Z*-P

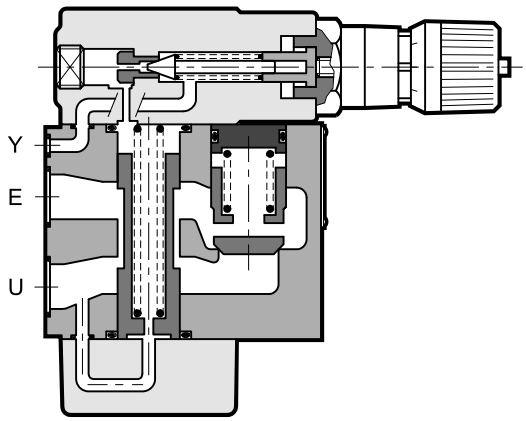
PRESSURE REDUCING VALVES

SERIES 22

SUBPLATE MOUNTING

Z3-P ISO 5781-06
Z5-P ISO 5781-08

OPERATING PRINCIPLE



— The Z*-P type valves are used when a branch with a lower pressure than the main one is desired in the hydraulic circuits.

Being normally open, they allow passage of oil up to the point when the outlet pressure is less than that set on the valve; the valve closes and keeps the outlet pressure constant when it reaches the set value. The intake pressure fluctuation, for values greater than the set values, does not affect the reduced outlet pressure, and furthermore the particular design of the valve prevents exceeding the set value even in transients.

The drainage, to be connected directly to the tank, discharges about 0,8 l/min. The valves are available, upon request, with reduced drainage (0,4 l/min).

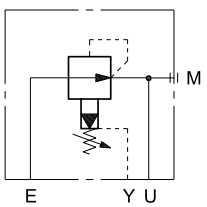
— Available even with incorporated check valve upon request, with cracking pressure of 0,5 bar.

PERFORMANCES (measured with mineral oil of viscosity 36 cSt at 50°C)

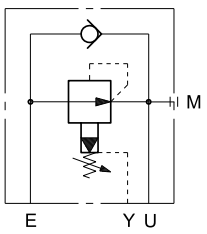
		Z3-P	Z5-P
Maximum operating pressure	bar	250	
Maximum flow rate	l/min	40	110
Drain flow rate: for Z*-P for Z*-P*R	l/min	0,8 0,4	
Ambient temperature range	°C	-20 / +60	
Fluid temperature range	°C	-20 / +80	
Fluid viscosity range	cSt	10 ÷ 400	
Fluid contamination degree	According to ISO 4406:1999 classe 20/18/15		
Recommended viscosity	cSt	25	
Mass	kg	3,9	6,1

HYDRAULIC SYMBOLS

Z*-P



Z*-P/C



1 - IDENTIFICATION CODE

Z		-	P	5		/		/	22	/	

Pressure reducing valve

Size:
3 = ISO 5781-06-07-*-00
(CETOP 4.4.5-2-06-250)
5 = ISO 5781-08-10-*-00
(CETOP 4.4.5-2-08-250)

Subplate mounting

Pressure adjustment range:
5 ÷ 210 bar

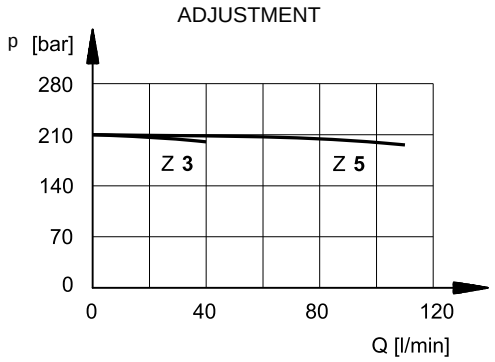
R = Reduced drainage (omit if not required)

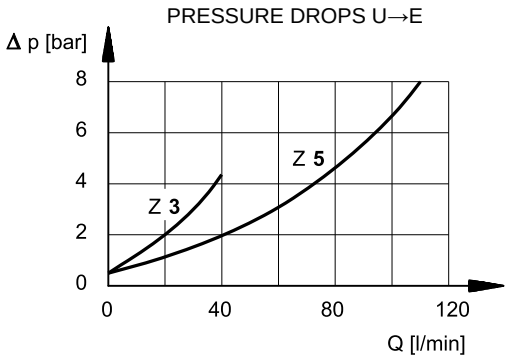
C = check valve for free flow from U→E
Cracking pressure 0,5 bar
(omit if not required)

Series No.
(the overall and mounting dimensions remain unchanged from 20 to 29)

Seals:
omit for mineral oils
V = viton for special fluids

2 - CHARACTERISTIC CURVES (values obtained with viscosity of 36 cSt at 50°C)





3 - HYDRAULIC FLUIDS

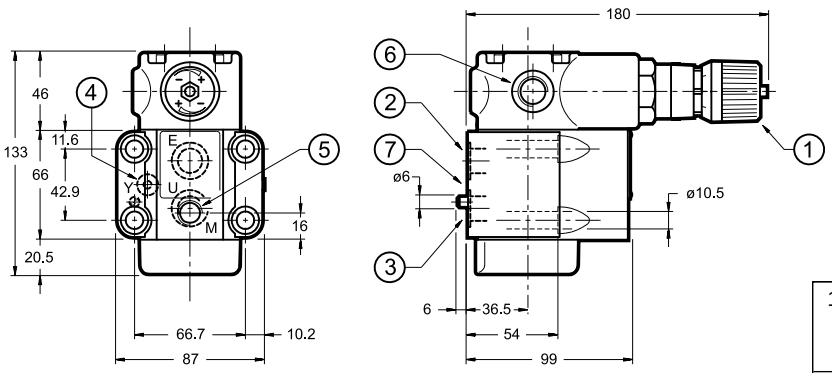
Use mineral oil-based hydraulic fluids HL or HM type, according to ISO 6743-4. For these fluids, use NBR seals. For fluids HFDR type (phosphate esters) use FPM seals (code V).

For the use of other kinds of fluid such as HFA, HFB, HFC, please consult our technical department. Using fluids at temperatures higher than 80 °C causes a faster degradation of the fluid and of the seals characteristics.

The fluid must be preserved in its physical and chemical characteristics.

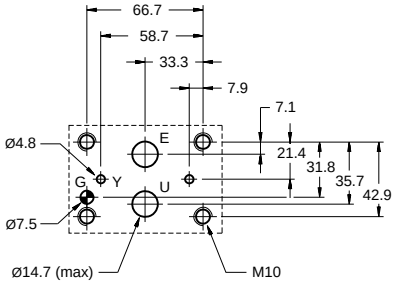
4 - Z3-P OVERALL AND MOUNTING DIMENSIONS

dimensions in mm



1	SICBLOC adjustment knob. To operate, push and rotate at the same time.
2	Intake
3	Outlet port
4	Drainage port
5	Pressure gauge port 1/4” NPT
6	Supplementary tube port for drainage 1/4” BSP
7	Mounting surface with sealing rings: N. 2 OR type 3068 (17.13x2.62) N. 2 OR type 2021 (5.28x1.78) 90 Shore

MOUNTING SURFACE:
ISO 5781-06-07-*-00 (CETOP 4.4.5-2-06-250)

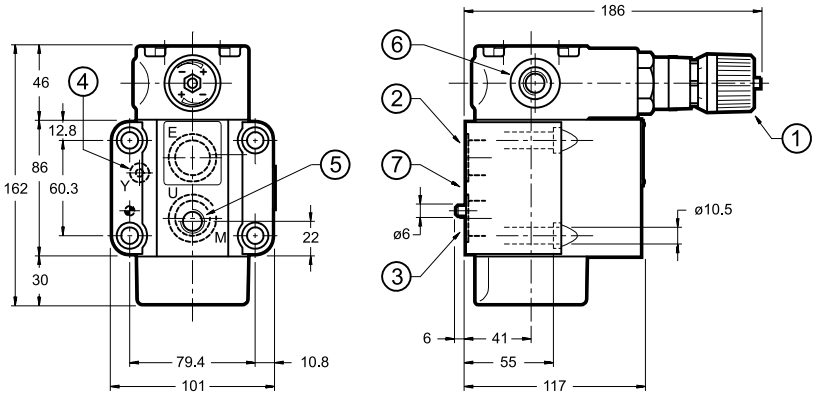


NOTE: the position of the Y port corresponds to the position of the X port provided for by the ISO Standard

FASTENING BOLTS:
4 bolts M10x70
Tightening torque: 40 Nm

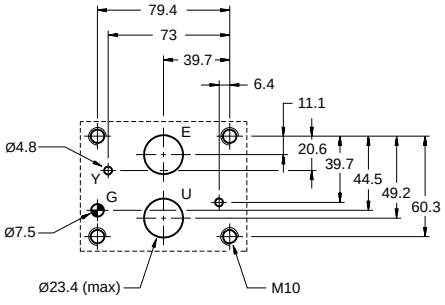
5 - Z5-P OVERALL AND MOUNTING DIMENSIONS

dimensions in mm



1	SICBLOC adjustment knob. To operate, push and rotate at the same time.
2	Intake
3	Outlet port
4	Drainage port
5	Pressure gauge port 1/4” NPT
6	Supplementary plug for drainage 1/4” BSP
7	Mounting surface with sealing rings: N. 2 OR type 3100 (25.07x2.62) 90 Shore N. 2 OR type 2021 (5.28x1.78) 90 Shore

MOUNTING SURFACE:
ISO 5781-08-10-*-00 (CETOP 4.4.5-2-08-250)



