UNITS FOR SIMULTANEOUS AND INDEPENDENT PRODUCTION OF HOT AND COLD WATER

i-FX-Q2-G05

INTEGRA unit for 4-pipe systems, air source, VSD screw compressors and EC fans, for outdoor installation

0502 - 1102 442,9-1125 kW

Full inverter multi-purpose outdoor unit for use in 4-pipe systems for the simultaneous production of chilled and hot water in two independent hydronic circuits. These units are able to simultaneously satisfy the demand for hot and cold water through a system that does not require seasonal switching and is therefore a valid alternative to traditional plants with chiller and boiler. Each circuit works with a variable speed drive semi-hermetic screw compressor using R513A, two shell and tubes heat exchangers and a source side coil heat exchanger shared by both circuits. The cold side shell and tube heat exchanger acts as an evaporator for the production of cold water, while the hot side shell and tube heat exchanger works as a condenser for the production of hot water. The source side auxiliary finned coil works as either condenser or evaporator as required by the loads.

Control

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. Complete alarm management system is available, with the "black-box" and the alarm history display functions. Optional proprietary devices can perform the adjustment of the resources in systems made of several units. 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, Bacnet-over-IP, LonWorks. Compatibility with the remote keyboard (up to 8 units). The programmable timer manages a weekly schedule organised into time bands to optimise unit performance by minimising power consumption during periods of inactivity. Up to 10 daily time bands can be associated with different operating set points.

Refrigerant

R513A

Versions

CA	Class A of efficiency	XL-CA	eXtra Low noise version, Class A of efficiency
SL-CA	Super Low noise version, Class A of efficiency		

Features

UNIQUE PROPOSAL

Unit designed to satisfy the cold and the hot side requirements simultaneously, for 4-pipe systems without any particular operation mode setting

ENERGY SAVING

Energy saving guaranteed by the advanced operation's logic. The best operation mode is set completely automatically and independently by the unit's controller, in order to minimize the absorbed energy whatever the cooling and/or heating demand might be

VERY HIGH EFFICIENCY

High full load and partial load efficiency in both heating and cooling mode, using inverter technology to continuously modulate compressors operation and EC fans as standard, in order to deliver the exact amount of energy based on the actual needs of the plant. High efficiency means reduced energy consumption throughout the entire year, for any operation mode and any outdoor condition.

ErP READY

The highest level of efficiency at part load, thanks to the inverter technology, can meet and exceed the minimum seasonal efficiency for heating, SCOP (only for reversible units) and for cooling, SEER, according with the eco-sustainable design requirements for all products using energy. The units already comply with the minimum seasonal energy efficiency requirements that will start from 2021.

WIDE OPERATING RANGE

Unit´s operation guaranteed with external air temperature down to -12°C during winter and up to 46°C during summer. Production of hot water up to 60°C without accessories and chilled water from -8°C to +18°C in order to suit any possible application.

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.

TRUE SILENCE

At partial loads (ie for most of the year), thanks to the use of EC fans and VSD screw compressors, i-FX-Q2 units are characterized by lower noise emissions compared to fixed speed units.

FLEXIBLE SELECTION

The units can be selected beyond the nominal point, giving the possibility to contain the initial investment (boost selection) or to enphasize even more the efficiencies (derating selection).

Accessories

- "LT" kit for working down to -12°C in heat pump mode
- Noise reducer (only on not silenced versions)
- Special fan diffusers
- Thicker soundproofing cladding
- Hydronic group
- VPF (Variable Primary Flow) system
- Set-up for remote connectivity with ModBus, Echelon, Bacnet, Bacnet over-IP.
- Touch Screen visual display
- Leak detector

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com | VPF VARIABLE PRIMARY FLOW | VSPEED VARIABLE SPEED DRIVE

