

HEATPUMP/CHILLER COMBINATION SRS

The world-wide first semi-hermetic Ammonia chiller/heatpump combination is successfully commissioned in Eindhoven, Netherlands by contractor **van Hout** and **ECR Nederland** during the mega-project of converting the defunct Philips Factory and Office Precinct into a live-able and sustainable office and residential complex.

The objective was to deliver heating and cooling with least impact to the environment by highly efficient machinery employing natural refrigerant Ammonia.

As Ammonia traditionally is used in industrial applications it was important to overcome the apprehension against this gas which is slightly flammable and poisonous, but highly efficient and without any negative influence to global warming or the ozone layer. This was achieved by using the innovative SRS semi-hermetic compressor of SRM which makes shaft-seals obsolete by its design.



The system is operating in summer mode for cooling and can be switched over easily to winter mode for heating. In winter operation the Ammonia receiver is acting as an economizer to boost the capacity. Frequency inverters assure close following of required cooling (heating) capacity with fast reaction.

Dry-Coolers and high efficient Plate in Shell Condensers and Evaporators with integrated phase-separation domes were used to reduce the refrigerant to a bare minimum of xxx kg.

The dry-coolers are equipped with an intelligent sensor system reducing electricity consumption by defrost-on-demand according to ice-build-up and EC-fans for free-cooling and low-noise function during night mode.



MAIN FEATURES:

- no shaft-seal
- newest 5/7-i-profile for highest efficiency and lowest demand of oil for sealing and lubrication.
- permanent magnet motor for highest efficiency.
- Speed control of up to 4500 rpm adapts closely to the capacity profile needed.
- Vi-Regulation for optimal adjustment to temperature zones
- single- and two-stage compressors

SRMTec offers a range of refrigeration technology equipment focused on natural refrigerants like NH₃, CO₂ and Hydrocarbons like Propane, Isobutane etc. for all kind of applications in every aspect of modern life. The compressors are the development of Svenska Rotor Maskiner, the pioneer of screw compressor engineering since 1908.

SRMTec EU is the Organization for European and American customer support and sales of industrial refrigeration solutions. We cooperate closely with our agents and distributors to be a reliable local partner for our customers.

PROJECT DESCRIPTION

Chiller/Heatpump Combination

SRMTec : SRS14SR ,
single stage
Refrigerant: Ammonia R717

Technical Data, Total Capacity @3600rpm

Q₀ Cooling: 400 kW
T_e: + 3,5°
T_c: +42°
COP: 4,04

Q₀ Heating: 426 kW
T_e: - 3,5°
T_c: +42°
COP: 4,1

Commissioning: Aug 2018

Learn more at srmtecgroupp.com/products/SRS14SR

Contacts/Partners of SRMTec Europe www.srmtecgroupp.com

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