

Pilot operated check valve 500

Type ERVM

NG 4
up to 25 l/min

Features

- Leakage free in closed position
- Operating pressure supported closing



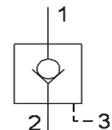
Design

- Seated valve
- Compact design
- Cartridge and in manifold
- External surface corrosion-free

Applications

The pilot operated check valve ERVM is a part of the 500+ series. It is a spring-loaded seated valve. It is used for leakage free closing of the flow in one direction and free flow in the other direction. The closed direction can be unlocked with pilot pressure at port X.

The compact cartridge design allows a direct integration into cylinders and motors. This assembly offers a pipe burst protection and an increase of the system stiffness.



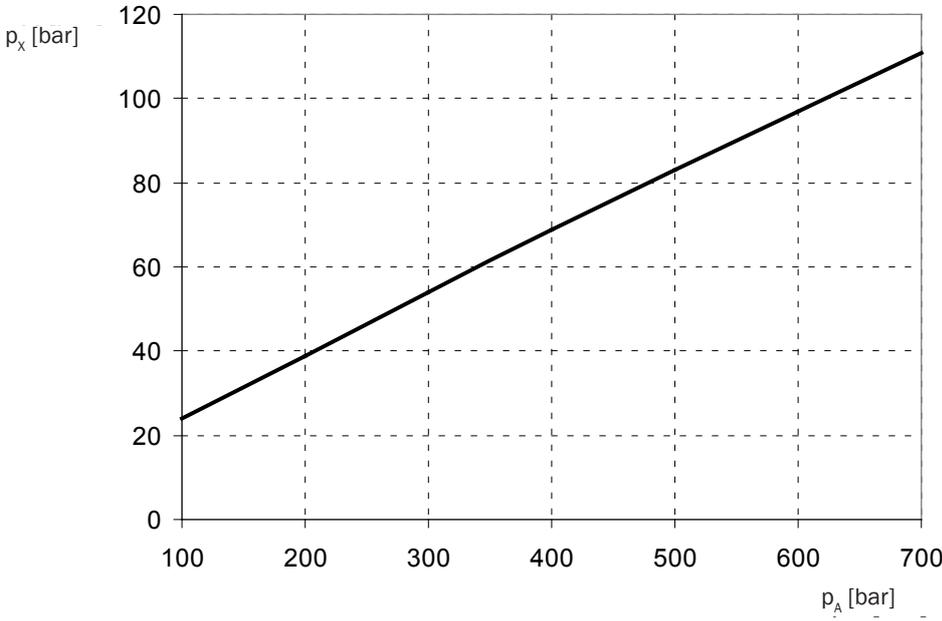
Technical data

Hydraulic fluid	mineral oil according to DIN 51524 (other fluids on request)	
Fluid temperature range	-20 to 80 °C	
Ambient temperature range	-20 to 80 °C	
Viscosity range	5 to 400 mm ² /s	
Porting	NG 4	
Max. operating pressure port A/P	700 bar	
Unlock pilot pressure port X	see characteristics	
Max. flow rate	25 l/min	
Pressure loss	at 12 l/min: 12 bar at 25 l/min: 30 bar	
Cracking pressure (P - A)	5 bar	
Filtration (recommendation)	According to NAS 1638, class 6 resp. class 17/15/12 ISO/DIN 4406	
Weight	0,055 kg (cartridge)	
Material/surface treatment	Cartridge body:	high tensile corrosion-free steel
	Cone:	hardened steel

