

# NECS-Q

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

1314 - 3218 332,0-849,5 kW



**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.**

## Refrigerant

## Versions

B	Basic	SL-CA	Super Low noise version, Class A of efficiency
CA	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). CA and SL-CA versions guarantee 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).

## Control



### 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.

## Accessories

- 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)

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
<b>PERFORMANCE</b>									
<b>COOLING ONLY (GROSS VALUE)</b>									
Cooling capacity	(1)	kW	352,6	377,5	411,8	451,8	496,3	546,1	567,4
Total power input	(1)	kW	125,3	130,8	150,0	163,1	176,2	188,7	196,3
EER	(1)	kW/kW	2,814	2,886	2,745	2,770	2,817	2,894	2,890
<b>COOLING ONLY (EN14511 VALUE)</b>									
Cooling capacity	(1)(2)	kW	351,1	376,0	410,0	450,4	494,5	544,3	565,4
EER	(1)(2)	kW/kW	2,770	2,840	2,700	2,740	2,780	2,860	2,850
ESEER	(1)(2)	kW/kW	-	-	-	-	-	-	-
<b>HEATING ONLY (GROSS VALUE)</b>									
Total heating capacity	(3)	kW	380,4	408,1	446,6	484,7	527,5	586,7	612,3
Total power input	(3)	kW	121,4	128,5	141,5	155,8	169,1	185,5	192,3
COP	(3)	kW/kW	3,133	3,176	3,156	3,111	3,119	3,163	3,184
<b>HEATING ONLY (EN14511 VALUE)</b>									
Total heating capacity	(2)(3)	kW	382,3	409,9	448,9	486,4	529,7	589,0	614,8
COP	(2)(3)	kW/kW	3,100	3,150	3,120	3,090	3,090	3,140	3,160
<b>COOLING WITH TOTAL HEAT RECOVERY</b>									
Cooling capacity	(4)	kW	354,6	378,8	423,4	459,6	499,8	546,9	568,5
Total power input	(4)	kW	107,3	112,8	126,4	139,1	149,5	162,6	169,7
Recovery heat exchanger capacity	(4)	kW	455,4	484,8	542,2	590,3	640,3	699,7	728,0
TER		kW/kW	7,549	7,657	7,639	7,549	7,625	7,669	7,643
<b>ENERGY EFFICIENCY</b>									
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>									
<b>Ambient refrigeration</b>									
Prated,c	(11)	kW	-	-	-	-	-	544	565
SEER	(11)(12)		-	-	-	-	-	4,13	4,15
Performance ηs	(11)(13)	%	-	-	-	-	-	162	163
<b>SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)</b>									
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	(16)		-	-	-	-	-	-	-
<b>EXCHANGERS</b>									
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>									
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
<b>HEAT EXCHANGER USER SIDE IN HEATING</b>									
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
<b>REFRIGERANT CIRCUIT</b>									
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	104	104	108	120	138	139
<b>NOISE LEVEL</b>									
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
<b>SIZE AND WEIGHT</b>									
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

- Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.
- Values in compliance with EN14511
- 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.
- Parameter calculated for LOW-TEMPERATURE application in AVERAGE climate conditions according to [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.
- Parameter calculated according to [REGULATION (EU) N. 2016/2281]
- Seasonal energy efficiency ratio
- Seasonal space cooling energy efficiency
- Seasonal coefficient of performance
- Seasonal space heating energy efficiency
- Energy efficiency class referred to LOW-TEMPERATURE application in AVERAGE climate conditions according to [REGULATION (EU) N. 811/2013]

The units highlighted in this publication contain HFC R410A [GWP<sub>100</sub> 2088] fluorinated greenhouse gases.  
Certified data in EUROVENT

