

CR

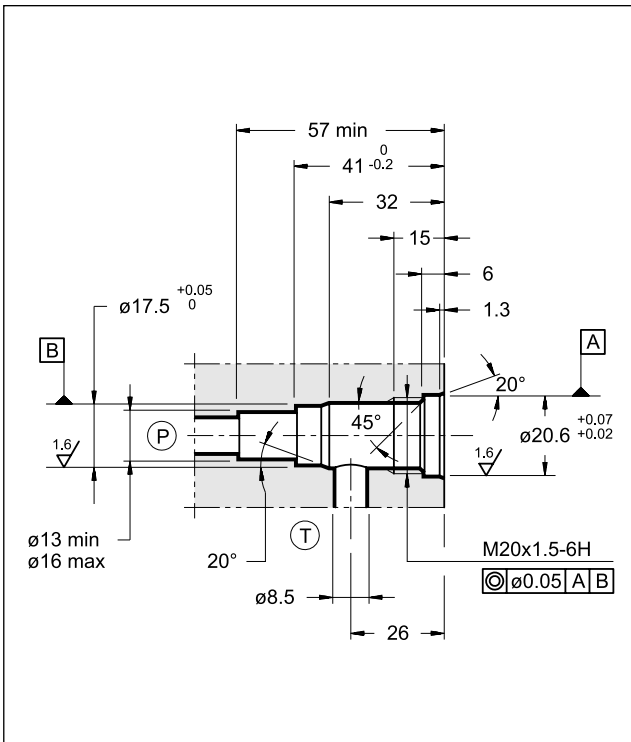
DIRECT OPERATED PRESSURE CONTROL VALVE SERIES 22



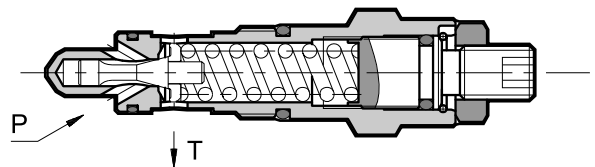
CARTRIDGE TYPE

p max 350 bar
Q max 50 l/min

SEAT DIMENSIONS: D-10B



OPERATING PRINCIPLE

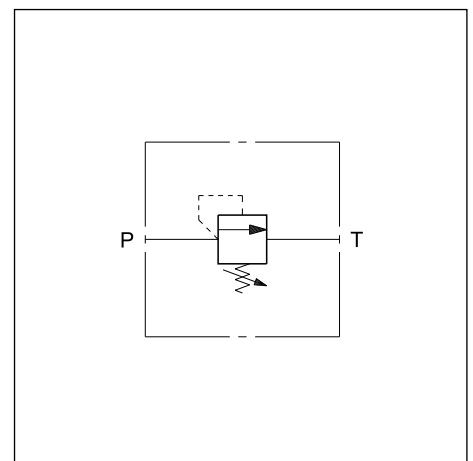


- The CR valve is a direct operated pressure control valve cartridge type that can be used in blocks or panels with type D-10B seat.
- It is normally used to control the maximum pressure in the hydraulic circuits or as a limiting device for pressure peaks generated during hydraulic actuator movement variation.
- It is available in five different pressure control ranges up to 350 bar.
- The circuit pressure acts on the shutter which is directly loaded by a spring on the opposite side. Once the set pressure is reached, the shutter opens, and discharges the excess flow in port T connected directly to the reservoir.
- The pressure can be adjusted by a screw, usually supplied as the countersunk hex type, equipped with locking nut and maximum adjustment limiter.

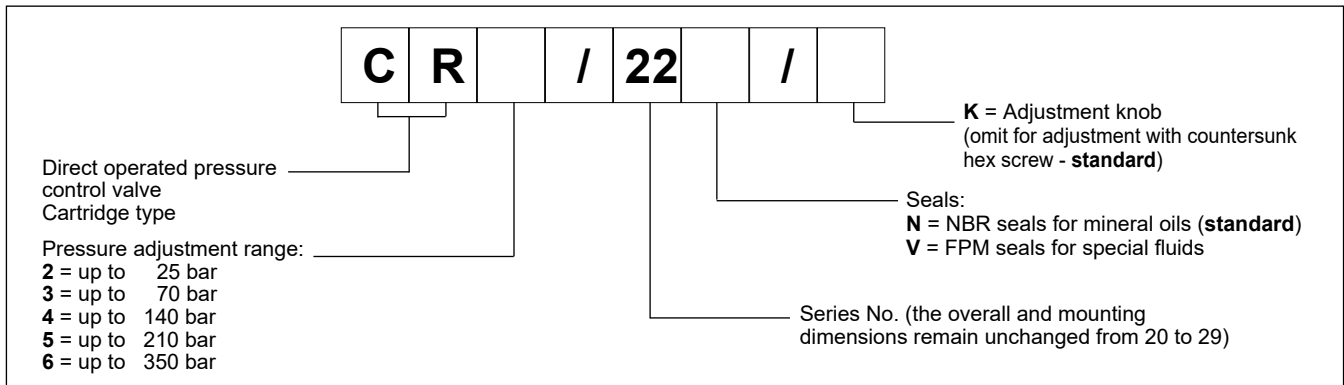
PERFORMANCES (measured with mineral oil of viscosity 36 cSt at 50°C)

Max working pressure	bar	350
Minimum controlled pressure and pressure drop	see diagram	
Maximum flow rate	l/min	50
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	0,16
Surface treatment: electrolytic zinc covering	Fe / Zn8 / B ISO 2081	

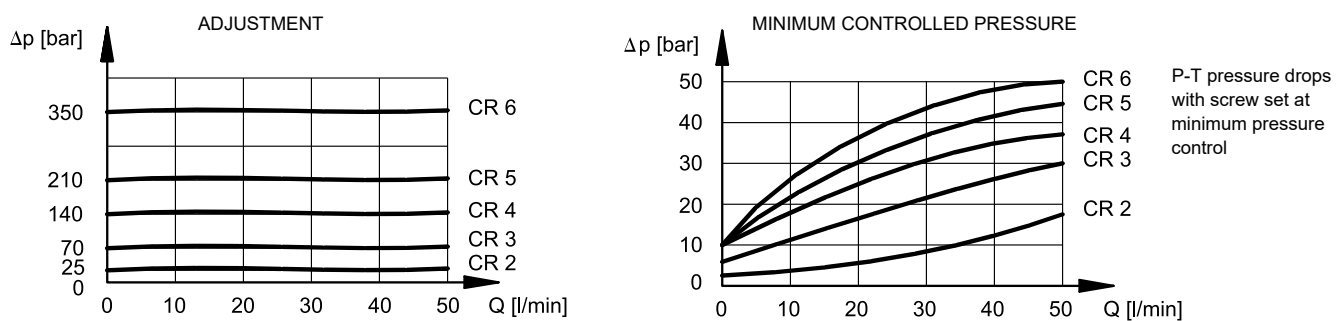
HYDRAULIC SYMBOL



1 - IDENTIFICATION CODE



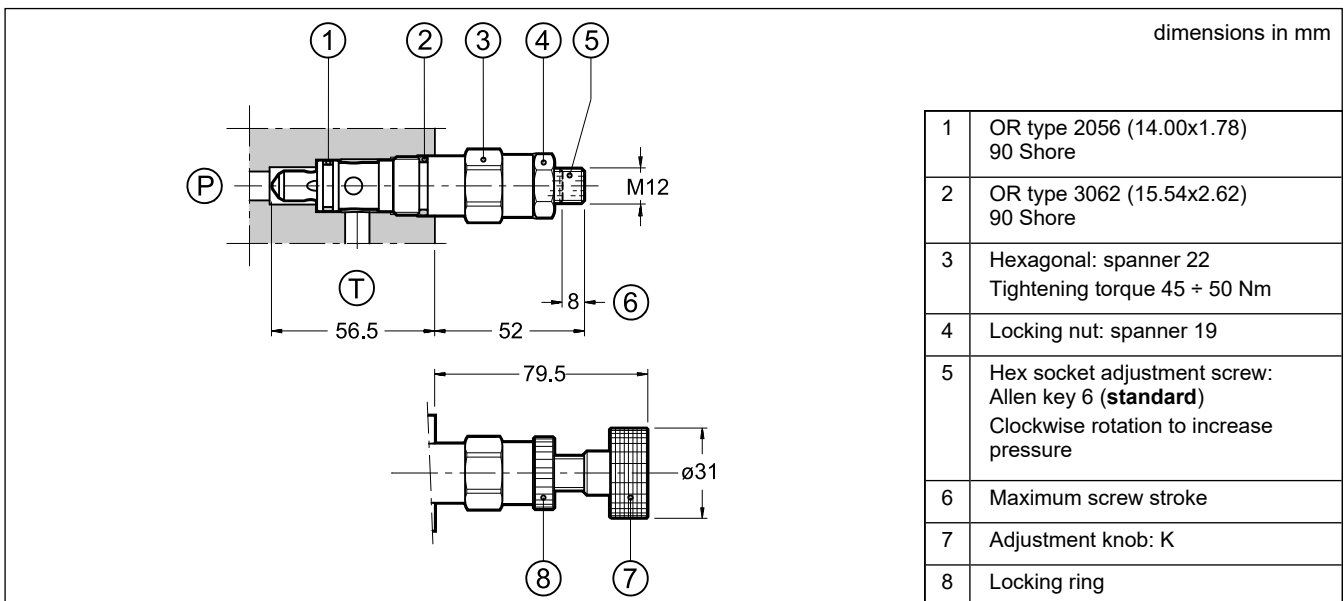
2 - CHARACTERISTIC CURVES (values obtained with viscosity of 36 cSt at 50°C)



3 - HYDRAULIC FLUIDS

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



1 - IDENTIFICATION CODE

P	L	K	08	-	/	10	/	
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Pressure relief valve, direct operated

Cartridge type _____

Size _____

Pressure adjustment range: _____

035 = up to 35 bar (6 bar/turn)
070 = up to 70 bar (14 bar/turn)
140 = up to 140 bar (34 bar/turn)
210 = up to 210 bar (53 bar/turn)
280 = up to 280 bar (75 bar/turn)
350 = up to 350 bar (94 bar/turn)

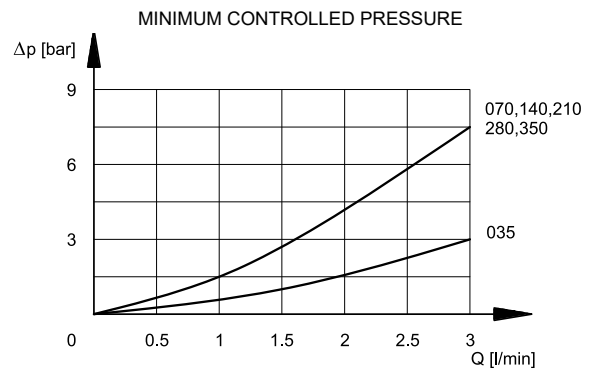
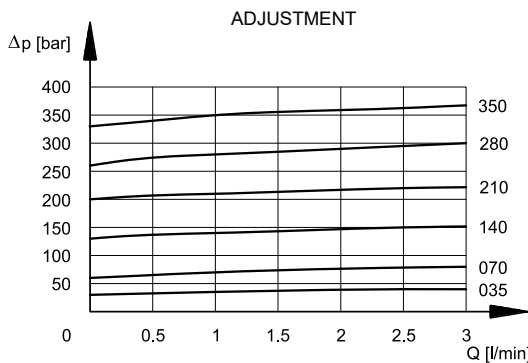
Option:
K = Adjustment knob.
 (omit for adjustment with hex socket screw)

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

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

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 (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	OR type 2037 (9.25x1.78) 70 Shore
2	Parbak 8-012 (9.96x1.14x1.35)
3	OR type 3.908 (16.36x2.2) 70 Shore
4	Cartridge tightening: spanner 24 Tightening torque 50 Nm
5	Locking nut: spanner 19
6	Socket hex adjustment screw: Hex key 6. Rotate clockwise to increase pressure
7	Adjustment knob: K



