

Heating

Technical Data

EGSAH-D9W,
EGSAX-D9W,
EGSAX-D9WG



- > EGSAH06DA9W
- > EGSAH10DA9W
- > EGSAX06DA9W
- > EGSAX10DA9W
- > EGSAX06DA9WG
- > EGSAX10DA9WG

TABLE OF CONTENTS

EGSAH-D9W, EGSAH-D9W, EGSAH-D9WG

1	Features	2
	EGSA(H/X)-D9W(G)	2
2	Specifications	3
	Technical Specifications	3
	Electrical Specifications	7
3	Options	8
4	Capacity tables	9
	Cooling Capacity Tables	9
	Heating Capacity Tables	10
5	Operation range	11
6	Dimensional drawings	12
7	Centre of gravity	14
8	Piping diagrams	15
9	Wiring diagrams	16
	Notes & Legend	16
	Control Circuit	17
	Power Supply, Back-up Heater	19
10	External connection diagrams	20
11	Sound data	21
	Sound Power Spectrum	21
	Sound Pressure Spectrum - Heating	22
12	Installation	23
	Installation Method	23
13	Hydraulic performance	25
	Static Pressure Drop Unit	25

1 Features

1 - 1 EGSAH-D9W

- Active cooling with high efficiency
- Integrated stainless steel domestic hot water tank
- Cloud ready: Remote monitoring and control
- Ultra high SCOP at cold climate, 35 °C LWT
- Extremely low sound power

1



EGSA(H/X)-D9W



EGSAX-D9WG



Online
controller

2 Specifications

2-1 Technical Specifications				EGSAH06D9W	EGSAH10D9W	EGSAX06D9W	EGSAX10D9W	EGSAX06D9WG	EGSAX10D9WG	
Space heating	Cold climate water outlet 35°C	General	Annual energy consumption	kWh	2,615	3,691	2,582	3,658	2,582	3,658
			ηs (Seasonal space heating efficiency)	%	218	219	221			
			Prated at -22°C	kW	6	9	6	9	6	9
		A Condition (-7°CDB/-8°CWB)	COPd		5.72	5.70	5.72	5.70	5.72	5.70
			Pdh	kW	3.6	5.0	3.6	5.0	3.6	5.0
		B Condition (2°CDB/1°CWB)	COPd		5.77	5.90	5.77	5.90	5.77	5.90
			Pdh	kW	2.2	3.0	2.2	3.0	2.2	3.0
		C Condition (7°CDB/6°CWB)	COPd		6.46	6.41	6.46	6.41	6.46	6.41
			Pdh	kW	1.5	2.1	1.5	2.1	1.5	2.1
		D Condition (12°CDB/11°CWB)	COPd		5.73	5.25	5.73	5.25	5.73	5.25
			Pdh	kW	1.1	1.2	1.1	1.2	1.1	1.2
		Tol (temperature operating limit)	COPd		4.84	4.39	4.84	4.39	4.84	4.39
	Pdh		kW	5.9	8.5	5.9	8.5	5.9	8.5	
	TOL		°C	-22						
	Tbiv (bivalent temperature)	COPd		4.84	4.39	4.84	4.39	4.84	4.39	
		Pdh	kW	5.9	8.5	5.9	8.5	5.9	8.5	
		Tbiv	°C	-22						
	Cold climate water outlet 55°C	General	Annual energy consumption	kWh	3,563	4,773	3,530	4,740	3,530	4,740
			ηs (Seasonal space heating efficiency)	%	164	168	165	169	165	169
			Prated at -22°C	kW	6	9	6	9	6	9
			A Condition (-7°CDB/-8°CWB)	COPd		4.01	4.05	4.01	4.05	4.01
Pdh				kW	3.8	5.4	3.8	5.4	3.8	5.4
B Condition (2°CDB/1°CWB)			COPd		4.68	4.87	4.68	4.87	4.68	4.87
			Pdh	kW	2.3	3.3	2.3	3.3	2.3	3.3
C Condition (7°CDB/6°CWB)			COPd		5.20	5.23	5.20	5.23	5.20	5.23
			Pdh	kW	1.6	2.1	1.6	2.1	1.6	2.1
D Condition (12°CDB/11°CWB)		COPd		4.76	4.56	4.76	4.56	4.76	4.56	
		Pdh	kW	1.0						
Tol (temperature operating limit)		COPd		2.95	2.89	2.95	2.89	2.95	2.89	
		Pdh	kW	6.4	8.5	6.4	8.5	6.4	8.5	
		TOL	°C	-22						
Tbiv (bivalent temperature)		COPd		2.95	2.89	2.95	2.89	2.95	2.89	
		Pdh	kW	6.4	8.5	6.4	8.5	6.4	8.5	
		Tbiv	°C	-22						
Warm climate water outlet 35°C		General	Annual energy consumption	kWh	1,486	2,197	1,421	2,132	1,421	2,132
			ηs (Seasonal space heating efficiency)	%	208	199	218	205	218	205
			Prated at 2°C	kW	6	9	6	9	6	9
		B Condition (2°CDB/1°CWB)	COPd		4.84	4.39	4.84	4.39	4.84	4.39
	Pdh		kW	5.9	8.5	5.9	8.5	5.9	8.5	
	C Condition (7°CDB/6°CWB)	COPd		5.45	5.43	5.45	5.43	5.45	5.43	
		Pdh	kW	3.9	5.7	3.9	5.7	3.9	5.7	
	D Condition (12°CDB/11°CWB)	COPd		6.10	5.99	6.10	5.99	6.10	5.99	
		Pdh	kW	1.8	2.5	1.8	2.5	1.8	2.5	
	Tbiv (bivalent temperature)	COPd		4.84	4.39	4.84	4.39	4.84	4.39	
		Pdh	kW	5.9	8.5	5.9	8.5	5.9	8.5	
		Tbiv	°C	2						

