

Daikin Altherma mid  
temperature split  
Technical Data  
ETVH12E6V /  
ETVH12E9W /  
ETVX12E6V /  
ETVX12E9W





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## ETVH12E6V / ETVH12E9W / ETVX12E6V / ETVX12E9W

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# 1 Features

ETVH12E6V, ETVH12E9W

## Floor standing air to water heat pump for heating, cooling and hot water

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- › A combined stainless steel domestic hot water tank of 180 or 230L and heat pump for easy installation
- › Inclusion of all hydraulic components means no third party components are required
- › The unit's sleek design blends in with other household appliances.
- › Energy efficient heating only system based on air to water heat pump technology
- › Quick configuration in 9 steps in a high resolution colour interface wizard



Onecta app  
(optional)

# 1 Features

## ETVX12E6V, ETVX12E9W

### Floor standing air to water heat pump for heating, cooling and hot water

- › A combined stainless steel domestic hot water tank of 180 or 230L and heat pump for easy installation
- › Inclusion of all hydraulic components means no third party components are required
- › The unit's sleek design blends in with other household appliances.
- › For hot water, heating and cooling
- › Quick configuration in 9 steps in a high resolution colour interface wizard

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Onecta app  
(optional)

## 2 Specifications

### Specifications

Technical specifications				ETVH12S18E6V		ETVH12S23E6V		
Heater capacity	Step 1		kW			2		
	Step 2		kW			2 or 4		
Power input	Nom.		kW			0.10		
Casing	Material			Precoated sheet metal				
Dimensions	Unit	Height	mm	1,650		1,850		
		Width	mm	595				
		Depth	mm	625				
	Packed unit	Height	mm	1,820		2,020		
		Width	mm	720				
		Depth	mm	740				
Weight	Unit		kg	108		117		
	Packed unit		kg	127		136		
Packing	Material			Wood / Carton / PE wrapping foil / Metal				
	Weight			16				
Pump	Type			Grundfos UPM3LK 15-75 130 PWM				
	Nr of speeds			PWM				
	Power input		W	75				
	Water side Heat exchanger	Water flow rate	Min.	l/min	20.0 (1)			
Expansion vessel	Volume			10				
	Max. water pressure			3				
	Pre pressure			1				
Tank	Name			Stainless steel domestic hot water tank 180 l		Stainless steel domestic hot water tank 230 L		
	Water volume			180		230		
	Material			Stainless steel (EN 1.4521)				
	Maximum water temperature			70.0				
	Maximum water pressure			10				
	Insulation	Material			Polyurethane foam			
		Heat loss		kWh/24h	1.2 (2)		1.4 (2)	
	Standing heat loss	S		W	50		58	
	Storage volume	V		l	180		220	
	Corrosion protection			Pickling				
	Energy efficiency class			B				
	General	Supplier/ Name or trademark			Daikin Europe N.V.			
		Manufacturer Name and address			Daikin Europe N.V. - Zandvoordestraat 300, 8400 Oostende, Belgium			
3-way valve	Coefficient of flow (kV)	Space heating	m <sup>3</sup> /h	8				
		Domestic hot water tank	m <sup>3</sup> /h	10				
Water circuit	Piping connections diameter			G 1" (female)				
	Piping material			Cu				
	Internal piping diameter			1-1/4"				
	Piping			1"				
	Safety valve			3				
	Manometer			Digital				
	Drain valve / fill valve			No				
	Shut off valve			Yes				
	flowswitch			Yes				
	Air purge valve			Yes				
	Total water volume		l	2.5 (3)				
	Minimum water volume in the system for cooling		l	20 (4)				
	Minimum water volume in the system for heating		l	0 (4)				
Water circuit - Domestic hot water side	Piping material			Stainless steel				
	Piping connections	Cold water in / Hot water out	inch	G 3/4" FEMALE				
		Recirculation connection	inch	G 3/4" FEMALE				
Sound power level	Nom.		dB(A)	44.0 (5)				
Sound pressure level	Nom.		dB(A)	30.0 (6)				

## 2 Specifications

### Specifications

Technical specifications				ETVH12S18E6V	ETVH12S23E6V
Operation range	Heating	Ambient	Min.	°C	0 (7)
			Max.	°C	0 (7)
		Water side	Min.	°C	0 (7)
			Max.	°C	0 (7)
	Indoor installation	Ambient	Min.	°CDB	5
			Max.	°CDB	35 (8)
	Cooling	Ambient	Min.	°CDB	0 (7)
			Max.	°CDB	0 (7)
		Water side	Min.	°C	0 (7)
			Max.	°C	0 (7)
Domestic hot water	Water side	Min.	°C	0 (7)	
		Max.	°C	0 (7)	
Safety devices	Item	01		Thermal cut out	

Electrical specifications				ETVH12S18E6V	ETVH12S23E6V
Power supply	Name			See note 10	
	Voltage range	Min.	%	10	
		Max.	%	10	
IP class	IP			IP X0B	
Electric heater	Power supply	Name		6V3	
		Phase		1~ / 3~	
		Frequency	Hz	50	
		Voltage	V	230	
	Current	Maximum running current	A	26.0	
		Zmax List	Ω	0.22	
		Minimum Ssc value		Equipment complying with EN/IEC 61000-3-12	
Recommended fuses		A	20 (9)		
Wiring connections	Communication cable	Quantity		3+GRD	
		Remark		1.5 mm <sup>2</sup>	
	Electric meter	Quantity		2	
		Remark		Minimum 0.75 mm <sup>2</sup> (5VDC pulse detection)	
	Preferential kWh rate power supply	Quantity		Power: 2	
		Remark		Power 6.3A (Select diameter and type according to national and local regulations)	
	Domestic hot water pump	Quantity		2	
		Remark		Minimum 0.75 mm <sup>2</sup> (2A inrush, 1A continuous)	
	For power supply back-up heater	Quantity		Prewired	
		Remark		Minimum 0.75 mm <sup>2</sup>	
	For connection with R6T	Quantity		Depends on thermostat type, cf. installation manual	
		Remark		Voltage: 230V / Max. current: 100mA / Min. 0.75mm <sup>2</sup>	
	For connection with A3P	Quantity		2	
		Remark		Voltage: 230V / Max. current: 100mA / Min. 0.75mm <sup>2</sup>	
For connection with M2S	Quantity		4		
	Remark		100 mA, minimum 0.75 mm <sup>2</sup>		

(1) Operation area is extended to lower flow rates only in case the unit operates with heat pump only. (Not in startup, no BUH operation, no defrost operation). |

(2) Based on a dT of 45 K |

(3) Including piping + back-up heater; excluding expansion vessel |

(4) Excluding the water in the unit. This minimum water volume is sufficient for most applications. During critical processes extra water may be required. |

(5) Measured with a pressure drop of 10 kPa in the heating system at an operating condition of leaving water 47-55°C in a room with an ambient of 20°C. DB/WB 7°C/6°. |

(6) Value measured in an anechoic room at 1m distance from the unit. It is a relative value, depending on the distance and acoustic environment. The sound pressure level mentioned is measured with a pressure drop of 10 kPa in the heating system at an operation |

(7) Refer to operation range of the unit. |

(8) Depends on operation mode, refer to installation manual. |

(9) 4 pole 20 A curve 400V tripping class C (refer to wiring diagram) |

(10) Above mentioned power supply of the hydrobox is for the backup heater only. The switch box and the pump of the hydrobox are supplied via the outdoor unit. The optional domestic hot water tank has a separate power supply.

Technical specifications				ETVH12S18E9W	ETVH12S23E9W
Heater capacity	Step 1		kW	3	
	Step 2		kW	max. 6 kW	
Power input	Nom.		kW	0.10	
Casing	Material			Precoated sheet metal	

