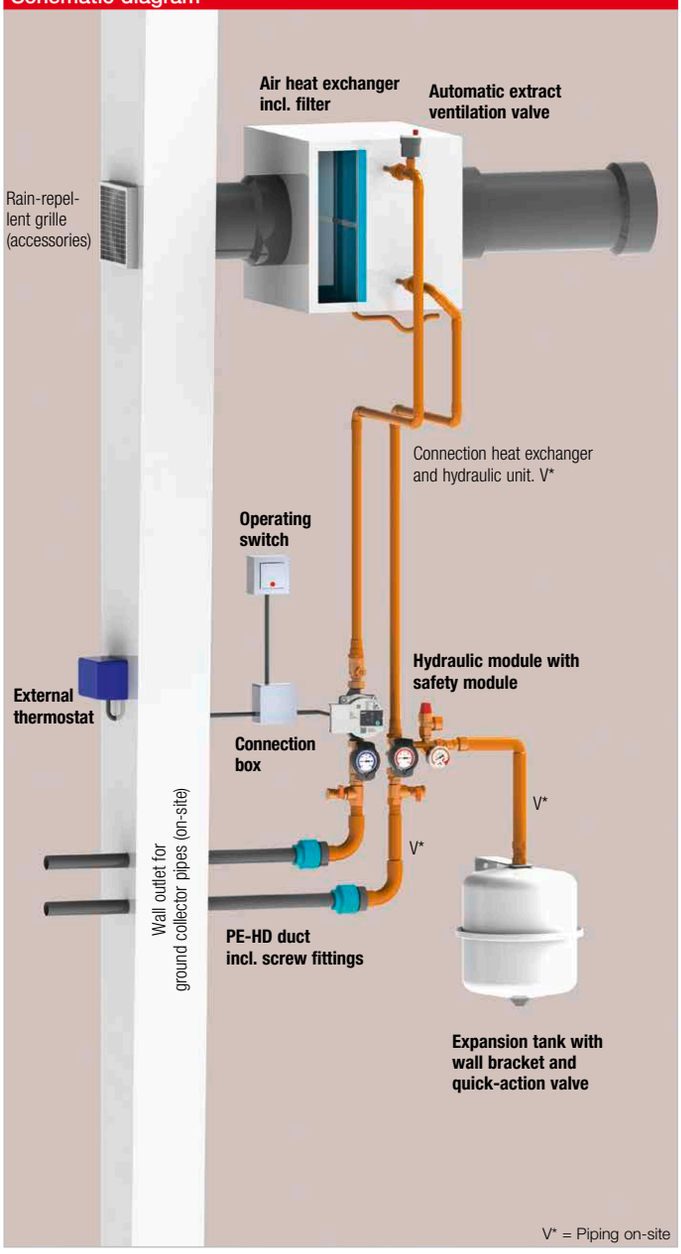
SEWT kit

Schematic diagram



The ground-to-brine heat exchanger SEWT significantly increases the efficiency of ventilation units with heat recovery! SEWT saves even more energy and minimises heating costs. The optimal addition for ventilation units with heat recovery.

Advantages

- Additional preheating and prevention of icing during the cold season.
- Pleasant "natural cooling" on hot days.
- Complete kit with coordinated components.

Functional principle

The ground-to-brine heat exchanger SEWT utilises the ground temperature which is relatively constant throughout the year. The ground collector pipe is installed is laid in the ground at a depth of approx. 1.2 m. The hydraulic unit ensures the circulation of the brine depending on the outdoor temperature.
The brine serves as a heat transfer medium and releases the heat to the supply air through the heat exchanger module.

This results in the following:

- During the cold season
  The preheating of cold intake air of up to 14 K.
  Thus, the intake air is normally at a temperature above 0 °C when it reaches the ventilation unit with heat recovery (anti-icing operation). This results in a higher supply air temperature and a positive effect on the total energy balance. Post-heating is only necessary in case of very low outdoor temperatures.
- On hot summer days
  The ground-to-brine heat exchanger reduces the intake air temperature.
- During the transitional period
  The brine is circulated depending on the outdoor temperature measured via the thermostats. The intake air is always energetically optimised when it reaches the ventilation unit, which additionally saves energy – the indoor climate is always comfortable.

Planning information

- In order to maximise the heat transfer, the ground collector pipe should be laid at a depth of at least 1.2 m, since the temperature there is constantly approx. 8–12 °C throughout the year. The ground temperature increases and stabilises with installation depth.
- In order to increase the heat transfer, the pipe should be laid directly in the ground in a sand bed. Furthermore, if ground collector pipes are laid in parallel, the distance should not be less than 0.5 m (from pipe to pipe).
- There is also the option of probe drilling as an alternative to surface laying.

Delivery

- The ground-to-brine heat exchanger SEWT is delivered as a kit corresponding to the course of processing on-site and for optimised transportation.
  The complete set guarantees the absolute precision fit and functional reliability, because all individual components are matched to each other. The kit consists of three sets, which are described on the adjacent page.

SEWT kit	Ref. no. 02564

Pictorial schematic

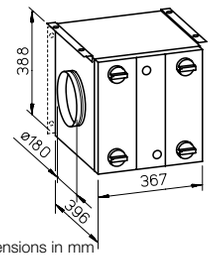
The pre-insulated duct system IsoPipe should be used to prevent condensation.
Alternative: Spiral duct with additional insulation.

