



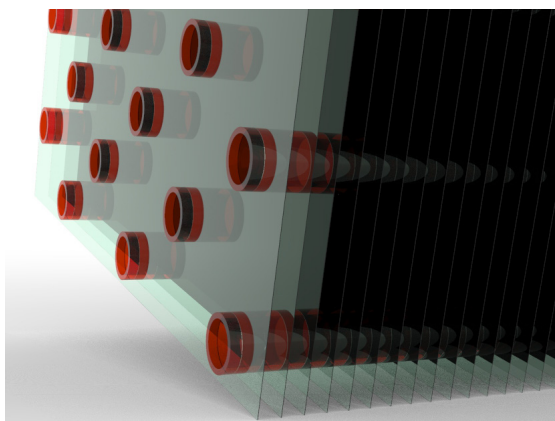
NordicLIGHT / NordicGREEN
Air-to-Water Heatpumps //2020

Features

// Air Heat Exchanger: specially designed for extracting heat from air

Conterflow
Direction in
Heatpump

Increased Fins
Step



Air Heat Exchanger is the main part of air heatpump. NordicLIGHT is equipped with industrial grade air evaporator, similar to the one used in refrigeration industry.

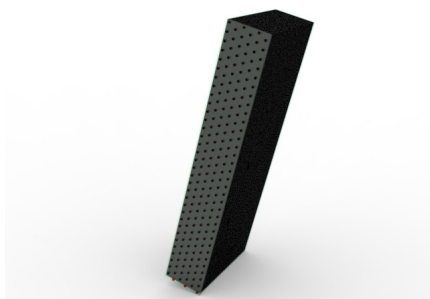
\\ Increased distance between fins decrease frosting of ice and increase the time between defrosts.

\\ The unit may operate as a chiller, but it's an original heatpump. The air and the refrigerant is in conterflow in heatpump mode. And in parallel flow in chiller mode. So the air heat exchanger is more efficient in heatpump mode.

// Defrost: in time and fast

Smart Defrost
Algorithm

Backward
Angled
Coil



Defrost is very important for energy efficiency

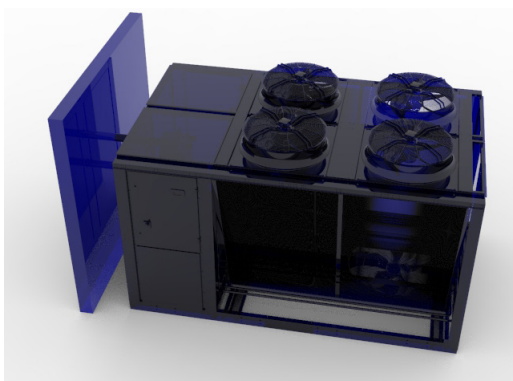
\\ The heat exchanger is angled backward 15 degrees. It is an optimal angle to remove water from the coil.

\\ Defrost is started in time thanks to smart algorithm. No energy loss due to unnecessary defrosts. And no energy caused by work in not optimal conditons due to late defrosts.

// Near the wall installation

Use Water
Without Glycol

Reduce
Installation
Space



The units are designed to be installed right near the wall from the side of water connections. This allows to reduce space for installation. And also allows to fill the unit with water using optional pipe-in-pipe water connection.

// High efficiency in low ambient temperature operation.

// Advanced control of the unit and external devices from heatpump controller.

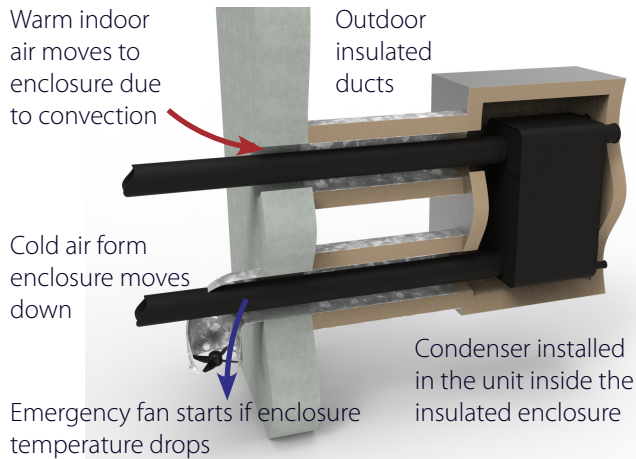
// Totally independent defrost on 2 circuit units.

