Daikin Altherma low temperature split Technical data book

EHSH-D3 / EHSHB-D3 / EHSX-D3 / EHSXB-D3

EHSH04P30DA3
EHSH08P50DA3
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1 Features

1 - 1 EHSH-D3

Floor standing air to water heat pump for heating and hot water with thermal solar support

- Integrated solar unit, offering top comfort in heating and hot water
- 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

Fresh hot water

Solar ready

1 Features
1 - 2 EHSX-D3

Floor standing air to water heat pump for heating, cooling and hot water with thermal solar support

- 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

Fresh hot water

Solar ready

1 Features
1 - 3 EHSHB-D3

Floor standing air to water heat pump for bivalent heating and hot water with thermal solar support

- Integrated solar unit, offering top comfort in heating and hot water
- 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
- Bivalent system: combinable with a secondary heat source
- 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 and hot water operation

Fresh hot water

Solar ready

1 Features
1 - 4 EHSXB-D3

Floor standing air to water heat pump for bivalent heating, cooling and hot water with thermal solar support

- 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
- Bivalent system: combinable with a secondary heat source
- 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

Fresh hot water

Solar ready

2 Specifications

1 - 4 EHSXB-D3

Technical specifications				EHSH04P30D3	EHSH08P50D3	EHSH08P30D3
Outdoor unit				ERGA04EAV3 / ERGA04EAV37 / ERGA04EAV3A	ERGA06EAV3 / ERGA06EAV3A / ERGA08EAV3 / ERGA08EAV3A	
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	900		
Weight	Unit		kg	73.0	93.0	73.0
	Packed unit		kg	83	103	83
Packing	Material			Plastic foil / Wood (pallet) / Corrugated board		
	Weight		kg	10		
PED	Category			art. 3.3		
	Most critical part	Name		Plate heat exchanger		
Pump	Nr of speeds			PWM		
	IP class			IP44		
	Power input		W	58		
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		
Tank	Water volume		l	294	477	294
	Material			Polypropylen		
	Maximum water temperature		°C	85.0		
	Insulation	Material		HFC-free Polyurethane foam		
		Heat loss	kWh/24h	1.5 (1)	1.7 (1)	1.5 (1)
	Energy efficiency class			B		
	Psbsol		W/K	1.43	1.59	1.43
	Standing heat loss		W	64	72	64
	Storage volume		l	294	477	294
	Vbu (Solar, BUH)		l	290	464	290
Heat exchanger	Quantity			2		
	Charging	Quantity		1		
Heat exchanger	Charging	Tube material		Stainless steel (1.4404)		
		Face area	m^2	3	2	3
		Internal coil volume	l	12		
		Operating pressure	bar	3.0		
		Average specifc thermal output	W/K	1,200	1,170	1,200
	Domestic hot water	Average specifc thermal output	W/K	2,790	2,825	2,790
		Face area	m^2	5.600	5.800	5.600
		Internal coil volume	l	27.1	28.2	27.1
		Operating pressure	bar	10.0		
		Quantity		1		
		Tube material		Stainless steel (1.4404)		
Thermal performance	Hot water volume without reheating at draw-off rate 12l/min		l	153 (2) / 252 (3) / 321 (4)	318 (2) / 494 (3) / 564 (4) / 276 (5)	153 (2) / 252 (3) / 321 (4)
	Hot water volume without reheating at draw-off rate 8l/min		l	184 (2) / 282 (3) / 352 (4)	364 (2) / 540 (3) / 612 (4) / 328 (5)	184 (2) / 282 (3) / 352 (4)
General	Supplier/ Manufacturer details	Name or trademark		Daikin Europe N.V.		
		Name and address		Daikin Europe N.V. - Zandvoordestraat 300, 8400 Oostende, Belgium		
Water circuit	Piping connections diameter		inch	G 1" (male)		
	Piping material			Brass(CW617N)		
	Safety valve		bar	3.0		
	Manometer			Digital		
	Drain valve / fill valve			Yes		
	Shut off valve			Yes		
	Air purge valve			Yes		
	Pressure	Heating Max.	bar	3.0		
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	3		
	Shut off valve			Yes		

2 Specifications

1 - 4 EHSXB-D3

Technical specifications					EHSH04P30D3	EHSH08P50D3	EHSH08P30D3
Water circuit - Domestic hot water side	Piping material				Brass(CW617N)		
	Piping connections	Cold water in / Hot water out		inch	G 1" (male)		
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		
Refrigerant circuit	Liquid side diameter			mm	6.35		
Sound power level	Nom.			dBA	39		
Operation range	Heating	Ambient	Min.	°CDB	-25		
			Max.	°CDB	25		
		Water side	Min.	°C	18		
			Max.	°C	65		
	Indoor installation	Ambient	Min.	°CDB	5		
			Max.	°CDB	35		
	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		
Control systems	Class of temperature control				II		
	Contribution to seasonal space heating efficiency			%	2.0		
	Infrared remote control				No		
	Wired remote control				RoCon+		
Installation place					Indoor		

Electrical specifications				EHSH04P30D3	EHSH08P50D3	EHSH08P30D3
Power supply	Phase			1~		
	Frequency		Hz	50		
	Voltage		V	230		
	Voltage range	Min.	%	10		
		Max.	%	10		
IP class	IP			IP 40		
Electrical power consumption	Max.		W	62		
	Standby		W	11		
Electric heater	Power supply	Name		3V / 9W		
		Phase		1~ / 3~		
		Frequency	Hz	50		

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

Technical specifications					EHSHB04P30D3	EHSHB08P30D3	EHSHB08P50D3
Outdoor unit					ERGA04EAV3 / ERGA04EAV37 / ERGA04EAV3A	ERGA06EAV3 / ERGA06EAV3A / ERGA08EAV3 / ERGA08EAV3A	
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	900		
Weight	Unit			kg	76.0		99.0
	Packed unit			kg	86		109
Packing	Material				Plastic foil / Wood (pallet) / Corrugated board		
	Weight			kg	10		
PED	Category				art. 3.3		
	Most critical part	Name			Plate heat exchanger		
Pump	Nr of speeds				PWM		
	IP class				IP44		
	Power input			W	58		

2 Specifications

1 - 4 EHSXB-D3

Technical specifications				EHSHB04P30D3	EHSHB08P30D3	EHSHB08P50D3
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		
Tank	Water volume		l	294		477
	Material			Polypropylen		
	Maximum water temperature		°C	85.0		
	Insulation	Material		HFC-free Polyurethane foam		
		Heat loss	kWh/24h	1.5 (1)		1.7 (1)
	Energy efficiency class			B		
	Psbsol		W/K	1.43		1.59
	Standing heat loss		W	64		72
	Storage volume		l	294		477
	Vbu (Solar, BUH)		l	290		464
Heat exchanger	Quantity			3		
	Charging	Quantity		1		
Heat exchanger	Charging	Tube material		Stainless steel (1.4404)		
		Face area	m^2	3		2
		Internal coil volume	l	12		
		Operating pressure	bar	3.0		
		Average specifc thermal output	W/K	1,200		1,170
	Domestic hot water	Average specifc thermal output	W/K	2,790		2,817
		Face area	m^2	5.600		5.900
		Internal coil volume	l	27.1		28.1
		Operating pressure	bar	10.0		
		Quantity		1		
		Tube material		Stainless steel (1.4404)		
	Pressurised solar	Average specifc thermal output	W/K	360.00		820.00
		Face area	m^2	0.70		1.69
		Internal coil volume	l	3.90		10.18
		Operating pressure	bar	6.0		
		Quantity		1		
		Tube material		Stainless steel (1.4404)		
Thermal performance	Hot water volume without reheating at draw-off rate 12l/min		l	153 (2) / 252 (3) / 321 (4)		282 (2) / 444 (3) / 516 (4) / 240 (5)
	Hot water volume without reheating at draw-off rate 8l/min		l	184 (2) / 282 (3) / 352 (4)		324 (2) / 492 (3) / 560 (4) / 288 (5)
General	Supplier/ Manufacturer details	Name or trademark		Daikin Europe N.V.		
		Name and address		Daikin Europe N.V. - Zandvoordestraat 300, 8400 Oostende, Belgium		
Water circuit	Piping connections diameter		inch	G 1" (male)		
	Piping material			Brass(CW617N)		
	Safety valve		bar	3.0		
	Manometer			Digital		
	Drain valve / fill valve			Yes		
	Shut off valve			Yes		
	Air purge valve			Yes		
	Pressure	Heating Max.	bar	3.0		
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	3		
	Shut off valve			Yes		
Water circuit - Domestic hot water side	Piping material			Brass(CW617N)		
	Piping connections	Cold water in / Hot water out	inch	G 1" (male)		
Piping connections	Pressurised solar heat exchanger		inch	G 1" (male)		
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		
Sound power level	Nom.		dBA	39		

