

TGR OPTIONS:

DESCRIPTION	INITIAL	STANDARD	OPTIONAL
Wheels	FW	•	
Inlet outlet process pump water gauges	GW	•	
Visual & sounding alarm	VSH		•
Expansion vessel	EV		•
Cooling mode only (no heater)	-HE		•
Water flow indirect reading	[1]	WIR	•
Refrigerant and source water probes kit	[2]	PK	•
Regulable water bypass	BR		•

NOTE

[1] This option includes the water flow indirect reading of:

- User side inlet water pressure
- User side outlet water pressure

[2] This option includes an additional electronic slave board detecting the following values:

- Condenser outlet water temperature
- Condenser inlet water pressure
- Condenser outlet water pressure
- Compress or discharge temperature
- Compressor suction temperature



FOCUS ON

With a centralized system, TGR operates indoor independently and performs the best cooling conditions of each mold, regardless of the specific parameters of each machine.

Friulair's Drycooler CDC can take advantage outdoor from the Free Cooling and allows significant energy savings. Tank and pumping group complete the circuit.



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MADE IN ITALY

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TGR

WATER THERMO-CHILLERS MACHINE SIDE TEMPERATURE CONTROL

from 4 to 16 KW



TGR



DESCRIPTION

The TGR thermoregulator is a device with the purpose of keeping a process medium at constant temperature. It provides a compact and on-board solution for the classic centralized refrigeration system. TGR units can be installed stand alone or in combination with a centralized refrigeration system (dry-cooler/chiller). TGR provides the right temperature to each user in need of different medium temperature with respect to the centralized refrigeration system. It is engineered to work in freecooling according to the process and to the main chilling units temperatures. This ensures higher efficiency of the system, less maintenance operations, quicker molds change-over and increases the productivity.

MAIN FEATURES

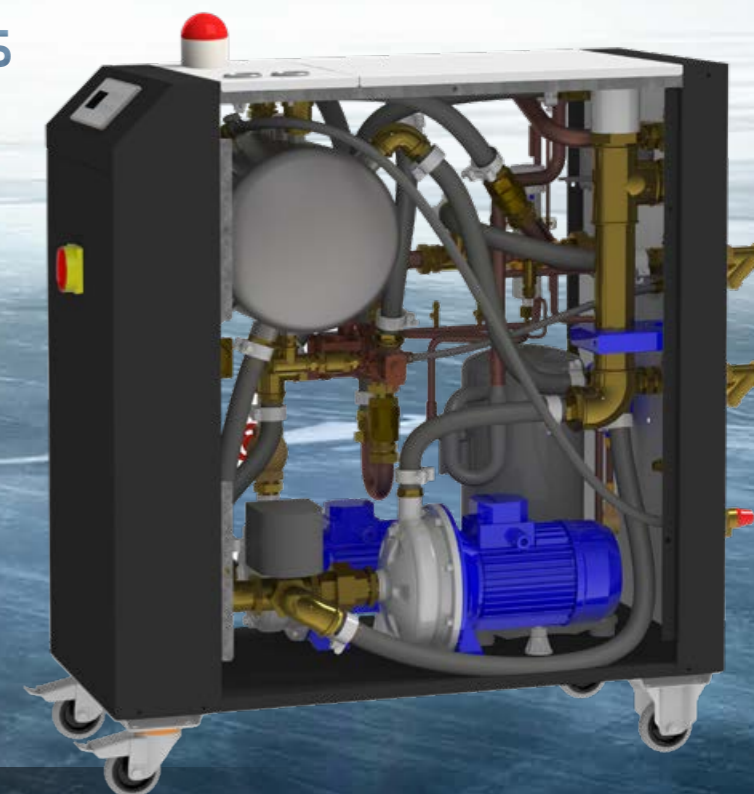
- Heating and cooling mode
- 3 sizes: TGR004 – TGR010 – TGR016, with cooling capacities from 4 kW to 16 kW
- Operating range: from -10°C to +95°C
- Accuracy of the outlet water temperature: +/- 0,5 K
- Ecological R407C refrigerant gas and highly efficient components of the refrigeration circuit
- Single hermetic compressor,
- Stainless steel brazed plate evaporator
- Stainless steel brazed plate condenser
- Non-ferrous water circuit materials (stainless steel, EPDM rubber, copper, brass)
- Condensing pressure control (pressostatic valve)
- Transducers (process side)
- Water pressure gauges
- High and low refrigerant pressure switches
- Non ferrous heating resistor
- All components of the pumps in contact with the fluid made of in stainless steel
- Automatic water filling system
- Insulated stainless steel pressurized water tank with atmospheric tank option, thanks to dedicated ball valves
- 3-way mixing water valve with integrated actuator for an accurate control of the outlet temperature
- Free Cooling management
- Integrated microprocessor electronic controller, with optimized and dedicated software
- Integrated display with clear icons for a real time monitoring of the TGR operations and any alarm status, recording up to the last 20 faults occurred
- Single thermoregulated zone configuration
- Automatic management of cooling and heating free cooling functions
- RS485 MODBUS RTU protocol communication
- Frame, cabinet and easy removable panels made in galvanised steel powder-coated
- 3/400V/50Hz or 3/460V/60Hz available
- IP40 rated electrical control panel
- Visual and sounding alarm

BENEFITS

- High, constant and increasing productivity
- Optimization of the overall process performance
- Reduction of cycle times and perfect repeatability
- Improvement of the cooling precision and quality of the molded components
- Energy saving
- Environmentally friendly
- Friendly maintenance
- Optimisation of transport, installation, running and maintenance costs thanks to a minimal footprint and usage of compact elements

SPECIFIC SOLUTION FOR THE INDUSTRIAL COOLING OF MOLDS FOR THE INJECTION OF PLASTIC

Other fields: blowing and extrusion of plastics, chemical and pharmaceutical processes, die-casting and bottling.



TECHNICAL DATA:

MODEL	TGR	004	010	016
Cooling Capacity	[KW] *	4,34	12,28	16,16
Cooling Capacity	[KW] **	4,88	14,07	18,2
Heater power	[KW]	6	6	6
Set point range (for User)	[°C]	-10 / +95	-10 / +95	-10 / +95
Compressor type		Reciprocating	Scroll	Scroll
N° of compressors	[#]	1	1	1
Compressor Power	[KW / A]	1,706 / 3,27	3,65 / 6,1	5,75 / 10,1
Maximum absorbed power	[KW / A]	7,05 / 10,57	7,34 / 11,17	8,01 / 12,77
User pump data:				
Nominal water flow	[l/h]	1470	3545	6200
Nominal head pressure	[Bar]	3	2,93	3,4
Min/Max flow	[l/h]	1200-6600	3000-9600	3000-9600
Min/Max head pressure	[Bar]	1,95-3,03	2,10-2,93	2,86-3,75
Tank Capacity	[L]	22	22	22
Width	[mm]	1059	1059	1059
Depth	[mm]	461	461	461
Height	[mm]	1025	1025	1025
Weight	[kg]	160	185	210
Water Connections size	[inch]	1" G	1" G	1" G

NOTE

* outlet water temperature 10°C, condenser 35°C/40°C

** outlet water temperature 15°C, condenser 40°C/45°C