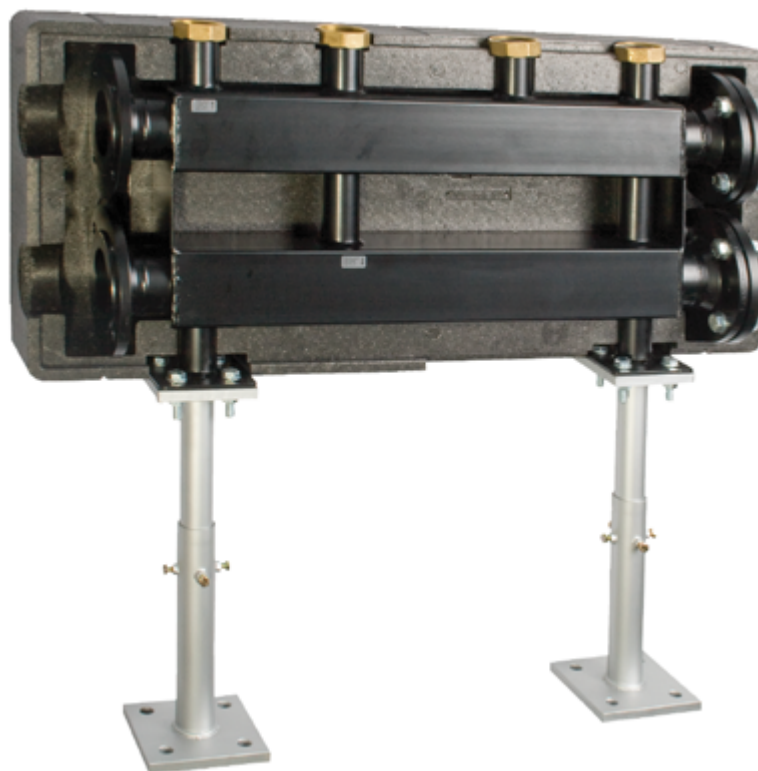


VB40/50 Series

Manifolds for HKM40/HK40 pump units

Manifolds for HKM50/HK50 pump units

Installation and operating manual



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1 General information

1.1 Important notes about the Installation and Operating Manual

NOTICE

The operator is responsible for ensuring adherence to the local laws and regulations (e.g. accident prevention regulations, etc.).

Incorrect operation or operating the manifold contrary to the specifications shall void all rights to any warranty claim.

This Installation and Operating Manual:

- is part of the manifold.
- contains instructions and information for the safe and correct installation and commissioning of the manifold.
- must be available to all users throughout the entire service life of the manifold.
- is intended for trained personnel who are familiar with the applicable standards and provisions and, in particular, with the relevant safety concepts and the operation and maintenance of the manifold.
- is protected by copyright and may not be altered without the manufacturer's permission.
- must not be available to unauthorised personnel, either as an original or duplicated document.

1.2 Product conformity

This manifold conforms to the 2006/42/EC machinery directive.

