

Heating Technical Data EDLQ-CV3, EKCB-CV3, EK2CB-CV3, EKMBUHC3V3, EKMBUHC9W1



- > EDLQ05CAV3
- > EDLQ07CAV3
- > EKCB07CAV3
- > EK2CB07CAV3
- > EKMBUHCA3V3
- > EKMBUHCA9W1

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1 Features

1 - 3 EDLQ-CV3

- Compact heating only monobloc for space heating with optional domestic hot water
- Fuss-free installation : only water connections required
- Reliable operation even when -25°C outside thanks to frost protection features such as free hanging coil
- COP up to 5 with typical annual efficiencies up to 300%



Inverter

1 Features

1 - 1 EKCB-CV3

- Connectable to options like domestic hot water tank, heat pump convector, room thermostat, back up heater kit, remote indoor sensor, electric meter, changeover to external heat source, etc.



1 Features

1 - 2 EK2CB-CV3

- Connectable to options like remote indoor sensor, electric meter, changeover to external heat source, etc



2 Specifications

2-1 Technical Specifications					EDLQ05CV3	EDLQ07CV3
Space heating	Average climate water outlet 55°C	General	Annual energy consumption	kWh	2,679	3,906
			η _s (Seasonal space heating efficiency)	%	125	
			Prated at -10°C	kW	4.20	6.10
			SCOP		3.20	3.22
			Seasonal space heating eff. class		A++	
		A Condition (-7°CDB / -8°CWB)	Cd _h (Degradation heating)		1.00	
			COP _d		1.98	
			P _d _h	kW	3.60	5.50
			PER _d	%	79.2	
		B Condition (2°CDB / 1°CWB)	Cd _h (Degradation heating)		1.00	
			COP _d		3.10	3.17
			P _d _h	kW	2.34	3.20
			PER _d	%	124	127
		C Condition (7°CDB / 6°CWB)	Cd _h (Degradation heating)		1.00	
			COP _d		4.27	4.20
			P _d _h	kW	2.80	3.60
			PER _d	%	171	168
		D Condition (12°CDB / 11°CWB)	Cd _h (Degradation heating)		1.00	
			COP _d		6.33	5.82
			P _d _h	kW	2.70	3.40
			PER _d	%	253	233
		Tol (temperature operating limit)	COP _d		1.65	1.74
			P _d _h	kW	4.20	3.10
			PER _d	%	66.0	69.6
			TOL	°C	-10.0	
			WTOL	°C	55.0	
		Rated heat output supplementary capacity	P _{sup} (at T _{desig} n - 10°C)	kW	0.00	3.00
		T _{biv} (bivalent temperature)	COP _d		1.65	1.98
			P _d _h	kW	4.20	5.50
			PER _d	%	66.0	79.2
			T _{biv}	°C	-10.0	-7.00

2 Specifications

2

2-1 Technical Specifications					EDLQ05CV3	EDLQ07CV3
Space heating	Cold climate water outlet 55°C	General	Annual energy consumption	kWh	3,730	5,460
			η_s (Seasonal space heating efficiency)	%	103	105
			Prated at -22°C	kW	4.10	6.00
	Warm climate water outlet 55°C	General	Annual energy consumption	kWh	1,260	1,890
			η_s (Seasonal space heating efficiency)	%	170	166
			Prated at 2°C	kW	4.20	6.10

2 Specifications

2-1 Technical Specifications					EDLQ05CV3	EDLQ07CV3
Space heating	Average climate water outlet 35°C	General	Annual energy consumption	kWh	2,040	3,460
			ηs (Seasonal space heating efficiency)	%	172	163
			Prated at -10°C	kW	4.40	7.00
			SCOP		4.39	4.14
			Seasonal space heating eff. class		A++	
		A Condition (-7°CDB / -8°CWB)	COPd		2.90	2.57
			Pdh	kW	4.01	6.20
			PERd	%	116	103
		B Condition (2°CDB / 1°CWB)	Cdh (Degradation heating)		1.00	
			COPd		4.21	4.00
			Pdh	kW	2.40	3.77
			PERd	%	168	160
		C Condition (7°CDB / 6°CWB)	Cdh (Degradation heating)		1.00	
			COPd		5.85	5.75
			Pdh	kW	1.70	2.59
			PERd	%	234	230
		D Condition (12°CDB / 11°CWB)	Cdh (Degradation heating)		1.00	
			COPd		7.71	7.27
			Pdh	kW	2.04	2.61
			PERd	%	308	291
		Tol (temperature operating limit)	COPd		2.52	2.15
			Pdh	kW	4.36	5.81
			PERd	%	101	86.0
			TOL	°C	-10.0	
			WTOL	°C	35.0	
		Tbiv (bivalent temperature)	COPd		2.52	2.57
			Pdh	kW	4.36	6.20
			PERd	%	101	103
			Tbiv	°C	-10.0	-7.00
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	0.040	1.19

2 Specifications

2-1 Technical Specifications					EDLQ05CV3		EDLQ07CV3		
Space heating	Cold climate water outlet 35°C	General	Annual energy consumption	kWh	2,780		4,140		
			ηs (Seasonal space heating efficiency)	%	138		139		
			Prated at -22°C	kW	4.00		6.00		
			Qhe Annual energy consumption (GCV)	Gj	9.99		14.9		
	Warm climate water outlet 35°C	General	Annual energy consumption	kWh	1,090		1,620		
			ηs (Seasonal space heating efficiency)	%	225		223		
			Prated at 2°C	kW	4.80		7.00		
Space heating general	Air to water unit	Rated airflow (outdoor)	m³/h	2,700			2,820		
	Other	Capacity control		Inverter					
		Cdh (Degradation heating)		1.00					
		Pck (Crankcase heater mode)	kW	0.00					
		Poff (Off mode)	kW	0.0080					
		Psb (Standby mode)	kW	0.0080					
		Pto (Thermostat off)	kW	0.0060		0.0080			
	Integrated supplementary heater	NOx emission		mg/kWh	0.00				
		Psup		kW	0.00				
		Type of energy input		Electrical					
Heating capacity	Min.			kW	1.80 (1)				
	Nom.			kW	4.40 (1) / 4.03 (2)		7.00 (1) / 6.90 (2)		
	Max.			kW	5.00 (1) / 4.75 (2)		7.00 (1) / 6.90 (2)		
Capacity control	Method				Inverter controlled				
Power input	Heating	Nom.		kW	0.880 (1) / 1.13 (2)		1.55 (1) / 2.02 (2)		
COP					5.00 (1) / 3.58 (2)		4.52 (1) / 3.42 (2)		
Casing	Colour				Ivory white				
	Material				Polyester painted galvanised steel plate				
Dimensions	Unit	Height		mm	735				
		Width		mm	1,090				
		Depth		mm	350				
	Packed unit	Height		mm	880				
		Width		mm	1,166				
		Depth		mm	432				
Weight	Unit			kg	76.0		80.0		
	Packed unit			kg	82.0		86.0		

2 Specifications

2-1 Technical Specifications					EDLQ05CV3		EDLQ07CV3	
Packing	Material				EPS / Carton / Wood			
	Weight			kg	6.00			
Heat exchanger	Length			mm	845			
	Rows		Quantity		2			
	Fin pitch			mm	1.80			
	Stages		Quantity		32			
	Tube type				ø8 Hi-XA			
	Fin		Type		WF fin			
		Treatment			Anti-corrosion treatment			
Pump	Type				DC motor			
	Quantity				1			
	Nr of speeds				Inverter controlled			
	Nominal ESP unit		Heating	kPa	68.6 (1) / 70.0 (2)		61.4 (1) / 62.0 (2)	
	Power input			W	76			
Expansion vessel	Volume			l	7			
	Max. water pressure			bar	3			
	Pre pressure			bar	1			
	Heater			W	50			
Fan	Type				Propeller fan			
	Quantity				1			
	Discharge direction				Horizontal			
	Air flow rate		Heating	High	m³/min	45.0		47.0
Fan motor	Quantity				1			
	Output			W	53			
Compressor	Quantity				1			
	Model				2YC36BXD#C		2YC45DXD#C	
	Type				Hermetically sealed swing compressor			
Operation range	Heating	Ambien t	Min.	°CDB	-25.0			
			Max.	°CDB	25.0			
		Water side	Min.	°C	15 (3)			
			Max.	°C	55.0			
	Domestic hot water	Ambien t	Min.	°CDB	-25.0 (4)			
			Max.	°CDB	35.0 (4)			
		Water side	Min.	°C	25			
			Max.	°C	80 (5)			
Water side Heat exchanger	Type				Brazed plate			
	Quantity				1			
	Water volume			l	0.900		1.30	
	Water flow rate	Min.		l/min	13.0 (6)			
		Max.		l/min	14.3		20.0	
	Insulation material				Elastomeric foam			
Heater			W	33.0				
Refrigerant	Type				R-410A			
	GWP				2,088			
	Charge			kg	1.30		1.45	
				TCO ₂ eq	2.714		3.027	
	Control				Expansion valve (electronic type)			
	Circuits	Quantity			1.00			
Refrigerant oil	Type				FVC50K			
	Charged volume			l	0.650			
Sound power level	Heating	Nom.		dBA	61		62	
Sound pressure level	Heating	Nom.		dBA	48 (7)		49 (7)	
Defrost method					Reversed cycle			
Defrost control					Sensor for outdoor heat exchanger temperature			
Water filter	Diameter perforations			mm	1.00			
	Material				Copper - brass - stainless steel			

