DAIKIN

altherma

Heating

Technical Data

Daikin Altherma low temperature split

EEDEN15-725

EHVH-CB, EHVX-CB

TABLE OF CONTENTS

EHVH-CB, EHVX-CB

1 Features

1 - 1 EHVH-CB

- Integrated indoor unit: all-in-one floor standing unit including the domestic hot water tank
- Energy efficient heating only system based on air to water heat pump technology
- Perfect fit for new built as well as for low energy houses
- Best seasonal efficiencies, providing the highest savings on running costs
- Flexible configuration with respect to heat emitters

1 Features

1 - 2 EHVX-CB

- Integrated indoor unit: all-in-one floor standing unit including the domestic hot water tank
- Energy efficient heating and cooling system based on air to water heat pump technology
- Perfect fit for new built as well as for low energy houses
- Best seasonal efficiencies, providing the highest savings on running costs
- Flexible configuration with respect to heat emitters

2 Specifications

2-1 Technical Specifications					EHVH04S18C B3V	EHVH08S18C B3V	EHVH08S26C B9W	EHVH11S18C B3V	EHVH11S26C B9W	EHVH16S18C B3V	EHVH16S26C B9W
Power input	Nom.			kW	0.075			0.110		0.170	
Casing	Colour				White						
	Material				Precoated sheet metal						
Dimensions	Unit	Height		mm	1,732						
		Width		mm	600						
		Depth		mm	728						
	Packed unit	Height		mm	1,922						
		Width		mm	690						
		Depth		mm	818						
Weight	Unit			kg	116	117	126	117	126	118	127
	Packed unit			kg	129	130	140	130	140	131	141
Packing	Material				Wood / Carton / PE wrapping foil						
	Weight			kg	12						
Tank	Water volume			l	180		260	180	260	180	260
	Material				Stainless steel (EN 1.4521)						
	Maximum water temperature			°C	65						
	Maximum water pressure			bar	10						
	Insulation	Material			White polyester						
		Heat loss		kWh/ 24h	1.4 (1)		1.9 (1)	1.4 (1)	1.9 (1)	1.4 (1)	1.9 (1)
	Corrosion protection				Anode						
3-way valve	Coefficient of flow (kV)	Space heating		m³/h	13						
		Domestic hot water tank		m³/h	8						
Pump	Type				DC motor						
	Nr of speeds				Inverter controlled						
	Power input			W	46			76		140	
Expansion vessel	Volume			l	10						
	Max. water pressure			bar	3						
	Pre pressure			bar	1						
Operation range	Heating	Water side	Min.	°C	15 (2)						
			Max.	°C	55			55 (8)			
	Domestic hot water	Water side	Min.	°C	25						
			Max.	°C	60 (3)			60 (3) / 60 (9)			
Water side Heat exchanger	Type				Brazed plate						
	Quantity				1						
	Water volume			l	0.90	1.30		1.00			
	Water flow rate	Min.		l/min	13.0 (4)			16.0 (4)			
		Max.		l/min	13.0	21.5		42.0		46.0	
	Insulation material				Elastomeric foam						
Refrigerant circuit	Gas side diameter			mm	15.9						
	Liquid side diameter			mm	6.4			9.5			
Water circuit - Domestic hot water side	Piping connections	Cold water in / Hot water out		inch	G 3/4" FEMALE						
		Recirculation connection		inch	G 1/2" FEMALE						
Sound power level	Nom.			dBA	42 (5)					44 (5)	
Sound pressure level	Nom.			dBA	28 (6)					30 (6)	
Water filter	Diameter perforations			mm	1.0						
	Material				copper - brass - stainless steel						
Water circuit	Piping connections diameter			inch	G 1"1/4 (female)						
	Safety valve			bar	3						
	Manometer				Yes						
	Drain valve / fill valve				Yes						
	Shut off valve				Yes						
	Air purge valve				Yes						
	Total water volume			l	4.3 (7)	4.7 (7)		4.4 (7)			
Safety devices	Item	01			Thermal cut out						

2 Specifications

2-1 Technical Specifications				EHVH04S18C B3V	EHVH08S18C B3V	EHVH08S26C B9W	EHVH11S18C B3V	EHVH11S26C B9W	EHVH16S18C B3V	EHVH16S26C B9W
PED	Category			Art3§3 / PED unit category: excluded from scope of PED due to article 1, item 3.6 of 97/23/EC	Category I / PED unit category: excluded from scope of PED due to article 1, item 3.6 of 97/23/EC		Art3§3 / PED unit category: excluded from scope of PED due to article 1, item 3.6 of 97/23/EC			
	Most critical part	Name		-	Plate heat exchanger		-			
		Ps*V	Bar*l	-	51		-			

2-2 Technical Specifications					EHVX04S18C B3V	EHVX08S18C B3V	EHVX08S26C B9W	EHVX11S18C B3V	EHVX11S26C B9W	EHVX16S18C B3V	EHVX16S26C B9W
Power input	Nom.			kW	0.075			0.110		0.170	
Casing	Colour				White						
	Material				Precoated sheet metal						
Dimensions	Unit	Height		mm	1,732						
		Width		mm	600						
		Depth		mm	728						
	Packed unit	Height		mm	1,922						
		Width		mm	690						
		Depth		mm	818						
Weight	Unit			kg	117	119	128	119	128	120	129
	Packed unit			kg	130	132	141	132	141	133	142
Packing	Material				Wood / Carton / PE wrapping foil						
	Weight			kg	12						
Tank	Water volume			l	180		260	180	260	180	260
	Material				Stainless steel (EN 1.4521)						
	Maximum water temperature			°C	65						
	Maximum water pressure			bar	10						
	Insulation	Material			White polyester						
		Heat loss		kWh/24h	1.4 (1)		1.9 (1)	1.4 (1)	1.9 (1)	1.4 (1)	1.9 (1)
	Corrosion protection				Anode						
3-way valve	Coefficient of flow (kV)	Space heating		m³/h	13						
		Domestic hot water tank		m³/h	8						
Pump	Type				DC motor						
	Nr of speeds				Inverter controlled						
	Power input			W	46			76		140	
Expansion vessel	Volume			l	10						
	Max. water pressure			bar	3						
	Pre pressure			bar	1						
Operation range	Heating	Water side	Min.	°C	15 (2)						
			Max.	°C	55			55 (8)			
	Domestic hot water	Water side	Min.	°C	25						
			Max.	°C	60 (3)			60 (3) / 60 (9)			
Water side Heat exchanger	Type				Brazed plate						
	Quantity				1						
	Water volume			l	0.90	1.30		1.00			
	Water flow rate	Min.		l/min	13.0 (4)			16.0 (4)			
		Max.		l/min	13.0	21.5		42.0		46.0	
	Insulation material				Elastomeric foam						
Refrigerant circuit	Gas side diameter			mm	15.9						
	Liquid side diameter			mm	6.4			9.5			
Water circuit - Domestic hot water side	Piping connections	Cold water in / Hot water out		inch	G 3/4" FEMALE						
		Recirculation connection		inch	G 1/2" FEMALE						
Sound power level	Nom.			dBA	42 (5)					44 (5)	

2 Specifications

2-2 Technical Specifications				EHVX04S18C B3V	EHVX08S18C B3V	EHVX08S26C B9W	EHVX11S18C B3V	EHVX11S26C B9W	EHVX16S18C B3V	EHVX16S26C B9W
Sound pressure level	Nom.		dBA	28 (6)					30 (6)	
Water filter	Diameter perforations		mm	1.0						
	Material			copper - brass - stainless steel						
Water circuit	Piping connections diameter		inch	G 1"1/4 (female)						
	Safety valve		bar	3						
	Manometer			Yes						
	Drain valve / fill valve			Yes						
	Shut off valve			Yes						
	Air purge valve			Yes						
	Total water volume		l	4.3 (7)	4.7 (7)		4.4 (7)			
Safety devices	Item	01		Thermal cut out						
PED	Category			Art3§3 / PED unit category: excluded from scope of PED due to article 1, item 3.6 of 97/23/EC	Category I / PED unit category: excluded from scope of PED due to article 1, item 3.6 of 97/23/EC		Art3§3 / PED unit category: excluded from scope of PED due to article 1, item 3.6 of 97/23/EC			
	Most critical part	Name		-	Plate heat exchanger		-			
		Ps*V	Bar*l	-	51		-			

