

# Investing in HFO

Frascold is investing €4m into its Italian factory and adding new HFO machines to its existing HC and CO<sub>2</sub> compressors, in response to growing market demands for natural refrigerants.

Italian compressor manufacturer Frascold has invested €4million in its factory as part of a major development programme.

The initiative will enable the company to significantly expand manufacturing capacity and speed up the launch of new compressors and related technology, including a new generation of HFO-optimised machines now coming onstream.

The development coincides with Frascold's 75th anniversary year, and is part of a longer term €10million expansion programme. This latest phase includes investment in robotic manufacturing systems and automated test facilities at its factory at Rescaldina, north west of Milan.

It also includes a new training and conference facility equipped with state-of-the-art presentation systems.

The investment is already bearing fruit, with a series of new product launches and technology innovations introduced to the market. These include:

- Introduction of an integrated inverter drive in the CX screw compressor (now designated CXIT);
- The new RX range of high efficiency compact medium to low temperature screw compressors, in capacities from 70 to 160hp, with a new rotor profile;
- A new range of variable speed reciprocating compressors, VS.

On the new refrigerants front, the company is at the forefront of the industry's push to develop new systems to run on the latest generation of Low Global Warming HFO refrigerants.

Following successful trials, Frascold recently supplied reciprocating compressors operating on refrigerant HFO R1234ze for use in chillers being installed by a leading UK supermarket chain (see page 14).

## The underlying strategy

ACR Today put its questions to Giuseppe Galli, General Manager.

"The expansion programme is a major project with a number of phases – including investment in plant and the complete transformation of the production process, from design, through research and development to manufacturing and market launch.

"The European Commission's recent report on HFCs would appear to represent a toughening of the stance towards the refrigerants. Many end users were already sensitive about the long-term future of HFCs. As I speak in October 2011 following the report, the EC is currently consulting on views on next steps for controlling HFCs.

"Despite some progress in controlling emissions, the tone of the report does little



to inspire confidence for the long term future of HFC refrigerants. Fortunately, Frascold has proven compressor solutions to operate with all mainstream alternatives, including HCs, carbon dioxide and HFOs.

"End users are looking for safe, efficient alternatives, based on technology that is reliable and proven. We have proven solutions across all current refrigerant options, whether CO<sub>2</sub>, hydrocarbons or HFOs – so customers can evaluate and compare with complete confidence."

"Demand for compressors that run on natural refrigerants is increasing all the time. The emphasis varies from country to country, in terms the popularity of particular refrigerants. However, there is no doubting that the overall picture is growth in interest and application of natural solutions. It is a trend that is accelerating.

"For our part, we aim to be at the forefront of developments in alternative refrigerants, and to have the technology and application knowledge to support customers in making the switch when and if they decide to do that."

"Our TK series compressors have been specifically designed for use in transcritical systems. They operate with low noise and vibration, and deliver excellent performance over an extended lifetime. We are currently adding new models to extend the range.

"Compressors in our SK series are designed to work in subcritical conditions – in systems operating up to 55 Bar. These compressors are generally used in CO<sub>2</sub> cascade systems."

"Our AXH series compressors from 0.5 up to 80HP are covered by the ATEX requirements II 3 G E x c II B T 3. In terms of what certification is required for a given project, this can vary according to the requirements of

the end user, the nature of the particular application, and the local and national laws that apply in the territory concerned. The bottom line is, if ATEX approval is required, we have that base covered."

"We have carried out tests with HFO refrigerants at Frascold's research and development facility. The results have been entirely positive and Frascold compressors have been supplied for use in chillers - which have been installed in working supermarkets. The feed-back has been very positive and the systems are operating well. We look forward to seeing the results of energy monitoring tests in due course".

"To compete in a global market with large players, the key is to be flexible and creative – and stay in touch with customers' changing needs. With our investments in manufacturing, we can translate this market knowledge and insight into new products that meet the need, and in a time frame that puts us ahead of the curve."



Giuseppe Galli, Frascold General Manager