OPTIONS

Single P2 Pump	P2
Single P3 Pump	P3
Double P2 Pump	D2
Double P3 Pump	D3
Pressurized water wank	TP
Condenser anti-corrosion treatment	OEC
Shut-off compressors valves on suction and discharge	VSC
Evaporator anti-freeze heater	RA1
Evaporator and pump anti-freeze heaters	RA2
Evaporator, pump and tank anti-freeze heaters	RA3
Electrical switchboard anti-condensation heater	RS
Double set point (from MODBUS and/or keyboard)	WE
Continuous fans speed control - phase cut type (minimum ambient temperature -8.0°C)	CA
230V electric service plug (in the electric cabinet)	EBS
Compressors softstarters	SFS [1]
Compressors acoustic shields	AI1
Condensers air filters	FP
Wind baffles kit	FWB
Flanged water connections kit (EN1092-1)	WC1
Threaded water connections kit (GAS)	WC2
Control panel roof kit	FPR
Rubber anti-vibration mountings for no tank units	FA1
Rubber anti-vibration mountings for units with tank	FA2
Automatic water filling kit	WF
Gateway for remote communication	ENB
Remote panel kit	ER
Barrier bag	PBB
Wooden base	PWB
Wooden crate (only for CFT 100÷200)	PWC

• [1] Not available on all models. Contact our company.

SOME OTHER UNITS AVAILABLE IN OUR PREMIUM LINE

QBE

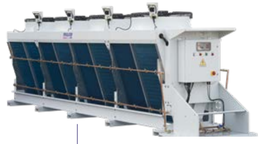
2 to 25kW
Air-cooled chillers
with rotary and scroll compressors

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

300 to 1200 kW
Drycoolers
also adiabatic system available

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
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
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
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

Киргизия (996)312-96-26-47
Россия (495)268-04-70
Казахстан (772)734-952-31

https://friulair.nt-rt.ru/ || fur@nt-rt.ru

FRIULAIR Chillers

CFT

AIR-COOLED SCROLL COMPRESSOR CHILLERS

from 100 to 300 kW

CFT

DESCRIPTION

The CFT range consists on air cooled water chillers with axial fans suitable for outdoor installations.
The family comprises 8 basic models with cooling capacities ranging from 100 to 300 kW.

STRUCTURE

Frame and cabinet are made up of a galvanized steel poweder coated. This makes CFT suitable for outdoor installations and harsh environments.
The compressor cabinet is separate from the fan's section and is accessible on three sides to make control and maintenance easy.
The hydraulic section is also easily accessible.

COMPRESSORS

The compressors are scroll type filled with lubricant oil. They are equipped with a crankcase heater, a check valve and are mounted on rubber anti-vibration blocks, protected by an electronic device controlling phase sequences to avoid any contrary rotation. Finally, an amperometric thermal protector is installed.

CONDENSERS

The microchannel condensers employed are more efficient and require a lower refrigerant charge (up to 35% less) compared to the traditional tube and fins type, while the alluminium structure avoids any galvanic risk.
An e-coating treatment, protecting the unit from UV and corrosion, is also available as optional.

FANS

Fans are equipped with 6 pole, axial motors, low noise curved blades to improve rotation speed and a protection grid.
They are equipped with internal thermal protection.
When ambient temperature is very low or when the unit operates with a reduced load, the option continuous fan speed regulation is available. Rotation speed is then regulated according to the condensing pressure thanks to a pressure transducer.

ELECTRONIC EXPANSION VALVE

CFT units are fitted with electronic expansion valves.
These valves grant the best performance of the unit, a big flexibility against different working conditions and a safe control of the gas superheating, highly important for the protection of the compressor and for the unit reliability.

HYDRAULIC CIRCUIT

The hydraulic circuit is highly customizable according to customer's requirements.
CFT are supplied for standard with water strainer and inlet/outlet galvanized steel pipes.

REFRIGERATION CIRCUIT

The refrigeration circuit is made up of high quality materials conforming to directive 2014/68/EU. It includes a dehydrator filter, a solenoid valve on liquid line, a liquid sight glass flow, an electronic thermostatic expansion valve, a manual reset, a high pressure safety switch, a high and a low pressure transducer, a HP and a LP refrigerant gauges and pressure plugs.

EVAPORATOR

The evaporator is a brazed stainless steel plates type. This heat-exchanger is equipped with a water differential pressure switch to protect it against low water flow issue and icing.
Units from CFT230 to CFT300 boast a double refrigeration circuit with one hydraulic circuit.
This configuration is very efficient with partial loads compared to independent evaporator versions.

MICROPROCESSOR CONTROLLER

A single electronic controller in order to reduce spare parts. It is one of the best in the market and different options allow a customized software. It displays the unit operation at any time in order to control the water temperature and the current temperature, necessary especially in case of partial or total water flow blockages and it also indicates which safety switch has triggered. It is possible to read and set data from customers pc through the IP address of the unit. The RS485 port with Modbus RTU communication protocol is installed as standard while the LAN/Ethernet connection is optional.