## 2 Specifications

### Specifications

2

Technical specifications					ETVH12S18E9W		ETVH12S23E9W	
Dimensions	Unit	Height	mm	1,650		1,850		
		Width	mm			595		
		Depth	mm			625		
	Packed unit	Height	mm	1,820		2,020		
		Width	mm			720		
Depth		mm			740			
Weight	Unit		kg	108		117		
	Packed unit		kg	127		136		
Packing	Material	Wood / Carton / PE wrapping foil / Metal						
	Weight		kg	16				
Pump	Type	Grundfos UPM3LK 15-75 130 PWM						
	Nr of speeds	PWM						
	Power input		W	75				
Water side Heat exchanger	Water flow rate	Min.	l/min	20.0 (1)				
Expansion vessel	Volume			10				
	Max. water pressure			3				
	Pre pressure			1				
Tank	Name			Stainless steel domestic hot water tank 180 l		Stainless steel domestic hot water tank 230 L		
	Water volume	l		180		230		
	Material	Stainless steel (EN 1.4521)						
	Maximum water temperature			70.0				
	Maximum water pressure			10				
	Insulation	Material	Polyurethane foam					
	Standing heat loss	S	W	1.2 (2)		1.4 (2)		
	Standing heat loss	S	W	50		58		
	Storage volume	V	l	180		220		
	Corrosion protection	Pickling						
Energy efficiency class	B							
General	Supplier/ Manufacturer details	Name or trademark	Daikin Europe N.V.					
	Manufacturer details	Name and address	Daikin Europe N.V. - Zandvoordestraat 300, 8400 Oostende, Belgium					
3-way valve	Coefficient of flow (kV)	Space heating	m <sup>3</sup> /h	8				
		Domestic hot water tank	m <sup>3</sup> /h	10				
Water circuit	Piping connections diameter	inch		G 1" (female)				
	Piping material	Cu						
	Internal piping diameter	inch		1-1/4"				
	Piping	inch		1"				
	Safety valve	bar		3				
	Manometer	Digital						
	Drain valve / fill valve	No						
	Shut off valve	Yes						
	flowswitch	Yes						
	Air purge valve	Yes						
	Total water volume	l		2.5 (3)				
Minimum water volume in the system for cooling	l		20 (4)					
Minimum water volume in the system for heating	l		0 (4)					
Water circuit - Domestic hot water side	Piping material	Stainless steel						
	Piping connections	Cold water in / Hot water out	inch	G 3/4" FEMALE				
	Recirculation connection	inch	G 3/4" FEMALE					
Sound power level	Nom.	dBA		44.0 (5)				
Sound pressure level	Nom.	dBA		30.0 (6)				
Operation range	Heating	Ambient	Min.	°C	0 (7)			
			Max.	°C	0 (7)			
		Water side	Min.	°C	0 (7)			
			Max.	°C	0 (7)			
	Indoor installation	Ambient	Min.	°CDB	5			
			Max.	°CDB	35 (8)			
	Cooling	Ambient	Min.	°CDB	0 (7)			
			Max.	°CDB	0 (7)			
		Water side	Min.	°C	0 (7)			
			Max.	°C	0 (7)			
Domestic Water hot water side	Water	Min.	°C	0 (7)				
		Max.	°C	0 (7)				



## 2 Specifications

### Specifications

Technical specifications				ETVH12S18E9W	ETVH12S23E9W
Safety devices	Item	01		Thermal cut out	
Electrical specifications				ETVH12S18E9W	ETVH12S23E9W
Power supply	Name			See note 10	
	Voltage	Min.	%	10	
	range	Max.	%	10	
IP class	IP			IP X0B	
Electric heater supply	Power	Name		9W	
		Phase		3~	
		Frequency	Hz	50	
		Voltage	V	400	
	Current	Maximum running current	A	13.0	
	Recommended fuses	A	20 (9)		
Wiring connections	Communication cable	Quantity		3+GRD	
		Remark		1.5 mm <sup>2</sup>	
	Electric meter	Quantity		2	
		Remark		Minimum 0.75 mm <sup>2</sup> (5VDC pulse detection)	
	Preferential kWh rate power supply	Quantity		Power: 2	
		Remark		Power 6.3A (Select diameter and type according to national and local regulations)	
	Domestic hot water pump	Quantity		2	
		Remark		Minimum 0.75 mm <sup>2</sup> (2A inrush, 1A continuous)	
	For power supply back-up heater	Quantity		Prewired	
		Remark			
	For connection with R6T	Quantity		2	
		Remark		Minimum 0.75 mm <sup>2</sup>	
	For connection with A3P	Quantity		Depends on thermostat type, cf. installation manual	
		Remark		Voltage: 230V / Max. current: 100mA / Min. 0.75mm <sup>2</sup>	
For connection with M2S	Quantity		2		
	Remark		Voltage: 230V / Max. current: 100mA / Min. 0.75mm <sup>2</sup>		
For connection with optional	Quantity		4		
	Remark		100 mA, minimum 0.75 mm <sup>2</sup>		

(1)Operation area is extended to lower flow rates only in case the unit operates with heat pump only. (Not in startup, no BUH operation, no defrost operation). |

(2)Based on a dT of 45 K |

(3)Including piping + back-up heater; excluding expansion vessel |

(4)Excluding the water in the unit. This minimum water volume is sufficient for most applications. During critical processes extra water may be required. |

(5)Measured with a pressure drop of 10 kPa in the heating system at an operating condition of leaving water 47-55°C in a room with an ambient of 20°C. DB/WB 7°C/6°. |

(6)Value measured in an anechoic room at 1m distance from the unit. It is a relative value, depending on the distance and acoustic environment. The sound pressure level mentioned is measured with a pressure drop of 10 kPa in the heating system at an operatin |

(7)Refer to operation range of the unit. |

(8)Depends on operation mode, refer to installation manual. |

(9)4 pole 20 A curve 400V tripping class C (refer to wiring diagram) |

(10)Above mentioned power supply of the hydrobox is for the backup heater only. The switch box and the pump of the hydrobox are supplied via the outdoor unit. The optional domestic hot water tank has a separate power supply.

Technical specifications				ETVX12S18E6V	ETVX12S23E6V	
Heater capacity	Step 1		kW	2		
	Step 2		kW	2 or 4		
Power input	Nom.		kW	0.10		
Casing	Material			Precoated sheet metal		
Dimensions	Unit	Height	mm	1,650	1,850	
		Width	mm		595	
		Depth	mm		625	
	Packed unit	Height	mm	1,820		2,020
		Width	mm		720	
		Depth	mm		740	
Weight	Unit		kg	108	117	
	Packed unit		kg	127	136	
Packing	Material			Wood / Carton / PE wrapping foil / Metal		
	Weight		kg	16		
Pump	Type			Grundfos UPM3LK 15-75 130 PWM		
	Nr of speeds			PWM		
	Power input		W	75		
Water side Heat exchanger	Water flow rate	Min.	l/min	20.0 (1)		

## 2 Specifications

### Specifications

2

Technical specifications				ETVX12S18E6V	ETVX12S23E6V	
Expansion vessel	Volume		l	10		
	Max. water pressure		bar	3		
	Pre pressure		bar	1		
Tank	Name			Stainless steel domestic hot water tank 180 l	Stainless steel domestic hot water tank 230 L	
	Water volume		l	180	230	
	Material			Stainless steel (EN 1.4521)		
	Maximum water temperature		°C	70.0		
	Maximum water pressure		bar	10		
	Insulation	Material			Polyurethane foam	
		Heat loss		kWh/24h	1.2 (2)	1.4 (2)
	Standing heat loss	S		W	50	58
	Storage volume	V		l	180	220
	Corrosion protection				Pickling	
Energy efficiency class				B		
General	Supplier/ Name or trademark			Daikin Europe N.V.		
	Manufacturer details		Name and address	Daikin Europe N.V. - Zandvoordestraat 300, 8400 Oostende, Belgium		
3-way valve	Coefficient of flow (kV)	Space heating	m <sup>3</sup> /h	8		
		Domestic hot water tank	m <sup>3</sup> /h	10		
Water circuit	Piping connections diameter		inch	G 1" (female)		
	Piping material			Cu		
	Internal piping diameter		inch	1-1/4"		
	Piping		inch	1"		
	Safety valve		bar	3		
	Manometer			Digital		
	Drain valve / fill valve			No		
	Shut off valve			Yes		
	flowswitch			Yes		
	Air purge valve			Yes		
	Total water volume		l	2.5 (3)		
	Minimum water volume in the system for cooling		l	20 (4)		
Minimum water volume in the system for heating		l	0 (4)			
Water circuit - Domestic hot water side	Piping material			Stainless steel		
	Piping connections	Cold water in / Hot water out	inch	G 3/4" FEMALE		
		Recirculation connection	inch	G 3/4" FEMALE		
Sound power level	Nom.		dB(A)	44.0 (5)		
Sound pressure level	Nom.		dB(A)	30.0 (6)		
Operation range	Heating	Ambient	Min.	°C	0 (7)	
			Max.	°C	0 (7)	
	Water side	Ambient	Min.	°C	0 (7)	
			Max.	°C	0 (7)	
	Indoor installation	Ambient	Min.	°CDB	5	
			Max.	°CDB	35 (8)	
	Cooling	Ambient	Min.	°CDB	0 (7)	
			Max.	°CDB	0 (7)	
		Water side	Min.	°C	0 (7)	
			Max.	°C	0 (7)	
Domestic hot water side		Min.	°C	0 (7)		
		Max.	°C	0 (7)		
Safety devices	Item	01		Thermal cut out		

Electrical specifications				ETVX12S18E6V	ETVX12S23E6V	
Power supply	Name			See note 10		
	Voltage range	Min.	%	10		
		Max.	%	10		
IP class	IP			IP X0B		
Electric heater	Power supply	Name		6V3		
		Phase		1~ / 3~		
		Frequency		Hz	50	
		Voltage		V	230	
	Current	Maximum running current		A	26.0	
		Zmax List		Ω	0.22	
		Minimum Ssc value			Equipment complying with EN/IEC 61000-3-12	
Recommended fuses			A	20 (9)		

## 2 Specifications

### Specifications

Electrical specifications			ETVX12S18E6V	ETVX12S23E6V
Wiring connections	Communication cable	Quantity	3+GRD	
		Remark	1.5 mm <sup>2</sup>	
Electric meter	Preferential kWh rate power supply	Quantity	2	
		Remark	Minimum 0.75 mm <sup>2</sup> (5VDC pulse detection)	
Domestic hot water pump	For power supply back-up heater	Quantity	Power: 2	
		Remark	Power 6.3A (Select diameter and type according to national and local regulations)	
For connection with R6T	For connection with A3P	Quantity	2	
		Remark	Minimum 0.75 mm <sup>2</sup> (2A inrush, 1A continuous)	
For connection with M2S	For connection with optional	Quantity	Prewired	
		Remark	2	
For connection with optional		Quantity	2	
		Remark	Minimum 0.75 mm <sup>2</sup>	
For connection with optional		Quantity	Depends on thermostat type, cf. installation manual	
		Remark	Voltage: 230V / Max. current: 100mA / Min. 0.75mm <sup>2</sup>	
For connection with optional		Quantity	2	
		Remark	Voltage: 230V / Max. current: 100mA / Min. 0.75mm <sup>2</sup>	
For connection with optional		Quantity	4	
		Remark	100 mA, minimum 0.75 mm <sup>2</sup>	

