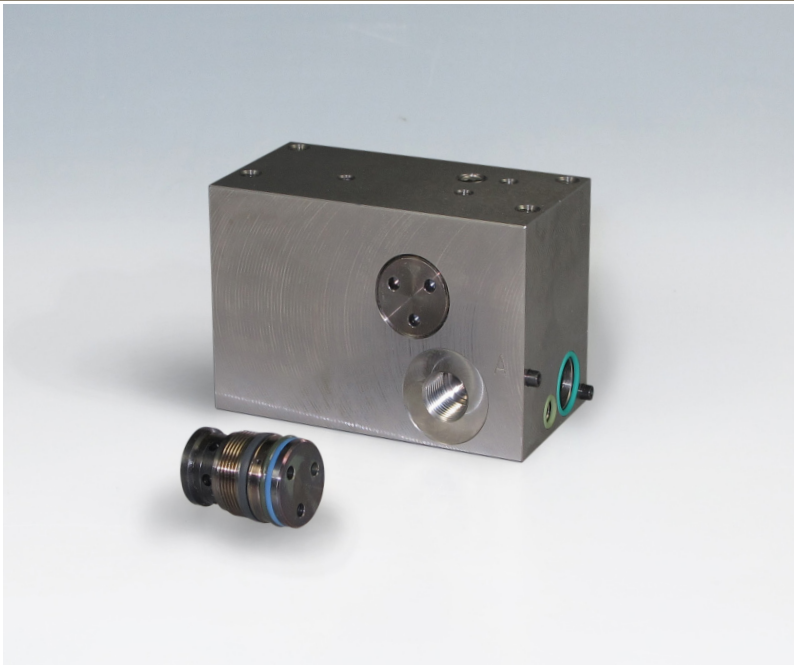
BIERI
HYDAC INTERNATIONAL

Pilot operated check valve 500

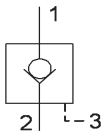
Type ERVM
NG 4
up to 25 l/min



Features
- Leakage free in closed position
- Operating ressure 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 assemby 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 tenisile corrosion-free steel Cone: hardened steel

Key sheet

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 vavle, 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

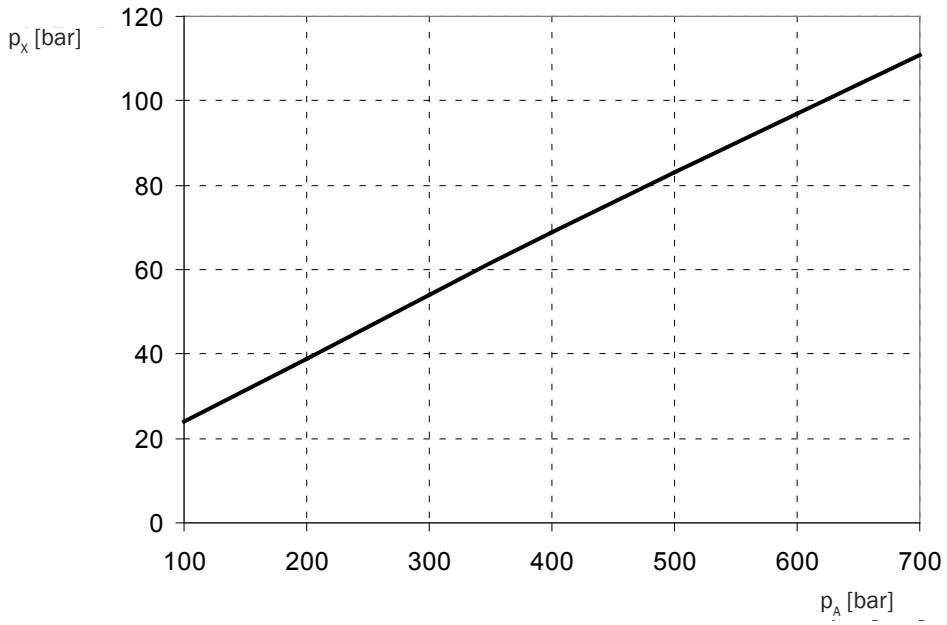
Seals	V [FPM] other seal materials on request

Special design
01 ... 99
(00 for standard)

Part index
Please leave blank (small letters a-d; different letters do not effect interchange-ability)

Design revision
Capital letters A-Z; identical letters equal same connecting dimensions