2 Specifications
1 - 4 EHSXB-D3

Technical specifications					EHSHB04P30D3	EHSHB08P30D3	EHSHB08P50D3
Operation range	Heating	Ambient	Min.	°CDB	-25		
			Max.	°CDB	25		
		Water side	Min.	°C	18		
			Max.	°C	65		
	Indoor installation	Ambient	Min.	°CDB	5		
			Max.	°CDB	35		
	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		
Control systems	Class of temperature control				II		
	Contribution to seasonal space heating efficiency			%	2.0		
	Infrared remote control				No		
	Wired remote control				RoCon+		
Installation place					Indoor		

Electrical specifications				EHSHB04P30D3	EHSHB08P30D3	EHSHB08P50D3
Power supply	Phase			1~		
	Frequency		Hz	50		
	Voltage		V	230		
	Voltage range	Min.	%	10		
		Max.	%	10		
IP class	IP			IP 40		
Electrical power consumption	Max.		W	62		
	Standby		W	11		
Electric heater	Power supply	Name		3V / 9W		
		Phase		1~ / 3~		
		Frequency	Hz	50		

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

Technical specifications				EHSX04P50D3	EHSX04P30D3	EHSX08P50D3	EHSX08P30D3
Outdoor unit				ERGA04EAV3 / ERGA04EAV37 / ERGA04EAV3A		ERGA06EAV3 / ERGA06EAV3A / ERGA08EAV3 / ERGA08EAV3A	
Casing	Colour			Traffic white (RAL9016) / Dark grey (RAL7011)			
	Material			Impact resistant polypropylene			
Dimensions	Unit	Height	mm	1,896	1,891	1,896	1,891
		Width	mm	790	595	790	595
		Depth	mm	790	615	790	615
	Packed unit	Height	mm	2,031	2,026	2,031	2,026
		Width	mm	800			
		Depth	mm	900			
Weight	Unit		kg	93.0	73.0	93.0	73.0
	Packed unit		kg	103	83	103	83
Packing	Material			Plastic foil / Wood (pallet) / Corrugated board			
	Weight		kg	10			
PED	Category			art. 3.3			
	Most critical part	Name		Plate heat exchanger			
Pump	Nr of speeds			PWM			
	IP class			IP44			
	Power input		W	58			
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			

2 Specifications

1 - 4 EHSXB-D3

Technical specifications					EHSX04P50D3	EHSX04P30D3	EHSX08P50D3	EHSX08P30D3
Tank	Water volume			l	477	294	477	294
	Material				Polypropylen			
	Maximum water temperature			°C	85.0			
	Insulation	Material			HFC-free Polyurethane foam			
		Heat loss		kWh/24h	1.7 (1)	1.5 (1)	1.7 (1)	1.5 (1)
	Energy efficiency class				B			
	Psbsol			W/K	1.59	1.43	1.59	1.43
	Standing heat loss			W	72	64	72	64
	Storage volume			l	477	294	477	294
	Vbu (Solar, BUH)			l	464	290	464	290
Heat exchanger	Quantity				2			
	Charging	Quantity			1			
Heat exchanger	Charging	Tube material			Stainless steel (1.4404)			
		Face area		m^2	2	3	2	3
		Internal coil volume		l	12			
		Operating pressure		bar	3.0			
		Average specifc thermal output		W/K	1,170	1,200	1,170	1,200
	Domestic hot water	Average specifc thermal output		W/K	2,825	2,790	2,825	2,790
		Face area		m^2	5.800	5.600	5.800	5.600
		Internal coil volume		l	28.2	27.1	28.2	27.1
		Operating pressure		bar	10.0			
		Quantity			1			
		Tube material			Stainless steel (1.4404)			
Thermal performance	Hot water volume without reheating at draw-off rate 12l/min			l	318 (2) / 494 (3) / 564 (4) / 276 (5)	153 (2) / 252 (3) / 321 (4)	318 (2) / 494 (3) / 564 (4) / 276 (5)	153 (2) / 252 (3) / 321 (4)
	Hot water volume without reheating at draw-off rate 8l/min			l	364 (2) / 540 (3) / 612 (4) / 328 (5)	184 (2) / 282 (3) / 352 (4)	364 (2) / 540 (3) / 612 (4) / 328 (5)	184 (2) / 282 (3) / 352 (4)
General	Supplier/ Manufacturer details	Name or trademark			Daikin Europe N.V.			
		Name and address			Daikin Europe N.V. - Zandvoordestraat 300, 8400 Oostende, Belgium			
Water circuit	Piping connections diameter			inch	G 1" (male)			
	Piping material				Brass(CW617N)			
	Safety valve			bar	3.0			
	Manometer				Digital			
	Drain valve / fill valve				Yes			
	Shut off valve				Yes			
	Air purge valve				Yes			
	Pressure	Heating	Max.	bar	3.0			
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	3			
	Shut off valve				Yes			
Water circuit - Domestic hot water side	Piping material				Brass(CW617N)			
	Piping connections	Cold water in / Hot water out		inch	G 1" (male)			
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			
Refrigerant circuit	Liquid side diameter			mm	6.35			
Sound power level	Nom.			dBA	39			
Operation range	Heating	Ambient	Min.	°CDB	-25			
			Max.	°CDB	25			
		Water side	Min.	°C	18			
			Max.	°C	65			
	Indoor installation	Ambient	Min.	°CDB	5			
			Max.	°CDB	35			
	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			

2 Specifications

1 - 4 EHSXB-D3

Technical specifications				EHSX04P50D3	EHSX04P30D3	EHSX08P50D3	EHSX08P30D3
Control systems	Class of temperature control			II			
	Contribution to seasonal space heating efficiency		%	2.0			
	Infrared remote control			No			
	Wired remote control			RoCon+			
Installation place				Indoor			

Electrical specifications				EHSX04P50D3	EHSX04P30D3	EHSX08P50D3	EHSX08P30D3
Power supply	Phase			1~			
	Frequency		Hz	50			
	Voltage		V	230			
	Voltage range	Min.	%	10			
		Max.	%	10			
IP class	IP			IP 40			
Electrical power consumption	Max.		W	62			
	Standby		W	11			
Electric heater	Power supply	Name		3V / 9W			
		Phase		1~ / 3~			
		Frequency	Hz	50			

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

Technical specifications				EHSXB04P30D3	EHSXB04P50D3	EHSXB08P30D3	EHSXB08P50D3
Outdoor unit				ERGA04EAV3 / ERGA04EAV37 / ERGA04EAV3A		ERGA06EAV3 / ERGA06EAV3A / ERGA08EAV3 / ERGA08EAV3A	
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	900			
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			
PED	Category			art. 3.3			
	Most critical part	Name		Plate heat exchanger			
Pump	Nr of speeds			PWM			
	IP class			IP44			
	Power input		W	58			
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			
Tank	Water volume		l	294	477	294	477
	Material			Polypropylen			
	Maximum water temperature		°C	85.0			
	Insulation	Material		HFC-free Polyurethane foam			
		Heat loss	kWh/24h	1.5 (1)	1.7 (1)	1.5 (1)	1.7 (1)
	Energy efficiency class			B			
	Psbsol		W/K	1.43	1.59	1.43	1.59
	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			

