

MAKING MODERN LIVING POSSIBLE



The DHP-AQ Air Source Heat Pump

Sky-high savings for your customers,
profits on the rise for you

50+

Applications supported

6kW → 36 kW

Product range

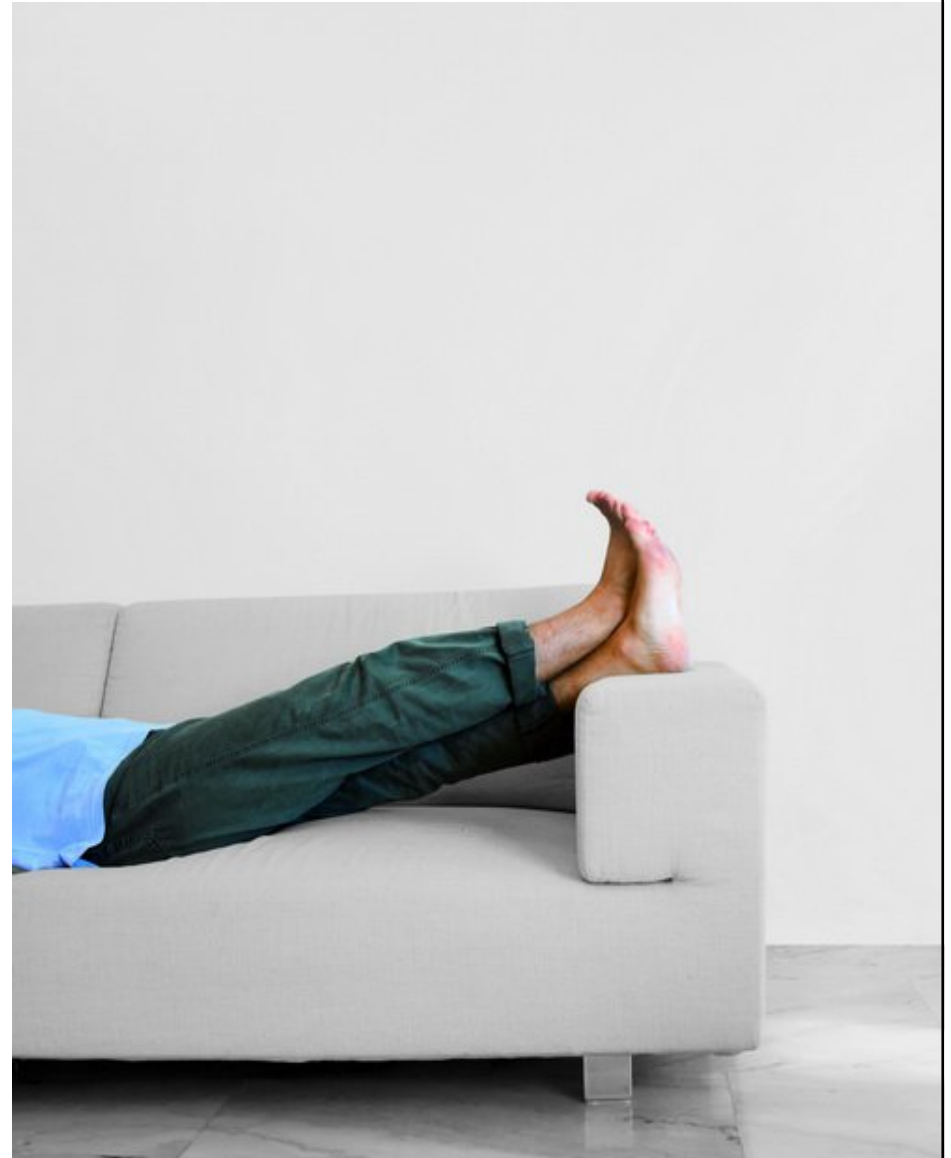
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The market

One and multi family houses, and light comm.

