



AIR TO WATER

HEAT PUMPS

EFFICIENT HEATING SYSTEM FOR YOUR HOME

[www.nordis-ac.com](http://www.nordis-ac.com)



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## Air-to-water heat pumps

More and more people are opting for air-to-water heat pumps as the main appliance for a comfortable living climate. It is an ecological and economical solution for heating your home.

Nordic technology at an affordable price. NØRDIS presents the Optimus Pro series of high-quality air-to-water heat pumps. A modern system for heating, cooling and hot water production works efficiently in outdoor temperatures from -25 to +43 degrees. The units are optimally adapted to the climate in the Nordic countries.

### NØRDIS OPTIMUS PRO SPLIT AIR-TO-WATER HEAT PUMPS WITHOUT DHW TANK

Air-to-water heat pumps without an integrated hot water tank have indoor units with three output levels. The heat pump system is compatible with underfloor heating, radiators, fan coil units and domestic hot water tanks. Therefore, you do not have to invest in redesigning the entire system.

### NØRDIS OPTIMUS PRO SPLIT AIR-TO-WATER HEAT PUMPS WITH DHW TANK

Air-to-water heat pumps can be combined with two sizes of indoor units with built-in DHW tanks. The latest technologies integrated in the devices ensure high performance and the lowest operating costs. The combination of heat pump units offers optimal options for heating, cooling and domestic hot water.

### NØRDIS OPTIMUS PRO MONO INTEGRATED AIR-TO-WATER HEAT PUMPS

The cost-effective Monoblock is a highly efficient system in a universal unit that is installed outdoors. The unit is simple and quick to install. It is compatible with any other heating or hot water system in the house.

# NØRDIS STANDARDS FOR AIR-TO-WATER HEAT PUMPS

## FEATURES FOR EQUIPMENT HIGH RELIABILITY

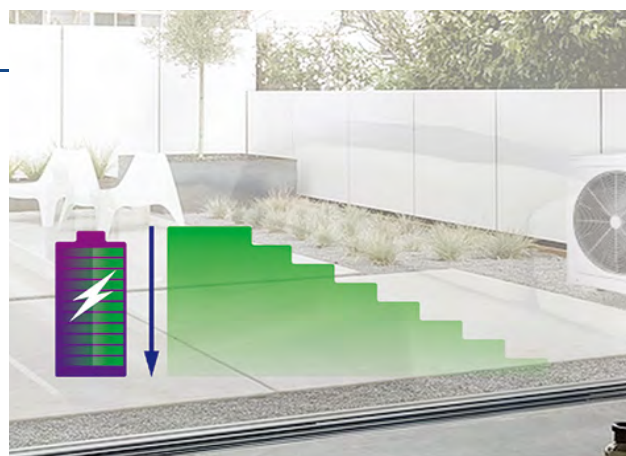
### PREHEATING AND DRYING UP FOR FLOOR

If a large amount of water remains on the floor before underfloor heating, the floor may warp or even crack during the heating process. We offer two modes for underfloor heating. One is the pre-heating mode, which is used after the first floor loops are installed, and the other is the drying mode for the first heating during seasonal heating. Both modes are used to protect the floor. During the process, the water temperature is gradually increased.



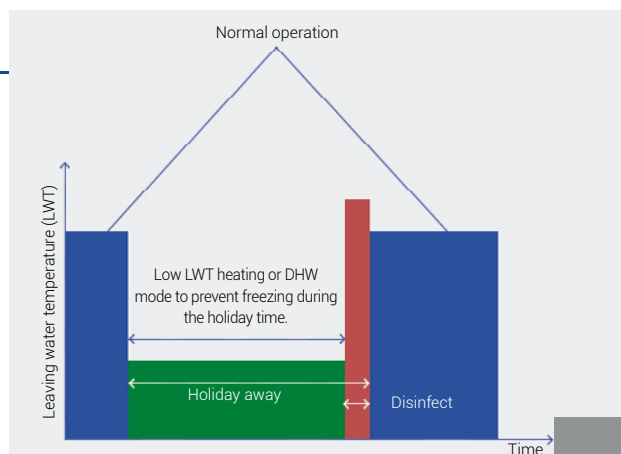
### POWER LIMITATION FUNCTION

The power limiting function makes the unit suitable for a wide range of power supplies. There are 8 configurations from which the user can choose depending on the maximum access current allowed. Only one simple setting is required on the wired controller, making the units suitable for a wide range of applications.



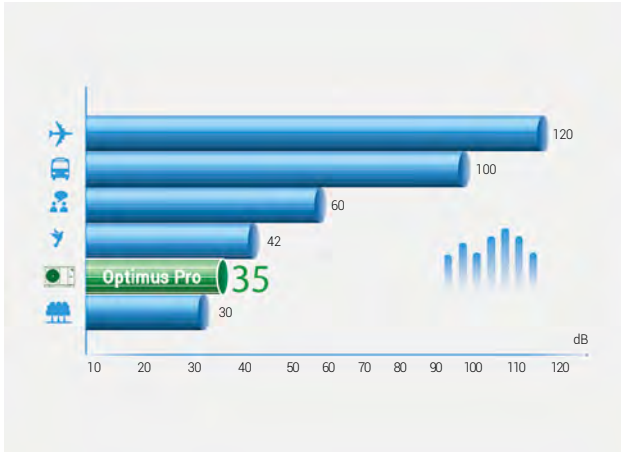
### HOLIDAY FUNCTION

The holiday away function is a mode to improve system reliability and save energy. The unit operates in heating mode and/or DHW mode with low water temperature to prevent the water from freezing during the holiday. The user can set the disinfection mode before returning home to ensure that germ-free water is available upon return.