2 Specifications

2-1 Technical Specifications				EGSAH06D9W	EGSAH10D9W	EGSAX06D9W	EGSAX10D9W	EGSAX06D9WG	EGSAX10D9WG			
Space heating	Warm climate water outlet 55°C	General	Annual energy consumption	kWh	2,054	2,695	1,988	2,630	1,988	2,630		
			ηs (Seasonal space heating efficiency)	%	153	160	159	165	159	165		
			Prated at 2°C	kW	6	9	6	9	6	9		
		B Condition (2°CDB/1°CWB)	COPd		2.95	2.89	2.95	2.89	2.95	2.89		
			Pdh	kW	6.4	8.5	6.4	8.5	6.4	8.5		
		C Condition (7°CDB/6°CWB)	COPd		3.72	3.83	3.72	3.83	3.72	3.83		
			Pdh	kW	4.1	5.3	4.1	5.3	4.1	5.3		
		D Condition (12°CDB/11°CWB)	COPd		4.94	5.16	4.94	5.16	4.94	5.16		
			Pdh	kW	1.9	2.5	1.9	2.5	1.9	2.5		
		Tbiv (bivalent temperature)	COPd		-	2.89	-	2.89	-	2.89		
			Pdh	kW	3.0	8.5	3.0	8.5	3.0	8.5		
			PERd	%	6.4	-	6.4	-	6.4	-		
			Tbiv	°C	2							
	Average climate water outlet 55°C	General	Annual energy consumption	kWh	3,237	4,179	3,183	4,125	3,183	4,125		
			ηs (Seasonal space heating efficiency)	%	150	160	153	162	153	162		
			Prated at -10°C	kW	6	9	6	9	6	9		
			SCOP		3.96 (1)	4.20 (1)	4.02 (1)	4.26 (1)	4.02 (1)	4.26 (1)		
			Seasonal space heating eff. class		A+++							
		A Condition (-7°CDB/-8°CWB)	COPd		3.21							
			Pdh	kW	5.5	7.4	5.5	7.4	5.5	7.4		
B Condition (2°CDB/1°CWB)		COPd		4.00	4.25	4.00	4.25	4.00	4.25			
		Pdh	kW	3.3	4.7	3.3	4.7	3.3	4.7			
C Condition (7°CDB/6°CWB)		COPd		4.71	4.85	4.71	4.85	4.71	4.85			
		Pdh	kW	2.2	3.0	2.2	3.0	2.2	3.0			
D Condition (12°CDB/11°CWB)		COPd		4.32	5.32	4.32	5.32	4.32	5.32			
		Pdh	kW	1.0	1.4	1.0	1.4	1.0	1.4			
Tol (temperature operating limit)		COPd		2.95	2.89	2.95	2.89	2.95	2.89			
		Pdh	kW	6.4	8.5	6.4	8.5	6.4	8.5			
		TOL	°C	-10								
Tbiv (bivalent temperature)		COPd		2.95	2.89	2.95	2.89	2.95	2.89			
	Pdh	kW	6.4	8.5	6.4	8.5	6.4	8.5				
	Tbiv	°C	-10									

2 Specifications

2-1 Technical Specifications				EGSAH06D9W	EGSAH10D9W	EGSAX06D9W	EGSAX10D9W	EGSAX06D9WG	EGSAX10D9WG	
Space heating	Average climate water outlet 35°C	General	Annual energy consumption	kWh	2,238	3,229	2,183	3,175	2,183	3,175
			ηs (Seasonal space heating efficiency)	%	214	210	219	213	219	213
			Prated at -10°C	kW	6	9	6	9	6	9
			SCOP		5.54 (1)	5.44 (1)	5.54 (1)	5.53 (1)	5.54 (1)	5.53 (1)
			Seasonal space heating eff. class		A+++					
		A Condition (-7°CDB/-8°CWB)	COPd		5.04	4.63	5.04	4.63	5.04	4.63
			Pdh	kW	5.6	7.7	5.6	7.7	5.6	7.7
		B Condition (2°CDB/1°CWB)	COPd		5.76	5.70	5.76	5.70	5.76	5.70
			Pdh	kW	3.3	4.6	3.3	4.6	3.3	4.6
		C Condition (7°CDB/6°CWB)	COPd		6.11	5.79	6.11	5.79	6.11	5.79
			Pdh	kW	2.1	2.9	2.1	2.9	2.1	2.9
		D Condition (12°CDB/11°CWB)	COPd		5.60	5.94	5.60	5.94	5.60	5.94
			Pdh	kW	1.0	1.4	1.0	1.4	1.0	1.4
		Tol (temperature operating limit)	COPd		4.84	4.39	4.84	4.39	4.84	4.39
			Pdh	kW	5.9	8.5	5.9	8.5	5.9	8.5
			TOL	°C	-10					
		Tbiv (bivalent temperature)	COPd		4.84	4.39	4.84	4.39	4.84	4.39
			Pdh	kW	5.9	8.5	5.9	8.5	5.9	8.5
Tbiv	°C		-10							
Space heating general	Other	Pck (Crankcase heater mode)	kW	0.000						
		Poff (Off mode)	kW	0.015						
		Psb (Standby mode)	kW	0.015						
		Pto (Thermostat off)	kW	0.024						
Domestic hot water heating	General	Declared load profile			L					
		Average climate	AEC (Annual electricity consumption)	kWh	877					
	AFC (Annual fuel consumption)		Gj	0						
	ηwh (water heating efficiency)		%	117						
	Qelec (Daily electricity consumption)		kWh	4.140						
	Qfuel (Daily fuel consumption)		kWh	0.000						
	Water heating energy efficiency class			A+						
	Cold climate	AEC (Annual electricity consumption)	kWh	877						
		AFC (Annual fuel consumption)	Gj	0						
		ηwh (water heating efficiency)	%	117						
		Qelec (Daily electricity consumption)	kWh	4.140						
		Qfuel (Daily fuel consumption)	kWh	0.000						
	Warm climate	AEC (Annual electricity consumption)	kWh	877						
		AFC (Annual fuel consumption)	Gj	0						
		ηwh (water heating efficiency)	%	117						
		Qelec (Daily electricity consumption)	kWh	4.140						
Qfuel (Daily fuel consumption)		kWh	0.000							
Heating capacity	Min.	kW			0.85					
	Nom.	kW			3.34	5.48	3.34	5.48	3.34	5.48
	Max.	kW			7.98	9.55	7.98	9.55	7.98	9.55
Power input	Nom.	kW			0.70	1.12	0.70	1.12	0.70	1.12
COP				4.74	4.89	4.74	4.89	4.74	4.89	
Casing	Colour			White + Black				Grey + Black		
	Material			Precoated sheet metal	-	Precoated sheet metal	-			
Dimensions	Unit	Height	mm	1,891						
		Width	mm	597						
		Depth	mm	666						
	Packed unit	Height	mm	2,202						
		Width	mm	720						
		Depth	mm	775						

2 Specifications

2

2-1 Technical Specifications					EGSAH06D9W	EGSAH10D9W	EGSAX06D9W	EGSAX10D9W	EGSAX06D9WG	EGSAX10D9WG	
Weight	Unit		kg	222							
	Packed unit		kg	237							
Packing	Material			Wood / Carton / PE wrapping foil / Metal							
	Weight		kg	15							
Tank	Energy efficiency class			A							
	Standing heat loss		W	50							
	Storage volume		l	-	180	-	180	-	180	-	
	Water volume		l	180	-	180	-	-	-	-	
	Material			Stainless steel (EN 1.4521)							
	Maximum water temperature		°C	60.0							
	Maximum water pressure		bar	10							
	Insulation	Material			Polyurethane foam						
		Heat loss		kWh/24h	1.2						
	Corrosion protection			Pickling							
	Name			Stainless steel domestic hot water tank 180 l							
3-way valve	Coefficient of flow (kV)	Space heating		m³/h	10						
		Domestic hot water tank		m³/h	8						
Pump	Type			Grundfos UPM3LK							
	Nr of speeds			PWM							
	Power input		W	75							
Compressor	Type			Hermetically sealed swing compressor							
	Model			2YC40JXD#C							
Operation range	Installation space	Min.		°C	5						
		Max.		°C	35						
	Brine side	Min.		°C	-10						
		Max.		°C	30						
	Heating	Water side	Min.		°C	5					
			Max.		°C	65					
	Domestic hot water	Water side	Min.		°C	25					
			Max.		°C	60					
Water side Heat exchanger	Type			Plate heat exchanger							
	Quantity			1							
	Water volume		l	1.76							
	Insulation material			Elastomeric foam							
Refrigerant	Type			R-32							
	GWP			675.0							
	Charge		TCO _{2eq}		1.15						
			kg		1.70						
	Circuits	Quantity			1						
Water circuit - Domestic hot water side	Piping connections	Cold water in / Hot water out	Diameter	mm	22						
		Recirculation connection		inch	G 3/4" FEMALE						
Refrigerant oil	Type			FW68DA							
	Charged volume		l	0.7							
Water circuit	Piping connections diameter		mm	22							
	Safety valve		bar	3							
	Manometer			Digital							
	Drain valve / fill valve			Yes							
	Shut off valve			Yes							
	Air purge valve			Yes							
	Total water volume		l	5.1							
	Heating water system	Water volume	Min.	l	20						

