HEAT PUMPS

NX-N 0152P - 0812P

Reversible unit, air source for outdoor installation
35,8-219 kW

Outdoor unit with heat pump for the production of chilled/hot water with hermetic rotary scroll compressors dedicated to the use of R410A, axial fans, plate heat exchanger, condensing coil with copper tubes and aluminum fins and thermostatic or electronic expansion valve, according to the version. The range is composed by units equipped with two compressors in a single-circuit configuration.

Version

K	Key efficiency, compact version
LN-K	Low Noise, Key efficiency and compact version
CA	Class A of efficiency
LN-CA	Low Noise, Class A of efficiency

Configurations

-	Basic function
D	Partial condensing heat recovery function

Features

REFRIGERANT GAS R410A

The use of R410A allowed to achive better energy efficiencies with environment full respect (ODP = 0)

ELECTRONIC EXPANSION VALVE

The use of the electronic expansion valve generates considerable benefits, especially in cases of variable demand and different external conditions. It has been introduced into these units as a result of accurate design choices concerning the cooling circuit and the optimisation of operation in various different working conditions. The electronic expansion valve comes standard in the high-efficieny CA version.

CLASS A EFFICIENCY

The full range is also available with the Class A efficiency rating (in heating). NX-N/CA guaranties within all the noise configurations premium levels of efficiency thanks to the generous sizing of the refrigerant-exchange surface areas and to an accurate control of the fans.

WIDE OPERATING RANGE

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

COMPLIANCE WITH THE STRICTEST EUROPEAN STANDARDS

The main new feature that distinguishes the new NX-N units regards the calculation methods used to define the energy efficiency values.
These values are in fact now calculated not only based on the capacity delivered and power consumed by the unit, but also taking into account heat exchanger pressure drop, or the available pressure head if the unit is installed with pumps, as required by European standard EN14511.
In this way, energy efficiency is no longer an index for evaluating the unit alone, but rather extends the assessment by considering the unit within the system, consequently taking into account the energy required to pump the refrigerant or heat carrier fluid used in the system.

TWO SOUND EMISSION LEVELS

The new NX-N appliances have two different sound emission levels. This means the best unit can be identified based on requirements, according to the system where it will be installed and the application.

INTEGRATED HYDRONIC GROUP

The optional built-in hydronic module already contains the main water circuit components; it is available with single or twin in-line, for achieving both low or high head.

Accessory

- Soft starters
- Set-up for remote connectivity with ModBus/Echelon protocol cards
- Remote control keyboard (distance to 200m and to 500m)

Controls

W3000 Base – W3000SE Compact

The controller in two different versions according to the unit's type:
W3000 Base: electronic controller complete with keypad features an easy-to-use interface and a complete LCD display, allowing to consult and intervene on the unit by means of a menu up to three languages (Italian and English come standard, a further language can be chosen within French, Spanish, German, Russian and Swedish)
W3000SE Compact: electronic controller complete with 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-language menu, with selectable language setting on site. This controller also includes an internal clock.
All the W3000 electronic controllers offer 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 is based on the exclusive QuickMind algorithm, including self-adaptive control logics, beneficial in low water content systems. As alternatives the proportional- or proportional- integral regulations are also available.
The diagnostics includes a complete alarm management, with the "black-box" and alarm logging functions for enhanced analysis of the unit operation (available on W3000SE Compact only).
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.
The internal real time clock allows to manage a weekly schedule operating on 4-day profiles with 10 hour belts (available on W3000SE Compact only, optional on W3000 Base controller).
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.