Ordering code

Example	ERV	M	4B	G1/4AB43	V	A	00
Pilot operated check valve							
Type	500+						
Nominal size	4						
Connection Bieri	...B						
Cartridge	...E						
Connection in-line mounting	...R						
Design							
X	cartridge						
In manifold for valve bank							
G1/4AB43	at 4/3-seated valve, closing A and B						
G3/8AB43	at 4/3-seated valve, closing A and B						
G1/4A43	at 4/3-seated valve, closing A						
G3/8A43	at 4/3-seated valve, closing A						
G1/4B43	at 4/3-seated valve, closing B						
G3/8B43	at 4/3-seated valve, closing B						
G1/4AB42	at 4/2-seated valve, closing A and B						
G3/8AB42	at 4/2-seated valve, closing A and B						
G1/4A42	at 4/2-seated valve, closing A						
G3/8A42	at 4/2-seated valve, closing A						
G1/4B42	at 4/2-seated valve, closing B						
G3/8B42	at 4/2-seated valve, closing B						
G1/4A33	at 3/3-seated valve, closing A						
G3/8A33	at 3/3-seated valve, closing A						
G1/4A32	at 3/2-seated valve, closing A						
G3/8A32	at 3/2-seated valve, closing A						
G1/4A22	at 2/2-seated valve, closing A						
G3/8A22	at 2/2-seated valve, closing A						
In-line body							
G1/4	In-line mounting with G1/4						
G3/8	In-line mounting with G3/8						
Seals	V [FPM] other seal materials on request						
							Special design 01 ... 99 (00 for standard)
							Part index Please leave blank (small letters a-d; different letters do not effect interchangeability)
							Design revision Capital letters A-Z; identical letters equal same connecting dimensions

Characteristics



Type ERVM

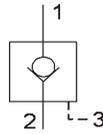
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Product information

Cartridge

Type code	Part number
ERVM-4E-X-V-A*00	3831358

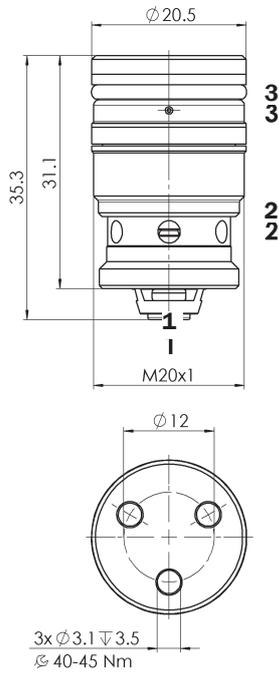
Hydraulic schematics



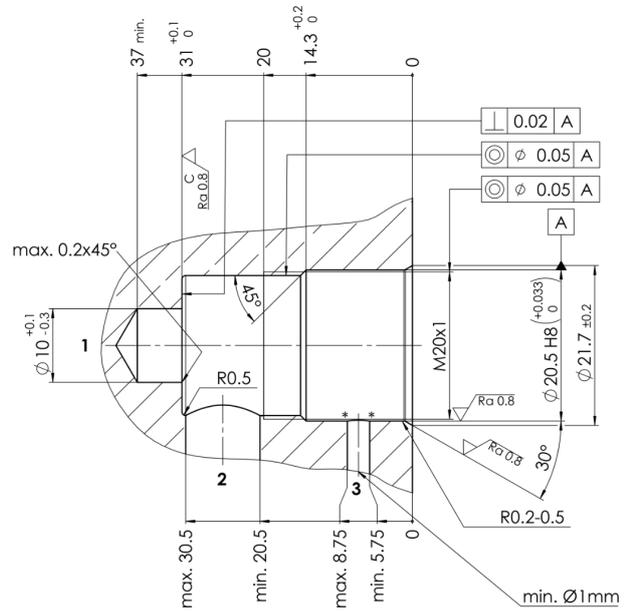
Unlock:

$$P3 > \frac{P1}{7.25} + 6 \text{ bar}$$

Dimensional drawing



Cavity drawing

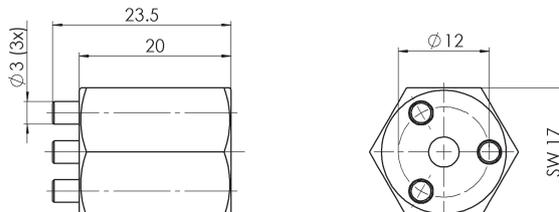


Steel yield strength $Rp0.2 \geq 450 \text{ N/mm}^2$
elongation at fracture $As \geq 10\%$