2 Specifications

2-1 Technical Specifications				EGSAH06D9W	EGSAH10D9W	EGSAX06D9W	EGSAX10D9W	EGSAX06D9WG	EGSAX10D9WG	
PED	Category			Category II						
	Most critical part	Name		Compressor						
		Ps*DN	bar	42						
		Ps*V	Bar*l	64						
General	Supplier/ Manufacturer details	Name and address			Daikin Europe N.V. - Zandvoordestraat 300, 8400 Oostende, Belgium					
		Name or trademark			Daikin Europe N.V.					
	Product description	Air-to-water heat pump			No					
		Brine-to-water heat pump			Yes					
		Heat pump combination heater			No					
		Low-temperature heat pump			No					
		Supplementary heater integrated			Yes					
	Water-to-water heat pump			Yes						
	LW(A) Sound power level (according to EN14825)	Indoor	dB(A)	39.0	41.0	39.0	41.0	39.0	41.0	
				Sound condition Ecodesign and energy label						Sound power in heating mode, measured according to the EN12102 under conditions of the EN14825
Brine pump	Type			Grundfos UPMXL Geo						
	Power input		W	180						
Brine heat exchanger	Quantity			1						
	Brine volume		l	1.94						
Brine circuit	Piping connections diameter		mm	28						
	Safety valve		bar	3						
	Drain valve / fill valve			Yes						
	Air purge valve			No						
Total volume		l	5.0							
2-2 Electrical Specifications				EGSAH06D9W	EGSAH10D9W	EGSAX06D9W	EGSAX10D9W	EGSAX06D9WG	EGSAX10D9WG	
Power supply	Phase			1~/3~						
	Frequency		Hz	50						
	Voltage		V	230/400						
	Voltage range	Min.	%	-10						
		Max.	%	10						
Electric heater	Type			9W						
Electrical power consumption	Standby		W	15						
Current	Recommended fuses			A						
			16/32							

Notes

(1) According to EN14825 and EN14511:2013

See operation range drawing: range increase by support booster heater or backup heater

3 Options

3 - 1 Options

3

EGSAH-D9W

EGSAX-D9W

EGSAX-D9WG

Factory-mounted equipment for -EGSA(H/X)10DA##-

Factory-mounted equipment for -EGSA(H/X)06DA##-

Description	EGSA(H/X)06DA##
Heating only model -EGSAH*-	9W
Reversible model -EGSAX*-	9W
Backup heater -3kW 1N~230V-	(7) (8) o
Backup heater -6kW 3N~400V-	(7) (9) o
Domestic hot water tank -180L-	o

Description	EGSA(H/X)10DA##
Heating only model -EGSAH*-	9W
Reversible model -EGSAX*-	9W
Backup heater -3kW 1N~230V-	(7) (8) o
Backup heater -6kW 3N~400V-	(7) (9) o
Domestic hot water tank -180L-	o

Kit availability

Reference	Description	EGSA*DA*			
		9W	9W	9W	9W
EGSAH*	Heating only indoor unit				
EGSAX*	Reversible indoor unit		9W		9W
EKRP1HBAA	Digital I/O PCB (1) (2)	o	o	o	o
EKRP1AHTA	D and PCB (3)	o	o	o	o
BRC1HHDA*	Remote user interface	o	o	o	o
EKCC8-W	Universal centralised user interface	o	o	o	o
KRCS01-1	Remote indoor sensor	o	o	o	o
EKPPCCAB4	PC cable 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)
EKRTWA	Wired room thermostat	o	o	o	o
EKRTR1	Wireless room thermostat	o	o	o	o
EKRTETS	External room thermostat (6)	o	o	o	o
KGSFILL2	Fill kit	o	o	o	o
K.FERNOXTF1	Magnetic filter / dirt separator	o	o	o	o
K.FERNOXTF1FL	Magnetic filter / dirt separator	o	o	o	o
EKCSENS	Current sensor	o	o	o	o
EKGSHYDMOD	Hydro modulator	o	o	o	o
EKGSPQWCAB	Power cable with connector for Germany	o	o	o	o

(1) PCB that provides additional output connections: -

- (a) Control external heat source (bivalent operation).
- (b) Output remote ON/OFF signal space heating/cooling
- (c) Remote alarm output

(2) Additional relays to allow bivalent control in combination with an external room thermostat are field-supplied.

(3) PCB to receive up to -4- digital inputs for power limitation

(4) Data cable for connection with PC.

(5) The valve kit is mandatory if a heat pump convector is installed on a reversible model (not mandatory for heating only models).

(6) -EKRTETS- can only be used in combination with -EKRTR1-

(7) Backup heater capacity depends on how the backup heater is connected to the grid.

(8) -1-phase -3-kW (normal operation) / -6-kW (emergency operation/ "HP forced off" mode)

(9) -3-phase -6-kW (normal operation) / -9-kW (emergency operation/ "HP forced off" mode)

3D122775

4 Capacity tables

4 - 1 Cooling Capacity Tables

EGSAX-D9W
EGSAX-D9WG

Maximum cooling capacity

	LWC [°C]	7		13		15		18		22	
	EBT [°C]	CC [kW]	PI [kW]	CC [kW]	PI [kW]	CC [kW]	PI [kW]	CC [kW]	PI [kW]	CC [kW]	PI [kW]
EGSAH(X)10DA9W(G)	-5			8,12	0,57	8,12	0,57	8,12	0,57	8,12	0,57
	0			11,27	1,28	11,27	1,27	11,28	1,25	11,29	1,24
	5	11,76	1,43	11,94	1,50	12,00	1,50	12,10	1,50	12,24	1,49
	10	11,85	1,61	12,61	1,65	12,73	1,65	12,92	1,66	13,18	1,66
	15	11,17	1,68	12,10	1,73	12,35	1,72	12,74	1,71	13,25	1,69
	20	10,49	1,76	11,59	1,81	11,97	1,79	12,56	1,76	13,33	1,72
	25	9,82	1,84	11,08	1,89	11,59	1,86	12,37	1,81	13,41	1,74
	30	9,14	1,92	10,57	1,98	11,21	1,93	12,19	1,86	13,49	1,77
EGSAH(X)06DA9W(G)	-5			8,12	0,57	8,12	0,57	8,12	0,57	8,12	0,57
	0			9,73	1,00	9,73	1,00	9,73	0,99	9,73	0,97
	5	10,04	1,11	10,31	1,16	10,40	1,15	10,52	1,14	10,68	1,12
	10	10,13	1,22	10,90	1,25	11,06	1,24	11,30	1,23	11,62	1,22
	15	9,80	1,38	10,74	1,42	11,04	1,40	11,49	1,38	12,09	1,36
	20	9,46	1,55	10,57	1,59	11,01	1,57	11,67	1,54	12,56	1,49
	25	9,13	1,71	10,41	1,76	10,99	1,73	11,86	1,69	13,02	1,63
	30	8,79	1,87	10,24	1,93	10,96	1,90	12,04	1,84	13,49	1,77

Legend

LWC: Leaving water temperature [°C]

EBT: Entering brine temperature [°C]

CC: Cooling capacity at maximum operating frequency, measured according to ·EN14511:2018·.

