INTEGRA

INTEGRA

NECS-Q 0152÷1204

INTEGRA unit for 4-pipe systems, air source for outdoor installation

36 - 311 kW

Unit Description

Multi-purpose outdoor unit for use in 4-pipe systems for the simultaneous production of chilled and hot water by means of two independent hydronic circuits. These units are able to satisfy the demand for hot and cold water simultaneously through a system that does not require seasonal switching and is therefore a valid alternative to traditional plants with chiller and boiler. This unit is equipped with hermetic rotary Scroll compressors, with R410A, axial fans, braze-welded plate-type exchanger and thermal expansion valve. External panels in Peraluman and base in galvanised sheet steel with paint finish. The range includes two-compressor and four-compressor versions, both with two independent refrigerant circuits.

Commands

W3000SE Large

The W3000SE Large controller offers advanced functions and algorithms. The keypad features an easy-to-use interface and a complete LCD display, allowing to consult and intervene on the unit by means of a multi-level menu, with selectable language setting. The regulation operates on both water circuits featuring the step-wise regulation referred to the return water temperature with proportional logic. This allows to satisfy simultaneously the different requests of both cooling and heating, with no need of mode setting. The diagnostics includes a complete alarm management, with the "black-box" and alarm logging functions for enhanced analysis of the unit operation. For multiple units systems, the regulation of the resources, via optional proprietary devices, can be implemented. Energy metering, for both consumption and capacity, can also be developed. 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, Echelon LonWorks. Compatibility with the remote keyboard managing up to 10 units. Availability of an internal real time clock for operation scheduling (4-day profiles with 10 hour belts). The defrost adopts a proprietary self-adaptive logic, which features the monitoring of numerous operational parameters. This allows to reduce the number and duration of the defrost cycles, with a benefit for the overall energy efficiency.

Versions

B	base version
LN	low noise version
SL	super-low noise version

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

TOTAL VERSATILITY

Climaveneta is the only company to offer all-in-one units with Scroll compressors in 3 versions designed to satisfy all service system and application requirements

CUTTING-EDGE ELECTRONICS

The Energy Raiser units are fitted with an evolved electronic unit that allows fully automatic management of the best type of operation to meet the load requirements

VENTILATION CONTROL FOR LOW-TEMPERATURE OPERATION

The standard units come fitted with pressure-operated control of ventilation, which allows the unit to produce cold water with an external air temperature down to -10°C

INTEGRATED HYDRONIC MODULE

The built-in hydronic module already contains the main water circuit components; it is available with single or twin in-line pump, for achieving both low or high head, available for both plant and recovery circuits (up to 4 pumps).

Main accessories

- Set-up for remote connectivity with ModBus/Echelon/ Bacnet protocol cards
- Remote keyboard (distance to 200m and to 500m)
- Soft starters
- Rubber anti-vibration mounting kit

NECS-Q / B

Models		0152	0182	0202	0252	0262	0302	0412	0512
COOLING ONLY									
Cooling capacity (1)	kW	36,6	43,2	48,5	55,8	61,2	73,3	94,8	120
Total power input (1)	kW	13,3	14,5	17,9	19,9	22,8	26,2	33,6	41,7
EER		2,76	2,99	2,71	2,80	2,68	2,80	2,82	2,88
HEATING ONLY									
Heating capacity (2)	kW	41,1	48,9	55,3	62,5	68,1	83,1	107	136
Total power input (2)	kW	13,3	14,7	17,2	19,7	21,4	24,9	32,1	40
COP		3,10	3,33	3,22	3,17	3,18	3,34	3,34	3,40
COOLING WITH TOTAL RECOVERY									
Cooling capacity (3)	kW	37,2	43,6	50,6	57,2	64,1	76,3	97,7	124
Heat recovery capacity (3)	kW	49,2	56,9	66,2	75	83,8	99,3	128	161
Total power input (3)	kW	12,8	14,2	16,6	18,9	21	24,5	31,9	39,6
TER (4)	-	6,75	7,08	7,04	6,99	7,04	7,17	7,08	7,20
COMPRESSORS									
No. Compressors/No. Circuits	N.	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2
NOISE LEVELS									
Sound power (5)	dB(A)	84	84	84	84	84	85	86	87
Sound pressure (6)	dB(A)	52	52	52	52	52	53	54	55
SIZE									
A	mm	2020	2020	2020	2520	2520	2520	3070	3570
B	mm	1300	1300	1300	1300	1300	1300	1300	1300
H	mm	1620	1620	1620	1620	1620	1620	1620	1620
Operating weight	kg	570	590	600	660	670	720	1030	1180

Models		0612	0604	0704	0804	0904	1004	1104	1204
COOLING ONLY									
Cooling capacity (1)	kW	151	150	166	189	211	240	277	311
Total power input (1)	kW	56,6	58,9	69	75,8	85,2	95,6	107	121
EER		2,66	2,54	2,41	2,49	2,48	2,51	2,58	2,58
HEATING ONLY									
Heating capacity (2)	kW	173	167	185	209	234	267	306	344
Total power input (2)	kW	52,1	58	64,9	72,1	79,8	92	104	116
COP		3,31	2,88	2,86	2,90	2,93	2,90	2,94	2,96
COOLING WITH TOTAL RECOVERY									
Cooling capacity (3)	kW	160	151	173	194	220	246	281	317
Heat recovery capacity (3)	kW	208	198	226	255	288	321	368	415
Total power input (3)	kW	51,3	49,8	57,1	64,5	72,1	79,8	92,8	105
TER (4)	-	7,17	7,01	6,99	6,96	7,05	7,11	6,99	6,97
COMPRESSORS									
No. Compressors/No. Circuits	N.	2 / 2	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2
NOISE LEVELS									
Sound power (5)	dB(A)	87	92	92	92	93	94	95	95
Sound pressure (6)	dB(A)	55	60	60	60	61	62	63	63
SIZE									
A	mm	3570	3110	3110	3110	4110	4110	4110	4110
B	mm	1300	2220	2220	2220	2220	2220	2220	2220
H	mm	1620	2150	2150	2150	2150	2150	2150	2150
Operating weight	kg	1290	1600	1840	2120	2320	2480	2680	2860

Note:

1 Evaporator water (in/out) = 12/7°C; Condenser air (in) = 35°C.

2 Condenser water (in/out) = 40/45°C; evaporator air (in) = 7°C - r.h. 87%.

3 Evaporator water (in/out) = 12/7°C; Recovery unit water (in/out) = 40/45°C

4 TER := Total Efficiency Ratio = (Cooling capacity + Heating capacity) / (Total power input)

5 Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.

