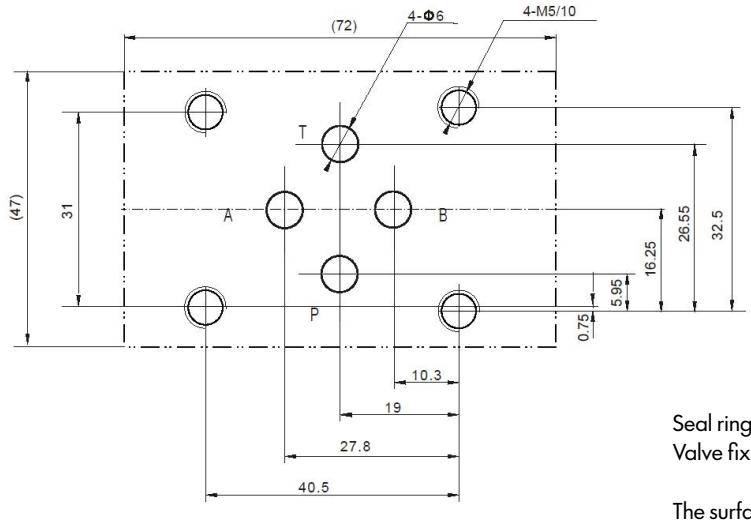
1. Valve body
2. Proportional solenoid "a"
3. Proportional solenoid "b"
4.1 4.2 Plug-in connector, colour black, separete order
5. Nameplate
6. 8.73x 1.78l seal rings for ports A, B, P and T
7. Plug for valves with one solenoid (2 positions spool type AEA or AJA)
8. Space required to remove the plug-in connector
9. Machined valve mounting surface, connection location to DIN 24 340A, ISO4401 (and) CETOP-RP 121H

Cetop 3 / NG6



1. Valve body
2. Proportional solenoid "a"
3. Proportional solenoid "b"
4. Plug-in connector to E DIN 43 563-BF6-3/Pg11
5. Nameplate
6. 8.73x 1.78l identical seal rings for ports A, B, P and T
7. Plug for valves with one solenoid (2 switched positions spool type AEA or AJA)
8. integrated electronics
9. Space required for the connection cable and to remove the plug.in connector
9. Machined valve mounting surface, connection location DIN 24 340A, ISO440 and CETOP-RP 121H

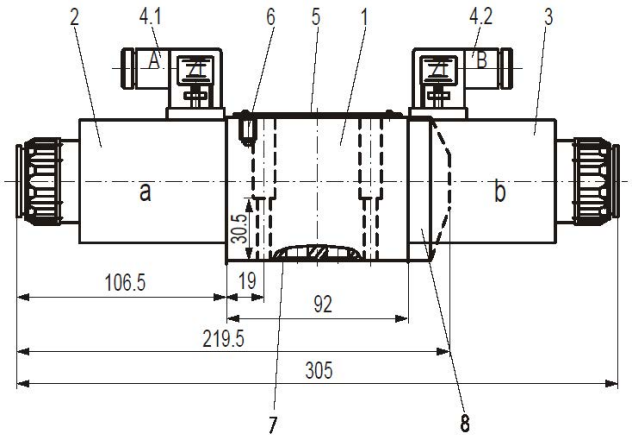
Subplate Size

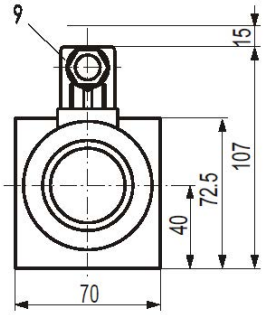


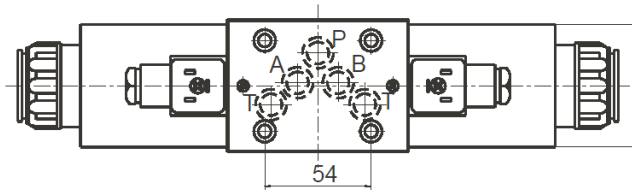
Seal ring: 8.73x1.78
Valve fixing screw: 4-M5x45-12.9(GB70-85)

The surface, connecting with the valve, should-be Ra0.8 roughnese, and 0.01/100mm flatness.

Cetop 5 / NG10

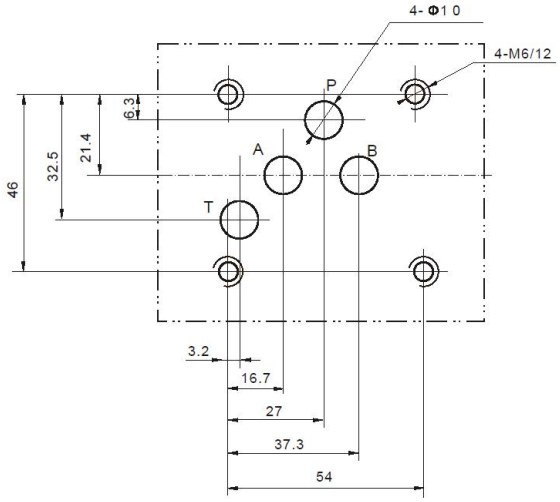






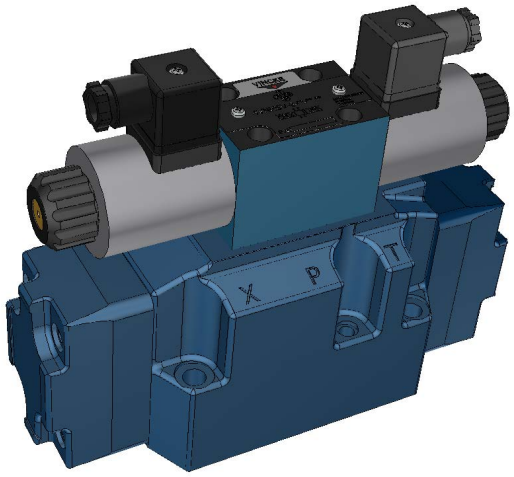
1. Valve body
2. Proportional solenoid "a"
3. Proportional solenoid "b"
4.1 4.2 Plug-in connector, colour black, separete order
5. Nameplate
6. Valve deflation screw
7. 12x 2 seal rings for ports A, B, P and T
8. Plug for valves with one solenoid (2 positions spool type AEA or AJA)
9. Space required to remove the plug-in connector
10. Machined valve mounting surface, connection location to DIN 24 340A, ISO4401 (and) CETOP-RP 121 H

Subplate Size



Seal ring: 8.73x1.78
Valve fixing screw: 4-M5x45-12.9(GB70-85)

The surface, connecting with the valve, should-be Ra0.8 roughnese, and 0.01/100mm flatness.



Technical Specification

Specifiaction		Cetop 7 / NG16		Cetop 8 / NG25	
Model		4VNKEH-16	4VNKEH-16	4VNKEH-25	4VNKEH-25
Max. Working (MPa) pressure	P, A, B Port	35		35	
	T port (internal leakage of control oil)	10		10	
	Y port (external leakage of control oil)	10		10	
Minimum control pressure (MPa)		1.2 Spring - Return 4/3 valve 4/2 valve		1.3 Spring - Return 4/3 valve 4/2 valve	
Maximum control pressure (MPa)		To25			
Max. Flow (L/min)		300		650	
Working fluid		Mineral oil: phospate-ester			
Fluid temp. (°C)		-20~70			
Viscosity (mm^2/s)		2.8~380			

Cleanliness

The maximum allowable cleanliness of the oil should be according to 9th degree of Standard Nas 1638. It is suggested that the minimum filter rating should be ß10 ≥75.

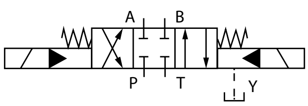
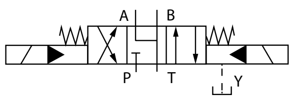
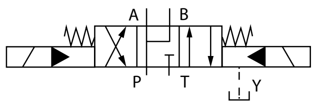
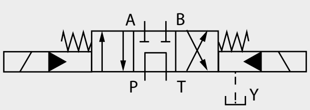
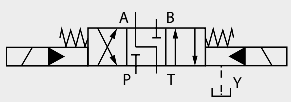
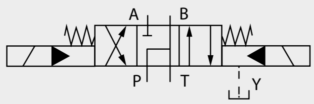
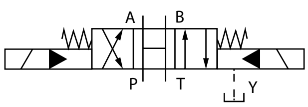
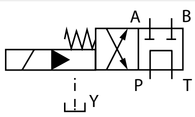
Ordering Code

4VNKEH-16-*-*-DC24V-*-*-*-*-*-*-*-*-*

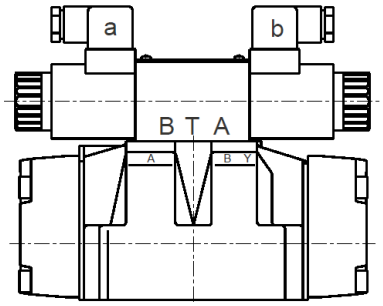
- Electro-hydraulic directional control valve
- Nominal size 16 Cetop 7, 25 Cetop 8
- Main valve return type
  Omit Spring return
  H Hydraulic centration
- Function code
  Details as following symbol table
- Working voltage
  D12 DC12V
  D24 DC24V
  A110 AC110V
  A220 AC220V
  B110 AC110V Rectified
  B220 AC220 Rectified
- Z5L Square connector with light
  Z6 Wire box type
- Omit without hand emergency
  N9 with concealed hand emergency
- Omit Intl cntrl intl disch
  XY Extl cntrl intl disch
  X Extl cntrl intl disch
  Y Intl cntrl intl disch
- Omit without damping
  08 ⌀0.8 Damping
  10 ⌀1.0 Damping
  12 ⌀1.2 Damping
- Omit without shifting time adjustment
  S With shifting time adjustment: Inlet flow control
  S1 shifting time adjustment: Outlet flow control
- Omit without stroke adjusting device
  A Head A of main valve with stroke adjustment
  B Head B of main valve with stroke adjustment
  W Both heads with stroke adjustment
- 1)Omit Without pre-load valve
  P4.5 With pre-load valve
- 2)Omit No reducing valve
  D3 With reducing valve
- Seal material
  Omit NBR Seals
  V FPM Seals

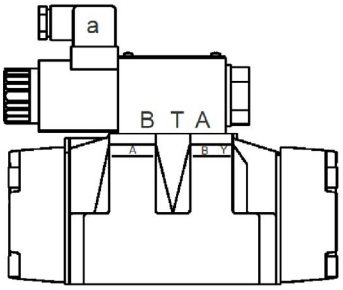
Explanation
1. For neutral unloaded directional control valve it must be ordered separately. There is no model (4VNKEH) Electro-hydraulic directional control valve NS10.
2. Only applied when the controlling pressure is higher than 25MPa

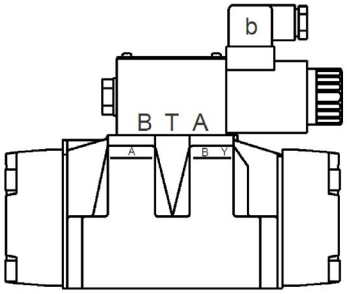
Code Symbol

4VNKSV-6-*HL					
16-E 25-E		16-J 25-J		16-M 25-M	
16-G 25-G		16-L 25-L		16-P 25-P	
16-H 25-H		16-GA 25-GA			

Name of Solenoid







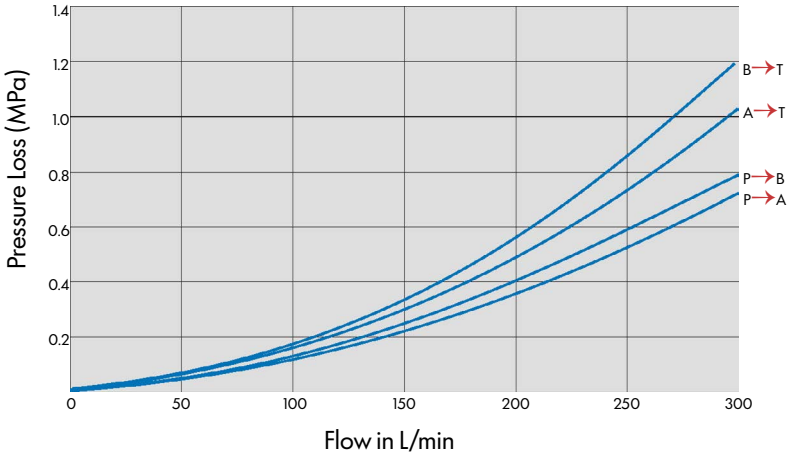
1. a When movement a, P → A B→T
2. b When movement b, P→B A→T
3. G Oil flow in the opposite direction with the above-mentioned movement.

Foor E, when solenoid "a" works, P→A,B

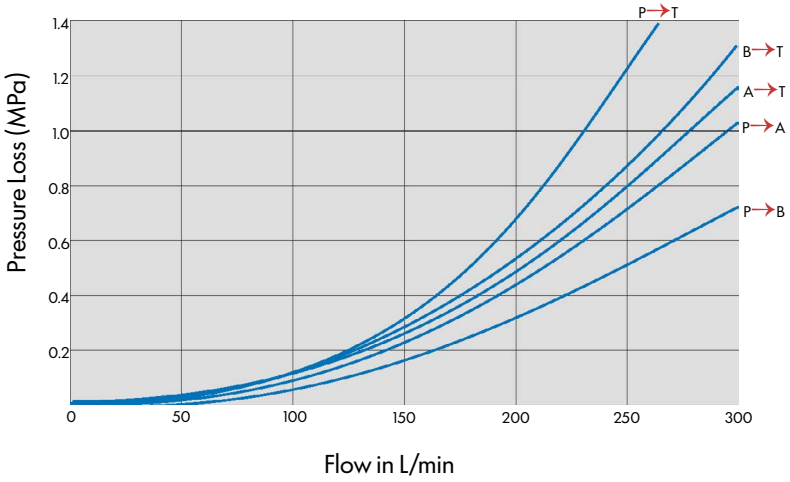
Performance Curve

Cetop 7 / NG16

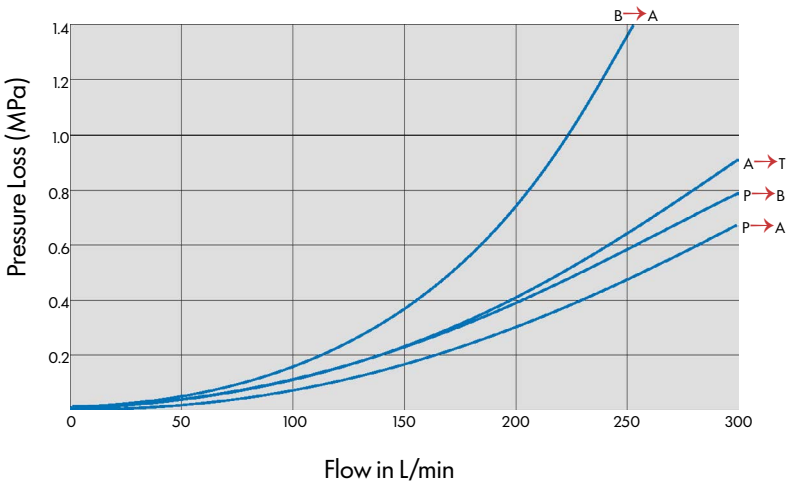
E



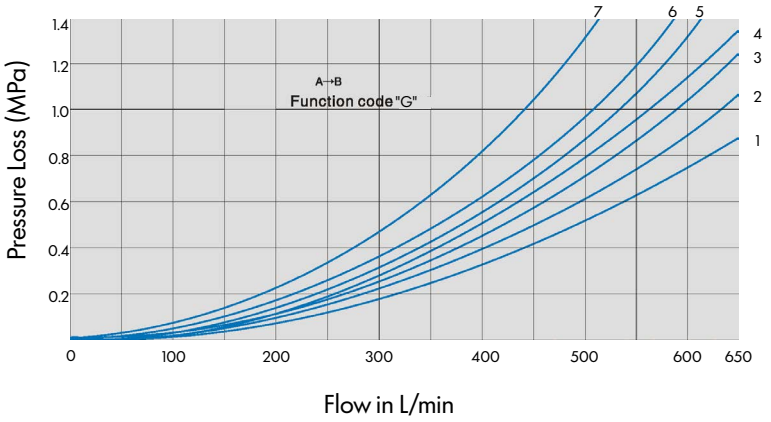
G



R



Cetop 8 / NG25

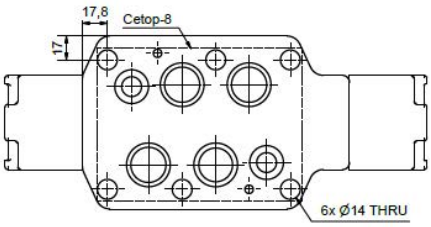


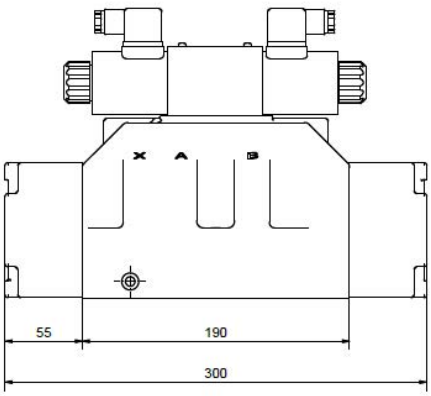
Function	Switching position			
Symbol	P→A	P→B	A→T	B→T
E	1	2	4	5
F	1	4	1	1
G	4	2	2	6
H	4	4	1	4
J	1	2	1	3
L	2	3	1	4
M	4	4	3	4
P	4	1	3	4
E	2	3	3	5
V	3	3	3	4

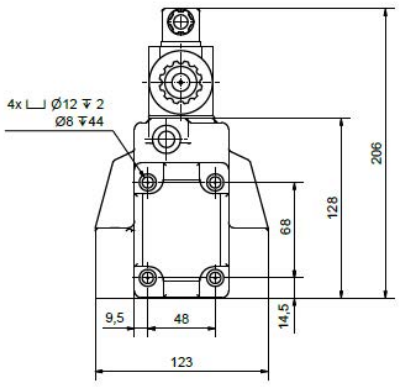
7. Function code "G" type, neutral position P→T
8. Function code "R" type, control position A→B

External Dimensions

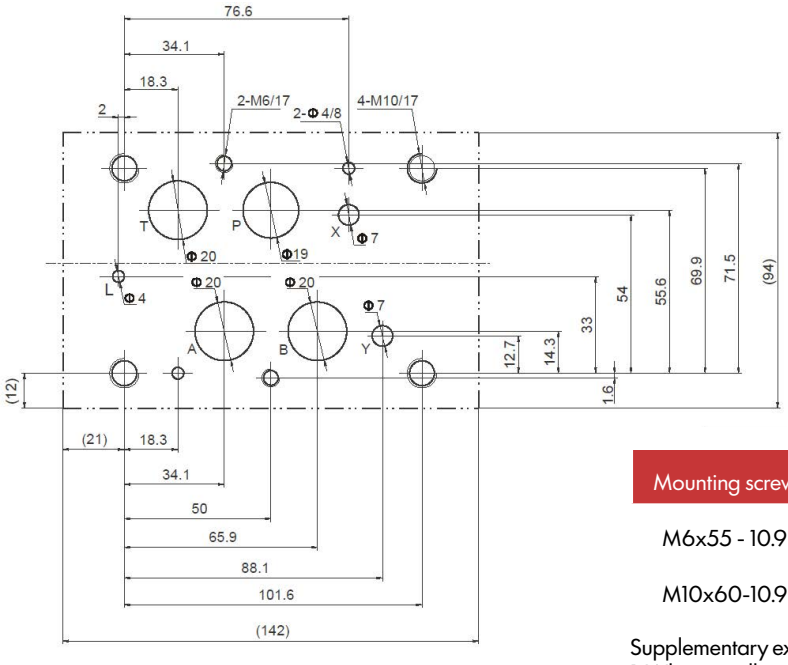
Cetop 8 / NG25







Subplate Size

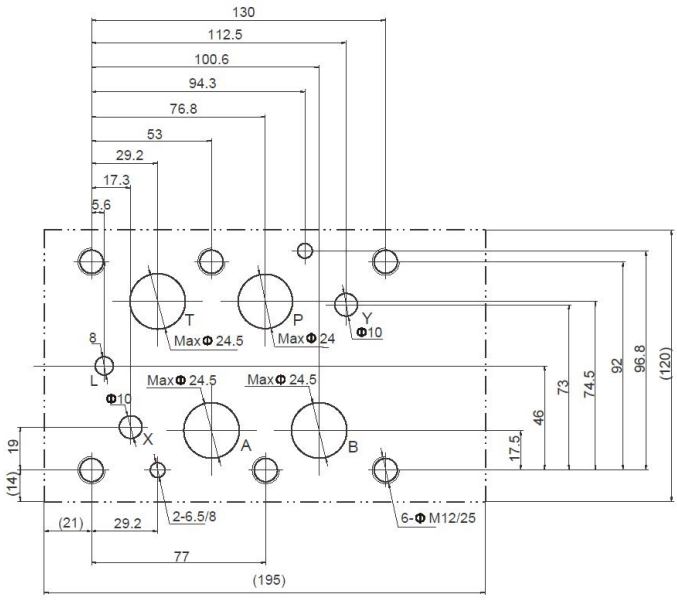


Mounting screw	Amount	Tighten torque
M6x55 - 10.9	2	15Nm
M10x60-10.9	4	75Nm

Supplementary explanation
1. When installing the product, considering horizontal position firstly.
2. The medium used in the hydraulic system must be filtered, its accuracy at least 20 μ m.
3. Screw should be according to the parameters in catalogue.
4. The surface, connecting with the valve, should be Ra0.8 roughness, and 0.01/100mm flatness.

External Dimensions

Subplate Size



Mounting screw	Amount	Tighten torque
M12x60 - 10.9	6	130Nm

Supplementary explanation
1. When installing the product, considering horizontal position firstly.
2. The medium used in the hydraulic system must be filtered, its accuracy at least 20 μ m.
3. Screw should be according to the parameters in catalogue.
4. The surface, connecting with the valve, should be Ra0.8 roughness, and 0.01/100mm flatness.