2-3 Electrical Specifications				EHVH04S18C B3V	EHVH08S18C B3V	EHVH08S26C B9W	EHVH11S18C B3V	EHVH11S26C B9W	EHVH16S18C B3V	EHVH16S26C B9W
Power supply	Name			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.						
	Voltage range	Min.	%	-10						
		Max.	%	10						
IP class	IP			IP X0B						
Electric heater	Power supply	Name		3V3		9W	3V3	9W	3V3	9W
		Phase		1~		Refer to installation manual or drawing 4D097266	1~	Refer to installation manual or drawing 4D097266	1~	Refer to installation manual or drawing 4D097266
		Frequency	Hz	50						
		Voltage	V	230		-	230	-	230	-
	Current	Running current	A	13.0		-	13.0	-	13.0	-
		Minimum Ssc value		-			Equipment complying with EN/IEC 61000-3-12	-	Equipment complying with EN/IEC 61000-3-12	-
	Voltage range	Min.	%	-10						
		Max.	%	10						
Wiring connections-Communication cable	Quantity			3						
	Remark			2.5 mm²						
Wiring connections-Electric meter	Quantity			2						
	Remark			Minimum 0.75 mm² (5VDC pulse detection)						
Wiring connections-Preferential kWh rate power supply	Quantity			Power: 2						
	Remark			Power 6.3A / Select diameter and type according to national and local regulations						
Wiring connections-Domestic hot water pump	Quantity			2						
	Remark			Minimum 0.75 mm² (2A inrush, 1A continuous)						
Wiring connections-For power supply back-up heater	Quantity			3G		Refer to installation manual or drawing 4D093592	3G	Refer to installation manual or drawing 4D093592	3G	Refer to installation manual or drawing 4D093592
	Remark			Select diameter and type according to national and local regulations						

2 Specifications

2-3 Electrical Specifications		EHVH04S18C B3V	EHVH08S18C B3V	EHVH08S26C B9W	EHVH11S18C B3V	EHVH11S26C B9W	EHVH16S18C B3V	EHVH16S26C B9W
Wiring connections- For connection with R6T	Quantity	2						
	Remark	Minimum 0.75 mm²						
Wiring connections- For connection with A3P	Quantity	Depends on thermostat type, cf. installation manual						
	Remark	Voltage: 230V / Max. current: 100mA / Min. 0.75mm² / Select diameter and type according to national and local regulations						
Wiring connections- For connection with M2S	Quantity	2						
	Remark	Voltage: 230V / Max. current: 100mA / Min. 0.75mm² / Select diameter and type according to national and local regulations						
Wiring connections- For connection with bottom plate heater	Quantity	2						
	Remark	Voltage: 230V / Min. 0.75mm² / Select diameter and type according to national and local regulations						
Wiring connections- For connection with user interface	Quantity	2						
	Remark	0.75 mm² till 1,25 mm² (max length 500m)						
Wiring connections- For connection with optional FWXV* (demand input and output)	Quantity	4						
	Remark	100 mA, minimum 0.75 mm²						

2-4 Electrical Specifications				EHVX04S18C B3V	EHVX08S18C B3V	EHVX08S26C B9W	EHVX11S18C B3V	EHVX11S26C B9W	EHVX16S18C B3V	EHVX16S26C B9W
Power supply	Name			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.						
	Voltage range	Min.	%	-10						
		Max.	%	10						
IP class	IP			IP X0B						
Electric heater	Power supply	Name		3V3		9W	3V3	9W	3V3	9W
		Phase		1~		Refer to installation manual or drawing 4D097266	1~	Refer to installation manual or drawing 4D097266	1~	Refer to installation manual or drawing 4D097266
		Frequency	Hz	50						
		Voltage	V	230		-	230	-	230	-
	Current	Running current	A	13.0		-	13.0	-	13.0	-
		Minimum Ssc value		-		Equipment complying with EN/IEC 61000-3-12	-	Equipment complying with EN/IEC 61000-3-12	-	Equipment complying with EN/IEC 61000-3-12
	Voltage range	Min.	%	-10						
		Max.	%	10						
Wiring connections- Communication cable	Quantity			3						
	Remark			2.5 mm²						
Wiring connections- Electric meter	Quantity			2						
	Remark			Minimum 0.75 mm² (5VDC pulse detection)						
Wiring connections- Preferential kWh rate power supply	Quantity			Power: 2						
	Remark			Power 6.3A / Select diameter and type according to national and local regulations						
Wiring connections- Domestic hot water pump	Quantity			2						
	Remark			Minimum 0.75 mm² (2A inrush, 1A continuous)						
Wiring connections- For power supply back-up heater	Quantity			3G		Refer to installation manual or drawing 4D093592	3G	Refer to installation manual or drawing 4D093592	3G	Refer to installation manual or drawing 4D093592
	Remark			Select diameter and type according to national and local regulations						
Wiring connections- For connection with R6T	Quantity			2						
	Remark			Minimum 0.75 mm²						

2 Specifications

2-4 Electrical Specifications		EHVX04S18C B3V	EHVX08S18C B3V	EHVX08S26C B9W	EHVX11S18C B3V	EHVX11S26C B9W	EHVX16S18C B3V	EHVX16S26C B9W
Wiring connections- For connection with A3P	Quantity	Depends on thermostat type, cf. installation manual						
	Remark	Voltage: 230V / Max. current: 100mA / Min. 0.75mm² / Select diameter and type according to national and local regulations						
Wiring connections- For connection with M2S	Quantity	2						
	Remark	Voltage: 230V / Max. current: 100mA / Min. 0.75mm² / Select diameter and type according to national and local regulations						
Wiring connections- For connection with bottom plate heater	Quantity	2						
	Remark	Voltage: 230V / Min. 0.75mm² / Select diameter and type according to national and local regulations						
Wiring connections- For connection with user interface	Quantity	2						
	Remark	0.75 mm² till 1,25 mm² (max length 500m)						
Wiring connections- For connection with optional FWXV* (demand input and output)	Quantity	4						
	Remark	100 mA, minimum 0.75 mm²						

Notes

(1) Heatloss according to EN12897

(2) 15°C-25°C: BUH only, no heat pump operation = during commissioning

(3) For *RLQ* outdoor units \>55°C BUH only, no heatpump operation

(4) 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).

(5) DB/WB 7°C/6°C - LWC 35°C (DT=5°C)

(6) The sound pressure level is measured in an anechoic room at 1m distance from the unit. It is a relative value, depending on the distance and acoustic environment.

(7) Including piping + PHE + back-up heater; excluding expansion vessel

(8) Refer to operation range for detail for differences between *RHQ* and *RLQ* models

(9) For *RHQ* outdoor units \>50°C BUH only, no heatpump operation

3 Electrical data

3 - 1 Electrical Data

EHV(H/X)-CB

* 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
  - Three-phase AC meter
    - 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		*RLQ(04/06/08)*			*R*Q(011/014/016)*V3			*R*Q(011/014/016)*W1					
Indoor unit type		*H(B/V)(H/X)(04/08)C*			*H(B/V)(H/X)(11/16)C*			*H(B/V)(H/X)(11/16)C*					
	Backup heater type	3V / 9W	9W	9W	3V / 9W	9W	9W	3V / 9W		9W		9W	
	Backup heater power supply	1~ 230V	3~ 400V	3~ 230V	1~ 230V	3~ 400V	3~ 230V	1~ 230V		3~ 400V		3~ 230V	
	Backup heater configuration	3 / 6 kW	6 / 9 kW	6 kW	3 / 6 kW	6 / 9 kW	6 kW	3 / 6 kW		6 / 9 kW		6 kW	
		Normal kWh rate power supply											
Electrical meter type	1~	1	1	-	-	1	1	-	-	1	-	1	-	-
	3~ balanced	-	1	-	-	-	1	-	-	1	-	1	-	-
	3~ unbalanced	-	-	1	1	-	-	1	1	-	1	-	1	1
		Preferential kWh rate power supply											
Electrical meter type	1~	2	1		1	2	1		1	1		-	-
	3~ balanced	-	-		-	-	-		-	1		1	1
	3~ unbalanced	-	1		1	-	1		1	-		1	1