Characteristics

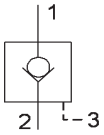


Product information

Cartridge

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

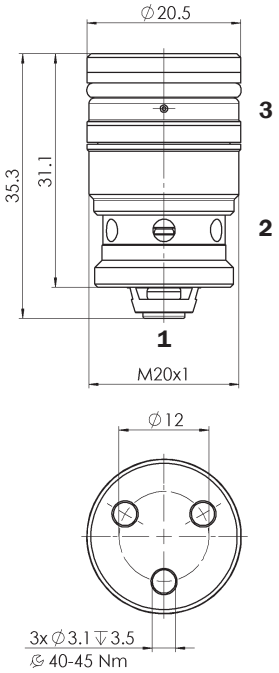
Hydraulic schematics



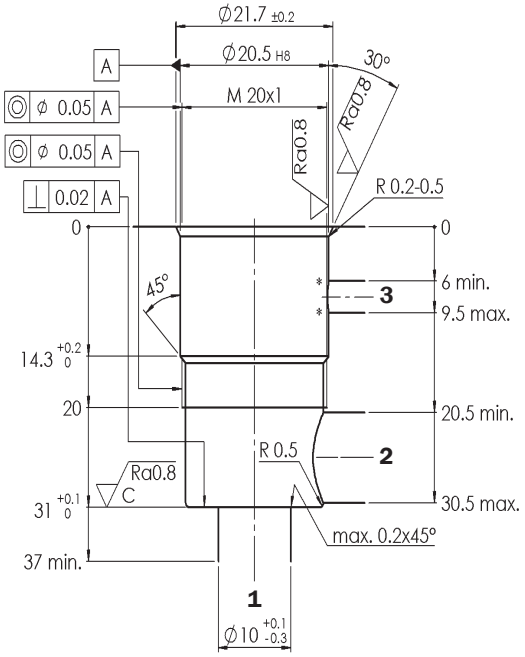
Unlock:

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

Dimensional drawing

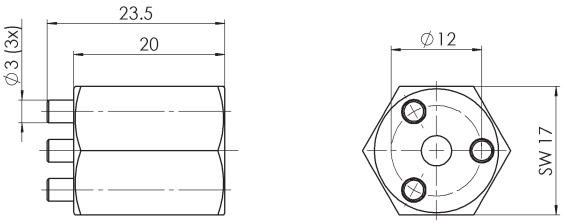


Cavity drawing



Assebly tool

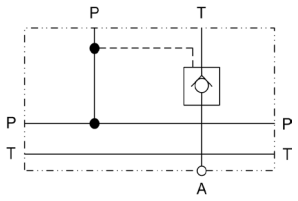
Type	Part number
Hexagon key	3690831



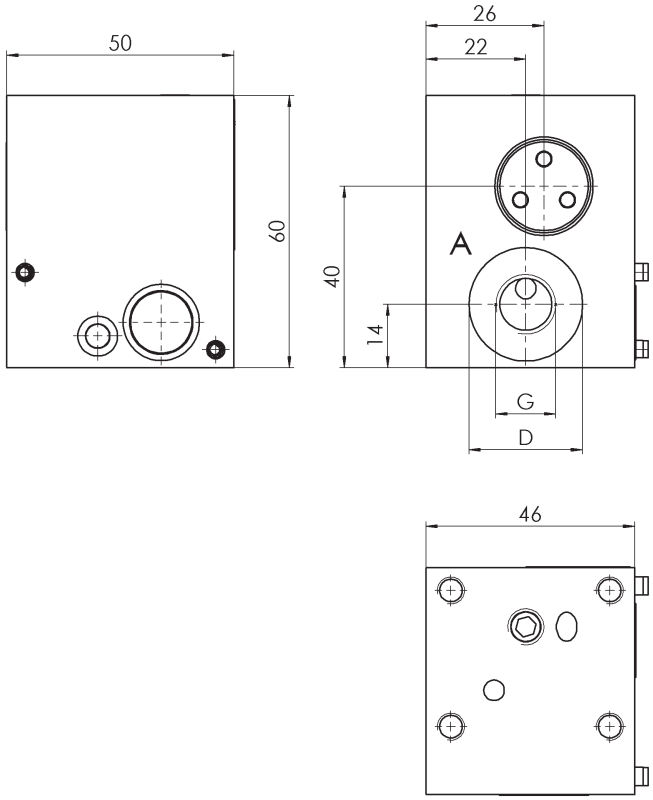
In manifold for valve bank with seated 2/2-valve