(1) Operation area is extended to lower flow rates only in case the unit operates with heat pump only. (Not in startup, no BUH operation, no defrost operation). |

(2) Based on a dT of 45 K |

(3) Including piping + back-up heater; excluding expansion vessel |

(4) Excluding the water in the unit. This minimum water volume is sufficient for most applications. During critical processes extra water may be required. |

(5) Measured with a pressure drop of 10 kPa in the heating system at an operating condition of leaving water 47-55°C in a room with an ambient of 20°C. DB/WB 7°C/6° |

(6) Value measured in an anechoic room at 1m distance from the unit. It is a relative value, depending on the distance and acoustic environment. The sound pressure level mentioned is measured with a pressure drop of 10 kPa in the heating system at an operation |

(7) Refer to operation range of the unit. |

(8) Depends on operation mode, refer to installation manual. |

(9) 4 pole 20 A curve 400V tripping class C (refer to wiring diagram) |

(10) Above mentioned power supply of the hydrobox is for the backup heater only. The switch box and the pump of the hydrobox are supplied via the outdoor unit. The optional domestic hot water tank has a separate power supply.

Technical specifications				ETVX12S18E9W	ETVX12S23E9W
Heater capacity	Step 1	kW		3	
				Step 2	max. 6 kW
Power input	Nom.	kW		0.10	
				Material	Precoated sheet metal
Dimensions	Unit	Height	mm	1,650	1,850
		Width	mm	595	
		Depth	mm	625	
	Packed unit	Height	mm	1,820	2,020
		Width	mm	720	
		Depth	mm	740	
Weight	Unit	kg	108	117	
	Packed unit	kg	127	136	
Packing	Material	Wood / Carton / PE wrapping foil / Metal			
	Weight	kg	16		
Pump	Type	Grundfos UPM3LK 15-75 130 PWM			
	Nr of speeds	PWM			
	Power input	W	75		
Water side Heat exchanger	Water flow rate	Min.	l/min	20.0 (1)	
Expansion vessel	Volume	l	10		
	Max. water pressure	bar	3		
	Pre pressure	bar	1		

## 2 Specifications

### Specifications

2

Technical specifications				ETVX12S18E9W	ETVX12S23E9W	
Tank	Name		Stainless steel domestic hot water tank 180 l		Stainless steel domestic hot water tank 230 L	
	Water volume	l	180		230	
	Material		Stainless steel (EN 1.4521)			
	Maximum water temperature	°C	70.0			
	Maximum water pressure	bar	10			
	Insulation	Material		Polyurethane foam		
		Heat loss	kWh/24h	1.2 (2)	1.4 (2)	
	Standing heat loss	W	50		58	
	Storage volume	l	180		220	
	Corrosion protection		Pickling			
Energy efficiency class		B				
General	Supplier/ Name or trademark	Daikin Europe N.V.				
	Manufacturer Name and address details	Daikin Europe N.V. - Zandvoordestraat 300, 8400 Oostende, Belgium				
3-way valve	Coefficient of Space heating	m <sup>3</sup> /h	8			
	Domestic hot water tank flow (kV)	m <sup>3</sup> /h	10			
Water circuit	Piping connections diameter		inch			
	Piping material		G 1" (female)			
	Internal piping diameter		Cu			
	Piping		1-1/4"			
	Safety valve		1"			
	Manometer		3			
	Drain valve / fill valve		Digital			
	Shut off valve		No			
	flowswitch		Yes			
	Air purge valve		Yes			
	Total water volume		l	2.5 (3)		
	Minimum water volume in the system for cooling		l	20 (4)		
Minimum water volume in the system for heating		l	0 (4)			
Water circuit - Domestic hot water side	Piping material		Stainless steel			
	Piping connections	Cold water in / Hot water out inch	G 3/4" FEMALE			
	Recirculation connection	inch	G 3/4" FEMALE			
Sound power level	Nom.	dB(A)	44.0 (5)			
Sound pressure level	Nom.	dB(A)	30.0 (6)			
Operation range	Heating	Ambient	Min.	°C	0 (7)	
			Max.	°C	0 (7)	
	Water side	Ambient	Min.	°C	0 (7)	
			Max.	°C	0 (7)	
	Indoor installation	Ambient	Min.	°CDB	5	
			Max.	°CDB	35 (8)	
	Cooling	Ambient	Min.	°CDB	0 (7)	
			Max.	°CDB	0 (7)	
	Water side	Ambient	Min.	°C	0 (7)	
			Max.	°C	0 (7)	
Domestic hot water side	Water	Min.	°C	0 (7)		
		Max.	°C	0 (7)		
Safety devices	Item	01	Thermal cut out			

Electrical specifications				ETVX12S18E9W	ETVX12S23E9W	
Power supply	Name		See note 10			
	Voltage range	Min.	%	10		
		Max.	%	10		
IP class	IP		IP X0B			
Electric heater	Power supply	Name	9W			
		Phase	3~			
	Frequency	Hz	50			
	Voltage	V	400			
	Current	Maximum running current	A	13.0		
	Recommended fuses		A	20 (9)		

## 2 Specifications

### Specifications

Electrical specifications			ETVX12S18E9W	ETVX12S23E9W	
Wiring connections	Communication cable	Quantity		3+GRD	
		Remark		1.5 mm <sup>2</sup>	
	Electric meter	Quantity		2	
		Remark		Minimum 0.75 mm <sup>2</sup> (5VDC pulse detection)	
	Preferential kWh rate power supply	Quantity		Power: 2	
		Remark		Power 6.3A (Select diameter and type according to national and local regulations)	
	Domestic hot water pump	Quantity		2	
		Remark		Minimum 0.75 mm <sup>2</sup> (2A inrush, 1A continuous)	
	For power supply back-up heater	Quantity		Prewired	
	For connection with R6T	Quantity		2	
		Remark		Minimum 0.75 mm <sup>2</sup>	
	For connection with A3P	Quantity		Depends on thermostat type, cf. installation manual	
		Remark		Voltage: 230V / Max. current: 100mA / Min. 0.75mm <sup>2</sup>	
	For connection with M2S	Quantity		2	
Remark			Voltage: 230V / Max. current: 100mA / Min. 0.75mm <sup>2</sup>		
For connection with optional	Quantity		4		
	Remark		100 mA, minimum 0.75 mm <sup>2</sup>		

(1) Operation area is extended to lower flow rates only in case the unit operates with heat pump only. (Not in startup, no BUH operation, no defrost operation). |

(2) Based on a dT of 45 K |

(3) Including piping + back-up heater; excluding expansion vessel |

(4) Excluding the water in the unit. This minimum water volume is sufficient for most applications. During critical processes extra water may be required. |

(5) Measured with a pressure drop of 10 kPa in the heating system at an operating condition of leaving water 47-55°C in a room with an ambient of 20°C. DB/WB 7°C/6° |

(6) Value measured in an anechoic room at 1m distance from the unit. It is a relative value, depending on the distance and acoustic environment. The sound pressure level mentioned is measured with a pressure drop of 10 kPa in the heating system at an operation |

(7) Refer to operation range of the unit. |

(8) Depends on operation mode, refer to installation manual. |

(9) 4 pole 20 A curve 400V tripping class C (refer to wiring diagram) |

(10) Above mentioned power supply of the hydrobox is for the backup heater only. The switch box and the pump of the hydrobox are supplied via the outdoor unit. The optional domestic hot water tank has a separate power supply.

