

# Brine defroster

G-2000, G-4000, G-6000, G-8000/  
G-2001, G-4001, G-6001, G-8001

## Installation manual



- **Please read this instruction manual completely before installing the product.**
- **Installation work must be performed by authorized personnel only.**
- **Please retain this installation manual for future reference after reading it thoroughly.**

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## Safety Precautions

Thank you for purchasing brine defroster G-2000/G-4000/G-6000/G-8000, G-2001/G-4001/G-6001/G-8001 series.

*READ THESE INSTRUCTIONS CAREFULLY BEFORE INSTALLING AND USING THE EQUIPMENT!  
THIS INSTRUCTION HAS BEEN MADE WITH THE GREATEST CARE.*

*HOWEVER, THIS INSTRUCTION CONFERS NO RIGHTS. WE RESERVE THE RIGHT TO CHANGE ALL OR PART OF THE  
CONTENTS OF THIS INSTRUCTION WITHOUT PRIOR NOTICE.*

This instruction contains all information necessary for an optimal installation and startup by skilled personnel. It can also be used as a manual for maintenance and service work.

It is absolutely important to follow the instructions in this manual very thoroughly in order to guarantee the correct function of the unit. Not following the instructions in this manual and/or using non-original parts lead to a lapse of any warranty and liability claims.

Please contact your dealer for further assistance if there are any questions left which are not covered in this manual.

## 0 Brief product description

The “**G-2000/G-4000/ G-6000/G-8000**” is a brine defroster, which heats the intake air in winter and cools it in summer and it is especially used as frost protection component of a ventilation unit. The brine in a brine-driven geothermal heat collector absorbs the soil's temperature and converts it to the intake air inside the heat exchanger of the unit. The unit as a whole (heat exchanger with “A” class circulation pumps and safety unit in an insulated EPP housing) is activated by the temperature controlled switch of the brine pump. G4 filter is integrated into the unit, front and top door ensures easy access and maintenance.

Unit is designed to be used as LEFT and RIGHT versions, that can be achieved by changing position of the filter. By changing versions of the unit and direction of the airflow there are minor heating and cooling changes possible.

The “**G-2001/G-4001/G-6001/G-8001**” is a brine defroster, which heats the intake air in winter and cools it in summer and it is especially used as frost protection component of a ventilation unit. The brine in a brine-driven geothermal heat collector absorbs the soil's temperature and converts it to the intake air (inside the heat exchanger of the unit). The unit is equipped with G4 filter what will protect unit against contamination.

The unit has to be connected to the circulation pump (by customer), safety group (by customer) and control (by customer). Units can be used in 2 versions “R” and version “L”. Version “R” – Right version means that airflow to the ventilation unit goes to the right hand side. “L” version – airflow to the left hand side. Filter has to be placed accordingly.

## 1 Warranty and Liability

### 1.1 General

Our general terms and conditions in its current version apply to the brine defroster G-2000/G-2001, G-4000/4001, G-6000/G-6001, G-8000/G-8001. The warranty period begins with the initial startup, but at the latest one month after delivery. This warranty only covers materials, not service. It is only valid if maintenance has been performed according to our specifications by an authorized plumber.

#### 1.1.1 Warranty Terms

The warranty period of our units is 2 years beginning on the date of delivery. The warranty only covers defects in material or construction faults that occurred during the warranty period. The brine defroster may not be dismantled without prior written permit of the manufacturer in case of a warranty claim. Spare parts are only covered by warranty if installed by an authorized plumber.

### The warranty expires if:

- after the warranty period has elapsed;
- the unit is used without genuine filters;
- parts are used, that have not been delivered by the manufacturer;
- the unit is used improperly;
- defects occur due to improper connection or use and decontamination of the system;
- non-authorized modifications are made.

### Liability

The brine defroster has been developed and produced for use in so called comfort ventilation systems. Any other use is considered an improper use and can lead to damages to equipment and persons; the manufacturer is not liable in such cases. The manufacturer is not liable for any damages caused by:

- non-compliance of safety, operation and maintenance notes;
- improper installation;
- use of non-authorized parts;
- defects that occur due to improper connection or use and decontamination of the system;
- after the warranty period has elapsed;
- normal wear and tear.

## 2 Safety Instructions



***Please obey the safety instructions in this manual. Disregarding of safety instructions, warnings and notes may result in damages to persons or the brine-defroster.***

- Only an authorized plumber is allowed to install, connect, start up and maintain the unit, unless otherwise stated in this manual.
- The installation of the unit has to be carried out in accordance to local building, safety and installation regulations of the municipality or the waterworks / electric utility.
- Please obey the warnings and safety instructions, notes and instructions in this manual.
- Please keep this manual next to the brine-defroster.
- Any modification to the Brine defroster or its manual is not permitted.
- The brine in the hydraulic circuit is under pressure. If maintenance should be necessary the pressure has to be released first. For that purpose, use the existing valves / filling valves.
- Please assure to disconnect mains supply before carrying out any maintenance operations by cutting the power supply of the linked control module (of the ventilation unit or the self-sufficient control unit).