PI: Power input at maximum operating frequency (including the controller and the pumps), measured according to ·EN14511:2018·.

Conditions

Cooling capacity

The capacity is according to ·EN14511:2018· and valid for chilled water range $Dt = -3\sim 8\text{°C}$

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

3D124144

4 Capacity tables

4 - 2 Heating Capacity Tables

4

EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG

Maximum heating capacity

	LWC [°C]	25		35		45		55		60	
	EBT [°C]	HC [kW]	PI [kW]	HC [kW]	PI [kW]	HC [kW]	PI [kW]	HC [kW]	PI [kW]	HC [kW]	PI [kW]
EGSAH(X)10DA9W(G)	-10	7,36	1,64	7,04	1,91	6,51	2,35	5,98	2,79	5,06	2,75
	-5	8,51	1,59	8,15	2,05	7,70	2,47	7,24	2,89	5,87	2,72
	0	9,65	1,55	9,55	2,20	8,88	2,59	8,49	2,98	6,68	2,70
	5	11,29	1,63	10,83	2,18	10,07	2,52	9,31	2,86	7,70	2,72
	10	12,93	1,72	12,40	2,16	11,26	2,45	10,12	2,74	8,72	2,75
	15	14,19	1,63	13,98	2,14	12,43	2,34	10,89	2,55	9,52	2,58
	20	15,46	1,55	15,56	2,12	13,61	2,24	11,66	2,37	10,31	2,41
	25	16,72	1,47	17,14	2,10	14,78	2,14	12,43	2,18	11,11	2,25
	30	17,98	1,38	18,71	2,08	15,96	2,04	13,20	2,00	11,90	2,08
EGSAH(X)06DA9W(G)	-10	6,08	1,42	5,84	1,64	5,36	1,99	4,88	2,34	4,41	2,50
	-5	7,14	1,37	6,86	1,72	6,45	2,08	5,99	2,44	5,54	2,60
	0	8,20	1,33	7,98	1,79	7,54	2,16	7,10	2,54	6,68	2,70
	5	9,60	1,40	9,30	1,83	8,81	2,21	8,33	2,60	7,70	2,72
	10	11,00	1,48	10,62	1,86	10,09	2,26	9,55	2,66	8,72	2,75
	15	12,13	1,40	12,05	1,84	11,26	2,17	10,46	2,49	9,52	2,58
	20	13,26	1,31	13,49	1,82	12,43	2,07	11,38	2,33	10,31	2,41
	25	14,39	1,22	14,92	1,79	13,61	1,98	12,29	2,16	11,11	2,25
	30	15,53	1,14	16,36	1,77	14,78	1,88	13,20	2,00	11,90	2,08

Legend

LWC: Leaving water temperature [°C]

EBT: Entering brine temperature [°C]

HC: Heating capacity at maximum operating frequency, measured according to ·EN14511:2018·.

PI: Power input at maximum operating frequency (including the controller and the pumps), measured according to ·EN14511:2018·.

Conditions

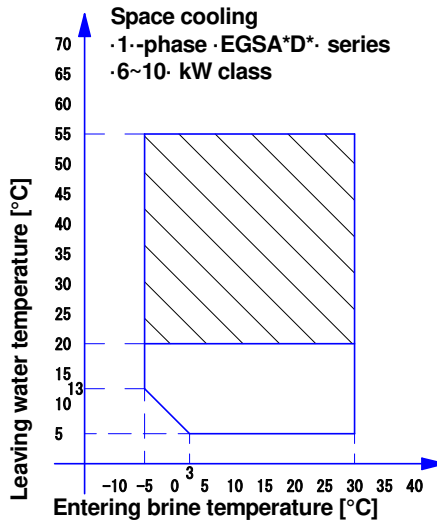
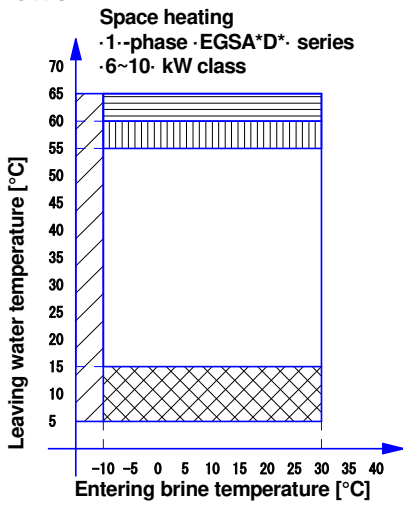
Heating capacity

3D123293

5 Operation range

5 - 1 Operation Range

EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG



- Legend**
- Backup heater only operation
Entering brine temperature = $\leq -10^{\circ}\text{C}$
 - Heat pump operation
 - Heat pump operation
Heat pump operation if setpoint $> 55^{\circ}\text{C}$ and $\Delta T = 8^{\circ}\text{C}$ ($\Delta T = \text{outlet temperature} - \text{inlet temperature}$)
 - Heat pump + backup heater operation
 - Pull-down area
 - Heat pump operation
Heating setpoint: $\geq 15^{\circ}\text{C}$

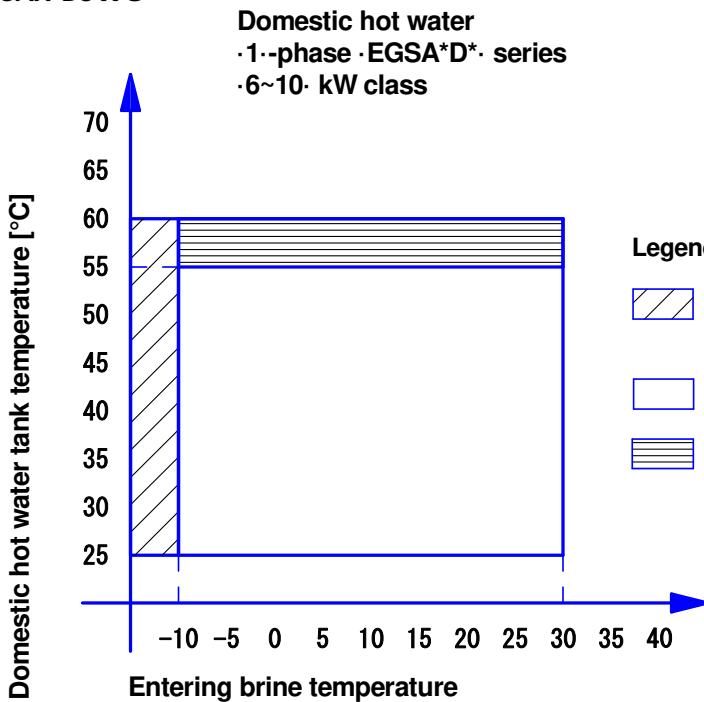
Prevent the system from freezing by adding antifreeze to the brine side (see note).

For more information, refer to the installation manual.

In restricted power supply mode, the outdoor unit and backup heater can only operate separately.

3D122772

EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG



- Legend**
- Backup heater only operation
Entering brine temperature = $\leq -10^{\circ}\text{C}$
 - Heat pump operation
 - Backup heater only operation

Prevent the system from freezing by adding antifreeze to the brine side (see note).