* Flat chamfer or rounding max. 0.5 mm wide

Assembly tool

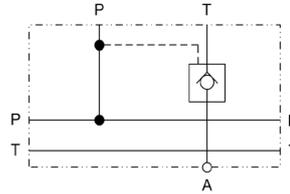
Type	Part number
Hexagon key	3690831



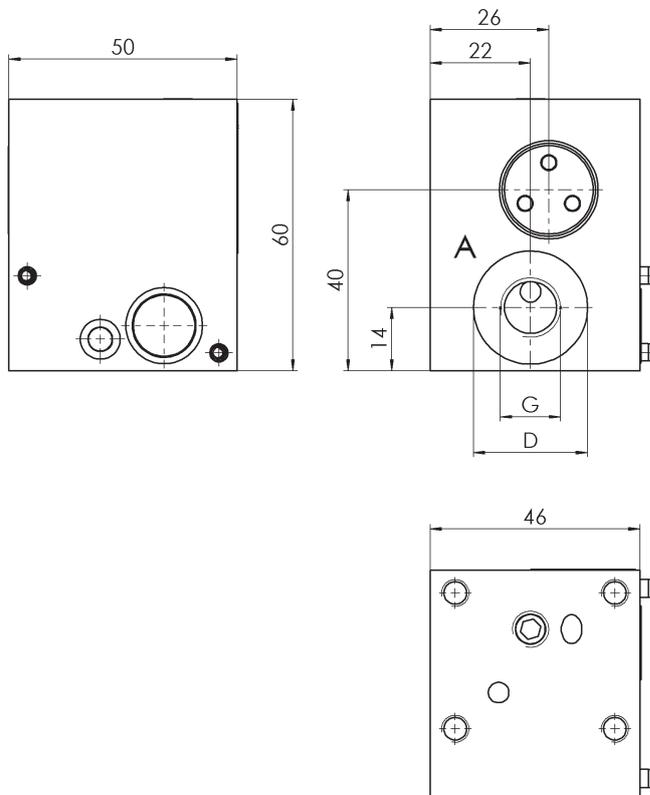
In manifold for valve bank with seated 2/2-valve

Hydraulic schematics

Type	Part number
ERVM-4B-G1/4A22-V-A*00	3831353
ERVM-4B-G3/8A22-V-A*00	3831355



Dimensional drawing



G	D
G3/8"	Ø28
G1/4"	Ø25

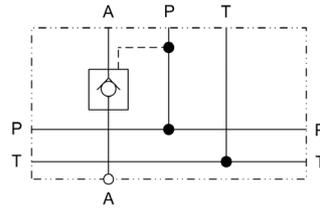
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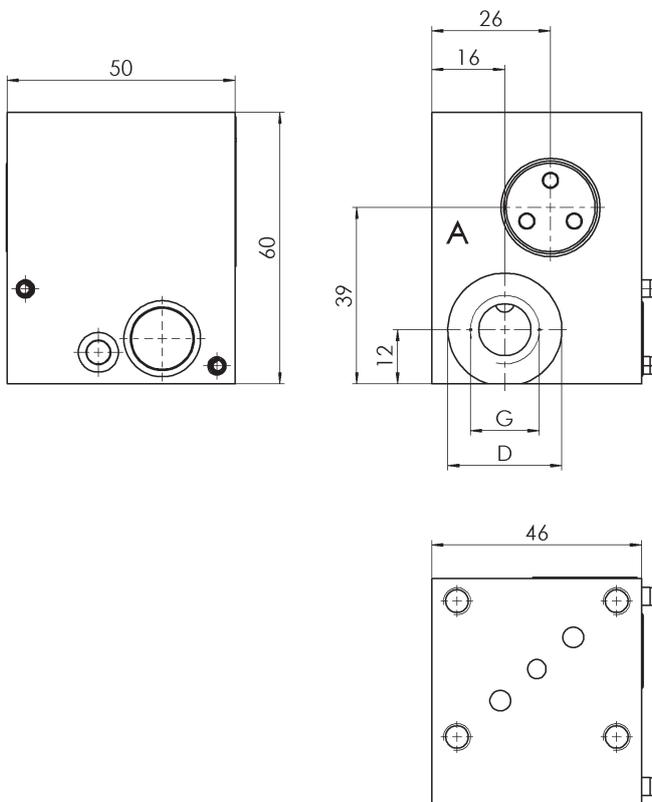
In manifold for valve bank with seated 3/2-valve

Type code	Part number
ERVM-4B-G1/4A32-V-A*00	3831351
ERVM-4B-G3/8A32-V-A*00	3831352