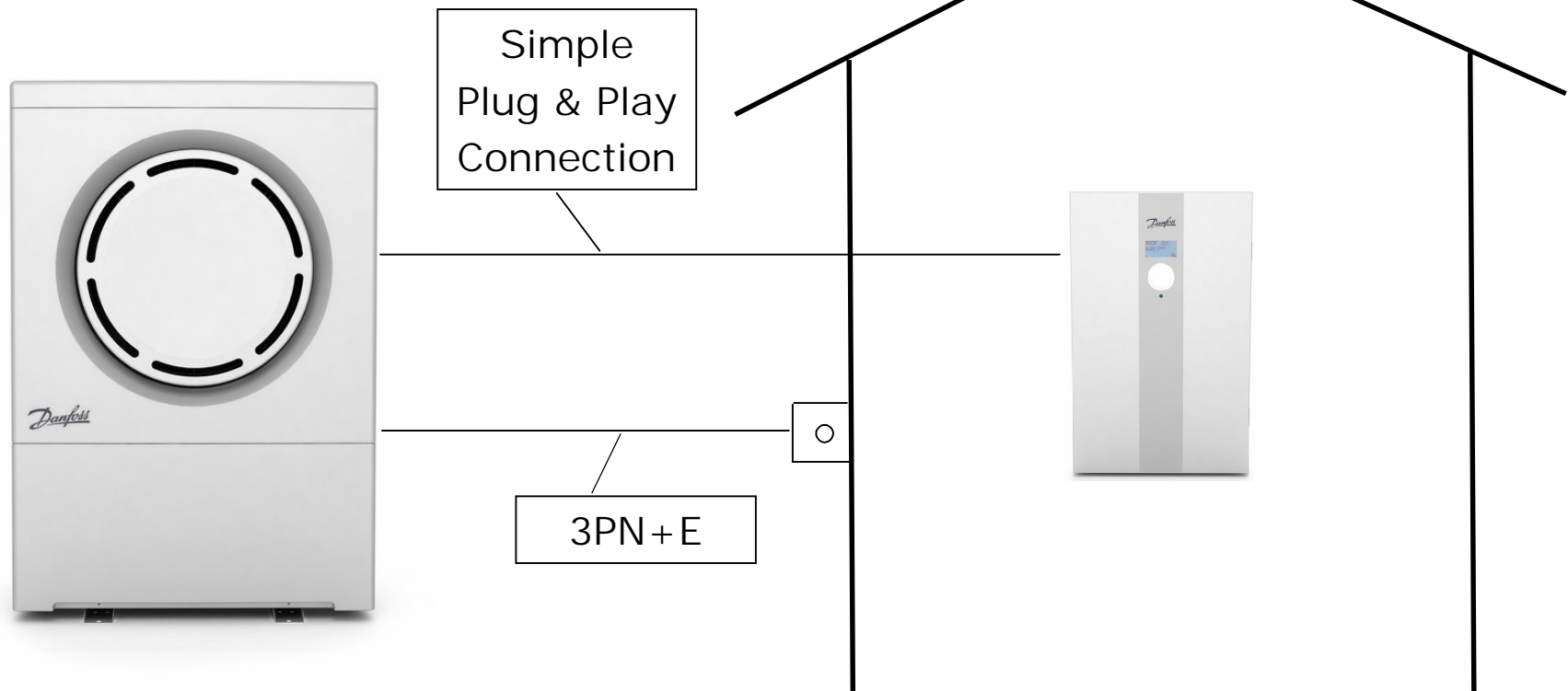


- All types of one family houses (new build & renovation)
- Larger homes, residences (with swimming pools etc.)
- Light commercial buildings like kindergartens, multi-family homes, office buildings, shops etc.
- Needs:
 - Performance and reliability
 - Low sound level
 - Ease of installation and operation
 - Flexibility (3 different indoor kits)
- Wary of applications supported - the choice for heating, cooling, new-build and retrofit which supports 50+ predefined applications





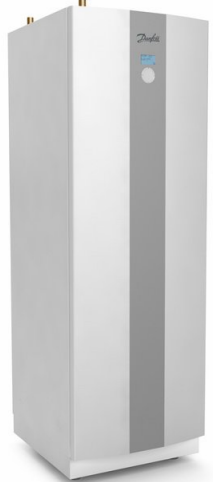
The solution

The DHP-AQ Plug & Play installation



The solution Indoor kits



MINI	MIDI	MAXI
<ul style="list-style-type: none">▪ Controller▪ Electrical connections 	<ul style="list-style-type: none">▪ Controller▪ Electrical connections▪ Class A circulation pump▪ 3-way valve▪ Electrical heater, optional (15kW 3~400VAC; 9kW 1~230VAC) 	<ul style="list-style-type: none">▪ Controller▪ Electrical connections▪ Hot water tank (180 l)▪ Class A circulation pump▪ 3-way valve▪ Electrical heater (15kW 3~400VAC; 9kW 1~230VAC)▪ Possibility to fit additional components in cabinet if required i.e. market adaptation on top of standard specification 