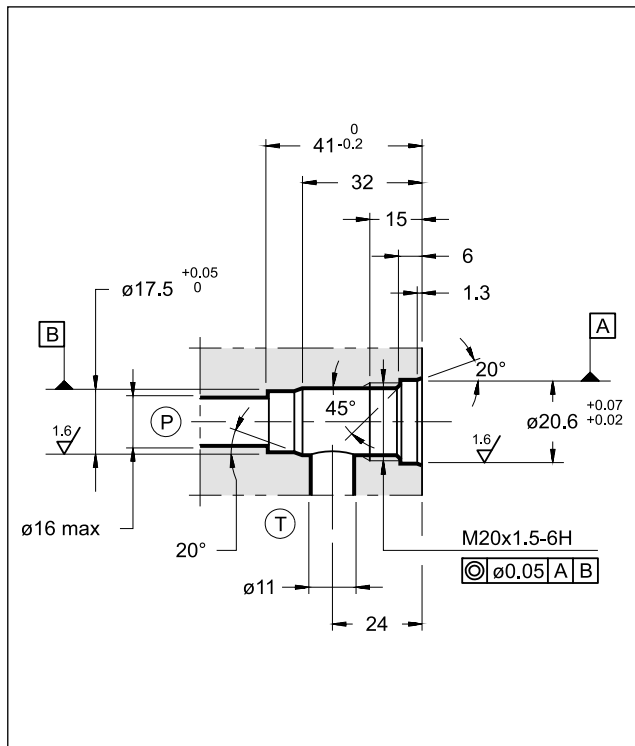
CRQ

PILOT OPERATED PRESSURE CONTROL VALVE SERIES 12

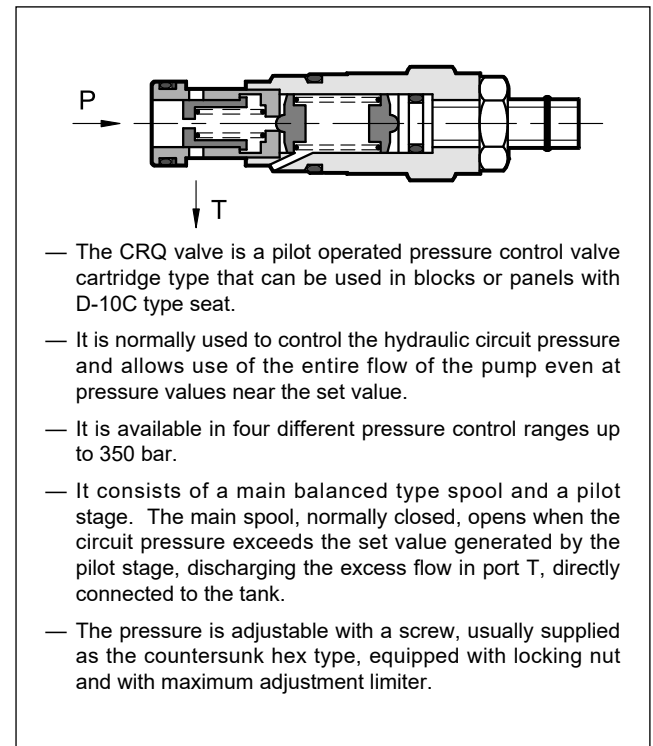
CARTRIDGE TYPE

p max 350 bar
Q max 100 l/min

SEAT DIMENSIONS: D-10C



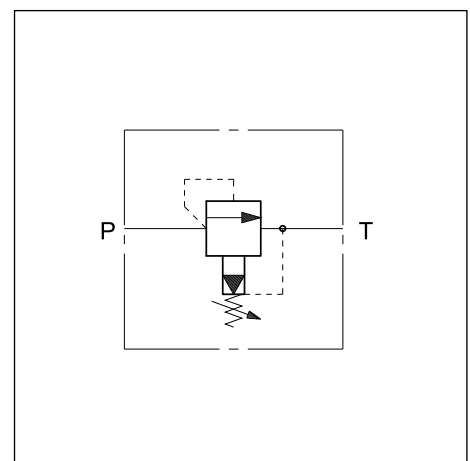
OPERATING PRINCIPLE



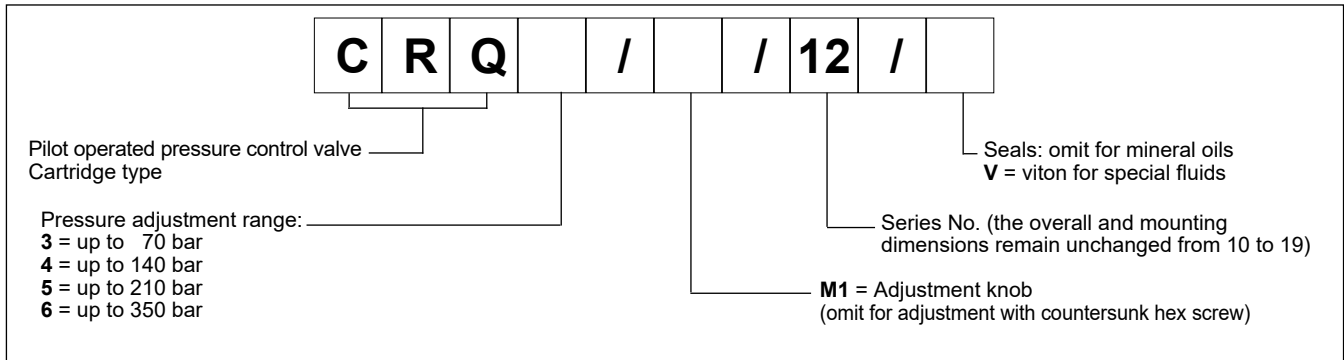
PERFORMANCES (measured with mineral oil of viscosity 36 cSt at 50°C)

Max working pressure	bar	350
Minimum controlled pressure and pressure drop	see diagram	
Maximum flow rate	l/min	100
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	0,16
Surface treatment: electrolytic zinc covering	Fe/Zn 8/B ISO 2081	

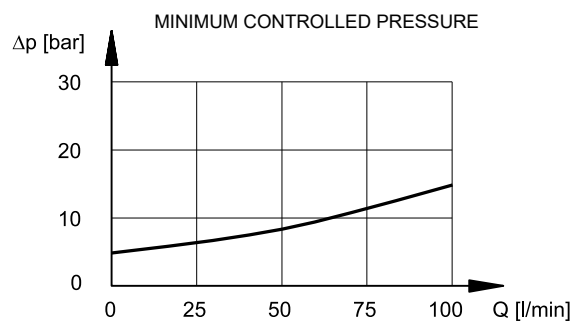
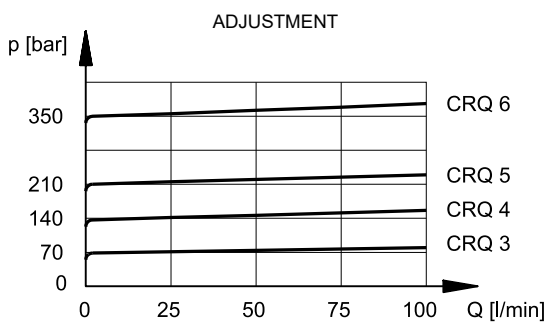
HYDRAULIC SYMBOL



1 - IDENTIFICATION CODE



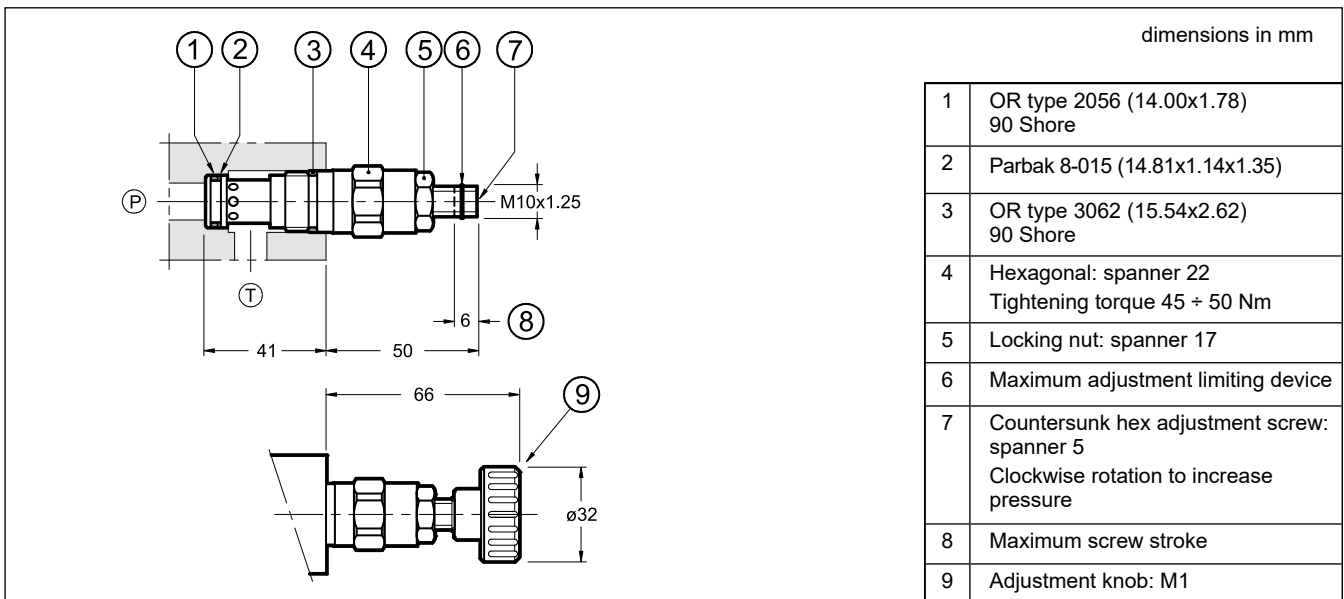
2 - CHARACTERISTIC CURVES (values obtained with viscosity of 36 cSt at 50°C)



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



1 - IDENTIFICATION CODE

P	R	K	10	-	/	13	/	/
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Pressure control valve, pilot operated

Cartridge type _____

Size _____

Pressure adjustment range: _____

070 = from 10 to 70 bar (17 bar/turn) **210** = from 10 to 210 bar (47 bar/turn)
140 = from 10 to 140 bar (32 bar/turn) **350** = from 10 to 350 bar (78 bar/turn)

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

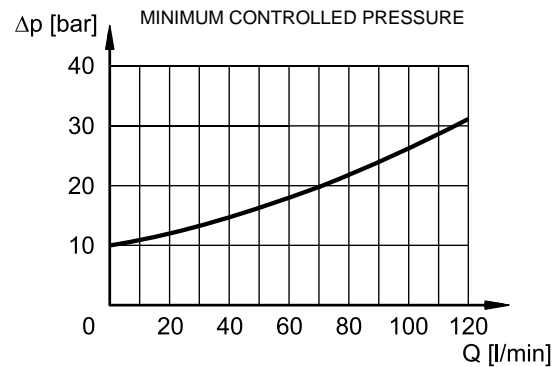
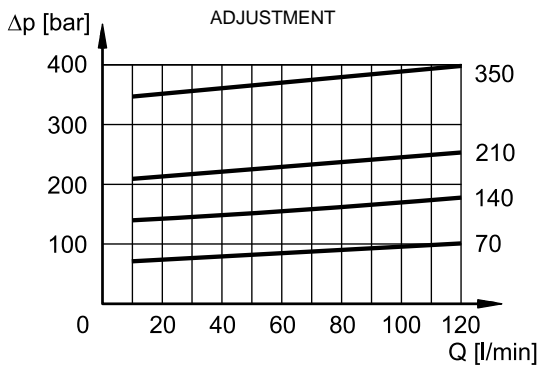
Seals:
N = NBR seals for mineral oils (**standard**)
V = FPM seals for special fluids

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

⚠ NOTE: the maximum regulated pressure value is reached when the screw is flush with the nut.
Screwing over this limit can damage the valve.

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 (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	OR type 2050 (12.42x1.78)
2	Parbak 8-014 (13.23x1.14x1.35)
3	OR type 3-910 (19.18x2.46)
4	Cartridge tightening: spanner 24 Tightening torque 38 Nm
5	Locking nut: spanner 13
6	Socket hex adjustment screw: Hex key 4. Rotate clockwise to increase pressure
7	Locking ring
8	Adjustment knob: K



DBV

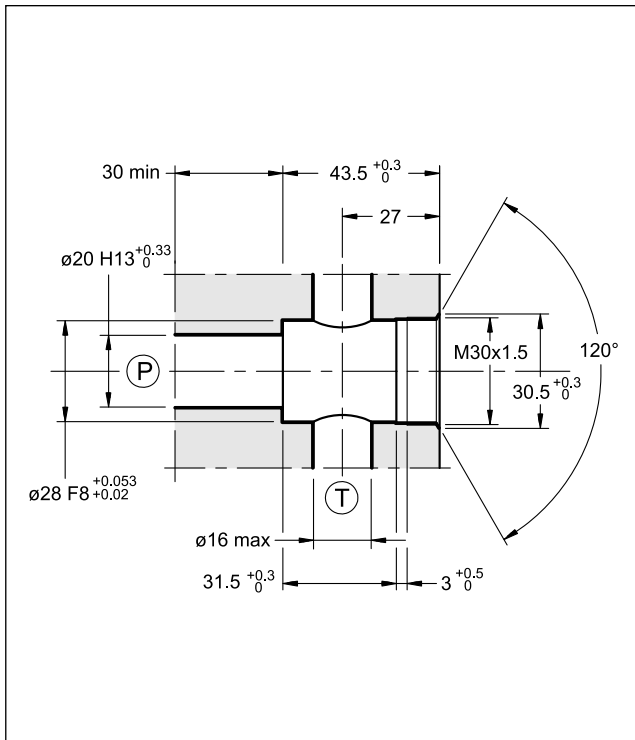
DIRECT OPERATED PRESSURE CONTROL VALVE

SERIES 10

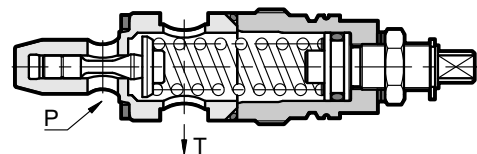
CARTRIDGE TYPE

p max 380 bar
Q max 120 l/min

SEAT DIMENSIONS: D-10E



OPERATING PRINCIPLE



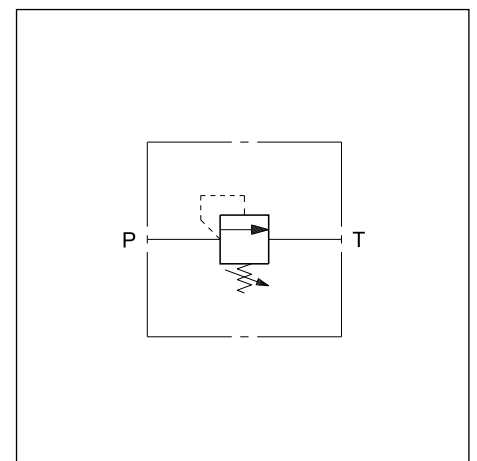
- The DBV valve is a direct operated pressure control valve cartridge type that can be used in blocks or panels with seat.
- It is normally used to control the maximum pressure in the hydraulic circuits or as a limiting device for pressure peaks generated during hydraulic actuator movement variation.
- It is available in different pressure control ranges up to 300 bar.
- The circuit pressure acts on the shutter which is directly loaded by a spring on the opposite side. Once the set pressure is reached, the shutter opens, and discharges the excess flow in port T connected directly to the reservoir.
- The pressure can be adjusted by a screw, equipped with locking nut and maximum adjustment limiter.

