

OTHER RANGES AVAILABLE IN OUR CATALOGUE



QBE

2 to 25kW
Air-cooled chillers
with rotary and scroll compressors



CWT

18 to 130kW
Air-cooled chillers
with scroll compressors



CWE/HWE

13 to 140kW
Air-cooled scroll compressor
chillers and heat pumps



CWB FC

80 to 240kW
Air-cooled chillers
with integrated freecooling



CDC

DRYCOOLERS (IN FREE-COOLING MODE)

FROM 300 TO 1200 KW

FRIULAIR®

Chillers

via Cisis, 36 - 33052 Cervignano del Friuli (Ud) Italy
Tel. +39 0431 939416 - Fax. +39 0431 939419
friulair@friulair.com - www.friulair.com

MADE IN ITALY

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DESCRIPTION

Friulair CDC range consists of air cooled water heat exchangers equipped with axial fans for outdoors installation dedicated to industrial and comfort cooling applications. For industrial applications, dry coolers are suitable for closed circuit cooling of various process fluids like food, power, process and general industries. CDC dry cooler family working in Free Cooling mode, consists of 11 models with cooling capacities ranging from 300 to 1200 kW. The first six models from CDC030 up to CDC060 are "table" shape type. The other ones from CDC070 up to CDC120 model are "V" shape type.

The Free Cooling units have to be considered an extension of the CWB-FC range and can be connected in series to units like CWB, CFT or CWV ranges where, due to the big cooling capacity demand, it is necessary to opt for cooling units that are physically combined with the standard chiller. If the requested cooling capacity do not fit with standard CDC models, Friulair s.r.l. sizes and selects the right dry cooler model according to the real needs of the customer.

Significant benefits are brought within the energy saving provided from the use of dry coolers instead of refrigerating compressors. The cooling process in dry coolers in free cooling mode is significant when the ambient temperature is lower than the coolant requested temperature.

In a world constantly focused on Green Solutions, CDC dry coolers boast further benefits as they allow to work in a closed and pressurized hydraulic circuit; differently from cooling towers, in fact, liquid leakage is avoided and the costs related to a constant water treatment and plant maintenance are reduced.

FRAME AND CABINET COVERING

Frames and cabinet covering materials are made of powder coated (standard RAL 7035) galvanized steel. This makes CDC suitable for outdoors installations and against harsh environments. The hydraulic section is external and easily accessible. The standard packing is plastic film on the "V" shape models and wooden crate on the "Table" shape models.

TECHNICAL DATA												400/3/50
S.I. (°C)		CDC030	CDC035	CDC040	CDC045	CDC050	CDC060	CDC070	CDC080	CDC090	CDC105	CDC120
Cooling capacity	[kW]	321,9	356,4	394,2	450,1	528,7	628,2	717,2	794,1	890,4	1037,1	1259,3
Water flow	[m³/h]	59,9	66,4	73,4	83,8	98,4	117	133,5	147,8	165,7	193,1	232,4
Air flow	[m³/h]	86630	162000	128550	139100	143720	208630	241880	209750	239840	293130	322110
Pressure drop [kPa]	[kPa]	74	64	37	54	44	60	82	66	84	77	65
N° of fans		4	6	6	6	6	8	10	8	10	14	14
Power consumption	[kW]	14,4	21,6	14,7	14,7	21,1	28,8	36	28,8	36	25,2	34,3
Adsorbed current	[A]	28,8	43,2	31,2	31,2	43,2	57,6	72	57,6	72	54,6	72,8
Power input	[V/ph/Hz]	400/3/50										
IP grade		54	54	54	54	54	54	54	54	54	54	54
Sound pressure level	[dB]	65	67	61	61	67	68	68	67	68	59	63
Length	[mm]	3530	5030	5030	5780	5780	7530	8030	8930	9280	9240	9240
Width	[mm]	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400
Height	[mm]	1565	1565	1565	1565	1565	1565	1565	1565	1565	2262	2262
Water connection	[inch]	3"	3"	4"	4"	4"	4"	4"	4"+4"	4"+4"	2x4"	2x4"

DATA REFERRED TO AC ON-OFF FANS. CONTACT OUR SALES OFFICES TO RECEIVE EC PERFORMANCE DATA AND FOR ANY CONFIGURATION DIFFERENT FROM THE STANDARD.

WORKING CONDITIONS:

- Ambient temperature: 0°C
- Inlet water temperature: 15°C
- Ethylene glycol: 30%

WORKING LIMITS

- Ambient temperature: -10°C / +45°C (min/max)
- Outlet water temperature: -10°C / +25°C (min/max)

Control Cabinet (optional)



Special electrical cabinets available on specific customer requirements.

3-way valve (optional)

To be installed as stand alone on user's plant or directly integrated in the CWB, CFT, CWV chillers ranges if purchased with CDC dry cooler.

Axial fans

Low noise fans are mounted on conveyors for an improved performance. Optional phase-cut speed regulators and electronic fans are available.



Adiabatic version

Adiabatic cooling mode is available, suitable for tropical installations. It boasts the following features:

- More cooling capacity in reduced dimensions
- Lower water consumption than classic cooling towers
- Energy saving
- Longer compressor(s) life when combined with a chiller (Free Cooling mode)



Electronic Controller

With a user friendly interface it manages ventilation, both with step or continuous fans speed in accordance with the outlet water temperature set-point.

Layout versions

- Horizontally mounted coils (standard, up to 600 kW)
- Vertically mounted coil (on request up to 600 kW)
- Compact "V" configuration (standard from 700 kW to 1200 kW)
- Anti-corrosion coils treatment (optional)

Other available optionals

- Fans cabling
- Electrical panel
- Water temperature control and microprocessor supervision directly mounted on the unit (*)
- Fans speed regulator (cut-phase for AC fans and 0-10 VDC for Electronic fans)
- Freecooling 3-way control valve
- Spray water kit for adiabatic systems
- Special fan motors - IP55 and/or High-temperature motors
- Safety isolating switch
- Internet gateway for remote monitoring (**)

(*) = available in the stand-alone version of CDC

(**) = only if CDC is purchased together with CWB, CFT or CWV chillers.