1.3 Product features

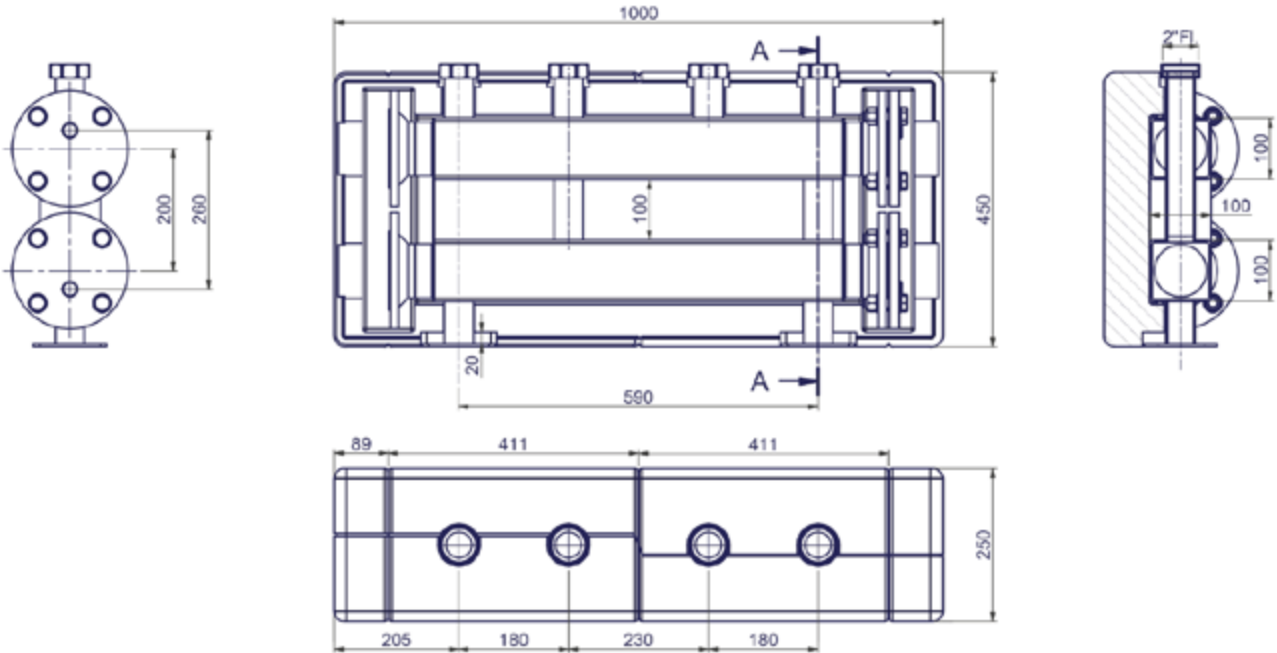
- EPP insulation shell
- All system connections are 2" male thread / DN80 with PN6 flange
- Compact, space-saving design

2 Technical features

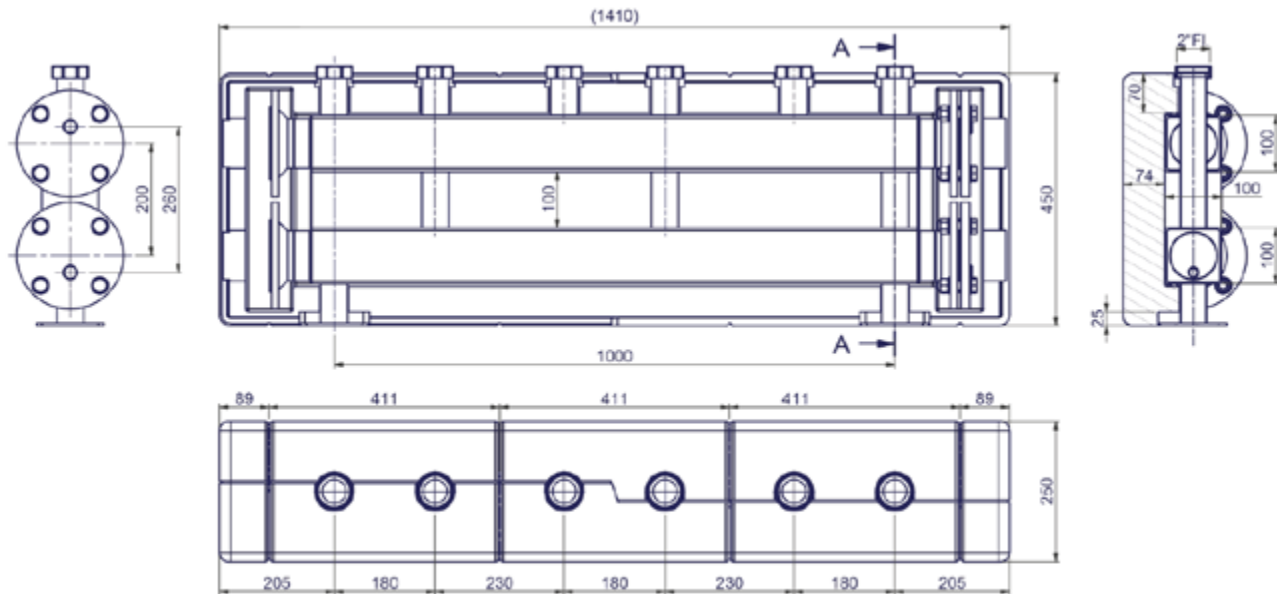
Hydraulic data	VB40/50-2 and VB40/50-3
Max. operating pressure	6 bar
Min. permissible operating temperature	2 °C
Max. permissible operating temperature	110 °C
Media	Water or water with glycol as per VDI (Association of German Engineers) 2035 / ÖNORM (Austrian standard) 5195
Dimensions	
Width x height x depth with EPP shell	VB40-2 / VB50-2: 1000 x 450 x 250 mm VB40-3 / VB50-3: 1410 x 450 x 250 mm
Weight	VB40/50-2 and VB40/50-3
Total weight without packaging	41 kg / 52 kg
Total weight with packaging	
Connections to pipe network	
Heating circuit side connections	2" union nut, with flat seals
Boiler side connections	DN80 flange (PN6)
Nominal width	DN40 / DN50
Materials	
Manifold	Tubular steel
Union nut	CW617N
Flat seal	AFM 34/2
Insulation shell	EPP
Kvs values	VB40/50
1 outlet open	38 m³/h
2 outlets open	52 m³/h
3 outlets open	56 m³/h
4 outlets open ¹⁾	62 m³/h
5 outlets open ¹⁾	70 m³/h

