

TRANSCRITICAL RACK

Code: 70CCT70028

| WORKING CONDITIONS | | |
|-----------------------|------------------------------|-------------|
| Loads MT | Net cooling capacity (kW) | 130 kW |
| | Evaporation temperature (°C) | -10°C |
| Loads CDZ | Net cooling capacity (kW) | 200 kW |
| | Water temperature (°C) | 7/ 12°C |
| Loads LT | Cooling capacity (kW) | 20 kW |
| | Evaporation temperature (°C) | -33°C |
| Gas cooler Conditions | Gas cooler pressure (bar-a) | 100,0 bar-a |
| | Outlet temperature R744 (°C) | 40°C |
| | Air temperature (°C) | 38°C |

| RACK CONFIGURATION | |
|--|-----------------------------------|
| System type | Booster |
| Parallel compression | Present |
| Liquid/Suction exchanger LT | Present |
| Gas cooler / flash gas outlet exchanger | Present |
| Heat recovery 1 (sanitary hot water 65°C) | Present |
| Heat recovery 2 (hot water 45°C) | Present |
| Project pressures PS, sucLT / PS, suct MT/liquid line / PS, discharge MT | 36 bar/ 55 bar / 60 bar / 120 bar |
| Type of frame | Open |

| RACK PERFORMANCE | | | | | |
|------------------|-----------------------------------|--------|-------------------|-----------------------|-----------------------|
| LT Side | Compressors type | Number | Setting | Cooling capacity (kW) | Power absorption (kW) |
| | CDS 301B | 1 | INVERTER (37,0Hz) | | |
| | CDS 301B | 2 | ON/OFF | | |
| | TOTAL cooling capacity (kW) | | | | 20,00 kW |
| MT Side | Compressors type | Number | Setting | Cooling capacity (kW) | Power absorption (kW) |
| | CD 3000H | 1 | INVERTER (55,0Hz) | | |
| | CD 3401H | 2 | ON/OFF | | |
| | TOTAL net cooling capacity (kW) | | | | 130,00 kW |
| Parallel Side | Compressors type | Number | Setting | Cooling capacity (kW) | Power absorption (kW) |
| | CD 4501H | 2 | INVERTER (55Hz) | | |
| | CD 5001M | 1 | ON/OFF | | |
| | TOTAL power to gas cooler MT (kW) | | | | 526,00 kW |

| DESCRIPTION |
|-------------|
|-------------|

MT Side

- N° 3 Dorin compressors, one of them modulated via INVERTER, each of them equipped with:
 - Crankcase heater
 - Discharge and suction valves on compressor
 - Discharge check valve (except compressor with INVERTER)
 - Electronic oil level regulator
 - HP pressure switch

- Suction inlet valve MT
- Mechanical suction filter

Parallel Side

- N° 3 Dorin compressor, two of them modulated via INVERTER, equipped with:
 - Crankcase heater
 - Discharge and suction valves on compressor
 - Electronic oil level regulator
 - HP pressure switch

LT Side

- N° 3 Dorin compressors, one of them modulated via INVERTER, each of them equipped with:
 - Crankcase heater
 - Discharge and suction valves on compressor
 - Discharge check valve (except compressor with INVERTER)
 - Electronic oil level regulator
 - HP pressure switch

- Suction inlet valve LT
- Mechanical suction filter

Intermediate pressure section

- Liquid receiver 350lt
- Optical liquid level alarm
- Filter drier with by-pass valve and safety valve in case of interception