2 Specifications

1 - 4 EHSXB-D3

Technical specifications					EHSXB04P30D3	EHSXB04P50D3	EHSXB08P30D3	EHSXB08P50D3
Heat exchanger	Charging	Tube material			Stainless steel (1.4404)			
		Face area		m^2	3	2	3	2
		Internal coil volume		l	12			
		Operating pressure		bar	3.0			
		Average specifc thermal output		W/K	1,200	1,170	1,200	1,170
	Domestic hot water	Average specifc thermal output		W/K	2,790	2,817	2,790	2,817
		Face area		m^2	5.600	5.900	5.600	5.900
		Internal coil volume		l	27.1	28.1	27.1	28.1
		Operating pressure		bar	10.0			
		Quantity			1			
		Tube material			Stainless steel (1.4404)			
	Pressurised solar	Average specifc thermal output		W/K	360.00	820.00	360.00	820.00
		Face area		m^2	0.70	1.69	0.70	1.69
		Internal coil volume		l	3.90	10.18	3.90	10.18
		Operating pressure		bar	6.0			
		Quantity			1			
		Tube material			Stainless steel (1.4404)			
Thermal performance	Hot water volume without reheating at draw-off rate 12l/min			l	153 (2) / 252 (3) / 321 (4)	282 (2) / 444 (3) / 516 (4) / 240 (5)	153 (2) / 252 (3) / 321 (4)	282 (2) / 444 (3) / 516 (4) / 240 (5)
	Hot water volume without reheating at draw-off rate 8l/min			l	184 (2) / 282 (3) / 352 (4)	324 (2) / 492 (3) / 560 (4) / 288 (5)	184 (2) / 282 (3) / 352 (4)	324 (2) / 492 (3) / 560 (4) / 288 (5)
General	Supplier/ Manufacturer details	Name or trademark			Daikin Europe N.V.			
		Name and address			Daikin Europe N.V. - Zandvoordestraat 300, 8400 Oostende, Belgium			
Water circuit	Piping connections diameter			inch	G 1" (male)			
	Piping material				Brass(CW617N)			
	Safety valve			bar	3.0			
	Manometer				Digital			
	Drain valve / fill valve				Yes			
	Shut off valve				Yes			
	Air purge valve				Yes			
	Pressure	Heating	Max.	bar	3.0			
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	3			
	Shut off valve				Yes			
Water circuit - Domestic hot water side	Piping material				Brass(CW617N)			
	Piping connections	Cold water in / Hot water out		inch	G 1" (male)			
Piping connections	Pressurised solar heat exchanger			inch	G 1" (male)			
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			
Sound power level	Nom.			dBA	39			
Operation range	Heating	Ambient	Min.	°CDB	-25			
			Max.	°CDB	25			
		Water side	Min.	°C	18			
			Max.	°C	65			
	Indoor installation	Ambient	Min.	°CDB	5			
			Max.	°CDB	35			
	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			

2 Specifications

1 - 4 EHSXB-D3

Technical specifications				EHSXB04P30D3	EHSXB04P50D3	EHSXB08P30D3	EHSXB08P50D3
Control systems	Class of temperature control			II			
	Contribution to seasonal space heating efficiency		%	2.0			
	Infrared remote control			No			
	Wired remote control			RoCon+			
Installation place				Indoor			

Electrical specifications				EHSXB04P30D3	EHSXB04P50D3	EHSXB08P30D3	EHSXB08P50D3
Power supply	Phase			1~			
	Frequency		Hz	50			
	Voltage		V	230			
	Voltage range	Min.	%	10			
		Max.	%	10			
IP class	IP			IP 40			
Electrical power consumption	Max.		W	62			
	Standby		W	11			
Electric heater	Power supply	Name		3V / 9W			
		Phase		1~ / 3~			
		Frequency	Hz	50			

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

3 Combination table

3 - 1 Combination Table

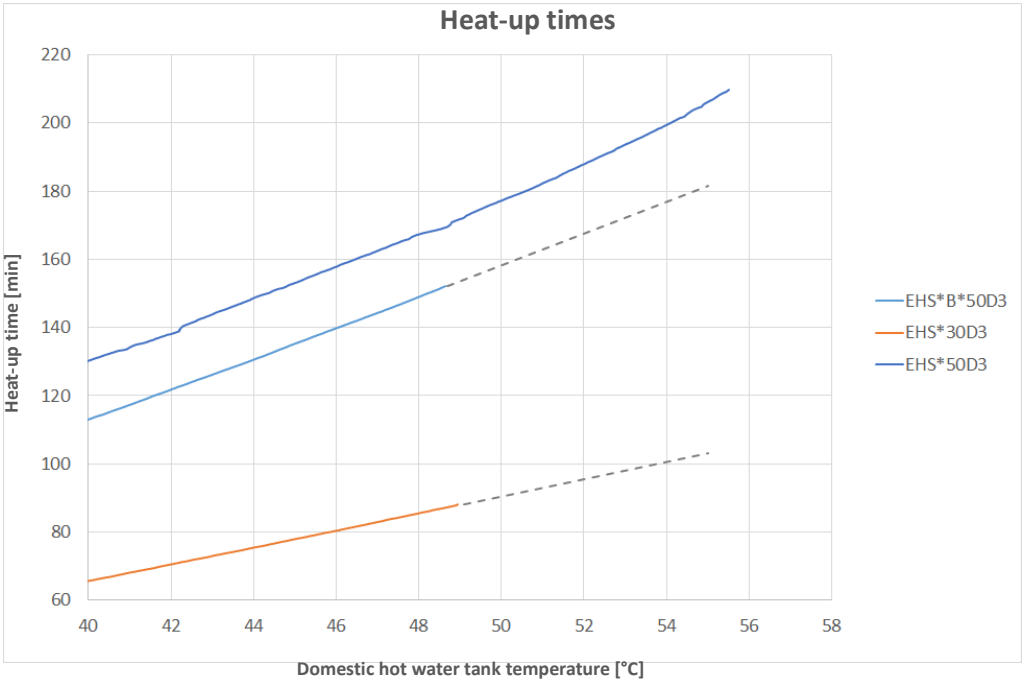
EHSH-D3
EHSHB-D3
EHSX-D3
EHSXB-D3

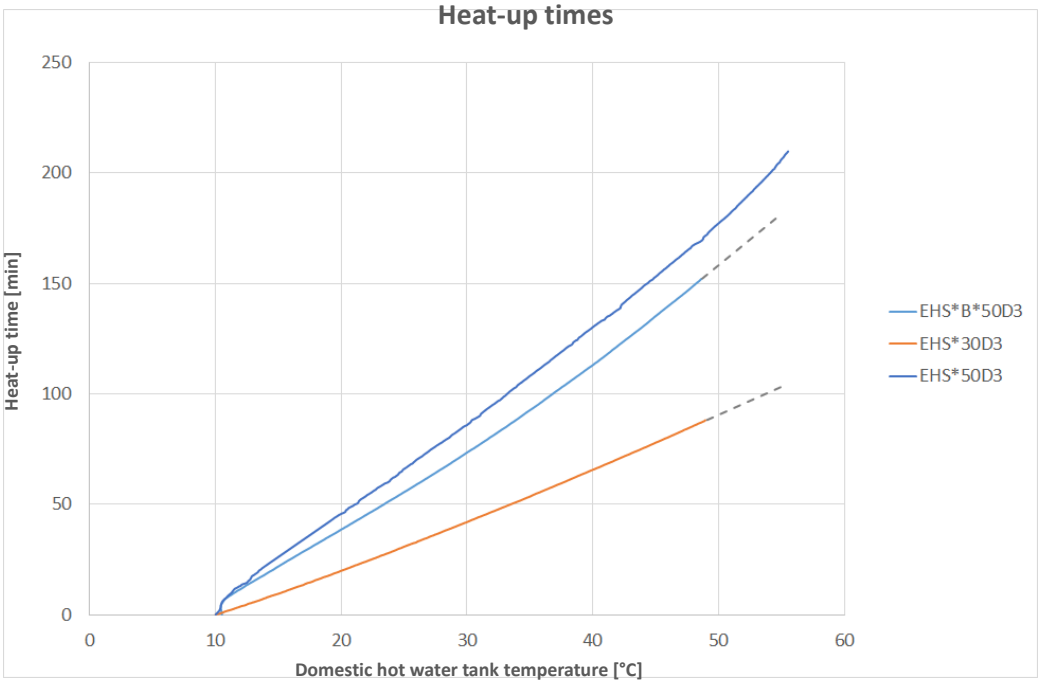
		EHSX04P30DA3 EHSX04P50DA3 EHSXB04P30DA3 EHSXB04P50DA3 EHSH04P30DA3 EHSHB04P30DA3	EHSX08P30DA3 EHSX08P50DA3 EHSXB08P30DA3 EHSXB08P50DA3 EHSH08P30DA3 EHSH08P50DA3 EHSHB08P30DA3 EHSHB08P50DA3
	ERGA04DAV3 ERGA04EAV3	✓	×
	ERGA06DAV3 ERGA06EAV3	×	✓
	ERGA08DAV3 ERGA08EAV3	×	✓
	ERGA04DAV3A ERGA04EAV3A	✓	×
	ERGA06DAV3A ERGA06EAV3A	×	✓
	ERGA08DAV3A ERGA08EAV3A	×	✓
	ERGA04DAV37 ERGA04EAV37	✓	×