¹⁾ When connecting VB40/50-2 and VB40/50-3

2.1 VB 40/50-2 dimensions



2.2 VB 40/50-3 dimensions



3 Safety

3.1 Safety notices



DANGER indicates an imminent danger that may cause serious physical injury or death if the appropriate safety precautions are not in place.



WARNING indicates a danger arising through incorrect behaviour (e.g. misuse, disregarding notices, etc.) that may cause serious physical injury or death.



CAUTION indicates a potentially dangerous situation that may cause minor or slight injuries if the appropriate safety precautions are not in place.



NOTICE indicates a situation that may cause material damage if the corresponding precautions are not taken.

3.2 Important safety information

- Read this operating manual carefully before use.
- Maintenance, cleaning and repair work may be carried out by trained specialist personnel only.
- If the manifold is damaged or is not functioning correctly, it must no longer be used. In this case, contact your specialist dealer immediately.
- Observe the maintenance instructions and intervals.
- Protect the manifold against the effects of weather.
- Never use the manifold outdoors.
- The device set may only be used in accordance with its intended use.

3.3 Intended use

Manifolds for HKM40/50 - HK40/50 pump units

The manifold is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of specialist knowledge or experience.

3.4 Foreseeable misuse

The following is regarded as foreseeable misuse:

- operating the manifold contrary to the specifications.
- using the manifold for use other than its intended use.
- making modifications to the manifold not agreed with the manufacturer.
- using replacement or wear parts not approved by the manufacturer.
- operating the manifold outdoors (parts and components are not UV-resistant)

3.5 Operator's responsibility

The operator must ensure that:

- the manifold is only used for its intended purpose.
- the manifold is installed, operated and maintained according to the specifications in the Installation and Operating Manual.
- the manifold is only operated according to local directives and occupational health and safety regulations.
- all precautions have taken to avoid hazards originating from the manifold.
- all precautions for first aid and fire suppression are carried out.
- only authorised and trained users have access to and operate the manifold.
- users have access to this Installation and Operating Manual at all times.

3.6 Users

Only qualified persons may operate the manifold or carry out service and maintenance work.

Operators

An operator is deemed to be qualified if they have read this operating manual and understood the potential hazards associated with improper behaviour.

Fitters/commissioners

Due to their technical training, expert knowledge and consideration of the relevant standards, provisions, regulations and laws, fitters/commissioners are able to carry out work on the pump units and to detect and prevent potential hazards.

3.7 Notes on operating environment

Limescale build-up (from hard water), corrosion or chemical and physical reactions can lead to damage to the manifold.

The system designer is responsible for evaluating these parameters and putting remedies in place.

