

High  
Efficiency  
Solutions.

CAREL



## ChillBooster

Booster for air-conditioning and  
refrigeration applications



# ChillBooster: evaporative cooling

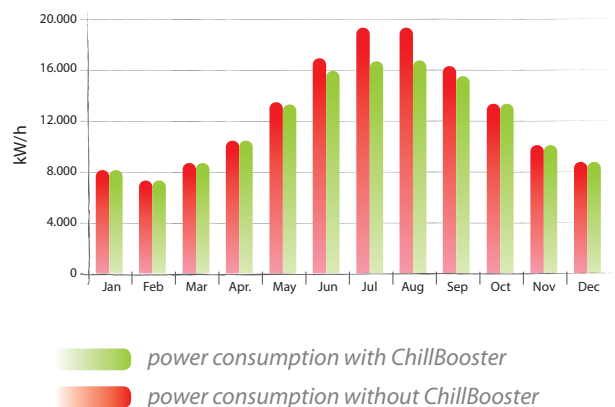
Evaporative cooler that works by atomising water into very fine droplets. The droplets evaporate spontaneously, removing heat from the air, which is thus humidified and cooled. The unit uses a paddle pump to pressurise the water, which is then atomised through special spray nozzles.

- Energy saving on chillers and drycoolers through evaporative cooling.
- ChillBooster provides that extra gear to handle peak demand on the hottest days of the year.

ChillBooster is an evaporative cooler used to increase the efficiency of chillers and drycoolers, as well as other appliances. ChillBooster cools the air before it comes into contact with the coil, thus lowering average condensing pressure. ChillBooster atomises water into very fine droplets that evaporate spontaneously, cooling the air. The coil is thus cooled by a flow of colder air and droplets of water, allowing more favourable operating conditions. This allows liquid coolers and condensers to deliver their rated capacity even during the hotter periods of the year, which often coincide with operation at maximum load. All without costly system oversizing.



Example of evaporative cooling on a chiller in a city in southern Europe



## Very low energy consumption

ChillBooster has extremely low power consumption: a system for drycoolers with an air flow-rate of 200,000 m<sup>3</sup>/h atomises 1000 l/h, with power consumption less than 0.7 kW!



## Ideal for retrofits

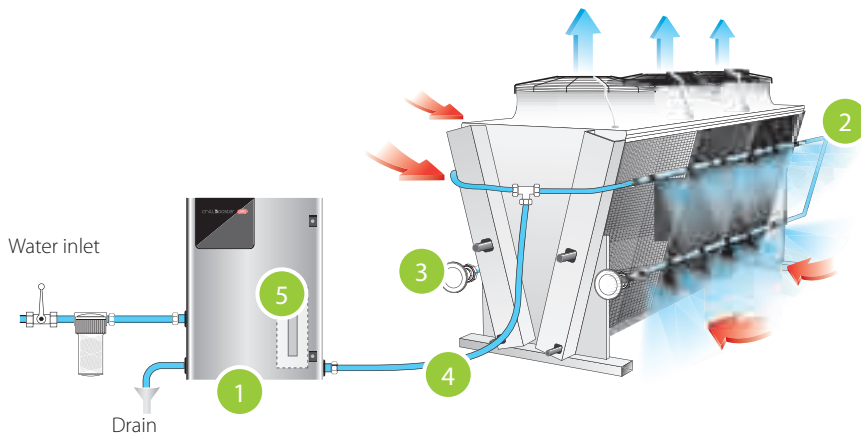
The IP55 pumping unit and easy-to-install modular system make ChillBooster ideal for retrofits on chillers, drycoolers and liquid coolers.



## Easy to install

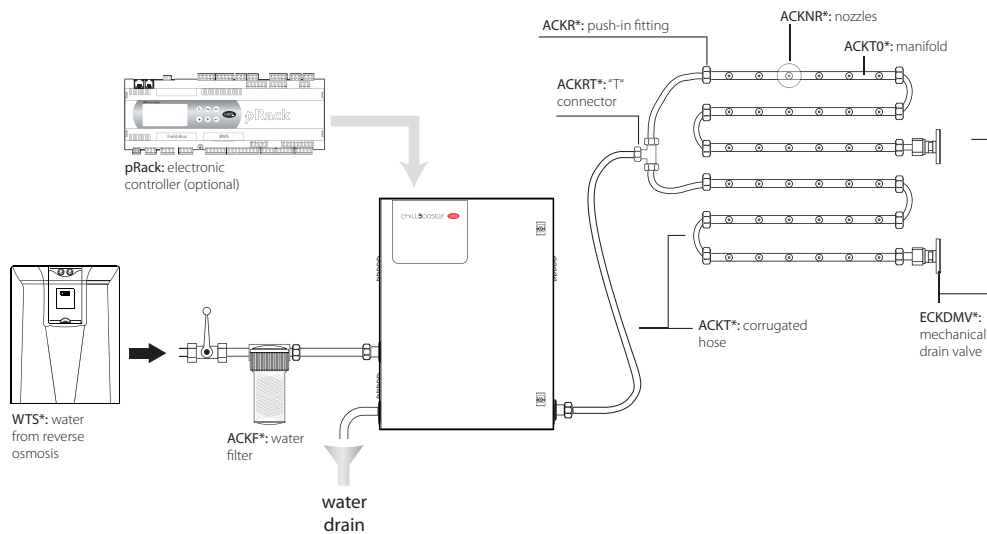
The water distribution system uses spray pipes available in various lengths, quick couplings and flexible connection pipes, making ChillBooster easy to install, without requiring special tools or welding equipment.