4 Capacity tables

4 - 1 Domestic Hot Water performance

EHSH-D3
EHSHB-D3
EHSX-D3
EHSXB-D3





	Heat-up time domestic hot water tank until 45°C
EHS*P30D3	78 min
EHS*B*P50D3	135 min
EHS*50D3	153 min

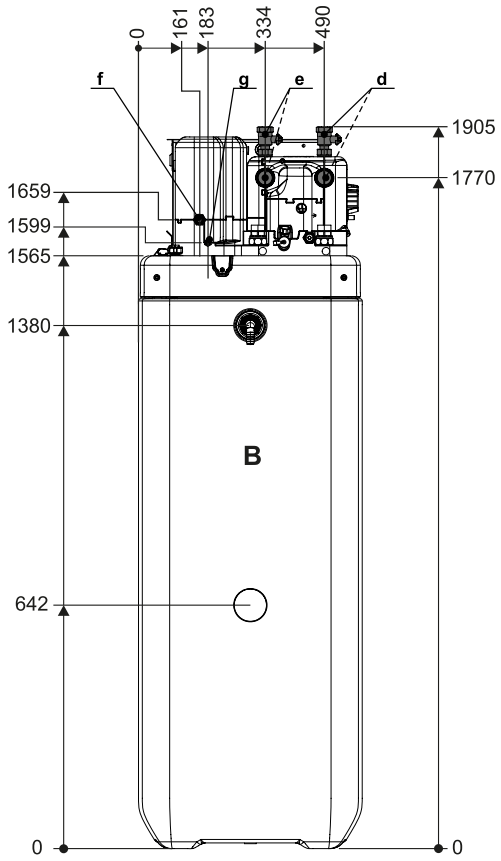
5 Dimensional drawings

5 - 1 Dimensional Drawings

EHSH-D3
EHSHB-D3
EHSX-D3
EHSXB-D3

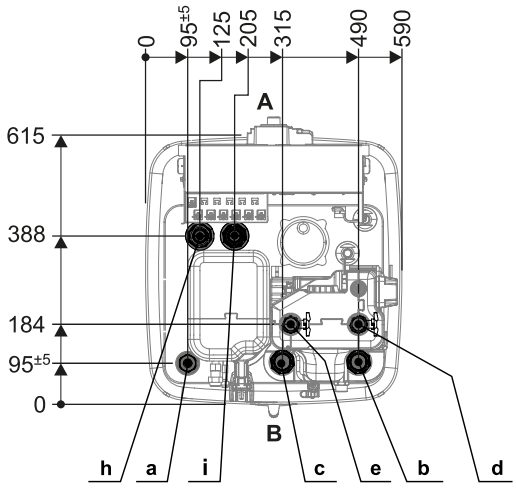
5

300 Litres Dimensions side-view



d Heating flow
e Heating return flow
f Connection for refrigerant gas line
g Connection for refrigerant fluid line
B rear

300 Litres Dimensions top-view



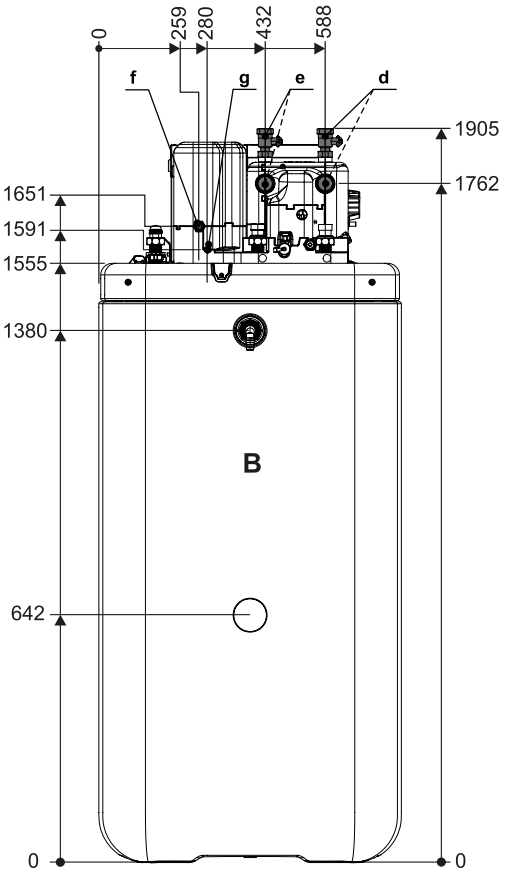
a Solar flow
b Domestic cold water
c Hot water
d Heating flow
e Heating return flow
h Biv flow (...Biv type only)
i Biv return flow (...Biv type only)
A front
B rear

5 Dimensional drawings

5 - 1 Dimensional Drawings

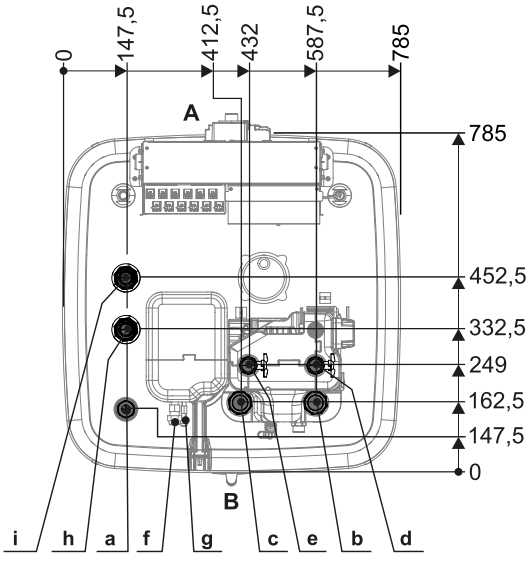
EHSH-D3
EHSHB-D3
EHSX-D3
EHSXB-D3

500 Litres Dimensions side-view



d Heating flow
e Heating return flow
f Connection for refrigerant gas line
g Connection for refrigerant fluid line
B rear