## COMFORT



### SILENT MODE

Due to the high degree of optimisation of the technical solutions, the sound pressure level of the NØRDIS Optimus Pro 4 kW units is only 35 dB (A) at a distance of 3 metres.

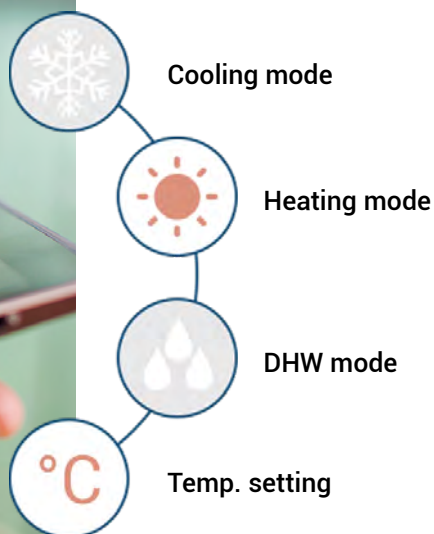
Test condition:

1. Evaporator air in 7°C, 85% R.H., Condenser water in/out 30/35°
2. Condenser air in 35°C. Evaporator water in/out 23/18°C



### SCHEDULE

NØRDIS air-to-water heat pumps operate automatically according to consumer habits. Maximum user-friendliness is ensured by setting the indoor climate and hot water preparation (with the integrated DHW tank in the unit) using scheduling.



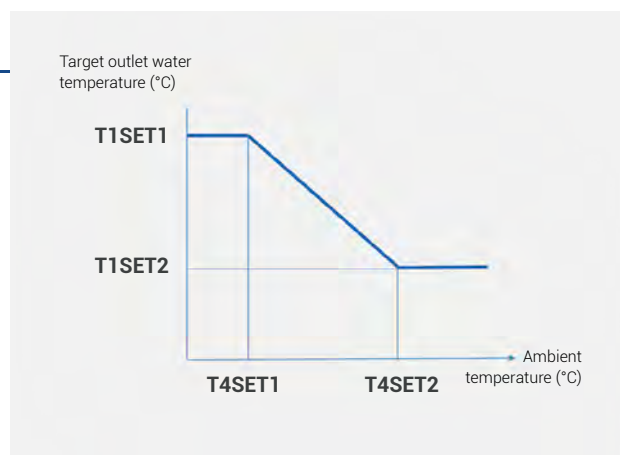
## SMART CONTROL

### CONVENIENT CONTROLLER OR CONTROL VIA MOBILE APP (WIFI)

The NØRDIS Optimus Pro heat pumps are controlled by an advanced multifunction controller or an app on a smart device. The app constantly provides optimal system settings to achieve maximum energy savings.

### WEATHER TEMPERATURE CURVE

With the weather temperature curve function, the water temperature changes automatically when the outdoor air temperature changes. When the outdoor air temperature increases/decreases, the heating load decreases/increases and the water temperature automatically increases/decreases. When the outdoor air temperature decreases/increases, the cooling load decreases/increases and the water temperature increases/decreases automatically. A total of 32 fixed weather temperature curves and one user-defined curve are available to meet different temperature requirements.



### SMART GRID

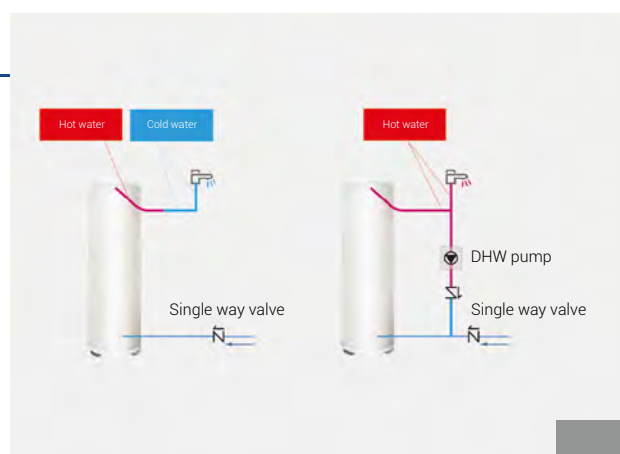
The heat pump adjusts operation according to various electrical signals. The power consumption of the system can be automatically adjusted according to the peak and valley power to reduce the power consumption as much as possible.

- Cheap electrical signal: Hot water is effectively produced in DHW mode.
- Normal electrical signal: Operates according to the user's needs.
- Expensive electrical signal: Set the maximum operating time for heating and cooling mode.



### DHW PUMP FUNCTION

The DHW pump function is used to return the water in the water pipe network to the hot water tank according to the set timer. A total of 12 timers can be set for a day so that the user can adapt the operating time of the domestic hot water pump to his habits to ensure that the hot water can be used without long waiting times.



## ECONOMY



### ENERGY SAVING

NØRDIS Optimus Pro heat pumps are an ecological and environmentally friendly solution for heating and hot water production with renewable energy sources. Energy efficiency class A+++.



### ECOLOGICAL R32 REFRIGERANT

R-32 is an environmentally friendly refrigerant used in modern equipment.

Advantages over its predecessor R410A:

- Low global warming potential (GWP) refrigerant.
- Higher heat transfer coefficient for better performance.
- The system requires less refrigerant.

