

# technical data



Altherma

ERHQ006-008AD

EKHBH/X008AA

ERHQ011-016AA

EKHBH/X016AB

EKHWS(U)

EKSOL

**R-410A**

# Altherma

ERHQ006-008AD  
EKHBH/X008AA  
ERHQ011-016AA  
EKHBH/X016AB  
EKHWS(U)  
EKSOL

In all of us,  
a green heart



Daikin's unique position as a manufacturer of air conditioning equipment, compressors and refrigerants has led to its close involvement in environmental issues. For several years Daikin has had the intention to become a leader in the provision of products that have limited impact on the environment. This challenge demands the eco design and development of a wide range of products and an energy management system, resulting in energy conservation and a reduction of waste.



ISO14001 assures an effective environmental management system in order to help protect human health and the environment from potential impact of our activities, products and services and to assist in maintaining and improving the quality of the environment.



Daikin Europe N.V. is approved by LRQA for its Quality Management System in accordance with the ISO9001 standard. ISO9001 pertains to quality assurance regarding design, development, manufacturing as well as to services related to the product.



Daikin units comply with the European regulations that guarantee the safety of the product.

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# technical data



Altherma

ERHQ006-008AD

EKHBH/X008AA

ERHQ011-016AA

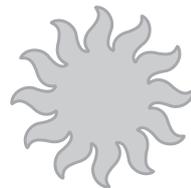
EKHBH/X016AB

EKHWS(U)

EKSOL

**R-410A**

Heating only



Heat pump



# technical data



Altherma

Part 1/3:

ERHQ006-008AD

EKHBH/X008AA

**R-410A**



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# 1 Features

- Cost effective alternative to a fossil fuel boiler
- Low energy bills and low CO2 emissions
- Easy to install
- Total solution for year round comfort



1

1

## 2 Specifications

1  
2

2-1 NOMINAL CAPACITY AND NOMINAL INPUT				ERHQ006AD	ERHQ007AD	ERHQ008AD
Indoor Units				EKHBH008AA	EKHBH008AA	EKHBH008AA
Condition 1	Heating capacity	Minimum	kW	4.36	4.36	4.36
		Nominal	kW	5.75	6.84	8.43
		Maximum	kW	7.45	8.79	9.58
	Heating PI	Nominal	kW	1.26	1.58	2.08
	COP	Nominal		4.56	4.34	4.05
Condition 2	Heating	Minimum	kW	3.87	3.87	3.87
		Nominal	kW	5.03	6.10	7.64
		Maximum	kW	6.68	7.98	8.76
	Heating PI	Nominal	kW	1.58	1.95	2.54
	COP	Nominal		3.18	3.13	3.00
Notes	Condition 1: cooling Ta 35°C - LWE 18°C (DT = 5°C) - heating Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C)					
Notes	Condition 2: cooling Ta 35°C - LWE 7°C (DT = 5°C) - heating Ta DB/WB 7°C/6°C - LWC 45°C (DT = 5°C)					

2-1 NOMINAL CAPACITY AND NOMINAL INPUT				ERHQ006AD	ERHQ007AD	ERHQ008AD
Indoor Units				EKHBX008AA	EKHBX008AA	EKHBX008AA
Condition 1	Heating capacity	Minimum	kW	4.36	4.36	4.36
		Nominal	kW	5.75	6.84	8.43
		Maximum	kW	7.45	8.79	9.58
	Cooling capacity	Minimum	kW	4.82	4.82	4.82
		Nominal	kW	7.20	8.16	8.37
		Maximum	kW	7.20	8.50	8.91
	Heating PI	Nominal	kW	1.26	1.58	2.08
	Cooling PI	Nominal	kW	2.27	2.78	2.97
	COP	Nominal		4.56	4.34	4.05
	EER	Nominal		3.17	2.94	2.82
Condition 2	Heating	Minimum	kW	3.87	3.87	3.87
		Nominal	kW	5.03	6.10	7.64
		Maximum	kW	6.68	7.98	8.76
	Cooling	Minimum	kW	3.67	3.67	3.67
		Nominal	kW	5.12	5.86	6.08
		Maximum	kW	5.12	6.13	7.10
	Heating PI	Nominal	kW	1.58	1.95	2.54
	Cooling PI	Nominal	kW	2.16	2.59	2.75
	COP	Nominal		3.18	3.13	3.00
	EER	Nominal		2.37	2.26	2.21
Notes	Condition 1: cooling Ta 35°C - LWE 18°C (DT = 5°C) - heating Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C)					
Notes	Condition 2: cooling Ta 35°C - LWE 7°C (DT = 5°C) - heating Ta DB/WB 7°C/6°C - LWC 45°C (DT = 5°C)					

2-2 TECHNICAL SPECIFICATIONS				ERHQ006AD	ERHQ007AD	ERHQ008AD
Casing	Colour	Ivory white				
	Material	Polyester painted galvanised steel				
Dimensions	Unit	Height	mm	797		
		Width	mm	960		
		Depth	mm	390		
	Packing	Height	mm	735		
		Width	mm	825		
		Depth	mm	300		
Weight	Unit	kg	56			
	Packed Unit	kg	61			
Packing	Material	EPS				
	Material	Carton				
	Weight	kg	5			

## 2 Specifications

1  
2

2-2 TECHNICAL SPECIFICATIONS				ERHQ006AD	ERHQ007AD	ERHQ008AD	
Heat Exchanger	Specifications	Length	mm	845			
		Nr of Rows		2			
		Fin Pitch	mm	1.8			
		Nr of Stages		32			
	Tube type			Hi-Xa(8)			
	Fin	Type			WF fin		
Treatment				Anti-corrosion treatment (PE)			
Fan	Type		Propeller				
	Quantity		1				
	Motor	Quantity	1				
		Output	W	53			
Compressor	Quantity		1				
	Motor	Model	2YC63BXD#C				
		Type	Hermetically sealed swing compressor				
		Motor Output	W	1,920			
Operation Range	Heating	Min	°CWB	-20			
		Max	°CWB	25			
	Cooling	Min	°CDB	10			
		Max	°CDB	43			
	Sanitary water	Min	°CDB	-20			
		Max	°CDB	43			
Sound Level (nominal)	Heating	Sound Power	dB(A)	61	61	62	
		Sound Pressure	dB(A)	48	48	49	
	Cooling	Sound Power	dB(A)	63	63	63	
		Sound Pressure	dB(A)	48	48	50	
Refrigerant	Type		R-410A				
	Charge	kg	1.7				
	Control		Expansion valve(electronic type)				
	Nr of Circuits		1				
Refrigerant Oil	Type		FVC50K				
Piping Connections	Liquid	Type	Flare connection				
		Diameter (OD)	mm	6.35			
	Gas	Type	Flare connection				
		Diameter (OD)	mm	15.9			
	Drain	Quantity	1				
		Type	Socket				
		Diameter (OD)	mm	18			
	Piping Length	Minimum	m	3			
		Maximum	m	30			
	Additional Refrigerant Charge		kg/m	0.02>10m			
Installation height difference	Maximum	m	20				
Defrost Method			Reverse cycle				
Defrost Control			Sensor for outdoor heat exchanger temperature				
Capacity Control Method			Inverter controlled				
Standard Accessories	Item	Installation manual					
	Quantity	1					
Standard Accessories	Item	Drain plug					
	Quantity	1					
Notes			See operation range drawing				
Notes			The sound pressure level is measured via a microphone at a certain distance from the unit. It is a relative value depending on the distance and acoustic environment. Refer to sound spectrum drawing for more information.				

## 2 Specifications

2-3 ELECTRICAL SPECIFICATIONS			ERHQ006AD	ERHQ007AD	ERHQ008AD
Power Supply	Name		V3		
	Phase		1~		
	Frequency	Hz	50		
	Voltage		V	230	
	Voltage Range	Minimum	V	-10%	
Maximum		V	+10%		
Current	Starting current	Heating	A	11	
		Cooling	A	11	
	Maximum running Current	Heating	A	18	
		Cooling	A	16.25	
	Minimum $S_{sc}$ value		kVA	Equipment complying with EN/IEC 61000-3-12	
Recommended fuses		A	20		
Wiring Connections	For power supply	Quantity	3		
	For connection with indoor	Quantity	4		
		Remark	Included earth wiring		

**1**  
**2**

### 3 Dimensional drawing & centre of gravity

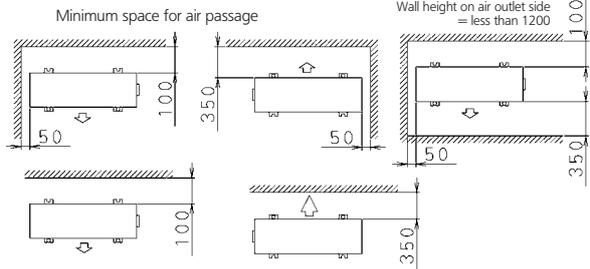
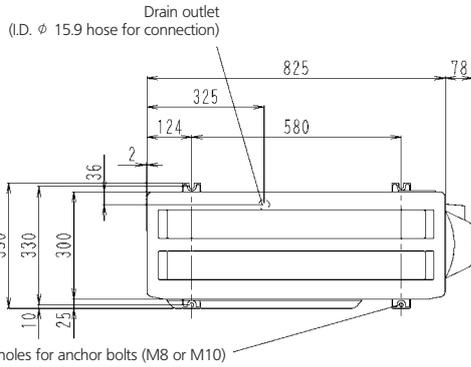
#### 3 - 1 Dimensional drawing

1

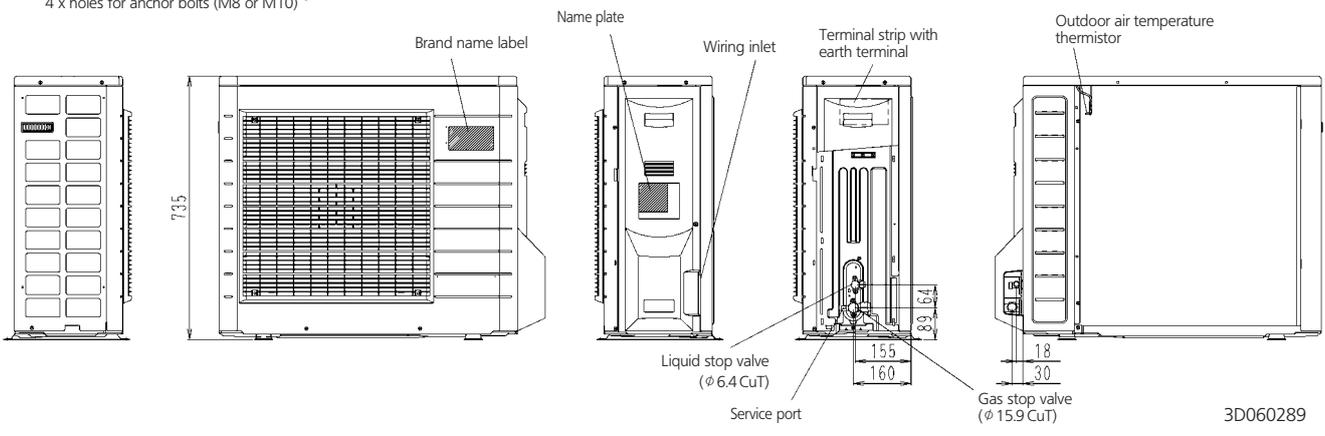
3

unit (mm)

ERHQ006-008 AD



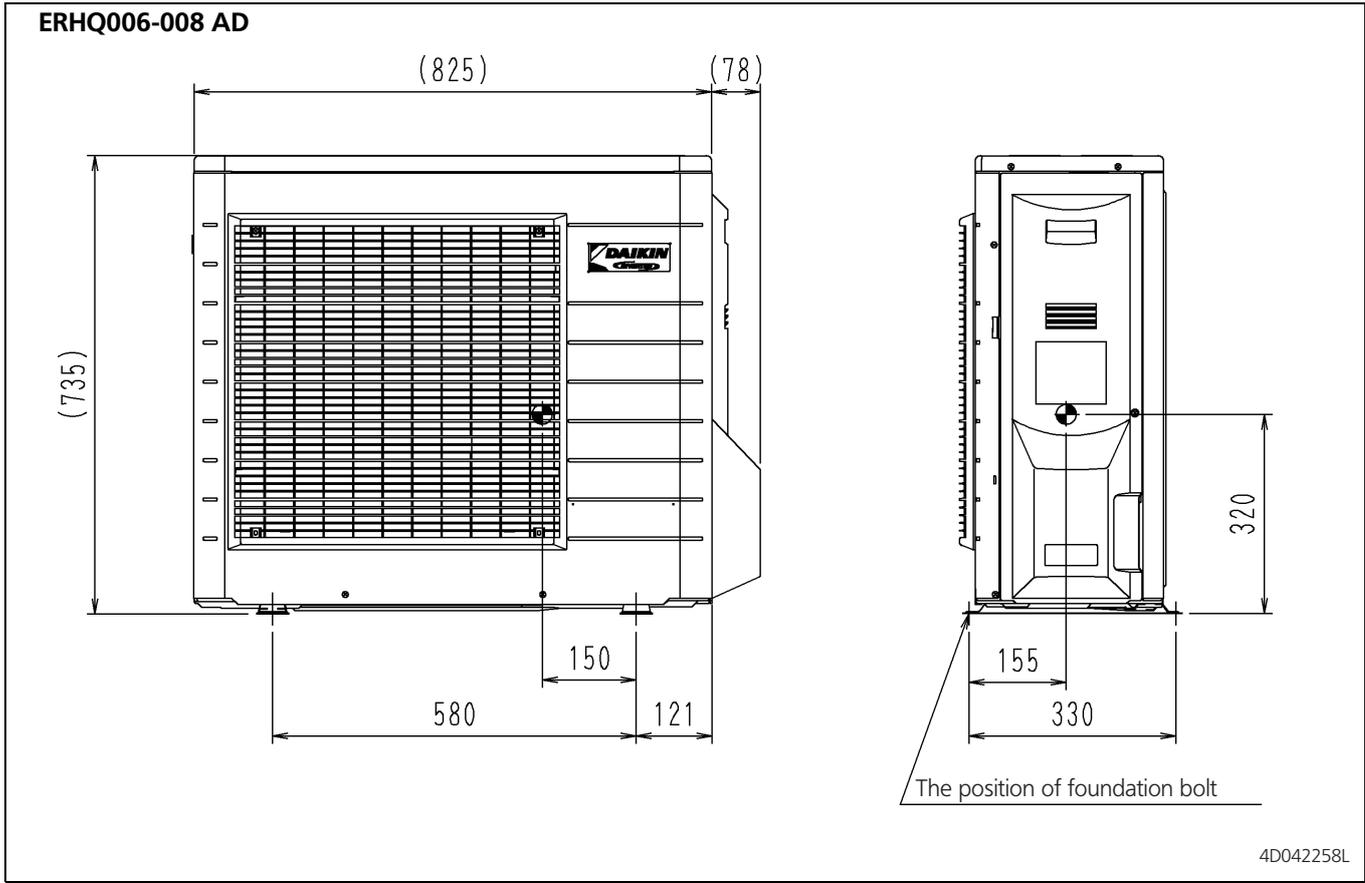
In case of removing stop valve cover



3D060289

### 3 Dimensional drawing & centre of gravity

#### 3 - 2 Centre of gravity



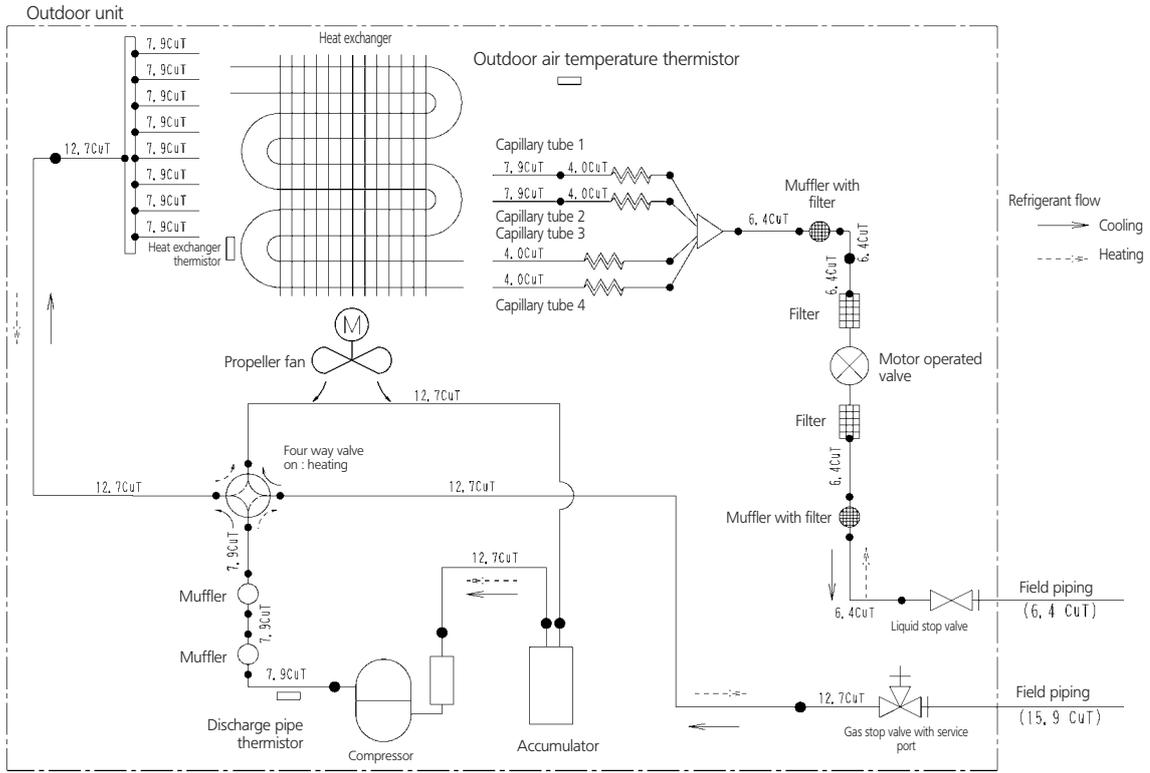
1  
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# 4 Piping diagram

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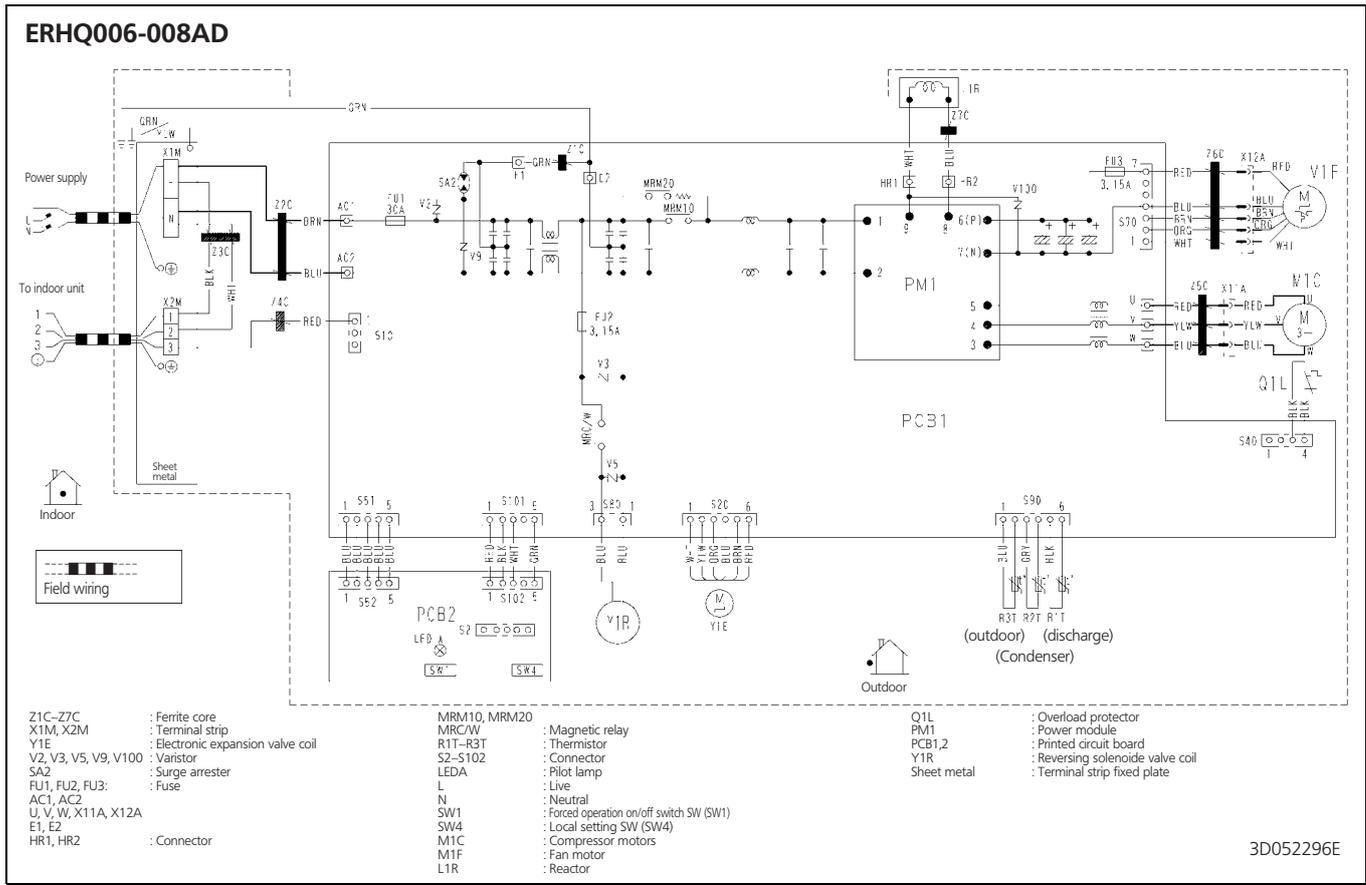
## ERHQ006-008AD



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# 5 Wiring diagram

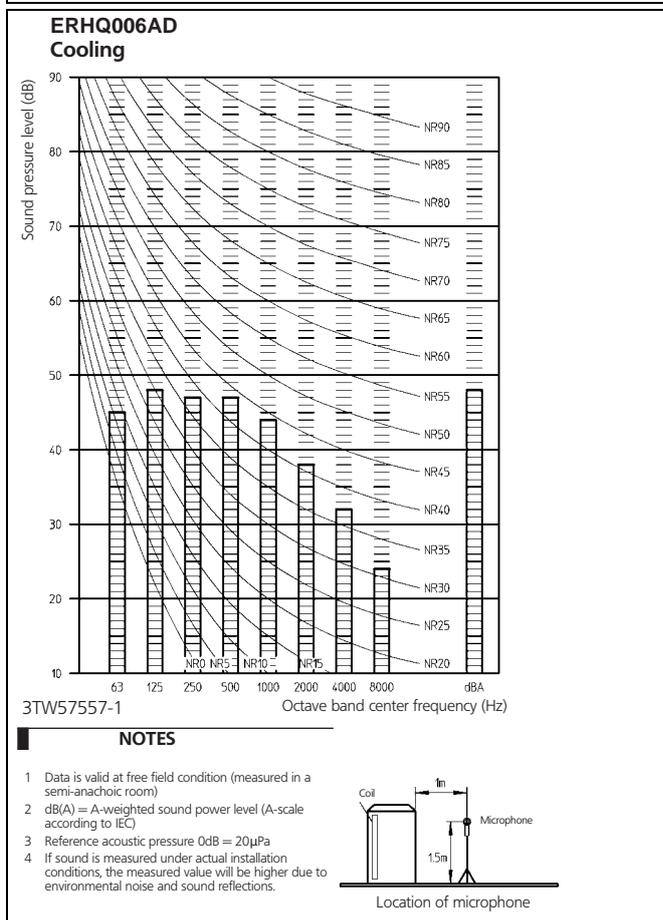
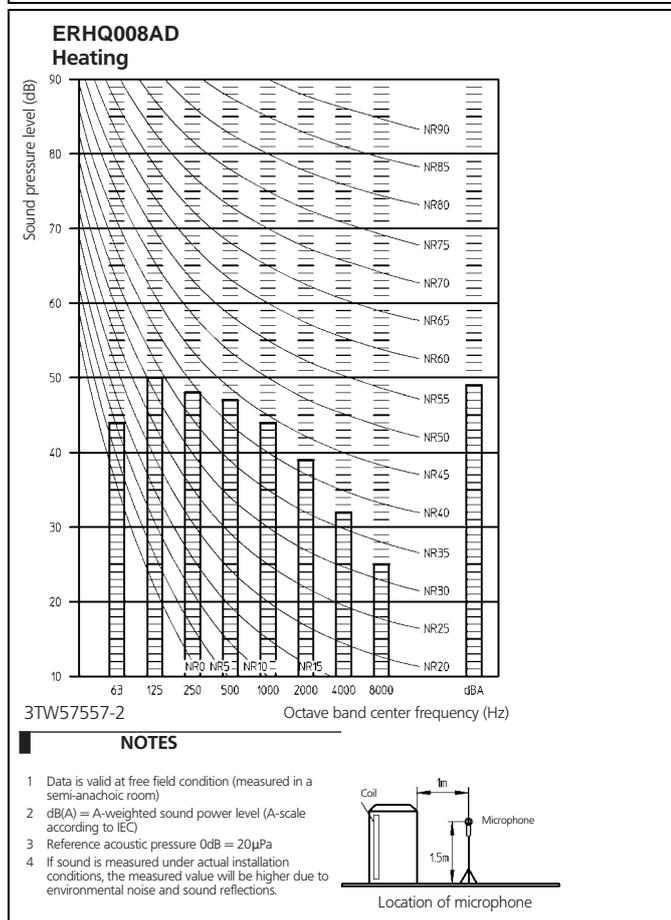
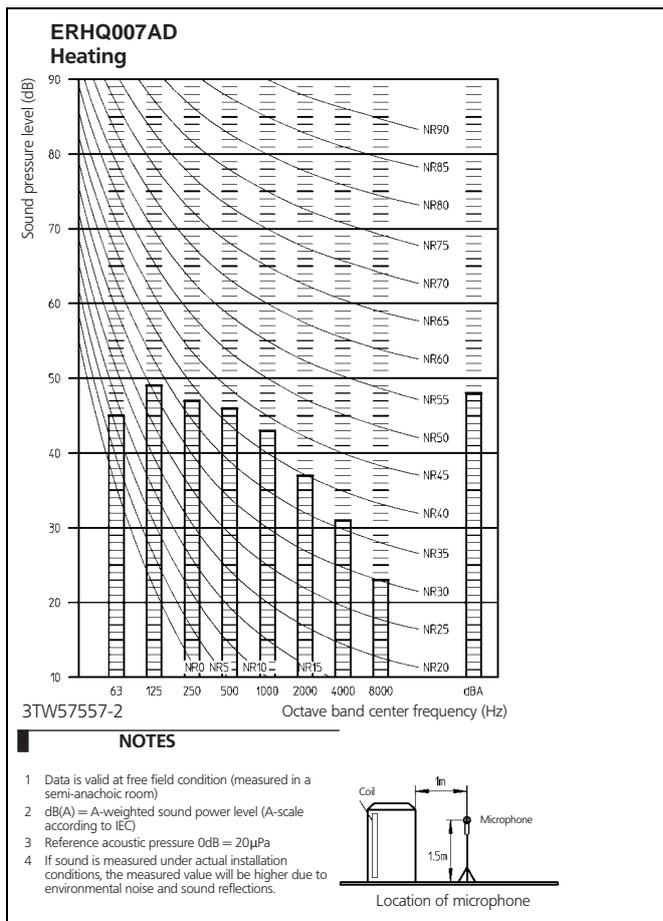
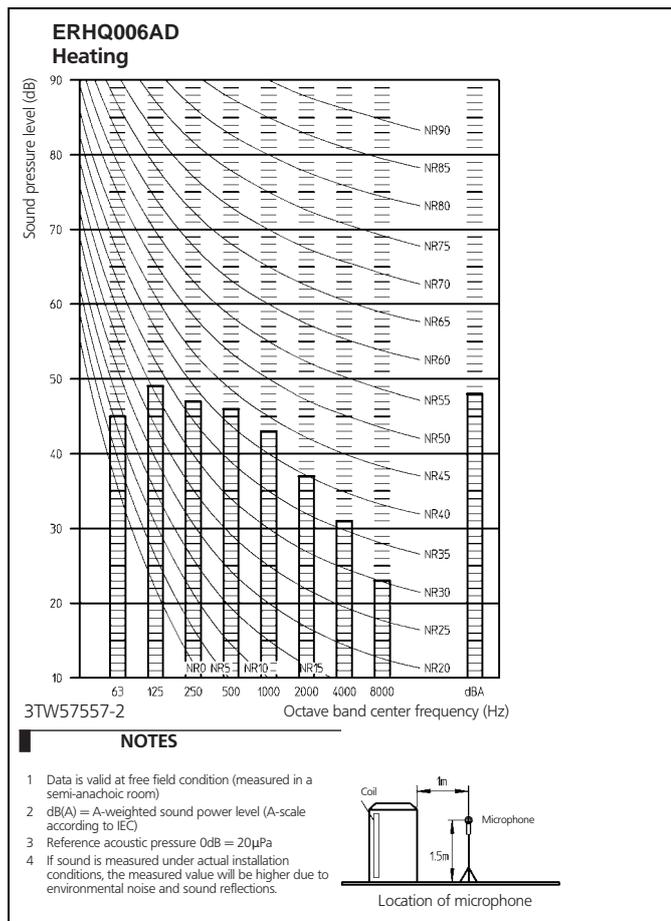
## 5 - 1 Wiring diagram