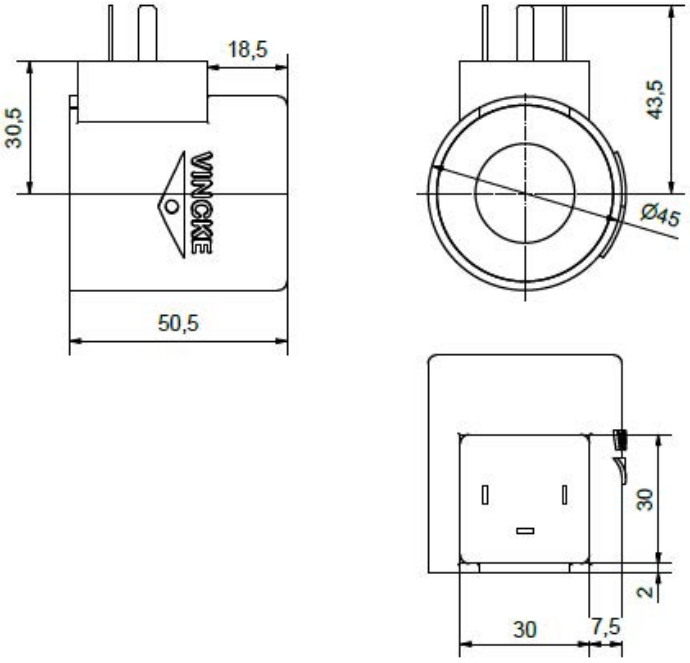


Technical Specification

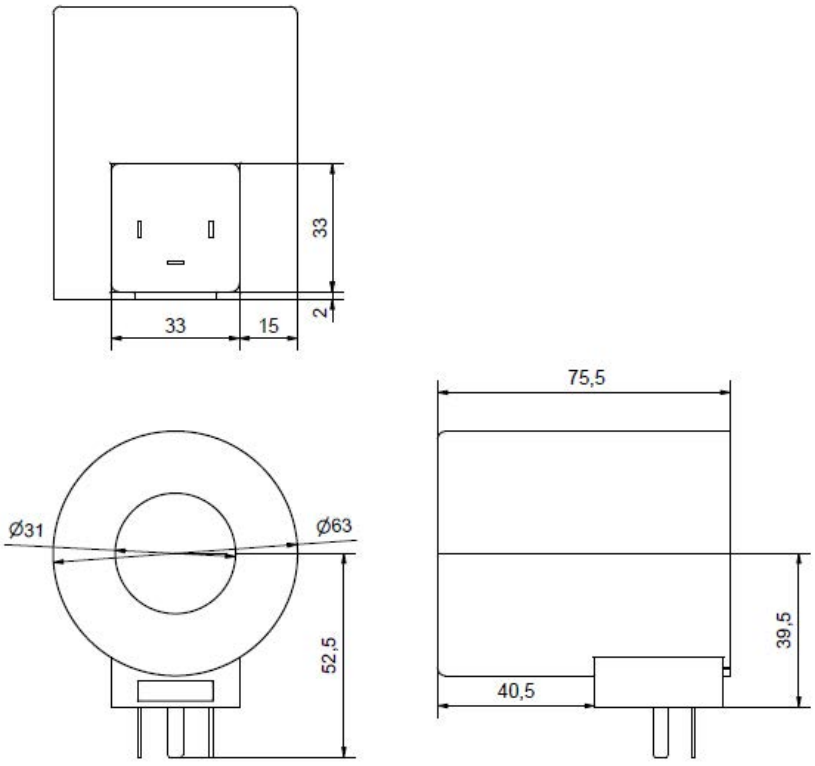
Specification	Cetop 3 / NG6				Cetop 5 / NG10			
Voltage Type	DC voltage(-DC)	DC voltage(-DC)	Half-wave rectified voltage (B-AC)	Half-wave rectified voltage (B-AC)	DC voltage(-DC)	DC voltage(-DC)	Half-wave rectified voltage (B-AC)	Half-wave rectified voltage (B-AC)
Code	C-6-DC12V	C-6-DC24V	C-6-B-AC110	C-6-B-AC220	C-6-DC12V	C-6-DC24V	C-6-AC110	C-6-AC220
Applicable voltage (V)	DC12V	DC24V	B-AC110	B-AC220	DC12V	DC24V	B-AC110	B-AC220
Allowable voltage fluctuation tolerance (%)	±10	±10	±10	±10	±10	±10	±10	±10
Power consumption (W)	30	30	30	30	36	36	36	36
Power-on duration	ED100%	ED100%	ED100%	ED100%	ED100%	ED100%	ED100%	ED100%
Maximum switching frequency (t/h)	12000	12000	12000	12000	12000	12000	12000	12000
Switching time on (ms)	25~45	25~45	25~45	25~45	25~45	25~45	25~45	25~45
Maximum coil internal temperature rise(°C)	≤150	≤150	≤150	≤150	≤150	≤150	≤150	≤150
Insulation class	F	F	H	H	F	F	H	H
Connector type	DIN43650	DIN43650	DIN43650	DIN43650	DIN43650	DIN43650	DIN43650	DIN43650

External Dimensions

Cetop 3 / NG6



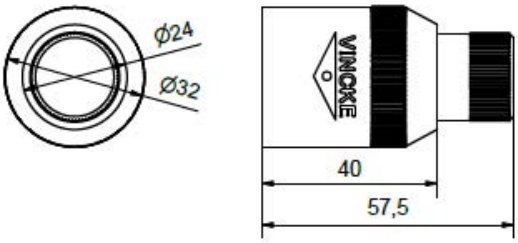
Cetop 5 / NG10



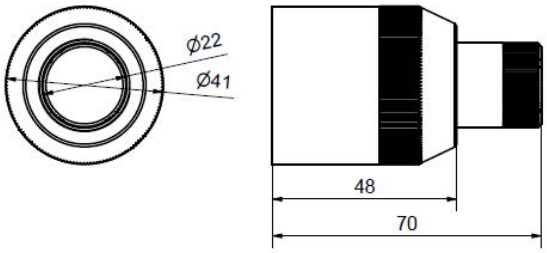


External Dimensions

Cetop 3 / NG6



Cetop 5 / NG10





Manual operated directional control valve is a directional control valve, by operating the handle, the spool moves in the axial direction to achieve oil loop switching.

Manual operated directional control valve and electrical operated directional control valve are played the same role in the hydraulic system. Easy operation, reliable work, and without the need for electricity

Technical Specification

Specification		Cetop 3 / NG6	Cetop 5 / NG10
Working pressure (Mpa)	Port P,A,B	31.5	
	Port T	16	
Max. Flow (L/min)		60	100
Working fluid		Mineral oil: phosphate-ester	
Fluid temp. (°C)		-20~70	
Viscosity (mm^2/s)		2.8~380	
Weight (kg)		About 1.4	About 3.3

Cleanliness

The maximum allowable cleanliness of the oil should be according to 9th degree of Standard NAS1638.it is suggested that the minimum filter rating should be $ß_{10} \geq 75$.

Ordering Code

4VNK-MV-06-*-*-*-*

Manual operated directional control valve

Nominal size 6 Cetop 3 or 10 Cetop 5

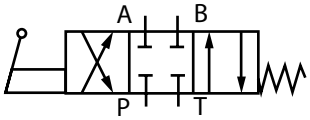
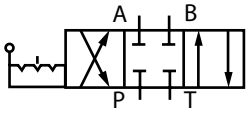
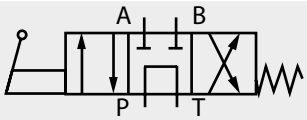
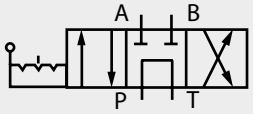
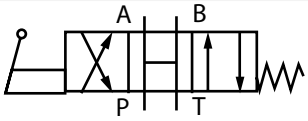
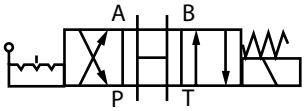
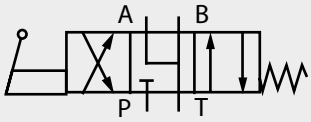
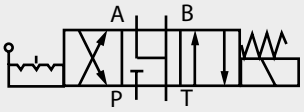
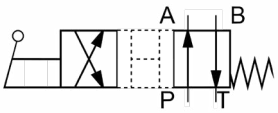
Spool type E, G, J etc.

Omit Spring return
OF With detent

Seal material
Omit NBR Seals
V FPM Seals

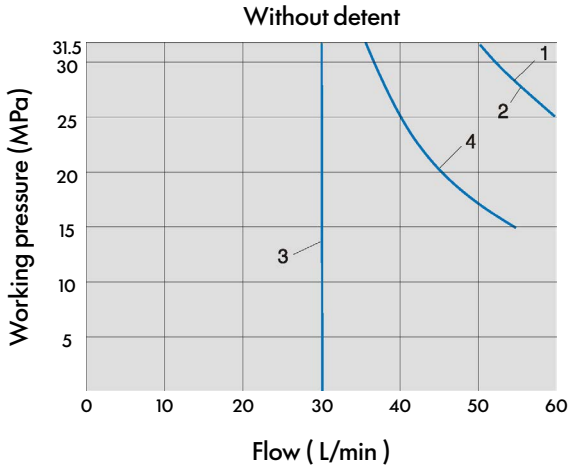
Omit without damping
08 Φ0.8 Damping
10 φ1.0 Damping
12 Φ1.2 Damping

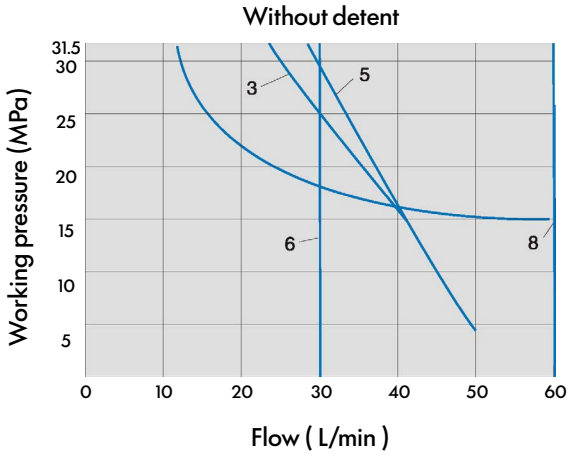
Code Symbol

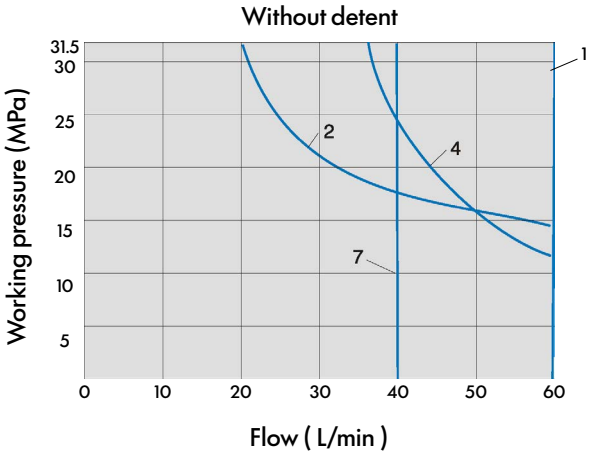
4VNKMV			
E		E-OF	
G		G-OF	
H		H-OF	
J		J-OF	
C		C-OF	

Specification Working limits

As the plug, the switch function of the valve is determined by the filter. In order to reach the largest flow as shown, we suggested to use full-flow filter 20 μ m. Every force on the valve can also affect the flow. With regard to the four-way valve, the normal flow data as shown is get from the regular use of two directions of the flow (e.g.P to A, and simultaneous return flow from B to T). See tables. If only one flow direction is needed, for example: When a four port valve which is closed up port A or port B, used as a three-way valve, the Maximum flow may be very small in the serious condition.





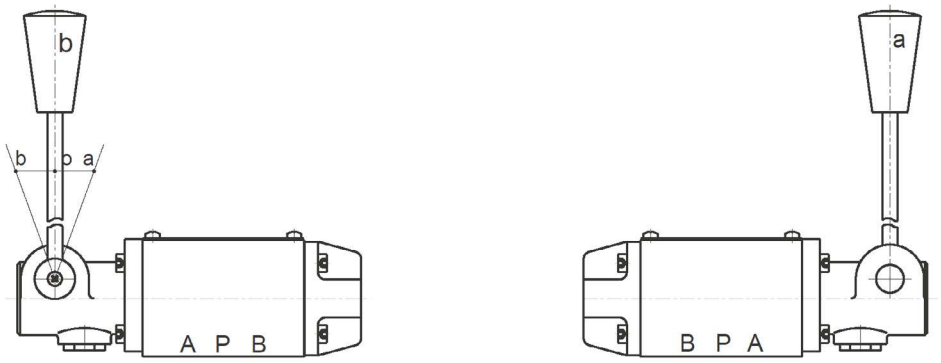


4. Spool symbol "G" in the median position P to T.

Performance curve		Function code
Without detent	1	E, H, C, G, J

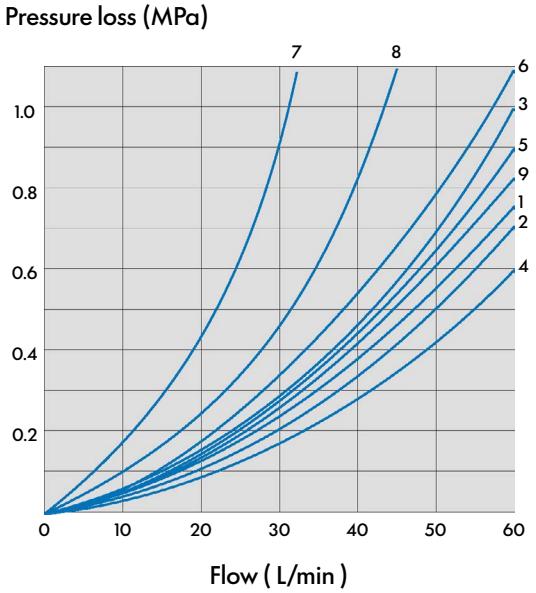
Performance curve		Function code
With detent	1	H, C
	2	E, J
	3	G

The Relationship Between the Location of the Handle and the Directional of the Oil Flow



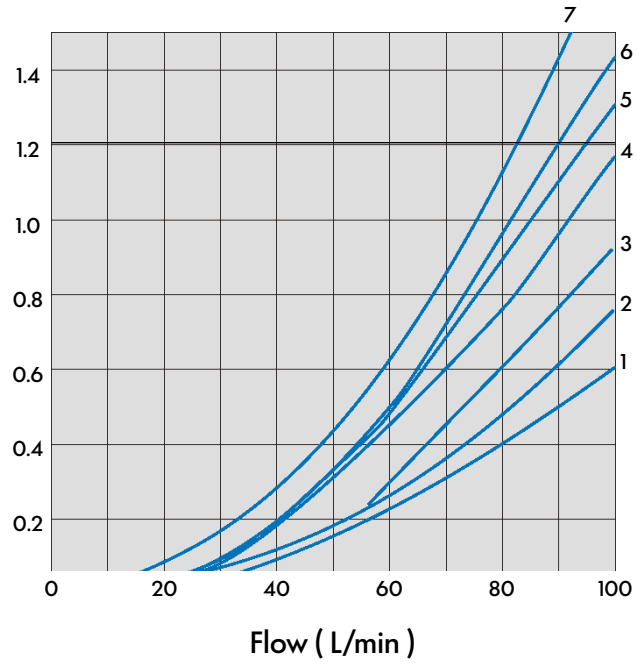
1. The name of the handle as shown in the picture
2. When the handle is on position P→B A→T
3. When the handle is on position P→A B→T
4. Oil flow in the opposite direction with the above-mentioned movement for 02/03: G.
   Oil flow in the opposite direction with the above-mentioned movement for 04/06: G.

Specification Performance curve



Function Code	Direction			
	P→A	P→B	A→T	B→T
C	1	1	3	1
E	3	3	1	1
G	6	6	9	9
H	2	4	2	2
J	1	1	2	1

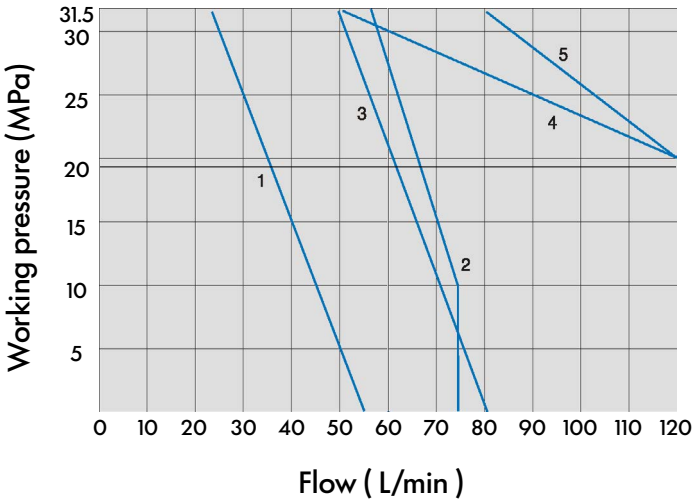
Pressure loss (MPa)



	P→A	P→B	A→T	B→T
C	2	2	3	3
E	2	2	4	4
G	3	3	4	6
H	1	1	4	5
J	2	2	3	3

4. Spool symbol "G" in the median position P → T.

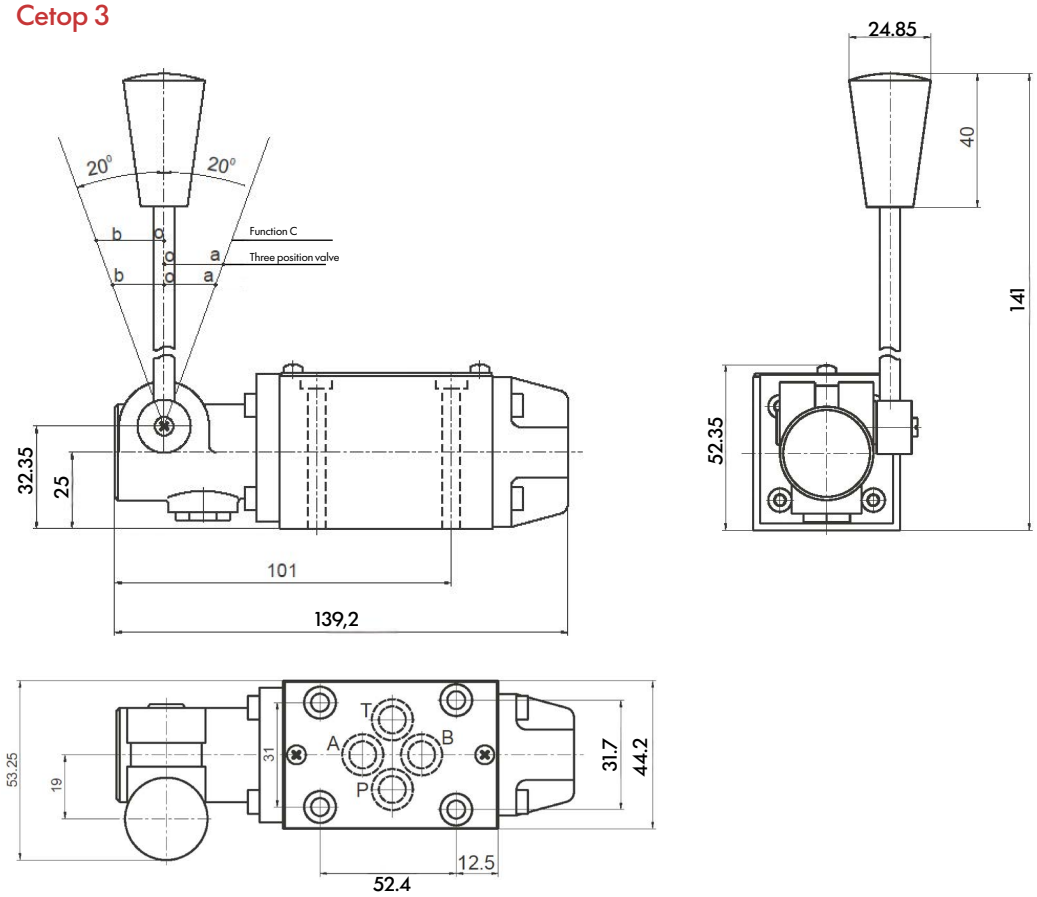
With detent



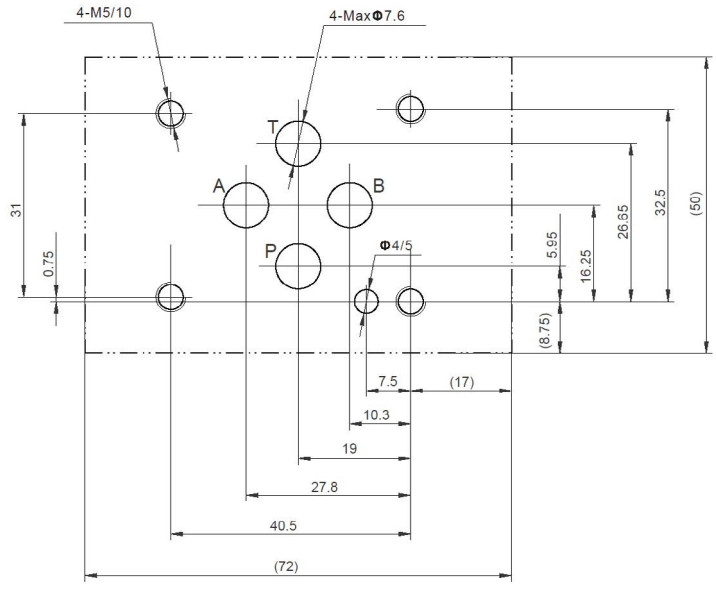
1	H
2	G
3	J
4	C, E

External Dimensions

Cetop 3



Size of Subplate Oil Port

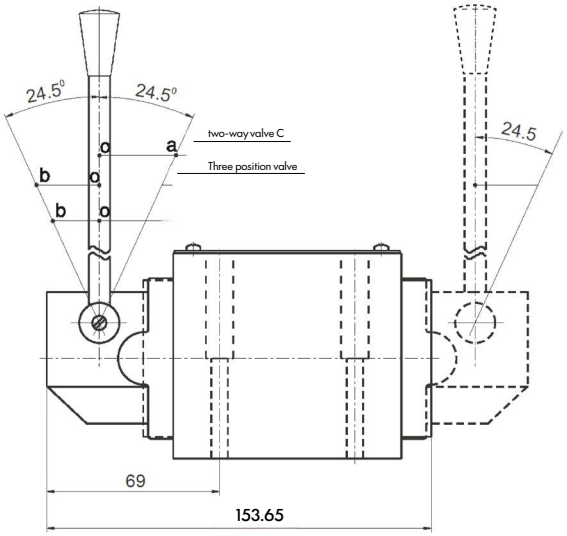


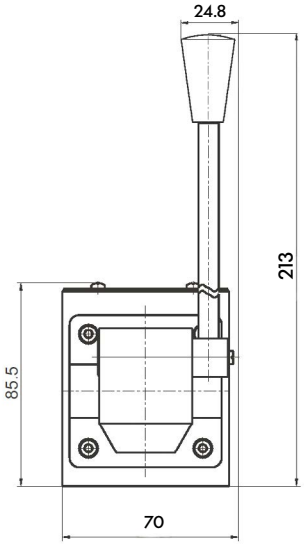
Mounting screw	Amount	Tighten torque
M5x50 - 10.9	4	9Nm

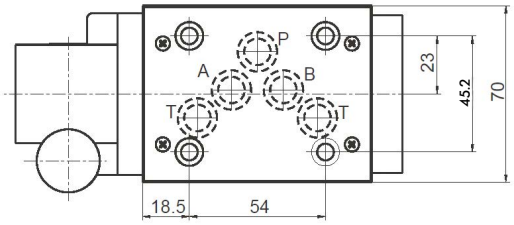
Supplementary explanation
1. When installing the product, considering horizontal position firstly.
2. The medium used in the hydraulic system must be filtered, its accuracy is at least 20 μ m.
3. Screw should be according to the parameters in catalogue.
4. The surface, connecting with the valve, should be Ra0.8 roughness, and 0.01/100mm flatness.