# 3 Electrical data

## 3 - 1 Electrical Data

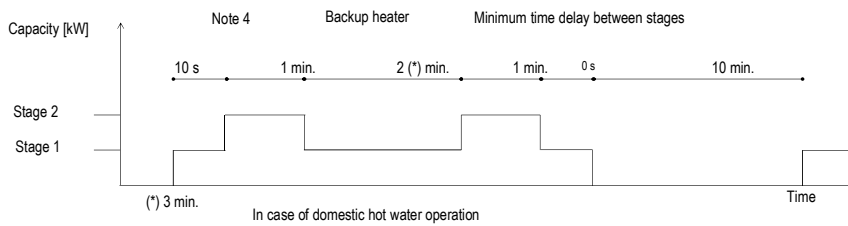
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ETVH12E6V / ETVH16E6V / ETVH12UE6V / ETVH16UE6V / ETVH12E9W / ETVH16E9W  
 ETVX12E6V / ETVX16E6V / ETVX12E9W / ETVX16E9W  
 ETVZ12E6V / ETVZ16E6V / ETVZ12E9W / ETVZ16E9W

### Electrical specifications

Type	6V						9W									
	2 - 4		2 - 6		4 - 6		2-4 (in case of emergency: 2-6)		6		3 - 6		3 - 9		3 - 6 (in case of emergency: 3-9)	
Capacity setting	[kW]															
Capacity stage	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2
Capacity stage 1	2	2	2	2	2	2	2	2	6	3	3	3	3	3	3	3
Capacity stage 2	4	6	4	4	4	4	4	6	-	6	9	6	9	6	9	9
Backup heater	Minimum time delay between stages															
	Note 4															
	Power supply (1)															
	Phase															
	Frequency															
	Voltage															
Nominal running current																
Zmax (backup heater)(2)																
Minimum Ssc value																

Notes	Content
(1)	The above-mentioned power supply of the hydrobox is for the backup heater only.
(2)	Booster heater power supply In accordance with EN/IEC 61000-3-11, it may be necessary to consult the distribution network operator to ensure that the equipment is connected only to a supply with $Z_{sys} \leq Z_{max}$ .
(3)	The equipment complies with EN/IEC 61000-3-12.
EN/IEC 61000-3-11	European/International Technical Standard setting the limits for voltage changes, voltage fluctuations and flicker in public low-voltage supply systems for equipment with rated current $\leq 75$ A.
EN/IEC 61000-3-12	European/International Technical Standard setting the limits for harmonic currents produced by equipment connected to public low-voltage systems with input current $> 16$ A and $\leq 75$ A per phase.
Zsys	System impedance



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### 3 Electrical data

#### 3 - 1 Electrical Data

ETBH12E6V / ETBH12E9W / ETBX12E6V / ETBX12E9W  
 ETVH12E6V / ETVH12UE6V / ETVH12E9W / ETVX12E6V  
 ETVX12E9W / ETVZ12E6V / ETVZ12E9W

\* Electrical meter specification

- Pulse meter type/voltage-free contact for 5 V DC detection by PCB.
- Possible number of pulses
  - 0.1· pulse/kWh
  - 1· pulse/kWh
  - 10· pulse/kWh
  - 100· pulse/kWh
  - 1000· pulse/kWh
- Pulse duration
  - minimum On time: ·40ms·
  - Minimum OFF time: ·100ms·
- Measurement type (depending on installation)
  - Single-phase AC meter
  - Three-phase AC meter
    - Balanced loads
    - Unbalanced loads

\* Electrical meter installation guideline

- It is the responsibility of the installer to cover the complete power consumption with electrical meters (combination of estimation and metering is not allowed).
- Required number of electrical meters

Outdoor unit type		EPRA(08/10/12)E*					
Indoor unit type		ETB(H/X)12EF*			ETV(H/X/Z)12S(U)*E*		
Backup heater type		6V		9W	6V		9W
Backup heater power supply		1~ 230V	3~ 230V	3~ 400V	1~ 230V	3~ 230V	3~ 400V
Backup heater configuration		2 / 4 / 6 kW	6 kW	3 / 6 / 9 kW	2 / 4 / 6 kW	6 kW	3 / 6 / 9 kW
<b>Normal kWh rate power supply</b>							
Electrical meter type	1~	1	-	-	1	-	-
	3~ balanced	-	-	-	-	-	-
	3~ unbalanced	-	1	1	-	1	1
<b>Preferential kWh rate power supply</b>							
Electrical meter type	1~	2	1	1	2	1	1
	3~ balanced	-	-	-	-	-	-
	3~ unbalanced	-	1	1	-	1	1

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# 4 Combination table

## 4 - 1 Combination Table

4

### ETVH12E6V / ETVH12UE6V / ETVH12E9W / ETVX12E6V / ETVX12E9W / ETVZ12E6V / ETVZ12E9W

**Factory-mounted equipment for :ETV(H/X/Z)12S\*E\***

Description	ETV(H/X/Z)12S*E*			
	18 - 6V (8)	18 - 9W (8)	23 - 6V (8)	23 - 9W (8)
Heating only model -ETVH-	o	o	o	o
Reversible model -ETVX-	o	o	o	o
(Integrated Bizone)	o	o	o	o
Backup heater -2.4-6kW 1N~230 V-	o	o	o	o
Backup heater -2.4-6kW 3~230 V-	o	o	o	o
Backup heater -3.6-9kW 3N~400 V-	o	o	o	o
Domestic hot water tank -180L-	o	o	o	o
Domestic hot water tank -230L-	o	o	o	o

**Outdoor combination table for :ETV(H/X/Z)12S(18/23)E-**

		EPR08EA(V3/W1)	EPRA10EA(V3/W1)	EPRA12EA(V3/W1)
ETVH12S(18/23)E*	Heating only indoor unit	o	o	o
ETVX12S(18/23)E*	Reversible indoor unit	o	o	o
ETVZ12S(18/23)E*	(Integrated Bizone)	o	o	o
ETVH12SU(18/23)E*	Heating only indoor unit for the UK	o	o	o

**Kit availability for indoor units**

Reference	Description	ETV*12S*E*					
		18 - 6V	18 - 9W	23 - 6V	23 - 9W	18 - 6V	23 - 6V
ETVH*	Heating only indoor unit	o	o	o	o	o	o
ETVX*	Reversible indoor unit	o	o	o	o	o	o
ETVZ*	(Integrated Bizone)	o	o	o	o	o	o
ETVH12SU*	Heating only indoor unit for the UK	o	o	o	o	o	o
EKRP1HBAA	Digital I/O PCB	*(1) (2)	o	o	o	o	o
EKRP1AHTA	Demand PCB	*(3)	o	o	o	o	o
BRCLHHDA*	HCI (Human Comfort Interface)	o	o	o	o	o	o
EKPCCA84	PC cable	*(4)	o	o	o	o	o
KRC50L-1	Remote indoor sensor	*(5)	o	o	o	o	o
EKRSCA1	Remote sensor for outdoor	*(5)	o	o	o	o	o
EKCC8-W	Universal centralised user interface	o	o	o	o	o	o
DCOM-LT/IO	DCOM gateway	o	o	o	o	o	o
DCOM-LT/MB	DCOM gateway	o	o	o	o	o	o
EKCC8-W	Cascade control	o	o	o	o	o	o
EKHVC0N/4	Conversion kit: heating only to reversible.	o	o	o	o	o	o
FWXV10-15-20ATV3	Heat pump convactor	*(6)	o	o	o	o	o
FWXT10-15-20ATV3	Heat pump convactor	*(6)	o	o	o	o	o
FWXM10-15-20ATV3	Heat pump convactor	*(6)	o	o	o	o	o
EKVHPC	Heat pump convactor valve kit	o	o	o	o	o	o
EKRTR1	Wired room thermostat	o	o	o	o	o	o
EKRTR1	Wireless room thermostat	o	o	o	o	o	o
EKRTR1S	External sensor room thermostat	*(7)	o	o	o	o	o
EKRVFRTA1V3	Multi-zoning base unit 230 V	*(9)	o	o	o	o	o
EKWCTROI1V3	Digital thermostat 230 V	*(9)	o	o	o	o	o
EKWCTRAN1V3	Analogue thermostat 230 V	*(9)	o	o	o	o	o
EKWCVATRI1V3	Actuator 230 V	*(9)	o	o	o	o	o
EKRELSG	Relay for Smart Grid	o	o	o	o	o	o
BRP069A71	WLAN module	*(10)	o	o	o	o	o
EKUHWG3D	G3- kit	*(11)	o	o	o	o	o
AFVALVE1	Freeze protection valve	o	o	o	o	o	o
ESAE04A01*	Daikin Residential Controller	o	o	o	o	o	o

**Kit availability for outdoor units**

Reference	Description	EPR08EA(V3/W1)	EPRA10EA(V3/W1)	EPRA12EA(V3/W1)
EKMST1	Mounting stand	o	o	o
EKMST2	Mounting stand	o	o	o

Reference	Description		
		ETVH*	ETVX*
	Only applicable for :ETVH* & ETVX* models		
EKMIKPOA	Mixing kit – PCB only	o	o
EKMIKPHA	Mixing kit – PCB with hydraulics	o	o
EKMIKHMA	Hydraulics – mixed pump group	*(12)	o
EKMIKHUA	Hydraulics – unmixed pump group	*(12)	o
EKMIKBVA	Balancing vessel	o	o
EKMIKDIA	Distributor for balancing vessel	*(13)	o

**Notes**

- (1) PCB that provides additional output connections:
  - (a) Control external heat source (bivalent operation).
  - (b) Output remote ON/OFF signal space heating/cooling
  - (c) Remote alarm output
- (2) Additional relays to allow bivalent control in combination with an external room thermostat are field-supplied.
- (3) PCB to receive up to -4- digital inputs for power limitation
- (4) Data cable for connection with PC.
- (5) Only 1 remote sensor can be connected: indoor OR outdoor sensor.
- (6) The valve kit is mandatory if a heat pump convactor is installed on a reversible model (not mandatory for heating only models).
- (7) -EKRTETS- can only be used in combination with -EKRTR1-
- (8) The backup heater capacity depends on a user interface setting.
- (9) Multi-zoning wired controls
- (10) The WLAN cartridge is supplied in the accessory bag of the unit and is meant to be plugged into the SD card slot on the MMI-2. In case of bad signal reception, the WLAN cartridge can be removed and replaced by the WLAN module.
- (11) This kit is mandatory for the UK models.
- (12) Only possible in combination with -EKMIKPOA-
- (13) Only possible in combination with -EKMIKBVA- and -EKMIKPHA- or -EKMIKHUA-
- (14) Only possible in combination with -HBKIT\*-
- (15) Only possible in combination with -ETVZ\*-

**Remark**

Other combinations than mentioned in this combination table are prohibited.

