# 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 tecnology which allows to obtain, taking in consideration the cooling capacity needed, the best result about costs/performances 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,

# Controls

designed without base, frame and panels.

# 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 staus. 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.











PERFORMÁNCE COOLING ONLY (GROSS VALUE) COOLING ONLY (GROSS VALUE)  (1) kW 488 610 661 752 91: Total power input (1) kW 87,6 107 116 132 16: EER (1) kW/kW 5,57 5,70 5,69 5,68 5,6 ESEER (1) kW/kW 8,52 8,57 8,47 8,62 8,6 ESEER (1) kW/kW 8,52 8,57 8,47 8,62 8,6  COOLING ONLY (EN14511 VALUE)  COOLING ONLY (EN14511 VALUE)  COOLING ONLY (EN14511 VALUE)  COOLING ONLY (EN14511 VALUE)  EER (1)(2) kW/kW 5,37 5,49 5,48 5,47 5,4 ESEER (1)(2) kW/kW 5,37 5,49 5,48 5,47 5,4 ESEER (1)(2) kW/kW 7,46 7,51 7,40 7,53 7,5 Cooling energy class	PERFORMANCE COOLING ONLY (GROSS VALUE) Cooling capacity ( EER ( ESEER ( COOLING ONLY (EN14511 VALUE) Cooling capacity (1) EER (1) ESEER (1) Cooling energy class ENERGY EFFICIENCY SEASONAL EFFICIENCY IN COOLING (Reg. EL Ambient refrigeration Prated, c (7) Performance ηs (7) EXCHANGERS	1) kW 1) kW/kW 1) kW/kW 1) kW/kW (2) kW/kW (2) kW/kW (2) kW/kW (3) kW/kW (4) kW/kW	488 87,6 5,57 8,52 487 5,37 7,46	610 107 5,70 8,57 608 5,49	661 116 5,69 8,47 659 5,48	752 132 5,68 8,62 750 5,47	917 161 5,68 8,63 914 5,48 7,53
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SEER   (1)   kW/kW   8,52   8,57   8,47   8,62   8,68	COOLING ONLY (EN14511 VALUE) Cooling capacity (1) ER (1) SSEER (1) Cooling energy class ENERGY EFFICIENCY EASONAL EFFICIENCY IN COOLING (Reg. EL INDIGHT refrigeration Frated,c (7) EEER (7) Eefformance ηs (7) EXCHANGERS	(2) kW (2) kW/kW (2) kW/kW (2) kW/kW (3) 2016/2281) (7) kW (8)	487 5,37 7,46	8,57 608 5,49	659 5,48	8,62 750 5,47	914 5,48 7,53
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1	Cooling capacity   (1)	(2) kW/kW (2) kW/kW J 2016/2281) 7) kW (8)	5,37 7,46 -	5,49	5,48	5,47	5,48 7,53
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Sound power level in cooling         (4)(5)         dB(A)         98         98         98         100         100           SIZE AND WEIGHT         A         (6)         mm         2950         3350         3350         3350         450           B         (6)         mm         1380         1450         1450         1480         142           H         (6)         mm         2000         2270         2270         2270         2270		3) dR(Δ)	80	70	70	81	81
STATE AND WEIGHT							100
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H (6) mm 2000 2270 2270 2270 2270 2270							1420
	•	,					2270
	•						6420
lotes: Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger water (in/out) 30°C/35°C.	lotes:	,			4200	4000	0-120

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 COOLIN	G (Reg. EU 20	16/2281)					
Ambient refrigeration	<del>_</del>						
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 R	EFRIGERATIO	N					
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 I	N REFRIGERA	TION					
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
В	(6)	mm	1420	1450	1510	1510	1510
Н	(6)	mm	2270	2350	2500	2500	2500
Operating weight	(6)	kg	7260	7960	8490	8580	8970

- Operating weight

  (6) kg 7260 7960 8490

  Notes:

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

  Values in compliance with EN14511-3:2013.

  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.

  Sound power level in cooling, indoors.

  Unit in standard configuration/execution, without optional accessories.

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

  Seasonal energy efficiency of the space cooling

  The units highlighted in this publication contain HFC R134a [GWP<sub>100</sub> 1430] fluorinated greenhouse gases.

  Certified data in EUROVENT



