



**CAREL**

## compactSteam

The compact steam humidifier for  
classy environments

**Connected** Efficiency

# compactSteam

Steam humidifier for personal health and comfort in prestigious residential environments, professional offices and small retail businesses.

- works on mains water;
- automatic water hardness compensation;
- models with capacity up to 10 lbs/hr (4.5 liters/hour), continuously adjustable;
- ON/OFF or proportional control;
- large display with unit status and diagnostics;
- versions for air ducts and direct in-room humidification.

compactSteam is a professional steam humidifier, controlled by a humidistat (not included), which can be placed in the most appropriate position in the room being humidified. It is as easy to install as any household appliance, requiring just a 110 or 220 V power supply, mains water supply and a water drain for refreshing the water.



The main features are:

- ordinary mains drinking water as the feedwater, without any treatment required;
- the program automatically manages water with different hardness, with the same universal steam cylinder;
- the water is automatically refreshed periodically for maximum hygiene and safety; the drain water is mixed with cold water so as not to exceed 140° F (60°C);
- the humidification capacity (up to 10 lbs/hr (4.5 liters/hour) is continuously adjusted to match actual demand;

All of the functions are managed automatically by the electronic controller, which includes a control panel with four buttons and a large display with both numbers and icons to show unit status, parameters and diagnostics.

compactSteam operates via an external humidistat or signal, which can be either ON/OFF or proportional (0 - 10 V). In the latter case, steam production is modulated continuously from 20% up to maximum capacity, so as to reflect actual demand.



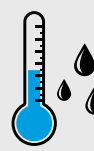
## Hygiene

If there is no demand for humidity for more than three consecutive days, the water is automatically drained to ensure maximum hygiene.



## Flexibility

compactSteam is available with a steam blower for in-room applications, or without a fan for direct applications in ducts.



## Environmental standards

The hot water drained for refreshing the water supply is mixed with cold water so as not to exceed a temperature of 140 °F (60 °C).

The water level in the cylinder is controlled via a fill solenoid valve and a drain pump; the concentration of salts in the water is managed completely automatically, so as to optimise the working life of the cylinder based on the hardness of the feedwater.

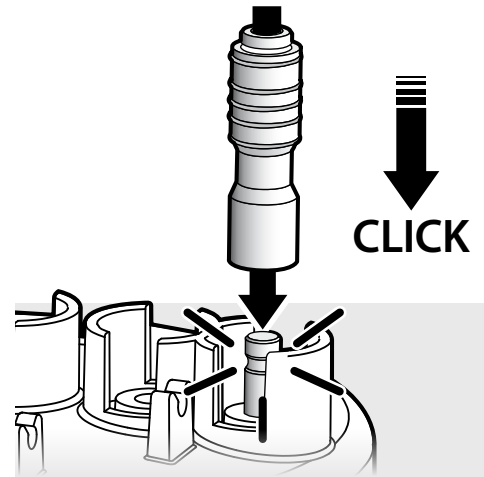
To facilitate the integration of compactSteam into HVAC systems, the electronic controller also includes a remote enabling input, a relay for remote alarm signalling, and can also be connected to a flow sensor, used for example to activate steam production based on fan operation in an air duct.



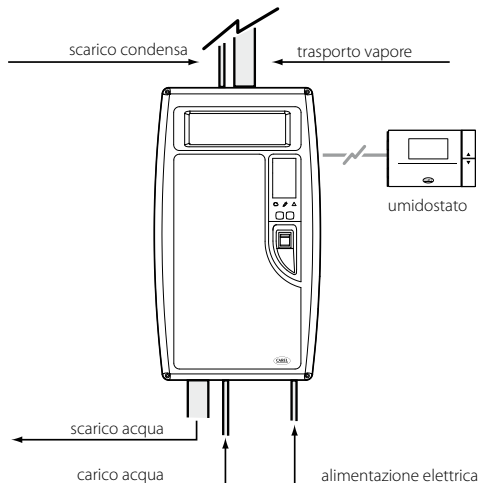
#### Steam blower for built-in installation

VRDCHA1000 - 110 V  
VRDCHA2000 - 220 V

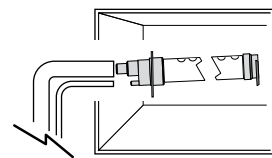
The remote blower fan switches on when the humidifier receives a steam request. When humidification is no longer necessary, the fan stops. The blower is designed to distribute the steam outward and slightly downward, so as to prevent condensation from forming on the ceiling. Behind the grill is a cleanable filter that protects the internal components of the appliance against dust and debris. The steam blower can be wall-mounted and deliver steam horizontally to the floor.



**Fast maintenance: quick connectors for the power supply ensure easy, fast and safe cylinder replacement.**



#### applicazione in condotta



#### applicazione a parete



#### Ideal humidity level

Automatic management of water salt concentration and foam.



#### Maximum capacity adjustment

To adapt to the specific characteristics of the environment, maximum steam production can be adjusted in steps of 5%.



