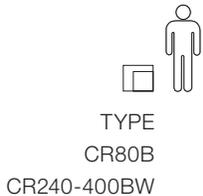




It's in the air ...

... controlling humidity
in wind turbines



TYPE CR80B, CR240BW and CR400BW

Description

Cotes supplies adsorption dehumidifiers that are specially designed to deal with the special needs for effective humidity control in modern wind turbines. The unique design ensures that these dehumidifier systems can be used in land-based as well as offshore installations. These Cotes systems have been installed in thousands of wind turbines, and have a proven track record for high quality and extreme reliability.

The CR80B model is in widespread use throughout the world, and has sufficient capacity for dehumidification duties in current wind turbines of most normal sizes. The CR240BW and CR400BW models are designed for use in locations with particularly high levels of humidity, and for the next generation of significantly larger wind turbines.

General product information

The special design of these Cotes adsorption dehumidifiers prevents the air filters from becoming blocked by the wet, salt-laden air prevalent in offshore installations. The large filter and/or filter cassette has an exceptionally long service life, configured to match the service intervals for the wind turbines themselves.

The general design is based on the fact that any salt present in air with a relative humidity of less than 70% is in the form of crystals, which can then be captured in the filter. This significantly reduces the negative impact of the salt on the dehumidifier itself as well as on the wind turbine tower and nacelle.

Land-based wind turbines:

- CR80B, with normal large filter, working below atmospheric pressure in the tower or nacelle

Wind turbines located on land and offshore

- CR80B-FC, with filter cassette, working below atmospheric pressure
- CR80B-FCS, with filter cassette, working below, at or above atmospheric pressure
- CR240BW, with filter cassette, working below, at or above atmospheric pressure
- CR400BW, with filter cassette, working below, at or above atmospheric pressure

Additional information

- Cabinet made of stainless steel
- High-efficiency rotor that is washable
- Simple, reliable and service-friendly design
- Ammeter for adjusting the flow of regeneration air (not available on CR80B models)
- Single-phase power supply, 230V AC

Effective control

Cotes has developed a number of special controller units designed for installation in Cotes dehumidifiers installed in wind turbines.

The dehumidifier is automatically turned on and off in order to maintain any designated relative humidity set point, as required to meet local conditions.

Mechanical DR10 hygrometers (including cable, connector and support) are often used with these models of Cotes dehumidifier systems.



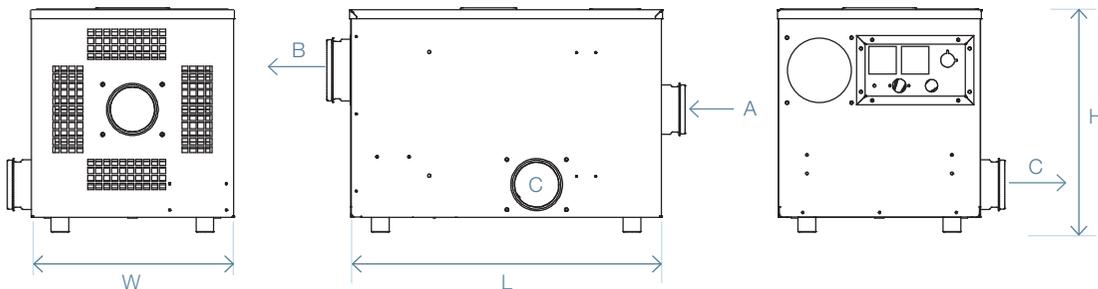
Middelgrunden wind farm, Denmark

Technical data

Type	Dry air nominal m ³ /h	Regeneration air Nominal m ³ /h	Voltage/ Phases	Regeneration air Heater kW	External Fuses A	External pressure dry air Pa	Capacity at 20°C, 60 % relative humidity Kg/h
CR80B	80	40	230/1N+PE	0.77	10	50	0.44
CR80B-FC	80	40	230/1N+PE	0.77	10	50	0.44
CR80B-FCS	80	40	230/1N+PE	0.77	10	50	0.44
CR240BW	240	40	230/1N+PE	1.00	10	50	0.80
CR400BW	400	60	230/1N+PE	2.00	10	50	1.50

Dimensions & weight

Type	L mm	W mm	H mm	Air inlet A Ø, mm	Dry air outlet B Ø, mm	Regeneration air outlet C Ø, mm	Weight kg
CR80B	385	313	293		80	50	15
CR80B-FC	422	313	293		80	50	15
CR80B-FCS	494	313	293	80	80	50	16
CR240BW	505	330	360	63	100	80	23
CR400BW	595	402	427	80	125	80	32



A: Regeneration air/Process air inlet
 B: Dry air outlet
 C: Regeneration air outlet

Distributor