

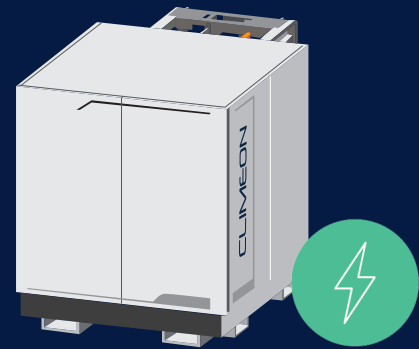
# CLIMEON HP 150

## PRODUCT SHEET

**THE HP 150 MAKES** it possible to create up to 150 kilowatts of clean electricity from low-temperature heat. Around the clock. Anywhere on the planet.

**HERE'S HOW IT WORKS.** [→](#)

# 150 KILOWATTS OF HEAT POWER



**THE HP 150 MODULE** converts low-temperature heat into clean electricity. Using the principles of the Organic Rankine Cycle, but at much lower pressure levels, the system is designed for unmatched efficiency within the operating temperatures.

Through Climeon Live, the system is remotely automatized and monitored, ensuring stable and reliable production.

## HOW IT WORKS

The Climeon module is based on the ORC technology, which, in short, means using a heat source (high pressure) and a cold source (low pressure) to drive a flow that generates electricity. Each module consists of an evaporator that transfers heat to the internal working fluid, a turbine-generator package for conversion of thermal energy to electricity, and a cooling system that transfers heat out of the module to the cooling water circuit.

The heat from the heat source boils the internal working fluid in the hot heat exchanger. The vaporized working fluid flows through the turbine, driving the generator to produce electricity. The fluid then enters the condenser tank where the gas is brought into direct contact with the cooled working fluid. The liquid working fluid is then distributed via pumps to the cold heat exchanger and hot heat exchanger, closing the loop.

## FEATURES

### CLEAN AND RELIABLE POWER SUPPLY

Unaffected by weather conditions, the Climeon Heat Power system can produce baseload energy 24/7 year round. The heat can come from geothermal sources, industrial waste heat such as manufacturing plants, or gensets on land and at sea.

### SIMPLE AND SCALABLE DESIGN

The compact and modular design consists of only three moving parts per module: a turbine and two pumps, allowing reduced installations and low maintenance costs. Installed capacity is easily scalable from 150 kW onwards. The modules can be configured either serially or parallelly to make optimal use of the heat source.

### OPTIMIZED PERFORMANCE

Because of the modular design, individual units can be taken offline for service without having to shut down the entire site, maximizing site availability. Climeon's control and cloud service, Climeon Live, ensures that every running hour is as profitable as possible. By monitoring production and then analyzing it in the cloud, Climeon Live can fine-tune the running parameters and even provide preemptive maintenance.

### FLEXIBLE AND MODULAR DEPLOYMENT

Using Climeon's standardized solution ensures reliability, cost competitiveness and quick deployment. The modules can be delivered as and where they are needed, moved for use at another site, or even resold.

# TECHNICAL SPECIFICATIONS

## INTERFACES

### HOT WATER

Temperature	Min	C°	70
	Max	C°	120
Flow rate	Min	l/s	10
	Max	l/s	50
Connection type		DN	200
Pressure class		PN	10

### COOLING WATER

Temperature*	Min	C°	0
	Max	C°	40
Flow	Min	l/s	10
	Max	l/s	50

\*Temp limits vary depending on installation, contact Climeon for more site specific information.

### ELECTRONICS COOLING WATER

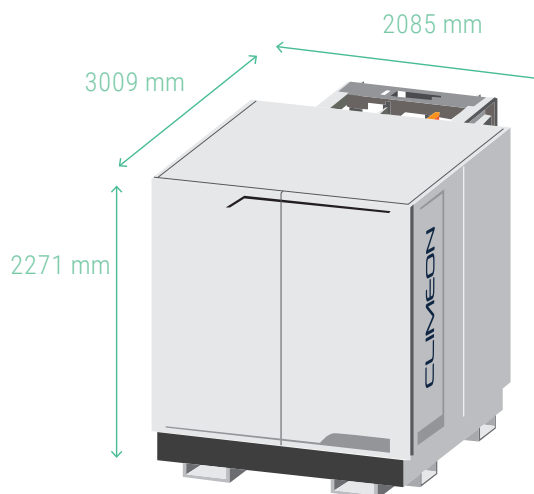
Temperature	max	C°	20
		C°	20
Connection type		ISO	TC64
Flow rate		l/min	30
Pressure	min ΔP (Pin-Pout)	bar(g)	1.7
	max	bar(g)	3

## DIMENSIONS

MODULE			ELECTRICAL CABINETS		
Unit			Control	Power	Multi module control (per powerblock) **
Depth	mm	3009	600	600	600
Width	mm	2085	600	1600	600
Height	mm	2271	2100	2100	2100
Weight (filled)	kg	9000( 10200)	400	1000	400

## AMBIENT REQUIREMENTS

Temperature	Min	C°	>0
	Max	C°	45
Humidity	Min	% RH	20
	Max	% RH	85



Please note: Space of 1500mm in front, 500mm above and 691mm behind is needed around the module.