#### Operating hours

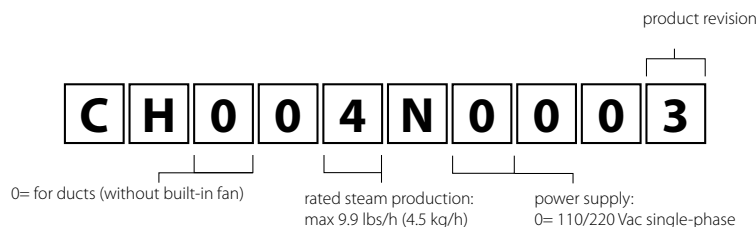
The maintenance timer indicates how long the cylinder has been operating, very useful for determining when it needs to be replaced.

## Table of technical specifications

Specifications	CH004N2003 (duct)	CHF04N2003 (room)
General		
Rated steam production (kg/h) (*)	9.9 lb/h (4.5 kg/h): 110/220 Vac single-phase 50/60 Hz - 3.38 kW	
Power supply voltage (*)	110 /220, 50/60 Hz single phase	
Power consumption (kW) (*)	1.7 kW or 3.38 kW	
Steam connection (mm)	22 mm	-
Max steam pressure (Pa/mmWC) (PSI/inWC)	950 Pa/95 mm WC 0.14 PSI / 3.7 in WC	-
Current (A) (*)	14	
Operating conditions	1 to 40 °C (33.8 to 104°F) 10 to 60 % RH	
Storage conditions	-10 to 70 °C (14 to 158°F)	
Ingress protection	IP20	
Range of modulation	20 to 100%	
Control type	ON/OFF and proportional 0 - 10 V	
Dimensions (HxWxD) (mm/inch)	600x341x204 mm (24"x14"x8")	
Water fill		
Feedwater specifications	3/4" G	
Instant flow rate (l/min)	0.6 l/min 0.16 gpm	
Conductivity limits (µS/cm)	100-1250 µS/cm	
Water drain		
Water drain connection (mm)	32 mm (1.25")	
Maximum drain temperature	< 60°C (< 140°F)	
Discharge flow-rate (l/min)	max. 25 l/min (max. 6.6 gpm) @50Hz max. 26.2 l/min (max. 7 gpm) @60Hz	

(\*): peak values may differ from the rated values. For sizing information see the technical manual.

## Part number



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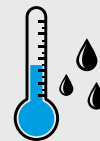
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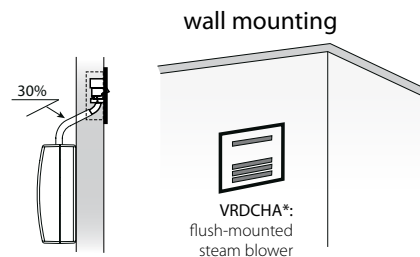
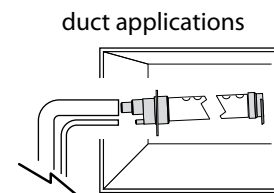
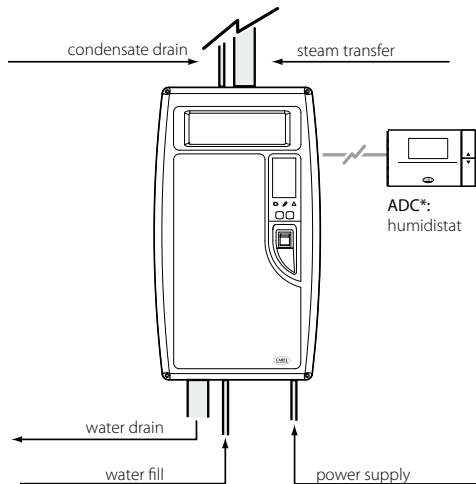
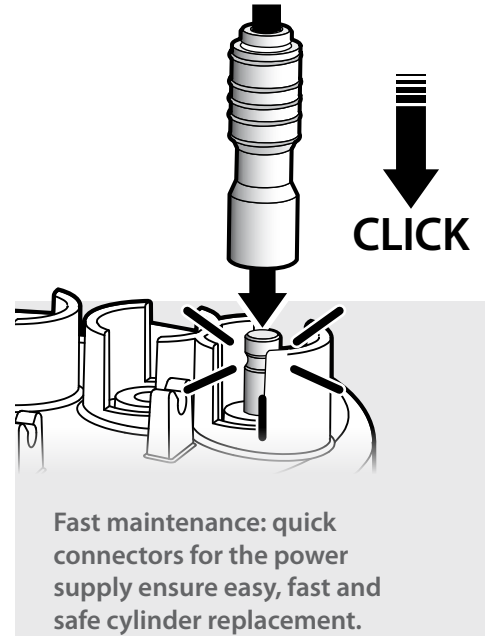
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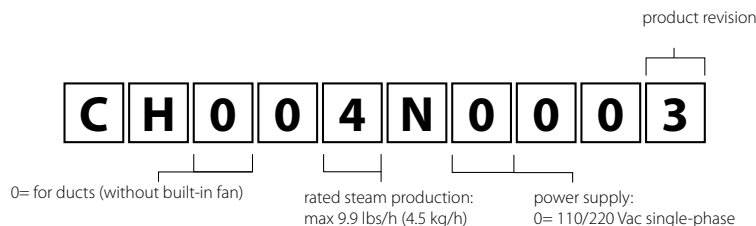
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