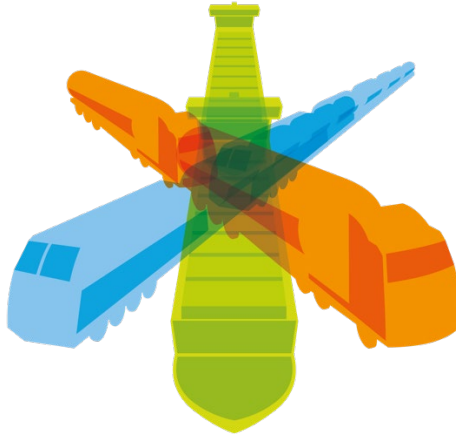




External heating

Procedure

Our HACCP analysis identifies two major risks that may affect the condition of the product:

1. Missing or incorrect sealing
2. The product temperature is not maintained

There are three reasons for heating:

- the temperature of many liquid products must be maintained;
- the tank must be heated before loading to prevent residual load;
- the tank must be heated before cleaning.

Löbbe units are used at locations with a high unloading frequency.

Van den Bosch uses two versions:

- Löbbe heating unit
- Löbbe cooling and heating unit





Löbbe heating unit

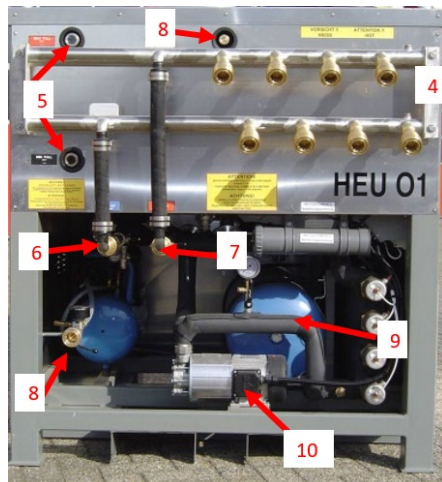


Configuration



1. Plug 1 Master (380V connection in case one container is plugged)
2. Plug 2 Slave (380V connection in case 2 or more containers are plugged)
3. Control display

The heating unit consists of a 500-litre reservoir, a pump, four container connections, a compressor and a control panel. It is heated with glycol or a glycol/water mixture (40/60). Heating with water only is also possible, but only in a frost-free environment. The reservoir can optionally be preheated so the glycol is already at temperature before the container is connected.



- 4. Connectors containers (4x)
- 5. Niveau indicators
- 6. Backflow
- 7. Pre-flow
- 8. Compressor connections
- 9. Heater
- 10. Pump

Pre-flow and backflow

Four containers can be connected to the heating unit using quick-release couplings.

The upper four connections are for pre-flow (7); the lower four are for backflow (6).

Level indicators

Always check the glycol level (5) before use. If it is below minimum, do NOT use the heating unit until the reservoir has been refilled with water or glycol.



Connecting

Ensure that the steam-line threads are fitted with PTFE tape and that Stucchi quick-release couplings are available.

Ensure that the Stucchi couplings are locked in position when connected (2).



**NEVER USE THE SYSTEM UNLESS A CONTAINER
IS CONNECTED!**

SWITCH OFF THE SYSTEM BEFORE CHANGING CONTAINERS!



Operation

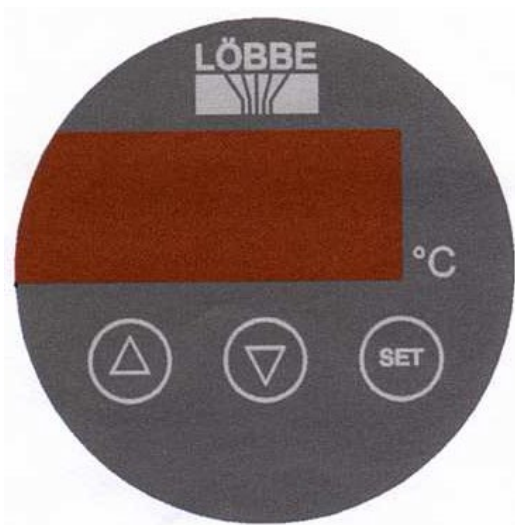
Overview of controls



1. Main switch
2. Selector switch
3. Reservoir temperature thermostat
4. Pre-flow temperature thermostat
5. Backflow temperature thermostat
6. Compressor switch

Setting the temperature

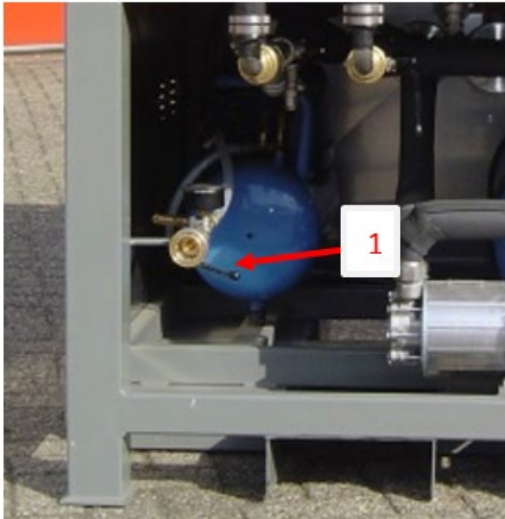
To maintain or reach the product temperature, always set the pre-flow temperature 10°C higher than the backflow temperature. Only one temperature can be set for all connected containers.



