



VR*-P CHECK VALVES

SUBPLATE MOUNTING

p max (see table of performances)
Q max (see table of performances)

OPERATING PRINCIPLE

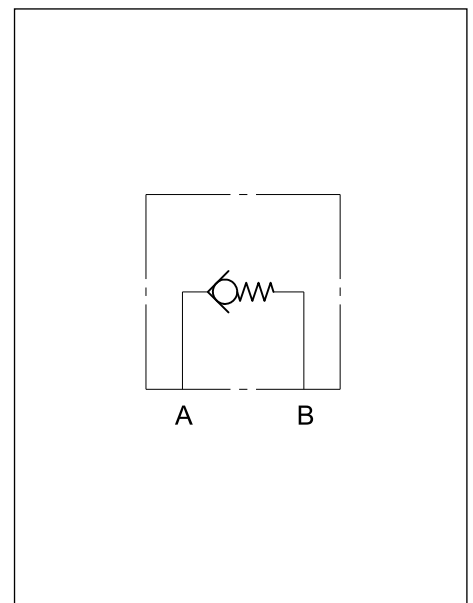
- VR*-P valves are one-way check valves constructed in the subplate mounting version.
- In rest conditions, the valve poppet, which is a cone on edge seal type, is kept closed by a spring with fixed setting.
- The shutter opens when the pressure in the intake line "A" exceeds the set value of the spring, added to any pressure in the outlet line "B".
- Available in three sizes for flow rates up to 400 l/min and with three different cracking pressures.

TECHNICAL SPECIFICATIONS

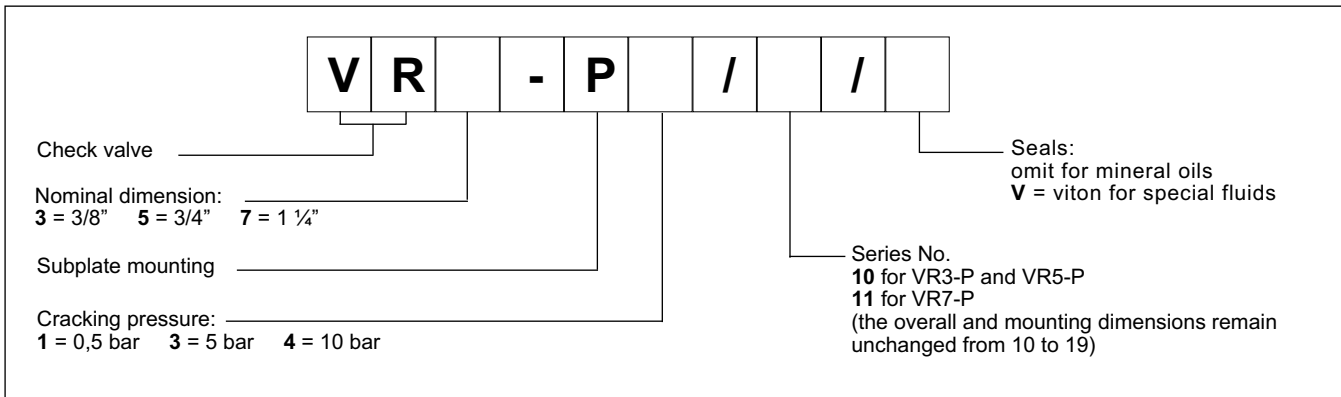
Valve code	Nominal dimension	Maximum flow rate [l/min]	Mass [kg]	Max. operating pressure [bar]
VR3 - P	3/8"	100	2,3	350
VR5 - P	3/4"	200	4,8	350
VR7 - P	1 1/4"	400	9	250