### 2.1 Symbols used

The following symbols are used in this manual:



***Attention, special note!***



***Risk of: - physical injury of user or installer  
- damaging the unit  
- failures if the instructions are not followed thoroughly***

## 3 Installation Prerequisites

The following paragraphs help to assess if the installation of the Brine defroster in a specific room is possible:

- The installation of the Brine defroster has to be carried out in accordance to local safety and installation regulations of the waterworks / electric utility and the regulations described in this manual.
- The place of installation has to provide enough space around the Brine defroster for air duct connections,



- collector pipe connections and maintenance.
- The following equipment has to be provided:
    - air duct connections.
    - mains supply 230 VAC (for control module).
    - appliances for condensate drain.
    - liquid tubes of the ductwork.
  - The brine defroster has to be installed in a frost-protected room.



***The liquid inside the system must not freeze. Freezing of the liquid would damage the system irreparably.***

- The condensate has to be drained off unit. Use a siphon to drain off the condensate.
- We recommend not to install the brine defroster in rooms with high humidity (e.g. bathroom/toilet). Thereby, condensate formation on the outside of the brine defroster is prevented.
- An intake air isolation damper is required if the system is used in areas with temperatures below -15 °C. This isolation damper has to block the air in case of a power outage. A power outage can damage the system if the temperature is below -15 °C. This is why the isolation damper is needed.

## 4 Shipping, Unpacking, Package Contents

Please handle the brine defroster with care.



***Please do not remove the packaging until installation! Please dispose the packaging environmentally friendly.***



***Protect the open ends (spigots) against dust and humidity before and during mounting work breaks!***

### 4.1 Checking the Package Content

In case of damages or incompleteness of the product delivered, please contact the supplier immediately. Package contents are:

- Brine defroster unit with integrated G4 filter;
- Wall mounting bracket;
- Installation manual;
- Rubber spacers (2pc).

## 5 Installation

### 5.1 Mounting

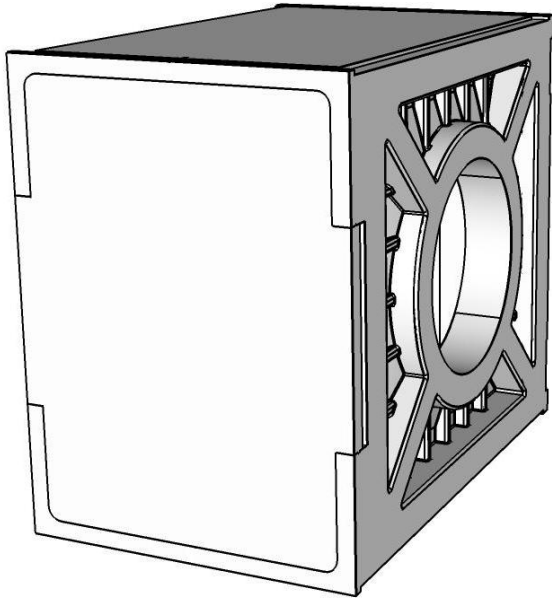


***Please assure a minimum clearance of 1 meter for maintenance purposes in front of the brine defroster.***

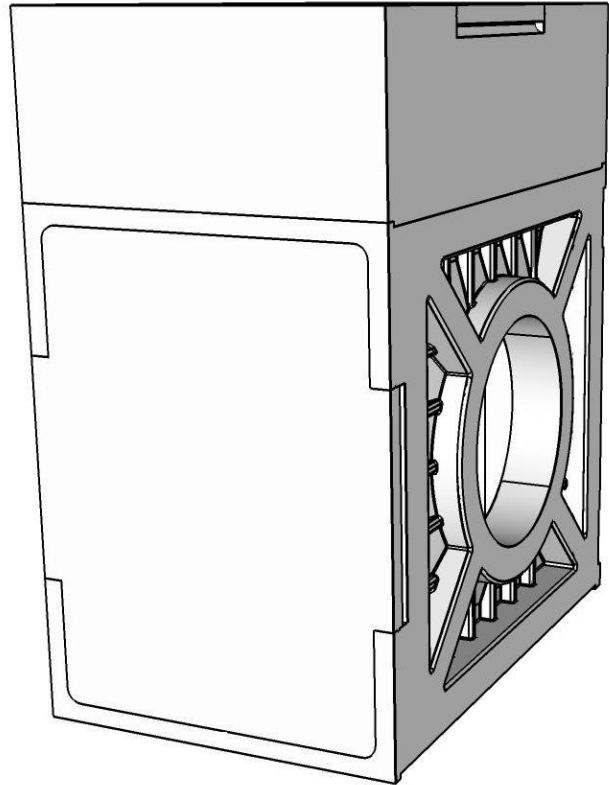
Mount the brine defroster on a wall using wall mounting bracket, please assure that wall can hold the weight of the unit.