2 Specifications

2

2-1 Technical Specifications				EDLQ05CV3		EDLQ07CV3	
Water circuit	Piping connections diameter		inch	G 1" (male)			
	Safety valve		bar	3			
	Manometer			No			
	Drain valve / fill valve			Yes			
	Shut off valve			Yes			
	Air purge valve			Yes (Manually)			
	Total water volume		l	1.60 (8)		2.00 (8)	
	Heater		W	50.0			
PED	Category			Category I / (9)			
	Most critical part	Name		Compressor			
		Ps*V	Bar*l	127		147	
General	Supplier/ Manufacturer details	Name and address		Daikin Industries Czech Republic s.r.o. U Nove Hospody 1/1155, 301 00			
		Name or trademark		Daikin Europe N.V.			
	Product description	Air-to-water heat pump		Yes			
		Brine-to-water heat pump		No			
		Heat pump combination heater		No			
		Low-temperature heat pump		No			
		Supplementary heater integrated		Yes			
		Water-to-water heat pump		No			
LW(A) Sound power level (according to EN14825)			dB(A)	61.0		62.0	
Sound condition Ecodesign and energy label				Sound power in heating mode, measured according to the EN12102 under conditions of the EN14825			

2-2 Technical Specifications				EKCB07CV3	EK2CB07CV3
Power input	Heating			-	
Casing	Colour			White	
	Material			Precoated sheet metal	
Dimensions	Unit	Height	mm	360	
		Width	mm	340	
		Depth	mm	97.0	
	Packed unit	Height	mm	406	
		Width	mm	392	
		Depth	mm	136	
Weight	Unit		kg	4.00	
	Packed unit		kg	5.00	
Packing	Material			Cardboard / EPS	
Heat exchanger				-	
Sound power level				-	
Sound pressure level				-	
General	Product description			-	

2-3 Technical Specifications				EKMBUHC3V3	EKMBUHC9W1
Power input	Heating			-	
Casing	Colour			White	
	Material			Precoated sheet metal	
Dimensions	Unit	Height	mm	560	
		Width	mm	250	
		Depth	mm	210	
	Packed unit	Height	mm	650	
		Width	mm	300	
		Depth	mm	270	
Weight	Unit		kg	11.0	13.0
	Packed unit		kg	12.0	14.0
Packing	Material			Cardboard / EPS	
Heat exchanger				-	
Sound power level				-	
Sound pressure level				-	

2 Specifications

2-3 Technical Specifications			EKMBUHC3V3	EKMBUHC9W1
Water circuit	Piping connections diameter	inch	G 1" (male)	
	Air purge valve		Yes	
	Total water volume	l	155	145
General	Product description		-	

2-4 Electrical Specifications				EDLQ05CV3	EDLQ07CV3
Power supply	Name			V3	
	Phase			1~	
	Frequency	Hz		50	
	Voltage	V		230	
Voltage range	Min.	%		-10	
	Max.	%		10	
Current	Maximum running current	Heating	A	15.7	15.9
	Starting current	Heating	A	15.7 (10)	15.9 (10)
	Recommended fuses		A	16	20
Wiring connections	For connection with R6T	Quantity		2	
		Remark		Minimum 0.75 mm ²	
	For power supply	Quantity		3	
	For connection with control box	Quantity		8	
		Remark		2 wires: minimum cable section 0,75 mm ² / maximum length: 20 m / 2 wires: minimum cable section 0,75 mm ² / maximum length: 500 m / 4 wires: 230 V	
	For connection with user interface	Quantity		2	
		Remark		0.75 mm ² till 1,25 mm ² (max length 500m)	
	Preferential kWh rate power supply	Quantity		Power: 2	
		Remark		230 V	
	Domestic hot water pump	Quantity		2	
		Remark		Minimum 0.75 mm ²	
Cable requirements	Cooling/Heating output	Maximum running current	A	Minimum cable section 0.75 mm ²	
		Quantity of wires		2.00	

2-5 Electrical Specifications				EKCB07CV3	EK2CB07CV3
Power supply	Phase			1~	
	Frequency		Hz	50	
	Voltage		V	230	
Current	Recommended fuses		A	10	
Wiring connections	For power supply	Quantity		3G	
	Preferential kWh rate power supply	Quantity		Signal: 2	-
		Remark		Signal: 0,75 mm² till 1,25 mm² (max length 50m)	-
	Domestic hot water pump	Quantity		2	-
		Remark		Minimum 0.75 mm²	-
	For connection with R6T	Quantity		-	2
		Remark		-	Minimum 0.75 mm²
	For connection with user interface	Quantity		2	-
		Remark		100 mA / 0.75 mm² till 1,25 mm² (max length 500m)	-
Cable requirements	Cooling/Heating output	Quantity of wires		2.00	-
		Maximum running current	A	Minimum cable section 0.75 mm2	-

2-6 Electrical Specifications			EKMBUHC3V3	EKMBUHC9W1
Wiring connections	For power supply	Quantity	3G	(2)

2 Specifications

Notes

- (1) Condition 1: cooling Ta 35°C - LWE 18°C (DT = 5°C); heating Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C)
- (2) Condition 2: cooling Ta 35°C - LWE 7°C (DT = 5°C); heating Ta DB/WB 7°C/6°C - LWC 45°C (DT = 5°C)
- (3) Lower if back-up heater is installed; In case of no back-up heater, then heat pump operation starts at 10°C
- (4) Operation range domestic hot water (outdoor unit): range increase by support booster heater or backup heater. See separate drawing for operation range.
- (5) > 50°C BSH only, no heatpump operation
- (6) 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).
- (7) The sound pressure level is measured via a microphone at a certain distance from the unit. It is a relative value depending on the distance and acoustic environment. Refer to sound spectrum drawing for more information.
- (8) Including piping + PHE; excluding expansion vessel
- (9) PED unit category: excluded from scope of PED due to article 1, item 3.6 of 97/23/EC
- (10) Daikin Altherma inverter controlled compressor starting current always ≤ max. running current

For more details on standard accessories refer to Installation/operation manual

Minimum Ssc value: Equipment complying with 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 >16A and ≤ 75A per phase

Contains fluorinated greenhouse gases

Equipment complying with EN/IEC 61000-3-12: European/international technical standard setting the limits for harmonic currents produced by equipment connected to public low-voltage system with input current > 16A and ≤ 75A per phase

Between *KCB*C* and *K2CB*C*

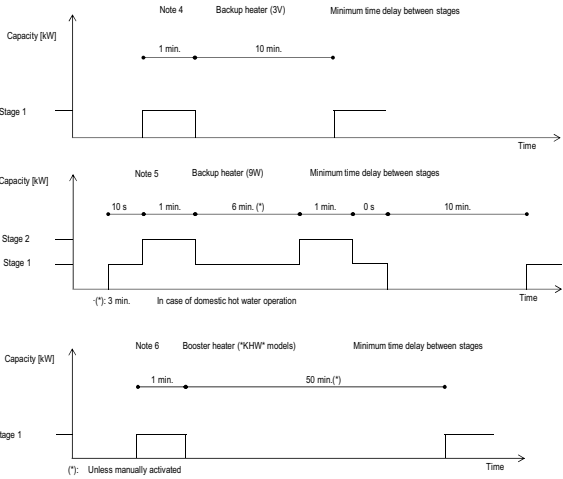
Select diameter and type according to national and local regulations

Refer to installation manual or drawing 4D097266

3 Electrical data
3 - 1 Electrical Data

EDLQ-CV3

Electrical specifications of the backup heaters and the booster heaters														
Backup heater	Type	3V			9W			Only for EHVH*SU*CB6W + EKLBUHCB6W1				V		
	Capacity setting	kW			3	3	6	9	3	6	3	6		
	Capacity stage	kW			1	1	2	2	1	2	1	2		
	Capacity stage 1	kW			-			3	-			6		
	Capacity stage 2	kW			-	-	6	9	-	6	-	6		
	Minimum time delay between stages			Note 4			Note 5			Note 4	Note 5	Note 5		
	Power supply (1)	Phase	1~			3~			1~	Note 5	3~			
	Current	Frequency	Hz			50								
		Voltage	V			230			400			400		
		Nominal running current	A			13	15,1	26	8,7	13	13	26	4,3	8,7
Zmax (backup heater) (2)		Ω			-			-						
Minimum Ssc value		kVA			-	(3)	-	(3)	-					
Booster heater (optional) (*KHW* models)	Only in case of EHB*:													
	Capacity setting	kW			3									
	Capacity stage				1									
	Minimum time delay between stages			Note 6										
	Nominal running current	+ EK*V3			A			13						
	Booster heater	+ EK*Z2			A			-	7,5	-	7,5	-		
	Zmax	Booster heater	(2)	Ω	-			-						
	Nominal running current	Backup heater +		Booster heater	Backup heater + EK*V3	26 (13+13)	28,1 (15,1+13)	39 (26+13)	21,7 (8,7+13)	26 (13+13)	39 (26+13)	17,3 (4,3+13)	21,7 (8,7+13)	13
					Backup heater + EK*Z2	A	-	16,2 (8,7+7,5)	20,5 (13+7,5)	-	-	16,2 (8,7+7,5)	-	
		Minimum Ssc value		Backup heater +	Booster heater + EK*Z2	kVA	(3)			-			-	
Booster heater (EHVH*SU*CB6W + EHVH*CBV)	Capacity setting	kW			2,4									
	Capacity stage				1									
	Minimum time delay between stages			Note 6										
	Current	Nominal running current	Booster heater	A	11									
		Zmax	Booster heater (2)	Ω	-									
		Nominal running current	Backup heater +	Booster heater	A	24 (13+11)			37 (26+11)	15,3 (4,3+11)	19,7 (8,7+11)	13		
	Minimum Ssc value	Backup heater +	Booster heater	kVA	(3)			-			-			
	Notes	(1)	The above-mentioned power supply of the hydrobox is for the backup heater only. 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 Zs≤ Zmax.											
		(3)	The equipment complies with EN/IEC 61000-3-12.											
ENIEC 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.												
ENIEC 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.												
Zys	System impedance													



