



## PRODUCT RANGE



# CONSTANT EVOLUTION IN THE RESEARCH FOR CONSTANTLY INNOVATIVE SOLUTIONS

## FROM THE PROJECT

Provides Metalmeccanica Srl looks towards the future with its constant quest for technological perfection. Our project is based on a complete production cycle, from the raw material to the finished product, amidst constantly changing challenges of high technology and advanced performance that allow us to meet any market demands.



## IN CONSTANT EVOLUTION

We demand only the best in technology and focus on finding precise, advanced solutions. We have invested in a new, state-of-the-art, high-precision laboratory, where we can carry out in-depth research in order to improve the efficiency of our heat exchangers and patent our most innovative solutions.



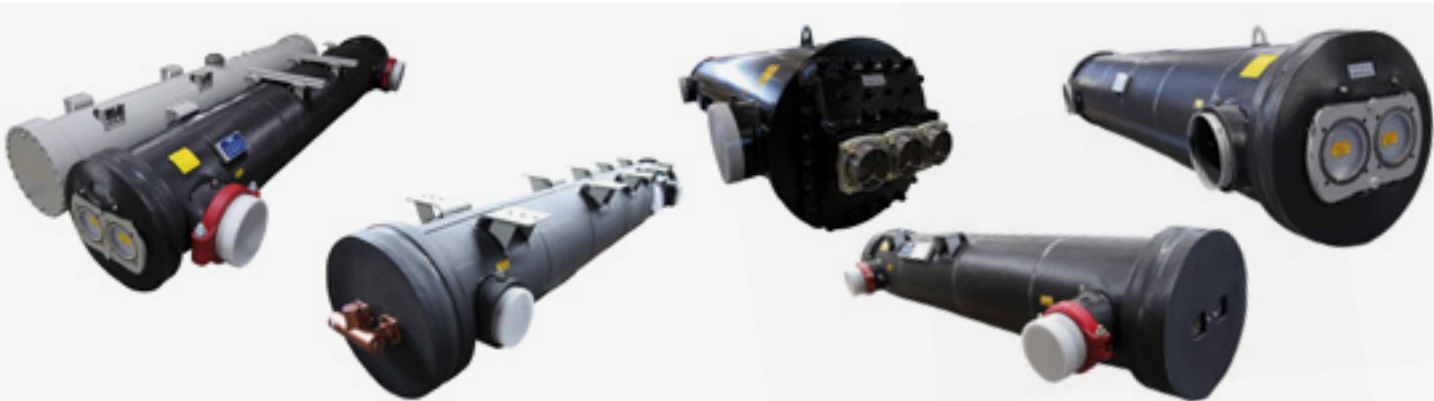
## TO CUSTOMISATION

Provides looks after its customers and their needs, which always come first in our list of values. Our company policy promotes the particularity and uniqueness of our products (some of which are patented) by offering fully customised solutions.



# SHELL AND TUBE DRY EXPANSION EVAPORATORS UP TO 3,000 KW / 900 RT

A range of Dry Expansion Evaporators both in counter flow and "U" tube type. High performance, low refrigerant charge, extremely stable operation due to a very good distribution on the refrigerant side and a well designed water side tube bundle. The product range offers various lengths of shell and tube and a total flexibility for personalization unless restricted by "design criteria". Latest generation heat transfer tubes especially engineered according to Provides' needs. Can reach 2K approach temperatures. Available in many different material types. Available in 1 up to 4 independant refrigerant circuits.



# SHELL AND TUBE CONDENSERS UP TO 12,000 KW / 3,500 RT AND MORE

A range of Condensers of extremely high performance (can reach 1K approach or less) in both Counter Current or Standard arrangement. Can be for fresh water or marine application (with CuNi tubes, cladled tubesheets, and US Navy approved resins for the water boxes). Can be supplied with Anodes. Can be used in High Fouling applications. Can be of various lengths from small to extremely large. Available in different materials. Available with one or more independant refrigerant circuits in the same shell. Can be Partial (up to 10% recovery) or Total Heat Recovery all within the same shell.



# SHELL AND TUBE FLOODED/SPRAY EVAPORATORS UP TO 10,000 KW / 3,000 RT AND MORE

A range of extremely High Efficiency Flooded Evaporators with the latest technological tubes – 1K Approach or Less easily obtainable. The "SPRAY" range consists of a similar range as the flooded with the difference that the tubes in the tube bundle are not submerged in refrigerant charge but have a SPRAY system that reduces the refrigerant charge by 70% in the evaporator itself. Can be used with oil free compressors or standard screw compressors – oil recovery is possible. Available with various materials and in different lengths. Available in multi refrigerant circuits on the same shell or multiple compressors on one single circuit.



# COMPACT FLOODED/SPRAY EVAPORATORS CSF AND COMPACT CONDENSERS CCF

A range of Revolutionary Compact Heat Exchangers. Extremely high Efficiency (less than 1K Approach), extremely LOW refrigerant charge, easy to maintain, clean and service. Low water side Pressure Drops. Ideal for "oil free" compressors but can also be used with standard screw/scroll compressors since there is an oil recovery system available. Very Compact size which can be used where standard heat exchangers do not fit. Very flexible range of use. Ideal for Modular Design both for high redundancy and for increasing/changing Thermal Capacity requirements.



# PERSONALIZED DESIGN OF PRE-ASSEMBLED WATER COOLED UNITS

The Provides Team will work closely (without any costs added whatsoever) with the client's technical department so as to design (under the supervision of the client's technical department) the complete range of water cooled assembled units which include the heat exchangers, the compressors, the refrigerant piping and the electrical panels taking care of all aspects including the Centre of Gravity so that assembled units will sit "level" on site or when being loaded (unloaded) for trasportation. The water cooled units can thus be assembled and delivered to the customer saving both transport costs and assembly costs for the client who only has to complete the assembly with the mounting of the compressors, the piping, the electrical panel and the cabling.