// High quality scroll compressors, heat exchangers and controllers.

// No exclusives: only components available on your local market.

Special Heatpump Options

// Pipe-in-pipe water connection for outdoor installation



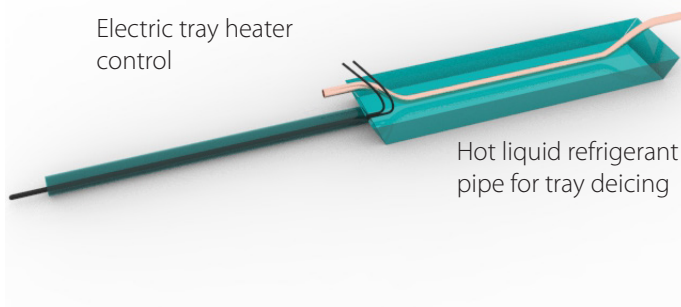
Optionally the condenser of the unit can be placed in insulated enclosure. Also emergency electrical heater will be installed. Local installer shall place the water pipes inside the insulated ducts. And factory supplied fan kit shall be installed indoor on the bottom pipe connection. Thus all the water piping will be in the air jacket.

\\ Warm air from the indoor will move to the enclosure due to convection and will prevent pipes from freezing.

\\ If the temperature in enclosure falls too much the unit controller starts the fan to blow warm indoor air to enclosure.

\\ So water without brine may be used in condenser without risk of freezing. With no energy waste for electrical heating.

// Defrost collection tray with smart antifrost protection



In the nordic climates the unit may work for weeks with subzero outdoor temperatures. Optionally the water tray will be installed and hot refrigerant pipe will be layed in it.

\\ Water from defrost will be collected in the tray and removed via the sewer pipes.

\\ Hot refrigerant pipe will protect water in the tray from freezing. And the heating cable, that can be layed inside the pipe or tray, will be energized for some time after defrost.

So you will never have problems with defrosted water icing using this option. Also the option can be used in warm climates to remove defrost water to the right place.

// Select compressors and refrigerant that you need

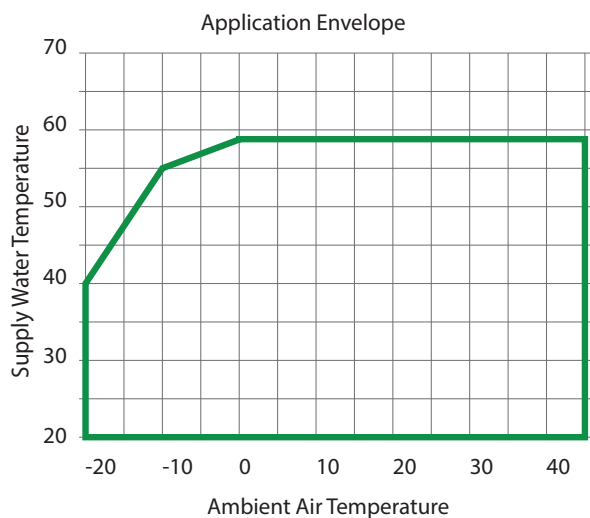
NordicLIGHT // R410a with on/off scrolls: basic solution for space heating.

NordicLIGHT EVI // R407C with EVI on/off scrolls: andvanced solution for space and DHW (domestic hot water) heating. Upto 65°C outlet water temperature.

NordicLIGHT iNVi // R410a with inverter scrolls: andvanced solution for space heating.

NordicGREEN // R290 Propane (GWP=3) with scroll or reciprocating compressors: green solution for space and DHW heating. Green refrigerant with low global warming potential.