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

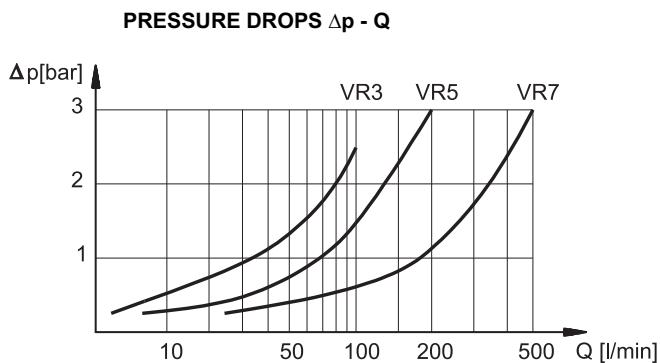
HYDRAULIC SYMBOL



1 - IDENTIFICATION CODE



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



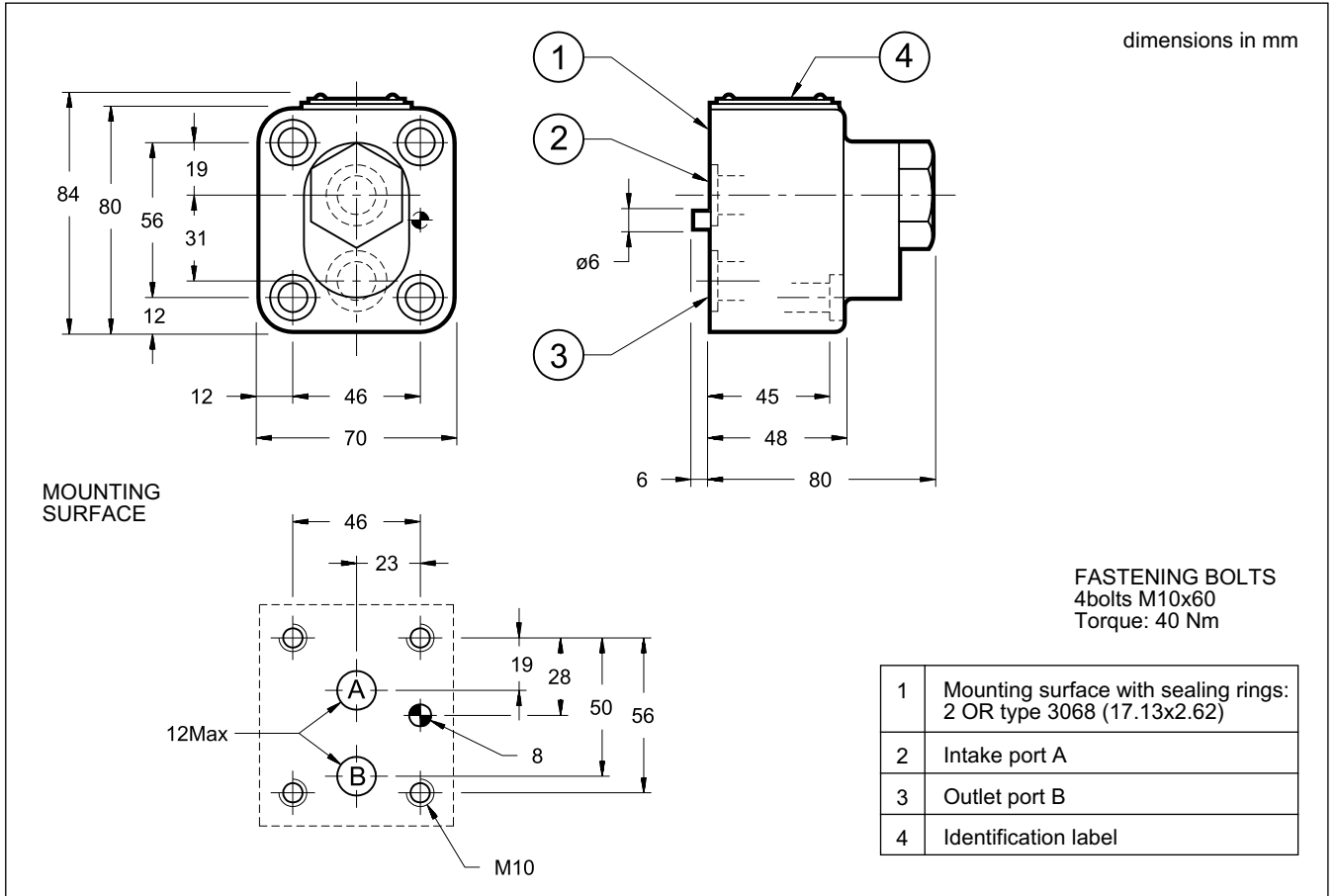
NOTE: Add the cracking pressure to the values shown in the diagram.

