



Outdoor unit for the production of chilled water with hermetic rotary Scroll compressors, ozone-friendly refrigerant R410A, axial-flow fans, shell and tubes heat exchanger, micro-channel full-aluminum air coils and thermostatic or electronic expansion valve, according to the model. The range is composed by units equipped with four compressors in tandem configuration on two independent refrigeration circuits.

Control



Electronic control W3000TE

W3000TE Compact control features an easy-to-use interface and a complete LCD display that allows consulting and intervening on the unit by means of a multi-language menu (19 languages are available).

The regulation is based on the patented "Quickmind" water temperature regulation logic uses self-adapting control to maintain flow temperatures and optimise performance even in low water content scenarios. As an alternative, the proportional or proportional-integral regulations are also available.

The diagnostics comprises a complete alarm management system, with the "black-box" (via PC) and the alarm history display (via display or also PC) for enhanced analysis of the unit operation

Optional proprietary devices can perform the adjustment of the resources in systems made of several units. Consumption metering and performance measurement are possible as well.

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, LonWorks.

Compatibility with the remote keyboard (up to 8 units).

The programmable timer manages a weekly schedule organised into time bands to optimise unit performance by minimising power consumption during periods of inactivity. Up to 10 daily time bands can be associated with different operating set points.

The defrosting (air source reversible unit only) follows a proprietary self-adaptive logic, which features the monitoring of several operational parameters. This allows to reduce the number and duration of the defrost cycles, with a benefit for the overall energy efficiency.

Refrigerant



Versions

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

Configurations

-	Basic function	D	Partial condensing heat recovery function
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Features

CLASS A EFFICIENCY

The full range is available with the Class A efficiency rating. Thanks to the generous sizing of the heat exchangers and an accurate control of the fan speed, the CA versions grant a premium level efficiency in every noise configuration.

ALUMINIUM MICRO-CHANNEL HEAT EXCHANGERS

The full aluminium micro-channel condenser coils deliver high efficiency whilst ensuring a reduced refrigerant volume and a lower unit weight. The e-coating protection (optional) grants the highest level of resistance to corrosion in any condition, even in the most aggressive environments.

ELECTRONIC EXPANSION VALVE SUPPLIED STANDARD

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-efficiency CA version, optional for the compact K versions.

WIDE OPERATING RANGE

Full load operation is ensured with outdoor air temperature up to 46°C, partial load operation is possible up to or even beyond 50°C. The unit can produce chilled water at negative temperature (down to -10°C of leaving water temperature). Dedicated accessories allow the unit operation down to -20°C of outdoor air temperature.

EXCHANGER

The shell and tube exchanger allows to achieve the highest flexibility on the unit's installation, keeping on the hydronic side the pressure drops at the minimum level, thus representing the best choice for all the hydronic applications on the residential, commercial and industrial markets.

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.

Accessories

- Microchannel coils with e-coating protection
- Traditional coils with copper tubes and aluminium fins, also available with prepainted fins or Fin Guard Silver protective treatment.
- Copper-Copper heat exchanger coils
- Compressor power factor correction
- Soft start
- Compressor suction and discharge valves
- High and low pressure gauges
- DVVF and DVV2F devices for low air temperature operation
- Hydronic module with 1 or 2 pumps, high or low head. Buffer tank available.
- Anti-intrusion grills