4D097266B

3 Electrical data

3 - 1 Electrical Data

EDLQ-CV3

* 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		*(B/D)LQ(05/07)*				
Indoor unit type		Optional	*KMBUHCA(3V3/9W1)			
	Backup heater type		3V / 9W	9W		
	Backup heater power supply		1~ 230V	3~ 400V		
	Backup heater configuration		3 / 6 3 / 6 kW	6 / 9 6 / 9 kW		
		Normal kWh rate power supply				
Electrical meter type	1~	1	1	1	-	
	3~ balanced	-	-	1	-	
	3~ unbalanced	-	-	-	1	
		Preferential kWh rate power supply				
Electrical meter type	1~	2	2	1		
	3~ balanced	-	-	-		
	3~ unbalanced	-	-	1		

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4 Options
4 - 1 Options

EDLQ-CV3

Kit availability for *B/D/LQ*C*

Reference	Description	#
*KCB07CAV3	Control box	o
*KRUCBL1...7	User interface language group 1~7	(12) o
*KRUCBS	Simplified user interface	(9) o
*KRSCA1	Remote sensor for outdoor	(10) o
KPCAB	PC cable kit	(11) o

Kit availability for *KCB*C* (1)

Reference	Description	#
*KCB07CAV3	Option box	(2) o
*KMBUHC*3V3	Backup heater kit	(6) (8) o
*KMBUHC*9W1	Backup heater kit	(6) (8) o
*KHWS150*3V3	Domestic hot water tank 150 l 1~230 V	o
*KHWS200*3V3	Domestic hot water tank 200 l 1~230 V	o
*KHWS300*3V3	Domestic hot water tank 300 l 1~230 V	o
*KHWS200*3Z2	Domestic hot water tank 200 l 2~400 V	(7) o
*KHWS300*3Z2	Domestic hot water tank 300 l 2~400 V	(7) o
*KHWSU150*3V3	Domestic hot water tank 150 l 1~230 V	(only for UK) o
*KHWSU200*3V3	Domestic hot water tank 200 l 1~230 V	(only for UK) o
*KHWSU300*3V3	Domestic hot water tank 300 l 1~230 V	(only for UK) o
*KHWE150*3V3	Enamel domestic hot water tank 150 l 1~230 V	o
*KHWE150*3V3	Wall-mounted enamel domestic hot water tank 150 l 1~230 V	o
*KHWE200*3V3	Enamel domestic hot water tank 200 l 1~230 V	o
*KHWE300*3V3	Enamel domestic hot water tank 300 l 1~230 V	o
*KHWE200*3Z2	Enamel domestic hot water tank 200 l 2~400 V	(7) o
*KHWE300*3Z2	Enamel domestic hot water tank 300 l 2~400 V	(7) o
EKUMBSPART BZKA7V3	Third-party tank connection kit Bzone kit	(only for UK) o
*KRTWA	Wireless room thermostat	o
*KTRT1	Wireless room thermostat	(receiver included) o
*KRTETS	External temperature sensor option kit	(4) o
FWXV15AVEB	Heat pump convactor	o
FWXV20AVEB	Heat pump convactor	o
*KVBHPC	Heat pump convactor valve kit	(5) o

Kit availability for *K2CB*C* (2)

Reference	Description	#
KRC3D1-1	Remote sensor for indoor	(10) o

Factory-mounted optional equipment for KMBUHC*

Description	#	
	*KMBUH*3V3	*KMBUH*9W1 (9)
Backup heater 3kW 1N~230 V	o	o
Backup heater 6kW 1N~230 V		o
Backup heater 6kW 3N~400 V		o
Backup heater 9kW 3N~400 V		o

Kit availability for *KMBUHC*

Reference	Description	#
EKMBHBP1	Valve kit	(8) o

Kit availability for *KHW*

Reference	Description	#					
		150A	100/100A	150B	200/100B	150B	200/100B
*KHWE(T)H3(V3/Z2)							
*KHWS43(V3/Z2)							
*KHWSU83V3						150B	200/100B
KHWHB	Option kit for the UK *KHWSU150~300*3V3	-	-	-	-	o	o
*KWB5MW150	Wall bracket for *KHWS(U)150*3V3	-	-	o	-	o	-

Notes

- (1) To be able to use these options, it is required that control box *KCB*C* is part of the system.
(a) Domestic hot water (e) Electricity meter
(b) Backup heater (f) Power limitation digital inputs
(c) External room thermostat/heat pump convactor
(d) Option box
- (2) To be able to use these options, it is required that option box *K2CB*C* is part of the system.
(a) Control external heat source (bivalent operation).
(b) Output remote ON/OFF signal space heating/cooling
(c) Remote alarm output
(d) External indoor thermistor
- (3) The simplified user interface (*KRUCBS) can only be used in combination with a main user interface (*KRUCBL1~7).
- (4) *KRTETS can only be used in combination with *KTRT1
- (5) The valve kit is mandatory if a heat pump convactor is installed on a reversible model (not mandatory for heating only models).
- (6) Only 1 of these options can be installed per indoor unit.
- (7) The combination possibilities depend on the power supply type.
- (8) If condensation is expected, the installation of valve kit EKMBHBP1 is required.
- (9) Unified model, the actual backup heater capacity depends on the actual internal upwiring.
- (10) Only 1 sensor connectable: indoor or outdoor
- (11) Data cable for connection with PC.
- (12) Mandatory option

Remark

Other combinations than mentioned in this combination table are prohibited.

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5 Capacity tables

5 - 1 Cooling/Heating Capacity Tables

EDLQ-CV3

Maximum cooling capacity															
		Tamb [°C]		20		25		30		35		40		43	
		LWE [°C]	CC [kW]	PI [kW]	CC [kW]	PI [kW]	CC [kW]	PI [kW]	CC [kW]	PI [kW]	CC [kW]	PI [kW]	CC [kW]	PI [kW]	
BLQ05	7		5,64	1,65	5,17	1,82	4,69	2,00	4,22	2,19	3,26	1,96	2,69	1,83	
	10		6,00	1,61	5,52	1,78	5,04	1,96	4,57	2,14	3,56	1,92	2,96	1,79	
	13		6,31	1,56	5,85	1,73	5,37	1,91	4,90	2,08	3,86	1,87	3,23	1,75	
	15		6,51	1,54	6,07	1,70	5,59	1,87	5,11	2,04	4,05	1,84	3,41	1,72	
	18		6,84	1,49	6,39	1,66	5,93	1,82	5,46	1,99	4,36	1,79	3,70	1,67	
	22		7,42	1,44	7,00	1,59	6,50	1,75	6,03	1,91	4,86	1,72	4,16	1,60	
BLQ07	7		7,38	2,50	6,73	2,55	6,04	2,61	5,33	2,69	3,44	2,09	2,31	1,73	
	10		7,98	2,45	7,29	2,49	6,54	2,55	5,79	2,62	3,87	2,05	2,72	1,71	
	13		8,61	2,39	7,88	2,42	7,06	2,48	6,25	2,55	4,33	2,02	3,18	1,70	
	15		9,04	2,35	8,28	2,38	7,42	2,43	6,57	2,50	4,66	1,99	3,51	1,68	
	18		9,73	2,29	8,89	2,32	8,00	2,36	7,08	2,43	5,19	1,95	4,06	1,66	
	22		10,75	2,22	9,88	2,23	8,84	2,27	7,83	2,33	6,00	1,90	4,90	1,64	

Heating capacity - integrated value													
	LWC (°C)	30		35		40		45		50		55	
	Tamb (°C)	HC	PI	HC	PI	HC	PI	HC	PI	HC	PI	HC	PI
(B/D)LQ05	-20	2,26	1,58	2,24	1,79	2,20	1,96	2,16	2,18	2,08	2,39		
	-15	3,30	1,58	3,11	1,78	3,17	1,95	2,93	2,20	2,86	2,39	2,64	2,49
	-7	4,70	1,58	4,60	1,71	4,51	1,93	4,30	2,05	4,08	2,34	3,81	2,46
	-2	4,84	1,41	4,76	1,57	4,63	1,76	4,53	1,93	4,28	2,16	4,10	2,27
	2	4,90	1,20	4,80	1,42	4,69	1,55	4,60	1,71	4,42	1,94	4,20	1,98
	7	5,13	0,95	5,00	1,07	4,88	1,25	4,75	1,41	4,48	1,54	4,20	1,56
	12	5,13	0,74	5,00	0,82	4,88	0,97	4,75	1,16	4,48	1,35	4,20	1,35
	15	5,13	0,68	5,00	0,73	4,88	0,89	4,75	1,09	4,48	1,25	4,20	1,28
	20	5,13	0,58	5,00	0,60	4,88	0,72	4,75	0,98	4,48	1,13	4,20	1,24
(B/D)LQ07	-20	3,79	2,46	3,73	2,76	3,51	3,08	3,26	3,21	3,12	3,22		
	-15	4,96	2,43	4,81	2,69	4,52	2,98	4,33	3,17	4,17	3,21	3,79	3,21
	-7	6,57	2,36	6,40	2,74	6,35	2,88	6,25	3,09	5,99	3,18	5,44	3,20
	-2	7,05	2,17	7,00	2,39	6,91	2,58	6,82	2,97	6,41	2,88	6,00	2,97
	2	7,05	1,90	7,00	2,09	6,95	2,39	6,90	2,60	6,50	2,57	6,10	2,78
	7	7,05	1,42	7,00	1,55	6,95	1,79	6,90	2,02	6,50	2,07	6,10	2,22
	12	7,05	1,09	7,00	1,26	6,95	1,45	6,90	1,69	6,50	1,78	6,10	1,91
	15	7,05	0,89	7,00	1,07	6,95	1,25	6,90	1,50	6,50	1,60	6,10	1,75
	20	7,05	0,65	7,00	0,78	6,95	0,93	6,90	1,18	6,50	1,31	6,10	1,48

Symbols

CC	Cooling capacity at maximum operating frequency, measured according to EN 14511.
HC	Heating capacity at maximum operating frequency, measured according to EN 14511
PI	Power input, measured according to EN 14511.
LWE	Leaving water evaporator temperature [°C]
LWC	Leaving water condensor temperature [°C]
Tamb	Ambient temperature; RH (heating) = 85%

Conditions

Cooling capacity

The capacity is according to standard EN14511 and valid for chilled water range $\Delta t = 3 - 8^{\circ}\text{C}$

Note Capacity values may not be extrapolated below 7°C leaving water temperature.