6 Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

NECS-Q / LN

Models		0604	0704	0804	0904	1004	1104	1204
COOLING ONLY								
Cooling capacity (1)	kW	143	157	177	199	227	261	291
Total power input (1)	kW	58,8	70,2	78,4	87,8	96,5	110	125
EER		2,43	2,24	2,26	2,27	2,36	2,37	2,32
HEATING ONLY								
Heating capacity (2)	kW	160	176	198	225	254	290	324
Total power input (2)	kW	54	60,8	67,9	75,7	85,8	97,9	110
COP		2,95	2,89	2,92	2,98	2,95	2,96	2,94
COOLING WITH TOTAL RECOVERY								
Cooling capacity (3)	kW	151	173	194	220	246	281	317
Heat recovery capacity (3)	kW	198	226	255	288	321	368	415
Total power input (3)	kW	49,8	57,1	64,5	72,1	79,8	92,8	105
TER (4)	-	7,01	6,99	6,96	7,05	7,11	6,99	6,97
COMPRESSORS								
No. Compressors/No. Circuits	N.	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2
NOISE LEVELS								
Sound power (5)	dB(A)	86	86	86	87	88	89	89
Sound pressure (6)	dB(A)	54	54	54	55	56	57	57
SIZE								
A	mm	3110	3110	3110	4110	4110	4110	4110
B	mm	2220	2220	2220	2220	2220	2220	2220
H	mm	2150	2150	2150	2150	2150	2150	2150
Operating weight	kg	1600	1840	2120	2320	2480	2680	2860

Note:

1 Evaporator water (in/out) = 12/7°C; Condenser air (in) = 35°C.

2 Condenser water (in/out) = 40/45°C; evaporator air (in) = 7°C - r.h. 87%.

3 Evaporator water (in/out) = 12/7°C; Recovery unit water (in/out) = 40/45°C

4 TER := Total Efficiency Ratio = (Cooling capacity + Heating capacity) / (Total power input)

5 Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.

6 Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

NECS-Q / SL

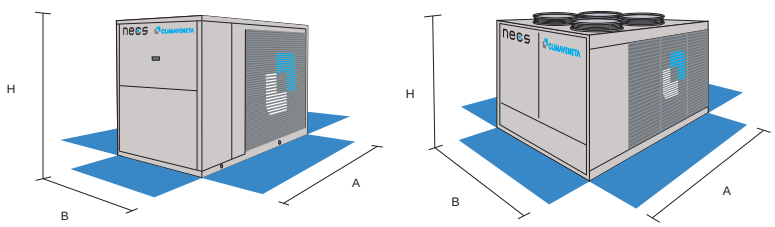
Models		0152	0182	0202	0252	0262	0302	0412	0512
COOLING ONLY									
Cooling capacity (1)	kW	33,3	39,6	47	50,9	58,3	69,1	93,9	119
Total power input (1)	kW	15	16,5	18,7	22,4	24,4	28,4	34,1	42,3
EER		2,21	2,39	2,52	2,28	2,39	2,43	2,75	2,81
HEATING ONLY									
Heating capacity (2)	kW	40	47,4	55,1	60,9	70,5	80,9	109	138
Total power input (2)	kW	13,1	14,6	17,2	19,7	21,5	24,8	32,2	40,1
COP		3,04	3,24	3,21	3,10	3,28	3,26	3,38	3,43
COOLING WITH TOTAL RECOVERY									
Cooling capacity (3)	kW	37,2	43,6	50,6	57,2	64,1	76,3	97,7	124
Heat recovery capacity (3)	kW	49,2	56,9	66,2	74,9	83,8	99,3	128	161
Total power input (3)	kW	12,8	14,2	16,6	18,9	21	24,5	31,9	39,6
TER (4)	-	6,75	7,08	7,04	6,99	7,04	7,17	7,08	7,20
COMPRESSORS									
No. Compressors/No. Circuits	N.	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2
NOISE LEVELS									
Sound power (5)	dB(A)	78	78	79	79	79	80	82	83
Sound pressure (6)	dB(A)	46	46	47	47	47	48	50	51
SIZE									
A	mm	2020	2020	2520	2520	2520	3070	3070	3570
B	mm	130	1300	1300	1300	1300	1300	1300	1300
H	mm	1620	1620	1620	1620	1620	1620	1620	1620
Operating weight	kg	570	590	660	660	700	780	1070	1230

Models		0612	0604	0704	0804	0904	1004	1104	1204
COOLING ONLY									
Cooling capacity (1)	kW	143	142	160	183	201	225	261	294
Total power input (1)	kW	60,4	58	67,4	75,5	87,3	95,5	108	123
EER		2,37	2,45	2,37	2,43	2,30	2,36	2,41	2,38
HEATING ONLY									
Heating capacity (2)	kW	169	159	178	205	226	253	295	330
Total power input (2)	kW	52	52,6	59,5	68,7	76,1	83,8	96,1	110
COP		3,26	3,02	2,99	2,99	2,98	3,02	3,07	3
COOLING WITH TOTAL RECOVERY									
Cooling capacity (3)	kW	160	151	173	194	220	246	281	317
Heat recovery capacity (3)	kW	208	198	226	255	288	321	368	415
Total power input (3)	kW	51,3	49,8	57,1	64,5	72,1	79,8	92,8	105
TER (4)	-	7,17	7,01	6,99	6,96	7,05	7,11	6,99	6,97
COMPRESSORS									
No. Compressors/No. Circuits	N.	2 / 2	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2
NOISE LEVELS									
Sound power (5)	dB(A)	83	82	82	83	83	83	85	86
Sound pressure (6)	dB(A)	51	50	50	51	51	51	53	54
SIZE									
A	mm	3570	3110	3110	4110	4110	4110	5110	5110
B	mm	1300	2220	2220	2220	2220	2220	2220	2220
H	mm	1620	2150	2150	2150	2150	2150	2150	2150
Operating weight	kg	1290	1700	1960	2350	2420	2590	2950	3100

Note:
1 Evaporator water (in/out) = 12/7°C; Condenser air (in) = 35°C.
2 Condenser water (in/out) = 40/45°C; evaporator air (in) = 7°C - r.h. 87%.
3 Evaporator water (in/out) = 12/7°C; Recovery unit water (in/out) = 40/45°C
4 TER := Total Efficiency Ratio = (Cooling capacity + Heating capacity) / (Total power input)
5 Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.
6 Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

Minimum clearance required

		0152-1204
Switchboard side	mm	1100
Switchboard opposite side	mm	1100
Condensation coil side	mm	2000



NECS-Q 1314÷3218

INTEGRA unit for 4-pipe systems, air source for outdoor installation

353 - 823 kW

Unit Description

Multi-purpose outdoor unit for use in 4-pipe systems for the simultaneous production of chilled and hot water by means of two independent hydronic circuits. These units are able to satisfy the demand for hot and cold water simultaneously through a system that does not require seasonal switching and is therefore a valid alternative to traditional plants with chiller and boiler. This unit is equipped with hermetic rotary Scroll compressors, with R410A, axial fans, shell and tube heat exchangers and electronic expansion valve. The range is composed by units equipped with four, six and eight compressors in multi-circuit configuration.

Commands

W3000SE Large

The W3000SE Large controller offers advanced functions and algorithms. The keypad features an easy-to-use interface and a complete LCD display, allowing to consult and intervene on the unit by means of a multi-level menu, with selectable language setting. The regulation operates on both water circuits featuring the step-wise regulation referred to the return water temperature with proportional logic. This allows to satisfy simultaneously the different requests of both cooling and heating, with no need of mode setting. The diagnostics includes a complete alarm management, with the "black-box" and alarm logging functions for enhanced analysis of the unit operation. For multiple units systems, the regulation of the resources, via optional proprietary devices, can be implemented. Energy metering, for both consumption and capacity, can also be developed. 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, Echelon LonWorks. Compatibility with the remote keyboard managing up to 10 units. Availability of an internal real time clock for operation scheduling (4-day profiles with 10 hour belts). The defrost adopts a proprietary self-adaptive logic, which features the monitoring of numerous operational parameters. This allows to reduce the number and duration of the defrost cycles, with a benefit for the overall energy efficiency.