NOTE: the position of the Y port corresponds to the position of the X port provided for by the ISO Standard

FASTENING BOLTS:
4 bolts M10x70
Tightening torque: 40 Nm

6 - SUBPLATES (see catalogue 51 000)

	Z3-P	Z5-P
Type	PMSZ3-AI4G with rear ports	PMSZ5-AI6G with rear ports
Port dimensions: - E, U - X, Y	 1/2" BSP 1/4" BSP	 1" BSP 1/4" BSP

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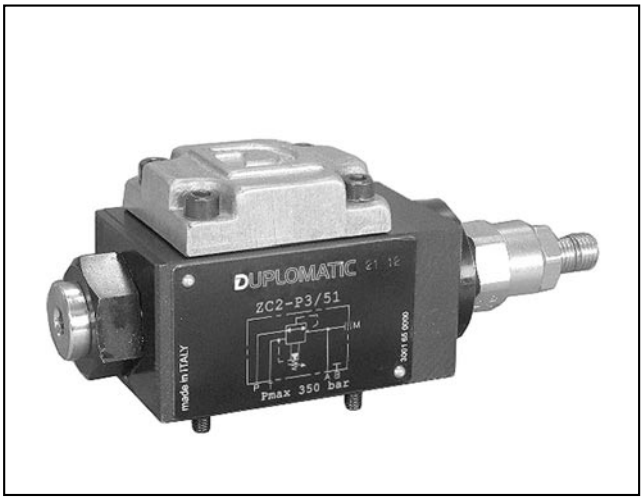
duplomaticmotionsolutions.com



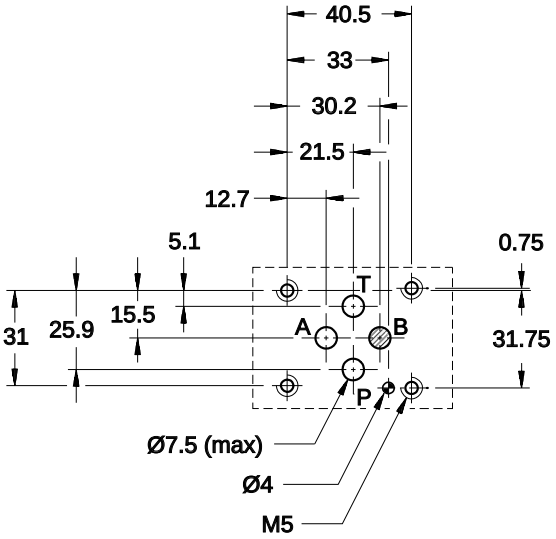
ZC2
BALANCING VALVES
SERIES 51

SUBPLATE MOUNTING
ISO 4401-03

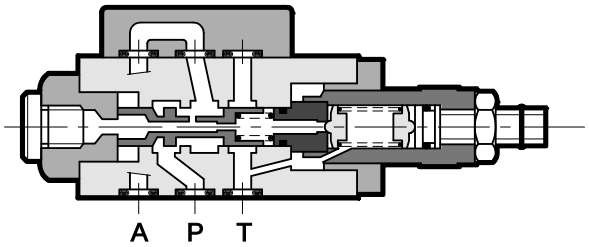
p max **350** bar
Q max **25** l/min

MOUNTING INTERFACES

ISO 4401-03-02-0-05
(CETOP 4.2-4-03-350)



OPERATING PRINCIPLE



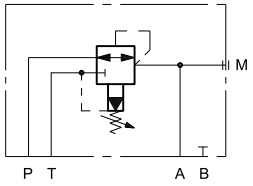
— The type ZC2 balancing valves act as pressure reducing valves that, besides reducing the pressure from line P to user A, allow the flow to return from user A to discharge T when a pressure greater than the set value is generated in the downstream circuit (user A). (A typical case of hydraulic counterweight or load balancing)

— They have a mounting surface in accordance with ISO 4401 standards. Port B is never used.

PERFORMANCES (measured with mineral oil of viscosity 36 cSt at 50°C)

Maximum operating pressure	bar	350
Maximum flow rate	l/min	25
Ambient temperature range	°C	-20 / +60
Fluid temperature range	°C	-20 / +80
Fluid viscosity range	cSt	10 ÷ 400
Fluid contamination degree	According to ISO 4406:1999 class 20/18/15	
Recommended viscosity	cSt	25
Mass	kg	1,3

HYDRAULIC SYMBOL



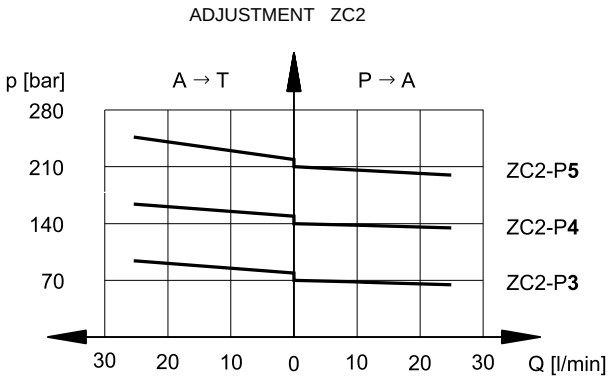
1 - IDENTIFICATION CODE

Z	C	2	-	P		/		/	51	/	

- Balancing valve
- Size: ISO 4401-03
- Subplate mounting
- Pressure adjustment range:
  3 = 10 ÷ 70 bar **4** = 30 ÷ 140 bar **5** = 50 ÷ 210 bar
- **M1**= Adjustment knob
  (omit for adjustment with countersunk hex screw)
- Series No.
  (the overall and mounting dimensions remain unchanged from 50 to 59)
- Seals:
  omit for mineral oils
  V = viton for special fluids

2 - CHARACTERISTIC CURVES

(values obtained with viscosity of 36 cSt at 50°C)



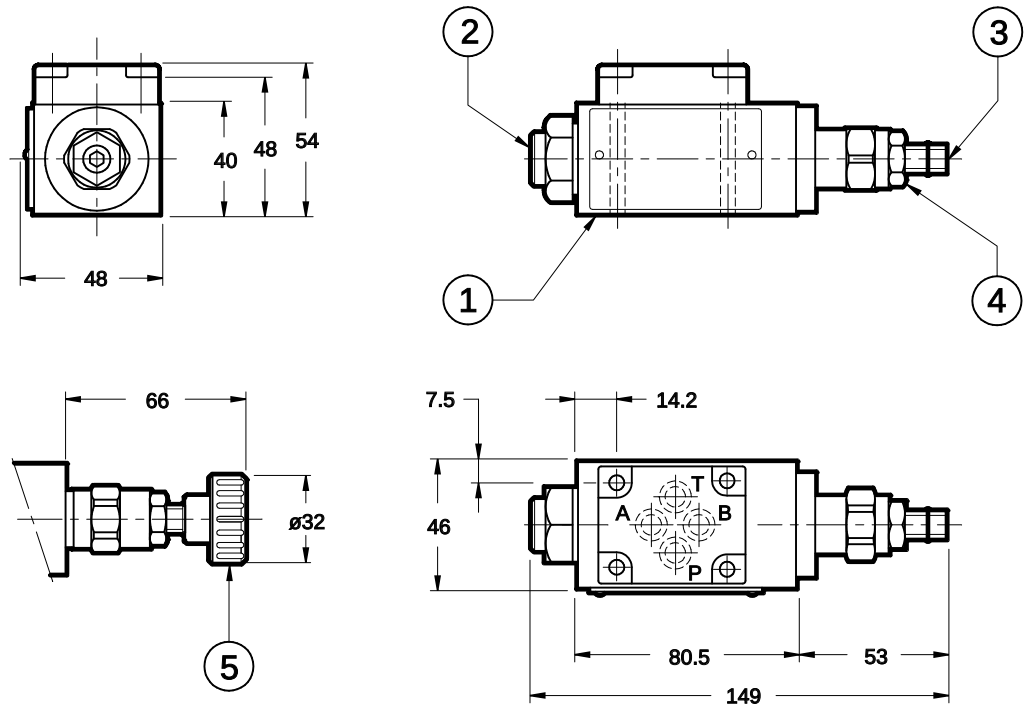
3 - HYDRAULIC FLUIDS

Use mineral oil-based hydraulic fluids HL or HM type, according to ISO 6743-4. For these fluids, use NBR seals. For fluids HFDR type (phosphate esters) use FPM seals (code V). For the use of other kinds of fluid such as HFA, HFB, HFC, please consult our technical department.

Using fluids at temperatures higher than 80 °C causes a faster degradation of the fluid and of the seals characteristics. The fluid must be preserved in its physical and chemical characteristics.

4 - ZC2 OVERALL AND MOUNTING DIMENSIONS

dimensions in mm

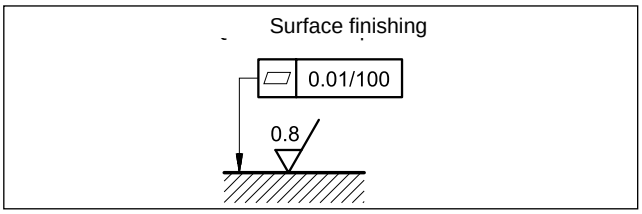


1	Mounting surface with sealing rings: 4 OR type 2037 (9.25x1.78) 90 Shore
2	Pressure gauge port 1/4" BSP
3	Countersunk hex adjustment screw: Spanner 5. Clockwise rotation to increase pressure
4	Locking nut: spanner 17
5	Adjustment knob: M1

9 - INSTALLATION

The ZC2 valves can be installed in any position without impairing correct operation.