# 6 Sound data

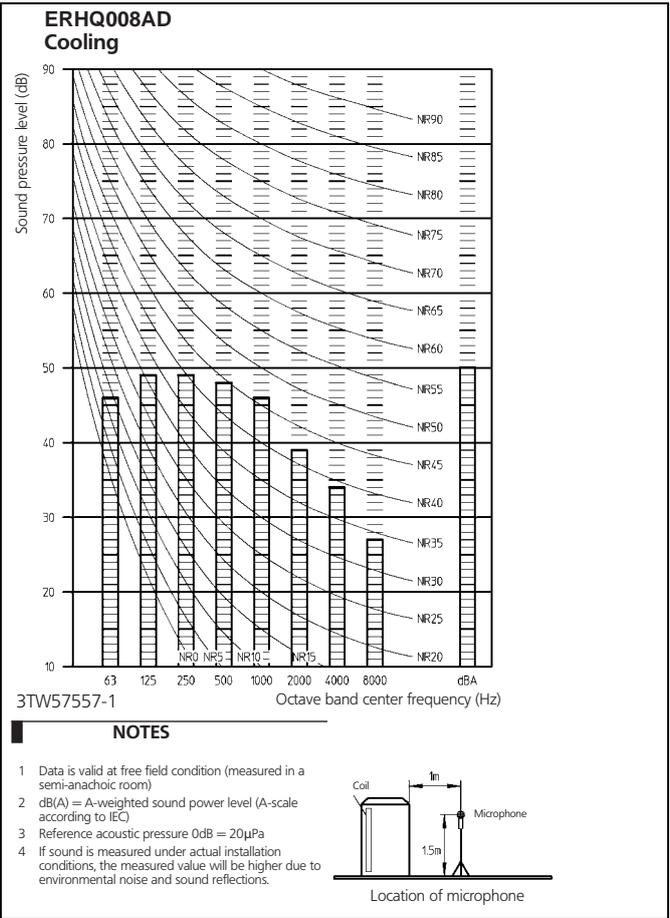
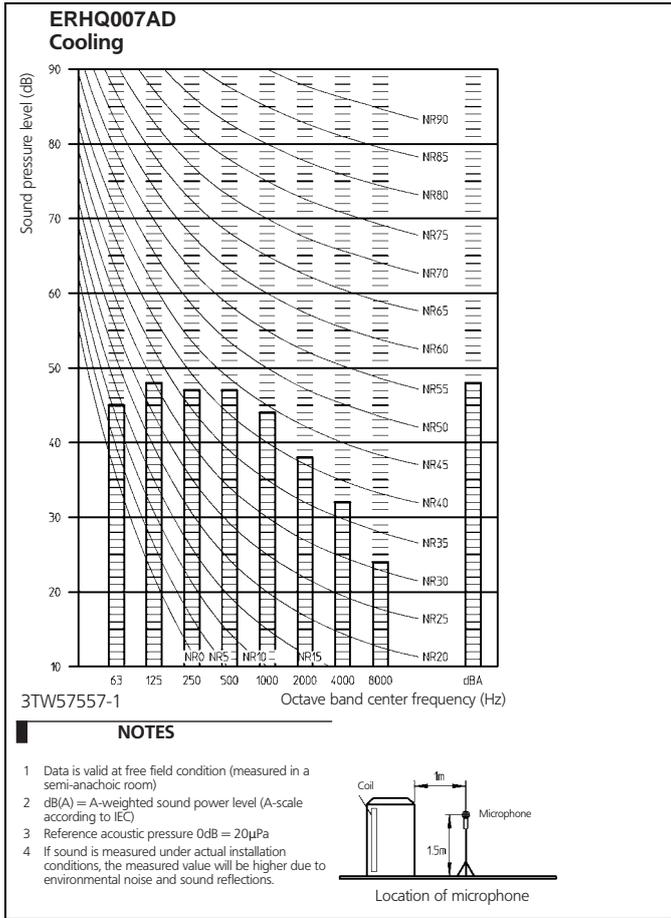
## 6 - 1 Sound pressure spectrum

1  
6



# 6 Sound data

## 6 - 1 Sound pressure spectrum





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# 1 Features

- Cost effective alternative to a fossil fuel boiler
- Low energy bills and low CO2 emissions
- Easy to install
- Total solution for year round comfort

1

1



## 2 Specifications

2-1 TECHNICAL SPECIFICATIONS				EKHBH008AA	EKHBX008AA	
Outdoor units				ERHQ006AD		
Nominal input (Indoor only)			W	230		
Casing	Colour			RAL9010		
	Material			Epoxy polyester painted galvanised steel		
Dimensions	Packing	Height	mm	1225		
		Width	mm	660		
		Depth	mm	610		
	Unit	Height(1)	mm	922		
		Width	mm	502		
		Depth	mm	361		
Weight	Machine weight		kg	50		
	Gross Weight		kg	65		
Packing	Material			EPS		
	Material			Wood		
	Material			Carton		
	Material			PP (straps)		
	Weight		kg	10		
Main components	Pump	Type		Water cooled		
		Nr. of speed		3		
		Nominal ESP unit	Heating	kPa	49	49
			Cooling	kPa		51
	Power input		W	130		
	Water side Heat exchanger	Type		Brazed plate		
		Qty		1		
		Water volume		l	0.67	
		Water flow rate Min.		l/min	12	
		Water flow rate No	Heating (3)	l/min	16.5	16.5
			Cooling (2)	l/min		14.7
	Insulation material			Polyurethane foam		
	Expansion vessel	Volume		l	10	
		Max. water pressure		bar	3	
		Pre pressure		bar	1	
	Water filter	Diameter perforations		mm	1	
Material			Brass			
Water circuit	Piping connections diameter (7)		inch	G 1 (MALE)		
	Piping		inch	1-1/4"		
	Safety valve		bar	3		
	Manometer			Yes		
	Drain valve / Fill valve			Yes		
	Shut off valve			Yes		
	Air purge valve			Yes		
	Total water volume (6)		l	5.5		
Refrigerant Circuit	Gas side diameter		mm	15.9		
	Liquid side diameter		mm	6.35		
Sound Level	Sound Pressure (4)		dBA	28		
	Sound Power (8)		dBA	42		
Operation range	Ambient	Heating	°C	-20-25	-20-25	
		Cooling	°C		10-43	
	Waterside	Heating (5)	°C	15-50	15-50	
		Cooling	°C		5-22	
Outdoor units				ERHQ007AD		
Nominal input (Indoor only)			W	230		
Casing	Colour			RAL9010		
	Material			Epoxy polyester painted galvanised steel		

## 2 Specifications

1  
2

2-1 TECHNICAL SPECIFICATIONS				EKHBH008AA		EKHBX008AA		
Dimensions	Packing	Height	mm	1225				
		Width	mm	660				
		Depth	mm	610				
	Unit	Height(1)	mm	922				
		Width	mm	502				
		Depth	mm	361				
Weight	Machine weight		kg	50				
	Gross Weight		kg	65				
Packing	Material			EPS				
	Material			Wood				
	Material			Carton				
	Material			PP (straps)				
	Weight		kg	10				
Main components	Pump	Type		Water cooled				
		Nr. of speed		3				
		Nominal ESP unit	Heating	kPa	45		45	
			Cooling	kPa			49	
		Power input		W	130			
	Water side Heat exchanger	Type		Brazen plate				
		Qty		1				
		Water volume		l	0.67			
		Water flow rate Min.		l/min	12			
		Water flow rate Nom.	Heating (3)	l/min	19.6		19.6	
			Cooling (2)	l/min			16.8	
	Insulation material			Polyurethane foam				
	Expansion vessel	Volume		l	10			
		Max. water pressure		bar	3			
		Pre pressure		bar	1			
	Water filter	Diameter perforations		mm	1			
		Material			Brass			
Water circuit	Piping connections diameter (7)		inch	G 1 (MALE)				
	Piping		inch	1-1/4"				
	Safety valve		bar	3				
	Manometer			Yes				
	Drain valve / Fill valve			Yes				
	Shut off valve			Yes				
	Air purge valve			Yes				
	Total water volume (6)		l	5.5				
	Refrigerant Circuit	Gas side diameter		mm	15.9			
Liquid side diameter		mm	6.35					
Sound Level	Sound Pressure (4)		dBA	28				
	Sound Power (8)		dBA	42				
Operation range	Ambient	Heating	°C	-20-25		-20-25		
		Cooling	°C			10-43		
	Waterside	Heating (5)	°C	15-50		15-50		
		Cooling	°C			5-22		
Outdoor units			ERHQ008AD					
Nominal input (Indoor only)			W	230				
Casing	Colour			RAL9010				
	Material			Epoxy polyester painted galvanised steel				
Dimensions	Packing	Height	mm	1225				
		Width	mm	660				
		Depth	mm	610				
	Unit	Height(1)	mm	922				
		Width	mm	502				
		Depth	mm	361				

## 2 Specifications

2-1 TECHNICAL SPECIFICATIONS				EKHBH008AA		EKHBX008AA		
Weight	Machine weight		kg	50				
	Gross Weight		kg	65				
Packing	Material			EPS				
	Material			Wood				
	Material			Carton				
	Material			PP (straps)				
	Weight		kg	10				
Main components	Pump	Type		Water cooled				
		Nr. of speed		3				
		Nominal ESP unit	Heating	kPa	38		38	
			Cooling	kPa			48	
		Power input		W	130			
	Water side Heat exchanger	Type		Brazed plate				
		Qty		1				
		Water volume		l	0.67			
		Water flow rate Min.		l/min	12			
		Water flow rate Nom.	Heating (3)	l/min	24.1		24.1	
			Cooling (2)	l/min			17.4	
		Insulation material		Polyurethane foam				
	Expansion vessel	Volume		l	10			
		Max. water pressure		bar	3			
		Pre pressure		bar	1			
	Water filter	Diameter perforations		mm	1			
		Material		Brass				
Water circuit	Piping connections diameter (7)		inch	G 1 (MALE)				
	Piping		inch	1-1/4"				
	Safety valve		bar	3				
	Manometer		Yes					
	Drain valve / Fill valve		Yes					
	Shut off valve		Yes					
	Air purge valve		Yes					
	Total water volume (6)		l	5.5				
	Refrigerant Circuit	Gas side diameter		mm	15.9			
Liquid side diameter		mm	6.35					
Sound Level	Sound Pressure (4)		dBA	28				
	Sound Power (8)		dBA	42				
Operation range	Ambient	Heating	°C	-20-25		-20-25		
		Cooling	°C			10-43		
	Waterside	Heating (5)	°C	15-50		15-50		
		Cooling	°C			5-22		
Notes	(1) With option kit EKHB DP installed: Height=936mm							
Notes	(2) Tamb 35°C - LWE 7°C (DT=5°C)							
Notes	(3) DB/WB 7°C/6°C-LWC 35°C(DT=5°C)							
Notes	(4) The sound pressure level is measured via a microphone at 1m from the unit. It is a relative value, depending on the distance and acoustic environment. The sound pressure level mentioned is valid for pump medium speed.							
Notes	(5) 15°C-25°C: BUH only, no Heatpump operation=during commissioning.							
Notes	(6) Including piping+PHE+backup heater/excluding expansion vessel.							
Notes	(7) Value mentioned is connection after ball valves. Connection at unit is G1 1/2 female							
Notes	(8) DB/WB 7°C/6°C-LWC 35°C(DT=5°C), medium pump speed							

## 2 Specifications

1  
2

2-2 ELECTRICAL SPECIFICATIONS				EKHBH008AA	EKHBX008AA
Electric heater	Type			3V3	
	Power Supply	Phase		1-	
		Frequency	Hz	50	
		Voltage	V	230	
	Current	Running Current	A	13	
	Voltage Range	Minimum		-10%	
		Maximum		+10%	
	Wiring Connections	For power supply backup heater	Quantity of wires		3G
Type of wires			Select diameter and type according to national and local regulations		
Electric heater	Type			6V3	
	Power Supply	Phase		1-	
		Frequency	Hz	50	
		Voltage	V	230	
	Current	Running Current	A	26	
	Voltage Range	Minimum		-10%	
		Maximum		+10%	
	Wiring Connections	For power supply backup heater	Quantity of wires		3G
Type of wires			Select diameter and type according to national and local regulations		
Electric heater	Type			6WN	
	Power Supply	Phase		3-	
		Frequency	Hz	50	
		Voltage	V	400	
	Current	Running Current	A	8.7	
	Voltage Range	Minimum		-10%	
		Maximum		+10%	
	Wiring Connections	For power supply backup heater	Quantity of wires		4G
Type of wires			Select diameter and type according to national and local regulations		
Electric heater	Type			6T1	
	Power Supply	Phase		3-	
		Frequency	Hz	50	
		Voltage	V	230	
	Current	Running Current	A	15.1	
	Voltage Range	Minimum		-10%	
		Maximum		+10%	
	Wiring Connections	For power supply backup heater	Quantity of wires		4G
Type of wires			Select diameter and type according to national and local regulations		
Electric heater	Type			9WN	
	Power Supply	Phase		3-	
		Frequency	Hz	50	
		Voltage	V	400	
	Current	Running Current	A	13	
	Voltage Range	Minimum		-10%	
		Maximum		+10%	
	Wiring Connections	For power supply backup heater	Quantity of wires		4G
Type of wires			Select diameter and type according to national and local regulations		

## 2 Specifications

2-2 ELECTRICAL SPECIFICATIONS				EKHBH008AA	EKHBX008AA
Electric heater	Type			9T1	
	Power Supply	Phase		3~	
		Frequency	Hz	50	
		Voltage	V	230	
	Current	Running Current	A	22.6	
	Voltage Range	Minimum		-10%	
		Maximum		+10%	
	Wiring Connections	For power supply backup heater	Quantity of wires	4G	
Type of wires			Select diameter and type according to national and local regulations		
Wiring Connections	Connection type			For power supply connection to Optional Warm Water Tank + Q2L	
	Quantity of wires			3G	
	Type of wires			Select diameter and type according to national and local regulations	
				For more details of the voltage range and current refer to installation manual EKHBH/X008AA*	
	Connection type			For connection with R5T	
	Quantity of wires			Wire included in option EKHWS*	
	Type of wires			Wire included in option EKHWS*	
	Connection type			For connection with A3P	
	Quantity of wires			Depends on thermostat type, refer to installation manual EKHBH/X008AA*	
	Type of wires			Select diameter and type according to national and local regulations	
				Voltage: 230V/Maximum current: 100mA/Minimum 0,75 mm <sup>2</sup>	
	Connection type			For connection with M2S	
	Quantity of wires			3G	
	Type of wires			Select diameter and type according to national and local regulations	
				Voltage: 230V/Maximum current: 100mA/Minimum 0,75 mm <sup>2</sup>	
	Connection type			For connection with M3S	
	Quantity of wires			3G or 4G	
	Type of wires			Select diameter and type according to national and local regulations	
Voltage: 230V/Maximum current: 100mA/Minimum 0,75 mm <sup>2</sup>					

### 3 Options

1  
3

Factory mounted optional equipment for EKHB(H/X)008AA\*\*

Reference	Description	A3V3		A6V3		A6WN		A6T1		A9WN		A9T1	
		○	○	—	—	—	—	—	—	—	—	—	—
3V3	Back up heater 3kW 1~230 V	○	○	—	—	—	—	—	—	—	—	—	—
6V3	Back up heater 6kW 1~230 V	—	—	○	○	—	—	—	—	—	—	—	—
6W1	Back up heater 6kW 3~400 V	—	—	—	—	○	○	—	—	—	—	—	—
6T1	Back up heater 6kW 3~230 V	—	—	—	—	—	—	○	○	—	—	—	—
9W1	Back up heater 9kW 3~400 V	—	—	—	—	—	—	—	—	○	○	—	—
9T1	Back up heater 9kW 3~230 V	—	—	—	—	—	—	—	—	—	—	○	○

Outdoor combination table for EKHB(H/X)008AA\*\*

		ERHQ006ADV3	ERHQ007ADV3	ERHQ008ADV3
EKHBH008AA*	Heating only indoor unit	○	○	○
EKHBX008AA*	Reversible indoor unit	○	○	○

Kit availability for ERHQ006AD\*

		ERHQ006ADV3	ERHQ007ADV3	ERHQ008ADV3
EKBPHT16	Bottom plate heater (1)	○	○	○

Kit availability for EKHB(H/X)008AA\*

Reference	Description	A3V3		A6V3		A6WN		A6T1		A9WN		A9T1	
		○	○	○	○	○	○	○	○	○	○	○	○
EKHWS150A3V3	Domestic hot water tank 150l 1-230V	○	○	○	○	○ (*)	○ (*)	○	○	○ (*)	○ (*)	○	○
EKHWS200A3V3	Domestic hot water tank 200l 1-230V	○	○	○	○	○ (*)	○ (*)	○	○	○ (*)	○ (*)	○	○
EKHWS300A3V3	Domestic hot water tank 300l 1-230V	○	○	○	○	○ (*)	○ (*)	○	○	○ (*)	○ (*)	○	○
EKHWS200A3Z2	Domestic hot water tank 200l 2-400V	—	—	—	—	○	○	—	—	○	○	—	—
EKHWS300A3Z2	Domestic hot water tank 300l 2-400V	—	—	—	—	○	○	—	—	○	○	—	—
EKHWSU150A3V3	Domestic hot water tank 150l 1-230V	○	○	○	○	○ (*)	○ (*)	○	○	○ (*)	○ (*)	○	○
EKHWSU200A3V3	Domestic hot water tank 200l 1-230V	○	○	○	○	○ (*)	○ (*)	○	○	○ (*)	○ (*)	○	○
EKHWSU300A3V3	Domestic hot water tank 300l 1-230V	○	○	○	○	○ (*)	○ (*)	○	○	○ (*)	○ (*)	○	○
EKHBDP	Option kit for condensate free cooling operation	—	○	—	○	—	○	—	○	—	○	—	○
EKR1HB	Digital I/O PCB (2)	○	○	○	○	○	○	○	○	○	○	○	○

(\*) If neutral line is available

Kit available for EKHWS\*

Reference	Description	15A3V3			200A3V3/Z2			300A3V3/Z2		
		○	○	○	○	○	○	○	○	○
EKUHW1	Option kit for UK EKHWSU150-300V3	—	—	—	○	○	○	○	○	○
EKSOLHWAV1	Solar kit (3)	○	○	○	○	○	○	○	○	○
EKWBSWW150	Wall bracket for EKSWW150V3	○	—	—	○	—	—	○	—	—

Remarks: Other combinations than mentioned in this option TW are not guaranteed.

(1) Heater tape that can be fixed on the bottom plate to prevent ice formation.

(2) Address card that provides two additional output connections (remote alarm and remote ON/OFF signalisation). In EKSOLHWAV1, the same digital I/O PCB as for EKR1HB is already included.

(3) Kit to be mounted on domestic hot water tank that provides connection to solar panels for additional water heating.

3TW57789-2C

# 4 Dimensional drawing & centre of gravity

## 4 - 1 Dimensional drawing

**EKHBH008AA**

**Center of gravity**

- ① Pump + switch for speed setting
- ② Remocon
- ③ Water IN connection G 1 1/2 (female)
- ④ Water OUT connection G 1 1/2 (female)
- ⑤ Power supply intake (+ domestic hot water tank)
- ⑥ Air purge
- ⑦ Expansion vessel+⑧nipple+⑨Drain
- ⑩ Blow off valve
- ⑪ Blow off drain (flexible hose φ 20)
- ⑫ Pressure gauge
- ⑬ Water filter
- ⑭ Suction pipe connection φ 15.9 flare connection
- ⑮ Liquid pipe connection φ 6.35 flare connection
- ⑯ Shut off valves with drain/fill valve (accessory delivered with unit)
- ⑰ Holes for fixation
- ⑱ Switchbox terminals
- ⑲ Switchbox terminals option domestic hot water tank
- Ⓜ Wallbracket

**Minimum space for service & ventilation**

3TW57784-1A

**EKHBX008AA**

**Center of gravity**

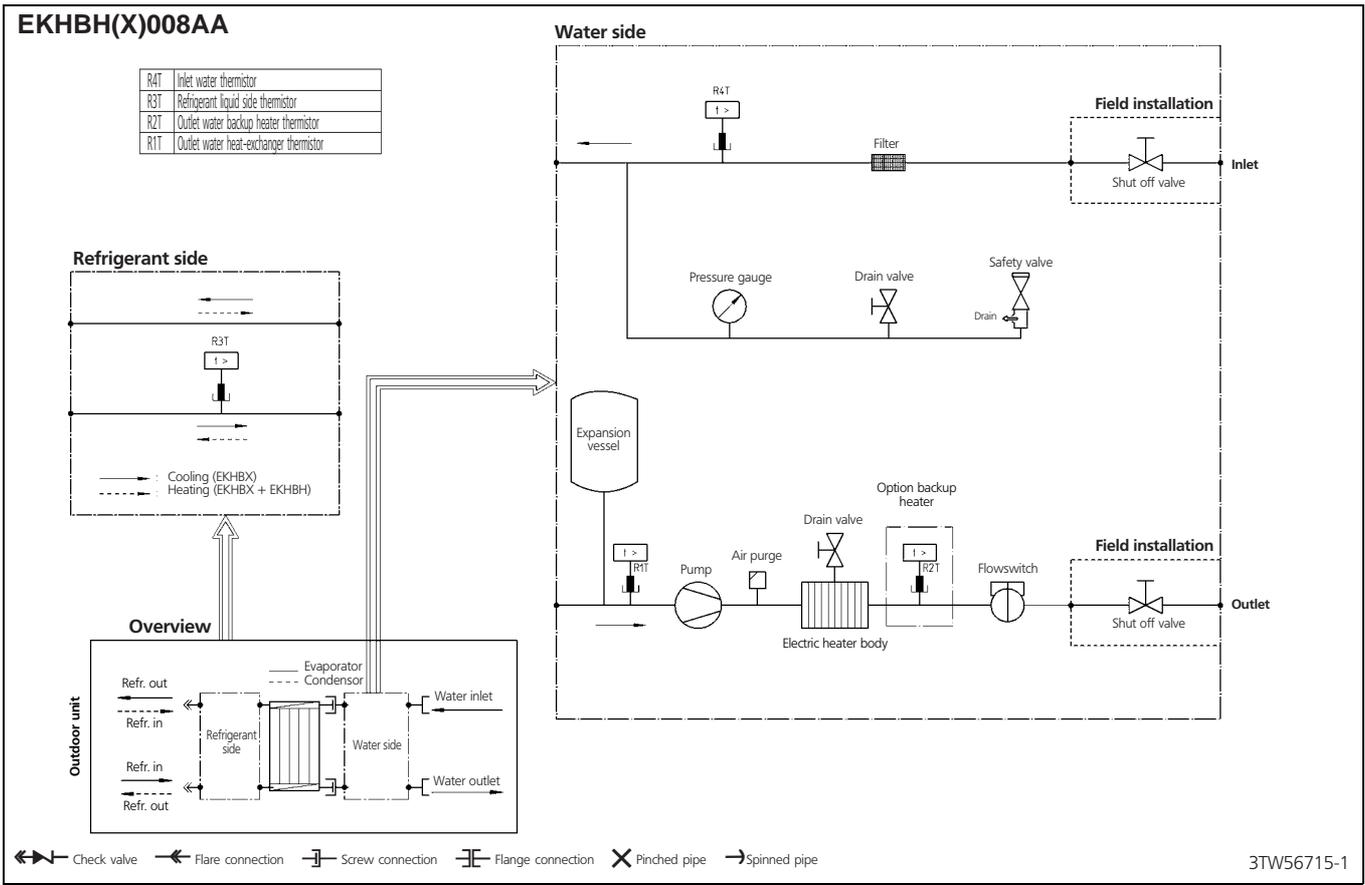
- ① Pump + switch for speed setting
- ② Remocon
- ③ Water IN connection G 1 1/2 (female)
- ④ Water OUT connection G 1 1/2 (female)
- ⑤ Power supply intake (+ domestic hot water tank)
- ⑥ Air purge
- ⑦ Expansion vessel+⑧nipple+⑨Drain
- ⑩ Blow off valve
- ⑪ Blow off drain (flexible hose φ 20)
- ⑫ Pressure gauge
- ⑬ Water filter
- ⑭ Suction pipe connection φ 15.9 flare connection
- ⑮ Liquid pipe connection φ 6.35 flare connection
- ⑯ Shut off valves with drain/fill valve (accessory delivered with unit)
- ⑰ Holes for fixation
- ⑱ Switchbox terminals
- ⑲ Switchbox terminals option domestic hot water tank
- Ⓜ Wallbracket