## VENTILATION

Flow		l/s	60
Pressure	loss	Pa	70

## INSTRUMENT AIR

Pressure	Min	bar(g)	7
	Max	bar(g)	9
Flow		Nm³/h	1.8
Quality			ISO 8537-1 2010, 3:4:3

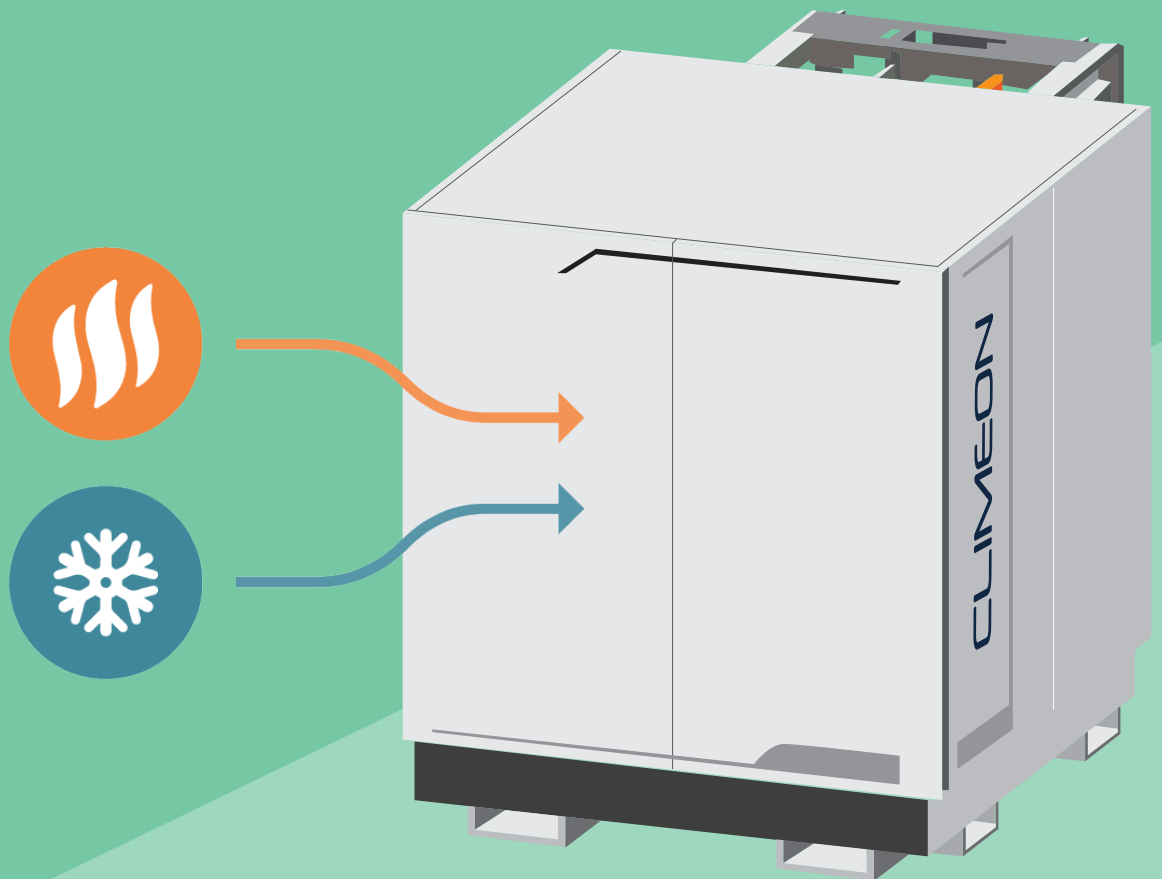
## GRID CONNECTION

Voltage**	Nom	V	400
Frequency	Min	Hz	50
	Max	Hz	60

\*\*For deviations from nominal voltage, contact Climeon for more information.

*“IT HAS OUTPERFORMED  
OUR EXPECTATIONS.”*

–Ingvar Garðarsson, Chairman of the Board of Varmaorka in Iceland, where the first geothermal power plant with Climeon heat power units was installed in 2018.



**ADDRESS**

Climeon AB  
Torshamnsgatan 44,  
164 40 Kista

**TELEPHONE**

+46 10-160 44 33 Global  
Customer Support  
+46 10-160 44 38

**WEB**

[www.climeon.com](http://www.climeon.com)  
General info  
[info@climeon.com](mailto:info@climeon.com)

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