4 Product description

4.1 Variants

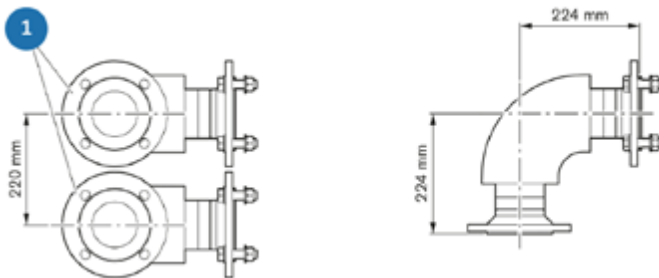
VB40/50 manifold

The VB40/50-2 manifold is suitable for two heating circuits and the VB40/50-3 manifold for three. Pump units and mixing units can be connected to VB40/5 manifolds.

The manifolds can be combined for up to 5 heating circuits.

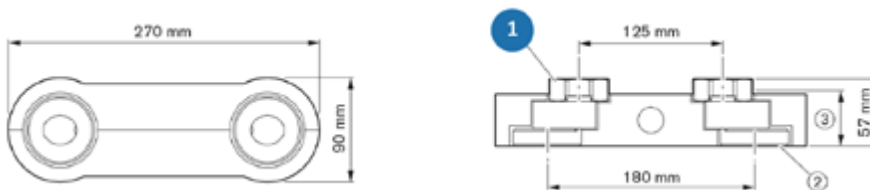
4.2 VB40/50-ECK angle connector set (optional - not included in delivery)

The VB40/50-ECK angle connector set allows two manifolds to be set up over a corner.



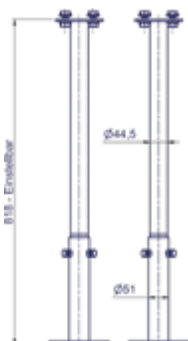
4.3 VB40/50-REDU adaptor set (optional - not included in delivery)

The VB40/50-REDU adaptor set is required if pump units or mixing units with nominal widths to DN 25 and DN 32 are to be connected to the VB40/50 manifold.



4.4 VB40/50-FUSS floor mounting kit (optional - not included in delivery)

The floor mounting kit (2 pieces) provides vertical support for manifolds.



5 Installation

NOTICE

Installation of the manifold must be carried out only by specialist personnel who have been duly trained and authorised by the manufacturer.

CAUTION

When carrying out repairs and replacing parts, the prescribed mounting positions and flow directions for the individual components to be replaced must be observed.

Material damage!

CAUTION

Opening shut-off valves quickly produces pressure surges.

- Always open shut-off valves slowly and in a controlled manner.