1. Anchor the wall mounting bracket horizontally on the wall. Mind the different mounting dimensions depending on the brine defroster model;

There are 2 unit modifications available



G-2001/ G-4001 / G-6001 /G-8001  
590 x390 x 530 mm



G-2000/ G-4000 / G-6000/G-8000  
590 x390 x 720 mm

2. Hang the brine defroster into the wall mounting bracket.

## 5.2 Air duct connection:

Connect the air ducts to the corresponding pipe connections DN 250. Seal all air duct connections of the brine defroster ensuring air tightness.

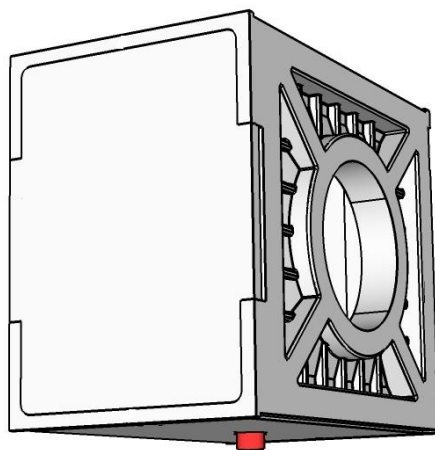


*The intake air duct, beginning from wall , gable or base plate to the brine defroster and between brine defroster and MVHR-unit has to be insulated steam-tight*

## 5.3 Connection of Condensate Drain

Please pay attention to the following notes:

- The condensate has to be drained off frost-protected. Use a siphon to drain off the condensate.
- Connect the condensate drain air-tight to the siphon (with a surge tank of minimum 60 mm) using a pipe or hose. Connect the siphon the sewer.
- Place the upper edge of the siphon minimum 40 mm under the condensate drain of the brine-defroster.



Siphon connection



*Check the water drain with connected intake air duct and MVHR unit switched on.*

## 5.4 Installation of the Brine Circuit (Geothermal Heat Collector)

### 5.4.1 General Notes on the Brine Circuit

The brine defroster uses a geothermal heat collector which transfers geothermal heat from the ground to the air streaming through the brine-defroster. The geothermal heat collector consists of a PE-pipe. The length of the PE pipe depends on local conditions, e.g. type of soil or ground water level. Compact and loamy soil is able to transfer more heat to brine than loose, sandy soil. If the pipe lays below the ground water level, the brine absorbs more energy from the soil. Please be sure to only regard the length of the pipes in the ground when calculating the pipe length. The length of the pipes in the building has no influences on how much energy can be absorbed. The length of the pipe can double in sandy soils. We recommend the following dimensions:

#### Units G-2000 / G-2001

Ground type	Collector length [m]	Pipe dimension	Circulation pump stage	Brine content approx [l]
Dry sand	300	DN32	1	175
Damp sand	150	DN32	1	95
Dry loam	150	DN32	1	95
Damp loam	120	DN32	1	80

#### Units G-4000 / G-4001

Ground type	Collector length [m]	Pipe dimension	Circulation pump stage	Brine content approx [l]
Dry sand	500	DN32	1	280
Damp sand	250	DN32	1	145
Dry loam	200	DN32	1	130
Damp loam	170	DN32	1	100

## Units G-6000 / G-6001

Ground type	Collector length [m]	Pipe dimension	Circulation pump stage	Brine content approx [l]
Dry sand	600	DN32	1	340
Damp sand	300	DN32	1	175
Dry loam	270	DN32	1	160
Damp loam	200	DN32	1	120

## Units G-8000 / G-8001

Ground type	Collector length [m]	Pipe dimension	Circulation pump stage	Brine content approx [l]
Dry sand	1000	DN40	1 or 2	560
Damp sand	500	DN40	1 or 2	285
Dry loam	450	DN40	1 or 2	250
Damp loam	320	DN40	1 or 2	185

Table 1: recommended dimensions of geothermal heat collector

As a rough estimate, you can work on the basis of 0.5 m brine ducting per 1 m<sup>3</sup>/h air quantity. However, a minimum of 100 m with smaller system. To be able to securely rule out the possibility of damage to the ducts, the collector ducts must be placed in a bed of 0.4 m of sand (depending on type of PE pipe).