R R513A | 4 PIPE SYSTEM | T SHELL & TUBES | EC AXIAL | SCREW

i-FX-Q2-G05 /CA			0502	0532	0602	0652	0702	0802	0902	1002	1102
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
PERFORMANCE											
PERFORMANCE MAX											
COOLING ONLY (GROSS VALUE)											
Cooling capacity	(1)(12)	kW	520,5	536,1	570,0	670,8	712,2	787,4	982,0	1048	1125
Total power input	(1)(12)	kW	180,4	181,2	189,0	229,8	238,9	261,5	344,9	356,6	411,4
EER	(1)(12)	kW/kW	2,885	2,959	3,016	2,919	2,981	3,011	2,847	2,939	2,735
Water flow		l/s	24,89	25,64	27,26	32,08	34,06	37,65	46,96	50,12	53,78
Pressure drop at the heat exchanger		kPa	46,5	52,6	32,5	46,4	48,6	29,0	45,7	47,8	55,5
COOLING ONLY (EN14511 VALUE)											
Cooling capacity	(1)(2)(12)	kW	520,0	535,5	569,5	670,2	711,5	786,9	981,3	1047	1124
EER	(1)(2)(12)	kW/kW	2,850	2,920	2,990	2,890	2,950	2,990	2,820	2,910	2,700
HEATING ONLY (GROSS VALUE)											
Total heating capacity	(3)(12)	kW	496,8	496,8	531,0	643,9	684,9	764,8	939,9	988,7	1071
Total power input	(3)(12)	kW	152,9	152,9	160,1	195,5	205,8	224,6	294,3	311,5	332,4
COP	(3)(12)	kW/kW	3,249	3,249	3,317	3,294	3,328	3,405	3,194	3,174	3,222
Water flow	(3)(12)	l/s	23,98	23,98	25,63	31,08	33,06	36,92	45,37	47,73	51,68
Pressure drop at the heat exchanger	(3)(12)	kPa	26,5	26,5	21,9	31,9	35,3	32,9	49,6	39,6	33,2
HEATING ONLY (EN14511 VALUE)											
Total heating capacity	(2)(3)(12)	kW	497,2	497,2	531,3	644,4	685,4	765,3	940,6	989,4	1071
COP	(2)(3)(12)	kW/kW	3,230	3,230	3,300	3,270	3,300	3,380	3,160	3,150	3,200
COOLING WITH TOTAL HEAT RECOVERY											
Cooling capacity	(4)(12)	kW	527,3	539,2	571,2	676,3	708,6	784,8	991,2	1054	1145
Total power input	(4)(12)	kW	158,4	161,4	167,6	200,9	209,8	230,6	298,1	312,2	341,7
Recovery heat exchanger capacity	(4)(12)	kW	676,2	690,9	728,8	865,2	905,8	1002	1271	1348	1466
TER	(4)(12)	kW/kW	7,601	7,621	7,757	7,670	7,693	7,745	7,591	7,694	7,641
SELECTION RATED											
COOLING ONLY (EN14511 VALUE)											
Cooling capacity	(1)(2)(11)	kW	487,0	530,8	569,5	626,3	688,4	786,9	914,4	984,6	1082
EER	(1)(2)(11)	kW/kW	2,990	2,990	2,990	2,990	2,990	2,990	3,030	3,010	2,860
HEATING ONLY (EN14511 VALUE)											
Total heating capacity	(2)(3)(11)	kW	463,4	491,5	531,3	599,0	659,5	765,3	871,2	938,3	1029
COP	(2)(3)(11)	kW/kW	3,310	3,270	3,300	3,340	3,320	3,380	3,330	3,360	3,350
COOLING WITH TOTAL HEAT RECOVERY (EN14511 VALUE)											
Cooling capacity	(5)(11)	kW	488,1	532,5	570,1	623,5	682,1	783,9	913,9	986,8	1101
Total power input	(5)(11)	kW	145,7	160,5	170,6	185,6	205,6	234,7	275,7	292,5	329,6
Recovery heat exchanger capacity	(5)(11)	kW	623,1	681,2	728,8	795,2	872,3	1002	1168	1257	1405
TER	(5)(11)	kW/kW	7,625	7,564	7,615	7,645	7,558	7,610	7,552	7,672	7,603
ENERGY EFFICIENCY											
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)											
Ambient refrigeration											
Prated,c	(13)	kW	-	-	-	626	688	787	914	985	1082
SEER	(13)(14)		-	-	-	5,09	5,13	5,03	4,74	4,67	4,65
Performance ηs	(13)(15)	%	-	-	-	201	202	198	186	184	183
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)											
PDesign	(6)(11)	kW	372	372	393	-	-	-	-	-	-
SCOP	(6)(11)(16)		3,93	3,93	3,89	-	-	-	-	-	-
Performance ηs	(6)(11)(17)	%	154	154	153	-	-	-	-	-	-
Seasonal efficiency class	(11)(18)		-	-	-	-	-	-	-	-	-
EXCHANGERS											
HEAT EXCHANGER USER SIDE IN COOLING											
Water flow	(1)(11)	l/s	23,31	25,41	27,26	29,97	32,95	37,65	43,76	47,12	51,77
Pressure drop at the heat exchanger	(1)(11)	kPa	40,8	51,6	32,5	40,5	45,4	29,0	39,7	42,3	51,4
HEAT EXCHANGER USER SIDE IN HEATING											
Water flow	(3)(11)	l/s	22,35	23,71	25,63	28,89	31,81	36,92	42,02	45,26	49,63
Pressure drop at the heat exchanger	(3)(11)	kPa	23,0	25,9	21,9	27,6	32,7	32,9	42,6	35,6	30,6
REFRIGERANT CIRCUIT											
Compressors nr.		N°	2	2	2	2	2	2	2	2	2
No. Circuits		N°	2	2	2	2	2	2	2	2	2
Regulation			STEPLESS	STEPLESS	STEPLESS	STEPLESS	STEPLESS	STEPLESS	STEPLESS	STEPLESS	STEPLESS
Refrigerant			R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A
Theoretical refrigerant charge		kg	253	275	307	338	372	425	451	473	473
NOISE LEVEL											
Total sound Pressure	(7)(11)	dB(A)	67	67	68	69	69	68	70	70	70
Total sound power level in cooling	(8)(9)(11)	dB(A)	100	100	101	102	102	101	103	103	103
Sound power level in heating	(8)(10)(11)	dB(A)	100	100	101	102	102	101	103	103	103
SIZE AND WEIGHT											
A	(12)	mm	8150	8150	8900	9650	10400	10400	10400	11900	11900
B	(12)	mm	2260	2260	2260	2260	2260	2260	2260	2260	2260
H	(12)	mm	2530	2530	2530	2530	2530	2530	2530	2530	2530
Operating weight	(12)	kg	8350	8380	9080	9590	10060	11010	12310	14110	14150