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

Hydraulic schematics



Dimensional drawing

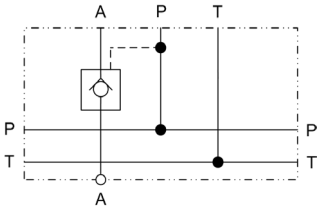


G	D
G3/8"	Ø28
G1/4"	Ø25

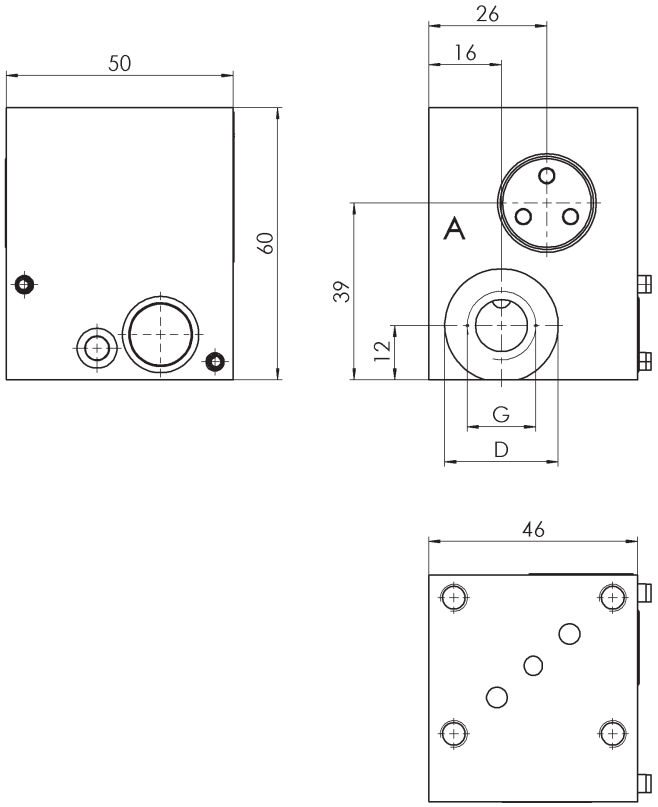
In manifold for valve bank with seated 3/2-valve

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

Hydraulic schematics



Dimensional drawing



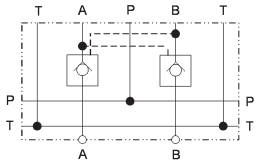
G	D
G3/8"	Ø28
G1/4"	Ø25

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

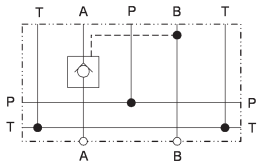
Type code	Part number
ERVM-4B-G1/4AB42-V-A*00	3831342
ERVM-4B-G3/8AB42-V-A*00	3831343
ERVM-4B-G1/4A42-V-A*00	3831344
ERVM-4B-G3/8A42-V-A*00	3831345
ERVM-4B-G1/4B42-V-A*00	3831346
ERVM-4B-G3/8B42-V-A*00	3831347

Hydraulic schematics

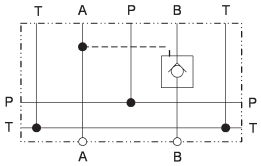
ERVM-4B-G1/4AB42-V-A*00
ERVM-4B-G3/8AB42-V-A*00



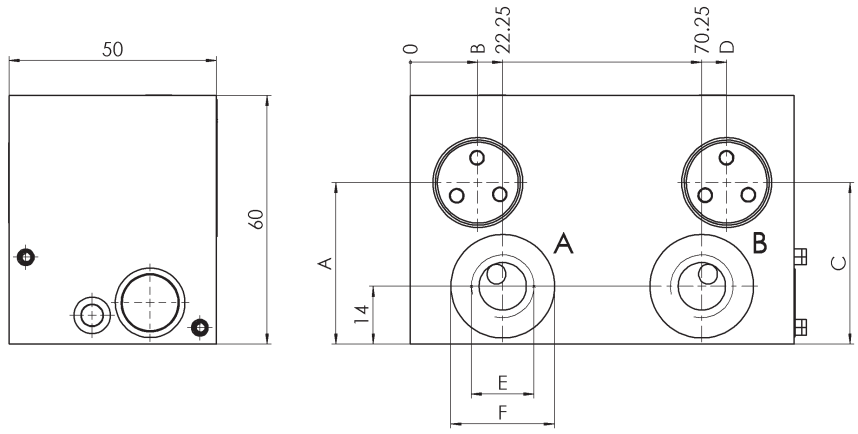
ERVM-4B-G1/4A42-V-A*00
ERVM-4B-G3/8A42-V-A*00

