

NECS-Q 1314 - 3218

INTEGRA unit for 4-pipe systems, air source for outdoor installation
332-850 kW



Version

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

Features

REFRIGERANT GAS R410A

The use of R410A allowed to achieve better energy efficiencies with environment full respect (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 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

CLASS A EFFICIENCY

The full range is also available with the Class A efficiency rating (in heating). 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 GROUP

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).

Accessory

- Remote control 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)

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.

Controls

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.



NECS-Q / B			1314	1414	1614	1716	1816	2016	2116
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	353	377	412	452	496	546	567
Total power input	(1)	kW	125	131	150	163	176	189	196
EER	(1)	kW/kW	2,81	2,89	2,75	2,77	2,82	2,89	2,89
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2)	kW	351	376	410	450	494	544	565
EER	(1)(2)	kW/kW	2,77	2,84	2,70	2,74	2,78	2,86	2,85
ESEER	(1)(2)	kW/kW	-	-	-	-	-	-	-
HEATING ONLY (GROSS VALUE)									
Total heating capacity	(3)	kW	380	408	447	485	528	587	612
Total power input	(3)	kW	121	129	141	156	169	186	192
COP	(3)	kW/kW	3,13	3,18	3,16	3,11	3,12	3,16	3,18
HEATING ONLY (EN14511 VALUE)									
Total heating capacity	(2)(3)	kW	382	410	449	486	530	589	615
COP	(2)(3)	kW/kW	3,10	3,15	3,12	3,09	3,09	3,14	3,16
COOLING WITH TOTAL HEAT RECOVERY									
Cooling capacity	(4)	kW	355	379	423	460	500	547	568
Total power input	(4)	kW	107	113	126	139	150	163	170
Recovery heat exchanger capacity	(4)	kW	455	485	542	590	640	700	728
TER		kW/kW	7,55	7,66	7,64	7,55	7,63	7,67	7,64
ENERGY EFFICIENCY									
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)									
Ambient refrigeration									
Prated,c	(11)	kW	-	-	-	-	-	544	565
SEER	(11)(12)		-	-	-	-	-	4,13	4,15
Performance ηs	(11)(13)	%	-	-	-	-	-	162	163
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)									
PDesign	(5)	kW	280	318	367	383	396	-	-
SCOP	(5)(14)		3,57	3,66	3,54	3,70	3,60	-	-
Performance ηs	(5)(15)	%	140	143	139	145	141	-	-
Seasonal efficiency class	(5)		-	-	-	-	-	-	-
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	l/s	16,86	18,05	19,69	21,61	23,73	26,11	27,13
Pressure drop	(1)	kPa	53,4	46,9	55,8	38,1	46,0	42,4	45,8
HEAT EXCHANGER USER SIDE IN HEATING									
Water flow	(3)	l/s	18,36	19,70	21,56	23,40	25,46	28,32	29,56
Pressure drop	(3)	kPa	63,4	55,8	66,9	44,7	52,9	49,9	54,3
REFRIGERANT CIRCUIT									
Compressors nr.		N°	4	4	4	6	6	6	6
No. Circuits		N°	2	2	2	3	3	3	3
Refrigerant charge		kg	86,0	92,0	92,0	106	119	132	139
NOISE LEVEL									
Sound Pressure	(6)	dB(A)	64	64	64	64	65	65	65
Sound power level in cooling	(7)(8)	dB(A)	96	96	96	96	97	97	97
Sound power level in heating	(7)(9)	dB(A)	96	96	96	96	97	0	0
SIZE AND WEIGHT									
A	(10)	mm	3905	3905	3905	4515	5690	5690	5690
B	(10)	mm	2260	2260	2260	2260	2260	2260	2260
H	(10)	mm	2450	2450	2450	2450	2450	2450	2450
Operating weight	(10)	kg	3530	3620	3650	4850	5240	5370	5430