General

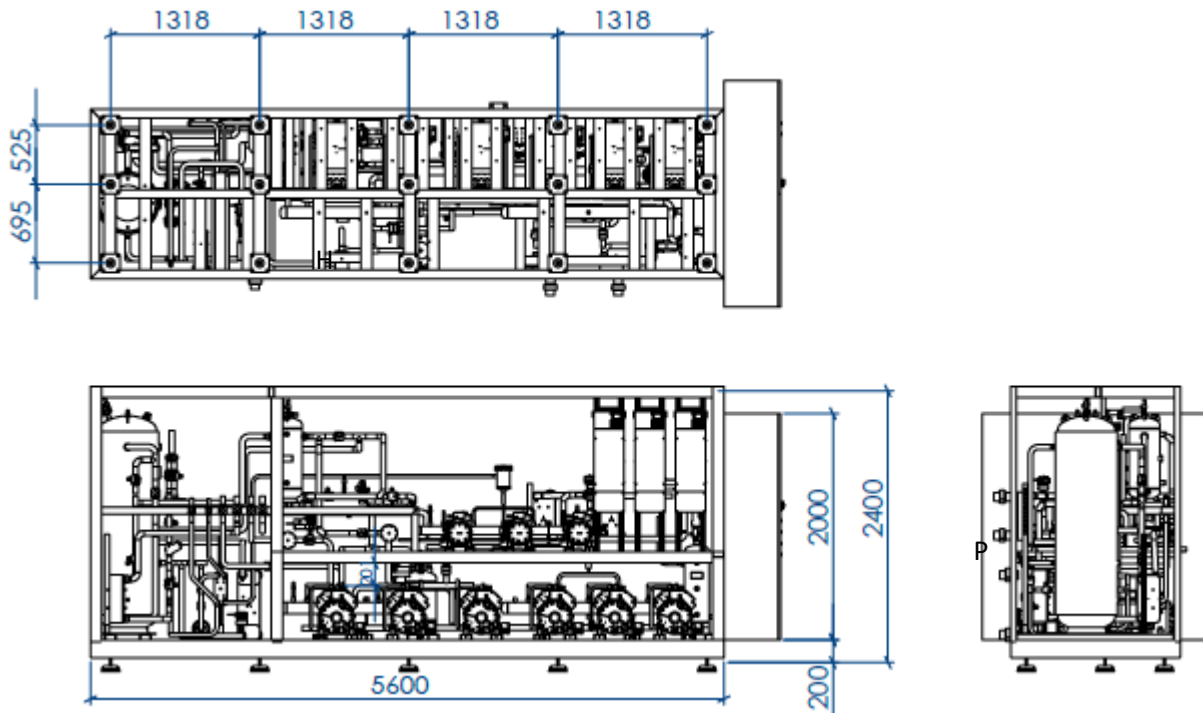
- Oil separator + oil receiver with make-up system via electronic sensor
- Gas cooler outlet valve
- Gas cooler inlet valve
- Gas cooler/flash-gas outlet exchanger
- Mechanical filter in the inlet from the cooler gas before the back-pressure valve
- N° 2 Back-pressure valves (Danfoss),
- N° 2 flash-gas valves (Danfoss),
- Galvanized steel frame painted RAL7044
- Set of high pressure safety pressure switches one for each compressor
- N° 1 general safety pressure switch with manual reset
- Low pressure switches MT /LT/Parallel safety and electromechanical call switches
- Maximum liquid receiver pressure safety pressure switch (for activation of safety group in OPTION)
- LT / MT/ Parallel side safety valves and intermediate pressure as per EN378
- LT / MT / Parallel pressure gauges and intermediate pressure
- HP / MT / LT pipes execution in AISI 304
- Insulation Armaflex Sp=25mm LT line, 19mm MT line and intermediate pressure

SWITCHBOARD

Power supply 400/3/50Hz + N

- General disconnecter
- On/off selectors for each compressor
- Contactors and magnetothermal protection for each compressor
- Differential protections for compressor/gas cooler fan blocks
- No. 1 INVERTER for MT + No. 1 INVERTER for LT + No.2 INVERTER for parallel
- Double transformer 400V/230V for auxiliaries
- IP55 box complete with ventilation grille, fans and double door; on the switchboard door there are lamps: green=start; yellow + button= electromechanical; red 1= pressure switch block, compressor thermal; red2=fans block
- No. 2 controllers DIXELL

WEIGHT AND DIMENSIONS



H= 2500 mm; L= 6100 mm; P= 2000 mm

TOTAL WEIGHT: 8000 Kg

MAXIMUM ABSORPTIONS

Absorbed power (max): 246,0 kW

Absorbed current (max): 386 A

OPTIONS (INCLUDED)

Back-up unit in R134a working on coil drowned in receiver