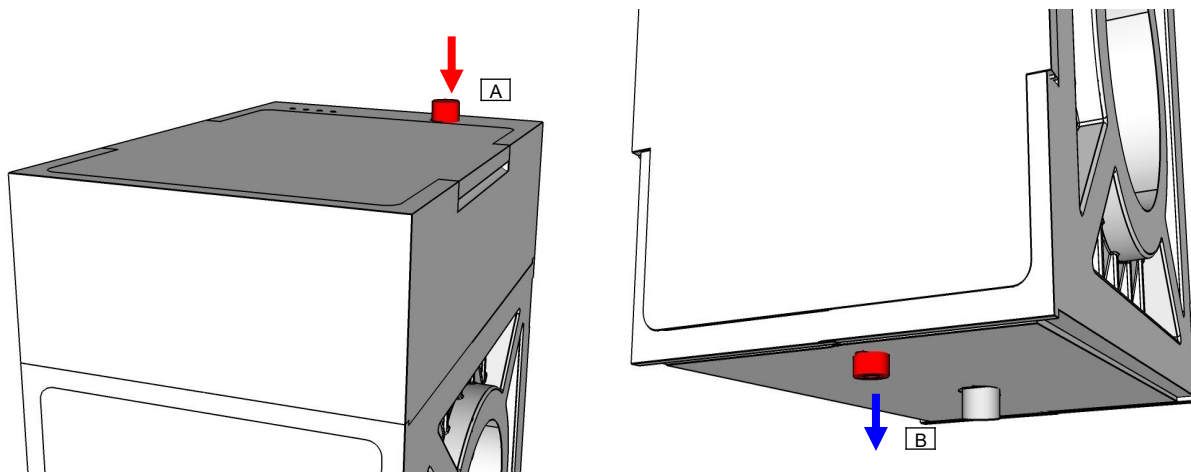
The geothermal heat collector can either be installed in an open space or a trench system, depending on the size of the property. The pipe has to be laid horizontally in the ground, the perfect depth is 1,5 to 2 m (but not deeper than 5 m). The distance between the pipes should be 0,8 m minimum. The highest point of the brine circle is the vent of the brine-defroster's safety unit. Please note:

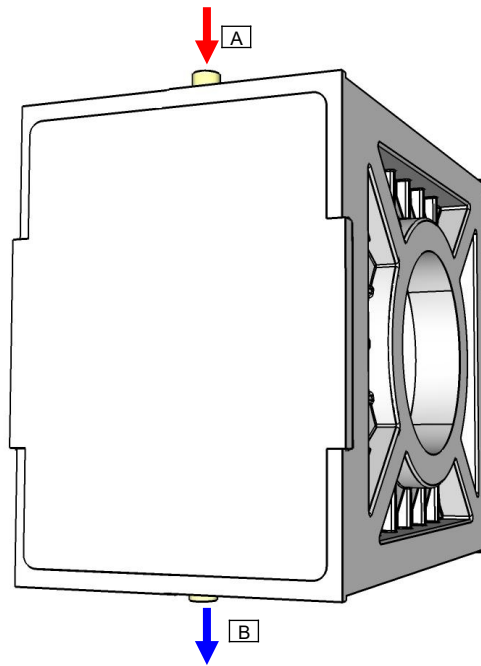
- Each brine circuit has to be capable of being locked, filled and emptied individually.
- Distributor and collector have to be at the very top of the brine pipe to ensure correct ventilation, furthermore easy inspection has to be ensured.
- The brine pipes has to be of suitable plastics. Do not use galvanized pipes.
- If more than one brine circuit is used the length of a single circuit should not exceed 100 m. All circuits have to be of identical length.
- There has to be a minimum clearance of 1 m to water-bearing pipes or foundations to avoid frost damages.
- At the highest point of the glycol system float vent (venting air from glycol system) has to be installed.

### 5.4.2 Connection of the Brine Circuit

Connect one side of the PE-pipe with the help of an adapter to the inlet of the brine-defrosters brine connection (A). Connect one side of the PE-pipe with the help of an adapter to the outlet of the brine-defrosters brine connection (B). Both connections are ¾ inch tapered external thread.

#### G-2000 /G-4000/ G-6000/G-8000





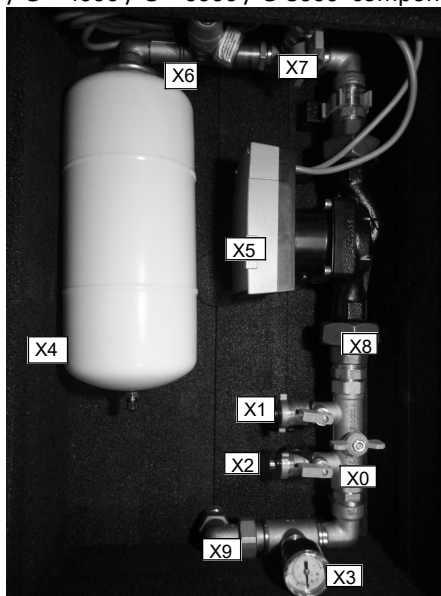
**Insulate all brine pipes of the brine circuit. All brine pipes inside the building and the wall bushing have to be sealed steam-tight and heat-insulated to avoid condensate.**

## 5.5 Electrical connections

The brine defroster is controlled by an external component (e.g. BUS-thermostat, universal thermostat). The temperature sensor and the brine pump of the brine defroster have to be connected to the corresponding control unit. Place temperature sensor into the air duct according to the control manual.