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 EN14511-3:2013.
 - 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 Seasonal space heating energy efficiency class LOW TEMPERATURE in AVERAGE climate conditions [REGULATION (EU) N. 813/2013]
 - 6 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.
 - 7 Sound power on the basis of measurements made in compliance with ISO 9614.
 - 8 Sound power level in cooling, outdoors.
 - 9 Sound power level in heating, outdoors.
 - 10 Unit in standard configuration/execution, without optional accessories.
 - 11 Seasonal energy efficiency of the cooling environment [REGULATION (EU) N. 2016/2281]
 - 12 Seasonal space heating energy index
 - 13 Seasonal energy efficiency of the space cooling
 - 14 Seasonal performance coefficient
 - 15 Seasonal space heating energy efficiency
- The units highlighted in this publication contain HFC R410A [GWP₁₀₀ 2088] fluorinated greenhouse gases.

NECS-Q / CA		1314	1414	1614	1716	1816	2016	2116
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	362	387	425	471	524	559
Total power input	(1)	kW	122	128	145	157	173	185
EER	(1)	kW/kW	2,96	3,03	2,94	3,01	3,04	3,03
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2)	kW	361	385	423	470	522	557
EER	(1)(2)	kW/kW	2,91	2,98	2,89	2,97	2,99	2,99
ESEER	(1)(2)	kW/kW	-	-	-	-	-	-
HEATING ONLY (GROSS VALUE)								
Total heating capacity	(3)	kW	394	420	462	507	546	603
Total power input	(3)	kW	120	127	140	155	166	183
COP	(3)	kW/kW	3,30	3,31	3,30	3,28	3,29	3,30
HEATING ONLY (EN14511 VALUE)								
Total heating capacity	(2)(3)	kW	396	422	464	509	549	606
COP	(2)(3)	kW/kW	3,26	3,28	3,26	3,25	3,26	3,27
COOLING WITH TOTAL HEAT RECOVERY								
Cooling capacity	(4)	kW	355	379	423	460	500	547
Total power input	(4)	kW	107	113	126	139	150	163
Recovery heat exchanger capacity	(4)	kW	455	485	542	590	640	700
TER		kW/kW	7,55	7,66	7,64	7,55	7,63	7,67
ENERGY EFFICIENCY								
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)								
Ambient refrigeration								
Prated,c	(11)	kW	-	-	-	-	-	557
SEER	(11)(12)		-	-	-	-	-	4,26
Performance ηs	(11)(13)	%	-	-	-	-	-	167
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)								
PDesign	(5)	kW	283	317	363	376	390	-
SCOP	(5)(14)		3,75	3,86	3,73	3,86	3,77	-
Performance ηs	(5)(15)	%	147	151	146	152	148	-
Seasonal efficiency class	(5)		-	-	-	-	-	-
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	(1)	l/s	17,32	18,49	20,32	22,54	25,06	26,74
Pressure drop	(1)	kPa	56,4	49,2	59,4	41,5	51,3	44,5
HEAT EXCHANGER USER SIDE IN HEATING								
Water flow	(3)	l/s	19,02	20,27	22,30	24,48	26,38	29,12
Pressure drop	(3)	kPa	68,0	59,1	71,5	48,9	56,8	52,7
REFRIGERANT CIRCUIT								
Compressors nr.		N°	4	4	4	6	6	6
No. Circuits		N°	2	2	2	3	3	3
Refrigerant charge		kg	99,0	106	106	139	139	152
NOISE LEVEL								
Sound Pressure	(6)	dB(A)	65	65	65	64	65	65
Sound power level in cooling	(7)(8)	dB(A)	97	97	97	97	98	98
Sound power level in heating	(7)(9)	dB(A)	97	97	97	97	98	0
SIZE AND WEIGHT								
A	(10)	mm	5080	5080	5080	6255	7430	7430
B	(10)	mm	2260	2260	2260	2260	2260	2260
H	(10)	mm	2450	2450	2450	2450	2450	2450
Operating weight	(10)	kg	3850	3950	3980	5460	5740	5890