Cetop 5

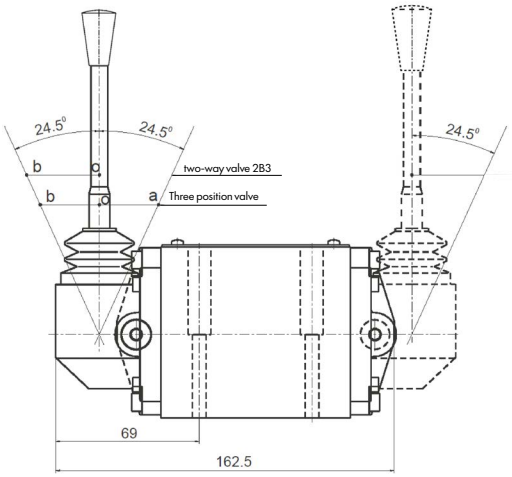
Without detent

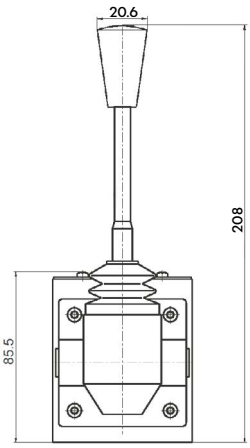


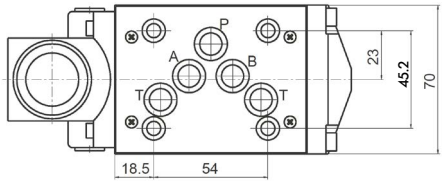




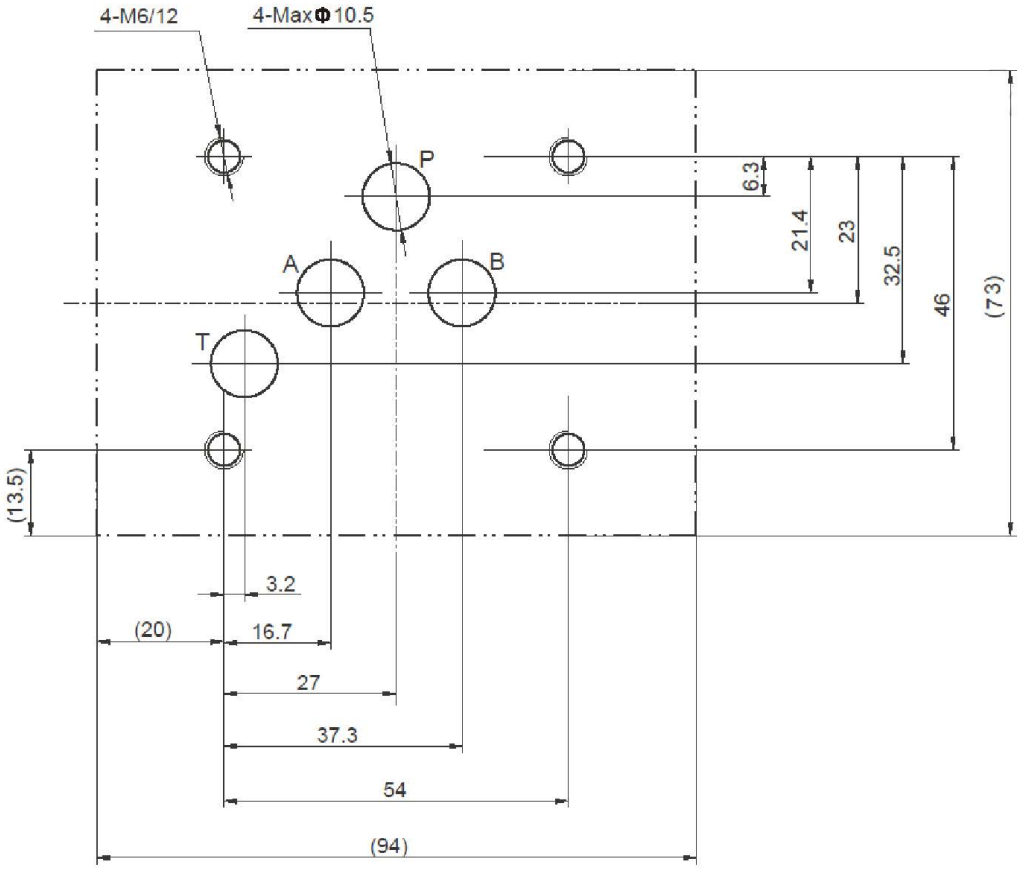
With detent







Size of Subplate Oil Port



Mounting screw	Amount	Tighten torque
M6x50 - 10.9	4	15Nm

Supplementary explanation
1. When installing the product, considering horizontal position firstly.
2. The medium used in the hydraulic system must be filtered, its accuracy is at least 20 μ m.
3. Screw should be according to the parameters in catalogue.
4. The surface, connecting with the valve, should be Ra0.8 roughness, and 0.01/100mm flatness.

MODULAR REVERSIBLE FLOW CONTROL VALVE
Pág 48

MODULAR FLOW CONTROL VALVE
Pág 50

MODULAR RELIEF VALVE
Pág 54

MODULAR REDUCING VALVE
Pág 59

MODULAR CHECK VALVE
Pág 63

MODULAR PILOT-OPERATED CHECK VALVE
Pág 67

MODULAR OVERCENTER VALVE
Pág 71

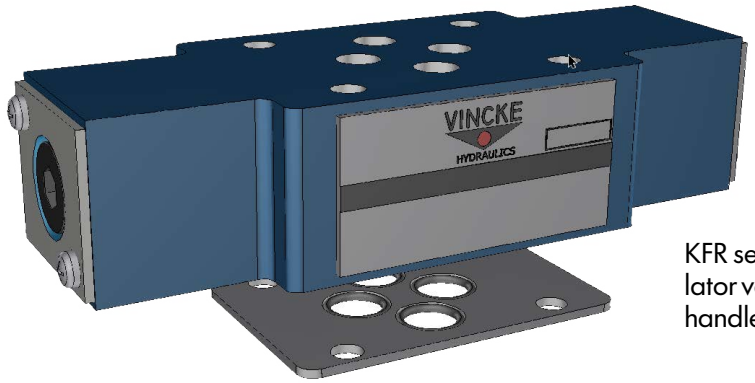
ELECTRICAL CHECK VALVE
Pág 75

FAST-SLOW CETOP
Pág 78

FLOW CONTROL VALVE
Pág 81

VINCKE
HYDRAULICS

BACK TO THE MAIN INDEX



KFR series modular reversible flow regulator valves are used to restrict flow by handle.

Technical Specification

Specification	Cetop 3 / NG6	Cetop 5 / NG10
Max. working pressure (MPa)	31.5	
Max. Flow (L/min)	80	160
Mounting location	Any	
Working fluid	Mineral oil: phosphate-ester hydraulic oil	
Fluid temp. (°C)	-20~70	
Viscosity (mm ^{2}/s)	10~800	

Cleanliness

NAS1638 Class 9, recommended filtration precision Min $\beta_{10} \geq 75$.

Ordering Code

KFR-R-6-*-2-*

Modular reversible flow control valve

Nominal size 6 Cetop 3, 10 Cetop 5

S meter in
S2 meter out

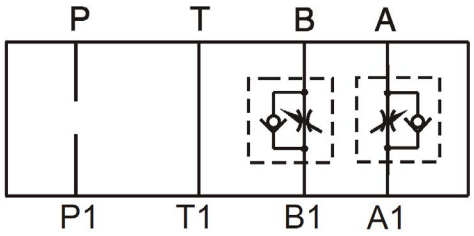
Seal Material
omit NBR
V FPM

1 Lockable rotaty Knob
2 Setscrew

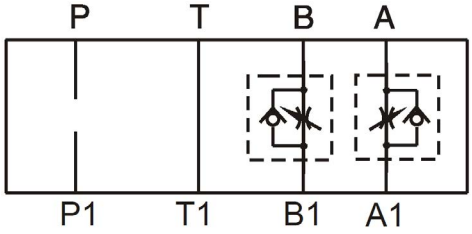
Note: For Dn6 and 10, meter in and meter out can be available by changing the valve body 180° so all these 2 types are marked with "S".;
For Dn6, S4 is converted from S3, so these 2 types are marked with S3.

Hydraulic Symbol

Meter in: S

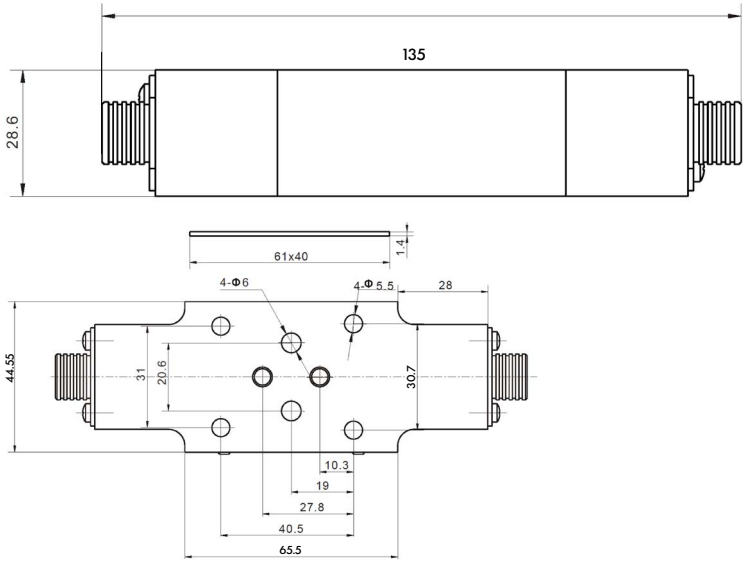


Meter out: S2

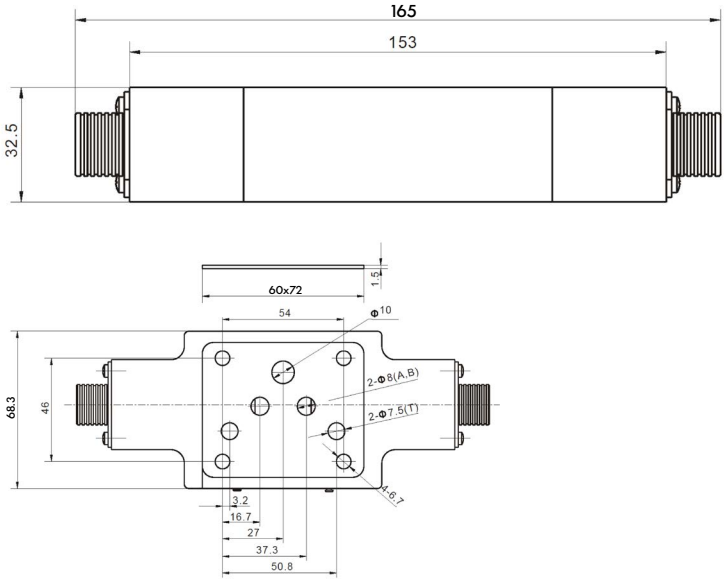


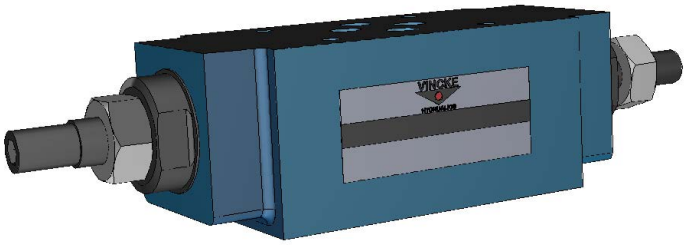
External Dimensions

Cetop 3 / NG6



Cetop 5 / NG10





KFR series modular flow regulator valves are used to restrict flow by handle.

Technical Specification

Specification	Cetop 3 / NG6	Cetop 5 / NG10	Cetop 7 / NG16	Cetop 8 / NG25
Max. working pressure (MPa)	35			
Max. Flow (L/min)	30	50	250	360
Hydraulic fluid	Mineral oil: phosphate-ester hydraulic oil			
Fluid temp. (°C)	-20~70			
Viscosity (mm^2/s)	2.8~380			
Opening pressure (MPa)	a: 0.05			

Cleanliness

The maximum allowable cleanliness of the oil should be according to 9th degree of Standard NAS1638. It is suggested that the minimum filter rating should be Min $\beta_{10} \geq 75$.

Ordering Code

KFR-6-*-2-*

Modular flow control valve

Nominal size 6 Cetop 3, 10 Cetop 5, 16 Cetop 7 or 25 Cetop 8

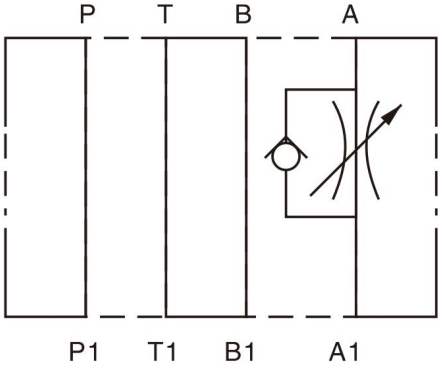
A A Pipeline
B B Pipeline
W AB Pipeline

Seal Material
omit NBR
V FPM

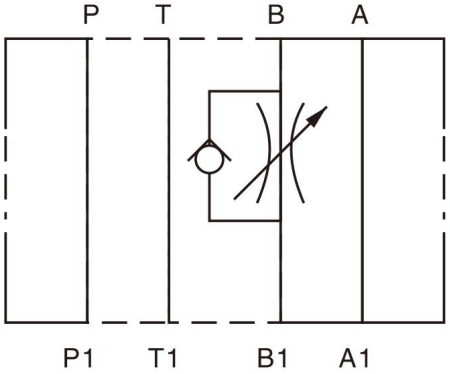
1 Lockable rotaty Knob
2 Setscrew

Hydraulic Symbol - Pipeline

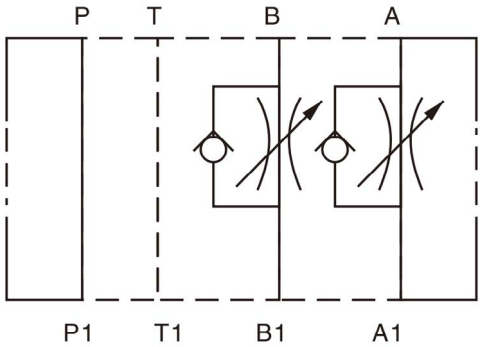
A



B

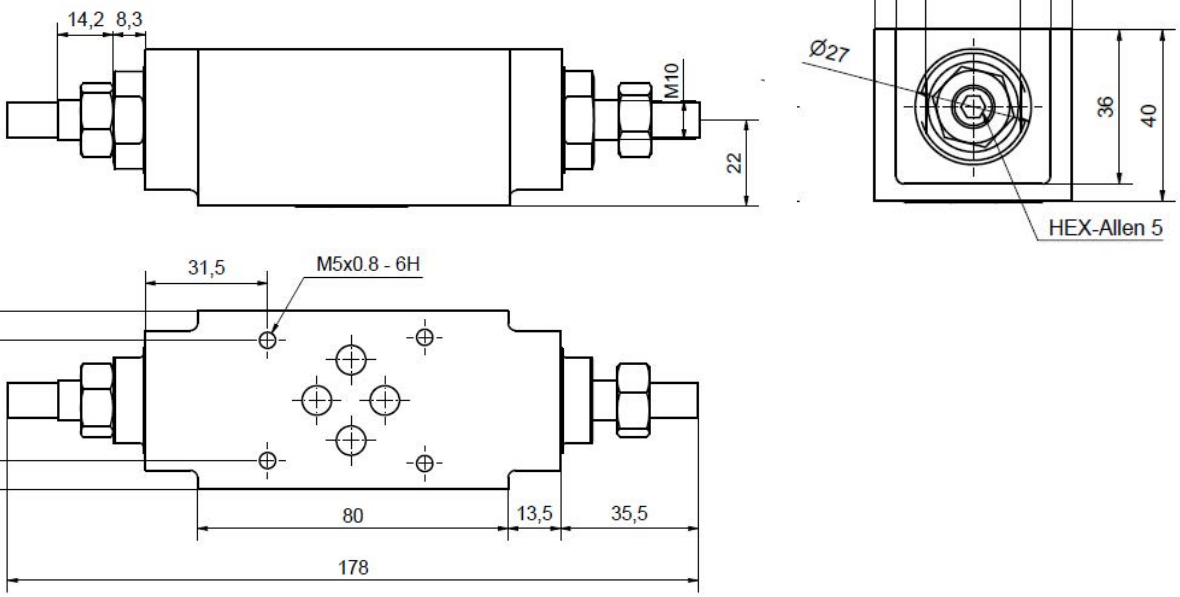


W

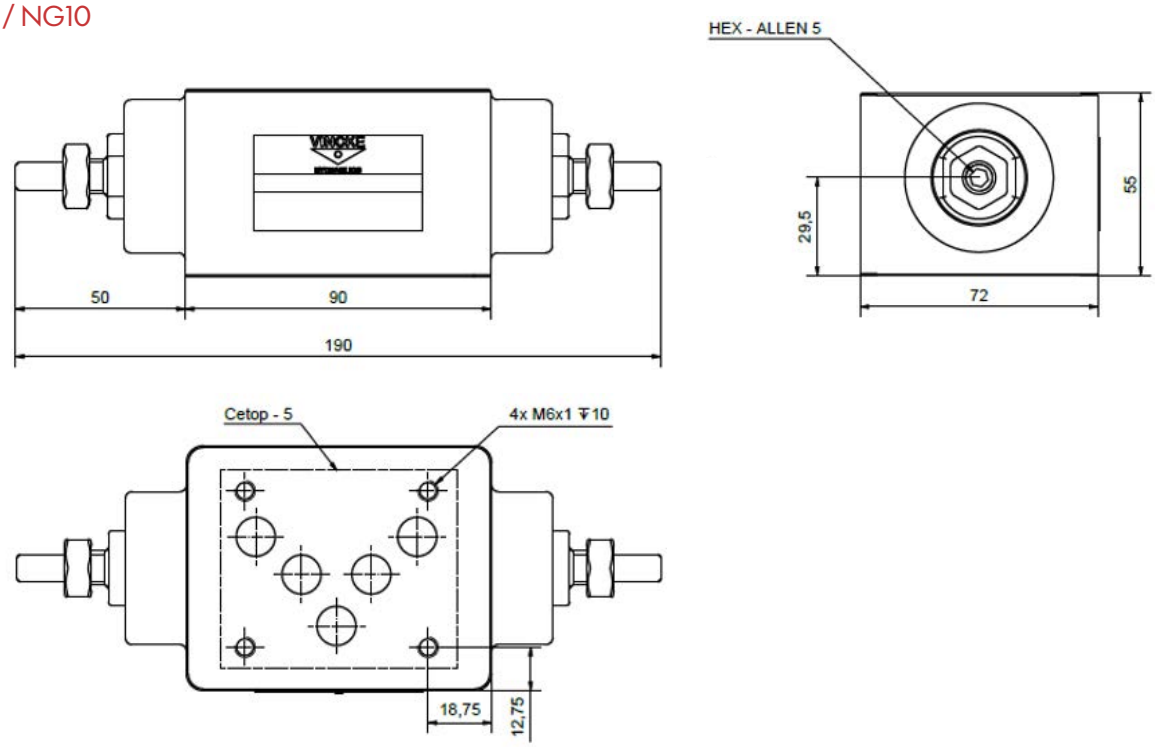


External Dimensions

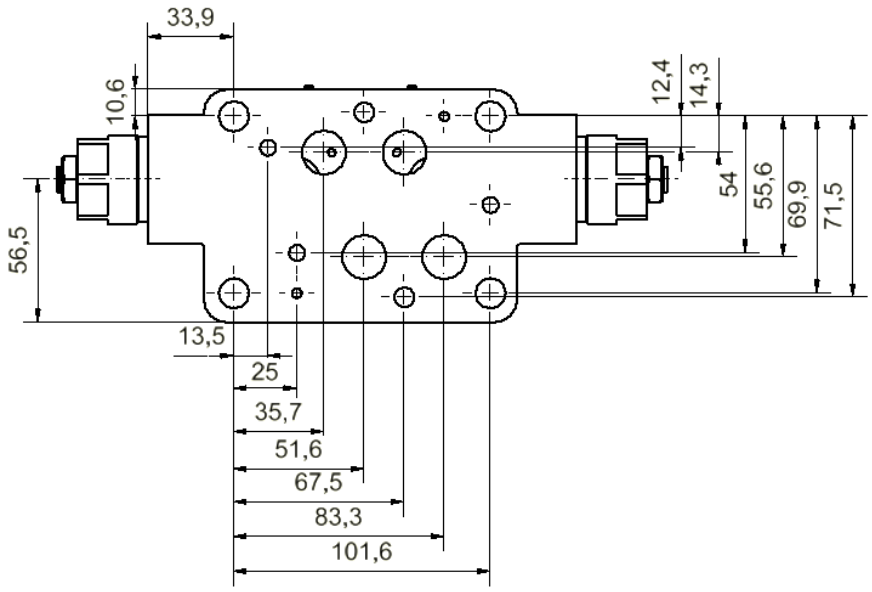
Cetop 3 / NG6

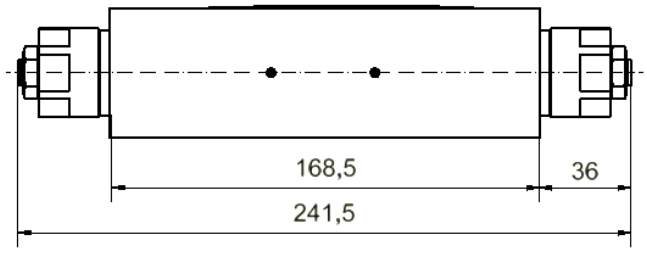


Cetop 5 / NG10

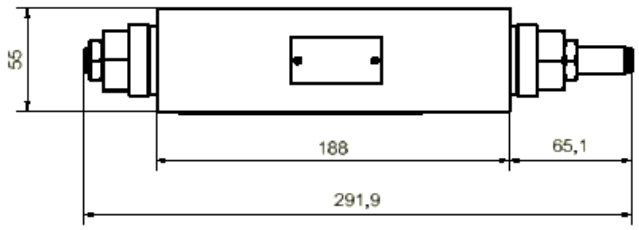


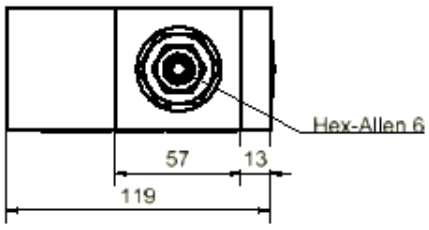
Cetop 7 / NG16

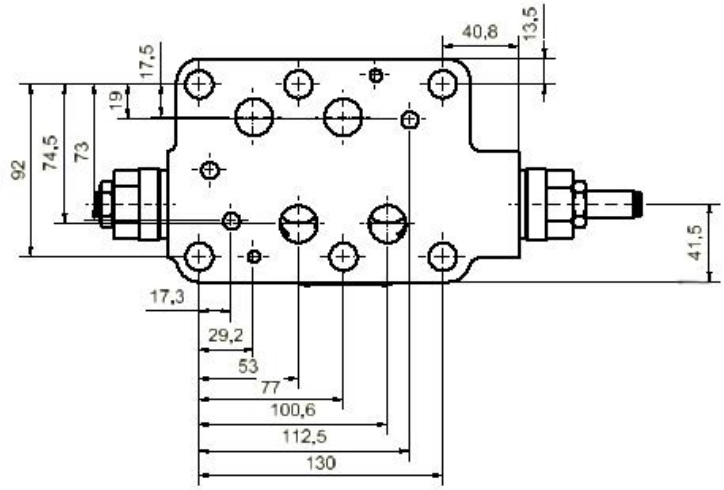


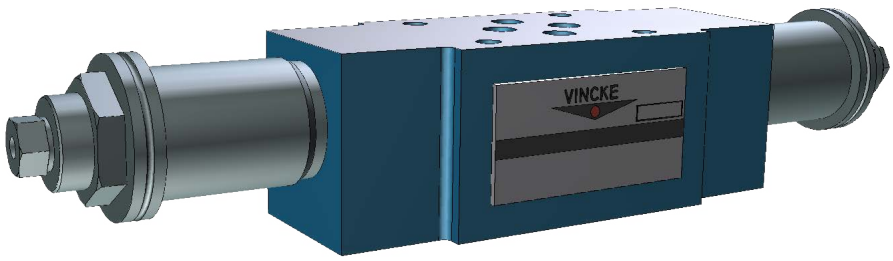


Cetop 8 / NG25









Technical Specification

Specification	Cetop 3 / NG6	Cetop 5 / NG10
Max. working pressure (MPa)	31.5	
Max. Flow (L/min)	60	100
Working fluid	Mineral oil: phosphate-ester hydraulic oil	
Fluid temp. (°C)	-20~70	
Viscosity (mm ^{2}/s)	10~800	
Working voltage (MPa)	5, 10, 20, 31.5	

Cleanliness

NAS1638 Class 9, recommended filtration precision Min $\beta_{10} \geq 75$.