NX / K		0614T	0714T	0814T	0914T	1014T	1114T	1214T
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	164,7	194,1	217,8	248,2	289,2	308,4	326,7
Total power input	(1) kW	58,31	66,73	78,90	88,61	98,95	108,4	118,2
EER	(1) kW/kW	2,825	2,910	2,760	2,801	2,921	2,845	2,764
ESEER	(1) kW/kW	4,060	4,390	4,300	4,410	4,260	4,270	4,180
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2) kW	164,2	193,4	216,8	247,2	287,7	307,4	325,5
EER	(1)(2) kW/kW	2,790	2,870	2,710	2,760	2,860	2,810	2,730
ESEER	(1)(2) kW/kW	3,920	4,210	4,080	4,200	4,020	4,110	4,020
Cooling energy class		C	C	C	C	C	C	C
ENERGY EFFICIENCY								
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)								
Ambient refrigeration								
Prated,c	(7) kW	164	193	217	247	288	307	326
SEER	(7)(8)	3,81	4,11	3,95	4,10	3,97	4,05	3,91
Performance ηs	(7)(9) %	150	161	155	161	156	159	153
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	(1) l/s	7,875	9,282	10,41	11,87	13,83	14,75	15,62
Pressure drop	(1) kPa	23,3	32,4	50,9	45,5	61,7	38,0	42,7
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	22,5	26,6	27,7	27,8	33,6	36,3	36,9
NOISE LEVEL								
Sound Pressure	(3) dB(A)	60	60	61	62	63	63	63
Sound power level in cooling	(4)(5) dB(A)	92	92	93	94	95	95	95
SIZE AND WEIGHT								
A	(6) mm	3160	3160	3160	3160	4335	4335	4335
B	(6) mm	2250	2250	2250	2250	2250	2250	2250
H	(6) mm	2170	2170	2170	2170	2170	2170	2170
Operating weight	(6) kg	1650	1810	1820	1950	2340	2530	2550

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
- 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.
- 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

The units highlighted in this publication contain HFC R410A [GWP₁₀₀ 2088] fluorinated greenhouse gases.

Certified data in EUROVENT

NX / LN-K		0614T	0714T	0814T	0914T	1014T	1114T	1214T
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	159,8	185,5	208,2	235,0	274,0	290,4	320,3
Total power input	(1) kW	58,13	68,57	79,63	92,21	101,0	111,6	118,5
EER	(1) kW/kW	2,750	2,704	2,616	2,549	2,713	2,602	2,703
ESEER	(1) kW/kW	4,130	4,420	4,370	4,410	4,250	4,250	4,370
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2) kW	159,3	184,9	207,3	234,1	272,7	289,5	319,2
EER	(1)(2) kW/kW	2,720	2,670	2,580	2,510	2,670	2,570	2,670
ESEER	(1)(2) kW/kW	3,990	4,250	4,160	4,210	4,040	4,100	4,210
Cooling energy class		C	D	D	D	D	D	D
ENERGY EFFICIENCY								
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)								
Ambient refrigeration								
Prated,c	(7) kW	159	185	207	234	273	290	319
SEER	(7)(8)	3,84	4,11	4,01	4,06	3,96	4,01	4,07
Performance ηs	(7)(9) %	150	162	157	159	156	157	160
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	(1) l/s	7,641	8,870	9,958	11,24	13,10	13,89	15,32
Pressure drop	(1) kPa	21,9	29,6	46,5	40,7	55,4	33,7	41,0
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	22,5	26,6	27,7	27,8	33,6	36,3	36,9
NOISE LEVEL								
Sound Pressure	(3) dB(A)	54	54	55	56	57	57	58
Sound power level in cooling	(4)(5) dB(A)	86	86	87	88	89	89	90
SIZE AND WEIGHT								
A	(6) mm	3160	3160	3160	3160	4335	4335	4335
B	(6) mm	2250	2250	2250	2250	2250	2250	2250
H	(6) mm	2170	2170	2170	2170	2170	2170	2170
Operating weight	(6) kg	1700	1860	1870	1990	2380	2580	2600