The product

The DHP-AQ outdoor unit specification



Cinderella Specifications		DHP6	DHP9	DHP11	DHP13	DHP16	DHP18
Dimension Height x Length x Depth	mm	1265x856x~450		1475x1016x~490		1550x1166x~490	
Heating A7/W35	Capacity (kW)	6,2	8,6	10,8	12,2	15,3	17,9
	COP	4,0	4,4	4,3	4,3	4,2	3,9
Heating A2/W35	COP	3,1	3,2	3,1	3,1	3,1	3,1
Cooling A35/W7	EER	2,2	2,4	2,3	2,3	2,3	2,1
Refrigerant		R407C					
Operating range (outdoor)		-20~+45 °C	-20~+45 °C	-20~+45 °C	-20~+45 °C	-20~+45 °C	-20~+45 °C
	1~230VAC	Yes	Yes	Yes	Yes	Yes	N/A
	Fuse (A)	20	20	32	32	40	-
	3~400VAC	Yes	Yes	Yes	Yes	Yes	Yes
Electrical supply	Fuse (A)	10	10	16	16	16	16

The product

The DHP-AQ two units one controller



Two outdoor units installed parallel with only one HP controller in-house, capacity sizes from 22kW to 36kW

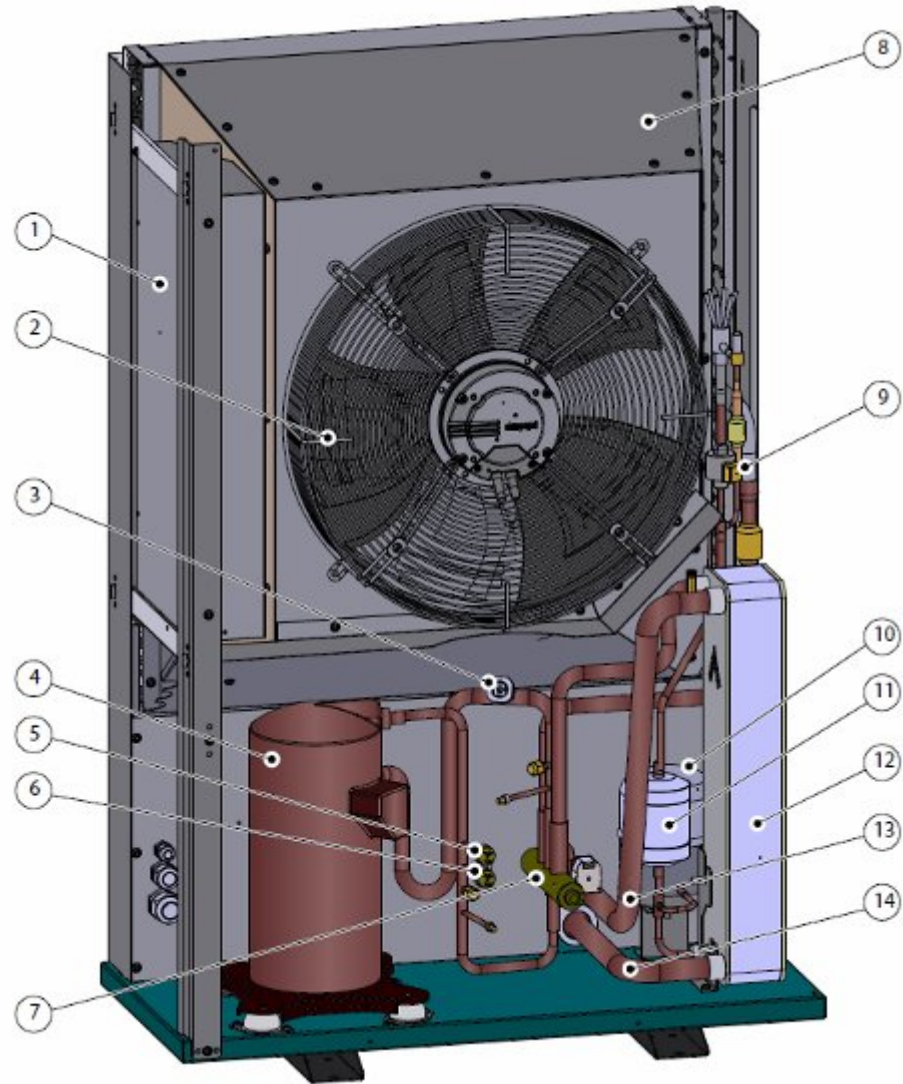


Cinderella Specifications Master/Slave		DHP22	DHP26	DHP32	DHP36
