

FRIULAIR®

Chillers

SOME OTHER UNITS AVAILABLE FROM OUR PREMIUM LINE

QBE



LIQUID CHILLERS
FROM 2 TO 25 KW

CWT



LIQUID CHILLERS
FROM 7 TO 128 KW

CWE/HWE



LIQUID CHILLERS/HEAT PUMPS
FROM 13 TO 140 KW

CWB/CWB FC



LIQUID CHILLERS
FROM 80 TO 570 KW



CDC

DRYCOOLERS (IN FREE-COOLING MODE)

FROM 300 TO 1200 KW

Архангельск (8182)63-90-72
Астана (7172)727-132
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06

Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Липецк (4742)52-20-81

Киргизия (996)312-96-26-47

Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16

Россия (495)268-04-70

Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13

Казахстан (772)734-952-31

Сургут (3462)77-98-35
Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Ярославль (4852)69-52-93

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DESCRIPTION

Friulair CDC range consists of air cooled water heat exchangers equipped with axial fans for outdoor installation dedicated to industrial and comfort cooling applications. For industrial applications, dry coolers are suitable for closed circuit cooling of various process liquids like food, power, process and general industries.

CDC dry cooler family (in Free-Cooling mode) consist of 11 basic models with cooling capacities ranging from 300 to 1200 kW. The first six models, from CDC030 up to CDC060, are "table" shape type. From CDC070 up to CDC120 model, are "V" shape type.

The Free-Cooling modules arise to be the extension of our CWB-FC range, and can be connected in series to our big units like CWB or CWV or CFT where, due to the big cooling capacity, it is necessary to develop cooling units that are physically disconnected from the rest of the refrigerating machine, intended as a standard chiller.

If requested cooling capacity do not fit with standard CDC models, FRIULAIR s.r.l. is ready to dimension and select the the right dry cooler model according to the real needs of the customer.

The concept must be: if ambient temperature is lower than coolant requested temperature, customer will take very big economic advantage due to the energy saving provided from dry cooler instead of running refrigerant compressors (Free Cooling).

With a world that is constantly focused on Green Solutions, another advantage of installing our CDC is that they allows to work in a closed and pressurized hydraulic circuit; this concept, unlike cooling towers, avoid any liquid leakage and the reduce the cost of constant water treatment and plant maintenance.

Each unit is individually tested in factory to guarantee maximum performance.

FRAME AND CABINET COVERING:

All frame and cabinet cover material are made of galvanized steel, powder coated (standard RAL 7035). This makes CDC suited for outdoor installation and for harsh environments.

The hydraulic section is external and always easily accessible.

The standard packing is made up of a protective plastic film on the "V" shape models, while it is with 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"

THESE DATA ARE CONSIDERED WITH AC FANS, On-Off. PLEASE CONTACT OUR OFFICES TO GET PERFORMANCE DATA WITH EC FANS AND FOR ANY SPECIAL CONFIGURATION OF THE ELECTRICAL PART YOU MAY NEED

REFERENCE 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)

Electrical board (option)



Special electrical panels developed on specific customer requirements.

3-way valve (option)

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

Axial fans

Low noise fans, mounted on conveyors for improved performance.

Phase-cut speed regulators or EC fans (inverter) are available as an option.



Adiabatic version (option for tropical installations)

- More cooling capacity in smaller 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 at step or with continuous speed of the fans, in accordance with the outlet water temperature set-point.

Layout version

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

Accessories

- 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 EC 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 supervision (**)

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

(**) = only if CDC is sold together with one of our chillers of the range CWB or CWV or CFT

Coil Heat-Exchanger

Coils design provides excellent heat transfer and minimum water pressure drops. Standard construction is copper tubes and aluminium fins. Different anti-corrosion treatments are available as an option. Design pressure of the coils is 6 bar. Each heat exchanger is leak tested with dry air before leaving our factory.