The required temperature can be set by pressing the SET button and then using the UP or DOWN button to select the correct value. Press the SET button again to check the set temperature.

Disconnecting

Van den Bosch heating units are equipped with a compressor. After disconnection, the glycol must be blown back into the reservoir. Connect the hoses to both compressor connections and switch on the compressor at the control panel. The valve on compressor connection (1) must be open.



Failure to blow the glycol back into the reservoir will result in:

- Insufficient glycol in the reservoir, causing problems for the next user.
- The total weight of the load unit differing from the weight stated on the weighbridge ticket.

Löbbe cooling and heating unit

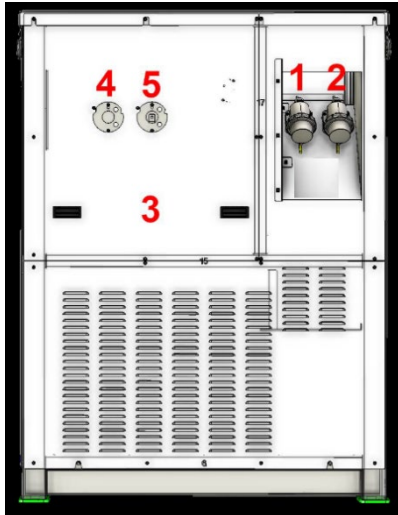


cooling
& HEATING-SYSTEM by **LÖBBE**

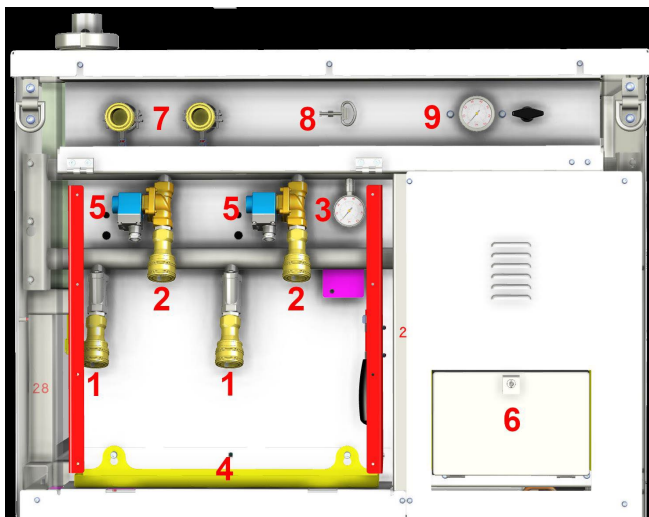
The Löbbe cooling and heating unit consists of a 440-litre reservoir, a pump, two container connections, a compressor and a control panel.



Configuration



1. Plug 1 main power connection
2. Plug 2 slave connection
3. Maintenance cover
4. Main backflow valve
5. Main pre-flow valve



1. Backflow connections with filter
2. Pre-flow connections
3. Pre-flow pressure gauge
4. Drip tray
5. Solenoid valves
6. Equipment storage compartment
7. Compressor connections
8. Storage-compartment key
9. Air-pressure gauge

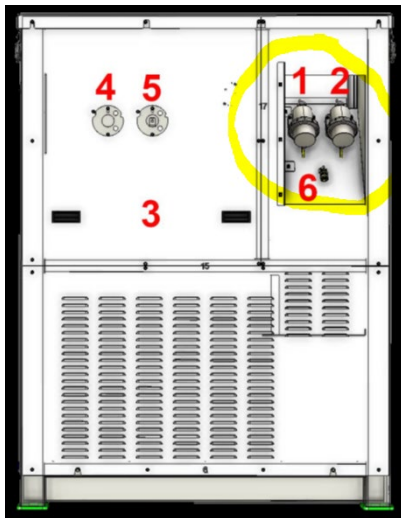


1. Compressor connection for returning glycol to the reservoir
2. Compressor connection for aeration
3. Compressor air-pressure gauge
4. Compressor valve, open/closed



Connecting

1.



Ensure that both 380 V connections, plug 1 and plug 2, are connected to the mains power supply.