Ordering Code

KRV-6-*-*-*-*

Modular relief valve

Nominal size 6 Cetop 3, 10 Cetop 5,

Relief method
P P → T
A A → T
B B → T
C A → T, B → T
D A → B, B → A

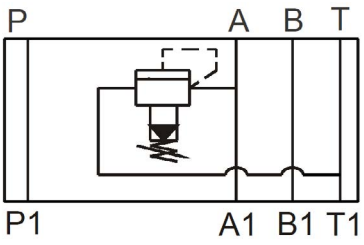
Seal Material
omit NBR
V FPM

1 handle
2 with hexagon and protective cap

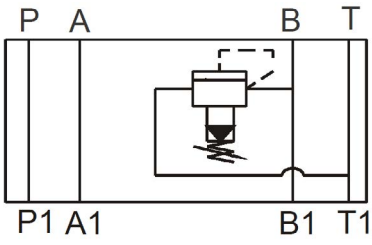
Pressure range
5 upto 5MPa
10 upto 10MPa
20 upto 20MPa
31.5 upto 31.5MPa

Hydraulic Symbol

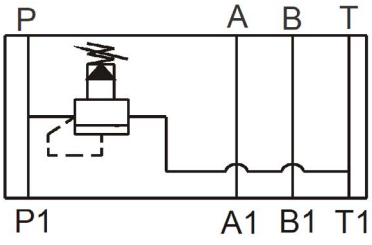
A



B



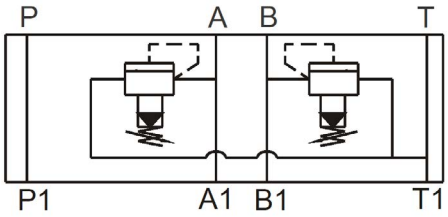
P



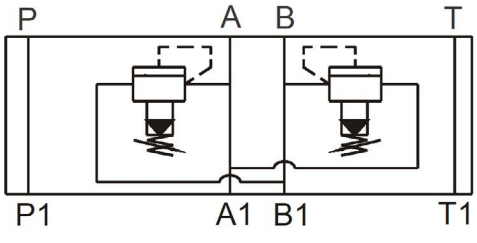
Broadside

Subface

C



D

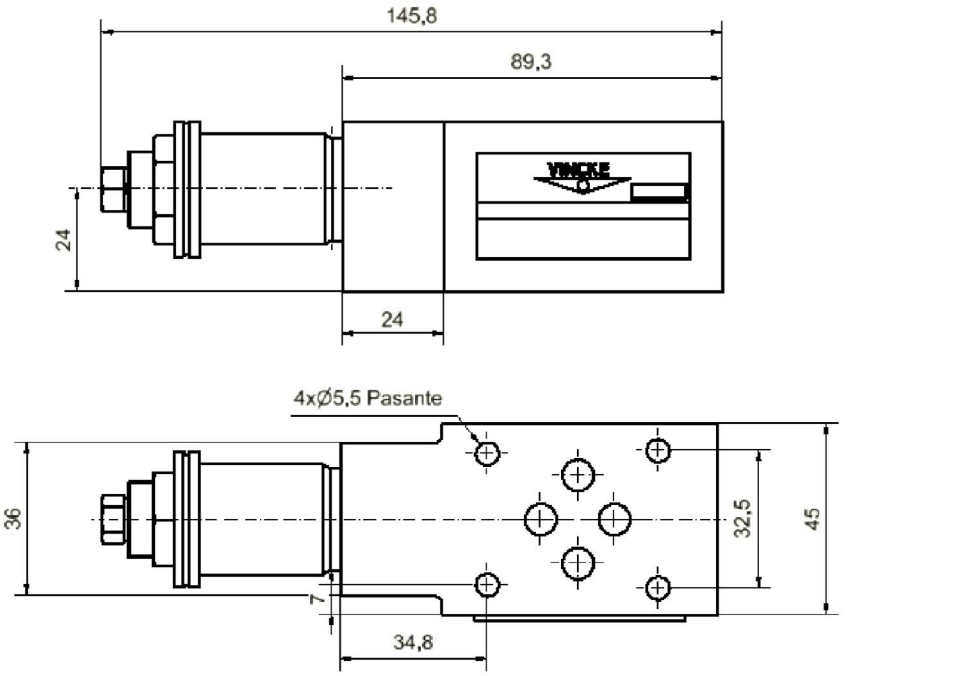


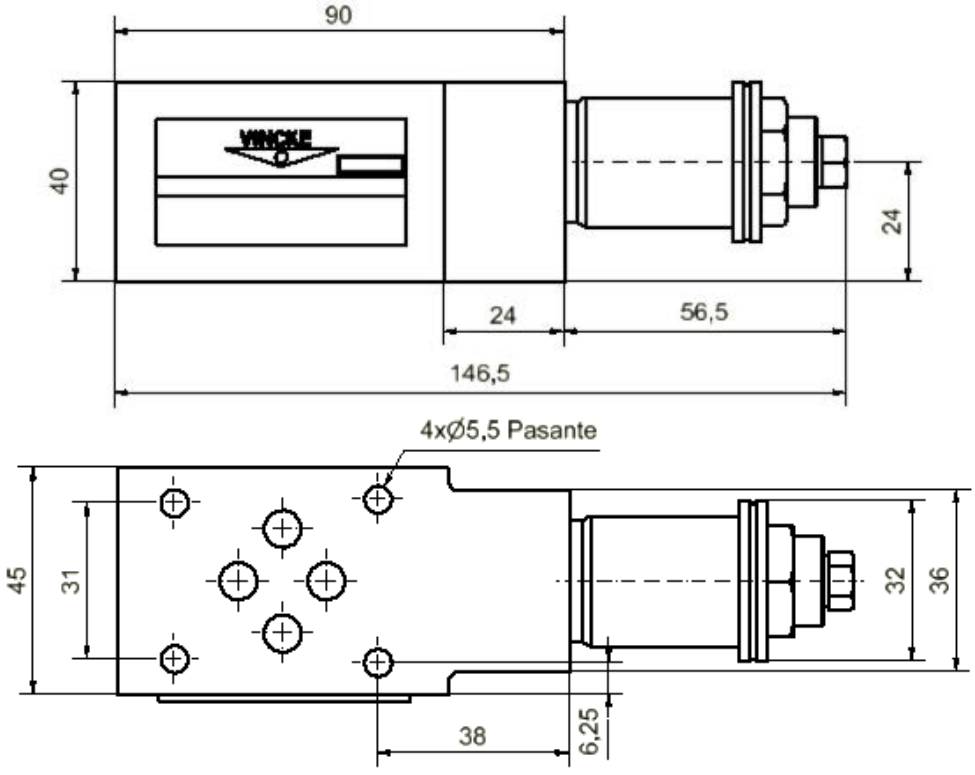
Broadside

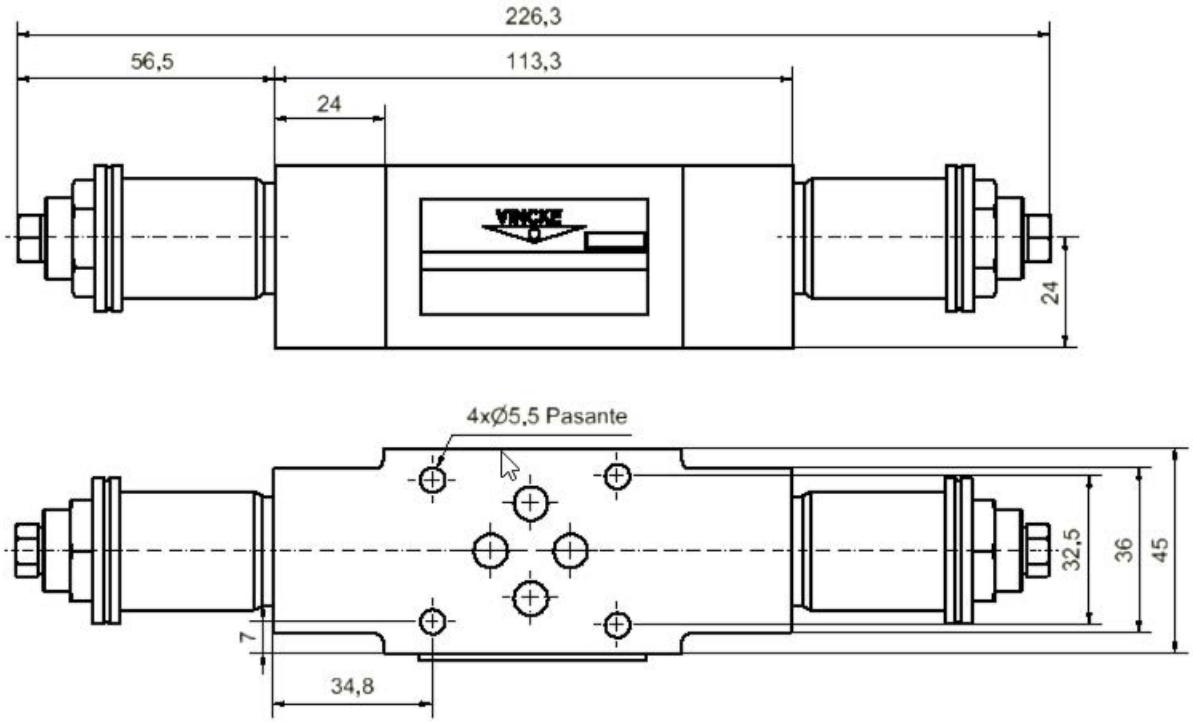
Subface

External Dimensions

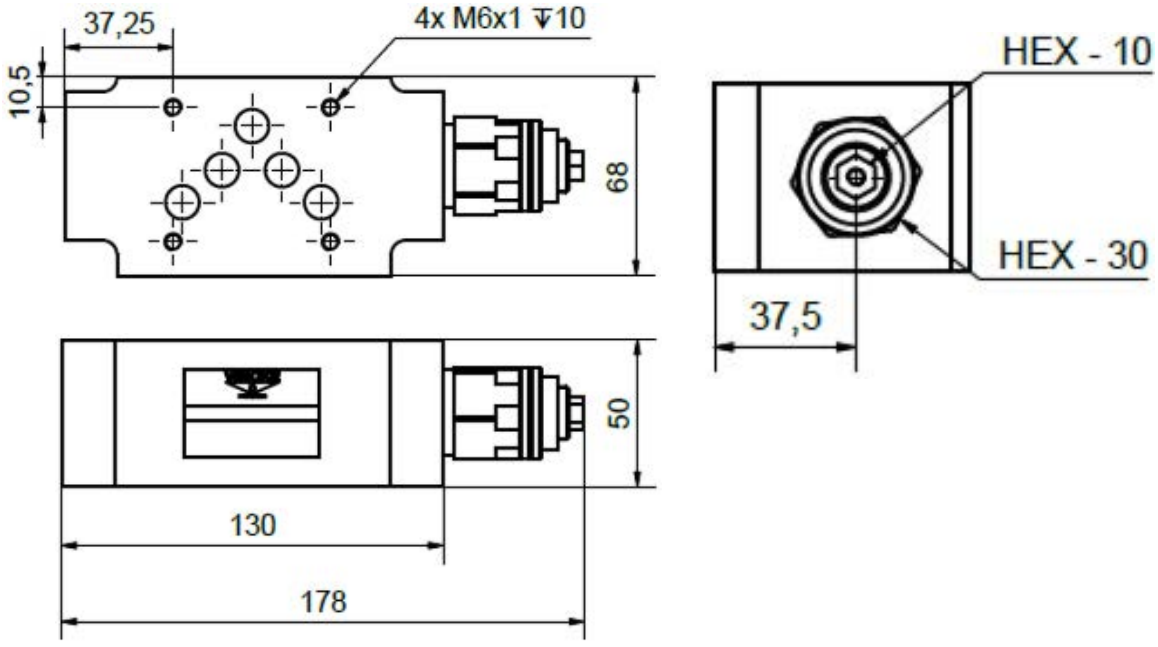
Cetop 3 / NG6

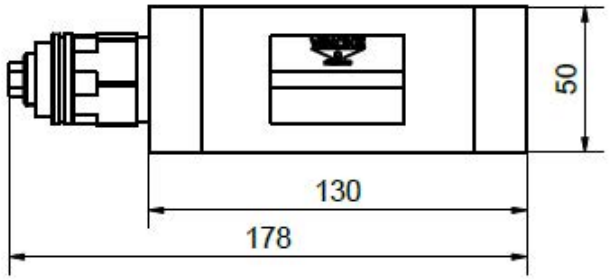


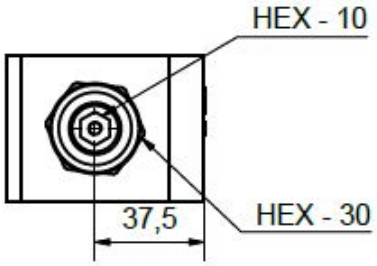


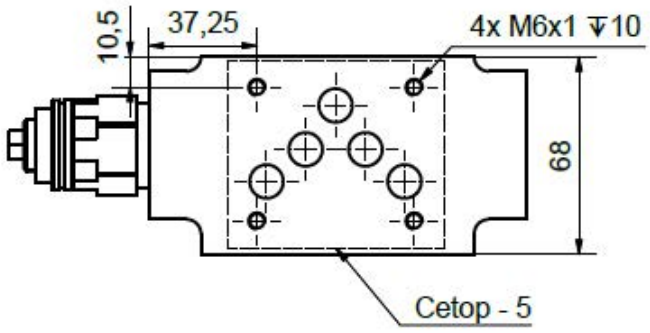

226,3
56,5
113,3
24
24
4xØ5,5 Pasante
32,5
36
45
7
34,8

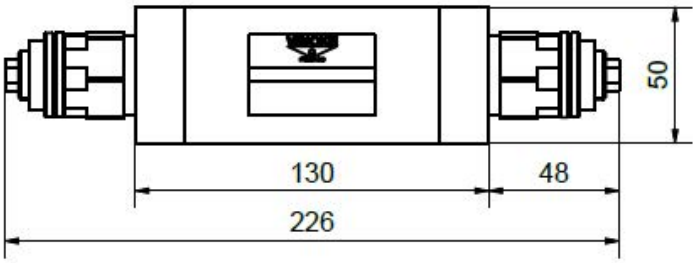
Cetop 5 / NG10

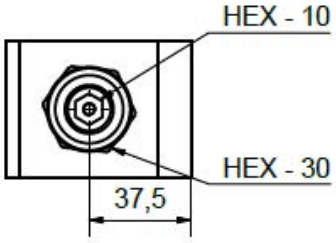

37,25
4x M6x1 ↧10
10,5
68
HEX - 10
HEX - 30
37,5
50
130
178

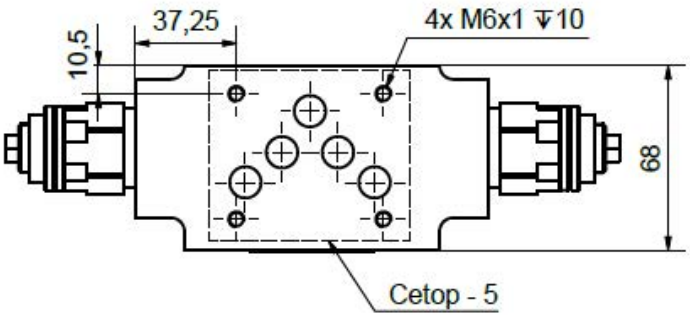

50
130
178

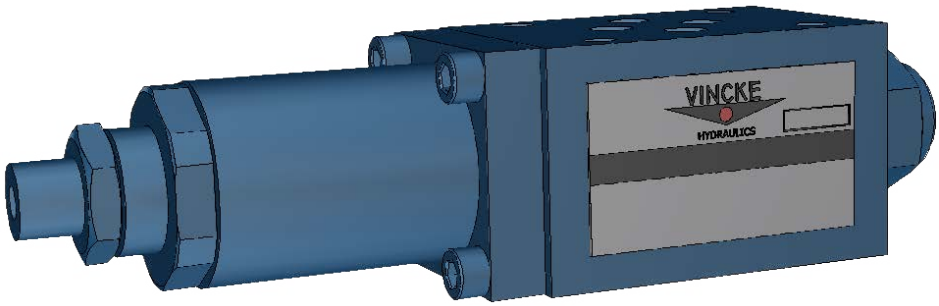

HEX - 10
37,5
HEX - 30


10,5
37,25
4x M6x1 ↧10
68
Cetop - 5


50
130
48
226


HEX - 10
HEX - 30
37,5


10,5
37,25
4x M6x1 ↧10
68
Cetop - 5



Technical Specification

Specification		Cetop 3 / NG6	Cetop 5 / NG10
Max. working pressure (MPa)	Working pressure	31.5	
	Secondary pressure	To21	
	Port T	To15	
Max Flow (L/min)		50	
Mounting location		Any	
Working fluid		Mineral oil: phosphate-ester hydraulic oil	
Fluid Temp (C°)		-20~70	
Viscosity (Mm ²/s)		10~800	

Cleanliness

NAS1638 Class 9, recommended filtration precision Min $ß_{10} \geq 75$.

Ordering Code

KRDV-6-*-*-*-*-*

Modular reducing valve

Nominal size 6 Cetop 3, 10 Cetop 5,

P P pipeline reducing
A A pipeline reducing
B B pipeline reducing (only for DN10)

2.5 upto 2.5MPa
7.5 upto 7.5MPa
15 upto 15MPa
21 upto 21MPa

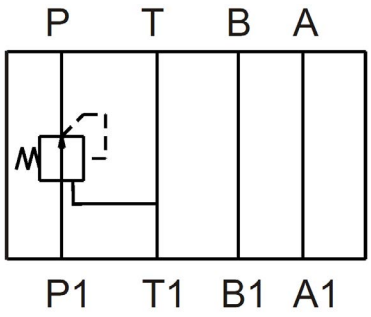
Seal Material
omit NBR
V FPM

1 plastic handle
2 steel handle

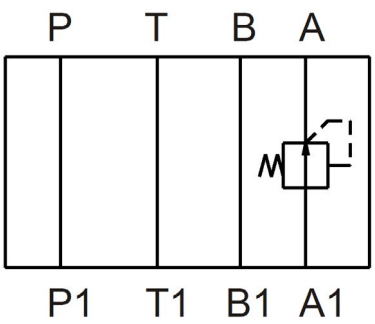
Omit none
D check valve

Hydraulic Symbol

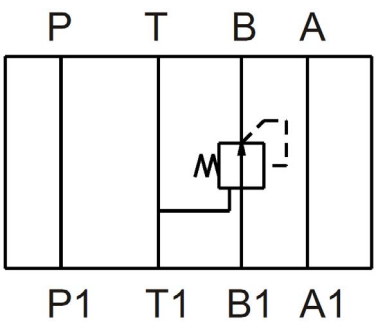
P pipeline



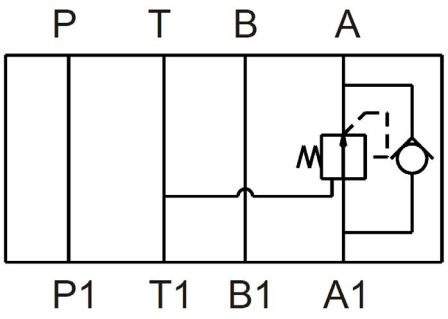
A pipeline



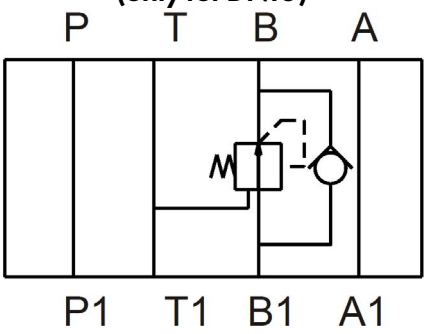
B pipeline (only for Dn10)