Versions

B	base version
CA	Class A of efficiency
SL-CA	Super Low noise version, Class A of efficiency

Features

REFRIGERANT GAS R410A

The use of R410A has resulted in units offering better energy efficiency in full respect for the environment (ODP = 0)

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 operations logic. The best operation mode is set completely automatically and independently by the units controller, in order to minimize the absorbed energy whatever the cooling and/or heating demand might be

CLASS A EFFICIENCY

The full range is also available with the Class A efficiency rating. NECS-Q/CA and NECS-Q/SL-CA guaranty premium levels of efficiency thanks to the generous sizing of the refrigerant-exchange surface areas and to an accurate control of the fans, available on both standard and low-noise versions.

INTEGRATED HYDRONIC MODULE

The built-in hydronic module already contains the main water circuit components; it is available with single or twin in-line pump, for achieving low or high head, available for both hot and cold water distribution systems (up to 4 pumps).

Main accessories

- Remote keyboard (distance to 200m and to 500m)
- Soft starters
- Set-up for remote connectivity with ModBus, Echelon LonTalk, Bacnet protocol board
- LT kit for extending the operating limits in heat pump mode down to -10°C (/SL-CA versions) and -12°C (/CA versions)

NECS-Q / B

Models		1314	1414	1614	1716	1816	2016	2116	2416	2418	2618	2818	3018	3218
COOLING ONLY														
Cooling capacity (1)	kW	353	378	412	452	494	546	567	617	662	704	757	791	823
Total power input (1)	kW	125	131	150	163	176	189	196	225	235	250	262	281	300
EER		2,81	2,89	2,75	2,77	2,82	2,89	2,89	2,74	2,82	2,81	2,89	2,82	2,74
HEATING ONLY														
Heating capacity (2)	kW	380	408	447	485	528	587	612	670	704	761	817	855	893
Total power input (2)	kW	121	129	142	156	169	186	192	212	225	243	256	270	283
COP		3,13	3,18	3,16	3,11	3,12	3,16	3,18	3,16	3,12	3,13	3,18	3,17	3,16
COOLING WITH TOTAL RECOVERY														
Cooling capacity (3)	kW	355	379	423	460	500	547	569	636	667	711	758	802	848
Heat recovery capacity (3)	kW	455	485	542	590	640	700	728	814	854	912	971	240	1085
Total power input (3)	kW	107	113	126	139	150	163	170	189	200	213	227	1027	252
TER (4)	-	7,57	7,65	7,66	7,55	7,60	7,65	7,63	7,67	7,61	7,62	7,62	1,01	7,67
COMPRESSORS														
No. Compressors/No. Circuits	N.	4 / 2	4 / 2	4 / 2	6 / 3	6 / 3	6 / 3	6 / 3	6 / 3	8 / 4	8 / 4	8 / 4	8 / 4	8 / 4
NOISE LEVELS														
Sound power (5)	dB(A)	96	96	96	96	97	97	97	98	98	98	99	99	99
Sound pressure (6)	dB(A)	64	64	64	64	65	65	65	66	65	65	66	66	66
SIZE														
A	mm	3905	3905	3905	4515	5690	5690	5690	5690	7430	7430	7430	7430	7430
B	mm	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260
H	mm	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450
Operating weight	kg	3530	3620	3650	4850	5240	5370	5430	5480	6700	6830	7000	7030	7060

Note:

1 Evaporator water (in/out) = 12/7°C; Condenser air (in) = 35°C.

2 Condenser water (in/out) = 40/45°C; evaporator air (in) = 7°C - r.h. 87%.

3 Evaporator water (in/out) = 12/7°C; Recovery unit water (in/out) = 40/45°C

4 TER := Total Efficiency Ratio = (Cooling capacity + Heating capacity) / (Total power input)

5 Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.

6 Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

NECS-Q / CA

Models		1314	1414	1614	1716	1816	2016	2116	2416	2418	2618	2818	3018	3218
COOLING ONLY														
Cooling capacity (1)	kW	362	387	425	471	524	559	581	637	680	724	775	813	850
Total power input (1)	kW	122	128	145	157	173	185	192	217	230	244	256	272	289
EER		2,96	3,03	2,94	3,01	3,04	3,03	3,03	2,94	2,95	2,96	3,03	2,99	2,94
HEATING ONLY														
Heating capacity (2)	kW	394	420	462	507	546	603	630	693	729	788	840	882	924
Total power input (2)	kW	120	127	140	155	166	183	190	210	221	2394	253	266	280
COP		3,30	3,31	3,30	3,28	3,29	3,30	3,32	3,30	3,29	3,29	3,32	3,31	3,30
COOLING WITH TOTAL RECOVERY														
Cooling capacity (3)	kW	355	379	423	460	500	547	569	636	667	711	758	802	848
Heat recovery capacity (3)	kW	394	485	542	590	640	700	728	814	854	912	971	1027	1085
Total power input (3)	kW	107	113	126	139	150	163	170	189	200	213	227	240	252
TER (4)	-	7,00	7,65	7,66	7,55	7,60	7,65	7,63	7,67	7,61	7,62	7,62	7,62	7,67
COMPRESSORS														
No. Compressors/No. Circuits	N.	4 / 2	4 / 2	4 / 2	6 / 3	6 / 3	6 / 3	6 / 3	6 / 3	8 / 4	8 / 4	8 / 4	8 / 4	8 / 4
NOISE LEVELS														
Sound power (5)	dB(A)	97	97	97	97	98	98	98	99	99	99	100	100	100
Sound pressure (6)	dB(A)	65	65	65	64	65	65	65	66	66	66	67	67	67
SIZE														
A	mm	5080	5080	5080	6255	7430	7430	7430	7430	9780	9780	9780	9780	9780
B	mm	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260
H	mm	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450
Operating weight	kg	3850	3950	3980	5460	5740	5890	5970	6020	7350	7500	7700	7740	7770

Note:

1 Evaporator water (in/out) = 12/7°C; Condenser air (in) = 35°C.

2 Condenser water (in/out) = 40/45°C; evaporator air (in) = 7°C - r.h. 87%.

3 Evaporator water (in/out) = 12/7°C; Recovery unit water (in/out) = 40/45°C

4 TER := Total Efficiency Ratio = (Cooling capacity + Heating capacity) / (Total power input)

5 Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.

