



#### HFO REFRIGERANT

Features

4th generation refrigerant HFO 1234ze, with negligible greenhouse effect in comparison with traditional HFC refrigerants (Global Warming Potential GWP of HFO 1234ze < 1, GWP of R134a = 1300 as per IPCC rev. 5th) and zero impact on the ozone layer.

#### HIGH EFFICIENCY

Very high efficiency at full and partial load, at the highest market levels, thanks to the adopted technological solutions. These units ensure low operating costs and therefore a quick payback time.

#### ErP COMPLIANT 2021

Thanks to the inverter technology and the accurate design, the units already comply and exceed the minimum seasonal energy efficiency requirements that will start from 2021, imposed by the eco-sustainable design Directive 2009/125/EC.

#### REFRIGERANT LEAK DETECTOR

It is supplied factory mounted inside each compressor enclosure and wired in the electrical board. In case of leak detection it will raise an alarm.

#### WIDE OPERATING RANGE

The accurate condensation control (EC fans as standard on every model), the availability of devoted kits and smart control logics allow unit's operation from -15°C up to 55°C of outdoor air temperature and up to 20°C of evaporator leaving water temperature.

# ALUMINIUM MICRO-CHANNEL HEAT EXCHANGERS

The full aluminium micro-channel condenser coils deliver high efficiency whilst ensuring a reduced refrigerant volume and a lower unit weight. The e-coating protection (optional) grants the highest level of resistance to corrosion in any condition, even in the most aggressive environments.

### INTEGRATED HYDRONIC GROUP

The built-in hydronic group (optional) includes the main water circuit components. The 2 pumps are in twin configuration and available with 2 or 4-pole motor, fixed or variable speed, high or low head, to satisfy the different installation requirements.

#### HARMONY BETWEEN UNIT AND PLANT

Low inrush current and power factor higher than similar fixed speed units, permit an easy electrical installation which is not stressed during start-up and with no need of extra devices for power factor correction. The use of VSD technology allows the unit to partialize in a stepless way, with consequent lower fluctuations of leaving water temperature.

## Accessories

- Noise reducer (only on not silenced versions)
- Microchannel coils with e-coating protection
- Traditional coils with copper tubes and alluminium fins, also available with prepainted fins or Fin Guard Silver protective treatment.
- Kit HT to increase the unit operating range
- Hydronic group
  - VPF (Variable Primary Flow) systemSet-up for remote connectivity with
- Set-up for remote connectivity with ModBus, Mitsubishi M-Net, Echelon, Bacnet, Bacnet over-IP.
- Remote control keyboard (distance to 200m and to 500m)

Outdoor unit for the production of chilled water with semi-hermetic variable-speed screw compressors optimized for HFO R1234ze refrigerant, axial-flow fans, micro-channel full-aluminum condensing coils, single-pass shell and tubes evaporator designed by Mitsubishi Electric Hydronics & IT Cooling Systems S.p.A. and electronic expansion valve. Base and supporting structure and panels are of galvanized epoxy powder coated steel with increased

thickness. Eurovent certification. The screw compressors feature the variable speed technology thanks to the integrated refrigerant cooled inverter, for the maximum compactness and operating flexibility. Moreover, they feature the Variable Vi (compression ratio) technology, to change the internal geometry according to the operating conditions. Thanks to the accurate sizing of all internal components and the use of variable speed technology, the unit ensures flexibility, reliability and maximum efficiency in every operating condition.



# W3000TE

W3000TE control is available with the new KIPlink user interface. Based on WiFi technology, it allows one to operate on the unit directly from the smartphone or tablet. Using KIPlink, it is possible to turn the unit on and off, adjust the set-point, plot the main operating variables, monitor the status of the various components and display / reset the alarms. As alternatives, the Touch interface, with a 7" WVGA colour display and USB port, or the Large keyboard, with a wide LCD display and led icons, are available. Temperature control characterized by the continuous capacity modulation, based on PID algorithms with dynamic neutral zone related to the leaving water temperature. Complete alarm management system is available, with the "black-box" and the alarm history display functions.

Consumption metering and performance measurement are possible and supervision can be developed via proprietary devices or the integration in third party systems by means of the most common protocols ModBus, Bacnet, Bacnet-over-IP, LonWorks. Compatibility with remote keyboard (up to 8 units). The programmable timer manages a weekly schedule organized into time bands (up to 10 daily time bands associated with different operating set points) to optimise unit performance by minimising power consumption during periods of inactivity. As an option (VPF package), the capacity modulation is integrated with the modulation of the water flow, by means of inverter and dedicated resources for the hydraulic circuit.



COOLING

SCREW

HF01234ze

INV. DRIVEN COMP.

