BTHC 1000



Installation and Operating Instruction

Buffer tank 1000 litres for heating and cooling

Order no.: 452115.66.85

EN · FD 0408

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1 Please read immediately

1.1 General information

Please read this manual carefully before installing the cylinder and observe the safety notes in particular.

⚠ ATTENTION!

We do not assume any liability for damage resulting from failure to observe this manual.

1.2 Intended use

The cylinder is only used for buffering water in closed heating and refrigerant circuits. It may only be used for this purpose. Any other use is classed as misuse and is prohibited.

The buffer tank must be used in combination with heat pumps for heating or heating/cooling, use in other water heating systems or chillers is also possible.

Any other or further use is regarded as misuse. The user is solely responsible for any resulting damage.

Intended use also includes observing the installation manual and complying with the maintenance intervals.

NOTE

Buffer tanks are not enamelled and, for this reason, should never be used for domestic water heating.

Please pass this installation manual and all documents accompanying the cylinder to the system operator for storage.

The cylinder corresponds to the ErP directive 2009/125/EC (environmentally-friendly design) and 2010/30/EU (energy efficiency) of the European Parliament.

The delegated regulation (EU) no. 814/2013 and the regulation (EU) no. 812/2013 of the commission are also fulfilled.

2 Setup and installation instructions

2.1 General

- The cylinder must be mounted and installed by an authorised specialist company!
- The set-up must take place in a frost-protected room, the cable paths must be kept as short as possible.
- The installation location of the cylinder must be chosen so that the lines can be routed sensibly.
- Unevenness at the installation location must be evened out, as the cylinder must stand level due to the risk of tipping.
- The cylinder is fixed on the transport pallet with screws. The cylinder can be transported to the installation location by loosening the screws (below the removable thermal insulation of the cylinder).
- All connecting sleeves which are not required should be sealed with vent plugs.
- The maximum permissible operating overpressure indicated on the type plate must not be exceeded. It may be necessary to mount a pressure reducer.
- Electric heating elements (immersion heaters) must only be connected by authorised electricians according to the corresponding circuit diagram. All relevant requirements of the utility company, the Association of German Engineers (VDE) and DIN 4751-2 must be observed.

NOTE

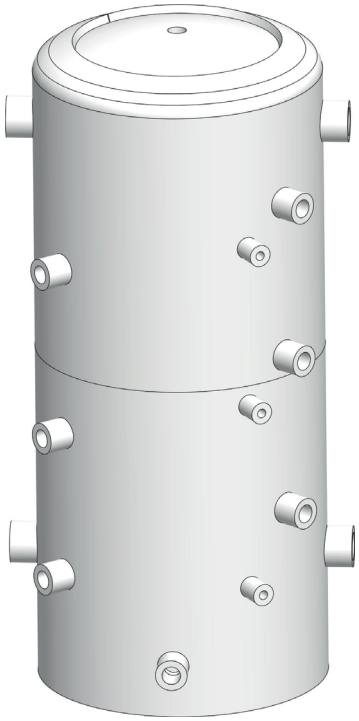
Damage to the thermal insulation, in particular during installation, must be avoided. Even minor damage can result in condensate fallout. This means that the insulation protection of the buffer tank during cooling operation is no longer effective.

NOTE

All connections lead out from the cylinder and are flush to the cylinder casing of the (removable) thermal insulation. The connecting stubs are fitted with a 25 mm thermal insulation to the thread to prevent condensate. All connecting stubs not required for the installation (flow and return, immersion sleeves and sleeves for electric heating elements) must be closed with a sealing plug and sealed with thermal insulation with a thickness of at least 25 mm.

All outgoing pipes must also be fitted with thermal insulation. To achieve optimal protection from condensate fallout, pipe and cylinder thermal insulation should overlap on the interface.

If a connecting stub is not in use, it should be sealed using a cap or sealing plug.



NOTE

The subsequent installation of the cylinder must take place with the thermal insulation/panelling fitted.

NOTE

If the thermal insulation of the cylinder is removed in the cold months, it must be stored at room temperature before installation in order to avoid damage to the insulation and fastening mechanism.

NOTE

A means of draining the cylinder should be provided on the lower stub (base of the cylinder).

NOTE

After the cylinder has been installed and the insulation fitted, affix the supplied type plate and connection diagram so that they are visible on the cylinder casing.

2.2 Safety valve

If the buffer tank is fitted with one or more immersion heaters, it must additionally be equipped with a type-tested diaphragm safety valve which cannot be shut off.

