

PRODUCT RANGE

RTH
GROUP



THERMOKEY



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 m², with over 250 people employed.

The commercial organization 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.



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
- "Table-Type" and "V-Type" series
- Modular design, 1-8 fans (\varnothing 500, 630, 800 mm)
- Capacity from 10 to 420 kW (R404a, $T_c = 40\text{ }^{\circ}\text{C}$, $T_1 = 25\text{ }^{\circ}\text{C}$)
- Casing made in protected aluminium and structured to ensure maximum strength and durability
- Reduced dimensions and weight
- Small internal volume and small refrigerant charge
- Low electrical power consumption
- No galvanic corrosion thanks to the coil entirely manufactured in aluminium
- Complete range of accessories
- 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,
Te = -8 °C, T₁ = 0 °C, RH = 85%)
Fin spacing: 4,5 mm 7,0 mm 11,0 mm

BRINE OPERATION

Capacity from 7 to 240 kW (Glycol 30%,
Tw₁ = -10 °C, T₁ = 0 °C, RH = 85%)
Fin spacing: 4,5 mm 6,0 mm 8,0 mm

AMMONIA OPERATION

Capacity from 8 to 262 kW (NH₃, Te
= -8 °C, T₁ = 0 °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, Te
= -8 °C, T₁ = 0 °C, RH = 85%)

BRINE OPERATION

Capacity from 4 to 47 kW (Glycol 30%,
Tw₁ = -10 °C, T₁ = 0 °C, RH = 85%)

AMMONIA OPERATION

Capacity from 5 to 52 kW (NH₃,
Te = -8 °C, T₁ = 0 °C, RH = 85%)

BLAST FREEZER UNIT COOLERS



- Specific for fast freezing applications
- Designed for R404A, R507, NH₃, CO₂
- Capacity from 14 to 107 kW (Te = -40 °C, T₁ = -35 °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, Te = -8 °C, T₁ = 0 °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,
Te = 2 °C, T₁ = 12 °C, RH = 75%)

BRINE OPERATION

Capacity from 7 to 135 kW (Glycol
30%, Tw₁ = 0 °C, Tw₂ = 4 °C, T₁ = 12
°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



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