

Heating

Technical Data

EHS<sub>H</sub>-D, EHS<sub>HB</sub>-D,  
EHS<sub>X</sub>-D, EHS<sub>XB</sub>-D



- |                |                             |                             |
|----------------|-----------------------------|-----------------------------|
| > EHSX04P30DA  | > EHSXB08P30DA              | > EHS <sub>HB</sub> 08P30DA |
| > EHSX04P50DA  | > EHSXB08P50DA              | > EHS <sub>HB</sub> 08P50DA |
| > EHSX08P30DA  | > EHS <sub>H</sub> 04P30DA  |                             |
| > EHSX08P50DA  | > EHS <sub>H</sub> 08P30DA  |                             |
| > EHSXB04P30DA | > EHS <sub>H</sub> 08P50DA  |                             |
| > EHSXB04P50DA | > EHS <sub>HB</sub> 04P30DA |                             |



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# 1 Features

## 1 - 1 EHS(H-X)(B)-D

- Integrated solar unit, offering top comfort in heating, hot water and cooling
- Maximum use of renewable energy: uses heat pump technology for heating and solar support for space heating and domestic hot water production
- Fresh water principle: hygienic water, with no need for thermal legionella disinfection
- Maintenance-free tank: no corrosion, anode, scale or lime deposits, and no loss of water through safety valve
- Solar support of domestic hot water with pressureless (drain-back) solar system
- Intelligent Heat Store management: continuous heating during defrost mode, and use of stored heat for space heating
- Heat loss is reduced to a minimum thanks to the high quality insulation
- App control possible for managing heating, hot water and cooling operation

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Fresh hot water    Solar ready



## 2 Specifications

2-1 Technical Specifications				EHSX04P30DA	EHSX04P50DA	EHSX08P30DA	EHSX08P50DA	
Outdoor unit				ERGA04DAV3 / ERGA04DAV3A		ERGA06DAV3 / ERGA08DAV3 / ERGA06DAV3A / ERGA08DAV3A		
Casing	Colour			Traffic white (RAL9016) / Dark grey (RAL7011)				
	Material			Impact resistant polypropylene				
Dimensions	Unit	Height	mm	1,891	1,896	1,891	1,896	
		Width	mm	595	790	595	790	
		Depth	mm	615	790	615	790	
	Packed unit	Height	mm	2,026	2,031	2,026	2,031	
		Width	mm	800				
		Depth	mm	800				
Weight	Unit		kg	73.0	93.0	73.0	93.0	
	Packed unit		kg	83	103	83	103	
Packing	Material			Plastic foil / Wood (pallet) / Corrugated board				
	Weight		kg	10				
Tank	Water volume		l	294	477	294	477	
	Material			Polypropylen				
	Maximum water temperature		°C	85.0 (1)				
	Insulation	Material			HFC-free Polyurethane foam			
		Heat loss	kWh/24h	1.5 (2)	1.7 (2)	1.5 (2)	1.7 (2)	
	Energy efficiency class			B				
	Psbisol		W/K	1.4	1.6	1.4	1.6	
	Standing heat loss		W	64	72	64	72	
	Storage volume		l	294	477	294	477	
	Vbu (Solar, BUH)		l	290	464	290	464	
Heat exchanger	Quantity			2				
	Charging	Quantity			1			
		Tube material			Stainless steel (2)			
		Face area	m <sup>2</sup>	3	2	3	2	
		Internal coil volume	l	12				
		Operating pressure	bar	3				
		Average specific thermal output	W/K	1,200	1,170	1,200	1,170	
	Domestic hot water	Average specific thermal output	W/K	2,790	2,825	2,790	2,825	
		Face area	m <sup>2</sup>	5.600	5.800	5.600	5.800	
		Internal coil volume	l	27.1	28.2	27.1	28.2	
		Operating pressure	bar	6				
		Quantity			1			
		Tube material			Stainless steel (2)			
Pump	Type			Grundfos UPM3K 25-75 CHBL				
	Nr of speeds			PWM				
	IP class			IP44				
	Power input		W	58				

## 2 Specifications

2-1 Technical Specifications				EHSX04P30DA	EHSX04P50DA	EHSX08P30DA	EHSX08P50DA	
Operation range	Heating	Water side	Min.	°C	18			
			Max.	°C	65			
	Indoor installation	Ambient	Min.	°CDB	5			
			Max.	°CDB	40			
	Cooling	Ambient	Min.	°CDB	10			
			Max.	°CDB	43			
		Water side	Min.	°C	5			
			Max.	°C	22			
	Domestic hot water	Ambient	Min.	°CDB	-25			
			Max.	°CDB	35			
Water side		Min.	°C	25				
		Max. (booster heater)	°C	80				
Water side Heat exchanger	Type			Plate heat exchanger				
	Model			ACH40-42AH-F				
	Quantity			1				
	Plates	Quantity		42				
	Water volume			l				
	Insulation material			EPP				
	Refrigerant			R-32				
Charge			kg					
Circuits			Quantity					
Control			Electronic expansion valve / Inverter					
GWP			675.0					
Refrigerant circuit	Gas side diameter		mm		15.9			
	Liquid side diameter		mm		6.35			
Water circuit - Domestic hot water side	Piping material			Brass(CW617N)				
	Piping connections	Cold water in / Hot water out	inch		G 1" (male)			
Sound power level	Nom.		dBA		39			
Thermal performance	Hot water volume without reheating at draw-off rate 12l/min		l		153 (3) / 252 (4) / 321 (5)	318 (3) / 494 (4) / 564 (5) / 276 (1)	153 (3) / 252 (4) / 321 (5)	318 (3) / 494 (4) / 564 (5) / 276 (1)
	Hot water volume without reheating at draw-off rate 8l/min		l		184 (3) / 282 (4) / 352 (5)	364 (3) / 540 (4) / 612 (5) / 328 (1)	184 (3) / 282 (4) / 352 (5)	364 (3) / 540 (4) / 612 (5) / 328 (1)
Water circuit	Piping connections diameter		inch		G 1" (male)			
	Piping material			Brass(CW617N)				
	Safety valve		bar		3			
	Manometer			Digital				
	Drain valve / fill valve			Yes				
	Shut off valve			Yes				
	Air purge valve			Yes				
Pressure	Heating	Max.	bar		3			
PED	Category			art. 3.3				
	Most critical part	Name		Plate heat exchanger				
General	Supplier/ Manufacturer details		Name or trademark		Daikin Europe N.V.			
			Name and address		ROTEX Heating Systems GmbH, Langwiesenstr. 10, 74363 Gueglingen			
Control systems	Class of temperature control			II				
	Contribution to seasonal space heating efficiency		%		2.0			
	Infrared remote control			No				
	Wired remote control			RoConPlus				
Water circuit - space heating side (main zone)	Air purge valve			Yes				
	Drain valve / fill valve			Yes				
	Manometer			Yes				
	Piping connections diameter		inch		G 1 (FEMALE)			
	Safety valve		bar		Yes			
	Shut off valve			Yes				

## 2 Specifications

2-2 Technical Specifications				EHSXB04P30DA	EHSXB04P50DA	EHSXB08P30DA	EHSXB08P50DA	
Outdoor unit				ERGA04DAV3 / ERGA04DAV3A		ERGA06DAV3 / ERGA08DAV3 / ERGA06DAV3A / ERGA08DAV3A		
Casing	Colour			Traffic white (RAL9016) / Dark grey (RAL7011)				
	Material			Impact resistant polypropylene				
Dimensions	Unit	Height	mm	1,891	1,896	1,891	1,896	
		Width	mm	595	790	595	790	
		Depth	mm	615	790	615	790	
	Packed unit	Height	mm	2,026	2,031	2,026	2,031	
		Width	mm	800				
		Depth	mm	800				
Weight	Unit			kg	76.0	99.0	76.0	99.0
	Packed unit			kg	86	109	86	109
Packing	Material			Plastic foil / Wood (pallet) / Corrugated board				
	Weight			kg	10			
Tank	Water volume			l	294	477	294	477
	Material			Polypropylen				
	Maximum water temperature			°C	85.0 (1)			
	Insulation	Material			HFC-free Polyurethane foam			
		Heat loss	kWh/24h		1.5 (2)	1.7 (2)	1.5 (2)	1.7 (2)
	Energy efficiency class			B				
	Psbisol			W/K	1.4	1.6	1.4	1.6
	Standing heat loss			W	64	72	64	72
	Storage volume			l	294	477	294	477
	Vbu (Solar, BUH)			l	290	464	290	464
Heat exchanger	Quantity			3				
	Charging	Quantity			1			
		Tube material			Stainless steel (2)			
		Face area	m <sup>2</sup>		3	2	3	2
		Internal coil volume	l	12				
		Operating pressure	bar	3				
		Average specific thermal output	W/K		1,200	1,170	1,200	1,170
	Domestic hot water	Average specific thermal output	W/K		2,790	2,817	2,790	2,817
		Face area	m <sup>2</sup>		5.600	5.900	5.600	5.900
		Internal coil volume	l		27.1	28.1	27.1	28.1
		Operating pressure	bar	6				
		Quantity			1			
		Tube material			Stainless steel (2)			
Pump	Type			Grundfos UPM3K 25-75 CHBL				
	Nr of speeds			PWM				
	IP class			IP44				
	Power input			W	58			