For more information, refer to the installation manual.

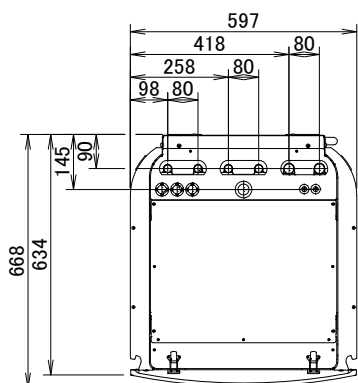
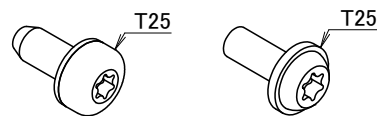
3D122773

6 Dimensional drawings

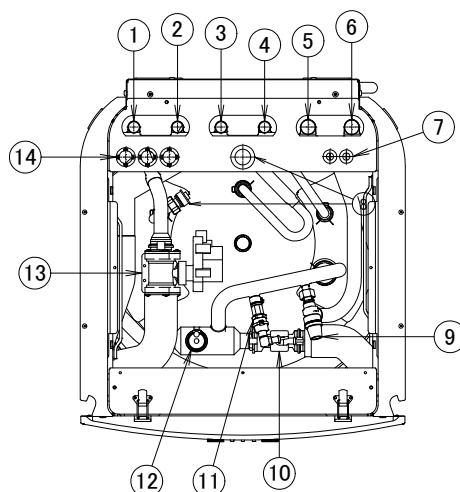
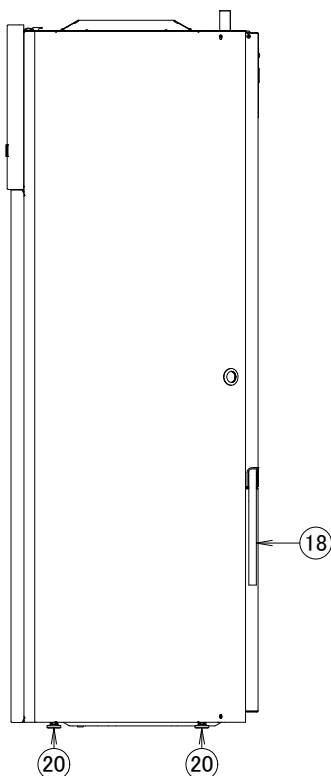
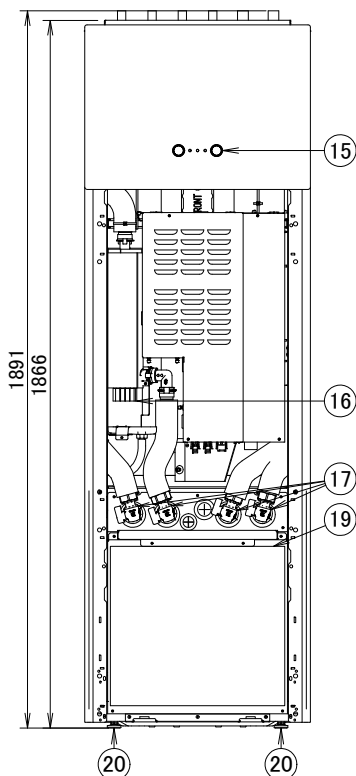
6 - 1 Dimensional Drawings

EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG

Screws used in this unit:



- ① Water out connection Ø22mm straight
- ② Water in connection Ø22mm straight
- ③ Tank out connection Ø22mm straight
- ④ Tank in connection Ø22mm straight
- ⑤ Brine out connection Ø28mm straight
- ⑥ Brine in connection Ø28mm straight
- ⑦ Low voltage wiring intake Ø13.5mm
- ⑧ Recirculation connection G3/4" (female)
- ⑨ Safety valve
- ⑩ Flow sensor
- ⑪ Space heating water pressure sensor
- ⑫ Air purge
- ⑬ 3-way valve
- ⑭ High voltage wiring intake Ø24mm
- ⑮ User interface
- ⑯ Backup heater
- ⑰ Shut-off valves
- ⑱ Drain outlet (unit + safety valve)
- ⑲ Hydrobox unit
- ⑳ Levelling feet



The typical field installation has to be done according to the applicable legislation.

For examples, refer to the installer reference guide.

3D122284

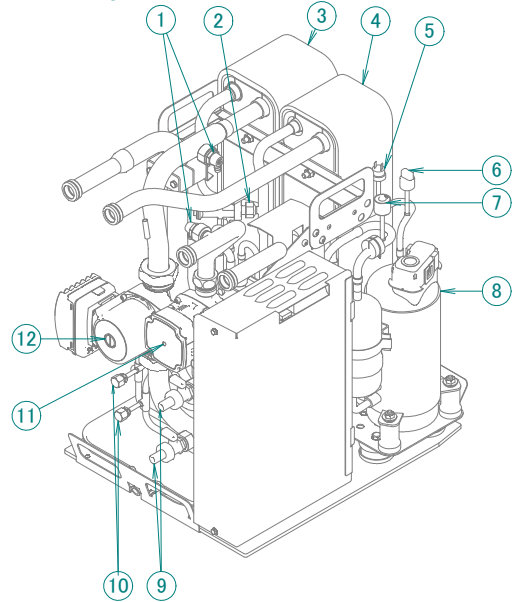
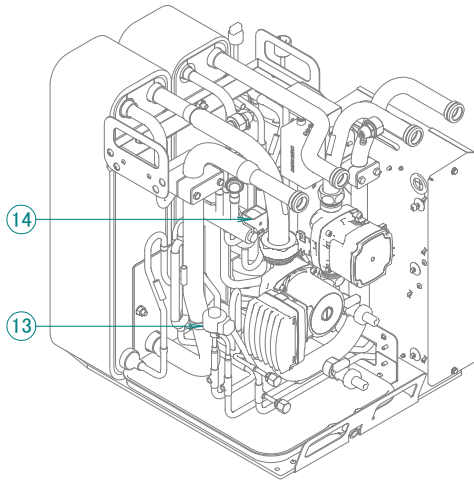
6 Dimensional drawings

6 - 1 Dimensional Drawings

EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG

- ① Manual air purge valve
- ② Refrigerant pressure relief valve
- ③ Plate heat exchanger Brine side
- ④ Plate heat exchanger Water side
- ⑤ High pressure switch
- ⑥ Refrigerant pressure sensor
- ⑦ Low pressure sensor

- ⑧ Compressor
- ⑨ Drain valve
- ⑩ Service port .5/16" flare
- ⑪ Pump Water side
- ⑫ Pump Brine side
- ⑬ Electronic expansion valve
- ⑭ 4-way valve



The typical field installation has to be done according to the applicable legislation.

For examples, refer to the installer reference guide.