3 - HYDRAULIC FLUIDS

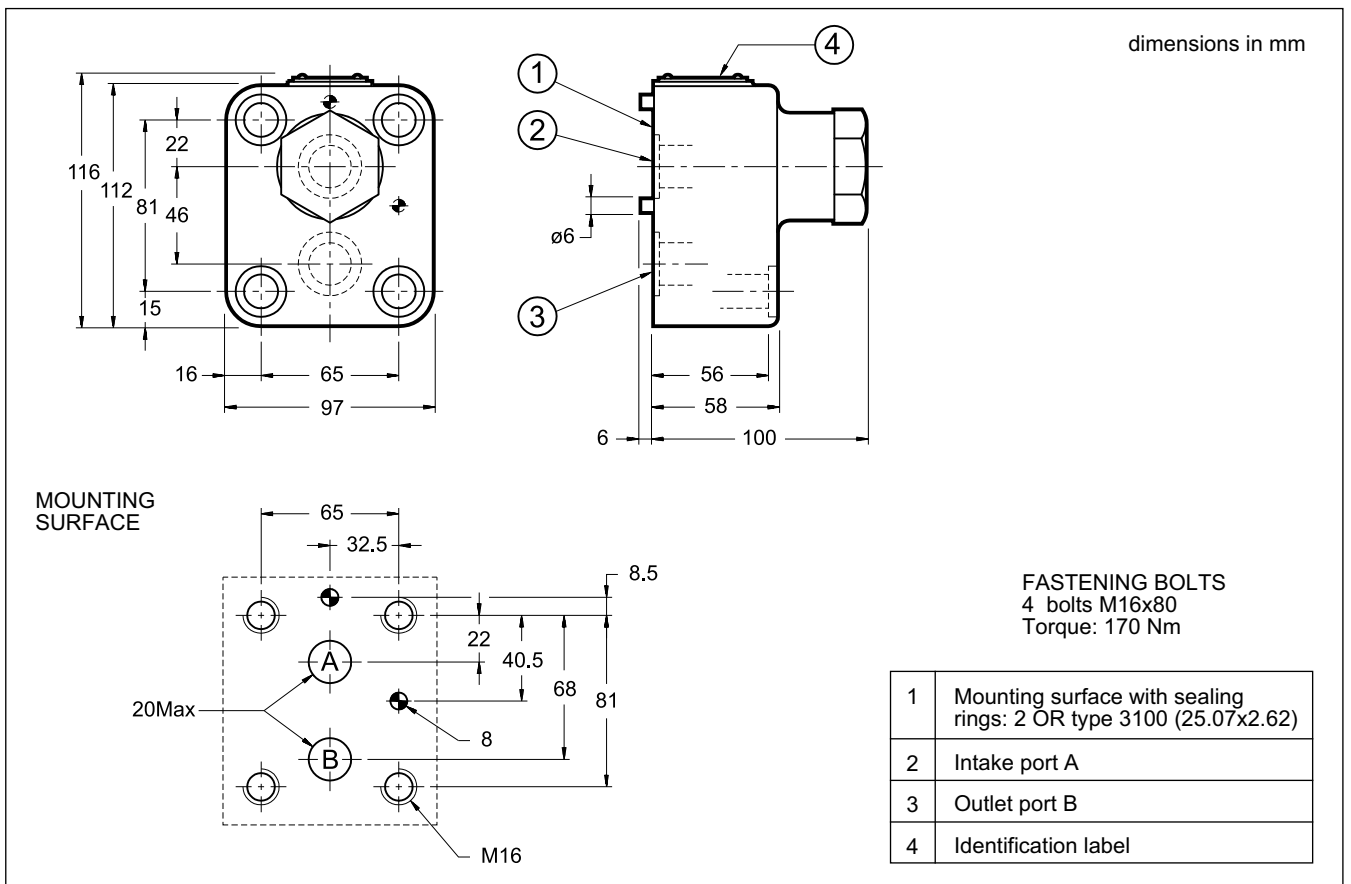
Use mineral oil-based hydraulic fluids HL or HM type, according to ISO 6743-4. For these fluids, use NBR seals. For fluids HFDR type (phosphate esters) use FPM seals (code V). For the use of other kinds of fluid such as HFA, HFB, HFC, please consult our technical department. Using fluids at temperatures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