Hydraulic schematics



Dimensional drawing



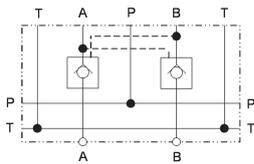
G	D
G3/8"	Ø28
G1/4"	Ø25

In manifold for valve bank with seated 4/2-valve

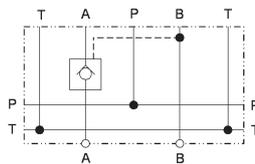
Type code	Part number
ERVM-4B-G1/4AB42-V-A*00	3831342
ERVM-4B-G3/8AB42-V-A*00	3831343
ERVM-4B-G1/4A42-V-A*00	3831344
ERVM-4B-G3/8A42-V-A*00	3831345
ERVM-4B-G1/4B42-V-A*00	3831346
ERVM-4B-G3/8B42-V-A*00	3831347

Hydraulic schematics

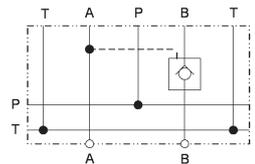
ERVM-4B-G1/4AB42-V-A*00
 ERVM-4B-G3/8AB42-V-A*00



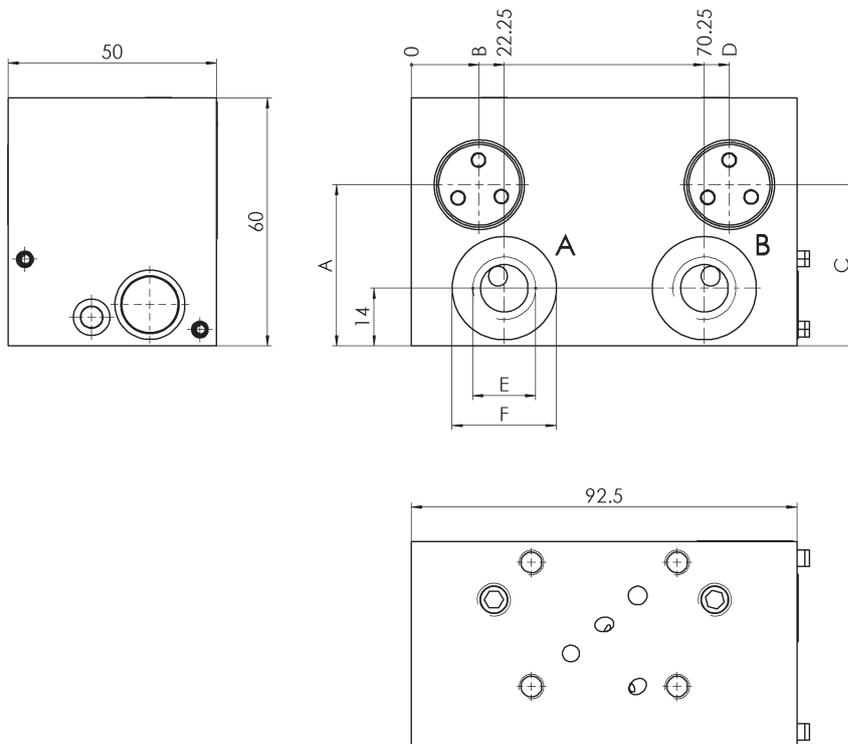
ERVM-4B-G1/4A42-V-A*00
 ERVM-4B-G3/8A42-V-A*00