PERFORMANCES

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

Max working pressure	bar	380
Minimum controlled pressure and pressure drop	see diagram	
Maximum flow rate	l/min	120
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	0,25
Surface treatment: electrolytic zinc covering	Fe/Zn 8/B ISO 2081	

HYDRAULIC SYMBOL



1 - IDENTIFICATION CODE

D	B	V	-	/	10	/	
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Direct operated pressure control valve
Cartridge type

Pressure adjustment range:

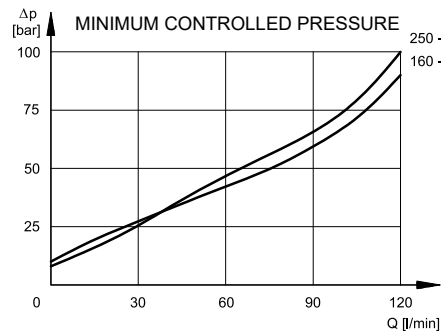
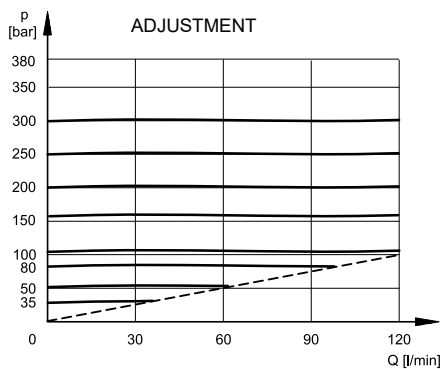
035 = up to 35 bar	160 = up to 160 bar
050 = up to 50 bar	200 = up to 200 bar
080 = up to 80 bar	250 = up to 250 bar
100 = up to 100 bar	300 = up to 300 bar

K = Adjustment knob
(omit for adjustment with hex screw - **standard**)

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

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

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



P-T pressure drops with screw set at minimum pressure control

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	Socket hex adjustment screw: spanner 8 (standard) Clockwise rotation to increase pressure
2	Locking nut: spanner 17
3	Hexagonal spanner 24 Tightening torque 70 ÷ 100 Nm
4	OR type 130 (22.22x2.62) 90 Shore
5	Maximum screw stroke
6	Adjustment knob: K



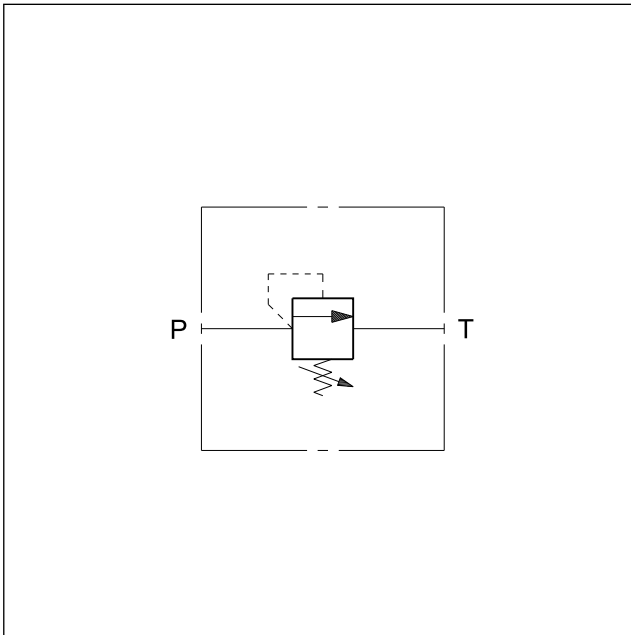
CD1-W

DIRECT OPERATED PRESSURE CONTROL VALVE SERIES 10

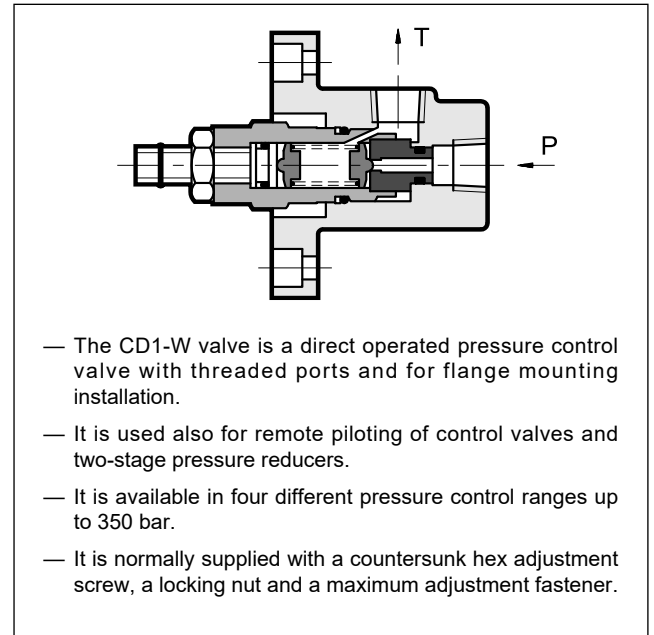
THREADED PORTS

p max 350 bar
Q max 3 l/min

HYDRAULIC SYMBOL



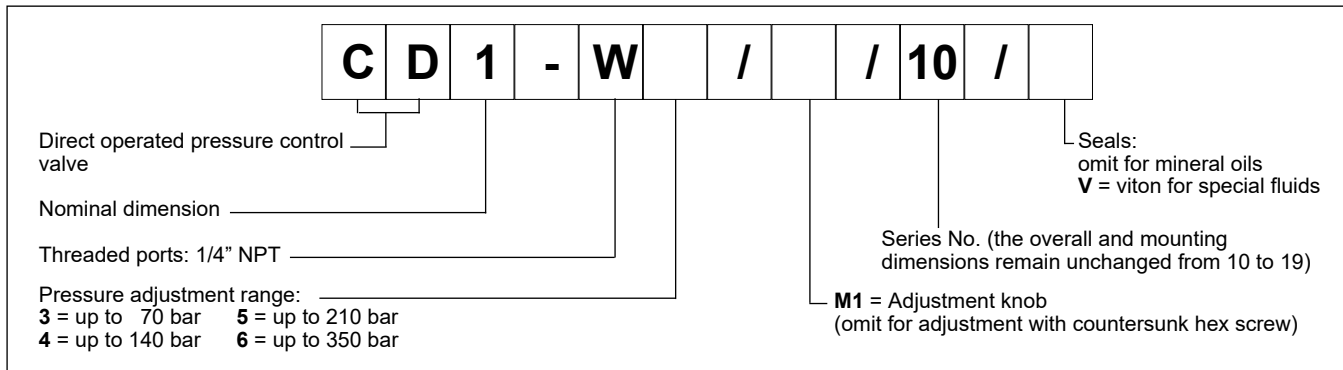
OPERATING PRINCIPLE



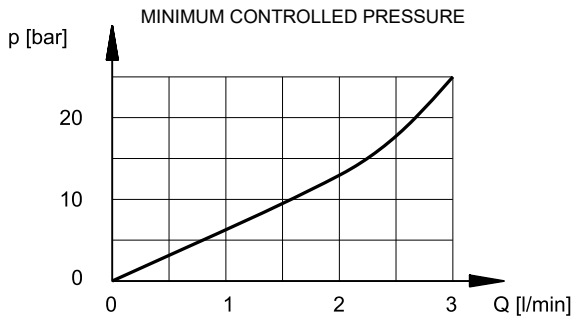
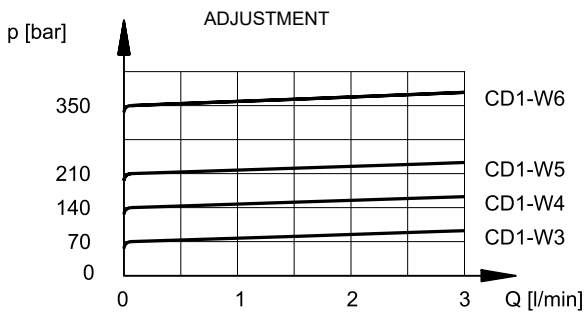
PERFORMANCE RATINGS (measured with mineral oil of viscosity 36 cSt at 50°C)

Maximum operating pressure	bar	350
Minimum controlled pressure	see diagram	
Maximum flow rate	l/min	3
Ambient temperature range	°C	-20 / +60
Fluid temperature range	°C	-20 / +80
Fluid viscosity range	cSt	10 + 400
Recommended filtration	according to ISO 4406:1999 class 20/18/15	
Recommended viscosity	cSt	25
Mass	kg	1,2

1 - IDENTIFICATION CODE



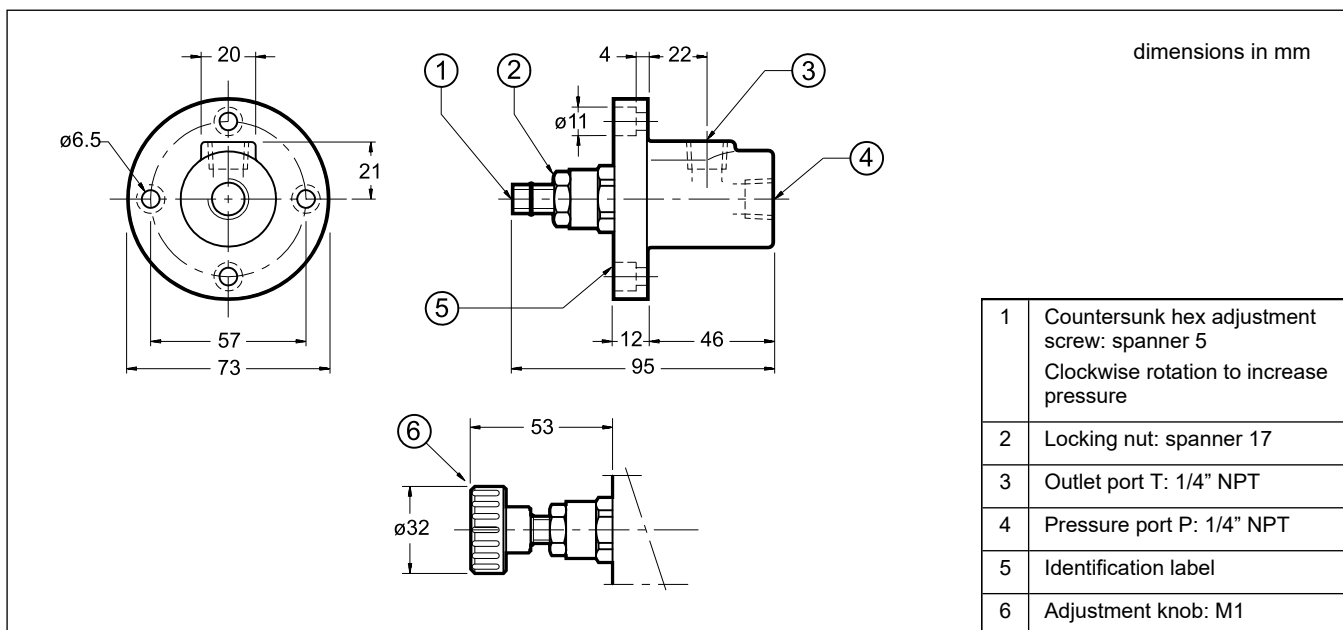
2 - CHARACTERISTIC CURVES (values obtained with viscosity of 36 cSt at 50°C)



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





RM*-W

PRESSURE CONTROL VALVES

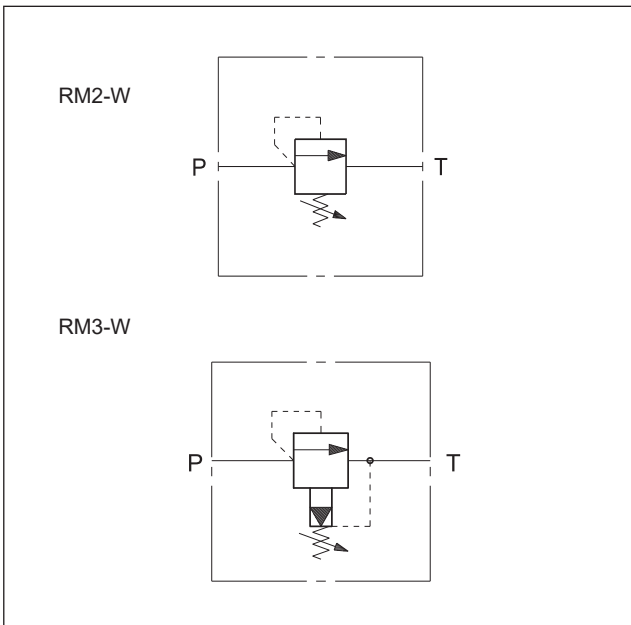
RM2-W SERIES 31
RM3-W SERIES 30

THREADED PORTS

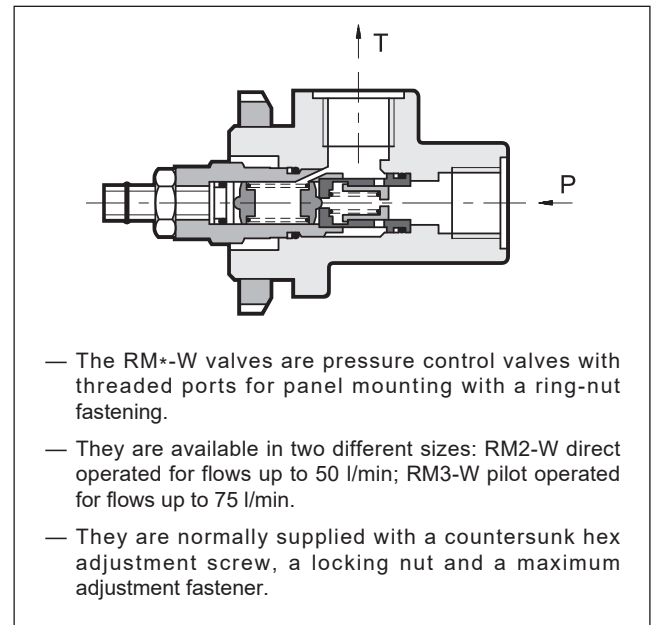
p max **350** bar

Q max (see table of performances)

HYDRAULIC SYMBOLS



OPERATING PRINCIPLE



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

		RM2-W	RM3-W
Maximum operating pressure	bar	350	
Minimum controlled pressure		see diagram	
Maximum flow rate	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	kg	0,9	



RQ*-W

PRESSURE RELIEF VALVE

SERIES 41

THREADED PORTS

p max 350 bar

Q max (see table of performances)

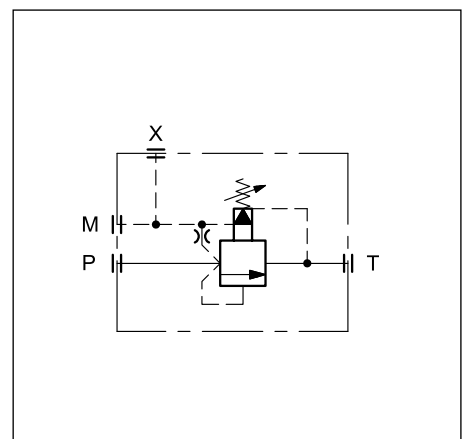
OPERATING PRINCIPLE

- The RQ*-W valves are pilot operated pressure relief valves with threaded ports, available in two nominal sizes for a flow rate up to 400 l/min.
- Main stage with shutter and cone seal.
- Possibility of remote piloting using port X (see par. 4).
- The valves allow the use of the entire flow of the pump even with pressure values near the set value. The wide passages allow reduced pressure drops and fluid heating due to low pressure drop across the valve.
- They are normally supplied with a hexagonal head adjustment screw. Upon request, they can be equipped with a SICBLOC adjustment knob.