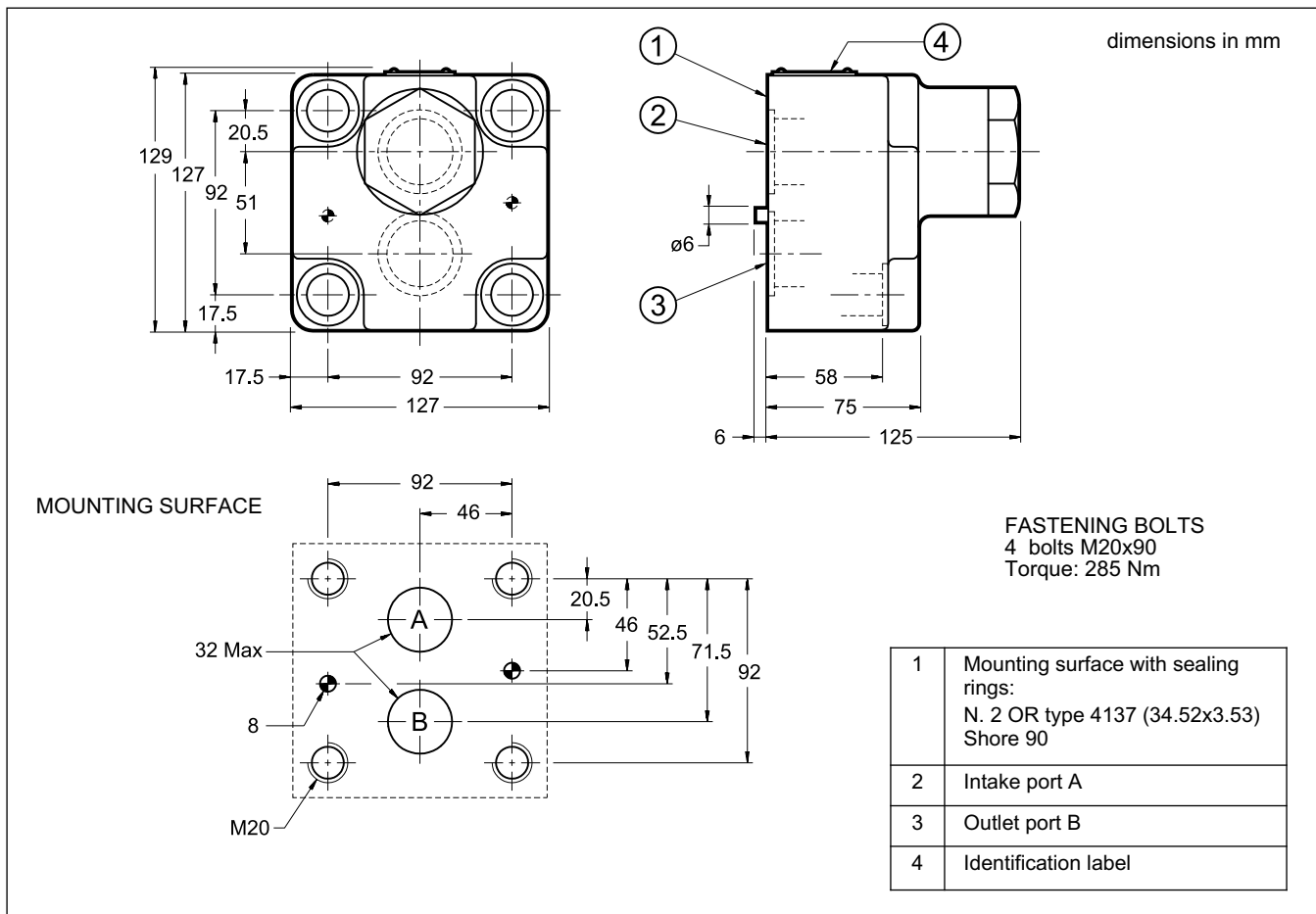
4 - VR3-P OVERALL AND MOUNTING DIMENSIONS



5 - VR5-P OVERALL AND MOUNTING DIMENSIONS



6 - VR7-P OVERALL AND MOUNTING DIMENSIONS





MVR

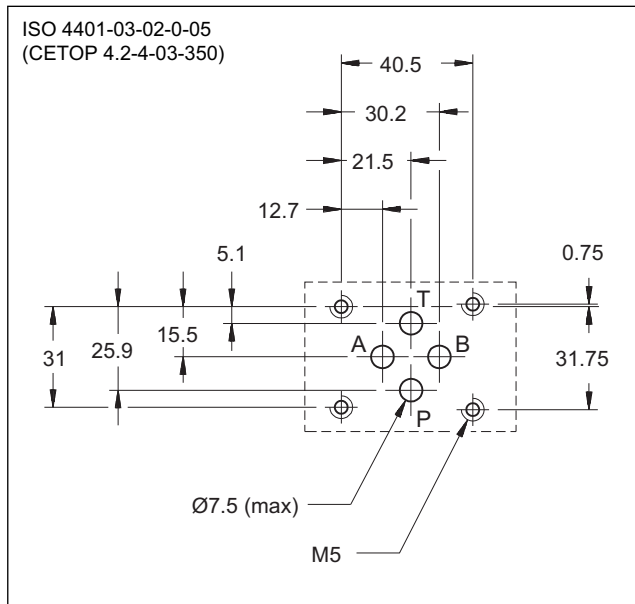
DIRECT CHECK VALVE

SERIES 51

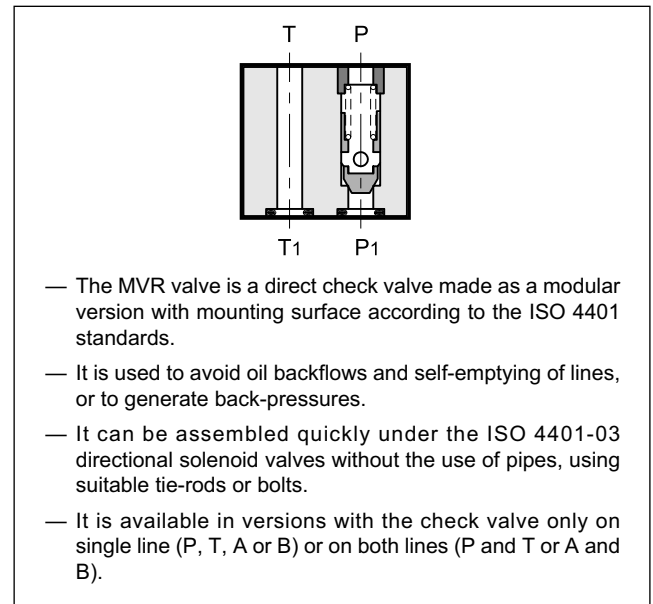
MODULAR VERSION ISO 4401-03

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

MOUNTING INTERFACE



OPERATING PRINCIPLE



CONFIGURATIONS (see hydraulic symbols table)