Product range // NordicLIGHT



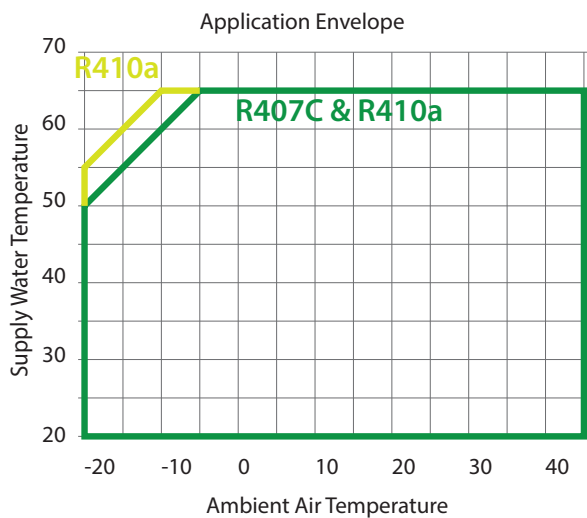
// Each circuit is equipped with tandem scroll compressors.

// R410a refrigerant

	10.2	12.2	15.2	16.2	18.2	20.2	24.2	26.2	30.2	20.4	24.4
Heat pump capacities. User water 30/35°C, Ambient air temperature +2°C											
Heating capacity, kW	23,5	27,7	35,3	39,0	44,4	55,1	64,8	68,8	80,5	46,2	57,0
Power input, kW	6,3	7,4	10,0	10,7	12,2	14,6	16,7	18,4	21,3	12,9	15,2
COP	3,72	3,74	3,54	3,64	3,64	3,77	3,88	3,74	3,78	3,58	3,75
Product data											
Number of circuits	1	1	1	1	1	1	1	1	1	2	2
Number of compressors	2	2	2	2	2	2	2	2	2	4	4
Compressor type	Scroll										
Number of fans	1	1	1	2	2	3	3	4	4	2	2
Lenght, m	1,26	1,26	1,26	1,6	1,6	2,25	2,25	2,9	2,9	2,0	2,0
Width, m	0,85	0,85	0,85	1,0	1,0	1,0	1,0	1,0	1,0	1,4	1,4
Height, m	1,8	1,8	2,1	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8

	32.4	36.4	40.4	48.4	52.4	60.4	80.4	100.4	120.4	160.4
Heat pump capacities. User water 30/35°C, Ambient air temperature +2°C										
Heating capacity, kW	78,1	88,8	110,2	129,5	137,7	161,1	204,8	248,4	335,6	408,0
Power input, kW	21,4	24,4	29,3	33,4	36,8	42,6	53,2	66,4	88,0	108,4
COP	3,64	3,64	3,77	3,88	3,74	3,78	3,85	3,74	3,81	3,76
Product data										
Number of circuits	2	2	2	2	2	2	2	2	2	2
Number of compressors	4	4	4	4	4	4	4	4	4	4
Compressor type	Scroll									
Number of fans	4	4	6	6	8	8	4	4	6	6
Lenght, m	2,65	2,65	3,3	3,3	3,95	3,95	3,7	3,7	4,9	4,9
Width, m	1,4	1,4	1,4	1,4	1,4	1,4	2,2	2,2	2,2	2,2
Height, m	1,8	1,8	1,8	1,8	1,8	1,8	2,3	2,3	2,3	2,3

Product range // NordicLIGHT EVI



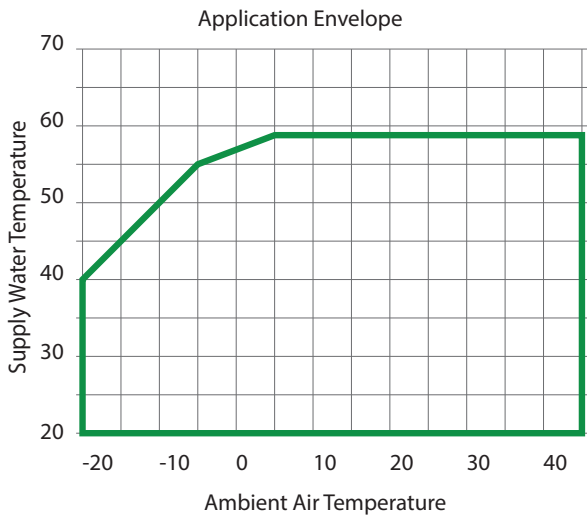
// Each circuit is equipped with tandem scroll compressors with enhanced vapor injection (EVI).