ERVM-4B-G1/4B42-V-A*00
 ERVM-4B-G3/8B42-V-A*00



Dimensional drawing



G	D
G3/8"	Ø28
G1/4"	Ø25

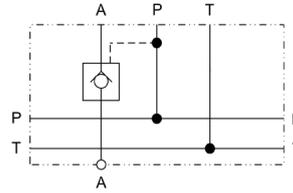
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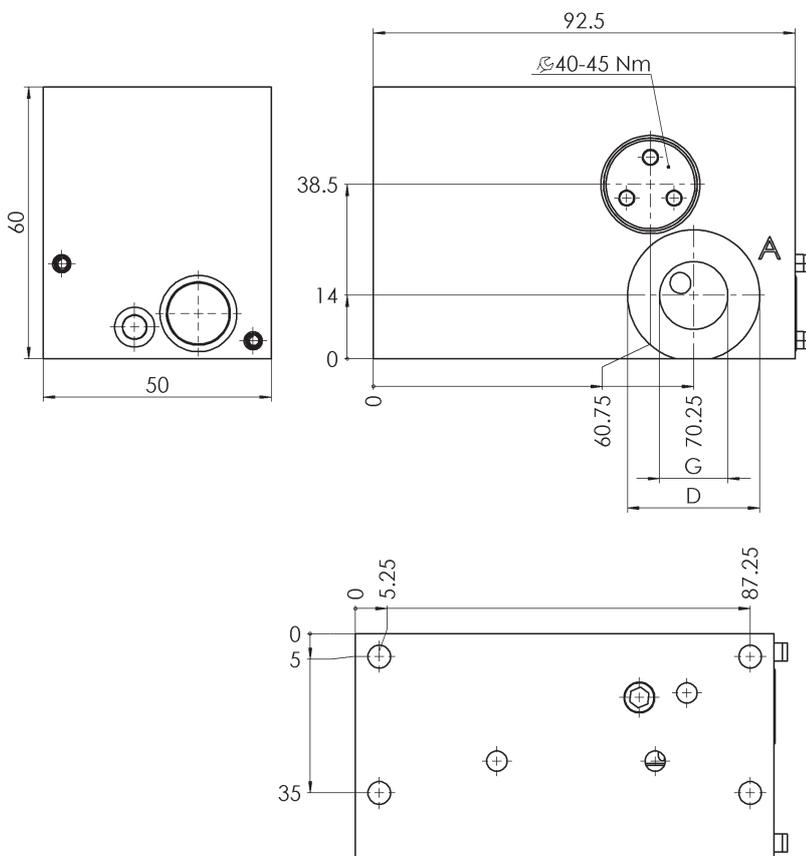
In manifold for valve bank with seated 3/3-valve

Hydraulic schematics

Type code	Part number
ERVM-4B-G1/4A33-V-A*00	3831348
ERVM-4B-G3/8A33-V-A*00	3831350



Dimensional drawing

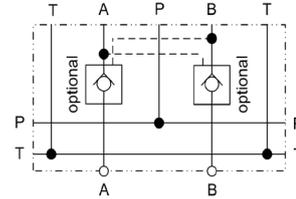


G	D
G3/8"	Ø28
G1/4"	Ø25

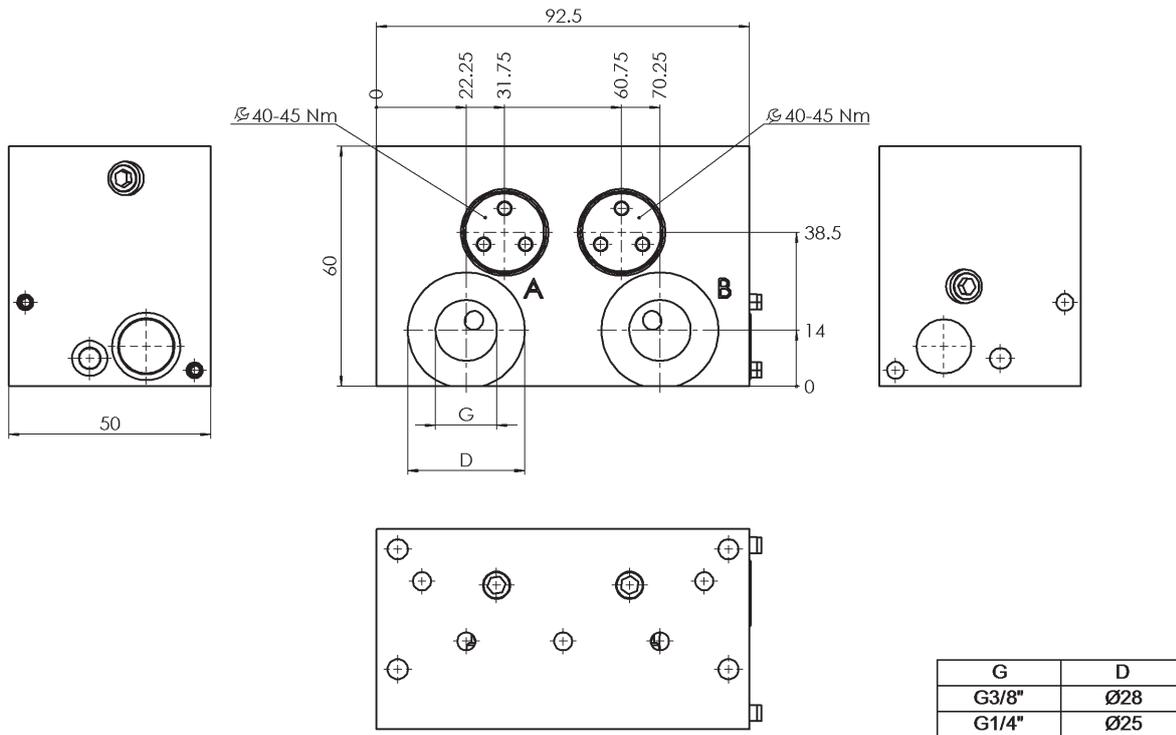
In direct connection block for valve bank with 4/3 seated valve