Notes

1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.
2 Values in compliance with EN14511
3 Plant (side) heat exchanger water (in/out) 40°C/45°C; Source (side) heat exchanger air (in) 7°C - 87% R.H.
4 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Plant (side) heat exchanger water (in/out) 40°C/45°C.
5 Plant (side) cooling exchanger water */7°C (same water flow rate found during the cooling mode); Plant (side) heat exchanger water */45°C (same water flow rate found during the heating mode)
6 Parameter calculated for LOW-TEMPERATURE applications in AVERAGE climate conditions according to [REGULATION (EU) N. 813/2013]
7 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.
8 Sound power on the basis of measurements taken in compliance with ISO 9614.
9 Sound power level in cooling, outdoors.
10 Sound power level in heating, outdoors.
11 Unit performance with inverter compressor at nominal speed.
12 Unit in standard configuration, without optional accessories.
13 Parameter calculated according to [REGULATION (EU) N. 2016/2281]
14 Seasonal energy efficiency ratio
15 Seasonal space cooling energy efficiency
16 Seasonal coefficient of performance
17 Seasonal space heating energy efficiency
18 Energy efficiency class referred to LOW-TEMPERATURE applications in AVERAGE climate conditions according to [REGULATION (EU) N. 811/2013]

The units highlighted in this publication contain R513A [GWP_{100} 631] fluorinated greenhouse gases.