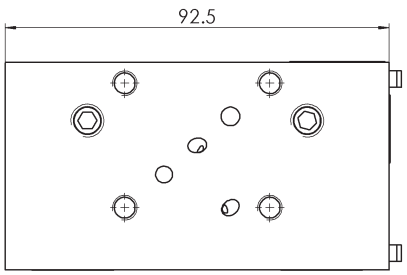


ERVM-4B-G1/4B42-V-A*00
ERVM-4B-G3/8B42-V-A*00



Dimensional drawing



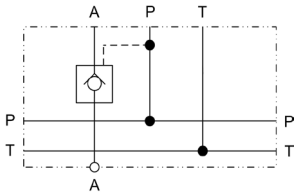


G	D
G3/8"	Ø28
G1/4"	Ø25

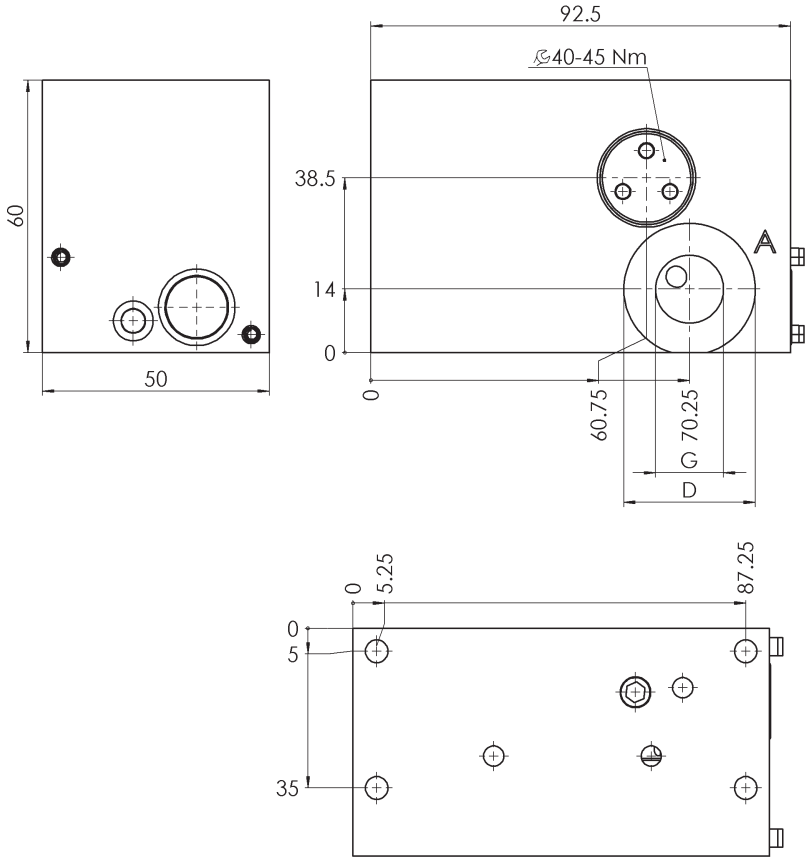
In manifold for valve bank with seated 3/3-valve