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

		RQ5-W	RQ7-W
Maximum operating pressure	bar	350	
Maximum flow rate	l/min	250	400
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	4,1	8

HYDRAULIC SYMBOL



1 - IDENTIFICATION CODE

	R	Q	-	W	/	/	41	/
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Pressure control valve _____

Nominal dimension **5** = DN 25
7 = DN 40

BSP threaded ports _____

Pressure adjustment range: _____

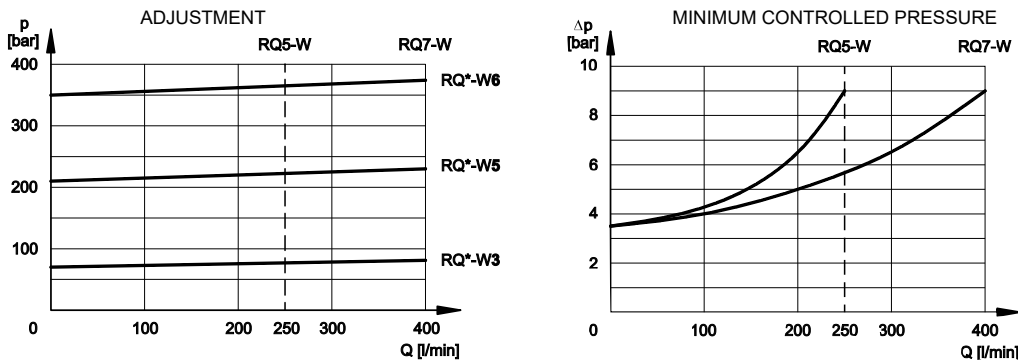
3 = up to 70 bar
5 = up to 210 bar
6 = up to 350 bar

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

Series No. (the overall and mounting dimensions remain unchanged from 40 to 49)

M = adjustment with SICBLOC knob
(omit for adjustment with hexagonal head 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	Hexagonal head adjustment screw. Spanner 13. Clockwise rotation to increase pressure
2	Remote piloting port X: 1/4" BSP
3	Outlet port T RQ5-W: 1" BSP RQ7-W: 1" 1/2 BSP
4	Pressure port P RQ5-W: 3/4" BSP RQ7-W: 1" 1/4 BSP
5	Pressure gauge port 3/8" BSP
6	SICBLOC adjustment knob. To operate, push and rotate at the same time.

	A	B	C	D	ØE	F	G	H	I	L	M	ØN	ØO
RQ5-W	168	98	49	4	22	21.5	44.5	123	80	87	53	35.5	46
RQ7-W	168	98	49	4	22	43	59.5	145	102	109	68	50	56



RQ*-P

PRESSURE RELIEF VALVES

SERIES 41

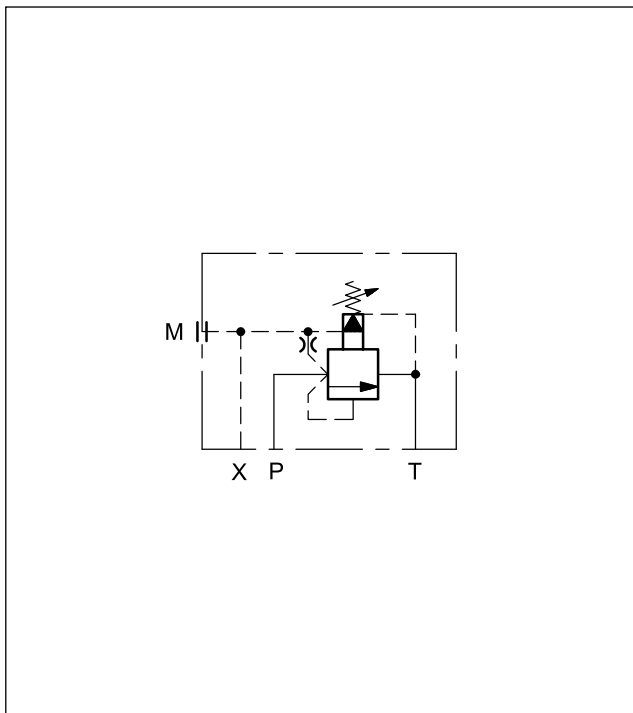
SUBPLATE MOUNTING

RQ3-P ISO 6264-06

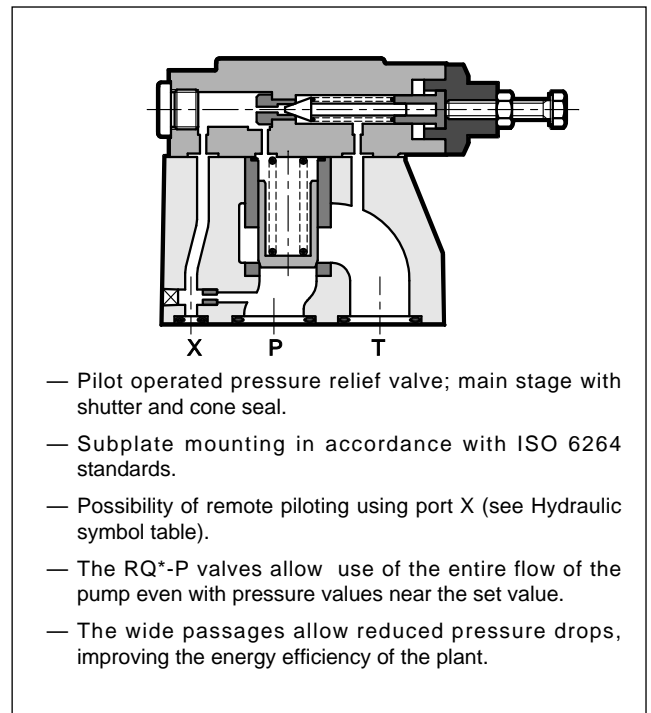
RQ5-P ISO 6264-08

RQ7-P ISO 6264-10

HYDRAULIC SYMBOL



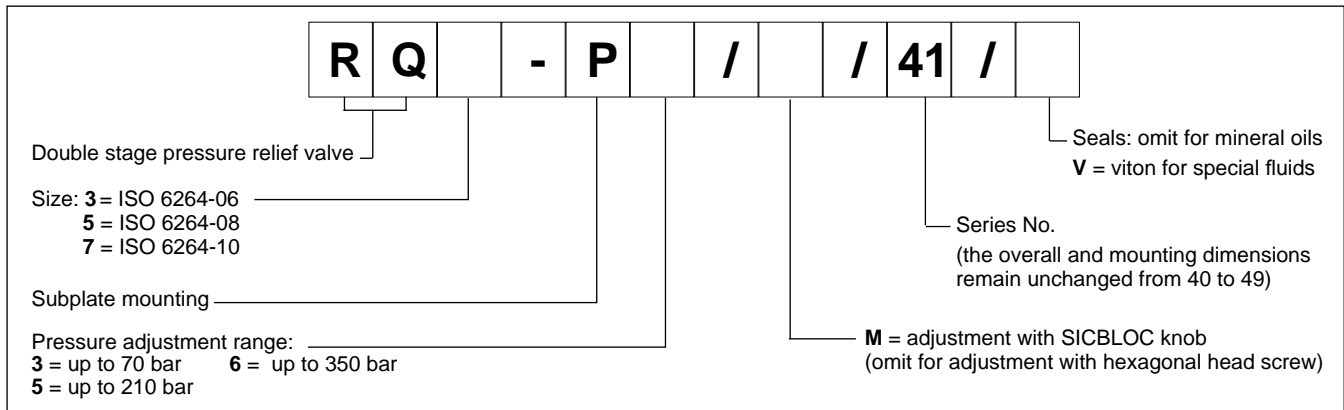
OPERATING PRINCIPLE



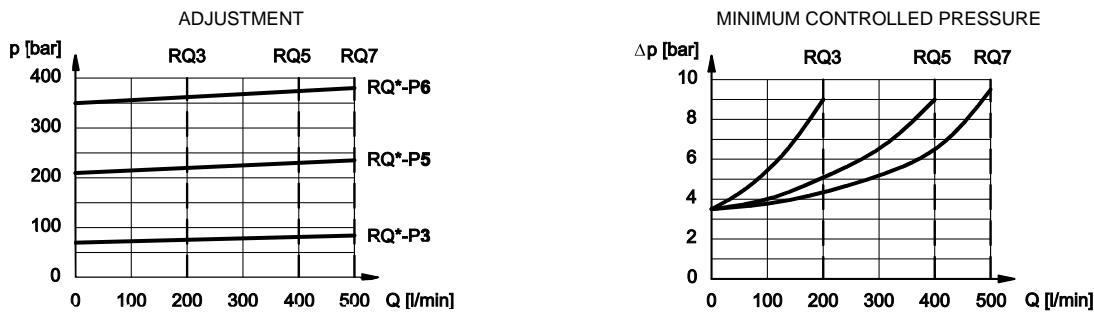
PERFORMANCES (measured with mineral oil of viscosity 36 cSt at 50°C)

		RQ3-P	RQ5-P	RQ7-P
Maximum operating pressure	bar	350		
Maximum flow rate	l/min	200	400	500
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	3,5	4,3	6,5