## 6 Startup

G-2000 / G – 4000 / G – 6000 / G-8000 component description



- X0 - filling valve
- X1 – filling valve
- X2 - filling valve
- X3 - Pressure gauge
- X4 – Expansion tank
- X5 – Brine pump
- X6 - safety valve
- X7 - valve
- X8 – pump screwed connection
- X9 - screwed connection

## 6.1 Filling the Brine Circuit

In normal operation, the defroster's valve **X0** is open and the filling valves **X1** and **X2** are closed. The brine defroster is filled using the filling valves **X1** and **X2**. The valve **X0** is open when the handgrip is parallel to the pipe. The valve **X0** is closed when the handgrip is perpendicular to the pipe. On the highest point of the system vent valve has to be installed (by customer).



**Only an authorized fitter/plumber is allowed to (re-)fill the brine-defroster.**

### 6.1.1 Initial Filling Instruction



**Fill the system with a ready-to-use ethylene glycol-water mixture. Please note the correct percentage of the ethylene glycol according to table 2!**

Maximum outside temperature [°C]	Ethylene glycol percentage [%]
-15	35
-20	40
-25	45
-30	50

Table 2: recommended Ethylene glycol percentage



**Higher concentrations of ethylene glycol can lead to flow problems due to the viscosity of the mixture. Concentrations of more than 50% will damage the system irreparably.**

6.1. Fill the system as follows:

1. Open top door
2. Connect the filling hose with the external filling pump to the filling valve X1.
3. Connect a drain hose to the filling valve X2.
4. Put the open end of the drain hose into a bucket.
5. Open the filling valves X1 and X2.
6. Close the stopcock X0.
7. Open vent X7.
8. Fill the system with the help of an external filling pump until the liquid flows out of the drain hose.
9. Close the filling valve X2.
10. Open the stopcock X0.
11. With the help of the water system's pressure, set the system under a primary pressure of 1,5 bar. Use the filling hose on filling valve X2 for that.
12. Pump the mixture for about 30 minutes through the system, so that air bubbles can drop out of the vent.
13. Check the system pressure again and refill if necessary to rise the pressure.
14. Close the filling valve X1 and uncouple the filling hose.
15. Adjust the brine pump to the correct step. Further information can be found in chapter "Adjusting the Brine Pump"
16. Close top door.



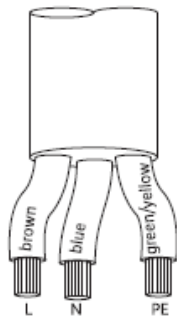
**In the installation report (at the end of this manual), you can fill in the specifications of the liquid used.**

## 6.2 Adjusting the Brine Pump



**The liquid pump supports 2 operating modes (depends on pump). The brine defroster always uses the "constant pressure" mode.**





220 V cable

black/brown: L1, 1~230V/50Hz  
 blue: Neutral N  
 yellow/green: Earth conductor



**Variable differential pressure**



**Constant differential pressure**



**Constant speed (I, II, III)**

**Pump operating button**



**Indicator lights (LEDs)**

**Signal display**

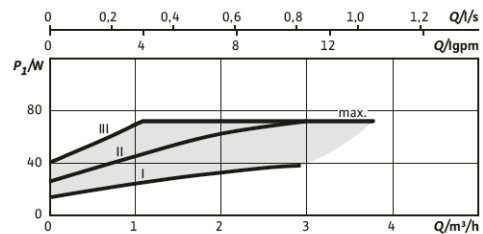
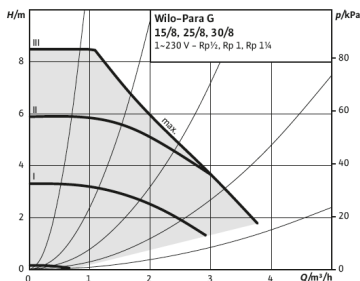
- LED is lit up in green in normal operation
- LED lights up/flashes in case of a fault

Press

- Select control mode
- Select pump curve (I, II, III) within the control mode

Press and hold

- Activate the pump venting function (press for 3 seconds)
- Activate manual restart (press for 5 seconds)
- Lock/unlock button (press for 8 seconds)



The brine defroster utilizes a brine pump to pump the ethylene glycol-water mixture into the hydraulic circuit. In order to guarantee an ideal mode of operation, the brine pump has to be adjusted correctly. The adjustment of the brine pump depends on what type of brine defroster is used.

- The flow rate of the brine pump has to be 6-7 l per minute for G -2000 / G -2001
- The flow rate of the brine pump has to be 9-10 l per minute for G -4000 / G-4001.
- The flow rate of the brine pump has to be 21 l per minute for G-6000 / G-6001.
- The flow rate of the brine pump has to be 36 l per minute for G-8000 / G-8001.

The pump adjustment depends on:

- the overall length of the geothermal heat collector;
- the inner diameter of the geothermal heat collector;
- the composition of the liquid mixture;
- the temperature of the liquid mixture.

## 7 Maintenance



***Periodic maintenance is absolutely necessary for the system to run properly.***

To assure a trouble-free operation of the brine defroster over years, we recommend to conclude a maintenance contract with a specialized maintenance firm.