**Minimum space for service & ventilation**

3TW57784-2A

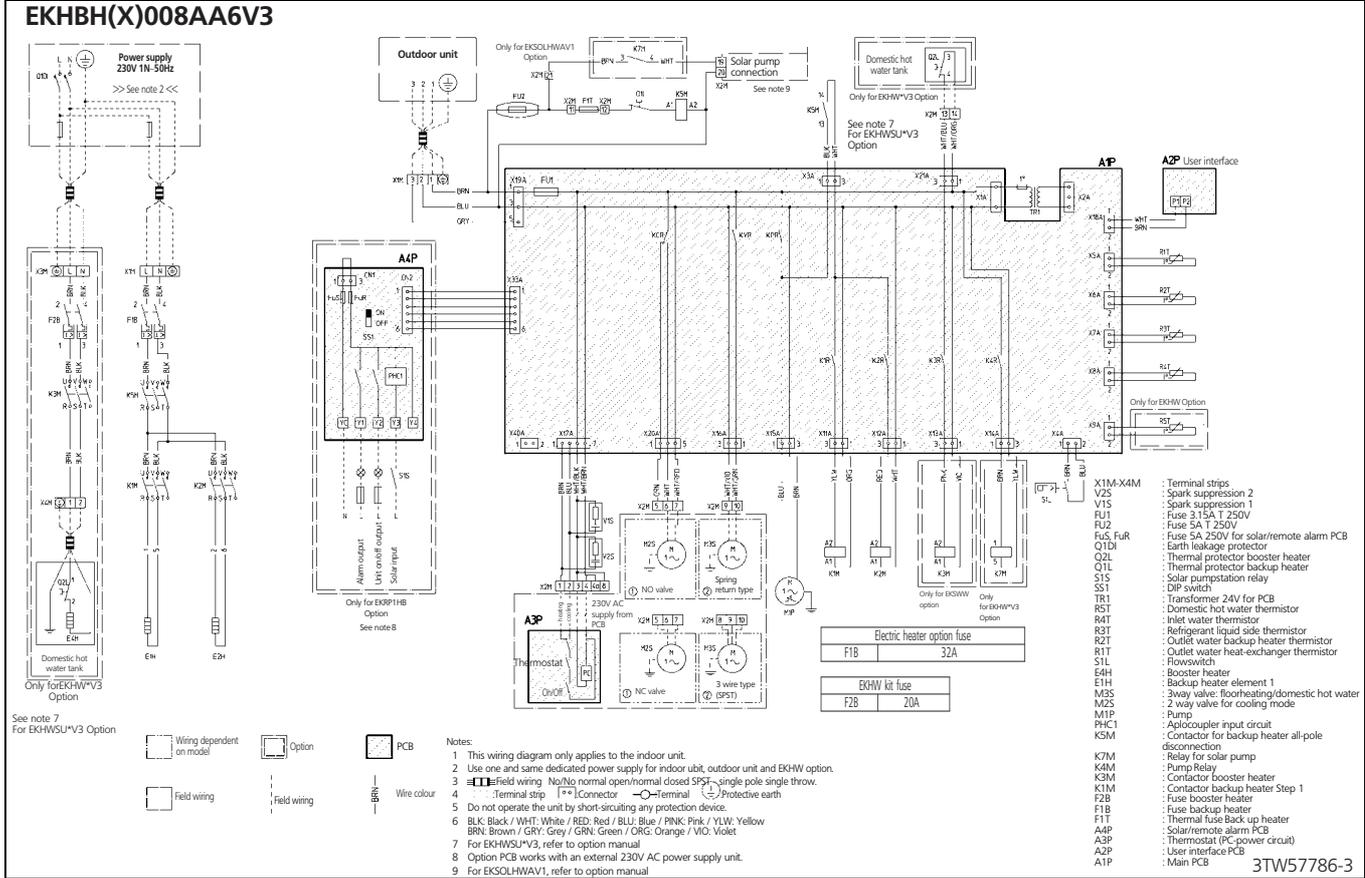
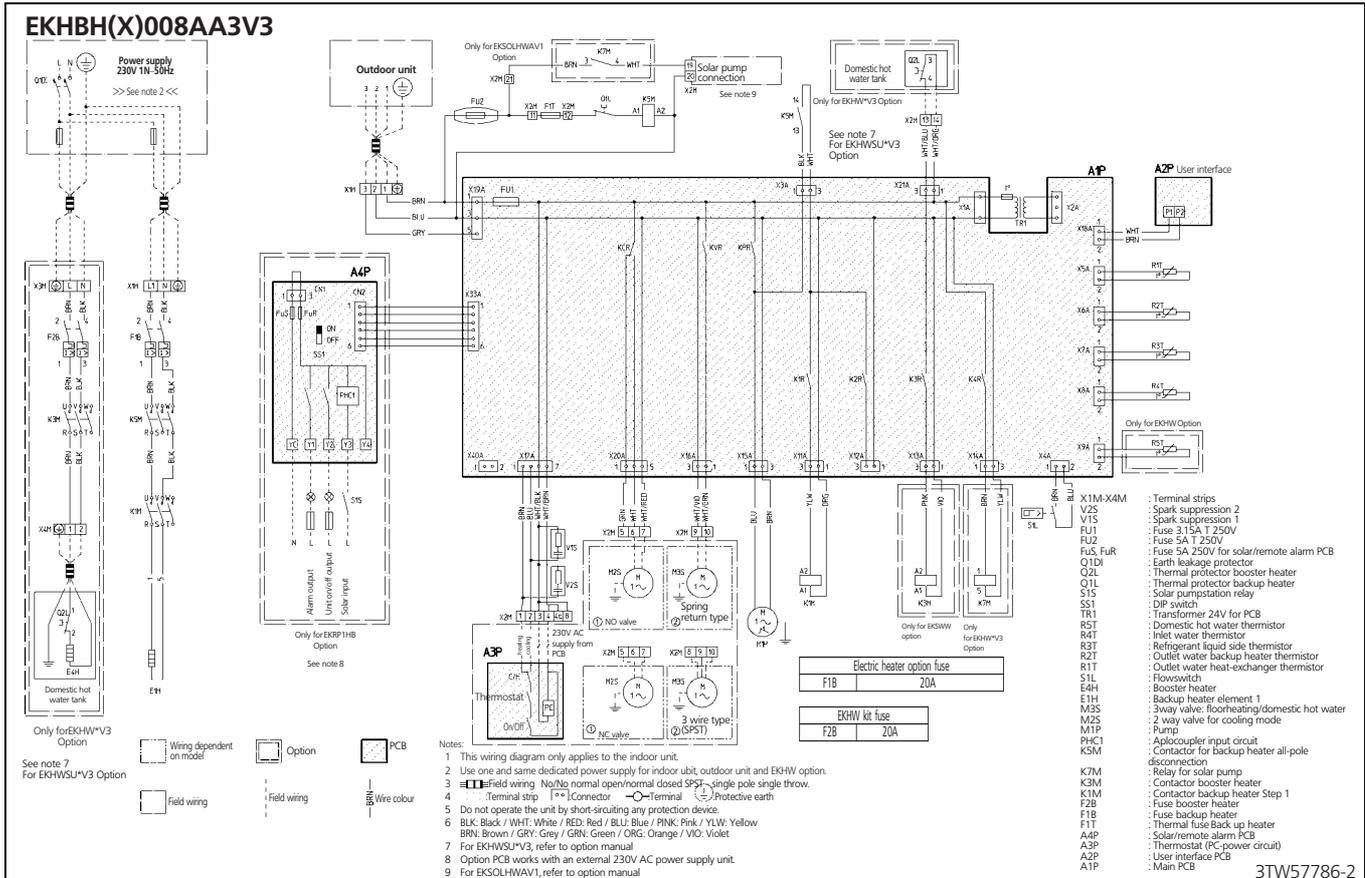
# 5 Piping diagram

1  
5



# 6 Wiring diagram

## 6 - 1 Wiring diagram

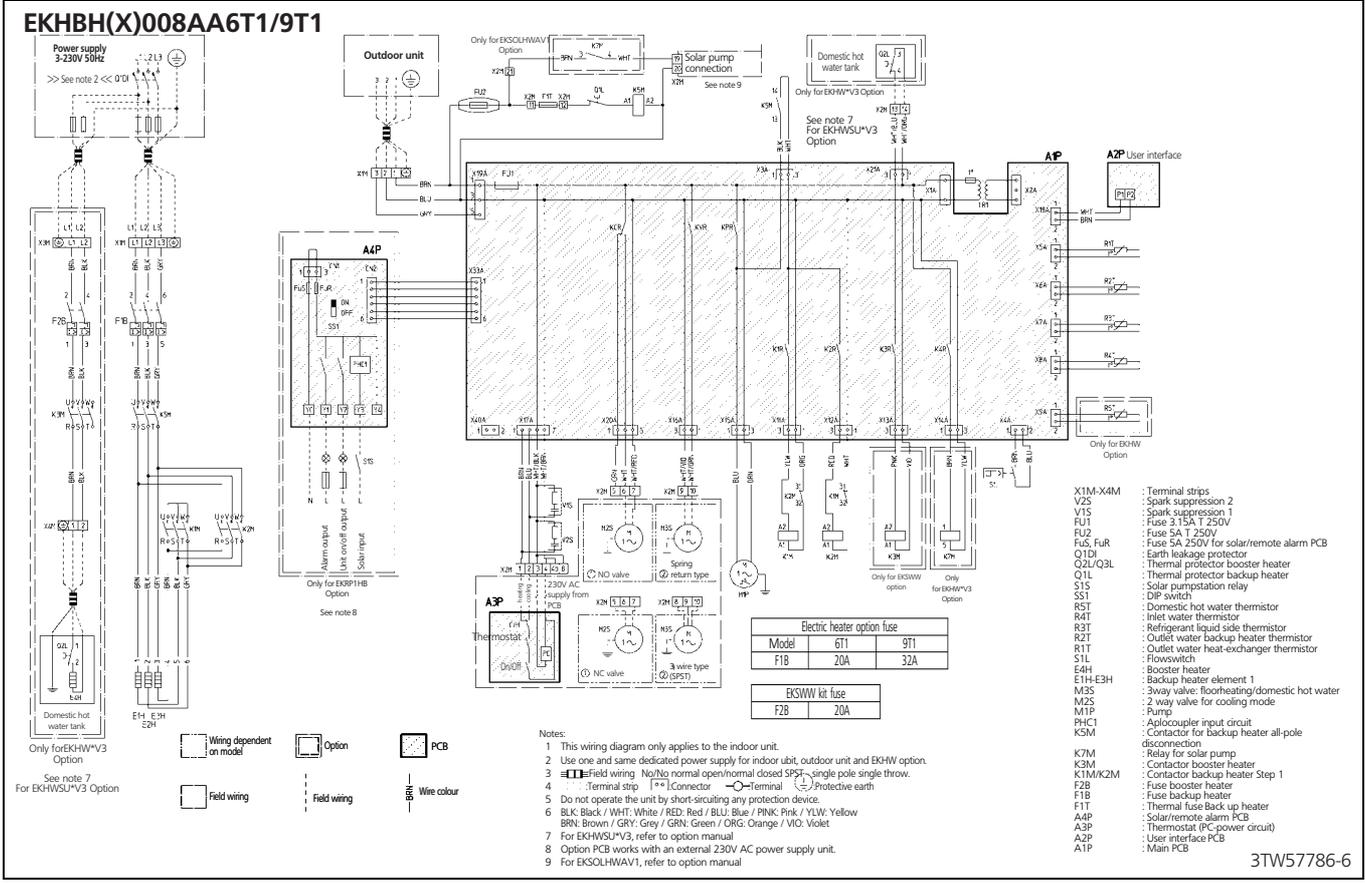
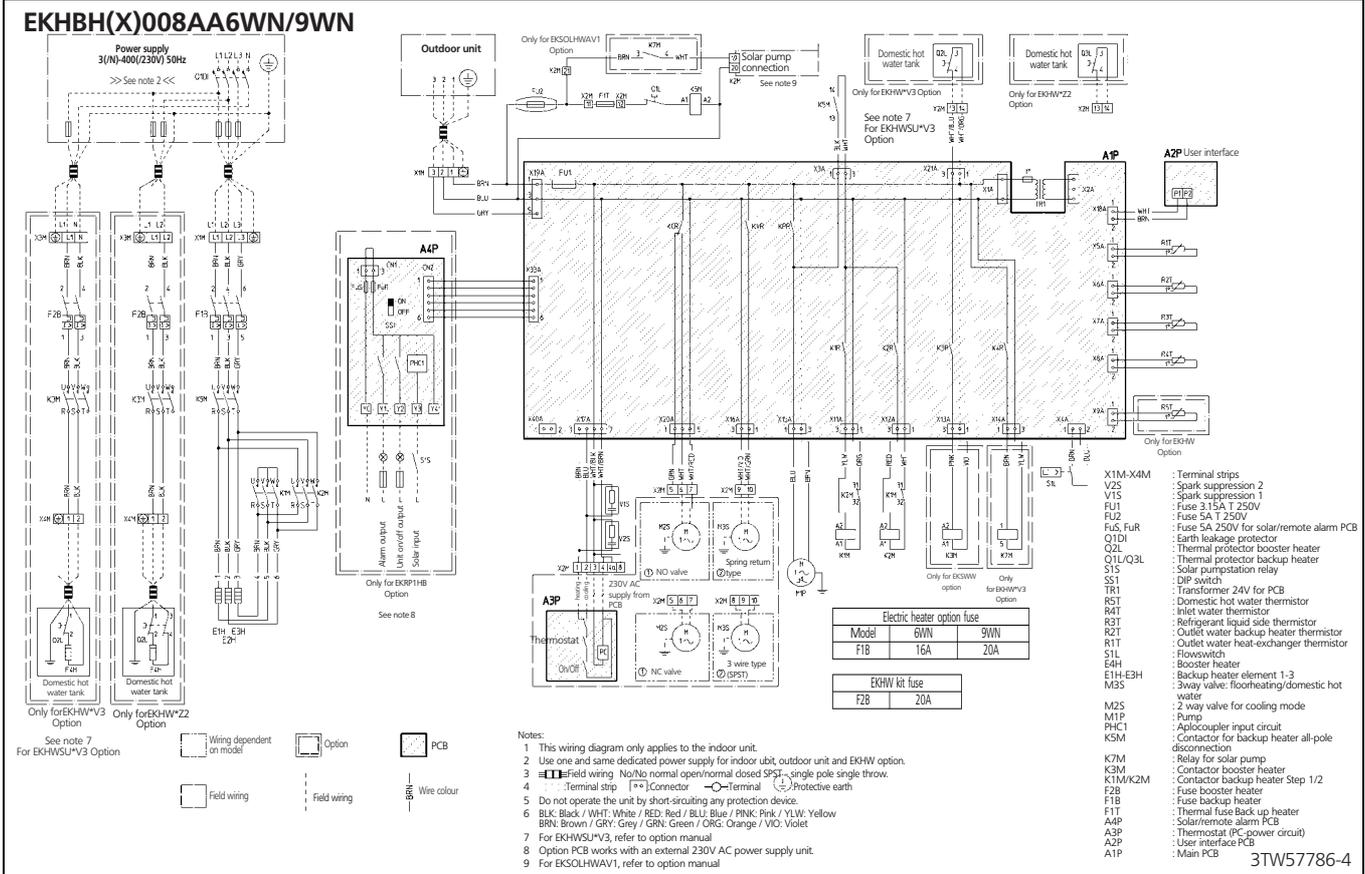


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6

# 6 Wiring diagram

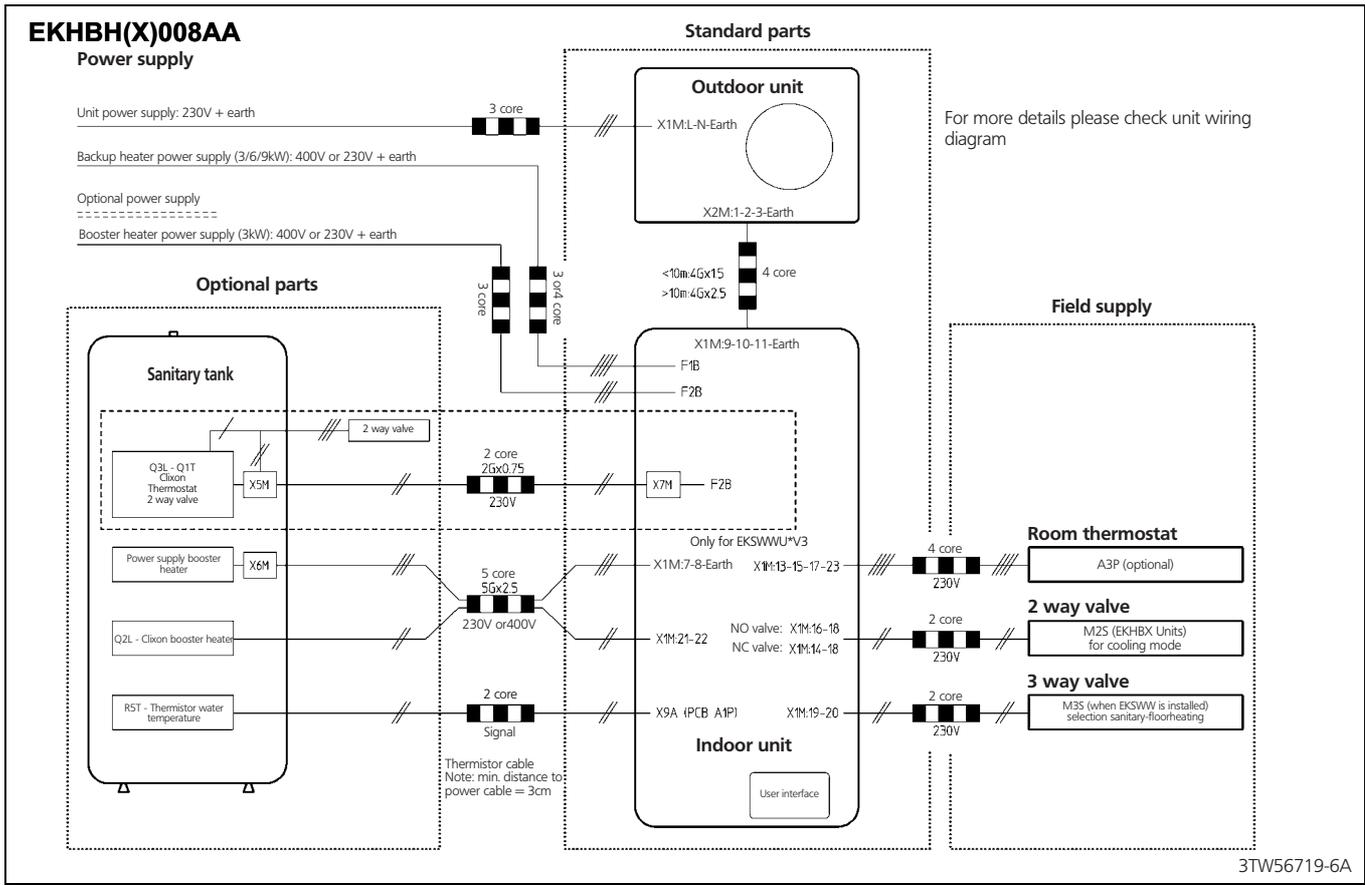
## 6 - 1 Wiring diagram

1  
6



# 6 Wiring diagram

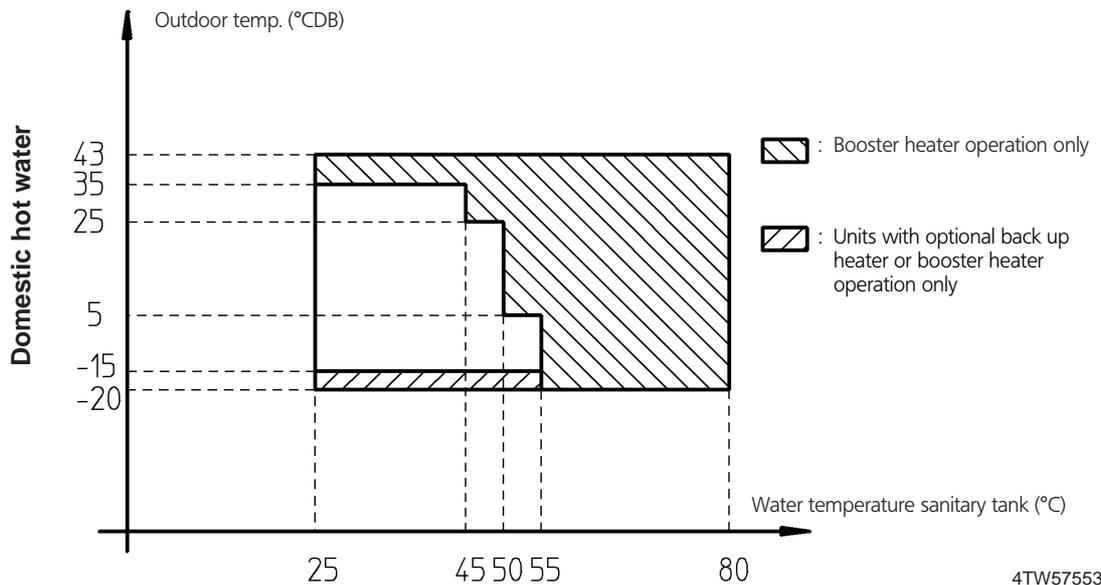
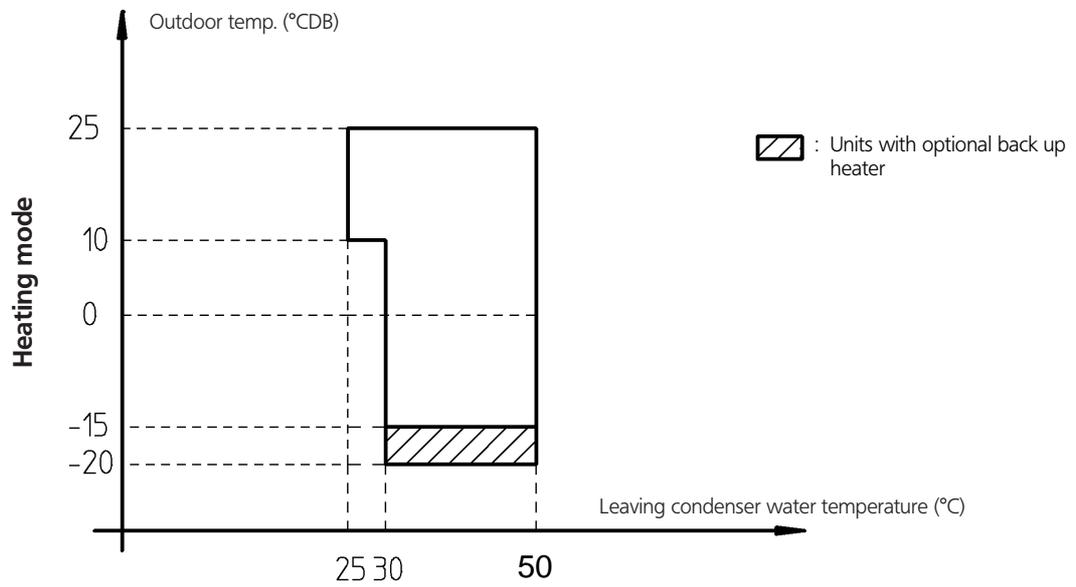
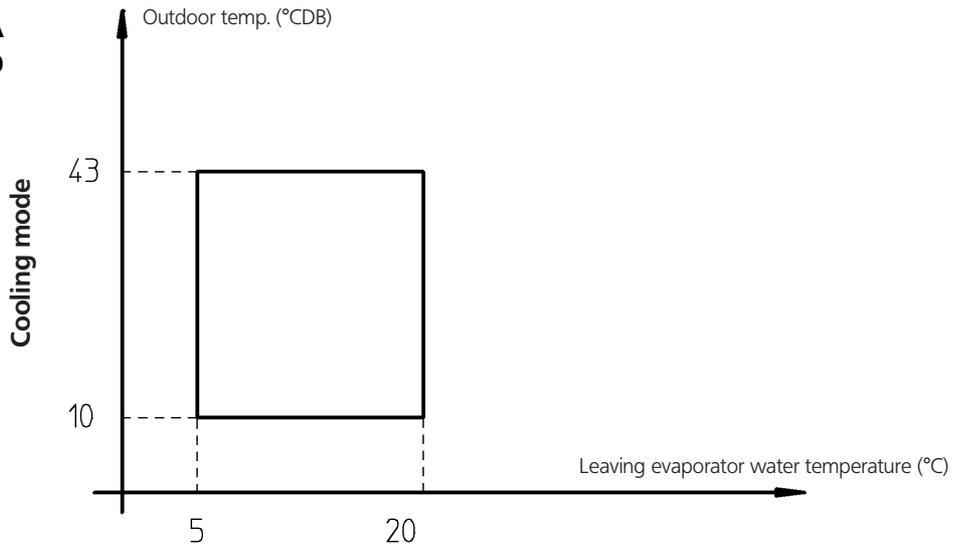
## 6 - 2 External connection diagram



# 7 Operation range

1  
7

EKHBH(X)008AA  
ERHQ006-008AD

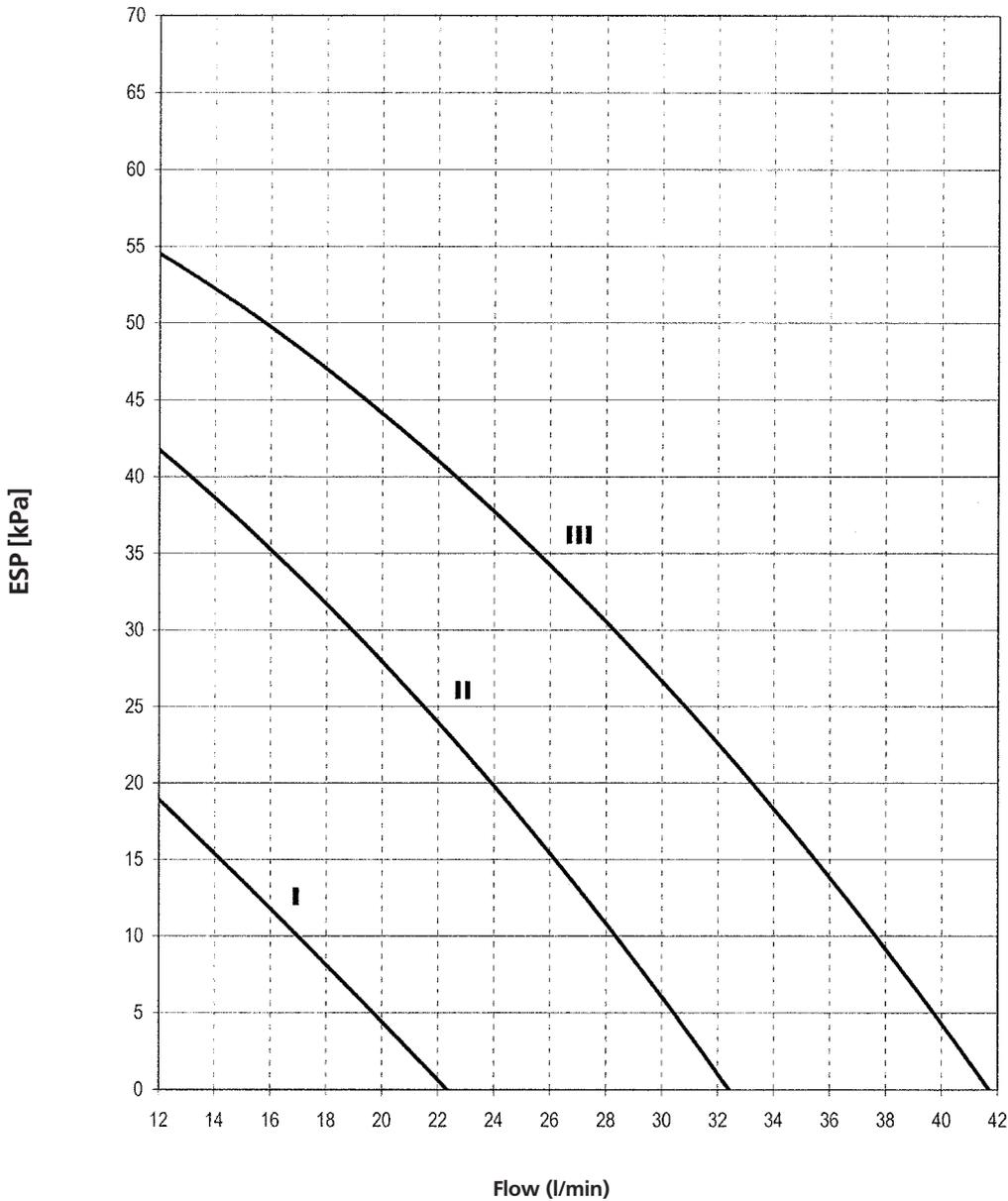


4TW57553-1A

# 8 Hydraulic performance

## 8 - 1 Static pressure drop unit

EKHBH(X)008AA



- III: High speed
- II: medium speed
- I: Low speed

ESP: External static pressure  
 Flow: waterflow through the unit

Warning:  
 1. Selecting a flow outside the curves can cause damage to or malfunction of the unit. See also minimum and maximum allowed water flowrange in the technical specifications.  
 2. Water quality must be according to EN directive EC 98/83 EC.

