

CHILLERS

i-FX-W (1+i) 1402 - 4652

High efficiency water cooled chiller
488-1784 kW



Version

CA High energy efficiency units

Features

HIGH EFFICIENCY

Unit with high efficiency and reduced energy consumption, thanks to the inverter technology, contributing to lower operating costs and therefore achieving a quick return on investment.

FLEXIBILITY

Unit featured by remarkable application flexibility thanks to the inverter technology which allows to obtain, taking in consideration the cooling capacity needed, the best result about costs/performance and maximum efficiency.

TOTAL VERSATILITY

Unit designed gathering in a single circuit a compressor with step regulation and one working with inverter, in order to guarantee the best answer to plant necessities both at full and at part loads.

MAXIMUM COMPACTNESS

Maximum compactness to achieve a very high flexibility in the design process and installation operations, offering a premium solution in case of reduced clearances or when retrofitting existing installations.

Accessory

- Touch Screen visual display
- VPF (Variable Primary Flow) system
- Set-up for remote connectivity with ModBus/Echelon protocol cards
- Several devices for condensation's control

Single circuit indoor unit for the production of chilled water, with fixed speed and variable speed (Inverter Driven) screw compressors optimized for R134a, electronic expansion valve, high performing shell and tube condenser and shell and tube flooded evaporator, both designed and produced by Climaveneta. These technological solutions enhance the EER values over 5,7 at Eurovent standard conditions.

The resulting unit is extremely compact, thanks to the strategic layout, designed without base, frame and panels.

Controls

W3000TE

The brand new W3000TE controller offers advanced functions and algorithms. The large format keyboard and the wide LCD display favour an easy and safe access to the machine setup and a complete view of unit's status. The assessment and intervention on the unit is managed through a multi-level menu, with selectable user's language. The led icons immediately show the operating status of the circuits, as well as of the fans and of the water pumps (if present). An optional extra is the touch screen interface: 7.0" WVGA colour display with adjustable LED backlight and front USB port. The touch screen technology allows intuitive navigation between the various screens, safe access to the data with a three-level password protection as well as the graphic display of the performance of some monitored measurements.

The diagnostics comprises a complete alarm management system, with "black box" (via PC) and alarm log functions (via display or also PC) for a better analysis of the unit performance.

For the systems made of several units, the adjustment of the resources is performed by optional proprietary devices.

Consumption metering and performance measurement are possible as well. Supervision can be easily developed via proprietary devices or the integration in third party systems by means of the most common protocols as ModBus, Bacnet-over-IP, Echelon LonWorks, Bacnet MS/TP protocols.

Compatibility with the remote keyboard managing up to 8 units.

The presence of the programmable timer allows the creation of an operating profile containing up to 4 typical days and 10 time bands.

The control is characterized by the continuous modulation of the unit capacity, based on PID algorithms and referring to the water delivery temperature.

Optionally (VPF package), capacity modulation can be integrated with hydraulic flow modulation, thanks to inverter-driven pumps and to specific resources for the hydraulic circuit.





i-FX-W (1+i)			1402	1752	1902	2152	2602
Power supply		V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
PERFORMANCE							
COOLING ONLY (GROSS VALUE)							
Cooling capacity	(1)	kW	488	610	661	752	917
Total power input	(1)	kW	87,6	107	116	132	161
EER	(1)	kW/kW	5,57	5,70	5,69	5,68	5,68
ESEER	(1)	kW/kW	8,52	8,57	8,47	8,62	8,63
COOLING ONLY (EN14511 VALUE)							
Cooling capacity	(1)(2)	kW	487	608	659	750	914
EER	(1)(2)	kW/kW	5,37	5,49	5,48	5,47	5,48
ESEER	(1)(2)	kW/kW	7,46	7,51	7,40	7,53	7,53
Cooling energy class			-	-	-	-	-
ENERGY EFFICIENCY							
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)							
Ambient refrigeration							
Prated,c	(7)	kW	487	608	659	750	914
SEER	(7)(8)		7,64	7,62	7,53	7,65	7,72
Performance ηs	(7)(9)	%	298	297	293	298	301
EXCHANGERS							
HEAT EXCHANGER USER SIDE IN REFRIGERATION							
Water flow	(1)	l/s	23,34	29,16	31,62	35,96	43,84
Pressure drop	(1)	kPa	30,5	34,7	33,8	33,2	37,1
HEAT EXCHANGER SOURCE SIDE IN REFRIGERATION							
Water flow	(1)	l/s	27,44	34,18	37,07	42,16	51,41
Pressure drop	(1)	kPa	37,4	35,4	41,7	41,5	38,7
REFRIGERANT CIRCUIT							
Compressors nr.		N°	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1
Refrigerant charge		kg	136	170	188	212	264
NOISE LEVEL							
Sound Pressure	(3)	dB(A)	80	79	79	81	81
Sound power level in cooling	(4)(5)	dB(A)	98	98	98	100	100
SIZE AND WEIGHT							
A	(6)	mm	2950	3350	3350	3350	4500
B	(6)	mm	1380	1450	1450	1480	1420
H	(6)	mm	2000	2270	2270	2270	2270
Operating weight	(6)	kg	3340	4190	4280	4680	6420