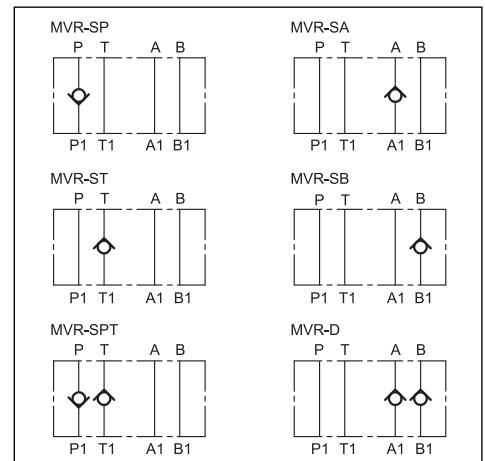
- MVR-SP: check valve on line P
- MVR-SA: check valve on line A
- MVR-ST: check valve on line T

- MVR-SB: check valve on line B
- MVR-SPT: check valve on lines P and T
- MVR-D: check valve on lines A and B

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

Maximum operating pressure	bar	350
Check valve cracking pressure		3 - 0,5 - 5
Maximum flow rate in controlled lines	l/min	50
Maximum flow rate in the free lines		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	1

HYDRAULIC SYMBOLS



1 - IDENTIFICATION CODE

M	V	R	-	/ 51 /
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Size: ISO 4401-03 Modular version.

Check valve _____

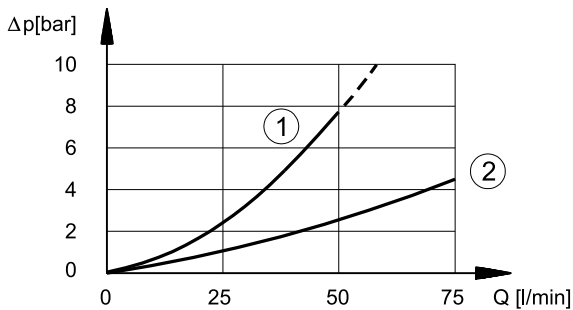
Cracking pressure: _____
omit for standard cracking pressure = 3 bar
1 = 0,5 bar
3 = 5 bar

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

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

SP: check valve on line P
SA: check valve on line A
SB: check valve on line B
ST: check valve on line T
SPT: check valve on lines P and T
D : check valve on lines A and B

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



- 1) pressure drops on controlled lines
- 2) pressure drops on free lines

NOTE: check valve cracking pressure must be added to the values indicated in the curve 1 in the diagram

3 - HYDRAULIC FLUIDS

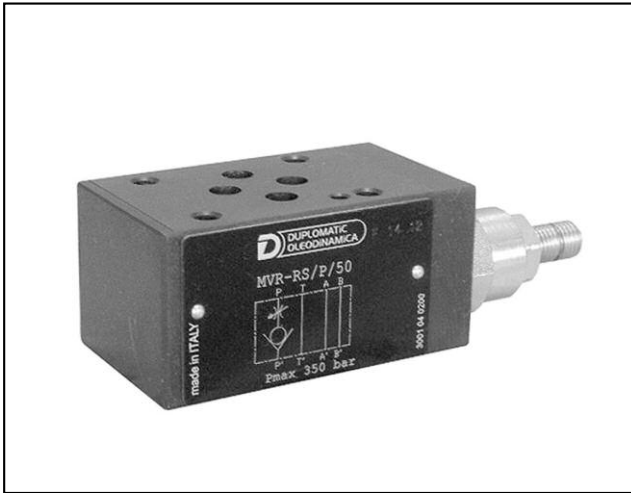
Use mineral oil-based hydraulic fluids HL or HM type, according to ISO 6743-4. For these fluids, use NBR seals. For fluids HFDR type (phosphate esters) use FPM seals (code V). For the use of other kinds of fluid such as HFA, HFB, HFC, please consult our technical department.

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 Mounting surface with sealing rings: 4 OR type 2037 (9.25x1.78) - 90 Sh