## CERTIFICATES







# NØRDIS Optimus Pro Split

## AIR TO WATER HEAT PUMPS



The NØRDIS Optimus Pro Split series is based on DC technology. This technology optimises the motor speed and ensures a comfortable amount of heat in the room with the lowest electricity consumption, even when the outdoor temperature drops to -25°C.

Outdoor unit model			HOP6W ODU	HOP8W ODU	HOP10W ODU	HOP12W ODU3	HOP16W ODU3
Compatible indoor units without DHW tank			HOP60WIDU	HOP100WIDU arba HOP100WIDU3		HOP160WIDU3	
Compatible indoor units with DHW tank			HOP100/190IDU arba HOP100/190IDU3			HOP160/240IDU3	
Heating A7W35 <sup>1</sup>	Capacity	kW	6,20	8,30	10,00	12,10	16,00
	Rated input	kW	1,24	1,60	2,00	2,44	3,56
	COP		5,00	5,20	5,00	4,95	4,50
Heating A7W45 <sup>2</sup>	Capacity	kW	6,35	8,20	10,00	12,30	16,00
	Rated input	kW	1,69	2,08	2,63	3,24	4,44
	COP		3,75	3,95	3,80	3,80	3,60
Heating A7W55 <sup>3</sup>	Capacity	kW	6,00	7,50	9,50	12,00	16,00
	Rated input	kW	2,00	2,36	3,06	3,87	5,52
	COP		3,00	3,18	3,10	3,10	2,90
Heating A-7W35 <sup>9</sup>	Capacity	kW	6,10	7,10	8,25	10,00	13,30
	Rated input	kW	2,00	2,18	2,62	3,33	4,93
	COP		3,05	3,25	3,15	3,00	2,70
Cooling A35W18 <sup>4</sup>	Capacity	kW	6,55	8,40	10,00	12,00	14,90
	Rated input	kW	1,34	1,66	2,08	3,00	4,38
	EER		4,90	5,05	4,80	4,00	3,40
Cooling A35W7 <sup>5</sup>	Capacity	kW	7,00	7,40	8,20	11,60	14,00
	Rated input	kW	2,33	2,19	2,48	4,22	5,71
	EER		3,00	3,38	3,30	2,75	2,45
Energy efficiency class <sup>6</sup>	Water outlet at 35°C	class	A+++				
	Water outlet at 55°C	class	A++				
SCOP <sup>6</sup>		35°C	4,95	5,22	5,2	4,81	4,62
		55°C	3,52	3,37	3,47	3,45	3,41
SEER <sup>6</sup>		7°C	5,37	5,83	5,98	4,86	4,67
		18°C	8,21	8,95	8,78	7,04	6,71



## FEATURES

- High energy efficiency class A+++ for energy saving;
- Refrigerant R32 75% less impact on global warming;
- DC Inverter technology enables precise consumption at actual load;
- Minimum operation ambient temperature down to -25°C;
- Extremely quiet - two silent modes;
- Smart Grid certification.

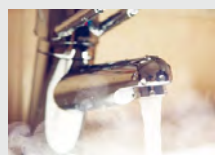


Outdoor unit model			HOP6WODU	HOP8WODU	HOP10WODU	HOP12WODU3	HOP16WODU3
Power supply		V/Ph/Hz	220-240/1/50			380-415/3/50	
Rated power		W	2600	3300	3600	5400	6100
Rated current		A	12,0	14,5	16,0	9,0	11,0
Power cable		mm²	3x2,5			5x2,5	
Automatic switch		A	C16		C20	C16~3	
Refrigerant	Type (GWP)		R32 (675)				
	Quantity in the device	kg	1,5	1,65		1,84	
Refrigerant pipes	Liquid phase	mm (col)	6,35 (1/4")	9,52 (3/8")			
	Gas phase	mm (col)	15,88 (5/8")				
Between the indoor and out-door units	Height difference, max.	m	20				
	Pipe length, min.	m	3				
	Pipe length, max.	m	30				
Additional refrigerant charge	Quantity	g/m	20	38			
	Pipe length	m	maks.15				
Compressor			DC two rotor inverter				
Fan			DC electric motor				
Sound power level <sup>7</sup>		dB(A)	58	59	60	64	68
Sound pressure 1 m		dB(A)	45	46	49	50	55
Sound pressure (2 silent mode)		dB(A)	40	41	41	43	43
Dimension (W x H x D)		mm	1008x712x426	1118x865x523			
Dimension of Package (W x H x D)		mm	1065x810x485	1190x970x560			
Net / Gross weight		kg	60 / 65,5	78,5 / 92		116 / 129,5	
Operation ambient temperature range	Heating	°C	-25 ~ +35				
	Cooling	°C	-5 ~ +43				
	DHW	°C	-25 ~ +43				



Ambient  
temperature  
down to

**-25°C**



Water  
temperature  
up to

**65°C**

# NØRDIS Optimus Pro Split without DHW tank



## FEATURES

- Modern wired controller for easy operation;
- Integrated WiFi module for unit control by smartphone;
- *Wilo* circulation pump;
- *Alfa Laval* heat exchanger;
- Weather temperature curve function;
- DHW disinfection;
- Integrated additional electric water heater.

Air-to-water heat pumps without an integrated hot water tank have three indoor units with different power. The heat pump system is compatible with underfloor heating, radiators, fan coil systems and hot water tanks. So you do not have to invest in redesigning the entire system.