6 Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

NECS-Q / SL-CA

Models		1314	1414	1614	1716	1816	2016	2116	2416	2418	2618	2818	3018	3218
COOLING ONLY														
Cooling capacity (1)	kW	332	357	398	429	500	512	536	596	616	663	715	754	795
Total power input (1)	kW	130	137	153	169	640	198	205	230	244	260	274	290	306
EER		2,56	2,61	2,60	2,54	2,52	2,59	2,61	2,60	2,52	2,55	2,61	2,60	2,60
HEATING ONLY														
Heating capacity (2)	kW	378	400	453	486	526	578	601	679	701	755	801	859	906
Total power input (2)	kW	116	124	138	151	163	178	186	207	217	233	248	262	276
COP		3,25	3,22	3,29	3,22	3,23	3,25	3,23	3,28	3,23	3,24	3,23	3,28	3,28
COOLING WITH TOTAL RECOVERY														
Cooling capacity (3)	kW	355	379	423	460	500	547	569	636	667	711	758	802	848
Heat recovery capacity (3)	kW	455	485	542	590	640	700	728	814	854	912	971	240	1085
Total power input (3)	kW	107	113	126	139	150	163	170	189	200	213	227	1027	252
TER (4)	-	7,57	7,65	7,66	7,55	7,60	7,65	7,63	7,67	7,61	7,62	7,62	1,01	7,67
COMPRESSORS														
No. Compressors/No. Circuits	N.	4 / 2	4 / 2	4 / 2	6 / 3	6 / 3	6 / 3	6 / 3	6 / 3	8 / 4	8 / 4	8 / 4	8 / 4	8 / 4
NOISE LEVELS														
Sound power (5)	dB(A)	88	88	88	89	89	90	90	91	91	91	92	92	92
Sound pressure (6)	dB(A)	56	56	56	57	57	57	57	58	58	58	59	59	59
SIZE														
A	mm	4515	5080	5080	5690	5690	6865	7430	7430	7430	8605	9780	9780	9780
B	mm	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260
H	mm	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450	2450
Operating weight	kg	3760	3900	4050	5350	5490	5780	5890	6130	7020	7330	7600	7750	7910

Note:

1 Evaporator water (in/out) = 12/7°C; Condenser air (in) = 35°C.

2 Condenser water (in/out) = 40/45°C; evaporator air (in) = 7°C - r.h. 87%.

3 Evaporator water (in/out) = 12/7°C; Recovery unit water (in/out) = 40/45°C

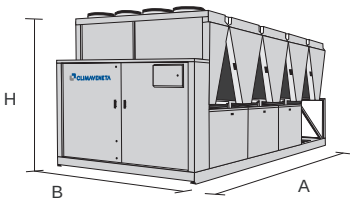
4 TER := Total Efficiency Ratio = (Cooling capacity + Heating capacity) / (Total power input)

5 Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.

6 Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

Minimum clearance required

		1314-3218
Switchboard side	mm	1500
Switchboard opposite side	mm	1500
Plant exchagers opposite side	mm	1500
Plant exchagers side	mm	2000



ERACS2-Q 1062÷3222

INTEGRA unit for 4-pipe systems, air source for outdoor installation

200 - 826 kW

Unit Description

Multi-purpose outdoor unit for use in 4-pipe systems for the simultaneous production of chilled and hot water by means of two independent hydronic circuits. These units are able to satisfy the demand for hot and cold water simultaneously 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 semi-hermetic screw compressor using R134a, two shell and tubes heat exchangers shared by both circuits, a cold heat exchanger on plants side that acts as an evaporator in the production of cold water, a heat exchanger on plants side that works as a condenser in the production of hot water, and a source side coil heat exchanger that works as either condenser or evaporator as required by the loads.

Commands

W3000 large

The controller W3000 large offers the latest control and functions specially developed for these units. The keypad is generously sized with full operating status display. The controls and detailed LCD make access to machine settings easy and safe. These resources permit to diirectly act on the unit settings through a multilevel menu, available in several languages. The diagnostics includes full management of alarms with black-box functions and alarm record for better analysis of unit performance. For multi-units plants a special device to coordinate and manage all the resources is available as an option; energy metering device is even possible as an option. Supervision is easy through Climaveneta devices or with various options for interfacing to ModBus, Bacnet, Echelon LonTalk protocols. Compatibility with remote keyboard (management up to 10 units). Clock available with programming of operation (standard 4 days and 10 time bands). Temperature regulation managed on the two water circuits, with a proportional logic referred to the return water temperatures. This allows to satisfy simultaneously the different heating- and cooling requests, with no need of mode changeover. Exclusive self-adaptive defrost logic, monitoring multiple operational- and ambient parameters, which allows to reduce the number and duration of the defrost cycles, with a benefit for the overall energy efficiency.

Versions

CA	Class A of efficiency
LN-CA	Low Noise, Class A of efficiency
SL-CA	Super Low noise version, Class A of efficiency
XL-CA	eXtra Low noise version, Class A of efficiency
XL-CA-E	eXtra Low noise, Class A enhanced

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 operations logic. The best operation mode is set completely automatically and independently by the units controller, in order to minimize the absorbed energy whatever the cooling and/or heating demand might be

EXTENSIVE RANGE OF OPERATION

Unit´s operation guaranteed with external air temperature down to -10°C during winter and up to 46°C during summer.

VERSION ´XL-CA-E´ AVAILABLE

Exclusive Premium version. Together for the first time, the lowest noise level on the market and the maximum efficiency in each operating mode.

HOT WATER SUPPLY

Supply of hot water in use up to 55°C, offering maximum versatility with respect to different plant engineering solutions

Main accessories

- Hydronic group
- VPF (Variable Primary Flow) kit: variable flow pumps with on board regulation
- Electronic expansion valve
- Set-up for remote connectivity with ModBus/Echelon/ Bacnet protocol cards

ERACS2-Q / CA

Models		1062	1162	1362	1562	1762	1962	2022	2222	2422	2622	2722	3222
COOLING ONLY													
Cooling capacity (1)	kW	210	248	302	329	380	425	483	525	554	624	701	826
Total power input (1)	kW	72,1	84,5	102	109	129	144	156	167	176	201	222	264
EER		2,91	2,93	2,96	3,02	2,95	2,95	3,10	3,14	3,15	3,10	3,16	3,13
HEATING ONLY													
Heating capacity (2)	kW	218	258	309	339	396	434	492	541	571	615	711	826
Total power input (2)	kW	67	80,7	92,2	101	122	131	149	159	169	178	207	240
COP		3,25	3,20	3,35	3,36	3,25	3,31	3,30	3,40	3,38	3,46	3,43	3,44
COOLING WITH TOTAL RECOVERY													
Cooling capacity (3)	kW	209	248	305	329	381	428	484	521	551	631	702	832
Heat recovery capacity (3)	kW	269	320	392	422	493	549	621	666	704	801	895	1056
Total power input (3)	kW	60,6	71,9	87,1	92,5	111	122	137	145	153	170	193	224
TER (4)	-	7,89	7,90	8,00	8,12	7,87	8,01	8,07	8,19	8,20	8,42	8,27	8,43
COMPRESSORS													
No. Compressors/No. Circuits	N.	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2
NOISE LEVELS													
Sound power (5)	dB(A)	97	97	97	98	99	99	99	101	101	101	101	102
Sound pressure (6)	dB(A)	65	65	65	66	67	67	67	69	69	69	69	70
SIZE													
A	mm	4610	4610	5610	5610	6610	6610	6300	7200	7200	7200	8400	9700
B	mm	2220	2220	2220	2220	2220	2220	2260	2260	2260	2260	2260	2260
H	mm	2150	2420	2430	2430	2430	2430	2350	2350	2350	2350	2350	2350
Operating weight	kg	*	*	*	*	*	*	*	*	*	*	*	*

Note:

1 Evaporator water (in/out) = 12/7°C; Condenser air (in) = 35°C.
2 Condenser water (in/out) = 40/45°C; evaporator air (in) = 7°C - r.h. 87%.
3 Evaporator water (in/out) = 12/7°C; Recovery unit water (in/out) = 40/45°C
4 TER := Total Efficiency Ratio = (Cooling capacity + Heating capacity) / (Total power input)
5 Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.
6 Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