MVR-RS/P

DIRECT CHECK VALVE WITH FLOW RESTRICTOR

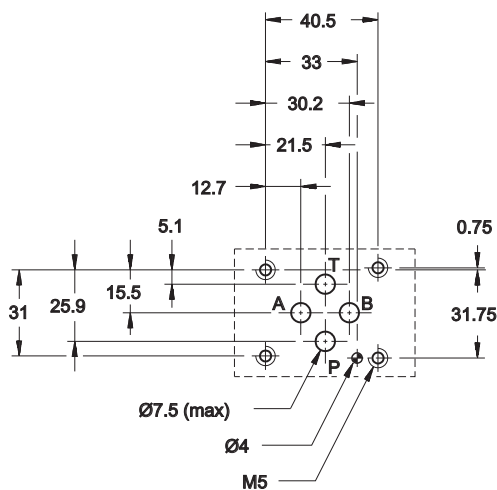
SERIES 50

MODULAR VERSION ISO 4401-03

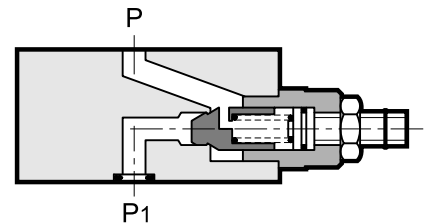
p max **350** bar
Q max (see table of performances)

MOUNTING INTERFACE

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



OPERATING PRINCIPLE

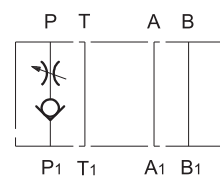


- The MVR-RS/P valve is a check valve that incorporates also the function of flow restriction.
- It is made as a modular version with mounting surface according to the ISO 4401-03 standards.
- It can be quickly assembled under the ISO 4401-03 directional solenoid valves and modular valves, without use of pipes and using suitable tie-rods or bolts.
- It is used when it is necessary to control the flow in a direction and to avoid backflows or the self-emptying of the lines in the opposite direction.
- Control of the flow is obtained with a socket hex screw with locking nut.

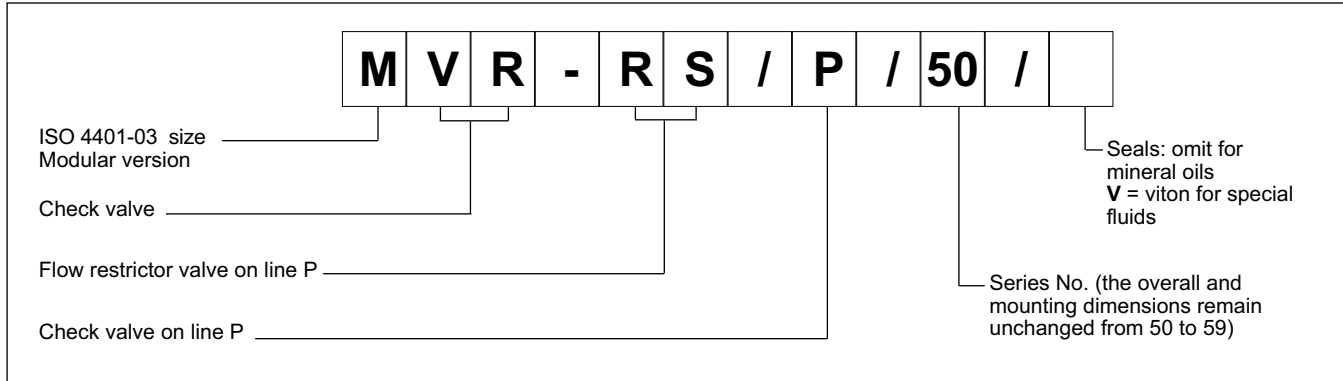
PERFORMANCES (measured with mineral oil of viscosity 36cSt at 50°C)

Maximum operating pressure	bar	350
Check valve cracking pressure		1
Maximum flow rate in controlled lines	l/min	50
Maximum flow rate in the free lines		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	1,1