## MULTIFUNCTIONALITY



DHW  
Operation Priority



AUTO mode



Disinfect mode



ECO mode



Preset water  
temperature



Fast DHW



Daily shedule



Weekly shedule

### PRELIMINARY HEAT PUMP CALCULATOR

With just a few clicks, you can find out the Nordis heat pump that is right for your home.

Heated area:  m<sup>2</sup>

Enter the heat demand for heating:  W/m<sup>2</sup>

Or choose the energy class of your home:

☐ A++ ☐ A+ ☐ A ☐ B ☐ C ☐ D

Will the heat pump prepare domestic hot water? ☐ Yes ☒ No

Calculate

## [NORDIS-AC.COM/CALCULATOR-PAGE/](http://NORDIS-AC.COM/CALCULATOR-PAGE/)

Quickly and easily calculate the air-to-water heat pump from the NØRDIS Optimus Pro series that is suitable for your needs.

Indoor units without DHW tank			HOP60W IDU	HOP100W IDU		HOP100W IDU3		HOP160W IDU3	
Compatible outdoor models			HOP6W ODU	HOP8W ODU	HOP10W ODU	HOP8W ODU	HOP10W ODU	HOP12W ODU3	HOP16W ODU3
Built-in electric heater		kW	3			9 (3+3+3) <sup>8</sup>			
Power supply		V/Ph/Hz	220-240/1/50			380-415/3/50			
Rated power		W	3095			9095			
Rated current		A	13,5			13,3			
Power cable		mm²	3x2,5			5x2,5			
Communication cable, AWG18 shielded		mm²	2x0,75						
Automatic switch		A	C16			C16~3			
Sound power level <sup>7</sup>		dB(A)	38	42			43		
Sound pressure		dB(A)	28	30			32		
Dimension (W x H x D)		mm	420x790x270						
Dimension of Package (W x H x D)		mm	525x1050x360						
Circulation Pump	Type		DC, electronic						
	Maximum lifting height	m	9						
	Power	W	5~90						
Minimum water flow		m³/h	0,36				0,6		
Operating limits for water flow		m³/h	0,4 ~ 1,25	0,4 ~ 2,1			0,7 ~ 3,0		
Heat exchanger			Plate, soldered						
Expansion tank		l	8						
Refrigerant pipes	Liquid phase	mm (col)	6,35 (1/4")	9,52 (3/8")					
	Gas phase	mm (col)	15,88 (5/8")						
Water pipe connection			R1"						
Net / Gross weight		kg	43 / 49				45 / 51		
Supply water temperature	Heating	°C	+12 ~ +65						
	Cooling	°C	+5 ~ +30						
	DHW	°C	+12 ~ +60						
Ambient temperature		°C	0 ~ +35						
Water pressure in the system		bar	1 ~ 3						

# NØRDIS Optimus Pro Split with DHW tank



## FEATURES

- Integrated stainless steel water tank with 190 l or 240 l capacity;
- Modern wired controller for easy operation;
- Integrated WiFi module for device control by smartphone;
- *Wilo* circulation pump;
- *Alfa Laval* heat exchanger;
- Weather temperature curve function;
- DHW disinfection;
- Integrated additional electric water heater.

Air-to-water heat pumps with integrated hot water tank have two units with different power and volume. The latest technologies integrated in the units ensure high performance and the lowest operating costs. The combination of heat pump units offers optimal options for heating, cooling and hot water.

## MULTIFUNCTIONALITY



DHW  
Operation Priority



AUTO mode



Disinfect mode



ECO mode



Preset water  
temperature



Fast DHW



Daily shedule



Water heater  
190 / 240 l



## NORDIS-AC.LT/PALEIDIMAS-DERINIMAS

After purchasing the NØRDIS air-to-water heat pump, contact one of the companies listed on the [nordis-ac.lt](http://nordis-ac.lt) website that employ certified NØRDIS equipment service and commissioning specialists. After inspection and evaluation of the equipment assembly, system installation and unit operation, the specialist:

- Programmes the parameters of the heat pump;
- Starts up the heating system and explains the operating instructions;
- Instructs the customer in the correct operation of the device;
- Explains the terms of the warranty.



Indoor units with DHW tank			HOP100/190 IDU			HOP100/190 IDU3			HOP160/240 IDU3	
Compatible outdoor models			HOP6W ODU	HOP8W ODU	HOP10W ODU	HOP6W ODU	HOP8W ODU	HOP10W ODU	HOP12W ODU3	HOP16W ODU3
Efficiency class for hot water production (temperate climate zone)		class	A+							
		COP	3,10	3,02		3,10	3,02		3,00	
Water tank capacity	Capacity	l	190						240	
	Material		Stainless steel, SUS 316L							
	Max water temperature	°C	70							
	Isolation		Polyurethane							
Built-in electric heater		kW	3			9 (3+3+3) <sup>8</sup>				
Power supply		V/Ph/Hz	220-240/1/50			380-415/3/50				
Rated power		W	3095			9095				
Rated current		A	13,5			13,5				
Power cable		mm²	3x2,5			5x2,5				
Communication cable, AWG18 shielded		mm²	2x0,75							
Automatic switch		A	C16			C16~3				
Sound power level <sup>7</sup>		dB	38	40		38	40		44	
Dimension (W x H x D)		mm	600x1683x600						600x1943x600	
Dimension of Package (W x H x D)		mm	653x1900x653						653x2160x653	
Circulation Pump	Type		DC, electronic							
	Maximum lifting height	m	9							
	Power	W	5~90							
Minimum water flow		m³/h	0,36						0,6	
Operating limits for water flow		m³/h	0,4 ~ 1,25	0,4 ~ 2,1		0,4 ~ 1,25	0,4 ~ 2,1		0,7 ~ 3,0	
Heat exchanger			Plate, soldered							
Expansion tank		l	8							
Refrigerant pipes	Liquid phase	mm (col)	6,35 (1/4")	9,52 (3/8")		6,35 (1/4")	9,52 (3/8")			
	Gas phase	mm (col)	15,88 (5/8")							
Water pipe connection	Heating/cooling		R1"							
	Hot water preparation		R3/4"							
Net / Gross weight		kg	139 / 154						159 / 180	
Supply water temperature	Heating	°C	+12 ~ +65							
	Cooling	°C	+5 ~ +30							
	DHW	°C	+12 ~ +60							
Ambient temperature		°C	+5 ~ +35							
Water pressure in the heating/cooling systemsistemoje		bar	1 ~ 2,5							
Water pressure in the hot water system (cold water)		bar	1,5 ~ 3							