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 EN14511-3:2013.
 - 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 Seasonal space heating energy efficiency class LOW TEMPERATURE in AVERAGE climate conditions [REGULATION (EU) N. 813/2013]
 - 6 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.
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 - 9 Sound power level in heating, outdoors.
 - 10 Unit in standard configuration/execution, without optional accessories.
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NECS-Q / CA		2416	2418	2618	2818	3018	3218
Power supply	V/ph/Hz	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	637	680	724	775	813
Total power input	(1)	kW	217	230	244	256	272
EER	(1)	kW/kW	2,94	2,95	2,96	3,03	2,99
COOLING ONLY (EN14511 VALUE)							
Cooling capacity	(1)(2)	kW	635	677	720	773	810
EER	(1)(2)	kW/kW	2,89	2,91	2,91	2,99	2,94
ESEER	(1)(2)	kW/kW	-	-	-	-	-
HEATING ONLY (GROSS VALUE)							
Total heating capacity	(3)	kW	693	729	788	840	882
Total power input	(3)	kW	210	221	239	253	266
COP	(3)	kW/kW	3,30	3,29	3,29	3,33	3,31
HEATING ONLY (EN14511 VALUE)							
Total heating capacity	(2)(3)	kW	696	732	792	843	886
COP	(2)(3)	kW/kW	3,27	3,26	3,26	3,30	3,28
COOLING WITH TOTAL HEAT RECOVERY							
Cooling capacity	(4)	kW	636	667	711	758	802
Total power input	(4)	kW	189	200	213	226	240
Recovery heat exchanger capacity	(4)	kW	814	854	911	971	1027
TER		kW/kW	7,68	7,62	7,61	7,63	7,63
ENERGY EFFICIENCY							
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)							
Ambient refrigeration							
Prated,c	(11)	kW	635	677	720	773	810
SEER	(11)(12)		4,16	4,10	4,13	4,24	4,23
Performance ηs	(11)(13)	%	164	161	162	167	166
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)							
PDesign	(5)	kW	-	-	-	-	-
SCOP	(5)(14)		-	-	-	-	-
Performance ηs	(5)(15)	%	-	-	-	-	-
Seasonal efficiency class	(5)		-	-	-	-	-
EXCHANGERS							
HEAT EXCHANGER USER SIDE IN REFRIGERATION							
Water flow	(1)	l/s	30,46	32,51	34,60	37,07	38,87
Pressure drop	(1)	kPa	49,3	50,7	57,4	44,5	48,9
HEAT EXCHANGER USER SIDE IN HEATING							
Water flow	(3)	l/s	33,44	35,18	38,05	40,54	42,57
Pressure drop	(3)	kPa	59,4	59,3	69,4	53,3	58,7
REFRIGERANT CIRCUIT							
Compressors nr.		N°	6	8	8	8	8
No. Circuits		N°	3	4	4	4	4
Refrigerant charge		kg	158	185	198	211	211
NOISE LEVEL							
Sound Pressure	(6)	dB(A)	66	66	66	67	67
Sound power level in cooling	(7)(8)	dB(A)	99	99	99	100	100
Sound power level in heating	(7)(9)	dB(A)	0	0	0	0	0
SIZE AND WEIGHT							
A	(10)	mm	7430	9780	9780	9780	9780
B	(10)	mm	2260	2260	2260	2260	2260
H	(10)	mm	2450	2450	2450	2450	2450
Operating weight	(10)	kg	6020	7350	7500	7700	7770

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 EN14511-3:2013.
 - 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 Seasonal space heating energy efficiency class LOW TEMPERATURE in AVERAGE climate conditions [REGULATION (EU) N. 813/2013]
 - 6 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.
 - 7 Sound power on the basis of measurements made in compliance with ISO 9614.
 - 8 Sound power level in cooling, outdoors.
 - 9 Sound power level in heating, outdoors.
 - 10 Unit in standard configuration/execution, without optional accessories.
 - 11 Seasonal energy efficiency of the cooling environment [REGULATION (EU) N. 2016/2281]
 - 12 Seasonal space heating energy index
 - 13 Seasonal energy efficiency of the space cooling
 - 14 Seasonal performance coefficient
 - 15 Seasonal space heating energy efficiency
- The units highlighted in this publication contain HFC R410A [GWP₁₀₀ 2088] fluorinated greenhouse gases.

