



## THE ORGANIZATION

Thermokey three production plants, based in Rivarotta di Teor (Udine-Italy), Curitiba (Paraná - Brazil), Pudong (Shanghai - China) altogether add up to an overall covered surface of more than 40.000 m<sup>2</sup>, with over 250 people employed.

The commercial organisation includes, along with the head quarter in Rivarotta di Teor (UD), one sales company in Germany and different subsidiaries based in Spain, Poland, Russia, as well as a widely spread network of distributors in Europe, Middle East, Far East and Latin America.

## CERTIFICATIONS

Aiming at granting the best operational standards in all the stages of its organization (from designing, to construction, to sales), the company obtained UNI EN ISO 9001:2000 certification in 2002, in cooperation with the prestigious TÜV institute in Munich. In agreement with its inclination to set up an environment friendly production system, Thermokey obtained in 2004 the environment certification UNI EN ISO 14001:2004.

[www.thermokey.com](http://www.thermokey.com)



**THERMOKEY**

WARM IDEAS

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ENGLISH PRODUCT RANGE - RELEASE 01 - 10/2010



# PRODUCT RANGE

**RTH**  
GROUP



ENG

***THERMOKEY***



# *THERMOKEY*



## COMPANY PROFILE

Thermokey Spa, founded in 1991, has been producing one of the widest range of heat exchangers available in the world-wide market for almost 20 years. Thanks to its technical and high quality standard reputation, it is internationally known as the ideal partner for manufacturers of cooling machines for air conditioning, refrigeration and process cooling applications.

## PRODUCTS

Thermokey heat exchangers range is growing richer year after year. At present, it includes finned pack heat exchangers, air condensers, liquid coolers, unit coolers, shell & tube and brazed plate heat exchangers.

The customers can select all of these units in full autonomy, thanks to specific quick selection softwares. Nevertheless, the company's technical staff is available all the time to guide the user through the choice of the most suitable heat exchanger, according to the requested application.

All Thermokey products are designed, developed and manufactured inside the company, in cooperation with international certifying institutions. The wide range of standard heat exchangers available in our catalogues is further enriched by the special heat exchangers which Thermokey R&D designs according to the customer's specific needs.



## POWER-LINE DRY COOLERS



- Capacity from 8 to 1100 kW  
(Glycol 35%,  $T_{w1} = 40\text{ }^{\circ}\text{C}$ ,  $T_{w2} = 35\text{ }^{\circ}\text{C}$ ,  $T_1 = 25\text{ }^{\circ}\text{C}$ )
- Modular design, 1-16 fans ( $\varnothing$  500, 630, 800, 900 mm)
- 8 sound levels
- Piping in copper or stainless steel AISI 304
- Finned pack available in a wide range of materials
- Complete range of accessories

## POWER-J DRY COOLERS



- Capacity from 70 to 1600 kW  
(Glycol 35%,  $T_{w1} = 40\text{ }^{\circ}\text{C}$ ,  $T_{w2} = 35\text{ }^{\circ}\text{C}$ ,  $T_1 = 25\text{ }^{\circ}\text{C}$ )
- Modular design, 2-16 fans ( $\varnothing$  900 mm)
- 8 sound levels
- Piping in copper or stainless steel AISI 304
- Finned pack available in a wide range of materials
- Complete range of accessories
- AFS (Air Fresh System) available upon request

## MAXI-J DRY COOLERS



- Capacity from 1200 to 2400 kW  
(Glycol 35%,  $T_{w1} = 40\text{ }^{\circ}\text{C}$ ,  $T_{w2} = 35\text{ }^{\circ}\text{C}$ ,  $T_1 = 25\text{ }^{\circ}\text{C}$ )
- Maximum performance, minimum footprint
- Modular design, 5-8 fans ( $\varnothing$  1250, 1600 mm)
- Ducted axial fans for big air flow
- Piping in copper or stainless steel AISI 304
- Finned pack available in a wide range of materials
- Electrical wiring in connection box upon request

