



# INTRODUCTION OF SRS FRIGADON LTD



**SRS FRIGADON (formally SRS Components Ltd)**  
**Established 1998**

**Suppliers of Frigadon chillers**  
**AIA heat exchanger coils, evaporators, dry coolers**  
**HYCOOL potassium formate heat transfer fluids**

# SRS Frigadon LTD – back ground information



- SRS Frigadon first started supplying Hydrocarbon chillers for cooling applications in 1996. During this time the product has continued to evolve and develop and today 95% of all Frigadon chiller production sold in Europe operates on R1270 and R290 natural refrigerant in a variety of applications from freezer stores, process cooling, refrigeration and air conditioning.

## The Company SRS Frigadon Ltd and Frigadon AB comes under the umbrella of Frigadon Holdings AB

- SRS Frigadon Ltd
- Operates from a sales office in Stratford upon Avon
- And its manufacturing facility namely Frigadon AB is located in Halmstad, Sweden which is on the coast, south of Gothenburg where we employ 35 persons.
- The Frigadon products are supplied globally
- SRS Frigadon can supplying a total 'turn-key' packaged Secondary Refrigeration Systems via the client's nominated refrigeration contractor.
- SRS Frigadon being 'P I' (Professional Indemnity) registered company can provide schematic engineering designs upon completion of agreed contracts

# Introduction to the Secondary Refrigerant System product range

Frigadon FWC Natural Refrigerant Chillers



AIA Heat Exchangers



Hycool Heat Transfer Fluids



Complimented by +GF+ Cool-Fit ABS Pipework



# Applications for Frigadon Chillers

- Chill applications for meats, dairy etc: 520kW at HYCOOL 20 flow rate -4 degree C
- Freezer cold stores, Spiral freezers 120kW at HYCOOL 45 flow rate of -31 degree C
- Safe low pressure 1.5bar fluid systems
- Use HYCOOL fluids - food safe and zero GWP
- Applications for: Pharmaceutical
  - Laboratories
  - Controlled Atmosphere
  - Marine & Cruise Ships
  - Heart Lung Machines
  - Oil cooling
  - Medical
  - Air Conditioning
  - Fishing Industry

# Projects include FW Mansfield's

## Mansfield's of Kent – installation completed 2008

- Installation of 5 x Frigadon hydrocarbon chillers.
- Total cooling duty 1,200 kW
- 98kg total volume of R1270 primary refrigerant
- Heat transfer fluid: 28,000 litres of HYCOOL 20
- Complex comprises 66 x AIA heat exchanger coils
- Cold rooms operating at +1 degree C
- HYCOOL flow temperature at -4 degree C
- Off Cycle Defrosting (OCD)
- +GF+ pre-insulated Cool-fit pipe work



# Williams Potato chilled storage



- Installation in Rochester, New York State
- 520kW SRS Frigadon air cooled chiller with twin condensers
- Georg Fisher +GF+ pipe work



# Brixham Fish Market



Our recent Installation at  
Brixham Fish Market where SRS Frigadon Ltd supplied  
54 x AIA Passive cooling coils and an FWC 2000 220kW hydrocarbon  
chiller – all cooled with HYCOOL 20

# Frigadon chiller testing facility at Halmstad, Sweden

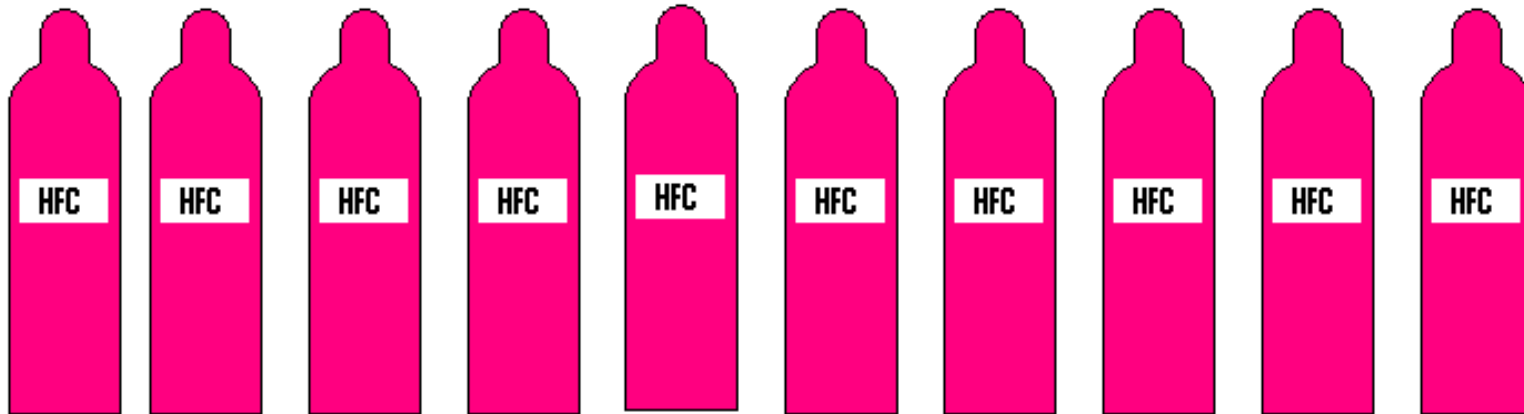
All chillers fully tested prior to delivery to site