The following maintenance work can be carried out by the end user:

- Replacement of the filter;
- Cleaning of the condensate drain;
- Checking the pressure;

The following maintenance work has to be carried out by a fitter/plumber:

- Inspection of the hydraulic circuit;
- Inspection and cleaning of the unit housing;
- Inspection and cleaning of the brine-to-air heat exchanger;
- Replacement of the brine pump (if necessary);
- Replacement of the expansion tank (if necessary);
- Replacement of the filling valve (if necessary);
- Replacement of the pressure gauge (if necessary);
- Replacement of the vent (if necessary);



***Please assure that the brine defroster is not connected to power supply during the whole maintenance. Therefore, remove the mains voltage from the control unit.***



***Assure that the hydraulic circuit is under pressure.***



***Only an authorized fitter/plumber is allowed to (re-)fill the brine defroster or maintain the hydraulic circuit.***

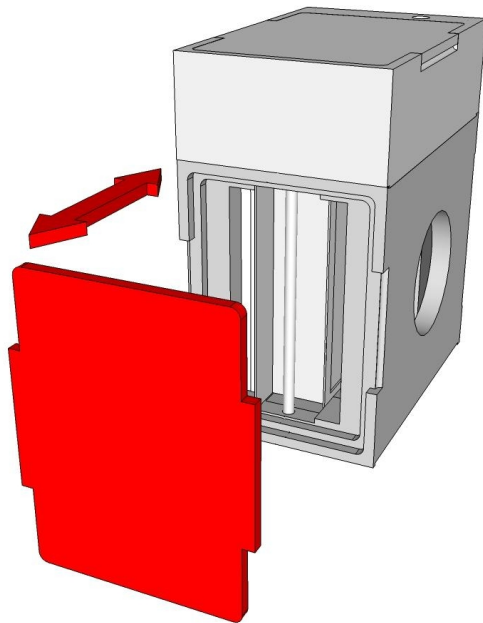
### 7.1 Filter Replacement

It depends on the operating conditions how often the filter has to be replaced. We recommend changing the filters when changing the filters of the heat recovery unit.

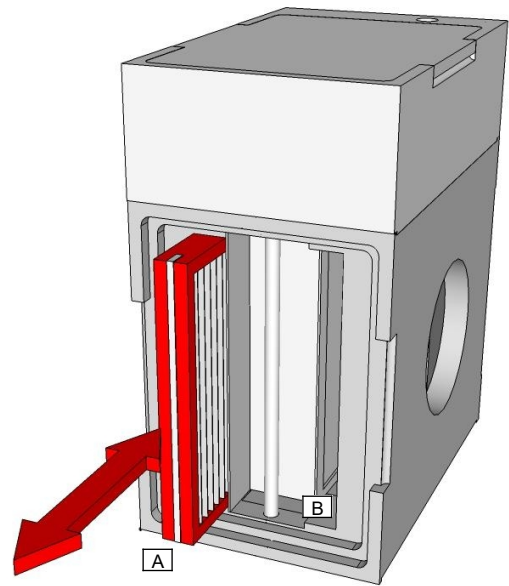


***Replace the filter (at least) every six months.***

1. Stop the ventilation unit,
2. Disconnect the mains voltage from the brine-defroster's control unit.
3. Open front door
4. Pull out filter (A) or (B) depending on the air flow direction



Remove front door



Replace filter

Location of the filter:

- "A" if airflow direction is from left to right
- "B" if airflow direction is from right to left

5. Insert new filter.
6. Close front door
7. Connect the control unit of the brine defroster with the mains voltage.



**Only use genuine filters provided by the manufacturer.**

## 7.2 Cleaning the Condensate Drain



**Check the condensate drain at least every 3 months.**

1. Disconnect the mains voltage from the ventilation unit.
2. Loosen the condensate drain.
3. The condensate drain checkup contains the following steps:
  - Check if the drain is still open by filling water into the siphon.
  - Visually check the condensate drain for contamination.
  - Check if there is sufficient amount of water in the siphon. There must not be air in the siphon.
4. Solve any problems occurred while checking the condensate drain.
5. Reconnect the condensate drain.
6. Connect the control unit of the brine defroster with the mains voltage.

## 7.3 Inspecting the Hydraulic Circuit



**Inspect the hydraulic circuit at least once a year.**

Check the system pressure on the pressure gauge. Refill the system if necessary.



**The pressure of the hydraulic circuit has to be between 0,8 and 2,5 bar to assure an ideal operation. The optimum pressure is 1,5 bar.**

### 7.3.1 Filling Instruction in Maintenance Operation

Refill the system as follows:

1. Disconnect the mains voltage from the brine-defroster's control unit.
2. Open top door
3. Connect a filling hose to the filling valve X1.
4. Open the filling valve X1.
5. Measure the glycol percentage with the help of a glycol refractometer.
  - Refill the system with a ready-to-use mixture if necessary. The filling instructions can be found in chapter "Filling the Brine Circuit".