## MINI CHANNEL COMPACT CONDENSERS



- Innovative high efficiency microchannel heat exchanger
- Capacity from 11 to 122 kW ( $R404A$ ,  $T_c = 40\text{ }^{\circ}\text{C}$ ,  $T_1 = 25\text{ }^{\circ}\text{C}$ )
- Reduced dimensions and weight
- Small internal volume and small refrigerant charge
- No galvanic corrosion thanks to the coil entirely manufactured in aluminium
- "Sliding mounted" coil, in order to facilitate the modularity
- High efficiency ABS cowlings
- 1 or 2 fans,  $\varnothing$  500 - 630 - 710 mm
- Electrical wiring in junction box included
- EC fans with EC controller on request

## TURBO-LINE CONDENSERS



- Capacity from 10 to 1200 kW (R404A,  $T_c = 40\text{ }^\circ\text{C}$ ,  $T_1 = 25\text{ }^\circ\text{C}$ )
- Modular design, 1-16 fans ( $\varnothing$  500, 630, 800 mm)
- 8 sound levels
- Piping in copper or stainless steel AISI 304
- Finned pack available in a wide range of materials
- Complete range of accessories
- Premium serie available for fans  $\varnothing$  500 and 630 mm

## TURBO-J CONDENSERS



- Capacity from 100 to 1915 kW (R404A,  $T_c = 40\text{ }^\circ\text{C}$ ,  $T_1 = 25\text{ }^\circ\text{C}$ )
- Maximum performance, minimum footprint
- Modular design, 2-16 fans ( $\varnothing$  900 mm)
- 8 sound levels
- Piping in copper or stainless steel AISI 304
- Finned pack available in a wide range of materials
- Complete range of accessories
- AFS (Air Fresh System) available upon request

## LIGHT CUBIC UNIT COOLERS



- High efficiency in compact sizes
- Capacity from 2 to 47 kW (R404A,  $T_e = -8\text{ }^\circ\text{C}$ ,  $T_1 = 0\text{ }^\circ\text{C}$ , RH = 85%)
- Modular design, 1- 4 fans
- Fans: Single and three-phase,  $\varnothing$  300, 350, 400 and 450 mm
- Electric defrosting system available on request
- Solid frame in galvanized steel, cowlings in ABS
- Fin spacing: 4 mm for PH Series  
6 mm for PM Series

## COMMERCIAL DUAL FLOW UNIT COOLERS



- Ceiling unit coolers for small and medium cold rooms
- Capacity from 1,5 to 20 kW (R404A,  $T_e = -8\text{ }^\circ\text{C}$ ,  $T_1 = 0\text{ }^\circ\text{C}$ , RH = 85%)
- Modular design, 1- 4 fans
- Mono-phase fans,  $\varnothing$  350 mm
- Fin spacing: 3,0 mm 6,0 mm
- Electric defrosting system available on request
- Casing in aluminium



## INDUSTRIAL UNIT COOLERS

- Ideal solution for medium and large cold rooms
- Modular design, 1- 5 fans
- Three-phase fans, Ø 500, 560, 630 and 800 mm
- Piping in copper or in stainless steel AISI 304
- Various defrosting systems available
- Casing in aluminium

### DIRECT EXPANSION OPERATION

- Capacity from 7 to 209 kW (R404A,
- $T_e = -8\text{ }^\circ\text{C}$ ,  $T_1 = 0\text{ }^\circ\text{C}$ , RH = 85%)
- Fin spacing: 4,5 mm 7,0 mm 11,0 mm

### BRINE OPERATION

- Capacity from 7 to 240 kW (Glycol 30%,
- $T_{w1} = -10\text{ }^\circ\text{C}$ ,  $T_1 = 0\text{ }^\circ\text{C}$ , RH = 85%)
- Fin spacing: 4,5 mm 6,0 mm 8,0 mm

### AMMONIA OPERATION

- Capacity from 8 to 262 kW (NH<sub>3</sub>,  $T_e$
- =  $-8\text{ }^\circ\text{C}$ ,  $T_1 = 0\text{ }^\circ\text{C}$ , RH = 85%)
- Fin spacing: 4,5 mm 7,0 mm 11,0 mm

## DUAL FLOW UNIT COOLERS



- Ceiling unit coolers for medium and large cold rooms
- Modular design, 1- 4 fans
- Three-phase fans, Ø 500 mm
- Piping in copper or in stainless steel AISI 304
- Fin spacing: 4,5 mm 7,0 mm
- Various defrosting systems available
- Casing in aluminium