Notes:

1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger water (in/out) 30°C/35°C.

2 Values in compliance with EN14511-3:2013.

3 Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.

4 Sound power on the basis of measurements made in compliance with ISO 9614.

5 Sound power level in cooling, indoors.

6 Unit in standard configuration/execution, without optional accessories.

7 Seasonal energy efficiency of the cooling environment [REGULATION (EU) N. 2016/2281]

8 Seasonal space heating energy index

9 Seasonal energy efficiency of the space cooling

The units highlighted in this publication contain HFC R134a [GWP₁₀₀ 1430] fluorinated greenhouse gases.

i-FX-W (1+i)			3002	3402	3852	4252	4652
Power supply		V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
PERFORMANCE							
COOLING ONLY (GROSS VALUE)							
Cooling capacity	(1)	kW	1049	1189	1351	1486	1637
Total power input	(1)	kW	184	206	233	260	289
EER	(1)	kW/kW	5,71	5,76	5,79	5,71	5,66
ESEER	(1)	kW/kW	8,55	8,56	8,60	8,44	8,39
COOLING ONLY (EN14511 VALUE)							
Cooling capacity	(1)(2)	kW	1046	1186	1348	1482	1632
EER	(1)(2)	kW/kW	5,52	5,58	5,62	5,52	5,47
ESEER	(1)(2)	kW/kW	7,59	7,65	7,74	7,49	7,44
Cooling energy class			-	-	-	-	-
ENERGY EFFICIENCY							
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)							
Ambient refrigeration							
Prated,c	(7)	kW	1046	1186	1348	1482	1632
SEER	(7)(8)		7,84	7,77	7,89	7,55	7,60
Performance ηs	(7)(9)	%	306	303	307	294	296
EXCHANGERS							
HEAT EXCHANGER USER SIDE IN REFRIGERATION							
Water flow	(1)	l/s	50,15	56,88	64,63	71,06	78,30
Pressure drop	(1)	kPa	37,5	31,9	30,9	37,3	45,3
HEAT EXCHANGER SOURCE SIDE IN REFRIGERATION							
Water flow	(1)	l/s	58,76	66,56	75,57	83,27	91,86
Pressure drop	(1)	kPa	30,0	33,3	29,6	35,9	29,5
REFRIGERANT CIRCUIT							
Compressors nr.		N°	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1
Refrigerant charge		kg	289	328	372	410	450
NOISE LEVEL							
Sound Pressure	(3)	dB(A)	81	80	80	82	82
Sound power level in cooling	(4)(5)	dB(A)	100	100	100	102	102
SIZE AND WEIGHT							
A	(6)	mm	4500	4600	4650	4650	4650
B	(6)	mm	1420	1450	1510	1510	1510
H	(6)	mm	2270	2350	2500	2500	2500
Operating weight	(6)	kg	7260	7960	8490	8580	8970

Notes:

- 1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger water (in/out) 30°C/35°C.
 - 2 Values in compliance with EN14511-3:2013.
 - 3 Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
 - 4 Sound power on the basis of measurements made in compliance with ISO 9614.
 - 5 Sound power level in cooling, indoors.
 - 6 Unit in standard configuration/execution, without optional accessories.
 - 7 Seasonal energy efficiency of the cooling environment [REGULATION (EU) N. 2016/2281]
 - 8 Seasonal space heating energy index
 - 9 Seasonal energy efficiency of the space cooling
- The units highlighted in this publication contain HFC R134a [GWP₁₀₀ 1430] fluorinated greenhouse gases.
 Certified data in EUROVENT