Heating capacity

The capacity is according to standard EN14511 and valid for heated water range $\Delta T = 3 - 8^{\circ}\text{C}$

Power input

Power input is the total input of indoor and outdoor units, including the circulation pump; according to EN 14511.

Notes

The capacity and the power input are valid for V3 models at 230 V.

The actual operation of a unit depends on its operating conditions: outdoor temperature, heating/cooling load, ...

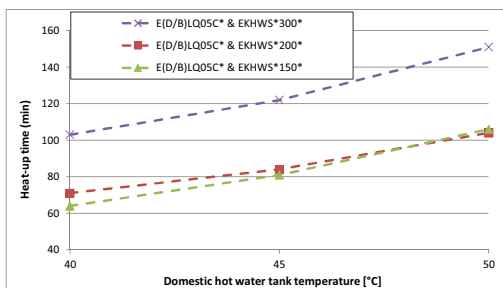
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5 Capacity tables

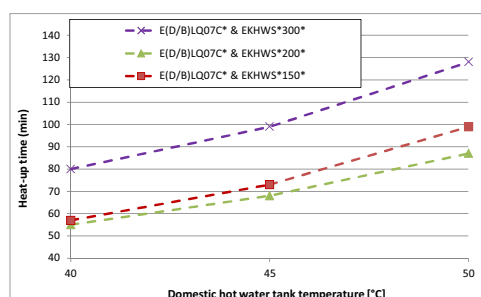
5 - 3 Domestic Hot Water performance

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Heat-up times



	Heat-up time domestic hot water tank until 45°C	
	E(D/B)LQ05C*	E(D/B)LQ07C*
EKHS*150*	81	73
EKHS*200*	84	68
EKHS*300*	122	99



Heat loss of domestic hot water tank

(1)

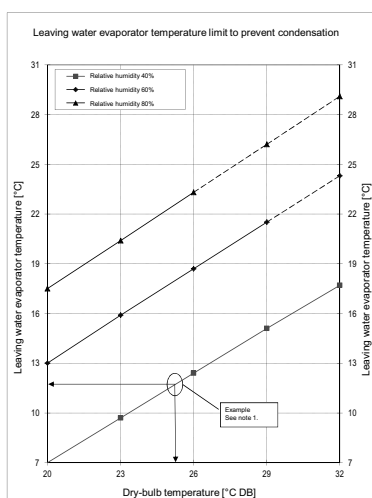
Domestic hot water tank	Heat loss [kWh/24h]	
EKHS*	150l	1,55
	200l	1,77
	300l	2,19

Notes
(1) According to EN12897.

Notes
1. Time the heat pump 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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EKMBUHC3V3 / EKMBUHC9W1



Notes
1. With an ambient temperature of 25°C and a relative humidity of 40%.
2. If the leaving water evaporator temperature is < 12°C, condensation on the water piping will occur.
3. See the psychrometric chart for more information.
4. If condensation is expected, the installation of valve kit EKMBHP1 is required.

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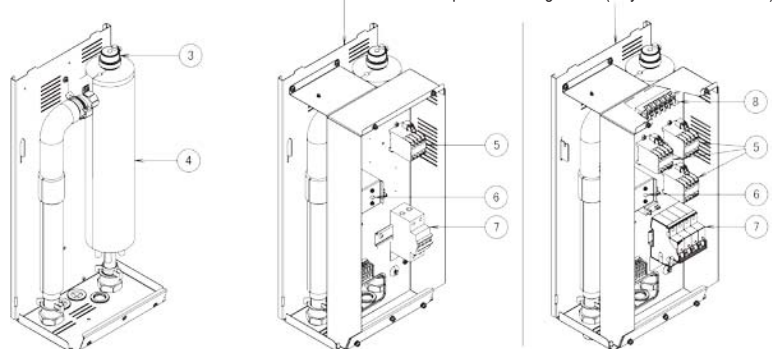
6 Dimensional drawings

6 - 1 Dimensional Drawings

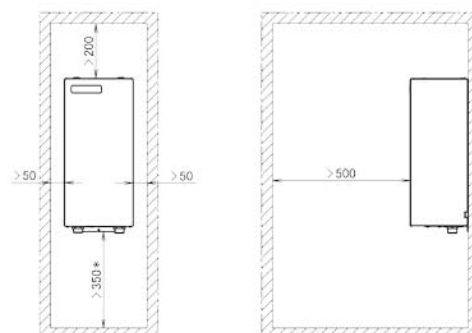
EKMBUHC3V3

Backup heater configuration (only for *KMBUHCA3V)

Backup heater configuration (only for *KMBUHCA9W)



Minimum installation service space

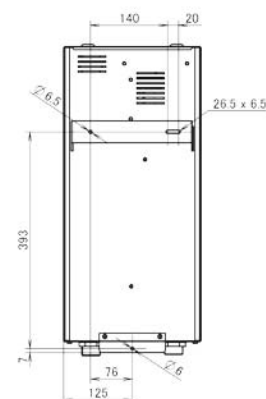
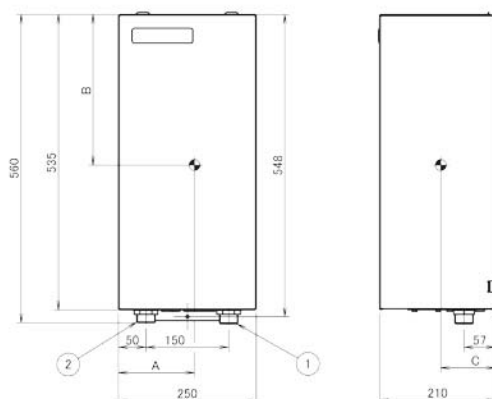


* When installing optional accessories, refer to their respective documentation.

1	Water in connection 1" M
2	Water out connection 1" M
3	Air purge
4	Backup heater
5	Contactor backup heater
6	Thermal cutout
7	Backup heater overcurrent fuse
8	Terminal block

Centre of gravity

MODEL	A	B	C
*3V3	132	272	103
*9W1	138	273	99

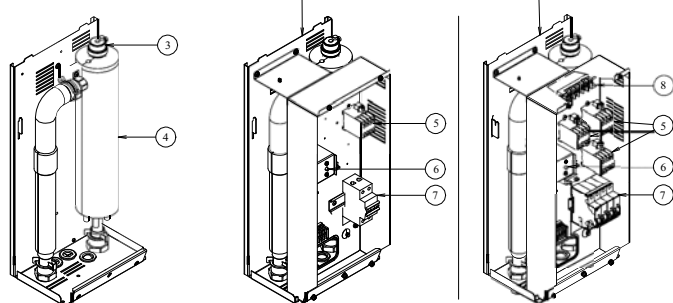


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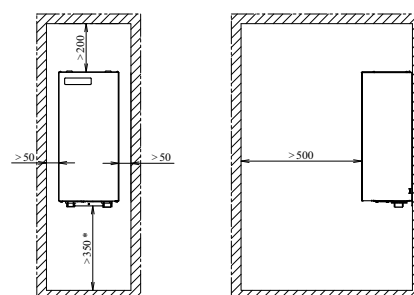
EKMBUHC9W1

Backup heater configuration (only for EKMBUHCA3V)

Backup heater configuration (only for EKMBUHCA9W)

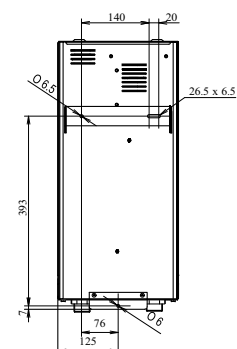
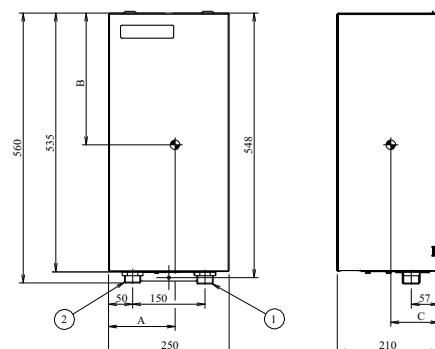


Minimum installation service space



* When installing optional accessories, refer to their respective documentation.