ENERGY CLASS

SHELL & TUBES

EC AXIAL

i-FX-G04 /A			2202	2602	2702	2722	3602	4202	4802
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
PERFORMANCE									
COOLING ONLY (GROSS VALUE)									
Cooling capacity	(1)	kW	382,7	417,9	486,9	534,8	642,0	725,9	843,1
Total power input	(1)	kW	117,7	130,2	147,7	168,4	211,1	237,1	281,3
EER	(1)	kW/kW	3,251	3,210	3,297	3,176	3,041	3,062	2,997
ESEER	(1)	kW/kW	5,010	5,170	5,130	5,030	4,960	5,000	4,950
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2)	kW	381,5	416,4	485,7	533,2	639,7	723,4	841,1
EER	(1)(2)	kW/kW	3,210	3,160	3,260	3,140	3,000	3,020	2,970
ESEER	(1)(2)	kW/kW	4,790	4,890	4,940	4,810	4,700	4,750	4,770
Cooling energy class			A	A	A	A	В	В	В
ENERGY EFFICIENCY									
SEASONAL EFFICIENCY IN COOLING (I	Reg. EU 20	16/2281)							
Ambient refrigeration									
Prated,c	(7)	kW	382	416	486	533	640	723	841
SEER	(7)(8)		5,18	5,26	5,26	5,18	5,09	5,18	5,09
Performance ns	(7)(9)	%	204	207	208	204	201	204	201
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFI	RIGERATIC	ON							
Vater flow	(1)	l/s	18,30	19,98	23,29	25,58	30,70	34,71	40,32
Pressure drop	(1)	kPa	35,3	42,1	30,1	36,4	46,1	46,8	30,8
REFRIGERANT CIRCUIT	. ,		,-	,		.,			,-
Compressors nr.		N°	2	2	2	2	2	2	2
No. Circuits		N°	2	2	2	2	2	2	2
Refrigerant charge		kg	63,0	70,0	81,0	86,0	108	124	134
NOISE LEVEL		9	,-	,.	,0	- 3,0			
Sound Pressure	(3)	dB(A)	67	68	68	69	68	70	72
Sound power level in cooling	(4)(5)	dB(A)	99	100	100	101	101	103	105
SIZE AND WEIGHT	(-/(-/	42(71)	00	100	100	101	101	100	100
	(6)	mm	4150	5400	5400	5400	6650	7900	7900
3	(6)	mm	2260	2260	2260	2260	2260	2260	2260
4	(6)	mm	2500	2500	2500	2500	2500	2500	2200
Dperating weight	(6)	kg	4780	5220	5360	5430	6060	6820	7810
	(0)	ĸġ	4700	5220	5500	3430	0000	0020	7010
i-FX-G04 /A		) //m ln /l .l	4822	6002	6022	6603	7203	7223	7823
Power supply		V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/5
PERFORMANCE									
COOLING ONLY (GROSS VALUE)					1000		1000	1000	
Cooling capacity	(1)	kW	915,7	994,1	1038	1146	1280	1399	1463
Fotal power input	(1)	kW	305,7	322,1	340,6	379,0	423,0	471,2	499,3
ER	(1)	kW/kW	2,995	3,086	3,048	3,024	3,026	2,969	2,930
ESEER	(1)	kW/kW	4,870	4,980	4,930	4,950	4,930	4,920	4,900
COOLING ONLY (EN14511 VALUE)	(								
Cooling capacity	(1)(2)	kW	912,6	991,0	1035	1143	1276	1394	1458
ER	(1)(2)	kW/kW	2,960	3,050	3,010	2,990	2,990	2,930	2,890
ESEER	(1)(2)	kW/kW	4,630	4,750	4,700	4,740	4,730	4,690	4,660
Cooling energy class			В	В	В	В	В	В	С
ENERGY EFFICIENCY									
SEASONAL EFFICIENCY IN COOLING (I	Reg. EU 20	16/2281)							
Ambient refrigeration									
	(-)	kW	913	991	1035	1143	1276	1394	1458
	(7)				5,09	5,11	5,04	5,04	5,00
Prated,c	(7)(8)		5,06	5,13	0,00			198	197
Prated,c SEER		%	5,06 199	202	201	201	198		
Prated,c BEER Performance ηs	(7)(8)						198		
Prated,c BEER Performance ŋs EXCHANGERS	(7)(8) (7)(9)	%					198		
Prated,c BEER Performance ηs EXCHANGERS HEAT EXCHANGER USER SIDE IN REFI	(7)(8) (7)(9) RIGERATIO	%	199	202	201	201		66 89	69.95
Prated,c SEER Performance ηs EXCHANGERS HEAT EXCHANGER USER SIDE IN REFI Vater flow	(7)(8) (7)(9) RIGERATIC (1)	% DN I/s	199 43,79	202 47,54	201 49,65	201 54,79	61,21	66,89 48,7	
Prated,c SEER Performance ηs EXCHANGERS HEAT EXCHANGER USER SIDE IN REFI Vater flow Pressure drop	(7)(8) (7)(9) RIGERATIO	%	199	202	201	201		66,89 48,7	69,95 53,3
Prated,c EER Performance ηs EXCHANGERS IEAT EXCHANGER USER SIDE IN REFI Vater flow Pressure drop REFRIGERANT CIRCUIT	(7)(8) (7)(9) RIGERATIC (1)	% DN I/s kPa	199 43,79 47,0	202 47,54 42,8	201 49,65 43,8	201 54,79 40,1	61,21 40,8	48,7	53,3
Prated,c SEER Performance ns EXCHANGERS IEAT EXCHANGER USER SIDE IN REFI Vater flow Pressure drop REFRIGERANT CIRCUIT Compressors nr.	(7)(8) (7)(9) RIGERATIC (1)	% DN I/s kPa N°	199 43,79 47,0 2	202 47,54 42,8 2	201 49,65 43,8 2	201 54,79 40,1 3	61,21 40,8 3	48,7 3	53,3 3
