Evaporators/Condensers –EC.RN range

Spiral plate heat exchangers for R410A

The SPIREC plate heat exchangers range EC.RN are all stainless steel AISI 316L and welded without gasket. As the sheet is rolled in spiral, it forms a compact and cylindrical unit that can handle high pressures and high temperatures.

The spiral design ensures optimal heat transfer efficiency and pressure resistance. The material and the welding process guarantees a high resistance against corrosion.

They are US patented and SPIREC is more than 40 years experienced in manufacturing spiral plate heat exchangers in stainless steel, cupper or titanium. SPIREC is well-known for its long tradition of quality and customer care.

Applications

- Evaporator
- Condenser
- Undercooler/desuperheater

Main uses

- Ground water source heat pump
- Water heater
- Swimming pool heat pump
- Domestic water heater
- Heat recovery
- Process cooler …

Construction

The dimpled plate is folded and rolled with a flow baffle in a spiral and welded. It forms an internal circuit (B) spiral flow and an external circuit (A) axial flow.
The SPIREC heat exchangers are single pass in both circuit and double-cross counter flow.

Benefits

Compact and strong.
Low pressure drop on water circuit (A)
Low refrigerant volume (B)
Pressure resistant against on-off cycles.
Ice forming tolerant
High resistant to thermal variations.
High resistant against corrosion, especially from the ground water

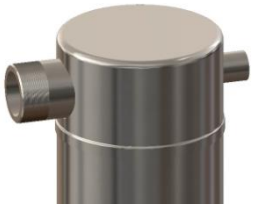
Easy refrigerant distribution in the single-pass internal circuit (B)
Stable operation

Unique conception

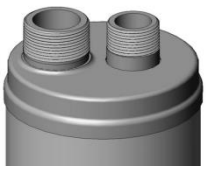
The SPIREC spiral plate heat exchangers are made to suit the machine they will be implanted in. They are easy to fit thanks to their compactness and their custom-built connections and dimensions.
The connections are radial or axial or both, with internal or external thread, ready to be soldered or welded… SPIREC will make what you need.