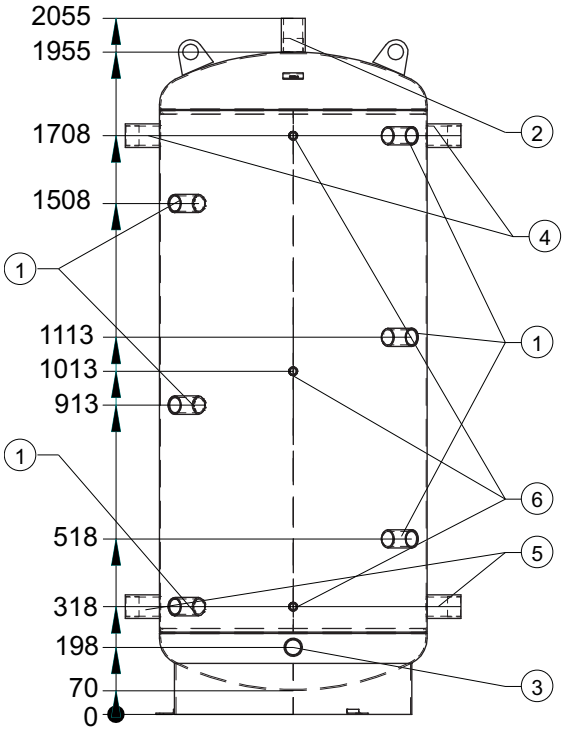
The connection diameter must have a nominal width (NW) of at least 20. The air outlet pipe must not allow any pressure increase to take place.
The operational reliability of the safety valve must be checked at regular intervals.

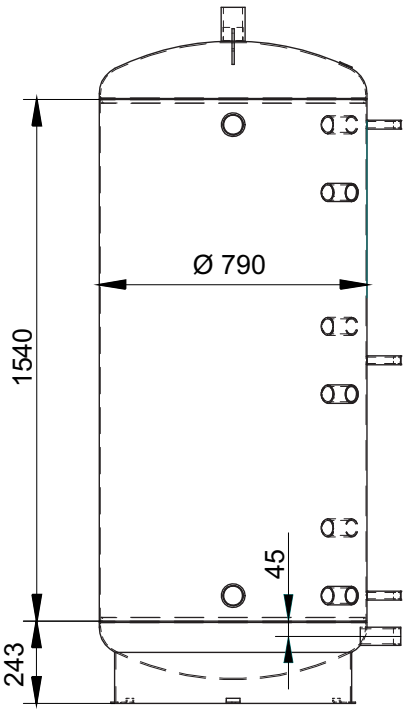
2.3 Commissioning

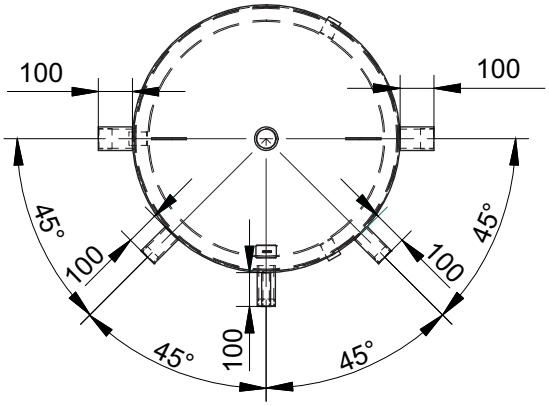
Ensure that the water supply is turned on and the buffer tank is filled before commissioning.
The first filling and commissioning must be performed by an authorised specialist company.

The entire system, including all installed components, should be inspected to ensure that everything is working properly and that there is no leakage.

3 Technical data - buffer tank dimensions







Connections		
1	Heating element inserts	1 ½“ internal thread
2	Connection for de-aeration	G 1 ½“ internal thread
3	Connection for drainage	G 1 ½“ internal thread
4	Heating water flow	G 2 ½“ internal thread
5	Heating water return	G 2 ½“ internal thread
6	Immersion sleeve	Rp ½“

Technical information	
Nominal capacity	1000 litres
Usable capacity	870 litres
Tilt dimension without thermal insulation	2250 mm
Height complete	2055 mm
Diameter without thermal insulation	790 mm
Diameter with thermal insulation	1000 mm
Insulation thickness thermal insulation	25 mm
Insulation thickness thermal insulation	100 mm
Net weight	120 kg
Heat loss [1]	3.36 kWh/24h
Permissible operating temperature, heating water	95 °C
Permissible operating overpressure, heating water	6 bar
Test pressure	9 bar

1. Room temperature 20 °C; cylinder temperature 65?

4 Maintenance buffer tank

A stable readiness for operation, reliability and long service life requires regular maintenance by a recognized specialist company.

⚠ ATTENTION!

Never carry out maintenance work yourself. Commission a recognized specialist company to carry out the work.

- The electrical insert (if present) should be checked and descaled annually (or more frequently in hard water areas). This should be combined with a functional test.
- We recommended having the system checked once a year.

NOTE

Old or damaged seals must be replaced.

5 Spare parts

A list of any spare parts required can be found on our website in the after-sales service portal. Further information on spare parts is available from our team in the front office or your after-sales service partner.

For the terms of the guarantee and after-sales service addresses, please refer to the Installation and Operating Instructions for Heat Pumps.

Subject to alterations and errors.