NX-N /K			0152P	0182P	0202P	0252P	0262P	0302P	0352P
Power supply		V/ph/Hz	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
PERFORMANCE									
COOLING ONLY (GROSS VALUE)									
Cooling capacity	(1)	kW	38,7	43,8	51,0	58,3	64,6	74,1	84,4
Total power input	(1)	kW	13,7	15,8	18,4	20,5	23,3	28,2	32,1
EER	(1)	kW/kW	2,82	2,77	2,77	2,84	2,77	2,63	2,63
ESEER	(1)	kW/kW	4,01	4,03	4,18	3,94	3,96	3,89	4,03
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2)	kW	38,5	43,5	50,7	58,0	64,3	73,8	83,9
EER	(1)(2)	kW/kW	2,76	2,71	2,71	2,79	2,72	2,58	2,57
ESEER	(1)(2)	kW/kW	3,83	3,85	4,00	3,78	3,82	3,77	3,84
Cooling energy class			C	C	C	C	C	D	D
HEATING ONLY (GROSS VALUE)									
Total heating capacity	(3)	kW	42,9	47,4	55,3	65,0	70,7	80,1	92,1
Total power input	(3)	kW	14,0	15,5	18,0	21,3	22,8	26,0	29,6
COP	(3)	kW/kW	3,06	3,06	3,07	3,05	3,10	3,08	3,11
HEATING ONLY (EN14511 VALUE)									
Total heating capacity	(3)(2)	kW	43,2	47,7	55,6	65,4	71,1	80,5	92,7
COP	(3)(2)	kW/kW	3,02	3,02	3,03	3,02	3,07	3,05	3,07
Cooling energy class			B	B	B	B	B	B	B
ENERGY EFFICIENCY									
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)									
Ambient refrigeration									
Prated,c	(10)	kW	-	-	-	-	-	-	-
SEER	(10)(11)		-	-	-	-	-	-	-
Performance ηs	(10)(12)	%	-	-	-	-	-	-	-
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)									
PDesign	(4)	kW	31,0	34,3	42,1	47,9	51,8	59,1	72,2
SCOP	(4)(13)		3,42	3,42	3,55	3,40	3,44	3,42	3,55
Performance ηs	(4)(14)	%	134	134	139	133	135	134	139
Seasonal efficiency class	(4)		A+	A+	A+	A+	A+	A+	-
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	l/s	1,85	2,09	2,44	2,79	3,09	3,54	4,04
Pressure drop	(1)	kPa	35,4	33,3	35,0	32,8	32,8	30,9	49,2
HEAT EXCHANGER USER SIDE IN HEATING									
Water flow	(3)	l/s	2,07	2,29	2,67	3,14	3,41	3,87	4,45
Pressure drop	(3)	kPa	44,2	39,8	42,0	41,5	40,0	36,8	59,7
REFRIGERANT CIRCUIT									
Compressors nr.		N°	2	2	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1	1
Refrigerant charge		kg	12,6	14,0	15,8	16,7	16,9	17,0	25,5
NOISE LEVEL									
Sound Pressure	(5)	dB(A)	67	67	67	67	67	67	68
Sound power level in cooling	(6)(7)	dB(A)	84	84	84	85	85	85	86
Sound power level in heating	(6)(8)	dB(A)	84	84	84	85	85	85	86
SIZE AND WEIGHT									
Operating weight	(9)	kg	510	550	570	640	650	660	790
A	(9)	mm	1825	1825	1825	2395	2395	2395	2395
B	(9)	mm	1195	1195	1195	1195	1195	1195	1195
H	(9)	mm	1865	1865	1865	1865	1865	1865	1865

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 Seasonal space heating energy efficiency class LOW TEMPERATURE in AVERAGE climate conditions [REGULATION (EU) N. 813/2013]
5 Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
6 Sound power on the basis of measurements made in compliance with ISO 9614.
7 Sound power level in cooling, outdoors.
8 Sound power level in heating, outdoors.
9 Unit in standard configuration/execution, without optional accessories.
10 Seasonal energy efficiency of the cooling environment [REGULATION (EU) N. 2016/2281]
11 Seasonal space heating energy index
12 Seasonal energy efficiency of the space cooling
13 Seasonal performance coefficient
14 Seasonal space heating energy efficiency
The units highlighted in this publication contain HFC R410A [GWP_{100} 2088] fluorinated greenhouse gases.