## 2 Specifications

2-2 Technical Specifications				EHSXB04P30DA	EHSXB04P50DA	EHSXB08P30DA	EHSXB08P50DA
Operation range	Heating	Water side	Min.	°C	18		
			Max.	°C	65		
	Indoor installation	Ambient	Min.	°CDB	5		
			Max.	°CDB	40		
	Cooling	Ambient	Min.	°CDB	10		
			Max.	°CDB	43		
		Water side	Min.	°C	5		
			Max.	°C	22		
	Domestic hot water	Ambient	Min.	°CDB	-25		
			Max.	°CDB	35		
Water side		Min.	°C	25			
		Max. (booster heater)	°C	80			
		Max.	°C	55			
Water side Heat exchanger	Type			Plate heat exchanger			
	Model			ACH40-42AH-F			
	Quantity			1			
	Plates	Quantity		42			
	Water volume			l			
	Insulation material			EPP			
Refrigerant	Type			R-32			
	Charge			kg			
	Circuits	Quantity		1			
	Control			Electronic expansion valve / Inverter			
	GWP			675.0			
Refrigerant circuit	Gas side diameter		mm	15.9			
	Liquid side diameter		mm	6.35			
Water circuit - Domestic hot water side	Piping material			Brass(CW617N)			
	Piping connections	Cold water in / Hot water out	inch	G 1" (male)			
Sound power level	Nom.		dBA	39			
Thermal performance	Hot water volume without reheating at draw-off rate 12l/min		l	153 (3) / 252 (4) / 321 (5)	282 (3) / 444 (4) / 516 (5) / 240 (1)	153 (3) / 252 (4) / 321 (5)	282 (3) / 444 (4) / 516 (5) / 240 (1)
	Hot water volume without reheating at draw-off rate 8l/min		l	184 (3) / 282 (4) / 352 (5)	324 (3) / 492 (4) / 560 (5) / 288 (1)	184 (3) / 282 (4) / 352 (5)	324 (3) / 492 (4) / 560 (5) / 288 (1)
Water circuit	Piping connections diameter		inch	G 1" (male)			
	Piping material			Brass(CW617N)			
	Safety valve	bar		3			
	Manometer			Digital			
	Drain valve / fill valve			Yes			
	Shut off valve			Yes			
	Air purge valve			Yes			
Pressure	Heating	Max.	bar	3			
PED	Category			art. 3.3			
	Most critical part	Name		Plate heat exchanger			
General	Supplier/ Manufacturer details	Name or trademark		Daikin Europe N.V.			
		Name and address		ROTEX Heating Systems GmbH, Langwiesenstr. 10, 74363 Gueglingen			
Control systems	Class of temperature control			II			
	Contribution to seasonal space heating efficiency		%	2.0			
	Infrared remote control			No			
	Wired remote control			RoConPlus			
Water circuit - space heating side (main zone)	Air purge valve			Yes			
	Drain valve / fill valve			Yes			
	Manometer			Yes			
	Piping connections diameter		inch	G 1 (FEMALE)			
	Safety valve		bar	Yes			
	Shut off valve			Yes			



## 2 Specifications

2-3 Technical Specifications				EHS04P30DA	EHS08P30DA	EHS08P50DA	EHSB04P30DA	
Outdoor unit				ERGA04DAV3 / ERGA04DAV3A	ERGA06DAV3 / ERGA08DAV3 / ERGA06DAV3A / ERGA08DAV3A		ERGA04DAV3 / ERGA04DAV3A	
Casing	Colour			Traffic white (RAL9016) / Dark grey (RAL7011)				
	Material			Impact resistant polypropylene				
Dimensions	Unit	Height	mm	1,891		1,896	1,891	
		Width	mm	595		790	595	
		Depth	mm	615		790	615	
	Packed unit	Height	mm	2,026		2,031	2,026	
		Width	mm	800				
		Depth	mm	800				
Weight	Unit			kg	73.0	93.0	76.0	
	Packed unit			kg	83	103	86	
Packing	Material			Plastic foil / Wood (pallet) / Corrugated board				
	Weight			kg	10			
Tank	Water volume			l	294	477	294	
	Material			Polypropylen				
	Maximum water temperature			°C	85.0 (1)			
	Insulation	Material			HFC-free Polyurethane foam			
		Heat loss	kWh/24h		1.5 (2)		1.7 (2)	1.5 (2)
	Energy efficiency class			B				
	Psbisol			W/K	1.4	1.6	1.4	
	Standing heat loss			W	64	72	64	
	Storage volume			l	294	477	294	
	Vbu (Solar, BUH)			l	290	464	290	
Heat exchanger	Quantity			2			3	
	Charging	Quantity			1			
		Tube material			Stainless steel (2)			
		Face area	m <sup>2</sup>		3		2	3
		Internal coil volume	l		12			
		Operating pressure	bar		3			
		Average specific thermal output	W/K		1,200		1,170	1,200
		Domestic hot water	Average specific thermal output	W/K	2,790		2,825	2,790
	Face area	m <sup>2</sup>		5.600		5.800	5.600	
	Internal coil volume	l		27.1		28.2	27.1	
	Operating pressure	bar		6				
	Quantity				1			
	Tube material				Stainless steel (2)			
Pump	Type			Grundfos UPM3K 25-75 CHBL				
	Nr of speeds			PWM				
	IP class			IP44				
	Power input			W	58			

## 2 Specifications

2-3 Technical Specifications				EHSX04P30DA	EHSXB08P30DA	EHSB08P50DA	EHSB04P30DA
Operation range	Heating	Water side	Min.	°C	18		
			Max.	°C	65		
	Indoor installation	Ambient	Min.	°CDB	5		
			Max.	°CDB	40		
	Cooling	Ambient	Min.	°CDB	10		
			Max.	°CDB	43		
		Water side	Min.	°C	5		
			Max.	°C	22		
	Domestic hot water	Ambient	Min.	°CDB	-25		
			Max.	°CDB	35		
Water side		Min.	°C	25			
		Max. (booster heater)	°C	80			
		Max.	°C	55			
Water side Heat exchanger	Type			Plate heat exchanger			
	Model			ACH40-42AH-F			
	Quantity			1			
	Plates	Quantity		42			
	Water volume			l			
	Insulation material			EPP			
Refrigerant	Type			R-32			
	Charge			kg			
	Circuits	Quantity		1			
	Control			Electronic expansion valve / Inverter			
	GWP			675.0			
Refrigerant circuit	Gas side diameter		mm		15.9		
	Liquid side diameter		mm		6.35		
Water circuit - Domestic hot water side	Piping material			Brass(CW617N)			
	Piping connections	Cold water in / Hot water out	inch		G 1" (male)		
Sound power level	Nom.		dBA		39		
Thermal performance	Hot water volume without reheating at draw-off rate 12l/min		l		153 (3) / 252 (4) / 321 (5)		318 (3) / 494 (4) / 564 (5) / 276 (1)
	Hot water volume without reheating at draw-off rate 8l/min		l		184 (3) / 282 (4) / 352 (5)		364 (3) / 540 (4) / 612 (5) / 328 (1)
Water circuit	Piping connections diameter		inch		G 1" (male)		
	Piping material			Brass(CW617N)			
	Safety valve		bar		3		
	Manometer			Digital			
	Drain valve / fill valve			Yes			
	Shut off valve			Yes			
	Air purge valve			Yes			
	Pressure	Heating	Max.	bar		3	
PED	Category			art. 3.3			
	Most critical part	Name		Plate heat exchanger			
General	Supplier/ Manufacturer details	Name or trademark		Daikin Europe N.V.			
		Name and address		ROTEX Heating Systems GmbH, Langwiesenstr. 10, 74363 Gueglingen			
Control systems	Class of temperature control			II			
	Contribution to seasonal space heating efficiency		%		2.0		
	Infrared remote control			No			
	Wired remote control			RoConPlus			
Water circuit - space heating side (main zone)	Air purge valve			Yes			
	Drain valve / fill valve			Yes			
	Manometer			Yes			
	Piping connections diameter		inch		G 1 (FEMALE)		
	Safety valve		bar		Yes		
	Shut off valve			Yes			

## 2 Specifications

2-4 Technical Specifications				EHSB08P30DA		EHSB08P50DA		
Outdoor unit				ERGA06DAV3 / ERGA08DAV3 / ERGA06DAV3A / ERGA08DAV3A				
Casing	Colour			Traffic white (RAL9016) / Dark grey (RAL7011)				
	Material			Impact resistant polypropylene				
Dimensions	Unit	Height	mm	1,891		1,896		
		Width	mm	595		790		
		Depth	mm	615		790		
	Packed unit	Height	mm	2,026		2,031		
		Width	mm	800				
		Depth	mm	800				
Weight	Unit		kg	76.0		99.0		
	Packed unit		kg	86		109		
Packing	Material			Plastic foil / Wood (pallet) / Corrugated board				
	Weight		kg	10				
Tank	Water volume		l	294		477		
	Material			Polypropylen				
	Maximum water temperature		°C	85.0 (1)				
	Insulation	Material			HFC-free Polyurethane foam			
		Heat loss	kWh/24h	1.5 (2)		1.7 (2)		
	Energy efficiency class			B				
	Psbso		W/K	1.4		1.6		
	Standing heat loss		W	64		72		
	Storage volume		l	294		477		
	Vbu (Solar, BUH)		l	290		464		
Heat exchanger	Quantity			3				
	Charging	Quantity			1			
		Tube material			Stainless steel (2)			
		Face area	m <sup>2</sup>	3		2		
		Internal coil volume	l	12				
		Operating pressure	bar	3				
		Average specific thermal output	W/K	1,200		1,170		
	Domestic hot water	Average specific thermal output	W/K	2,790		2,817		
		Face area	m <sup>2</sup>	5.600		5.900		
		Internal coil volume	l	27.1		28.1		
		Operating pressure	bar	6				
		Quantity			1			
		Tube material			Stainless steel (2)			
Pump	Type			Grundfos UPM3K 25-75 CHBL				
	Nr of speeds			PWM				
	IP class			IP44				
	Power input		W	58				