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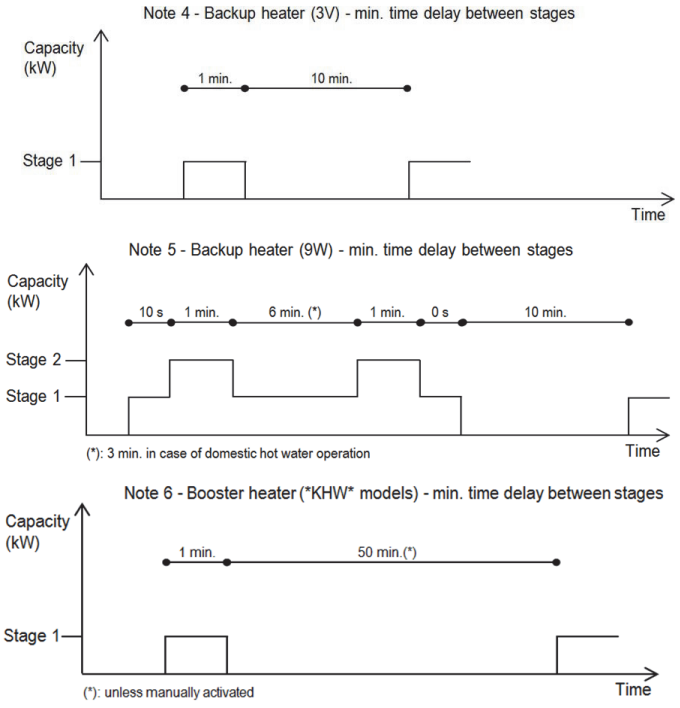
3 Electrical data

3 - 1 Electrical Data

EHV(H/X)-CB

Electrical specifications Backup heater and Booster heater ·(*KHW* models)·										
Backup heater	Type				3V	9W				
	Capacity setting			kW	3	6	3	6	6	9
	Capacity stage				1	2	1	2	2	2
	Capacity stage 1			kW	3	3	3	3	3	3
	Capacity stage 2			kW	-	6	6	6	6	9
	Minimum time delay between stages				Note 4	Note 5				
	Power supply	Phase			1~	3~	1~	1~	3~	3~
	(1)	Frequency		Hz	50	50				
		Voltage		V	230	230	230	230	400	400
	Current	Nominal running current		A	13	15,1	13	26	8,7	13
		Zmax (backup heater) (2)		Ω	-	-	-	-	-	-
				Complex	-	-	-	-	-	-
		Minimum Ssc value		kVA	-	-	-	(3)	-	-
Booster heater (optional) (*KHW* models)	Capacity setting			kW	3	3	3	3	3	3
	Capacity stage				1	1	1	1	1	1
	Minimum time delay between stages				Note 6					
	Current	Nominal running current	+ EK*V3	A	26 (13+13)	28,1 (15,1+13)	26 (13+13)	39 (26+13)	21,7 (8,7+13)	26 (13+13)
			+ EK*Z2	A	-	-	-	-	16,2 (8,7+7,5)	20,5 (13+7,5)
		Minimum Ssc value	+ EK*V3	kVA	(3)	(3)	(3)	(3)	(3)	(3)
			+ EK*Z2	kVA	-	-	-	-	(3)	(3)
		Zmax (backup heater)		Ω	-	-	-	-	-	-
		Booster heater (*KHW* models) (2)		Complex	-	-	-	-	-	-
Notes	(1)	The above-mentioned power supply of the hydrobox is for the backup heater only. The switch box and the pump of the hydrobox are supplied with the outdoor unit. The optional domestic hot water tank has a separate power supply.								
	(2)	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 Zsys ≤ Zmax.								
	(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 ≤ 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 ≤ 75 A per phase.								
	Zsys	System impedance								



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4 Combination table

4 - 1 Combination Table

EHV(H/X)-CB

Factory-mounted optional equipment for *HV(H/X)04S#CB##

Description	04 # - ##	
Heating only model *HVH*	18 - 3V	
Reversible model *HVX*		18 - 3V
Backup heater 3kW 1N~230 V	o	o
Backup heater 6kW 1N~230 V	-	-
Backup heater 6kW 3N~400 V	-	-
Backup heater 6kW 3~230 V	-	-
Backup heater 9kW 3N~400 V	-	-
Domestic hot water tank 180L	o	o
Domestic hot water tank 260L	-	-

Factory-mounted optional equipment for *HV(H/X)(08/11/16)S#CB##

Description	# - ##			
Heating only model *HVH*	18 - 3V		26 - 9W (9)	
Reversible model *HVX*		18 - 3V		26 - 9W (9)
Backup heater 3kW 1N~230 V	o	o	o	o
Backup heater 6kW 1N~230 V	-	-	o	o
Backup heater 6kW 3N~400 V	-	-	o	o
Backup heater 6kW 3~230 V	-	-	o	o
Backup heater 9kW 3N~400 V	-	-	o	o
Domestic hot water tank 180L	o	o	-	-
Domestic hot water tank 260L	-	-	o	o

Outdoor combination table for *HV(H/X)(04/08)S(18/26)CB*
and *HV(H/X)(11/16)S(18/26)CB*

		*RLQ004CA*V3*	*RLQ006CA*V3*	*RLQ008CA*V3*	*RHQ011B*(V3/W1)	*RHQ014B*(V3/W1)	*RHQ016B*(V3/W1)	*RLQ011C*(V3/W1)	*RLQ014C*(V3/W1)	*RLQ016C*(V3/W1)
HVH04S18CB	Heating only indoor unit	o	---	---	---	---	---	---	---	---
HVX04S18CB	Reversible indoor unit	o	---	---	---	---	---	---	---	---
HVH08S(18/26)CB	Heating only indoor unit	---	o	o	---	---	---	---	---	---
HVX08S(18/26)CB	Reversible indoor unit	---	o	o	---	---	---	---	---	---
HVH11S(18/26)CB	Heating only indoor unit	---	---	---	o	---	---	o	---	---
HVX11S(18/26)CB	Reversible indoor unit	---	---	---	o	---	---	o	---	---
HVH16S(18/26)CB	Heating only indoor unit	---	---	---	---	o	o	---	o	o
HVX16S(18/26)CB	Reversible indoor unit	---	---	---	---	o	o	---	o	o

Kit availability for outdoor units

		*RLQ004CA*V3*	*RLQ006CA*V3*	*RLQ008CA*V3*	*RHQ011B*(V3/W1)	*RHQ014B*(V3/W1)	*RHQ016B*(V3/W1)	*RLQ011C*(V3/W1)	*RLQ014C*(V3/W1)	*RLQ016C*(V3/W1)
EKDP008CA	Drain pan kit	o	o	o	---	---	---	---	---	---
EKDPH008CA	Drain pan kit	o	o	o	---	---	---	---	---	---
EKFT008CA	Drain pan kit	o	o	o	---	---	---	---	---	---
*KDK04	Drain plug kit (3)	---	---	---	o	o	o	---	---	---
*KBPHTH16A	Bottom plate heater (1) (3) (10)	---	---	---	o	o	o	--- (8)	--- (8)	--- (8)
*K016SNC	Snow cover	---	---	---	---	---	---	o	o	o
KRP58M51	Demand PCB	---	---	---	---	---	---	o	o	o

Kit availability

Reference	Description					
			# - ##			
	Heating only model *HVH*		18 - 3V		26 - 9W	
	Reversible model *HVX*			18 - 3V		26 - 9W
*KRSCA1	Remote sensor for outdoor	(11)	o	o	o	o
KRCS01-1	Remote sensor for indoor	(11)	o	o	o	o
*KRUCBL1...7	User interface language group 1~7		o	o	o	o
*KRUCBS	Simplified user interface	(13)	o	o	o	o
*KRP1HBAA	Digital I/O PCB	(2)	o	o	o	o
*KRP1AHTA	Demand PCB	(6)	o	o	o	o
*KRTWA	Wired room thermostat		o	o	o	o
*KRTR1	Wireless room thermostat	(receiver included)	o	o	o	o
*KRTETS	External temperature sensor option kit	(4)	o	o	o	o
FWXV15AVEB	Heat pump convector		o	o (5)	o	o (5)
FWXV20AVEB	Heat pump convector		o	o (5)	o	o (5)
*KVKHPC	Heat pump convector valve kit	(5)	o	o (5)	o	o (5)
*KPCCAB2	PC cable kit	(12)	o	o	o	o