4TW57789-1



# technical data



Altherma

Part 2/3:

ERHQ011-016AA

EKHBH/X016AB

**R-410A**



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# 1 Features

- Cost effective alternative to a fossil fuel boiler
- Low energy bills and low CO2 emissions
- Easy to install
- Total solution for year round comfort

2

1



## 2 Specifications

2-1 NOMINAL CAPACITY AND NOMINAL INPUT				ERHQ011AA	ERHQ014AA	ERHQ016AA	ERHQ011AA	ERHQ014AA	ERHQ016AA
For combination indoor units + outdoor units	Indoor Units			EKHBH016AA	EKHBH016AA	EKHBH016AA	EKHBX016AA	EKHBX016AA	EKHBX016AA
	Condition 1	Heating capacity	Nominal kW	11.2	14.0	16.0	11.2	14.0	16.0
	Cooling capacity	Nominal kW				13.9	17.3	17.8	
	Heating PI	Nominal kW	2.46	3.17	3.83	2.46	3.17	3.83	
	Cooling PI	Nominal kW				3.79	5.78	6.77	
	COP	Nominal	4.55	4.42	4.18	4.55	4.42	4.18	
	EER	Nominal				3.67	2.99	2.63	
Nominal Capacity	Heating capacity	Nominal kW	10.3	13.1	15.2	10.3	13.1	15.2	
	Cooling capacity	Nominal kW				10.0	12.5	13.1	
	Heating PI	Nominal kW	3.06	3.88	4.66	3.06	3.88	4.66	
	Cooling PI	Nominal kW				3.60	5.29	5.95	
	COP	Nominal	3.37	3.38	3.26	3.37	3.38	3.26	
	EER	Nominal				2.78	2.36	2.20	
For combination indoor units + outdoor units	Notes			Condition 1: cooling Ta 35°C - LWE 18°C - heating Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C)					
				Condition 2: cooling Ta 35°C - LWE 7°C (DT = 5°C) - heating Ta DB/WB 7°C/6°C - LWC 45°C (DT = 5°C)					

2-2 TECHNICAL SPECIFICATIONS				ERHQ011AA	ERHQ014AA	ERHQ016AA	ERHQ011AA	ERHQ014AA	ERHQ016AA	
Casing	Colour			Ivory white						
	Material			Painted galvanised steel plate						
Dimensions	Unit	Height	mm	1170	1170	1170	1170	1170	1170	
		Width	mm	900	900	900	900	900	900	
		Depth	mm	320	320	320	320	320	320	
	Packing	Height	mm	1349	1349	1349	1349	1349	1349	
		Width	mm	980	980	980	980	980	980	
		Depth	mm	420	420	420	420	420	420	
Weight	Unit		kg	103	103	103	103	103	103	
	Packed Unit		kg	114	114	114	114	114	114	
Packing	Material			EPS						
				Carton						
				Wood						
				PP (Straps)						
	Weight		kg	11	11	11	11	11	11	
Heat Exchanger	Dimensions	Length	mm	857	857	857	857	857	857	
		Nr of Rows			2	2	2	2	2	2
		Fin Pitch	mm	1.4	1.4	1.4	1.4	1.4	1.4	
		Nr of Passes			6	6	6	6	6	6
		Face Area	m <sup>2</sup>	0.98	0.98	0.98	0.98	0.98	0.98	
		Nr of Stages			52	52	52	52	52	52
	Tube type			Hi-XSS(8)						
	Fin	Type		WF fin						
Treatment		Anti-corrosion treatment (PE)								
Fan	Type			Propeller						
	Quantity			2	2	2	2	2	2	
Air Flow Rate (nominal at 230V)	Heating	High	m <sup>3</sup> /min	90	90	90	90	90	90	
	Cooling	High	m <sup>3</sup> /min				96	100	97	

## 2 Specifications

2-2 TECHNICAL SPECIFICATIONS				ERHQ011AA	ERHQ014AA	ERHQ016AA	ERHQ011AA	ERHQ014AA	ERHQ016AA	
Fan	Discharge direction			Horizontal						
	Motor	Quantity		2	2	2	2	2	2	
Model		Brushless DC motor								
Output		W	70	70	70	70	70	70		
Motor	Speed (nominal)	Steps		8	8	8	8	8	8	
		Heating	rpm	760	760	760	760	760	760	
		Cooling	rpm				800	850	830	
Fan	Motor	Output	W	70	70	70	70	70	70	
		Drive			Direct drive					
Compressor	Quantity			1	1	1	1	1	1	
	Motor	Model			JT100G-VD					
		Type			Hermetically sealed scroll compressor					
	Motor	W	2200	2200	2200	2200	2200	2200		
	Starting Method			Inverter driven						
	Crankcase Heater	W	33	33	33	33	33	33		
Operation Range	Heating	Min	°CWB	-20	-20	-20	-20	-20	-20	
		Max	°CWB	35	35	35	35	35	35	
	Cooling	Min	°CDB				10	10	10	
		Max	°CDB				46	46	46	
	Sanitary water	Min	°CDB	-20	-20	-20	-20	-20	-20	
		Max	°CDB	43	43	43	43	43	43	
Sound Level (nominal)	Heating	Sound Power	dBA				64	64	66	
		Sound Pressure	dBA	49	51	53	49	51	53	
	Cooling	Sound Power	dBA				64	66	69	
		Sound Pressure	dBA				50	52	54	
Sound Level (Night quiet)	Heating	Sound Pressure	dBA	42	42	43	42	42	43	
	Cooling	Sound Pressure	dBA				45	45	46	
Refrigerant	Type			R-410A						
	Charge	kg	3.7	3.7	3.7	3.7	3.7	3.7		
	Control			Expansion valve (electronic type)						
	Nr of Circuits			1	1	1	1	1	1	
Refrigerant Oil	Type			Daphne FVC68D						
	Charged Volume	l	1.0	1.0	1.0	1.0	1.0	1.0		

## 2 Specifications

2-2 TECHNICAL SPECIFICATIONS			ERHQ011AA	ERHQ014AA	ERHQ016AA	ERHQ011AA	ERHQ014AA	ERHQ016AA	
Piping connections	Liquid (OD)	Quantity	1	1	1	1	1	1	
		Type	Flare connection						
		Diameter (OD) mm	9,52						
	Gas	Quantity	1	1	1	1	1	1	
		Type	Flare connection						
		Diameter (OD) mm	15,9						
	Drain	Quantity	3	3	3	3	3	3	
		Type	Hole						
		Diameter (OD) mm	26	26	26	26	26	26	
	Piping Length	Minimum	m	5	5	5	5	5	5
		Maximum	m	75	75	75	75	75	75
		Equivalent	m	95	95	95	95	95	95
		Chargeless	m	30	30	30	30	30	30
Additional Refrigerant Charge	kg/m	See installation manual outdoor unit 4PW37976-1B							
Installation height difference	Maximum	m	30	30	30	30	30	30	
Heat Insulation	Both liquid and gas pipes								
Defrost Method	Pressure equalising								
Defrost Control	Sensor for outdoor heat exchanger temperature								
Capacity Control Method	Inverter controlled								
Safety Devices	Fan motor thermal protector								
	Fuse								
	High pressure switch								
Standard Accessories	Item	Tie-wraps							
	Quantity	2	2	2	2	2	2		
	Item	Installation manual							
	Quantity	1	1	1	1	1	1		
Notes	The sound pressure level is measured via a microphone at a certain distance from the unit. It is a relative value depending on the distance and acoustic environment. Refer to sound spectrum drawing for more information. Down to 3m with recharging of the outdoor unit. Refer to the installation manual of the outdoor unit.								

2-3 ELECTRICAL SPECIFICATIONS			ERHQ011AA	ERHQ014AA	ERHQ016AA	ERHQ011AA	ERHQ014AA	ERHQ016AA
Power Supply	Name	V3						
	Phase	1~						
	Frequency	Hz	50	50	50	50	50	50
	Voltage	V	230	230	230	230	230	230
	Voltage range	Minimum	V	-10%				
Maximum		V	+10%					
Current	Maximum running Current	Cooling	A			22.8	27.4	31.9
	Recommended fuses	A	32	32	32	32	32	32
Wiring connections	For Power Supply	Remark	See installation manual outdoor unit 4PW37976-1B					
	For connection with indoor	Remark	See installation manual outdoor unit 4PW37976-1B					
Power Supply Intake	Outdoor unit only							

### 3 Capacity tables

#### 3 - 1 Heating capacity tables

## ERHQ011-016AA

### MAXIMUM HEATING CAPACITY - PEAK VALUES

LWC Tamb	30		35		40		45		50		55	
	HC	PI										
-20	5.66	2.17	5.46	2.37	5.44	2.61	7.50	3.02	8.18	3.36	8.72	3.77
-15	6.48	2.21	6.25	2.42	6.17	2.67	8.57	3.05	9.10	3.38	9.53	3.82
-7	8.04	2.24	7.74	2.46	7.63	2.72	9.52	3.06	9.94	3.42	10.9	3.81
2	10.2	2.23	9.81	2.47	9.68	2.74	10.3	3.05	10.3	3.41	10.9	3.81
7	11.6	2.21	11.2	2.46	10.8	2.72	11.8	3.04	11.3	3.40	11.7	3.81
12	13.1	2.18	12.7	2.43	12.2	2.72	12.7	3.03	12.2	3.40	11.7	3.81
15	14.1	2.15	13.6	2.41	13.2	2.70	12.7	3.03	12.2	3.40	11.7	3.81
20	15.9	2.10	15.4	2.36	14.9	2.65	14.4	2.99	13.8	3.37	13.3	3.78
-20	7.24	2.72	7.14	2.97	7.05	3.26	9.25	3.79	10.4	4.14	11.1	4.62
-15	8.19	2.78	8.01	3.04	7.85	3.34	9.25	3.79	10.4	4.14	11.1	4.62
-7	10.1	2.64	9.78	3.11	9.51	3.43	10.7	3.74	11.4	4.17	11.4	4.62
2	11.5	2.67	11.1	3.14	11.1	3.47	11.8	3.76	11.4	4.17	11.4	4.62
7	12.7	2.67	12.3	3.16	12.2	3.49	11.8	3.76	11.4	4.17	11.4	4.62
12	14.4	2.68	14.0	3.17	13.5	3.50	13.1	3.68	12.7	4.30	12.3	4.77
15	16.3	2.68	15.9	3.16	15.4	3.50	14.9	3.69	14.4	4.32	13.9	4.79
20	19.9	2.62	19.3	3.13	18.7	3.48	18.1	3.67	17.5	4.31	17.0	4.80
-20	8.35	3.25	8.31	3.54	8.27	3.89	10.9	4.52	12.0	5.08	11.9	5.35
-15	9.38	3.33	9.33	3.63	9.28	3.98	11.1	4.10	12.2	4.58	13.1	5.11
-7	11.5	3.42	11.3	3.73	11.1	4.10	10.9	4.52	12.0	5.08	11.9	5.35
2	13.0	3.46	12.7	3.78	12.5	4.15	12.2	4.58	13.1	5.11	13.4	5.40
7	14.4	3.48	14.1	3.81	13.8	4.19	13.5	4.62	14.8	5.15	15.1	5.44
12	16.3	3.50	16.0	3.83	15.6	4.22	15.2	4.66	16.7	5.18	16.6	5.44
15	18.5	3.51	18.1	3.85	17.6	4.24	17.2	4.69	18.0	5.20	18.0	5.44
20	22.5	3.50	22.0	3.85	21.4	4.25	20.8	4.70	20.3	5.21	18.7	5.77

### MAXIMUM HEATING CAPACITY - INTEGRATED VALUE

LWC Tamb	30		35		40		45		50		55	
	HC	PI										
-20	5.04	2.17	4.88	2.37	4.84	2.61	6.43	3.02	6.63	3.17	6.99	3.64
-15	5.77	2.21	5.56	2.42	5.49	2.67	6.43	3.02	6.63	3.17	6.99	3.64
-7	6.89	2.24	6.63	2.46	6.54	2.72	6.94	2.87	7.29	3.26	7.53	3.82
2	8.16	2.16	7.86	2.39	7.75	2.65	7.63	2.86	7.94	3.42	8.31	3.81
7	11.6	2.21	11.2	2.46	10.8	2.72	11.8	3.04	11.3	3.41	11.7	3.81
12	13.1	2.18	12.7	2.43	12.2	2.72	12.7	3.03	12.2	3.40	11.7	3.81
15	14.1	2.15	13.6	2.41	13.2	2.70	12.7	3.03	12.2	3.40	11.7	3.81
20	15.9	2.10	15.4	2.36	14.9	2.65	14.4	2.99	13.8	3.37	13.3	3.78
-20	6.45	2.72	6.35	2.97	6.28	3.26	7.42	3.79	7.99	4.31	8.73	4.47
-15	7.29	2.78	7.13	3.04	6.99	3.34	7.42	3.79	7.99	4.31	8.73	4.47
-7	8.06	2.84	7.84	3.11	7.62	3.43	8.65	3.52	9.02	4.03	9.39	4.77
2	9.27	2.70	9.00	2.68	8.95	3.26	8.65	3.52	8.38	3.90	8.73	4.47
7	10.0	2.78	9.71	3.05	9.65	3.37	9.32	3.64	9.02	4.03	9.39	4.77
12	11.6	2.88	11.3	3.17	11.1	3.50	10.7	3.68	10.4	4.18	10.2	4.62
15	13.3	2.86	12.9	3.16	12.4	3.50	11.9	3.69	11.4	4.32	11.9	4.79
20	17.6	2.85	17.1	3.15	16.5	3.50	16.0	3.69	15.5	4.32	15.0	4.80
-20	7.44	3.25	7.39	3.54	7.36	3.89	9.31	4.41	9.71	4.77	9.19	4.84
-15	8.35	3.33	8.30	3.63	8.26	3.98	9.31	4.41	9.71	4.77	9.19	4.84
-7	8.91	3.34	8.77	3.64	8.63	4.00	9.31	4.41	9.71	4.77	9.19	4.84
2	10.5	3.26	10.3	3.56	10.1	3.91	9.31	4.41	9.71	4.77	9.19	4.84
7	11.1	3.15	10.9	3.45	10.6	3.79	10.4	4.18	10.2	4.62	9.19	4.84
12	12.7	3.50	12.4	3.83	12.1	4.22	11.9	4.22	11.4	4.66	11.4	5.44
15	14.8	3.51	14.4	3.85	14.0	4.24	13.4	4.24	12.7	4.69	12.7	5.44
20	22.5	3.50	22.0	3.85	21.4	4.25	20.8	4.25	20.3	5.21	18.7	5.77

#### Symbols

- CC Cooling capacity at maximum operating frequency, measured acc. Eurovent 6/C/003-2006 [kW]
- HC Heating capacity at maximum operating frequency, measured acc. Eurovent 6/C/003-2006 [kW]
- PI Power input [kW], measured acc. Eurovent 6/C/003-2006 [kW]
- LWE Leaving Water Evaporator temperature [°C]
- LWC Leaving Water Condenser temperature [°C]
- Tamb Ambient temperature [°C] RH=85%

#### Conditions

1. Cooling capacity  
Capacity is according to Eurovent rating standard 6/C/003-2006 and valid for chilled water range D1 = 3-8°C
2. Heating capacity  
Capacity is according to Eurovent rating standard 6/C/003-2006 and valid for chilled water range D1 = 3-8°C
3. Power input  
Power input is total input of indoor and outdoor unit, except the circulation pump; according to Eurovent rating standard 6/C/003-2006  
Pump power input to be added=90W (according EN14511)

3TW57752-1

### 3 Capacity tables

#### 3 - 2 Cooling capacity tables

## ERHQ011-016AA

### MAXIMUM COOLING CAPACITY

Tamb LWE	20		25		30		35		40		45		
	CC	PI	CC	PI	CC	PI	CC	PI	CC	PI	CC	PI	
ERHQ11	7	11,7	2,56	11,2	2,86	10,6	3,21	10,0	3,60	9,39	4,03	8,75	4,50
	10	12,9	2,58	12,3	2,89	11,6	3,25	11,0	3,65	10,3	4,09	9,65	4,58
	13	14,1	2,59	13,4	2,92	12,8	3,29	12,1	3,70	11,3	4,15	10,6	4,65
	15	14,9	2,60	14,2	2,93	13,5	3,31	12,8	3,73	12,0	4,20	11,3	4,70
	18	16,2	2,61	15,5	2,96	14,7	3,35	13,9	3,79	13,1	4,26	12,3	4,78
ERHQ14	7	14,5	3,85	13,9	4,27	13,2	4,75	12,5	5,29	11,7	5,90	11,1	5,92
	10	16,0	3,94	15,3	4,37	14,6	4,86	13,7	5,42	12,9	6,04	11,2	5,46
	13	17,6	4,02	16,8	4,47	15,9	4,98	15,0	5,55	14,1	6,18	11,9	5,04
	15	18,6	4,08	17,8	4,54	16,9	5,06	15,9	5,64	14,9	6,28	12,2	4,79
	18	20,2	4,17	19,3	4,65	18,4	5,18	17,3	5,78	16,2	6,44	12,9	4,42
ERHQ16	7	22,5	4,29	21,5	4,80	20,4	5,36	19,3	5,98	17,0	6,75	15,1	5,92
	10	23,3	4,37	22,2	4,84	21,0	5,37	19,7	5,95	17,0	6,59	15,1	5,92
	13	23,3	4,48	22,2	4,97	21,0	5,51	19,7	6,11	17,0	6,75	15,1	5,92
	15	23,3	4,60	22,2	5,10	21,0	5,66	19,7	6,27	17,0	6,93	15,1	5,92
	18	23,3	4,97	22,2	5,52	21,0	6,12	19,7	6,77	17,0	7,04	15,1	5,92

#### Symbols

- CC Cooling capacity at maximum operating frequency, measured acc. Eurovent 6/C/003-2006 [kW]
- HC Heating capacity at maximum operating frequency, measured acc. Eurovent 6/C/003-2006 [kW]
- PI Power input [kW], measured acc. Eurovent 6/C/003-2006 [kW]
- LWE Leaving Water Evaporator temperature [°C]
- LWC Leaving Water Condensor temperature [°C]
- Tamb Ambient temperature [°C] RH=85%

#### Conditions

1. Cooling capacity  
Capacity is according to Eurovent rating standard 6/C/003-2006 and valid for chilled water range D1 = 3-8°C
2. Heating capacity  
Capacity is according to Eurovent rating standard 6/C/003-2006 and valid for chilled water range D1 = 3-8°C
3. Power input  
Power input is total input of indoor and outdoor unit, except the circulation pump; according to Eurovent rating standard 6/C/003-2006  
Pump power input to be added=90W (according EN14511)

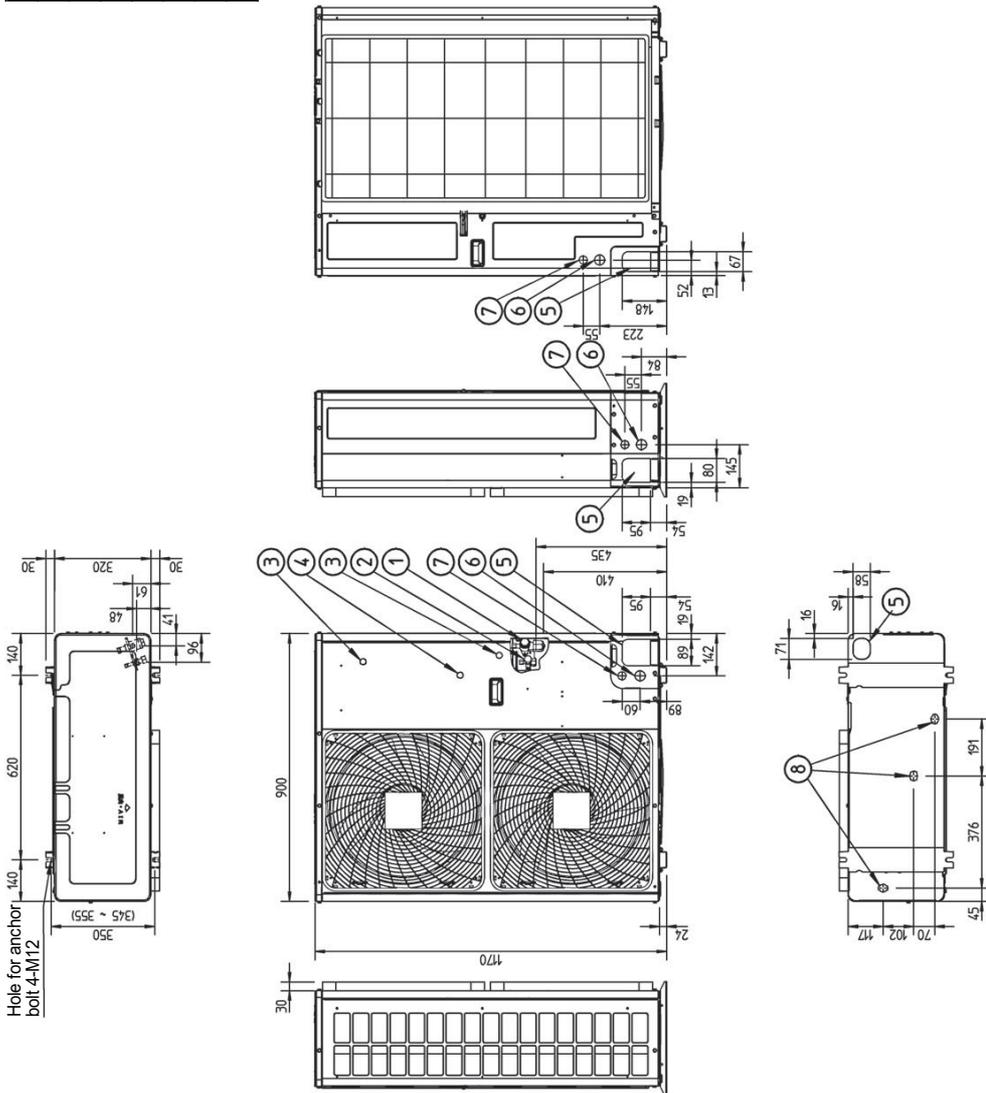
3TW57752-1

## 4 Dimensional drawing & centre of gravity

### 4 - 1 Dimensional drawing

2  
4

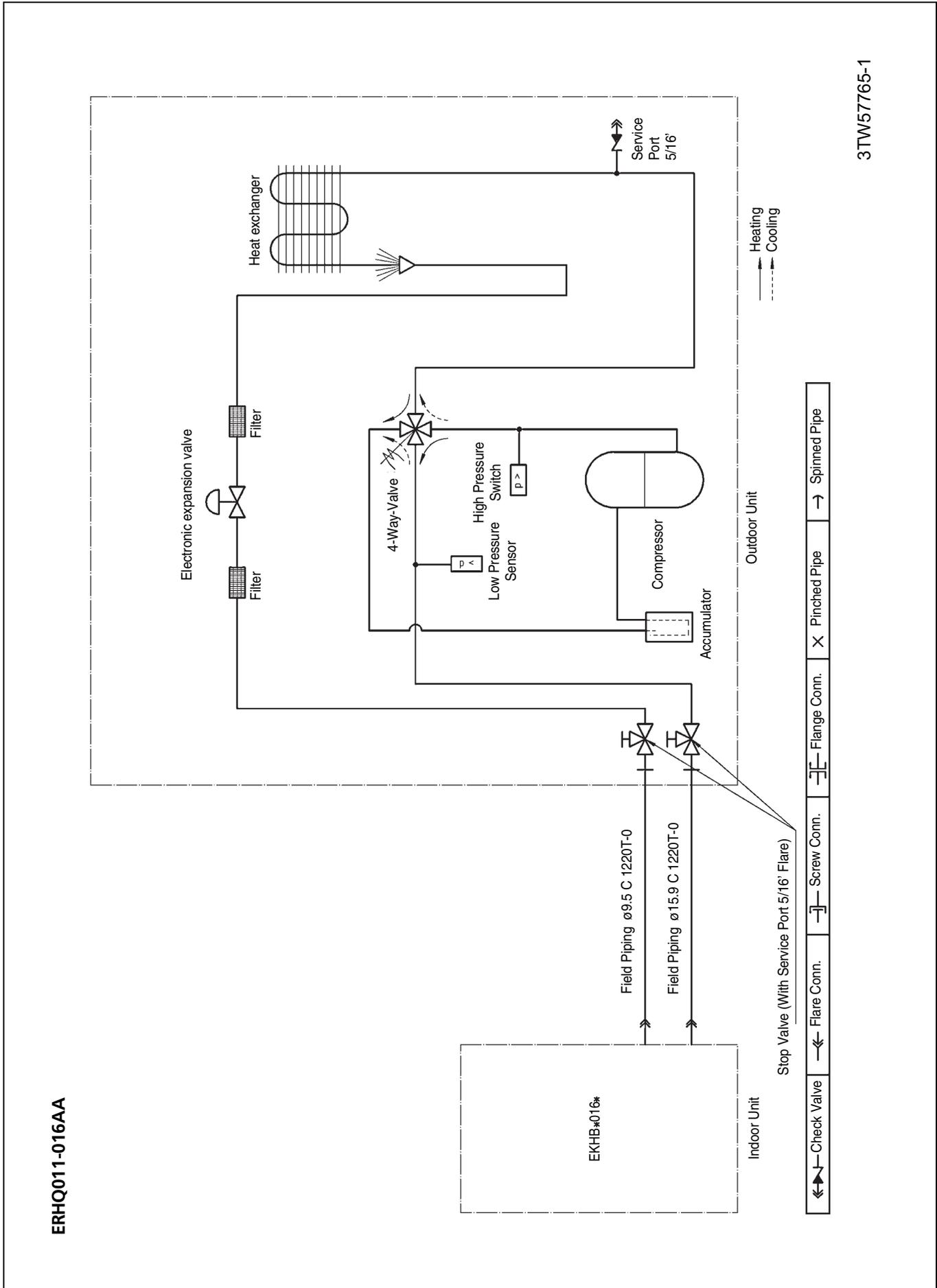
1	Gas pipe connection Ø15.9 flare
2	Liquid pipe connection Ø9.5 flare
3	Service port (in the unit)
4	Grounding terminal M5 (in switch box)
5	Refrigerant piping intake
6	Power supply wiring intake (knock out hole Ø34)
7	control wiring intake (knock out hole Ø27)
8	Drain outlet