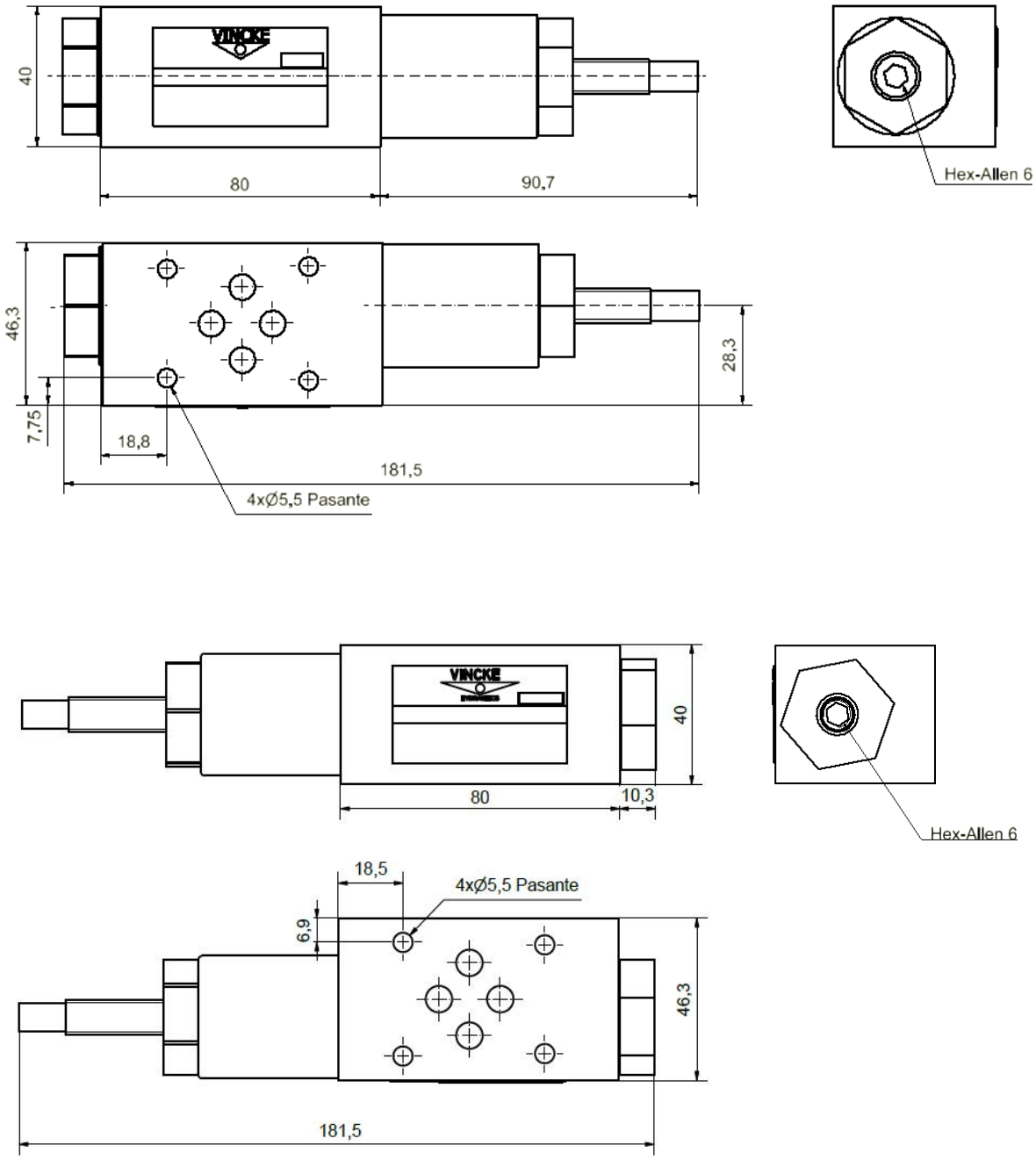
A pipeline with check valve



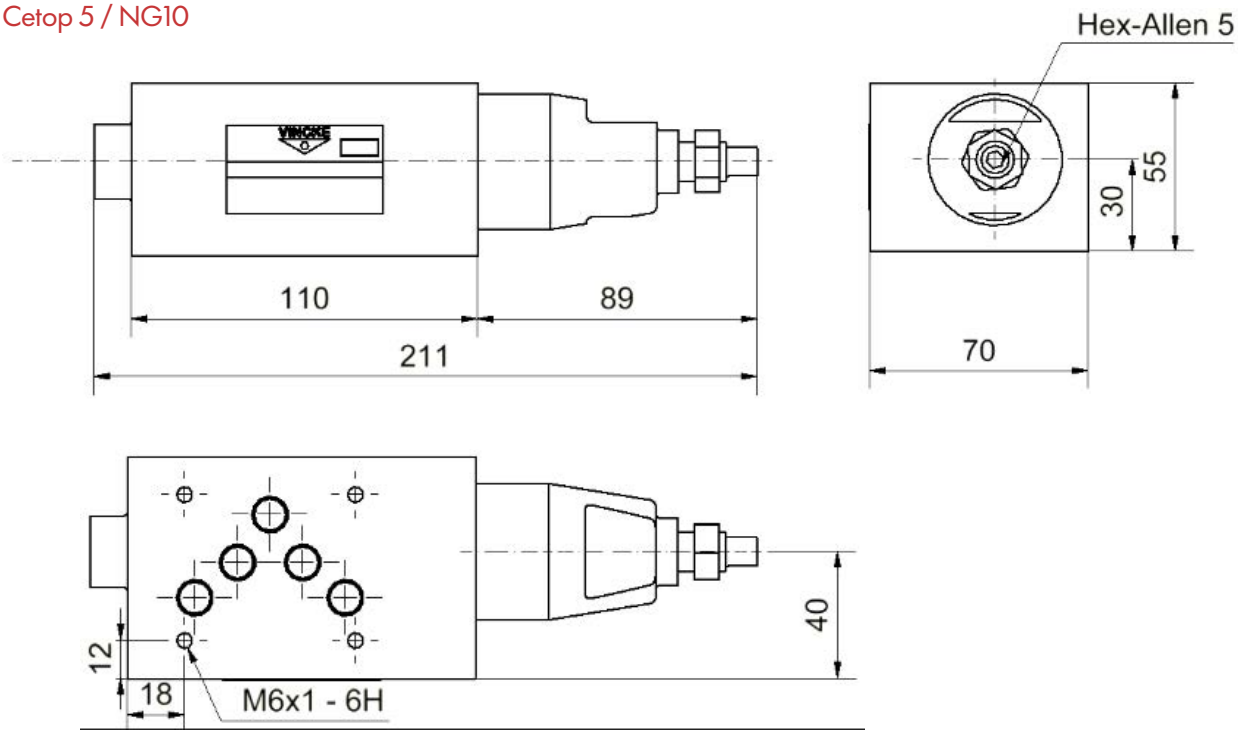
B pipeline with check valve (only for DN10)

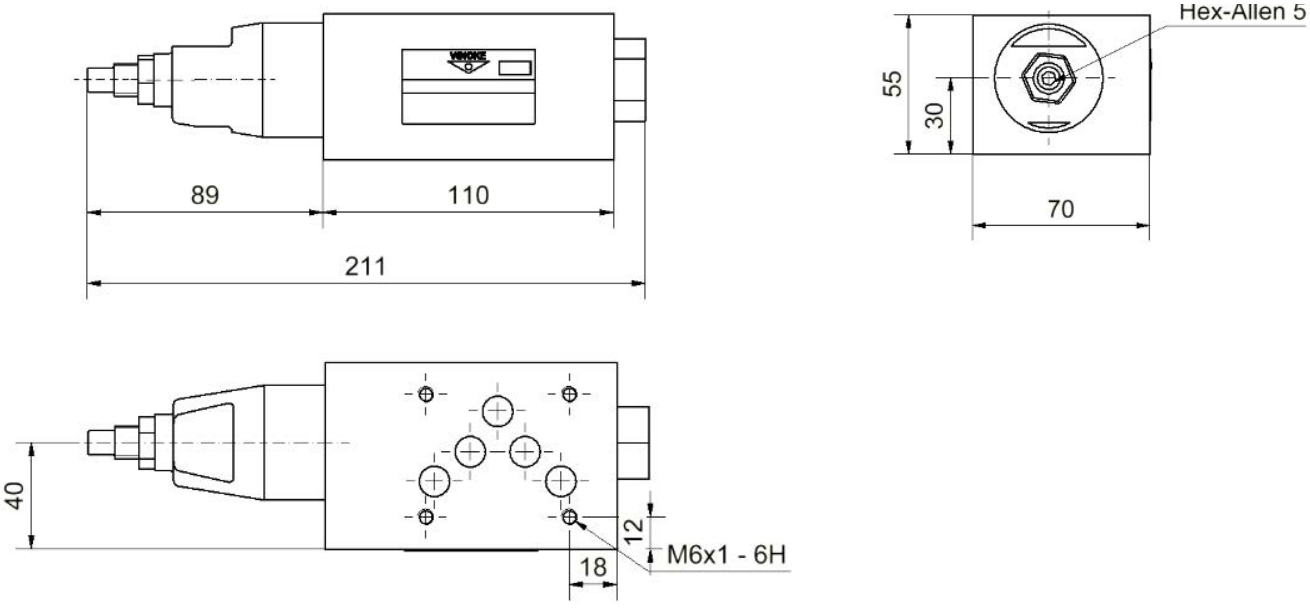


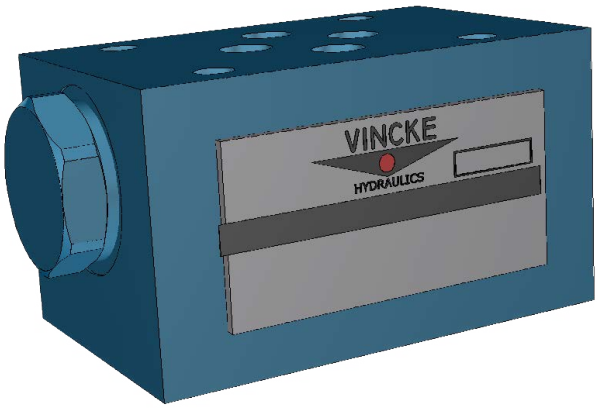
Cetop 3 / NG6


40
80
90,7
Hex-Allen 6
46,3
28,3
7,75
18,8
181,5
4xØ5,5 Pasante
40
80
10,3
Hex-Allen 6
18,5
4xØ5,5 Pasante
6,9
46,3
181,5

Cetop 5 / NG10


Hex-Allen 5
110
89
211
30
55
70
12
18
M6x1 - 6H
40


Hex-Allen 5
89
110
211
55
30
70
40
12
18
M6x1 - 6H



KCV series modular check valves allow free flow in one direction and block flow in the counter direction.

Technical Specification

Specification	Cetop 3 / NG6	Cetop 5 / NG10
Max. working pressure (MPa)	31.5	
Max. Flow (L/min)	40	100
Working fluid	Mineral oil: phosphate-ester	
Fluid temp. (°C)	-20~70	
Viscosity (mm^2/s)	2.8~380	
O penning pressure	a: 0.05 b: 0.25 c: 0.4	

Cleanliness

The maximum allowable cleanliness of the oil should be according to 9th degree of Standard NAS1638.It is suggested that the minimun filter rating should be $ß_{10} \geq 75$.

Ordering Code

KCV-6-*-*-*

Modular check Valve

Nominal size 6 Cetop 3, 10 Cetop 5

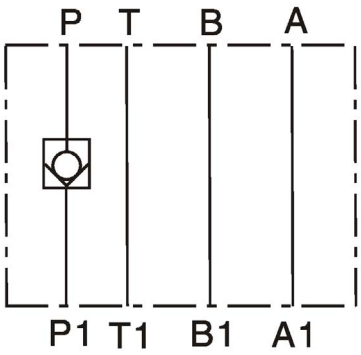
P P Pipeline
T T Pipeline
A A Pipeline
B B Pipeline
W AB Pipeline

Seal Material
Omit NBR Seals
V FPM Seals

O pening pressure
a 0.05
b 0.25
c 0.4

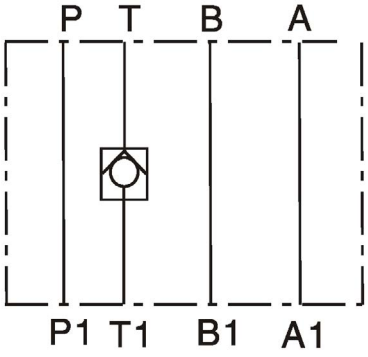
Code Symbol

P Pipeline



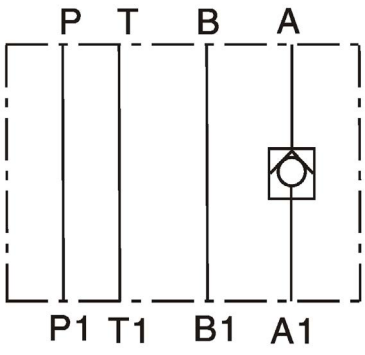
KCV-06-P

T Pipeline



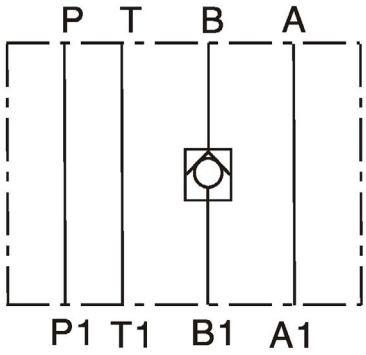
KCV-06-T

A Pipeline



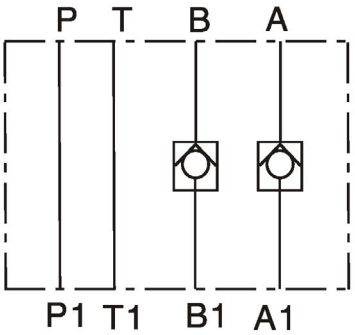
KCV-06-A

B Pipeline



KCV-06-B

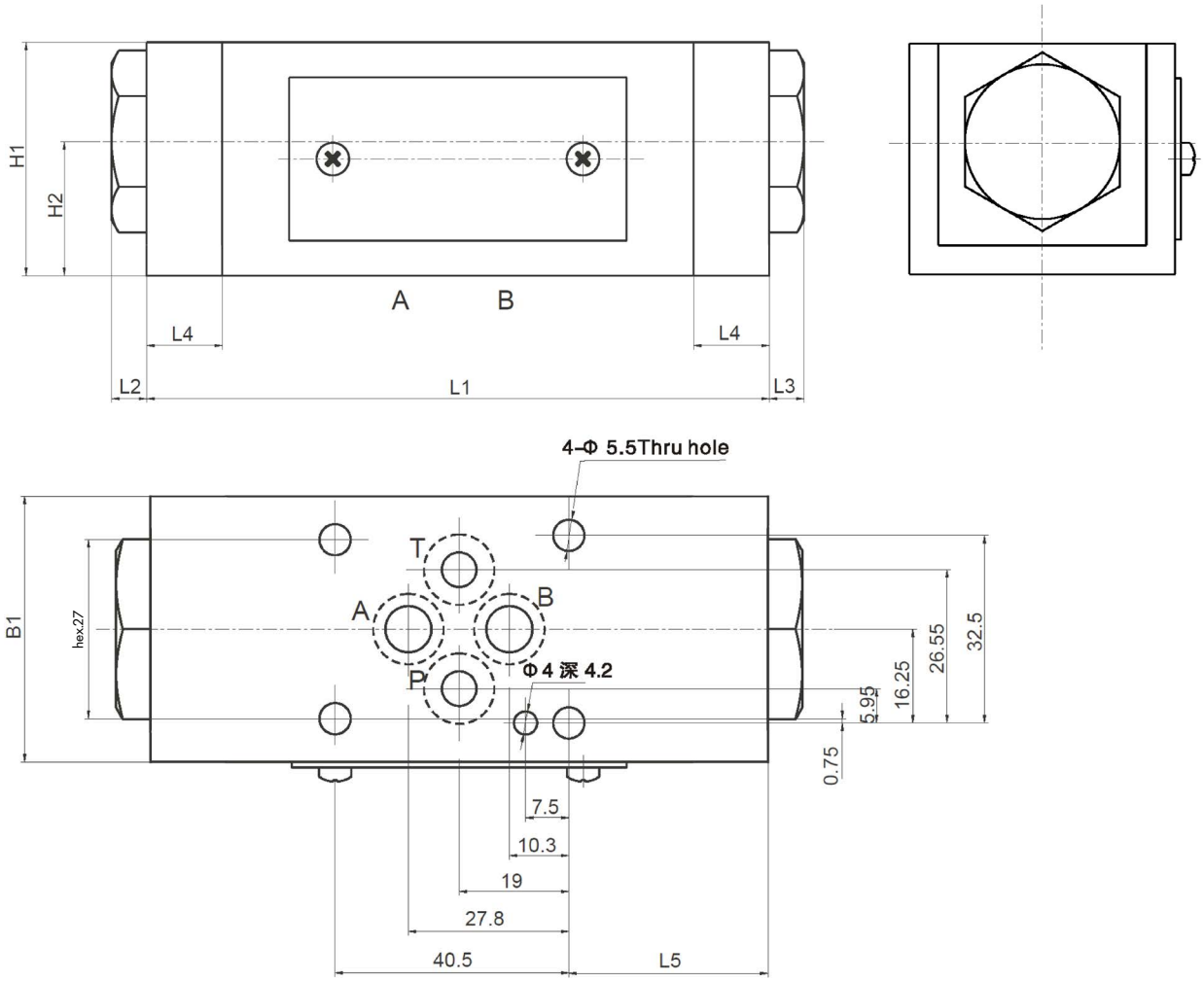
W Pipeline



KCV-06-W

External Dimensions

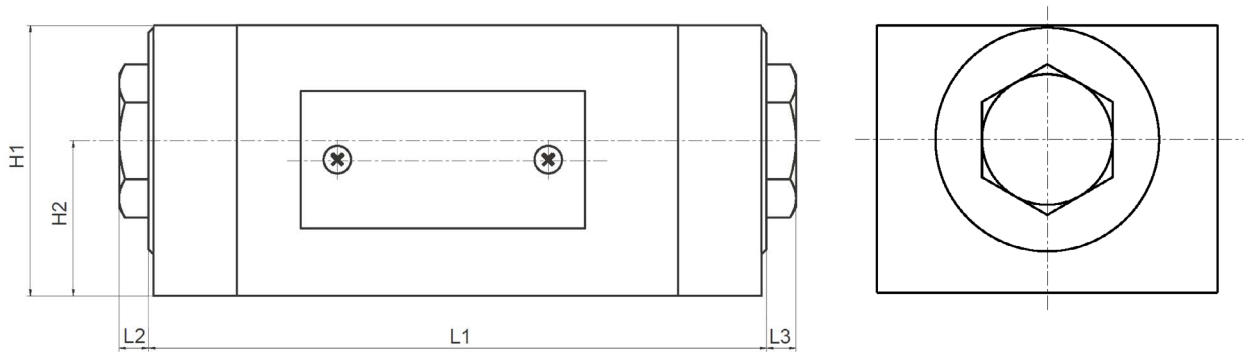
Cetop 3 / NG6

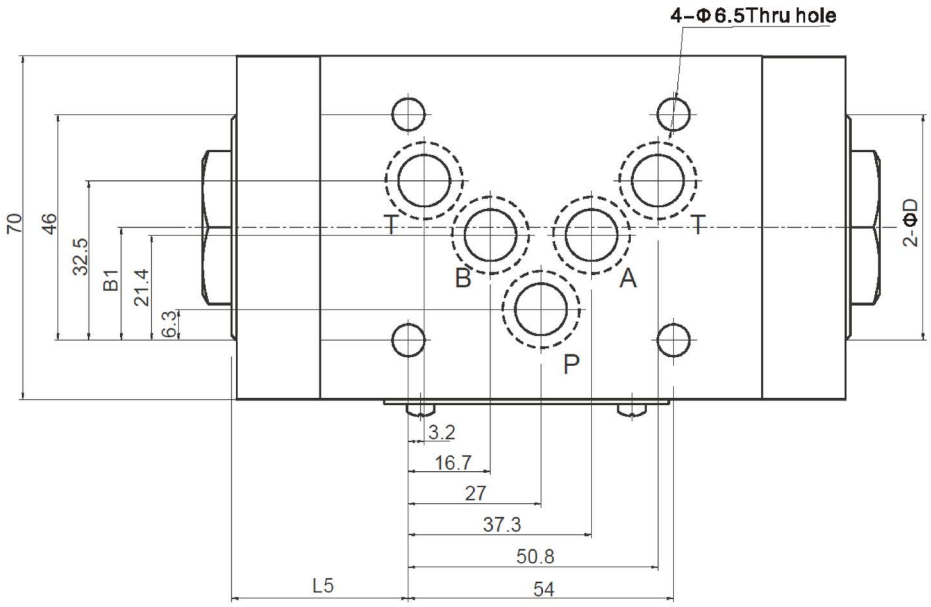


Specification	B1	H1	H2	L1	L2	L3	L4	L5
DA-02-A	46	40	20	80	6	-	-	20
DA-02-B	46	40	20	80	-	6	-	20
DA-02-P	46	40	20	80	-	6	-	20
DA-02-T	46	40	20	80	-	6	-	20
DA-02-W	46	40	23	107	6	6	13	34.5

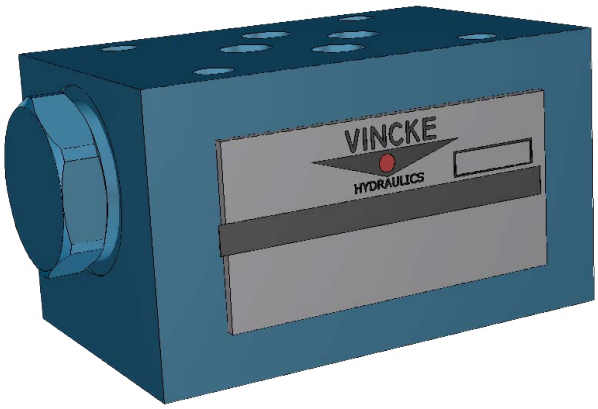
External Dimensions

Cetop 5 / NG10





Specification	D	B1	H1	H2	L1	L2	L3	L5
DA-03-A	-	18.5	55	27.5	80	-	6	10
DA-03-B	-	18.5	55	27.5	80	6	-	16
DA-03-P	-	15.8	55	27.5	80	-	6	16
DA-03-T	-	23	55	27.5	100	-	6	19.5
DA-03-W	46	23	55	31.5	126	6	6	36
DA-03-WT	-	32.5	55	27.5	150	6	6	48



KPCV series modular check valves allow
free flow in one direction and block flow
in the counter direction.

Technical Specification

Specification	Cetop 3 / NG6	Cetop 5 / NG10	Cetop 7 / NG16	Cetop 8 / NG25
Max. working pressure (MPa)	31.5			
Max. Flow (L/min)	60	100	200	360
Working fluid	Mineral oil: phosphate-ester			
Fluid temp. (°C)	-20~70			
Viscosity (mm^2/s)	2.8~500			
O penning pressure	a: 0.05 b: 0.25 c: 0.4			

Cleanliness

The maximum allowable cleanliness of the oil should be according to 9th degree of Standard NAS1638.It is suggested that the minimun filter rating should be $ß_{10} \geq 75$.

