cosmotec

your cooling solutions

R513A
R1234yf



Compact Protherm

CNE-CNY / CNO-CNH

R513A

R1234yf

Wall-Mounted Air Conditioners

The compact and complete solution for electrical enclosures

Despite being designed with very compact dimensions, the range offers a wide variety of features to meet diverse market demands:

- Range up to 1000W
- Single template for all models
- High efficiency
- Wide temperature range
- Various power supply options
- Certifications for global export
- Low noise levels
- Electronic control on all models

Compact Protherm is the **cosmotec** line of air conditioners designed for installations requiring minimal space in terms of width or height. Its technical solutions make the air conditioners stand out as a comprehensive proposal for flexibility, reliability, and efficiency.



Sustainability

The use of **R513A refrigerant gas**, combined with efficiency and reduced refrigerant usage, minimizes resource consumption and CO2 impact, making Compact Protherm air conditioners “Green.”



The R1234yf refrigerant has a GWP of 0.5, in compliance with Regulation 2024/573, well below the limit of 150.

If, for safety reasons, the specific application does not allow the use of air conditioners with flammable refrigerants, the R513A version is available, with a GWP of 631, below the limit of 750, as specified in Annex IV of the Regulation.

R1234yf and R513A refrigerants offer high energy efficiency and environmental sustainability, do not deplete the ozone layer, and will remain available in the medium to long term, not only for production but also for maintenance.



Efficinecy

The growing need to reduce energy consumption has driven the development of air conditioners focused on maximizing efficiency while maintaining robustness, reliability, and compactness—all hallmark features of Compact Protherm air conditioners.



Compact Protherm units feature high EER values, resulting in economic savings, excellent performance, and reduced stress on components, thanks to:

- Proper design of components and airflow.
- The use of high-performance compressors and fans.
- Energy-saving functions (SEM and SEM2).

Easy and Fast Installation

Positioning
Inserts for easier and faster placement of the air conditioner.

Quick Connections
Quick connections for power supply and signals, even for UL Listed units.

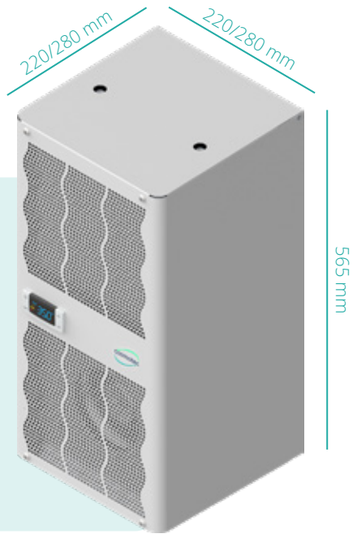
Test/Trial Function
Quick startup and component verification via the test/trial function.



Cooling Performance in Compact Dimensions

In a context where production space is valuable, solutions like enclosures with a depth of 300 mm/12” combine high performance and optimized layouts. However, the increased density of electronic components amplifies thermal issues, requiring better protection from overheating to ensure operational continuity.

Compact Protherm, the evolution of our bestseller, offers ideal thermal management for electrical enclosures with depths up to 300 mm, thanks to its 280 mm width and a compact height of 565 mm, making it perfect for integrated boxes in machine tools.



Flexibility

Applications
Compact Protherm air conditioners are designed for Indoor (CNE/CNY) and Outdoor (CNO/CNH) installations, covering the full range of applications.

Range and Power Supply
The wide range of available electrical power supplies (115V, 230V, 400V, 460V) makes Compact Protherm air conditioners the complete solution to meet all market demands.

Certifications
CE, UL Listed (only R513A version) certifications facilitate market access and eliminate customs issues, saving time and money on subsequent approvals while enhancing reliability.

Stulz Spa is authorized to conduct UL tests in its own laboratory and independently draft test reports.

Temperatures
The extended operating range allows installation in all industrial environments and ensures operation even in outdoor settings with critical temperatures.

Reliability

Condensate Drain
The integrated device in the unit ensures greater safety in the work environment by eliminating the presence of water, with no electrical consumption or additional components, thereby enhancing efficiency and reliability.

Protection Degree
They are suitable for operation in all industrial environments, ensuring the correct protection degree even in critical applications (IP54/55, Type 12/4/4x only R513A version).

Remote Monitoring
They can be connected to a Modbus monitoring system for direct communication with the air conditioner. This enables quick identification of potential issues, allowing for rapid service activation.