ERHQ11-016AA

3TW57764-1

# 5 Piping diagram

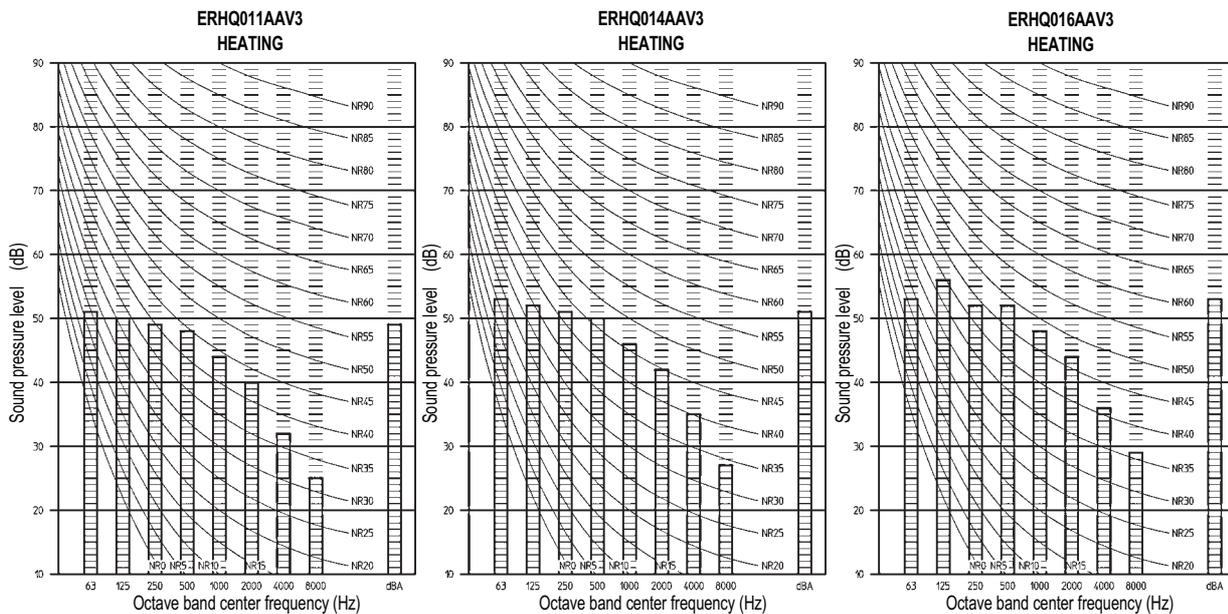


## 6 Sound data

### 6 - 1 Sound pressure spectrum

2  
6

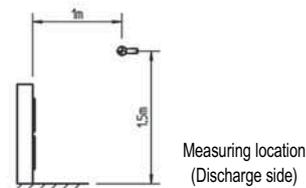
ERHQ11-016AA



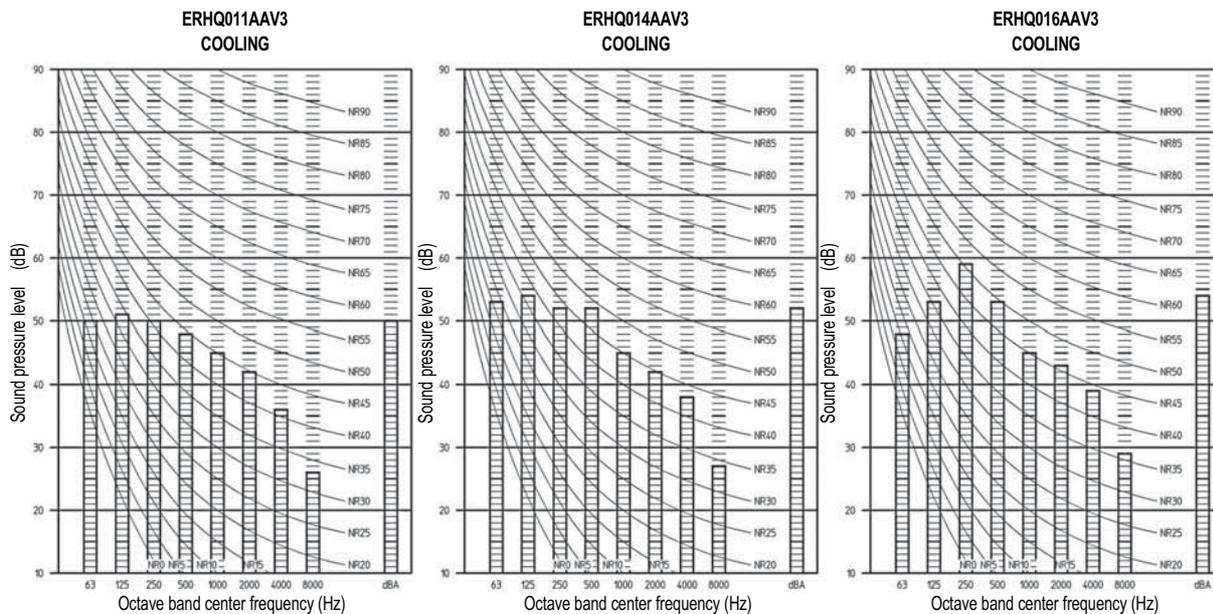
3TW57767-2A

#### NOTES

- 1 Data is valid at free field condition (measured in a semi-anechoic room).
- 2 dBA = A-Weighted sound pressure level. (A-scale according to IEC)
- 3 Reference acoustic pressure 0dB = 20μPa.
- 4 If sound is measured under actual installation conditions, the measured value will be higher due to environmental noise and sound reflections.



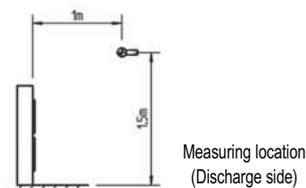
ERHQ11-016AA



3TW57767-1A

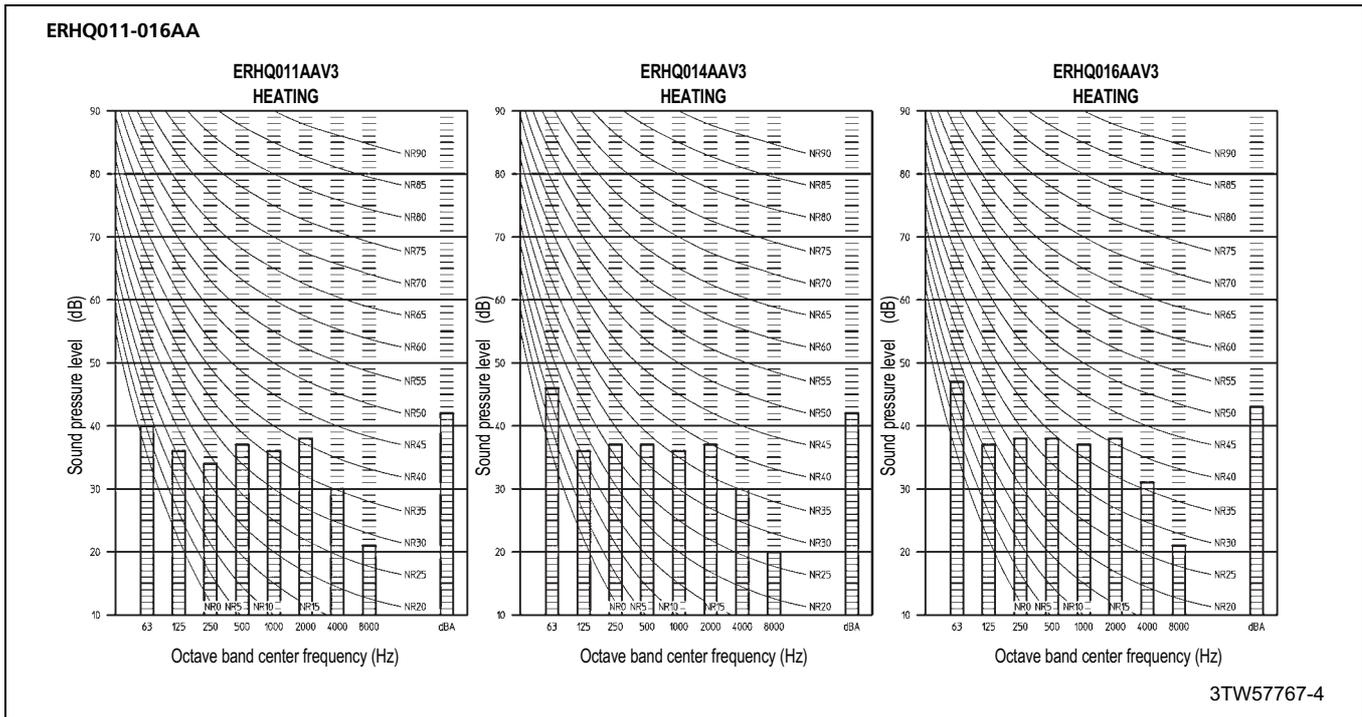
#### NOTES

- 1 Data is valid at free field condition (measured in a semi-anechoic room).
- 2 dBA = A-Weighted sound pressure level. (A-scale according to IEC)
- 3 Reference acoustic pressure 0dB = 20μPa.
- 4 If sound is measured under actual installation conditions, the measured value will be higher due to environmental noise and sound reflections.



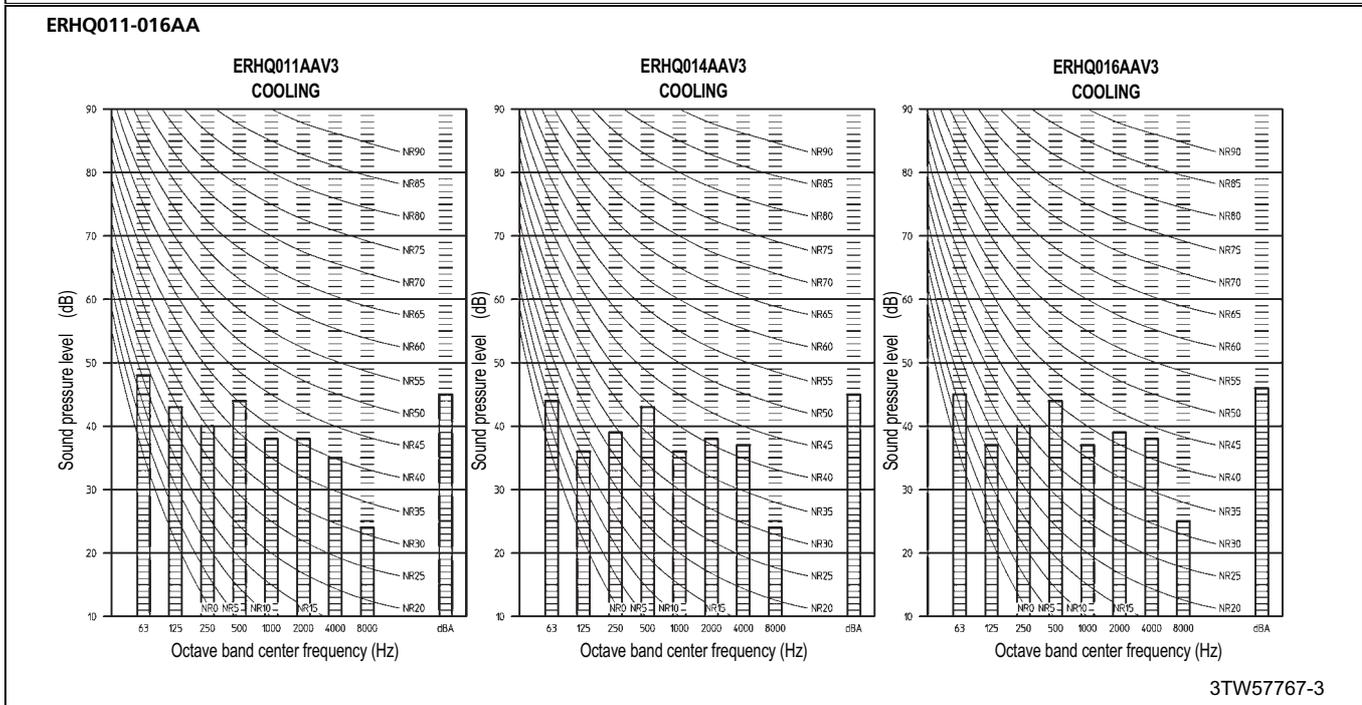
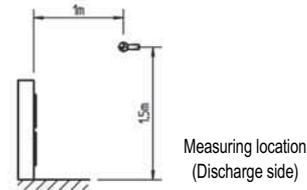
# 6 Sound data

## 6 - 1 Sound pressure spectrum



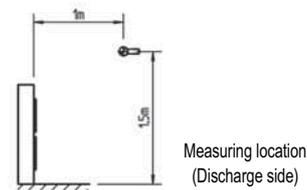
**NOTES**

- 1 Data is valid at free field condition (measured in a semi-anechoic room).
- 2 dBA = A-Weighted sound pressure level. (A-scale according to IEC)
- 3 Reference acoustic pressure 0dB = 20μPa.
- 4 If sound is measured under actual installation conditions, the measured value will be higher due to environmental noise and sound reflections.



**NOTES**

- 1 Data is valid at free field condition (measured in a semi-anechoic room).
- 2 dBA = A-Weighted sound pressure level. (A-scale according to IEC)
- 3 Reference acoustic pressure 0dB = 20μPa.
- 4 If sound is measured under actual installation conditions, the measured value will be higher due to environmental noise and sound reflections.





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# 1 Features

- Cost effective alternative to a fossil fuel boiler
- Low energy bills and low CO2 emissions
- Easy to install
- Total solution for year round comfort

2

1



## 2 Specifications

2-1 TECHNICAL SPECIFICATIONS				EKHBH016AB	EKHBX016AB	
Outdoor units				ERHQ011AAV3		
Nominal input (Indoor only)			W	230		
Casing	Colour			RAL9010		
	Material			Epoxy polyester painted galvanised steel		
Dimensions	Packing	Height	mm	1225		
		Width	mm	660		
		Depth	mm	610		
	Unit	Height (1)	mm	922		
		Width	mm	502		
		Depth	mm	361		
Weight	Machine weight		kg	55		
	Gross Weight		kg	65		
Packing	Material			EPS		
	Material			Wood		
	Material			Carton		
	Material			PP (Straps)		
	Weight		kg	10		
Main components	Pump	Type		Water cooled		
		Nr. of speed		2		
		Nominal ESP unit	Heating	kPa	52.5	
			Cooling	kPa	55.9	
		Power input		W	210	
	Water side Heat ex-changer	Type		Brazen plate		
		Qty		1		
		Water volume		l	1.01	
		Water flow rate Min.		l/min	16	
		Water flow rate Nom.	Heating (3)	l/min	32.1	
			Cooling (2)	l/min	28.7	
		Water flow rate Max.		l/min	58	
	Insulation material			Polyurethane foam		
	Expansion vessel	Volume		l	10	
		Max. water pressure		bar	3	
		Pre pressure		bar	1	
	Water filter	Diameter perforations		mm	1	
		Material			Brass	
	Water circuit	Piping connections diameter		inch	1-1/4" MBSP	
		Piping		inch	1-1/4"	
Safety valve		bar	3			
Manometer			Yes			
Drain valve / Fill valve			Yes			
Shut off valve			Yes			
Air purge valve			Yes			
Total water volume (6)		l	5.5			
Refrigerant Circuit	Gas side diameter		mm	15.9		
	Liquid side diameter		mm	9.52		
Sound Level	Sound Pressure (5)		dBA	28		
Operation range	Ambient	Heating	°C	-20-35		
		Cooling	°C	10-46		
	Waterside	Heating (5)	°C	15-55		
		Cooling	°C	5-22		
Outdoor units				ERHQ014AAV3		
Nominal input (Indoor only)			W	230		
Casing	Colour			RAL9010		
	Material			Epoxy polyester painted galvanised steel		

## 2 Specifications

2-1 TECHNICAL SPECIFICATIONS				EKHBH016AB		EKHBX016AB		
Dimensions	Packing	Height	mm			1225		
		Width	mm			660		
		Depth	mm			610		
	Unit	Height (1)	mm			922		
		Width	mm			502		
		Depth	mm			361		
Weight	Machine weight		kg			55		
	Gross Weight		kg			65		
Packing	Material						EPS	
	Material						Wood	
	Material						Carton	
	Material						PP (Straps)	
	Weight		kg					10
Main components	Pump	Type				Water cooled		
		Nr. of speed				2		
		Nominal ESP unit	Heating	kPa			43.5	
			Cooling	kPa			49.1	
		Power input		W			210	
	Water side Heat exchanger	Type						Brazed plate
		Qty				1		
		Water volume		l			1.01	
		Water flow rate Min.		l/min	16			
		Water flow rate Nom.	Heating (3)	l/min			40.1	
			Cooling (2)	l/min			35.8	
		Water flow rate Max.		l/min	58			
	Insulation material						Polyurethane foam	
	Expansion vessel	Volume		l			10	
		Max. water pressure		bar			3	
		Pre pressure		bar			1	
	Water filter	Diameter perforations		mm			1	
Material						Brass		
Water circuit	Piping connections diameter		inch			1-1/4" MBSP		
	Piping		inch			1-1/4"		
	Safety valve		bar			3		
	Manometer						Yes	
	Drain valve / Fill valve						Yes	
	Shut off valve						Yes	
	Air purge valve						Yes	
	Total water volume (6)		l			5.5		
Refrigerant Circuit	Gas side diameter		mm			15.9		
	Liquid side diameter		mm			9.52		
Sound Level	Sound Pressure (5)		dBA			28		
Operation range	Ambient	Heating	°C			-20~35		
		Cooling	°C			10~46		
	Waterside	Heating (5)	°C			15~55		
		Cooling	°C			5~22		
Outdoor units				ERHQ016AAV3				
Nominal input (Indoor only)			W	230				
Casing	Colour				RAL9010			
	Material						Epoxy polyester painted galvanised steel	
Dimensions	Packing	Height	mm			1225		
		Width	mm			660		
		Depth	mm			610		
	Unit	Height (1)	mm			922		
		Width	mm			502		
		Depth	mm			361		

## 2 Specifications

2-1 TECHNICAL SPECIFICATIONS				EKHBH016AB	EKHBX016AB	
Weight	Machine weight		kg	55		
	Gross Weight		kg	65		
Packing	Material			EPS		
	Material			Wood		
	Material			Carton		
	Material			PP (Straps)		
	Weight		kg	10		
Main components	Pump	Type		Water cooled		
		Nr. of speed		2		
		Nominal ESP unit	Heating	kPa	35.0	
			Cooling	kPa	46.8	
		Power input		W	210	
	Water side Heat exchanger	Type		Brazed plate		
		Qty		1		
		Water volume		l	1.01	
		Water flow rate Min.		l/min	16	
		Water flow rate Nom.	Heating (3)	l/min	45.9	
			Cooling (2)	l/min	37.6	
		Water flow rate Max.		l/min	58	
	Insulation material		Polyurethane foam			
	Expansion vessel	Volume		l	10	
		Max. water pressure		bar	3	
		Pre pressure		bar	1	
	Water filter	Diameter perforations		mm	1	
Material		Brass				
Water circuit	Piping connections diameter		inch	1-1/4" MBSP		
	Piping		inch	1-1/4"		
	Safety valve		bar	3		
	Manometer		Yes			
	Drain valve / Fill valve		Yes			
	Shut off valve		Yes			
	Air purge valve		Yes			
	Total water volume (6)		l	5.5		
Refrigerant Circuit	Gas side diameter		mm	15.9		
	Liquid side diameter		mm	9.52		
Sound Level	Sound Pressure (5)		dBA	28		
Operation range	Ambient	Heating	°C	-20-35		
		Cooling	°C	10-46		
	Waterside	Heating (5)	°C	15-55		
		Cooling	°C	5-22		
Notes	(1) With option kit EKHBDP installed: Height=936mm					
Notes	(2) Tamb 35°C - LWE 7°C (DT=5°C)					
Notes	(3) DB/WB 7°C/6°C-LWC 35°C(DT=5°C)					
Notes	(4) The sound pressure level is measured via a microphone at 1m from the unit. It is a relative value, depending on the distance and acoustic environment. The sound pressure level mentioned is valid for pump medium speed.					
Notes	(5) 15°C-25°C: BUH only, no Heatpump operation=during commissioning.					
Notes	(6) Including piping+PHE+backup heater/excluding expansion vessel.					