Data certified in EUROVENT

CLIMAVENETA®

UNITS FOR SIMULTANEOUS AND INDEPENDENT PRODUCTION OF HOT AND COLD WATER

i-FX-Q2-G05

INTEGRA unit for 4-pipe systems, air source, VSD screw compressors and EC fans, for outdoor installation

0502 - 1102 442,9-1125 kW

i-FX-Q2-G05 /SL-CA			0502	0532	0602	0652	0702	0802	0902	1002	1102
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
PERFORMANCE											
PERFORMANCE MAX											
COOLING ONLY (GROSS VALUE)											
Cooling capacity	(1)(12)	kW	498,6	513,3	549,0	646,7	686,7	765,6	905,4	981,9	1039
Total power input	(1)(12)	kW	183,1	184,0	188,8	229,5	235,8	261,6	322,0	347,6	386,2
EER	(1)(12)	kW/kW	2,723	2,790	2,908	2,818	2,912	2,927	2,812	2,825	2,690
Water flow		l/s	23,84	24,55	26,26	30,93	32,84	36,61	43,30	46,96	49,69
Pressure drop at the heat exchanger		kPa	42,7	48,2	30,2	43,1	45,1	27,4	38,9	42,0	47,4
COOLING ONLY (EN14511 VALUE)											
Cooling capacity	(1)(2)(12)	kW	498,1	512,8	548,6	646,1	686,1	765,1	904,8	981,2	1038
EER	(1)(2)(12)	kW/kW	2,690	2,760	2,880	2,790	2,880	2,910	2,790	2,800	2,660
HEATING ONLY (GROSS VALUE)											
Total heating capacity	(3)(12)	kW	492,0	492,0	526,1	637,4	678,9	756,3	881,6	948,9	1018
Total power input	(3)(12)	kW	150,9	150,9	157,8	192,7	203,0	221,5	265,7	283,7	301,1
COP	(3)(12)	kW/kW	3,260	3,260	3,334	3,308	3,344	3,414	3,318	3,345	3,381
Water flow	(3)(12)	l/s	23,75	23,75	25,39	30,77	32,77	36,51	42,55	45,80	49,13
Pressure drop at the heat exchanger	(3)(12)	kPa	26,0	26,0	21,5	31,3	34,7	32,1	43,7	36,4	30,0
HEATING ONLY (EN14511 VALUE)											
Total heating capacity	(2)(3)(12)	kW	492,4	492,4	526,4	637,8	679,4	756,8	882,2	949,5	1018
COP	(2)(3)(12)	kW/kW	3,240	3,240	3,310	3,280	3,320	3,390	3,290	3,320	3,360
COOLING WITH TOTAL HEAT RECOVERY											
Cooling capacity	(4)(12)	kW	527,3	539,2	571,2	676,3	708,6	784,8	945,4	1021	1102
Total power input	(4)(12)	kW	158,4	161,4	167,6	200,9	209,8	230,6	280,6	299,1	322,7
Recovery heat exchanger capacity	(4)(12)	kW	676,2	690,9	728,8	865,2	905,8	1002	1209	1302	1405
TER	(4)(12)	kW/kW	7,601	7,621	7,757	7,670	7,693	7,745	7,680	7,770	7,766
SELECTION RATED											
COOLING ONLY (EN14511 VALUE)											
Cooling capacity	(1)(2)(11)	kW	467,1	508,0	548,6	603,6	664,5	765,1	880,5	951,2	1038
EER	(1)(2)(11)	kW/kW	2,860	2,850	2,880	2,920	2,940	2,910	2,850	2,870	2,660
HEATING ONLY (EN14511 VALUE)											
Total heating capacity	(2)(3)(11)	kW	459,0	486,8	526,4	593,3	653,7	756,8	860,7	929,0	1018
COP	(2)(3)(11)	kW/kW	3,330	3,280	3,310	3,350	3,340	3,390	3,330	3,380	3,360
COOLING WITH TOTAL HEAT RECOVERY (EN14511 VALUE)											
Cooling capacity	(5)(11)	kW	488,1	532,6	570,1	623,5	682,1	783,8	913,9	986,8	1100
Total power input	(5)(11)	kW	145,5	160,3	170,4	185,3	205,4	234,5	274,6	291,6	329,3
Recovery heat exchanger capacity	(5)(11)	kW	623,1	681,4	728,8	795,2	872,3	1002	1168	1257	1405
TER	(5)(11)	kW/kW	7,636	7,573	7,621	7,658	7,566	7,614	7,582	7,695	7,608
ENERGY EFFICIENCY											
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)											
Ambient refrigeration											
Prated,c	(13)	kW	-	-	-	604	664	765	880	951	1038
SEER	(13)(14)		-	-	-	5,08	5,13	4,97	4,71	4,63	4,61
Performance ηs	(13)(15)	%	-	-	-	200	202	196	185	182	181
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)											
PDesign	(6)(11)	kW	370	370	393	-	-	-	-	-	-
SCOP	(6)(11)(16)		4,01	3,93	4,00	-	-	-	-	-	-
Performance ηs	(6)(11)(17)	%	157	154	157	-	-	-	-	-	-
Seasonal efficiency class	(11)(18)		-	-	-	-	-	-	-	-	-
EXCHANGERS											
HEAT EXCHANGER USER SIDE IN COOLING											
Water flow	(1)(11)	l/s	22,36	24,32	26,26	28,89	31,80	36,61	42,14	45,52	49,69
Pressure drop at the heat exchanger	(1)(11)	kPa	37,5	47,3	30,2	37,6	42,3	27,4	36,8	39,5	47,4
HEAT EXCHANGER USER SIDE IN HEATING											
Water flow	(3)(11)	l/s	22,14	23,48	25,39	28,62	31,53	36,51	41,52	44,81	49,13
Pressure drop at the heat exchanger	(3)(11)	kPa	22,6	25,4	21,5	27,1	32,1	32,1	41,5	34,9	30,0
REFRIGERANT CIRCUIT											
Compressors nr.		N°	2	2	2	2	2	2	2	2	2
No. Circuits		N°	2	2	2	2	2	2	2	2	2
Regulation			STEPLESS	STEPLESS	STEPLESS	STEPLESS	STEPLESS	STEPLESS	STEPLESS	STEPLESS	STEPLESS
Refrigerant			R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A
Theoretical refrigerant charge		kg	253	275	307	338	372	425	451	473	473
NOISE LEVEL											
Total sound Pressure	(7)(11)	dB(A)	57	58	58	59	59	59	61	61	59
Total sound power level in cooling	(8)(9)(11)	dB(A)	90	91	91	92	92	92	94	94	92
Sound power level in heating	(8)(10)(11)	dB(A)	90	91	91	92	92	92	94	94	92
SIZE AND WEIGHT											
A	(12)	mm	8150	8150	8900	9650	10400	10400	10400	11900	11900
B	(12)	mm	2260	2260	2260	2260	2260	2260	2260	2260	2260
H	(12)	mm	2530	2530	2530	2530	2530	2530	2530	2530	2530
Operating weight	(12)	kg	8800	8830	9530	10040	10510	11450	12750	14560	14600