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

Hydraulic schematics



Dimensional drawing

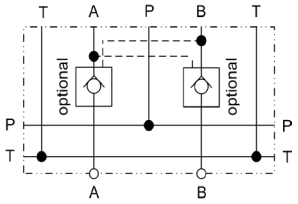


G	D
G3/8"	Ø28
G1/4"	Ø25

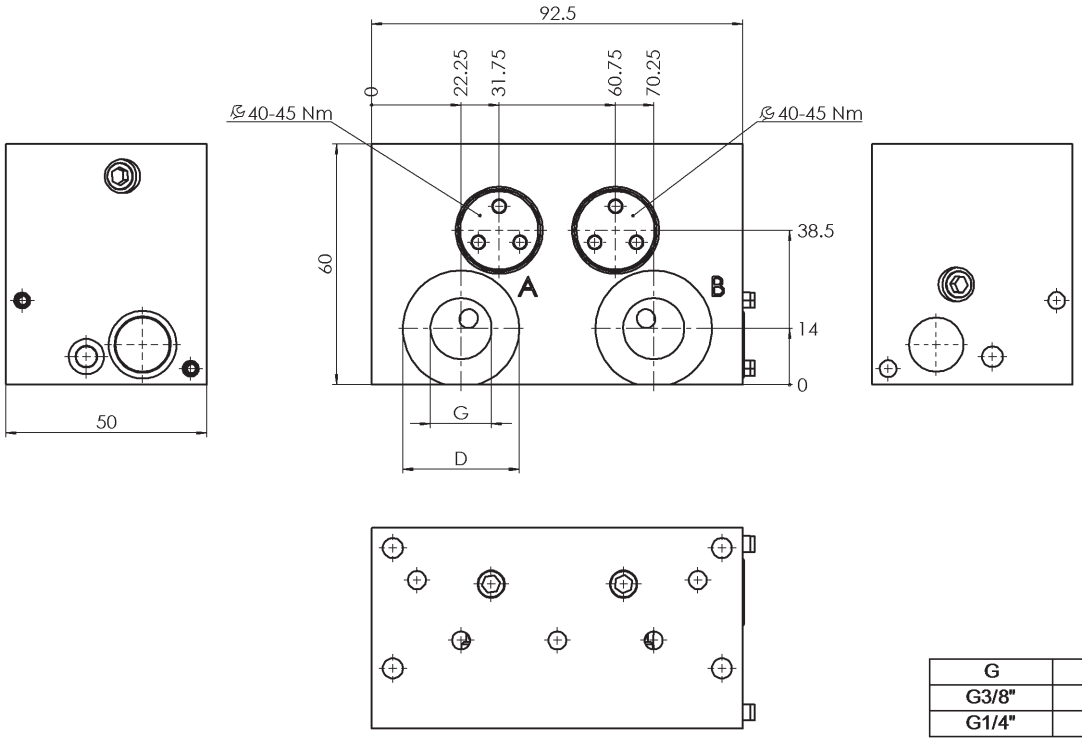
In direct connection block for valve bank with 4/3 seated valve