## NØRDIS Optimus Pro Mono

### INTEGRATED AIR-TO-WATER HEAT PUMPS

DC Inverter



The NØRDIS Optimus Pro monoblocks are highly efficient air-to-water heat pumps with low energy consumption. The entire heating system is housed in a universal unit that is installed outdoors. This makes it ideal for homes that do not have adjoining rooms for additional heat pump units. The unit is easy and quick to install.

The NØRDIS Optimus Pro monoblocks are perfectly compatible with any other heating or hot water system already installed in your home. The units ensure low energy consumption, a high energy rating and excellent heating and cooling performance.

### OUTDOOR MODULES

#### FEATURES

- High energy efficiency class A+++ for energy saving;
- Refrigerant R32 75% less impact on global warming;
- DC inverter technology enables precise consumption under real load;
- Minimum operation ambient temperature down to -25°C;
- Extremely quiet - two silent modes;
- Smart Grid certification;
- Advanced wired controller for easy operation;
- Integrated WiFi module for unit control by smart-phone.



## TECHNICAL DATA



Išorinių blokų modeliai			HOP4W MONO	HOP6W MONO	HOP8W MONO	HOP10W MONO	HOP12W MONO	HOP14W MONO	HOP16W MONO
Built-in electric heater		kW	3						
Power supply		V/Ph/Hz	220-240/1/50						
Rated power		W	5300 <sup>11</sup>	5700 <sup>11</sup>	6400 <sup>11</sup>	6700 <sup>11</sup>	8500 <sup>11</sup>	8800 <sup>11</sup>	9200 <sup>11</sup>
Rated current		A	25	27	29	30	38	39	40
Power cable		mm <sup>2</sup>	3x4,0		3x6,0		3x10,0		
Communication cable, AWG18 shielded		mm <sup>2</sup>	5x0,75						
Automatic switch		A	C32				C40		
Heating A7W35 <sup>1</sup>	Capacity	kW	4,20	6,35	8,40	10,00	12,10	14,50	15,90
	Rated input	kW	0,82	1,28	1,63	2,02	2,44	3,15	3,53
	COP		5,10	4,95	5,15	4,95	4,95	4,60	4,50
Heating A7W45 <sup>2</sup>	Capacity	kW	4,30	6,30	8,10	10,00	12,30	14,10	16,00
	Rated input	kW	1,13	1,70	2,10	2,67	3,32	3,92	4,57
	COP		3,80	3,70	3,85	3,75	3,70	3,60	3,50
Heating A7W55 <sup>3</sup>	Capacity	kW	4,40	6,00	7,50	9,50	11,90	13,80	16,00
	Rated input	kW	1,49	2,03	2,36	3,06	3,90	4,68	5,61
	COP		2,95	2,95	3,18	3,10	3,05	2,95	2,85
Heating A-7W35 <sup>9</sup>	Capacity	kW	4,70	6,00	7,00	8,00	10,00	12,00	13,10
	Rated input	kW	1,52	2,00	2,19	2,62	3,33	4,21	4,85
	COP		3,10	3,00	3,20	3,05	3,00	2,85	2,70
Cooling A35W18 <sup>4</sup>	Capacity	kW	4,50	6,50	8,30	9,90	12,00	13,50	14,90
	Rated input	kW	0,82	1,35	1,64	2,18	3,04	3,75	4,38
	EER		5,50	4,80	5,05	4,55	3,95	3,60	3,40
Cooling A35W7 <sup>5</sup>	Capacity	kW	4,70	7,00	7,45	8,20	11,50	12,40	14,00
	Rated input	kW	1,36	2,33	2,22	2,52	4,18	4,96	5,60
	EER		3,45	3,00	3,35	3,25	2,75	2,50	2,50
Seasonal space heating energy efficiency class <sup>6</sup>	Water outlet at 35°C	class	A+++						
	Water outlet at 55°C	class	A++						
SCOP <sup>6</sup>		35°C	4,85	4,95	5,22	5,2	4,81	4,72	4,62
		55°C	3,31	3,52	3,37	3,47	3,45	3,47	3,41
Refrigerant	Type (GWP)		R32 (675)						
	Charged volume	kg	1,4				1,75		
Compressor			DC two rotor inverter						
Heat exchanger			Plate, soldered						
Fan			DC electric motor						
Number of fans			1						
Circulation pump	Type		DC, electronic						
	Max. lifting height	m	9						
	Capacity	W	5~90						
Nominal water flow		m³/h	0,72	1,09	1,44	1,72	2,08	2,49	2,73
Operating limits for water flow		m³/h	0,4 ~ 0,9	0,4 ~ 1,25	0,4 ~ 1,65	0,4 ~ 2,1	0,7 ~ 2,5	0,7 ~ 2,75	0,7 ~ 3,0
Water piping connection			R1"		R1 1/4"				
Sound power Level <sup>7</sup>		dB(A)	55	58	59	60	65	65	68
Dimension (W×H×D)		mm	1295x792x429			1385x945x526			
Packing dimension (W×H×D)		mm	1375x965x475			1465x1120x560			
Net / Gross weight		kg	103/ 126			126 / 153		149 / 175	
Ambient temperature range	Heating	°C	-25 ~ +35						
	Cooling	°C	-5 ~ +43						
	DHW	°C	-25 ~ +43						
LWT setting range	Heating	°C	+25 ~ +65						
	Cooling	°C	+5 ~ +25						
	DHW <sup>10</sup>	°C	+30 ~ +60						