Circuit A- radial
Circuit B- axial

Circuit A- radial & extended
Circuit B- axial 90°



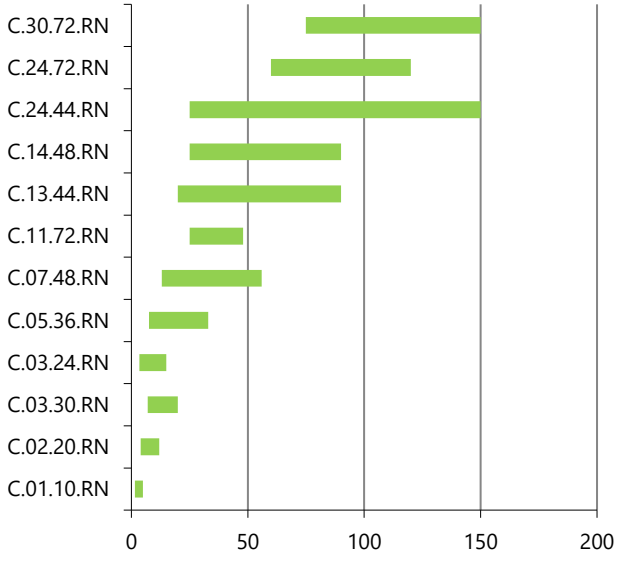
Circuit A- radial
Circuit B- radial



Circuit A- axial
Circuit B- axial

Technical data

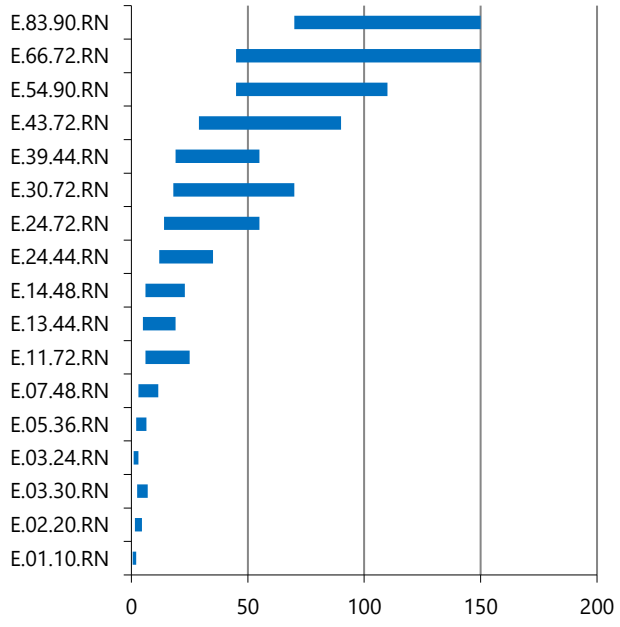
Condensers –EC.RN range



Capacity (kW) – indicative values min/max with :

- water 15/30°C T_{cond}=35°C (min)
- water 25/32°C T_{cond}=45°C (max)

Evaporators –EC.RN range



Capacity (kW) – indicative values min/max with :

- water 10/7°C T_{ev}=3°C (min)
- water 20/16°C T_{ev}=7°C (max)

Other operating points, other capacities: please contact us.

Water requirement

Ground water or well waters shall not contain any substance which can be deposited, and the limitations values of iron (<0.2 mg / l) and manganese (<0.1 mg / l) must be respected to avoid deposition in the exchangers.

The use of surface water or water containing salt is not allowed. Water analyzes are carried out by specialized and authorized laboratories.

We recommend filtering the water with a 600 µm filter.

It is not necessary to analyze water to investigate its corrosive nature if its temperature does not exceed 13°C. In this case it is important to respect the limits of iron and manganese values.

In case water is highly chlorinated or while the chlorination is obtained by electrolysis of salt, INOX is prohibited, you must use our titanium range EC.TTi.RN.

Long term warranty against corrosion label

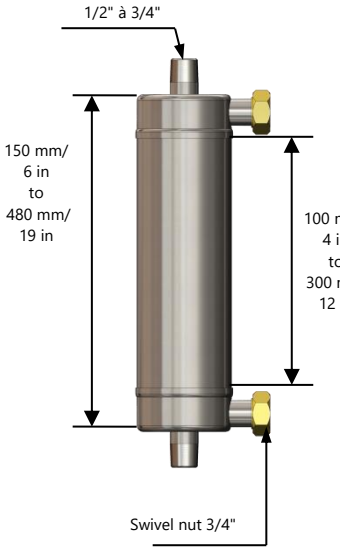
Technical description

AISI 316L Mo stainless steel all welded, no gasket.
Chloroprene B circuit baffle.
A fittings male BSP or swivel nut
B fittings male BSP.
Bracket welded on the end cap, or threaded shaft welded on the side
Design pressures: 15 bars A circuit
42 bars B circuit except 54.90 and 83.90
Design temperature: -50°C to +150°C.

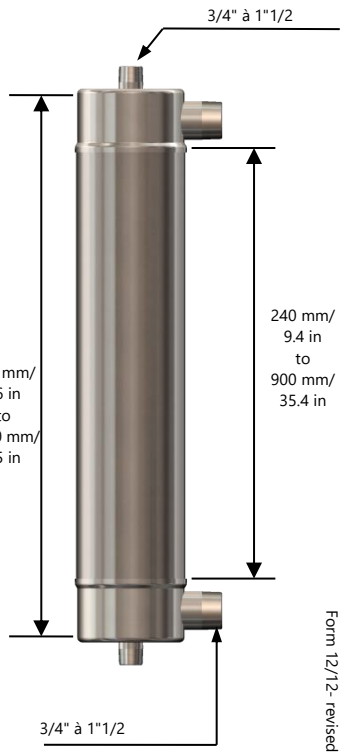
Other materials, other baffle materials available.

Dimensions, weight, volume

A circuit: 0,29 l to 13,4 l
B circuit: de 0,18 l à 7,9 l
Dry weight : de 1,1 kg à 70 kg



EC.01.01.RN to EC.03.30.RN



EC.03.24.RN to EC.83.90.RN

Other fittings available.