



CAREL

μChiller

Solution for high-efficiency
commercial chiller/HP units

Connected Efficiency

The complete solution for chillers and heat pumps with DC and scroll compressors

Controller for the management of high-efficiency units with brushless DC compressors, guaranteeing compressor protection, reliability and high-efficiency.

Main controller specifications:

- Integrated management of BLDC compressors and electronic expansion valves
- Integrated connectivity to supervisory systems
- Dedicated app for installers and/or maintenance technicians
- User interface on graphic terminal

Comfort applications are today evolving significantly. This is due to various factors, such as growing demand for electricity, new regulations on the reduction of CO₂ emissions, and the increasing expectations of users in terms of indoor comfort.

In this complex scenario, CAREL is a strategic partner, supporting customers with dedicated solutions that exploit continuous technological innovations to integrate high-efficiency devices into their systems, essential for obtaining the highest possible energy performance in service sector applications and minimising environmental impact.

The µChiller fully meets all of the above requirements, providing complete control of high-efficiency units through integrated management of devices such as electronic expansion valves and brushless DC compressors. This ensures greater compressor protection and reliability and, at the same time, high unit efficiency.



Refrigerant availability

Compatibility with natural refrigerants and low-GWP mixtures to meet the needs of unit manufacturers in terms of regulations such as F-Gas, EPA, ...



Interaction with mobile devices

To reduce chiller/HP commissioning times and simplify maintenance activities.



Very high efficiency

Complete control of high-efficiency units, guaranteeing greater compressor protection and reliability and, at the same time, high unit efficiency.



APPLICA

The distinctive feature of the μ Chiller range is wireless connectivity with NFC (Near Field Communication) as standard, as well as Bluetooth on dedicated models, allowing interaction with mobile devices using the CAREL "APPLICA" app, making it easier to configure parameters and commission the unit in the field.



μ Chiller APPLICA

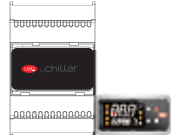
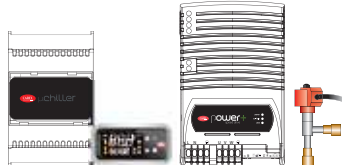
APPLICA for μ Chiller, available for smartphones and tablets, has been designed to revolutionise and simplify commissioning and maintenance of chiller/HP units, all simply using a mobile device. This is made possible by:

- A simple and intuitive user interface.
- No new technology or experience needed: smartphones and apps are commonly used by over 80% of the world's population.
- Wireless connectivity with devices via Bluetooth and NFC, thus avoiding the need for additional wiring in the field.

Available versions

µChiller has been designed on a flexible and scalable platform.

The table below summarises the technical specifications that differentiate the three models available.

	Standard	Enhanced	High Efficiency
			
Panel mounting	●		
DIN rail mounting	●	●	●
EVD EVO driver	●	●	●
Built-in driver for unipolar EEV		●	●
Number of refrigerant circuits managed	max 2 (with expansion)	max 2 (with expansion)	max 1
Number of compressors per circuit	max 2 (on-off only)	max 2 (on-off only)	max 2 (1 BLDC +1 on-off)
Modbus BMS RS485	●	●	●
LED display	built-in (panel) external (DIN)	external	external
pGDX	●	●	●
Clock	●	●	●
NFC	●	●	●
Bluetooth	● (specific models)	● (specific models)	● (specific models)
Power supply	24 V	24 V	24 V
Analogue inputs	6 (panel) 7 (DIN)	7	7
Digital inputs	5 (panel) 6 (DIN)	5 (panel) 6 (DIN)	5 (panel) 6 (DIN)
Analogue outputs	2	2	2
Digital outputs	5 (panel) 6 (DIN)	5 (panel) 6 (DIN)	5 (panel) 6 (DIN)

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