Prated,c SEER Performance ns EXCHANGERS IEAT EXCHANGER USER SIDE IN REFI Vater flow Pressure drop REFRIGERANT CIRCUIT Compressors nr. Jo. Circuits	(7)(8) (7)(9) RIGERATIC (1)	% DN I/s kPa N° N°	199 43,79 47,0 2 2	202 47,54 42,8 2 2	201 49,65 43,8 2 2	201 54,79 40,1 3 3	61,21 40,8 3 3	48,7 3 3	53,3 3 3
Prated,c SEER Performance ηs EXCHANGERS IEAT EXCHANGER USER SIDE IN REFI Vater flow Pressure drop REFRIGERANT CIRCUIT Compressors nr. No. Circuits Refrigerant charge	(7)(8) (7)(9) RIGERATIC (1)	% DN I/s kPa N°	199 43,79 47,0 2	202 47,54 42,8 2	201 49,65 43,8 2	201 54,79 40,1 3	61,21 40,8 3	48,7 3	53,3 3
Prated,c SEER Performance ηs EXCHANGERS HEAT EXCHANGER USER SIDE IN REFI Nater flow Pressure drop REFRIGERANT CIRCUIT Compressors nr. No. Circuits Refrigerant charge NOISE LEVEL	(7)(8) (7)(9) RIGERATIO (1) (1)	% I/s kPa N° N° kg	199 43,79 47,0 2 2 139	202 47,54 42,8 2 2 167	201 49,65 43,8 2 2 171	201 54,79 40,1 3 3 189	61,21 40,8 3 3 195	48,7 3 203	53,3 3 218
Prated,c SEER Performance ηs EXCHANGERS HEAT EXCHANGER USER SIDE IN REFI Vater flow Pressure drop REFRIGERANT CIRCUIT Compressors nr. No. Circuits Refrigerant charge NOISE LEVEL Sound Pressure	(7)(8) (7)(9) RIGERATIO (1) (1) (1) (3)	N° N° N° N° kg dB(A)	199 43,79 47,0 2 2 139 72	202 47,54 42,8 2 2 167 72	201 49,65 43,8 2 2 171 72	201 54,79 40,1 3 189 72	61,21 40,8 3 195 72	48,7 3 203 73	53,3 3 218 73
Prated,c SEER Performance ηs EXCHANGERS HEAT EXCHANGER USER SIDE IN REFINATION Water flow Pressure drop REFRIGERANT CIRCUIT Compressors nr. No. Circuits Refrigerant charge NOISE LEVEL Sound Pressure Sound power level in cooling	(7)(8) (7)(9) RIGERATIO (1) (1)	% I/s kPa N° N° kg	199 43,79 47,0 2 2 139	202 47,54 42,8 2 2 167	201 49,65 43,8 2 2 171	201 54,79 40,1 3 3 189	61,21 40,8 3 3 195	48,7 3 203	53,3 3 218
Prated,c SEER Performance ηs EXCHANGERS HEAT EXCHANGER USER SIDE IN REFI Water flow Pressure drop REFRIGERANT CIRCUIT Compressors nr. No. Circuits Refrigerant charge NOISE LEVEL Sound Pressure Sound power level in cooling SIZE AND WEIGHT	(7)(8) (7)(9) <b>RIGERATIC</b> (1) (1) (1) (3) (4)(5)	% N KPa N° Kg dB(A) dB(A)	199 43,79 47,0 2 2 139 72 105	202 47,54 42,8 2 167 72 105	201 49,65 43,8 2 2 171 72 105	201 54,79 40,1 3 3 189 72 105	61,21 40,8 3 195 72 105	48,7 3 203 73 106	53,3 3 218 73 106
Prated,c SEER Performance ηs EXCHANGERS HEAT EXCHANGER USER SIDE IN REFI Water flow Pressure drop REFRIGERANT CIRCUIT Compressors nr. No. Circuits Refrigerant charge NOISE LEVEL Sound Pressure Sound power level in cooling SIZE AND WEIGHT A	(7)(8) (7)(9) <b>RIGERATIC</b> (1) (1) (1) (1) (3) (4)(5) (6)	% N KPa N° Kg dB(A) dB(A) mm	199 43,79 47,0 2 2 139 72 105 9150	202 47,54 42,8 2 2 167 72 105 10400	201 49,65 43,8 2 2 171 72 105 10400	201 54,79 40,1 3 3 189 72 105 11650	61,21 40,8 3 195 72 105 11650	48,7 3 203 73 106 12900	53,3 3 218 73 106 12900
Prated, c SEER Performance ηs EXCHANGERS HEAT EXCHANGER USER SIDE IN REFI Water flow Pressure drop REFRIGERANT CIRCUIT Compressors nr. No. Circuits Refrigerant charge NOISE LEVEL Sound Pressure Sound power level in cooling SIZE AND WEIGHT A 3	(7)(8) (7)(9) <b>RIGERATIC</b> (1) (1) (1) (3) (4)(5) (6) (6) (6)	N <sup>°</sup> kPa N° kg dB(A) dB(A) mm	199 43,79 47,0 2 2 139 72 105 9150 2260	202 47,54 42,8 2 2 167 72 105 10400 2260	201 49,65 43,8 2 2 171 72 105 10400 2260	201 54,79 40,1 3 3 189 72 105 11650 2260	61,21 40,8 3 3 195 72 105 11650 2260	48,7 3 203 73 106 12900 2260	53,3 3 218 73 106 12900 2260
Prated,c SEER Performance ηs EXCHANGERS HEAT EXCHANGER USER SIDE IN REFI Water flow Pressure drop REFRIGERANT CIRCUIT Compressors nr. No. Circuits Refrigerant charge NOISE LEVEL Sound Pressure Sound power level in cooling SIZE AND WEIGHT	(7)(8) (7)(9) <b>RIGERATIC</b> (1) (1) (1) (1) (3) (4)(5) (6)	% N KPa N° Kg dB(A) dB(A) mm	199 43,79 47,0 2 2 139 72 105 9150	202 47,54 42,8 2 2 167 72 105 10400	201 49,65 43,8 2 2 171 72 105 10400	201 54,79 40,1 3 3 189 72 105 11650	61,21 40,8 3 195 72 105 11650	48,7 3 203 73 106 12900	3 3 218 73 106 12900

