Product information
FRANK WET / Water Heat Exchanger

Description:

The FRANK water heat exchanger has been designed specifically for generating heat from lakes, rivers or the sea.

The compact, high-efficiency heat exchanger draws the heat energy from the water and provides it to a heat pump. The FRANK water heat exchanger can just as easily be used for cooling purposes.

The FRANK heat exchanger and the protective casing are made of environmentally-friendly, high-grade polyethylene.

Features:

- Large heat exchanger surface
- Modular design with 3 module sizes
- All pipe connections are welded
- Robust protective casing
- Secure connection by means of welding connection with electro fusion fittings

Installation:

The FRANK heat exchanger can be installed using anchor ballasts on the bed of the lake/river or by attaching it to jetties or quay walls. See Fig. 1+2.

Mode of operation:

The heat exchanger is operated in conjunction with heat pumps. A water/ethylene glycol mixture containing up to 35% glycol is generally used as the heat transfer medium.

Heat extraction rate:

Thanks to the modular design, it can be adapted easily to the performance requirements.

The heat extraction rate is dependent on the module size (1-3 modules), the surrounding water temperature and the operating conditions. For larger performance requirements, several units can be connected to one manifold in parallel.
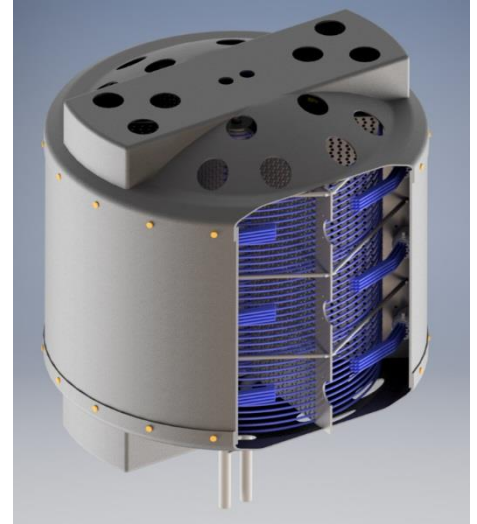
Inner view of a three-unit module
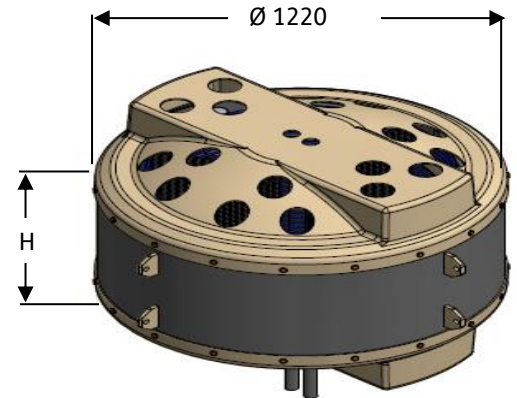
Technical data:

Max. operating pressure:	3.0 bar
Max. test pressure	4.5 bar
Perm. ambient temperature	-10°C to +40°C
Supply/return pipe connection	d 40 mm, SDR 11
Min. water depth (dep. on the module size)	2,60 to 3,20 m

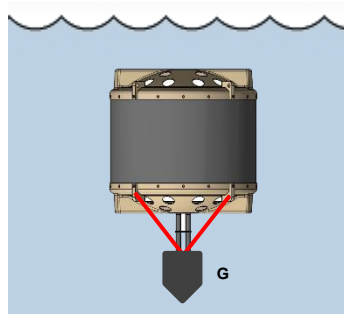| Module type:	Height (H):
WET 1	600 mm
WET 2	900 mm
WET 3	1200 mm

Fig. 1: Attachment with anchoring weight
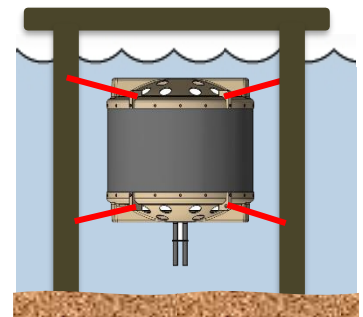
Fig. 2: Bracing under landing stage