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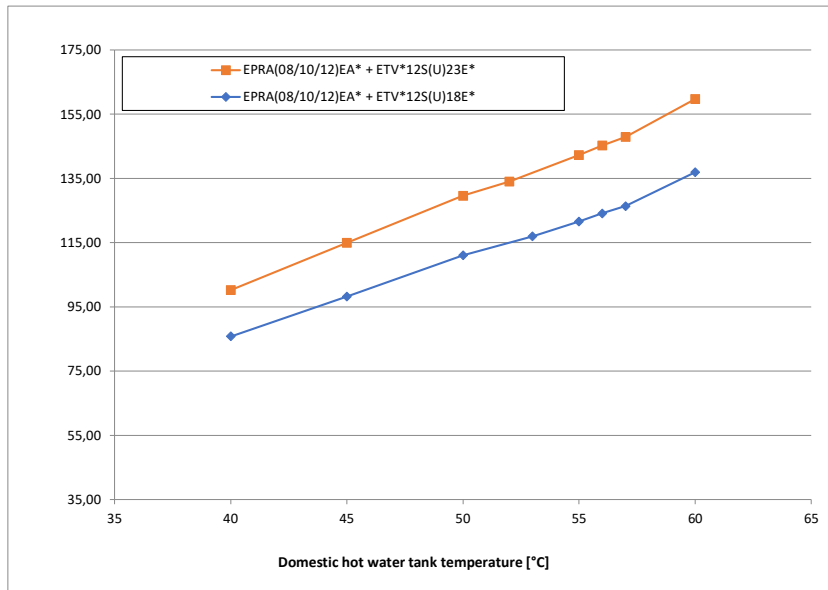


# 5 Capacity tables

## 5 - 1 Domestic Hot Water performance

ETBH12E6V  
 ETBH12E9W  
 ETBX12E6V  
 ETBX12E9W  
 ETVH12E6V  
 ETVH12UE6V  
 ETVH12E9W  
 ETVX12E6V  
 ETVX12E9W  
 ETVZ12E6V  
 ETVZ12E9W

Heat-up times



Model name	Heat-up time domestic hot water tank until 45°C
EPRA(08/10/12)EA* + ETV*12S(U)18E*	-98· min.
EPRA(08/10/12)EA* + ETV*12S(U)23E*	-115· min.

Notes

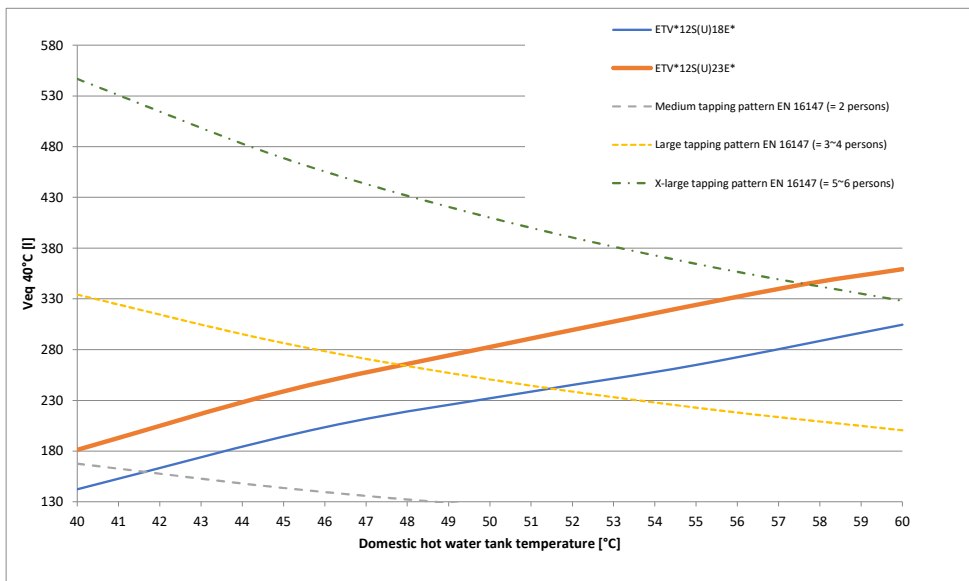
1. Time the indoor unit (**heat pump only operation**) requires to heat up the domestic hot water tank from 10°C to the indicated temperature.  
 See the operation range for maximum domestic hot water tank temperature during heat pump only operation.

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ETBH12E6V  
 ETBH12E9W  
 ETBX12E6V  
 ETBX12E9W  
 ETVH12E6V  
 ETVH12UE6V  
 ETVH12E9W  
 ETVX12E6V  
 ETVX12E9W  
 ETVZ12E6V  
 ETVZ12E9W

Selection guide for the domestic hot water tank volume  
 (1)

Ve<sub>q</sub> 40°C = the amount of water with a temperature of 40°C that can be tapped when the domestic hot water tank is heated to a certain temperature, and the temperature of the cold inlet water is 10°C.



If a higher daily Ve<sub>q</sub> 40°C is required, then additional heat-up cycles are required within 24 hours.  
 See the operation manual for more information.

Notes

- (1) According to EN16147.

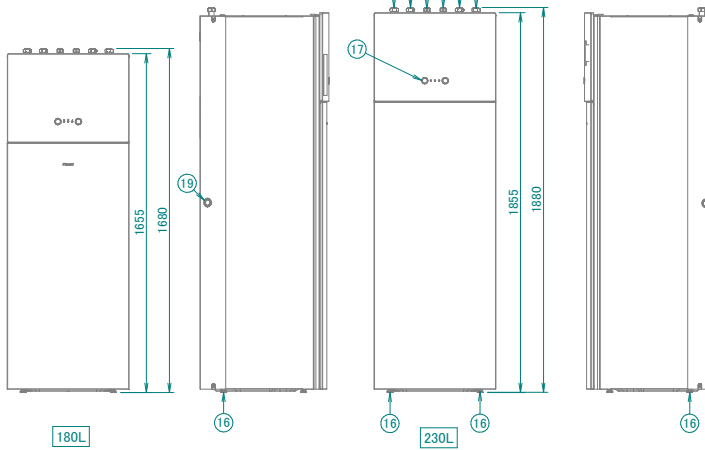
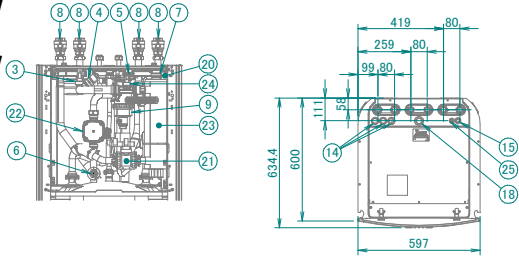
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# 6 Dimensional drawings

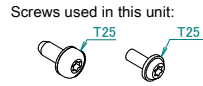
## 6 - 1 Dimensional Drawings

6

ETVH12E6V  
ETVH12E9W  
ETVX12E6V  
ETVX12E9W



- ① Water out connection ·1"· To outdoor unit
- ② Water in connection ·1"·
- ③ Flow switch
- ④ Space heating water pressure sensor
- ⑤ Safety valve
- ⑥ Drain valve water circuit
- ⑦ Air purge
- ⑧ Shut-off valve
- ⑨ Magnetic filter / dirt separator
- ⑩ Water in connection ·1" F BSP·
- ⑪ Water out connection ·1" F BSP·
- ⑫ Domestic hot water: cold water in ·3/4" F BSP·
- ⑬ Domestic hot water: hot water out ·3/4" F BSP·
- ⑭ High voltage wiring intake ·Ø 24mm·
- ⑮ Low voltage wiring intake ·Ø 15mm·
- ⑯ Levelling feet
- ⑰ User interface
- ⑱ Recirculation connection ·G 3/4"· (female)
- ⑲ Drain outlet (unit + safety valve)
- ⑳ Expansion vessel
- ㉑ 3-way valve
- ㉒ Pump
- ㉓ Backup heater
- ㉔ Flow sensor
- ㉕ Low voltage wiring intake (options)

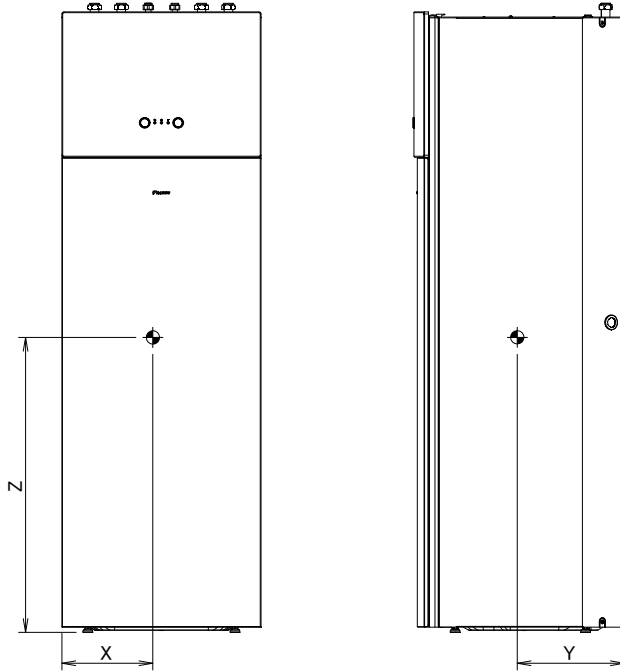


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# 7 Centre of gravity

7 - 1 Centre of Gravity

ETVH12E6V / ETVH16E6V / ETVH12UE6V / ETVH16UE6V / ETVH12E9W / ETVH16E9W  
 ETVX12E6V / ETVX16E6V / ETVX12E9W / ETVX16E9W  
 ETVZ12E6V / ETVZ16E6V / ETVZ12E9W / ETVZ16E9W