NX-N /K			0402P	0452P	0502P	0552P	0602P	0702P	0802P
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	100	113	125	138	162	180	199
Total power input	(1)	kW	35,7	40,7	45,2	52,3	58,2	67,6	77,7
EER	(1)	kW/kW	2,81	2,76	2,77	2,64	2,78	2,66	2,56
ESEER	(1)	kW/kW	3,73	3,82	3,87	3,87	3,78	3,80	3,69
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2)	kW	99,6	112	124	138	161	179	198
EER	(1)(2)	kW/kW	2,75	2,71	2,71	2,59	2,73	2,62	2,51
ESEER	(1)(2)	kW/kW	3,58	3,67	3,74	3,72	3,65	3,67	3,56
Cooling energy class			C	C	C	D	C	D	D
HEATING ONLY (GROSS VALUE)									
Total heating capacity	(3)	kW	108	119	134	150	175	193	211
Total power input	(3)	kW	35,5	39,2	42,9	48,6	57,0	63,2	69,5
COP	(3)	kW/kW	3,05	3,05	3,12	3,09	3,06	3,06	3,04
HEATING ONLY (EN14511 VALUE)									
Total heating capacity	(3)(2)	kW	109	120	135	151	176	194	213
COP	(3)(2)	kW/kW	3,01	3,01	3,08	3,05	3,03	3,03	3,01
Cooling energy class			B	B	B	B	B	B	B
ENERGY EFFICIENCY									
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)									
Ambient refrigeration									
Prated,c	(10)	kW	-	-	-	-	-	-	-
SEER	(10)(11)		-	-	-	-	-	-	-
Performance ηs	(10)(12)	%	-	-	-	-	-	-	-
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)									
PDesign	(4)	kW	80,1	92,5	103	119	133	157	183
SCOP	(4)(13)		3,22	3,23	3,26	3,36	3,24	3,28	3,22
Performance ηs	(4)(14)	%	126	126	127	131	126	128	126
Seasonal efficiency class	(4)		-	-	-	-	-	-	-
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	l/s	4,79	5,38	5,98	6,61	7,74	8,59	9,51
Pressure drop	(1)	kPa	48,2	49,5	47,2	47,9	47,0	44,8	54,8
HEAT EXCHANGER USER SIDE IN HEATING									
Water flow	(3)	l/s	5,23	5,77	6,47	7,24	8,43	9,33	10,20
Pressure drop	(3)	kPa	57,3	56,9	55,3	57,5	55,8	52,8	63,2
REFRIGERANT CIRCUIT									
Compressors nr.		N°	2	2	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1	1
Refrigerant charge		kg	31,9	35,8	44,3	45,3	48,8	49,8	52,5
NOISE LEVEL									
Sound Pressure	(5)	dB(A)	70	70	70	72	71	71	72
Sound power level in cooling	(6)(7)	dB(A)	88	88	88	90	90	90	91
Sound power level in heating	(6)(8)	dB(A)	88	88	88	90	90	90	91
SIZE AND WEIGHT									
Operating weight	(9)	kg	970	1020	1150	1210	1330	1360	1380
A	(9)	mm	2825	2825	3360	3360	3980	3980	3980
B	(9)	mm	1195	1195	1195	1195	1195	1195	1195
H	(9)	mm	1980	1980	1980	1980	1980	1980	1980

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 Seasonal space heating energy efficiency class LOW TEMPERATURE in AVERAGE climate conditions [REGULATION (EU) N. 813/2013]
5 Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
6 Sound power on the basis of measurements made in compliance with ISO 9614.
7 Sound power level in cooling, outdoors.
8 Sound power level in heating, outdoors.
9 Unit in standard configuration/execution, without optional accessories.
10 Seasonal energy efficiency of the cooling environment [REGULATION (EU) N. 2016/2281]
11 Seasonal space heating energy index
12 Seasonal energy efficiency of the space cooling
13 Seasonal performance coefficient
14 Seasonal space heating energy efficiency
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Certified data in EUROVENT