Notes

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|--|---|
| 1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C. | 5 Sound power level in cooling, outdoors. |
| 2 Values in compliance with EN14511 | 6 Unit in standard configuration/execution, without optional accessories. |
| 3 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 Parameter calculated according to [REGULATION (EU) N. 2016/2281] |
| 4 Sound power on the basis of measurements made in compliance with ISO 9614. | 8 Seasonal energy efficiency ratio |
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NX / SL-K		0614T	0714T	0814T	0914T	1014T	1114T	1214T
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	159,0	179,9	214,3	241,3	264,0	296,0	312,2
Total power input	(1) kW	56,28	70,71	77,80	89,35	103,7	109,1	119,6
EER	(1) kW/kW	2,824	2,545	2,754	2,702	2,546	2,713	2,610
ESEER	(1) kW/kW	4,340	4,410	4,400	4,410	4,280	4,340	4,260
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2) kW	158,5	179,3	213,4	240,3	262,8	295,0	311,1
EER	(1)(2) kW/kW	2,790	2,510	2,710	2,660	2,510	2,680	2,580
ESEER	(1)(2) kW/kW	4,180	4,240	4,190	4,200	4,070	4,170	4,100
Cooling energy class		C	D	C	D	D	D	D
ENERGY EFFICIENCY								
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)								
Ambient refrigeration								
Prated,c	(7) kW	158	179	213	240	263	295	311
SEER	(7)(8)	4,00	4,08	4,04	4,08	3,97	4,06	3,94
Performance ηs	(7)(9) %	157	160	158	160	156	159	155
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	(1) l/s	7,602	8,604	10,25	11,54	12,63	14,16	14,93
Pressure drop	(1) kPa	21,7	27,8	49,3	43,0	51,4	35,1	39,0
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	22,5	26,6	30,2	41,2	41,3	41,4	41,4
NOISE LEVEL								
Sound Pressure	(3) dB(A)	50	51	51	52	52	54	54
Sound power level in cooling	(4)(5) dB(A)	82	83	83	84	84	86	86
SIZE AND WEIGHT								
A	(6) mm	3160	3160	4335	4335	4335	5510	5510
B	(6) mm	2250	2250	2250	2250	2250	2250	2250
H	(6) mm	2170	2170	2170	2170	2170	2170	2170
Operating weight	(6) kg	1700	1860	2160	2290	2380	2930	2950

Notes

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NX / CA		0614T	0714T	0814T	0914T	1014T	1114T	1214T
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	174,1	205,2	235,4	266,4	301,9	330,0	352,0
Total power input	(1) kW	54,38	65,00	72,87	84,11	95,76	102,8	111,0
EER	(1) kW/kW	3,200	3,157	3,229	3,168	3,151	3,210	3,171
ESEER	(1) kW/kW	4,310	4,260	4,450	4,490	4,430	4,350	4,370
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2) kW	173,6	204,4	234,2	265,2	300,9	328,8	350,6
EER	(1)(2) kW/kW	3,160	3,110	3,160	3,110	3,110	3,160	3,120
ESEER	(1)(2) kW/kW	4,170	4,060	4,200	4,240	4,260	4,170	4,180
Cooling energy class		A	A	A	A	A	A	A
ENERGY EFFICIENCY								
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)								
Ambient refrigeration								
Prated,c	(7) kW	174	204	234	265	301	329	351
SEER	(7)(8)	4,06	4,03	4,10	4,17	4,25	4,13	4,10
Performance ηs	(7)(9) %	159	158	161	164	167	162	161
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	(1) l/s	8,326	9,814	11,26	12,74	14,44	15,78	16,83
Pressure drop	(1) kPa	26,1	36,2	59,5	52,4	36,5	43,6	49,6
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	24,3	31,0	36,8	39,7	39,8	44,5	46,1
NOISE LEVEL								
Sound Pressure	(3) dB(A)	60	61	62	63	63	64	65
Sound power level in cooling	(4)(5) dB(A)	92	93	94	95	95	96	97
SIZE AND WEIGHT								
A	(6) mm	3160	4335	4335	4335	4335	5510	5510
B	(6) mm	2250	2250	2250	2250	2250	2250	2250
H	(6) mm	2170	2170	2170	2170	2170	2170	2170
Operating weight	(6) kg	1700	2150	2160	2290	2550	2930	2950