## 2 Specifications

2-4 Technical Specifications					EHSB08P30DA		EHSB08P50DA	
Operation range	Heating	Water side	Min.	°C			18	
			Max.	°C			65	
	Indoor installation	Ambient	Min.	°CDB			5	
			Max.	°CDB			40	
	Cooling	Ambient	Min.	°CDB			10	
			Max.	°CDB			43	
		Water side	Min.	°C			5	
			Max.	°C			22	
	Domestic hot water	Ambient	Min.	°CDB			-25	
			Max.	°CDB			35	
Water side		Min.	°C			25		
		Max. (booster heater)	°C			80		
		Max.	°C			55		
Water side Heat exchanger	Type				Plate heat exchanger			
	Model				ACH40-42AH-F			
	Quantity				1			
	Plates	Quantity			42			
	Water volume			l	1.01			
	Insulation material				EPP			
Refrigerant	Type				R-32			
	Charge			kg	1.50			
	Circuits	Quantity			1			
	Control				Electronic expansion valve / Inverter			
	GWP				675.0			
Refrigerant circuit	Gas side diameter			mm	15.9			
	Liquid side diameter			mm	6.35			
Water circuit - Domestic hot water side	Piping material				Brass(CW617N)			
	Piping connections	Cold water in / Hot water out	inch		G 1" (male)			
Sound power level	Nom.			dBA	39			
Thermal performance	Hot water volume without reheating at draw-off rate 12l/min			l	153 (3) / 252 (4) / 321 (5)		282 (3) / 444 (4) / 516 (5) / 240 (1)	
	Hot water volume without reheating at draw-off rate 8l/min			l	184 (3) / 282 (4) / 352 (5)		324 (3) / 492 (4) / 560 (5) / 288 (1)	
Water circuit	Piping connections diameter			inch	G 1" (male)			
	Piping material				Brass(CW617N)			
	Safety valve			bar	3			
	Manometer				Digital			
	Drain valve / fill valve				Yes			
	Shut off valve				Yes			
	Air purge valve				Yes			
Pressure	Heating	Max.	bar	3				
PED	Category				art. 3.3			
	Most critical part	Name			Plate heat exchanger			
General	Supplier/ Manufacturer details	Name or trademark			Daikin Europe N.V.			
		Name and address			ROTEX Heating Systems GmbH, Langwiesenstr. 10, 74363 Gueglingen			
Control systems	Class of temperature control				II			
	Contribution to seasonal space heating efficiency			%	2.0			
	Infrared remote control				No			
	Wired remote control				RoConPlus			
Water circuit - space heating side (main zone)	Air purge valve				Yes			
	Drain valve / fill valve				Yes			
	Manometer				Yes			
	Piping connections diameter			inch	G 1 (FEMALE)			
	Safety valve			bar	Yes			
	Shut off valve				Yes			

## 2 Specifications

2

2-5 Electrical Specifications				EHSX04P30DA	EHSX04P50DA	EHSX08P30DA	EHSX08P50DA
Power supply	Phase			1~			
	Frequency		Hz	50			
	Voltage		V	230			
	Voltage range	Min.	%	10			
		Max.	%	10			
IP class	IP			IP 40			
Electric heater	Power supply	Name		3V / 9W			
		Phase		1~ / 3~			
		Frequency	Hz	50			
Electrical power consumption	Max.		W	62			
	Standby		W	11			

2-6 Electrical Specifications				EHSXB04P30DA	EHSXB04P50DA	EHSXB08P30DA	EHSXB08P50DA
Power supply	Phase			1~			
	Frequency		Hz	50			
	Voltage		V	230			
	Voltage range	Min.	%	10			
		Max.	%	10			
IP class	IP			IP 40			
Electric heater	Power supply	Name		3V / 9W			
		Phase		1~ / 3~			
		Frequency	Hz	50			
Electrical power consumption	Max.		W	62			
	Standby		W	11			

2-7 Electrical Specifications				EHSX04P30DA	EHSX08P30DA	EHSX08P50DA	EHSXB04P30DA
Power supply	Phase			1~			
	Frequency		Hz	50			
	Voltage		V	230			
	Voltage range	Min.	%	10			
		Max.	%	10			
IP class	IP			IP 40			
Electric heater	Power supply	Name		3V / 9W			
		Phase		1~ / 3~			
		Frequency	Hz	50			
Electrical power consumption	Max.		W	62			
	Standby		W	11			

2-8 Electrical Specifications				EHSXB08P30DA	EHSXB08P50DA
Power supply	Phase			1~	
	Frequency		Hz	50	
	Voltage		V	230	
	Voltage range	Min.	%	10	
		Max.	%	10	
IP class	IP			IP 40	
Electric heater	Power supply	Name		3V / 9W	
		Phase		1~ / 3~	
		Frequency	Hz	50	
Electrical power consumption	Max.		W	62	
	Standby		W	11	

### Notes

- (1) Heat up of tank only with heat pump, no electrical heater
- (2) Heatloss according to EN12897
- (3) TKW = 10°C/TWW = 40°C/TSP = 50°C
- (4) TKW = 10°C/TWW = 40°C/TSP = 60°C
- (5) TKW = 10°C/TWW = 40°C/TSP = 65°C

### 3 Combination table

#### 3 - 1 Combination Table

EHSHB-D, ESHH-D, EHSXB-D, EHSX-D

		Brand	DAIKIN	
		Productname	EHSX04P30DA EHSX04P50DA EHSXB04P30DA EHSXB04P50DA ESH04P30DA ESH04P50DA	ESH08P30DA ESH08P50DA EHSXB08P30DA EHSXB08P50DA ESH08P30DA ESH08P50DA ESH08P30DA ESH08P50DA
outdoor units	DAIKIN	ERGA04DAV3	P	-
		ERGA06DAV3	-	P
		ERGA08DAV3	-	P
		ERGA04DAV3A	P	-
		ERGA06DAV3A	-	P
		ERGA08DAV3A	-	P

**Notes**

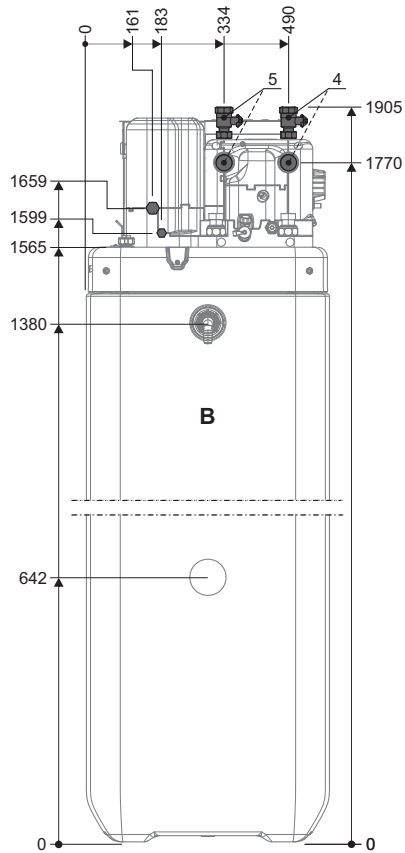
P : Pair combination allowed

# 4 Dimensional drawings

## 4 - 1 Dimensional Drawings

4

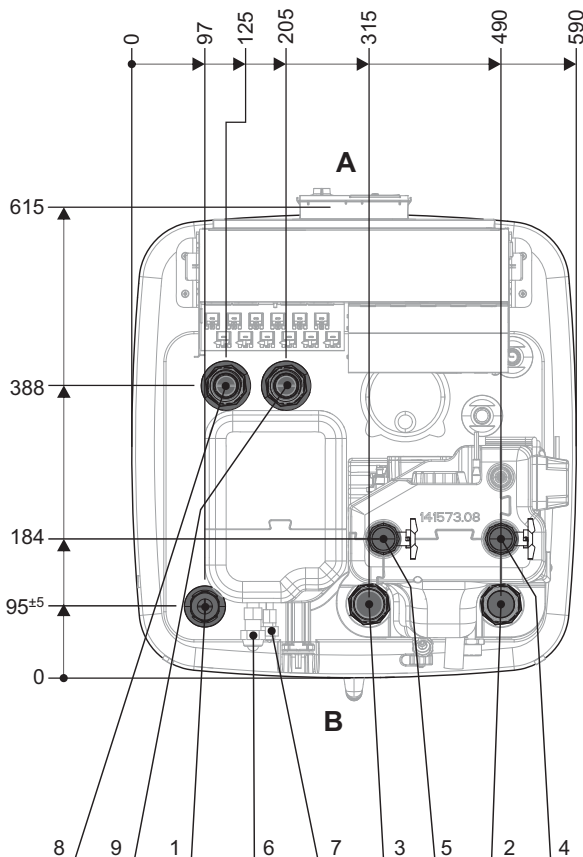
EHSHB-D, ESH-D, EHSXB-D, EHSX-D  
300 Litres Dimensions side-view



No.	Name
1	Solar - feed
2	Cold water
3	Hot water
4	Heating feed
5	Heating return flow
6	Connection coolant gas line
7	Connection coolant fluid line
8	Solar - feed flow (only Daikin Altherma EHS(X/H)-D type)
9	Solar - return (only Daikin Altherma EHS(X/H)-D type)

A	Front
B	Back

EHSHB-D, ESH-D, EHSXB-D, EHSX-D  
300 Litres Dimensions top-view



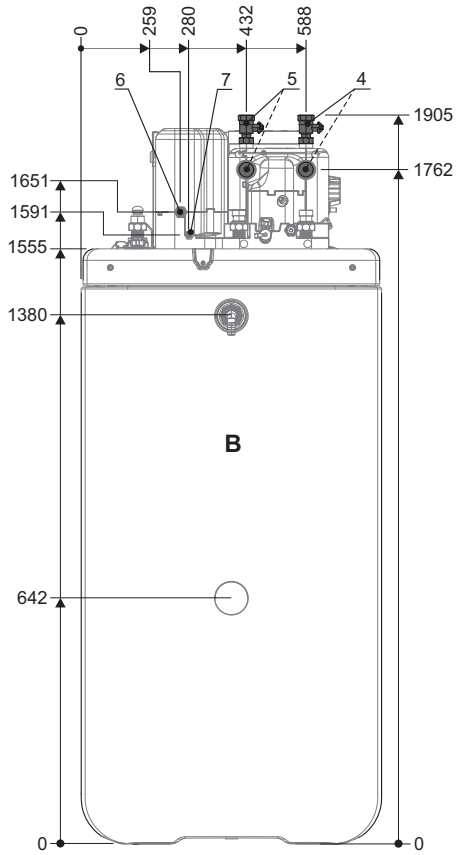
No.	Name
1	Solar - feed
2	Cold water
3	Hot water
4	Heating feed
5	Heating return flow
6	Connection coolant gas line
7	Connection coolant fluid line
8	Solar - feed flow (only Daikin Altherma EHS(X/H)-D type)
9	Solar - return (only Daikin Altherma EHS(X/H)-D type)