***The glycol percentage must not differ more than 3% from the percentage chosen at startup. After refilling the system with water twice, the glycol percentage has to be adjusted.***

6. With the help of the water system's pressure, set the system under a primary pressure of 1,5 bar. Use the filling hose on filling valve X1 for that.
7. Close the filling valve X1 and uncouple the filling hose.
8. Close top door
9. Connect the control unit of the brine defroster with the mains voltage.

## 7.4 Maintenance of the Brine-to-air Heat Exchanger



***Check the brine-to-air heat exchanger at least every 3 months.***

1. Stop ventilation system.
2. Open front door
3. Remove filter
4. Check the lamellas of the brine-to-air heat exchanger for sediments and damages.
  - Use a lamella comb to align the lamellas.
  - Rinse the battery with tepid tap water.



***Never use aggressive or solvent cleaners!***

5. When all work is done insert filter
6. Close front door.

## 7.5 Replace the Brine Pump

1. Open top door
2. Disconnect control from mains
3. Close the stopcocks X0 and X7.
4. Connect a drain hose to the filling valve X1 to drain the liquid.
5. Open the filling valve X1 slowly till all pressure is gone.
6. Replacement of the liquid pump.
7. Refill the system to a normal pressure of 1,5 bar according to the instructions mentioned in point 6.1.
8. When all the maintenance work is done: close top door, connect control to mains

## 7.6 Replacement of the Expansion Tank

1. Open top door
2. Disconnect control from mains
3. Close the stopcocks X0 and X7.
4. Connect a drain hose to the filling valve X1 to drain the liquid.
5. Open the filling valve X1 slowly till all pressure is gone.
6. Replace the expansion tank
7. Refill the system to a normal pressure of 1,5 bar according to the instructions mentioned in point 6.1.
8. When all the maintenance work is done: close top door, connect control to mains

## 7.7 Replacement of the filling valve

1. Open top door
2. Disconnect control from mains
3. Close the stopcocks X7.
4. Connect a drain hose to the filling valve X1 or X2 to drain the liquid.
5. Open the respective filling valve slowly till all pressure is gone.
6. Replace the filling valve.
7. Refill the system to a normal pressure of 1,5 bar according to the instructions mentioned in point 6.1.
8. When all the maintenance work is done: close top door, connect control to mains

## 7.8 Replacement of the Pressure Gauge

1. Open top door
2. Disconnect control from mains
3. Close the stopcocks X7 and X0.
4. Connect a drain hose to the filling valve X2 to drain the liquid.
5. Open the filling valve X2 slowly till all pressure is gone.
6. Replace the pressure gauge.
7. Refill the system to a normal pressure of 1,5 bar according to the instructions mentioned in point 6.1.
8. When all the maintenance work is done: close top door, connect control to mains

## 8 Errors

The brine defroster itself is not equipped with a digital control unit, so it is not capable of displaying error codes.

The error message does not always occur on the display of the control unit or panel of the ventilation unit connected, even though an error or problem is detected. An overview of errors or problems, which can occur without any error code/ error message, can be found below.

Problem / Error	Reason / Indication	Check / Action to take
The brine pump is not running	Parameterization of control unit incorrect	Check the settings of the control unit
	Pump settings incorrect, defective line connection to control unit	Check the pump settings, the cabling and the connection points • If the pump connection clamps of the control unit are energized, the pump is defective
No or insufficient cooling or preheating capacity	System pressure too low, incorrect pump setting	Check and correct the system pressure and the Pump setting
No or insufficient supply air	Filter clogged	Replace the filter
	Brine-to-air heat exchanger blocked	Clean the brine-to-air heat exchanger
Noise level too high	Beat noise • Air gap somewhere	Seal the air gap with e.g. insulating tape (optionally available)
	Slurry noise • Siphon is empty • Siphon leaks	Fill the siphon and reconnect it
Condensate	Condensate drain clogged,	Clean the condensate drains (top and bottom of the brine-defroster)
	Condensate on the pipes and / or on brine and air duct connections	Insulate connections and pipes
	System was not installed frost-protected	The brine defroster was not installed according to the installation

		requirements. Insulate the room where the brine defroster is installed in or move the brine defroster to a frost-protected room.
	High inside air humidity	Lower the air humidity by airing the room regularly. If the air humidity remains high, move the brine defroster to a room with lower air humidity or insulate the parts on which condensate occurs.