1 - IDENTIFICATION CODE



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

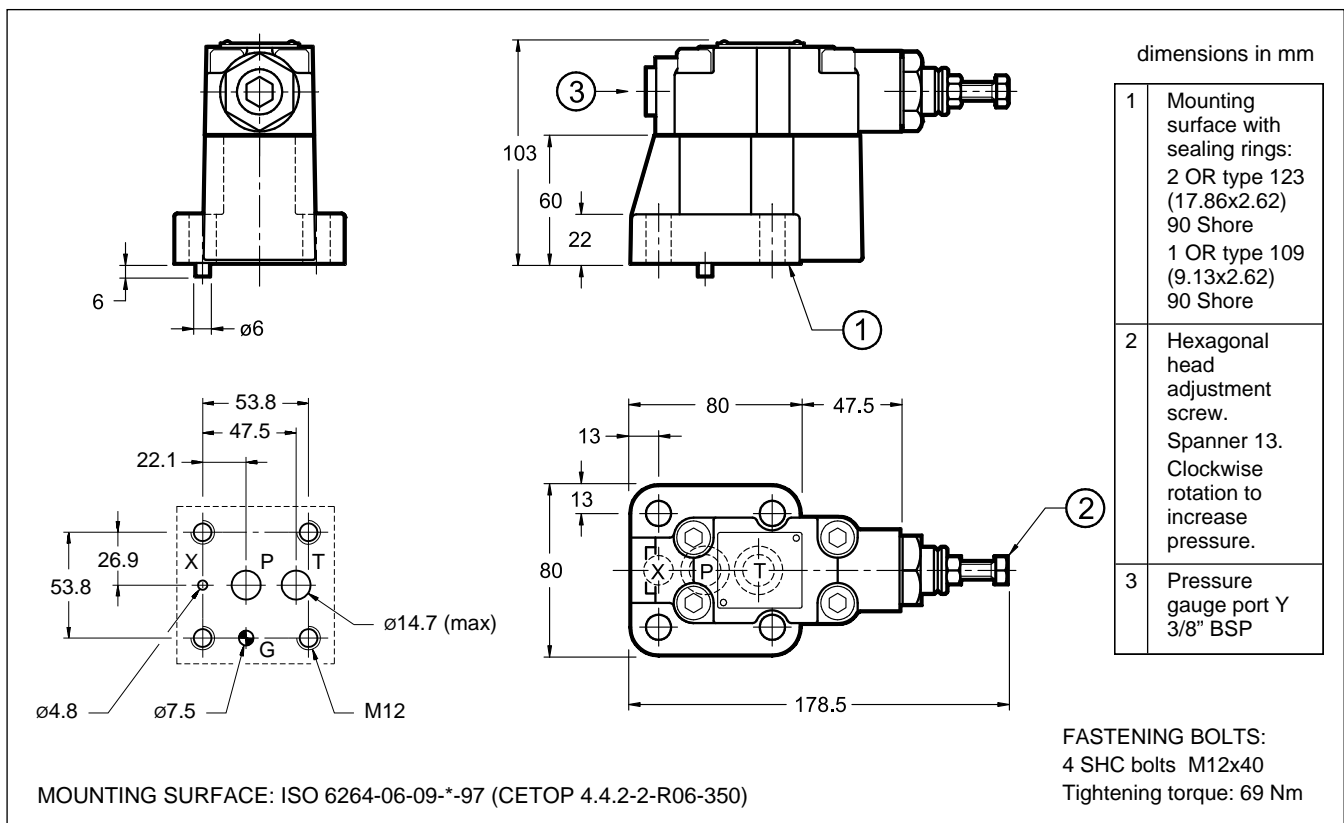


3 - HYDRAULIC FLUIDS

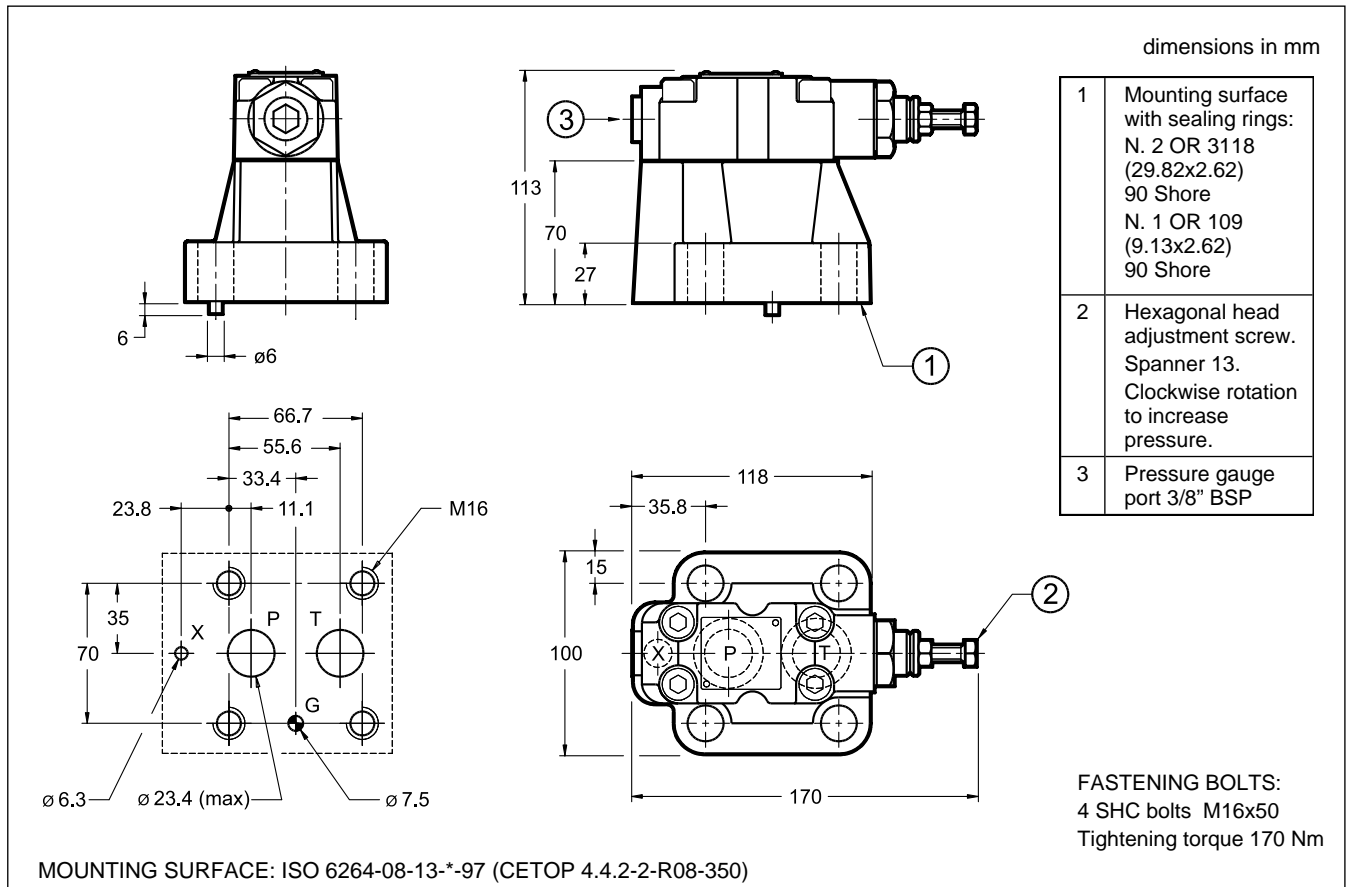
Use mineral oil-based hydraulic fluids HL or HM type, according to ISO 6743-4. For these fluids, use NBR seals. For fluids HFDR type (phosphate esters) use FPM seals (code V). For the use of other kinds of fluid such as HFA, HFB, HFC, please consult our technical department. Using fluids at temperatures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

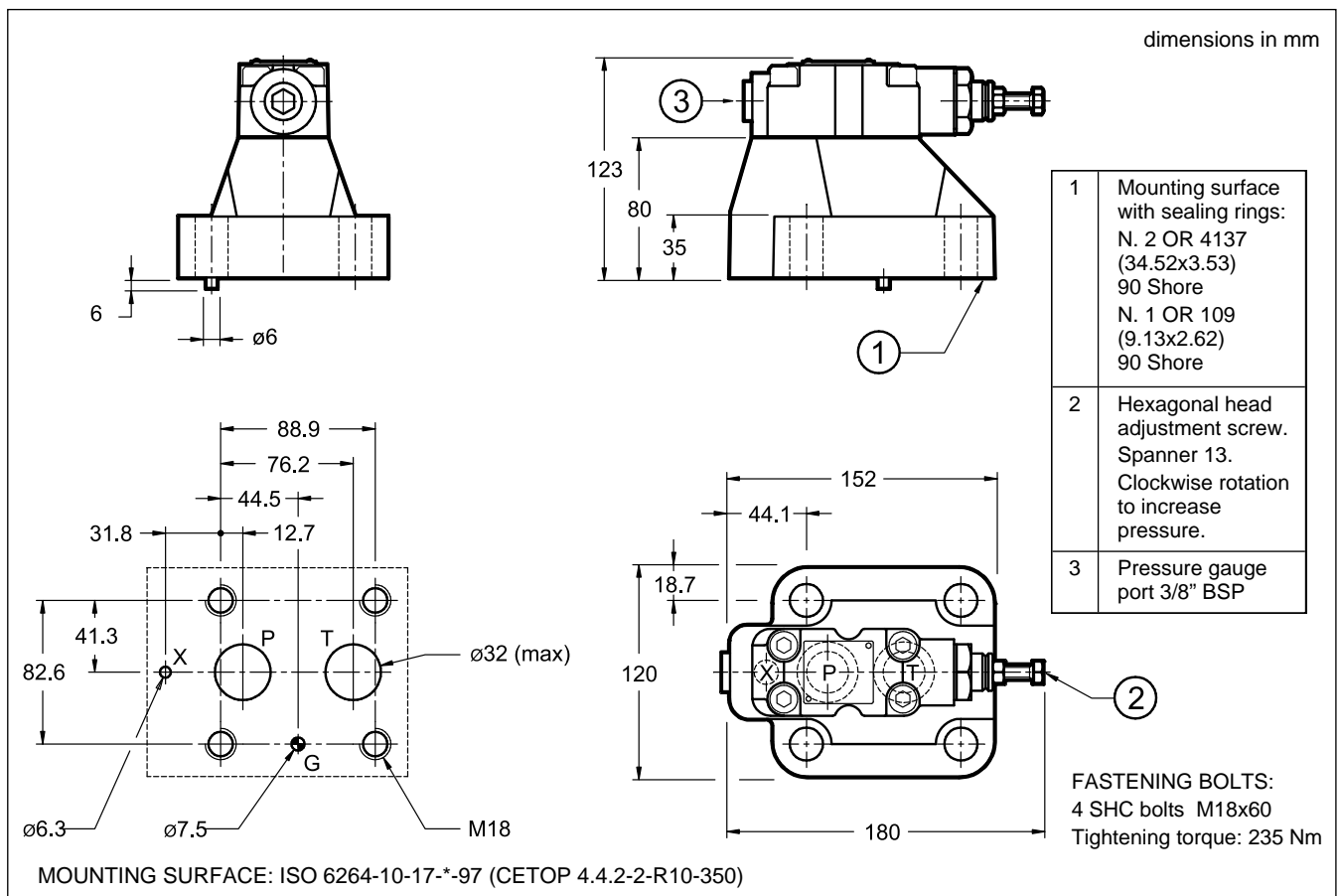
4 - RQ3-P OVERALL AND MOUNTING DIMENSIONS



5 - RQ5-P OVERALL AND MOUNTING DIMENSIONS



6 - RQ7-P OVERALL AND MOUNTING DIMENSIONS

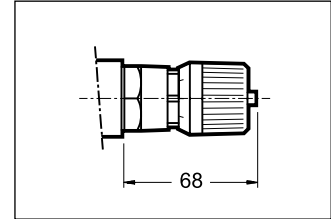




7 - ADJUSTMENT KNOB

The RQ valves can be equipped with a SICBLOC adjustment knob. To operate it, push and rotate at the same time.

To request this option, add: /M (see paragraph 1).



8 - SUBPLATES (see catalogue 51 000)

	RQ3-P	RQ5-P	RQ7-P
Type	PMRQ3-AI4G rear ports	PMRQ5-AI5G rear ports	PMRQ7-AI7G rear ports
P, T ports dimension	P: 1/2" BSP T: 3/4" BSP	1" BSP	1" 1/4 BSP
X port dimension	1/4" BSP	1/4" BSP	1/4" BSP



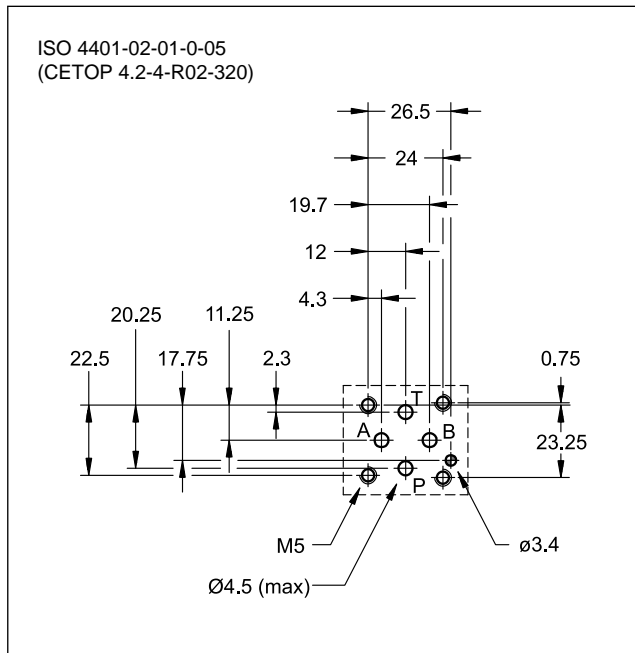
PRM2

DIRECT OPERATED PRESSURE RELIEF VALVE SERIES 10

MODULAR VERSION ISO 4401-02

p max 320 bar
Q max 20 l/min

MOUNTING SURFACE



OPERATING PRINCIPLE

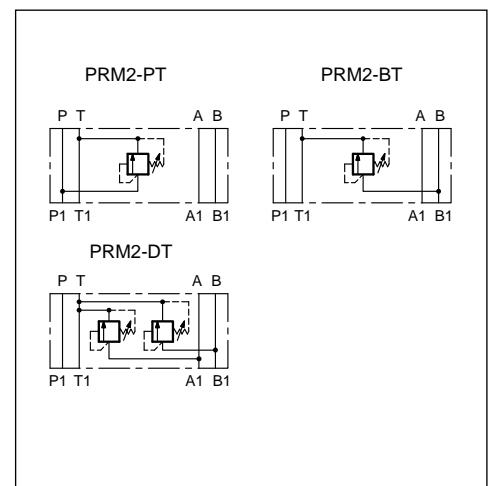
- The PRM2 valve is a direct operated pressure relief valve made as a modular version with mounting surface according to the ISO 4401 standards.
- It can be assembled with all ISO 4401-02 modular valves without use of pipes, using suitable tie-rods or bolts.
- It is available in versions for single relief on P or B with discharge in T, or two independent relief on A and B with discharge in T, all with three 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 supplied with a countersunk hex adjustment screw and locking nut.

PERFORMANCES

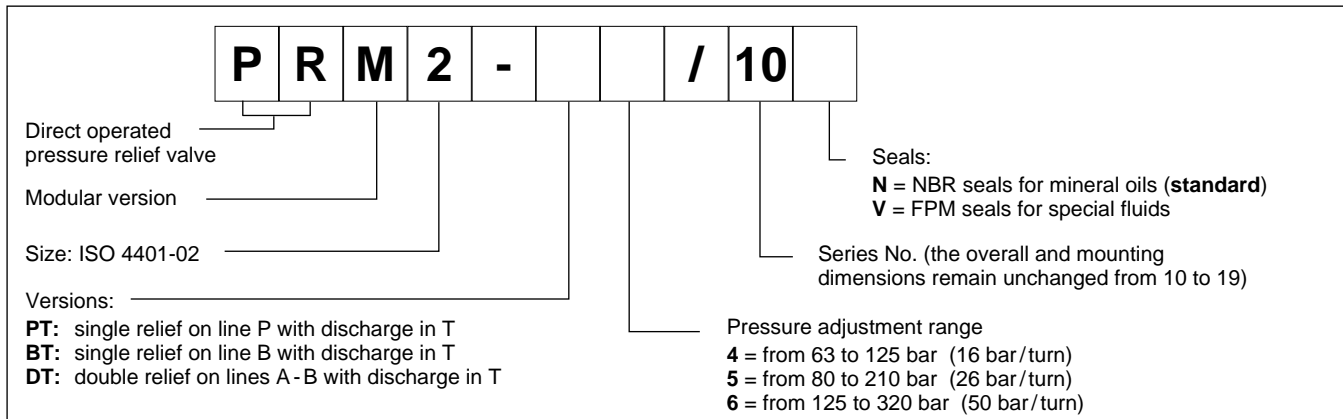
(measured with mineral oil of viscosity 36cSt at 50°C)

Maximum operating pressure	bar	320
Minimum controlled pressure	see Δp diagram.	
Maximum flow rate	l/min	20
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: PRM2-PT and PRM2-BT PRM2-DT	kg	0.85 1