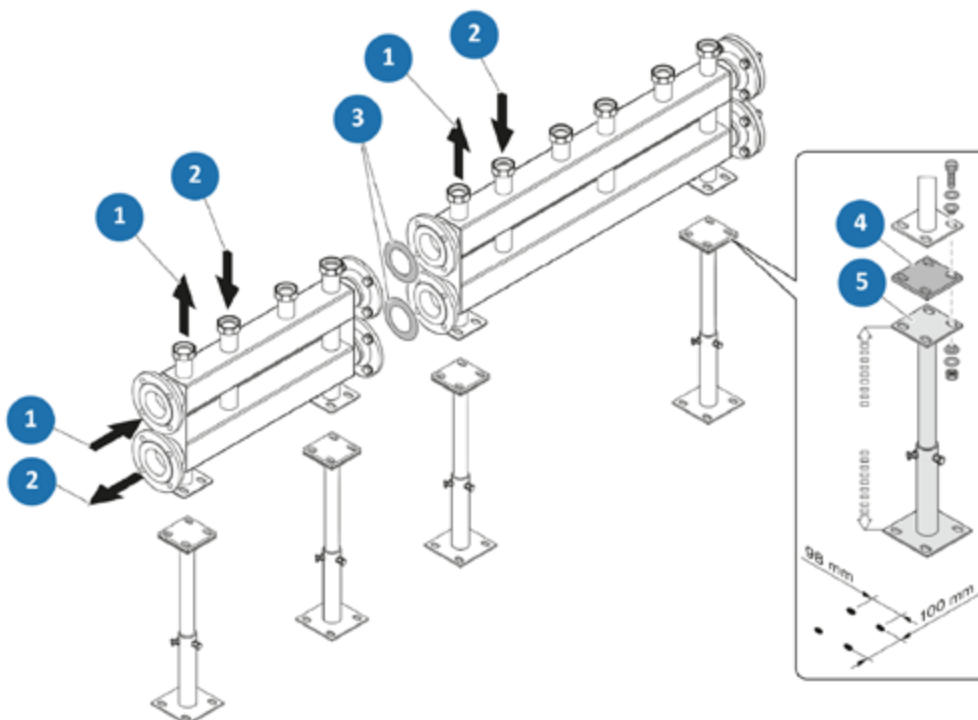
5.1 Installing VB40/50 manifolds

5.2 Pedestals

Install the manifolds on the pedestals (5) with foam rubber inserts (4). Adjust the height and set with a spirit level while observing the maximum extension marking on the pedestals.

If several manifolds are to be connected together, remove the flange cover on the end face. Connect manifolds with seals (3).

Fix the pedestals (5) to the floor using suitable fixing bolts.



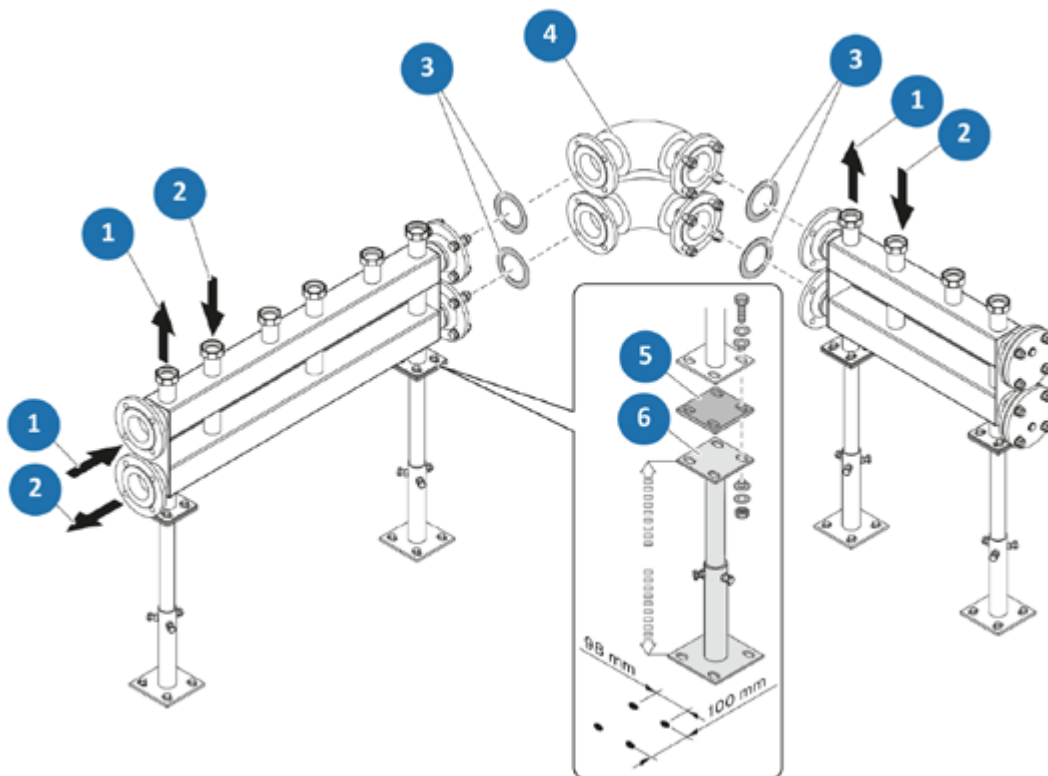
5.3 Installing the angle connector set

5.4 Installing the angle connector set with pedestals

Install the manifolds on the pedestals (6) with foam rubber inserts (5). Adjust the height and set with a spirit level while observing the maximum extension marking on the pedestals.

Remove the flange cover on the end face if necessary. Install angle connectors (4) to the manifolds with seals (3).

Fix the pedestals (6) to the floor using suitable fixing bolts.