#### Notes

1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) neat exchanger air (in) 35°C.
Values in compliance with EN14511
Average sound pressure level at 10m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
Sound power on the basis of measurements made in compliance with ISO 9614.

Sound power level in cooling, outdoors. Unit in standard configuration/execution, without optional accessories. Parameter calculated according to [REGULATION (EU) N. 2016/2281] Seasonal energy efficiency ratio Seasonal space cooling energy efficiency 5 6 7

8 9

The units highlighted in this publication contain HFC HFO-1234ze [GWP<sub>100</sub> 7] fluorinated greenhouse gases. Certified data in EUROVENT



# i-FX-G04

i-FX-G04 /SL-A			2202	2602	2702	2722	3602	4202	4802
Power supply		V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/5
PERFORMANCE									
COOLING ONLY (GROSS VALUE)									
Cooling capacity	(1)	kW	377,2	421,3	480,7	527,2	633,2	718,2	832,9
Total power input	(1)	kW	116,8	125,4	145,9	167,1	207,2	234,4	269,9
ER	(1)	kW/kW	3,229	3,360	3,295	3,155	3,056	3,064	3,086
ESEER	(1)	kW/kW	5,020	5,220	5,130	5,050	4,950	5,020	5,050
COOLING ONLY (EN14511 VALUE)	(1)(0)	1.1.47	070 4	110.0	470 5	505 7	001.0	745 7	000 5
Cooling capacity EER	(1)(2) (1)(2)	kW kW/kW	376,1	419,8	479,5	525,7	631,0	715,7	830,5
ESEER	(1)(2)	kW/kW	3,190 4,810	3,310 4,940	3,260 4,940	3,120 4,840	3,010 4,710	3,020 4,770	3,050 4,840
Cooling energy class	(1)(2)	KVV/KVV	4,010 A	4,940 A	4,940 A	4,840 A	4,710 B	4,770 B	4,840 B
ENERGY EFFICIENCY			~	~	~	~	D	D	D
SEASONAL EFFICIENCY IN COOLING	(Bog Ell 20	46/0004)							
	(Reg. EU 20	10/2201)							
Ambient refrigeration Prated.c	(7)	kW	376	420	480	526	631	716	830
EER	(7)(8)	K V V	5,18	5,32	5,26	5,18	5,09	5,19	5,24
eers erformance ηs	(7)(8)	%	204	210	207	204	200	204	207
XCHANGERS	(1)(3)	/0	204	210	207	204	200	204	207
	EDICEDATIC								
IEAT EXCHANGER USER SIDE IN REI Vater flow	FRIGERATIC (1)	I/s	18.04	20,15	22.99	25.21	30,28	34,34	39,83
ressure drop	(1)	kPa	34,3	42,8	22,99	35,3	44,8	45,9	39,63
EFRIGERANT CIRCUIT	(1)	Ki d	04,0	42,0	20,7	00,0	44,0	40,0	50,9
Compressors nr.		N°	2	2	2	2	2	2	2
lo. Circuits		N°	2	2	2	2	2	2	2
Refrigerant charge		kg	63,0	73,0	81,0	86,0	108	124	134
IOISE LEVEL		ng	00,0	10,0	01,0	00,0	100		101
Sound Pressure	(3)	dB(A)	60	61	61	62	61	63	63
Sound power level in cooling	(4)(5)	dB(A)	92	93	93	94	94	96	96
IZE AND WEIGHT		- ( )							
\ \	(6)	mm	4150	5400	5400	5400	6650	7900	9150
}	(6)	mm	2260	2260	2260	2260	2260	2260	2260
1	(6)	mm	2500	2500	2500	2500	2500	2500	2500
Operating weight	(6)	kg	5020	5600	5680	5760	6390	7160	8400
i-FX-G04 /SL-A Power supply		V/ph/Hz	<b>4822</b> 400/3/50	<b>6002</b> 400/3/50	<b>6022</b> 400/3/50	<b>6603</b> 400/3/50	<b>7203</b> 400/3/50	<b>7223</b> 400/3/50	<b>7823</b> 400/3/5
PERFORMANCE									
OOLING ONLY (GROSS VALUE)									
	(4)			070.0	1001		1000	1001	4 4 5 0
cooling capacity	(1)	kW	902,8	972,2	1024	1141	1262	1391	1458
ooling capacity other control of the	(1)	kW	303,4	318,4	337,4	376,1	416,2	468,8	499,7
cooling capacity otal power input ER	(1)	kW kW/kW	303,4 2,976	318,4 3,053	337,4 3,035	376,1 3,034	416,2 3,032	468,8 2,967	499,7 2,918
cooling capacity otal power input ER SEER	(1)	kW	303,4	318,4	337,4	376,1	416,2	468,8	499,7 2,918
cooling capacity otal power input ER SEER COOLING ONLY (EN14511 VALUE)	(1) (1) (1)	kW kW/kW kW/kW	303,4 2,976 4,890	318,4 3,053 4,980	337,4 3,035 4,950	376,1 3,034 4,960	416,2 3,032 5,020	468,8 2,967 4,990	499,7 2,918 4,900
Cooling capacity otal power input ER SEER COOLING ONLY (EN14511 VALUE) Cooling capacity	(1) (1) (1) (1)(2)	kW kW/kW kW/kW	303,4 2,976 4,890 899,8	318,4 3,053 4,980 969,3	337,4 3,035 4,950 1021	376,1 3,034 4,960 1138	416,2 3,032 5,020 1258	468,8 2,967 4,990 1386	499,7 2,918 4,900 1455
Cooling capacity otal power input ER SEER COOLING ONLY (EN14511 VALUE) Cooling capacity ER	(1) (1) (1) (1)(2) (1)(2)	kW kW/kW kW/kW kW/kW	303,4 2,976 4,890 899,8 2,940	318,4 3,053 4,980 969,3 3,020	337,4 3,035 4,950 1021 3,000	376,1 3,034 4,960 1138 3,000	416,2 3,032 5,020 1258 3,000	468,8 2,967 4,990 1386 2,930	499,7 2,918 4,900 1455 2,890