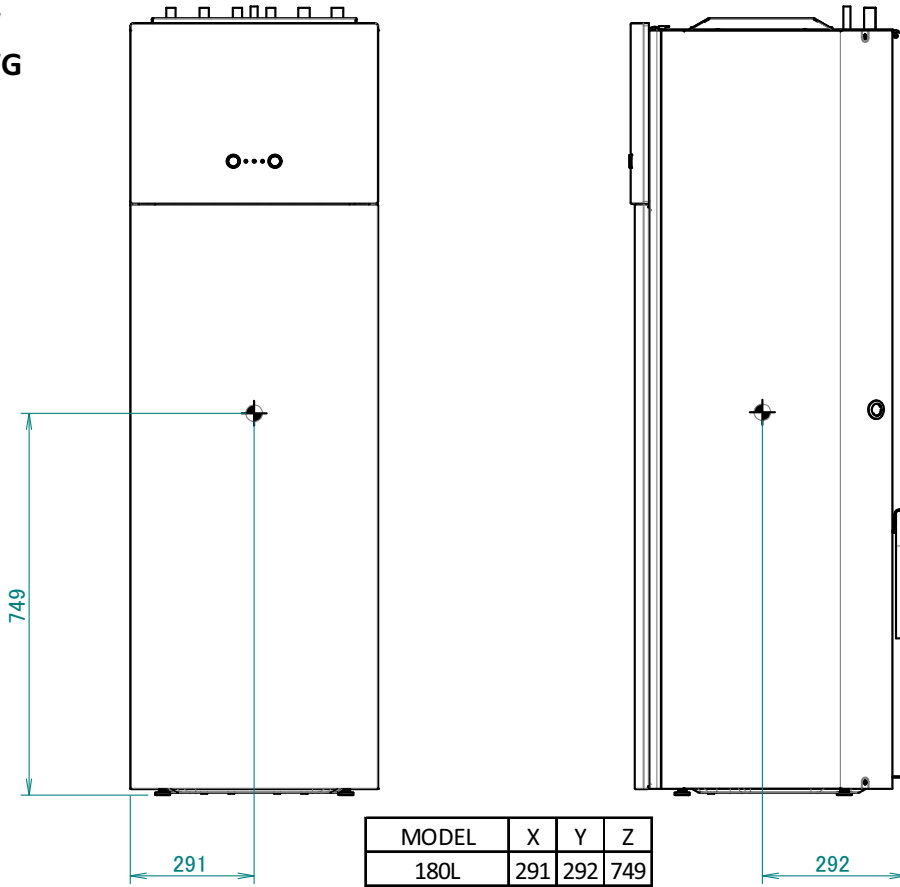
3D122355

7 Centre of gravity

7 - 1 Centre of Gravity

7

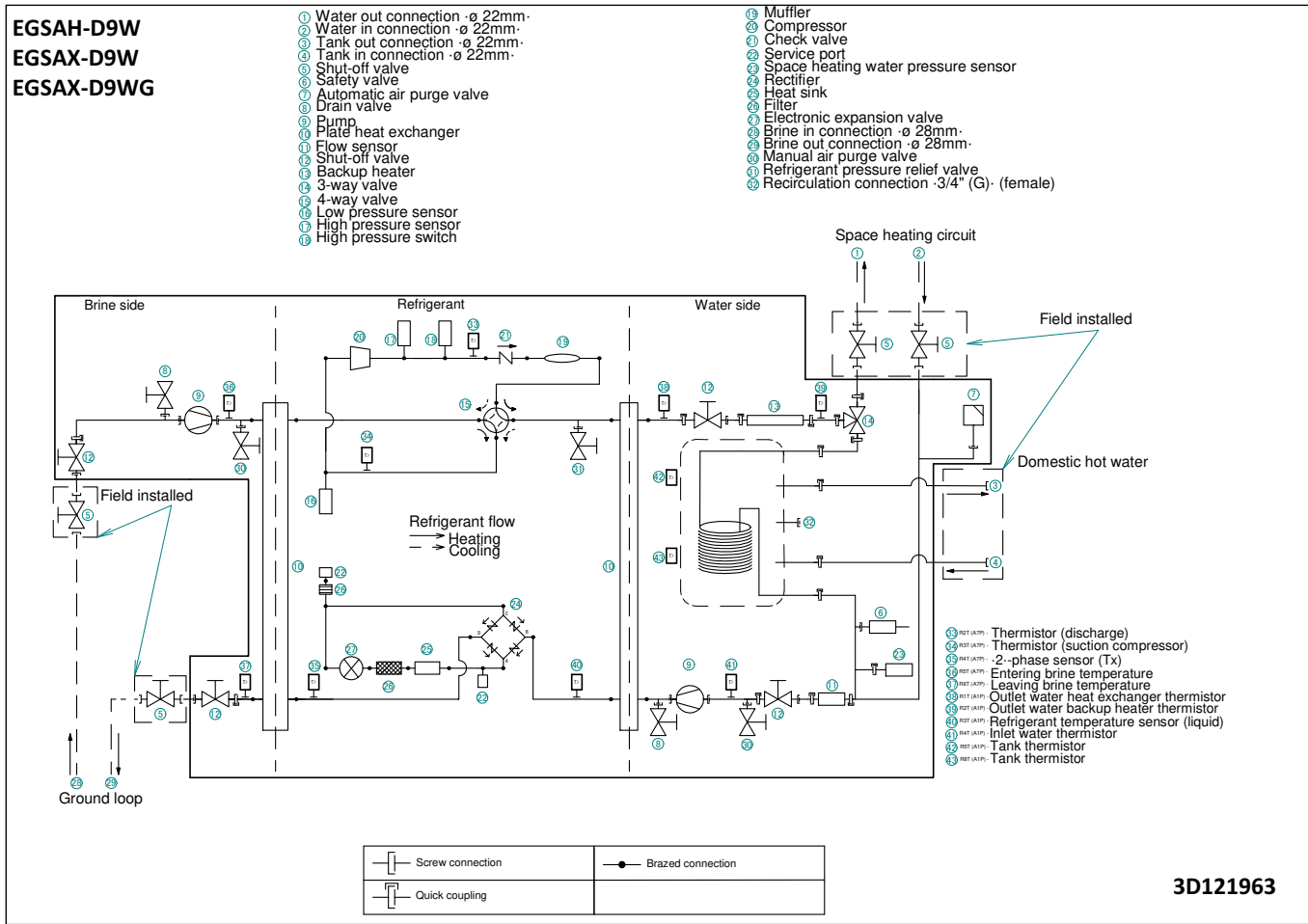
EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG



3D122238

8 Piping diagrams

8 - 1 Piping Diagrams



9 Wiring diagrams

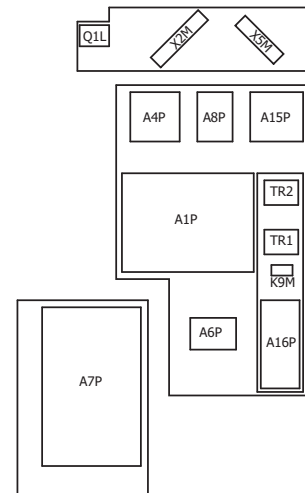
9 - 1 Notes & Legend

EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG

NOTES to go through before starting the unit

X1M	: Main terminal	X5M	: Field wiring terminal for DC
X2M	: Field wiring terminal for AC		
— — — — —	: Earth wiring	— — — — —	: Field supply
15	: Wire number 15	→ **/12.2	: Connection ** continues on page 12 column 2
①	: Several wiring possibilities		
	: Option		: Mounted in switch box
	: Wiring depending on model		: PCB