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
- 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.
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NX / LN-CA		0614T	0714T	0814T	0914T	1014T	1114T	1214T
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	167,5	198,4	227,4	262,1	294,5	318,0	344,4
Total power input	(1) kW	52,84	61,62	70,49	82,78	93,23	99,58	108,7
EER	(1) kW/kW	3,172	3,221	3,226	3,165	3,160	3,193	3,168
ESEER	(1) kW/kW	4,560	4,610	4,700	4,710	4,550	4,630	4,700
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2) kW	167,0	197,7	226,3	261,0	293,6	316,9	343,0
EER	(1)(2) kW/kW	3,130	3,170	3,160	3,110	3,120	3,150	3,120
ESEER	(1)(2) kW/kW	4,400	4,400	4,440	4,470	4,390	4,430	4,480
Cooling energy class		A	A	A	A	A	A	A
ENERGY EFFICIENCY								
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)								
Ambient refrigeration								
Prated,c	(7) kW	167	198	226	261	294	317	343
SEER	(7)(8)	4,23	4,31	4,31	4,36	4,37	4,39	4,37
Performance ηs	(7)(9) %	166	170	169	171	172	172	172
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	(1) l/s	8,011	9,488	10,87	12,53	14,08	15,21	16,47
Pressure drop	(1) kPa	24,1	33,8	55,5	50,7	34,7	40,5	47,5
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	24,3	31,0	36,8	39,7	41,0	44,5	46,1
NOISE LEVEL								
Sound Pressure	(3) dB(A)	54	55	56	57	58	59	59
Sound power level in cooling	(4)(5) dB(A)	86	87	88	89	90	91	91
SIZE AND WEIGHT								
A	(6) mm	3160	4335	4335	4335	5510	5510	5510
B	(6) mm	2250	2250	2250	2250	2250	2250	2250
H	(6) mm	2170	2170	2170	2170	2170	2170	2170
Operating weight	(6) kg	1700	2150	2160	2290	2880	2900	2930

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
PERFORMANCE								
COOLING ONLY (GROSS VALUE)								
Cooling capacity	(1) kW	167,3	194,9	224,2	259,3	291,8	316,6	343,6
Total power input	(1) kW	52,28	61,03	69,89	82,01	92,62	99,59	108,8
EER	(1) kW/kW	3,199	3,195	3,207	3,162	3,151	3,179	3,158
ESEER	(1) kW/kW	4,690	4,700	4,680	4,720	4,720	4,680	4,700
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2) kW	166,8	194,2	223,1	258,2	290,9	315,5	342,2
EER	(1)(2) kW/kW	3,160	3,150	3,140	3,110	3,110	3,130	3,110
ESEER	(1)(2) kW/kW	4,520	4,490	4,420	4,470	4,550	4,490	4,470
Cooling energy class		A	A	A	A	A	A	A
ENERGY EFFICIENCY								
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)								
Ambient refrigeration								
Prated,c	(7) kW	167	194	223	258	291	316	342
SEER	(7)(8)	4,33	4,37	4,28	4,35	4,50	4,42	4,35
Performance ηs	(7)(9) %	170	172	168	171	177	174	171
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	(1) l/s	8,000	9,322	10,72	12,40	13,95	15,14	16,43
Pressure drop	(1) kPa	24,1	32,7	53,9	49,6	34,1	40,1	47,2
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	28,4	31,0	36,8	39,7	41,0	44,5	46,1
NOISE LEVEL								
Sound Pressure	(3) dB(A)	51	51	52	53	54	55	55
Sound power level in cooling	(4)(5) dB(A)	83	83	84	85	86	87	87
SIZE AND WEIGHT								
A	(6) mm	4335	4335	5510	5510	5510	5510	5510
B	(6) mm	2250	2250	2250	2250	2250	2250	2250
H	(6) mm	2170	2170	2170	2170	2170	2170	2170
Operating weight	(6) kg	1980	2150	2490	2610	2880	2900	2930

Notes

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Dimensional drawing