Notes

(1) Heater tape that can be fixed on the bottom plate to prevent excessive ice formation.
(2) PCB that provides additional output connections:
  (a) Control external heat source (bivalent operation).
  (b) Output remote ON/OFF signal space heating/cooling OR bottom plate heater *KBPHTH16* control.
  (c) Remote alarm output
(3) It is not allowed to combine a bottom plate heater with a drain plug/stop kit.
(4) *KRTETS can only be used in combination with *KRTR1
(5) The valve kit is mandatory if a heat pump convector is installed on a reversible model (not mandatory for heating only models).
(6) PCB to receive up to 4 digital inputs for power limitation, only for *HV(H/X)(04/08)CB.
(8) The bottom plate heater is factory mounted and controlled by the outdoor unit.
(9) Unified model, the actual backup heater capacity depends on the actual internal upwiring.
(10) Requires digital I/O PCB *KRP1HBAA
(11) Only 1 sensor connectable: indoor or outdoor
(12) Data cable for connection with PC.
(13) The simplified user interface (*KRUCBS) can only be used in combination with a main user interface (*KRUCBL1~7).

Remark

Other combinations than mentioned in this combination table are prohibited.

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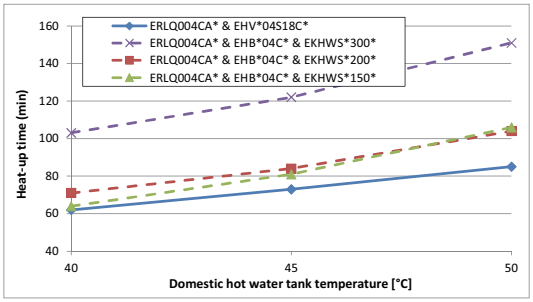
5 Capacity tables

5 - 1 Domestic Hot Water performance

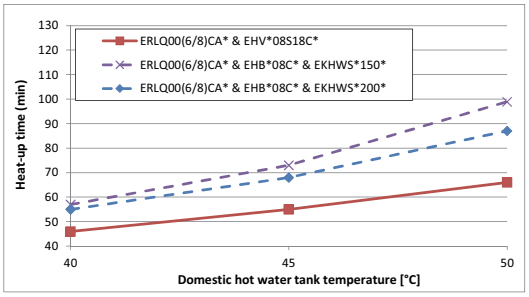
EHV(H/X)-CB

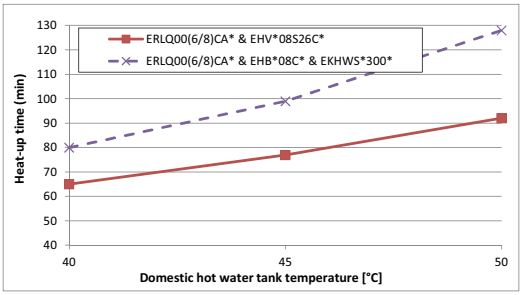
Heat-up times GBS (1)



	Heat-up time domestic hot water tank until 45°C	
	ERLQ004CA*	ERLQ00(6/8)CA*
EHV*04S18C*	73	N/A
EHV*08S18C*	N/A	55
EHV*08S26C*	N/A	77

	ERLQ004CA* & EHB*04C*	ERLQ00(6/8)CA* & EHB*08C*
EKHWS*150*	81	73
EKHWS*200*	84	68
EKHWS*300*	122	99





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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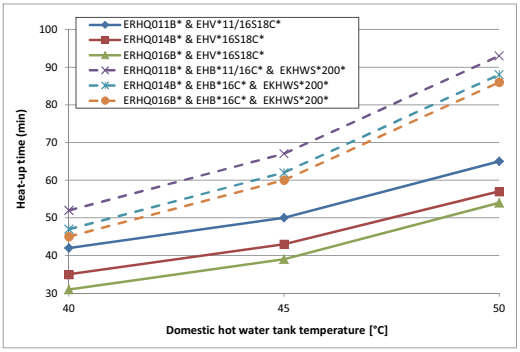
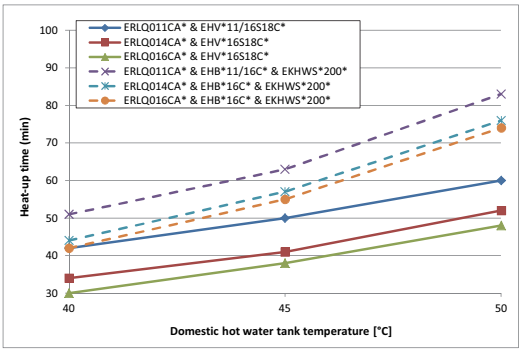
EHV(H/X)-CB

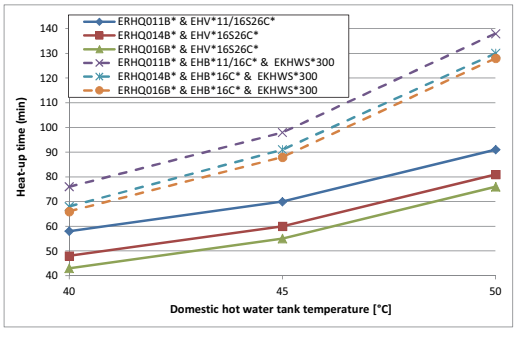
Heat-up times GQI (1)

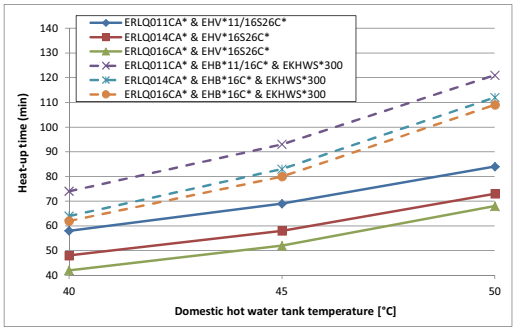




Heat-up time domestic hot water tank until 45°C	
	ERLQ016CA*
EHV*16S18C*	38
EHV*16S26C*	52

	ERLQ016CA* & EHB*16C*
EKHWS*150*	69
EKHWS*200*	55
EKHWS*300*	80





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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5 Capacity tables

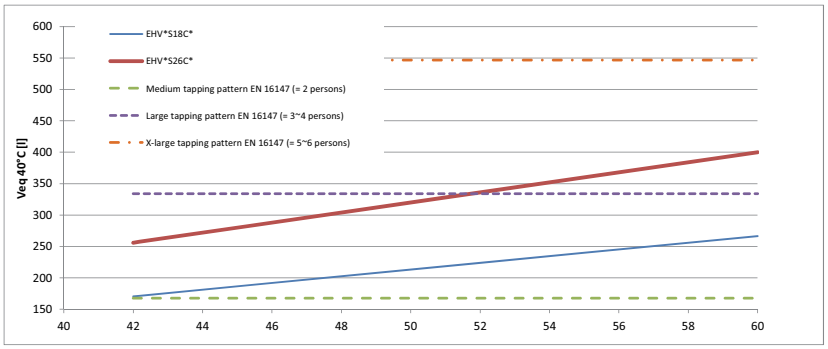
5 - 1 Domestic Hot Water performance

EHV(H/X)-CB

Selection guide for the domestic hot water tank volume

(1)

Veq 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 Veq 40°C is required, then additional heat-up cycles are required within 24 hours.
See the operation manual for more information.

Heat loss of domestic hot water tank

(2)

Domestic hot water tank		Heat loss [kWh/24h]
EHV*	180 l	1,38
	260 l	1,91

Domestic hot water tank		Heat loss [kWh/24h]
EKHWS*	150l	1,55
	200l	1,77
	300l	2,19

Notes
(1) According to EN16147.
(2) According to EN12897.