SEWT-W

SEWT-H

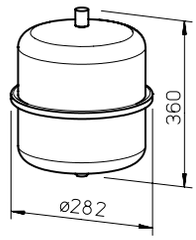
SEWT-E

Dimensions SEWT-W



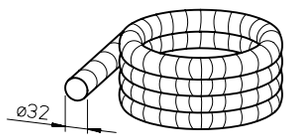
Dimensions in mm

Dimensions SEWT-H



Dimensions in mm

Dimensions SEWT-E



Dimensions in mm

Heat exchanger module

Description

- Highly efficient ground-to-brine heat exchanger unit with aluminium blades for optimal heat transfer to the intake air. Connection duct Ø 12 mm made of copper.
- Double-walled, fully insulated casing made of steel sheet (20 mm insulation, white powder-coated. With mounting bracket for wall or ceiling mounting.
- Connector Ø 180 mm with double lip seal.
- Variable air flow direction through convertible air filter.
- With integrated air filter, class ISO Coarse 75 % (G4). Prevents the ingress of dirt, insects, etc.
- Inspection panels are easy to open without tools for quick and easy access to the filter.
- Condensate drain connector incl. siphon, Ø 1/2".

Accessories

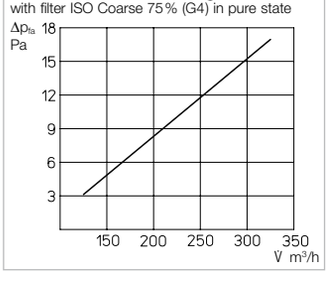
Replacement air filter class ISO Coarse 75 % (G4)

Unit = 3 pcs.

ELF-SEWT-F	No. 02568

Technical data SEWT-W

Pressure loss Heat exchanger module
with filter ISO Coarse 75 % (G4) in pure state



Hydraulic module and control

Description

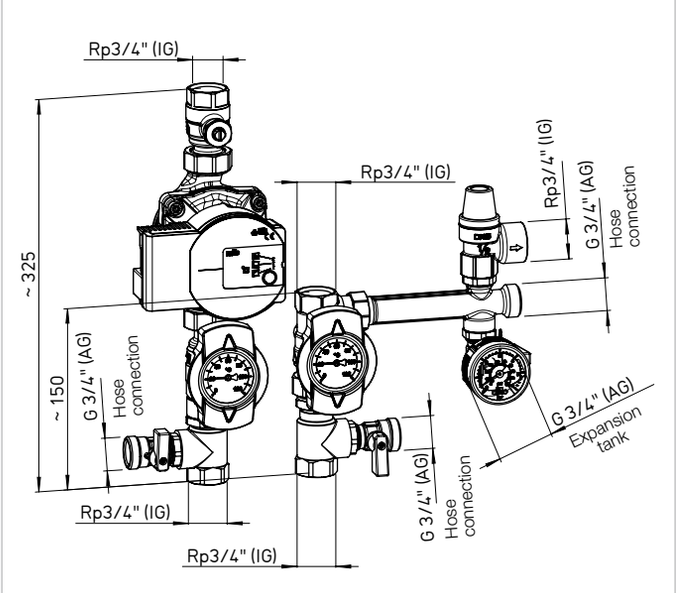
- Complete hydraulic kit with all components necessary for the connection of the ground-to-brine heat exchanger system and the corresponding control unit for automatic or manual system operation.

Delivery

- Brine pump unit (230 V) incl. safety module.
- Flow and return temperature display.
- Automatic quick-vent valve with non-return valve.
- Membrane pressure expansion tank – 12 litre, connection 3/4", incl. wall bracket and quick-action valve.
- Thermostat module with 2 setpoints for automatic control of the brine circuit in summer / winter operation.

- Switch unit for switching between automatic (thermostatic operation) and manual control of the brine circuit (incl. separate connection box – no Fig.)

Technical data Thermostat	
Load capacity	16 A (4 A ind.)
Voltage	230V, 50/60Hz
Protection category	IP54
Wiring diagram no.	906
Temperature range (adjust.)	2 x 0 – 40 °C
Technical data Hydraulic module	
Current consumption max.	0.44 A
Voltage	230 V, 50 Hz
Power consumption	3 – 45 W
Protection category	IP44



Ground installation set with screw fittings and 20 l ethylene glycol.

Description

- Flexible PE-HD ground collector pipe (PE-HD = polyethylene high-pressure pipe), wall thickness 2.9 mm, external Ø 32 mm. Delivered in 100 metre bundle.
- Specifically designed for ground installation.
- Screw fitting set made of high-quality polypropylene (PP) for connection of the ground collector pipe to the hydraulic unit.
- The screw fitting set (32-1") has an active seal system.
- 20 l canister of ethylene glycol, free from amines and nitrites. Sufficient for completely filling the duct system with a 25 % glycol-water mixture.

Reference

The SEWT kit offers functional reliability and accuracy of fit in addition to the package price saving:

Type	**Ref. no.**
SEWT kit	02564

The individual components of the SEWT kit are to be ordered separately:

Type	**Ref. no.**
SEWT-W	02565
SEWT-H	02566
SEWT-E	02567