

MultiCool+ chiller performance table

Data compiled for coolant **R448A / R449A**

Work range	Unit model	Q _{cool} [kW]		To [°C]	Power supply [V]	Min Q _{cool} total receivers [kW]
		From	To			
Cooling	MultiCool Plus 10	3.0	9.7	-10	400	5.0
	MultiCool Plus 15	4.1	13.8	-10	400	7.5
	MultiCool Plus 25	5.2	17.5	-10	400	9.0
Freezing	MultiCool M Plus 4	1.4	4.2	-30	400	2.0
	MultiCool M Plus 7	1.8	5.7	-30	400	3.0
	MultiCool M Plus 11	2.2	7.0	-30	400	4.0

Energy efficiency table

Data compiled for coolant **R448A / R449A**

Unit model	Average evaporation temperature [°C]	SEEI Seasonal Energy Efficiency Index	Annual electricity consumption [kWh]	Compliant with Ecodesign 2018 requirements
MultiCool Plus 10	-10	5.47	10892	Yes
MultiCool Plus 15	-10	5.03	15501	Yes
MultiCool Plus 25	-10	5.32	20211	Yes
MultiCool M Plus 4	-30	1.63	15785	Yes
MultiCool M Plus 7	-30	1.62	20692	Yes
MultiCool M Plus 11	-30	1.72	24730	Yes



MultiCool+ Inverter Units

SAVING
UP TO 40% ENERGY
IN YOUR STORE!



The perfect solution for markets and convenience stores

– 40% savings with MultiCool+

The current development of technology allows for the construction of more efficient devices and meeting more and more stringent environmental standards while significantly reducing electricity consumption. In view of the growing energy prices and the decrease in profitability of stores, regardless of their format, technical departments will look for economical and ecological solutions for their markets or supermarkets. The perfect solution is the MultiCool inverter chiller manufactured by IGLOO, allowing you to save as much as 40% of energy related to refrigeration.

High savings

The use of inverter scroll compressors with adjustment from 900 to 7200 revolutions and condensation pressure control by means of EC fans, with the possibility of reading system operating pressures in real time allowed making units that completely smoothly provide the cooling energy required at a given moment to the system. When the unit stops, when the compressor returns to system power, it starts **from zero** and stops at the power required by the system. Thanks to the internal lubrication and sub-cooling system of the compressor, the MultiCool+ IGLOO units can operate at reduced efficiency for a long time. The units' performance has also been increased by the use of BLDC compressors, which generate an increase in performance along with a reduction in revolutions. The real-time control of the working pressures of MultiCool+ units allowed for the development of a proprietary **LOW BAR MODE** system with electronic expansion valves in receivers. Maintaining the supply pressure at a constant level of a few bar generates **over 40% savings in electricity consumption**

compared to traditional compressor systems. **LOW BAR MODE** systems, additionally connected with IGLOO refrigeration units, bring other above-standard savings of **up to 50% and more**. More and more units work in difficult environmental requirements, for example inside housing estates, in the back of restaurants near residential buildings, where, in addition to economic aspects, environmentally friendly technology is important, and MultiCool+ chillers meet these requirements perfectly.

Silent work

In order to reduce noise as much as possible, the condenser operates with the use of the highest class EC fans with smooth large diameter adjustment, which allows for a significant reduction of the rotational speed. Combined with its own insulation of scroll compressors, it enables additional soundproofing of the chamber up to 40 dB at a distance of 1 m. There is also a night mode that allows for an even higher level of soundproofing. The compact housing, made of metal resistant to all external conditions, is powder-coated and provides the unit with an aesthetic appearance, allowing it to fit in a compact urban development. The control panel placed inside the units allows diagnosing the device and changing the unit's operating settings. The entire menu is in Polish, and the panel is operated via buttons.



INVERTER UNIT
MultiCool+
 MADE BY **IGLOO**

Features of MultiCool+

1. **PLUG & PLAY** chiller, ready to start.
2. Built-in control and diagnostic panel with an intuitive text menu in Polish or English.
3. Standard equipment includes a set of necessary apparatus and is programmed for **refrigeration or freezing**.
4. Housing made of powder-coated corrosion-resistant sheet metal with **Aluzinc** coating.
5. Extremely high work performance with control based on a professional **PLC**.
6. Built-in chiller working parameters recorder, with the option of saving data to any USB storage device.
7. Super quiet and efficient condenser fan with **an EC motor** and smooth speed control.

Equipment standard

- scroll inverter compressor
- compressor crankcase heater
- mechanical degreaser
- slat condenser
- energy-saving EC condenser fan
- coolant tank
- safety valve
- coolant sight glass
- suction accumulator
- low-pressure transducer
- high-pressure transducer
- wet vapor injection system to the compressor head
- LP pressure switch
- motherboard
- PLC
- menu in Polish and English
- chiller work parameter recorder
- main cut-off switch
- cooling fan for the generator switchgear section
- silent night work algorithm
- compressor flood protection algorithm
- excessive pressure protection algorithm
- high discharge temperature protection algorithm
- dirty condenser detection and signaling
- protection against the effects of coolant shortage
- RS485 for connection with monitoring systems
- LOW bar MODE
- outside light indicating the chiller's operating conditions
- HP pressure switch
- chiller's sound insulation
- Igloo Professional inverter compressor drive
- overcurrent circuit breaker
- 230 V service socket with overcurrent protection
- shut-off valve downstream of the coolant tank
- thermal insulation of the coolant tank
- heating module for the generator switchgear section
- AlZn sheet metal housing, powder coated in Pure White structure
- set of shut-off connection valves with AVX
- built-in graphic control panel



Smart controller

Dynamic changes in environmental requirements entail changes in coolants and the use of substances with a lower GWP. Thanks to the use of the controller and the control panel, each unit can be set to work with one of several coolants loaded in the chiller's controller at startup. Thanks to proprietary software, the chillers have an internal diagnostic system that detects improper operating parameters, which allows avoiding shutdowns. Diagnostics is carried out several times and in the case of no improvement, the unit limits its output and communicates it with a sound signal. IGLOO inverter chillers are the perfect solution for multi-evaporator systems and systems with variable cooling power demand, and, importantly, they meet the new restrictive ecological and environmental requirements. All data on MULTICOOL+ chillers can be found at: www.agregaty.igloo.pl