Outdoor unit model			HOP12W MON03	HOP14W MON03	HOP16W MON03	HOP18W MON03	HOP22W MON03	HOP26W MON03	HOP30W MON03
Power supply		V/Ph/Hz	380-415/3/50						
Heating A7W35 <sup>1</sup>	Capacity	kW	12,10	14,50	15,90	18,00	22,00	26,00	30,10
	Rated input	kW	2,44	3,15	3,53	3,83	5,00	6,37	7,70
	COP		4,95	4,60	4,50	4,70	4,40	4,08	3,91
Heating A7W45 <sup>2</sup>	Capacity	kW	12,30	14,10	16,00	18,00	22,00	26,00	30,00
	Rated input	kW	3,32	3,92	4,57	5,14	6,47	8,39	10,35
	COP		3,70	3,60	3,50	3,50	3,40	3,10	2,90
Heating A7W55 <sup>3</sup>	Capacity	kW	11,90	13,80	16,00	18,00	22,00	26,00	30,00
	Rated input	kW	3,90	4,68	5,61	6,55	8,30	10,61	13,04
	COP		3,05	2,95	2,85	2,75	2,65	2,45	2,30
Heating A-7W35 <sup>9</sup>	Capacity	kW	10,00	12,00	13,10	18,00	21,00	22,00	23,00
	Rated input	kW	3,33	4,21	4,85	6,67	8,08	8,80	9,39
	COP		3,00	2,85	2,70	2,70	2,60	2,50	2,45
Cooling A35W18 <sup>4</sup>	Capacity	kW	12,00	13,50	14,90	18,50	23,00	27,00	31,00
	Rated input	kW	3,04	3,75	4,38	3,90	5,00	6,30	7,75
	EER		3,95	3,60	3,40	4,75	4,60	4,30	4,00
Cooling A35W7 <sup>5</sup>	Capacity	kW	11,50	12,40	14,00	17,00	21,00	26,00	29,50
	Rated input	kW	4,18	4,96	5,60	5,57	7,12	9,63	11,57
	EER		2,75	2,50	2,50	3,05	2,95	2,70	2,55
Seasonal space heating energy efficiency class <sup>6</sup>	Water outlet at 35°C	class	A+++						
	Water outlet at 55°C	class	A++						
SCOP <sup>6</sup>		35°C	4,81	4,72	4,62	4,6	4,53	4,5	4,2
		55°C	3,45	3,47	3,41	3,2	3,23	3,15	3,15
SEER <sup>6</sup>		7°C				4,7	4,7	4,66	4,49
		18°C				5,48	5,67	5,88	5,71
Refrigerant	Type (GWP)		R32 (675)						
	Charged volume	kg	1,75			5,00			
Compressor			DC two rotor inverter						
Heat exchanger			Plate, soldered						
Fan			DC electric motor						
Number of fans			1			2			
Circulation pump	Type		DC, electronic						
	Max. lifting height	m	9			12			
	Capacity	W	5 ~ 90			10 ~ 305			
Nominal water flow		m³/h	2,08	2,49	2,73	3,1	3,78	4,47	5,18
Operating limits for water flow		m³/h	0,7 ~ 2,5	0,7 ~ 2,75	0,7 ~ 3,0				
Water piping connection			R1 1/4"						
Sound power Level <sup>7</sup>		dB	65	65	68	71	73	75	77
Dimension (W×H×D)		mm	1385x945x526			1129x1558x440			
Packing dimension (W×H×D)		mm	1465x1120x560			1220x1735x565			
Net / Gross weight		kg	160 / 188			177 / 206			
Ambient temperature range	Heating	°C	-25 ~ +35						
	Cooling	°C	-5 ~ +43						
	DHW	°C	-25 ~ +43						
LWT setting range	Heating	°C	+25 ~ +65						
	Cooling	°C	+5 ~ +25						
	DHW <sup>10</sup>	°C	+30 ~ +60						



# HEATING, COOLING AND DOMESTIC HOT WATER IN ONE SYSTEM

## FOR AN INTEGRATED HOME SYSTEM

### ONE-STOP SOLUTION - HEATING, COOLING AND DOMESTIC HOT WATER IN ONE SYSTEM

NORDIS Optimus Pro is an integrated system that provides space heating and cooling as well as domestic hot water. It offers a complete, year-round solution that eliminates the need for, or works in conjunction with, conventional gas or oil boilers. NORDIS Optimus Pro can be combined with underfloor heating systems, fan coil units, radiators and domestic hot water tanks. It can also be connected to solar collectors, gas stoves, boilers and other heat sources.