Valves are fixed by means of screws or tie rods on a flat surface with planarity and roughness equal to or better than those indicated in the relative symbols. If minimum values are not observed, fluid can easily leak between the valve and support surface.



6 - FASTENING BOLTS

Fastening bolts are delivered with the valve.

N. 4 bolts M5x55
Tightening torque: 5 Nm (A 8.8 screws)

7 - SUBPLATES (see cat. 51 000)

Type PMMD-AI3G ports on rear 3/8" BSP
Type PMMD-AL3G side ports 3/8" BSP

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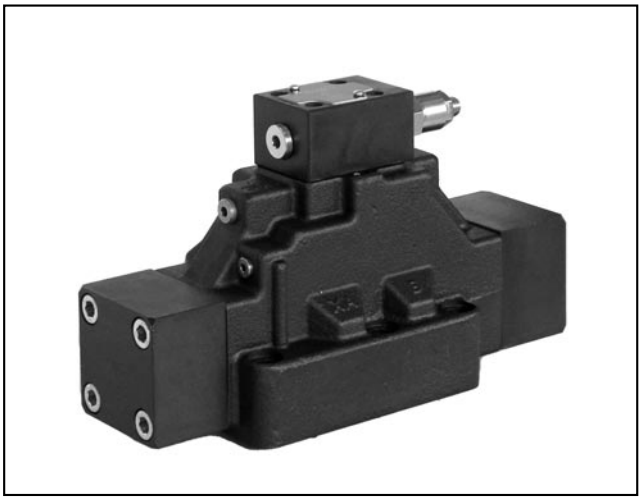
duplomaticmotionsolutions.com



DZC*

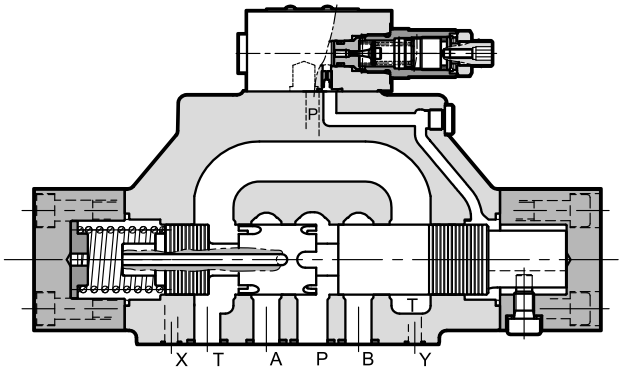
THREE-PORT PRESSURE REDUCING VALVES

SERIES 20

DZC5	**CETOP P05**
DZC5R	**ISO 4401-05**
DZC7	**ISO 4401-07**
DZC8	**ISO 4401-08**

p max **350** bar
Q max (see table of performances)

OPERATING PRINCIPLE



— The DZC* valves, besides reducing the pressure from line P to working line A, allow the flow to return from the line A to the return line T when a pressure greater than the set value is generated in the downstream circuit (flow path A): a typical example of hydraulic counterweight or load balancing.

— They have a mounting surface according to ISO 4401 standards. Port B is never used.

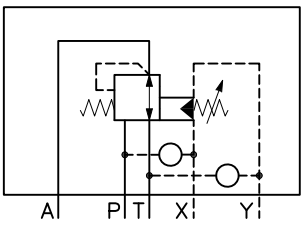
— They are available in three different sizes for flow rates up to 500 l/min.

PERFORMANCES

(obtained with mineral oil with viscosity of 36 cSt at 50°C)

		DZC5 DZC5R	DZC7	DZC8
Maximum operating pressure	bar	350		
Maximum flow	l/min	150	300	500
Pilot flow rate	l/min	1.1		
Ambient temperature range	°C	-20 / +60		
Fluid temperature range	°C	-20 / +80		
Fluid viscosity range	cSt	10 ÷ 400		
Fluid contamination degree	According to ISO 4406:1999 class 20/18/15			
Recommended viscosity	cSt	25		
Mass	kg	5.6	7.3	14.1

HYDRAULIC SYMBOL (typical)



1 - IDENTIFICATION CODE

D	Z	C		-		/	20		-			/	

Three-port pressure reducing valve

Nominal size:
5 = CETOP P05 (**NOTE**)
5R = ISO 4401-05
7 = ISO 4401-07
8 = ISO 4401-08

Pressure adjustment range:
070 = 2 ÷ 70 bar
140 = 2 ÷ 140 bar
210 = 2 ÷ 210 bar
280 = 2 ÷ 280 bar

Series No. (the overall and mounting dimensions remain unchanged from 20 to 29)

Seals:
N = NBR seals for mineral oil (**standard**)
V = FPM seals for special fluids

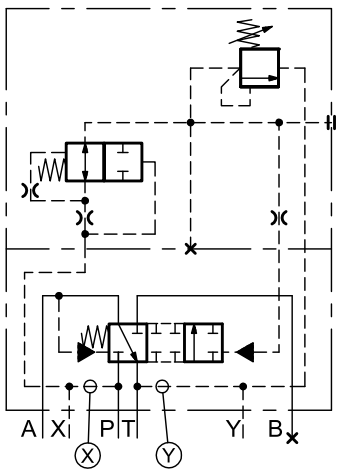
Piloting: **I** = internal
E = external

Drainage: **I** = internal
E = external

Omit for adjustment with socket hex screw (**standard**)
K1 = adjustment knob

NOTE: This version is interchangeable with the previous model ZC4 Duplomatic

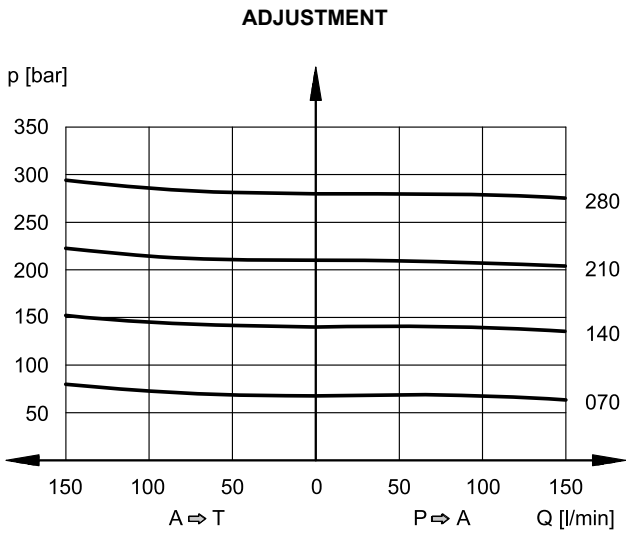
2 - DETAILED SYMBOL



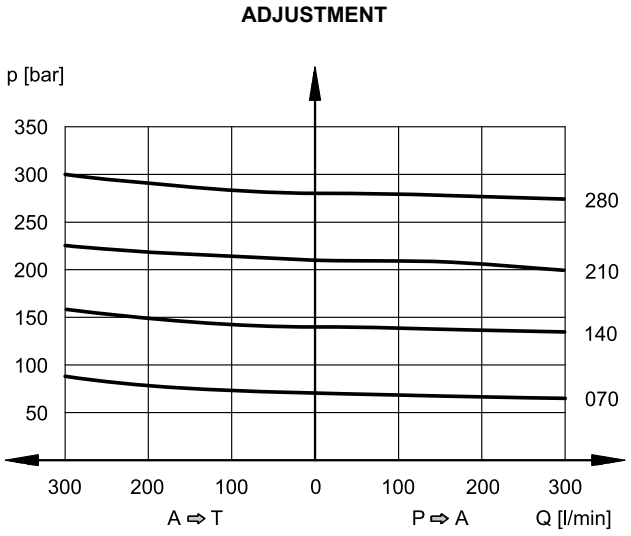
3 - CHARACTERISTIC CURVES

(obtained with mineral oil with viscosity of 36 cSt at 50 °C)

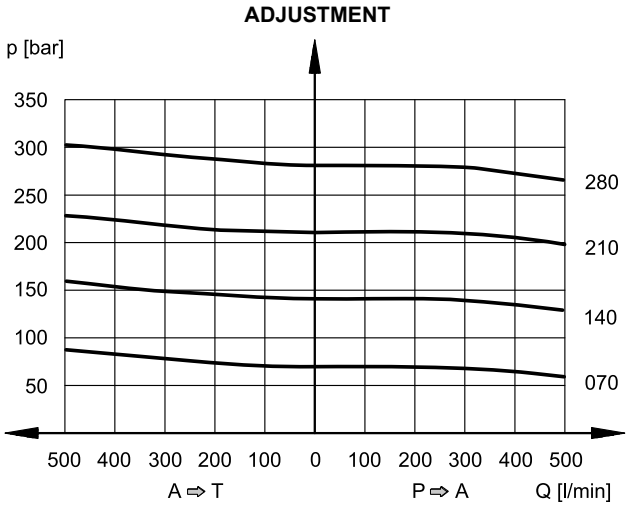
3.1 - Characteristic curves DZC5 and DZC5R



3.2 - Characteristic curves DZC7



3.3 - Characteristic curves DZC8



4 - HYDRAULIC FLUIDS

Use mineral oil-based hydraulic fluids HL or HM type, according to ISO 6743-4. For these fluids, use NBR seals (code N). For fluids HFDR type (phosphate esters) use FPM seals (code V). For the use of other kinds of fluid such as HFA, HFB, HFC, please consult our technical department. Using fluids at temperatures higher than 80 °C causes a faster degradation of the fluid and of the seals characteristics.

