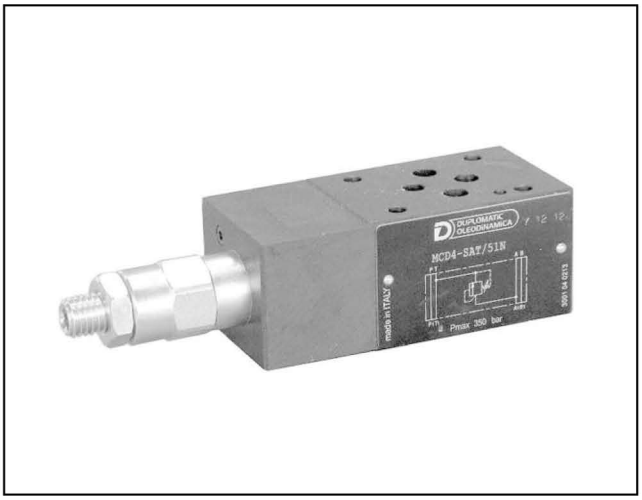
Part number:

HYDROMA HYDRAULICKÉ SYSTÉMY | HIDROMA SISTEMS UKŁADY HYDRAULICZNE | HYDROMA ГИДРАВЛИЧЕСКИЕ СИСТЕМЫ



MCD

DIRECT OPERATED PRESSURE RELIEF VALVE

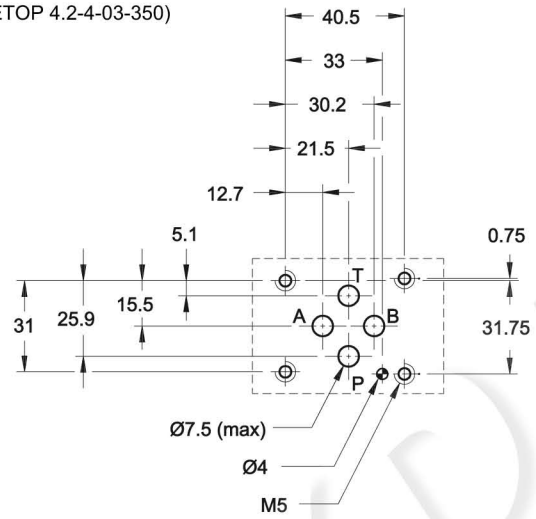
SERIES 51

MODULAR VERSION ISO 4401-03

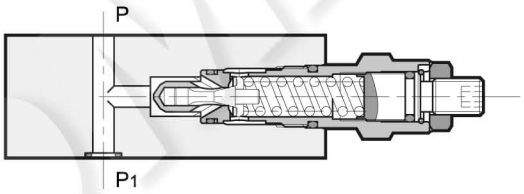
p max **350** bar
Q max (see table of performances)

MOUNTING INTERFACE

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



OPERATING PRINCIPLE



— The MCD valve is a direct operated pressure relief valve made as a modular version with mounting surface according to the ISO 4401 standards.
— It can be assembled with all ISO 4401-03 modular valves without 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 and with four different pressure adjustment ranges.
— This valve is normally 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 normally supplied with a hexagonal head adjustment screw, locking nut and limitation of the maximum adjustment travel.

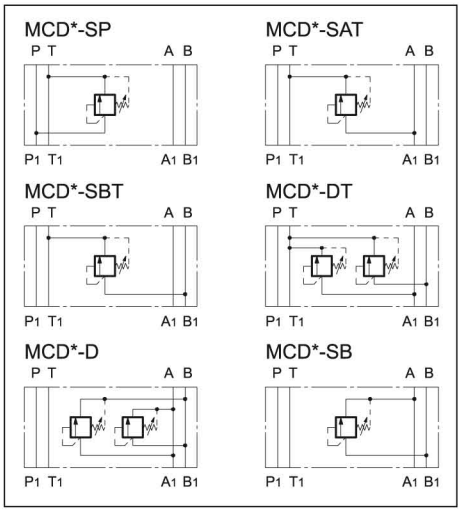
CONFIGURATIONS (see hydraulic symbols table)

— "SP": controls the pressure on line P with discharge in T
— "SAT": controls the pressure on line A with discharge in T
— "SBT": controls the pressure on line B with discharge in T
— "DT": controls the pressure on lines A-B with discharge in T
— "D": controls the pressure on lines A-B with crossed discharges
— "SB": controls the pressure on line B with discharge in A

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

Maximum operating pressure	bar	350
Minimum controlled pressure	see Δp diagram	
Maximum flow rate in controlled lines Maximum 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: MCD-SP / MCD-SAT / MCD-SBT / MCD-SB MCD-DT / MCD-D	kg	1,4 2,0