A	Front
B	Back

# 4 Dimensional drawings

## 4 - 1 Dimensional Drawings

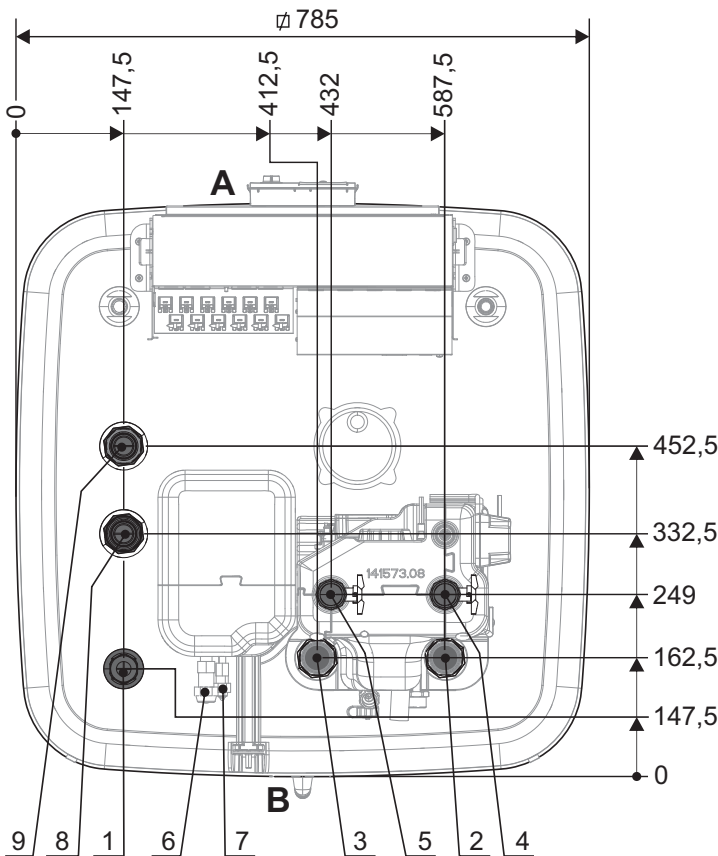
EHSX-D, EHSXB-D, EHSX-D  
500 Litres Dimensions side-view



No.	Name
1	Solar - feed
2	Cold water
3	Hot water
4	Heating feed
5	Heating return flow
6	Connection coolant gas line
7	Connection coolant fluid line
8	Solar - feed flow (only Daikin Altherma EHS(X/H)-D type)
9	Solar - return (only Daikin Altherma EHS(X/H)-D type)

A	Front
B	Back

EHSXB-D, EHSX-D, EHSXB-D, EHSX-D  
500 Litres Dimensions top-view



No.	Name
1	Solar - feed
2	Cold water
3	Hot water
4	Heating feed
5	Heating return flow
6	Connection coolant gas line
7	Connection coolant fluid line
8	Solar - feed flow (only Daikin Altherma EHS(X/H)-D type)
9	Solar - return (only Daikin Altherma EHS(X/H)-D type)

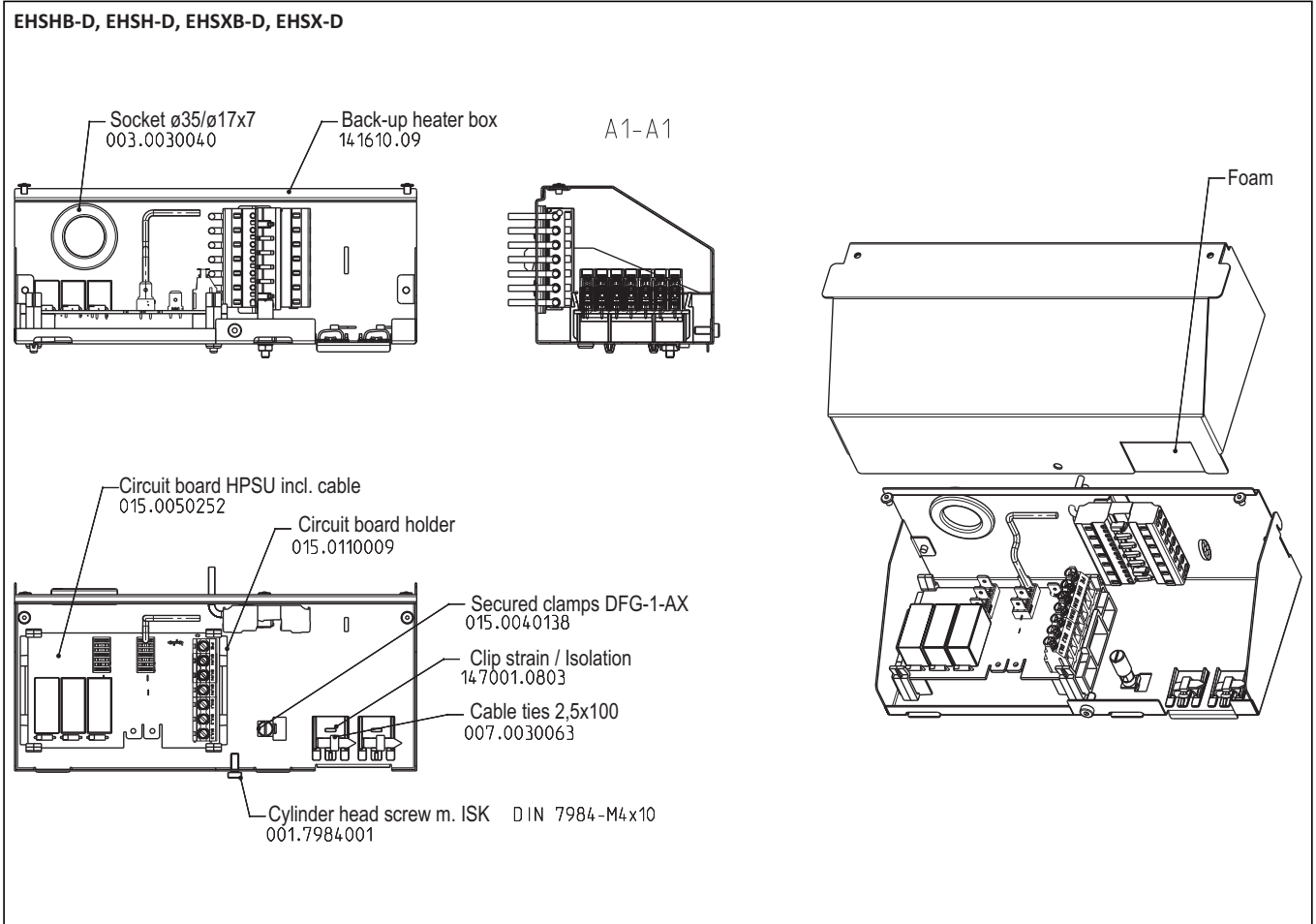
A	Front
B	Back



# 4 Dimensional drawings

## 4 - 1 Dimensional Drawings

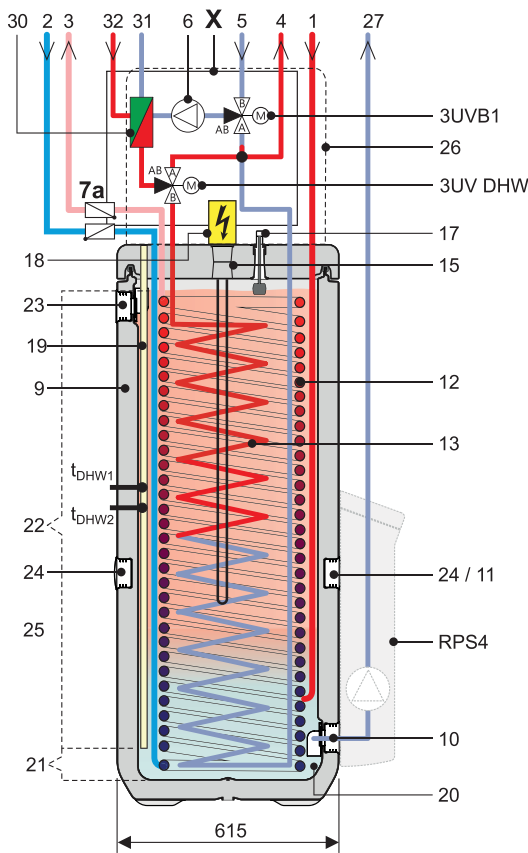
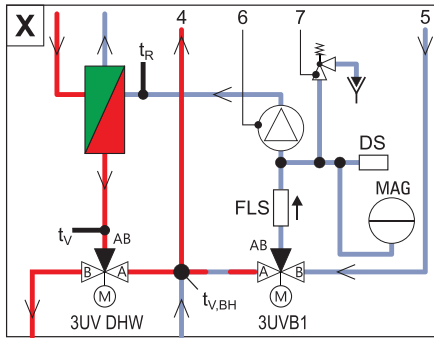
4



# 5 Piping diagrams

## 5 - 1 Piping Diagrams

EHSHB-D, ESHH-D, EHSXB-D, EHSX-D  
Standard 300 Litres



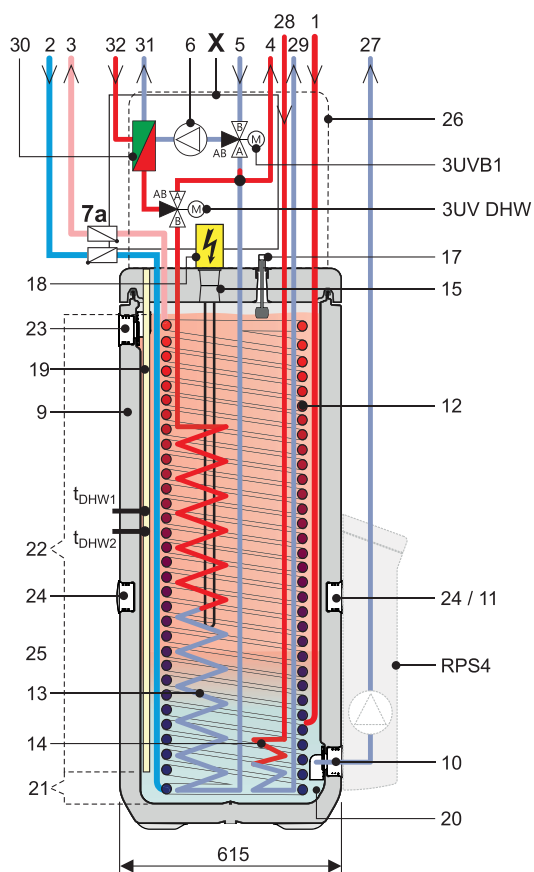
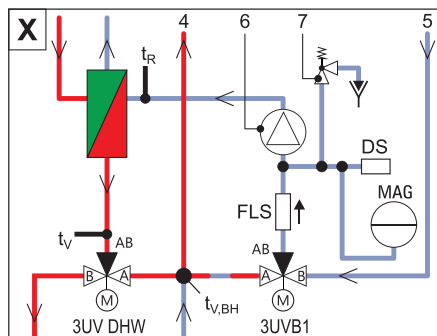
No.	Name
1	Solar - flow or connection for additional heat source (only BIV)
2	Cold water flow
3	Hot water flow
4	Heating flow
5	Heating return
6	Circulation pump
7	Pressure relief valve
7a	Recommended accessories: non-return valves (2 pcs.)
8	Automatic fan
9	Storage tank (double walled jacket made of polypropylene with PUR hard foam heat insulation)
10	Filling and drainage connection or Solar - return flow connection
11	Mount for solar controller or handle
12	Heat exchanger (stainless steel) for drinking water heating
13	Heat exchanger (stainless steel) for storage tank charging or heating support
14	Heat exchanger (stainless steel) for pressurised solar storage tank charging
15	Connection for optional electrical Backup-Heater EKBUxx
16	Solar inflow layering pipe
17	Fill level indicator (tank water)
18	Optional: Electrical Backup-Heater (EKBUxx)
19	Submersible sensor sleeve for storage tank temperature sensor $t_{DHW1}$ and $t_{DHW2}$
20	Unpressurised storage tank water
21	Solar zone
22	Hot water zone
23	Safety overflow connection
24	Mount for handle
25	Type plate
26	Protective cover
27	Solar - return
28	Solar - feed
29	Solar - return
30	Panel heat exchanger
31	Connection coolant fluid line
32	Connection to coolant gas line
3UVB1	3-way diverter valve (internal heat generator circuit)
3UV DHW	3 way diverter valve (hot water/heating)
DS	Pressure sensor
FLS	Flow sensor
$t_{DHW1}$ , $t_{DHW2}$	Storage tank temperature sensor
$t_r$	Return flow temperature sensor
$t_v$	Flow temperature sensor
$t_{v,BH}$	Flow temperature sensor Backup-Heater
RoCon B1	Operating section Daikin Altherma EHS(X/H) control unit
RPS4A	Optional: DaikinSolar regulation and pump unit
MAG	Membrane expansion vessel