The fluid must be preserved in its physical and chemical characteristics.

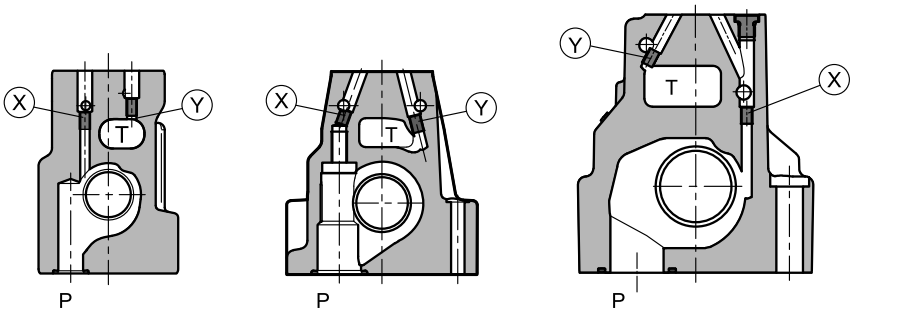
5 - PILOTING AND DRAINAGE

The DZC* valves are available with pilot and drain both internal and external. The version with external drain allows a higher back pressure on the discharge line.

NOTE: The configuration of pilots and drains must be chosen when ordering. Subsequent modifications are allowed only to specialized operators with authorization and in factory.

TYPE OF VALVE		Plug assembly	
		X	Y
IE	internal pilot and and external drain	NO	YES
II	internal pilot and internal drain	NO	NO
EE	external pilot and external drain	YES	YES
EI	external pilot and internal drain	YES	NO

DZC5 and DZC5R **DZC7** **DZC8**



X: M5x6 plug for external pilot
Y: M5x6 plug for external drain

X: M6x8 plug for external pilot
Y: M6x8 plug for external drain

PRESSURES (bar)

Pressure	MAX
Piloting pressure on external X port	350 (**NOTE**)
Pressure on T port with internal drain	2
Pressure on T port with external drain	250

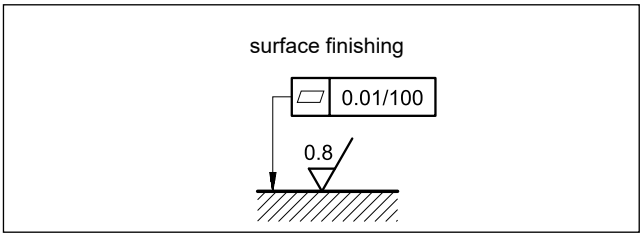
NOTE: Pilot pressure must be 10% higher than the set value for the reduced pressure, in order to let the valve work properly.

6 - INSTALLATION

The DZC* valves can be installed in any position without impairing correct operation. Connect the valve T port directly to the tank. Add any backpressure value detected in the T line to the controlled pressure value.

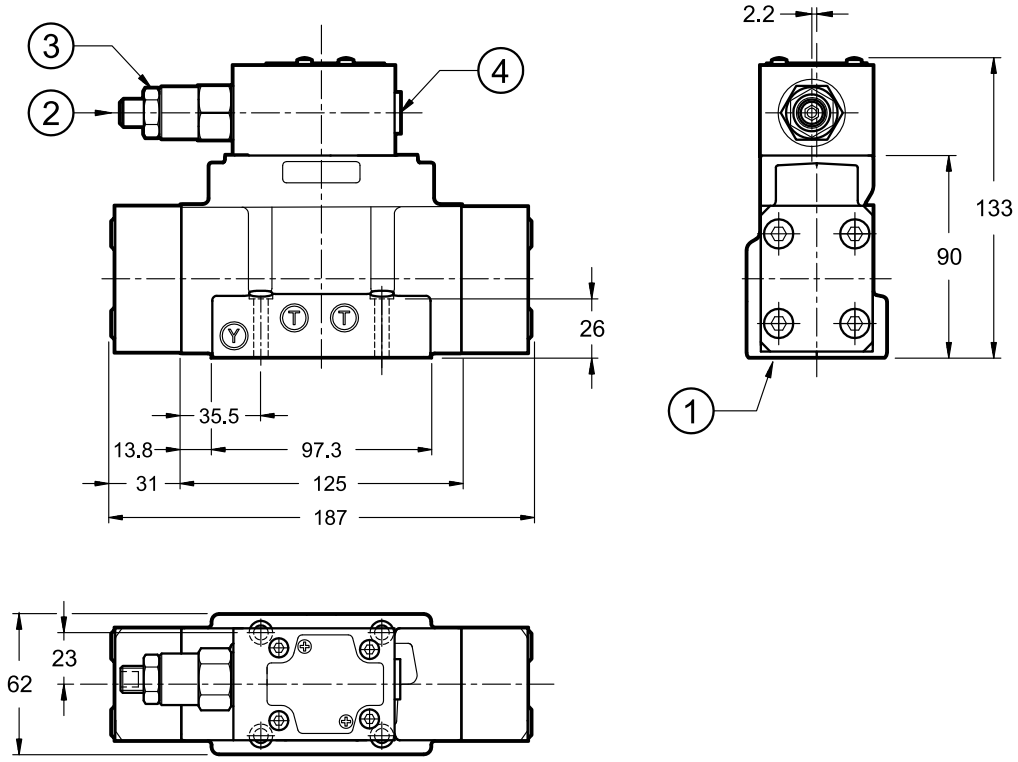
Maximum admissible backpressure in the T line, in operating conditions, is 2 bar.

Valves are fixed by means of screws or tie rods on a flat surface with planarity and roughness equal to or better than those indicated in the relative symbols. If minimum values are not observed, fluid can easily leak between the valve and support surface.

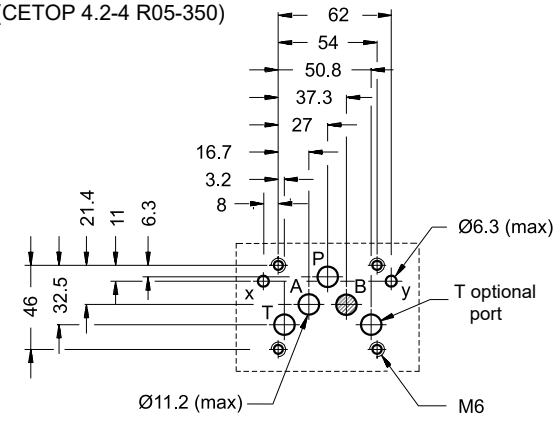


7 - DZC5 AND DZC5R OVERALL AND MOUNTING DIMENSIONS

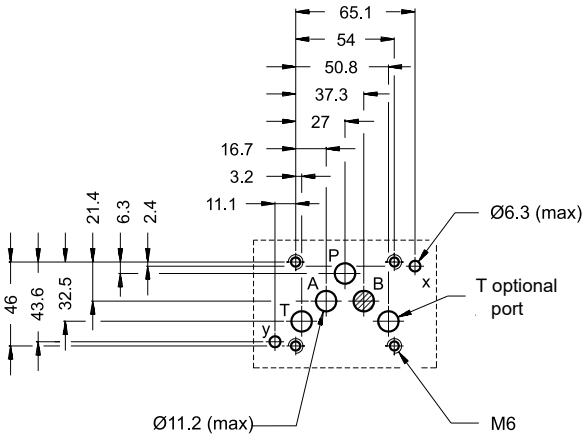
dimensions in mm



DZC5R MOUNTING INTERFACE
ISO 4401-05-05-0-05
(CETOP 4.2-4 R05-350)



