

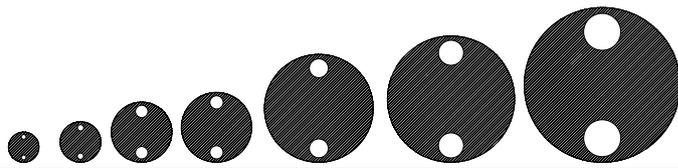
# GREEN P&S Type K - Kettle Reboiler - WWR

## DESIGN



GREEN P&S Type K Kettle Reboiler is suitable for various industrial fields, with advantages such as efficiency, safety, and compactness. They can be customized according to customer specific process conditions, and are resistant to high temperature, high pressure, and corrosion. GREEN P&S Type K is known as a flooded evaporator. It operates by maintaining a liquid refrigerant level inside the evaporator, ensuring that the heat transfer surfaces are continuously submerged in liquid refrigerant.

GREEN P&S Type K is use to evaporate media (like ammonia) with a hot stream. This solution is widely used in refrigeration, heat pump and ORC cycles. The flow of heat (in the plates) boils the cold bath (in the shell) in counter-current. The manifold ensures good gravitational phase separation. The manifold design limits the size of the shell and therefore the thickness of the shell, as well as the amount of fluid to be evaporate (savings on operating costs).



Type	NR025	NR050	NR080	NR100	NR150	NR200	NR300
Port diameter (DN)	DN25	DN50	DN80	DN100	DN150	DN200	DN300
Plate diameter (mm)	~200	~300	~450	~600	~900	~1000	~1200

## CHARACTERISTICS

### KETTLE REBOILER

Heat is applied to the submerged plate pack, causing the liquid to reach its boiling point and generate vapor. The vaporized gas rises to the top of the system, after that it's a 3 stages process :

- First, an expansion zone enables gravity separation
- Next, the flow meets a second dynamic separation stage
- Finally, the flow meets the demister, which has been specifically designed to clean the steam flow of the finest droplets

This guarantees the operator top-quality steam, with no possibility of liquids getting back into the compressors.



### PnS + SEPARATOR

A Plate and Shell heat exchanger with an external droplet separator is a specialized heat exchanger used in industrial refrigeration systems to efficiently evaporate the media while ensuring that any liquid droplets are effectively separated from the vapor. This design enhances system performance and safety by preventing liquid carryover into downstream components.

The design is particularly advantageous in systems requiring efficient heat transfer and effective moisture separation to maintain optimal performance and safety.



## TECHNICAL SPECIFICATIONS

### Design temperature

-196°C up to 500°C

### Plate Connection sizes

DN25 to DN300

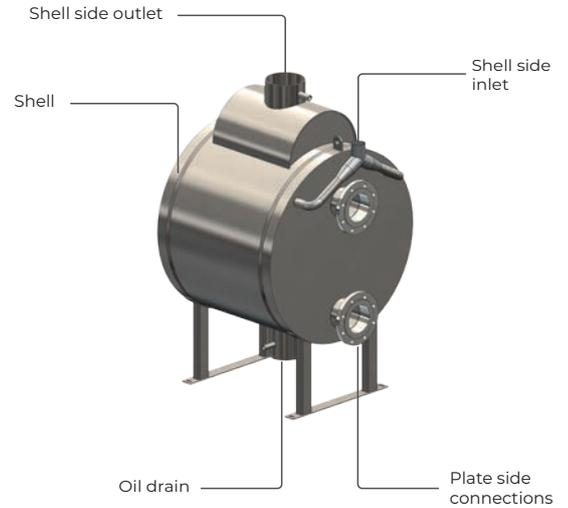
### Design pressure

Full Vacuum / 120 Barg

### Sizes

2m<sup>2</sup> up to 2000m<sup>2</sup>

Stainless steel	Stainless steel / Nickel based alloys	Titanium	Carbon steel
304L 316L Duplex Superduplex	254 SMO C276 904L Alloy 59	Titanium Gr1 Titanium Gr2	SA516 Gr60 SA516 Gr70



Oil&Gas  
Refinery



Pulp & Paper



Chemical



Heavy  
Industries



Power



Food Production



Clean Energy



Marine

## CUSTOMERS BENEFITS

### > COMPACT STRUCTURE

GREEN P&S Type K has a compact structure and requires very little space for installation and maintenance.

### > FLEXIBLE HEATING OPTIONS

The ability to utilize different heat sources, such as liquid, gas, or condensing steam, allows for adaptability in various processes.

### > RELIABLE PERFORMANCE

With robust construction and optimized design, these evaporators provide stable and long-lasting performance with minimal maintenance needs.

### > EFFICIENT HEAT EXCHANGE

The unique design enables the kettle reboiler to generate efficient heat transfer efficiency and achieve a very close end temperature difference.