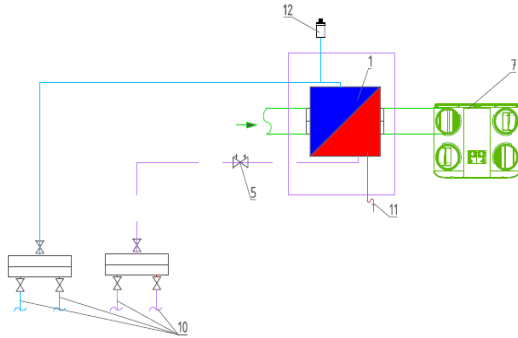
Table 4: Overview of possible errors

Date: 2019-12-09

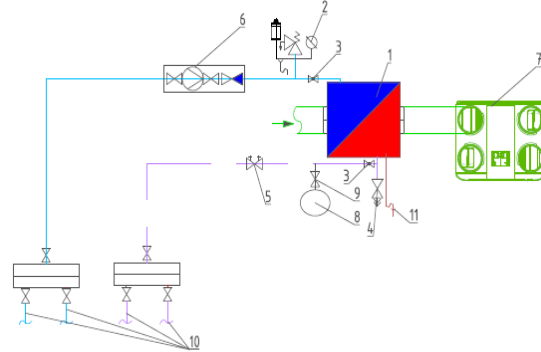


## 9 Installation sketch

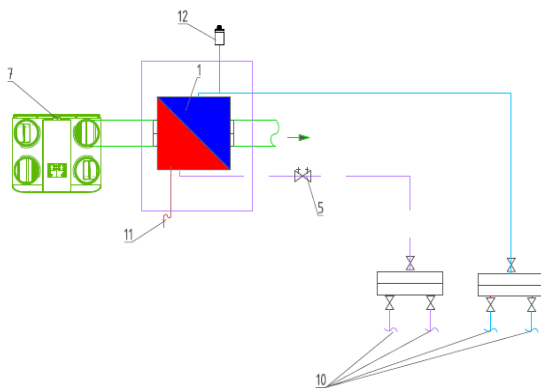
**G-2000/ G-4000/ G-6000 /G-8000**  
**Connection to the ground collector.**



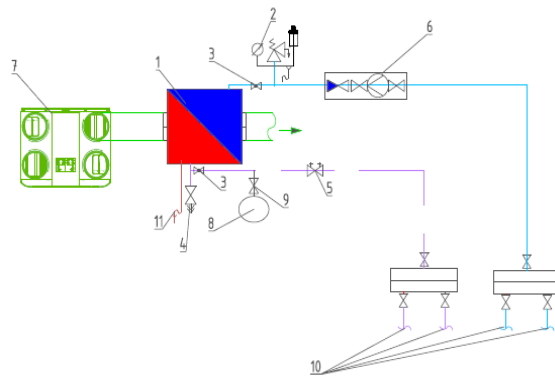
**G-2001/ G-4001/ G-6001 /G-8001**  
**Connection to the ground collector.**



**G-2000/ G-4000/ G-6000 /G-8000**  
**Connection to the ground collector.**  
**Cooling mode only, installation on supply air duct.**




**G-2001/ G-4001/ G-6001 /G-8001**  
**Connection to the ground collector.**  
**Cooling mode only, installation on supply air duct.**



### Legend

- |                           |  |
|---------------------------|--|
| 1) Brine defroster        | 7) Heat recovery ventilation unit                            |
| 2) Safety group 3bar      | 8) Expansion vessel  |
| 3) Ball valve             | 9) Cap valve   |
| 4) Filling group          | 10) Ground collector/ heat pump collector/ vertical borehole |
| 5) Balance valve          | 11) Condensation connection                                  |
| 6) Circulation pump group | 12) Air release valve  |

**Calculation and compilation on ground collector has to be designed by local engineer.**

<b>Date: 01.03.2020.</b>  Subject to change in the interest of technical progress v2	Installation report	
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<b>Construction project:</b>	
Address:	
Town:	
Type of project:	

<b>Brine-defroster specifications:</b>	
Model:	
Serial-No.:	
Built:	
Brine pump settings:	

<b>Control unit settings:</b>	

<b>Geothermal heat collector specifications:</b>			
Soil type:		Amount of liquid:	
Collector pipe type:		Glycol (in %):	
Collector pipe length:		Glycol measured (in %)	

<b>Geothermal heat collector layout:</b>	

Date: .....		Signatures: .....	
		Startup personnel / Plumber	User

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## EC Declaration of Conformity

We, GHT, Ltd., declare that the product:

Brine defroster

Models: G – 2000/G-2001, G – 4000/G-4001, G-6000/G-6001, G-8000/G-8001

is in conformity with 2006/95/EC (LVD Directive) and 2004/108/EC (EMC Directive).

For the evaluation of the compliance with this Directives, the following standards or standardized documents were applied:

EN 60355-1:2002 +A11+A1+A2+A13+A14;  
EN 55014-1:2006+A1;  
EN 6100-3-2:2006+A1+A2;  
EN 61000-3-3:2008

TUV Report reference number: 140483404E/45018/TR/14

Person responsible for making this declaration

Name, Surname: Ivars Gredzens

Position/Title: Chairman of the Board

Signature: \_\_\_\_\_

A large, stylized handwritten signature in blue ink, written over a horizontal line. The signature is cursive and appears to read 'Ivars Gredzens'.

Riga, Latvia

02th August, 2019



**SIA „GHT”**  
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V5  
2020