500 Litres Dimensions top-view



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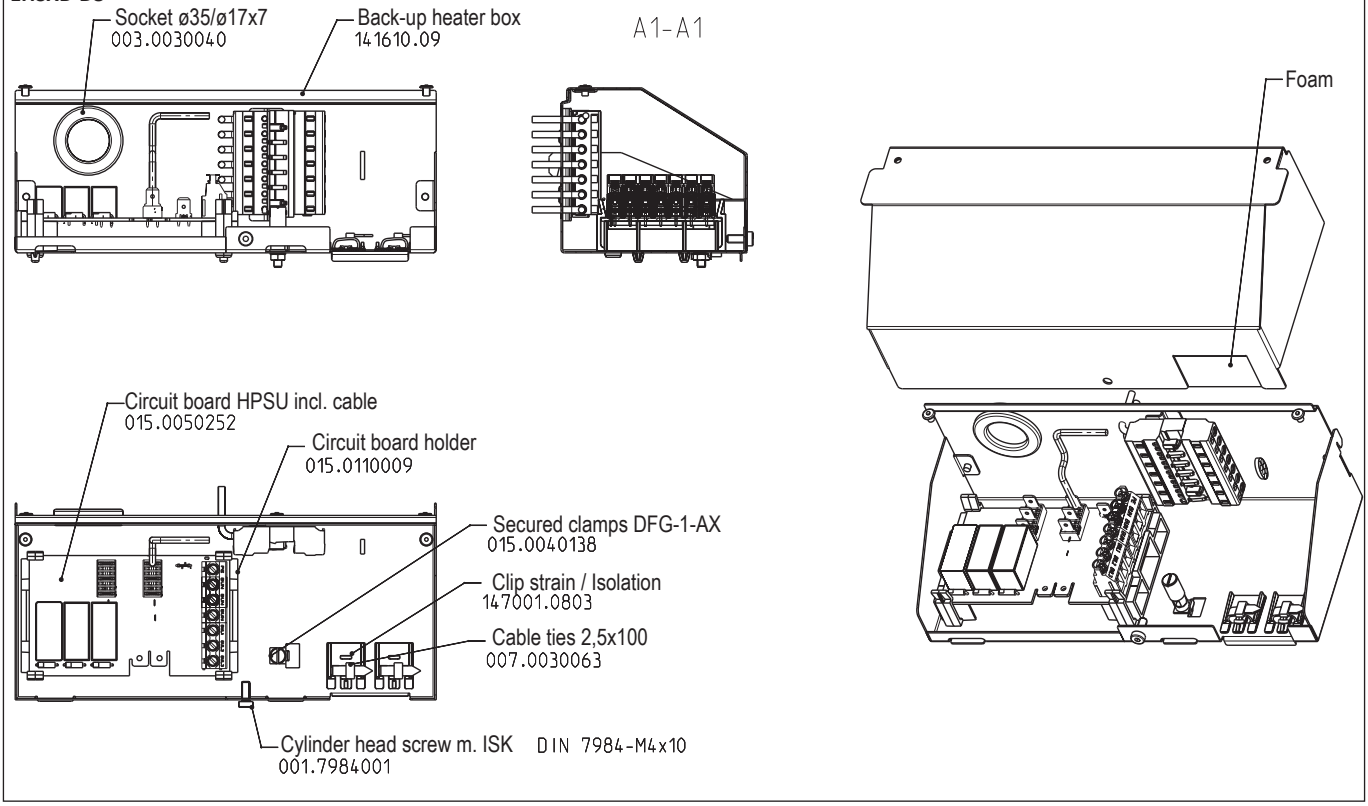
h Biv flow (...Biv type only)
i Biv return flow (...Biv type only)
A front
B rear

5 Dimensional drawings

5 - 1 Dimensional Drawings

EHSH-D3
EHSHB-D3
EHSX-D3
EHSXB-D3

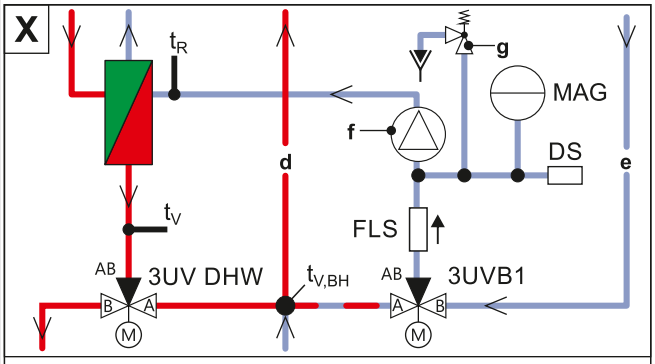


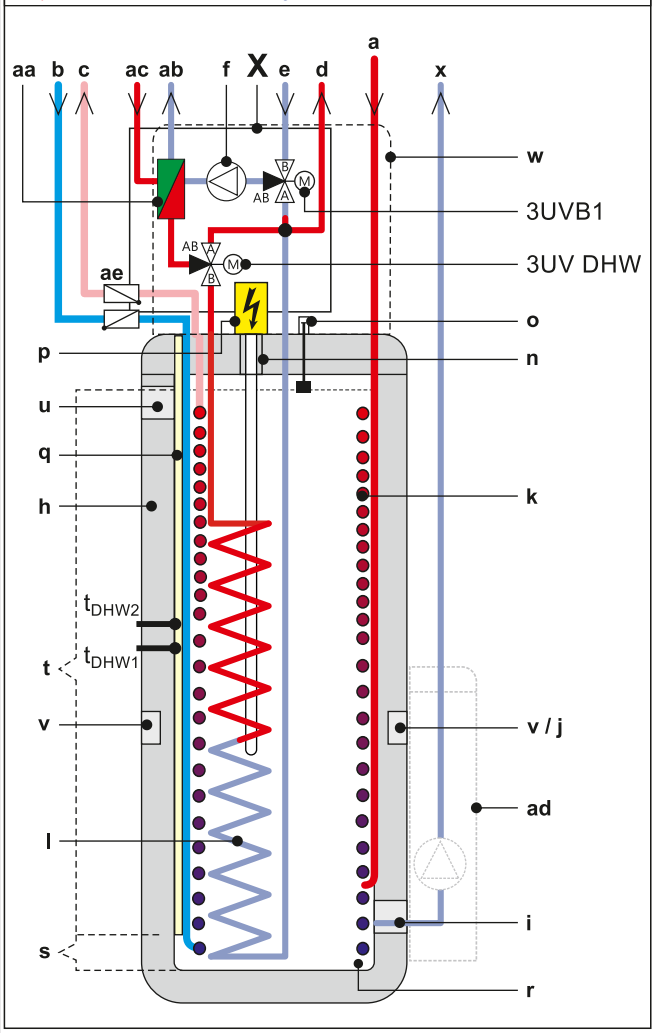
6 Piping diagrams

6 - 1 Piping Diagrams

EHSH-D3
EHSHB-D3
EHSX-D3
EHSXB-D3

standard 300 Litres





a Solar flow
b Cold water connection
c Hot water
d Heating flow
e Heating return flow
f Circulation pump
g Pressure relief valve

h Storage tank (polypropylene, double-walled jacket with PUR hard foam heat insulation)
i Filling and draining connection or solar return flow connection
j Mount for solar controller or handle
k Heat exchanger (stainless steel) for domestic hot water heating
l Heat exchanger (stainless steel) for storage tank charging or heating support
m Biv heat exchanger (stainless steel) for charging with external heat generator (e.g. pressurised solar system)
n Connection for optional electrical backup heater EKBUxx

o Fill level indicator (tank water)
p Optional: electric backup heater (EKBUxx)
q Submersible sensor sleeve for storage tank temperature sensor t_{DHW1} and t_{DHW2}
r Pressureless storage tank water
s Solar zone
t Hot water zone
u Safety overflow connection
v Mount for handle
w Protective cover
x Solar return flow
y Biv flow
z Biv return flow
aa Plate heat exchanger
ab Connection for refrigerant fluid line
ac Connection for refrigerant gas line
ad Optional: Solar control and pump unit
ae Circulation stop valve (accessory)

3UVB1 3-way changeover valve (internal heat generator circuit)
3UV DHW 3-way changeover valve (hot water/heating)
DS Pressure sensor
FLS FlowSensor
MAG Expansion vessel (field supply)
t_{DHW1}, t_{DHW2} Storage tank temperature sensor

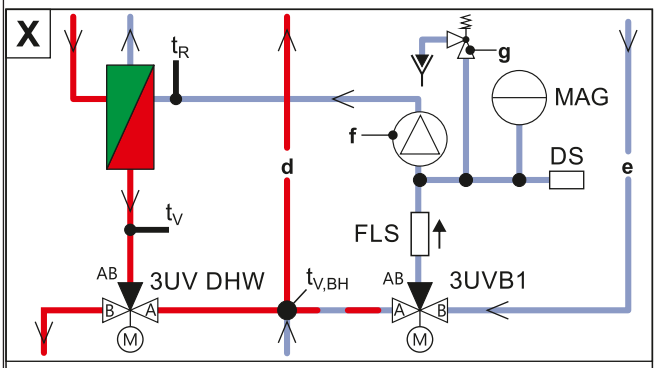
t_R Return temperature sensor
$t_{V,BH}$ Backup heater inflow temperature sensor