Ordering Code

KPCV-6-*-*-*

Modular Pilot-Operated Check Valve

Nominal size 6 Cetop 3, 10 Cetop 5, 16 Cetop 7 or 25 Cetop 8

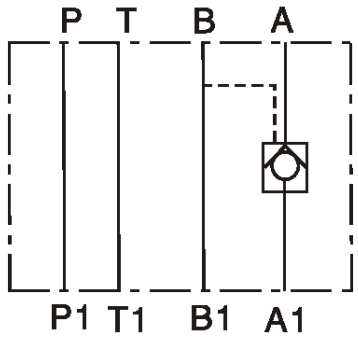
A A Pipeline
B B Pipeline
W AB Pipeline

Seal Material
Omit NBR Seals
V FPM Seals

O pening pressure
a 0.05
b 0.25
c 0.4

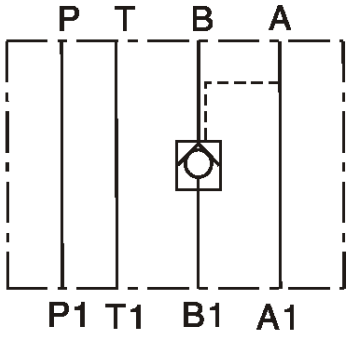
Code Symbol

A Pipeline



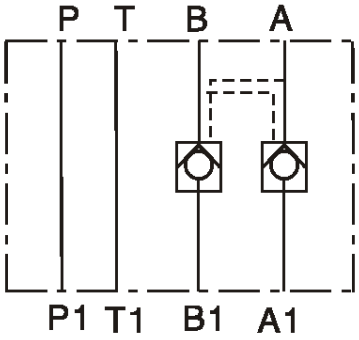
KPCV-06-A

B Pipeline



KPCV-06-B

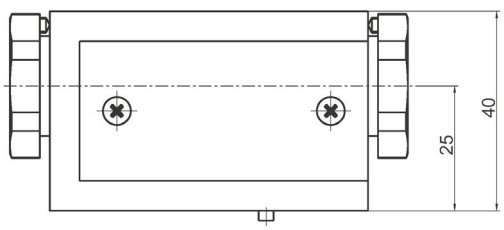
W Pipeline

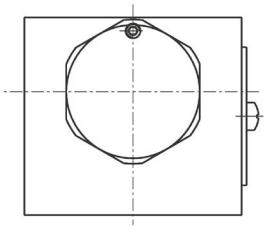


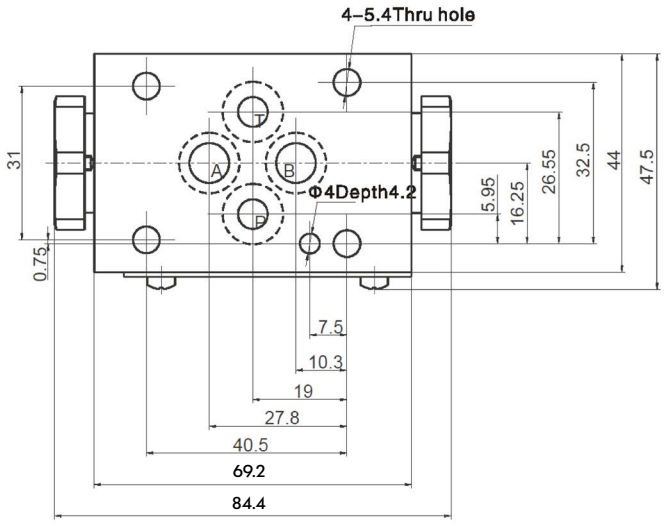
KPCV-06-W

External Dimensions

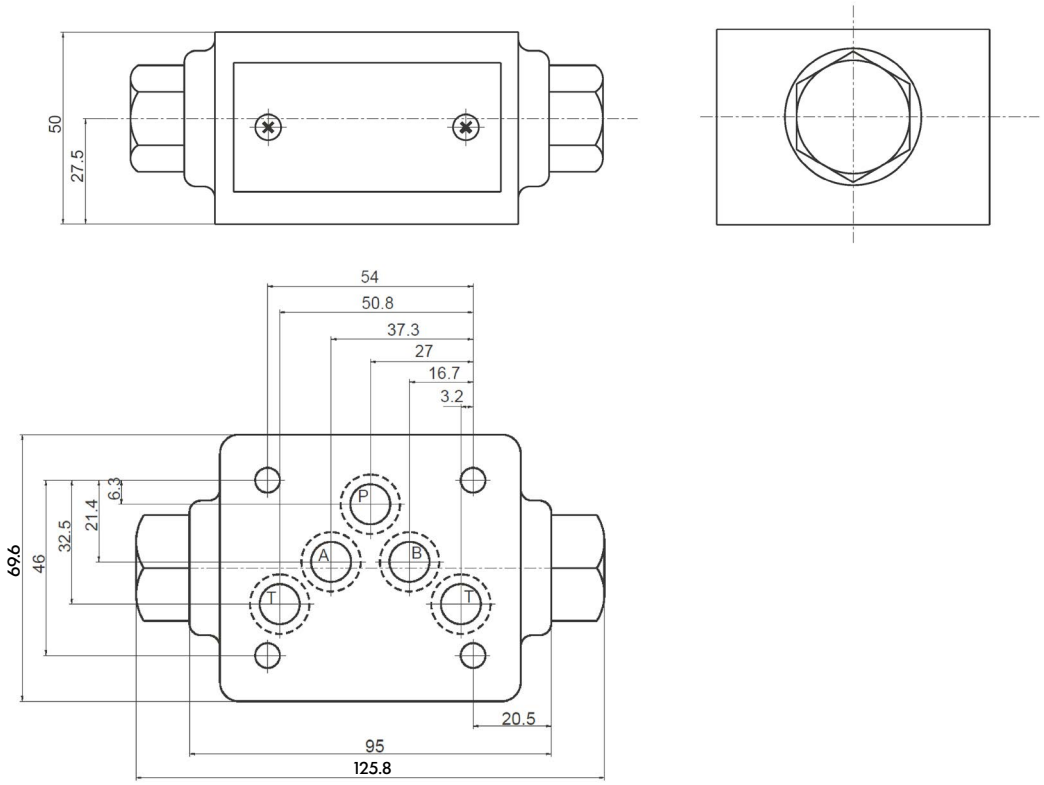
Cetop 3 / NG6



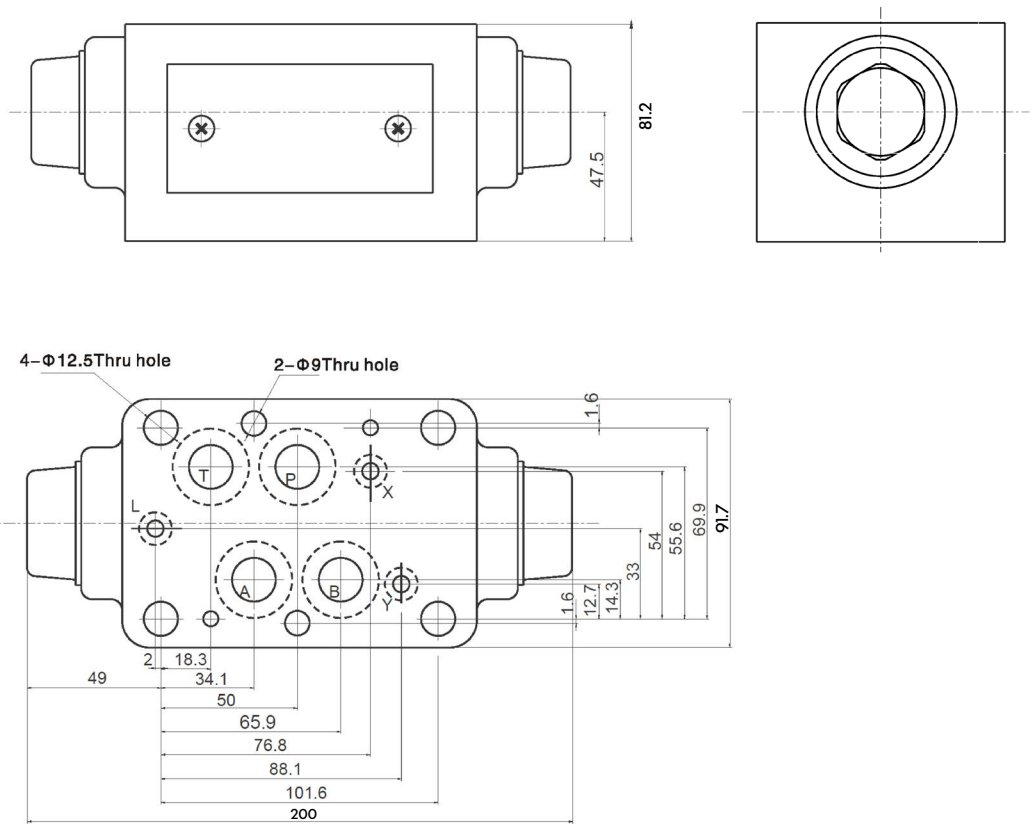




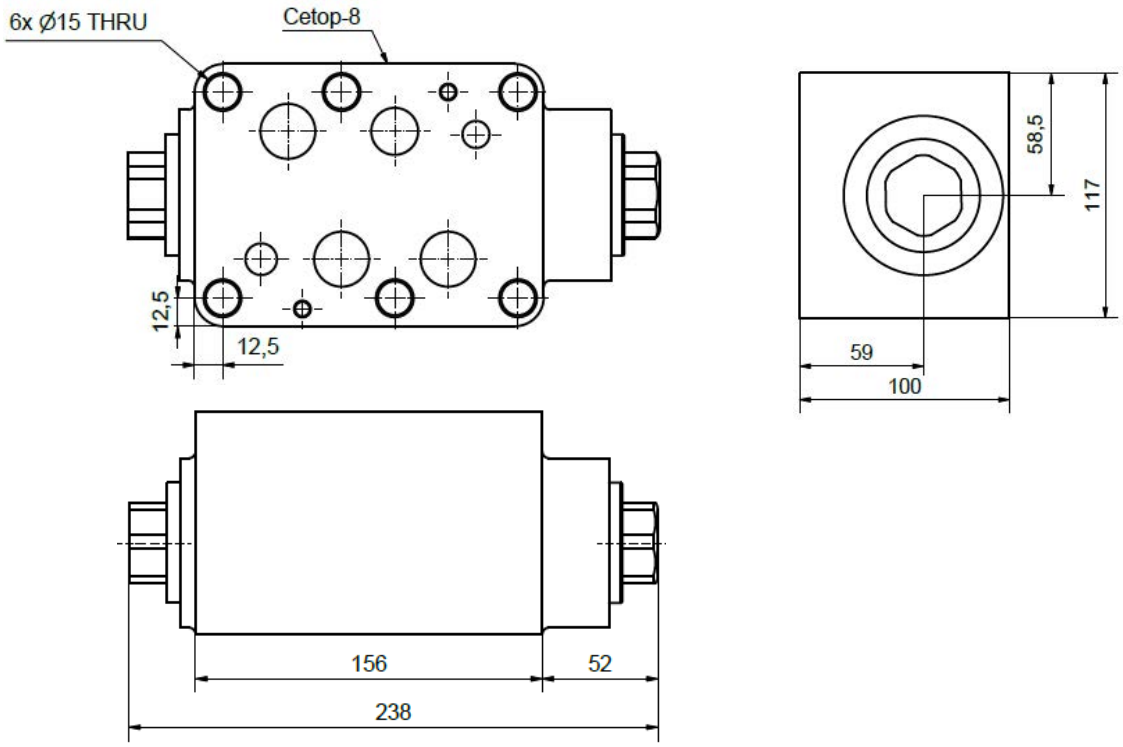
Cetop 5 / NG10



Cetop 7 / NG16



Cetop 8 / NG25





KOOV series modular Modular Cetop free flow in one direction and block flow in the counter direction.

Technical Specification

Specification	Cetop 3 / NG6
Max. working pressure (MPa)	350
Max. Flow (L/min)	50
Working fluid	Mineral oil: phosphate-ester
Fluid temp. (°C)	-20~70
Viscosity (mm^2/s)	2.8~500
O penning pressure	a: 0.05 b: 0.25 c: 0.4

Cleanliness

The maximum allowable cleanliness of the oil should be according to 9th degree of Standard NAS1638.It is suggested that the minimun filter rating should be $ß_{10} \geq 75$.

Ordering Code

KOOV-6-*-*-*

Modular Cetop

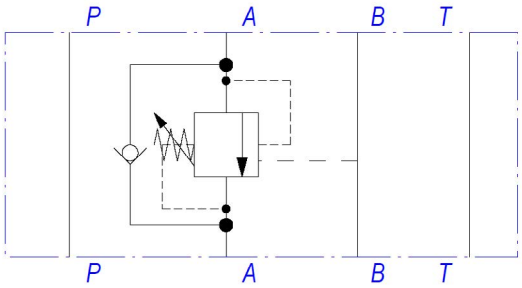
Nominal size 6 Cetop 3

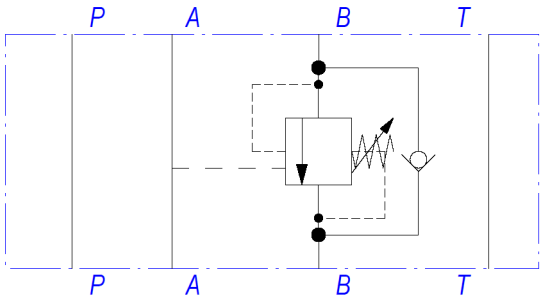
A A Pipeline
B B Pipeline
W AB Pipeline

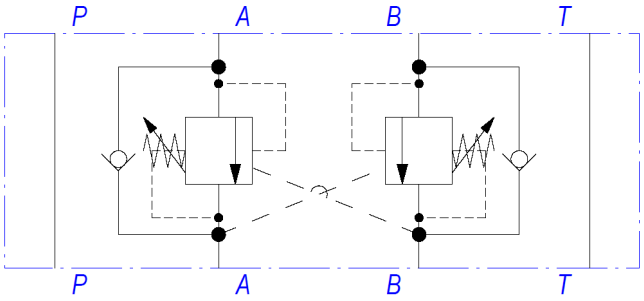
Seal Material
Omit NBR Seals
V FPM Seals

O pening pressure
a 0.05
b 0.25
c 0.4

Code Symbol



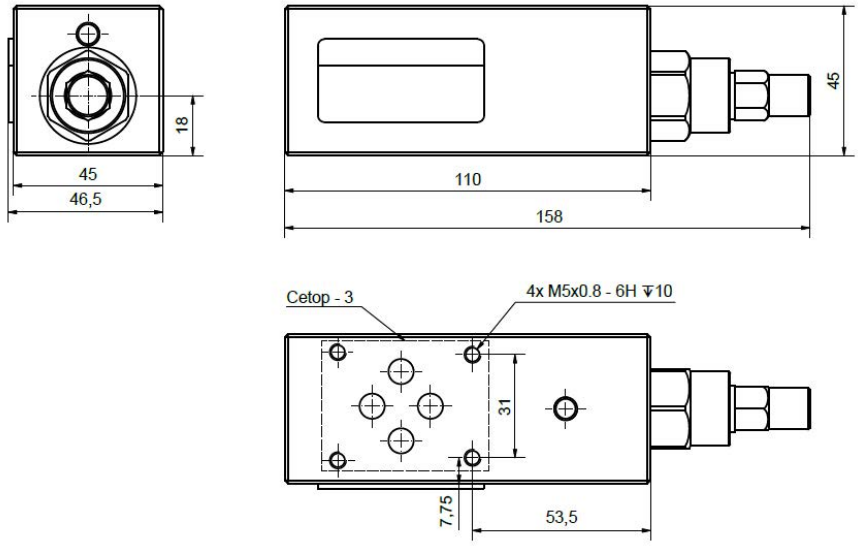




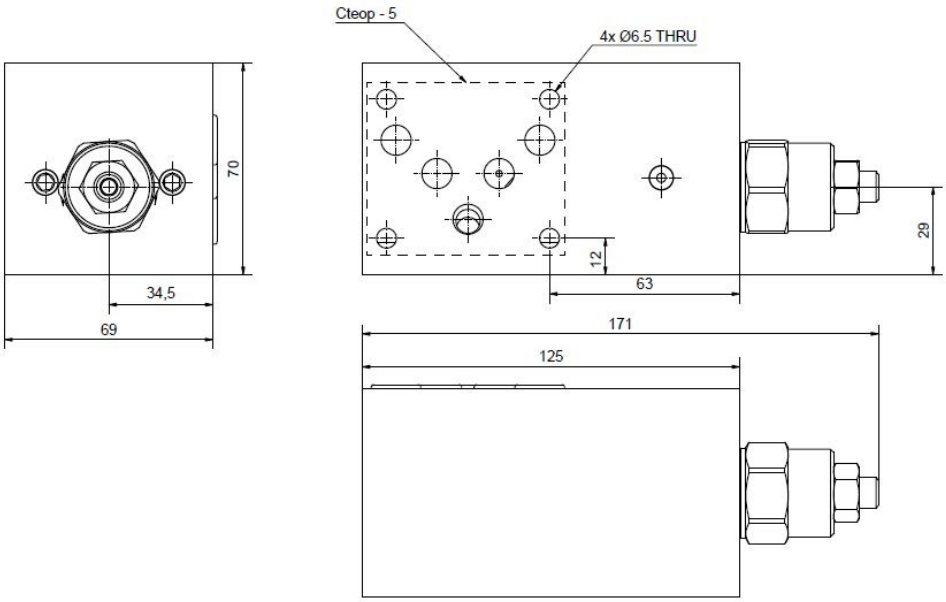
External Dimensions

Simple

Cetop 3

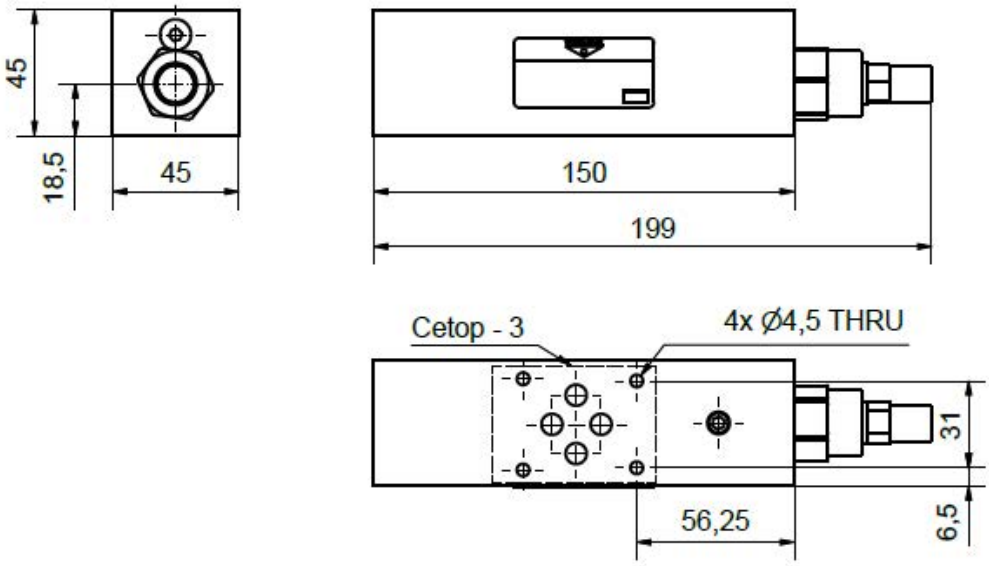


Cetop 5 / NG10

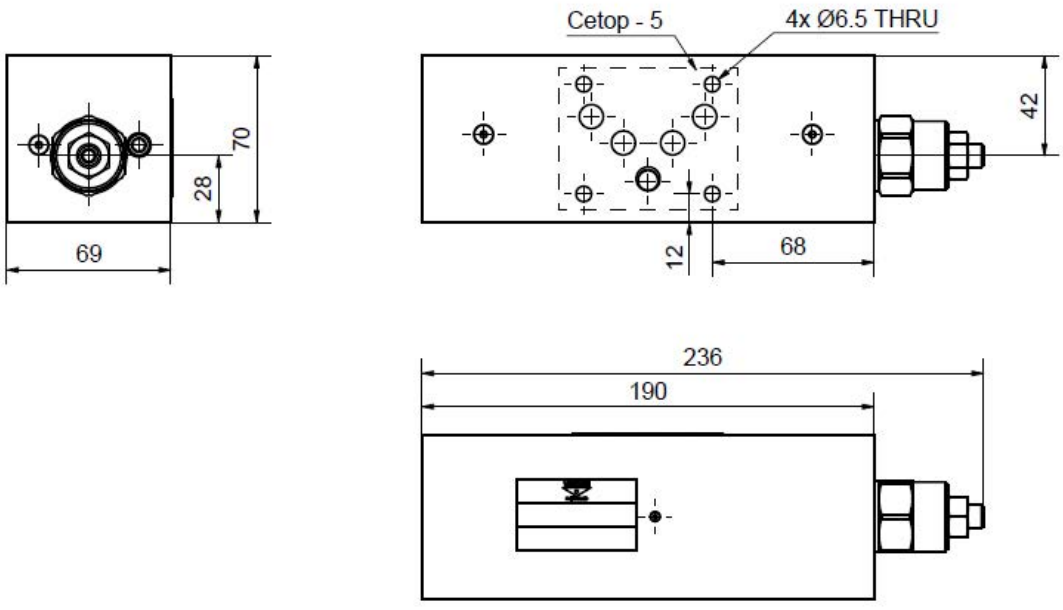


Double

Cetop 3 / NG6



Cetop 5 / NG10





ECV series modular Electric check valve free flow in one direction and block flow in the counter direction.

Technical Specification

Specification	Cetop 3 / NG6
Max. working pressure (MPa)	350
Max. Flow (L/min)	50
Working fluid	Mineral oil: phosphate-ester
Fluid temp. (°C)	-20~70
Viscosity (mm ^{2}/s)	2.8~500
O penning pressure	a: 0.05 b: 0.25 c: 0.4

Cleanliness

The maximum allowable cleanliness of the oil should be according to 9th degree of Standard NAS1638.It is suggested that the minimun filter rating should be $\beta_{10} \geq 75$.

Ordering Code

ECV-6-*-*-*

Electrical Check Valve

Nominal size 6 Cetop 3, 10 Cetop 5,

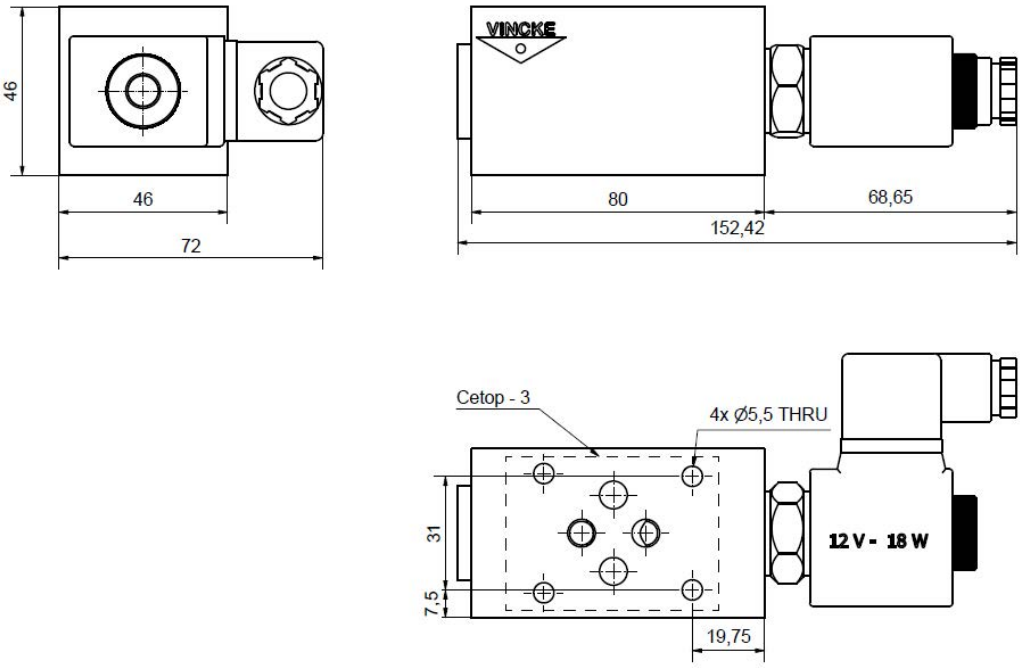
A A Pipeline
B B Pipeline
W AB Pipeline

Seal Material
Omit NBR Seals
V FPM Seals

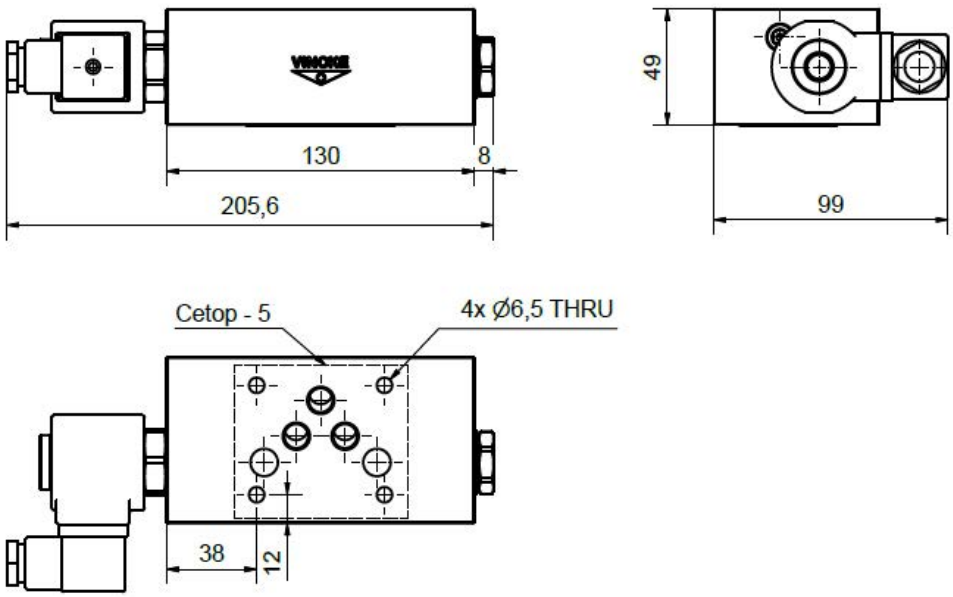
O pening pressure
a 0.05
b 0.25
c 0.4

External Dimensions

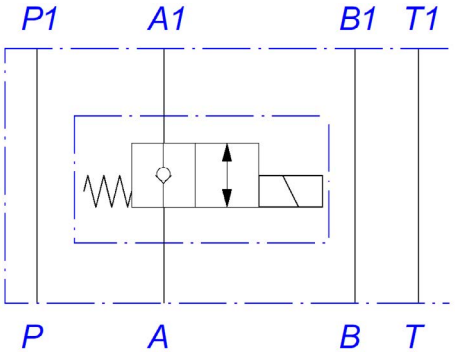
Cetop 3 / NG6

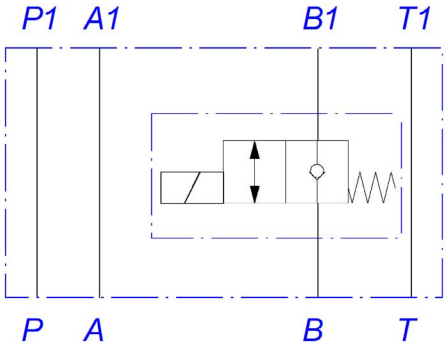


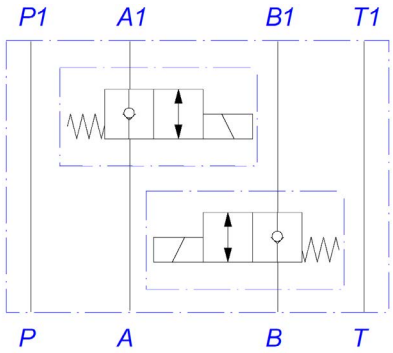
Cetop 5 / NG10

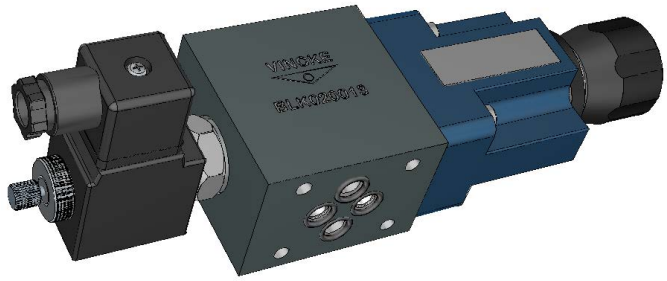


Code Symbol









FS series modular Fast-Slow Cetop free flow in one direction and block flow in the counter direction.