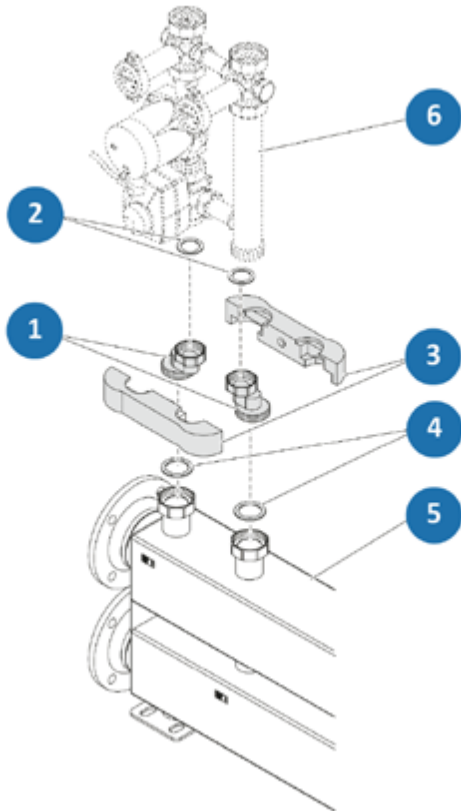


5.5 Installing the VB40/50-REDU adaptor

Insert seals (4).

Install the VB40/50-REDU adaptor (1) on the manifold (5). Insert seals (2).

Install the pump unit (6) on the adaptor (1). Install the insulation shell (3).