POSITION IN SWITCH BOX



LEGEND

* : optional # : field supply

Part n°	Description
A1P	main PCB (hydro)
A2P	* user interface PCB
A3P	* On/OFF thermostat
A3P	* heat pump convector
A4P	* digital I/O PCB
A4P	* receiver PCB (wireless On/OFF thermostat, PC=power circuit)
A6P	BUH control PCB
A7P	inverter PCB
A8P	* demand PCB
A11P	MMI main PCB
A15P	LAN adapter
A16P	ACS digital I/O PCB
B1L	flow sensor
B1PR	refrigerant pressure sensor
B1PW	water pressure sensor
C2~C8	capacitor
CN* (A4P)	* connector
CT*	* current sensor
DS1 (A8P)	* dipswitch
E1H	backup heater element (1 kW)
E2H	backup heater element (2 kW)
F1B	# overcurrent fuse
F1T	thermal fuse backup heater
F1~2U (A4P)	* fuse (5 A, 250 V)
F1U (A16P)	fuse (T, 1.5 A, 250 V)
F2B	# overcurrent fuse compressor
F6U (A7P)	fuse (T, 3.15 A, 250 V)
FU1 (A1P)	fuse (T, 6.3 A, 250 V)
K*R (A1/4/7/16P)	relay on PCB
K1~6M (A6P)	BUH relay
K9M	thermal protector BUH relay
L1R	reactor
M1C	motor (compressor)
M1P	main water supply pump
M2P	# domestic hot water pump
M2S	# shut off valve
M3P	# drain pump
M4P	brine pump

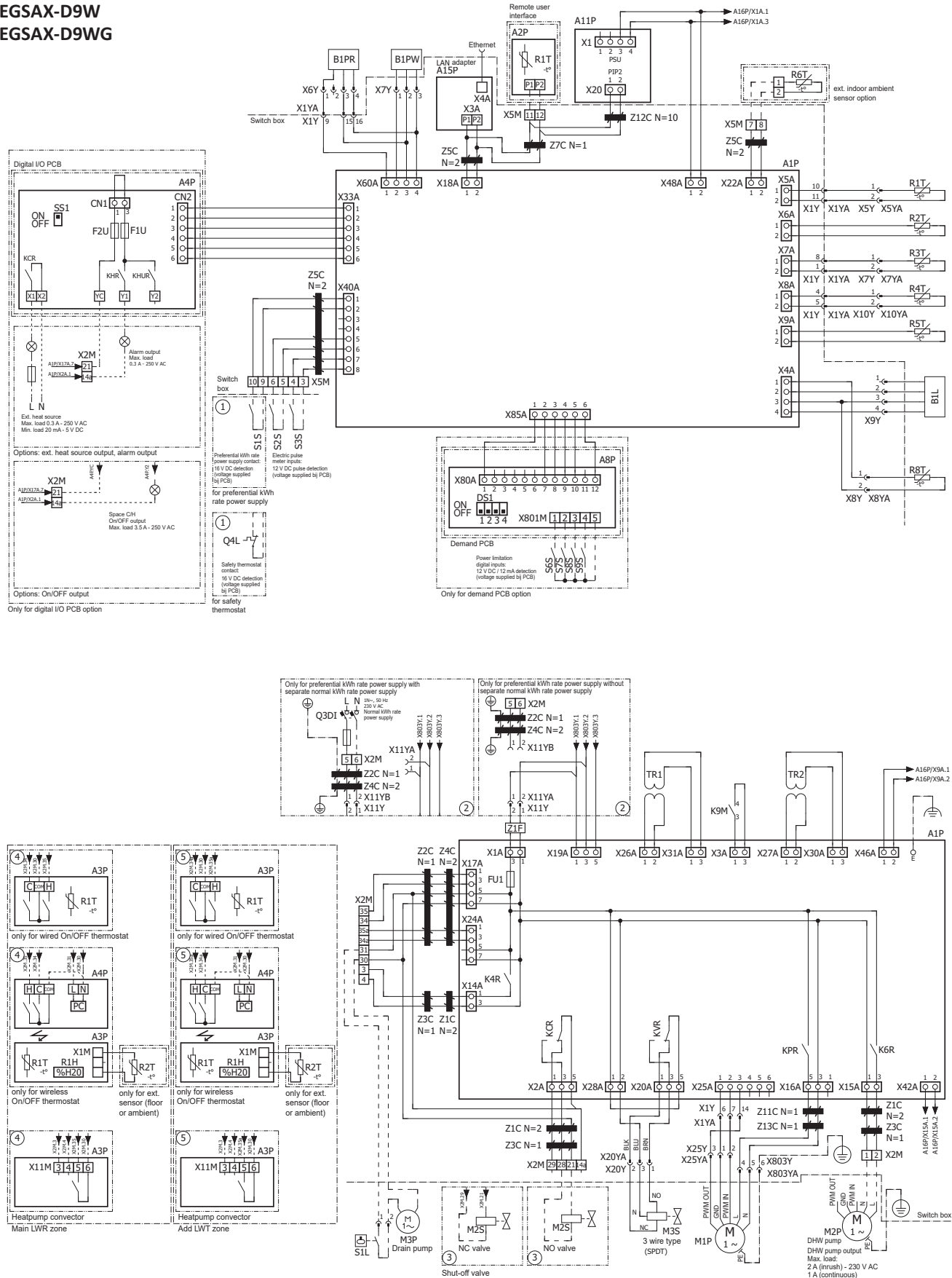
M3S	3 way valve for floorheating / domestic hot water
Q*DI	# earth leakage circuit breaker
Q1L	thermal protector backup heater
Q1L (A7P)	thermal protector compressor
Q4L	# safety thermostat
R1T (A1P)	outlet water heat temperature sensor (LWC)
R1T (A2P)	* ambient sensor user interface
R1T (A3P)	* ambient sensor On/OFF thermostat
R1T (A7P)	thermistor (outdoor ambient)
R2T (A1P)	after BUH temperature sensor
R2T (A3P)	* external sensor (floor or ambient)
R2T (A7P)	thermistor (discharge)
R3T (A1P)	refrigerant liquid temperature sensor
R3T (A7P)	thermistor (suction)
R4T (A1P)	inlet water temperature sensor (EWC)
R4T (A7P)	thermistor (2 phase)
R5T (A1P)	DHW tank temperature sensor
R5T (A7P)	thermistor (brine entering temperature)
R6T (A1P)	* external indoor ambient thermistor
R6T (A7P)	thermistor (brine low temperature)
R8T (A1P)	DHW tank temperature sensor
R1H (A3P)	* humidity sensor
S1L	# low level switch
S1NPL	low pressure sensor (refrigerant)
S1PH	high pressure switch
S1PL	# low brine pressure switch
S1S	# preferential kWh rate PS contact
S2S	# electrical meter pulse input 1
S3S	# electrical meter pulse input 2
S6~9S	# digital power limitation inputs
SS1 (A4P)	* selector switch
TR1,TR2	power supply transformer
V1~6D (A6P)	diode
X*H*	backup heater connector
X*M	terminal strip
X*Y*	connector
Y1E	electronic expansion valve
Y1S	Solenoid valve (4-way valve)
Z*C	noise filter (ferrite core)
Z*F (A16P)	noise filter