DZC5 MOUNTING INTERFACE
CETOP 4.2-4 P05-350

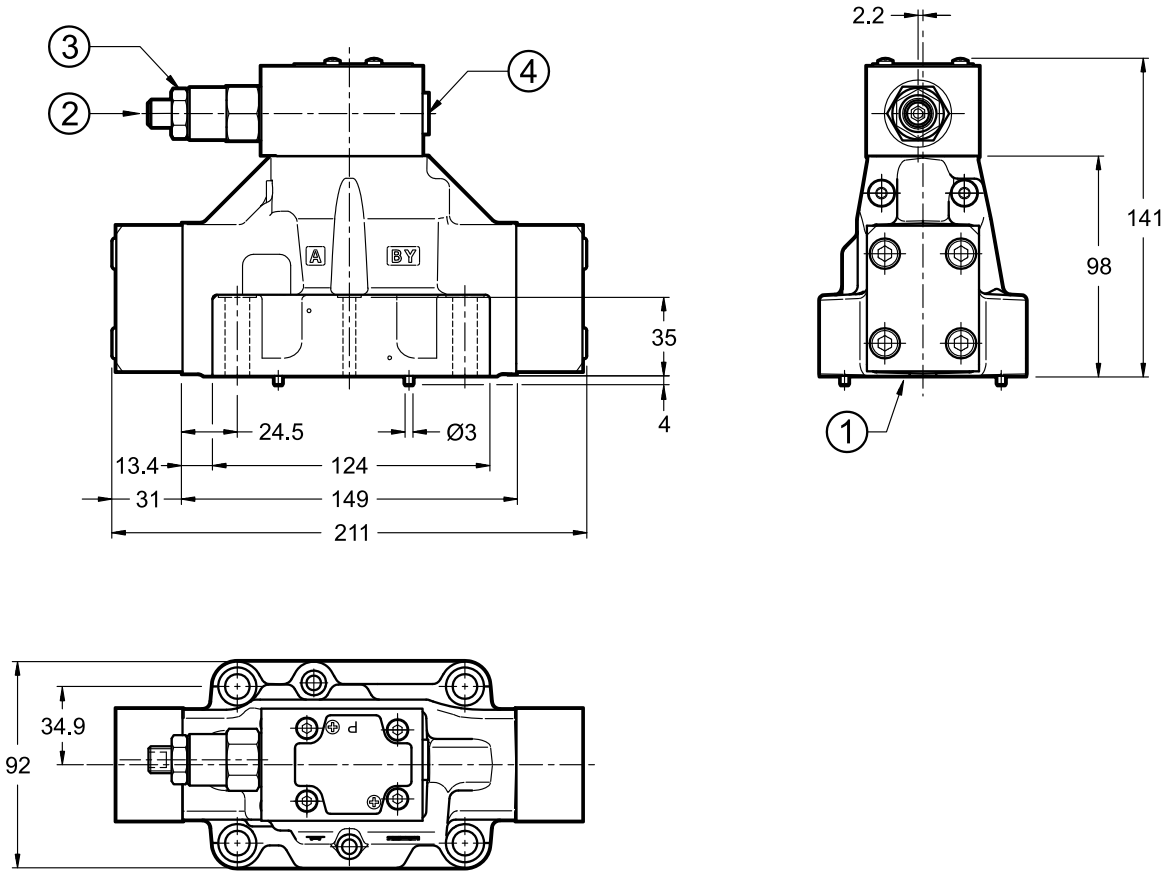


Valve fastening: N. 4 bolts SHC ISO 4762 M6x35
Tightening torque: 8 Nm (A 8.8 bolts)
Thread of mounting holes: M6x10

1	Mounting surface with sealing rings: N. 5 OR type 2050 (12.42x1.78) - 90 Shore N. 2 OR type 2037 (9.25x1.78) - 90 Shore
2	Socket hex adjustment screw: Allen key 6. Clockwise rotation to increase pressure
3	Locking nut: spanner 19
4	Pressure gauge port 1/4" BSPP

8 - DZC7 OVERALL AND MOUNTING DIMENSIONS

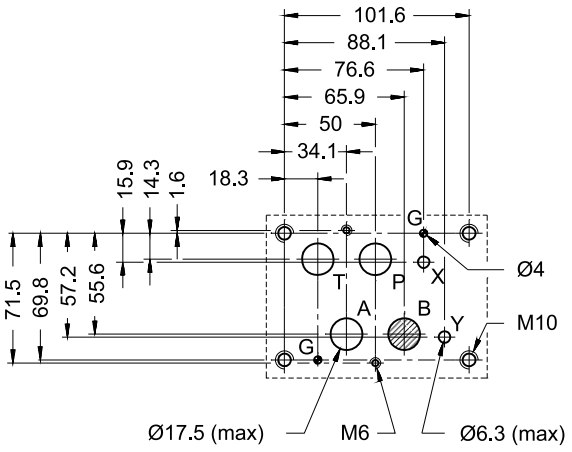
dimensions in mm



1	Mounting surface with sealing rings: N. 4 OR type 130 (22.22x2.62) - 90 Shore N. 2 OR type 2043 (10.82x1.78) - 90 Shore
2	Socket hex adjustment screw: Allen key 6. Clockwise rotation to increase pressure
3	Locking nut: spanner 19
4	Pressure gauge port 1/4" BSPP

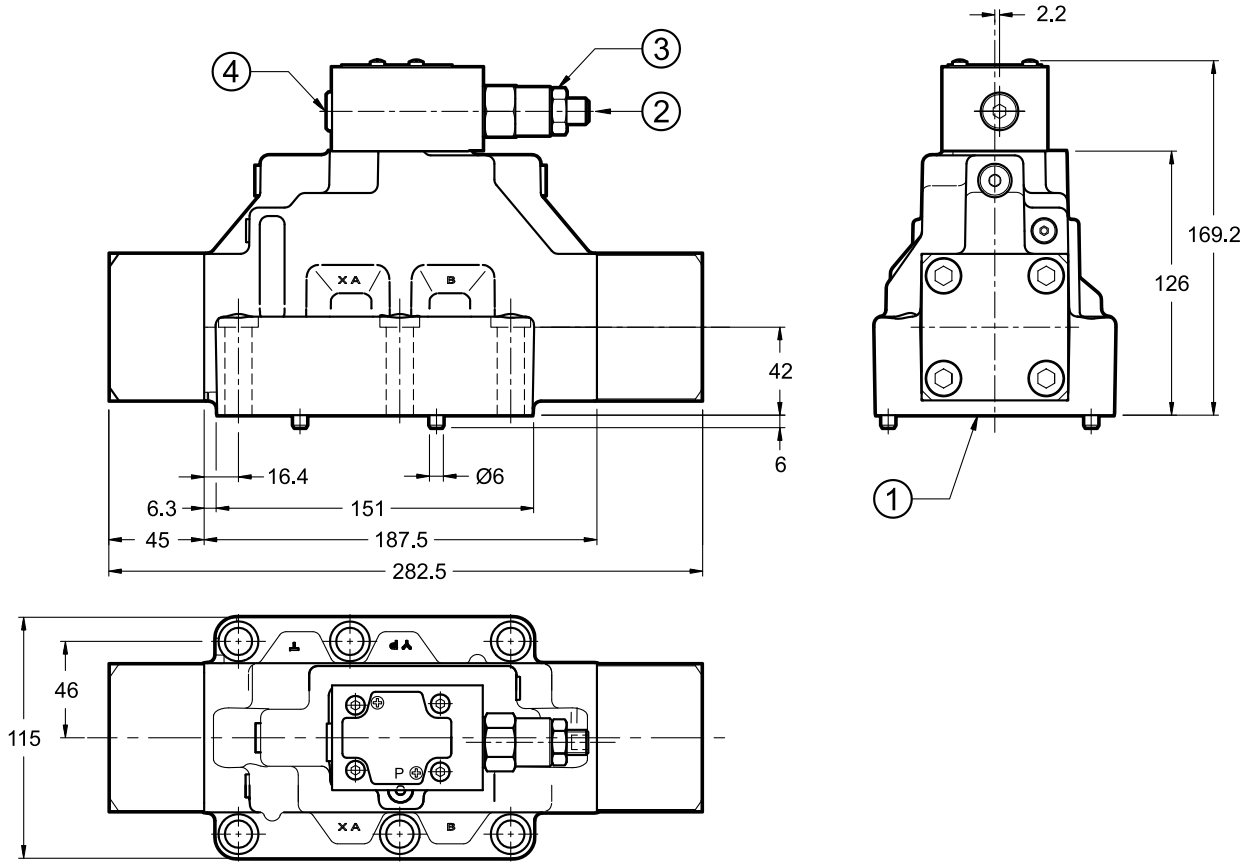
Single valve fastening:	N. 4 SHC bolts ISO 4762 M10x50 N. 2 SHC bolts ISO 4762 M6x50
Tightening torque	M10x60: 40 Nm (A 8.8 bolts) M6x60: 8 Nm (A 8.8 bolts)
Thread of mounting holes:	M6x18; M10x18

MOUNTING INTERFACE
ISO 4401-07-07-0-05
(CETOP 4.2-4-07-350)



9 - DZC8 OVERALL AND MOUNTING DIMENSIONS

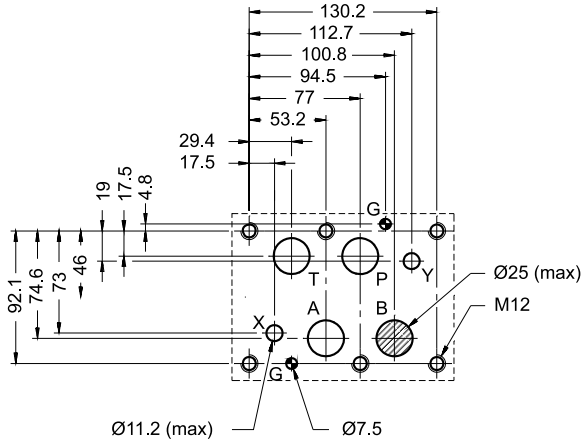
dimensions in mm



1	Mounting surface with sealing rings: N. 4 OR type 3131 (32.99x2.62) - 90 Shore N. 2 OR type 3087 (21.89x2.62) - 90 Shore
2	Socket hex adjustment screw: Allen key 6. Clockwise rotation to increase pressure
3	Locking nut: spanner 19
5	Pressure gauge port 1/4" BSPP

Valve fastening: N. 6 SHC bolts ISO 4762 M12x60
Tightening torque: 69 Nm (A 8.8 bolts)
Thread of mounting holes: M12x20

MOUNTING INTERFACE
ISO 4401-08-08-0-05
(CETOP 4.2-4-08-350)

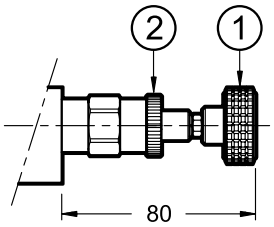


10 - OPTIONS

The valves can be equipped with adjustment knob instead of the standard socket head screw.