### DIRECT EXPANSION OPERATION

- Capacity from 5 to 44 kW (R404A,  $T_e$
- =  $-8\text{ }^\circ\text{C}$ ,  $T_1 = 0\text{ }^\circ\text{C}$ , RH = 85%)

### BRINE OPERATION

- Capacity from 4 to 47 kW (Glycol 30%,
- $T_{w1} = -10\text{ }^\circ\text{C}$ ,  $T_1 = 0\text{ }^\circ\text{C}$ , RH = 85%)

### AMMONIA OPERATION

- Capacity from 5 to 52 kW (NH<sub>3</sub>,
- $T_e = -8\text{ }^\circ\text{C}$ ,  $T_1 = 0\text{ }^\circ\text{C}$ , RH = 85%)

## BLAST FREEZER UNIT COOLERS



- Specific for fast freezing applications
- Designed for R404A, R507, NH<sub>3</sub>, CO<sub>2</sub>
- Capacity from 14 to 107 kW ( $T_e = -40\text{ }^\circ\text{C}$ ,  $T_1 = -35\text{ }^\circ\text{C}$ , RH = 90%)
- Piping in copper or in stainless steel AISI 304
- External static pressure of 100 Pa
- Fin spacing 12 mm
- Various defrosting systems available
- Casing in aluminium

## FRUIT COOLERS



- Ideal for fruit and vegetables storage
- Capacity from 21 to 50 kW
- (R404A,  $T_e = -8\text{ }^\circ\text{C}$ ,  $T_1 = 0\text{ }^\circ\text{C}$ , RH = 85%)
- Modular design, 4 - 6 fans
- Three-phase fans, Ø 400 and 450 mm
- Fin spacing 6,0 mm
- Electric defrosting system available on request
- Solid frame in galvanized steel painted RAL 9010

## RADIAL UNIT COOLERS



- The ideal solution for air ducting
- Fin spacing: 4,5 mm or 7,0 mm
- External static pressure of 150 Pa
- Modular design, 1- 4 fans
- Radial ducted fans: 4 and 6 poles, Ø 560, 630 mm
- Electric defrosting system available on request
- Casing in aluminium

### DIRECT EXPANSION OPERATION

- Capacity from 10 to 115 Kw (R404A,  $T_e = 2\text{ }^\circ\text{C}$ ,  $T_1 = 12\text{ }^\circ\text{C}$ , RH = 75%)

### BRINE OPERATION

- Capacity from 7 to 135 kW (Glycol 30%,  $T_{w_1} = 0\text{ }^\circ\text{C}$ ,  $T_{w_2} = 4\text{ }^\circ\text{C}$ ,  $T_1 = 12\text{ }^\circ\text{C}$ , RH = 75%)

## COILS



- Geometries:
 

25x22 mm with 3/8" and 5/16" tube
30x26 mm with 3/8" and 1/2" tube
42x36,4 mm with 1/2" and 5/8" tube
50x43,3 mm with 1/2" and 5/8" tube
- Special high efficiency tubes and fins
- Tubes material: copper and stainless steel AISI 304 or AISI 316L
- Fins Material: aluminium, prepainted, double layer prepainted, copper, stainless steel AISI 304

## BRAZED PLATES HEAT EXCHANGERS



- Compact design and high performances
- Reduced dimensions and weight
- Small internal volume and small refrigerant charge
- Environment friendly
- Different sizes available, 9 single circuit and 2 double circuit
- Capacity from 5 to 600 kW
- Wide range of applications: air-conditioning, refrigeration, heating, industrial processes
- Internal corrugation of the plates especially designed for maximizing thermal exchange with reduced pressure drops
- Independently tested circuits with pressure and vacuum tests

## SHELL & TUBES



- Suitable for HCFCs and HFCs refrigerants
- The construction can be also in Stainless steel AISI316L, CuNi, Ti
- Exchangers made according to ABS, ASME, GOST, RINA approvals
- Loose or welded supports, flanges, insulation, water tanks upon request

### EVAPORATORS

- Ideal for liquid cooling and hot water production
- Capacity from 18 to 1500 kW in standard conditions
- Dedicated serie for R134a refrigerant
- Different sizes available, from 1 to 4 circuits

### CONDENSERS

- Ideal for air conditioning and refrigeration plants
- Capacity from 10 to 2000 kW in standard conditions
- Extra length models: +200 mm, +400 mm
- 2, 4 or 8 passes by different headers