The Smart Grid certification indicates that Optimus Pro systems can fully utilise electricity from different sources or different price levels, such as photovoltaic and Peak Valley of urban electricity supply, to meet different operating modes, which has a positive impact on cost savings.



Optimus Pro Mono unit

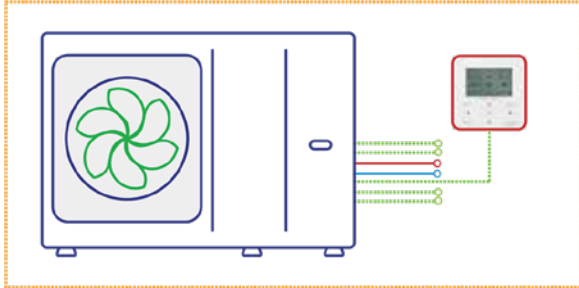




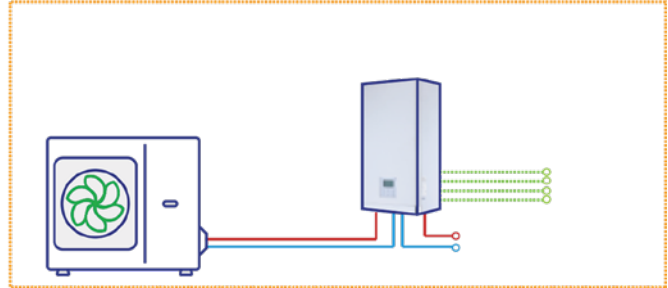
## TYPICAL APPLICATION

The practical applications are many, including but not limited to the following. The examples of application below are for illustrative purposes only.

Mono

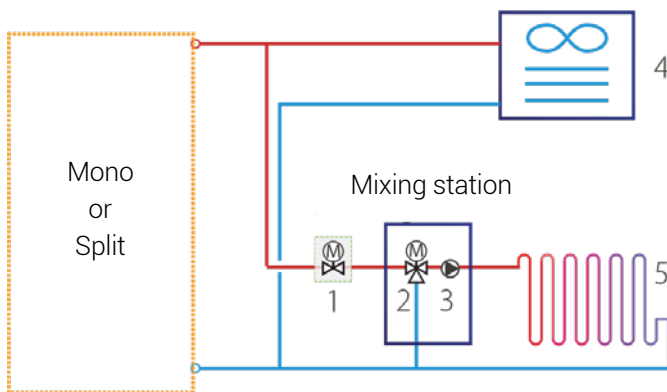


Split



## HEATING AND COOLING

Underfloor heating is used for space heating and a fan coil unit is used for both space heating and cooling. For heating mode, underfloor heating and fan coils require different operating water temperatures. To achieve these two temperatures, a mixing station (provided by the customer) consisting of a 3-way valve and a water pump is used to adjust the water temperature to the requirements of the underfloor heating loops. The mixing station is controlled by the unit. For cooling mode, a 2-way valve is used to prevent cool water from entering the underfloor heating loops, which causes condensation during cooling.

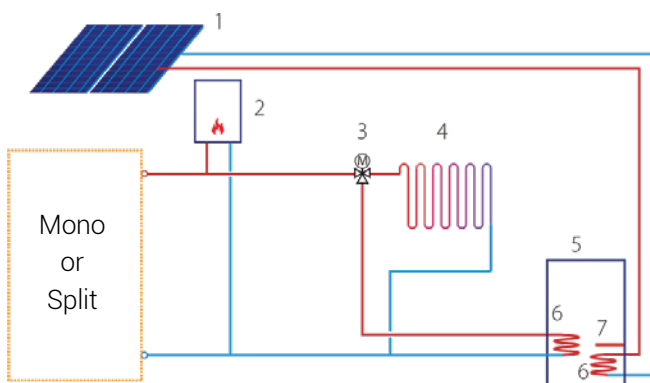


Notes:

1. 2-way valve (field supplied)
2. 3-way valve (field supplied)
3. Water pump (field supplied)
4. Fan coil unit (field supplied)
5. Floor heating loop (field supplied)

## HEATING, DHW AND HYBRID HEAT SOURCE

Electric auxiliary heating (customised)\* and AHS provide additional heat to raise the water temperature for the outlet temperature of the unit. TBH and solar systems provide additional heat to raise the hot water temperature. A 3-way valve is used to switch between heating and DHW mode.



Notes:

1. Solar panel (field supplied)
2. AHS: Additional heating source (field supplied)
3. 3-way valve (field supplied)
4. Floor heating loop (field supplied)
5. Water tank (field supplied)
6. Heat exchanger coil (field supplied)
7. TBH: Tank booster heater (field supplied)



## DOUBLE ZONES CONTROL

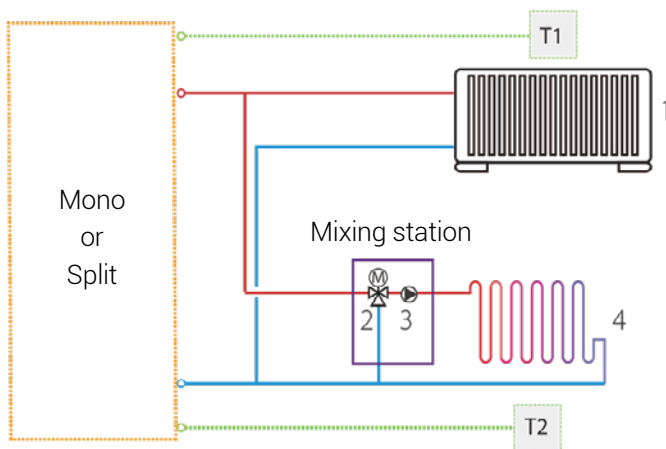
Double zones control is only available for heating mode. This allows you to set different zones to different temperatures to meet the different requirements of daily use.