Combination of outdoor units		2xDHP11	2xDHP13	2xDHP16	2xDHP18
Heating A7/W35	Capacity (kW)	2x10,8	2x12,2	2x15,3	2x17,9
	COP	4,3	4,3	4,2	3,9
Cooling A35/W7	EER	2,3	2,3	2,3	2,2
Operating range (outdoor)		-20~+45 °C	-20~+45 °C	-20~+45 °C	-20~+45 °C
Electrical supply	1~230VAC	Yes	Yes	Yes	N/A
	3~400VAC	Yes	Yes	Yes	Yes

The technical description The DHP-AQ inside



1. Electrical cabinet
2. Fan
3. Pressure transmitter
4. Compressor
5. High pressure pressostat
6. Operating pressure pressostat
7. 4-way valve
8. Air heat exchanger
9. Electronic expansion valve
10. Receiver
11. Drying filter
12. Condenser
13. Supply line heating system
14. Return line heating system

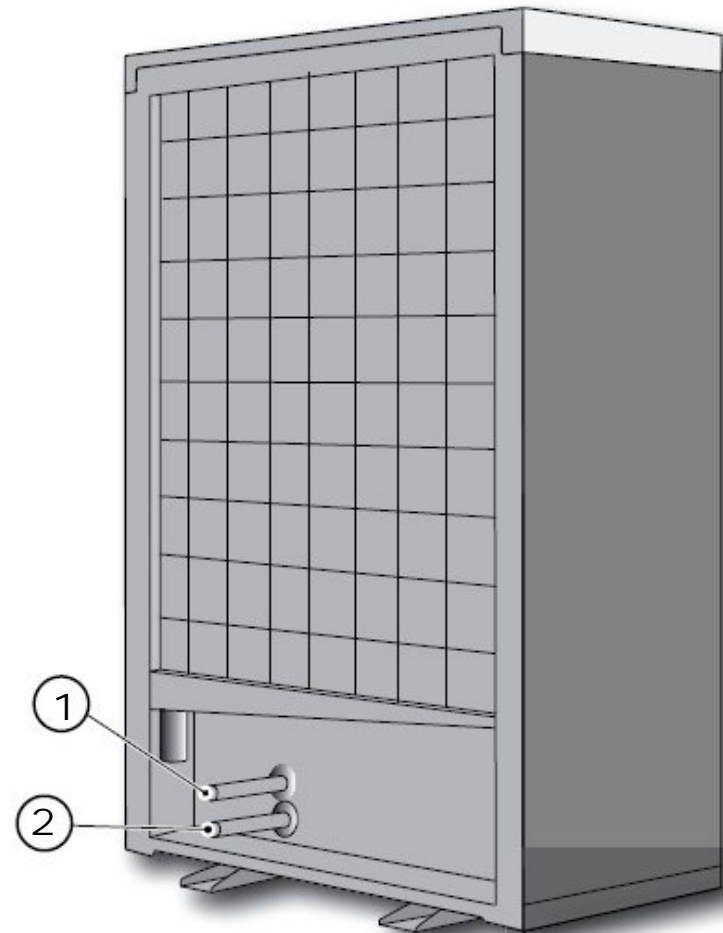


The technical description

The DHP-AQ connections



1. Supply line heating system
DHP-AQ 6, 9, 11, 13,
16, 18 - 28 mm Cu
2. Return line heating system
DHP-AQ 6, 9, 11, 13,
16, 18 - 28 mm Cu