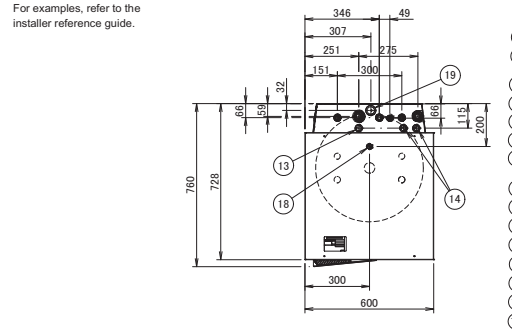
4D079038D

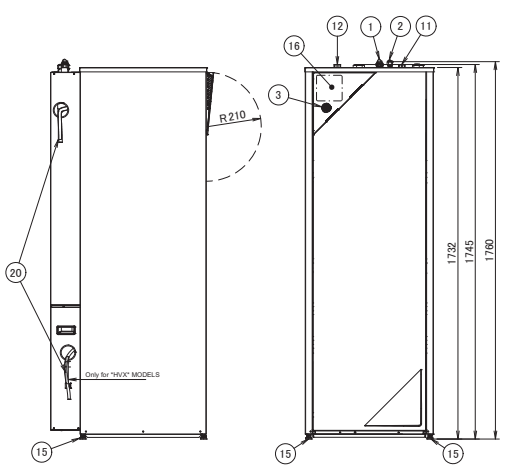
6 Dimensional drawings

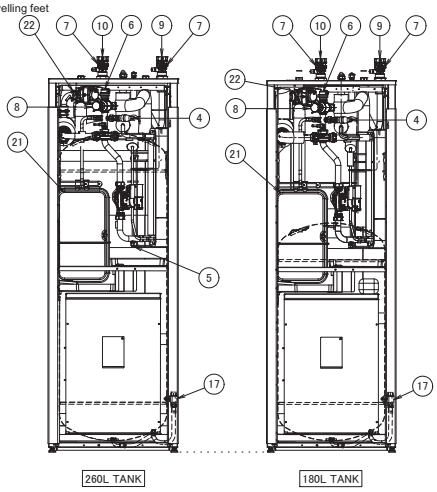
6 - 1 Dimensional Drawings

EHV(H/X)04~08CB

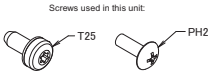
The typical field installation has to be done according to the applicable legislation.
For examples, refer to the installer reference guide.







Screws used in this unit:



1. Gas pipe connection Ø15.9 flare
2. Liquid pipe connection Ø6.35 flare
3. Pressure gauge
4. Safety valve
5. Drain valve water circuit
6. Air purge
7. Shut-off valve with fill valve (included accessory)
8. Water filter
9. Water in connection 1-1/4" F BSP
10. Water out connection 1-1/4" F BSP
11. Domestic hot water: cold water in 3/4" F BSP
12. Domestic hot water: hot water out 3/4" F BSP
13. Control wiring intake Ø24mm
14. Power supply wiring intake Ø24mm
15. Levelling feet
16. User interface Option kit
17. Drain valve domestic hot water tank circuit
18. Recirculation connection G 1/2" (female)
19. Hole for the recirculation piping or options wiring Ø35
20. Drain outlet (unit + safety valve)
21. Expansion vessel
22. 3-way valve

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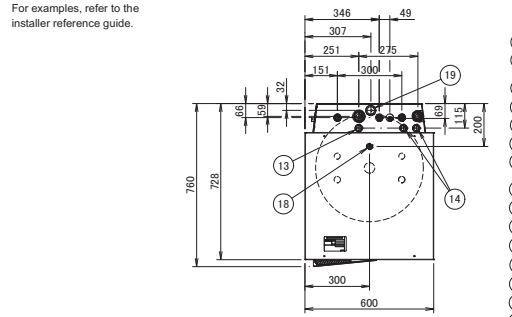
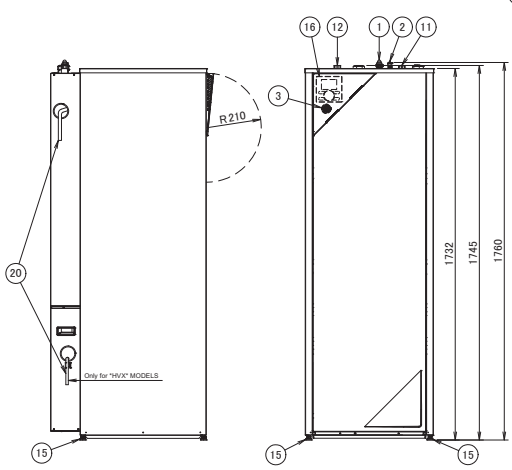
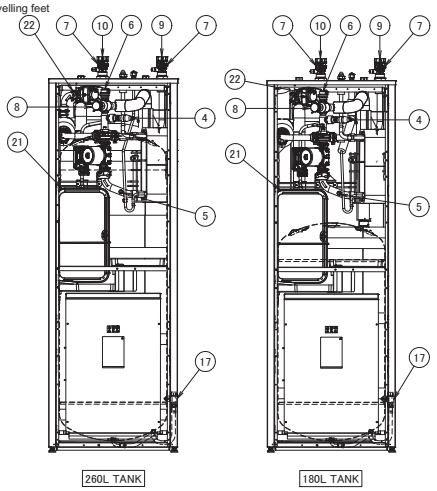
EHV(H/X)11~16CB

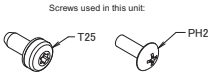
The typical field installation has to be done according to the applicable legislation.
For examples, refer to the installer reference guide.







Screws used in this unit:



1. Gas pipe connection Ø15.9 flare
2. Liquid pipe connection Ø9.52 flare
3. Pressure gauge
4. Safety valve
5. Drain valve water circuit
6. Air purge
7. Shut-off valve with fill valve (included accessory)
8. Water filter
9. Water in connection 1-1/4" F BSP
10. Water out connection 1-1/4" F BSP
11. Domestic hot water: cold water in 3/4" F BSP
12. Domestic hot water: hot water out 3/4" F BSP
13. Control wiring intake Ø24mm
14. Power supply wiring intake Ø24mm
15. Levelling feet
16. User interface Option kit
17. Drain valve domestic hot water tank circuit
18. Recirculation connection G 1/2" (female)
19. Hole for the recirculation piping or options wiring Ø35
20. Drain outlet (unit + safety valve)
21. Expansion vessel
22. 3-way valve

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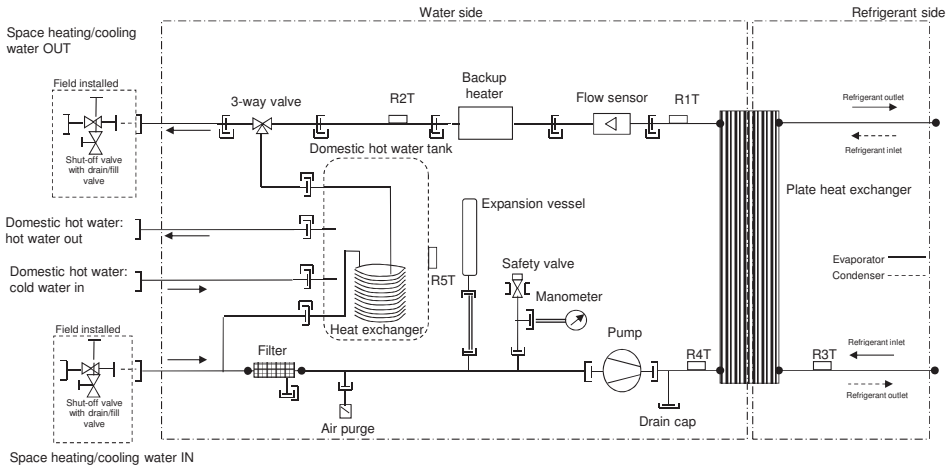
7 Piping diagrams

7 - 1 Piping Diagrams

EHV(H/X)-CB



Legend

Check valve		Screw connection	
Flare connection		Quick coupling	
Spinned pipe		Flange connection	
Pinched pipe		Brazed connection	