# 5 Piping diagrams

## 5 - 1 Piping Diagrams

5

**EHSB-D, EHSB-D, EHSXB-D, EHSX-D**  
**Bivalent 300 Litres**

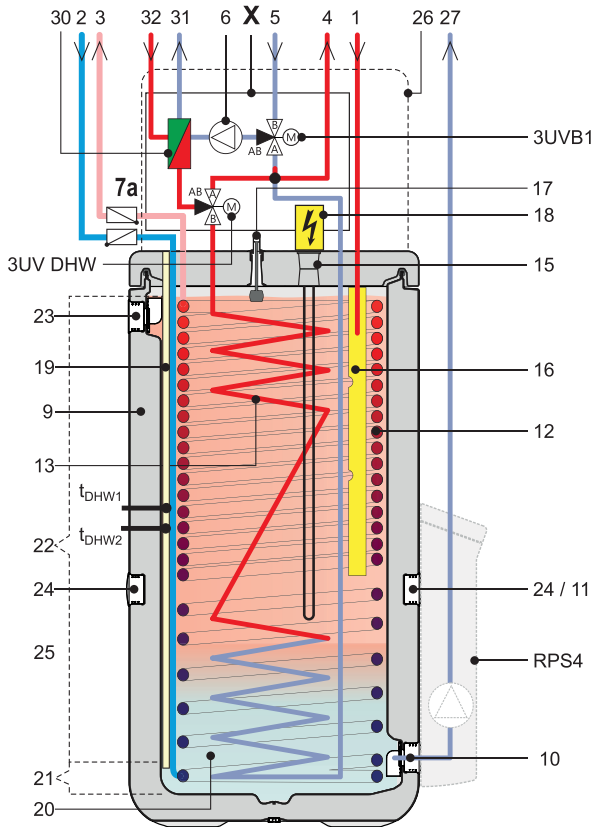
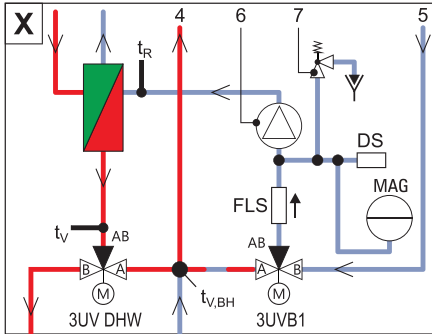


No.	Name
1	Solar - flow or connection for additional heat source (only BIV)
2	Cold water flow
3	Hot water flow
4	Heating flow
5	Heating return
6	Circulation pump
7	Pressure relief valve
7a	Recommended accessories: non-return valves (2 pcs.)
8	Automatic fan
9	Storage tank (double walled jacket made of polypropylene with PUR hard foam heat insulation)
10	Filling and drainage connection or Solar - return flow connection
11	Mount for solar controller or handle
12	Heat exchanger (stainless steel) for drinking water heating
13	Heat exchanger (stainless steel) for storage tank charging or heating support
14	Heat exchanger (stainless steel) for pressurised solar storage tank charging
15	Connection for optional electrical Backup-Heater EKBUXx
16	Solar inflow layering pipe
17	Fill level indicator (tank water)
18	Optional: Electrical Backup-Heater (EKBUXx)
19	Submersible sensor sleeve for storage tank temperature sensor $t_{DHW1}$ and $t_{DHW2}$
20	Unpressurised storage tank water
21	Solar zone
22	Hot water zone
23	Safety overflow connection
24	Mount for handle
25	Type plate
26	Protective cover
27	Solar - return
28	Solar - feed
29	Solar - return
30	Panel heat exchanger
31	Connection coolant fluid line
32	Connection to coolant gas line
3UVB1	3-way diverter valve (internal heat generator circuit)
3UV DHW	3 way diverter valve (hot water/heating)
DS	Pressure sensor
FLS	Flow sensor
$t_{DHW1}$ , $t_{DHW2}$	Storage tank temperature sensor
$t_R$	Return flow temperature sensor
$t_V$	Flow temperature sensor
$t_{V,BH}$	Flow temperature sensor Backup-Heater
RoCon B1	Operating section Daikin Altherma EHS(X/H) control unit
RPS4A	Optional: DaikinSolar regulation and pump unit
MAG	Membrane expansion vessel

# 5 Piping diagrams

## 5 - 1 Piping Diagrams

**EHSHB-D, ESHH-D, EHSXB-D, EHSX-D**  
Standard 500 Litres



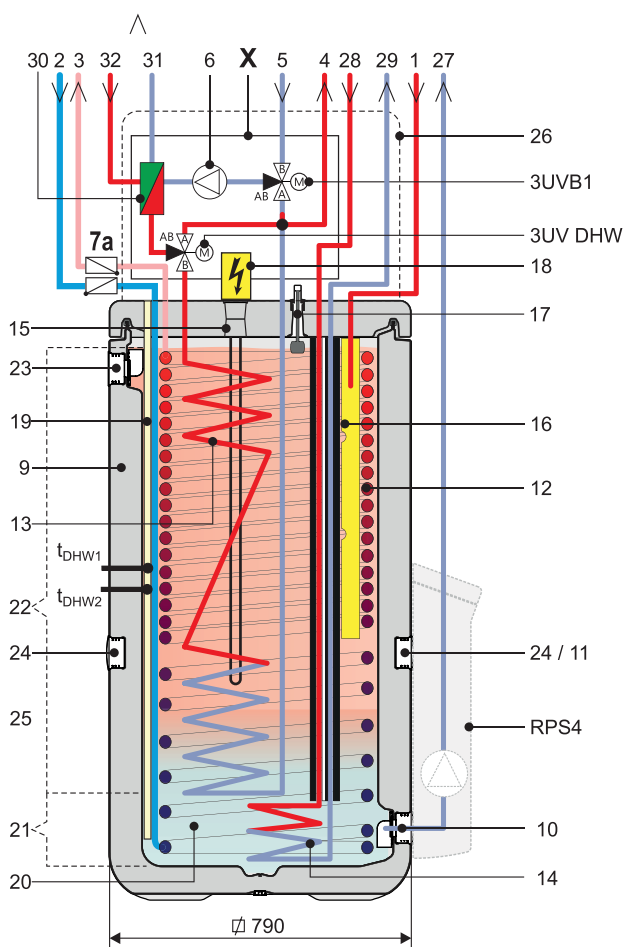
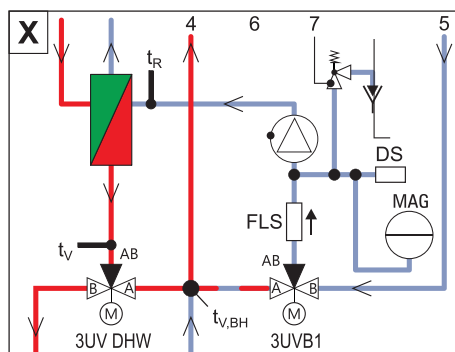
No.	Name
1	Solar - flow or connection for additional heat source (only BIV)
2	Cold water flow
3	Hot water flow
4	Heating flow
5	Heating return
6	Circulation pump
7	Pressure relief valve
7a	Recommended accessories: non-return valves (2 pcs.)
8	Automatic fan
9	Storage tank (double walled jacket made of polypropylene with PUR hard foam heat insulation)
10	Filling and drainage connection or Solar - return flow connection
11	Mount for solar controller or handle
12	Heat exchanger (stainless steel) for drinking water heating
13	Heat exchanger (stainless steel) for storage tank charging or heating support
14	Heat exchanger (stainless steel) for pressurised solar storage tank charging
15	Connection for optional electrical Backup-Heater EKBUxx
16	Solar inflow layering pipe
17	Fill level indicator (tank water)
18	Optional: Electrical Backup-Heater (EKBUxx)
19	Submersible sensor sleeve for storage tank temperature sensor $t_{DHW1}$ and $t_{DHW2}$
20	Unpressurised storage tank water
21	Solar zone
22	Hot water zone
23	Safety overflow connection
24	Mount for handle
25	Type plate
26	Protective cover
27	Solar - return
28	Solar - feed
29	Solar - return
30	Panel heat exchanger
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32	Connection to coolant gas line
3UVB1	3-way diverter valve (internal heat generator circuit)
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DS	Pressure sensor
FLS	Flow sensor
$t_{DHW1}$ , $t_{DHW2}$	Storage tank temperature sensor
$t_R$	Return flow temperature sensor
$t_V$	Flow temperature sensor
$t_{V,BH}$	Flow temperature sensor Backup-Heater
RoCon B1	Operating section Daikin Altherma EHS(X/H) control unit
RPS4A	Optional: DaikinSolar regulation and pump unit
MAG	Membrane expansion vessel