MODEL	X	Y	Z
EAV (H/X) 16S18*	327	329	890
EAV (H/X) 16S23*	327	329	1015
EAVZ16S18*	311	315	903
EAVZ16S23*	311	315	1028
ETV (H/X) 16S18*	327	329	890
ETV (H/X) 16S23*	327	329	1015
ETVZ16S18*	311	315	903
ETVZ16S23*	311	315	1028
ETV (H/X) 12S18*	327	329	890
ETV (H/X) 12S23*	327	329	1015
ETVZ12S18*	311	315	903
ETVZ12S23*	311	315	1028
ETVH12SU18*	327	329	890
ETVH12SU23*	327	329	1015
ETVH16SU18*	327	329	890
ETVH16SU23*	327	329	1015

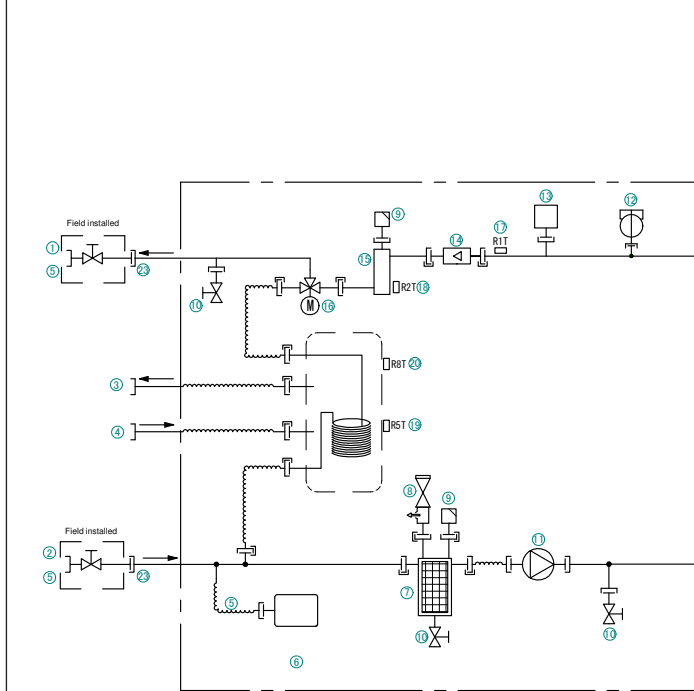
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# 8 Piping diagrams

## 8 - 1 Piping Diagrams

8

ETVH12E6V / ETVH16E6V / ETVH12UE6V / ETVH16UE6V / ETVH12E9W / ETVH16E9W  
 ETVX12E6V / ETVX16E6V / ETVX12E9W / ETVX16E9W



- ① Space heating - water OUT
- ② Space heating - water IN
- ③ Domestic hot water: hot water out -3/4"
- ④ Domestic hot water: cold water in -3/4"
- ⑤ Shut-off valve -1" (male-female)
- ⑥ Expansion vessel
- ⑦ Magnetic filter / dirt separator
- ⑧ Safety valve
- ⑨ Air purge
- ⑩ Drain valve
- ⑪ Pump
- ⑫ Flow switch
- ⑬ Space heating water pressure sensor
- ⑭ Flow sensor
- ⑮ Backup heater
- ⑯ 3-way valve (space heating/domestic hot water)
- ⑰ R1T - Inlet water thermistor
- ⑱ R2T - Outlet water backup heater thermistor
- ⑲ R5T - Tank thermistor
- ⑳ R8T - Tank thermistor
- Field piping connections
- ㉑ Water in connection -1"
- ㉒ Water out connection -1"
- ㉓ Screw connection -1"

Screw connection	Brazed connection
Quick coupling	Flare connection

3D120611B

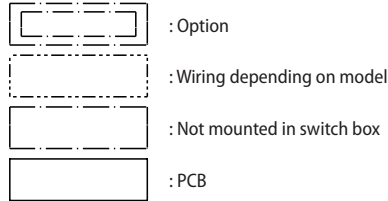
# 9 Wiring diagrams

## 9 - 1 Notes & Legend

### ETVH12E6V / ETVH12UE6V / ETVH12E9W / ETVX12E6V / ETVX12E9W

#### NOTES to go through before starting the unit

- X1M : Main terminal
- X2M : Field wiring terminal for AC
- X5M : Field wiring terminal for DC
- X6M : BUH Power supply terminal
- X10M : Smartgrid terminal
- · — · — · — : Earth wiring
- — — — — : Field supply
- ① : Several wiring possibilities

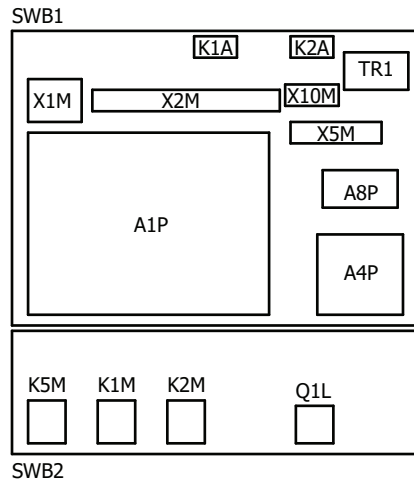


#### NOTES

1. Connection point of the power supply for the BUH should be foreseen outside the unit.

- Backup heater power supply
  - 6T1 (3~, 230V, 6kW)
  - 6V3 (1N~, 230V, 6kW)
  - 6WN/9WN (3N~, 400V, 6/9kW)
- User installed options:
  - LAN adapter
  - Remote user interface
  - Ext. indoor thermistor
  - Ext. outdoor thermistor
  - Digital I/O PCB
  - Demand PCB
  - Safety thermostat
  - Smartgrid kit
  - WLAN adapter module
  - WLAN cartridge
  - Bizonex mixing kit
- Main LWT:
  - ON/OFF thermostat (wired)
  - ON/OFF thermostat (wireless)
    - Ext. thermistor
  - Heat pump convector
- Add LWT:
  - ON/OFF thermostat (wired)
  - ON/OFF thermostat (wireless)
    - Ext. thermistor
  - Heat pump convector

#### POSITION IN SWITCH BOX



#### LEGEND

Part n°	Description	Part n°	Description
A1P	main PCB	Q4L	# safety thermostat
A2P	* ON/OFF thermostat (PC=power circuit)	Q*DI	# earth leakage circuit breaker
A3P	* heat pump convector	R1H (A2P)	* humidity sensor
A4P	* digital I/O PCB	R1T (A1P)	outlet water heat exchanger thermistor
A8P	* demand PCB	R1T (A2P)	* ambient sensor ON/OFF thermostat
A9P	status indicator	R1T (A14P)	* ambient sensor user interface
A11P	MMI main PCB	R2T (A1P)	outlet backup heater thermistor
A13P	* LAN adapter	R2T (A2P)	* external sensor (floor or ambient)
A14P	* user interface PCB	R5T, R8T	domestic hot water thermistor
A15P	* receiver PCB (wireless ON/OFF thermostat)	R6T	* external indoor or outdoor ambient thermistor
A20P	* WLAN adapter module	S1L	flow switch
A30P	* Bizonex mixing kit PCB	S1S	# preferential kWh rate PS contact
B2L	flow sensor	S2S	# electrical meter pulse input 1
B1PW	water pressure sensor	S3S	# electrical meter pulse input 2
CN* (A4P)	* connector	S4S	# smart grid feed-in
DS1 (A8P)	* dipswitch	S6S-S9S	* digital power limitation inputs
E1H	backup heater element (1 kW)	S10S-S11S	# low voltage smartgrid contact
E2H	backup heater element (2 kW)	SS1 (A4P)	* selector switch
E*P (A9P)	indication LED	SW1~2 (A12P)	turn buttons
F1B	# overcurrent fuse backup heater	SW3~5 (A12P)	push button
F1T	thermal fuse backup heater	TR1	power supply transformer
F1U, F2U (A4P)	* fuse 5 A 250 V for digital I/O PCB	X6M	# BUH power supply terminal strip
FU1 (A1P)	fuse T 5A 250V for PCB	X10M	* smartgrid power supply terminal strip
K1A, K2A	* high voltage smartgrid relay	X*, X*A, J*	connector
K1M, K2M	* contactor backup heater	X*H*, X*Y	
K5M	* safety contactor BUH	X*M	terminal strip
K*R (A*P)	relay on PCB		
M1P	main supply pump		
M2P	# domestic hot water pump		
M2S	# 2 way valve for cooling mode		
M3S	# 3 way valve for spaceheating /domestic hot water		
P1M	MMI display		
PC (A15P)	* power circuit		
PHC1 (A4P)	* optocoupler input circuit		
Q1L	thermal protector backup heater		

