HEAT PUMPS

NX-N 0604P - 1204P

Reversible unit, air source for outdoor installation
148-319 kW

Version

K	Key efficiency, compact version
LN-K	Low Noise, Key efficiency and compact version
SL-K	Super Low noise, Key efficiency and compact version

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)

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

- Set-up for remote connectivity with ModBus/Echelon protocol cards
- Remote control keyboard (distance to 200m and to 500m)
- Soft starters
- Rubber anti-vibration mounting kit. Spring anti-vibration mounting kit (4 compressors models only)

Outdoor reversible unit for the production of chilled/hot water with hermetic rotary Scroll compressors, ozone-friendly refrigerant R410A, axial-flow fans, copper tubes aluminum fins air coils, braze-welded plate-type exchanger and thermostatic expansion valve. External panels in pre-clad sheet steel and base in galvanised steel with paint finish. The range is composed by units equipped with four compressors in tandem configuration on two independent refrigerant circuits.

Controls

W3000SE Compact

The W3000SE Compact 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 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.
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.

NX-N / K			0604P	0704P	0804P	0904P	1004P	1104P	1204P
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	160	186	211	245	274	298	319
Total power input	(1)	kW	56,9	67,4	75,9	88,8	99,4	106	116
EER	(1)	kW/kW	2,81	2,76	2,78	2,76	2,76	2,80	2,75
ESEER	(1)	kW/kW	3,87	4,01	4,07	3,95	3,99	4,05	4,04
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2)	kW	159	185	210	244	273	297	318
EER	(1)(2)	kW/kW	2,77	2,71	2,74	2,72	2,71	2,76	2,71
ESEER	(1)(2)	kW/kW	3,70	3,83	3,89	3,77	3,81	3,88	3,87
Cooling energy class			C	C	C	C	C	C	C
HEATING ONLY (GROSS VALUE)									
Total heating capacity	(3)	kW	174	202	230	271	299	324	345
Total power input	(3)	kW	56,4	66,4	75,4	89,2	98,3	106	113
COP	(3)	kW/kW	3,08	3,04	3,06	3,04	3,05	3,07	3,05
HEATING ONLY (EN14511 VALUE)									
Total heating capacity	(3)(2)	kW	174	203	232	273	301	325	346
COP	(3)(2)	kW/kW	3,05	3,01	3,03	3,01	3,02	3,04	3,03
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	127	148	172	200	226	242	260
SCOP	(4)(13)		3,23	3,27	3,27	3,21	3,24	3,26	3,21
Performance ηs	(4)(14)	%	126	128	128	125	126	127	125
Seasonal efficiency class	(4)		-	-	-	-	-	-	-
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	l/s	7,66	8,88	10,09	11,73	13,11	14,25	15,27
Pressure drop	(1)	kPa	42,5	43,2	44,9	49,2	49,2	43,7	50,1
HEAT EXCHANGER USER SIDE IN HEATING									
Water flow	(3)	l/s	8,38	9,74	11,12	13,09	14,45	15,64	16,64
Pressure drop	(3)	kPa	50,9	51,9	54,5	61,3	59,8	52,6	59,5
REFRIGERANT CIRCUIT									
Compressors nr.		N°	4	4	4	4	4	4	4
No. Circuits		N°	2	2	2	2	2	2	2
Refrigerant charge		kg	34,4	55,6	72,6	74,4	74,0	95,0	95,6
NOISE LEVEL									
Sound Pressure	(5)	dB(A)	73	72	73	74	75	75	75
Sound power level in cooling	(6)(7)	dB(A)	92	92	93	94	95	95	95
Sound power level in heating	(6)(8)	dB(A)	92	92	93	94	95	95	95
SIZE AND WEIGHT									
Operating weight	(9)	kg	1640	1990	2120	2360	2500	2850	2880
A	(9)	mm	3110	4110	4110	4110	4110	5110	5110
B	(9)	mm	2220	2220	2220	2220	2220	2220	2220
H	(9)	mm	2150	2150	2150	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]
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.
Certified data in EUROVENT