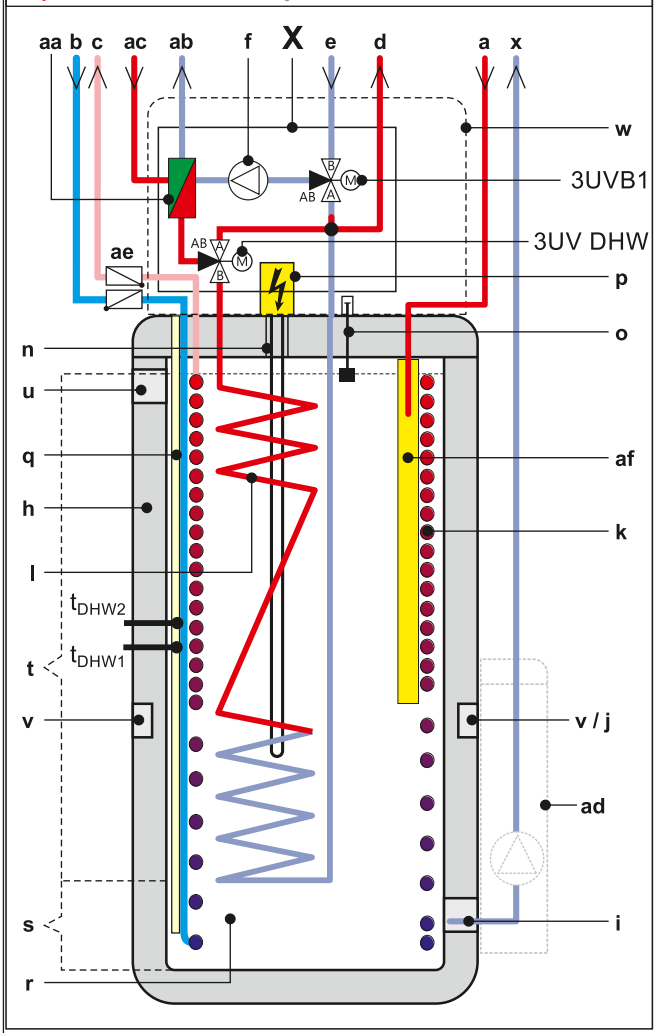
6 Piping diagrams

6 - 1 Piping Diagrams

EHSH-D3
EHSHB-D3
EHSX-D3
EHSXB-D3

standard 500 Litres





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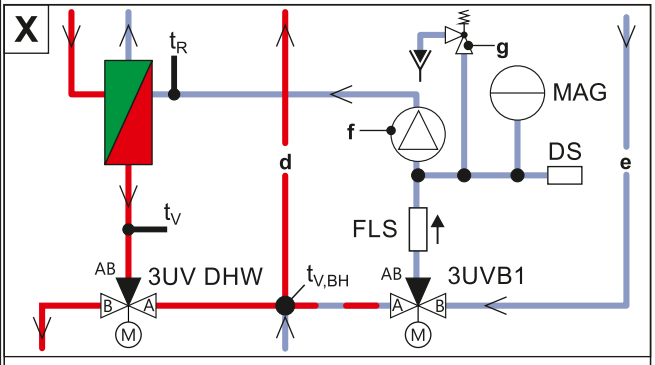
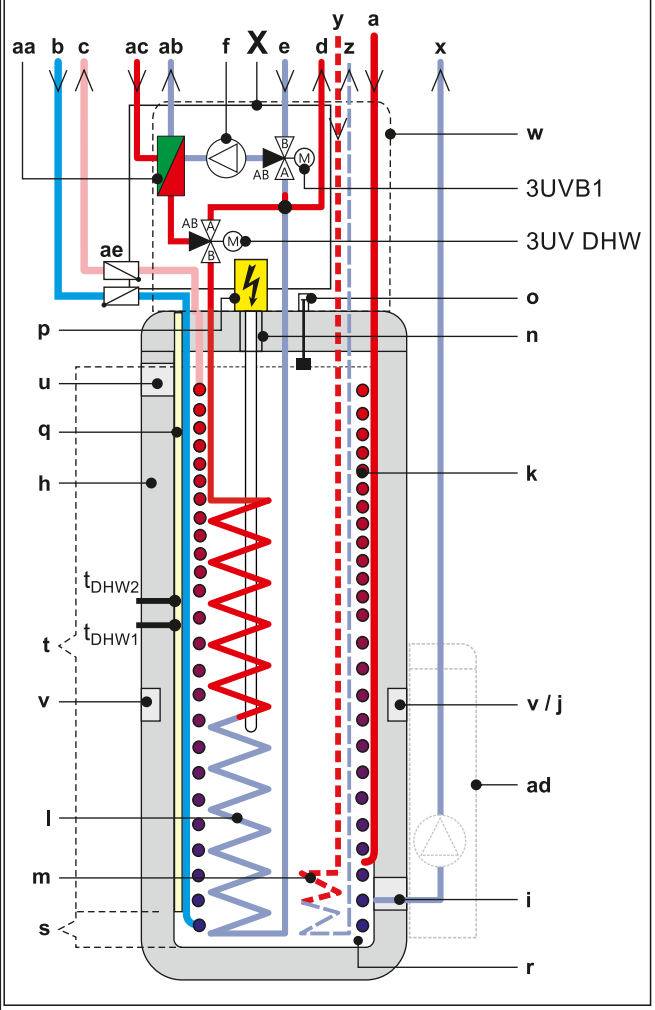
6 Piping diagrams

6 - 1 Piping Diagrams

EHSH-D3
EHSHB-D3
EHSX-D3
EHSXB-D3

bivalent 300 Litres





a Solar flow
b Cold water connection
c Hot water
d Heating flow
e Heating return flow
f Circulation pump
g Pressure relief valve

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z Biv return flow
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FLS FlowSensor
MAG Expansion vessel (field supply)
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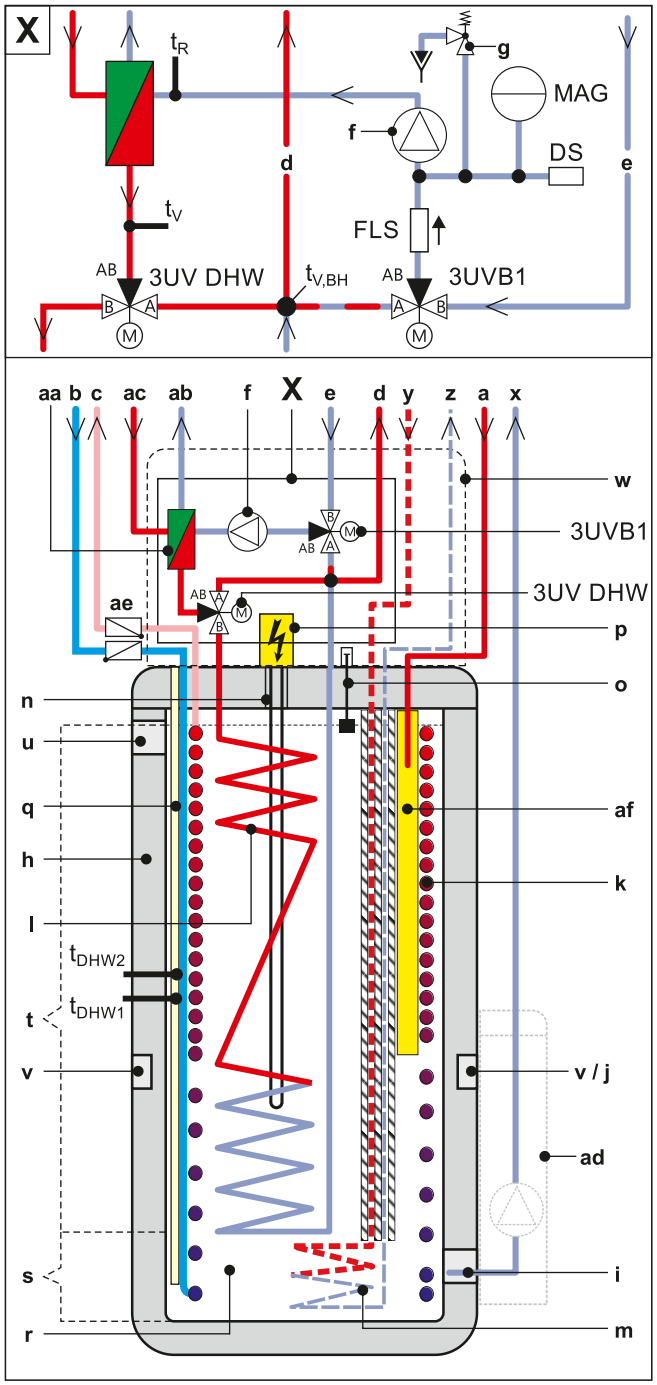
t_R Return temperature sensor
$t_{V, BH}$ Backup heater inflow temperature sensor