// Upto 65°C supply water temperature.

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// R407C or R410a refrigerant.
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Product range // NordicLIGHT iNVi



// Each circuit is equipped with single inverter scroll compressor.

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// Variable speed continuous compressor
operation.
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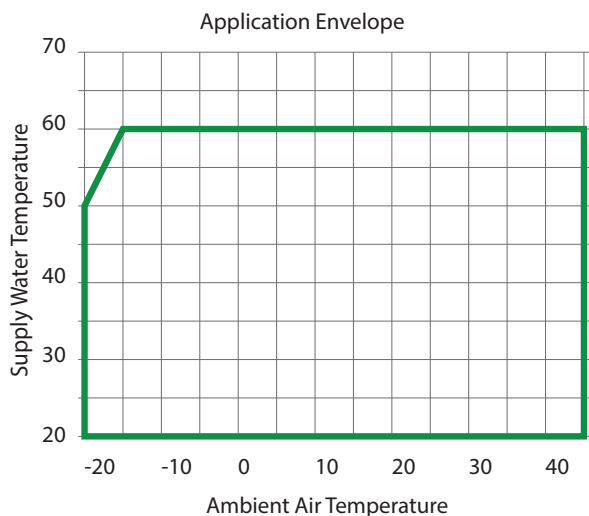
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// Exact setpoint control.
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// Improved part load efficiency

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// R410a refrigerant
```

	06.1iN	15.1iN	18.1iN	26.1iN	12.2iN	30.2iN	36.2iN	52.2iN
Heat pump capacities. User water 30/35°C, Ambient air temperature +2°C								
Heating capacity, kW	19,4	38,2	56,9	78,8	38,7	76,4	113,8	157,6
Power input, kW	5,7	11,7	17,7	23,7	11,7	23,4	35,3	47,5
COP	3,40	3,27	3,22	3,32	3,32	3,27	3,22	3,32
Product data								
Number of circuits	1	1	1	1	2	2	2	2
Number of compressors	1	1	1	1	2	2	2	2
Compressor type	Scroll Inverter							
Number of fans	1	2	3	4	2	4	6	8
Lenght, m	1,26	1,6	2,25	2,9	2,0	2,65	3,3	3,95
Width, m	0,85	1,0	1,0	1,0	1,4	1,4	1,4	1,4
Height, m	1,8	1,8	1,8	1,8	1,8	1,8	1,8	1,8

Product range // NordicGREEN



// Each circuit is equipped with tandem scroll or three stage reciprocating compressor. Inverter as an option.

// R290 Propane refrigerant with low GWP value.

// Leak detector and emergency fan included. Special safe wiring suitable for propane application.

	S10.2	P10.1	S12.2	P15.1	S15.2	P20.2	P22.2	P25.2	S20.4	P20.2	S24.4
Heat pump capacities. User water 30/35°C, Ambient air temperature +2°C											
Heating capacity, kW	22,0	24,0	25,2	33,8	32,1	39,8	44,1	51,1	44,0	47,2	49,6
Power input, kW	5,9	6,2	6,6	8,6	8,2	10,6	11,8	13,7	12,2	12,6	13,4
COP	3,70	3,86	3,84	3,94	3,91	3,74	3,74	3,74	3,62	3,73	3,71
Product data											
Number of circuits	1	1	1	1	1	1	1	1	2	2	2
Number of compressors	1	1	2	1	2	2	2	2	4	2	4
Compressor type	Scroll	Piston	Scroll	Piston	Scroll	Piston	Piston	Piston	Scroll	Piston	Scroll
Number of fans	1	1	1	1	1	2	2	2	2	2	2
Lenght, m	1,26	1,26	1,26	1,26	1,26	1,26	1,6	1,6	2,0	2,0	2,0
Width, m	0,85	0,85	0,85	0,85	0,85	0,85	1,0	1,0	1,4	1,4	1,4
Height, m	1,8	1,8	1,8	1,8	2,1	2,1	1,8	1,8	1,8	1,8	1,8

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