NECS-Q / SL-CA		1314	1414	1614	1716	1816	2016	2116	
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	332	357	398	429	462	512	536
Total power input	(1)	kW	130	137	153	169	183	198	205
EER	(1)	kW/kW	2,56	2,61	2,60	2,54	2,52	2,59	2,61
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2)	kW	331	355	396	428	460	511	534
EER	(1)(2)	kW/kW	2,52	2,57	2,56	2,51	2,49	2,56	2,58
ESEER	(1)(2)	kW/kW	-	-	-	-	-	-	-
HEATING ONLY (GROSS VALUE)									
Total heating capacity	(3)	kW	378	400	453	486	526	578	601
Total power input	(3)	kW	116	124	138	151	163	178	186
COP	(3)	kW/kW	3,25	3,23	3,29	3,22	3,23	3,25	3,23
HEATING ONLY (EN14511 VALUE)									
Total heating capacity	(2)(3)	kW	380	402	455	488	528	580	603
COP	(2)(3)	kW/kW	3,21	3,19	3,25	3,20	3,20	3,22	3,20
COOLING WITH TOTAL HEAT RECOVERY									
Cooling capacity	(4)	kW	355	379	423	460	500	547	568
Total power input	(4)	kW	107	113	126	139	150	163	170
Recovery heat exchanger capacity	(4)	kW	455	485	542	590	640	700	728
TER		kW/kW	7,55	7,66	7,64	7,55	7,63	7,67	7,64
ENERGY EFFICIENCY									
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)									
Ambient refrigeration									
Prated,c	(11)	kW	-	-	-	-	-	-	-
SEER	(11)(12)		-	-	-	-	-	-	-
Performance ηs	(11)(13)	%	-	-	-	-	-	-	-
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)									
PDesign	(5)	kW	225	260	359	288	399	360	388
SCOP	(5)(14)		3,65	3,69	3,77	3,67	3,90	3,73	3,70
Performance ηs	(5)(15)	%	143	145	148	144	153	146	145
Seasonal efficiency class	(5)		-	-	-	-	-	-	-
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	l/s	15,88	17,05	19,02	20,50	22,08	24,49	25,62
Pressure drop	(1)	kPa	47,4	41,8	52,0	34,3	39,8	37,3	40,8
HEAT EXCHANGER USER SIDE IN HEATING									
Water flow	(3)	l/s	18,23	19,32	21,87	23,47	25,37	27,91	28,99
Pressure drop	(3)	kPa	62,4	53,7	68,8	45,0	52,6	48,5	52,3
REFRIGERANT CIRCUIT									
Compressors nr.		N°	4	4	4	6	6	6	6
No. Circuits		N°	2	2	2	3	3	3	3
Refrigerant charge		kg	92,0	92,0	106	125	139	139	139
NOISE LEVEL									
Sound Pressure	(6)	dB(A)	56	56	56	57	57	57	57
Sound power level in cooling	(7)(8)	dB(A)	88	88	88	89	89	90	90
Sound power level in heating	(7)(9)	dB(A)	89	89	89	90	90	91	91
SIZE AND WEIGHT									
A	(10)	mm	4515	5080	5080	5690	5690	6865	7430
B	(10)	mm	2260	2260	2260	2260	2260	2260	2260
H	(10)	mm	2450	2450	2450	2450	2450	2450	2450
Operating weight	(10)	kg	3760	3900	4050	5350	5490	5780	5890

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 EN14511-3:2013.
 - 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 Seasonal space heating energy efficiency class LOW TEMPERATURE in AVERAGE climate conditions [REGULATION (EU) N. 813/2013]
 - 6 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.
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NECS-Q / SL-CA