# 5 Piping diagrams

## 5 - 1 Piping Diagrams

5

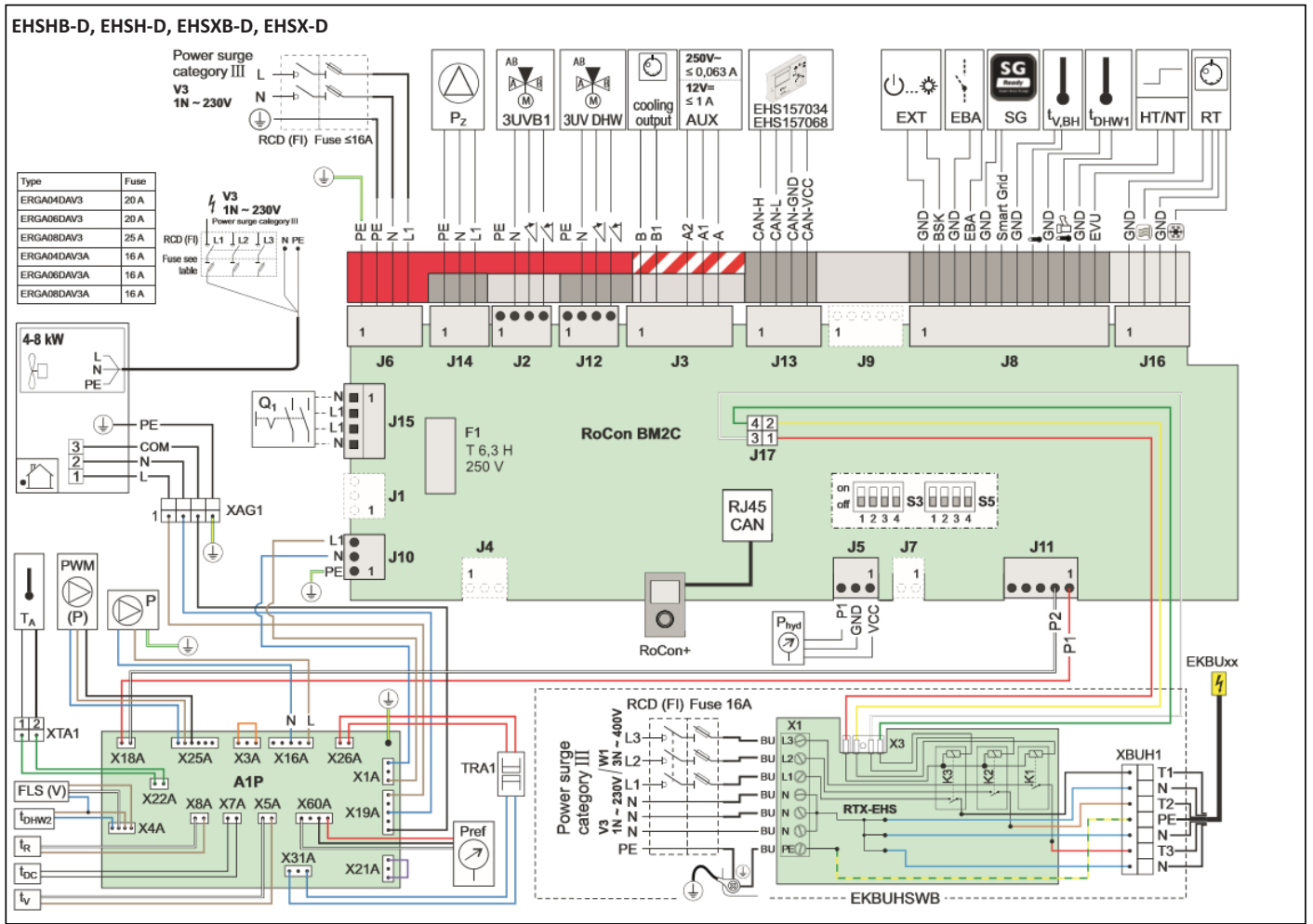
EHSB-D, ESH-D, EHSXB-D, EHSX-D  
Standard 500 Litres



No.	Name
1	Solar - flow or connection for additional heat source (only BIV)
2	Cold water flow
3	Hot water flow
4	Heating flow
5	Heating return
6	Circulation pump
7	Pressure relief valve
7a	Recommended accessories: non-return valves (2 pcs.)
8	Automatic fan
9	Storage tank (double walled jacket made of polypropylene with PUR hard foam heat insulation)
10	Filling and drainage connection or Solar - return flow connection
11	Mount for solar controller or handle
12	Heat exchanger (stainless steel) for drinking water heating
13	Heat exchanger (stainless steel) for storage tank charging or heating support
14	Heat exchanger (stainless steel) for pressurised solar storage tank charging
15	Connection for optional electrical Backup-Heater EKBUXx
16	Solar inflow layering pipe
17	Fill level indicator (tank water)
18	Optional: Electrical Backup-Heater (EKBUXx)
19	Submersible sensor sleeve for storage tank temperature sensor $t_{DHW1}$ and $t_{DHW2}$
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30	Panel heat exchanger
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32	Connection to coolant gas line
3UVB1	3-way diverter valve (internal heat generator circuit)
3UV DHW	3 way diverter valve (hot water/heating)
DS	Pressure sensor
FLS	Flow sensor
$t_{DHW1}$ , $t_{DHW2}$	Storage tank temperature sensor
$t_r$	Return flow temperature sensor
$t_v$	Flow temperature sensor
$t_{v,BH}$	Flow temperature sensor Backup-Heater
RoCon B1	Operating section Daikin Altherma EHS(X/H) control unit
RPS4A	Optional: DaikinSolar regulation and pump unit
MAG	Membrane expansion vessel

# 6 Wiring diagrams

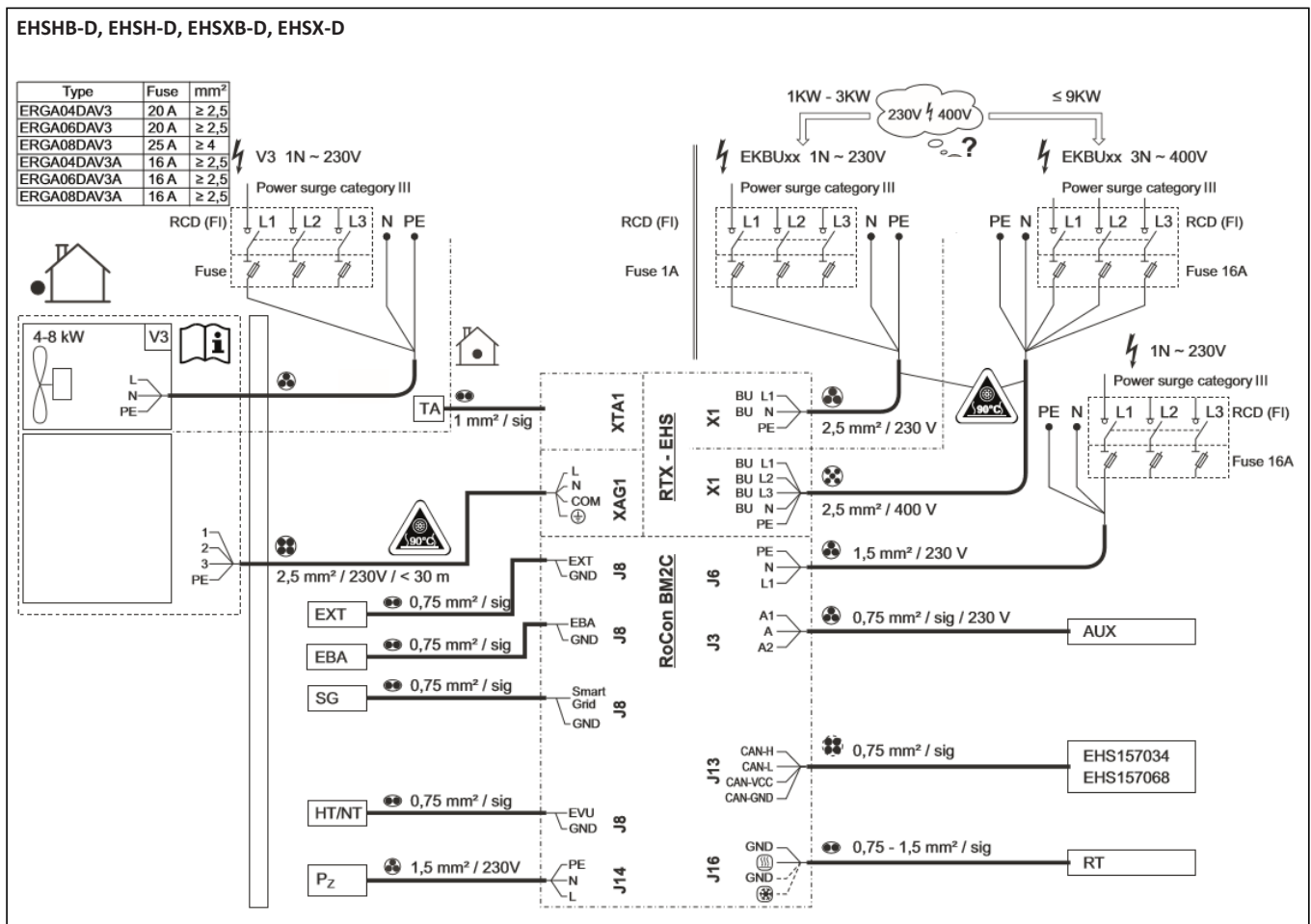
## 6 - 1 Wiring Diagrams - Single Phase



# 7 External connection diagrams

## 7 - 1 External Connection Diagrams

7



# 8 Installation

## 8 - 1 Installation Method

### EHSHB-D, ESHS-D, EHSXB-D, EHSX-D

**CAUTION**

The use of refrigerant lines that have already been used can lead to damage to the unit.

- Do not reuse a refrigerant line that has been used with another refrigerant. Replace or carefully clean the refrigerant line.