Thermistor	Description
R5T	Tank thermistor
R4T	Inlet water thermistor
R3T	Refrigerant liquid side thermistor
R2T	Outlet water backup heater thermistor
R1T	Outlet water heat exchanger thermistor

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8 Wiring diagrams

8 - 1 Wiring Diagrams - Three Phase

EHV(H/X)-CB

NOTES TO GO THROUGH BEFORE STARTING THE UNIT

X1M : Main terminal
X2M : Field wiring terminal for AC
X5M : Field wiring terminal for DC
X6M, X7M : Backup heater terminal
X4M : Booster heater terminal

— - — - : Earth wiring
15 : Wire number 15
- - - - - - - - - - : Field supply
→ **/12.2 : Connection ** continues on page 12 column 2
(1) : Several wiring possibilities

: Option

: Wiring depending on model

: Not mounted in switchbox

: PCB

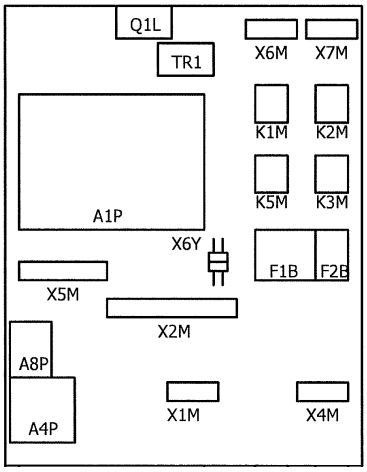
Backup heater configuration (Only for*9W):
- □ 3V3 (1N~, 230 V, 3 kW)
- □ 6V3 (1N~, 230 V, 6 kW)
- □ 6WN (3N~, 400 V, 6 kW)
- □ 9WN (3N~, 400 V, 9 kW)
- □ 6T1 (3~, 230 V, 6 kW)

User installed options:
- □ Bottom plate heater
- □ Domestic hot water tank
- □ Domestic hot water tank with solar connection
- □ Remote user interface
- □ Ext. indoor thermistor
- □ Ext. outdoor thermistor
- □ Digital I/O PCB
- □ Demand PCB
- □ Solar pump and control station

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 SWITCHBOX



LEGEND

* : Optional
(*) : Standard for *HV*, Optional for *HB*
: Field supply

A1P		: Main PCB
A2P		: User interface PCB
A3P	*	: Solar pumpstation PCB
A3P	*	: ON/OFF thermostat (PC=Power circuit)
A3P	*	: Heat pump convector
A4P	*	: Digital I/O PCB
A4P	*	: Receiver PCB (wireless ON/OFF thermostat)
A8P	*	: Demand PCB
B1L		: Flow sensor
BSK	*	: Solar pump station relay
DS1 (A8P)	*	: Dipswitch
E1H		: Backup heater element (1 kW)
E2H		: Backup heater element (2 kW)
E3H		: Backup heater element (3 kW)
E4H	*	: Booster heater (3 kW)
F1B		: Overcurrent fuse backup heater
F2B	*	: Overcurrent fuse booster heater
F1T		: Thermal fuse backup heater
F1U,F2U	*	: Fuse 5A 250V for digital I/O PCB
FU1		: Fuse T 6.3A 250 V for PCB
PHC1	*	: Optocoupler input circuit
K1M,K2M		: Contactor backup heater
K3M	*	: Contactor booster heater
K5M		: Safety contactor BUH (only *9W)
K*R		: Relay on PCB
M1P		: Main supply pump
M2P	#	: Domestic hot water pump
M2S	#	: 2 way valve for cooling mode
M3S	(*)	: 3 way valve for floorheating/domestic hot water
Q1DI, Q2DI	#	: Earth leakage circuit breaker
Q1L		: Thermal protector backup heater
Q2L	*	: Thermal protector booster heater
R1T		: Outlet water heat exchanger thermistor
R1T (A2P)		: Ambient sensor user interface
R1T (A3P)	*	: Ambient sensor ON/OFF thermostat
R2T		: Outlet backup heater thermistor
R2T	*	: External sensor (floor or ambient)
R3T		: Refrigerant liquid side thermistor
R4T		: Inlet water thermistor
R5T	(*)	: Domestic hot water thermistor
R6T	*	: External indoor or outdoor ambient thermistor
R1H (A3P)	*	: Humidity sensor
S1S	#	: Preferential kWh rate power supply contact
S2S	#	: Electrical meter pulse input 1
S3S	#	: Electrical meter pulse input 2
S6S-S9S	#	: Digital power limitation inputs
SS1 (A4P)	*	: Selector switch
TR1		: Power supply transformer
X*M		: Terminal strip
X*Y		: Connector

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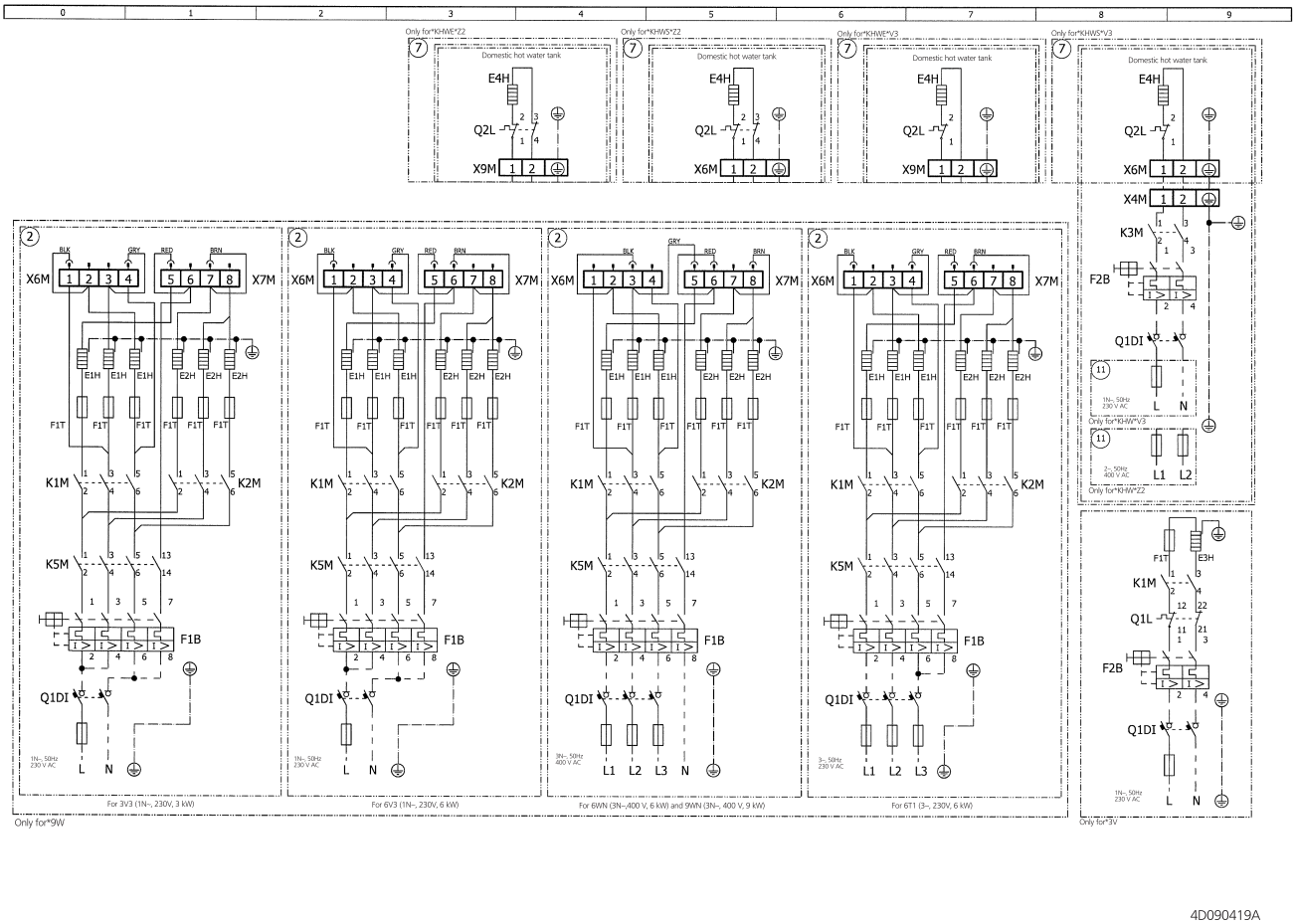
8 Wiring diagrams