ERACS2-Q / LN-CA

Models		1062	1162	1362	1562	1762	1962	2022	2222	2422	2622	2722	3222
COOLING ONLY													
Cooling capacity (1)	kW	205	241	294	322	369	414	469	513	541	604	686	800
Total power input (1)	kW	70,8	84,3	103	109	130	144	163	168	177	206	226	274
EER		2,90	2,86	2,85	2,95	2,84	2,88	2,88	3,05	3,06	2,93	3,04	2,92
HEATING ONLY													
Heating capacity (2)	kW	218	258	309	339	396	434	492	541	571	615	711	826
Total power input (2)	kW	67	80,7	92,2	101	122	131	149	159	169	178	207	240
COP		3,25	3,20	3,35	3,36	3,25	3,31	3,30	3,40	3,38	3,46	3,43	3,44
COOLING WITH TOTAL RECOVERY													
Cooling capacity (3)	kW	209	248	305	329	381	428	484	521	551	631	702	832
Heat recovery capacity (3)	kW	269	320	392	422	493	549	621	666	704	801	895	1056
Total power input (3)	kW	60,6	71,9	87,1	92,5	111	122	137	145	153	170	193	224
TER (4)	-	7,89	7,90	8,00	8,12	7,87	8,01	8,07	8,19	8,20	8,42	8,27	8,43
COMPRESSORS													
No. Compressors/No. Circuits	N.	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2
NOISE LEVELS													
Sound power (5)	dB(A)	90	91	91	92	92	92	93	95	95	95	95	96
Sound pressure (6)	dB(A)	58	59	59	60	60	60	61	63	63	63	63	64
SIZE													
A	mm	4610	4610	5610	5610	6610	6610	6300	7200	7200	7200	8400	9700
B	mm	2220	2220	2220	2220	2220	2220	2260	2260	2260	2260	2260	2260
H	mm	2150	2420	2430	2430	2430	2430	2350	2350	2350	2350	2350	2350
Operating weight	kg	*	*	*	*	*	*	*	*	*	*	*	*

Note:

1 Evaporator water (in/out) = 12/7°C; Condenser air (in) = 35°C.
2 Condenser water (in/out) = 40/45°C; evaporator air (in) = 7°C - r.h. 87%.
3 Evaporator water (in/out) = 12/7°C; Recovery unit water (in/out) = 40/45°C
4 TER := Total Efficiency Ratio = (Cooling capacity + Heating capacity) / (Total power input)
5 Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.
6 Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

ERACS2-Q / SL-CA

Models		1062	1162	1362	1562	1762	1962	2022	2222	2422	2622	2722	3222
COOLING ONLY													
Cooling capacity (1)	kW	200	233	283	314	356	401	464	509	537	597	680	790
Total power input (1)	kW	72,7	87,2	109	113	137	149	166	170	180	210	229	281
EER		2,75	2,67	2,60	2,78	2,60	2,69	2,80	2,99	2,98	2,84	2,97	2,81
HEATING ONLY													
Heating capacity (2)	kW	211	251	301	330	385	422	486	536	564	607	703	816
Total power input (2)	kW	64,8	78,4	89,9	98,4	119	127	147	157	167	176	205	238
COP		3,26	3,20	3,35	3,35	3,24	3,32	3,31	3,41	3,38	3,45	3,43	3,43
COOLING WITH TOTAL RECOVERY													
Cooling capacity (3)	kW	209	248	305	329	381	428	484	521	551	631	702	832
Heat recovery capacity (3)	kW	269	320	392	422	493	549	621	666	704	801	895	1056
Total power input (3)	kW	60,6	71,9	87,1	92,5	111	122	137	145	153	170	193	224
TER (4)	-	7,89	7,90	8,00	8,12	7,87	8,01	8,07	8,19	8,20	8,42	8,27	8,43
COMPRESSORS													
No. Compressors/No. Circuits	N.	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2
NOISE LEVELS													
Sound power (5)	dB(A)	86	87	87	88	88	88	89	91	91	91	91	92
Sound pressure (6)	dB(A)	54	55	55	56	56	56	57	59	59	59	59	60
SIZE													
A	mm	4610	4610	5610	5610	6610	6610	6300	7200	7200	7200	8400	9700
B	mm	2220	2220	2220	2220	2220	2220	2260	2260	2260	2260	2260	2260
H	mm	2150	2420	2430	2430	2430	2430	2350	2350	2350	2350	2350	2350
Operating weight	kg	*	*	*	*	*	*	*	*	*	*	*	*

Note:

1 Evaporator water (in/out) = 12/7°C; Condenser air (in) = 35°C.

2 Condenser water (in/out) = 40/45°C; evaporator air (in) = 7°C - r.h. 87%.

3 Evaporator water (in/out) = 12/7°C; Recovery unit water (in/out) = 40/45°C

4 TER := Total Efficiency Ratio = (Cooling capacity + Heating capacity) / (Total power input)

5 Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.

6 Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

ERACS2-Q / XL-CA

Models		2022	2222	2422	2622	2722	3222
COOLING ONLY							
Cooling capacity (1)	kW	455	501	528	584	667	772
Total power input (1)	kW	167	169	180	212	230	287
EER		2,72	2,96	2,93	2,75	2,90	2,69
HEATING ONLY							
Heating capacity (2)	kW	486	536	564	607	703	816
Total power input (2)	kW	143	152	161	170	198	230
COP		3,40	3,53	3,50	3,57	3,55	3,55
COOLING WITH TOTAL RECOVERY							
Cooling capacity (3)	kW	484	521	551	631	702	832
Heat recovery capacity (3)	kW	621	666	704	801	895	1056
Total power input (3)	kW	137	145	153	170	193	224
TER (4)	-	8,07	8,19	8,20	8,42	8,27	8,43
COMPRESSORS							
No. Compressors/No. Circuits	N.	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2
NOISE LEVELS							
Sound power (5)	dB(A)	85	87	87	87	87	88
Sound pressure (6)	dB(A)	53	55	55	55	55	56
SIZE							
A	mm	6300	7200	7200	7200	8400	9700
B	mm	2260	2260	2260	2260	2260	2260
H	mm	2350	2350	2350	2350	2350	2350
Operating weight	kg	*	*	*	*	*	*

Note:

1 Evaporator water (in/out) = 12/7°C; Condenser air (in) = 35°C.

2 Condenser water (in/out) = 40/45°C; evaporator air (in) = 7°C - r.h. 87%.

3 Evaporator water (in/out) = 12/7°C; Recovery unit water (in/out) = 40/45°C

4 TER := Total Efficiency Ratio = (Cooling capacity + Heating capacity) / (Total power input)

5 Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.