6 Piping diagrams

6 - 1 Piping Diagrams

EHSH-D3
EHSHB-D3
EHSX-D3
EHSXB-D3

bivalent 500 Litres



a Solar flow
b Cold water connection
c Hot water
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g Pressure relief valve

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MAG Expansion vessel (field supply)
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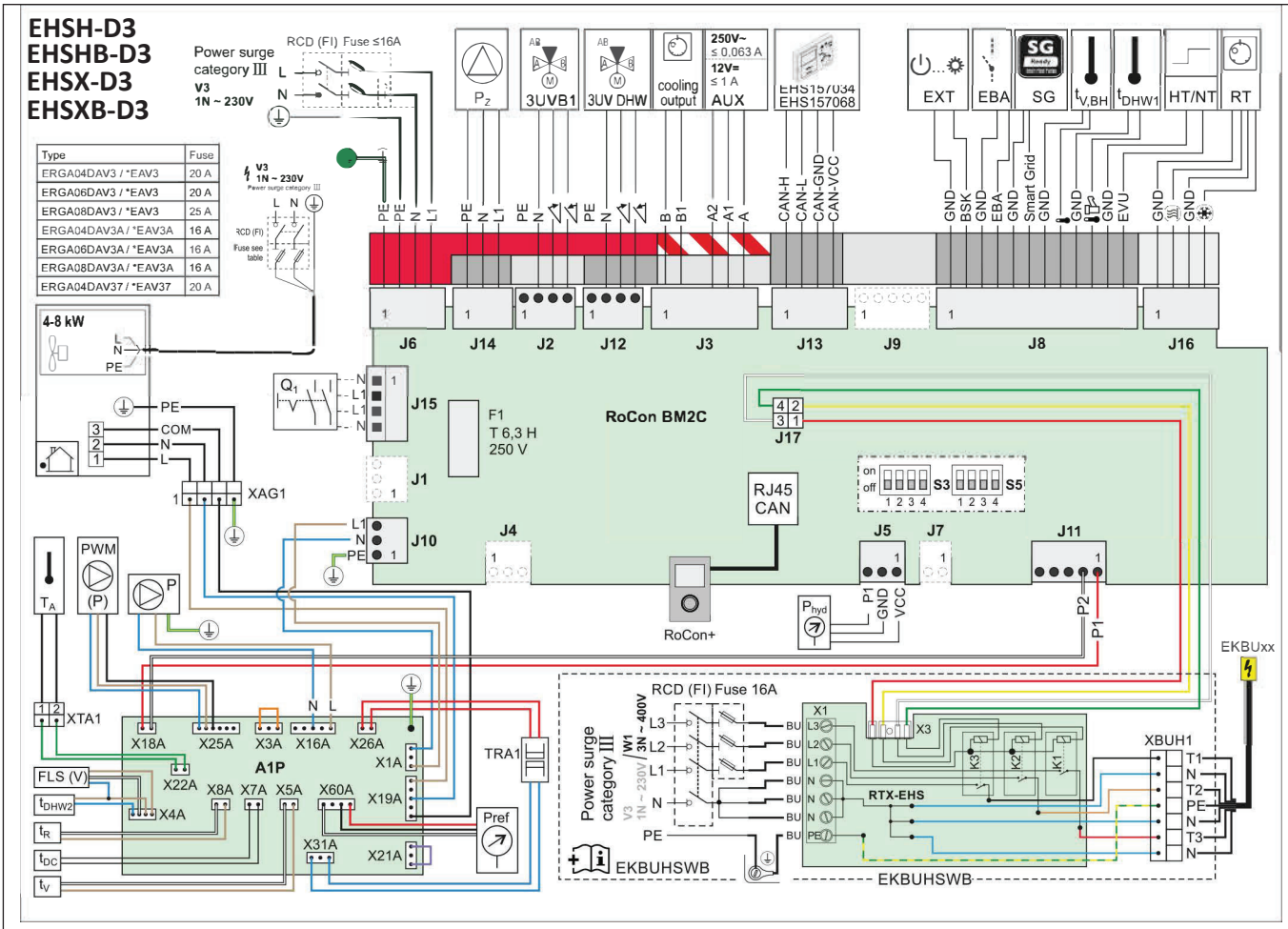
t_R Return temperature sensor
$t_{V,BH}$ Backup heater inflow temperature sensor

7 Wiring diagrams

7 - 1 Wiring Diagrams - Single Phase

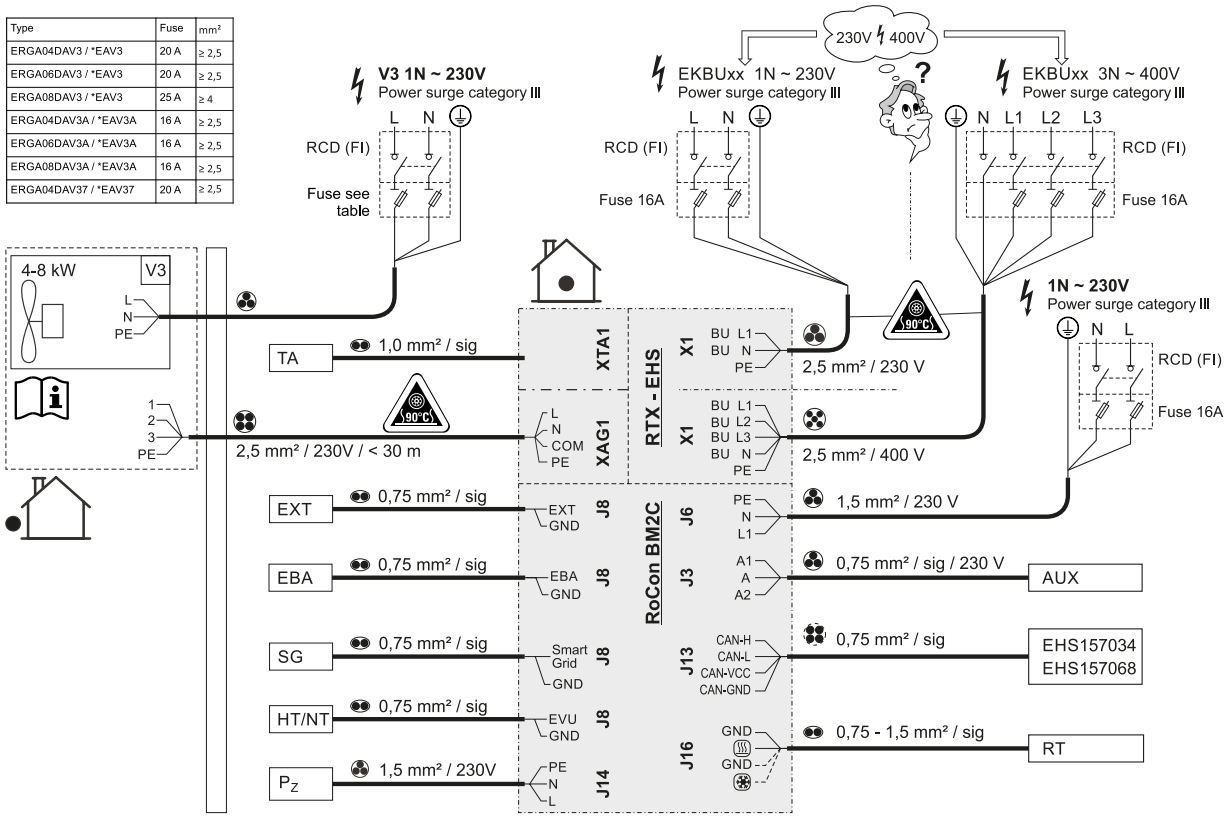


8 External connection diagrams

8 - 1 External Connection Diagrams

EHSH(B)-D3
EHSX(B)-D3

Type	Fuse	mm²
ERGA04DAV3 / *EAV3	20 A	≥ 2,5
ERGA06DAV3 / *EAV3	20 A	≥ 2,5
ERGA08DAV3 / *EAV3	25 A	≥ 4
ERGA04DAV3A / *EAV3A	16 A	≥ 2,5
ERGA06DAV3A / *EAV3A	16 A	≥ 2,5
ERGA08DAV3A / *EAV3A	16 A	≥ 2,5
ERGA04DAV37 / *EAV37	20 A	≥ 2,5