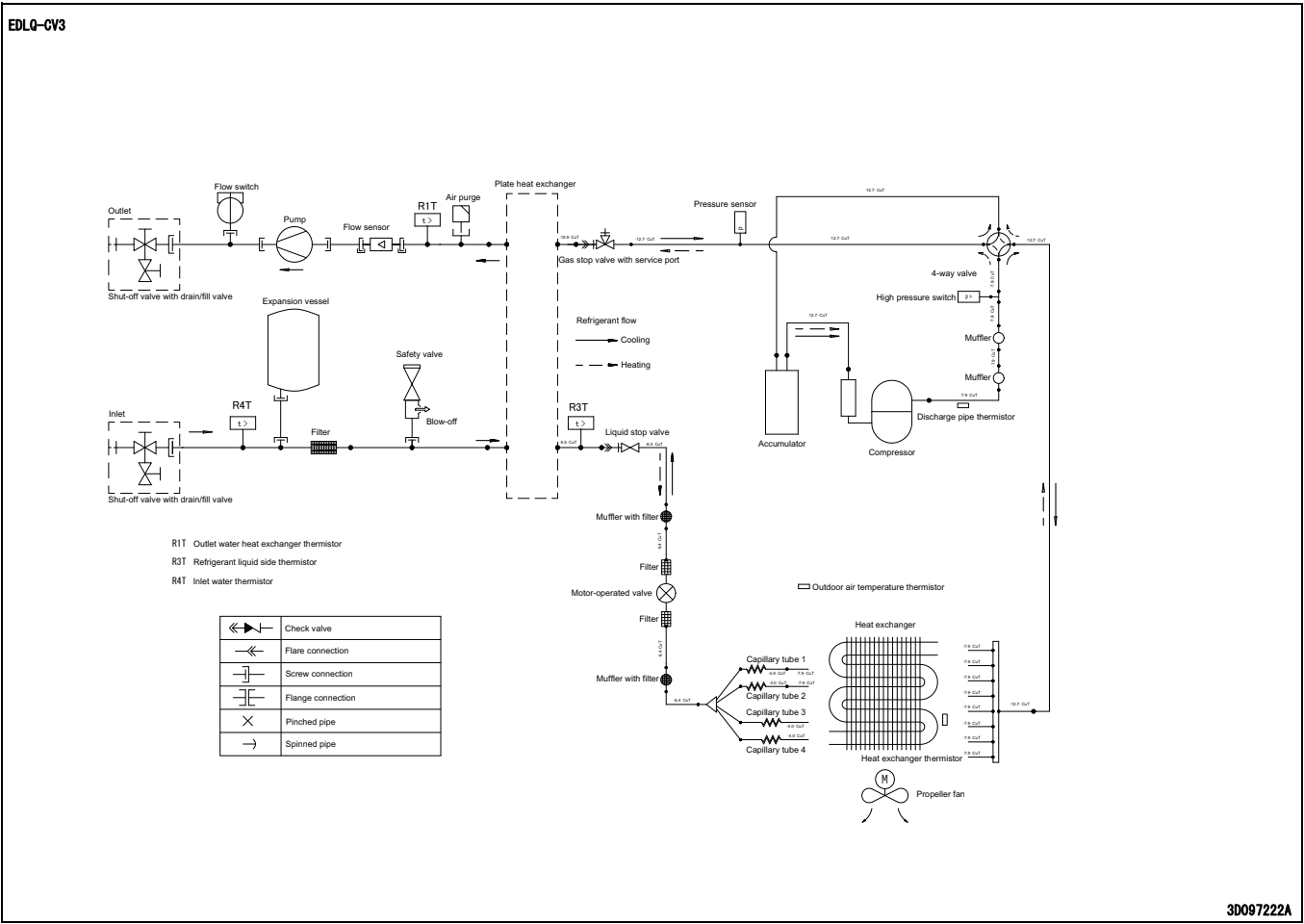
- 1 Water in connection 1" M
- 2 Water out connection 1" M
- 3 Air purge
- 4 Backup heater
- 5 Contactor backup heater
- 6 Thermal fuse backup heater
- 7 Backup heater overcurrent fuse
- 8 Terminal block



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7 Piping diagrams

7 - 1 Piping Diagrams



8 Wiring diagrams

8 - 1 Wiring Diagrams - Single Phase

EDLQ-CV3

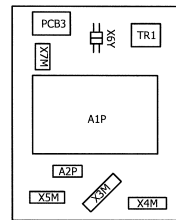
NOTES TO GO THROUGH BEFORE STARTING THE UNIT

- X4M : Main terminal
- ① : Earth wiring
: Wire number 15
: Field supply
: Several wiring possibilities
- ② : Option
- ③ : Wiring depending on model
- ④ : Switchbox
- ⑤ : PCB

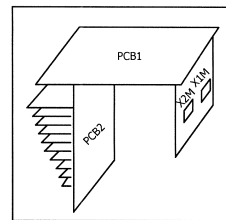
User installed options:

- Remote user interface
□ Ext. outdoor thermistor
□ Control box
□ DHW tank
□ BUH option
□ BUH configuration (Only for*9W)
□ 6V3 (1N~, 230V, 6kW)
□ 6WN (3N~, 400V, 6kW)
□ 9WN (3N~, 400V, 9kW)
- Main LWT:
□ ON/OFF thermostat (Wired)
□ ON/OFF thermostat (Wireless)
□ Ext. Thermistor
□ Heat pump connector
- Add LWT:
□ ON/OFF thermostat (Wired)
□ ON/OFF thermostat (Wireless)
□ Ext. Thermistor
□ Heat pump connector
□ Option box
□ External indoor ambient thermistor

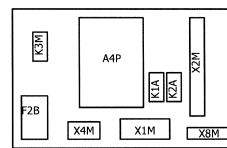
POSITION IN SWITCHBOX



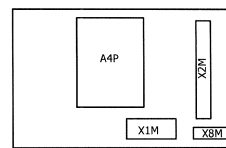
Hydro switch box



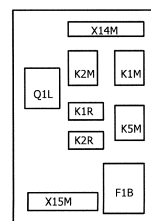
Compressor switchbox



Control box



Option box



BUH-Kit

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EDLQ-CV3

LEGEND

* : optional
: field supply

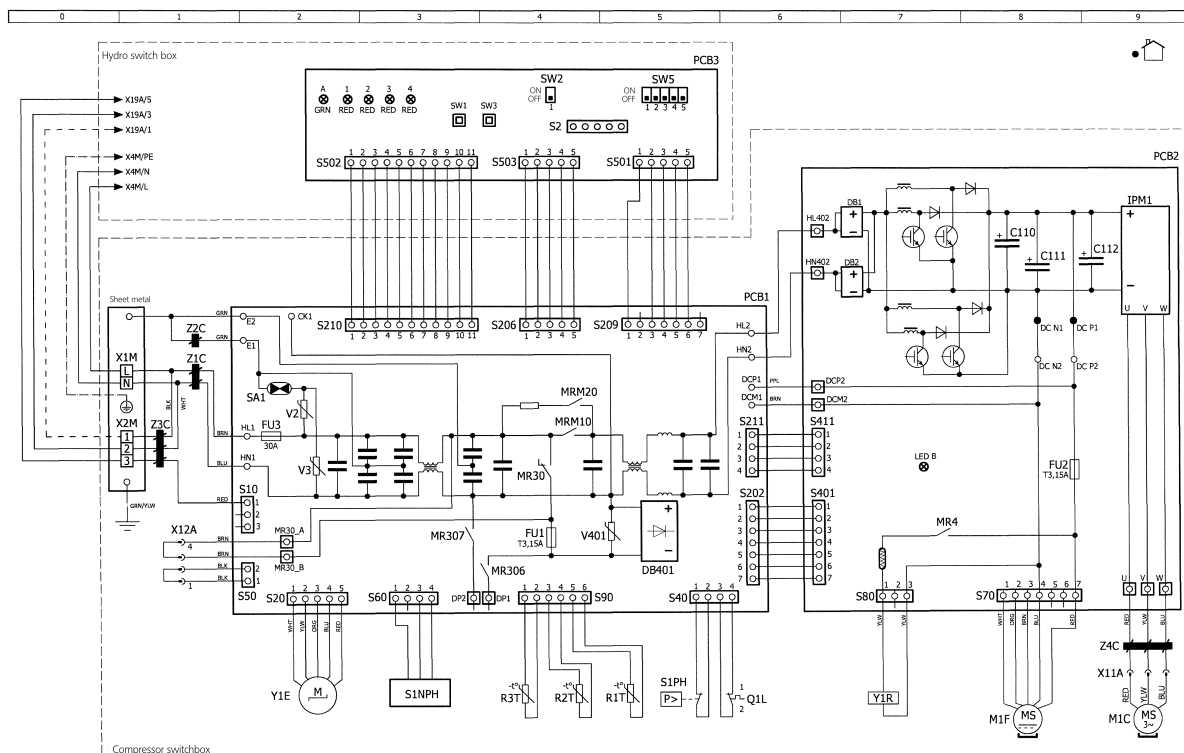
Part n°	Description	Part n°	Description	Part n°	Description
A1P	: main PCB	K*R	: relay on PCB	PCB3	: service PCB
A2P	: current loop PCB	M1P	: main supply pump	Z1C~Z4C	: ferrite core
A3P	* : On/OFF thermostat (PC=power circuit)	M2P	# : DHW pump	Y1E	: electronic expansion valve coil
A3P	* : heat pump convactor	M2S	# : Shut-OFF Valve	V2, V3, V401	: varistor
A4P	* : extension PCB(control, optional)	M3S	: 3 way valve for domestic hot water	SA1	: surge arrester
A5P	: user interface PCB	M4S	* : Valve Kit	FU1, FU3(PCB1)	: fuse
A7P	* : receiver PCB (wireless On/OFF thermostat)	Q*DI	# : earth leakage circuit breaker	S1NPH	: pressure sensor
B1L	: flow sensor	Q1L	* : thermal protector backup heater	S1PH	: pressure switch (high)
DS1(A4P)	* : dipswitch	Q2L/Q3L	* : thermal protector booster heater	R1T(PCB1)	: thermistor (discharge)
E1H	: BUH element (1 kW)	R1T (A1P)	: outlet water heat exchanger thermistor	R2T(PCB1)	: thermistor (heat exchange)
E2H	: BUH element (2 kW)	R1T (A5P)	: ambient sensor user interface	R3T(PCB1)	: thermistor (air)
E3H	: BUH element	R1T (A3P)	* : ambient sensor On/OFF thermostat	S2~S503	: connector
E4H	: booster heater (3 kW)	R2T	* : outlet backup heater thermistor	LED A, LED B	: pilot lamp
E6H	: PHE heater tape	R2T (A3P)	* : external sensor (floor or ambient)	IPM1	: intelligent power module
E7H	: expansion vessel heater	R3T (A1P)	: refrigerant liquid side thermistor	SW1, SW3	: push buttons
F1B	* : overcurrent fuse BUH	R4T (A1P)	: inlet water thermistor	SW2, SW5	: dip switches
F2B	* : overcurrent fuse booster heater	R5T	* : domestic hot water thermistor	C110~C112	: capacitor
F1T, F2T	* : thermal fuse backup heater	R6T (A1P)	* : external outdoor ambient thermistor	LED 1~4	: indication lamps
FU1 (A1P)	: fuse T 6,3 A 250 V	R6T (A4P)	* : external indoor ambient thermistor	Q1L(PCB1)	: overload protector
FU2 (A1P)	: fuse T 6,3 A 250 V	R1H (A3P)	* : humidity sensor	DB1, DB2, DB401	: rectifier bridge
F1U (A4P)	: fuse T 2 A 250 V	S1L	: flow switch	Y1R	: reversing solenoid valve coil
F2U (A4P)	: fuse T 2 A 250 V for 3 way valve	S1S	# : preferential kWh rate PS contact	SHEET METAL	: terminal strip fixed plate
K1	* : terminal strip	S1P	# : digital power limitation input 1	MRM*, MR30, MR4, MR306, MR307	: magnetic relay
K1A	: relay for heating	S2P	# : digital power limitation input 2	MR30_A, DP1, E1, MR30_B, DP2, E2, DC_P*, DC_N*	: connector
K1M	* : contactor BUH (step 1)	S3P	# : digital power limitation input 3	HN402, HL402, DCP1, DCP2, DCM 1, DCM2	
K1R	* : relay backup heater (step 1)	S4P	# : digital power limitation input 4		
K2	* : booster heater	S5P-S6P	# : electrical meters		
K2A	: relay for cooling	TR1	: power supply transformer		
K2M	* : contactor BUH (step 2)	X*M	: terminal strip	FU2(PCB2)	: fuse
K2R	* : relay backup heater (step 2)	X*Y	: connector	M1C	: compressor motor
K3M	* : contactor BSH	PCB1	: main PCB	M1F	: fan motor
K5M	* : safety contactor BUH (only *9W)	PCB2	: inverter PCB	STB	* : thermal protector booster heater