The technical description

The DHP-AQ Data sheet



DHP-AQ			6	9	11	13	16	18
Refrigerant	Type		R407C	R407C	R407C	R407C	R407C	R407C
	Amount	kg	4.3	4.3	5.0	5.0	5.7	6.0
	Test pressure	MPa	3.4	3.4	3.4	3.4	3.4	3.4
	Design pressure	MPa	3.1	3.1	3.1	3.1	3.1	3.1
Compressor	Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
	Oil		POE	POE	PVE	POE	PVE	POE
Electrical data 3-N, ~50Hz	Main supply	Volt	400	400	400	400	400	400
	Rated power, compressor	kW	2.2	2.9	3.3	4.2	5	6.1
	Rated power, fan	kW	0.2	0.2	0.2	0.3	0.3	0.7
	Start current	A	12	10	18	17	UT ⁸⁾	18
	Fuse	A	10	10	16	16	16	16
Electrical data 1-N, ~50Hz	Main supply	Volt	230	230	230	230	230	-
	Rated power, compressor	kW	2.4	2.8	3.6	4.3	5.5	-
	Rated power, fan	kW	0.2	0.2	0.2	0.3	0.3	-
	Start current	A	11	21	26	28	39	-
	Fuse	A	20	20	32	32	40	-
Performance ⁷⁾	COP ¹⁾		4.1	4.6	4.6	4.3	4.4	4.0
	COP ²⁾		4.0	4.4	4.3	4.3	4.2	3.9
	Heating capacity ²⁾	kW	6.2	8.6	10.8	12.2	15.3	17.9
	Power input - heating ²⁾	kW	1.5	2.0	2.5	2.9	3.7	4.6
	EER ³⁾		2.2	2.4	2.3	2.3	2.3	2.1
	Cooling capacity ⁴⁾	kW	4.3	5.9	7.4	8.6	10.0	11.4
Nominal flow ⁴⁾	Power input - cooling ³⁾	kW	1.9	2.5	3.2	3.7	4.4	5.4
	Heating circuit	l/s	0.150	0.216	0.263	0.299	0.372	0.432
Operating range (outdoor)		°C	-20~+45°C	-20~+45°C	-20~+45°C	-20~+45°C	-20~+45°C	-20~+45°C
Max temperature ⁵⁾	Heating circuit	°C	60	60	60	60	60	60
Pressure levels	Low pressure	MPa	0.05	0.05	0.05	0.05	0.05	0.05
	Operating	MPa	2.85	2.85	2.85	2.85	2.85	2.85
	High pressure	MPa	3.1	3.1	3.1	3.1	3.1	3.1
Sound power level	Regular mode ⁶⁾	dB(A)	61	62	64	66	66	74
	Silent mode ⁶⁾	dB(A)	58	59	61	63	63	71
Weight	Outdoor unit	kg	125	131	150	155	191	185
	Mini	kg	18	18	18	18	18	18
	Midi	kg	21	21	21	21	21	21
	Maxi	kg	106	106	106	106	106	106




The measurements are performed on a limited number of heat pumps which can cause variations in the results. Tolerances in the measuring methods can also cause variations.

1) At A2/W35 Δ10K warm side, (EN 255)
 2) At A2/W35 according to EN 14511.
 3) At A35/W7 according to EN14511.
 4) Nominal flow: heating circuit Δ10K.
 5) At outdoor temperature 0°C

6) According to SS-EN 12102, EN ISO 3781.
 7) The values apply to a new heat pump with clean heat exchangers.
 8) Under test

The technical description Indoor kit and heat pump size



6-9 kW	11-13 kW	16-18 kW
856x510x1272	1016x564x1477	1166x570x1557
		

MINI	MIDI	MAXI
380x204x600	420x255x625 (+50)	596x690x1845 ± 10
		

Measures With x Depth x Height in mm

The technical description

System solution (example with mini kit)



DV125 0104. DHP-AQ. Additional heater, hot water tank and 1 heating circuit.

Application

Houses/Smaller apartment buildings

Heat source

Outdoor air

System:

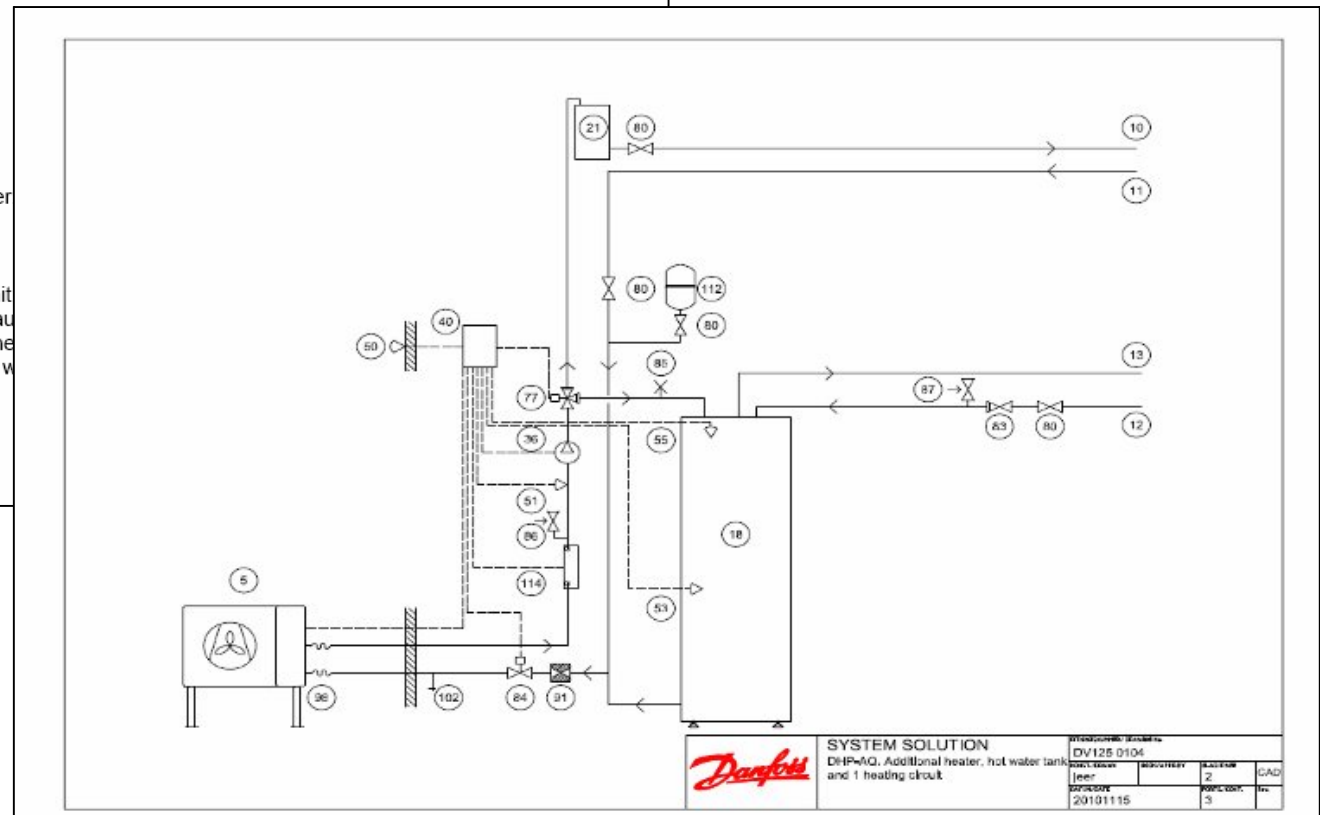
Heating and hot water production and additional heater

Function

Heat pumps provide heating and hot water. Supply line temperature is controlled by the control unit following a set control curve. Additional heater starts at a set temperature. Buffer tank for equalization of the temperature to the heating circuit. Additional heater installed heating capacity of the heat pump (when hot water is produced).