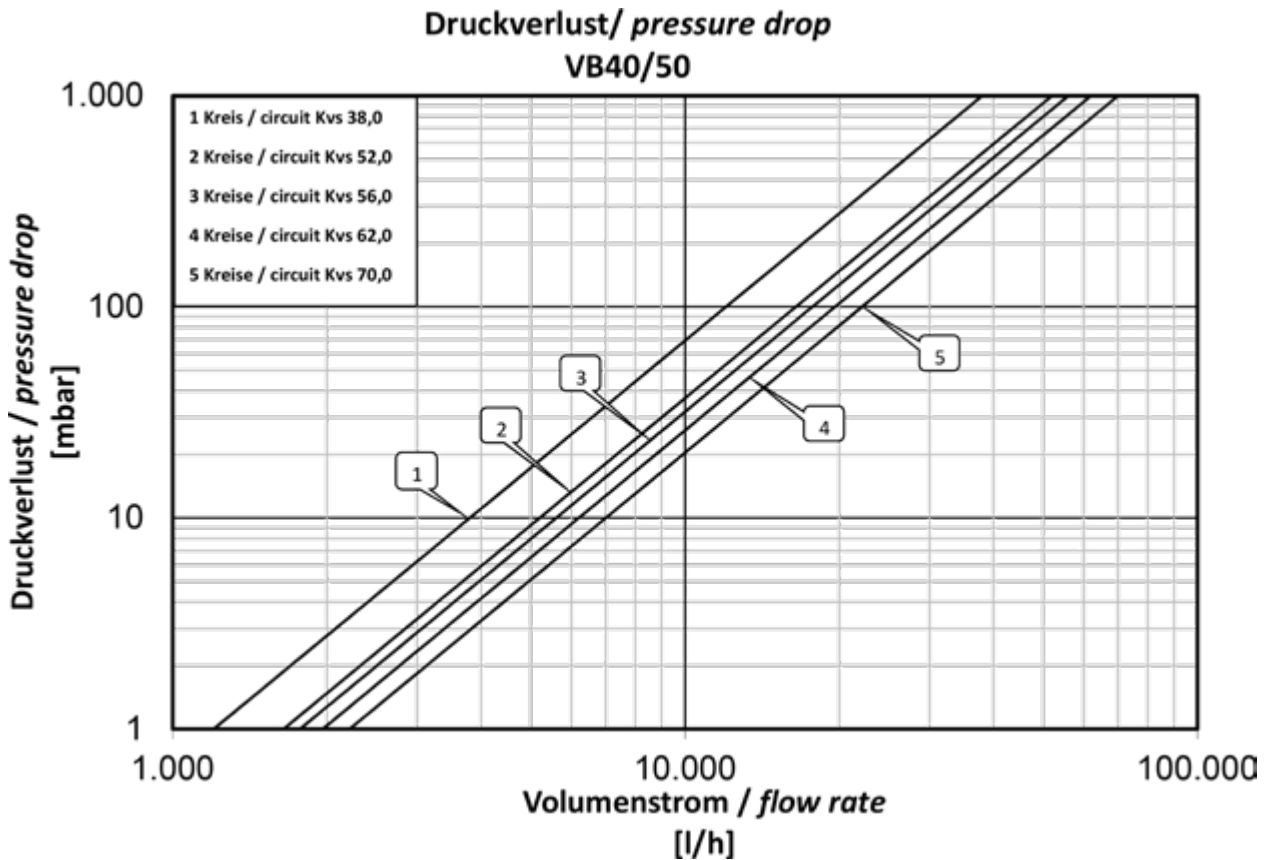
5.6 Installation

Before starting the unit for the first time, check all screw fittings and retighten if necessary!

Torque:

- 1½" screw fitting (130 Nm)
- 2" screw fitting (190 Nm)

6 Performance curve



7 Maintenance



Hot water!

Severe scalding possible.

Do not put hands into hot water when draining the manifold.

Allow the manifold to cool before carrying out any maintenance, cleaning or work repair.



Hot surfaces!

Severe burns possible.

Do not hold pipework or components while the unit is in operation.

Allow the manifold to cool before carrying out any maintenance, cleaning or work repair.

Wear heat-resistant safety gloves if it is necessary to work on hot components.



Maintenance of the manifold must be carried out only by specialist personnel who have been duly trained and authorised by the manufacturer.

7.1 Annual maintenance schedule

1. General visual inspection

- Check the manifold for leaks and retighten connections with flat seals or replace the seals.

2. Post-maintenance checks

- Check all loosened screw connections for a firm seating and retighten if necessary.
- Remove all tools, materials and other equipment used from the work area.
- Fill and bleed the system.

7.2 Replacing wear parts

Note that the manifold has parts which are subject to wear that naturally occurs as a result of normal use even when properly maintained and serviced.

Specifically, these are mechanical parts and parts which are in contact with hot water and steam such as hoses, seals, valves, etc.

Normal wear and tear is not a defect and is not covered under warranty or guarantee. Nevertheless, defects and malfunctions may only ever be remedied by trained specialist personnel.

Contact your specialist dealer for more information.

8 Disposal

⚠ WARNING Improper disposal can lead to contamination of the environment and groundwater!

When disposing of components and operating materials, the provisions and guidelines of the country of use must be observed.

1. Remove the manifold in the correct way or engage a specialist company to do this.
2. Separate the subassemblies and components into recyclable materials, hazardous substances and operating materials.
3. Dispose of the subassemblies and components in accordance with local laws and provisions or take them to a recycling facility.

8.1 Return to manufacturer

Contact the manufacturer if you wish to return the manifold or component parts.

8.2 Informing authorities and the manufacturer

Inform the manufacturer when decommissioning and disposing of the manifold for statistical purposes.

9 Warranty

WATTS products are tested extensively. WATTS therefore guarantees only the replacement or, at the sole discretion of WATTS, the free-of-charge repair of components of the supplied products where these, in the opinion of WATTS, exhibit verifiable manufacturing faults. Warranty claims due to defects or defects of title may be asserted within one (1) year of delivery/transfer of risk. Excluded from the warranty are damages attributable to normal use of the product or friction and damages resulting from modifications or non-authorised repairs on the products, for which WATTS rejects all claims for compensation (direct or indirect). (For more detailed information, please refer to our website.) In all cases, supply is subject to the General Terms and Conditions, which can be found at www.wattswater.de.

The descriptions and photographs contained in this product specification sheet are supplied by way of information only and are not binding. Watts Industries reserves the right to carry out any technical and design improvements to its products without prior notice.

Warranty: all sales and contracts for sale are expressly conditioned on the buyer's assent to Watts terms and conditions found on its website at www.wattswater.de/agn Watts hereby objects to any term, different from or additional to Watts terms, contained in any buyer communication in any form, unless agreed to in a writing signed by an officer of Watts.



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