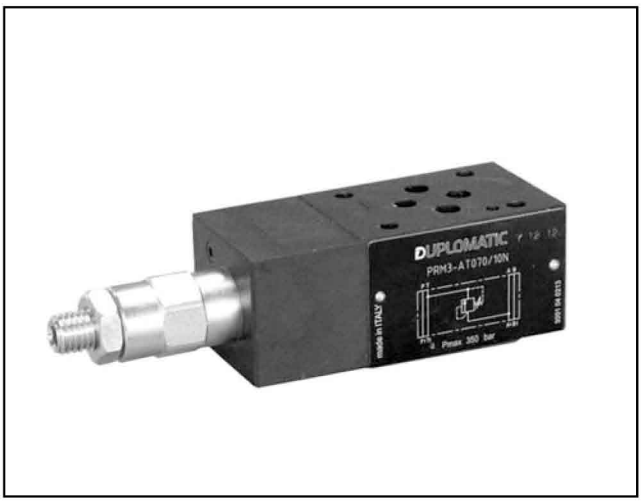
Part number:

HYDROMA
HYDRAULICKÉ SYSTÉMY

HIDROMA SISTEMS
UKŁADY HYDRAULICZNE

HYDROMA
ГИДРАВЛИЧЕСКИЕ СИСТЕМЫ



PRM3

DIRECT OPERATED PRESSURE RELIEF VALVE

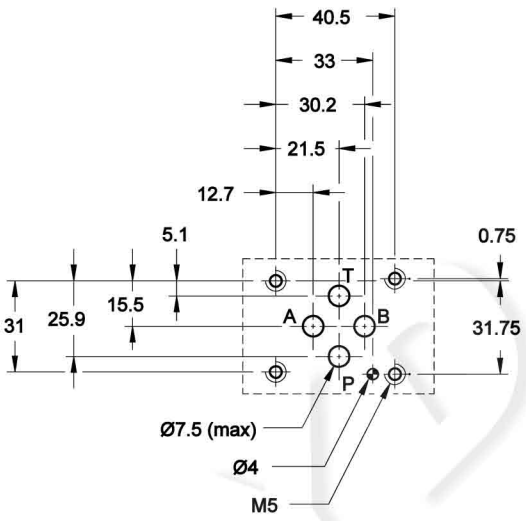
SERIES 10

MODULAR VERSION ISO 4401-03

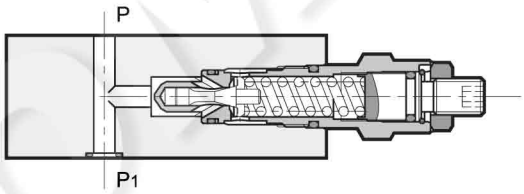
p max **350** bar
Q max (see table of performances)

MOUNTING SURFACE

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



OPERATING PRINCIPLE



— The PRM3 valve is a direct operated pressure relief valve made as a modular version, with mounting surface according to ISO 4401 standards.

— It can be assembled with all ISO 4401-03 modular valves without the use of pipes, using suitable tie-rods or bolts.

— It is available in versions for single adjustment on one control line, or dual on two control lines, in five different pressure adjustment ranges.

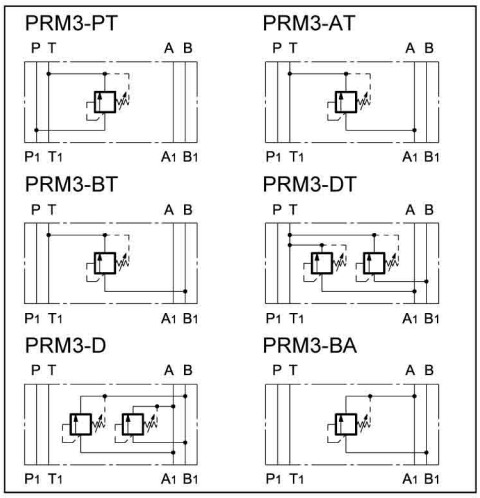
— This valve is used as a hydraulic circuit pressure limiting device or as a limiting device of the pressure peaks generated during the movement of hydraulic actuators.

— It is supplied with a hexagonal head adjustment screw, locking nut and limitation of the maximum adjustment travel. A version with knob is also available.

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

Maximum operating pressure	bar	350
Minimum controlled pressure	bar	see Δp - Q diagram
Max flow rate in controlled lines Max flow rate in the free lines	l/min	50 75
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: PRM3-PT, -AT, -BT, -BA PRM3-DT, -D	kg	1,3 1,8

HYDRAULIC SYMBOLS



1 - IDENTIFICATION CODE

P	R	M	3	-			/	10		/		

Pressure relief valve, direct operated

Modular version

ISO 4401-03 size

Versions:
PT = single on line P with discharge in T
AT = single on line A with discharge in T
BT = single on line B with discharge in T
DT = double on lines A-B with discharge in T
D = double on lines A-B with cross discharge
BA = single on line B with discharge in A

Pressure adjustment range:
025 = up to 25 bar
070 = up to 70 bar
140 = up to 140 bar
210 = up to 210 bar
350 = up to 350 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 (See point 5):
S = with hexagonal socket screw (**standard**)
K = Adjustment knob

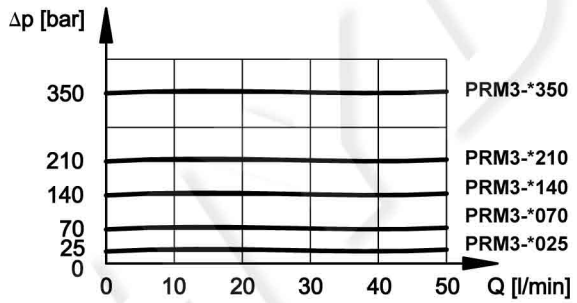
Option: **/W7** surface treatment. Omit if not required (**NOTE**)

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).