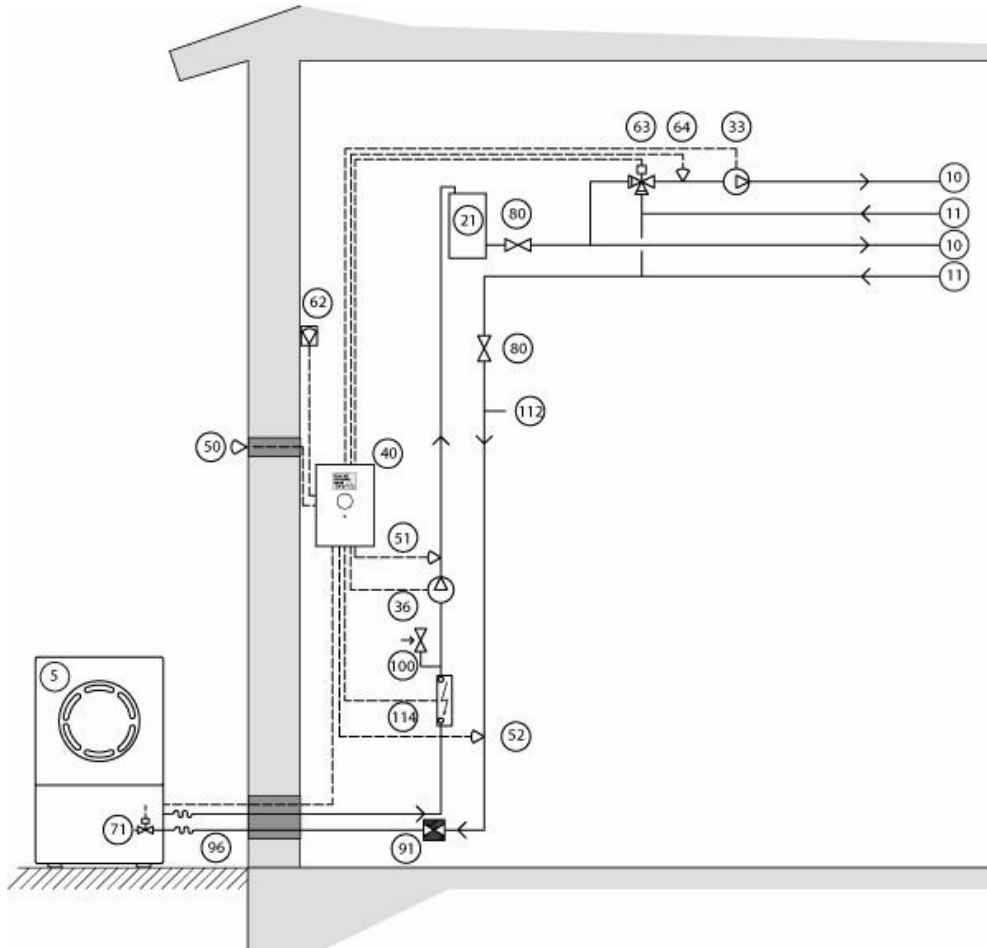
Hot water

Heat pumps provide hot water.