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8 Wiring diagrams

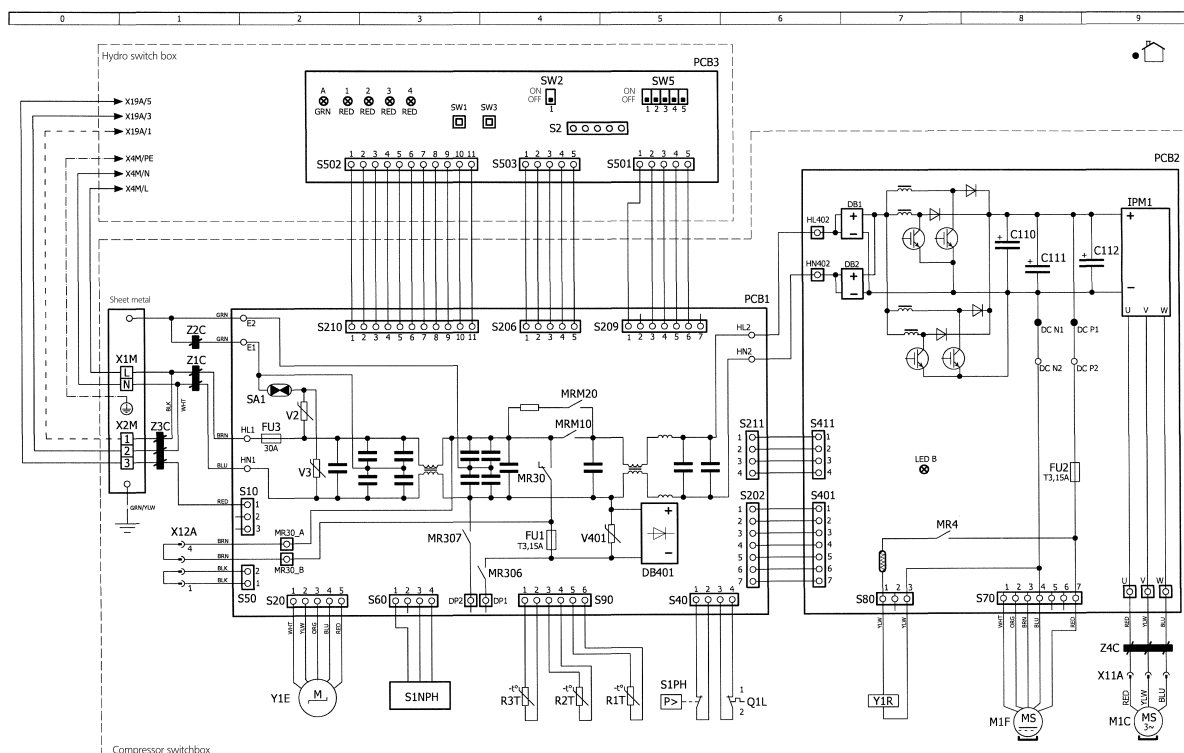
8 - 1 Wiring Diagrams - Single Phase

EDLQ-CV3



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EDLQ-CV3



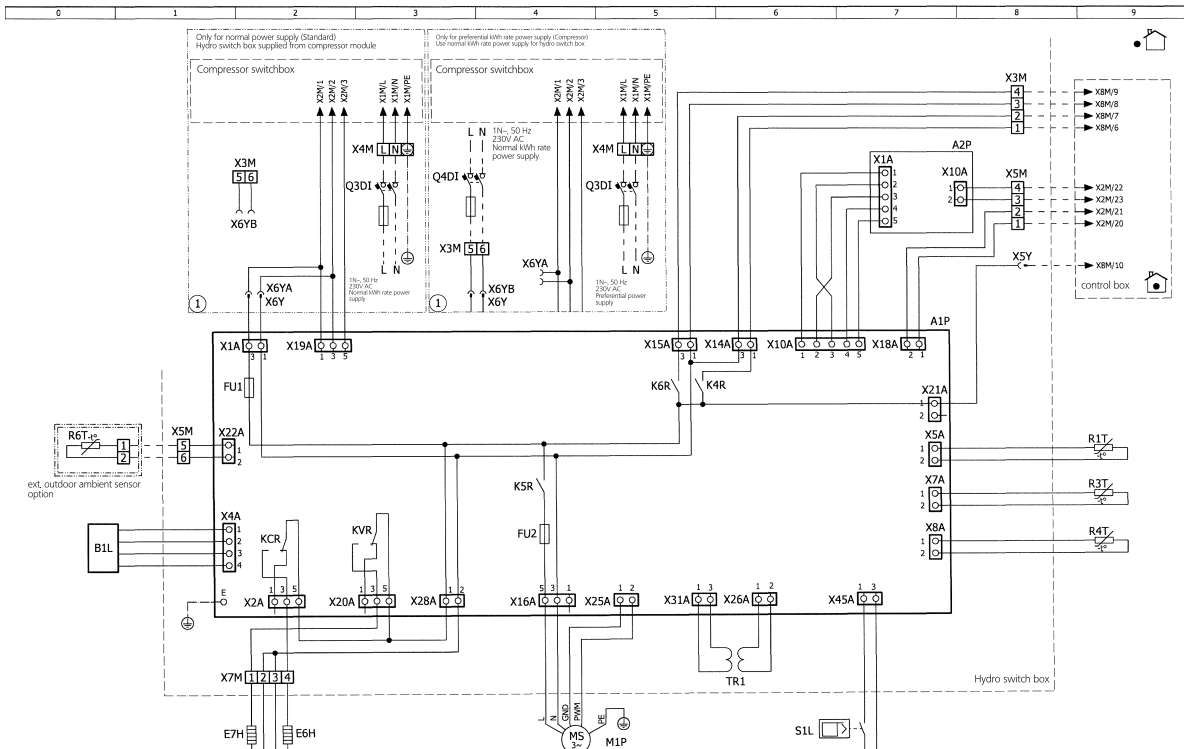
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8 Wiring diagrams