Technical Specification

Specification	Cetop 3 / NG6
Max. working pressure (MPa)	350
Max. Flow (L/min)	50
Working fluid	Mineral oil: phosphate-ester
Fluid temp. (°C)	-20~70
Viscosity (mm ^{2}/s)	2.8~500
O penning pressure	a: 0.05 b: 0.25 c: 0.4

Cleanliness

The maximum allowable cleanliness of the oil should be according to 9th degree of Standard NAS1638.It is suggested that the minimun filter rating should be $ß_{10} \geq 75$.

Ordering Code

FS-6-*-*-*

Fast-Slow Cetop

Nominal size 6 Cetop 3

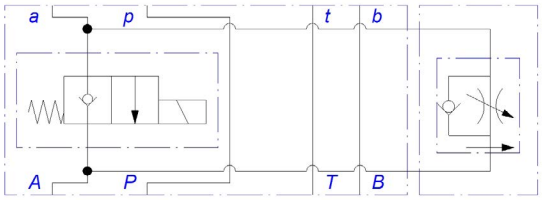
A A Pipeline
B B Pipeline
W AB Pipeline

Seal Material
Omit NBR Seals
V FPM Seals

O pening pressure
a 0.05
b 0.25
c 0.4

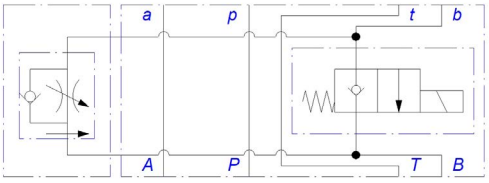
Code Symbol

FAST-SLOW NORMALLY CLOSE LINE A



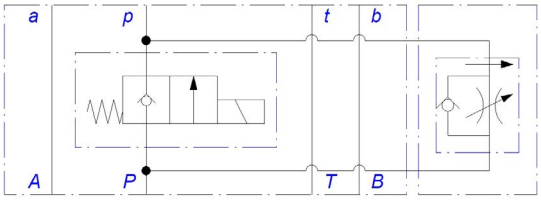
OR SIDE

FAST-SLOW NORMALLY CLOSE LINE B



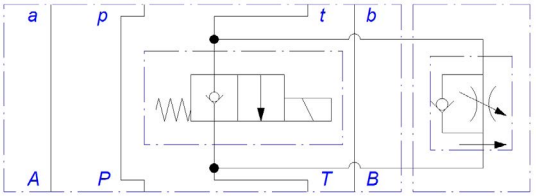
OR SIDE

FAST-SLOW NORMALLY CLOSE LINE P



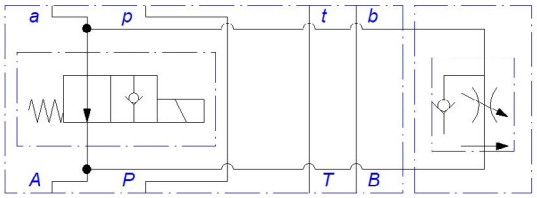
OR SIDE

FAST-SLOW NORMALLY CLOSE LINE T



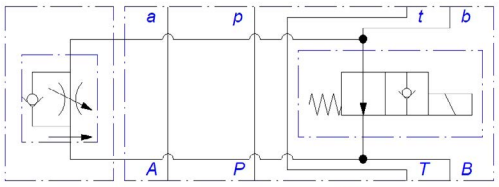
OR SIDE

FAST-SLOW NORMALLY OPEN LINE A



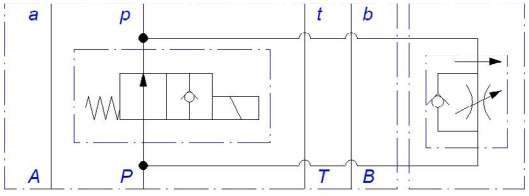
OR SIDE

FAST-SLOW NORMALLY OPEN LINE B



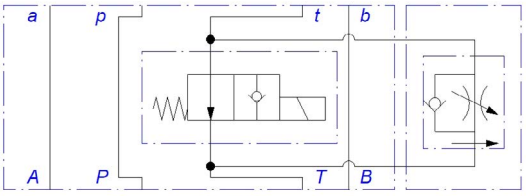
OR SIDE

FAST-SLOW NORMALLY OPEN LINE P



OR SIDE

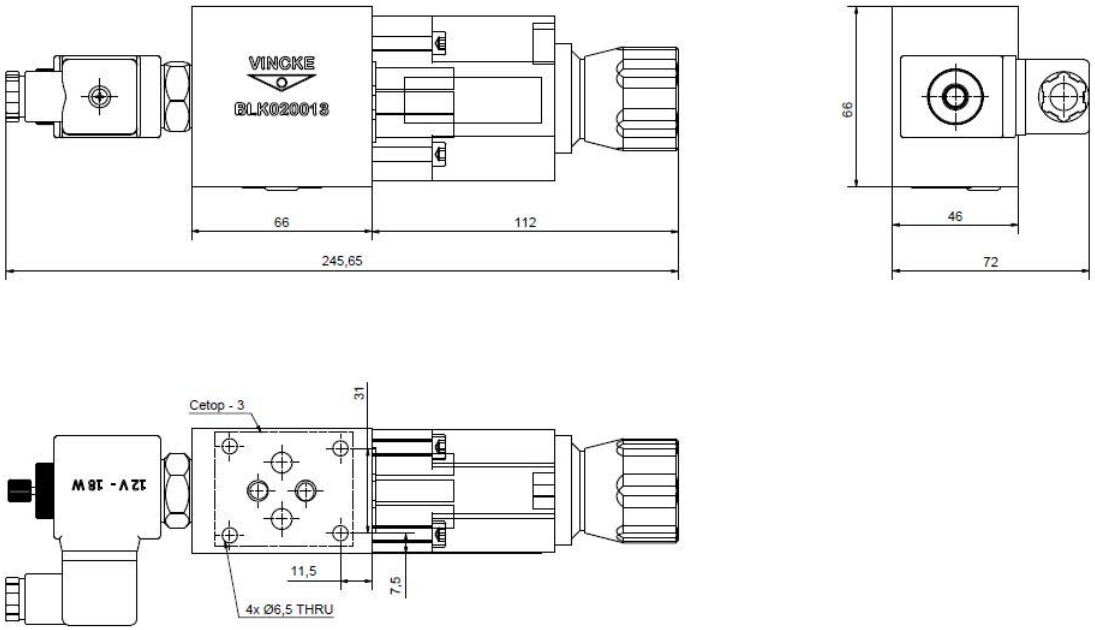
FAST-SLOW NORMALLY OPEN LINE T



OR SIDE

External Dimensions

Cetop 3 / NG6





Technical Specification

Specification		Cetop 3 / NG6								
2-way flow control valve										
Fluid		Mineral oil (HL, HLP) wit DIN51524; organic phosphate (HFD-R)								
Temperature range of oil (°C)		-20~+80								
Cleanness of oil		The highest pollution grade of oil NAS1638 grade 9, advise the filtration of filter to be $\beta_{10} \geq 75$								
Flow	Q max (L/min)	0.2	0.6	1.5	3.0	6.0	10.0	16.0	25.0	32.0
	Q min to 10MPa (ML/min)	15	15	15	15	25	50	70	100	250
	~31.5MPa (ML/min)	25	25	25	25	25	50	70	100	250
The pressure drop ΔP, when B → A flow reversely-freely		see the back curve								
Minimum differential pressure (MPa)		0.6~1.4								
Pressure stability, to ΔP=31.5MPa (%)		±2(Qmax)								
Working pressure, port A (MPa)		~31.5								
Weight (Kg)		To 1.3 (SB ~ 1.5)								
Rectifier stack board										
Nominal flow rate (L/min)		32								
Start Pressure (MPa)		~21								
Weight (Kg)		about 0.9								

Under the small flow, when flow from P (entrance of directional valve) to A (exit of flow control valve), the pressure loss is substantial.

Ordering Code

KFRC-6-7-6-3-V-*

Flow control valve

Nominal size 6 Cetop 3

Setting device
Scale knob can be locked=3
With scale knob= 7

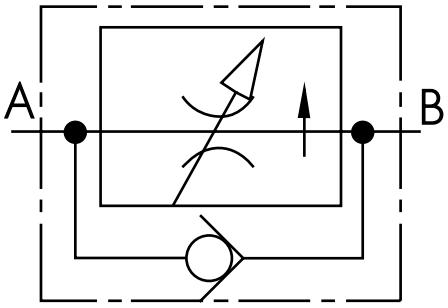
When scale is at 0 position, it corresponds to Port= 6

Explain other details with words

1.V=FKM seal
No mark= NBR seal

1.Flow (A →B)
0.2Q=to 0.2L/min
0.6Q=to 0.6L/min
1.5Q= to 1.5L/min
3Q= to 3L/min
6Q= to 6L/min
10Q= to 10L/min
16Q= to 16L/min
25Q= to 25L/min
32Q= to 32L/min

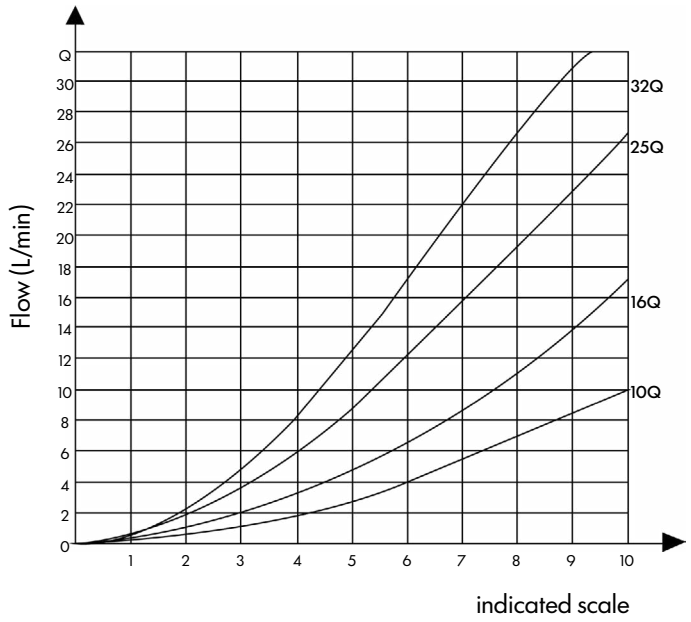
Hydraulic Symbol

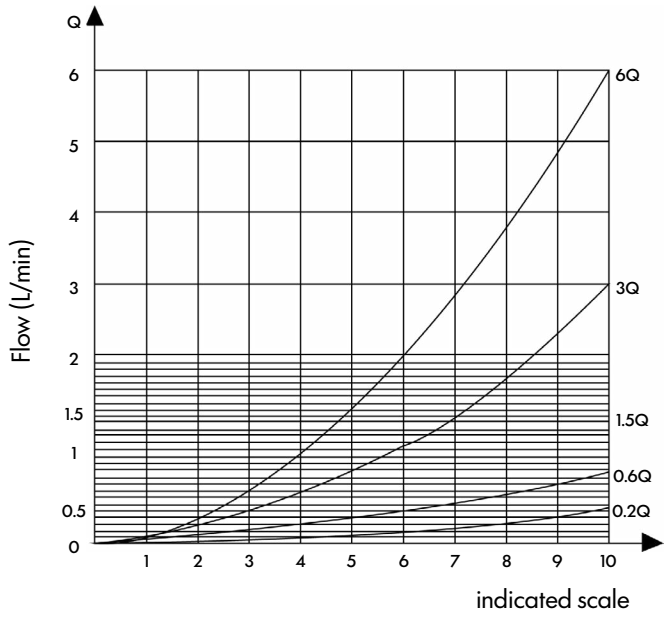


Characteristic Curve

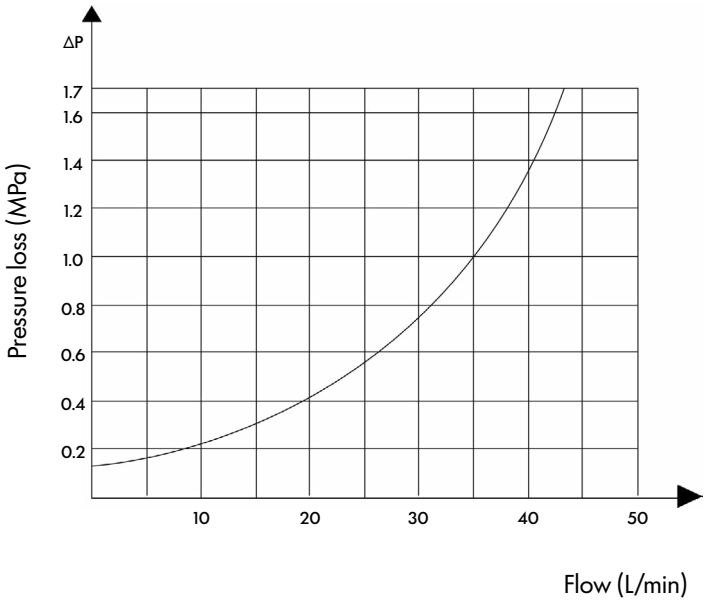
(measured when v=36mm²/s; t=50°C)

curve of flow-scale (flow control A → B

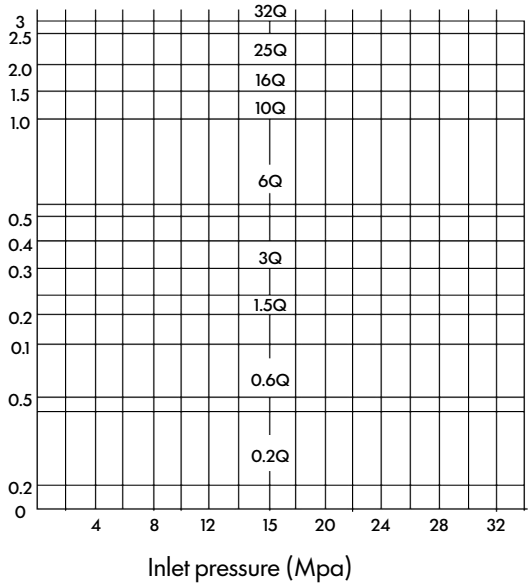




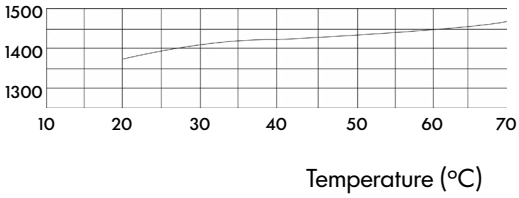
Choke orifice closed, the differential pressure goes by one-way valve from B to A



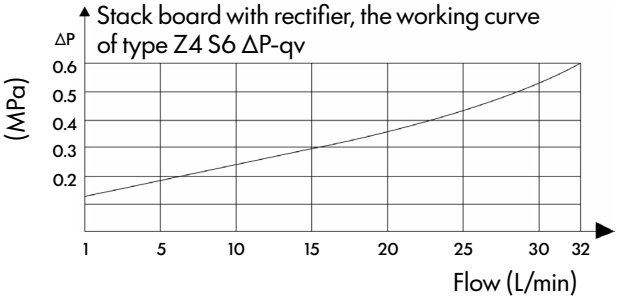
Curve of pressure and flow

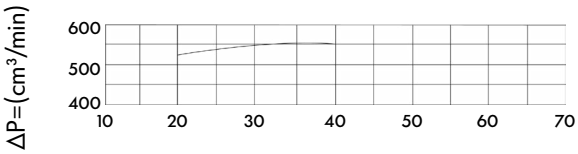


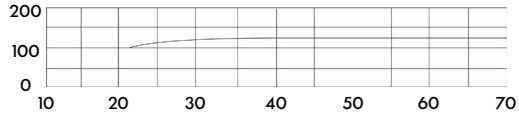
The effect from temperature whem ΔP=2Mpa



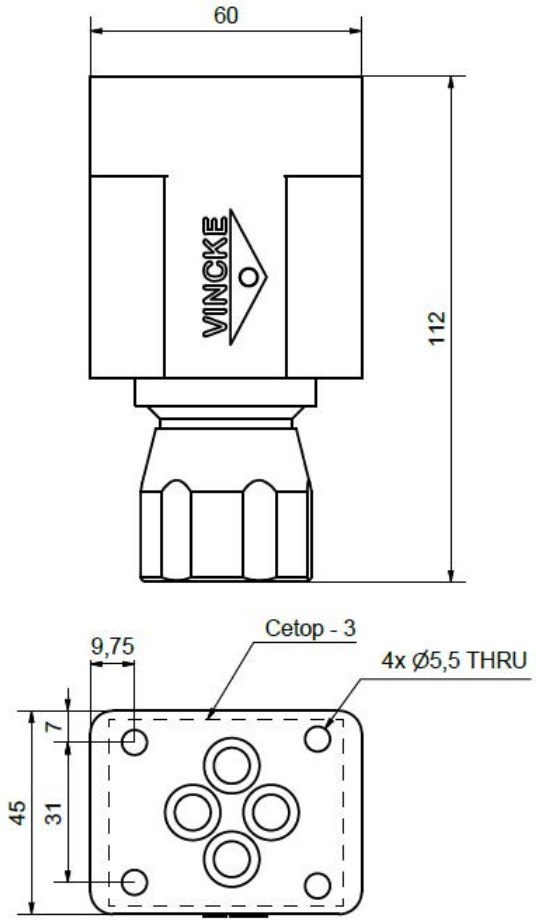
Stack board with rectifier, the working curve of type Z4 S6 ΔP-qv







External Dimensions

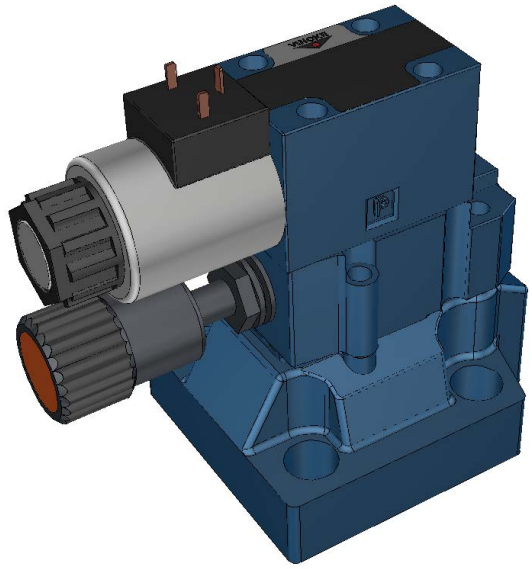


RELIEF VALVE
Pág 87

UNLOADING VALVE
Pág 92

VINCKE
HYDRAULICS

BACK TO THE MAIN INDEX



Technical Specification

Specification	Cetop 3 / TN-10		Cetop 5 / TN-20	
	10	15	20	25
Max Flow (L/min)	250	500	500	500
Max. working pressure (MPa)	35			
Working fluid	Mineral oil: phosphate-ester hydraulic oil			
Fluid Temp (C°)	-20~70			
Viscosity (Mm ²/s)	12~380			
Working press (MPa)	5 10 20 31.5 35			

Cleanliness

The maximum allowable cleanliness of the oil should be according to 9th degree of Standard NAS1638.It is suggested that the minimum filter rating should be $\beta_{10} \geq 75$.

Ordering Code

DAM-*-*-10-*-*-B-1-Y-*-DC24-*-*-*-*-*

Relief valve

Omit with solenoids directional valve
W Without solenoids directional valve

Omit Pilot operated valve
C Pilot operated without main cartridge (not marked diameter)
Pilot operated with main cartridge (marked diameter)

Nominal size 10-20

Omit Subplate connection
G Pipe type connection-G Scew
G2 Pipe type connection-M Scew

Working pressure
5 to 5MPa
10 to 10MPa
20 to 20MPa
31.5 to 31.5MPa
35 to 35MPa

A Always close
B Always open

1 Rotary knob
2 Sleeve with hehagon and protective cap

Seal Material
omit NBR
V FPM

Pilot operated drainage port thread
Omit G1/4"
2 M14X1.5

Omit no damping[2)]
08 0.8 Damping
10 1.0 Damping
12 1.2 Damping

Omit whitout push road emergency[3)]
N9 with concealed push road emergency

Z5L Square connector with light[4)]

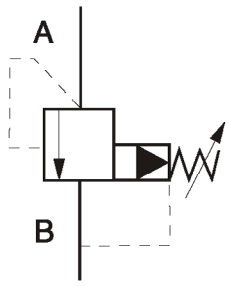
Working voltage[5)]
D12 DC12V
D24 DC24V
A110 AC110V
A220 AC220V
B110 (B110V Rectifield)
B220 (B220V Rectifield)

Omit Standard Type[6)]
U minimum setting pressure is lower type

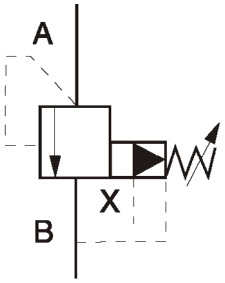
Omit Intl cntrl intl disch
X Extl cntrl intl disch
Y Intl cntrl extl disch
XY Extl cntrl extl disch

Code Symbol

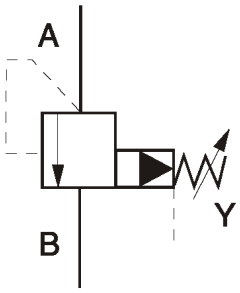
Y...