## 2 Specifications

2-2 ELECTRICAL SPECIFICATIONS				EKHBH016AB	EKHBX016AB
Electric heater	Type			3V3	
	Power Supply	Phase		1~	
		Frequency	Hz	50	
		Voltage	V	230	
	Current	Running Current	A	13	
	Voltage Range	Minimum		-10%	
		Maximum		+10%	
	Wiring Connections	For power supply backup heater	Quantity of wires	3G	
Type of wires			Select diameter and type according to national and local regulations		
Electric heater	Type			6V3	
	Power Supply	Phase		1~	
		Frequency	Hz	50	
		Voltage	V	230	
	Current	Running Current	A	26	
	Voltage Range	Minimum		-10%	
		Maximum		+10%	
	Wiring Connections	For power supply backup heater	Quantity of wires	3G	
Type of wires			Select diameter and type according to national and local regulations		
Electric heater	Type			6WN	
	Power Supply	Phase		3~	
		Frequency	Hz	50	
		Voltage	V	400	
	Current	Running Current	A	8.7	
	Voltage Range	Minimum		-10%	
		Maximum		+10%	
	Wiring Connections	For power supply backup heater	Quantity of wires	4G	
Type of wires			Select diameter and type according to national and local regulations		
Electric heater	Type			6T1	
	Power Supply	Phase		3~	
		Frequency	Hz	50	
		Voltage	V	230	
	Current	Running Current	A	15.1	
	Voltage Range	Minimum		-10%	
		Maximum		+10%	
	Wiring Connections	For power supply backup heater	Quantity of wires	4G	
Type of wires			Select diameter and type according to national and local regulations		
Electric heater	Type			9WN	
	Power Supply	Phase		3~	
		Frequency	Hz	50	
		Voltage	V	400	
	Current	Running Current	A	13	
	Voltage Range	Minimum		-10%	
		Maximum		+10%	
	Wiring Connections	For power supply backup heater	Quantity of wires	4G	
Type of wires			Select diameter and type according to national and local regulations		

## 2 Specifications

2-2 ELECTRICAL SPECIFICATIONS				EKHBH016AB	EKHBX016AB
Electric heater	Type			9T1	
	Power Supply	Phase		3~	
		Frequency	Hz	50	
		Voltage	V	230	
	Current	Running Current	A	22.6	
	Voltage Range	Minimum		-10%	
		Maximum		+10%	
	Wiring Connections	For power supply backup heater	Quantity of wires	4G	
Type of wires			Select diameter and type according to national and local regulations		
Wiring Connections	Connection type			For power supply connection to Optional Warm Water Tank + Q2L	
	Quantity of wires			3G	
	Type of wires			Select diameter and type according to national and local regulations	
				For more details of the voltage range and current refer to installation manual EKHBH/X016AB*	
	Connection type			For connection with R5T	
	Quantity of wires			Wire included in option EKHWS*	
	Type of wires			Wire included in option EKHWS*	
	Connection type			For connection with A3P	
	Quantity of wires			Depends on thermostat type, refer to installation manual EKHBH/X016AB*	
	Type of wires			Select diameter and type according to national and local regulations	
				Voltage: 230V/Maximum current: 100mA/Minimum 0,75 mm <sup>2</sup>	
	Connection type			For connection with M2S	
	Quantity of wires			3G	
	Type of wires			Select diameter and type according to national and local regulations	
				Voltage: 230V/Maximum current: 100mA/Minimum 0,75 mm <sup>2</sup>	
	Connection type			For connection with M3S	
	Quantity of wires			3G or 4G	
	Type of wires			Select diameter and type according to national and local regulations	
			Voltage: 230V/Maximum current: 100mA/Minimum 0,75 mm <sup>2</sup>		

### 3 Options

2  
3

Factory mounted optional equipment for EKHB(H/X)016AB\*\*

Reference	Description	B3V3		B6V3		B6WN		B6T1		B9WN		B9T1	
		○	○	—	—	—	—	—	—	—	—	—	—
3V3	Back up heater 3kW 1~230 V	○	○	—	—	—	—	—	—	—	—	—	—
6V3	Back up heater 6kW 1~230 V	—	—	○	○	—	—	—	—	—	—	—	—
6W1	Back up heater 6kW 3~400 V	—	—	—	—	○	○	—	—	—	—	—	—
6T1	Back up heater 6kW 3~230 V	—	—	—	—	—	—	○	○	—	—	—	—
9W1	Back up heater 9kW 3~400 V	—	—	—	—	—	—	—	—	○	○	—	—
9T1	Back up heater 9kW 3~230 V	—	—	—	—	—	—	—	—	—	—	○	○

Outdoor combination table for EKHB(H/X)016AB\*\*

		ERHQ011AAV3	ERHQ014AAV3	ERHQ016AAV3
EKHBH016AB*	Heating only indoor unit	○	○	○
EKHBX016AB*	Reversible indoor unit	○	○	○

Kit availability for ERHQ011-016AA\*\*

		ERHQ011AAV3	ERHQ014AAV3	ERHQ016AAV3
EKBPHT16	Bottom plate heater (1)	○	○	○

Kit availability for EKHB(H/X)016AB\*

Reference	Description	B3V3		B6V3		B6WN		B6T1		B9WN		B9T1	
		○	○	○	○	○	○	○	○	○	○	○	○
EKHS150A3V3	Domestic hot water tank 150l 1-230V	○	○	○	○	○ (*)	○ (*)	○	○	○ (*)	○ (*)	○	○
EKHS200A3V3	Domestic hot water tank 200l 1-230V	○	○	○	○	○ (*)	○ (*)	○	○	○ (*)	○ (*)	○	○
EKHS300A3V3	Domestic hot water tank 300l 1-230V	○	○	○	○	○ (*)	○ (*)	○	○	○ (*)	○ (*)	○	○
EKHS200A3Z2	Domestic hot water tank 200l 2-400V	—	—	—	—	○	○	—	—	○	○	—	—
EKHS300A3Z2	Domestic hot water tank 300l 2-400V	—	—	—	—	○	○	—	—	○	○	—	—
EKHSU150A3V3	Domestic hot water tank 150l 1-230V	○	○	○	○	○ (*)	○ (*)	○	○	○ (*)	○ (*)	○	○
EKHSU200A3V3	Domestic hot water tank 200l 1-230V	○	○	○	○	○ (*)	○ (*)	○	○	○ (*)	○ (*)	○	○
EKHSU300A3V3	Domestic hot water tank 300l 1-230V	○	○	○	○	○ (*)	○ (*)	○	○	○ (*)	○ (*)	○	○
EKHBDP	Option kit for condensate free cooling operation	—	○	—	○	—	○	—	○	—	○	—	○
EKRP1HB	Digital I/O PCB (2)	○	○	○	○	○	○	○	○	○	○	○	○

(\*) If neutral line is available

Kit available for EKHS\*

Reference	Description	15A3V3			200A3V3/Z2			300A3V3/Z2		
		—	—	—	○	○	○	○	○	○
EKUJWA	Option kit for UK EKHSU150-300V3	—	—	—	○	○	○	—	—	—
EKSOLHWAV1	Solar kit (3)	○	○	○	○	○	○	○	○	○
EKWBSWW150	Wall bracket for EKSWW150V3	○	—	—	○	—	—	—	—	—

Remarks: Other combinations are not guaranteed

(1) Heater tape that can be fixed on the bottom plate to prevent ice formation.

(2) Address card that provides two additional output connections (remote alarm and remote ON/OFF signalisation). In EKSOLHWAV1, the same digital I/O PCB as for EKR1HB is already included.

(3) Kit to be mounted on domestic hot water tank that provides connection to solar panels for additional water heating.

3TW57819-2

# 4 Dimensional drawing & centre of gravity

## 4 - 1 Dimensional drawing

### EKHBH016AB

**Minimum space for service & ventilation**

- Center of gravity
- ① Pump + switch for speed setting
- ② Remocon
- ③ Water IN connection: 1 1/4" M BSP
- ④ Water OUT connection: 1 1/4" M BSP
- ⑤ Power supply intake (+ sanitary warm water tank)
- ⑥ Air purge
- ⑦ Expansion vessel+⑧nipple+⑨Drain
- ⑩ Blow off valve
- ⑪ Blow off drain (flexible hose φ 20)
- ⑫ Pressure gauge
- ⑬ Water filter
- ⑭ Suction pipe connection φ 15.9 flare connection
- ⑮ Liquid pipe connection φ 9.52 flare connection
- ⑯ Shut off valves with drain/fill valve (accessory delivered with unit)
- ⑰ Holes for fixation
- ⑱ Switchbox terminals
- ⑲ Switchbox terminals option sanitary warm water tank
- ⓪ Wallbracket

3TW57754-1A

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### EKHBX016AB

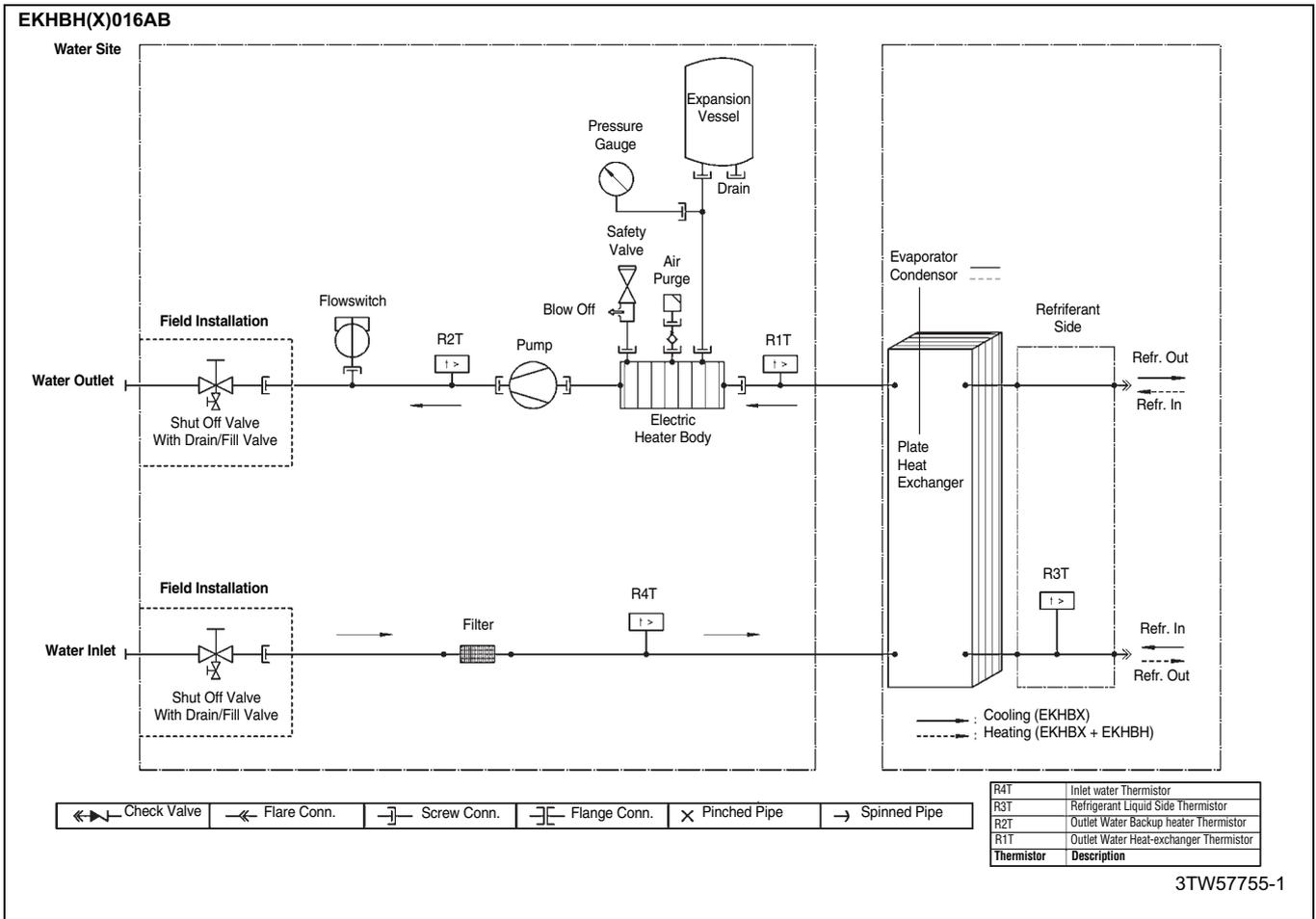
**Minimum space for service & ventilation**

- Center of gravity
- ① Pump + switch for speed setting
- ② Remocon
- ③ Water IN connection: 1 1/4" M BSP
- ④ Water OUT connection: 1 1/4" M BSP
- ⑤ Power supply intake (+ sanitary warm water tank)
- ⑥ Air purge
- ⑦ Expansion vessel+⑧nipple+⑨Drain
- ⑩ Blow off valve
- ⑪ Blow off drain (flexible hose φ 20)
- ⑫ Pressure gauge
- ⑬ Water filter
- ⑭ Suction pipe connection φ 15.9 flare connection
- ⑮ Liquid pipe connection φ 9.52 flare connection
- ⑯ Shut off valves with drain/fill valve (accessory delivered with unit)
- ⑰ Holes for fixation
- ⑱ Switchbox terminals
- ⑲ Switchbox terminals option sanitary warm water tank
- ⓪ Wallbracket

3TW57754-2A

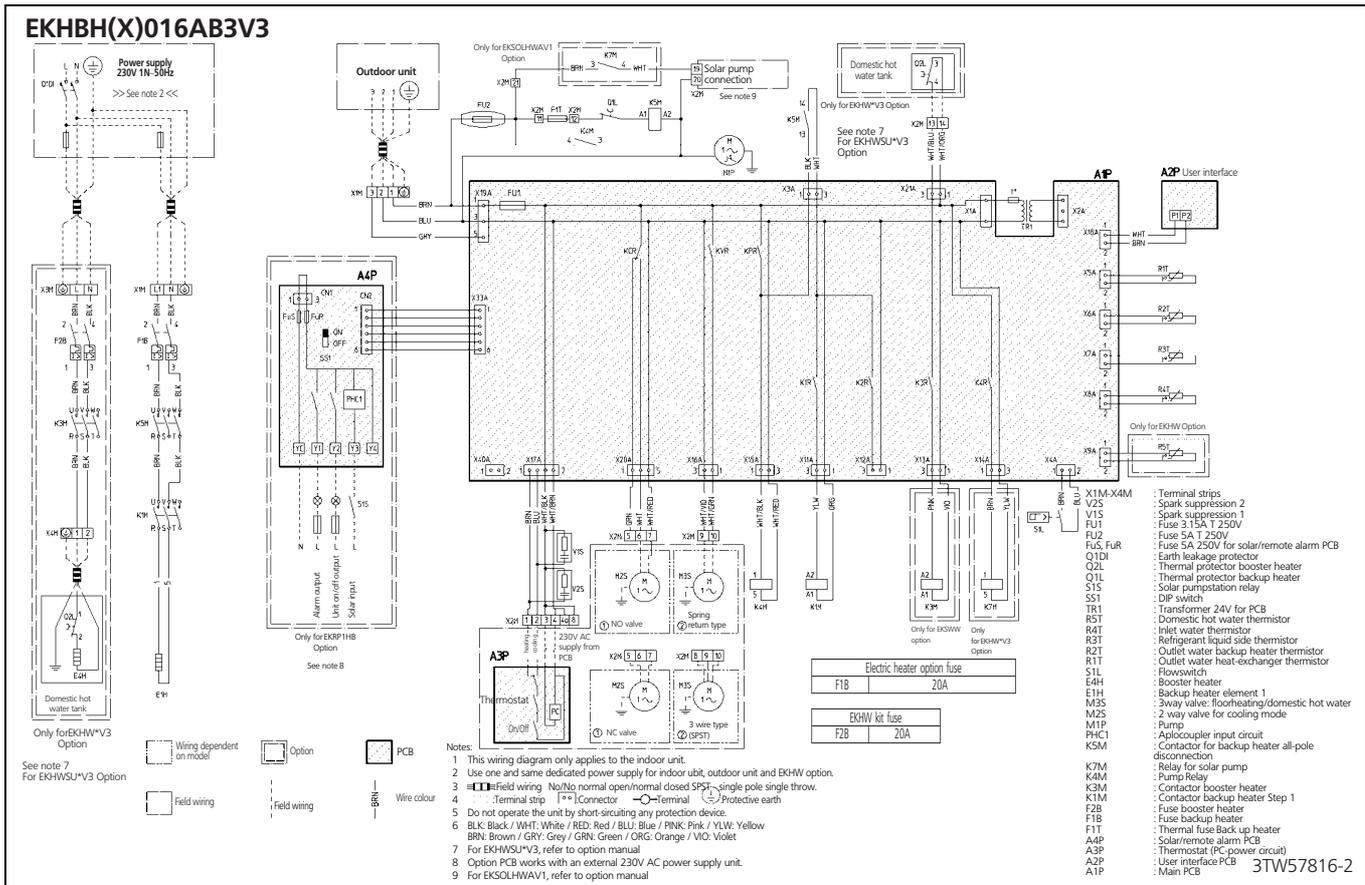
# 5 Piping diagram

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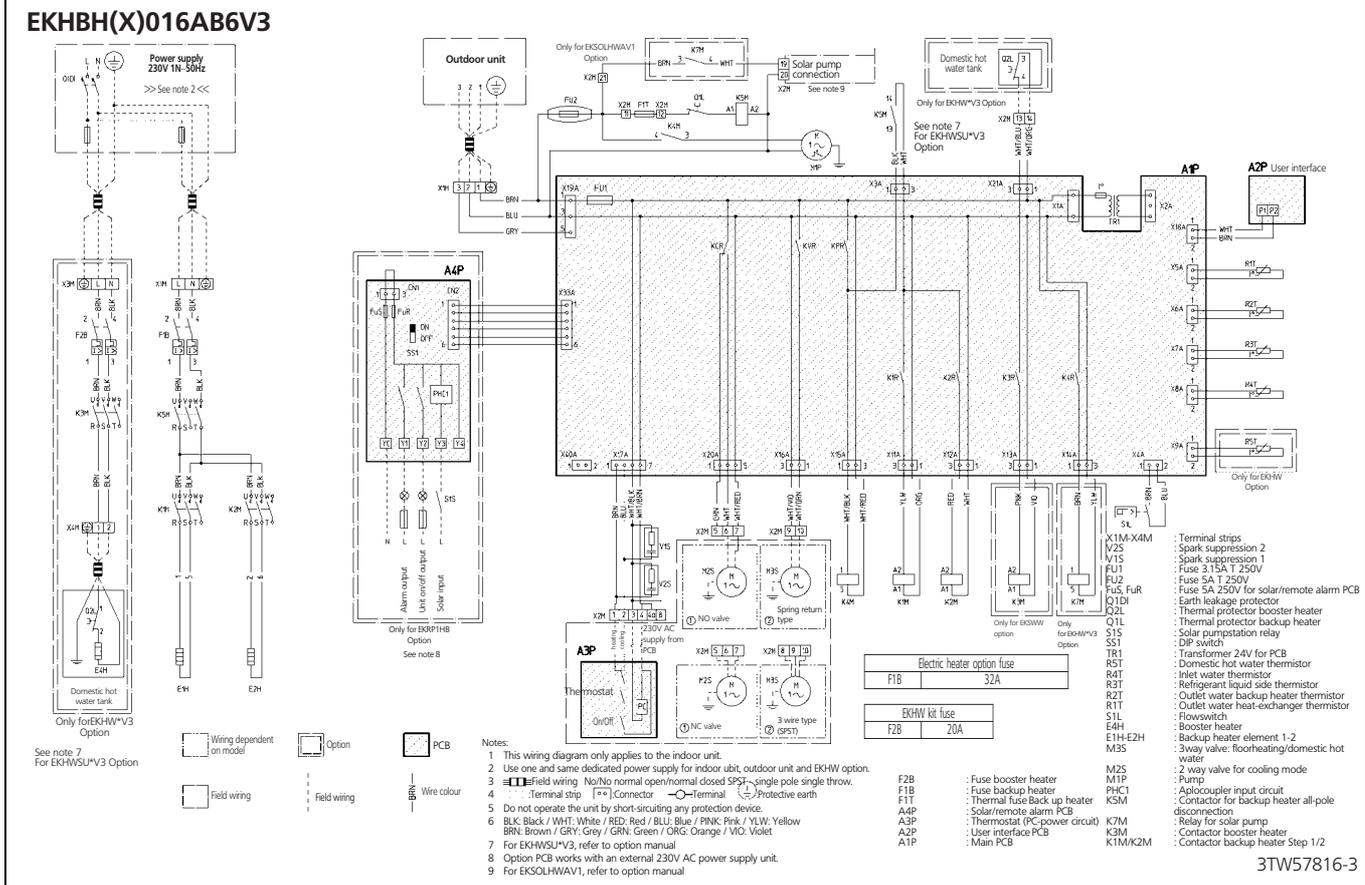


# 6 Wiring diagram

## 6 - 1 Wiring diagram



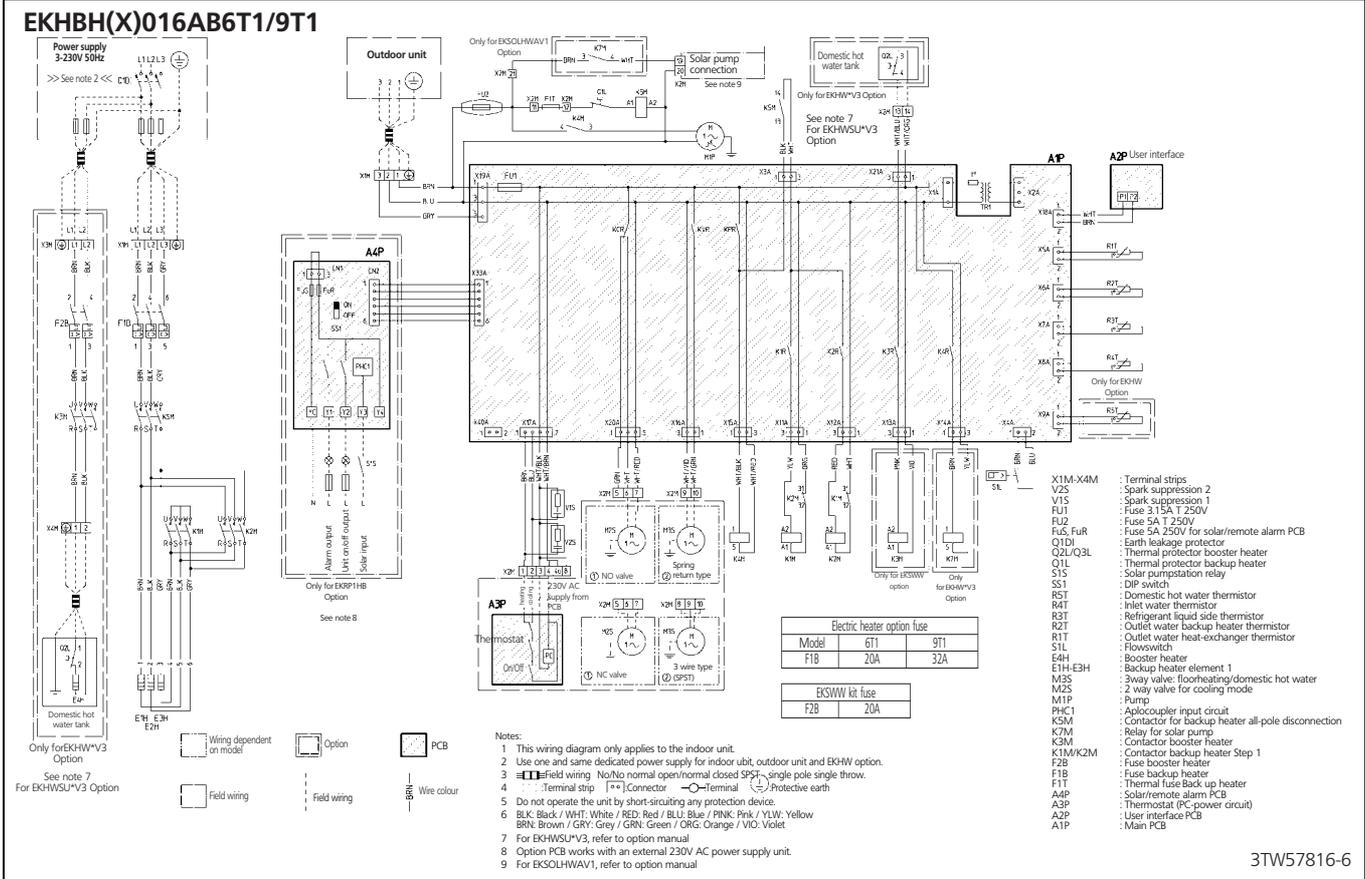
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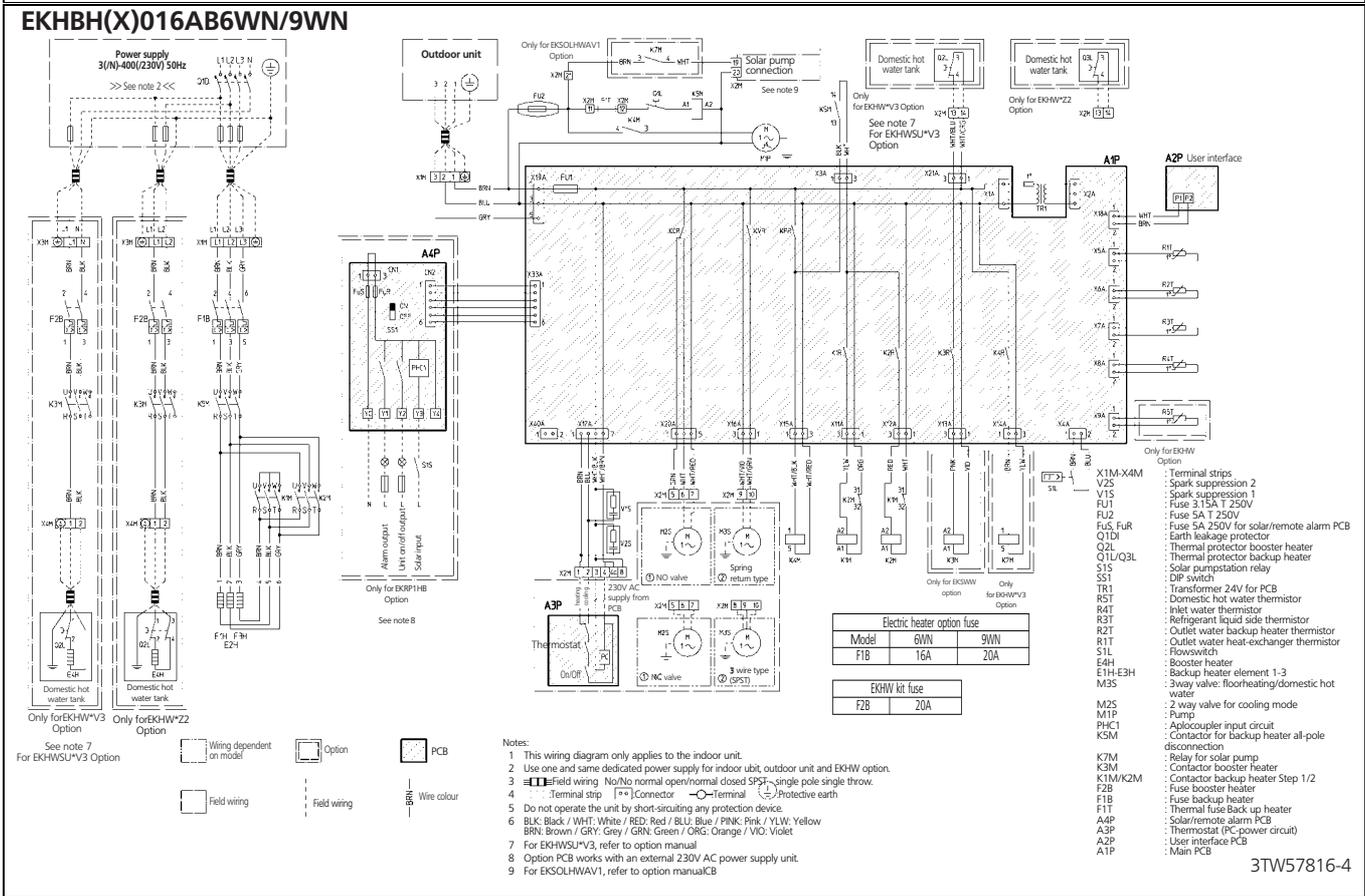
# 6 Wiring diagram

