

ECO₂Rack

CO₂ compressor rack



Rack of single or double suction CO₂ compressors in transcritical cycle, or in subcritical cycle condensed by glycol or refrigerant. ECO₂Rack condensing units can be built in various combinations of 2 or 3 compressors to offer a total cooling capacity of 50 to 300 kW.

Features

- ▶ Construction in galvanised sheet steel structure with epoxy paint.
- ▶ Sets of up to 3 CO₂ compressors equipped with rotalock valves.
- ▶ Inverter capacity control per compressor group.
- ▶ Particulate separator and CO₂ filter.
- ▶ Oil separator and accumulator with oil filter and electronic injection per compressor.
- ▶ Medium pressure CO₂ receiver (PS: 60 bar) with double safety valve led to the outside.
- ▶ Economiser - liquid CO₂ subcooler.
- ▶ Refrigeration circuit made of copper tube, equipped with filter drier.
- ▶ Instrumentation panel with pressure gauges and load taps.
- ▶ Integrated control and power panel with electronic control unit for compressor management and electronic valves.
- ▶ Emergency unit for CO₂ maintenance.

Subcritical ECO₂Rack

- ▶ Up to triple stainless steel plate cascade condenser with double or triple electronic expansion valve.
- ▶ PS: 52 bar.

Transcritical ECO₂Rack

- ▶ Set of transcritical CO₂ compressors and set of compressors in parallel. Inverter drive in one compressor of each set.
- ▶ Double pressure control valve.
- ▶ Pressure regulating valve with medium pressure relief.
- ▶ Internal economiser exchanger.
- ▶ PS: 120 bar. Variable speed EC axial motor fans.

Options

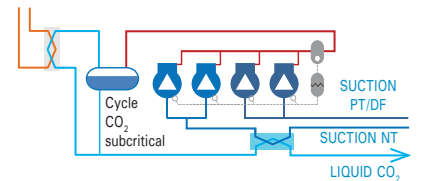
- ▶ Hot gas heat recovery unit for DHW production by means of stainless steel plate heat exchanger with automatic bypass valve.
- ▶ Hot gas heat recovery unit for heating by means of stainless steel plate heat exchanger.
- ▶ Emergency unit for CO₂ maintenance.

- ❄ Large maintenance access.
- ❄ Custom design.

Single or double suction subcritical cycle

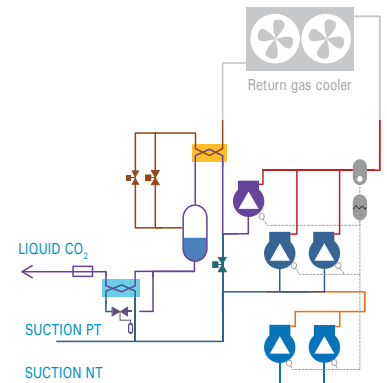
A low-temperature subcritical CO₂ condensing units can be combined in cascade with a water or glycol condensing circuit.

The double suction makes it possible to incorporate the refrigeration production of very negative temperature services (deep-freezing) or even positive temperature services.



Transcritical cycle with parallel compression

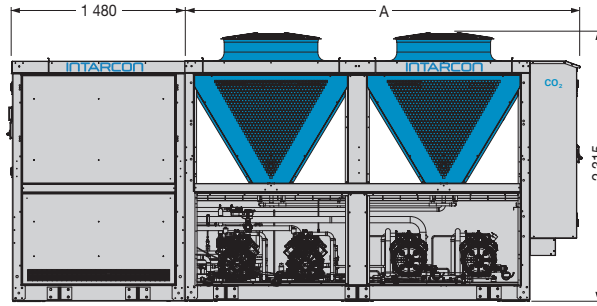
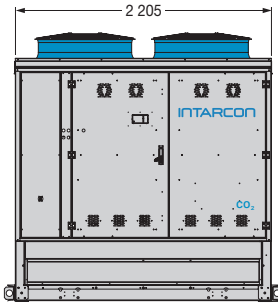
The transcritical cycle with parallel compression improves energy efficiency at high ambient temperatures.



Standard design pressures (PS)

- High pressure: 120 bar
- Liquid line: 52 bar
- Suction positive temp.: 45 bar
- Suction negative temp.: 30 bar

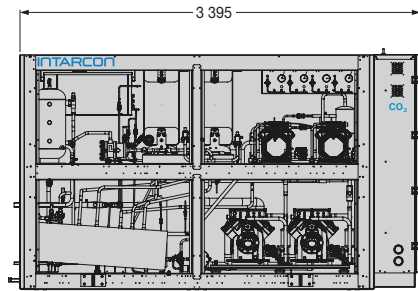
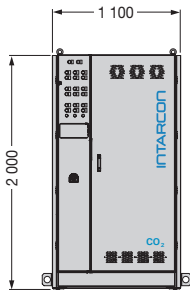
ECO₂Watt dimensions



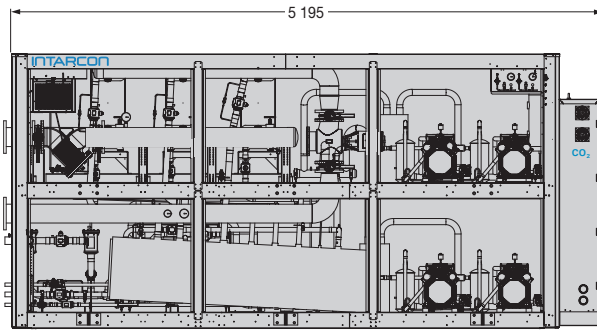
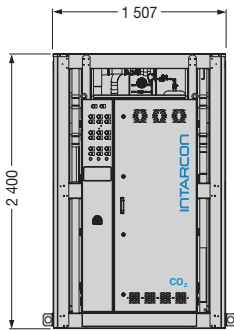
Dimensions (mm)	A
1 series	1 901
2 series	3 377
3 series	4 853
4 series	6 329
5 series	7 380

ECO₂Rack dimensions

1 series



2 series



Dimensions in mm.