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
<b>PERFORMANCE</b>									
<b>COOLING ONLY (GROSS VALUE)</b>									
Cooling capacity	(1)	kW	362,2	386,7	424,9	471,4	524,0	559,1	581,3
Total power input	(1)	kW	122,2	127,8	144,6	156,8	172,6	184,7	191,7
EER	(1)	kW/kW	2,964	3,026	2,938	3,006	3,036	3,027	3,032
<b>COOLING ONLY (EN14511 VALUE)</b>									
Cooling capacity	(1)(2)	kW	360,6	385,1	422,9	469,8	521,9	557,2	579,2
EER	(1)(2)	kW/kW	2,910	2,980	2,880	2,970	2,990	2,990	2,990
ESEER	(1)(2)	kW/kW	-	-	-	-	-	-	-
<b>HEATING ONLY (GROSS VALUE)</b>									
Total heating capacity	(3)	kW	394,1	419,8	462,0	507,2	546,4	603,2	629,9
Total power input	(3)	kW	119,5	126,7	139,8	154,8	166,2	182,6	189,5
COP	(3)	kW/kW	3,298	3,313	3,305	3,276	3,288	3,303	3,324
<b>HEATING ONLY (EN14511 VALUE)</b>									
Total heating capacity	(2)(3)	kW	396,2	421,8	464,5	509,2	548,8	605,6	632,6
COP	(2)(3)	kW/kW	3,260	3,280	3,260	3,250	3,260	3,270	3,290
<b>COOLING WITH TOTAL HEAT RECOVERY</b>									
Cooling capacity	(4)	kW	354,6	378,8	423,4	459,6	499,8	546,9	568,5
Total power input	(4)	kW	107,3	112,8	126,4	139,1	149,5	162,6	169,7
Recovery heat exchanger capacity	(4)	kW	455,4	484,8	542,2	590,3	640,3	699,7	728,0
TER		kW/kW	7,549	7,657	7,639	7,549	7,625	7,669	7,643
<b>ENERGY EFFICIENCY</b>									
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>									
<b>Ambient refrigeration</b>									
Prated,c	(11)	kW	-	-	-	-	-	557	579
SEER	(11)(12)		-	-	-	-	-	4,26	4,22
Performance ηs	(11)(13)	%	-	-	-	-	-	167	166
<b>SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)</b>									
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	(16)		-	-	-	-	-	-	-
<b>EXCHANGERS</b>									
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>									
Water flow	(1)	l/s	17,32	18,49	20,32	22,54	25,06	26,74	27,80
Pressure drop	(1)	kPa	56,4	49,2	59,4	41,5	51,3	44,5	48,1
<b>HEAT EXCHANGER USER SIDE IN HEATING</b>									
Water flow	(3)	l/s	19,02	20,27	22,30	24,48	26,38	29,12	30,41
Pressure drop	(3)	kPa	68,0	59,1	71,5	48,9	56,8	52,7	57,5
<b>REFRIGERANT CIRCUIT</b>									
Compressors nr.		N°	4	4	4	6	6	6	6
No. Circuits		N°	2	2	2	3	3	3	3
Refrigerant charge		kg	111	112	119	142	142	152	158
<b>NOISE LEVEL</b>									
Sound Pressure	(6)	dB(A)	65	65	65	64	65	65	65
Sound power level in cooling	(7)(8)	dB(A)	97	97	97	97	98	98	98
Sound power level in heating	(7)(9)	dB(A)	97	97	97	97	98	0	0
<b>SIZE AND WEIGHT</b>									
A	(10)	mm	5080	5080	5080	6255	7430	7430	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	3850	3950	3980	5460	5740	5890	5970

**Notes**

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- Values in compliance with EN14511
- 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.
- Parameter calculated for LOW-TEMPERATURE application in AVERAGE climate conditions according to [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.
- Parameter calculated according to [REGULATION (EU) N. 2016/2281]
- Seasonal energy efficiency ratio
- Seasonal space cooling energy efficiency
- Seasonal coefficient of performance
- Seasonal space heating energy efficiency
- Energy efficiency class referred to LOW-TEMPERATURE application in AVERAGE climate conditions according to [REGULATION (EU) N. 811/2013]

 The units highlighted in this publication contain HFC R410A [GWP<sub>100</sub> 2088] fluorinated greenhouse gases.