8 - 1 Wiring Diagrams - Single Phase

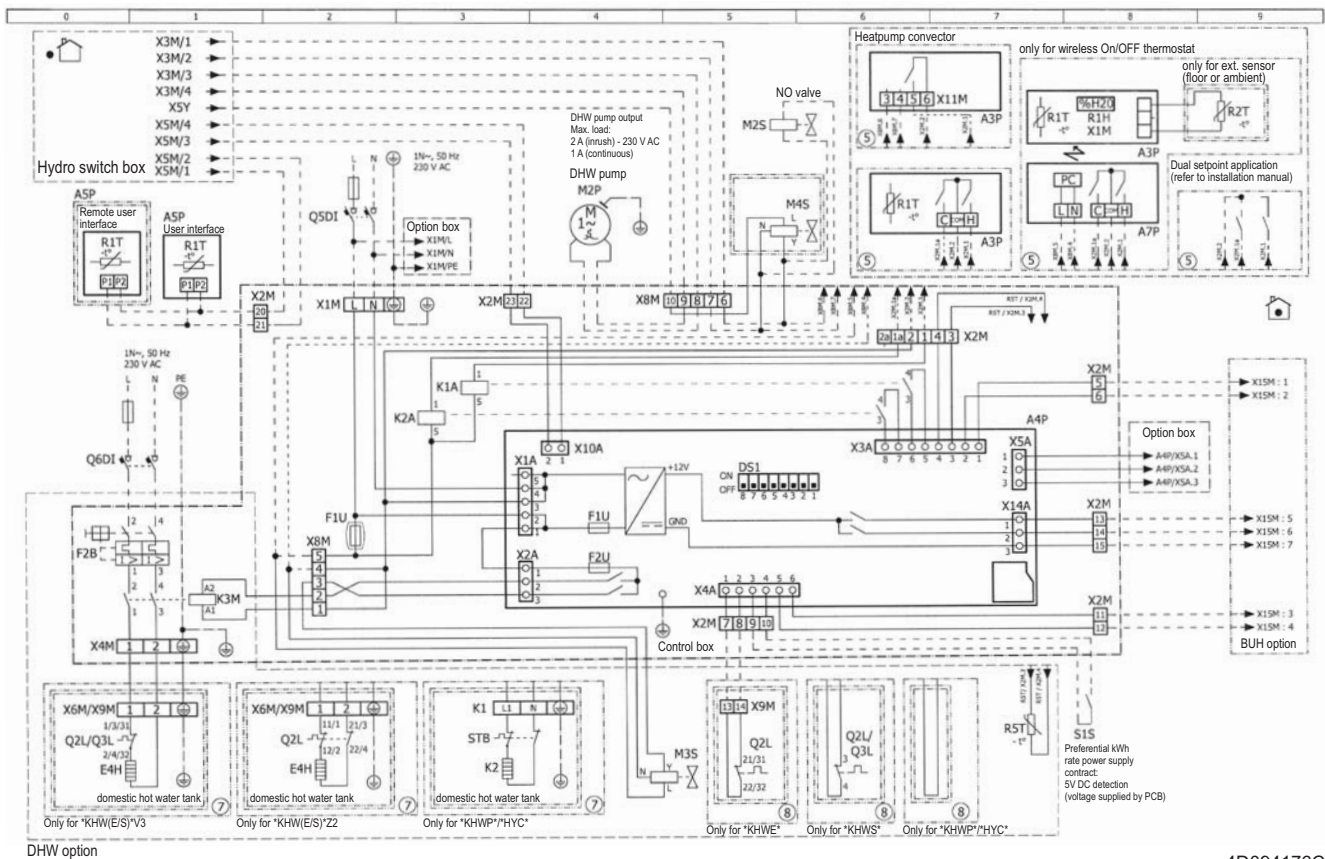
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EDLQ-CV3



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EDLQ-CV3



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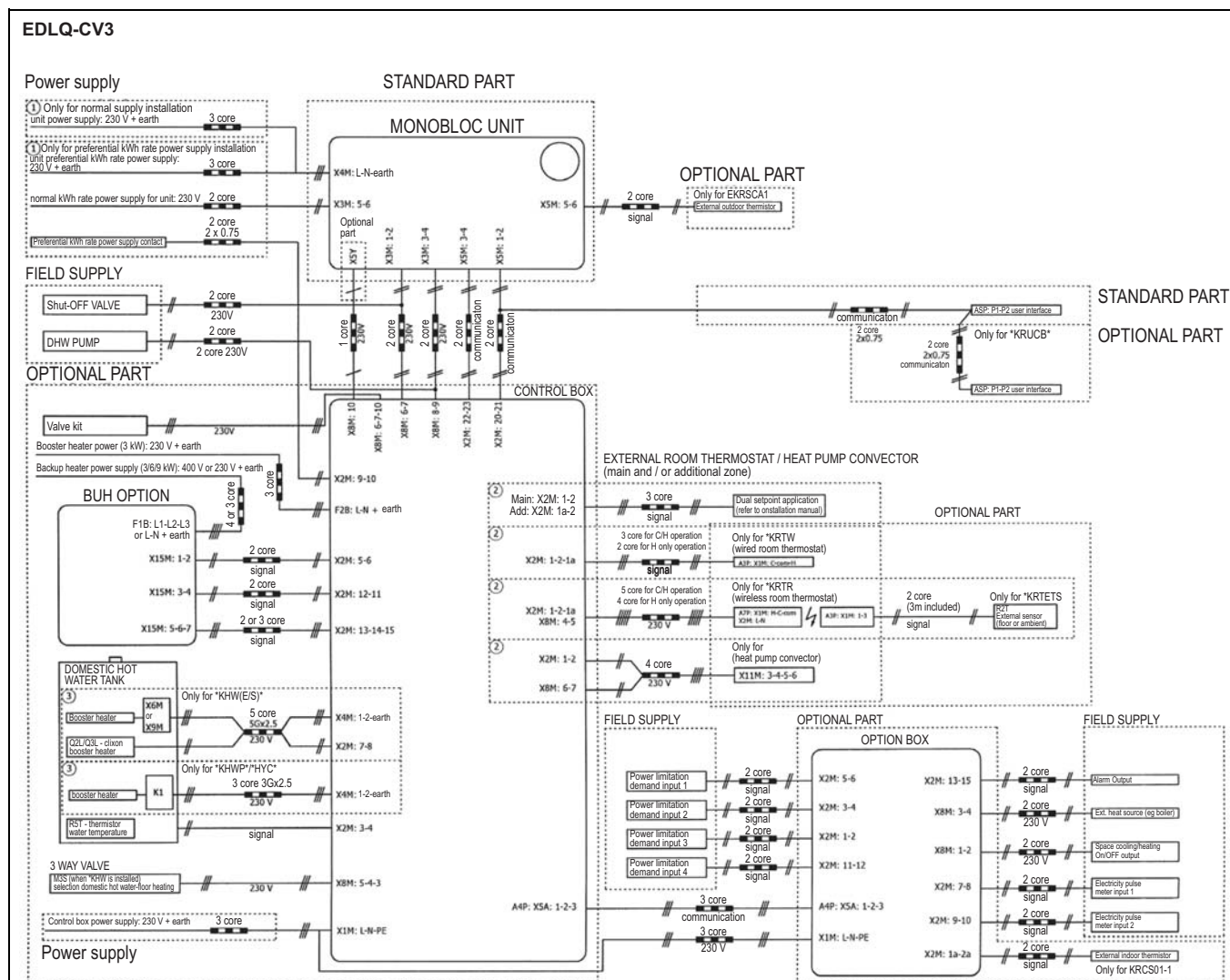
8 - 1 Wiring Diagrams - Single Phase

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9 External connection diagrams

9 - 1 External Connection Diagrams



TYPICAL CONFIGURATION		
OUTDOOR	INDOOR	
		2 low voltage wires
		Standard: 4 low voltage wires Optional: 4 high voltage wires
		Only for "DLQ" Standard: 4 low voltage wires Optional: 4 high voltage wires Inside: 6 or 7 wires to BUH
		Only for "BLQ" Standard: 4 low voltage wires Optional: 5 high voltage wires Inside: 6 or 7 wires to BUH Valve kit: 3 wires

NOTES

- In case of signal cable: keep minimum distance to power cables > 5 m.
- Available heaters: see combination table.

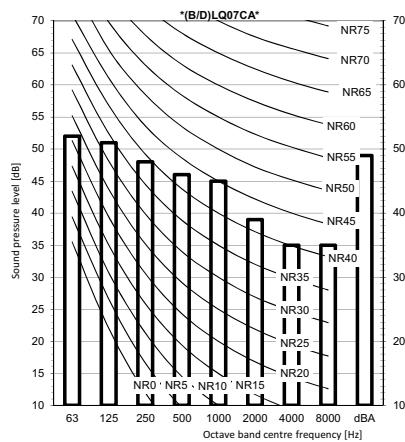
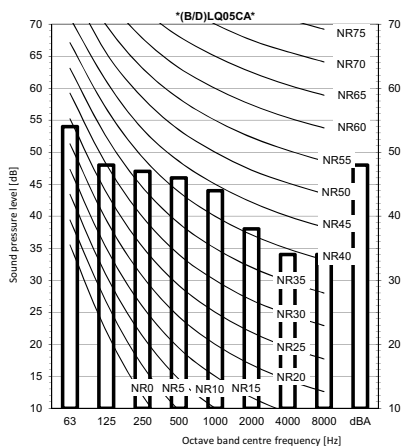
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10 Sound data