- If the total refrigerant charge in the system is < 1.84 kg, there are no further requirements.
- If the total refrigerant charge in the system is  $\geq 1.84$  kg, other minimum floor space requirements must be met:
  - Compare the total refrigerant charge in the system ( $m_c$ ) with the maximum refrigerant filling ( $m_{max}$ ) permitted for the installation room ( $A_{room1}$ ), (see ).
    - If  $m_c \leq m_{max}$ : The device can be installed in this room without any further requirements.
    - If  $m_c > m_{max}$ : Proceed with the following steps.
  - Compare the minimum floor area ( $A_{min}$ ) from with the floor area of the installation room ( $A_{room1}$ ) and the adjacent room ( $A_{room2}$ ).
    - If  $A_{min} \leq A_{room1} + A_{room2}$ : Proceed with the following steps.
    - If  $A_{min} > A_{room1} + A_{room2}$ : Contact your local dealer.
  - Calculate coolant quantity ( $d_m$ ) exceeding  $m_{max}$ :  
 $d_m = m_c - m_{max}$
  - Calculate the minimum opening range ( $VA_{min}$ ) for natural ventilation between the installation room and the adjacent room (see ).
  - The device can be installed if:
    - 2 ventilation openings are provided between the installation room and adjacent room (1 each at top and bottom)
    - Bottom opening: The bottom opening must meet the requirements for the minimum opening range ( $VA_{min}$ ). It must be as close to the ground as possible. If the ventilation opening starts on the floor, the height  $\geq$  must be 20 mm. The bottom of the opening must be  $\leq 100$  mm above the floor. At least 50% of the required opening area must be < 200 mm from the floor. The entire area of the opening must be < 300 mm from the floor.
    - Upper opening: The area of the upper opening must be larger or the same size as the lower opening. The bottom of the upper opening must be at least 1.5m above the top edge of the lower opening.
    - Ventilation openings to the outside are not considered suitable ventilation openings.

$A_{room}$ (m <sup>2</sup> )	Maximum refrigerant filling permitted in a room ( $m_{max}$ ) (kg)
28	1,814
29	1,846
30	1,877
31	1,909

Maximum refrigerant filling permitted in a room

$m_c$ (kg)	Minimum floor area $A_{min}$ (m <sup>2</sup> )
1.84	28.81
1.86	29.44
1.88	30.08
1.90	30.72

Minimum floor area of indoor unit

$m_c$	$m_{max}$	$d_m = m_c - m_{max}$ (kg)	Minimum area of the ventilation opening (cm <sup>2</sup> )
1.9	0.1	1.80	729
1.9	0.3	1.60	648
1.9	0.5	1.40	567
1.9	0.7	1.20	486
1.9	0.9	1.00	418
1.9	1.1	0.80	370
1.9	1.3	0.60	301
1.9	1.5	0.40	216
1.9	1.7	0.20	115

Minimum area of ventilation opening



# 8 Installation

## 8 - 1 Installation Method

8

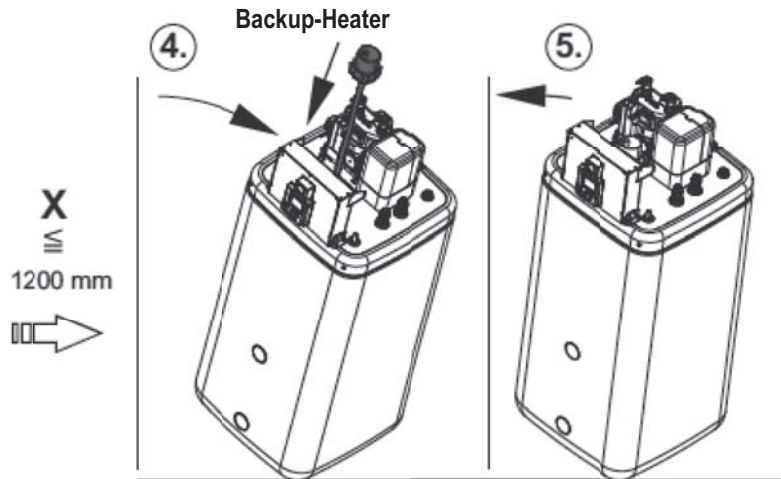
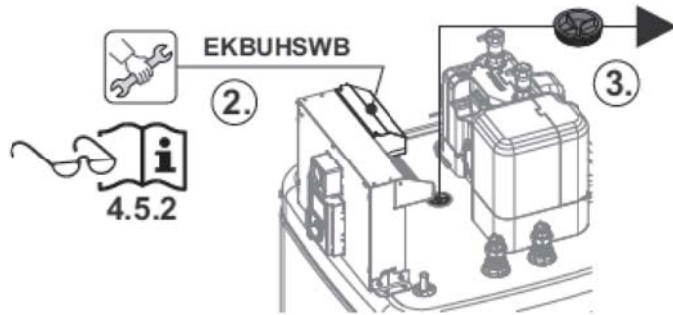
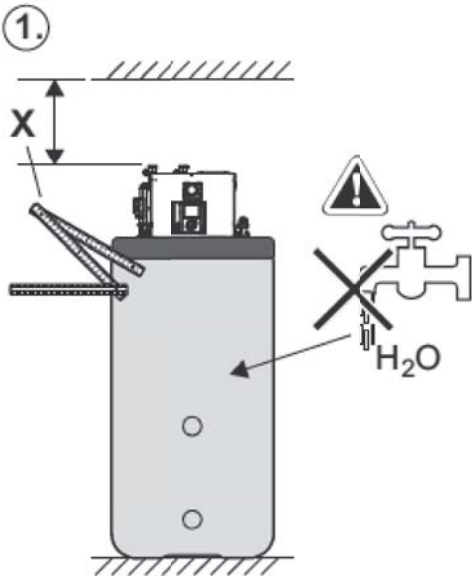
### EHSB-D, ESH-D, EHSXB-D, EHSX-D

**Recommended minimum distance:**

To the Wall: (back side)  $\geq 100$  mm, (front side)  $\geq 500$  mm

To the Ceiling:  $\geq 1200$  mm, minimum 480 mm.

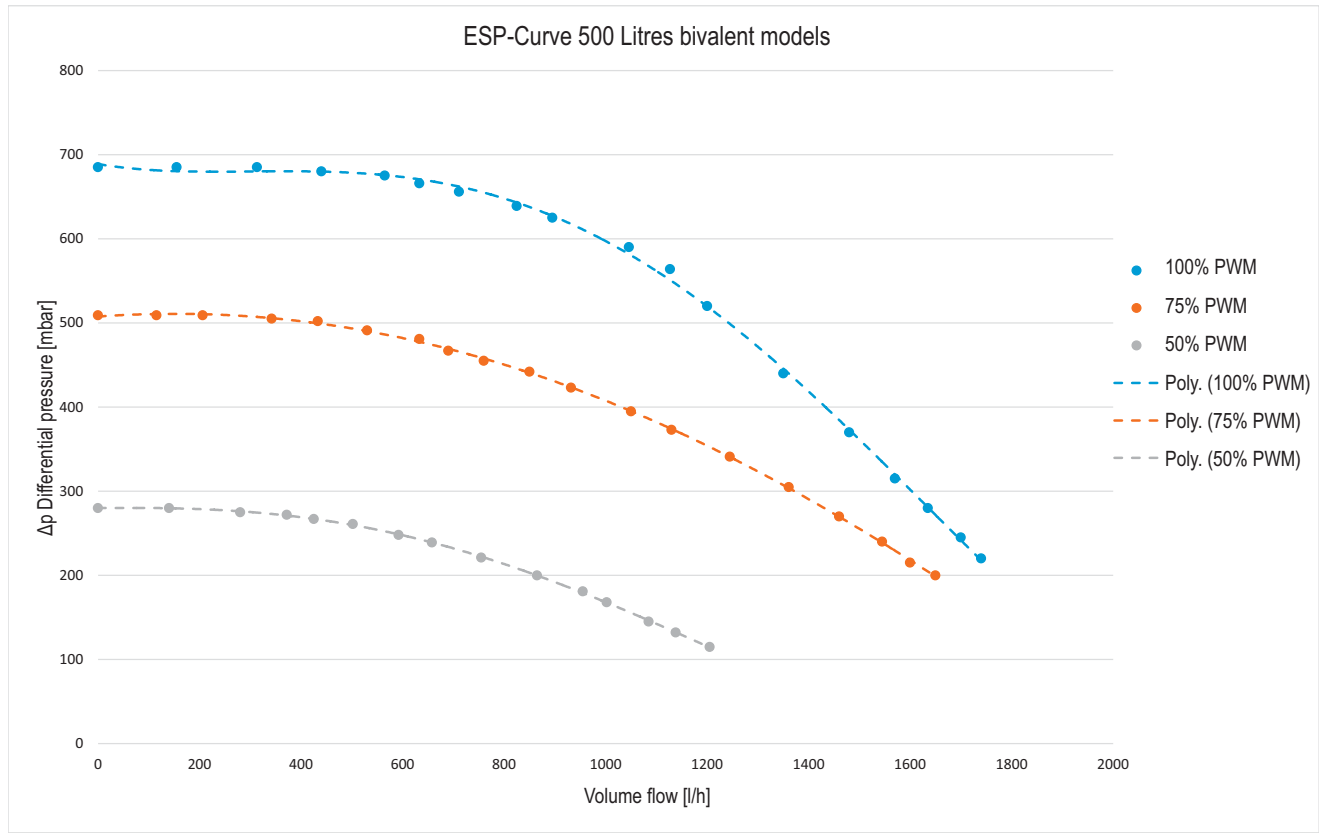
**If Backup-Heater needs to be installed:**