6 Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

ERACS2-Q / XL-CA-E

Models		1062	1162	1362	1562	1762	2022	2222	2422	2622
COOLING ONLY										
Cooling capacity (1)	kW	204	247	293	319	366	473	510	541	611
Total power input (1)	kW	66,6	76,6	99,4	105	127	153	163	169	193
EER		3,06	3,22	2,95	3,04	2,88	3,09	3,13	3,20	3,17
HEATING ONLY										
Heating capacity (2)	kW	218	267	308	340	393	513	552	588	644
Total power input (2)	kW	62,4	77,6	88,3	95,2	116	145	154	164	176
COP		3,49	3,44	3,49	3,57	3,39	3,54	3,58	3,59	3,66
COOLING WITH TOTAL RECOVERY										
Cooling capacity (3)	kW	209	248	305	329	381	484	521	551	631
Heat recovery capacity (3)	kW	269	320	392	422	493	621	666	704	801
Total power input (3)	kW	60,6	71,9	87,1	92,5	111	137	145	153	170
TER (4)	-	7,89	7,90	8,00	8,12	7,87	8,07	8,19	8,20	8,42
COMPRESSORS										
No. Compressors/No. Circuits	N.	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2
NOISE LEVELS										
Sound power (5)	dB(A)	85	86	86	87	87	86	88	88	88
Sound pressure (6)	dB(A)	53	54	54	55	55	54	56	56	56
SIZE										
A	mm	4610	5610	5610	6610	6610	8400	9300	9300	9300
B	mm	2220	2220	2220	2220	2220	2260	2260	2260	2260
H	mm	2420	2430	2430	2430	2430	2350	2350	2350	2350
Operating weight	kg	*	*	*	*	*	*	*	*	*

Note:

1 Evaporator water (in/out) = 12/7°C; Condenser air (in) = 35°C.

2 Condenser water (in/out) = 40/45°C; evaporator air (in) = 7°C - r.h. 87%.

3 Evaporator water (in/out) = 12/7°C; Recovery unit water (in/out) = 40/45°C

4 TER := Total Efficiency Ratio = (Cooling capacity + Heating capacity) / (Total power input)

5 Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.

6 Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

Minimum clearance required

		1062-1762	2022-2622
Switchboard side	mm	1100	1800
Switchboard opposite side	mm	1100	1500
Condensation coil side	mm	2000	2000

i-FX-Q 0502÷0802

INTEGRA unit for 4-pipe systems, air source for outdoor installation

479 - 811 kW

Unit Description

Multi-purpose outdoor unit for use in 4-pipe systems for the simultaneous production of chilled and hot water by means of two independent hydronic circuits. These units are able to satisfy the demand for hot and cold water simultaneously 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 an inverter driven semi-hermetic screw compressor using R134a, two shell and tubes heat exchangers shared by both circuits, a cold heat exchanger and a hot one on plants side, and a source side coil heat exchanger that works as either condenser or evaporator as required by the loads. The revolutionary units design, patent pending, and the use of inverter motors on compressors, fans and, on request, on pumps, ensures un umbeatable efficiency, specially at part load.

Commands

W3000SE Large

The W3000SE Large controller offers advanced functions and algorithms. The keypad features an easy-to-use interface and a complete LCD display, allowing to consult and intervene on the unit by means of a multi-level menu, with selectable language setting. The regulation operates on both water circuits and features the continuous modulation of capacity by adjustment of the compressor speed. The modulation is based on PID algorithms and referring to the leaving water temperature. This is combined with the management of the compressors status, with two selectable logics (proportional referred to the return temperature or dead band referred to the leaving temperature). This allows to satisfy simultaneously and accurately the different requests of both cooling and heating, with no need of mode setting. The diagnostics includes a complete alarm management, with the “black-box” and alarm logging functions for enhanced analysis of the unit operation. For multiple units systems, the regulation of the resources, via optional proprietary devices, can be implemented. Energy metering, for both consumption and capacity, can also be developed. 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, Echelon LonWorks. Compatibility with the remote keyboard managing up to 10 units. Availability of an internal real time clock for operation scheduling (4-day profiles with 10 hour belts). The defrost adopts a proprietary self-adaptive logic, which features the monitoring of numerous operational parameters. This allows to reduce the number and duration of the defrost cycles, with a benefit for the overall energy efficiency.

Versions

CA	Class A of efficiency
LN-CA	Low Noise, Class A of efficiency
SL-CA	Super Low noise version, Class A of efficiency

Features

UNIQUE PROPOSAL - PATENT PENDING

The exclusive regulation´s logic of the INTEGRA units, the only able to satisfy cold and hot building loads simultaneously, and the use of inverter motors ensure the highest energy saving for complex plants, as the 4-pipes system are

VERY HIGH EFFICIENCY AT PARTIAL LOAD

Very high efficiency at partial load thanks to the inverter technology applied on screw compressors. Therefore, operating costs are reduced to a minimum

TRUE SILENCE

Silence optimized for the most frequent operational conditions, thanks to the accurate structures design, to the use of EC fans (DC brushless) and to the adoption of variable-speed driven compressors

EXTENSIVE RANGE OF OPERATION

Unit´s operation guaranteed with external air temperature down to -10°C during winter and up to 46°C during summer.

HARMONY BETWEEN UNIT AND PLANT

Low inrush current and cos(phi) higher than 0.9, 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 inverter allows the unit partialize down to 15%, with consequent lower fluctuations of leaving water temperature

Main accessories

- Hydronic group
- VPF (Variable Primary Flow) kit: variable flow pumps with on board regulation
- Set-up for remote connectivity with ModBus/Echelon/ Bacnet protocol cards

i-FX-Q / CA

Models		0502	0602	0702	0802
COOLING ONLY					
Cooling capacity (1)	kW	498	617	711	811
Total power input (1)	kW	164	210	245	273
EER		3,04	2,94	2,90	2,97
HEATING ONLY					
Heating capacity (2)	kW	528	654	758	856
Total power input (2)	kW	155	194	224	249
COP		3,41	3,37	3,38	3,44
COOLING WITH TOTAL RECOVERY					
Cooling capacity (3)	kW	485	613	715	814
Heat recovery capacity (3)	kW	624	787	917	1040
Total power input (3)	kW	147	185	215	240
TER (4)	-	7,54	7,57	7,59	7,72
COMPRESSORS					
No. Compressors/No. Circuits	N.	2 / 2	2 / 2	2 / 2	2 / 2
NOISE LEVELS					
Sound power (5)	dB(A)	*	*	*	*
Sound pressure (6)	dB(A)	*	*	*	*
SIZE					
A	mm	7800	9000	9000	9900
B	mm	2260	2260	2260	2260
H	mm	2430	2430	2430	2430
Operating weight	kg	*	*	*	*

Note:
1 Evaporator water (in/out) = 12/7°C; Condenser air (in) = 35°C.
2 Condenser water (in/out) = 40/45°C; evaporator air (in) = 7°C - r.h. 87%.
3 Evaporator water (in/out) = 12/7°C; Recovery unit water (in/out) = 40/45°C
4 TER := Total Efficiency Ratio = (Cooling capacity + Heating capacity) / (Total power input)
5 Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.
6 Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

i-FX-Q / LN-CA

Models		0502	0602	0702	0802
COOLING ONLY					
Cooling capacity (1)	kW	484	599	690	787
Total power input (1)	kW	159	206	243	271
EER		3,04	2,91	2,84	2,90
HEATING ONLY					
Heating capacity (2)	kW	528	654	758	856
Total power input (2)	kW	155	194	224	249
COP		3,41	3,37	3,38	3,44
COOLING WITH TOTAL RECOVERY					
Cooling capacity (3)	kW	485	613	715	814
Heat recovery capacity (3)	kW	624	787	917	1040
Total power input (3)	kW	147	185	215	240
TER (4)	-	7,54	7,57	7,59	7,72
COMPRESSORS					
No. Compressors/No. Circuits	N.	2 / 2	2 / 2	2 / 2	2 / 2
NOISE LEVELS					
Sound power (5)	dB(A)	*	*	*	*
Sound pressure (6)	dB(A)	*	*	*	*
SIZE					
A	mm	7800	9000	9000	9900
B	mm	2260	2260	2260	2260
H	mm	2430	2430	2430	2430
Operating weight	kg	*	*	*	*