Sequencing
Some critical applications require redundancy in the cooling system. To meet this critical need, two Compact Protherm air conditioners can communicate with each other and manage:

- Automatic rotation to balance operating hours.
- Mutual support in case one unit has an alarm preventing its operation or if the cabinet temperature exceeds the threshold of the supporting unit.





XCB, a control for...

Greater Protection
The electronic board installed in the internal compartment offers adequate protection against external agents (dust, oils) present in the environment.

Energy Saving
Power consumption is reduced by managing the evaporator fan.

Reliability
System redundancy is possible through the sequencing function.

Precise Cooling
Hot spots are eliminated with the option to install a remote sensor.

Remote Monitoring
Through an RS485 serial port and Modbus RTU protocol.

Signaling
Includes an alarm exchange contact (NO and NC) and a remote/door open command.

Heating Function
Optionally available on the Outdoor version, providing cabinet heating if required.



Not just standard...

Options
- Special color
- INOX AISI304/316 structure
- Electric resistance (only CNO/CNH)
- Remote sensor

Accessories
- Air filter (only for painted version)
- Keypad (only CNO/CNH)
- Sequencing cable
- Modbus Serial Port

Applications


Hydrogen


Machine Tools


Automotive/E-Mobility


Energy Storage


Food & Beverage


Plastics


Chemical/Pharmaceutical


Printing

Application Examples

Cooling of electrical panels in the Food & Beverage sector.

In the Food & Beverage sector, production lines must be washed and sanitized to remove production residues. Electrical panels are made of stainless steel and have high levels of protection to withstand high-pressure washing. Compact Protherm conditioners are perfect for this sector, featuring a stainless steel coating and IP55/Type4/4x protection. Their dedicated layout and accessories, such as the 30° sloped roof, prevent dust and liquid deposits, ensuring hygiene and safety. The compact dimensions enable installation in applications with limited space, offering high performance, flexible power supply options, and certifications for global export.



Technical Features

General Characteristics

- Wall-mounted air conditioners
- Indoor application (CNE/CNY), Outdoor application (CNO/CNH)
- Cooling capacity: up to 1000W
- Various power supply options available (115V, 230V, 400/460V)
- Refrigerant: R513A - R1234yf
- XCB electronic board + display (display as an accessory for CNO/CNH)
- Standard general alarm and remote control contacts
- Certifications: CE, UL Listed (only R513A version)
- Condensate dissipator (CNE/CNY)
- Internal circuit protection rating: IP54/Type12 (only R513A version), IP55/Nema 4 (4x with stainless steel option only R513A version)
  SEM and SEM² functions
- Sequencing and Modbus (with dedicated accessories)
- Various options/accessories available

		CNE/CNY04 - CNO/CNH04				
Cooling capacity	@L35L35	450	500	445	495	490
Voltage	V,~	230,1		400,2	460,2	115,1
Frequency	Hz	50	60	50	60	60
Temperature limits [°C]	Indoor	+20/+45				+25/+40
	Outdoor CNE/CNY	+20/+55				+20/+50
	Outdoor CNO/CNH	-20/+55				-20/+50
Dimensions [mm]	Height	565				
	Width	280				
	Depth	220		278		220

		CNE/CNY07 - CNO/CNH07				
Cooling capacity	@L35L35	665	685	650	670	630
Voltage	V,~	230,1		400,2	460,2	115,1
Frequency	Hz	50	60	50	60	60
Temperature limits [°C]	Indoor	+20/+45				+25/+45
	Outdoor CNE/CNY	+20/+55				+20/+50
	Outdoor CNO/CNH	-20/+55				-20/+50
Dimensions [mm]	Height	565				
	Width	280				
	Depth	220		278		220

		CNE/CNY10 - CNO/CNH10				
Cooling capacity	@L35L35	1000	1075	975	1050	1000
Voltage	V,~	230,1		400,2	460,2	115,1
Frequency	Hz	50	60	50	60	60
Temperature limits [°C]	Indoor	+20/+45				+25/+45
	Outdoor CNE/CNY	+20/+55				+20/+50
	Outdoor CNO/CNH	-20/+55				-20/+50
Dimensions [mm]	Height	565				
	Width	280				
	Depth	220		278		220

cosmotec
your cooling solutions

STULZ S.p.A.
Via E.Torricelli 3
37067 Valeggio sul Mincio (VR)
Tel. +39 045.6331600
Fax +39 045.6331635

www.cosmotec.it
info@cosmotec-cooling.com