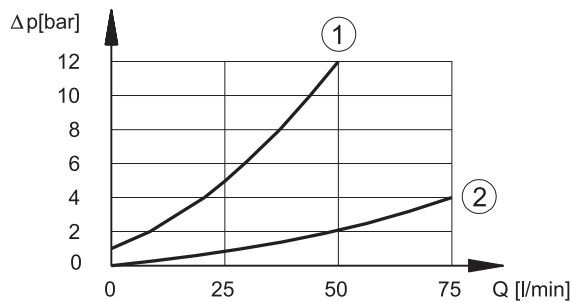
HYDRAULIC SYMBOL



1 - IDENTIFICATION CODE



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

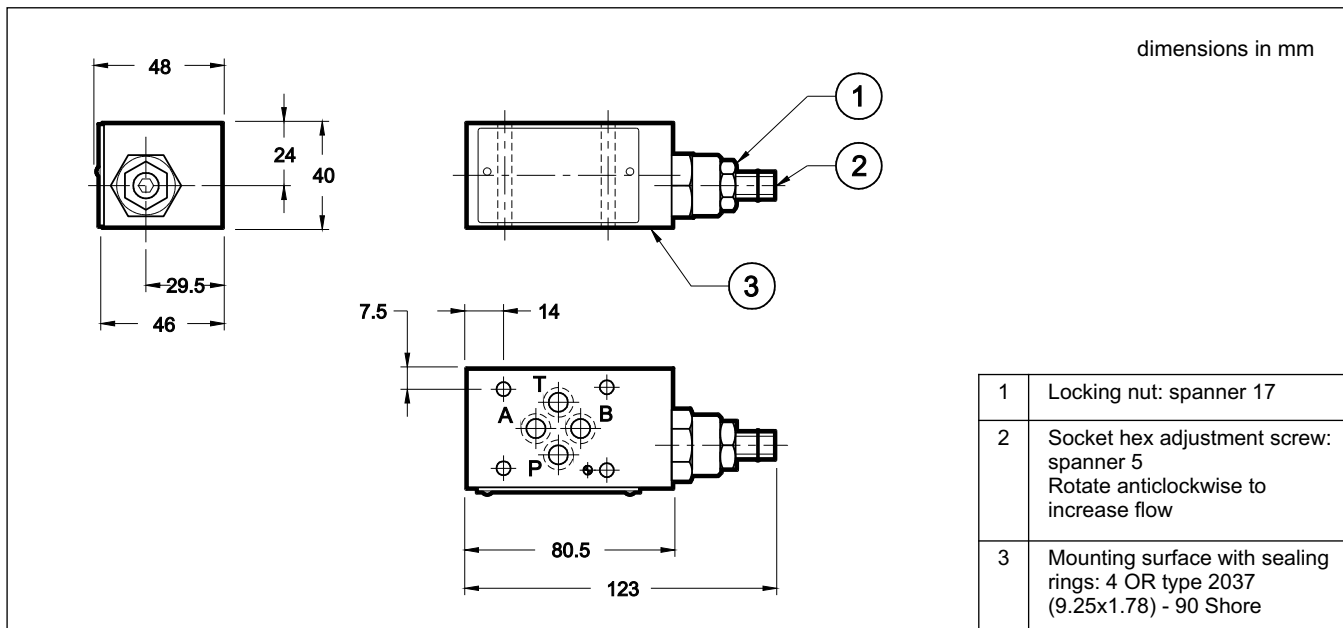


- 1) pressure drops P₁→P
- 2) pressure drops on free lines (ex. A→A₁)

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





VR4M

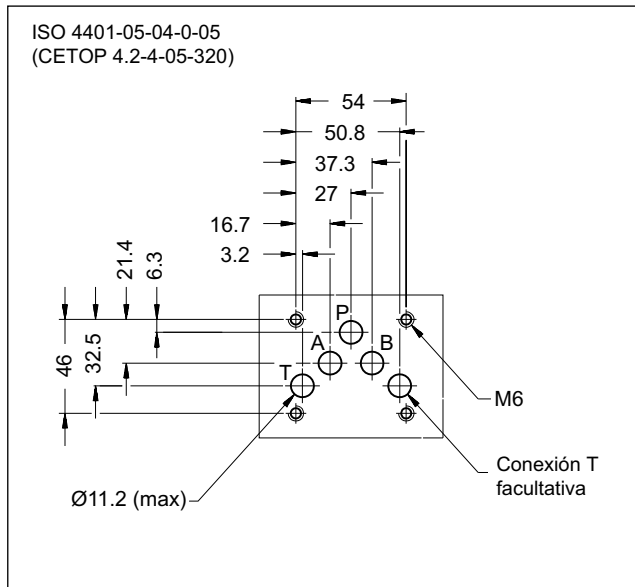
VÁLVULA ANTIRRETORNO

SERIE 50

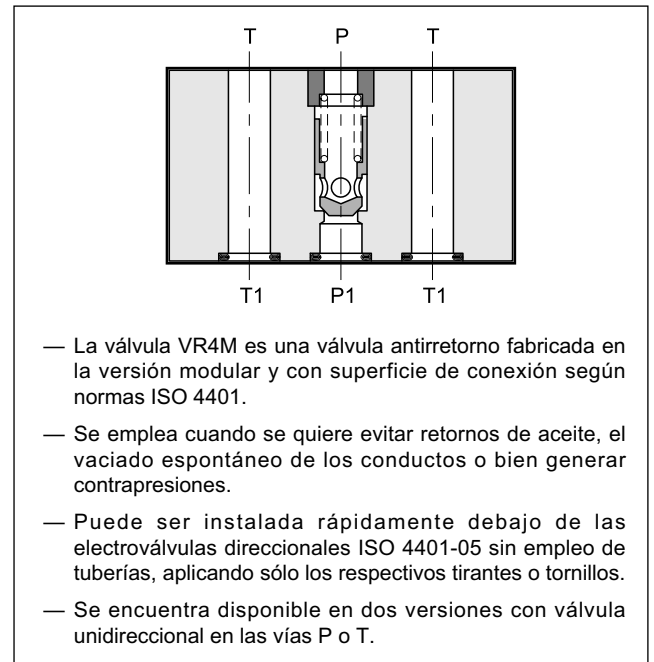
TIPO MODULAR ISO 4401-05

p max **350** bar
Q max **100** l/min

PLANO DE ASIENTO



PRINCIPIO DE FUNCIONAMIENTO



VERSIONES

(ver tabla Símbolos Hidráulicos)