Note:
1 Evaporator water (in/out) = 12/7°C; Condenser air (in) = 35°C.
2 Condenser water (in/out) = 40/45°C; evaporator air (in) = 7°C - r.h. 87%.
3 Evaporator water (in/out) = 12/7°C; Recovery unit water (in/out) = 40/45°C
4 TER := Total Efficiency Ratio = (Cooling capacity + Heating capacity) / (Total power input)
5 Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.
6 Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

i-FX-Q / SL-CA

Models		0502	0602	0702	0802
COOLING ONLY					
Cooling capacity (1)	kW	479	592	681	777
Total power input (1)	kW	158	207	245	273
EER		3,03	2,86	2,78	2,85
HEATING ONLY					
Heating capacity (2)	kW	523	649	750	847
Total power input (2)	kW	152	191	220	244
COP		3,44	3,40	3,41	3,47
COOLING WITH TOTAL RECOVERY					
Cooling capacity (3)	kW	485	613	715	814
Heat recovery capacity (3)	kW	624	787	917	1040
Total power input (3)	kW	147	185	215	240
TER (4)	-	7,54	7,57	7,59	7,72
COMPRESSORS					
No. Compressors/No. Circuits	N.	2 / 2	2 / 2	2 / 2	2 / 2
NOISE LEVELS					
Sound power (5)	dB(A)	*	*	*	*
Sound pressure (6)	dB(A)	*	*	*	*
SIZE					
A	mm	7800	9000	9000	9900
B	mm	2260	2260	2260	2260
H	mm	2430	2430	2430	2430
Operating weight	kg	*	*	*	*

Note:

1 Evaporator water (in/out) = 12/7°C; Condenser air (in) = 35°C.

2 Condenser water (in/out) = 40/45°C; evaporator air (in) = 7°C - r.h. 87%.

3 Evaporator water (in/out) = 12/7°C; Recovery unit water (in/out) = 40/45°C

4 TER := Total Efficiency Ratio = (Cooling capacity + Heating capacity) / (Total power input)

5 Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.

6 Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

Minimum clearance required

		0502-0802
Switchboard side	mm	1800
Switchboard opposite side	mm	1500
Condensation coil side	mm	2000

NECS-WQ 0152÷1604

INTEGRA unit for 4-pipe systems, water source

45,7 - 491 kW

Unit Description

Multi-purpose indoor unit for use in 4-pipe systems for the simultaneous production of chilled and hot water by means of two independent water circuits. These units are able to satisfy the demand for hot and cold water simultaneously through a system that does not require seasonal switching. Water-source unit equipped with hermetic rotary Scroll compressors, with R410A, plate heat exchangers and thermostatic expansion valve. The range is composed by units equipped with two and four compressors, all with two independent refrigerant circuits.

Commands

W3000 large

The controller W3000 large offers the latest control and functions developed directly by Climaveneta on the basis of their experience gained over the years with these particular units and the related plant engineering. The keypad is generously sized with full operating status display. The controls and detailed LCD make access to machine settings easy and safe. Temperature regulation managed on the two water circuits, with a proportional logic referred to the return water temperatures. This allows to satisfy simultaneously the different heating- and cooling requests, with no need of mode changeover. The diagnostics includes full management of alarms with black-box functions and alarm record for better analysis of unit performance. Supervision is easy through Climaveneta devices or with various options for interfacing to ModBus, Bacnet, Echelon LonTalk protocols. Compatibility with remote keyboard (management up to 10 units). Clock available with programming of operation (standard 4 days and 10 time bands). Exclusive self-adaptive defrost logic, monitoring multiple operational- and ambient parameters, which allows to reduce the number and duration of the defrost cycles, with a benefit for the overall energy efficiency.

Versions

B	base version

Features

REFRIGERANT GAS R410A

The use of R410A has resulted in units offering better energy efficiency in full respect for the environment (ODP = 0)

INTEGRATED CONDENSATION'S CONTROL

A 2 way valve is supplied as standard for the condensing pressure control. For all the applications in which a constant waterflow through the condenser is needed, a 3-way valve option is also available under request.

ENERGY SAVING

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

HOT WATER SUPPLY

Production of hot water up to 54°C to meet the most demanding application needs.

Main accessories

- Remote keyboard (distance to 200m and to 500m)
- Set-up for remote connectivity with ModBus, Echelon LonTalk, Bacnet protocol board
- Acoustical enclosure to reduce the noise emissions.
- Water connections directed upwards (for 2 compressors units only)

NECS-WQ / B

Models		0152	0182	0202	0252	0262	0302	0412	0512	0612
COOLING ONLY										
Cooling capacity (1)	kW	48,6	55,8	65	73,8	83,2	97,5	127	159	206
Total power input (1)	kW	8,70	9,80	11,3	13,2	14,7	17,4	22,7	28,1	36,5
EER		5,59	5,69	5,75	5,59	5,66	5,60	5,59	5,64	5,63
HEATING ONLY										
Heating capacity (2)	kW	52,1	59,7	69,3	79	88,9	104	135	169	219
Total power input (2)	kW	12,4	13,8	16,2	18,5	20,4	23,9	31	38,4	49,9
COP		4,20	4,33	4,28	4,28	4,36	4,37	435	4,40	4,38
COOLING WITH TOTAL RECOVERY										
Cooling capacity (3)	kW	40,4	46,7	54,1	61,7	67,9	82	106	133	172
Heat recovery capacity (3)	kW	52,1	59,7	69,3	79	88,9	104	135	169	219
Total power input (3)	kW	12,4	13,8	16,2	18,5	20,4	23,9	31	38,4	49,9
TER (4)	-	7,46	7,71	7,62	7,61	7,69	7,78	7,77	7,86	7,84
COMPRESSORS										
No. Compressors/No. Circuits	N.	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2
NOISE LEVELS										
Total power input	kW									
Sound power (5)	dB(A)	73	74	74	74	75	76	77	78	79
Sound pressure (6)	dB(A)	42	43	43	43	44	45	46	47	48
SIZE										
A (7)	mm	1222	1222	1222	1222	1222	1222	1222	1222	1222
B (7)	mm	893	893	893	893	893	893	893	893	893
H (7)	mm	1496	1496	1496	1496	1496	1496	1496	1496	1496
Operating weight (7)	kg	450	470	490	505	525	550	745	825	910