9 Installation

9 - 1 Installation Method

EHSH-D3
EHSHB-D3
EHSX-D3
EHSXB-D3

⚠ **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 refrigeran. 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 ≥ 1.84 kg, other minimum floor space requirements must be met:

1. Compare the total refrigerant charge in the system (m_c) with the maximum refrigrant filling (m_{max}) permitted for the installation room (A_{room}), (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.
2. Compare the minimum floor area (A_{min}) from with the floor area of the installation room (A_{room}) and the adjacent room (A_{room2}).
   - If $A_{min} \leq A_{room} + A_{room2}$: Proceed with the following steps.
   - If $A_{min} > A_{room} + A_{room2}$: Contact your local dealer.
3. Calculate coolant quantitiy (dm) exceeding m_{max}: $d_m = m_c - m_{max}$
4. Calculate the minimum opening range (VA_{min}) for natural ventilation between the installation room and the adjacent room (see).
5. 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 ≥ must be 20 mm. The bottom of the opening must be ≤ 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 het 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^2)	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^2)
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^2)
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 ventialition opening

9 Installation

9 - 1 Installation Method

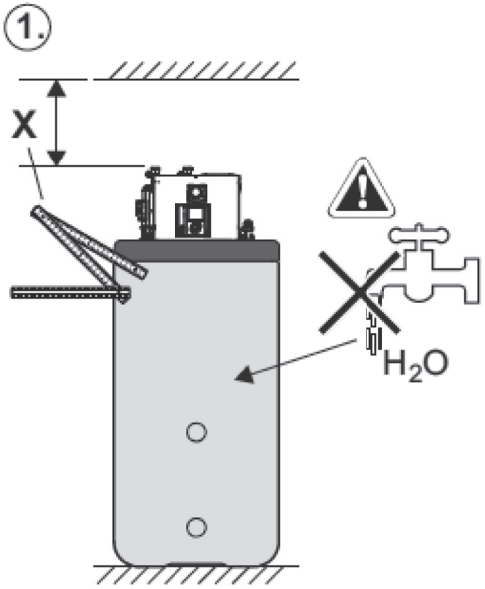
EHSH-D3
EHSHB-D3
EHSX-D3
EHSXB-D3

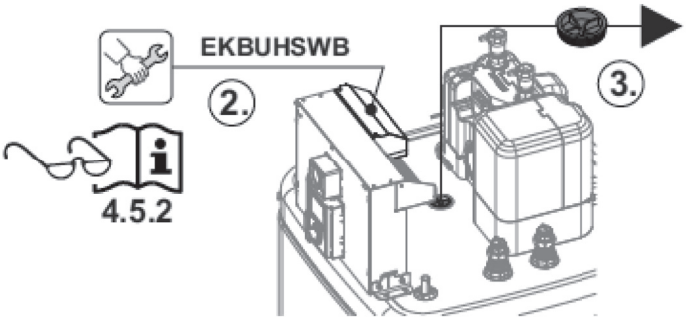
Recommended minimum distance:

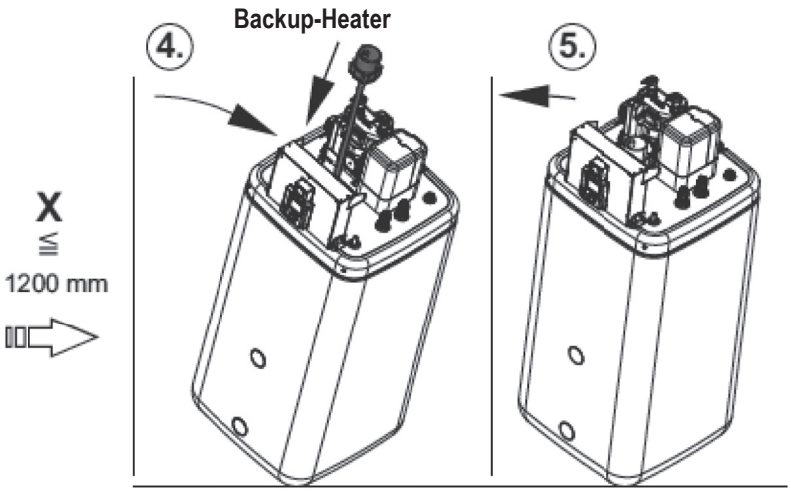
To the Wall: (back side) ≥ 100 mm, (front side) ≥ 500 mm

To the Ceiling: ≥ 1200 mm, minimum 480 mm.

If Backup-Heater needs to be installed:



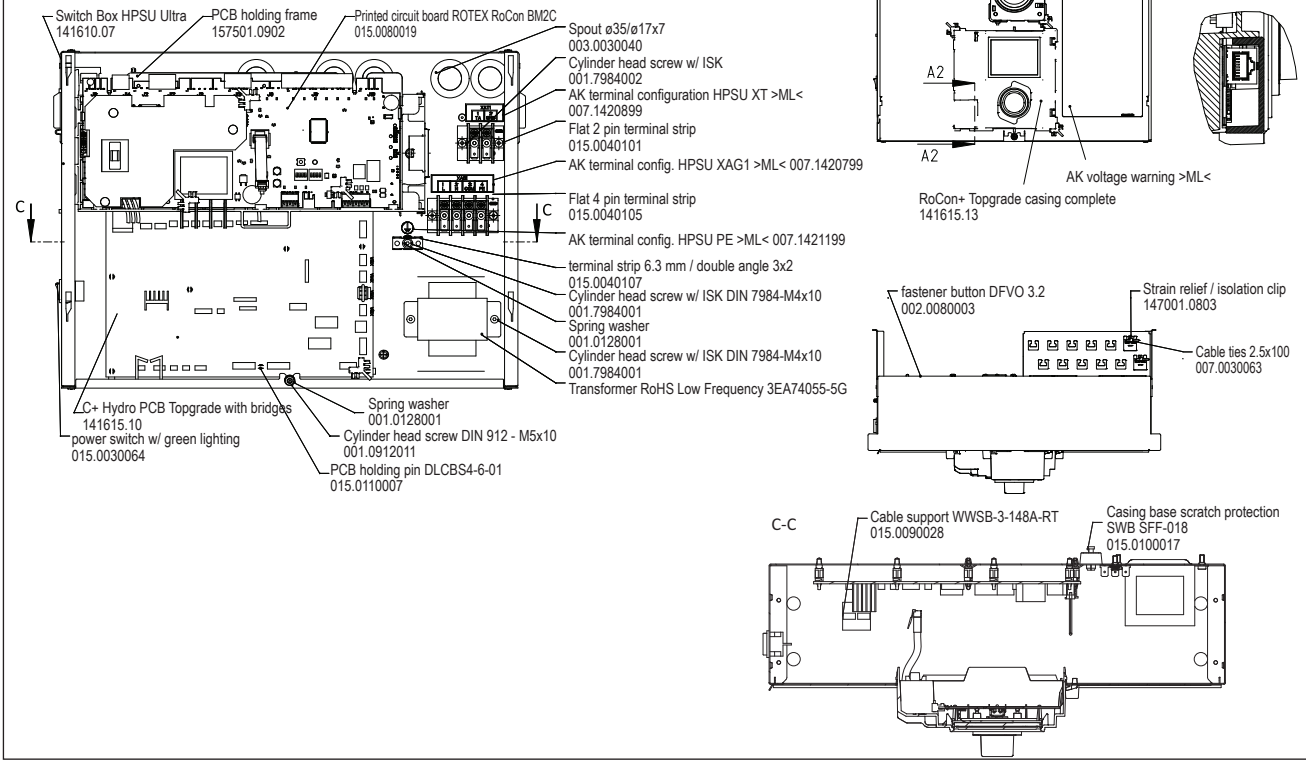




9 Installation

9 - 2 Switch Box Connection

EHSH-D3
EHSHB-D3
EHSX-D3
EHSXB-D3



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