Add **K1** in the identification code to order this version (see point 1)

dimensions in mm



1	Adjustment knob: K1
2	Locking ring

11 - SUBPLATES

(See catalogue 51 000)

		DZC5	DZC7	DZC8
Model with rear ports		PME4-AI5G	PME07-AI6G	-
Model with side ports		PME4-AL5G	PME07-AL6G	PME5-AL8G
Thread of ports:	P - T - A - B X - Y	3/4” BSPP 1/4” BSPP	1” BSPP 1/4” BSPP	1½” BSPP 1/4” BSPP

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PZM2

PRESSURE REDUCING VALVE DIRECT OPERATED WITH VARIABLE ADJUSTMENT

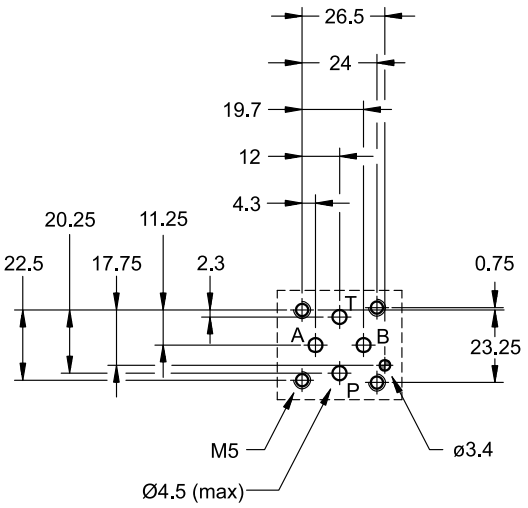
SERIES 21

MODULAR VERSION
ISO 4401-02

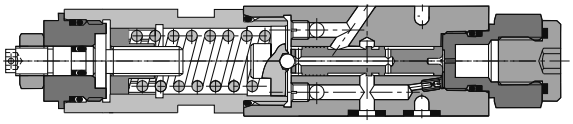
p max **320** bar
Q max **20** l/min

MOUNTING SURFACE

ISO 4401-02-01-0-05
(CETOP 4.2-4-R02-320)



OPERATING PRINCIPLE



— The PZM2 valve is a three-ports pressure reducing valve, direct operated, spool type, made as modular version, with ports according to the ISO 4401 standards and can be assembled quickly, without use of pipes, under the ISO 4401-02 solenoid valves.

— The PZM2 is a normally open valve. The hydraulic fluid flows freely in the pressure line. When the inlet pressure in P exceeds the value set by the spring, the valve opens the outlet port to the tank line until the outlet pressure has been reduced to the set value.

— The valve construction provides good adjustment sensitivity with reduced drainage flow. The drainage to the tank line is internal.

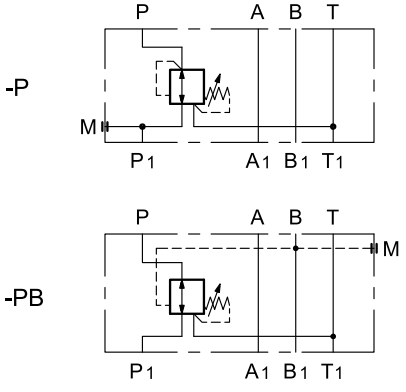
— The three-ports design provides protection of the secondary circuit from pressure surges since it allows a reverse flow from the actuator to the tank line.

PERFORMANCES

(measured with mineral oil of viscosity 36cSt at 50°C)

Maximum operating pressure Maximum pressure on port T	bar	320 210
Maximum flow rate in the controlled lines Maximum flow rate in the free lines	l/min	20 30
Ambient temperature range	°C	-20 / +60
Fluid temperature range	°C	-20 / +80
Fluid viscosity range	cSt	10 ÷ 400
Fluid contamination degree	According to ISO 4406:1999 class 20/18/15	
Recommended viscosity	cSt	25
Mass	kg	0,6

HYDRAULIC SYMBOL



1 - IDENTIFICATION CODE

P	Z	M	2	-			/	21		/	S

Pressure-reducing valve direct operated

Modular version

Size: ISO 4401-02

Versions
P = pressure reduction on line P
PB = pressure reduction on line P with pilot signal from line B

Pressure adj. range:
2 = 10 ÷ 25 bar
3 = 20 ÷ 63 bar
4 = 30 ÷ 160 bar
5 = 50 ÷ 210 bar

Series No.
(the overall and mounting dimensions remain unchanged from 20 to 29)

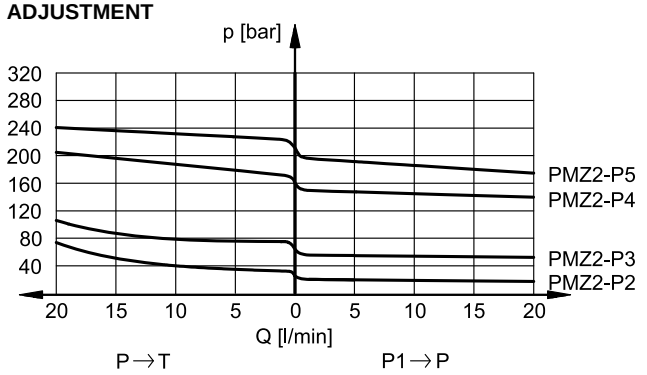
Seals:
N = NBR seals for mineral oils (**standard**)
V = FPM seals for special fluids

Adjustment screw

2 - CHARACTERISTIC CURVES

(values obtained with viscosity of 36 cSt at 50°C)

ADJUSTMENT



3 - HYDRAULIC FLUIDS

Use mineral oil-based hydraulic fluids HL or HM type, according to ISO 6743-4. For these fluids, use NBR seals (code N).

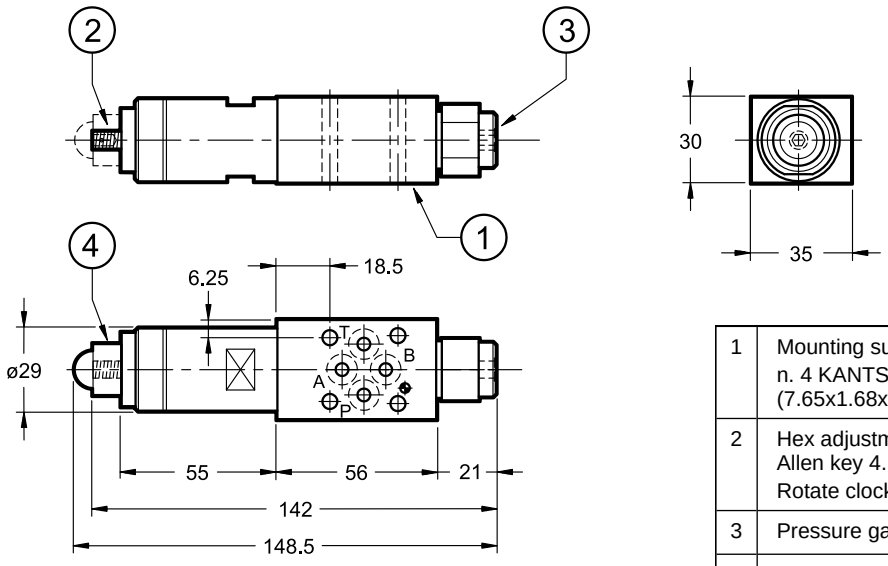
For fluids HFDR type (phosphate esters) use FPM seals (code V). For the use of other kinds of fluid such as HFA, HFB, HFC, please consult our technical department.

Using fluids at temperatures higher than 80 °C causes a faster degradation of the fluid and of the seals characteristics.

The fluid must be preserved in its physical and chemical characteristics.

4 - OVERALL AND MOUNTING DIMENSIONS

dimensions in mm



1	Mounting surface with sealing rings: n. 4 KANTSEAL type DKAR00011 (7.65x1.68x1.68) - 70 Shore
2	Hex adjustment screw with lead-sealing hole: Allen key 4. Rotate clockwise to increase pressure
3	Pressure gauge port 1/4” BSP
4	Protective cap with embedded locking nut

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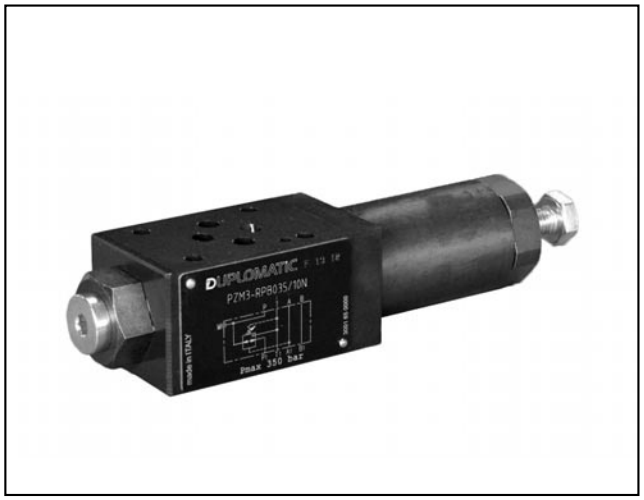


PZM3

DIRECT OPERATED THREE-PORT PRESSURE REDUCING VALVE WITH VARIABLE ADJUSTMENT

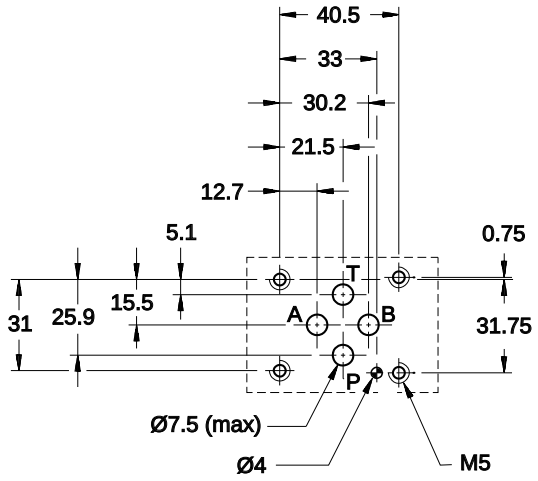
SERIES 10

MODULAR VERSION ISO 4401-03

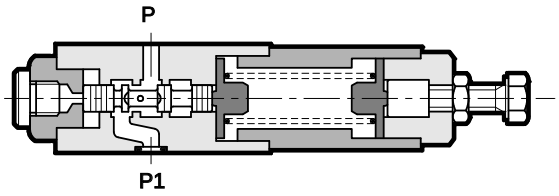
p max **350** bar
Q max (see table of performances)

MOUNTING INTERFACE

ISO 4401-03-02-0-05
(CETOP 4.2-4-03-350)



OPERATING PRINCIPLE



— The PZM3 valve is a three-port, spool type, direct operated pressure reducing valve with variable adjustment.