# Hydrocarbon - The ideal option & A Real Alternative to Ammonia

- Frigadon recognises that there is major competition from the DX, NH<sub>3</sub> and CO<sub>2</sub> refrigeration systems but as proven over the years there is plenty of room for a fourth option – SRS
- A recent contract such as with Nestles, York the initial specification included for 1,500kW of cooling incorporating NH<sub>3</sub> chiller systems When Nestles realised that SRS could supply 540kW air cooled hydrocarbon chillers then three of the new Frigadon FWC 3000 twin condenser R290 chillers were specified and subsequently installed.
- The point was proven that with SRS Frigadon there is a good alternative to NH<sub>3</sub> systems

# Reduced refrigerant charge



Utilising secondary cooling enabled refrigerant charge reductions in the region of 90% compared with DX installations

**Typical Total Refrigerant Charge 5 x 6.5kg (32.5kg) for a 350kW Chiller**

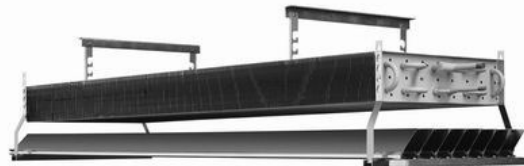


## AIA Portfolio of coils, evaporators etc supplied by SRS Frigadon Ltd



BTL Agri-Fruit Coils

DDB Dual Discharge Coils



KBEH Gravity Passive Coils

NE Fan Coils



X2 & VX2 Dry Coolers



SRS Frigadon range of products also includes AIA DX evaporators and condensers



# AIA coil applications

Coil Applications include

- Fan Coils for Cold Storage & Freezers
- Gravity Coils for Breweries, Maltings and food prep areas
- BTL Agri-Fruit Coils for Controlled Atmosphere Fruit Storage
- Condensers and Dry Coolers
- Specialist Coils for all requirements

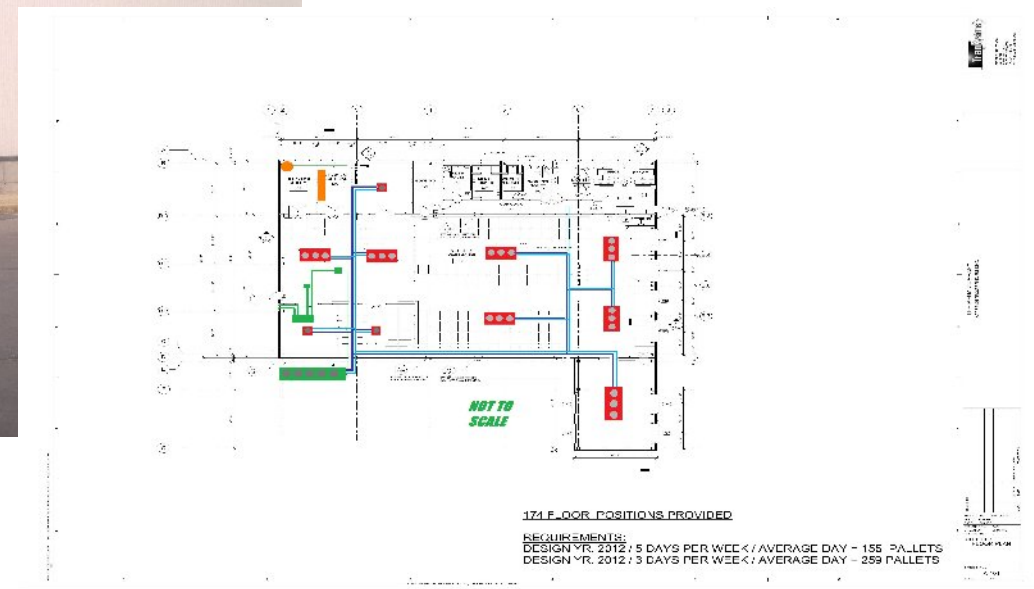


**+GF+ Cool-fit pipe work connected to 10 x AIA heat exchanger coils in total**



ACT Fish Processing – Bucharest, Romania

# +GF+Cool-fit pre-insulated pipelines installed throughout Installation completed in Bucharest, Romania



ACT Fish Processing – FWC3000 Hydrocarbon Chiller



# Conclusion

- The success of such system engineering and its results are proving that the energy usage and plant performance of such engineering is based on a combination of the efficiencies of all parts which is determined by compressors, coils, heat transfer fluids as well as valves, pumps, piping, insulation and other parts of the system and the design concept by which it is all brought together.
- Considering all the uncertainties associated with the HFC synthetic refrigerant gases coupled to the increasing pressures to use natural refrigerants then our belief is that by using hydrocarbons and food safe HYCOOL heat transfer fluids would be the ideal alternative solution.

- **Thank you**

- **ALAN COLBOURNE**

**Managing Director of SRS Frigadon Ltd and Frigadon Holdings AB**

