

## 100 Semi-hermetic Ammonia Compressors !!!

Since 2016 the first semi-hermetic ammonia compressors (single and double stage) were developed by SRMTec and produced in China. Meanwhile SRMTec has sold in Europe more than 100 semi-hermetic compressors!

The first applications were installed in Asia/China for cold storage applications where the end-user wanted to be on the forefront of climate neutral refrigeration by using ammonia to cool CO2 which is used as the secondary coolant medium in the cool rooms.



In 2017 SRMTec was launching these trend-setting compressors successfully in Europe.

The first semi-hermetic installation was the BRAUNLAGE ice rink in Germany in July 2017 where the semi-hermetic screw compressor fitted perfectly to this application:

Permanent technically sealed without a shaft-seal was appropriate to the location in the middle of the city with close proximity to residential areas. The seasonal operating pattern required a technical solution without a shaft-seal which during standstill periods is prone to dry up with consequential leakages. The 2 x Compressor package caters for the initial pull down for ice production at the beginning of the season with both compressors operating. After this, the ice is maintained with one compressor operating at best energy efficiency.



In Spain followed a whole spree of installations by an innovative contractor who used these compressors pre-dominantly in food processing/storage applications close or within the shopping markets. From the very beginning this contractor was convinced by the concept and so confident to install his systems on Canary and Balearic Islands where the serviceability is rather difficult. As the compressors never missed a heartbeat within the last three years he was proven right to do so.



In 2018 followed the first double-stage semi-hermetic compressor installation in Germany in a cold-storage facility. Housed within a container as plant room this installation is mobile and ready to be moved when the next stage of expansion takes place.

The double stage compressor makes booster-systems obsolete if there is no side-load required on the high stage. This makes very compact and efficient systems possible. Perfect applications are spiral/tunnel-freezers or cold rooms with dedicated compressor systems.

In the same year SRMTec introduced the high temperature application window of the SRS



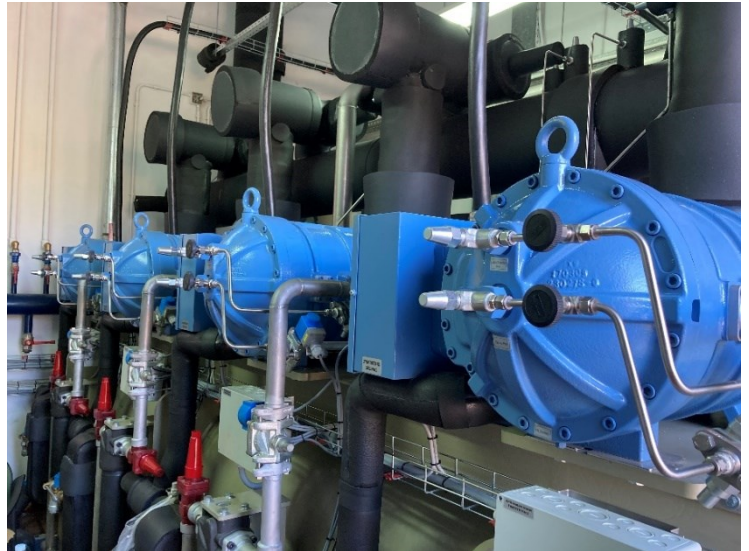


compressor to cater for the rising demand of medium to high temperature process cooling and comfort heating/cooling. The worldwide first all-season ammonia comfort cooling heatpump (winter) and chiller (summer) was commissioned in EINDHOVEN, The Netherlands. It is designed as two redundant systems with a maximum of “green”-features (natural refrigerant Ammonia, variable Vi, inverter speed control, economizer operation, free-cooling condensers) for highest energy efficiency. With its safety features (no-shaft seal, critical ammonia charge, plate in shell heat exchangers) it fits perfectly into the “green” environment of the Philips Precinct with bio-mass power plant, photo-voltaic energy generation and green roof-top gardens.

The latest installation is a 4 x SRS1210SS double stage semi-hermetic compressor installation in ATHENS, Greece where the innovative contractor Mouteveli Bros met an equally forward-looking end-user, Farma Mitsopoulos Meat Processing Factory, who wanted to be future proof with his newest installation. The 4 compressors operate at  $T_e: -50^{\circ}\text{C}$  /  $T_c: +40^{\circ}\text{C}$  to generate 250kW to replace 3 existing Static Freezers and to run a new Linear Belt Inline Freezer for Gyros.

## Compressor number 3 is our 100'th semi-hermetic compressor in operation!

The system is designed and built by Mouteveli Bros with a high efficiency 3-stage horizontal oil separator and air-cooled oil cooler. The unit is controlled by a Carel PLC with customized software to control and manage all capacity stages and the external DC Power Drives for the permanent magnet motors of the compressors.



In 2020 our latest compressor is added to the semi-hermetic Ammonia family:

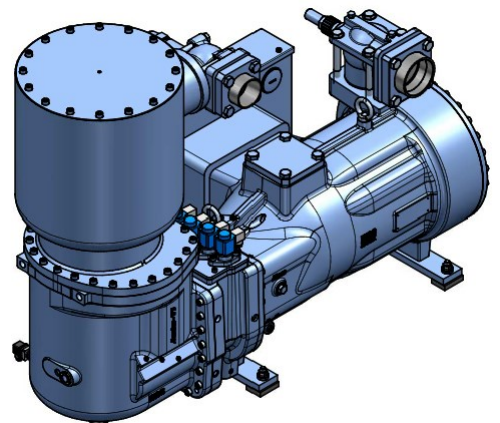
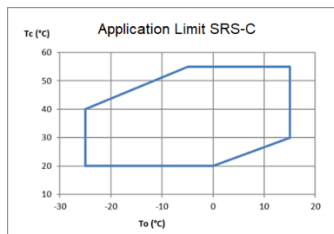
## SRS-C with integrated oil separator

This game-changing Innovation is optimized for high-temperature chiller applications.

Integrated Oil Separator

- space saving
- reducing ammonia charge
- omitting pipe runs and connections
- reducing potential leakage points.

Auto-Vi and ActiFlow oil system improve energy efficiency to new levels.



SRMTec offers a range of refrigeration technology equipment focused on natural refrigerants like NH<sub>3</sub>, CO<sub>2</sub> 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.

**SRM 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.

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