NX-N /LN-K			0152P	0182P	0202P	0252P	0262P	0302P	0352P
Power supply		V/ph/Hz	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
PERFORMANCE									
COOLING ONLY (GROSS VALUE)									
Cooling capacity	(1)	kW	35,8	39,8	46,8	53,4	60,4	69,9	77,9
Total power input	(1)	kW	15,2	17,6	19,9	22,4	25,8	29,9	34,9
EER	(1)	kW/kW	2,36	2,26	2,35	2,38	2,34	2,34	2,23
ESEER	(1)	kW/kW	3,91	3,75	4,07	3,82	3,84	3,85	3,92
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2)	kW	35,6	39,6	46,6	53,1	60,1	69,6	77,5
EER	(1)(2)	kW/kW	2,31	2,22	2,31	2,35	2,31	2,30	2,19
ESEER	(1)(2)	kW/kW	3,75	3,62	3,91	3,68	3,71	3,72	3,77
Cooling energy class			E	F	E	E	E	E	F
HEATING ONLY (GROSS VALUE)									
Total heating capacity	(3)	kW	42,9	47,4	55,3	65,0	70,7	80,1	92,1
Total power input	(3)	kW	14,0	15,5	18,0	21,3	22,8	26,0	29,6
COP	(3)	kW/kW	3,06	3,06	3,07	3,05	3,10	3,08	3,11
HEATING ONLY (EN14511 VALUE)									
Total heating capacity	(3)(2)	kW	43,2	47,7	55,6	65,4	71,1	80,5	92,7
COP	(3)(2)	kW/kW	3,02	3,02	3,03	3,02	3,07	3,05	3,07
Cooling energy class			B	B	B	B	B	B	B
ENERGY EFFICIENCY									
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)									
Ambient refrigeration									
Prated,c	(10)	kW	-	-	-	-	-	-	-
SEER	(10)(11)		-	-	-	-	-	-	-
Performance ηs	(10)(12)	%	-	-	-	-	-	-	-
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)									
PDesign	(4)	kW	31,0	34,3	42,1	47,9	51,8	59,1	72,2
SCOP	(4)(13)		3,42	3,42	3,55	3,40	3,44	3,42	3,55
Performance ηs	(4)(14)	%	134	134	139	133	135	134	139
Seasonal efficiency class	(4)		A+	A+	A+	A+	A+	A+	-
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	l/s	1,71	1,90	2,24	2,56	2,89	3,34	3,73
Pressure drop	(1)	kPa	30,2	27,6	29,4	27,5	28,6	27,5	41,9
HEAT EXCHANGER USER SIDE IN HEATING									
Water flow	(3)	l/s	2,07	2,29	2,67	3,14	3,41	3,87	4,45
Pressure drop	(3)	kPa	44,2	39,8	42,0	41,5	40,0	36,8	59,7
REFRIGERANT CIRCUIT									
Compressors nr.		N°	2	2	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1	1
Refrigerant charge		kg	12,6	14,0	15,8	16,7	16,9	17,0	25,5
NOISE LEVEL									
Sound Pressure	(5)	dB(A)	60	60	60	60	61	62	64
Sound power level in cooling	(6)(7)	dB(A)	77	77	77	78	79	80	82
Sound power level in heating	(6)(8)	dB(A)	78	78	78	79	80	81	83
SIZE AND WEIGHT									
Operating weight	(9)	kg	510	560	580	650	660	670	800
A	(9)	mm	1825	1825	1825	2395	2395	2395	2395
B	(9)	mm	1195	1195	1195	1195	1195	1195	1195
H	(9)	mm	1865	1865	1865	1865	1865	1865	1865

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 Seasonal space heating energy efficiency class LOW TEMPERATURE in AVERAGE climate conditions [REGULATION (EU) N. 813/2013]
5 Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
6 Sound power on the basis of measurements made in compliance with ISO 9614.
7 Sound power level in cooling, outdoors.
8 Sound power level in heating, outdoors.
9 Unit in standard configuration/execution, without optional accessories.
10 Seasonal energy efficiency of the cooling environment [REGULATION (EU) N. 2016/2281]
11 Seasonal space heating energy index
12 Seasonal energy efficiency of the space cooling
13 Seasonal performance coefficient
14 Seasonal space heating energy efficiency
The units highlighted in this publication contain HFC R410A [GWP_{100} 2088] fluorinated greenhouse gases.