## Example diagram for a chiller or drycooler



- 1 pumping unit, ON/OFF control
- 2 modular stainless steel manifolds; spray nozzles
- 3 distribution system mechanical drain valve
- 4 connection hoses and metal fittings
- 5 UV lamp (optional)

## OVERVIEW DRAWING ChillBooster



### Residential

Ideal when combined with a chiller for air-conditioning spaces such as offices, apartments and homes.



### Retail

For air-conditioning in supermarkets, shopping centres and large stores, the unit increases performance, bringing savings.



### Hospitals

ChillBooster helps guarantee continuous service, savings and hygiene, all fundamental in these environments.



### Datacentres

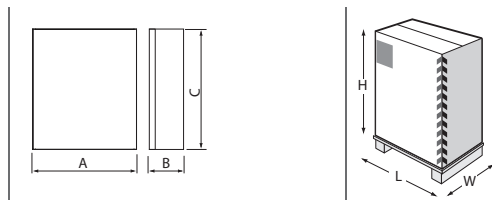
For room or process air-conditioning requiring the cooling of water or mixes of fluids, the unit increases capacity and performance, guaranteeing continuous operation of the equipment.

## ChillBooster table

Features	AC010****	AC050D****	AC100D****
Flow-rate (l/h)	100	500	1000
Power consumption	0.4	0.5	0.6
Cabinet temperature	5T40 °C (40-104 °F)		
Temperature-operated drain valve connection	pipe OD 10, ID 5		
Electrical specifications	230 V, 50/60 Hz (depending on the model)		
Certification	CE		
UV lamp duration (optional)	4000 h		
Ingress protection	IP55		
<b>Water fill</b>			
Connection	1/2" G female		
Pressure (min.-max.)	3-8 bars, 0.3-0.8 MPa, 40-115 Psi		
<b>Water drain</b>			
Connection	1/2" G female		
<b>Outlet</b>			
Connection	1/2" G female		
<b>Feedwater *</b>			
Type	drinkable and demineralised		
Electrical conductivity	<100 µS/cm		
Total hardness	<5 °fH (50 ppm CaCO3)		

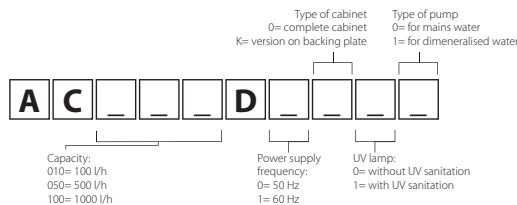
\* demineralised water is recommended, so as to limit fouling and minimise maintenance

## Dimensions (mm(inches)) and weights (kg(lbs))



Model	AxBxC	weight	LxWxH	weight
AC****0**	600x300x800 (23.62x11.82x31.50)	49 (108)	720x410x1020 (28.5x16x40)	52 (115)
AC****01*	600x300x800 (23.62x11.82x31.50)	53 (115)	720x410x1020 (28.5x16x40)	56 (125)
AC****K**	550x210x750 (21.65x8.30x29.53)	27 (60)	860x660x360 (34x26x14)	32 (70)
AC****K1*	550x210x750 (21.65x8.30x29.53)	32 (70)	860x660x360 (34x26x14)	37 (82)

## Unit code



## Components



### End-of-line valve

M1/2" GAS brass mechanical drain valve for draining water due to unit inactivity .



### Manifold

AlSi304 stainless steel manifolds, Ø20 mm, with threaded holes for nozzles; available with 7 holes (1052 mm), 13 holes (1964 mm) or 19 holes (2876 m).



### Quick fittings

Compression fittings for non-threaded Ø20mm pipes; brass or stainless steel.



### Hose

AlSi304 stainless steel corrugated hoses.



### Nozzles

Nozzles with 5, 7.5 or 15 kg/h capacity at 10 bars.

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