MAIN FUNCTIONS

- Ambient and water inlet and outlet temperature display
- Blocks display using alphanimeric codes and full description
- Management of one or two pumps
- Water differential pressure alarm delay at the start-up
- Operating counter for compressors
- Compressors and pumps automatic alternation
- No simultation activation of the compressors
- Anti-freeze protection
- Alarm reset
- Remote alarm and on/off remote alarm available via clean contact in terminal block

CONTROL PANEL

The control panel complies with EN 60204 CE and is equipped with a door lock which blocks the access to the control panel during operation, and a watertight door to access the electronic control. It includes circuit breaker protectors and contactors for compressors, fans and a pump as optional, autotransformers and compressor rotation control devices; the wires are identified.

		CFT	100	115	130	160	180	200	230	260	280	300
PERFORMANCES	[1] [2]											
Cooling capacity		[kW]	102.18	118.93	130.23	166.41	179.47	196.15	240.44	257.05	286.66	308.74
Compressors power input		[kW]	30.17	43.91	49.60	55.46	61.56	72.75	80.76	90.08	110.75	132.19
Total power input		[kW]	33.97	47.71	53.40	61.16	67.26	78.45	88.36	97.68	118.35	139.79
Total absorbed current		[A]	57.36	77.52	87.43	101.17	115.46	130.66	144.73	158.42	192.04	227.23
Energy efficiency		EER	3.01	2.49	2.44	2.72	2.67	2.50	2.72	2.63	2.42	2.21
Seasonal energy efficiency rating	[*]	SEPR HT	5.00	5.13	5.21	5.11	5.32	5.31	5.54	5.53	5.47	5.32
Water flow		[l/h]	17574	20455	22399	28622	30869	33739	41356	44213	49306	53104
Evaporator pressure drop		[kPa]	60	79	47	73	45	52	43	48	39	44
ELECTRICAL DATA	[2] [3]											
Maximum power input (total)		[kW]	48,16	62,66	66,75	81,31	87,83	98,40	116,74	125,32	142,08	158,83
Maximum absorbed current (total)		[A]	78,41	100,19	108,46	132,65	146,28	162,55	188,36	200,37	228,94	257,51
Starting current		[A]	254,10	263,99	345,13	359,18	345,99	385,13	355,17	364,18	462,60	484,03
Fan power		[kW]	1,90	1,90	1,90	1,90	1,90	1,90	1,90	1,90	1,90	1,90
Fan current		[A]	3,90	3,90	3,90	3,90	3,90	3,90	3,90	3,90	3,90	3,90
Number of fans		[#]	2	2	2	3	3	3	4	4	4	4
Power supply		[V/Ph/Hz]	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
IP protection degree		---	IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP54
TECHNICAL DATA												
N° of compressors		[#]	2	2	2	2	2	2	4	4	4	4
N° of refrigerant circuits		[#]	1	1	1	1	1	1	2	2	2	2
Air flow		[m³/h]	44.000	44.000	44.000	66.000	66.000	66.000	88.000	88.000	88.000	88.000
Sound pressure level	[4]	[dbA]	58,0	56,5	58,0	58,5	57,5	59,0	61,0	59,5	60,5	61,0
Water connections size (Grooved)		[inch]	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	3"	3"	3"	3"
Width		[mm]	1.104	1.104	1.104	1.104	1.104	1.104	2.204	2.204	2.204	2.204
Depth		[mm]	3.004	3.004	3.004	4.004	4.004	4.004	3.004	3.004	3.004	3.004
Height		[mm]	1.990	1.990	1.990	1.990	1.990	1.990	1.990	1.990	1.990	1.990
Net weight - standard version		[kg]	897	1167	1186	1296	1346	1356	2088	2104	2163	2169
OPTION												
Tank capacity TP		[dm³]	470	470	470	470	600	600	600	600	600	600
Expansion vessel capacity		[dm³]	18	18	18	18	18	18	18	18	18	18
Pump power input P2		[kW]	2,55	3,44	3,44	3,44	4,52	6,09	6,09	6,09	6,09	6,09
Pump absorbed current P2		[A]	4,70	6,40	6,40	6,40	8,70	10,60	10,60	10,60	10,60	10,60
Pump power input P3		[kW]	3,44	4,52	4,52	6,09	6,09	8,26	8,26	8,26	8,26	8,26
Pump absorbed current P3		[A]	6,40	8,70	8,70	10,60	10,60	13,60	13,60	13,60	13,60	13,60

- [*] Data in accordance with European Regulation (EU) 2016/2281 for eco-design requirements
- [1] Data referred to: water temp. in/out: 12/7°C - ambient air temp. 35°C
- [2] Data referred to the unit without pump
- [3] Data related to the heaviest condition allowed, without the intervention of the safety devices
- [4] Data referred to 10m and at an height of 1,5 m in open field

OPERATING LIMITS

- Ambient temperature (without condensing control): +20°C/+43°C
- Ambient temperature (with condensing control): -8°C/+43°C
- Outlet water temperature: -10/+25°C