NX-N /LN-K			0402P	0452P	0502P	0552P	0602P	0702P	0802P
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	94,5	104	114	132	154	168	180
Total power input	(1)	kW	36,7	42,5	47,8	54,1	60,5	71,6	83,8
EER	(1)	kW/kW	2,57	2,44	2,38	2,43	2,55	2,35	2,14
ESEER	(1)	kW/kW	3,89	3,89	3,85	3,99	3,96	3,91	3,62
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2)	kW	94,0	103	113	131	154	168	179
EER	(1)(2)	kW/kW	2,53	2,40	2,35	2,39	2,51	2,32	2,11
ESEER	(1)(2)	kW/kW	3,75	3,75	3,73	3,85	3,82	3,78	3,50
Cooling energy class			D	E	E	E	D	E	F
HEATING ONLY (GROSS VALUE)									
Total heating capacity	(3)	kW	108	119	134	150	175	193	211
Total power input	(3)	kW	35,5	39,2	42,9	48,6	57,0	63,2	69,5
COP	(3)	kW/kW	3,05	3,05	3,12	3,09	3,06	3,06	3,04
HEATING ONLY (EN14511 VALUE)									
Total heating capacity	(3)(2)	kW	109	120	135	151	176	194	213
COP	(3)(2)	kW/kW	3,01	3,01	3,08	3,05	3,03	3,03	3,01
Cooling energy class			B	B	B	B	B	B	B
ENERGY EFFICIENCY									
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)									
Ambient refrigeration									
Prated,c	(10)	kW	-	-	-	-	-	-	-
SEER	(10)(11)		-	-	-	-	-	-	-
Performance ηs	(10)(12)	%	-	-	-	-	-	-	-
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)									
PDesign	(4)	kW	80,1	92,5	103	119	133	157	183
SCOP	(4)(13)		3,31	3,41	3,46	3,51	3,41	3,48	3,38
Performance ηs	(4)(14)	%	130	133	136	137	134	136	132
Seasonal efficiency class	(4)		-	-	-	-	-	-	-
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	l/s	4,52	4,95	5,45	6,29	7,38	8,05	8,59
Pressure drop	(1)	kPa	42,9	42,0	39,2	43,4	42,8	39,3	44,7
HEAT EXCHANGER USER SIDE IN HEATING									
Water flow	(3)	l/s	5,23	5,77	6,47	7,24	8,43	9,33	10,20
Pressure drop	(3)	kPa	57,3	56,9	55,3	57,5	55,8	52,8	63,2
REFRIGERANT CIRCUIT									
Compressors nr.		N°	2	2	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1	1
Refrigerant charge		kg	31,9	35,8	44,3	45,3	48,8	49,8	52,5
NOISE LEVEL									
Sound Pressure	(5)	dB(A)	65	65	65	66	65	65	67
Sound power level in cooling	(6)(7)	dB(A)	83	83	83	84	84	84	86
Sound power level in heating	(6)(8)	dB(A)	84	84	84	85	85	85	87
SIZE AND WEIGHT									
Operating weight	(9)	kg	1010	1100	1200	1250	1360	1410	1430
A	(9)	mm	2825	2825	3360	3360	3980	3980	3980
B	(9)	mm	1195	1195	1195	1195	1195	1195	1195
H	(9)	mm	1980	1980	1980	1980	1980	1980	1980

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 Seasonal space heating energy efficiency class LOW TEMPERATURE in AVERAGE climate conditions [REGULATION (EU) N. 813/2013]
5 Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
6 Sound power on the basis of measurements made in compliance with ISO 9614.
7 Sound power level in cooling, outdoors.
8 Sound power level in heating, outdoors.
9 Unit in standard configuration/execution, without optional accessories.
10 Seasonal energy efficiency of the cooling environment [REGULATION (EU) N. 2016/2281]
11 Seasonal space heating energy index
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Certified data in EUROVENT