HYDRAULIC SYMBOLS

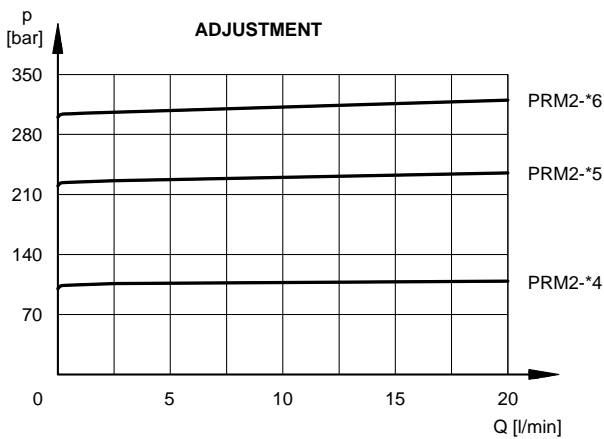


1 - IDENTIFICATION CODE



2 - CHARACTERISTIC CURVES

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



3 - HYDRAULIC FLUIDS

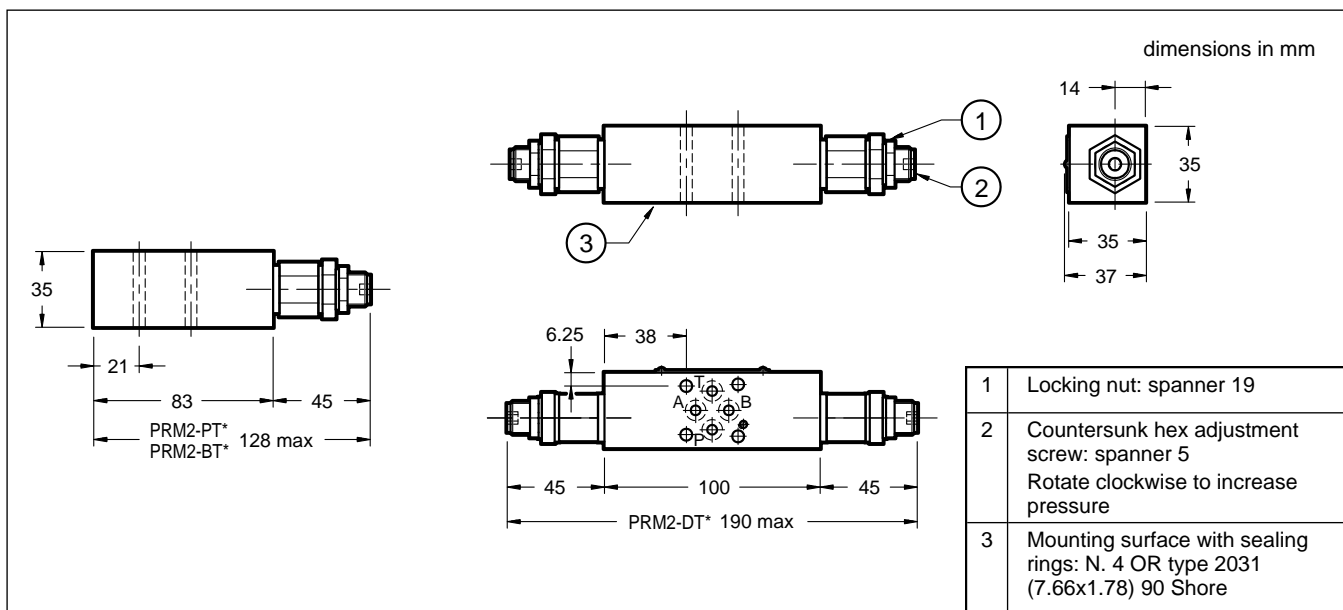
Use mineral oil-based hydraulic fluids HL or HM type, according to ISO 6743-4. For these fluids, use NBR seals. For fluids HFDR type (phosphate esters) use FPM seals (code V).

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





PRM3

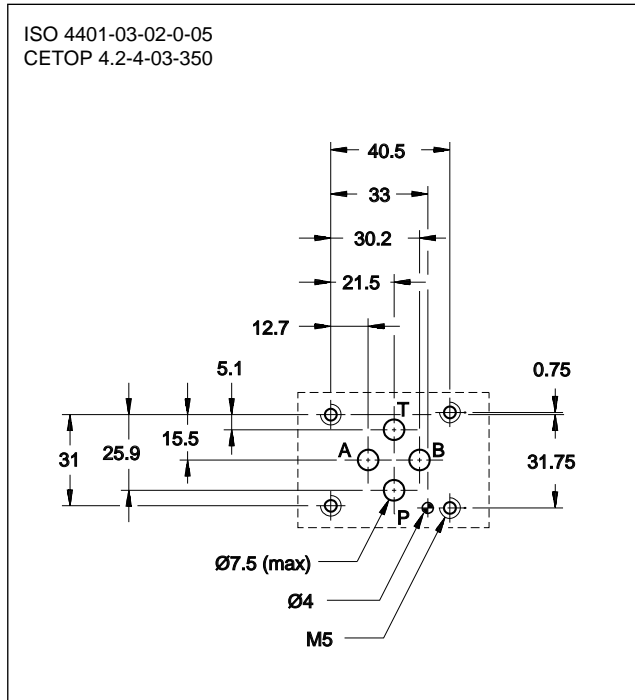
DIRECT OPERATED PRESSURE RELIEF VALVE

SERIES 10

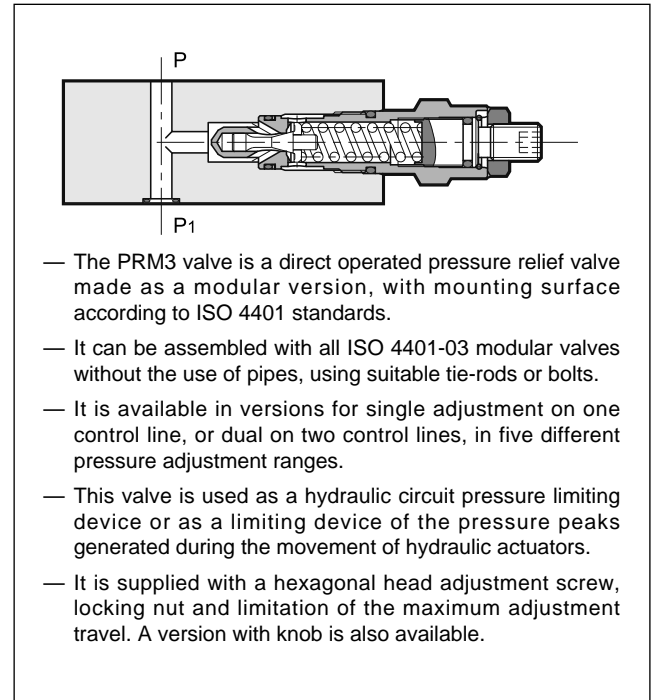
MODULAR VERSION ISO 4401-03

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

MOUNTING SURFACE



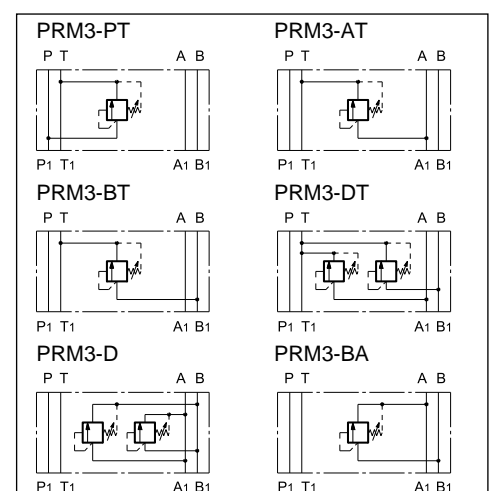
OPERATING PRINCIPLE



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

Maximum operating pressure	bar	350
Minimum controlled pressure	bar	see $\Delta p - Q$ 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	/	
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Pressure relief valve, direct operated

Modular version

ISO 4401-03 size

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

Adjustment type (See point 5):
S = with hexagonal socket screw (**standard**)
K = Adjustment knob

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

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

Pressure adjustment range:

025 = up to 25 bar	210 = up to 210 bar
070 = up to 70 bar	350 = up to 350 bar
140 = up to 140 bar	

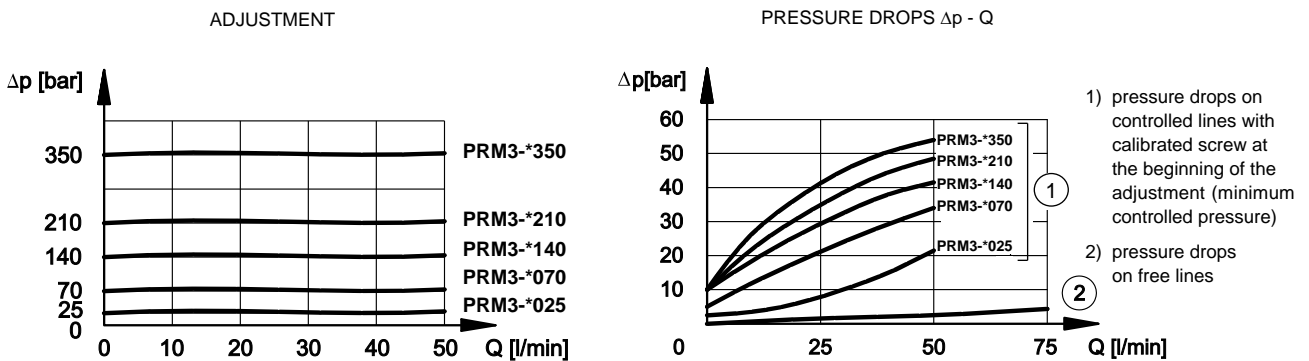
Versions:

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

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)



3 - HYDRAULIC FLUIDS

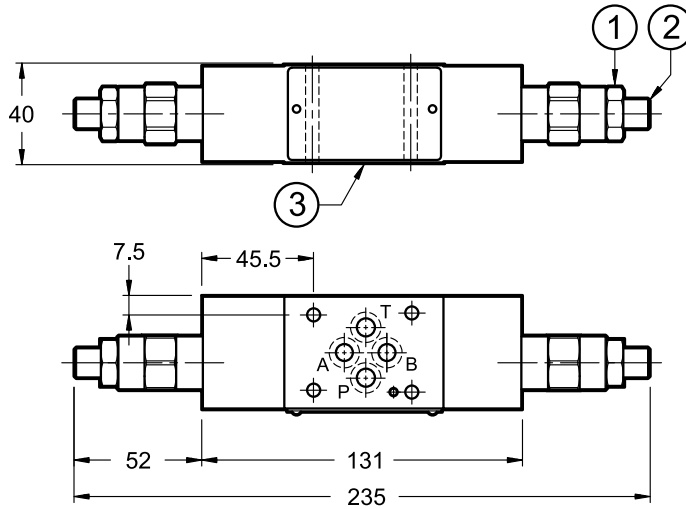
Use mineral oil-based hydraulic fluids HL or HM type, according to ISO 6743-4. For these fluids, use NBR seals (code N). For fluids HFDR type (phosphate esters) use FPM seals (code V). For the use of other kinds of fluid such as HFA, HFB, HFC, please consult our technical department.

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.

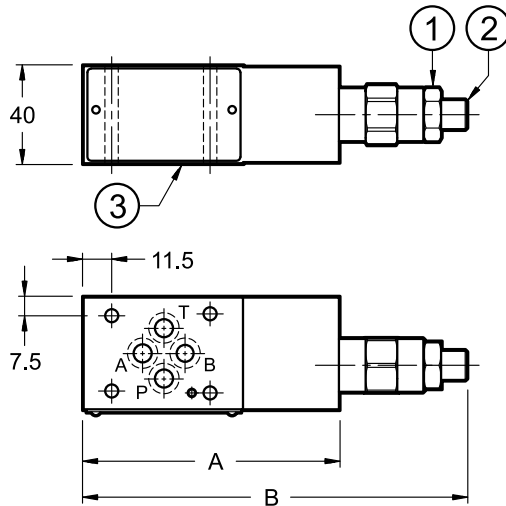
4 - OVERALL AND MOUNTING DIMENSIONS

dimensions in mm

PRM3-D, PRM3-DT

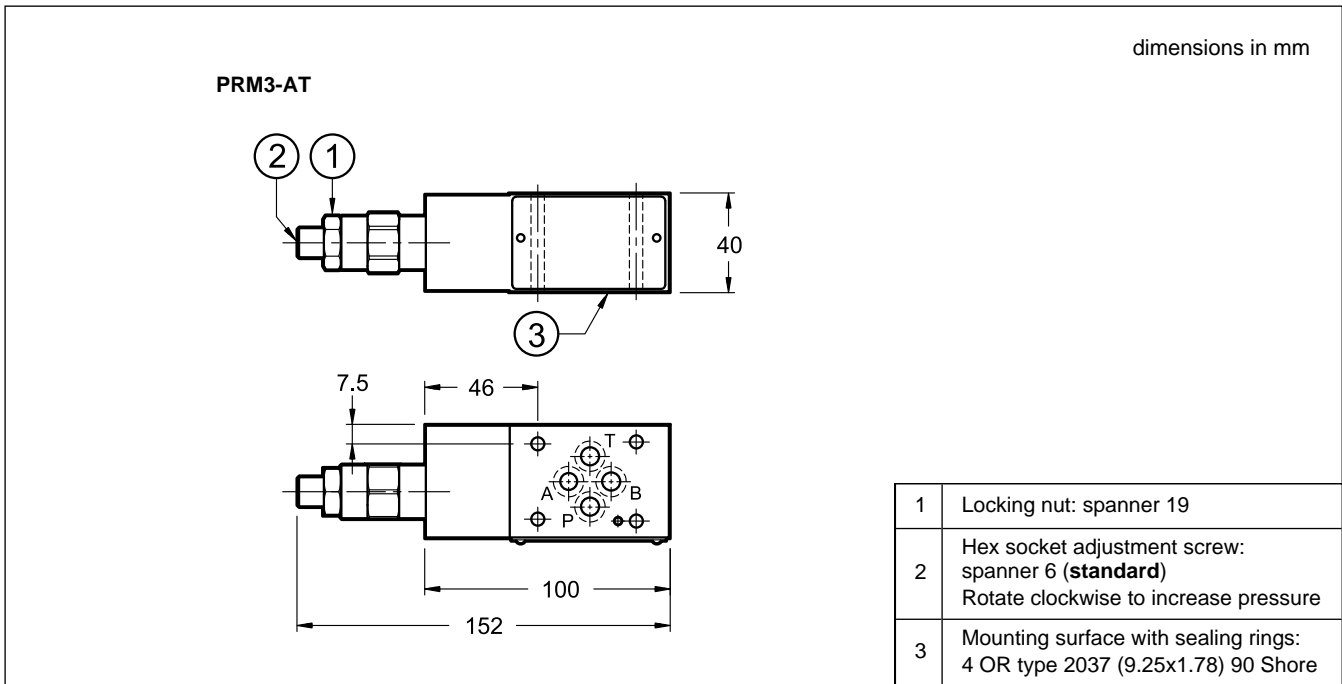


PRM3-PT, PRM3-BA, PRM3-BT



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

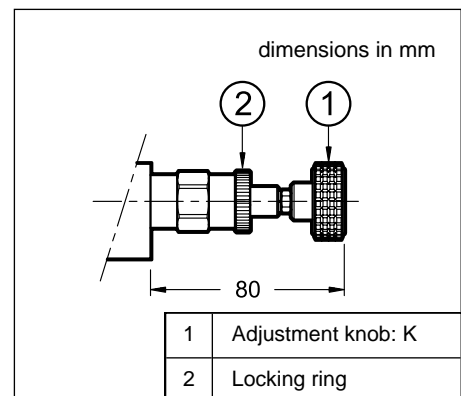
1	Locking nut: spanner 19
2	Hex socket adjustment screw: spanner 6 (standard) Rotate clockwise to increase pressure
3	Mounting surface with sealing rings: 4 OR type 2037 (9.25x1.78) 90 Shore

