

GREEN[®] & COOL

Green Refrigeration Systems



ÖSTHAMMARS
KOMMUN
- EN DEL AV ROSLAGEN

 Energi &
Kylanalys

 Industri &
Laboratoriekyl
En del av TESAB-kedjan

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COMPRESSOR PACK:

Model: Mistral 12025H32325H

Cooling capacity: 250 kW

Evaporating temp: -10C

Ambient temp: +30C

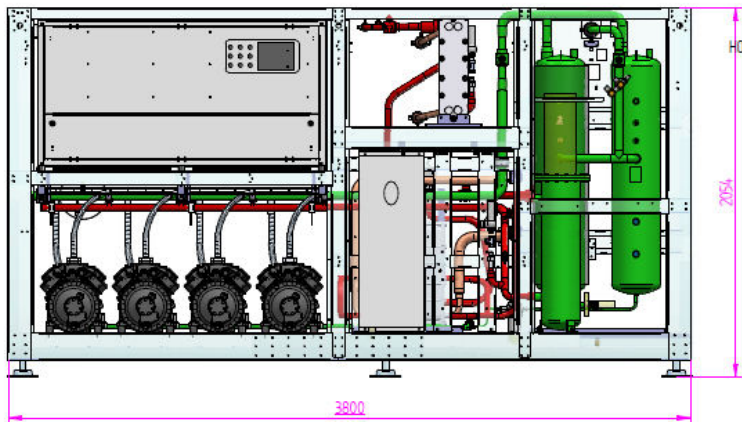
1 pc. Dorin CD 3400H +

3 pc. Dorin CD 3500H

Improved oil separation

Larger oil receiver

Further enhanced PLC control





CO2 PUMP MODULE

Volume: 2500 l

Design pressure: 52 Bar

Total CO2 charge: 1950 kg

Oil return to compressor pack

Energy harvester HEX (Heat pump)

Fully integrated control with pack PLC.



GAS COOLER

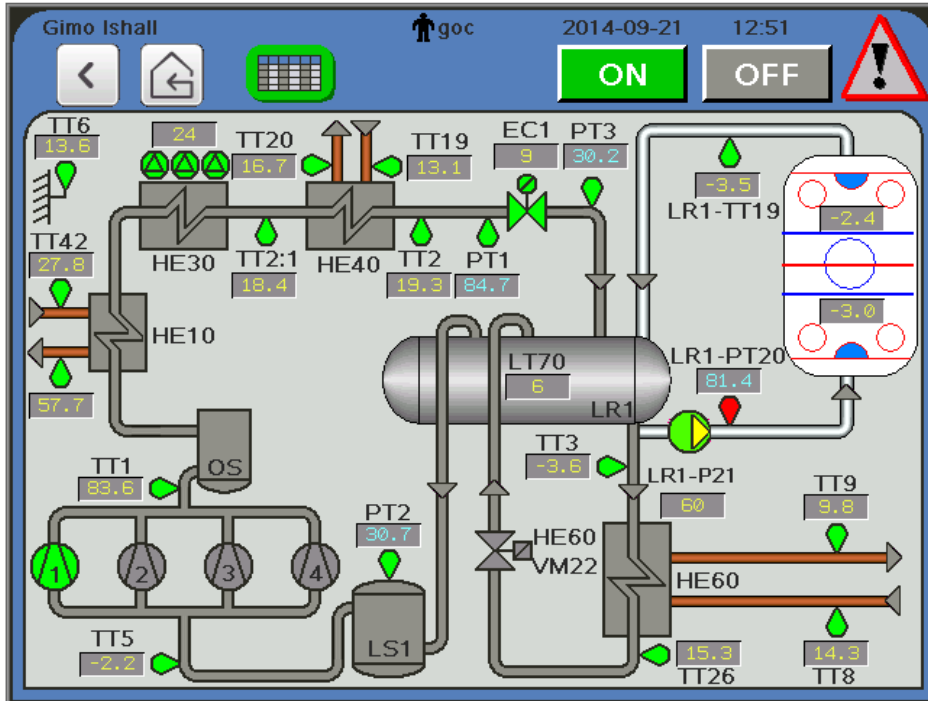
Model: Profroid Tenor range 7 fans

Cooling capacity: 367 kW

Ambient temp +30C

Sound pressure, 10m: 40 dB(A)

Fan motors connected to the PLC via Modbus for optimal and extended functionality, including "Coil clean-reverse fan" and energy monitoring.



CONTROL SYSTEM

All components in refrigerant circuit monitored and controlled by the PLC on the compressor pack.



LESSONS LEARNED

- No operational problems since start up in October 2014
- Very accurate capacity control.
- High energy savings, 60-70% lower than traditional technology and potential for even higher savings.
- Potential for optimization of gas cooler sizing.