Rank.® HTHP 0.5MWt

Example point of operation

V1.1

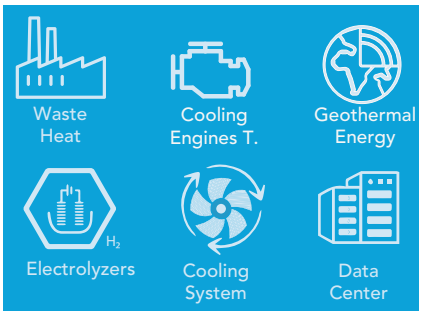
Selected operating point

Water-Steam
COP H+C

Useful Heat / Disipation

Tout (ºC)					
150	-	-	4,7	6,1	10,2
140	-	3,8	5,8	8,0	10,5
130	3,0	4,7	6,4	9,6	12,2
120	3,6	5,7	8,3	10,1	-
110	4,4	6,2	10,9	13,4	-
Tin (ºC)	40	60	80	100	120

Heat source



Heat source

Heat transfer fluid	Water
Inlet temperature	40 °C
Outlet temperature	35 °C
Volumetric flow rate	65 m³/h
Thermal power	300 kWt
Pressure drop	100 kPa

Useful heat
Disipation

Heat transfer fluid	Water
Inlet temperature	110 °C
Outlet temperature	110 °C
Pressure	1 bara
Caudal	0,23kg/s
Power	507 kWt

Electricity

Consumption	200 kWe
COP_H+C	4,4
COP_H	2,5
COP_C	1,9
Voltage	3x400 V

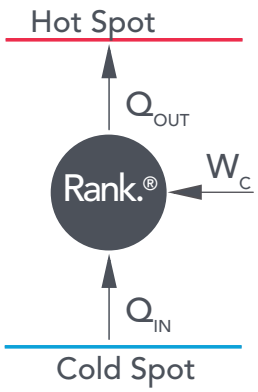
version 29/07/2025

Rank.®

Although our staff has made every effort possible to ensure the most accurate data and close to the final solution, these should be considered as indicative and not binding.

sales@rank-orc.com
rank-orc.com

Calculation COP´s



$$COP_{H+C} = \frac{Q_{OUT} + Q_{IN}}{W_c}$$

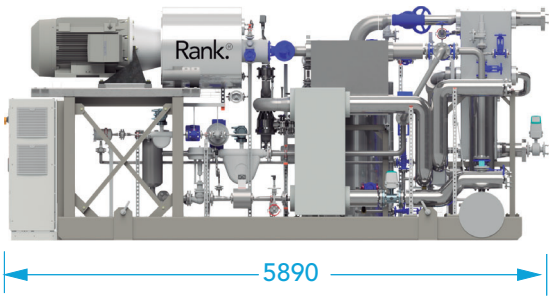
$$COP_H = \frac{Q_{OUT}}{W_C}$$

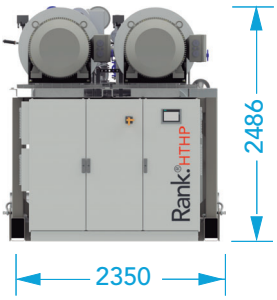
$$COP_C = \frac{Q_{IN}}{W_C}$$

COP_H = COP Heating
COP_C = COP Cooling
COP_{H+C} = COP Aggregate
Q_{OUT} = Thermal Power Delivered
Q_{IN} = Extract Cooling Power
W_C = Electricity Consumption HTHP

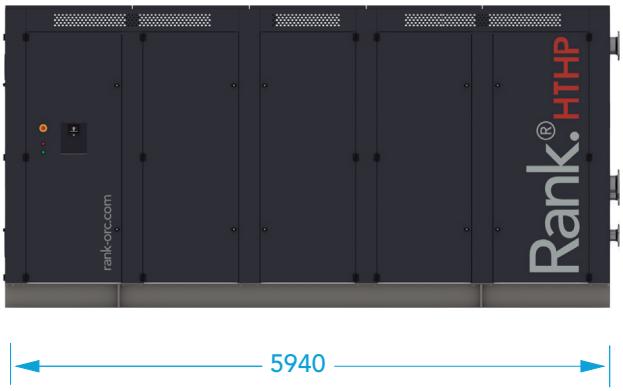
Dimensiones

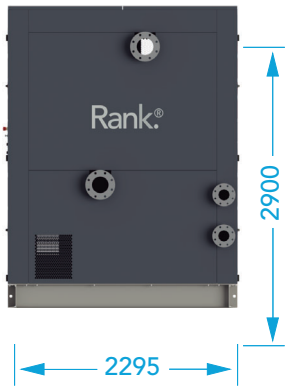
Basic Option



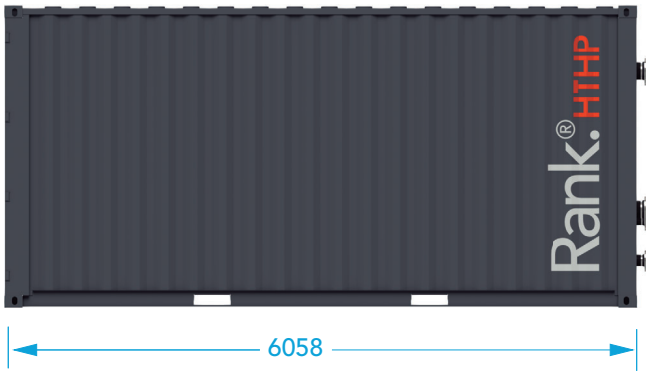


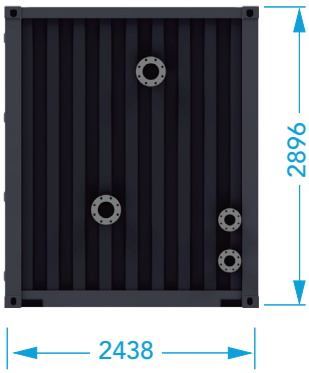
Wrap-around Option





Container Option





Compliance with regulations and standards

- Low voltage Directive
- Machinery Directive
- Electromagnetic Compatibility Directive
- Pressurized Equipment Directive
- EN/ISO 3744:2010
- UNE EN 10216
- UNE EN 764-7
- UNE EN 13136:2014+A1
- 2006/42/CE
- 2014/68/UE
- ASME B31.1 / ASME B31.3 – Process Piping Code
- ASME Boiler and Pressure Vessel Code Section VIII
- UL 508A- Control Panel Wiring
- 2014/35/UE
- 2014/30/UE

sales@rank-orc.com
rank-orc.com