\* : optional # : field supply

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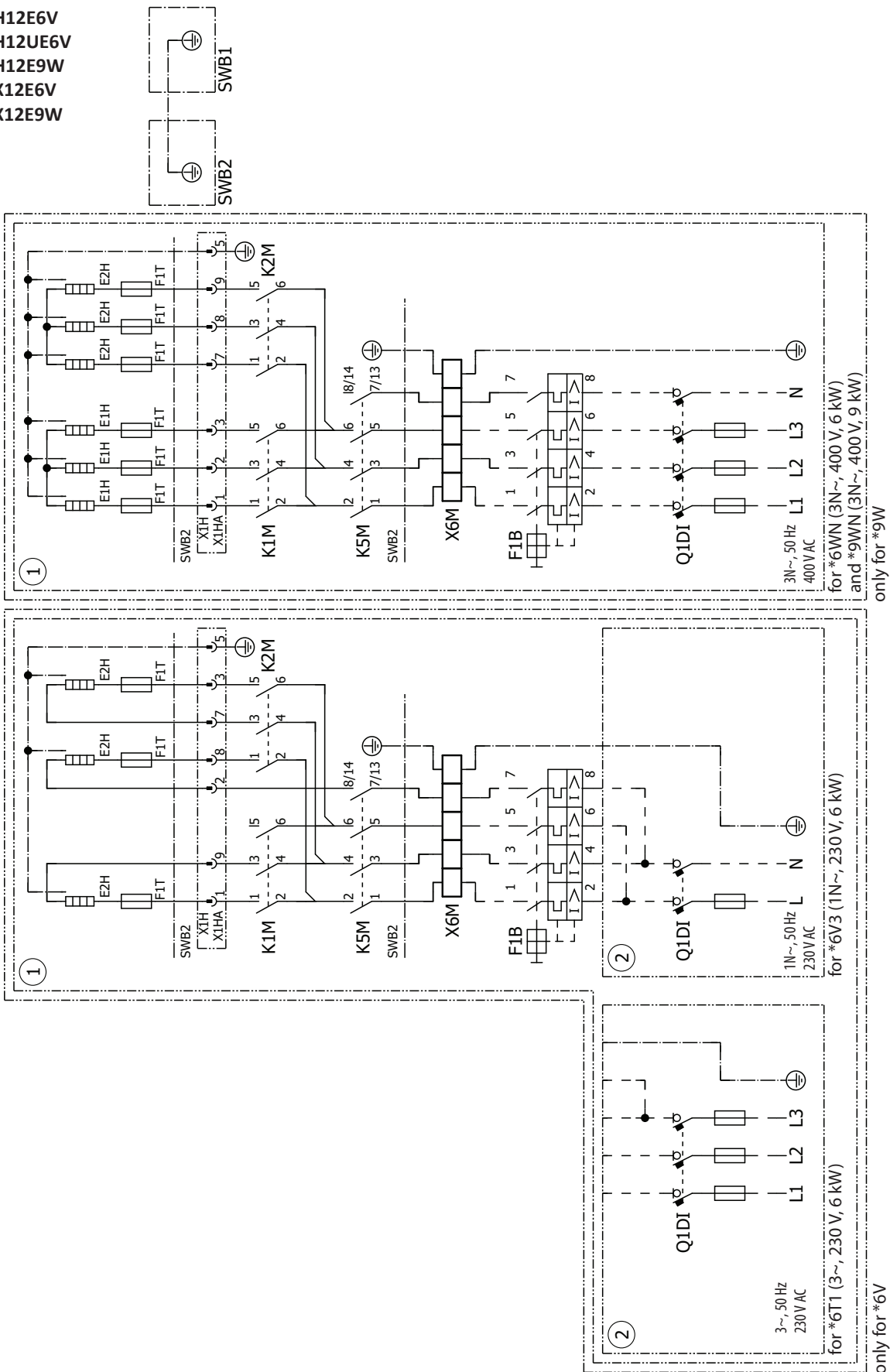




# 9 Wiring diagrams

## 9 - 3 Power Supply, Back-up Heater

ETVH12E6V  
ETVH12UE6V  
ETVH12E9W  
ETVX12E6V  
ETVX12E9W



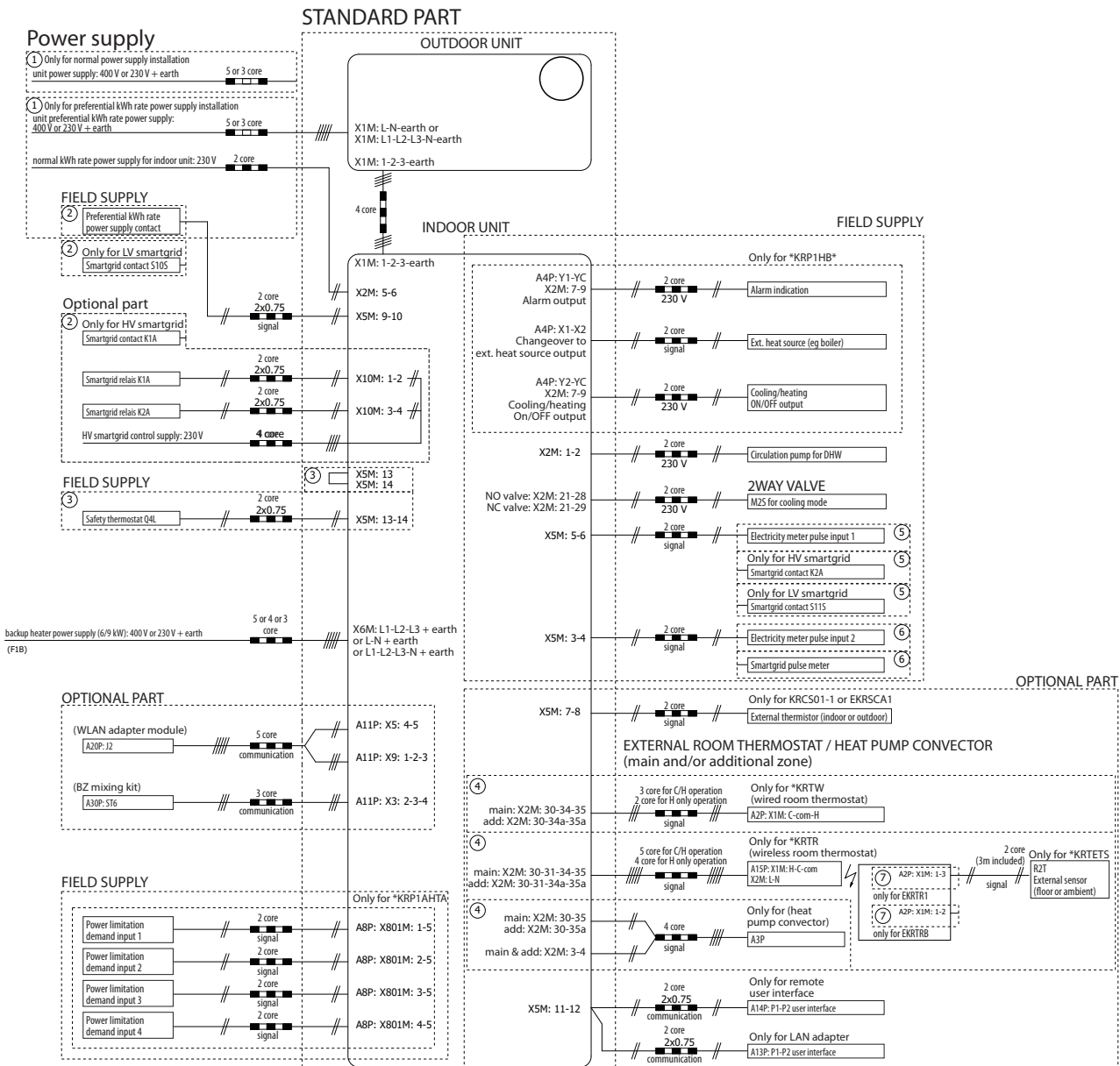
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# 10 External connection diagrams

## 10 - 1 External Connection Diagrams

10

ETVH12E6V  
ETVH12UE6V  
ETVH12E9V  
ETVX12E6V  
ETVX12E9V



**NOTE**

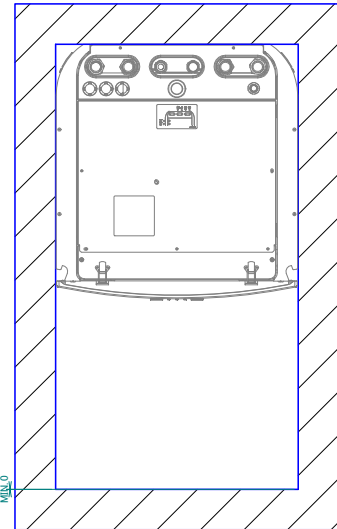
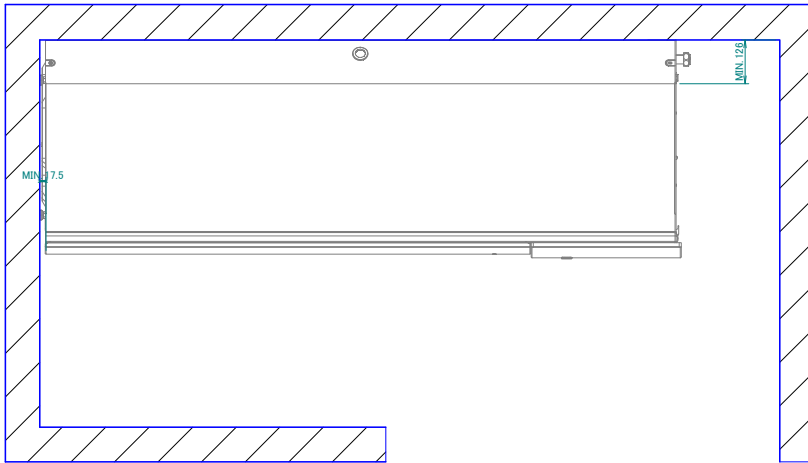
- In case of signal cable: keep minimum distance to power cables > 5 cm