10 - 1 Sound Pressure Spectrum

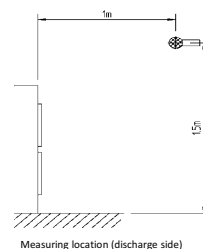
EDLQ-CV3

Heating



Notes

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



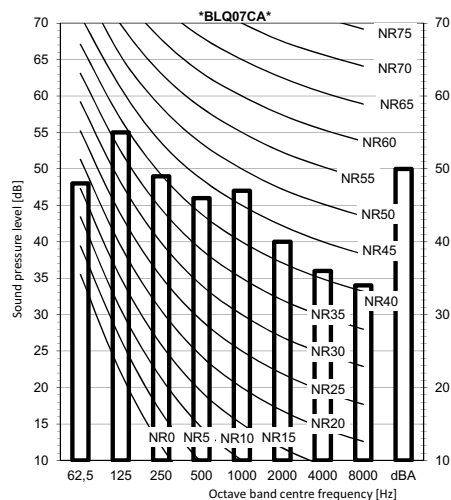
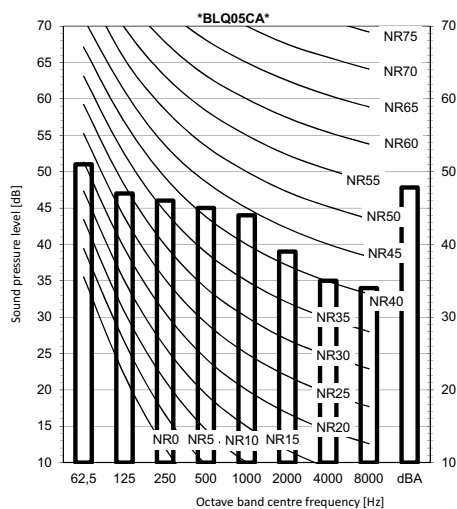
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10 Sound data

10 - 2 Sound Pressure Spectrum - Cooling

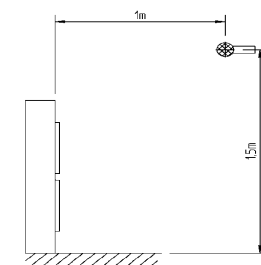
EDLQ-CV3

Cooling



Notes

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



Measuring location (discharge side)

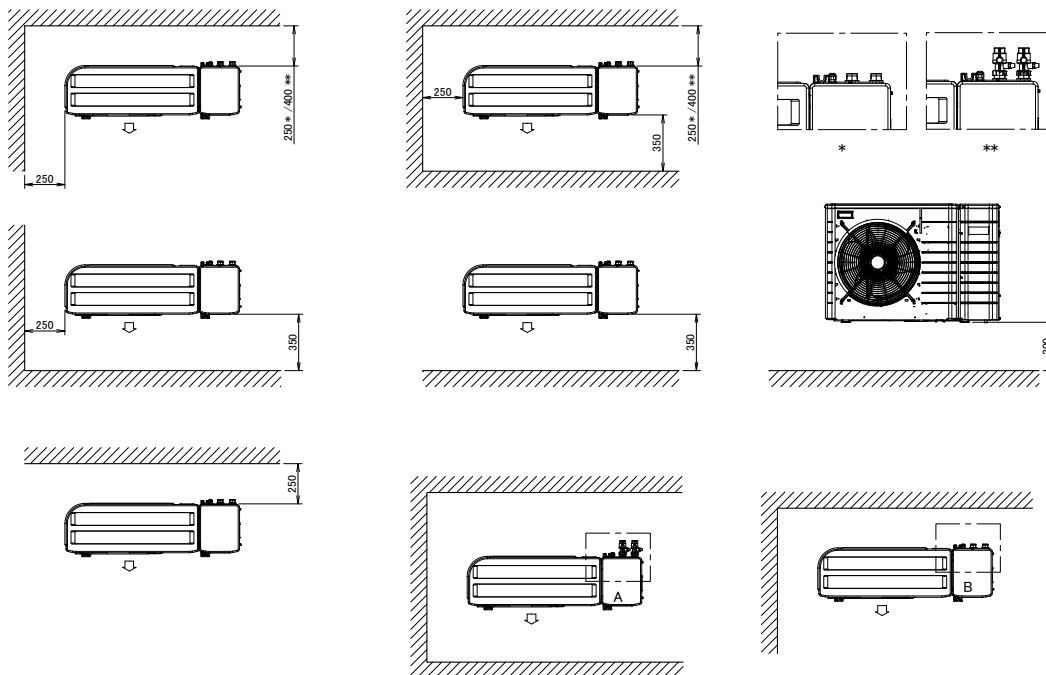
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11 Installation

11 - 1 Installation Method

EDLQ-CV3

Minimum space for air passage
Wall height on air outlet side < 1200 mm



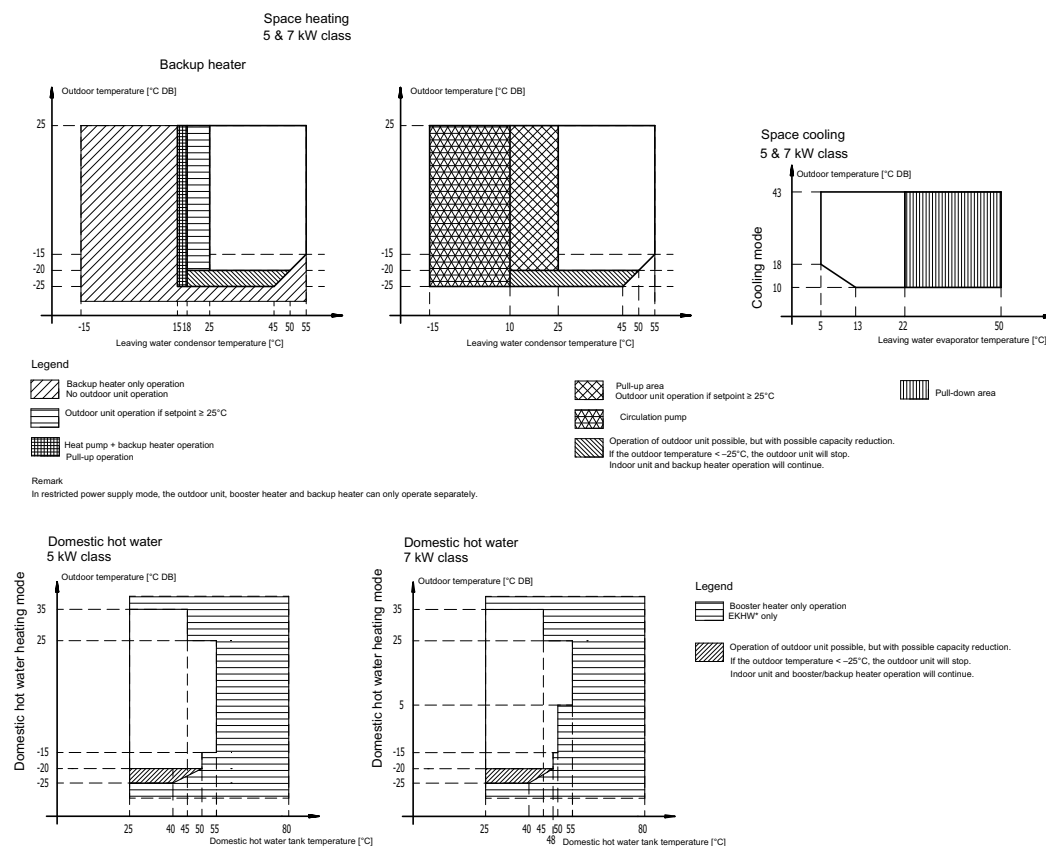
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12 Operation range

12 - 1 Operation Range

EDLQ-CV3

12

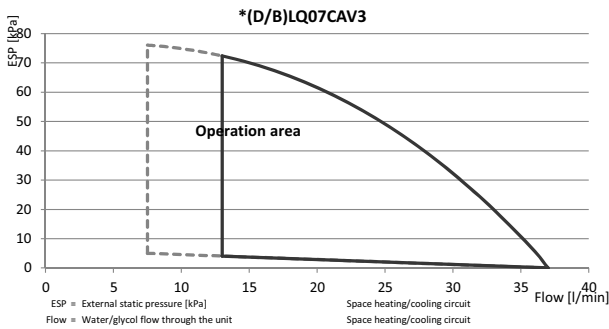
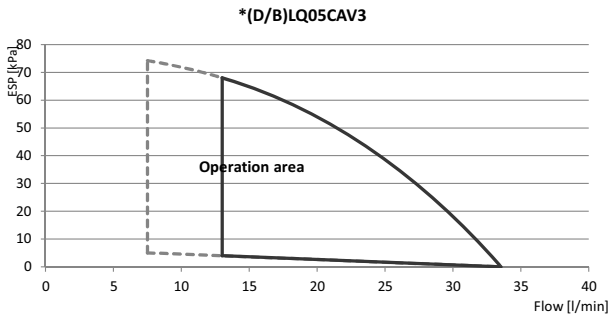


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13 Hydraulic performance

13 - 1 Static Pressure Drop Unit

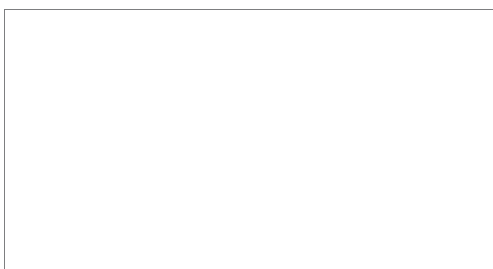
EDLQ-CV3



- Notes**
1. The operation area is extended to lower flow rates only in case the unit operates with heat pump only, and the temperature of the flow medium is sufficiently high.
This does not apply to start-up operation, defrost operation, and backup heater operation in case a backup heater is installed.
 2. See dashed lines
The higher operation range limit is only valid if the flow medium is water. If glycol is added to the system, the limit is lower.
 3. 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.

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