## 6 - 1 Wiring diagram

2  
6



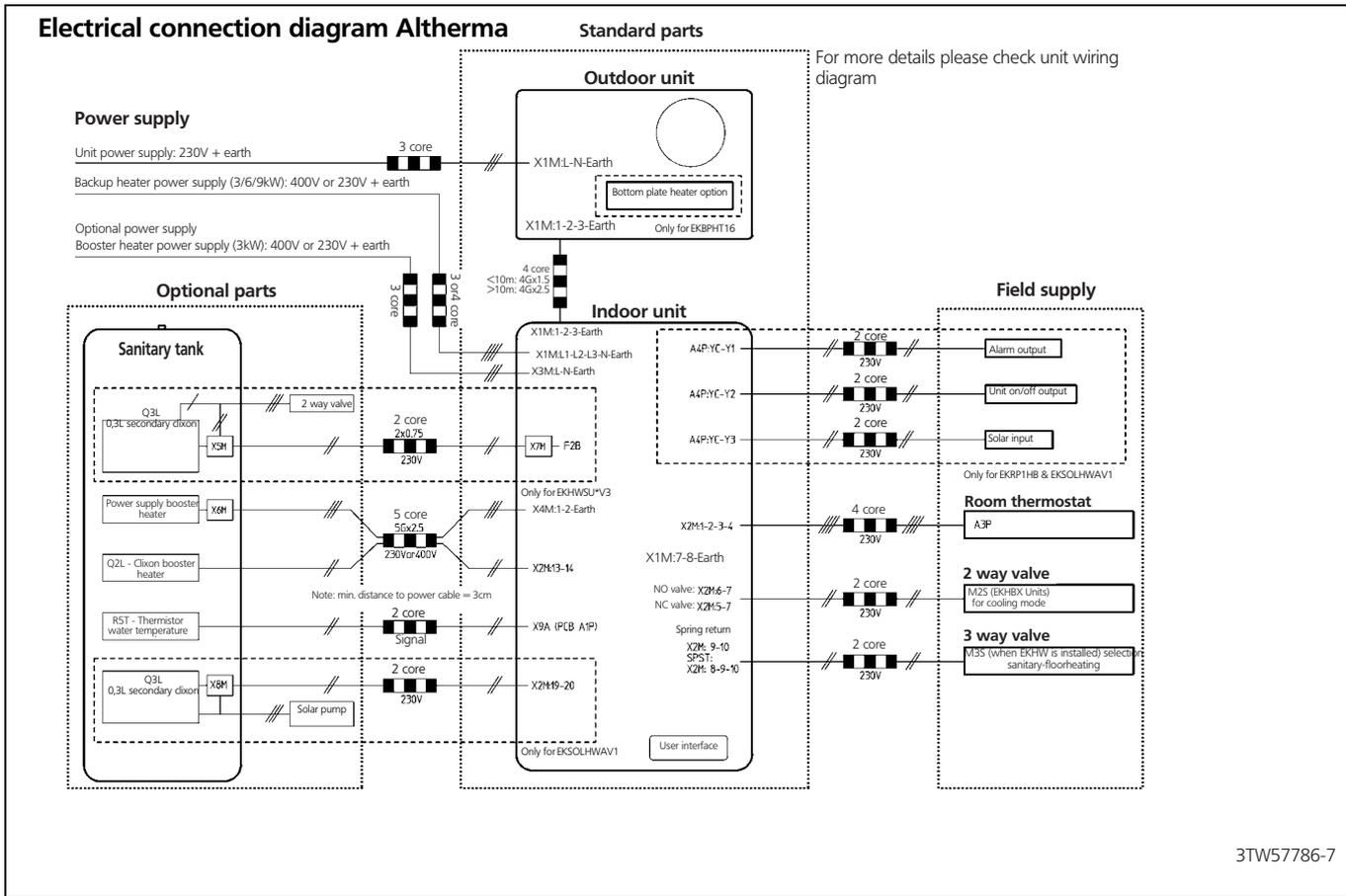
3TW57816-6



3TW57816-4

# 6 Wiring diagram

## 6 - 2 External connection diagram



3TW57786-7

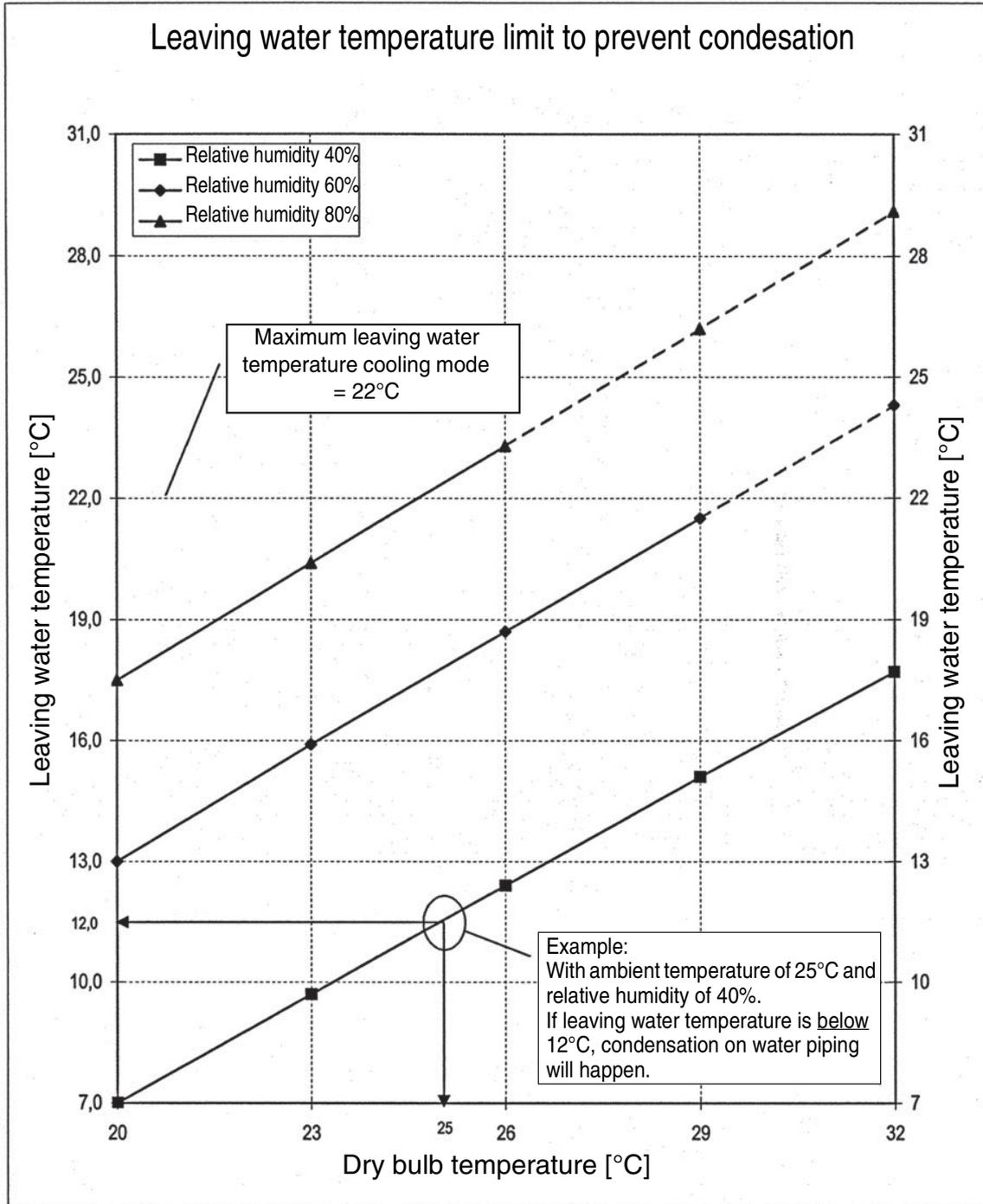
## 7 Installation

### 7 - 1 Option necessity instruction

# EKHBDP

2

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1. Refer to psychometric chart for more information.
2. If condensation is expected, installation of EKHBDP - drainpan kit must be considered.

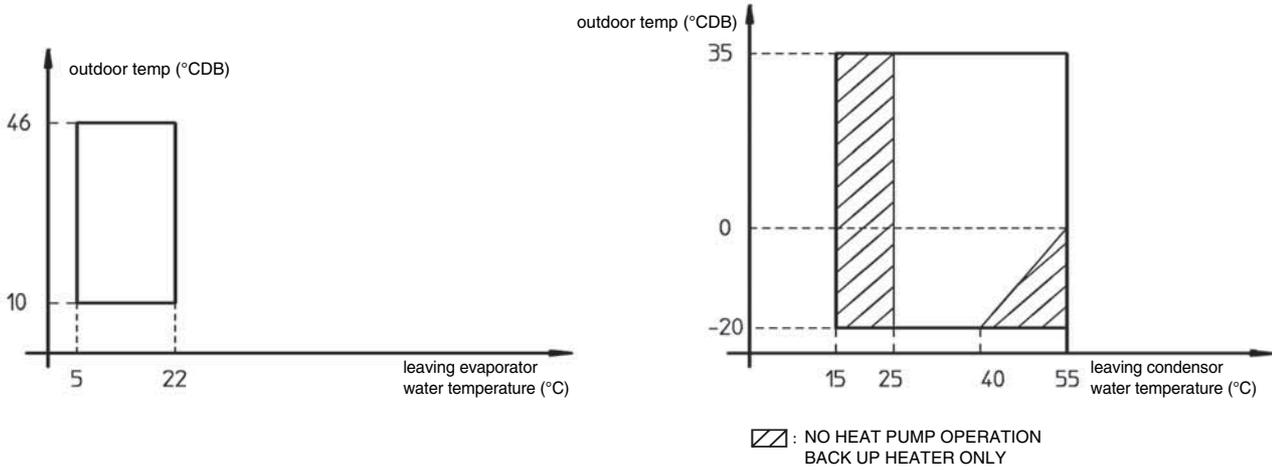
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# 8 Operation range

**EKHBH(X)016AB**  
**ERHQ011-016AA**

COOLING MODE

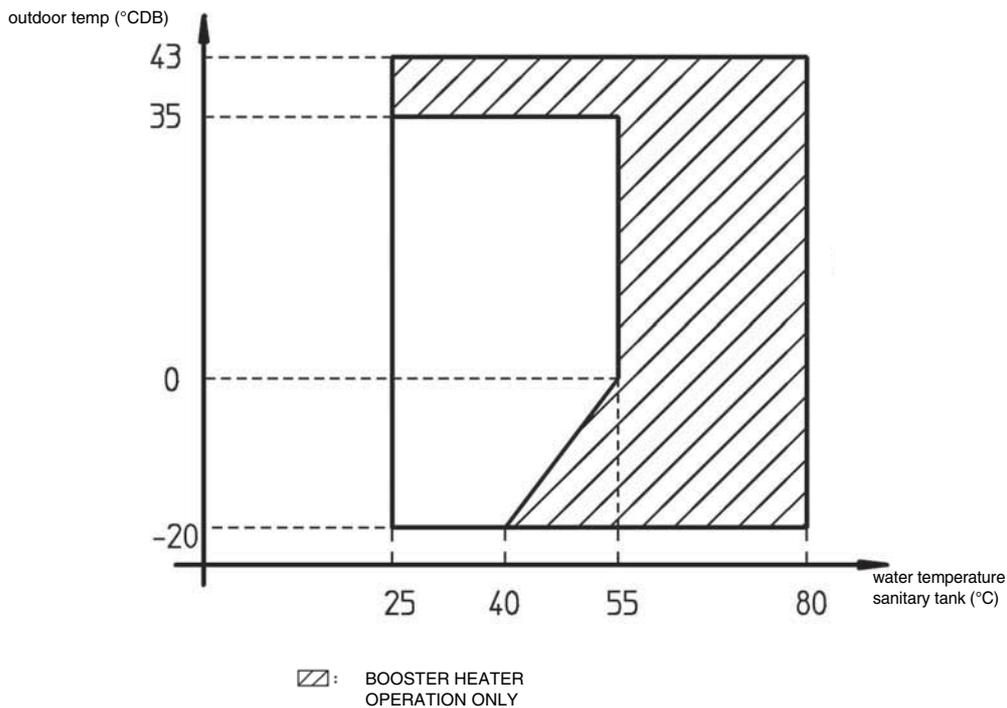
HEATING MODE



4TW57753-1A

**EKHW**

DOMESTIC HOT MODE

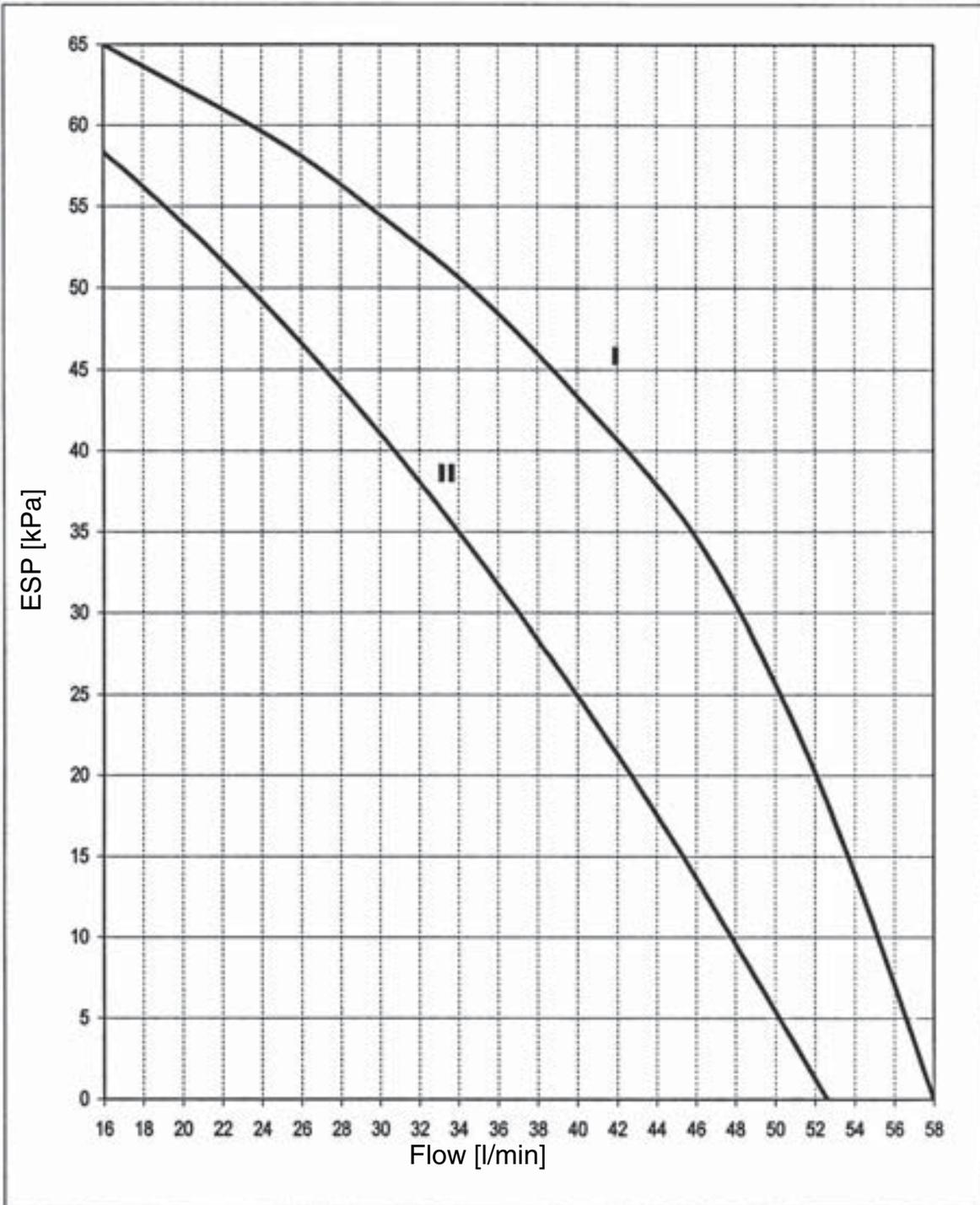


4TW57753-1A

## 9 Hydraulic performance

### 9 - 1 Static pressure drop unit

# EKHBH(X)016



I high speed  
 II medium speed  
 ESP: external static pressure  
 Flow: waterflow through the unit

**Warning:**

1. Selecting a flow outside the curves can cause damage to or malfunction of the unit. See also minimum and maximum allowed water flowrange in the technical specifications.
2. Water quality must be according to EN directive EC 98/83 EC.

4TW57759-1

# technical data



Altherma

Part 3/3:  
EKHWS(U)  
EKSOL

**R-410A**



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# 1 Features

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1



## 2 Specifications

2-1 TECHNICAL SPECIFICATIONS			EKHWS150A 3V3	EKHWS200A 3V3	EKHWS300A 3V3	EKHWS200A 3Z2	EKHWS300A 3Z2	EKHWSU150 A3V3	EKHWSU200 A3V3	EKHWSU300 A3V3		
Casing	Colour		Neutral white									
	Material		Epoxy-coated mild steel									
Dimensions	Packing	Height	mm	950	1,200	1,650	1,200	1,650	1,040	1,280	1,735	
		Width	mm	600	600	600	600	600	600	600	600	
		Depth	mm	600	600	600	600	600	600	600	600	
	Unit	Height	mm	900	1,150	1,600	1,150	1,600	1,015	1,265	1,715	
		Width	mm	580	580	580	580	580	580	580	580	
		Depth	mm	580	580	580	580	580	580	580	580	
Weight	Unit		kg	37	45	59	45	59	38	46	60	
	Packed Unit		kg	40	49	64	49	64	41	50	65	
Packing	Material		EPS									
			Carton									
	Weight		kg	3	4	5	4	5	3	4	5	
Main components	Tank	Water volume	l	150	200	300	200	300	150	200	285	
		Material		Stainless steel (DIN 1.4521)								
		Max. temperature	°C	85	85	85	85	85	85	85	85	
		Max. water pressure	bar	10	10	10	10	10	10	10	10	
Tank	Insulation	Material		Polyurethane foam								
		Min. thickness	mm	40	40	40	40	40	40	40	40	
Main components	Heat exchanger	Quantity		1	1	1	1	1	1	1		
		Material		Duplex steel LDX 2101								
	Booster heater	Quantity		1	1	1	1	1	1	1	1	
		Capacity	kW	3	3	3	3	3	3	3	3	
Temperature sensor	Cable length		m	12	12	12	12	12	12	12		
Piping connections	Water inlet H/E Diameter		inch	3/4" FBSP								
	Water outlet H/E Diameter		inch	3/4" FBSP								
	Cold water in Diameter		inch	3/4" FBSP								
	Hot water out Diameter		inch	3/4" FBSP								

2-2 ELECTRICAL SPECIFICATIONS			EKHWS150A 3V3	EKHWS200A 3V3	EKHWS300A 3V3	EKHWS200A 3Z2	EKHWS300A 3Z2	EKHWSU150 A3V3	EKHWSU200 A3V3	EKHWSU300 A3V3	
Unit	Power Supply	Phase		1~	1~	1~	2~	2~	1~	1~	1~
		Frequency	Hz	50	50	50	50	50	50	50	50
		Voltage	V	230	230	230	400	400	230	230	230
	Nominal running current		A	13	13	13	7.5	7.5	13	13	13
	Fuse	Size	A	20	20	20	20	20	20	20	20
		Phase			1~	1~	1~	2~	2~	1~	1~

S

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### 3 Capacity tables

#### 3 - 1 Heating capacity tables

The ALTHERMA by Daikin heat-pump in combination with the optional domestic hot water tank provide hot water for household usage. The below mentioned data allow a proper selection of the domestic hot water tank size for maximum comfort and efficiency.

##### (1) Sanitary hot water volume:

The volume of hot water available for domestic sanitary usage depends on the physical volume of the sanitary tank, on the sanitary water setpoint temperature and on the temperature spreading in the tank. Therefore we define the equivalent hot water volume (EHVV).

##### Definition:

EHVV = the volume of hot water available for domestic sanitary usage at a temperature of 40°C. 40°C is considered a comfortable sanitary hot water temperature.

Tank	Setpoint temp. (°C)	EHVV (l)	Usage pattern		
			Modest	Medium	High
150L	55	110	-	-	-
	65	150	+	-	-
	75	175	++	+	-
200L	55	160	+	-	-
	65	200	++	+	-
	75	240	++	++	-
300L	55	295	++	++	-
	65	385	++	++	+
	75	435	++	++	++

Grade ++ Excessive availability of sanitary hot water.  
 + Sufficient availability of sanitary hot water.  
 - Temporary shortage of sanitary hot water can occur.

Usage pattern **Modest** Daily demand up to 220 l -> typical 2-persons usage pattern.  
**Medium** Daily demand up to 325 l -> typical 3 to 4 persons usage pattern.  
**High** Daily demand up to 550 l -> 4 to 6 persons usage pattern.

##### (2) Heat-up time:

##### Definition:

Heat-up time The time required to reheat the domestic hot water tank to 55°C after tapping a certain volume of hot water at 40°C. note: changing the field settings (see installation manual) can influence the heat-up time.

Tank	Setpoint temp. (°C)	Heat-up time for 150 L (bath) <min>	Heat-up time for 50 L (shower) <min>
150L	55	60	45
200L	55	60	40
300L	55	50	30

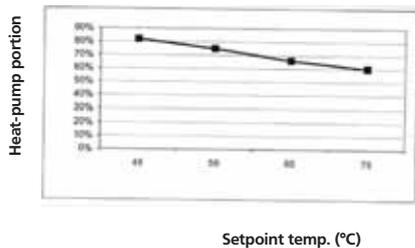
Conditions for testing: Ta = 7°CDB / 6°CWB, Troom = 20°C, Tstart = 10°C, outdoor unit type: ERYQ007

##### (3) Efficiency of sanitary hot water production:

In the ALTHERMA by Daikin system both the heat-pump and the electric booster heater supply the energy to produce sanitary hot water. The higher the portion of energy supplied by the heat-pump, the more energy efficient the system is. Lowering the setpoint temperature increases the portion of energy supplied by the heat-pump and thus the efficiency of the system.

##### Definition:

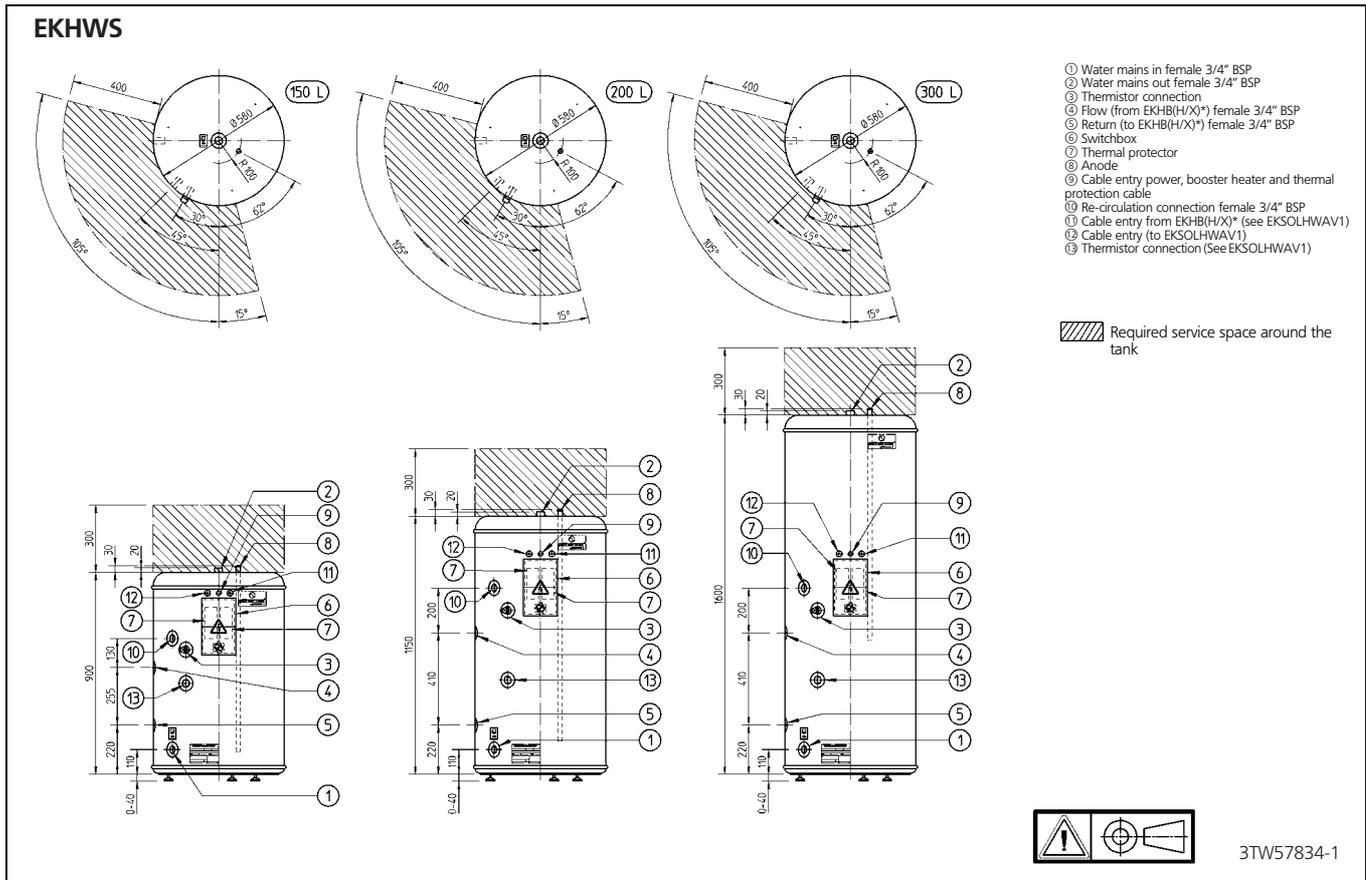
Heat-pump portion Percentage of energy supplied by the heat-pump in the total energy need for sanitary hot water.



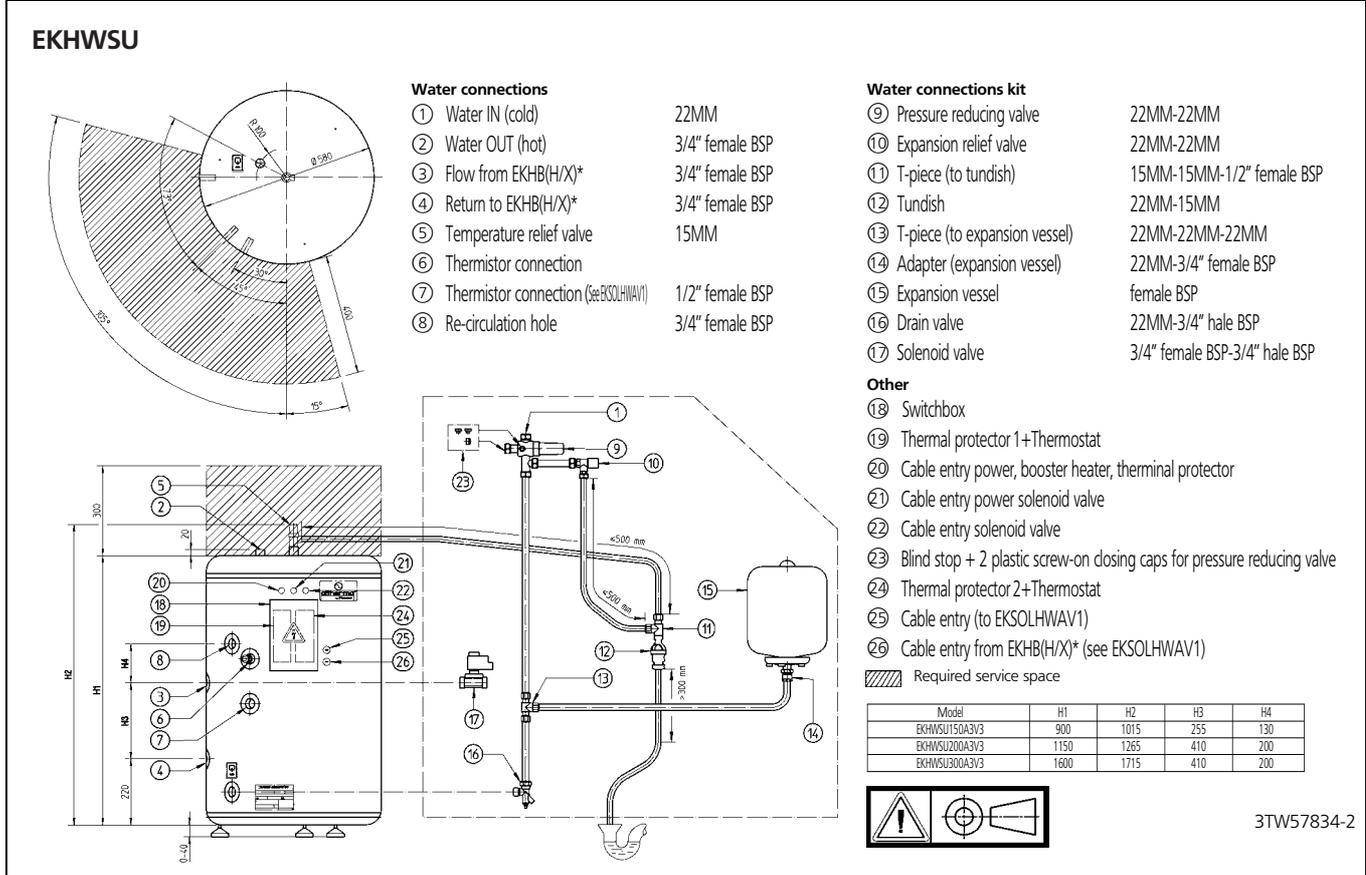
Conditions: Real life condition  
 Outdoor temperature 7°CDB / 6°CWB  
 Room temperature 20°CDB  
 Outdoor unit type ERYQ007  
 Tank type 200l  
 Field settings Default field settings (see installation manual).  
 Simulation of a daily usage based upon 'medium' usage pattern.