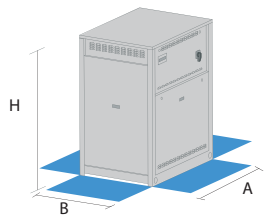
Models		0604	0704	0804	0904	1004	1104	1204	1404	1604
COOLING ONLY										
Cooling capacity (1)	kW	194	225	255	285	317	365	413	468	522
Total power input (1)	kW	34,8	40	45,3	50,8	56,3	64,8	73	84,1	95,1
EER		5,58	5,63	5,62	5,61	5,63	5,63	5,66	5,56	5,49
HEATING ONLY										
Heating capacity (2)	kW	208	240	270	303	338	388	440	498	557
Total power input (2)	kW	47,7	54,7	61,8	69,2	76,8	88,4	99,6	113	126
COP		4,36	4,38	4,37	4,38	4,40	4,39	4,41	4,41	4,42
COOLING WITH TOTAL RECOVERY										
Cooling capacity (3)	kW	163	188	212	238	266	305	346	392	438
Heat recovery capacity (3)	kW	208	240	270	303	338	388	440	498	557
Total power input (3)	kW	47,7	54,7	61,8	69,2	76,8	88,4	99,6	113	126
TER (4)	-	7,78	7,82	7,80	7,82	7,86	7,84	7,89	7,88	7,90
COMPRESSORS										
No. Compressors/No. Circuits	N.	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2
NOISE LEVELS										
Total power input	kW									
Sound power (5)	dB(A)	86	87	88	89	90	91	91	91	91
Sound pressure (6)	dB(A)	54	55	56	57	58	59	59	59	59
SIZE										
A (7)	mm	2520	2520	2520	2520	2520	2520	2520	2520	2520
B (7)	mm	880	880	880	880	880	880	880	880	880
H (7)	mm	1810	1810	1810	1810	1810	1810	1810	1810	1810
Operating weight (7)	kg	975	1165	1365	1445	1610	1710	1810	1895	2000

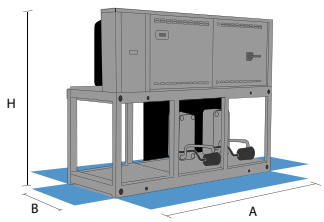
Note:

1 Evaporator water (in/out) = 12/7°C; condenser water (in/out) = 14/30°C
2 Condenser water (in/out) = 40/45°C; evaporator water (in/out) = 14/7°C
3 Evaporator water (in/out) = 12/7°C; Recovery unit water (in/out) = 40/45°C
4 TER := Total Efficiency Ratio = (Cooling capacity + Heating capacity) / (Total power input)
5 Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.
6 Average sound pressure level, at 1 m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.
7 Unit in standard configuration/execution, without optional accessories

Minimum clearance required

		0152-0612	0604-1604
Switchboard side	mm	800	1000
Switchboard opposite side	mm	800	1000
Condensation coil side	mm	800	800





ERACS2-WQ 0802÷3202

INTEGRA unit for 4-pipe systems, water source

194 - 891 kW

Unit Description

Multi-purpose indoor unit for use in 4-pipe systems for the simultaneous production of chilled and hot water by means of two independent water circuits. These units are able to satisfy the demand for hot and cold water simultaneously through a system that does not require seasonal switching. Each circuit works with a semi-hermetic screw compressor using R134a, and three tube nest heat exchangers, a cold exchanger on the user side shared by both circuits that acts as an evaporator in the production of cold water, a heat exchanger on the user side that words as a condenser in the production of hot water, and a source side exchanger that works as either condenser or evaporator as required by the loads.

Commands

W3000SE Large

The W3000SE Large controller offers advanced functions and algorithms. The keypad features an easy-to-use interface and a complete LCD display, allowing to consult and intervene on the unit by means of a multi-level menu, with selectable language setting. The regulation operates on both water circuits featuring the step-wise regulation referred to the return water temperature with proportional logic. This allows to satisfy simultaneously the different requests of both cooling and heating, with no need of mode setting. The diagnostics includes a complete alarm management, with the "black-box" and alarm logging functions for enhanced analysis of the unit operation. For multiple units systems, the regulation of the resources, via optional proprietary devices, can be implemented. Energy metering, for both consumption and capacity, can also be developed. 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, Echelon LonWorks. Compatibility with the remote keyboard managing up to 10 units. Availability of an internal real time clock for operation scheduling (4-day profiles with 10 hour belts).

Versions

- base version

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 operations logic. The best operation mode is set completely automatically and independently by the units controller, in order to minimize the absorbed energy whatever the cooling and/or heating demand might be

EXTENSIVE RANGE OF OPERATION

Supply of hot water in use up to 55°C, offering maximum versatility with respect to different plant engineering solutions

INTEGRATED CONDENSATION'S CONTROL

A 2 way valve is supplied as standard for the condensing pressure control. For all the applications in which a constant waterflow through the condenser is needed, a 3-way valve option is also available under request.

Main accessories

- Integral acoustical enclosure (type base or plus)
- Several devices for condensation´s control
- Electronic expansion valve
- Set-up for remote connectivity with ModBus/Echelon/ Bacnet protocol cards

ERACS2-WQ / -

Models		0802	1002	1102	1302	1502	1702	1902	2152	2502	2602	2702	3202
COOLING ONLY													
Cooling capacity (1)	kW	194	240	275	326	373	435	479	554	648	703	781	891
Total power input (1)	kW	34,3	43,2	48,5	57,2	66,1	76,5	85,7	94,5	111	121	135	153
EER		5,66	5,56	5,66	5,69	5,64	5,68	5,58	5,87	5,83	5,83	5,80	5,81
HEATING ONLY													
Heating capacity (2)	kW	205	255	291	344	393	459	514	589	686	738	831	941
Total power input (2)	kW	45,7	57	65,9	76,3	86,9	103	117	128	149	158	180	205
COP		4,49	4,47	4,42	4,51	4,52	4,44	4,40	4,59	4,62	4,68	4,62	4,59
COOLING WITH TOTAL RECOVERY													
Cooling capacity (3)	kW	162	201	229	272	311	362	404	468	547	589	662	748
Heat recovery capacity (3)	kW	205	255	291	344	393	459	514	589	686	738	831	941
Total power input (3)	kW	45,7	57	65,9	76,3	86,9	103	117	128	149	158	180	205
TER (4)	-	8,03	8,00	7,89	8,07	8,10	7,97	7,85	8,26	8,28	8,40	8,29	8,24
COMPRESSORS													
No. Compressors/No. Circuits	N.	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2
NOISE LEVELS													
Total power input	kW												
Sound power (5)	dB(A)	94	95	97	97	97	97	97	98	99	99	99	99
Sound pressure (6)	dB(A)	76	77	79	79	79	79	78	79	80	80	80	80
SIZE													
A (7)	mm	3680	3680	3680	3680	3680	3680	3800	3800	3800	5000	5000	5000
B (7)	mm	1170	1170	1170	1170	1170	1170	1490	1490	1490	1490	1490	1490
H (7)	mm	1950	1950	1950	1950	1950	1950	1950	1950	1950	2050	2050	2050
Operating weight (7)	kg	*	*	*	*	*	*	*	*	*	*	*	*

Note:

1 Evaporator water (in/out) = 12/7°C; condenser water (in/out) = 14/30°C

2 Condenser water (in/out) = 40/45°C; evaporator water (in/out) = 14/7°C

3 Evaporator water (in/out) = 12/7°C; Recovery unit water (in/out) = 40/45°C

4 TER := Total Efficiency Ratio = (Cooling capacity + Heating capacity) / (Total power input)

5 Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.

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

7 Unit in standard configuration/execution, without optional accessories

Minimum clearance required

		0802-3202
Switchboard side	mm	800
Switchboard opposite side	mm	500
Condensation coil side	mm	500