NX-N /CA			0152P	0182P	0202P	0252P	0262P	0302P	0352P
Power supply		V/ph/Hz	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3/50	400/3/50
PERFORMANCE									
COOLING ONLY (GROSS VALUE)									
Cooling capacity	(1)	kW	40,0	45,3	51,2	59,6	66,8	80,9	92,0
Total power input	(1)	kW	13,0	15,0	18,0	19,9	22,5	27,0	30,8
EER	(1)	kW/kW	3,08	3,02	2,84	2,99	2,97	3,00	2,99
ESEER	(1)	kW/kW	4,19	4,24	4,22	4,05	4,12	4,01	4,12
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2)	kW	39,7	45,0	50,9	59,3	66,5	80,5	91,4
EER	(1)(2)	kW/kW	3,00	2,95	2,78	2,93	2,91	2,94	2,91
ESEER	(1)(2)	kW/kW	3,97	4,03	4,03	3,88	3,96	3,85	3,89
Cooling energy class			B	B	C	B	B	B	B
HEATING ONLY (GROSS VALUE)									
Total heating capacity	(3)	kW	46,1	51,0	59,0	69,5	74,5	86,8	98,6
Total power input	(3)	kW	14,1	15,5	18,1	21,3	22,9	26,7	30,3
COP	(3)	kW/kW	3,27	3,29	3,26	3,26	3,25	3,25	3,25
HEATING ONLY (EN14511 VALUE)									
Total heating capacity	(3)(2)	kW	46,4	51,3	59,4	69,9	74,9	87,3	99,3
COP	(3)(2)	kW/kW	3,21	3,24	3,21	3,22	3,21	3,21	3,20
Cooling energy class			A	A	A	A	A	A	A
ENERGY EFFICIENCY									
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)									
Ambient refrigeration									
Prated,c	(10)	kW	-	-	-	-	-	-	-
SEER	(10)(11)		-	-	-	-	-	-	-
Performance ηs	(10)(12)	%	-	-	-	-	-	-	-
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)									
PDesign	(4)	kW	33,5	37,2	43,9	51,5	55,6	64,9	73,1
SCOP	(4)(13)		3,77	3,77	3,89	3,76	3,76	3,55	3,56
Performance ηs	(4)(14)	%	148	148	153	147	147	139	140
Seasonal efficiency class	(4)		A+	A+	A++	A+	A+	A+	-
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	l/s	1,91	2,17	2,45	2,85	3,20	3,87	4,40
Pressure drop	(1)	kPa	37,7	35,7	35,3	34,2	35,1	36,9	58,4
HEAT EXCHANGER USER SIDE IN HEATING									
Water flow	(3)	l/s	2,23	2,46	2,85	3,36	3,60	4,19	4,76
Pressure drop	(3)	kPa	51,0	46,0	47,8	47,4	44,5	43,2	68,4
REFRIGERANT CIRCUIT									
Compressors nr.		N°	2	2	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1	1
Refrigerant charge		kg	14,0	15,5	15,6	16,8	17,1	19,9	30,0
NOISE LEVEL									
Sound Pressure	(5)	dB(A)	66	66	66	67	67	70	70
Sound power level in cooling	(6)(7)	dB(A)	84	84	84	85	85	88	88
Sound power level in heating	(6)(8)	dB(A)	84	84	84	85	85	88	88
SIZE AND WEIGHT									
Operating weight	(9)	kg	590	640	640	670	670	800	990
A	(9)	mm	2395	2395	2395	2395	2395	2825	3360
B	(9)	mm	1195	1195	1195	1195	1195	1195	1195
H	(9)	mm	1865	1865	1865	1865	1865	1980	1980

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 Seasonal space heating energy efficiency class LOW TEMPERATURE in AVERAGE climate conditions [REGULATION (EU) N. 813/2013]
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NX-N /CA			0402P	0452P	0502P	0562P	0612P	0712P	0812P
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	102	116	131	153	170	198	219
Total power input	(1)	kW	34,4	39,1	43,5	51,3	56,5	66,5	72,2
EER	(1)	kW/kW	2,97	2,97	3,01	2,97	3,00	2,97	3,04
ESEER	(1)	kW/kW	4,13	4,17	4,05	4,04	4,05	3,93	3,86
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2)	kW	102	116	130	152	169	197	218
EER	(1)(2)	kW/kW	2,90	2,91	2,94	2,91	2,94	2,92	2,97
ESEER	(1)(2)	kW/kW	3,94	3,96	3,88	3,84	3,89	3,77	3,70
Cooling energy class			B	B	B	B	B	B	B
HEATING ONLY (GROSS VALUE)									
Total heating capacity	(3)	kW	110	122	138	161	181	209	232
Total power input	(3)	kW	33,9	37,6	42,4	49,7	55,6	64,4	71,2
COP	(3)	kW/kW	3,26	3,25	3,26	3,25	3,25	3,25	3,26
HEATING ONLY (EN14511 VALUE)									
Total heating capacity	(3)(2)	kW	111	123	139	162	182	210	234
COP	(3)(2)	kW/kW	3,21	3,21	3,22	3,20	3,21	3,21	3,22
Cooling energy class			A	A	A	A	A	A	A
ENERGY EFFICIENCY									
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)									
Ambient refrigeration									
Prated,c	(10)	kW	-	-	-	-	-	-	-
SEER	(10)(11)		-	-	-	-	-	-	-
Performance ηs	(10)(12)	%	-	-	-	-	-	-	-
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)									
PDesign	(4)	kW	81,1	92,2	104	115	134	154	179
SCOP	(4)(13)		3,58	3,65	3,56	3,45	3,55	3,39	3,34
Performance ηs	(4)(14)	%	140	143	139	135	139	133	131
Seasonal efficiency class	(4)		-	-	-	-	-	-	-
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	l/s	4,89	5,56	6,26	7,29	8,12	9,45	10,50
Pressure drop	(1)	kPa	50,1	52,8	51,8	58,3	51,7	54,2	66,8
HEAT EXCHANGER USER SIDE IN HEATING									
Water flow	(3)	l/s	5,33	5,90	6,67	7,79	8,72	10,10	11,21
Pressure drop	(3)	kPa	59,6	59,5	58,8	66,5	59,7	61,9	76,2
REFRIGERANT CIRCUIT									
Compressors nr.		N°	2	2	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1	1
Refrigerant charge		kg	34,5	38,0	44,5	51,3	54,1	60,6	63,9
NOISE LEVEL									
Sound Pressure	(5)	dB(A)	71	71	71	71	71	72	73
Sound power level in cooling	(6)(7)	dB(A)	89	89	90	91	91	92	93
Sound power level in heating	(6)(8)	dB(A)	89	89	90	91	91	92	93
SIZE AND WEIGHT									
Operating weight	(9)	kg	1120	1170	1290	1790	1890	2150	2260
A	(9)	mm	3360	3360	3980	4110	4110	5110	5110
B	(9)	mm	1195	1195	1195	2220	2220	2220	2220
H	(9)	mm	1980	1980	1980	2150	2150	2150	2150