# 4 Dimensional drawing & centre of gravity

## 4 - 1 Dimensional drawing

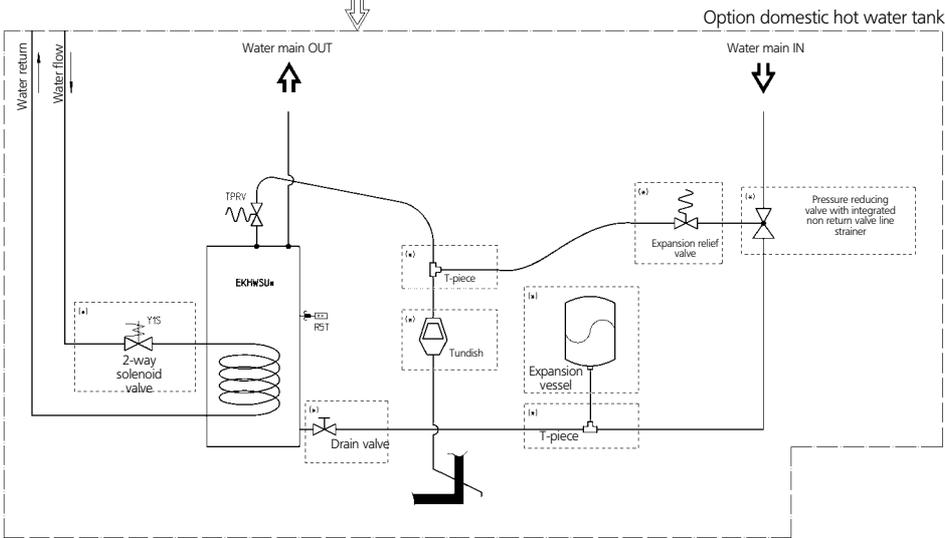
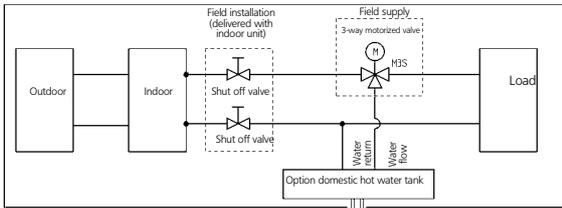


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**4**



# 5 Piping diagram

## EKHWSU



\*Field installation delivered with EKUHWA kit

RST	Domestic hot water thermistor
Y1S	Solenoid valve
MSS	3-way motorized valve

3TW57835-1

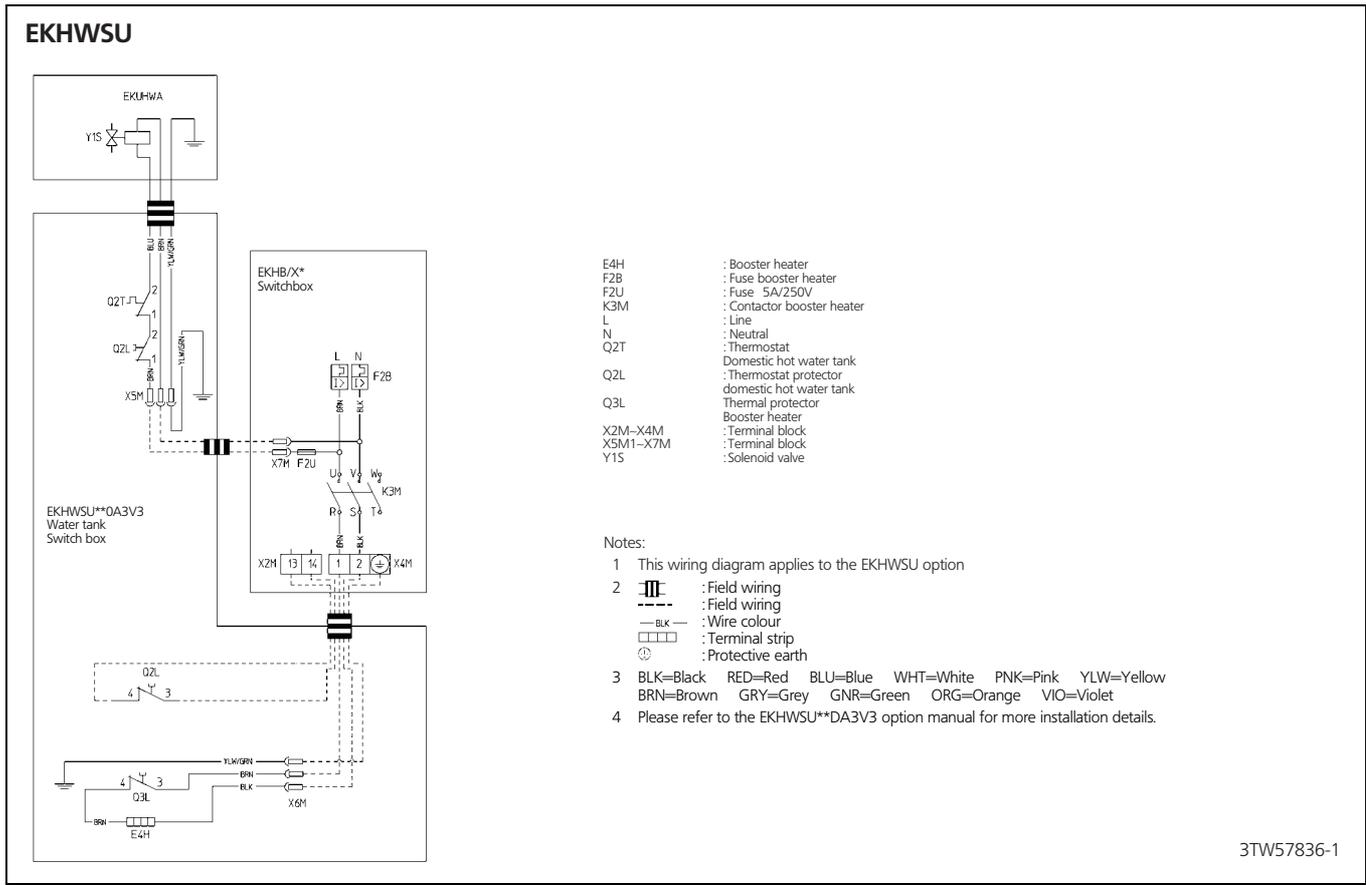


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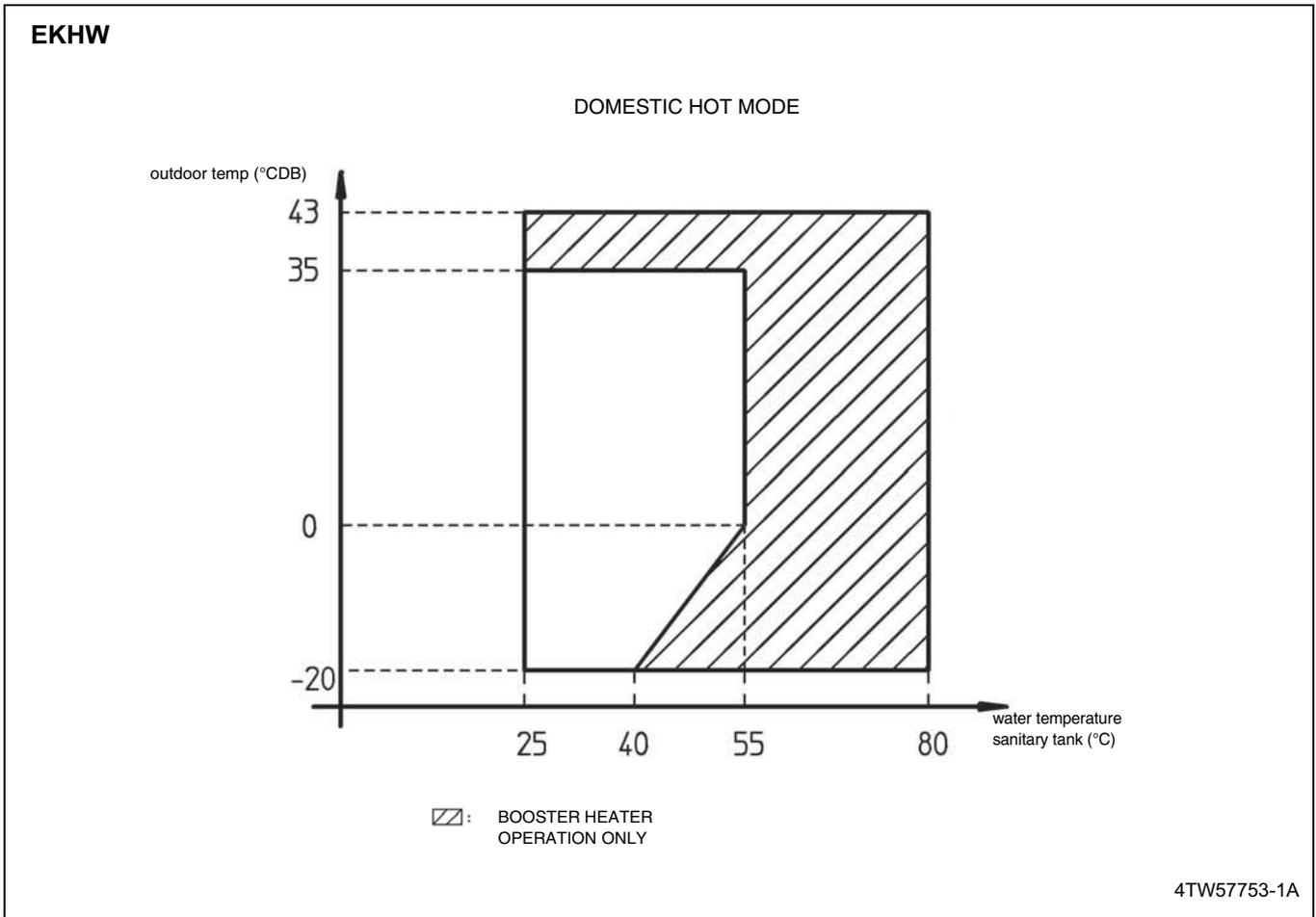
# 6 Wiring diagram

## 6 - 1 Wiring diagram



# 7 Operation range

3  
7



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	Wiring diagram .....	81

# 1 Features

3

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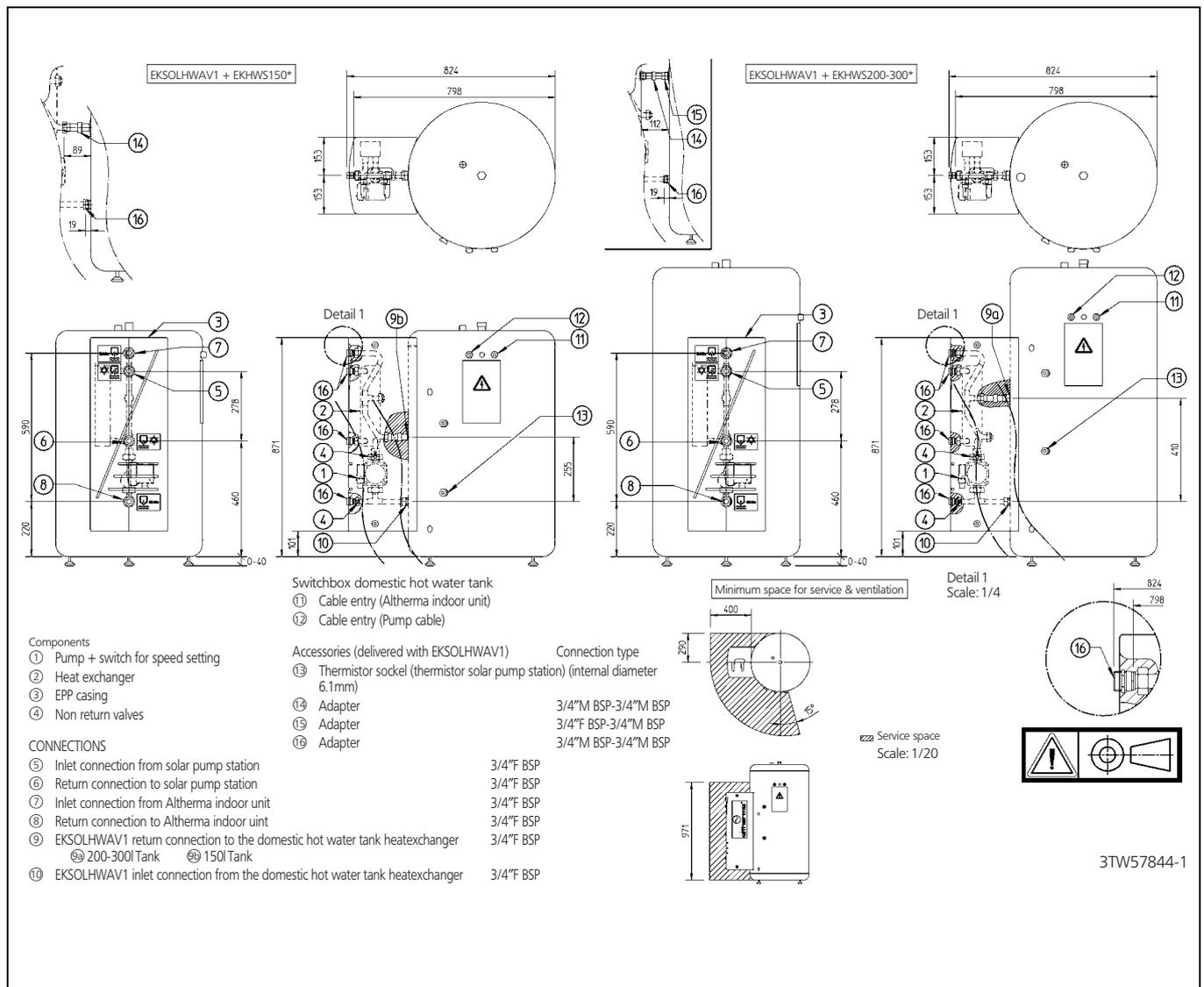
## 2 Specifications

2-1 TECHNICAL SPECIFICATIONS				EKSOLHWAV1
Dimensions	Packing	Height	mm	795
		Width	mm	340
		Depth	mm	295
	Unit	Height	mm	770
		Width	mm	305
		Depth	mm	270
Weight	Unit	kg	8	
	Packed Unit	kg	9	
Packing	Material		Carton	
	Weight	kg	1	
Heat Exchanger	Type			Brazed plate
	Pressure drop	Solar side	kPa	21.5
	Maximum inlet temperature	Solar side	°C	110
	Capacity		W	1,400
	Logarithmic mean temperature difference (LMTD)		K	5
Pump	Type			water cooled
	Number of speeds			3
	Power input		W	46
Sound	Sound Pressure		dBA	27
Water circuit	Piping connections diameter		inch	3/4" FBSP
Insulation material				EPP
Ambient temperature	Maximum		°C	35
	Minimum		°C	1

2-2 ELECTRICAL SPECIFICATIONS				EKSOLHWAV1
Unit	Power Supply	Phase		1~
		Frequency	Hz	50
		Voltage	V	220-240
Voltage range	Minimum			-10%
	Maximum			+10%
Power Supply Intake				indoor unit

### 3 Dimensional drawing & centre of gravity

#### 3 - 1 Dimensional drawing



3  
3

### 3 Dimensional drawing & centre of gravity

#### 3 - 1 Dimensional drawing

**EKSOLHWAV1 + EKHWS150\***

**EKSOLHWAV1 + EKHWS200-300\***

**Switchbox domestic hot water tank**

**Minimum space for service & ventilation**

**Components**

- ① Pump + switch for speed setting
- ② Heat exchanger
- ③ EPP casing
- ④ Non return valves

**Accessories (delivered with EKSOLHWAV1)**

- ⑬ Thermistor socket (thermistor solar pump station) (internal diameter 6.1mm)
- ⑭ Adapter
- ⑮ Adapter (Field supply)

**Connection type**

- ⑯ Solenoid valve 3/4" F BSP-3/4" F BSP
- ⑰ Adapter 3/4" M BSP-3/4" M BSP Solenoid valve

**CONNECTIONS**

- ⑤ Inlet connection from solar pump station 3/4" F BSP
- ⑥ Return connection to solar pump station 3/4" F BSP
- ⑦ Inlet connection from Altherma indoor unit 3/4" F BSP
- ⑧ Return connection to Altherma indoor unit 3/4" F BSP
- ⑨ EKSOLHWAV1 return connection to the domestic hot water tank heatexchanger 3/4" F BSP  
 ☉ 200-300 Tank ☉ 150 Tank
- ⑩ EKSOLHWAV1 inlet connection from the domestic hot water tank heatexchanger 3/4" F BSP

Model	H1
EKHWSU150*	430
EKHWSU200*	400
EKHWSU300*	400

☐ Service space  
Scale: 1/20

3TW57844-2

# 4 Piping diagram

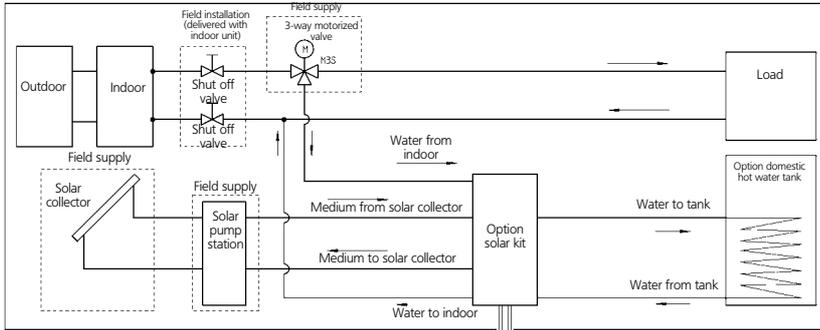
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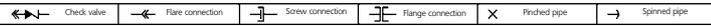
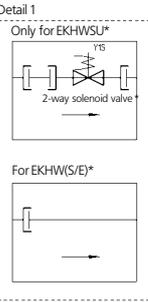
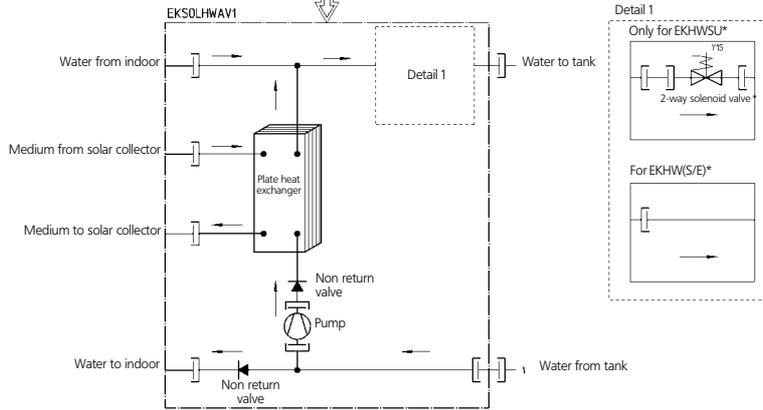
## EKSOLHWAV1

Overview

Y1S	Solenoid valve
M3S	3-way motorized valve



\* Delivered with EKHWA kit

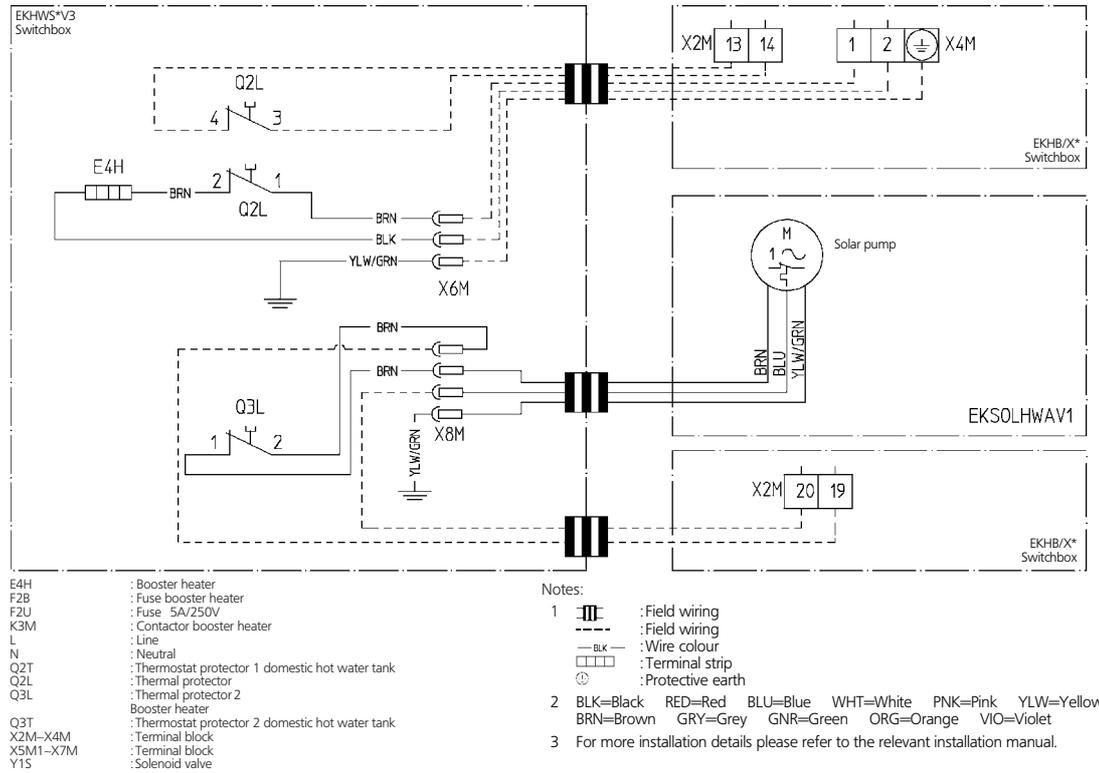


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# 5 Wiring diagram

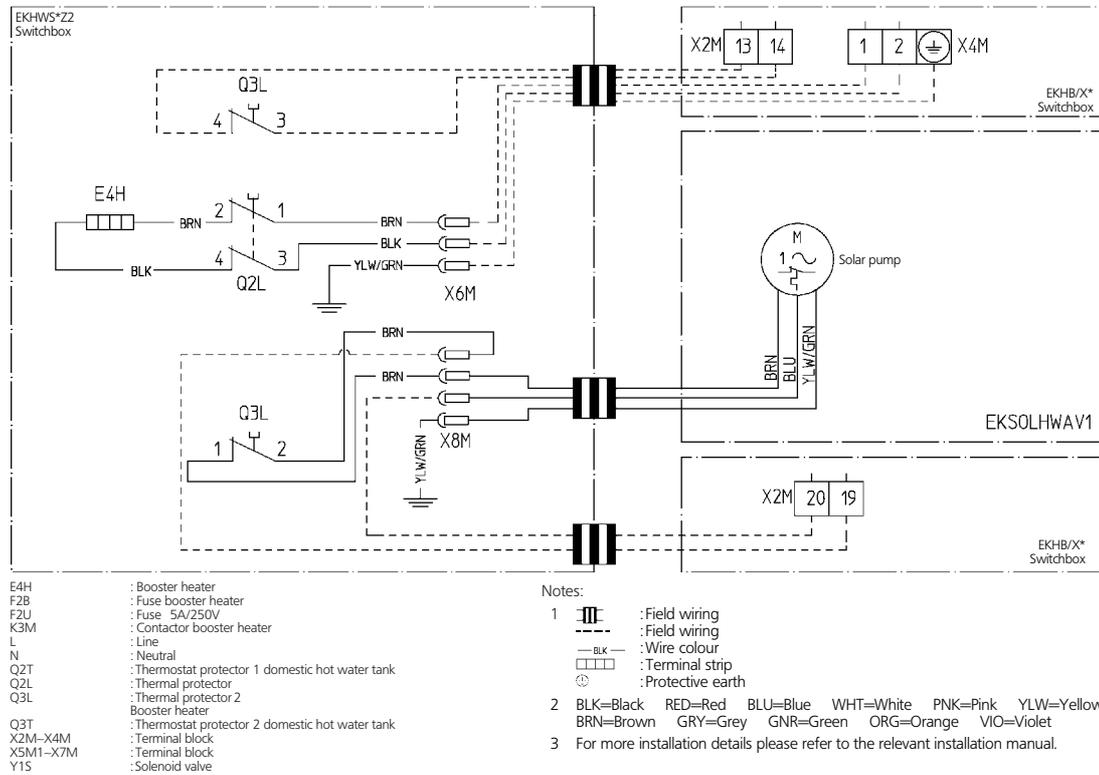
## 5 - 1 Wiring diagram

### EKSOLHWAV1 with EKHWS\*V3



3TW57846-1

### EKSOLHWAV1 with EKHWS\*Z2



3TW57846-1

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# 5 Wiring diagram

## 5 - 1 Wiring diagram

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