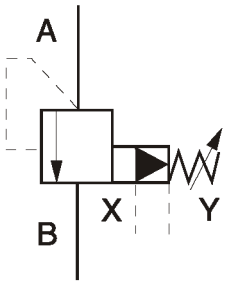
Y..X/..



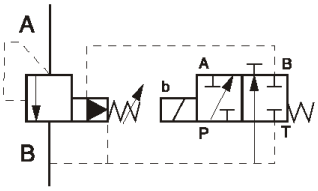
Y..Y/..



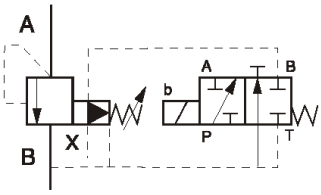
Y..XY/..



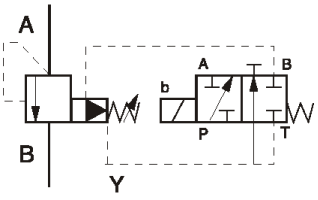
YW..
Always close



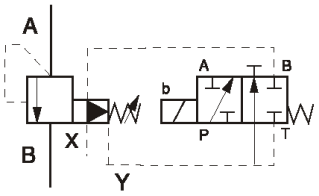
YW..X/
Always close



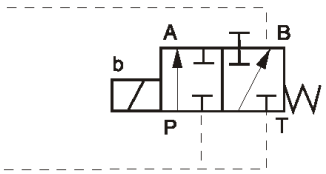
YW..Y/
Always close



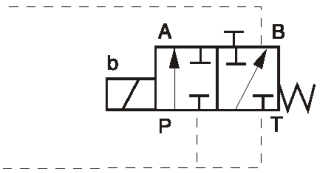
YW..XY/
Always close



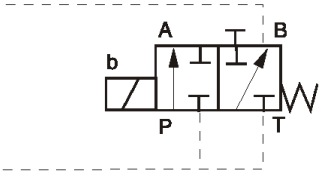
Always open



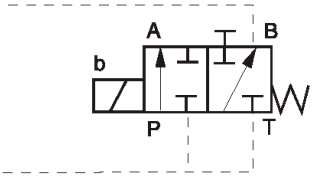
Always open



Always open

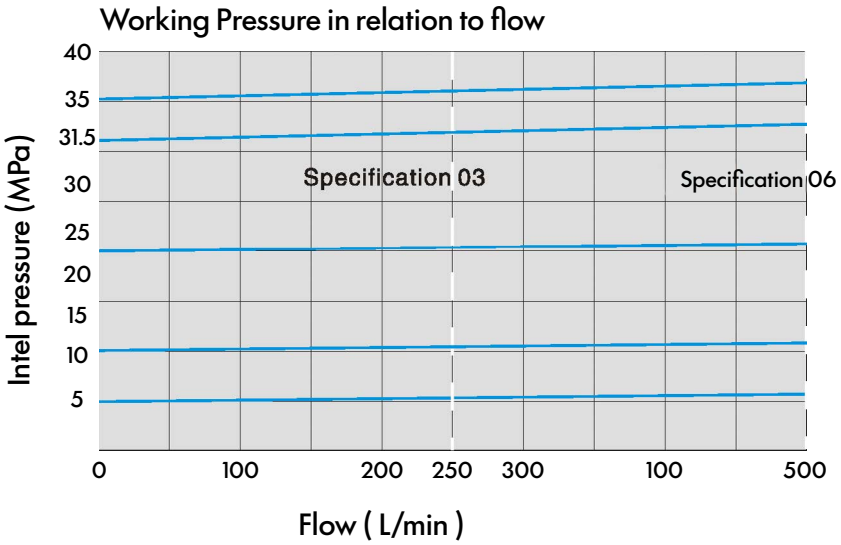


Always open

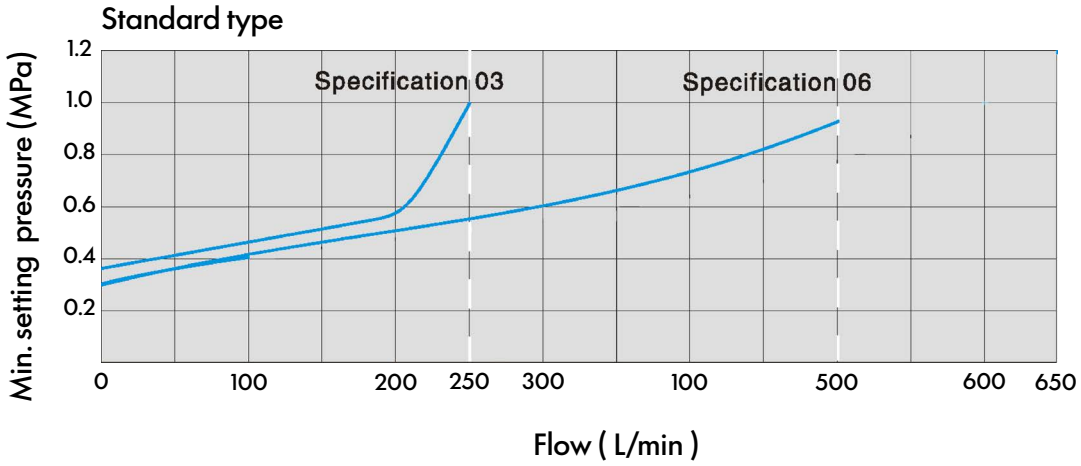


Performance Curve

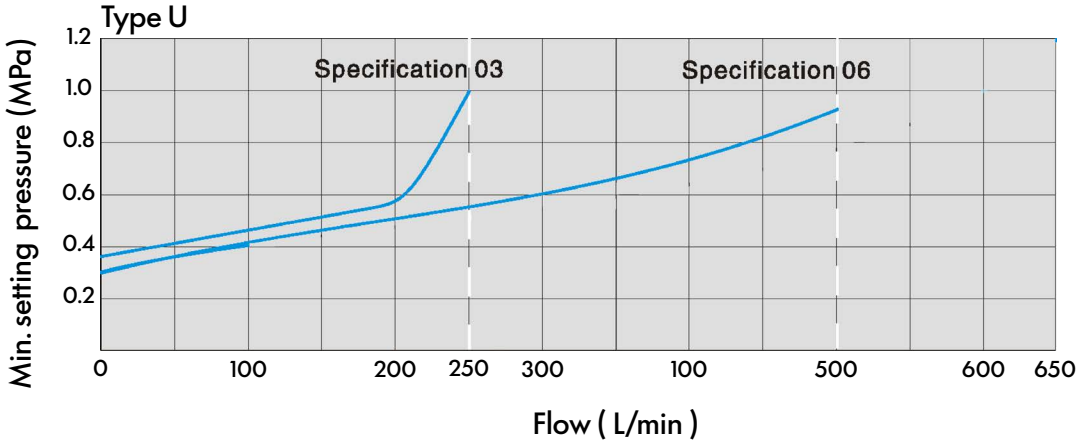
1) The characteristic curves were measured with external, pressureless, pilot oil drain.
2)In the case of internal pilot oil drain, the inlet pressure increases by the outlet pressure in port T.



Minimum set pressure and circulation pressure in dependence upon the flow standard version.

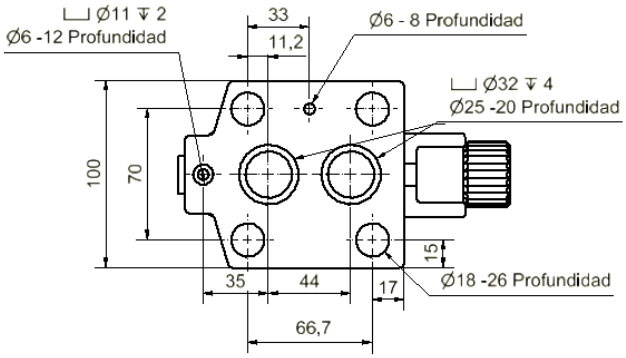


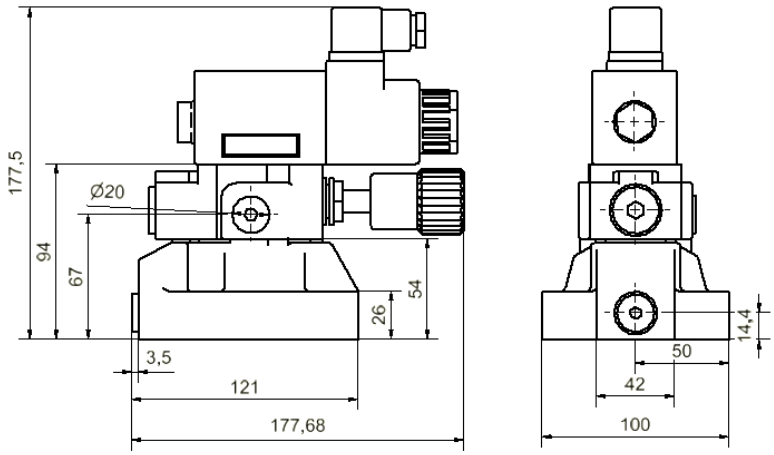
Minimum set pressure and circulation pressure in dependence upon the flow version "u"



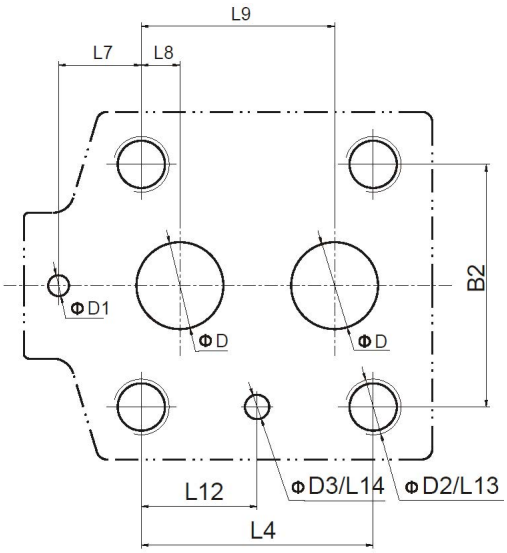
The characteristic curves are valid for outlet pressure B:0 over the entire flow range.

External Dimensions



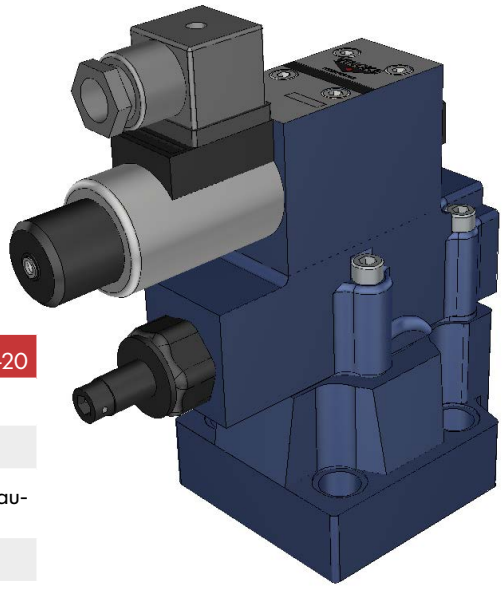


Subplate Mounting Size



Specification	Mounting screw	Tighten torque
Y/YW-03	M12x45-10.9	130Nm
Y/YW-06	M16x50-10.9	310Nm

Specification	B1	B2	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14	D	D1	D2	D3
Y/YW-03	77.9	54	95	90	67	54	23.5	149.3	0	22.1	47.5	14	159.7	22.1	20	5	12	6	M12	7
Y/YW-06	100	69.8	122.2	117.5	83.7	66.7	26.5	161.8	23.8	11.1	55.6	11	172.2	33.3	25	6	25	6	M16	7



Technical Specification

Specification	Cetop 3 / TN-10	Cetop 5 / TN-20
Max. working pressure (MPa)	31.5	
Max Flow (L/min)	250	500
Working fluid	Mineral oil: phosphate-ester hydraulic oil	
Fluid Temp (C°)	-20~70	
Viscosity (Mm ^{2}/s)	12~380	
Working press (MPa)	5 10 20 31.5 35	

Cleanliness

The maximum allowable cleanliness of the oil should be according to 9th degree of Standard NAS1638.It is suggested that the minimum filter rating should be $ß_{10} \geq 75$.

Ordering Code

DIU-*-10-*-*-*-Y-*-*

Sequence valve

Pilot operated valve
Omit Pilot operated withot main cartridge
(not marked diameter)
C Pilotoperated with man cartridge
(marked diameter)

Nominal size 10-20

Working press
5 toMPa
10 toMPa
20 to20MPa
31.5 to31.5MPa
35 to 35MPa

Omit Without check valve
D With check valve

Seal Material
omit NBR
V FPM

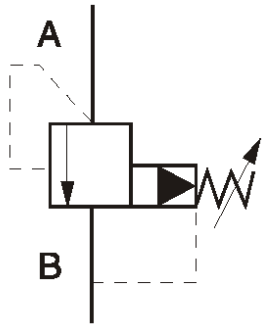
Pilot operated drainage port thread
Omit G1/4"
2 M14X1.5

Omit Intl cntrl intl disch
X Extl cntrl intl disch
Y Intl cntrl extl disch
XY Extl cntrl extl disch

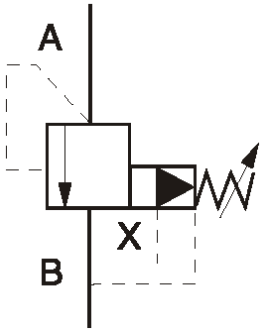
1 Rotary knob
2 Sleeve with hexagon and protective cap

Code Symbol

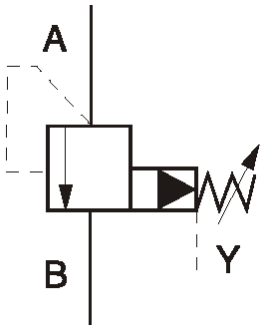
YS..



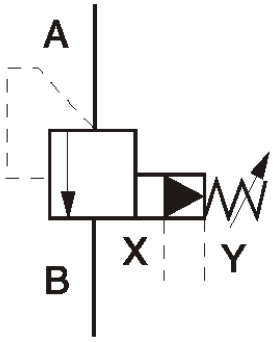
YS..X/..



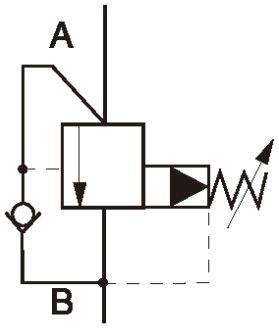
YS..Y/..



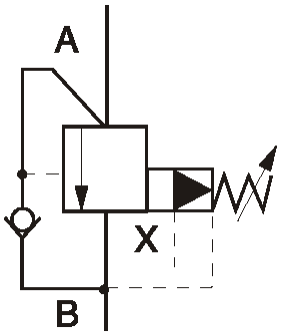
YS..XY/..



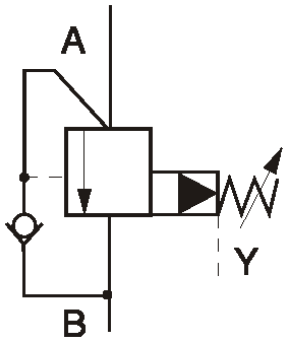
YS..D..



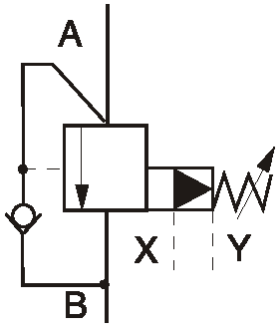
YS..D..X/..



YS..D..Y/..

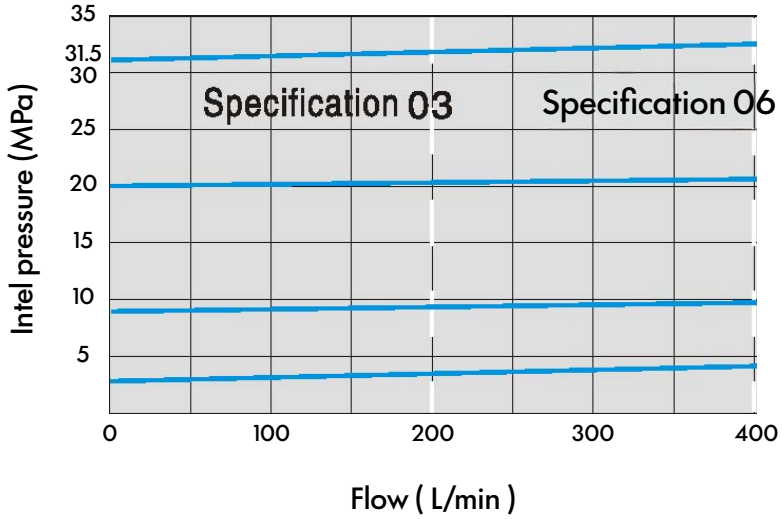


YS..D..XY/..

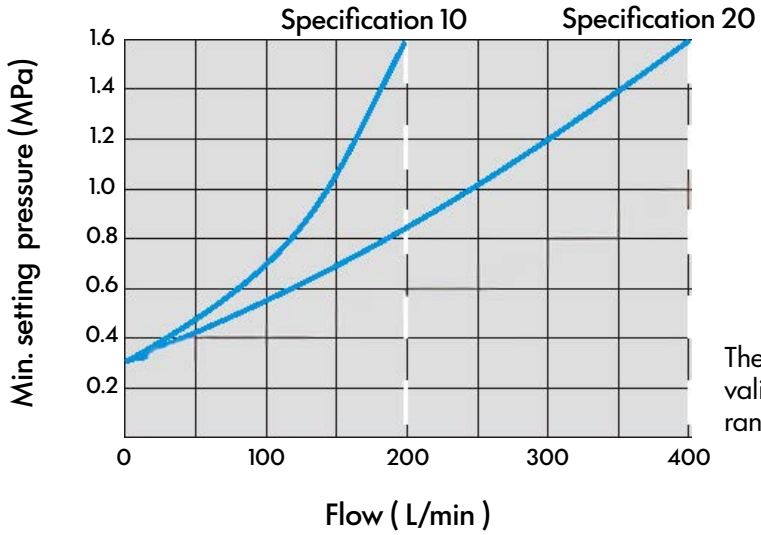


Performance Curve

Intel pressure in relation to the flow (A → B)

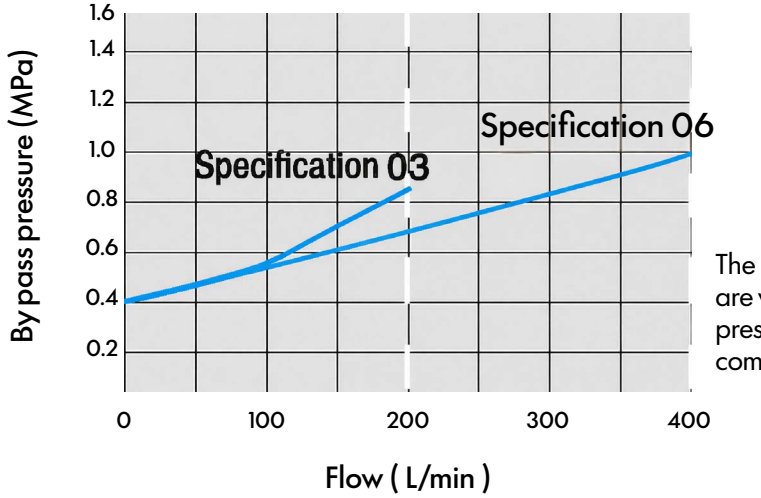


Minimum settable pressure in relation to the flow (A → B)
(=bypass pressure version "...X...")



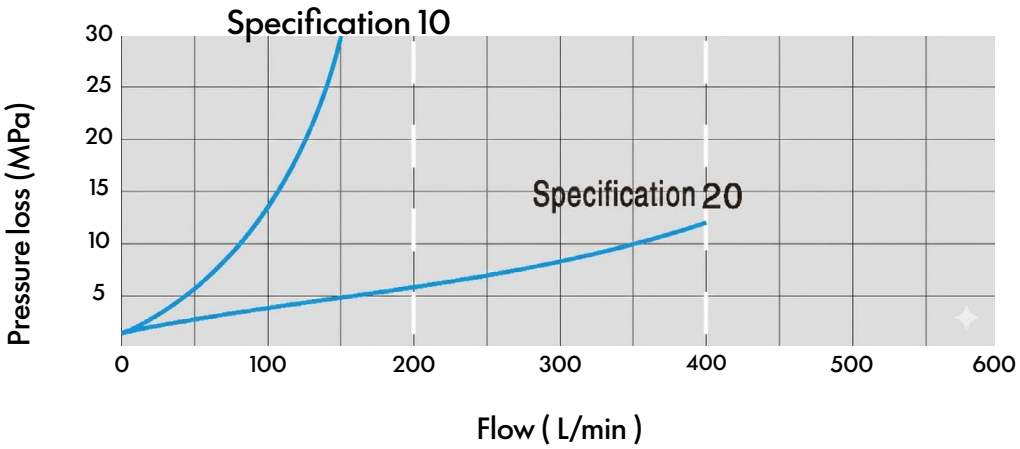
The characteristic curve are valid for the complete flow range

Bypass pressure in relation to (A → B)
(only version"...XY...")



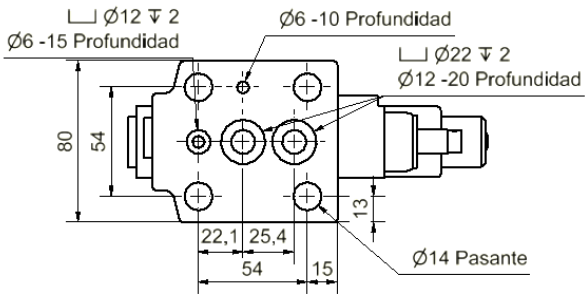
The characteristic curves are valid for outlet pressure P_B =0 for the complete flow range

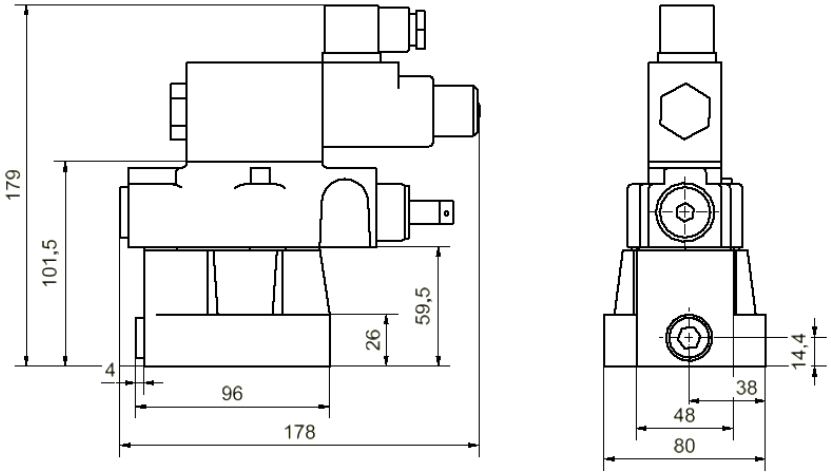
The curve ΔP-Q pass through the check valve



External Dimensions

Cetop 3 / NG6





Cetop 5/ NG10