NX-N / LN-K			0604P	0704P	0804P	0904P	1004P	1104P	1204P
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	153	174	201	234	258	283	303
Total power input	(1)	kW	56,9	68,5	78,3	90,0	101	109	119
EER	(1)	kW/kW	2,68	2,55	2,56	2,60	2,55	2,60	2,54
ESEER	(1)	kW/kW	3,96	4,08	4,12	4,08	4,02	4,06	4,05
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2)	kW	152	174	200	233	257	282	302
EER	(1)(2)	kW/kW	2,64	2,51	2,53	2,57	2,51	2,57	2,51
ESEER	(1)(2)	kW/kW	3,78	3,90	3,95	3,90	3,86	3,91	3,88
Cooling energy class			D	D	D	D	D	D	D
HEATING ONLY (GROSS VALUE)									
Total heating capacity	(3)	kW	165	192	221	255	284	310	329
Total power input	(3)	kW	52,7	63,0	71,9	83,9	92,9	100	107
COP	(3)	kW/kW	3,14	3,05	3,08	3,04	3,05	3,09	3,07
HEATING ONLY (EN14511 VALUE)									
Total heating capacity	(3)(2)	kW	166	193	222	256	285	311	331
COP	(3)(2)	kW/kW	3,11	3,02	3,05	3,01	3,03	3,06	3,04
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	126	132	170	196	223	239	257
SCOP	(4)(13)		3,34	3,30	3,51	3,37	3,38	3,42	3,43
Performance ηs	(4)(14)	%	130	129	137	132	132	134	134
Seasonal efficiency class	(4)		-	-	-	-	-	-	-
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	l/s	7,30	8,34	9,60	11,20	12,35	13,52	14,49
Pressure drop	(1)	kPa	38,7	38,0	40,6	44,9	43,7	39,3	45,2
HEAT EXCHANGER USER SIDE IN HEATING									
Water flow	(3)	l/s	7,98	9,28	10,69	12,31	13,70	14,97	15,88
Pressure drop	(3)	kPa	46,2	47,1	50,3	54,2	53,7	48,2	54,3
REFRIGERANT CIRCUIT									
Compressors nr.		N°	4	4	4	4	4	4	4
No. Circuits		N°	2	2	2	2	2	2	2
Refrigerant charge		kg	34,4	55,6	72,6	74,4	74,0	95,0	95,6
NOISE LEVEL									
Sound Pressure	(5)	dB(A)	67	66	67	68	69	70	70
Sound power level in cooling	(6)(7)	dB(A)	86	86	87	88	89	90	90
Sound power level in heating	(6)(8)	dB(A)	87	87	88	89	90	91	91
SIZE AND WEIGHT									
Operating weight	(9)	kg	1690	2040	2170	2410	2550	2900	2930
A	(9)	mm	3110	4110	4110	4110	4110	5110	5110
B	(9)	mm	2220	2220	2220	2220	2220	2220	2220
H	(9)	mm	2150	2150	2150	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.
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NX-N / SL-K			0604P	0704P	0804P	0904P	1004P	1104P	1204P
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	148	175	202	232	256	281	303
Total power input	(1)	kW	57,8	68,5	78,9	88,2	100	111	119
EER	(1)	kW/kW	2,56	2,56	2,56	2,63	2,55	2,54	2,54
ESEER	(1)	kW/kW	4,07	4,07	4,11	4,12	4,12	4,09	4,09
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2)	kW	147	175	201	231	255	280	302
EER	(1)(2)	kW/kW	2,52	2,53	2,52	2,59	2,51	2,51	2,51
ESEER	(1)(2)	kW/kW	3,90	3,89	3,93	3,93	3,95	3,94	3,92
Cooling energy class			D	D	D	D	D	D	D
HEATING ONLY (GROSS VALUE)									
Total heating capacity	(3)	kW	160	193	223	257	283	307	330
Total power input	(3)	kW	51,2	63,6	72,5	82,2	91,2	100	108
COP	(3)	kW/kW	3,13	3,03	3,08	3,12	3,10	3,07	3,05
HEATING ONLY (EN14511 VALUE)									
Total heating capacity	(3)(2)	kW	161	194	224	258	284	308	332
COP	(3)(2)	kW/kW	3,10	3,01	3,05	3,09	3,07	3,04	3,02
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	125	135	172	197	219	239	258
SCOP	(4)(13)		3,45	3,24	3,47	3,54	3,46	3,40	3,41
Performance ηs	(4)(14)	%	135	127	136	139	136	133	133
Seasonal efficiency class	(4)		-	-	-	-	-	-	-
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	l/s	7,08	8,39	9,64	11,10	12,23	13,44	14,51
Pressure drop	(1)	kPa	36,4	38,5	41,0	44,0	42,8	38,9	45,3
HEAT EXCHANGER USER SIDE IN HEATING									
Water flow	(3)	l/s	7,73	9,32	10,78	12,40	13,65	14,83	15,93
Pressure drop	(3)	kPa	43,4	47,5	51,2	55,0	53,3	47,3	54,6
REFRIGERANT CIRCUIT									
Compressors nr.		N°	4	4	4	4	4	4	4
No. Circuits		N°	2	2	2	2	2	2	2
Refrigerant charge		kg	34,4	55,6	72,6	96,8	96,8	95,0	95,6
NOISE LEVEL									
Sound Pressure	(5)	dB(A)	63	63	63	64	65	66	67
Sound power level in cooling	(6)(7)	dB(A)	82	83	83	84	85	86	87
Sound power level in heating	(6)(8)	dB(A)	83	84	84	85	86	87	88
SIZE AND WEIGHT									
Operating weight	(9)	kg	1690	2130	2260	2690	2830	3020	3040
A	(9)	mm	3110	4110	4110	5110	5110	5110	5110
B	(9)	mm	2220	2220	2220	2220	2220	2220	2220
H	(9)	mm	2150	2150	2150	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.
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