Cooling capacity otal power input ER SEER COOLING ONLY (EN14511 VALUE) Cooling capacity ER SEER	(1) (1) (1) (1)(2)	kW kW/kW kW/kW	303,4 2,976 4,890 899,8 2,940 4,660	318,4 3,053 4,980 969,3 3,020 4,770	337,4 3,035 4,950 1021 3,000 4,730	376,1 3,034 4,960 1138 3,000 4,760	416,2 3,032 5,020 1258 3,000 4,820	468,8 2,967 4,990 1386 2,930 4,750	499,7 2,918 4,900 1455 2,890 4,750
Cooling capacity Total power input ER COOLING ONLY (EN14511 VALUE) Cooling capacity ER SEER Cooling energy class	(1) (1) (1) (1)(2) (1)(2)	kW kW/kW kW/kW kW/kW	303,4 2,976 4,890 899,8 2,940	318,4 3,053 4,980 969,3 3,020	337,4 3,035 4,950 1021 3,000	376,1 3,034 4,960 1138 3,000	416,2 3,032 5,020 1258 3,000	468,8 2,967 4,990 1386 2,930	499,7 2,918 4,900 1455 2,890
cooling capacity otal power input ER SEER COOLING ONLY (EN14511 VALUE) Cooling capacity ER SEER Cooling energy class ENERGY EFFICIENCY	(1) (1) (1) (1)(2) (1)(2) (1)(2)	kW kW/kW kW/kW kW/kW kW/kW	303,4 2,976 4,890 899,8 2,940 4,660	318,4 3,053 4,980 969,3 3,020 4,770	337,4 3,035 4,950 1021 3,000 4,730	376,1 3,034 4,960 1138 3,000 4,760	416,2 3,032 5,020 1258 3,000 4,820	468,8 2,967 4,990 1386 2,930 4,750	499,7 2,918 4,900 1455 2,890 4,750
Cooling capacity otal power input ER SEER COOLING ONLY (EN14511 VALUE) Cooling capacity ER SEER Cooling energy class Cooling energy class ENERGY EFFICIENCY SEASONAL EFFICIENCY IN COOLING	(1) (1) (1) (1)(2) (1)(2) (1)(2)	kW kW/kW kW/kW kW/kW kW/kW	303,4 2,976 4,890 899,8 2,940 4,660	318,4 3,053 4,980 969,3 3,020 4,770	337,4 3,035 4,950 1021 3,000 4,730	376,1 3,034 4,960 1138 3,000 4,760	416,2 3,032 5,020 1258 3,000 4,820	468,8 2,967 4,990 1386 2,930 4,750	499,7 2,918 4,900 1455 2,890 4,750
Cooling capacity otal power input ER SEER COOLING ONLY (EN14511 VALUE) Cooling capacity ER SEER Cooling energy class SNERGY EFFICIENCY SEASONAL EFFICIENCY IN COOLING Ambient refrigeration	(1) (1) (1)(2) (1)(2) (1)(2) (Reg. EU 20	kW kW/kW kW/kW kW/kW kW/kW 16/2281)	303,4 2,976 4,890 899,8 2,940 4,660 B	318,4 3,053 4,980 969,3 3,020 4,770 B	337,4 3,035 4,950 1021 3,000 4,730 B	376,1 3,034 4,960 1138 3,000 4,760 B	416,2 3,032 5,020 1258 3,000 4,820 B	468,8 2,967 4,990 1386 2,930 4,750 B	499,7 2,918 4,900 1455 2,890 4,750 C
Cooling capacity otal power input ER SEER Cooling capacity ER SEER Cooling energy class ENERGY EFFICIENCY SEASONAL EFFICIENCY IN COOLING mbient refrigeration Prated,c	(1) (1) (1) (1)(2) (1)(2) (1)(2)	kW kW/kW kW/kW kW/kW kW/kW	303,4 2,976 4,890 899,8 2,940 4,660	318,4 3,053 4,980 969,3 3,020 4,770 B 969	337,4 3,035 4,950 1021 3,000 4,730 B 1021	376,1 3,034 4,960 1138 3,000 4,760 B 1138	416,2 3,032 5,020 1258 3,000 4,820 B 1258	468,8 2,967 4,990 1386 2,930 4,750 B 1386	499,7 2,918 4,900 1455 2,890 4,750 C
Cooling capacity Total power input ER SEER COOLING ONLY (EN14511 VALUE) Cooling capacity ER SEER Cooling energy class ENERGY EFFICIENCY SEASONAL EFFICIENCY IN COOLING wmbient refrigeration Trated,c EER	(1) (1) (1) (1)(2) (1)(2) (1)(2) (Reg. EU 20 (7)	kW kW/kW kW/kW kW/kW kW/kW 16/2281)	303,4 2,976 4,890 899,8 2,940 4,660 B 900	318,4 3,053 4,980 969,3 3,020 4,770 B	337,4 3,035 4,950 1021 3,000 4,730 B	376,1 3,034 4,960 1138 3,000 4,760 B	416,2 3,032 5,020 1258 3,000 4,820 B	468,8 2,967 4,990 1386 2,930 4,750 B	499,7 2,918 4,900 1455 2,890 4,750 C
Cooling capacity otal power input ER SER COOLING ONLY (EN14511 VALUE) Cooling capacity ER SEER Cooling energy class Cooling	(1) (1) (1) (1)(2) (1)(2) (1)(2) (1)(2) (1)(2) (7)(8)	kW kW/kW kW/kW kW/kW kW/kW	303,4 2,976 4,890 899,8 2,940 4,660 B 900 5,06	318,4 3,053 4,980 969,3 3,020 4,770 B 969 5,12	337,4 3,035 4,950 1021 3,000 4,730 B 1021 5,10	376,1 3,034 4,960 1138 3,000 4,760 B 1138 5,12	416,2 3,032 5,020 1258 3,000 4,820 B 1258 5,11	468,8 2,967 4,990 1386 2,930 4,750 B 1386 5,10	499,7 2,918 4,900 1455 2,890 4,750 C 1455 4,98
Cooling capacity otal power input ER SER COOLING ONLY (EN14511 VALUE) Cooling capacity ER Cooling energy class Cooling energy class Cooling energy class COOLING ENTRY COOLING CONTRY COOLING COOLING CONTRY COOLING C	(1) (1) (1)(2) (1)(2) (1)(2) (1)(2) (1)(2) (7)(7)(8) (7)(9)	kW kW/kW kW/kW kW/kW 16/2281) kW	303,4 2,976 4,890 899,8 2,940 4,660 B 900 5,06	318,4 3,053 4,980 969,3 3,020 4,770 B 969 5,12	337,4 3,035 4,950 1021 3,000 4,730 B 1021 5,10	376,1 3,034 4,960 1138 3,000 4,760 B 1138 5,12	416,2 3,032 5,020 1258 3,000 4,820 B 1258 5,11	468,8 2,967 4,990 1386 2,930 4,750 B 1386 5,10	499,7 2,918 4,900 1455 2,890 4,750 C 1455 4,98
