t-max

COOLING AND HEATING UNITS

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# New Coolmax Series Chiller

t-max products are under the guarantee of Tepro Makine. Our products have been carefully selected with the expertise and experience gained as a leading company in the sector. With the understanding of "best quality at an affordable price", products that increase productivity and provide flexible usage advantages are offered under the brand t-max.

**New Product**

## Modular Design

T-MAX cooling systems can work alone as well as in groups and have the feature of working in harmony with T-MAX or other brand coolers.

## Main Body

The main body is made of galvanized steel and covered with epoxy with a minimum thickness of microns. In this way, t-max coolers are effectively protected, and their appearance and value can be preserved for many years. Minimum energy consumption, high efficiency.

## Ease of Maintenance

To provide easy and fast service, easy access to all parts is provided. Panels made of galvanized steel are easily removable and portable. It has a durable and stylish appearance with 60-micron thick epoxy paint.

- CE Standard
- Reasonable price
- Modular design
- Stainless steel pump (optional)
- Very quiet condenser
- Scroll or screw-type refrigerant compressor
- Optional electronically controlled expansion valve
- Continuous control of the process fluid
- Continuous automatic adjustment of refrigerant capacity
- Low current draw at start-up
- Easy and economical maintenance
- Stock products and spare parts
- 24/7 technical support

## Compressor

The circulation of the refrigerant in the system is provided by a scroll resistant to overloads or by a screw-type compressor for larger flow rates Depending on the model, it can be connected to an independent gas circuit or with a twin compressor, the compressors are switched on and off depending on the desired temperature. In this way, maximum efficiency and co-aging are ensured.

## Evaporator

Thanks to the maximum water turbulence method, Shell&tube evaporators are self-cleaning. The tank surfaces of the system, which work with the dry expansion logic of water/gas separation, are insulated against unwanted heat transfers. In the system called "Counter-Flow", maximum cooling efficiency is achieved by flowing water and exposure flows in opposite directions.

» Maximum heat transfer is achieved.
» Unwanted heat transfers are prevented.
» A high degree of efficiency has been achieved thanks to the compressors working with low gas pressures.

## Fans

Carefully selected fan brands from leading fan manufacturers are used for T-MAX cooling groups.

## Water Cooling Circuit

The cooling circuit is made of copper pipes and includes the following components.

- For all models:
- Expansion valve with external balancing (Optional electronic valve);
- Valve on the liquid line;
- Dryer Filter;
- Solenoid valve;
- Liquid and humidity indicator;
- Crankcase heater;
- High and low-pressure Switches;
- Oil level indicator;
- Safety valve on the compressor;
- High Pressure and low-pressure gauge.

## Water Circuit

The water system includes the following for all models:

- Collector and fittings;
- Evaporator;
- Flow Meter;
- Pressure indicator;
- Pump Accessories

## Electrical Panel

The control panel is mounted on the unit. Therefore, it is protected in the IP55 protection class. The door lock is connected to the main switch per European standards. The wiring complies with the IEC standard. The electrical panel includes magneto-thermal protection for fuses, compressors and fans, according to IEC 947. Circuit start for compressors, directs for screw (optional soft start, star-triangle) and scroll compressors, section Auxiliary power is protected by fuses.


## Control

Cooling is controlled by a microprocessor. Electronic control is carried out by a control system with Corel Software installed. Programming, input shows nominal values (data operation) and problems, input is made directly on the screen. There is also a visual and audible alarm. The parameters remain in the memory of the control system in case of a power cut.

## Microprocessor

» The microprocessor controls all the functions of the device and any adjustments are made from here.
» The operation can be entered directly by the microprocessor values and parameters.
» Each chip can control up to 4 compressors.
» There are audible and visual alarm buttons for various functions continuous monitoring. The data memory is preserved in the event of a power failure in the system.
» Set points have been changed and setting changes can be made on the screen.