			2416	2418	2618	2818	3018	3218
Power supply	V/ph/Hz		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	596	616	663	714	754	795
Total power input	(1)	kW	229	244	260	274	290	306
EER	(1)	kW/kW	2,60	2,52	2,55	2,61	2,60	2,60
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2)	kW	594	614	661	712	752	792
EER	(1)(2)	kW/kW	2,57	2,49	2,52	2,58	2,57	2,57
ESEER	(1)(2)	kW/kW	-	-	-	-	-	-
HEATING ONLY (GROSS VALUE)								
Total heating capacity	(3)	kW	679	701	755	801	859	906
Total power input	(3)	kW	207	217	233	248	262	276
COP	(3)	kW/kW	3,28	3,23	3,24	3,23	3,28	3,28
HEATING ONLY (EN14511 VALUE)								
Total heating capacity	(2)(3)	kW	682	704	758	804	863	910
COP	(2)(3)	kW/kW	3,25	3,20	3,21	3,21	3,25	3,25
COOLING WITH TOTAL HEAT RECOVERY								
Cooling capacity	(4)	kW	636	667	711	758	802	848
Total power input	(4)	kW	189	200	213	226	240	252
Recovery heat exchanger capacity	(4)	kW	814	854	911	971	1027	1085
TER		kW/kW	7,68	7,62	7,61	7,63	7,63	7,67
ENERGY EFFICIENCY								
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)								
Ambient refrigeration								
Prated,c	(11)	kW	594	614	661	712	752	792
SEER	(11)(12)		4,12	4,13	4,20	4,25	4,24	4,14
Performance ηs	(11)(13)	%	162	162	165	167	167	163
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)								
PDesign	(5)	kW	-	-	-	-	-	-
SCOP	(5)(14)		-	-	-	-	-	-
Performance ηs	(5)(15)	%	-	-	-	-	-	-
Seasonal efficiency class	(5)		-	-	-	-	-	-
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	(1)	l/s	28,51	29,47	31,72	34,17	36,08	38,02
Pressure drop	(1)	kPa	43,2	41,7	48,3	37,8	42,2	46,8
HEAT EXCHANGER USER SIDE IN HEATING								
Water flow	(3)	l/s	32,80	33,84	36,44	38,65	41,48	43,73
Pressure drop	(3)	kPa	57,2	54,9	63,7	48,4	55,7	62,0
REFRIGERANT CIRCUIT								
Compressors nr.		N°	6	8	8	8	8	8
No. Circuits		N°	3	4	4	4	4	4
Refrigerant charge		kg	158	185	185	185	198	211
NOISE LEVEL								
Sound Pressure	(6)	dB(A)	58	58	58	59	59	59
Sound power level in cooling	(7)(8)	dB(A)	91	91	91	92	92	92
Sound power level in heating	(7)(9)	dB(A)	0	0	0	0	0	0
SIZE AND WEIGHT								
A	(10)	mm	7430	7430	8605	9780	9780	9780
B	(10)	mm	2260	2260	2260	2260	2260	2260
H	(10)	mm	2450	2450	2450	2450	2450	2450
Operating weight	(10)	kg	6130	7020	7330	7600	7750	7910

Notes:

- Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.
 - Values in compliance with EN14511-3:2013.
 - Plant (side) heat exchanger water (in/out) 40°C/45°C; Source (side) heat exchanger air (in) 7°C - 87% R.H.
 - Plant (side) cooling exchanger water (in/out) 12°C/7°C; Plant (side) heat exchanger water (in/out) 40°C/45°C.
 - Seasonal space heating energy efficiency class LOW TEMPERATURE in AVERAGE climate conditions [REGULATION (EU) N. 813/2013]
 - 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.
 - Sound power level in heating, outdoors.
 - Unit in standard configuration/execution, without optional accessories.
 - Seasonal energy efficiency of the cooling environment [REGULATION (EU) N. 2016/2281]
 - Seasonal space heating energy index
 - Seasonal energy efficiency of the space cooling
 - Seasonal performance coefficient
 - Seasonal space heating energy efficiency
- The units highlighted in this publication contain HFC R410A [GWP₁₀₀ 2088] fluorinated greenhouse gases.