8 - 1 Wiring Diagrams - Three Phase

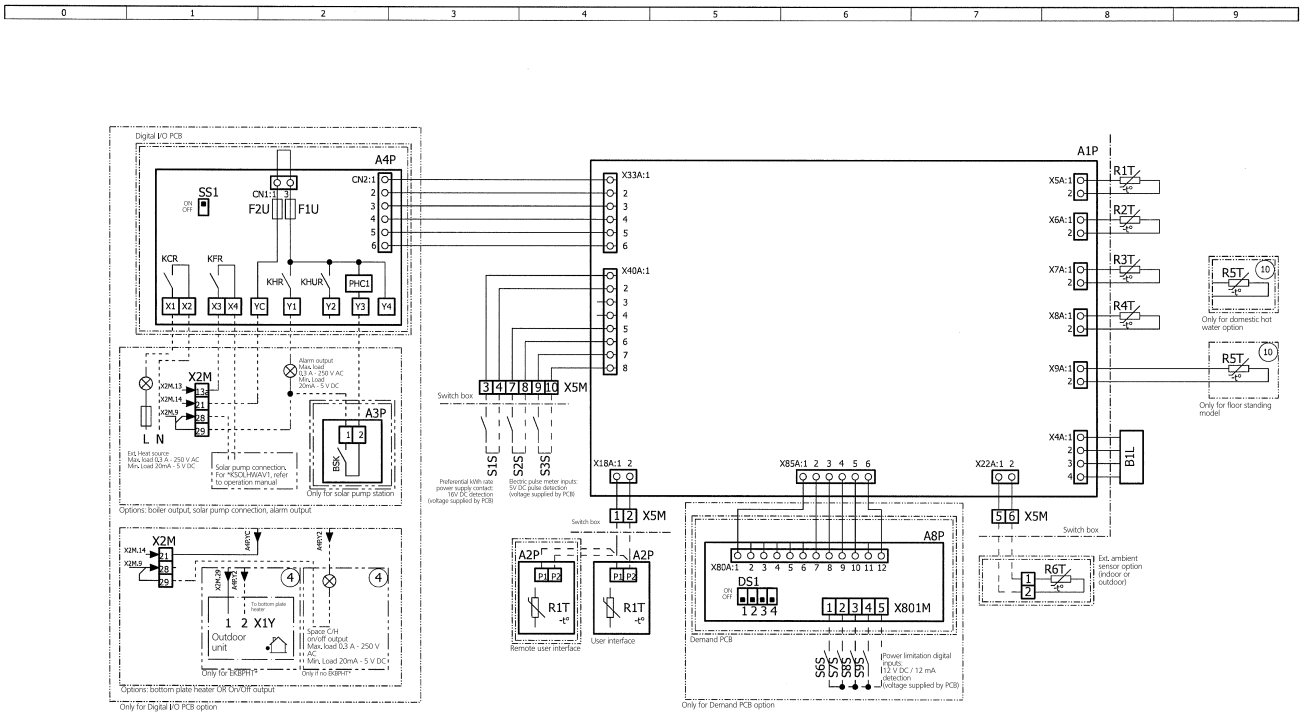
EHV(H/X)-CB



8 Wiring diagrams

8 - 1 Wiring Diagrams - Three Phase

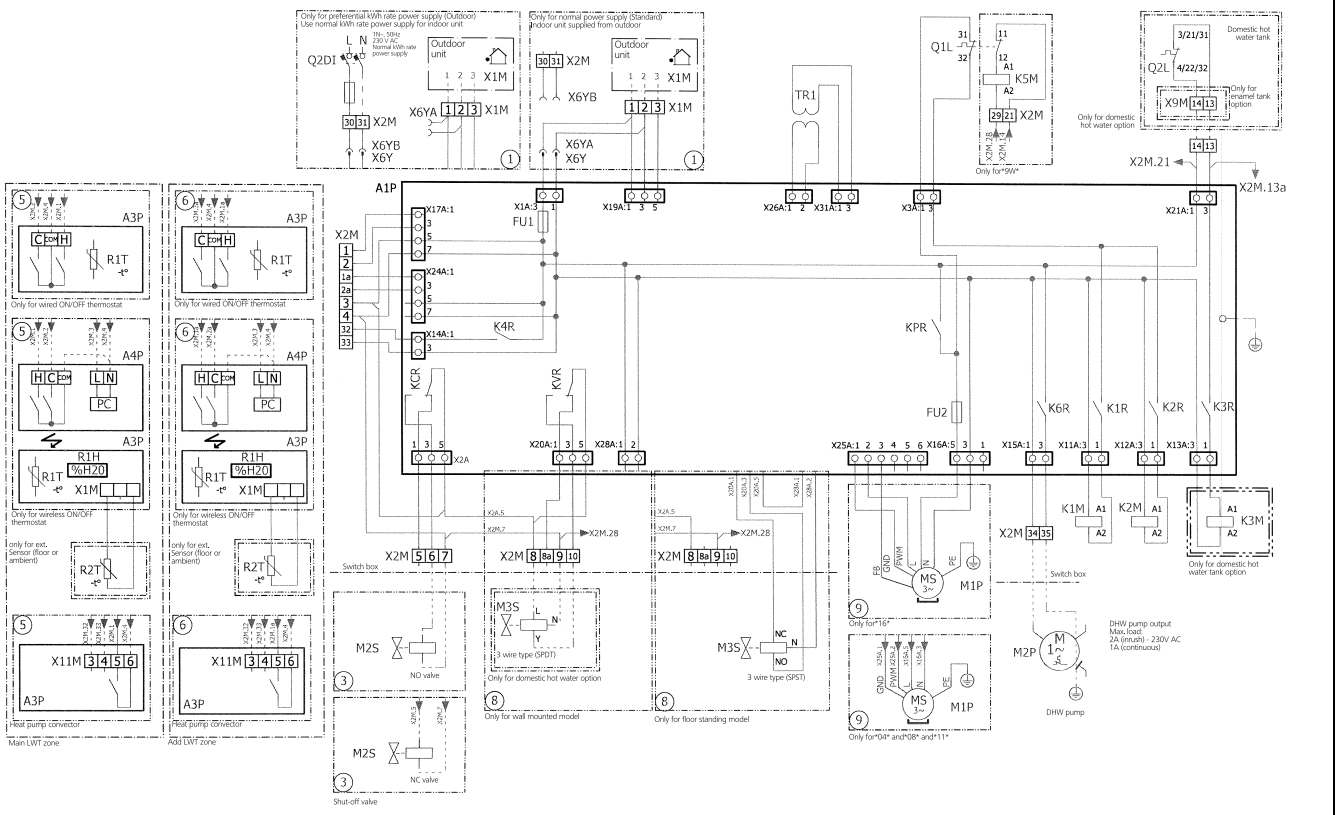
EHV(H/X)-CB



8 Wiring diagrams

8 - 1 Wiring Diagrams - Three Phase

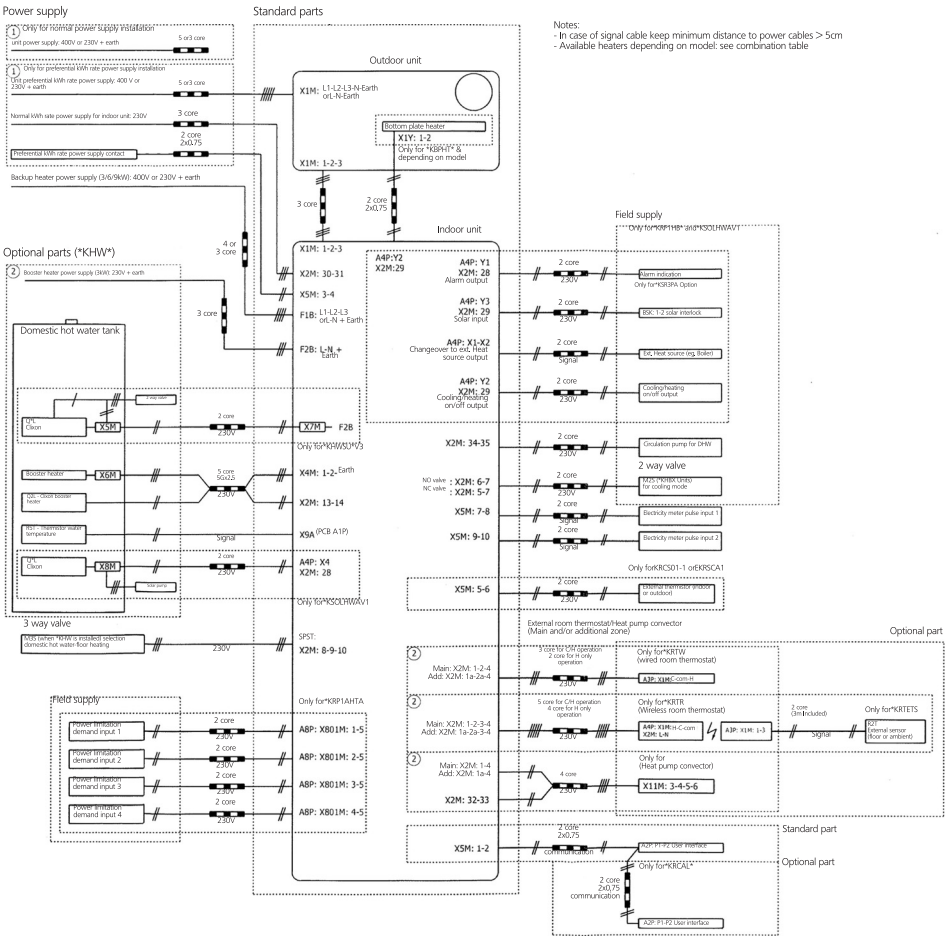
EHV(H/X)-CB



9 External connection diagrams

9 - 1 External Connection Diagrams

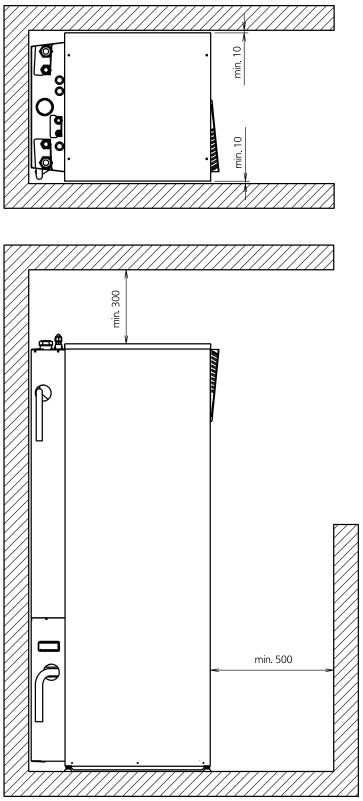
EHV(H/X)-CB



10 Installation

10 - 1 Installation Method

EHV(H/X)-CB



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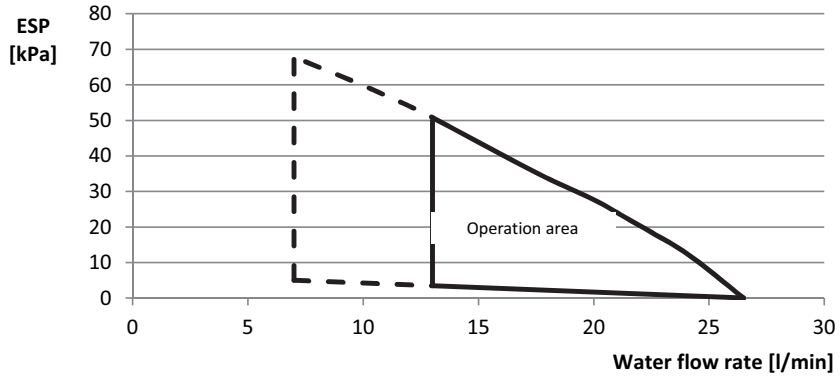
11 Hydraulic performance

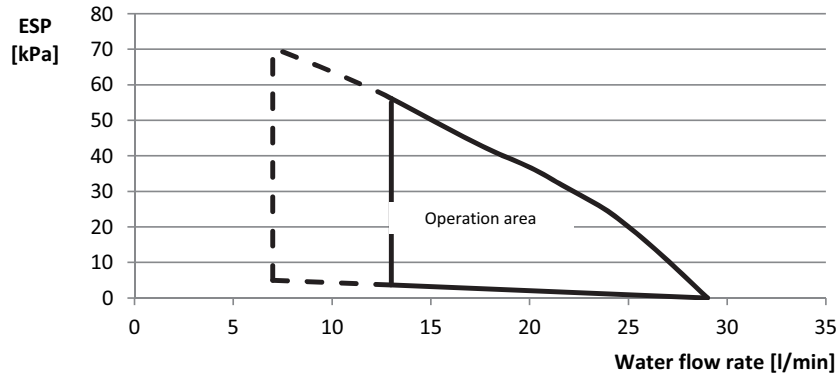
11 - 1 Static Pressure Drop Unit

EHV(H/X)04-08CB

EHV(H/X)04S*CB*



EHV(H/X)08S*CB*



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.)
See dashed lines