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 Seasonal space heating energy efficiency class LOW TEMPERATURE in AVERAGE climate conditions [REGULATION (EU) N. 813/2013]
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NX-N /LN-CA			0152P	0182P	0202P	0252P	0262P	0302P	0352P
Power supply		V/ph/Hz	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3/50	400/3/50
PERFORMANCE									
COOLING ONLY (GROSS VALUE)									
Cooling capacity	(1)	kW	36,3	40,9	47,5	54,3	59,8	79,4	87,1
Total power input	(1)	kW	14,6	16,9	19,5	22,0	25,2	26,8	31,2
EER	(1)	kW/kW	2,49	2,42	2,44	2,47	2,37	2,96	2,79
ESEER	(1)	kW/kW	3,98	3,90	4,14	3,89	3,83	4,12	4,08
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2)	kW	36,1	40,7	47,3	54,0	59,5	79,0	86,6
EER	(1)(2)	kW/kW	2,44	2,38	2,39	2,43	2,34	2,91	2,73
ESEER	(1)(2)	kW/kW	3,81	3,76	3,97	3,75	3,70	3,96	3,88
Cooling energy class			E	E	E	E	E	B	C
HEATING ONLY (GROSS VALUE)									
Total heating capacity	(3)	kW	46,1	51,0	59,0	69,5	74,5	86,8	98,6
Total power input	(3)	kW	14,1	15,5	18,1	21,3	22,9	26,7	30,3
COP	(3)	kW/kW	3,27	3,29	3,26	3,26	3,25	3,25	3,25
HEATING ONLY (EN14511 VALUE)									
Total heating capacity	(3)(2)	kW	46,4	51,3	59,4	69,9	74,9	87,3	99,3
COP	(3)(2)	kW/kW	3,21	3,24	3,21	3,22	3,21	3,21	3,20
Cooling energy class			A	A	A	A	A	A	A
ENERGY EFFICIENCY									
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)									
Ambient refrigeration									
Prated,c	(10)	kW	-	-	-	-	-	-	-
SEER	(10)(11)		-	-	-	-	-	-	-
Performance ηs	(10)(12)	%	-	-	-	-	-	-	-
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)									
PDesign	(4)	kW	33,5	37,2	43,9	51,5	55,6	64,9	73,1
SCOP	(4)(13)		3,77	3,77	3,89	3,76	3,76	3,55	3,56
Performance ηs	(4)(14)	%	148	148	153	147	147	139	140
Seasonal efficiency class	(4)		A+	A+	A++	A+	A+	A+	-
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	l/s	1,73	1,96	2,27	2,60	2,86	3,80	4,17
Pressure drop	(1)	kPa	31,0	29,1	30,4	28,4	28,1	35,5	52,4
HEAT EXCHANGER USER SIDE IN HEATING									
Water flow	(3)	l/s	2,23	2,46	2,85	3,36	3,60	4,19	4,76
Pressure drop	(3)	kPa	51,0	46,0	47,8	47,4	44,5	43,2	68,4
REFRIGERANT CIRCUIT									
Compressors nr.		N°	2	2	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1	1
Refrigerant charge		kg	14,0	15,5	15,6	16,8	17,1	19,9	30,0
NOISE LEVEL									
Sound Pressure	(5)	dB(A)	59	59	59	60	61	64	65
Sound power level in cooling	(6)(7)	dB(A)	77	77	77	78	79	82	83
Sound power level in heating	(6)(8)	dB(A)	78	78	78	79	80	83	84
SIZE AND WEIGHT									
Operating weight	(9)	kg	600	640	650	710	720	840	1000
A	(9)	mm	2395	2395	2395	2395	2395	2825	3360
B	(9)	mm	1195	1195	1195	1195	1195	1195	1195
H	(9)	mm	1865	1865	1865	1865	1865	1980	1980