HYDRAULIC SYMBOLS



1 - IDENTIFICATION CODE

M	C	D		-		/	51		/	

Size: ISO 4401-03
Modular version

Direct operated
pressure relief valve

Pressure adjustment range
2 = up to 25 bar **5** = up to 210 bar
3 = up to 70 bar **6** = up to 350 bar
4 = up to 140 bar

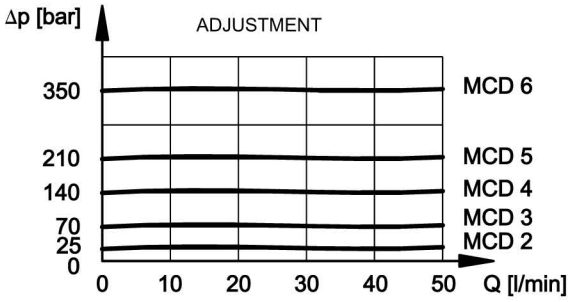
Configurations:
SP: single on line P with discharge in T
SAT: single on line A with discharge in T
SBT: single on line B with discharge in T
DT: double on lines A-B with discharge in T
D: double on lines A-B with crossed discharges
SB: single on line B with discharge in A

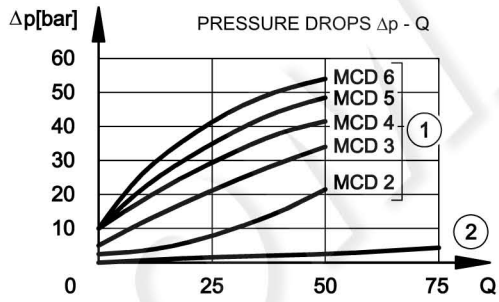
Series No. (the overall and mounting dimensions remain unchanged from 50 to 59)

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

Omit for adjustment with countersunk hex screw - **standard**
K = Adjustment knob

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





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

2) pressure drops on free lines

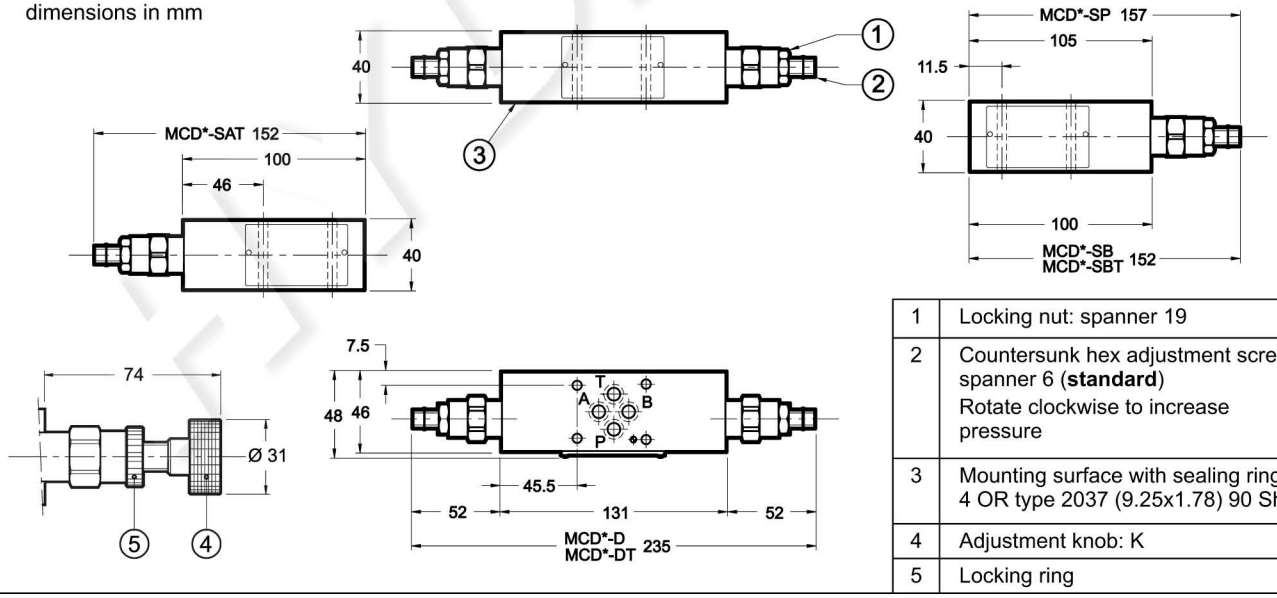
3 - HYDRAULIC FLUIDS

Use mineral oil-based hydraulic fluids HL or HM type, according to ISO 6743-4. For these fluids, use NBR seals. 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	Countersunk hex 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
4	Adjustment knob: K
5	Locking ring