### 1. Using wired controller only

The wired controller sets the mode, temperature and on/off. Zone 1 is controlled based on the water outlet temperature. Zone 2 is controlled based on the water outlet temperature or the sensor integrated in the wired control.

### 2. Using wired controller and thermostat

The wired control sets the mode and water temperature. Both zone 1 and zone 2 are controlled by the thermostat.



Notes:

1. Radiator (field supplied)
2. 3-way valve (field supplied)
3. Water pump (field supplied)
4. Floor heating loop (field supplied)

Abbreviation

T: Room thermostat (field supplied)



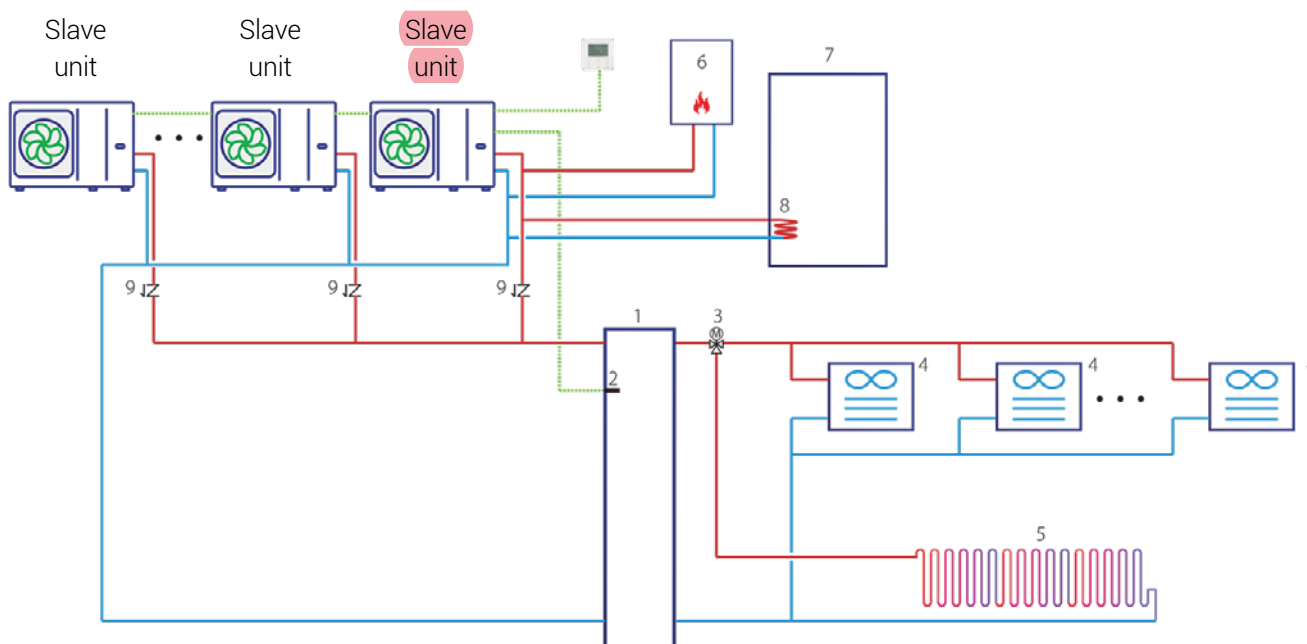


## CASCADE SYSTEM\*

The cascade system design is perfect when capacity expansion is required as the building's cooling/heating needs evolve. Up to 6 units can be controlled in a group with one controller. The temperature control of the expansion tank makes the water temperature more accurate.

The water tank can only be connected to the master unit's water circuit via a three-way valve and is controlled by the master unit.

The AHS can only be connected to the master water circuit and controlled by the master unit.



### Notes:

1. Balance tank (field supplied)
2. Balance tank temperature sensor (field supplied)
3. 3-way valve (field supplied)
4. Fan coil unit (field supplied)
5. Floor heating loop (field supplied)
6. AHS: Additional heating source (field supplied)
7. Water tank (field supplied)
8. Heat exchanger coil (field supplied)
9. Single way valve (field supplied)

## COMMENTS

[illegible]

## INDEX

<sup>1</sup> Evaporator air in 7°C, 85% R.H., Condenser water in/out 30/35°C.

<sup>2</sup> Evaporator air in 7°C, 85% R.H., Condenser water in/out 40/45°C.

<sup>3</sup> Evaporator air in 7°C, 85% R.H., Condenser water in/out 47/55°C.

<sup>4</sup> Condenser air in 35°C. Evaporator water in/out 23/18°C.

<sup>5</sup> Condenser air in 35°C. Evaporator water in/out 12/7°C.

<sup>6</sup> Seasonal space heating energy efficiency class testes in average climate general conditions.

<sup>7</sup> Testing standard: EN12102-1.

<sup>8</sup> For three phase type backup electric heater, 3/6kW can be achieved by changing DIP switch when heat pump is equipped with 9kW. In this case, three phase power supply is needed.

<sup>9</sup> Evaporator air in -7°C, 85% R.H., Condenser water in/out 30/35°C.

<sup>10</sup> In the MONO unit, the maximum hot water temperature of 60 ° C can only be reached by using an additional electric heater.

<sup>11</sup> The rated power is specified together with the built-in electric heater.



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