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.
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NX-N /LN-CA			0402P	0452P	0502P	0562P	0612P	0712P	0812P
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	99,0	110	125	144	165	189	212
Total power input	(1)	kW	34,5	39,7	43,7	50,1	55,7	63,8	70,1
EER	(1)	kW/kW	2,87	2,77	2,86	2,88	2,97	2,96	3,03
ESEER	(1)	kW/kW	4,09	4,12	4,04	4,01	4,12	3,95	3,91
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2)	kW	98,4	109	124	144	164	188	211
EER	(1)(2)	kW/kW	2,81	2,71	2,80	2,82	2,91	2,91	2,97
ESEER	(1)(2)	kW/kW	3,90	3,93	3,89	3,82	3,97	3,80	3,76
Cooling energy class			C	C	C	C	B	B	B
HEATING ONLY (GROSS VALUE)									
Total heating capacity	(3)	kW	110	122	138	161	181	209	232
Total power input	(3)	kW	33,9	37,6	42,4	49,7	55,6	64,4	71,2
COP	(3)	kW/kW	3,26	3,25	3,26	3,25	3,25	3,25	3,26
HEATING ONLY (EN14511 VALUE)									
Total heating capacity	(3)(2)	kW	111	123	139	162	182	210	234
COP	(3)(2)	kW/kW	3,21	3,21	3,22	3,20	3,21	3,21	3,22
Cooling energy class			A	A	A	A	A	A	A
ENERGY EFFICIENCY									
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)									
Ambient refrigeration									
Prated,c	(10)	kW	-	-	-	-	-	-	-
SEER	(10)(11)		-	-	-	-	-	-	-
Performance ηs	(10)(12)	%	-	-	-	-	-	-	-
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)									
PDesign	(4)	kW	81,1	92,2	104	115	134	154	179
SCOP	(4)(13)		3,58	3,65	3,56	3,45	3,55	3,39	3,34
Performance ηs	(4)(14)	%	140	143	139	135	139	133	131
Seasonal efficiency class	(4)		-	-	-	-	-	-	-
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	l/s	4,73	5,26	5,97	6,90	7,91	9,03	10,16
Pressure drop	(1)	kPa	47,0	47,3	47,1	52,1	49,1	49,5	62,6
HEAT EXCHANGER USER SIDE IN HEATING									
Water flow	(3)	l/s	5,33	5,90	6,67	7,79	8,72	10,10	11,21
Pressure drop	(3)	kPa	59,6	59,5	58,8	66,5	59,7	61,9	76,2
REFRIGERANT CIRCUIT									
Compressors nr.		N°	2	2	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1	1
Refrigerant charge		kg	34,5	38,0	44,5	51,3	54,1	60,6	63,9
NOISE LEVEL									
Sound Pressure	(5)	dB(A)	66	66	65	65	65	66	67
Sound power level in cooling	(6)(7)	dB(A)	84	84	84	85	85	86	87
Sound power level in heating	(6)(8)	dB(A)	85	85	85	86	86	87	88
SIZE AND WEIGHT									
Operating weight	(9)	kg	1130	1190	1300	1800	1900	2160	2270
A	(9)	mm	3360	3360	3980	4110	4110	5110	5110
B	(9)	mm	1195	1195	1195	2220	2220	2220	2220
H	(9)	mm	1980	1980	1980	2150	2150	2150	2150

Notes:
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