Safety information for the heat exchangers

When handling the heat exchangers it is necessary to pay attention to the following safety information.

	Be careful when unpacking the heat exchangers; they may fall from their original packaging after transport. Be careful while installing the heat exchanger as in some cases the circuit is pre-charged with pressurized nitrogen.
	Always wear gloves when handling the exchangers as there are some sharp surfaces that cannot be reduced.
	Be careful when installing the exchanger; installation must be carried out by highly qualified personnel so that installation complies with the correct assembly procedure.
	As a consequence of the special application of the heat exchanger, some surfaces might overheat, thus becoming hazardous to people and things. Pay further attention to possible risks resulting from the chosen application.

Information on cleaning and maintenance of the heat exchangers

The heat exchangers made by Calligaris –Heat Exchangers- are built with copper, cupronickel, steel or stainless steel circuits and for the heat dispersion they use some fins made of aluminium, hydrophilic aluminium, copper and stainless steel; the thickness of the fins varies from 0,10 to 0,25 mm.

The exchangers may have an epoxy powder coating or additional treatments to increase the resistance to corrosion of the exchanger itself. The circulating fluid within the tubes of the exchanger is the main means of heat transfer.

The transmission of heat is made from the contact between the pipe and the fin on the exchanger. The diameter of the piping, the centre to centre distance between the tubes, the number of fins and the distance between them is determined by calculating the thermodynamic performance if requested and by the customer's specifications.

The accumulation of dirt or dust on the fins implies a decrease for the transferred heat and may cause corrosion to occur more rapidly or it could bring a stuck to the heat changed by the equipment.

The place of installation of the application must be kept clean: heat transfer must not be compromised by dust or dirt. These indications also apply to the quality of the air that goes through the fins.

The cleaning must be done by means of industrial cleaning substances and through the use of chemical additives which must be chosen according either to the application or the dirt that has settled on the exchanger, and also according to the materials it is made up of. When cleaning by means of compressed air it is necessary both to keep the flow of air parallel to the direction of the fins and to adjust the pressure of the flow of air so as not to damage the finned surface.

The use of inadequate solutions or chemical agents may increase the risk of damaging or corroding the fins of the heat exchanger; the firm Calligaris –Heat Exchangers- accepts no responsibility for any damage done to the heat exchanger because of such use.

Anyway, the cleaning, according to the quantity of the accumulated dust, must be done by specialized personnel and at least once a year.

For any questions contact the firm at the telephone number below:

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