Hydraulic schematics

Type code	Part number
ERVM-4B-G1/4AB43-V-A*00	3831336
ERVM-4B-G3/8AB43-V-A*00	3831337
ERVM-4B-G1/4A43-V-A*00	3831338
ERVM-4B-G3/8A43-V-A*00	3831339
ERVM-4B-G1/4B43-V-A*00	3831340
ERVM-4B-G3/8B43-V-A*00	3831341



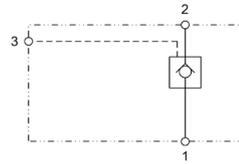
Dimensional drawing for part no. 3831336 and 3831337



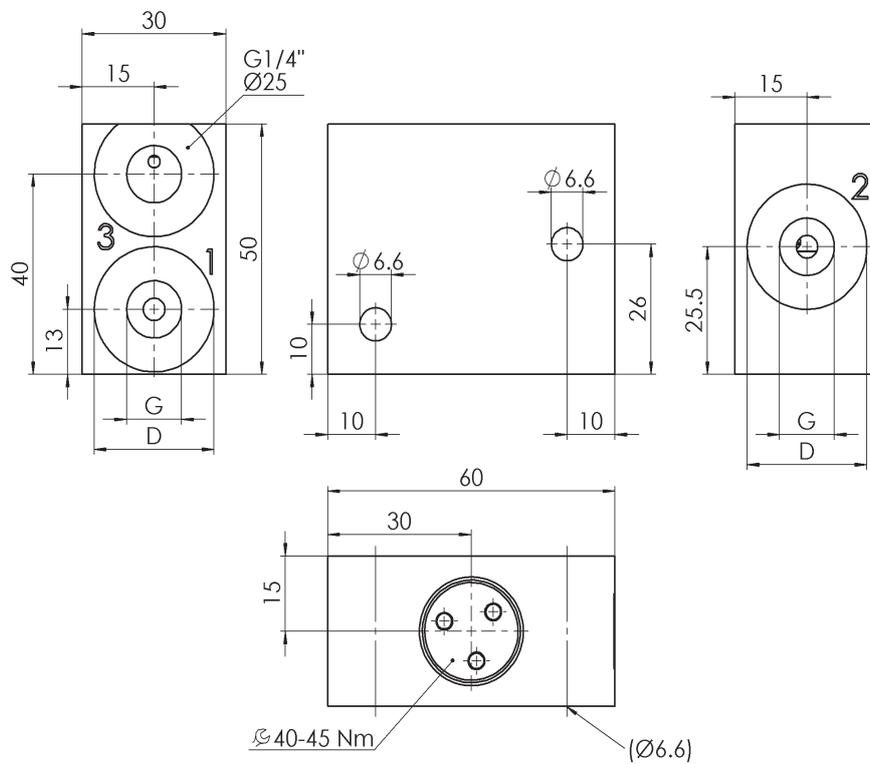
In-line mounting

Type code	Part number
ERVM-4R-G1/4-V-A*00	3831356
ERVM-4R-G3/8-V-A*00	3831357

Hydraulic schematics



Dimensional drawing



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G1/4"	Ø25

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