cooling capacity otal power input ER SEER COOLING ONLY (EN14511 VALUE) cooling capacity ER SEER cooling energy class Cooling energy class EXERGY EFFICIENCY EASONAL EFFICIENCY IN COOLING Imbient refrigeration rated,c EER eeformance ns EXCHANGERS IEAT EXCHANGER USER SIDE IN REI	(1) (1) (1)(2) (1)(2) (1)(2) (1)(2) (1)(2) (7)(7)(8) (7)(9)	kW kW/kW kW/kW kW/kW 16/2281) kW	303,4 2,976 4,890 899,8 2,940 4,660 B 900 5,06 199	318,4 3,053 4,980 969,3 3,020 4,770 B 969 5,12 202	337,4 3,035 4,950 1021 3,000 4,730 B 1021 5,10 201	376,1 3,034 4,960 1138 3,000 4,760 B 1138 5,12 202	416,2 3,032 5,020 1258 3,000 4,820 B 1258 5,11 202	468,8 2,967 4,990 1386 2,930 4,750 B 1386 5,10 201	499,7 2,918 4,900 1455 2,890 4,750 C 1455 4,98 196
cooling capacity otal power input ER SEER OOLING ONLY (EN14511 VALUE) cooling capacity ER SEER cooling energy class NERGY EFFICIENCY EASONAL EFFICIENCY IN COOLING mbient refrigeration rated,c EER erformance ns XCHANGERS EAT EXCHANGER USER SIDE IN REI Vater flow	(1) (1) (1)(2) (1)(2) (1)(2) (1)(2) (1)(2) (7)(2) (7)(8) (7)(9) FRIGERATIC	kW kW/kW kW/kW kW/kW kW/kW 16/2281) kW %	303,4 2,976 4,890 899,8 2,940 4,660 B 900 5,06	318,4 3,053 4,980 969,3 3,020 4,770 B 969 5,12	337,4 3,035 4,950 1021 3,000 4,730 B 1021 5,10	376,1 3,034 4,960 1138 3,000 4,760 B 1138 5,12	416,2 3,032 5,020 1258 3,000 4,820 B 1258 5,11	468,8 2,967 4,990 1386 2,930 4,750 B 1386 5,10	499,7 2,918 4,900 1455 2,890 4,750 C 1455 4,98 196
tooling capacity otal power input ER SEER OOLING ONLY (EN14511 VALUE) tooling capacity ER SEER tooling energy class NERGY EFFICIENCY EASONAL EFFICIENCY IN COOLING mbient refrigeration rated,c EER erformance ns XCHANGERS IEAT EXCHANGER USER SIDE IN REI Vater flow ressure drop	(1) (1) (1) (1)(2) (1)(2) (1)(2) (Reg. EU 20 (7) (7)(8) (7)(9) FRIGERATIC (1)	kW kW/kW kW/kW kW/kW tw/kW 16/2281) kW %	303,4 2,976 4,890 899,8 2,940 4,660 B 900 5,06 199 43,17	318,4 3,053 4,980 969,3 3,020 4,770 B 969 5,12 202 46,49	337,4 3,035 4,950 1021 3,000 4,730 B 1021 5,10 201 48,96	376,1 3,034 4,960 1138 3,000 4,760 B 1138 5,12 202 54,56	416,2 3,032 5,020 1258 3,000 4,820 B 1258 5,11 202 60,35	468,8 2,967 4,990 1386 2,930 4,750 B 1386 5,10 201 66,50	499,7 2,918 4,900 1455 2,890 4,750 C 1455 4,98 196 69,70
cooling capacity otal power input ER SEER COOLING ONLY (EN14511 VALUE) Cooling capacity ER SEER Cooling energy class EXERGY EFFICIENCY EASONAL EFFICIENCY IN COOLING Inbient refrigeration Irated,c EER VALUER EER VALUER EER EFRIGERANT CIRCUIT	(1) (1) (1) (1)(2) (1)(2) (1)(2) (Reg. EU 20 (7) (7)(8) (7)(9) FRIGERATIC (1)	kW kW/kW kW/kW kW/kW tw/kW 16/2281) kW %	303,4 2,976 4,890 899,8 2,940 4,660 B 900 5,06 199 43,17	318,4 3,053 4,980 969,3 3,020 4,770 B 969 5,12 202 46,49	337,4 3,035 4,950 1021 3,000 4,730 B 1021 5,10 201 48,96	376,1 3,034 4,960 1138 3,000 4,760 B 1138 5,12 202 54,56	416,2 3,032 5,020 1258 3,000 4,820 B 1258 5,11 202 60,35	468,8 2,967 4,990 1386 2,930 4,750 B 1386 5,10 201 66,50	499,7 2,918 4,900 1455 2,890 4,750 C 1455 4,98 196 69,70
Cooling capacity otal power input ER SEER COOLING ONLY (EN14511 VALUE) Cooling capacity ER SEER Cooling energy class COOLING ONLY (EN14511 VALUE) Cooling energy class COOLING ENERGY EASONAL EFFICIENCY IN COOLING INDENT REFIGIENCY IN COOLING INDENT REFIGIENCY IN COOLING INDENT REFIGUENCY COOLING INFORMATION COOLING INFORMATIO	(1) (1) (1) (1)(2) (1)(2) (1)(2) (Reg. EU 20 (7) (7)(8) (7)(9) FRIGERATIC (1)	kW kW/kW kW/kW kW/kW kW/kW 16/2281) kW % 0N l/s kPa	303,4 2,976 4,890 899,8 2,940 4,660 B 900 5,06 199 43,17 45,7	318,4 3,053 4,980 969,3 3,020 4,770 B 969 5,12 202 46,49 40,9	337,4 3,035 4,950 1021 3,000 4,730 B 1021 5,10 201 48,96 42,6	376,1 3,034 4,960 1138 3,000 4,760 B 1138 5,12 202 54,56 39,7	416,2 3,032 5,020 1258 3,000 4,820 B 1258 5,11 202 60,35 39,7	468,8 2,967 4,990 1386 2,930 4,750 B 1386 5,10 201 66,50 48,1	499,7 2,918 4,900 1455 2,890 4,750 C 1455 4,98 196 69,70 30,9