2.



Switch both switches to "on".

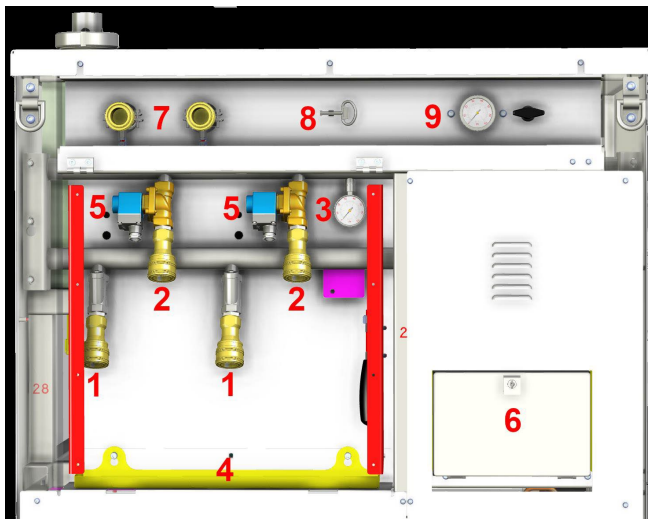


3.



Ensure that the threads of the steam lines are fitted with PTFE tape and that Stucchi quick-release couplings are available. When connecting the Stucchi couplings, ensure that they are properly locked in place (2). See the instructions for the Löbbe heating unit.

4.

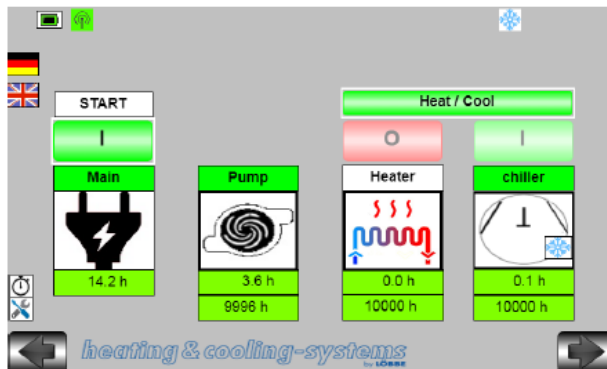


Connect the hoses:
1. Connections for the backflow (**steam outlet**)
2. Connections for the pre-flow (**steam inlet**)



Operation

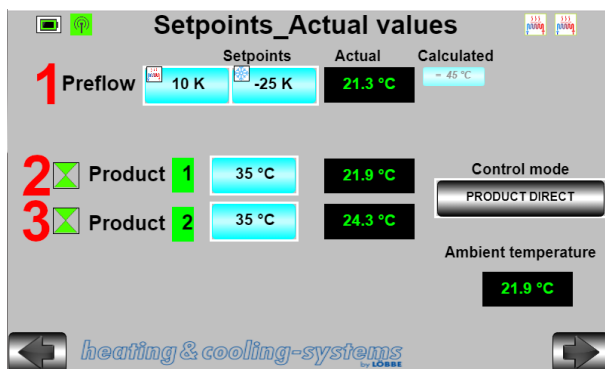
1.



Switch on the main power to pump glycol into the container lines. This takes approximately 15 minutes.

Thereafter, switch on the heater or de chiller.

2.

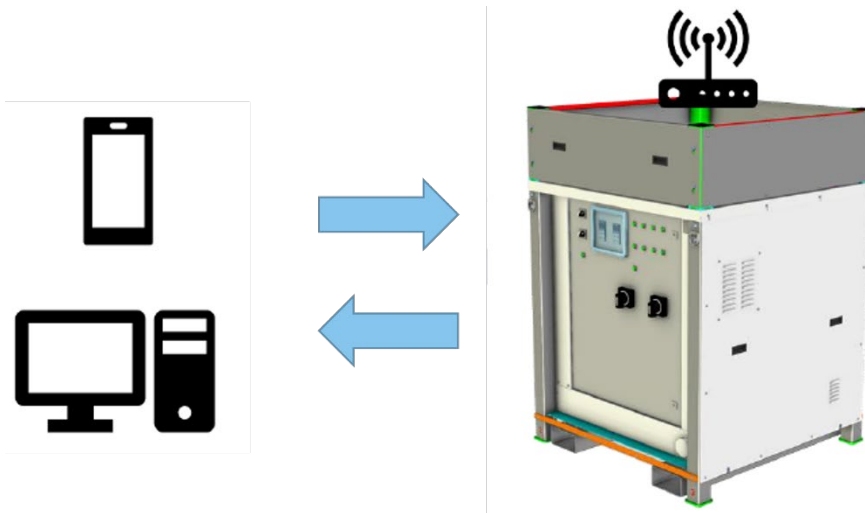


Set the required temperature. The required temperature is stated in the Trimble onboard computer.

