



your cooling solutions

R513A 

Compact Protherm CNE-CNO



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



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."



Among HFO refrigerants, **cosmotec** has chosen R513A for its air conditioners due to its unique characteristics.

- It belongs to the A1 safety class, as it is a **non-flammable gas**, requiring no special safety measures for installation in electrical enclosures and/or cabinets.
- It also offers excellent properties: a significantly **lower GWP value** compared to R134a (R134a: GWP = 1430, R513A: GWP = 631), **high energy efficiency**, and environmental sustainability.
- It does not harm the ozone layer** and is available in the medium to long term not only for production but also for maintenance.

R513A

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.

Kältemittel	CNE04U122080000		CNE07U122080000		CNE10U122080000	
	R134A	R513A	R134A	R513A	R134A	R513A
GWP						
Q.ty gas [kg]	0,205	0,22	0,26	0,275	0,25	0,25
Q.ty CO2 Eq. [Tonn]	293	139	372	174	358	158

Efficiency

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

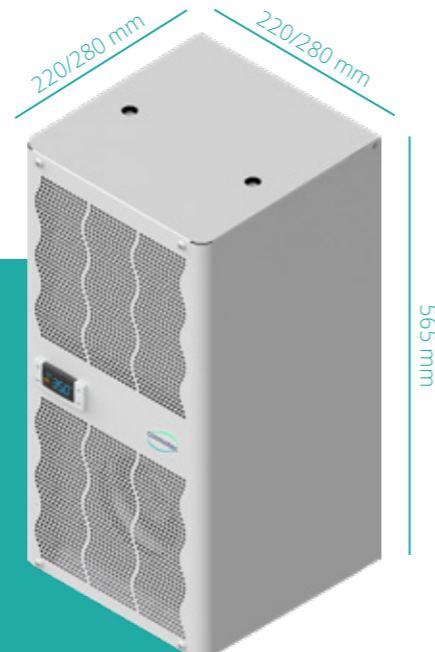
Quick startup and component verification via the test/trial function.



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) and Outdoor (CNO) 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, and EAC 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).

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...

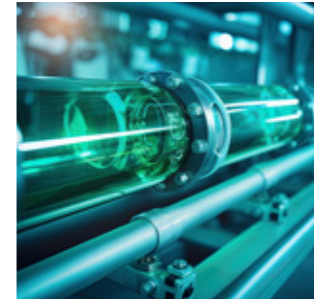
Options

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

Accessories

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

Applications



Hydrogen



Machine Tools



Automotive/E-Mobility



Energy Storage



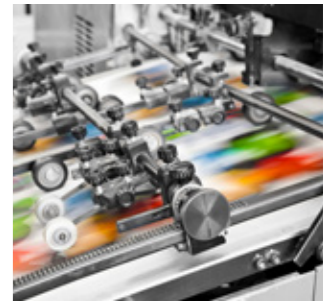
Food & Beverage



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), Outdoor application (CNO)
- Cooling capacity: up to 1000W
- Various power supply options available (115V, 230V, 400/460V)
- Refrigerant: R513a
- XCB electronic board + display (display as an accessory for CVO)
- Standard general alarm and remote control contacts
- Certifications: CE, UL Listed, EAC
- Condensate dissipator (CNE)
- Internal circuit protection rating: IP54/Type12, IP55/Nema 4 (4x with stainless steel option)
- SEM and SEM² functions
- Sequencing and Modbus (with dedicated accessories)
- Various options/accessories available

		CNE04 - CNO04				
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	+20/+55				+20/+50
	Outdoor CNO	-20/+55				-20/+50
Dimensions [mm]	Height	565				
	Width	280				
	Depth	220		278		220

		CNE07 - CNO07				
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	+20/+55				+20/+50
	Outdoor CNO	-20/+55				-20/+50
Dimensions [mm]	Height	565				
	Width	280				
	Depth	220		278		220

		CNE10 - CNO10				
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	+20/+55				+20/+50
	Outdoor CNO	-20/+55				-20/+50
Dimensions [mm]	Height	565				
	Width	280				
	Depth	220		278		220

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