Notes

1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.
2 Values in compliance with EN14511
3 Plant (side) heat exchanger water (in/out) 40°C/45°C; Source (side) heat exchanger air (in) 7°C - 87% R.H.
4 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Plant (side) heat exchanger water (in/out) 40°C/45°C.
5 Plant (side) cooling exchanger water */7°C (same water flow rate found during the cooling mode); Plant (side) heat exchanger water */45°C (same water flow rate found during the heating mode)
6 Parameter calculated for LOW-TEMPERATURE applications in AVERAGE climate conditions according to [REGULATION (EU) N. 813/2013]
7 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.
8 Sound power on the basis of measurements taken in compliance with ISO 9614.
9 Sound power level in cooling, outdoors.
10 Sound power level in heating, outdoors.
11 Unit performance with inverter compressor at nominal speed.
12 Unit in standard configuration, without optional accessories.
13 Parameter calculated according to [REGULATION (EU) N. 2016/2281]
14 Seasonal energy efficiency ratio
15 Seasonal space cooling energy efficiency
16 Seasonal coefficient of performance
17 Seasonal space heating energy efficiency
18 Energy efficiency class referred to LOW-TEMPERATURE applications in AVERAGE climate conditions according to [REGULATION (EU) N. 811/2013]

The units highlighted in this publication contain R513A [GWP_{100} 631] fluorinated greenhouse gases.