Cooling capacity otal power input ER SEER COOLING ONLY (EN14511 VALUE) Cooling capacity ER Cooling energy class Cooling energy class Cooling energy class EXER EASONAL EFFICIENCY EASONAL EFFICIENCY IN COOLING Ambient refrigeration Trated,c EER Verformance ns EXCHANGERS IEAT EXCHANGER USER SIDE IN REI Vater flow Tressure drop EEFRIGERANT CIRCUIT Compressors nr. Io. Circuits	(1) (1) (1) (1)(2) (1)(2) (1)(2) (Reg. EU 20 (7) (7)(8) (7)(9) FRIGERATIC (1)	kW kW/kW kW/kW kW/kW 16/2281) kW 16/2281) kW % DN I/s kPa N°	303,4 2,976 4,890 899,8 2,940 4,660 B 900 5,06 199 43,17 45,7 2	318,4 3,053 4,980 969,3 3,020 4,770 B 969 5,12 202 46,49 40,9 2	337,4 3,035 4,950 1021 3,000 4,730 B 1021 5,10 201 48,96 42,6 2	376,1 3,034 4,960 1138 3,000 4,760 B 1138 5,12 202 54,56 39,7 3	416,2 3,032 5,020 1258 3,000 4,820 B 1258 5,11 202 60,35 39,7 3	468,8 2,967 4,990 1386 2,930 4,750 B 1386 5,10 201 66,50 48,1 3	499,7 2,918 4,900 1455 2,890 4,750 C 1455 4,98 196 69,70 30,9 3
Cooling capacity otal power input ER SEER COOLING ONLY (EN14511 VALUE) Cooling capacity ER Cooling energy class Cooling ener	(1) (1) (1) (1)(2) (1)(2) (1)(2) (Reg. EU 20 (7) (7)(8) (7)(9) FRIGERATIC (1)	kW kW/kW kW/kW kW/kW kW/kW 16/2281) kW % N° N°	303,4 2,976 4,890 899,8 2,940 4,660 B 900 5,06 199 43,17 45,7 2 2	318,4 3,053 4,980 969,3 3,020 4,770 B 969 5,12 202 46,49 40,9 2 2	337,4 3,035 4,950 1021 3,000 4,730 B 1021 5,10 201 48,96 42,6 2 2	376,1 3,034 4,960 1138 3,000 4,760 B 1138 5,12 202 54,56 39,7 3 3 3	416,2 3,032 5,020 1258 3,000 4,820 B 1258 5,11 202 60,35 39,7 3 3 3	468,8 2,967 4,990 1386 2,930 4,750 B 1386 5,10 201 66,50 48,1 3 3	499,7 2,918 4,900 1455 2,890 4,750 C 1455 4,98 196 69,70 30,9 3 0
Cooling capacity otal power input ER SEER COOLING ONLY (EN14511 VALUE) Cooling capacity ER SEER Cooling energy class ENERGY EFFICIENCY SEASONAL EFFICIENCY IN COOLING Ambient refrigeration Prated,c SEER Performance ηs EXCHANGERS HEAT EXCHANGER USER SIDE IN REI Vater flow Pressure drop EFFIGERANT CIRCUIT Compressors nr. Io. Circuits Sefrigerant charge IOISE LEVEL	(1) (1) (1) (1)(2) (1)(2) (1)(2) (Reg. EU 20 (7) (7)(8) (7)(9) FRIGERATIC (1)	kW kW/kW kW/kW kW/kW kW/kW 16/2281) kW % N° N°	303,4 2,976 4,890 899,8 2,940 4,660 B 900 5,06 199 43,17 45,7 2 2	318,4 3,053 4,980 969,3 3,020 4,770 B 969 5,12 202 46,49 40,9 2 2	337,4 3,035 4,950 1021 3,000 4,730 B 1021 5,10 201 48,96 42,6 2 2	376,1 3,034 4,960 1138 3,000 4,760 B 1138 5,12 202 54,56 39,7 3 3 3	416,2 3,032 5,020 1258 3,000 4,820 B 1258 5,11 202 60,35 39,7 3 3 3	468,8 2,967 4,990 1386 2,930 4,750 B 1386 5,10 201 66,50 48,1 3 3	499,7 2,918 4,900 1455 2,890 4,750 C 1455 4,98 196 69,70 30,9 3 3 0
Cooling capacity otal power input ER SEER COOLING ONLY (EN14511 VALUE) Cooling capacity ER SEER Cooling energy class Cooling energy class Coolin	(1) (1) (1)(2) (1)(2) (1)(2) (1)(2) (Reg. EU 20 (7) (7)(8) (7)(9) FRIGERATIC (1) (1)	kW kW/kW kW/kW kW/kW 16/2281) kW 16/2281) kW 0N I/s kPa N° N° kg	303,4 2,976 4,890 899,8 2,940 4,660 B 900 5,06 199 43,17 45,7 2 2 139	318,4 3,053 4,980 969,3 3,020 4,770 B 969 5,12 202 46,49 40,9 2 2 167	337,4 3,035 4,950 1021 3,000 4,730 B 1021 5,10 201 48,96 42,6 2 2 171	376,1 3,034 4,960 1138 3,000 4,760 B 1138 5,12 202 54,56 39,7 3 189	416,2 3,032 5,020 1258 3,000 4,820 B 1258 5,11 202 60,35 39,7 3 3 204	468,8 2,967 4,990 1386 2,930 4,750 B 1386 5,10 201 666,50 48,1 3 3 213	499,7 2,918 4,900 1455 2,890 4,750 C 1455 4,98 196 69,70 30,9 3 0 0 223
Cooling capacity otal power input ER SER COOLING ONLY (EN14511 VALUE) Cooling capacity ER SER Cooling energy class ENERGY EFFICIENCY SEASONAL EFFICIENCY IN COOLING Imbient refrigeration Prated, c SER SER SER SER SER SER SER SER	(1) (1) (1)(2) (1)(2) (1)(2) (1)(2) (1)(2) (7)(8) (7)(9) FRIGERATIO (1) (1) (1) (1) (3)	kW kW/kW kW/kW kW/kW 16/2281) kW 16/2281) kW 0N //s kPa 0N //s kPa 0N //s kPa 0N	303,4 2,976 4,890 899,8 2,940 4,660 B 900 5,06 199 43,17 45,7 2 2 139 63	318,4 3,053 4,980 969,3 3,020 4,770 B 969 5,12 202 46,49 40,9 2 2 167 63 96	337,4 3,035 4,950 1021 3,000 4,730 B 1021 5,10 201 48,96 42,6 2 2 171 63 96	376,1 3,034 4,960 1138 3,000 4,760 B 1138 5,12 202 54,56 39,7 3 189 63	416,2 3,032 5,020 1258 3,000 4,820 B 1258 5,11 202 60,35 39,7 3 3 204 63 96	468,8 2,967 4,990 1386 2,930 4,750 B 1386 5,10 201 66,50 48,1 3 3 213 64 97	499,7 2,918 4,900 1455 2,890 4,750 C 1455 4,98 196 69,70 30,9 3 0 223 64 97