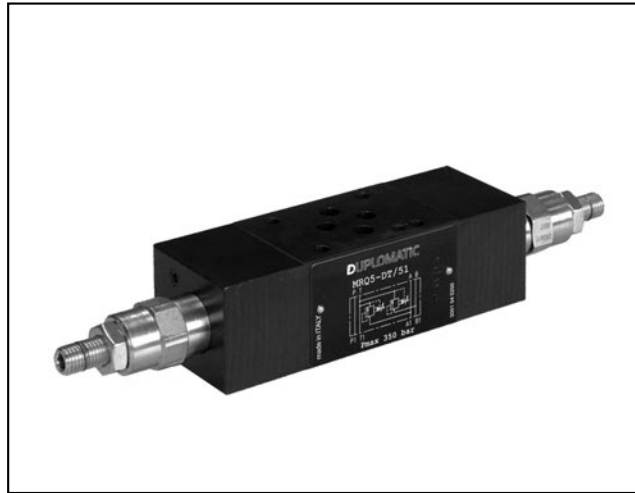


5 - ADJUSTMENT KNOB

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).





MRQ

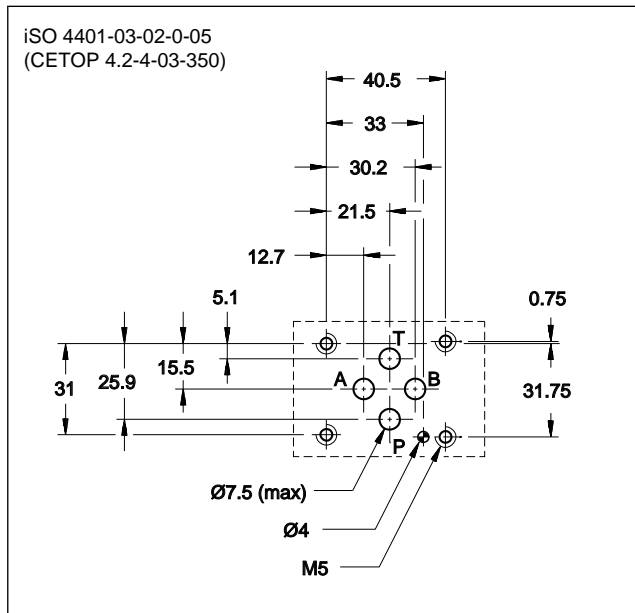
PILOT OPERATED PRESSURE RELIEF VALVE

SERIES 51

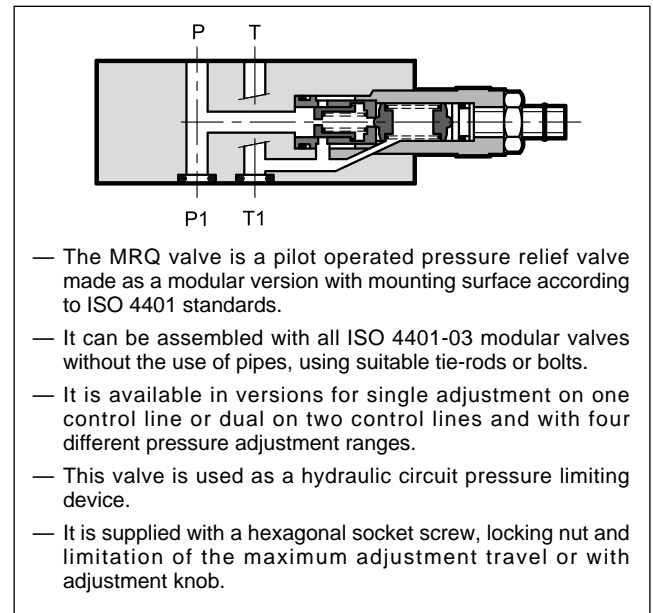
MODULAR VERSION ISO 4401-03

p max 350 bar
Q max 75 l/min

MOUNTING INTERFACE



OPERATING PRINCIPLE

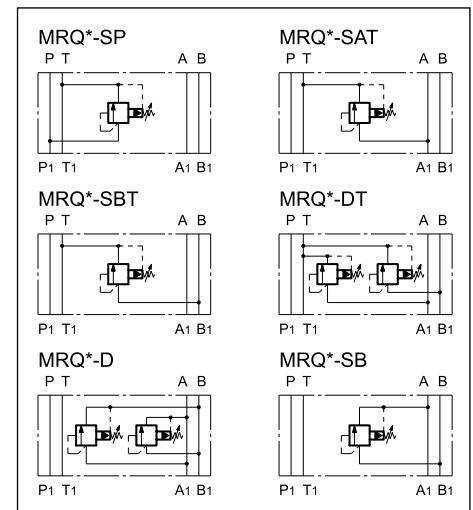


PERFORMANCES

(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 and in the free lines	l/min	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: MRQ-SP / MRQ-SAT / MRQ-SBT / MRQ-SB / MRQ-DT / MRQ-D	kg	1,4 2,1

HYDRAULIC SYMBOLS



1 - IDENTIFICATION CODE

M	R	Q	-	/	/	51	/	
----------	----------	----------	----------	----------	----------	-----------	----------	--

ISO 4401-03 size
Modular version

Pilot operated pressure relief valve

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

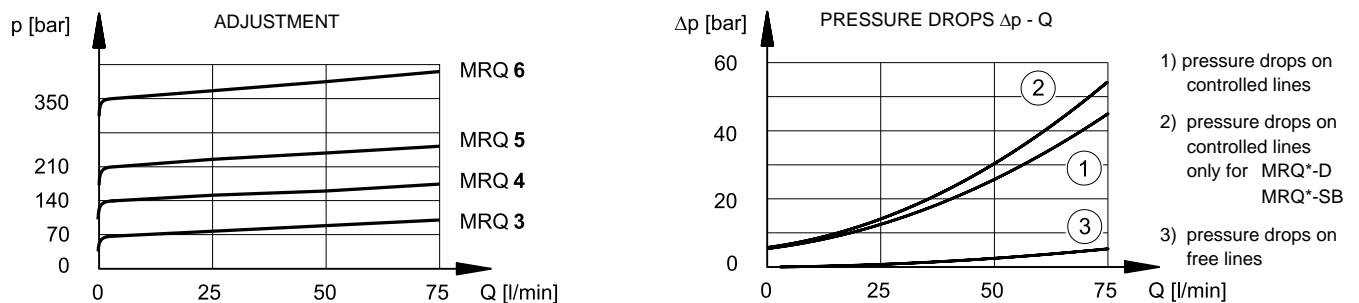
Configurations:
SP = single on line P with discharge in T
SAT = single on line A with discharge in T
SBT = single on line B with discharge in T

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

Series No. (the overall and mounting dimensions remain unchanged from 50 to 59)
 Omit for adjustment with hexagonal socket screw
M1 = Adjustment knob

SB = single on line B with discharge in A
DT = double on lines A-B with discharge in T
D = double on lines A-B with crossed discharges

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	Countersunk hex adjustment screw: spanner 5 Rotate clockwise to increase pressure
3	Mounting surface with sealing rings: 4 OR type 2037 (9.25x1.78) 90 Shore
4	Adjustment knob: M1



PRM5

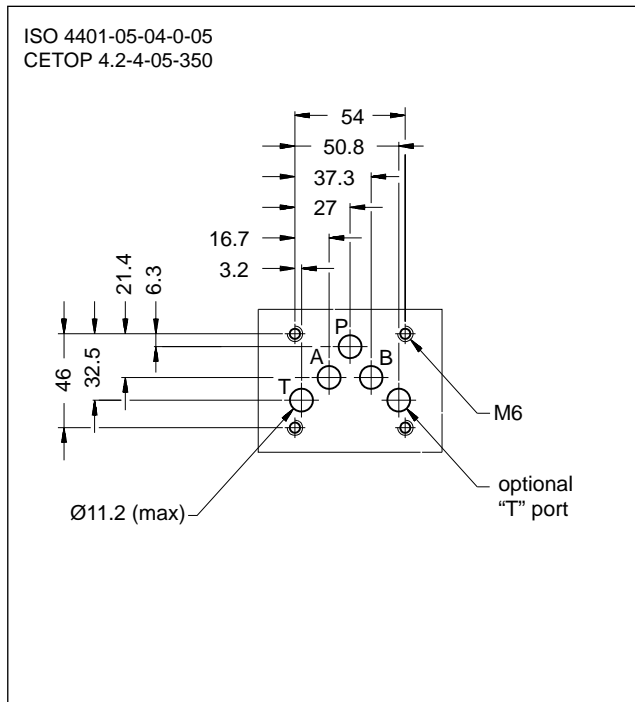
PILOT OPERATED PRESSURE RELIEF VALVE

SERIES 10

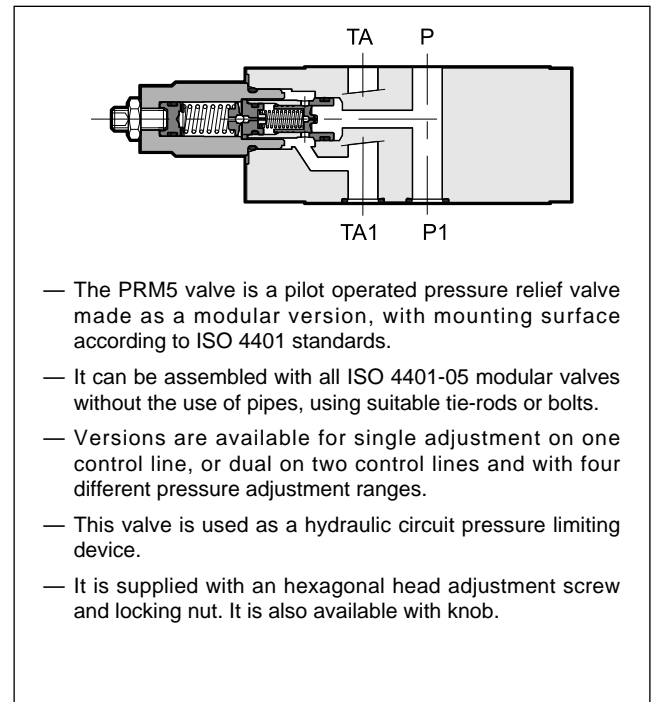
MODULAR VERSION ISO 4401-05

p max 350 bar
Q max 120 l/min

MOUNTING SURFACE



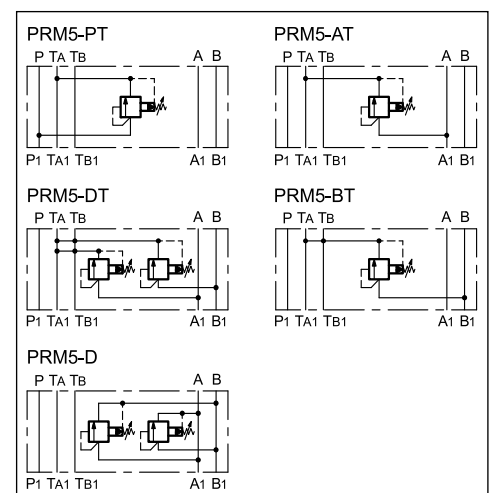
OPERATING PRINCIPLE



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

Maximum operating pressure	bar	350
Minimum controlled pressure	bar	see $\Delta p - Q$ diagram
Max flow	l/min	120
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: PRM5-PT, -AT, -BT PRM5-DT, -D	kg	2,8 3

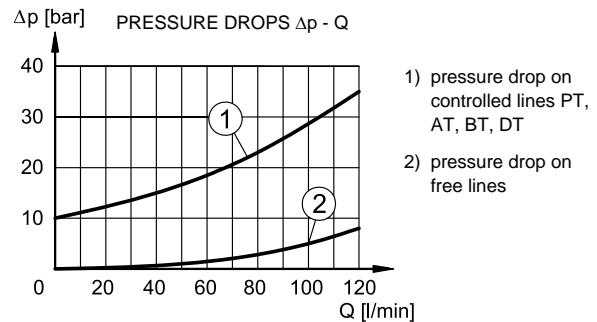
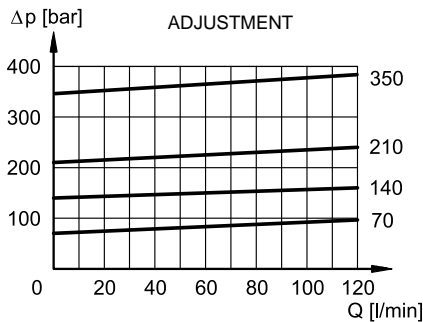
HYDRAULIC SYMBOLS



1 - IDENTIFICATION CODE

P R M 5 -	/ 10	/	
Pilot operated pressure relief valve Modular version ISO 4401-05 size Versions: PT: single on line P with discharge in TA AT: single on line A with discharge in TA BT: single on line B with discharge in TA and TB DT: double on lines A-B with discharge in TA and TB D: double on lines A-B with cross discharge Pressure adjustment range: 070 = 14 ÷ 70 bar (17 bar/turn) 210 = 14 ÷ 210 bar (47 bar/turn) 140 = 14 ÷ 140 bar (32 bar/turn) 350 = 14 ÷ 350 bar (78 bar/turn)	Option: W7 surface treatment. Omit if not required (NOTE) Option: K = Adjustment knob. Omit for adjustment with hex socket screw (standard) Seals: N = NBR seals for mineral oils (standard) V = FPM seals for special fluids Series No. (the overall and mounting dimensions remain unchanged from 10 to 19)	NOTE: Upon request we can supply these valves completely with zinc-nickel surface treatment on the body. Add the suffix /W7 at the end of the identification code.	