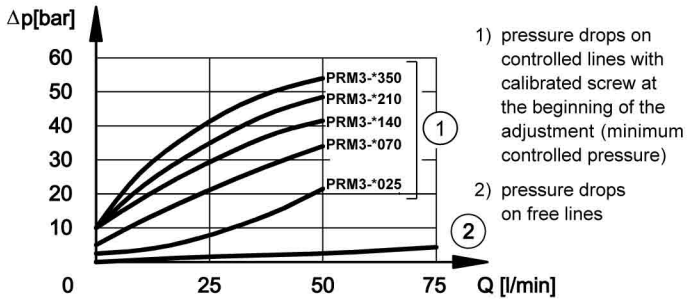
2 - CHARACTERISTIC CURVES

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

ADJUSTMENT



PRESSURE DROPS Δp - Q



1) pressure drops on controlled lines with calibrated screw at the beginning of the adjustment (minimum controlled pressure)
2) pressure drops on free lines

3 - HYDRAULIC FLUIDS

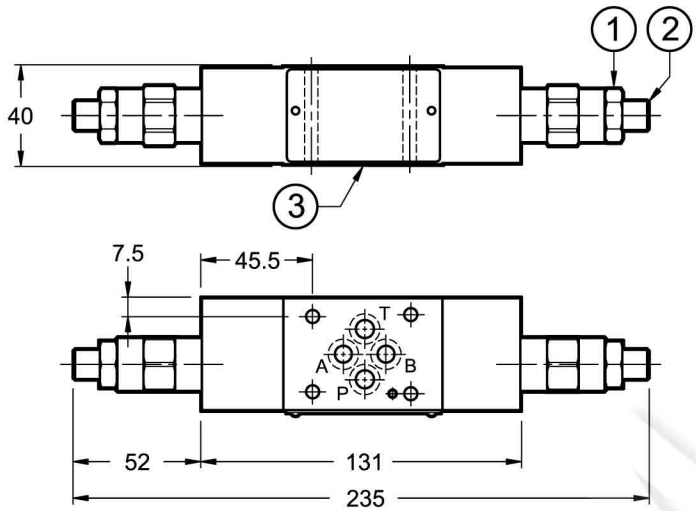
Use mineral oil-based hydraulic fluids HL or HM type, according to ISO 6743-4. For these fluids, use NBR seals (code N). For fluids HFDR type (phosphate esters) use FPM seals (code V). For the use of other kinds of fluid such as HFA, HFB, HFC, please consult our technical department.

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.

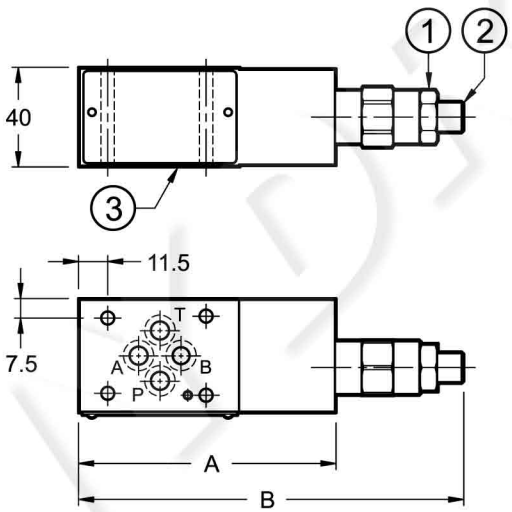
4 - OVERALL AND MOUNTING DIMENSIONS

dimensions in mm

PRM3-D, PRM3-DT



PRM3-PT, PRM3-BA, PRM3-BT

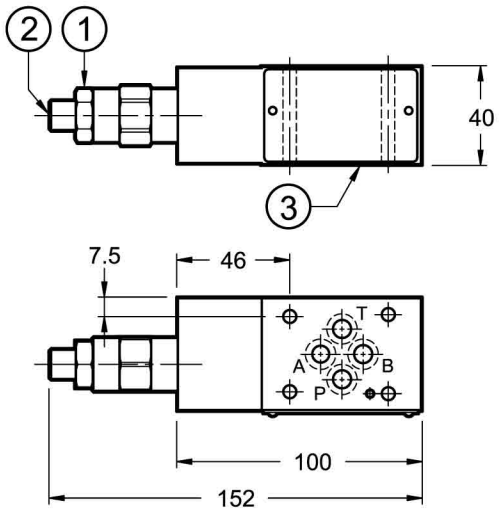


	A	B
PRM3-PT	105	157
PRM3-BA	100	152
PRM3-BT	100	152

1	Locking nut: spanner 19
2	Hex socket adjustment screw: spanner 6 (**standard**) Rotate clockwise to increase pressure
3	Mounting surface with sealing rings: 4 OR type 2037 (9.25x1.78) 90 Shore

dimensions in mm

PRM3-AT



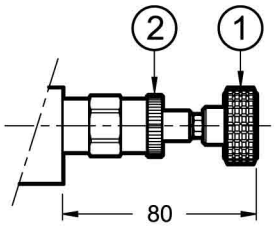
1	Locking nut: spanner 19
2	Hex socket adjustment screw: spanner 6 (**standard**) Rotate clockwise to increase pressure
3	Mounting surface with sealing rings: 4 OR type 2037 (9.25x1.78) 90 Shore

5 - ADJUSTMENT KNOB

The standard valve is supplied with the hex socket adjustment screw. A version with knob is also available.

Use the letter **K** in the identification code to order this version (see point 1).

dimensions in mm



1	Adjustment knob: K
2	Locking ring