Data certified in EUROVENT

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com | VPF VARIABLE PRIMARY FLOW | VSPEED VARIABLE SPEED DRIVE

R513A | SHELL & TUBES | 4 PIPE SYSTEM | EC AXIAL | SCREW

i-FX-Q2-G05 /XL-CA			0502	0532	0602	0652	0702	0802	0902	1002
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
PERFORMANCE										
PERFORMANCE MAX										
COOLING ONLY (GROSS VALUE)										
Cooling capacity	(1)(12)	kW	442,9	483,5	525,6	571,7	632,6	731,8	847,6	912,3
Total power input	(1)(12)	kW	152,8	169,2	179,6	192,8	212,3	249,5	294,0	315,1
EER	(1)(12)	kW/kW	2,899	2,858	2,927	2,965	2,980	2,933	2,883	2,895
Water flow		l/s	21,18	23,12	25,14	27,34	30,25	35,00	40,54	43,63
Pressure drop at the heat exchanger		kPa	33,7	42,7	27,7	33,7	38,3	25,1	34,1	36,3
COOLING ONLY (EN14511 VALUE)										
Cooling capacity	(1)(2)(12)	kW	442,5	483,0	525,3	571,2	632,0	731,4	847,1	911,7
EER	(1)(2)(12)	kW/kW	2,870	2,830	2,900	2,940	2,950	2,910	2,860	2,870
HEATING ONLY (GROSS VALUE)										
Total heating capacity	(3)(12)	kW	438,3	466,5	507,0	565,9	626,8	728,3	833,4	897,4
Total power input	(3)(12)	kW	129,9	140,0	150,6	166,7	185,0	212,1	245,2	260,8
COP	(3)(12)	kW/kW	3,374	3,332	3,367	3,395	3,388	3,434	3,399	3,441
Water flow	(3)(12)	l/s	21,16	22,52	24,47	27,32	30,26	35,15	40,23	43,32
Pressure drop at the heat exchanger	(3)(12)	kPa	20,6	23,3	19,9	24,7	29,5	29,8	39,0	32,6
HEATING ONLY (EN14511 VALUE)										
Total heating capacity	(2)(3)(12)	kW	438,6	466,8	507,3	566,3	627,3	728,8	834,0	898,0
COP	(2)(3)(12)	kW/kW	3,350	3,310	3,350	3,370	3,360	3,410	3,370	3,410
COOLING WITH TOTAL HEAT RECOVERY										
Cooling capacity	(4)(12)	kW	464,1	508,8	548,8	590,8	650,9	751,5	883,4	921,3
Total power input	(4)(12)	kW	134,8	148,4	157,1	171,6	190,1	221,3	257,6	272,8
Recovery heat exchanger capacity	(4)(12)	kW	590,8	648,3	696,5	752,1	829,6	959,6	1126	1178
TER	(4)(12)	kW/kW	7,826	7,796	7,925	7,826	7,785	7,732	7,799	7,694
SELECTION RATED										
COOLING ONLY (EN14511 VALUE)										
Cooling capacity	(1)(2)(11)	kW	442,5	483,0	525,3	571,2	632,0	731,4	847,1	911,7
EER	(1)(2)(11)	kW/kW	2,870	2,830	2,900	2,940	2,950	2,910	2,860	2,870
HEATING ONLY (EN14511 VALUE)										
Total heating capacity	(2)(3)(11)	kW	438,6	466,8	507,3	566,3	627,3	728,8	834,0	898,0
COP	(2)(3)(11)	kW/kW	3,350	3,310	3,350	3,370	3,360	3,410	3,370	3,410
COOLING WITH TOTAL HEAT RECOVERY (EN14511 VALUE)										
Cooling capacity	(5)(11)	kW	463,2	507,6	547,7	589,8	649,8	750,6	882,2	920,2
Total power input	(5)(11)	kW	137,2	151,5	159,7	174,6	193,8	224,9	262,8	278,0
Recovery heat exchanger capacity	(5)(11)	kW	590,9	648,3	696,5	752,2	829,8	959,9	1126	1178
TER	(5)(11)	kW/kW	7,683	7,632	7,792	7,685	7,634	7,605	7,642	7,549
ENERGY EFFICIENCY										
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)										
Ambient refrigeration										
Prated,c	(13)	kW	-	-	-	571	632	731	847	912
SEER	(13)(14)		-	-	-	5,04	5,19	5,00	4,60	4,56
Performance ηs	(13)(15)	%	-	-	-	199	205	197	181	179
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)										
PDesign	(6)(11)	kW	323	350	376	-	-	-	-	-
SCOP	(6)(11)(16)		4,25	4,19	4,25	-	-	-	-	-
Performance ηs	(6)(11)(17)	%	167	165	167	-	-	-	-	-
Seasonal efficiency class	(11)(18)		-	-	-	-	-	-	-	-
EXCHANGERS										
HEAT EXCHANGER USER SIDE IN COOLING										
Water flow	(1)(11)	l/s	21,18	23,12	25,14	27,34	30,25	35,00	40,54	43,63
Pressure drop at the heat exchanger	(1)(11)	kPa	33,7	42,7	27,7	33,7	38,3	25,1	34,1	36,3
HEAT EXCHANGER USER SIDE IN HEATING										
Water flow	(3)(11)	l/s	21,16	22,52	24,47	27,32	30,26	35,15	40,23	43,32
Pressure drop at the heat exchanger	(3)(11)	kPa	20,6	23,3	19,9	24,7	29,5	29,8	39,0	32,6
REFRIGERANT CIRCUIT										
Compressors nr.		N°	2	2	2	2	2	2	2	2
No. Circuits		N°	2	2	2	2	2	2	2	2
Regulation			STEPLESS	STEPLESS	STEPLESS	STEPLESS	STEPLESS	STEPLESS	STEPLESS	STEPLESS
Refrigerant			R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A
Theoretical refrigerant charge		kg	253	275	307	338	372	425	451	473
NOISE LEVEL										
Total sound Pressure	(7)(11)	dB(A)	53	54	55	55	55	56	55	56
Total sound power level in cooling	(8)(9)(11)	dB(A)	86	87	88	88	88	89	88	89
Sound power level in heating	(8)(10)(11)	dB(A)	87	88	89	89	89	90	89	90
SIZE AND WEIGHT										
A	(12)	mm	8150	8150	8900	9650	10400	10400	10400	11900
B	(12)	mm	2260	2260	2260	2260	2260	2260	2260	2260
H	(12)	mm	2530	2530	2530	2530	2530	2530	2530	2530
Operating weight	(12)	kg	8800	8830	9530	10040	10510	11450	12750	14560