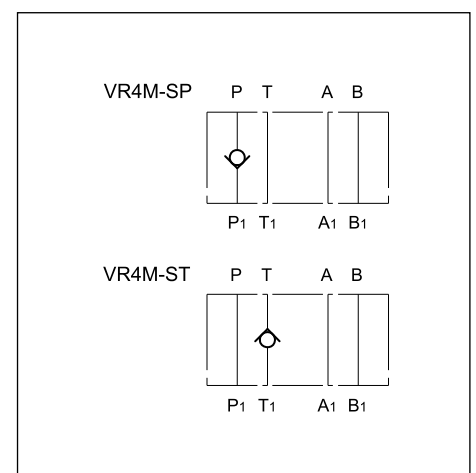
- VR4M-SP: válvula unidireccional en la vía P.
- VR4M-ST: válvula unidireccional en la vía T.

PRESTACIONES

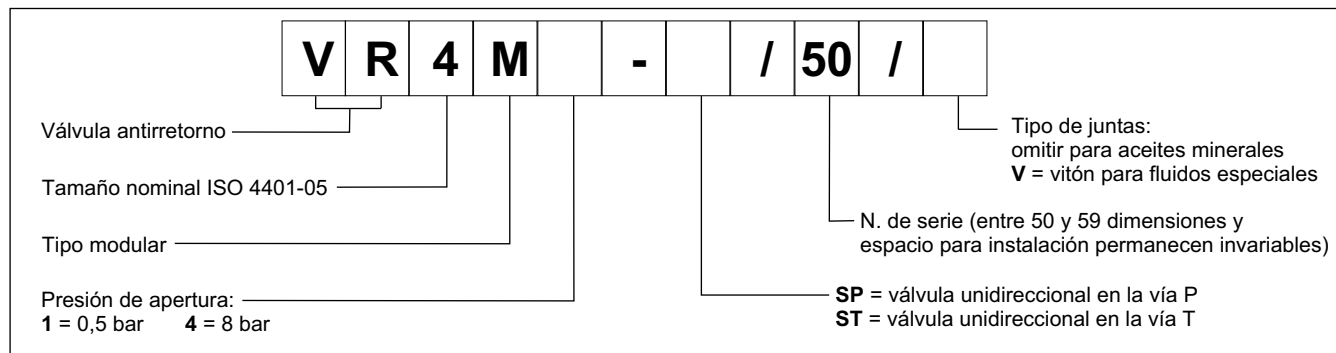
(medidas con aceite mineral de viscosidad 36 cSt a 50°C)

Presión máxima de trabajo	bar	350
Presión apertura válvula antirretorno	bar	0,5 - 8
Caudal máx en los conductos controlados y en los conductos libres	l/min	100
Campo temperatura ambiente	°C	-20 / +50
Campo temperatura fluido	°C	-20 / +80
Campo viscosidad fluido	cSt	10 ÷ 400
Grado de contaminación del fluido	según ISO 4406:1999 clase 20/18/15	
Viscosidad recomendada	cSt	25
Masa	kg	2,3

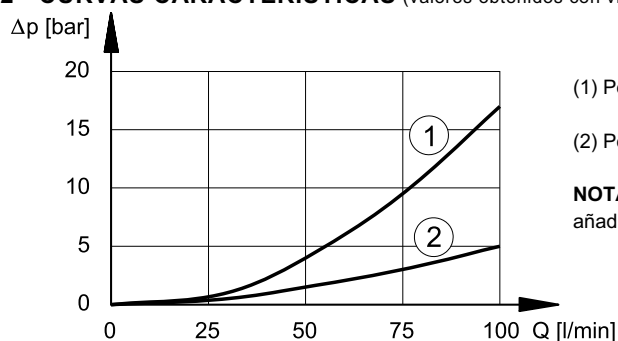
SIMBOLOS HIDRAULICOS



1 - CÓDIGO DE IDENTIFICACIÓN



2 - CURVAS CARACTERISTICAS (valores obtenidos con viscosidad 36 cSt a 50°C)



3 - FLUIDOS HIDRAULICOS

Usar fluidos hidráulicos a base de aceite mineral tipo HL o HM según ISO 6743-4. Para esos tipos de fluidos, usar juntas en NBR. Para fluidos tipo HFDR (ésteres fosfóricos) utilizar juntas en FPM (código V). Para el uso de otros tipos de fluidos, como HFA, HFB, HFC consultar con nuestra Oficina Técnica.

El uso con fluido a temperatura superior a 80° determina una precoz disminución de las propiedades del fluido y de los tipos de juntas. El fluido debe mantener intactas sus propiedades físicas y químicas.

4 - DIMENSIONES PARA LA INSTALACIÓN