Only set the product temperature when a container is actually connected. Otherwise, an *error* message will appear.

3.

The unit will now begin heating or cooling, depending on the selected target temperature. The pre-flow temperature will increase or decrease accordingly.



De Löbbe cooling- en heating units can be controlled remotely.
If remote control is used, the driver must connect the container, switch on the unit and contact the planner to confirm that the office connection has been established. The driver must then follow the planner's instructions.

Disconnecting

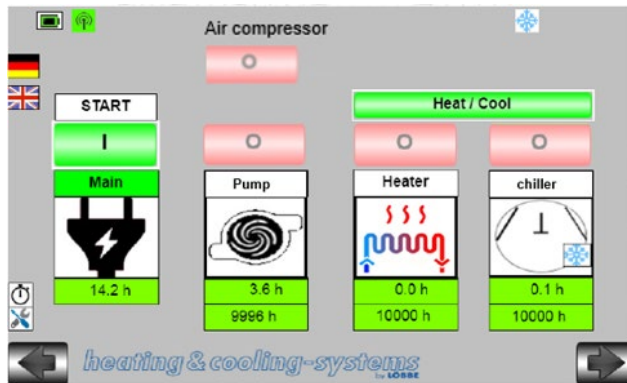
1.



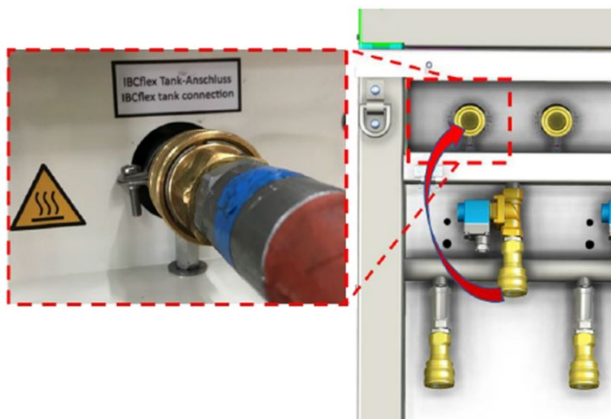
When the heating or cooling process can be ended, the glycol must be blown back from the container into the unit reservoir.



2.

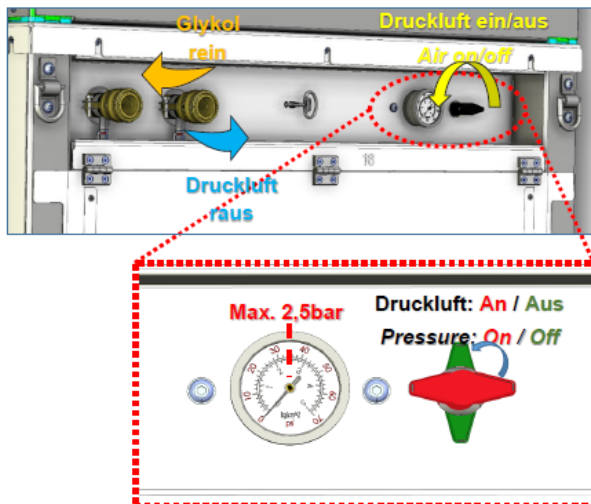


Switch off the heater or chiller by selecting it.
Switch off the pump by selecting it.



To do this, disconnect both the pre-flow and backflow connections from the unit and then connect them to the two compressor connections.

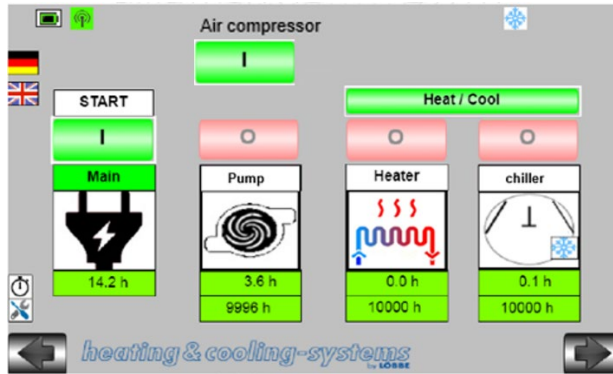
3.



Then turn the compressor air-pressure valve to the “on” position.



4.



Switch on the compressor at the control panel.

It takes approximately 15 minutes to blow all glycol back into the reservoir. Only after all glycol has been blown back into the reservoir may the compressor be switched off and the container hoses disconnected. The container is then ready for transport.

Note: Leave the unit tidy after use:

- Hoses clean and rolled up
- Drip tray empty
- Accessories returned to the storage compartment