Notes

1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.
2 Values in compliance with EN14511
3 Plant (side) heat exchanger water (in/out) 40°C/45°C; Source (side) heat exchanger air (in) 7°C - 87% R.H.
4 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Plant (side) heat exchanger water (in/out) 40°C/45°C.
5 Plant (side) cooling exchanger water */7°C (same water flow rate found during the cooling mode); Plant (side) heat exchanger water */45°C (same water flow rate found during the heating mode)
6 Parameter calculated for LOW-TEMPERATURE applications in AVERAGE climate conditions according to [REGULATION (EU) N. 813/2013]
7 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.
8 Sound power on the basis of measurements taken in compliance with ISO 9614.
9 Sound power level in cooling, outdoors.
10 Sound power level in heating, outdoors.
11 Unit performance with inverter compressor at nominal speed.
12 Unit in standard configuration, without optional accessories.
13 Parameter calculated according to [REGULATION (EU) N. 2016/2281]
14 Seasonal energy efficiency ratio
15 Seasonal space cooling energy efficiency
16 Seasonal coefficient of performance
17 Seasonal space heating energy efficiency
18 Energy efficiency class referred to LOW-TEMPERATURE applications in AVERAGE climate conditions according to [REGULATION (EU) N. 811/2013]

The units highlighted in this publication contain R513A [GWP_{100} 631] fluorinated greenhouse gases.

Data certified in EUROVENT

CLIMAVENETA®

i-FX-Q2-G05

INTEGRA unit for 4-pipe systems, air source, VSD screw compressors and EC fans, for outdoor installation

0502 - 1102 442,9-1125 kW

Dimensional drawing