— It is made in modular version according to the ISO 4401-03 standards, it can be assembled quickly under solenoid valves, without the use of pipes.

— It is normally open and the hydraulic fluid flows freely from P1 port to P port.

— The three-way design provides protection of the secondary circuit from pressure surges since it allows a reverse flow from the actuator to the T discharge line.

The spool is subjected to the pressure in the P path but also to the force of the counter spring. When the pressure in P1 exceeds the spring force, the valving element closes until the pressure is reduced to the set pressure value.

— The valve provides good adjustment sensitivity with reduced drain flow. The drain is connected to path T inside the valve.

— The valve can be supplied with adjustment by hexagonal head screw or by knob.

PERFORMANCES

(measured with mineral oil of viscosity 36cSt at 50°C)

Maximum operating pressure Maximum pressure on port T	bar	350 10
Maximum flow rate in the controlled lines Maximum flow rate in the free lines Drainage flow rate	l/min	50 75 ≤ 0.08
Ambient temperature range	°C	-20 / +60
Fluid temperature range	°C	-20 / +80
Fluid viscosity range	cSt	10 ÷ 400
Fluid contamination degree	According to ISO 4406:1999 class 20/18/15	
Recommended viscosity	cSt	25
Mass	kg	1.6

1 - IDENTIFICATION CODE

P	Z	M	3	-			/	10		/		

Pressure reducing valve, direct operated

Modular version

Size ISO 4401-03

Configurations:

P = pressure reduction in P. Internal drain to line T and adjustment on side B

PA = pressure reduction in line P-A and full pressure in line P-B with adjustment on side B

PB = pressure reduction in line P-B and full pressure in line P-A with adjustment on side B

RP = pressure reduction in P. Internal drain to line T and adjustment on side A

RPA = pressure reduction in line P-A and full pressure in line P-B with adjustment on side A

RPB = pressure reduction in line P-B and full pressure in line P-A with adjustment on side A

Pressure adjustment range:

035 = 3 ÷ 35 bar **140** = 30 ÷ 140 bar
070 = 10 ÷ 70 bar **280** = 50 ÷ 280 bar

Series No. (the overall and mounting dimensions remain unchanged from 10 to 19)

Seals:

N = NBR seals for mineral oils (**standard**)
V = FPM seals for special fluids

Adjustment type:

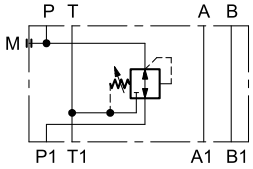
S = with hexagonal head screw (**standard**)
CK3 = with push, adjust, lock knob (see point 6)

Option: **/W7** surface treatment. Available only for PZM3-P and PZM3-RP in the version with S adjustment type. Omit if not required (**NOTE**)

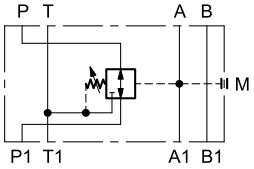
NOTE: The standard valve is supplied with surface treatment of phosphating black.
The zinc-nickel finishing on the valve body makes the valve suitable to ensure a salt spray resistance up to **240** hours.
(test operated according to UNI EN ISO 9227 standards and test evaluation operated according to UNI EN ISO 10289 standards).

2 - HYDRAULIC SYMBOLS

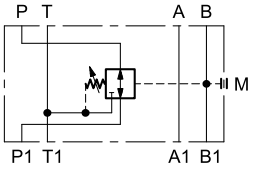
PZM3-P
PZM3-RP



PZM3-PA
PZM3-RPA



PZM3-PB
PZM3-RPB

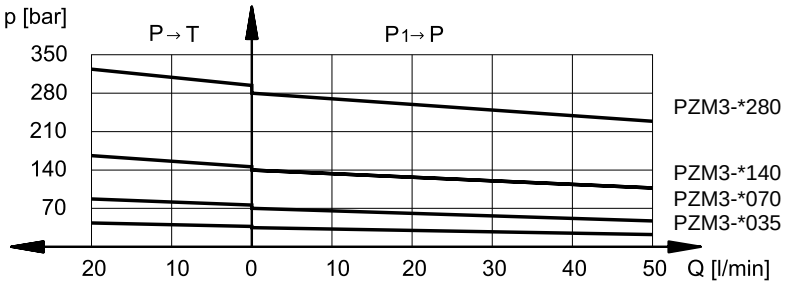


NOTE: The versions RP, RPA and RPB have been made with adjustment on side A, so as to be interchangeable with valves of other companies.
The standard version is equipped with adjustment on side B.

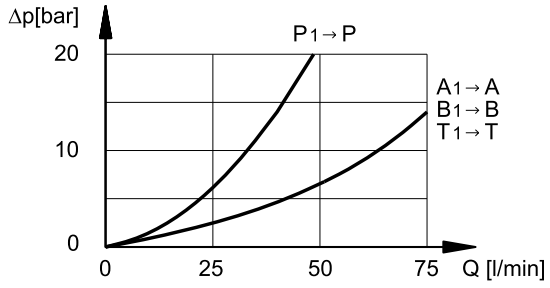
3 - CHARACTERISTIC CURVES

(values obtained with viscosity of 36 cSt at 50°C)

ADJUSTMENT



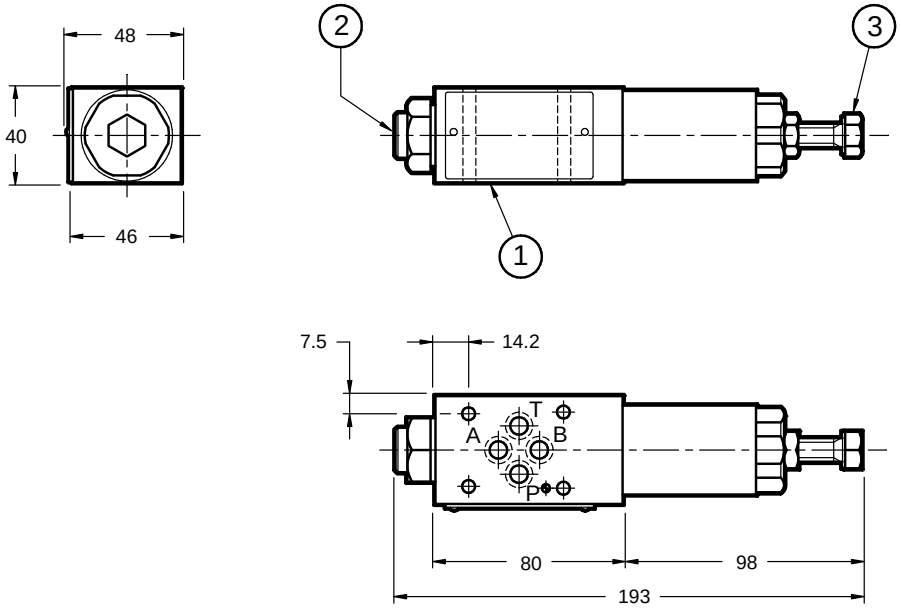
PRESSURE DROPS Δp - Q



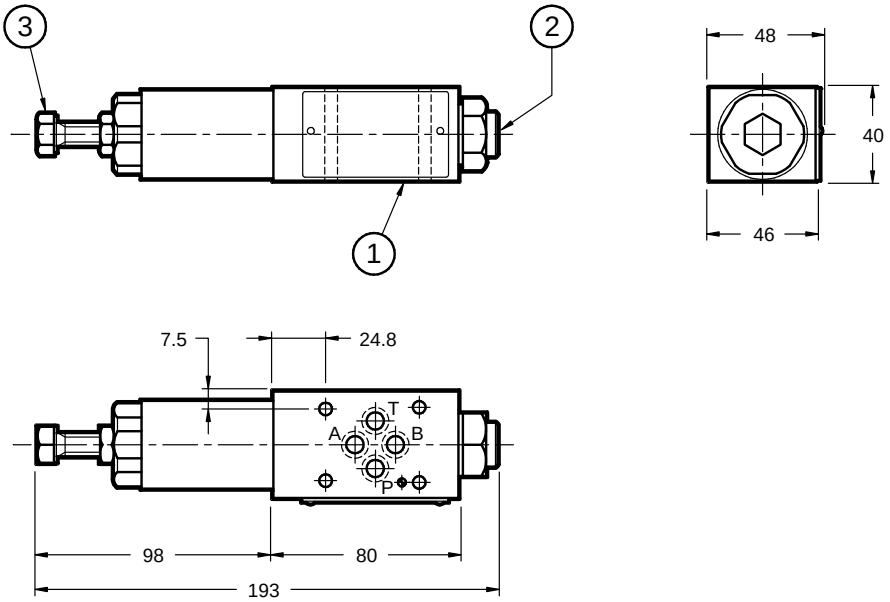
4 - OVERALL AND MOUNTING DIMENSIONS

dimensions in mm

PZM3-P
PZM3-PA
PZM3-PB



PZM3-RP
PZM3-RPA
PZM3-RPB



1	Mounting surface with sealing rings: 4 OR type 2037 (9.25x1.78) 90 Shore
2	Pressure gauge port 1/4” BSPP
3	Hexagonal head adjustment screw. Spanner 17. Rotate clockwise to increase pressure

5 - HYDRAULIC FLUIDS

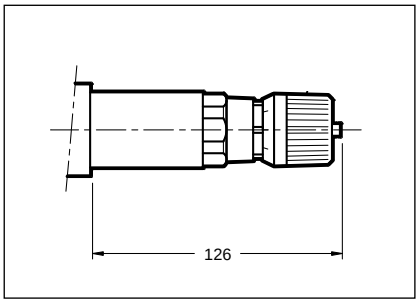
Use mineral oil-based hydraulic fluids HL or HM type, according to ISO 6743-4. For these fluids, use NBR seals. For fluids HFDR type (phosphate esters) use FPM seals (code V). For the use of other kinds of fluid such as HFA, HFB, HFC, please consult our technical department.