Certified data in EUROVENT

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
<b>PERFORMANCE</b>								
<b>COOLING ONLY (GROSS VALUE)</b>								
Cooling capacity	(1)	kW	637,1	679,8	723,5	775,2	812,7	849,5
Total power input	(1)	kW	216,9	230,2	244,4	255,7	272,2	289,2
EER	(1)	kW/kW	2,937	2,953	2,960	3,032	2,986	2,937
<b>COOLING ONLY (EN14511 VALUE)</b>								
Cooling capacity	(1)(2)	kW	634,7	677,2	720,5	772,6	809,8	846,2
EER	(1)(2)	kW/kW	2,890	2,910	2,910	2,990	2,940	2,890
ESEER	(1)(2)	kW/kW	-	-	-	-	-	-
<b>HEATING ONLY (GROSS VALUE)</b>								
Total heating capacity	(3)	kW	692,8	728,7	788,2	839,9	881,9	923,9
Total power input	(3)	kW	209,9	221,3	239,4	252,6	266,2	279,8
COP	(3)	kW/kW	3,301	3,293	3,292	3,325	3,313	3,302
<b>HEATING ONLY (EN14511 VALUE)</b>								
Total heating capacity	(2)(3)	kW	695,8	731,8	792,1	843,1	885,6	928,1
COP	(2)(3)	kW/kW	3,270	3,260	3,260	3,300	3,280	3,270
<b>COOLING WITH TOTAL HEAT RECOVERY</b>								
Cooling capacity	(4)	kW	636,2	666,7	711,0	757,8	801,7	847,8
Total power input	(4)	kW	188,9	199,6	213,2	226,5	239,8	252,1
Recovery heat exchanger capacity	(4)	kW	813,7	854,3	911,5	970,7	1027	1085
TER		kW/kW	7,676	7,620	7,613	7,629	7,627	7,668
<b>ENERGY EFFICIENCY</b>								
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>								
<b>Ambient refrigeration</b>								
Prated,c	(11)	kW	635	677	720	773	810	846
SEER	(11)(12)		4,16	4,10	4,13	4,24	4,23	4,14
Performance ηs	(11)(13)	%	164	161	162	167	166	163
<b>SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)</b>								
PDesign	(5)	kW	-	-	-	-	-	-
SCOP	(5)(14)		-	-	-	-	-	-
Performance ηs	(5)(15)	%	-	-	-	-	-	-
Seasonal efficiency class	(16)		-	-	-	-	-	-
<b>EXCHANGERS</b>								
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>								
Water flow	(1)	l/s	30,46	32,51	34,60	37,07	38,87	40,63
Pressure drop	(1)	kPa	49,3	50,7	57,4	44,5	48,9	53,5
<b>HEAT EXCHANGER USER SIDE IN HEATING</b>								
Water flow	(3)	l/s	33,44	35,18	38,05	40,54	42,57	44,60
Pressure drop	(3)	kPa	59,4	59,3	69,4	53,3	58,7	64,4
<b>REFRIGERANT CIRCUIT</b>								
Compressors nr.		N°	6	8	8	8	8	8
No. Circuits		N°	3	4	4	4	4	4
Refrigerant charge		kg	158	188	198	211	211	211
<b>NOISE LEVEL</b>								
Sound Pressure	(6)	dB(A)	66	66	66	67	67	67
Sound power level in cooling	(7)(8)	dB(A)	99	99	99	100	100	100
Sound power level in heating	(7)(9)	dB(A)	0	0	0	0	0	0
<b>SIZE AND WEIGHT</b>								
A	(10)	mm	7430	9780	9780	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	6020	7350	7500	7700	7740	7770

#### Notes

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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
<b>PERFORMANCE</b>									
<b>COOLING ONLY (GROSS VALUE)</b>									
Cooling capacity	(1)	kW	332,0	356,5	397,7	428,7	461,8	512,2	535,8
Total power input	(1)	kW	129,9	136,8	153,0	168,8	183,2	197,7	205,3
EER	(1)	kW/kW	2,556	2,606	2,599	2,540	2,521	2,591	2,610
<b>COOLING ONLY (EN14511 VALUE)</b>									
Cooling capacity	(1)(2)	kW	330,7	355,2	396,0	427,5	460,3	510,6	534,1
EER	(1)(2)	kW/kW	2,520	2,570	2,560	2,510	2,490	2,560	2,580
ESEER	(1)(2)	kW/kW	-	-	-	-	-	-	-
<b>HEATING ONLY (GROSS VALUE)</b>									
Total heating capacity	(3)	kW	377,6	400,3	453,0	486,1	525,7	578,3	600,5
Total power input	(3)	kW	116,2	124,1	137,8	150,9	162,9	178,2	185,8
COP	(3)	kW/kW	3,250	3,226	3,287	3,221	3,227	3,245	3,232
<b>HEATING ONLY (EN14511 VALUE)</b>									
Total heating capacity	(2)(3)	kW	379,5	402,0	455,4	487,9	527,8	580,5	602,9
COP	(2)(3)	kW/kW	3,210	3,190	3,250	3,200	3,200	3,220	3,200
<b>COOLING WITH TOTAL HEAT RECOVERY</b>									
Cooling capacity	(4)	kW	354,6	378,8	423,4	459,6	499,8	546,9	568,5
Total power input	(4)	kW	107,3	112,8	126,4	139,1	149,5	162,6	169,7
Recovery heat exchanger capacity	(4)	kW	455,4	484,8	542,2	590,3	640,3	699,7	728,0
TER		kW/kW	7,549	7,657	7,639	7,549	7,625	7,669	7,643
<b>ENERGY EFFICIENCY</b>									
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>									
<b>Ambient refrigeration</b>									
Prated,c	(11)	kW	-	-	-	-	-	-	-
SEER	(11)(12)		-	-	-	-	-	-	-
Performance ηs	(11)(13)	%	-	-	-	-	-	-	-
<b>SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)</b>									
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	(16)		-	-	-	-	-	-	-
<b>EXCHANGERS</b>									
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>									
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
<b>HEAT EXCHANGER USER SIDE IN HEATING</b>									
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
<b>REFRIGERANT CIRCUIT</b>									
Compressors nr.		N°	4	4	4	6	6	6	6
No. Circuits		N°	2	2	2	3	3	3	3
Refrigerant charge		kg	97,0	103	119	126	142	142	142
<b>NOISE LEVEL</b>									
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
<b>SIZE AND WEIGHT</b>									
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**

- Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.
- Values in compliance with EN14511
- 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.
- Parameter calculated for LOW-TEMPERATURE application in AVERAGE climate conditions according to [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.
- Parameter calculated according to [REGULATION (EU) N. 2016/2281]
- Seasonal energy efficiency ratio
- Seasonal space cooling energy efficiency
- Seasonal coefficient of performance
- Seasonal space heating energy efficiency
- Energy efficiency class referred to LOW-TEMPERATURE application in AVERAGE climate conditions according to [REGULATION (EU) N. 811/2013]

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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
<b>PERFORMANCE</b>							
<b>COOLING ONLY (GROSS VALUE)</b>							
Cooling capacity	(1)	kW	596,2	616,3	663,3	714,5	754,4
Total power input	(1)	kW	229,5	244,4	259,8	273,8	290,1
EER	(1)	kW/kW	2,598	2,522	2,553	2,610	2,600
<b>COOLING ONLY (EN14511 VALUE)</b>							
Cooling capacity	(1)(2)	kW	594,2	614,3	660,9	712,4	752,0
EER	(1)(2)	kW/kW	2,570	2,490	2,520	2,580	2,570
ESEER	(1)(2)	kW/kW	-	-	-	-	-
<b>HEATING ONLY (GROSS VALUE)</b>							
Total heating capacity	(3)	kW	679,4	701,0	755,0	800,7	859,2
Total power input	(3)	kW	206,9	217,0	232,8	247,7	262,0
COP	(3)	kW/kW	3,284	3,230	3,243	3,233	3,279
<b>HEATING ONLY (EN14511 VALUE)</b>							
Total heating capacity	(2)(3)	kW	682,3	703,8	758,5	803,6	862,6
COP	(2)(3)	kW/kW	3,250	3,200	3,210	3,210	3,250
<b>COOLING WITH TOTAL HEAT RECOVERY</b>							
Cooling capacity	(4)	kW	636,2	666,7	711,0	757,8	801,7
Total power input	(4)	kW	188,9	199,6	213,2	226,5	239,8
Recovery heat exchanger capacity	(4)	kW	813,7	854,3	911,5	970,7	1027
TER		kW/kW	7,676	7,620	7,613	7,629	7,627
<b>ENERGY EFFICIENCY</b>							
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>							
<b>Ambient refrigeration</b>							
Prated,c	(11)	kW	594	614	661	712	752
SEER	(11)(12)		4,12	4,13	4,20	4,25	4,24
Performance ηs	(11)(13)	%	162	162	165	167	163
<b>SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)</b>							
PDesign	(5)	kW	-	-	-	-	-
SCOP	(5)(14)		-	-	-	-	-
Performance ηs	(5)(15)	%	-	-	-	-	-
Seasonal efficiency class	(16)		-	-	-	-	-
<b>EXCHANGERS</b>							
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>							
Water flow	(1)	l/s	28,51	29,47	31,72	34,17	36,08
Pressure drop	(1)	kPa	43,2	41,7	48,3	37,8	42,2
<b>HEAT EXCHANGER USER SIDE IN HEATING</b>							
Water flow	(3)	l/s	32,80	33,84	36,44	38,65	41,48
Pressure drop	(3)	kPa	57,2	54,9	63,7	48,4	55,7
<b>REFRIGERANT CIRCUIT</b>							
Compressors nr.		N°	6	8	8	8	8
No. Circuits		N°	3	4	4	4	4
Refrigerant charge		kg	175	185	185	185	198
<b>NOISE LEVEL</b>							
Sound Pressure	(6)	dB(A)	58	58	58	59	59
Sound power level in cooling	(7)(8)	dB(A)	91	91	91	92	92
Sound power level in heating	(7)(9)	dB(A)	0	0	0	0	0
<b>SIZE AND WEIGHT</b>							
A	(10)	mm	7430	7430	8605	9780	9780
B	(10)	mm	2260	2260	2260	2260	2260
H	(10)	mm	2450	2450	2450	2450	2450
Operating weight	(10)	kg	6130	7020	7330	7600	7750

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#### Dimensional drawing