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



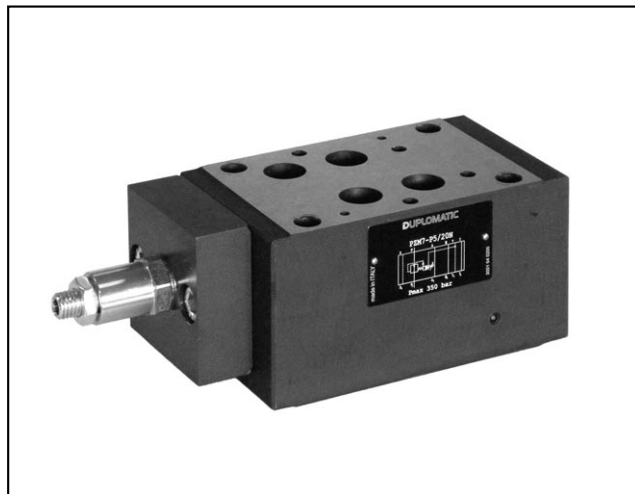
3 - HYDRAULIC FLUIDS

Use mineral oil-based hydraulic fluids HL or HM type, according to ISO 6743-4. For these fluids, use NBR seals (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	Socket hex adjustment screw: Hex key 4. Rotate clockwise to increase pressure
2	Locking nut: spanner 13
3	Mounting surface with sealing rings: 5 OR type 2050 (12.42 x 1.78) 90 Shore



PRM7

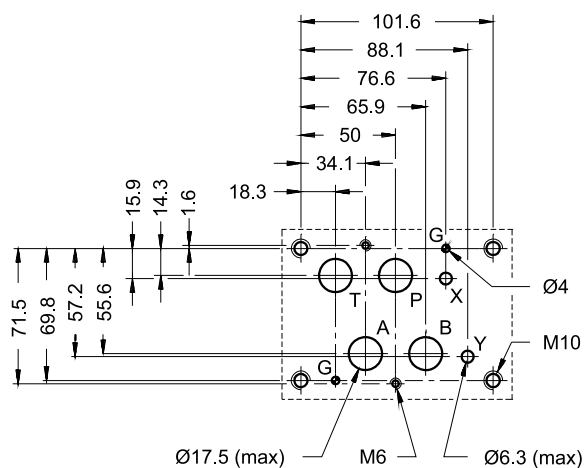
PRESSURE RELIEF VALVE, PILOT OPERATED SERIES 20

MODULAR VERSION ISO 4401-07

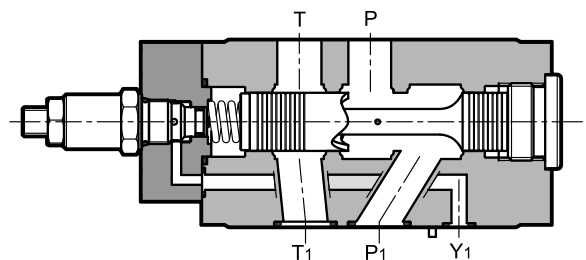
p max 350 bar
Q max 300 l/min

MOUNTING INTERFACE

ISO 4401-07-07-0-05
(CETOP 4.2-4-07)



OPERATING PRINCIPLE



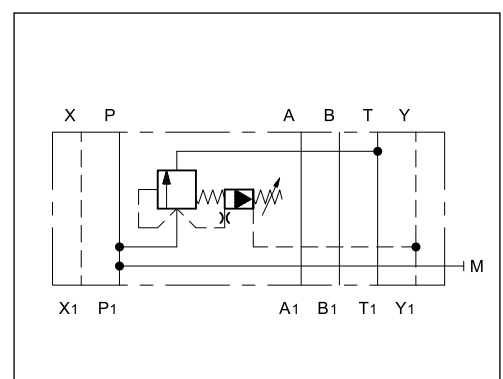
- The PRM7 valve is a pilot operated pressure relief valve made as a modular version with a mounting surface according to ISO 4401-07 standards.
- It can be assembled with all ISO 4401-07 modular valves without the use of pipes, using suitable tie-rods or bolts.
- This valve is used as a hydraulic circuit pressure limiting device.
- It is available with pressure adjustment on port P and relief in T, and five pressure adjustment ranges.
- It is supplied with an adjustment screw. The knob is available as option.

PERFORMANCES

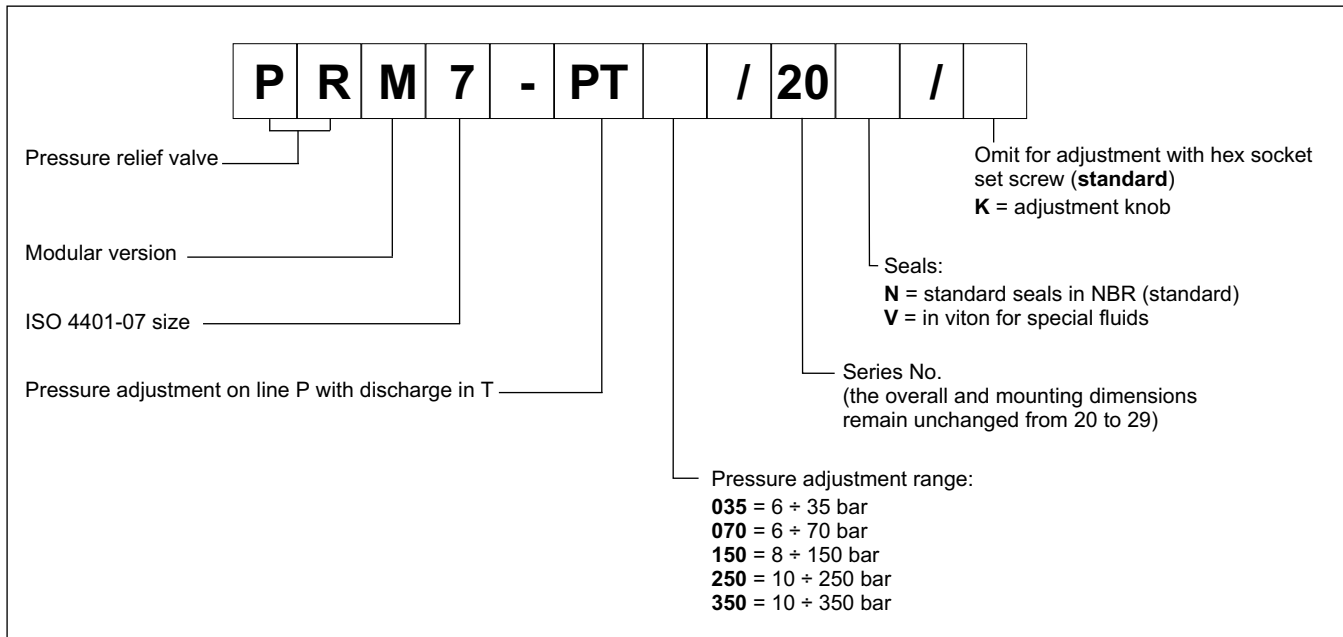
(measured with mineral oil of viscosity 36 cSt at 50°C)

Maximum operating pressure	bar	350
Maximum flow rate	l/min	300
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	7,5

HYDRAULIC SYMBOL



1 - IDENTIFICATION CODE



3 - HYDRAULIC FLUIDS

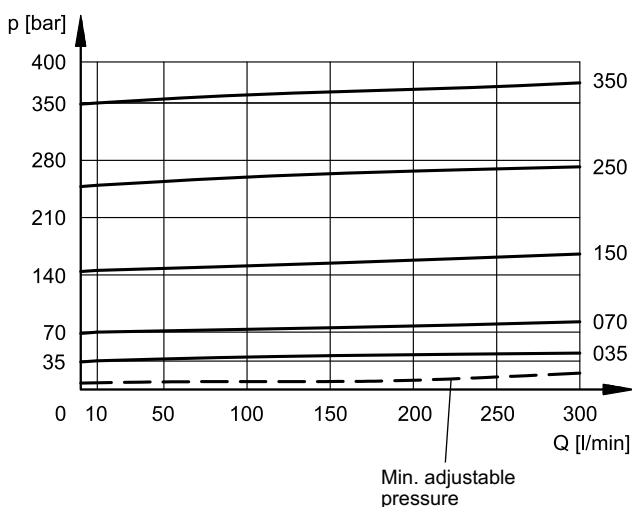
Use mineral oil-based hydraulic fluids HL or HM type, according to ISO 6743-4. For these fluids, use NBR seals. For fluids HFDR type (phosphate esters) use FPM seals (code V). For the use of other kinds of fluid such as HFA, HFB, HFC, please consult our technical department. Using fluids at temperatures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

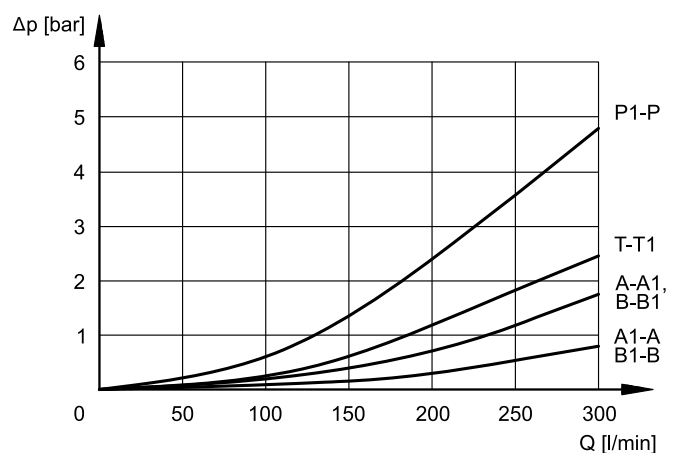
2 - CHARACTERISTIC CURVES

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

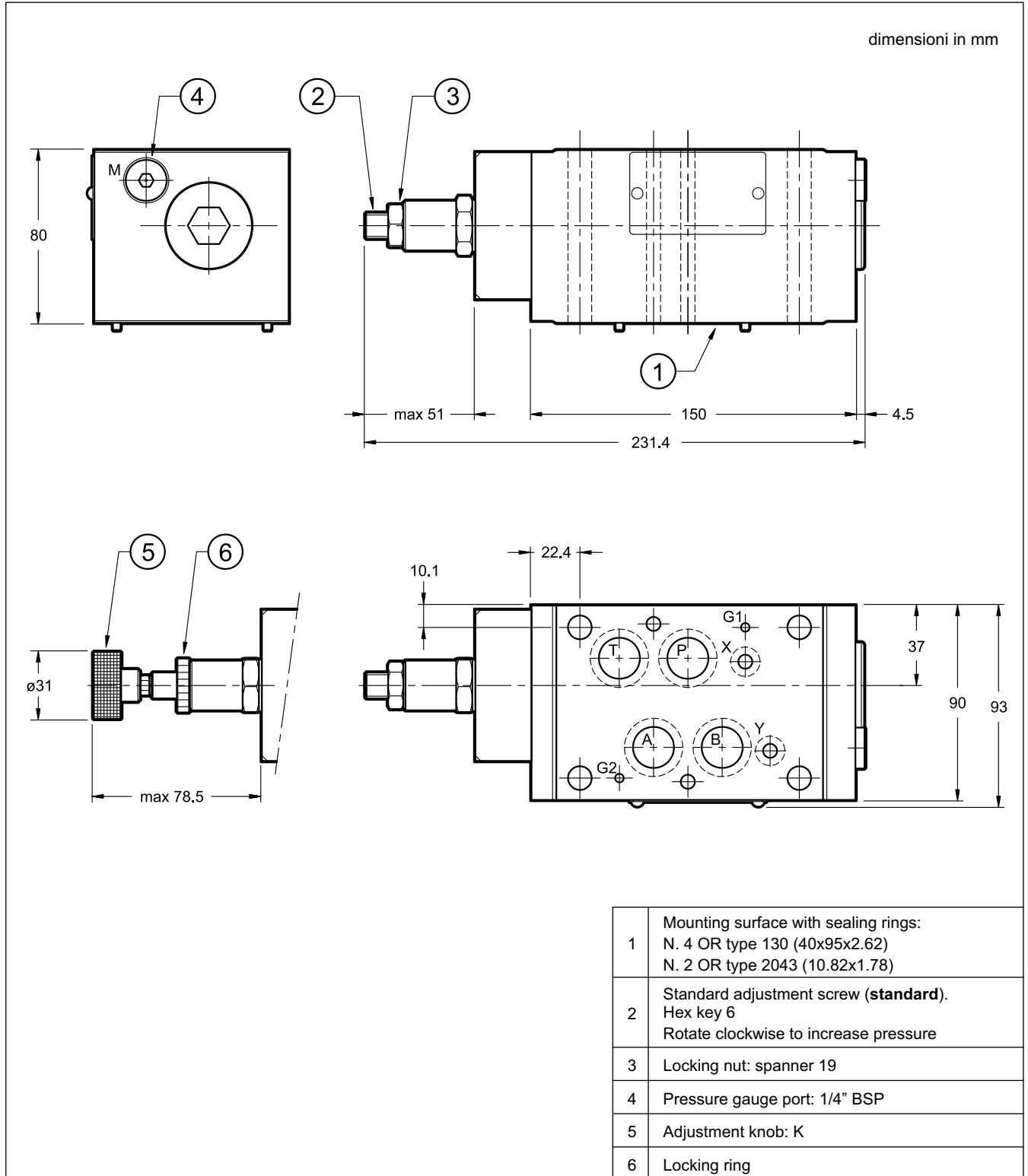
ADJUSTMENT



PRESSURE DROPS Δp - Q



4 - OVERALL AND MOUNTING DIMENSIONS





PRM7

SERIES 20



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