Using fluids at temperatures higher than 80 °C causes a faster degradation of the fluid and of the seals characteristics.The fluid must be preserved in its physical and chemical characteristics.

6 - ADJUSTMENT KNOB

Valves can be supplied with adjustment knob, which is engaged by pushing and twisting at the same time. When released, the knob disengages to secure the adjustment from involuntary tampering.

Add **CK3** in the identification code to order this version (see point 1).



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PZM5

PILOT OPERATED PRESSURE REDUCING VALVE

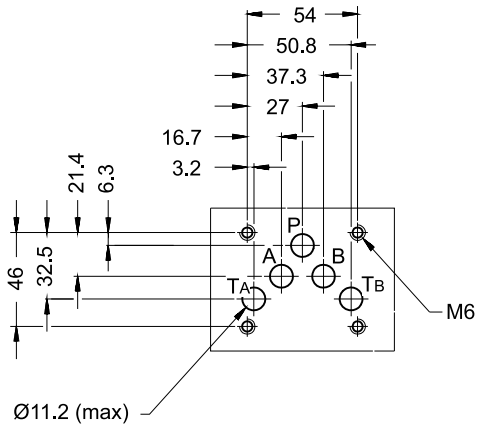
SERIES 10

MODULAR VERSION
ISO 4401-05

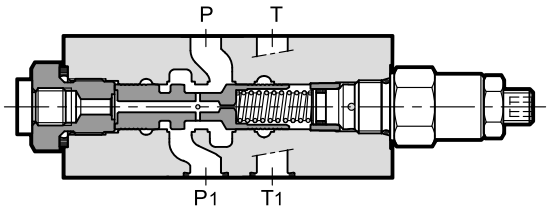
p max **350** bar
Q max (see table of performances)

MOUNTING INTERFACE

ISO 4401-05-04-0-05
(CETOP 4.2-4-05-350)



OPERATING PRINCIPLE



— The PZM5 valve is a pilot operated pressure reducing valve, shaped as modular version with mounting surface according to ISO 4401 standards.

— It reduces pressure on secondary circuit branches, assuring stability of the controlled pressure and even changing the flow that passes through the valve.

— It can be assembled quickly under ISO 4401-05 directional solenoid valves without the use of pipes.

— It is supplied with a hex socket adjustment screw, locking nut and a travel limiting device for maximum adjustment.

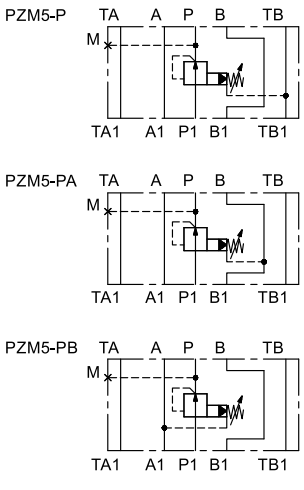
— Three pressure adjustment ranges are available, up to 280 bar.

PERFORMANCES

(measured with mineral oil of viscosity 36 cSt at 50 °C)

Maximum operating pressure	bar	350
Maximum flow rate in the controlled line P Maximum flow rate in the free lines Drain flow rate	l/min	80 100 < 0,8
Ambient temperature range	°C	-20 / +60
Fluid temperature range	°C	-20 / +80
Fluid viscosity range	cSt	10 ÷ 400
Recommended effective viscosity	cSt	25
Fluid contamination degree	according to ISO 4406:1999 class 20/18/15	
Mass	kg	2,7

HYDRAULIC SYMBOLS



1 - IDENTIFICATION CODE

P	Z	M	5	-			/	10		/	

Pressure reducing valve, pilot operated

Modular version

Size ISO 4401-05

Versions:
P = pressure reduction in P. Internal drain to line T_B
PA = pressure reduction in line P-A when line B is connected to the tank; full pressure in line P-B
PB = pressure reduction in line P-B when line A is connected to the tank; full pressure in line P-A.

Pressure adjustment range:
070 = 8 ÷ 70 bar **150** = 8 ÷ 150 bar **280** = 8 ÷ 280 bar

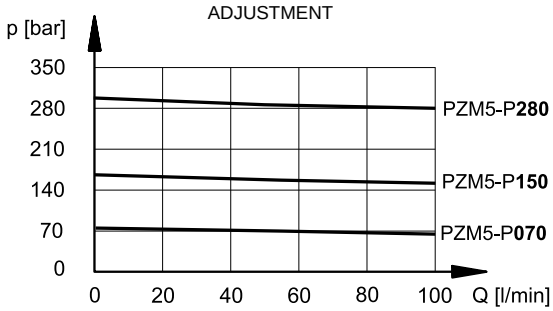
Series No. (the overall and mounting dimensions remain unchanged from 10 to 19)

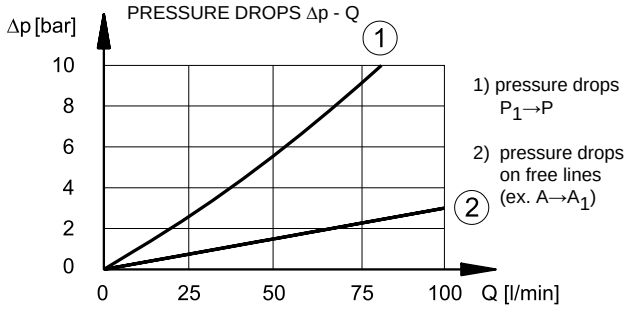
Seals:
N = NBR seals for mineral oils (**standard**)
V = FPM seals for special fluids

Option: **K** = Adjustment knob.
(Omit for adjustment with hex socket screw)

2 - CHARACTERISTIC CURVES

(values obtained with viscosity of 36 cSt at 50 °C)

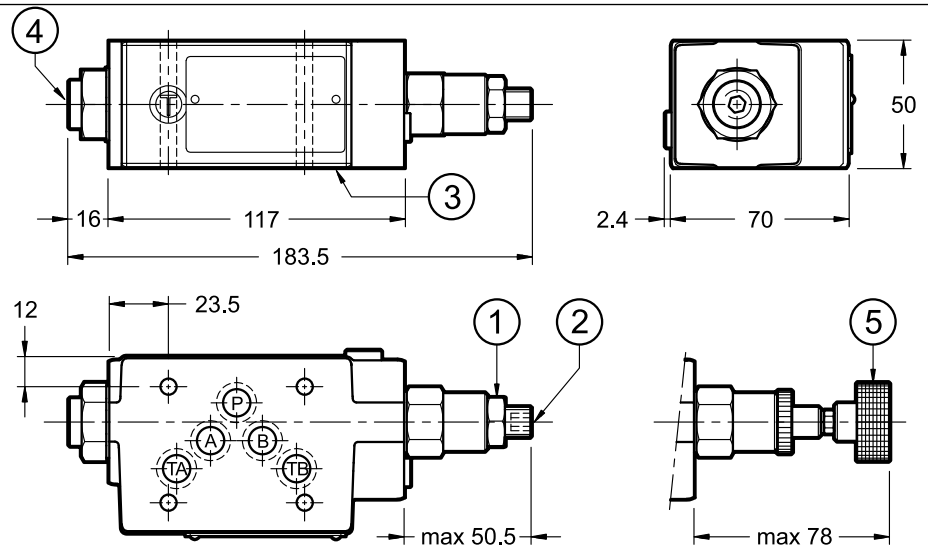




3 - HYDRAULIC FLUIDS

Use mineral oil-based hydraulic fluids HL or HM type, according to ISO 6743-4. For these fluids, use NBR seals. For fluids HFDR type (phosphate esters) use FPM seals (code V). For the use of other kinds of fluid such as HFA, HFB, HFC, please consult our technical department. Using fluids at temperatures higher than 80 °C causes a faster degradation of the fluid and of the seals characteristics. The fluid must be preserved in its physical and chemical characteristics.

4 - OVERALL AND MOUNTING DIMENSIONS



dimensions in mm

1	Locking nut spanner 19
2	Socket hex adjustment screw: Allen key 6. Rotate clockwise to increase pressure
3	Mounting surface with sealing rings: 5 OR type 2050 (12.42x1.78) 90 Shore
4	Pressure gauge port 1/4” BSP
5	Adjustment knob **K**

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