### KEY FEATURES:

» Inlet and outlet temperature display
» ID and image alarms
» Optional features include two pumps and alternate operating control.
» "Free cooling" with optional modular control valve
» Reed switch delay during start-up
» Compressor(s) operating counter hours
» Rotation direction of compressors
» Pump function soft close
» Electronic thermostat antifreeze
» Stay away-start
» Manual operation
» Manual reset
» Alarms:
» High and low pressure, oil and overheating
» Compressor overload
» Overload and overheat fans Freeze Flow switch
» Eprom error

## New COOLMAX SERIES CHILLER Air Condenser Chiller Cooling Units

| Model | ENX | ENX16 | ENX22 | ENX30 | ENX38 | ENX45 | ENX55 | ENX70 |
|---|---|---|---|---|---|---|---|---|
| Cooling Capacity (15°C-25°C) | kW/ Kcal/h | 24 / 20.640 | 36 / 31.000 | 46 / 39.560 | 56 / 48.160 | 77 / 66.220 | 85 / 73.100 | 105 / 90.300 |
| Cooling Capacity (07°C-35°C) | kW/ kcal/h | 15 / 12.900 | 26 / 22.360 | 32 / 27.520 | 39 / 33.540 | 50 / 43.000 | 56 / 48.160 | 71 / 61.000 |
| Compressor Nominal Power | kW | 4,54 | 6,65 | 9,00 | 11,20 | 12,75 | 18,10 | 20,50 |
| Number of Compressor | Adet | 1 | 1 | 1 | 2 | 2 | 2 | 2 |
| Number of Cooling Circuit | Adet | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Power Level | Adet | 1 | 1 | 1 | 1 / 1 | 1 / 1 | 1 / 1 | 1 / 1 |
| Power Refrigerant Gas | - | R410A | R410A | R410A | R410A | R410A | R410A | R410A |
| Water Section | | | | | | | | |
| Rated Water Flow | $m^3/h$ | 2,5 | 3,8 | 5,1 | 6,4 | 7,2 | 10,3 | 12,2 |
| Evaporator Type | - | Plate Type | Plate Type | Plate Type | Plate Type | Plate Type | Shell and Tube | Shell and Tube |
| Hydraulic Connections | Inch | 1 " | 1 1/2 " | 2 " | 2 " | 2 " | 2 1/2 " | 2 1/2 " |
| Tank Volume | $dm^3$ | 100 | 200 | 250 | 250 | 250 | 325 | 325 |
| Pump Power | HP | 1,5 | 1,5 | 3 | 3 | 4 | 4 | 5,5 |
| Rated Pump Pressure | Bar | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 |
| Fan Section (Axial) | | | | | | | | |
| Total Air Flow | m3/h | 12.500 | 12.500 | 25.000 | 25.000 | 37.500 | 37.500 | 37.500 |
| Number of Fans | Adet | 1 | 1 | 2 | 2 | 3 | 3 | 3 |
| Fan Motor Power | kW | 0,8 | 0,8 | 1,6 | 1,6 | 2,4 | 2,4 | 2,4 |
| Total Electrical Data | | | | | | | | |
| Electrical Connection | V/Hz | 400/3/50 | 400/3/50 | 400/3/50 | 400/3/50 | 400/3/50 | 400/3/50 | 400/3/50 |
| Rated Power Drawn | kW | 7,1 | 9,5 | 12,75 | 15 | 19,8 | 25,7 | 29,6 |
| Maximum Drawn Current | A | 14,9 | 20 | 23 | 31,5 | 41,6 | 54,0 | 62,2 |
| Dimensions and Weight | | | | | | | | |
| Length | mm | 1270 | 1370 | 1910 | 1910 | 2830 | 2830 | 2830 |
| Width | mm | 705 | 800 | 1000 | 1000 | 1190 | 1190 | 1190 |
| Height | mm | 1410 | 1770 | 1855 | 1855 | 2330 | 2330 | 2330 |
| Empty Weight | kg | 270 | 350 | 450 | 460 | 1060 | 1060 | 1060 |
| Operating Weight | kg | 370 | 200 | 685 | 710 | 1310 | 1385 | 1385 |