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# 11 Installation

## 11 - 1 Installation Method

ETVH12E6V / ETVH16E6V  
ETVH12E9W / ETVH16E9W  
ETVX12E6V / ETVX16E6V  
ETVX12E9W / ETVX16E9W



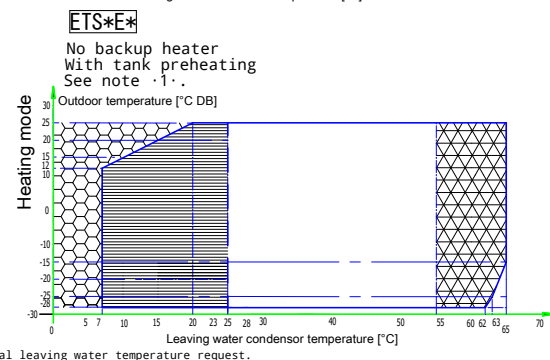
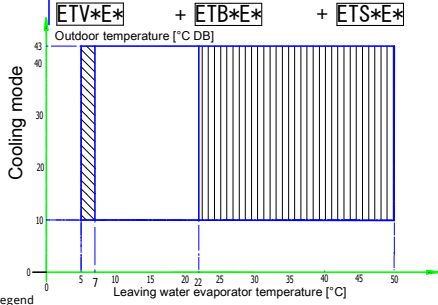
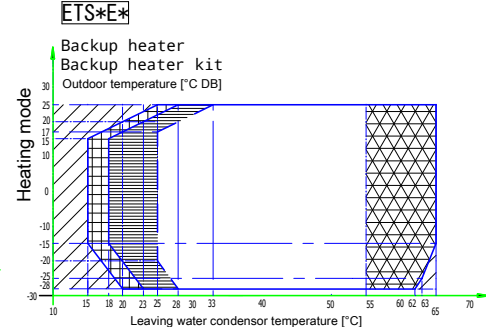
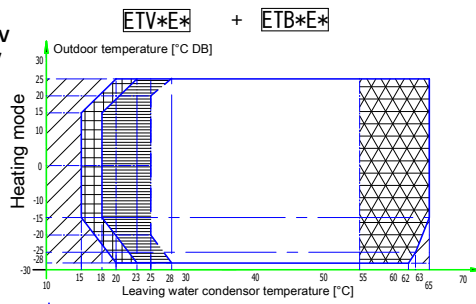
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# 12 Operation range

## 12 - 1 Operation Range

12

ETBH12E6V / ETBH12E9W  
 ETBX12E6V / ETBX12E9W  
 ETVH12E6V / ETVH12UE6V  
 ETVH12E9W / ETVX12E6V  
 ETVX12E9W / ETVZ12E6V  
 ETVZ12E9W



- Legend
- Backup heater only operation
  - No outdoor unit operation
  - Heat pump + backup heater operation
  - Pull-up area
  - Outdoor unit operation if controller setpoint is regulated to minimal leaving water temperature request. See dashed lines
  - Circulation pump operation only
  - Outdoor unit operation if setpoint > 55°C and ΔT = -10°C (ΔT = outlet temperature - inlet temperature)
  - Pull-down area
  - In case valve kit -AFVALVE1- is part of the system, then the minimum setpoint is -7°C.

- Notes
1. Tank preheating  
For details, see the installer reference guide.
  2. If negative ambient temperatures are expected, both in operation or at standstill, take adequate countermeasures against freezing. For more information, refer to the installation manual.
  3. In restricted power supply mode, the outdoor unit and backup heater can only operate separately.

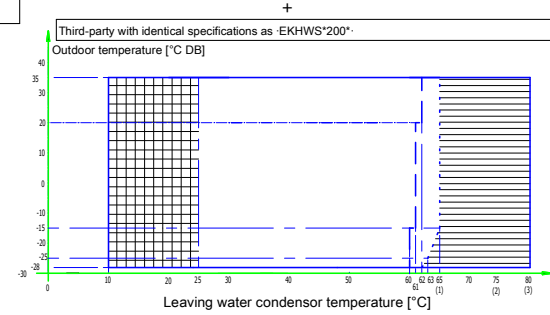
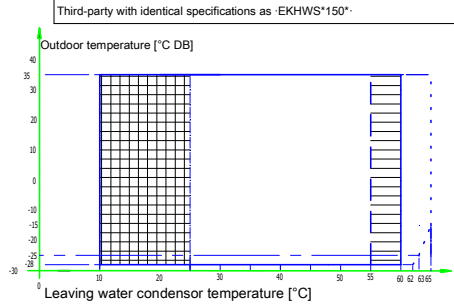
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ETBH12E6V / ETBH12E9W  
 ETBX12E6V / ETBX12E9W  
 ETVH12E6V / ETVH12UE6V  
 ETVH12E9W / ETVX12E6V  
 ETVX12E9W / ETVZ12E6V  
 ETVZ12E9W

### Domestic hot water heating mode

EKHWS\*150\*  
 EKHWS\*180\*  
 +

ETV\* + EKHWP\* + ETS\* +  
 EKHWS\*200\*  
 EKHWS\*250\*  
 EKHWS\*300\*



- Legend
- Setpoint [°C]
  - Domestic hot water
  - Leaving water temperature [°C]
  - Pull-up area
  - Booster heater only operation (if a booster heater is part of the system)
  - (1) ETV\*12\*E\* indoor units only
  - (2) Combination of EKHWS\* and ETB\*12\*E indoor units
  - (3) Combination of EKHWP\* and ETB\*12\*E indoor units

/ETS\*12\*E indoor units only

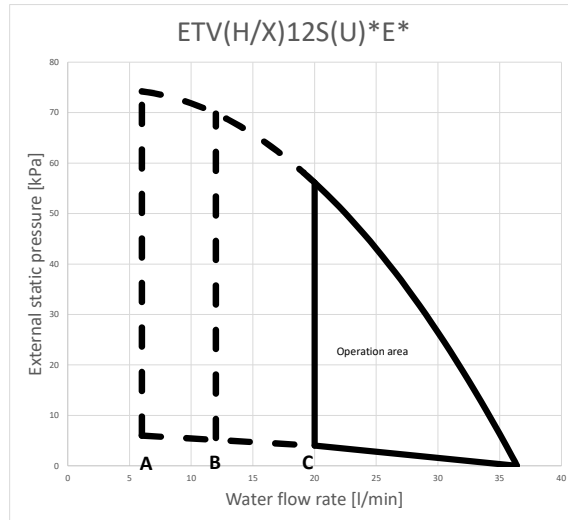
- Notes
1. In restricted power supply mode (EKHW\* only), the outdoor unit, booster heater and backup heater can only operate separately.
  2. Third-party with identical specifications as EKHWS\*150\*  
Coil surface > 1.05-m<sup>2</sup> and < 3.7-m<sup>2</sup>  
Tank thermistor and booster heater above heat pump coil.
  3. If negative ambient temperatures are expected, both in operation or at standstill, take adequate countermeasures against freezing.
- For more information, refer to the installation manual.
4. Third-party with identical specifications as EKHWS\*200\*  
Coil surface > 1.8-m<sup>2</sup> and < 3.7-m<sup>2</sup>  
Tank thermistor and booster heater above heat pump coil.

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# 13 Hydraulic performance

## 13 - 1 Static Pressure Drop Unit

ETVH12E6V  
 ETVH12UE6V  
 ETVH12E9W  
 ETVX12E6V  
 ETVX12E9W



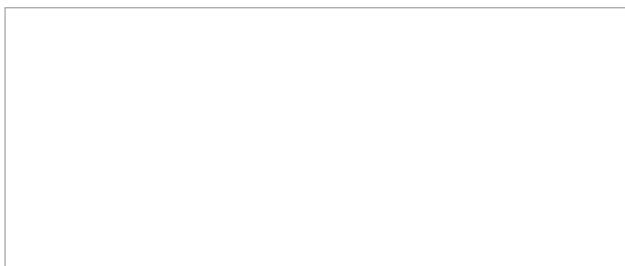
- A Minimum water flow rate during normal operation
- B Minimum water flow rate during backup heater operation
- C Minimum water flow rate during defrost operation

Operation area is extended to lower flow rates only in case the unit operates with heat pump only.  
 See dashed lines

Notes

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

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