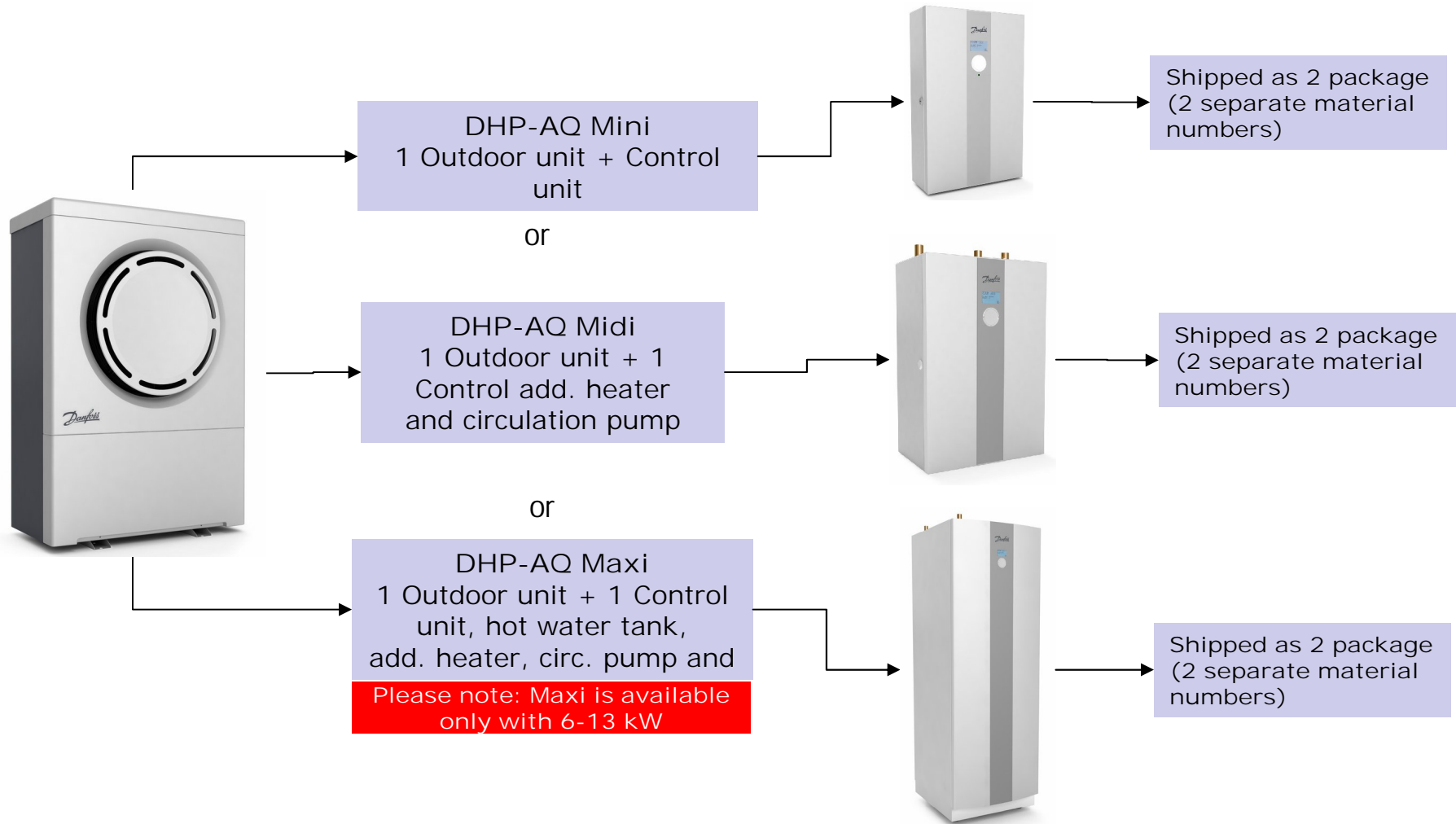
The technical description

System solution (example with mini kit)



Pos	Qty.	Name
5	1	Heat pump unit
10	1	Supply line
11	1	Return line
12	1	Cold water
13	1	Hot water
18	1	Hot water tank
21	1	Equalization tank
36	1	Circ.pump (radiator)
40	1	Control unit
50	1	Outdoor sensor
51	1	Supply line sensor (hp)
53	1	Hot water sensor start (hp)
55	1	Hot water sensor top (hp)
77	1	Reversing valve
80	4	Shut-off valve
83	1	Non-return valve
84	1	Flow guard
85	1	Venting valve
86	1	Safety valve (3,0 bar)
87	1	Safety valve (9 bar)
91	1	Strainer filter ball
98	2	Flexible hose
102	1	Draining valve
112	1	Expansion tank
114	1	Additional heater

The ordering The DHP-AQ heat pump



The ordering

One order – two code numbers, an examples



Delivered to customer

Ordering
DHP-AQ 9 kw (400V)
with
Mini indoor kit

=

We provide 2 code
numbers on order form:
086U9992 + 086L0280

=



Ordering
DHP-AQ 13 kw (400V)
with
Maxi indoor kit

=

We provide 2 code
numbers on order form:
086U9995 + 086L0285

=



The ordering The DHP-AQ heat pumps 400 V



When ordering please provide always
2 code numbers: 1. The heat pump
unit; 2. The indoor kit

Code	DHP-AQ type	Supply	Price
086U9991	DHP-AQ HP 6	400 V	
086U9992	DHP-AQ HP 9	400 V	
086U9994	DHP-AQ HP 11	400 V	
086U9995	DHP-AQ HP 13	400 V	
086U9997	DHP-AQ HP 16	400 V	
086U9998	DHP-AQ HP 18	400 V	
086L0280	DHP-AQ CONTROL MINI	400 V	
086L0281	DHP-AQ CONTROL MIDI 6-13	400 V	
086L0282	DHP-AQ CONTROL MIDI 16-18	400 V	
086L0285	DHP-AQ CONTROL MAXI 6-13	400 V	



The ordering

The DHP-AQ heat pumps 230 V



When ordering please provide always 2 code numbers: 1. The heat pump unit; 2. The indoor kit

Code	DHP-AQ type	Supply	Price
086L0002	DHP-AQ HP 6 SP	230 V	
086L0003	DHP-AQ HP 9 SP	230 V	
086L0005	DHP-AQ HP 11 SP	230 V	
086L0006	DHP-AQ HP 13 SP	230 V	
086L0008	DHP-AQ HP 16 SP	230 V	
086L0303	DHP-AQ CONTROL MIDI 6-13 SP	230 V	
086L0304	DHP-AQ CONTROL MIDI 16 SP	230 V	
086L0283	DHP-AQ CONTROL MAXI 6-13 SP	230 V	





The DHP-AQ Air Source Heat Pump

Savings worth celebrating

Shhh!

The quietest air/water
heat pump around

Best

Seasonal performance

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