Cooling capacity Total power input EER ESEER COOLING ONLY (EN14511 VALUE) Cooling capacity EER Cooling energy class ENERGY EFFICIENCY SEASONAL EFFICIENCY IN COOLING Ambient refrigeration Prated, c SEER Performance ns EXCHANGERS HEAT EXCHANGER USER SIDE IN REI Water flow Pressure drop REFRIGERANT CIRCUIT Compressors nr. No. Circuits Refrigerant charge NOISE LEVEL Sound Pressure Sound power level in cooling SIZE AND WEIGHT A	(1) (1) (1) (1)(2) (1)(2) (1)(2) (Reg. EU 20 (7) (7)(8) (7)(9) FRIGERATIC (1) (1) (1) (1) (3) (4)(5) (6)	kW kW/kW kW/kW kW/kW 16/2281) kW 16/2281) kW 0N //s kPa 0N //s kPa 0N //s kPa 0N	303,4 2,976 4,890 899,8 2,940 4,660 B 900 5,06 199 43,17 45,7 2 2 139 63 96 9150	318,4 3,053 4,980 969,3 3,020 4,770 B 969 5,12 202 46,49 40,9 2 2 167 63 96 10400	337,4 3,035 4,950 1021 3,000 4,730 B 1021 5,10 201 48,96 42,6 2 2 1771 63 96 10400	376,1 3,034 4,960 1138 3,000 4,760 B 1138 5,12 202 54,56 39,7 3 3 189 63 96 11650	416,2 3,032 5,020 1258 3,000 4,820 B 1258 5,11 202 60,35 39,7 3 3 204 63 96 12900	468,8 2,967 4,990 1386 2,930 4,750 B 1386 5,10 201 66,50 48,1 3 3 213 64 97 12900	499,7 2,918 4,900 1455 2,890 4,750 C 1455 4,98 196 69,70 30,9 3 0 223 64 97 12900
Cooling capacity otal power input ER SER COOLING ONLY (EN14511 VALUE) Cooling capacity ER Cooling capacity ER Cooling energy class Cooling energy class Cooling energy class Cooling energy class EXER EXE	(1) (1) (1)(2) (1)(2) (1)(2) (Reg. EU 20 (7) (7)(8) (7)(9) FRIGERATIC (1) (1) (1) (3) (4)(5) (6) (6) (6)	kW kW/kW kW/kW kW/kW 16/2281) kW 16/2281) kW 0N 1/s kPa 0N 1/s kPa 0N 0N 1/s kPa 0N 0N 0N 0N 0N 0N 0N 0N 0N 0N 0 0N 0	303,4 2,976 4,890 899,8 2,940 4,660 B 900 5,06 199 43,17 45,7 2 2 139 63 96 9150 2260	318,4 3,053 4,980 969,3 3,020 4,770 B 969 5,12 202 46,49 40,9 2 2 167 63 96 96 96 10400 2260	337,4 3,035 4,950 1021 3,000 4,730 B 1021 5,10 201 48,96 42,6 2 2 171 63 96 10400 2260	376,1 3,034 4,960 1138 3,000 4,760 B 1138 5,12 202 54,56 39,7 3 3 189 63 96 11650 2260	416,2 3,032 5,020 1258 3,000 4,820 B 1258 5,11 202 60,35 39,7 3 3 204 63 96 12900 2260	468,8 2,967 4,990 1386 2,930 4,750 B 1386 5,10 201 66,50 48,1 3 3 213 64 97 12900 2260	499,7 2,918 4,900 1455 2,890 4,750 C 1455 4,98 196 69,70 30,9 3 0 223 64 97 12900 2260
Cooling capacity Total power input EER ESEER COOLING ONLY (EN14511 VALUE) Cooling capacity EER Cooling energy class ENERGY EFFICIENCY SEASONAL EFFICIENCY IN COOLING Ambient refrigeration Prated,c SEER Performance ηs EXCHANGERS HEAT EXCHANGER USER SIDE IN REI Nater flow Pressure drop REFRIGERANT CIRCUIT Compressors nr. No. Circuits Refrigerant charge NOISE LEVEL Sound Pressure Sound Press	(1) (1) (1) (1)(2) (1)(2) (1)(2) (Reg. EU 20 (7) (7)(8) (7)(9) FRIGERATIC (1) (1) (1) (1) (3) (4)(5) (6)	kW kW/kW kW/kW kW/kW 16/2281) kW 16/2281) kW 0N 1/s kPa 0N 1/s kPa 0N 1/s kPa 0N 1/s kPa 0N 0N 1/s kPa 0N 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	303,4 2,976 4,890 899,8 2,940 4,660 B 900 5,06 199 43,17 45,7 2 2 139 63 96 9150	318,4 3,053 4,980 969,3 3,020 4,770 B 969 5,12 202 46,49 40,9 2 2 167 63 96 10400	337,4 3,035 4,950 1021 3,000 4,730 B 1021 5,10 201 48,96 42,6 2 2 1771 63 96 10400	376,1 3,034 4,960 1138 3,000 4,760 B 1138 5,12 202 54,56 39,7 3 3 189 63 96 11650	416,2 3,032 5,020 1258 3,000 4,820 B 1258 5,11 202 60,35 39,7 3 3 204 63 96 12900	468,8 2,967 4,990 1386 2,930 4,750 B 1386 5,10 201 66,50 48,1 3 3 213 64 97 12900	499,7 2,918 4,900 1455 2,890 4,750 C 1455 4,98 196 69,70 30,9 3 0 223 64

# Notes

Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.
 Values in compliance with EN14511
 Average sound pressure level at 10m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
 Sound power on the basis of measurements made in compliance with ISO 9614.

5 6 7

Sound power level in cooling, outdoors. Unit in standard configuration/execution, without optional accessories. Parameter calculated according to [REGULATION (EU) N. 2016/2281] Seasonal energy efficiency ratio Seasonal space cooling energy efficiency

8 9

The units highlighted in this publication contain HFC HFO-1234ze [GWP<sub>100</sub> 7] fluorinated greenhouse gases. Certified data in EUROVENT





Dimensional drawing