## New COOLMAX SERIES CHILLER Air Condenser Chiller Cooling Units

| ENX90 | ENX100 | ENX130 | ENX160 | ENX185 | ENX230 | ENX280 | ENX340 | ENX370 | ENX430 |
|---|---|---|---|---|---|---|---|---|---|
| 118 / 101.480 | 137 / 117.820 | 156 / 134.160 | 210 / 180.600 | 236 / 202.960 | 312 / 268.320 | 388 / 333.680 | 488 / 419.680 | 556 / 478.160 | 624 / 536.640 |
| 80 / 68.800 | 96 / 82.560 | 108 / 92.900 | 147 / 126.420 | 165 / 141.900 | 218 / 187.480 | 272 / 233.920 | 342 / 294.120 | 389 / 334.540 | 437 / 375.820 |
| 26,00 | 29,00 | 35,20 | 46,50 | 52,00 | 76,80 | 84,40 | 104,00 | 120,00 | 134,80 |
| 2 | 2 | 2 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 1 / 1 | 1 / 1 | 1 / 1 | 2 / 2 | 2 / 2 | 2 / 2 | 2 / 2 | 2 / 2 | 2 / 2 | 2 / 2 |
| R410A | R410A | R410A | R410A | R410A | R410A | R410A | R410A | R410A | R410A |
| | | | | | | | | | |
| 14,8 | 16,6 | 20 | 24 | 29,4 | 40 | 48 | 59 | 67,4 | 75,6 |
| Shell and Tube | Shell and Tube | Shell and Tube | Shell and Tube | Shell and Tube | Shell and Tube | Shell and Tube | Shell and Tube | Shell and Tube | Shell and Tube |
| 2 1/2 " | 2 1/2 " | 2 1/2 " | 3 " | 4" | 5 " | 5 " | 5 " | 6 " | 6 " |
| 325 | 325 | 350 | 600 | 600 | 600 | N/A | N/A | N/A | N/A |
| 5,5 | 5,5 | 10 | 10 | 10 | 10 | | | | |
| 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | | | | |
| | | | | | | | | | |
| 37.500 | 48.000 | 50.000 | 80.000 | 80.000 | 120.000 | 120.000 | 160.000 | 160.000 | 200.000 |
| 3 | 2 | 4 | 4 | 4 | 6 | 6 | 8 | 8 | 10 |
| 2,4 | 3,4 | 3,2 | 7,2 | 7,2 | 10,8 | 10,8 | 14,4 | 14,4 | 18 |
| | | | | | | | | | |
| 400/3/50 | 400/3/50 | 400/3/50 | 400/3/50 | 400/3/50 | 400/3/50 | 400/3/50 | 400/3/50 | 400/3/50 | 400/3/50 |
| 35,7 | 40,0 | 50,4 | 66,9 | 72,9 | 103,8 | 103,6 | 128,8 | 146,4 | 166,3 |
| 74,9 | 83,9 | 105,9 | 140,4 | 153,1 | 217,9 | 217,6 | 270,5 | 307,4 | 349,2 |
| | | | | | | | | | |
| 2830 | 2830 | 4450 | 4450 | 4450 | 4400 | 4400 | 5650 | 5650 | 7100 |
| 1190 | 1190 | 1190 | 1190 | 1180 | 2200 | 2200 | 2200 | 2200 | 2200 |
| 2330 | 2330 | 2350 | 2450 | 2450 | 2500 | 2500 | 2500 | 2500 | 2500 |
| 1060 | 1250 | 1540 | 1650 | 1750 | 1920 | 2450 | 3385 | 3450 | 4810 |
| 1385 | 1575 | 1890 | 2250 | 2350 | 2520 | 2450 | 3385 | 3450 | 4810 |

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