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

Hydraulic schematics

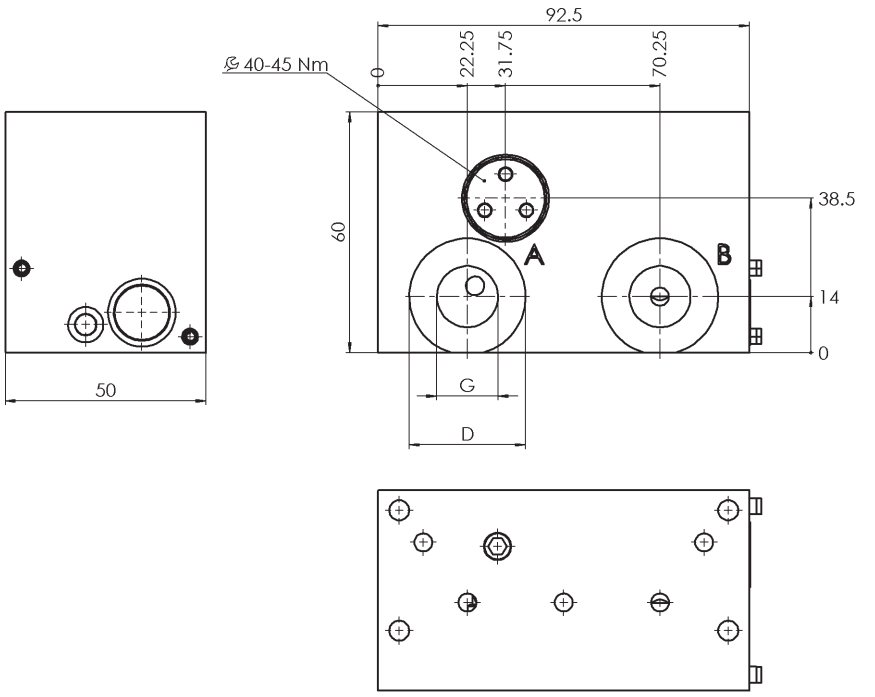


Dimensional drawing for part no. 3831336 and 3831337



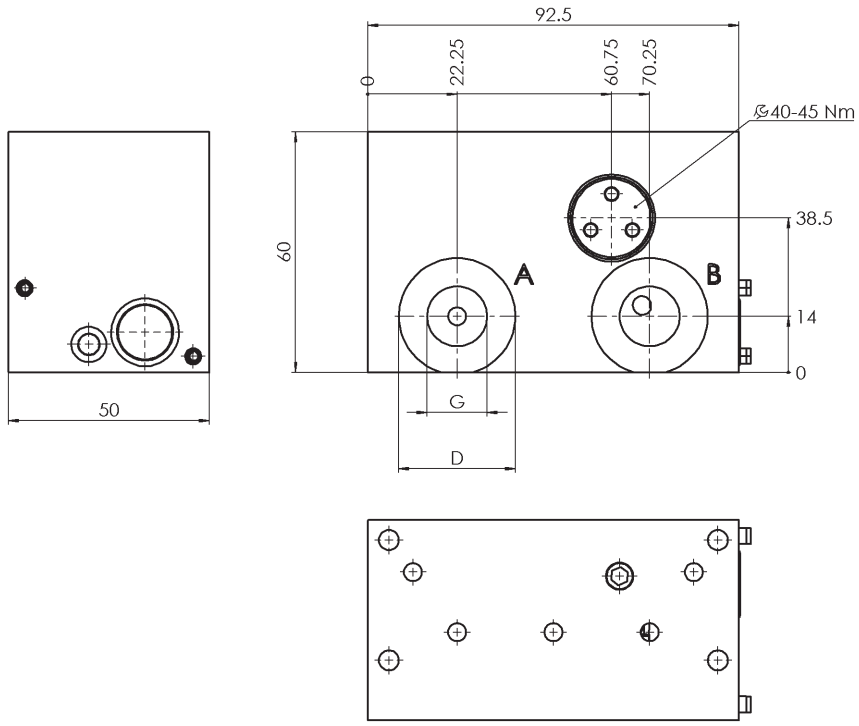
G	D
G3/8"	Ø28
G1/4"	Ø25

Dimensional drawing for part no. 3831338 and 3831339



G	D
G3/8"	Ø28
G1/4"	Ø25

Dimensional drawing for part no. 3831340 and 3831341

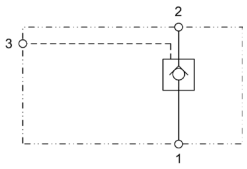


G	D
G3/8"	Ø28
G1/4"	Ø25

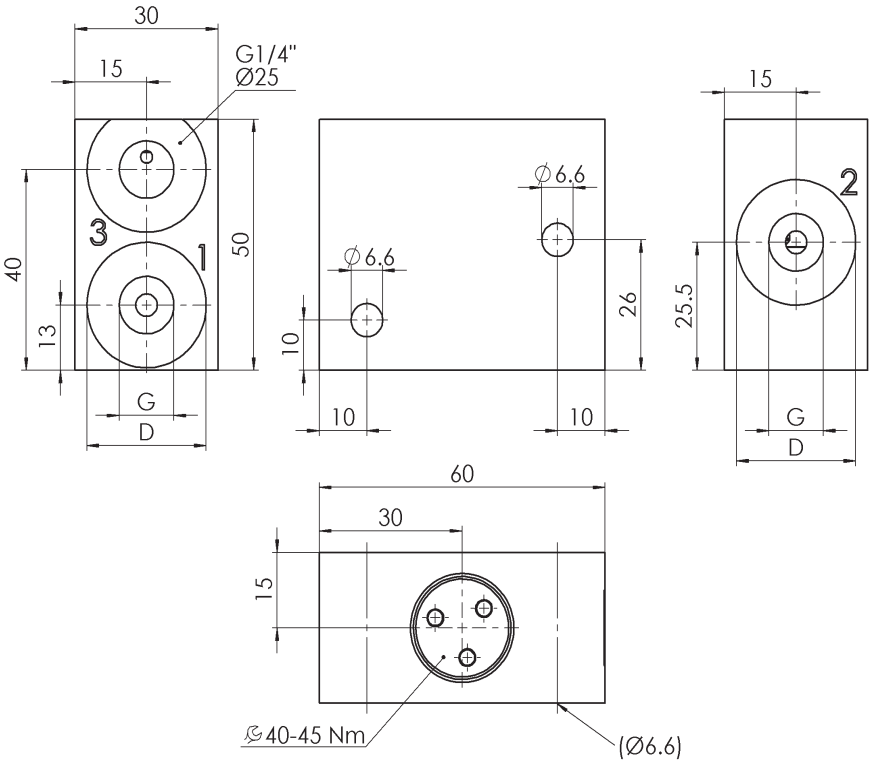
In-line mounting

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

Hydraulic schematics



Dimensional drawing



G	D
G3/8"	Ø28
G1/4"	Ø25

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The information in this brochure relates to the operating conditions and applications described.
For applications and operating conditions not described, please contact the relevant technical department.
Subject to technical modifications.