# 9 Hydraulic performance

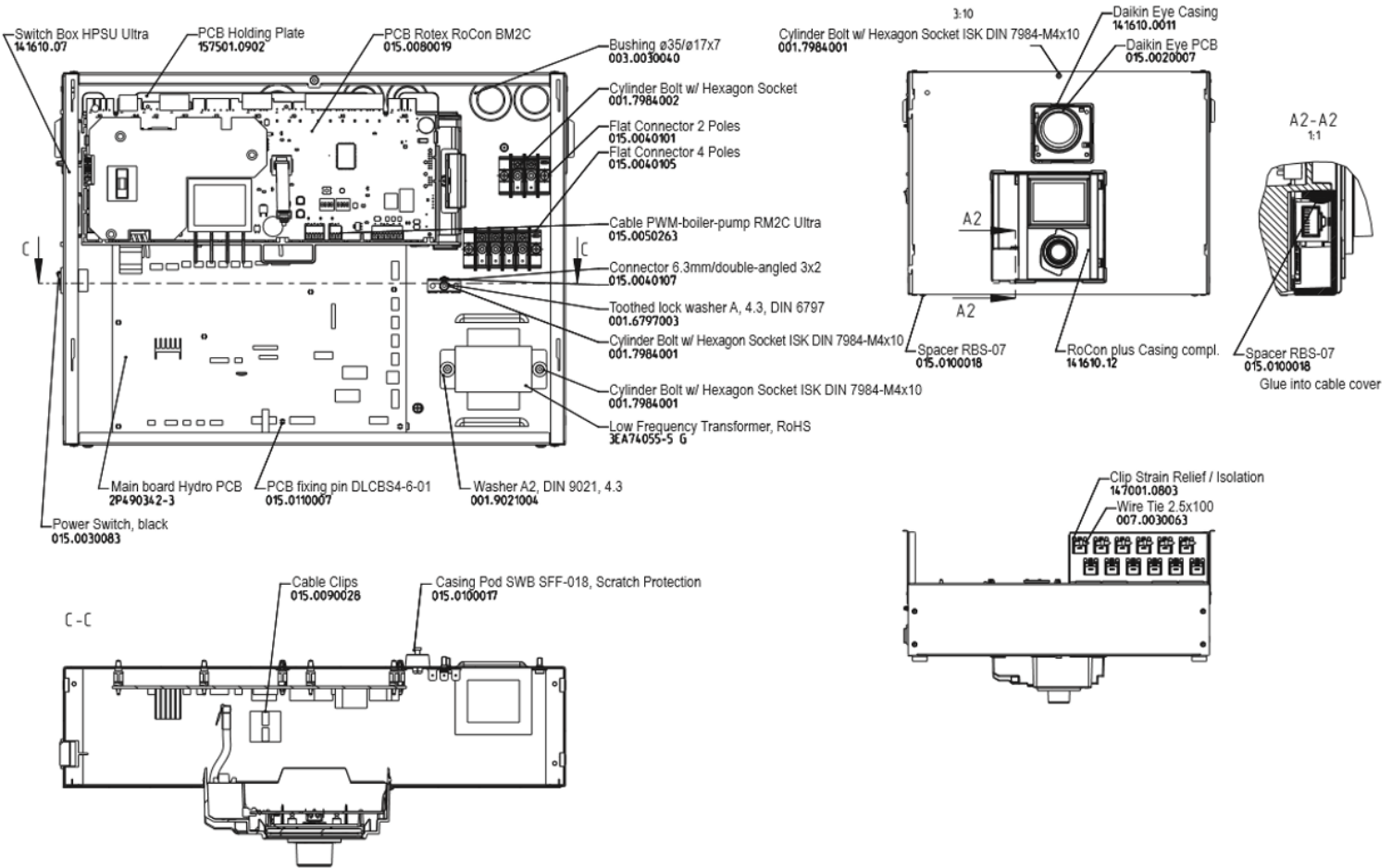
## 9 - 1 Static Pressure Drop Unit

EHSB-D, EHSB-D, EHSXB-D, EHSX-D



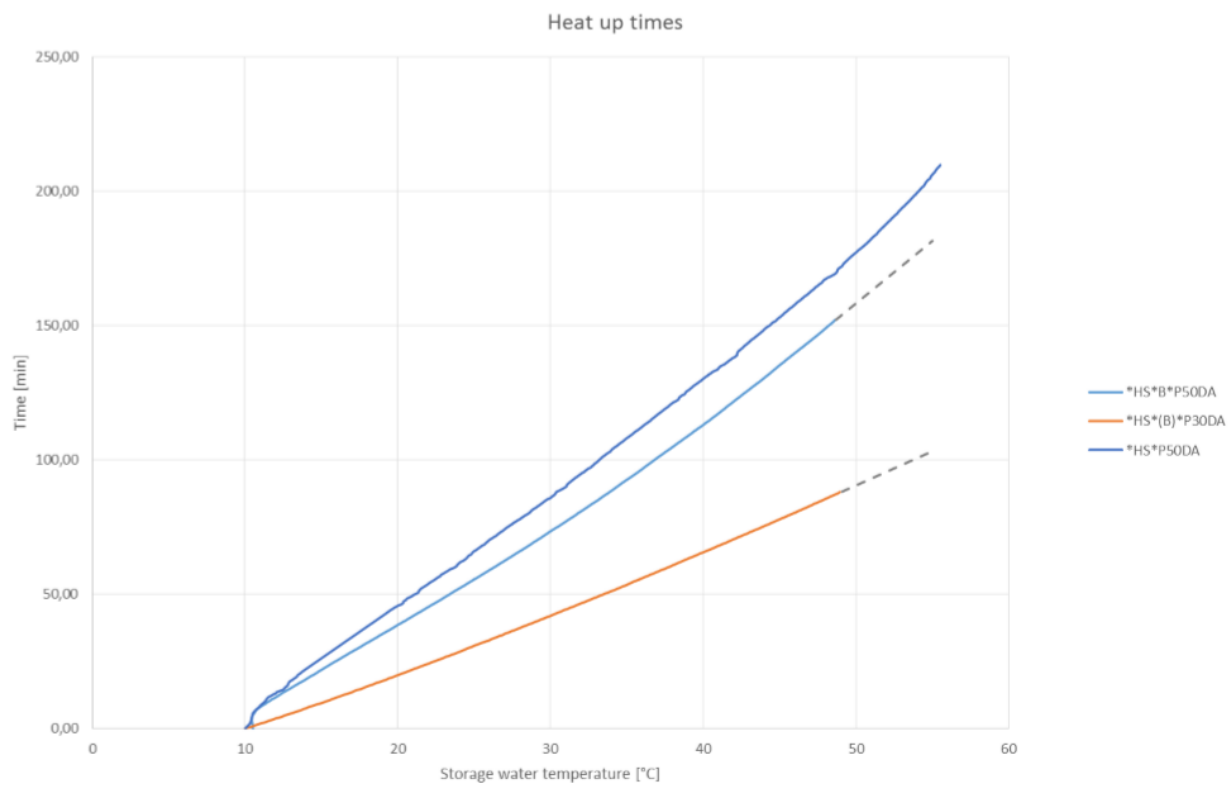
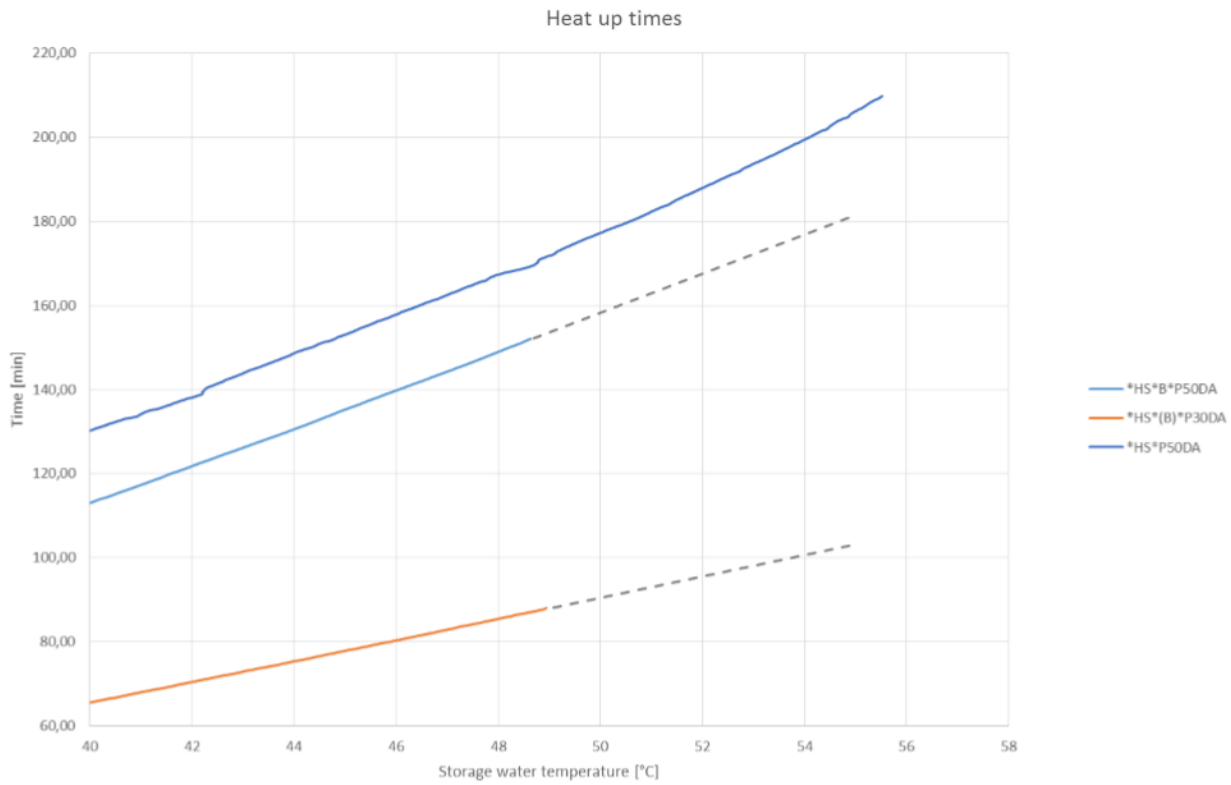
# 10 Switchbox

## EHSB-D, EHSB-D, EHSXB-D, EHSX-D



# 11 Capacity tables

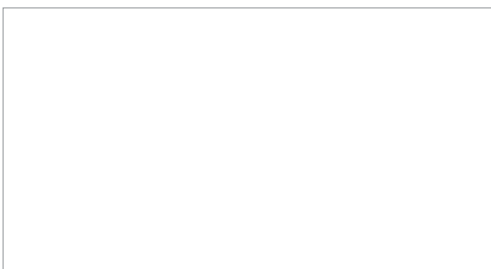
## 11 - 1 Domestic Hot Water performance



	Heat-up time storage tank until 45°C	Heat-up time storage tank until 48°C	Heat-up time storage tank until 50°C
*HS*(B)*P30DA	78 min	85 min	91 min
*HS*B*P50DA	135 min	149 min	158 min
*HS*P50DA	153 min	167 min	177 min



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