Extraction Capacity (heating) at lake temperature 4,4 °C

Inlet temperature of heat transfer medium
- — · — · — -2,2 °C
- ———— 0 °C
- ------- + 2,2 °C

Type WET 3 ~11 bis 13 kW
Type WET 2 ~ 7 to 10 kW
Type WET 1 ~ 3 to 6 kW

extraction capacity in kW
Flow rate in m³/h
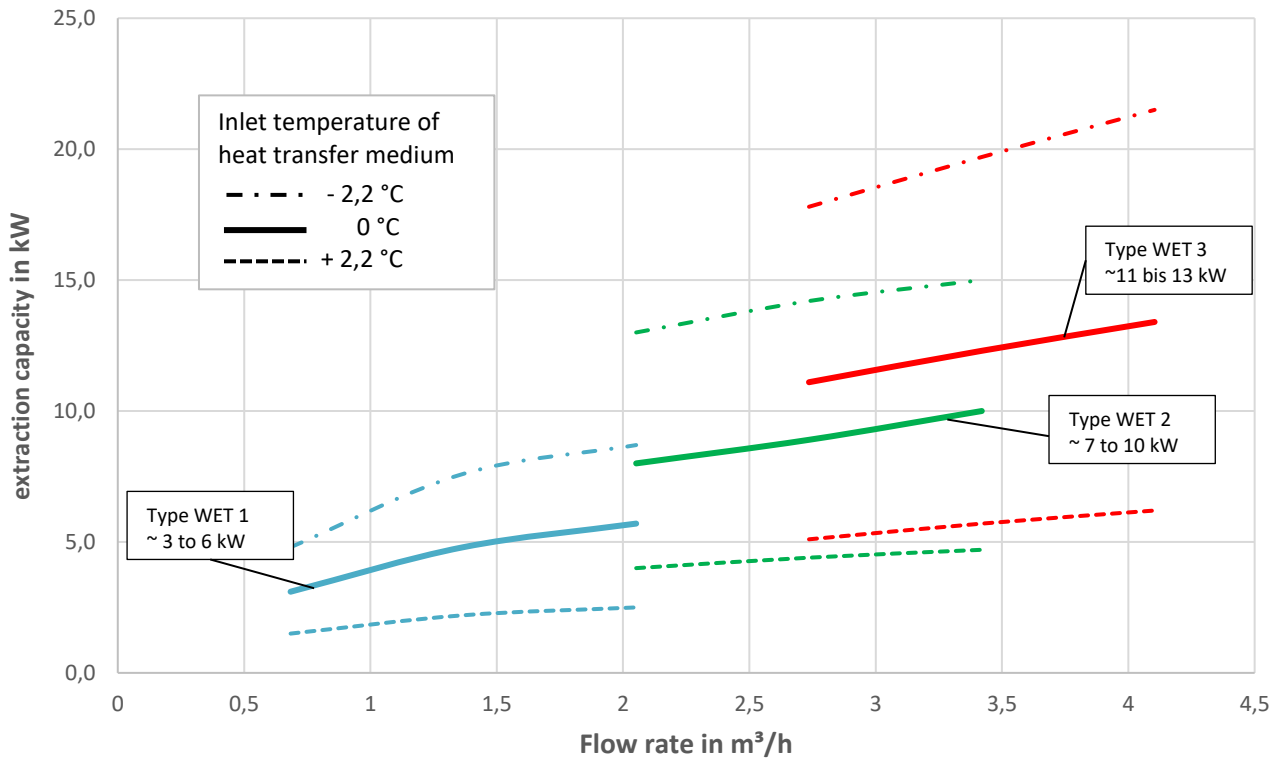
Capacity (cooling) at lake temperature 10,0°C

Inlet temperature of heat transfer medium
- — · — · — +14,4 °C
- ———— +16,7 °C
- ------- +18,9 °C

Type WET 3
Type WET 2
Type WET 1

extraction capacity in kW
Flow rate in m³/h

FRANK