ESP = External static pressure [kPa]
Space heating/cooling circuit
Flow = Water flow through the unit
Space heating/cooling circuit

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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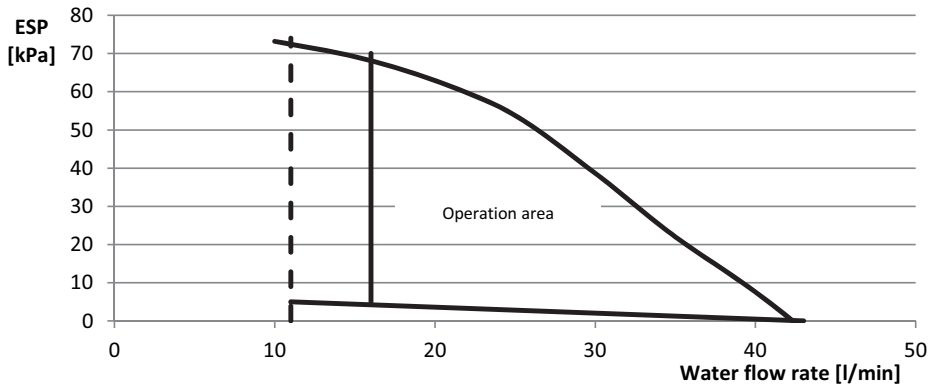
11 Hydraulic performance

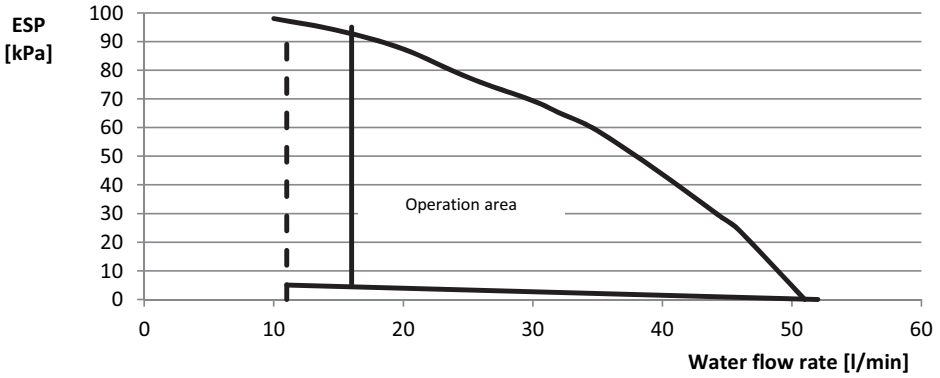
11 - 1 Static Pressure Drop Unit

EHV(H/X)11-16CB

EHV(H/X)11S*CB*



EHV(H/X)16S*CB*



Operation area is extended to lower flow rates only in case the unit operates with heat pump only.
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ESP = External static pressure [kPa]
Space heating/cooling circuit
Flow = Water flow through the unit
Space heating/cooling circuit

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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