4D116863D

9 Wiring diagrams

9 - 2 Control Circuit

EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG

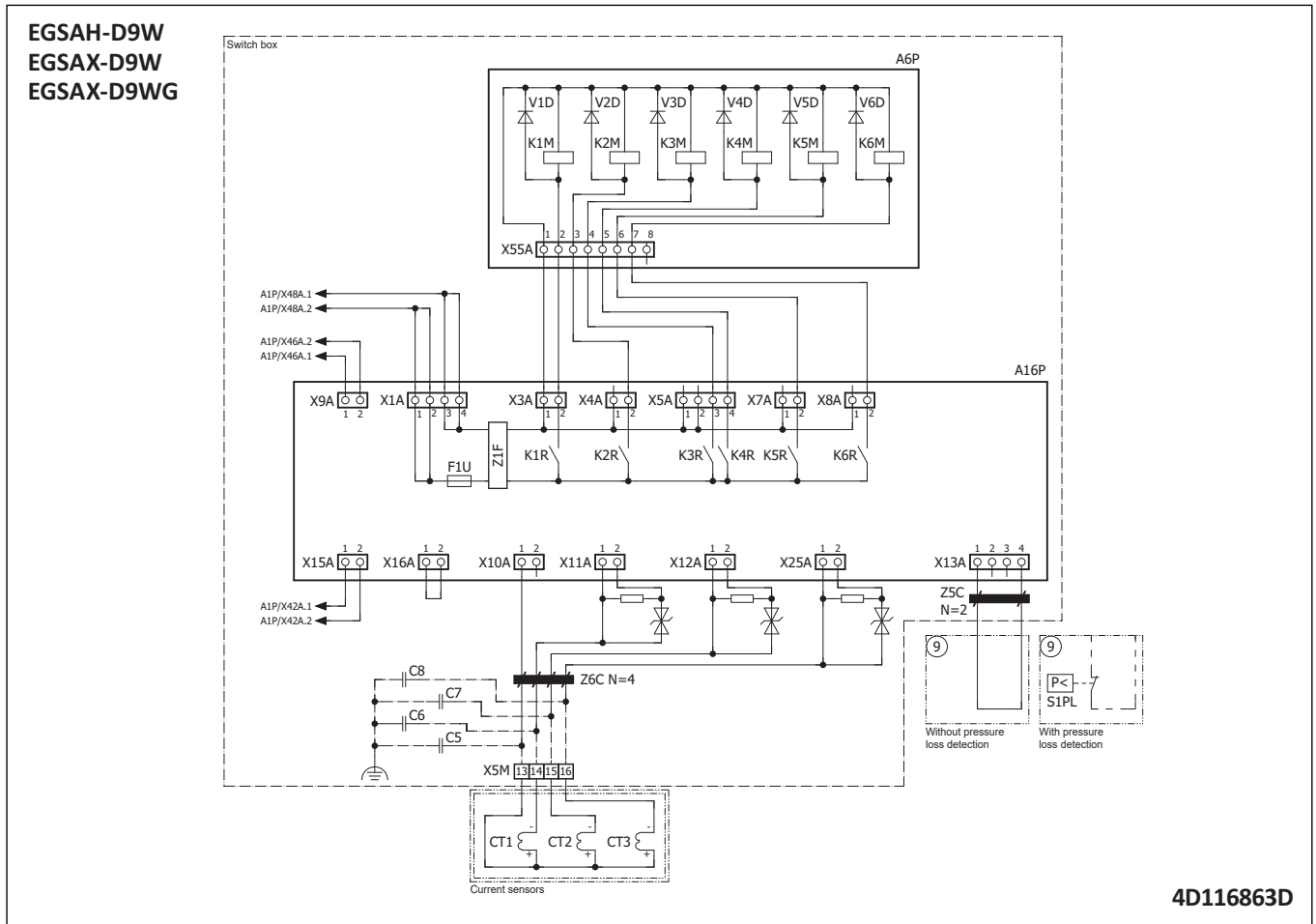


4D116863D

9 Wiring diagrams

9 - 2 Control Circuit

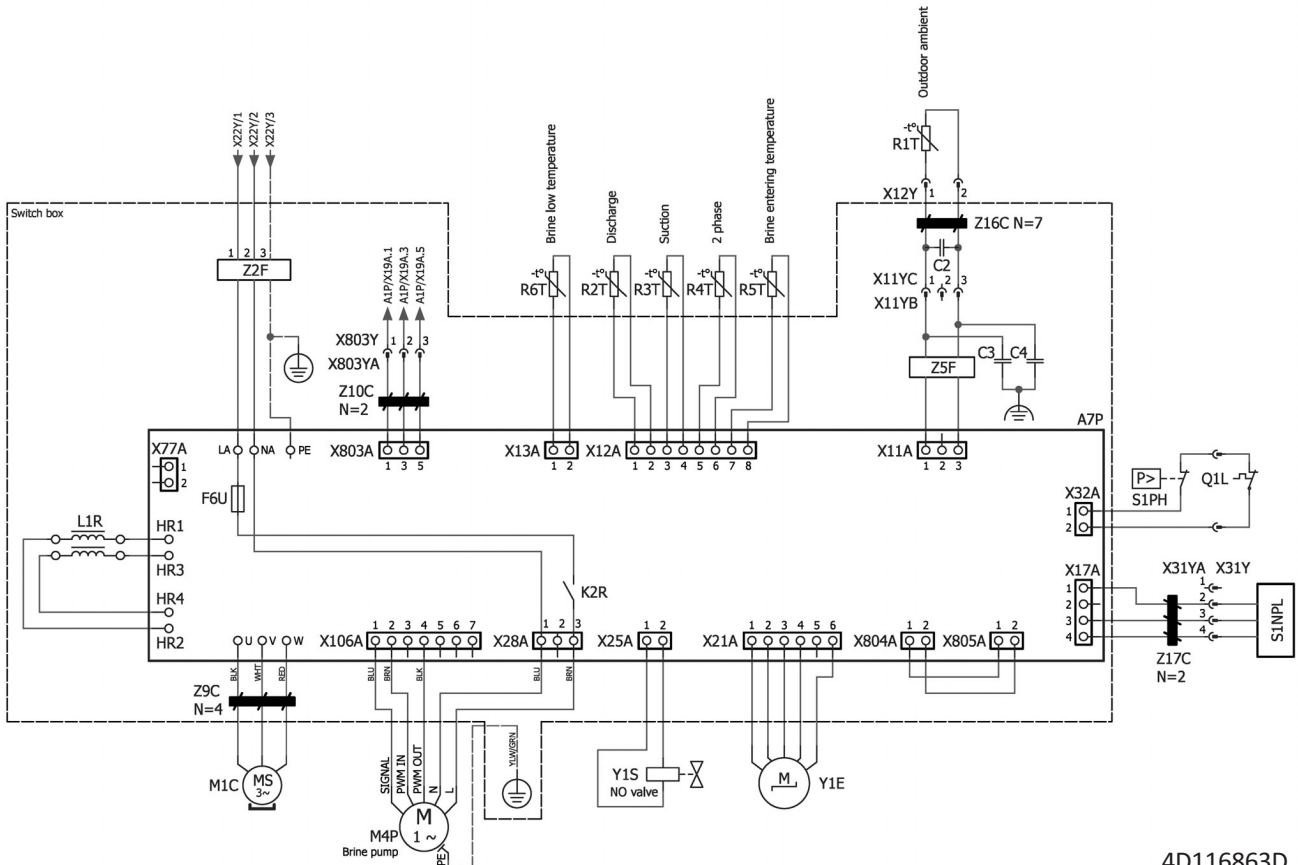
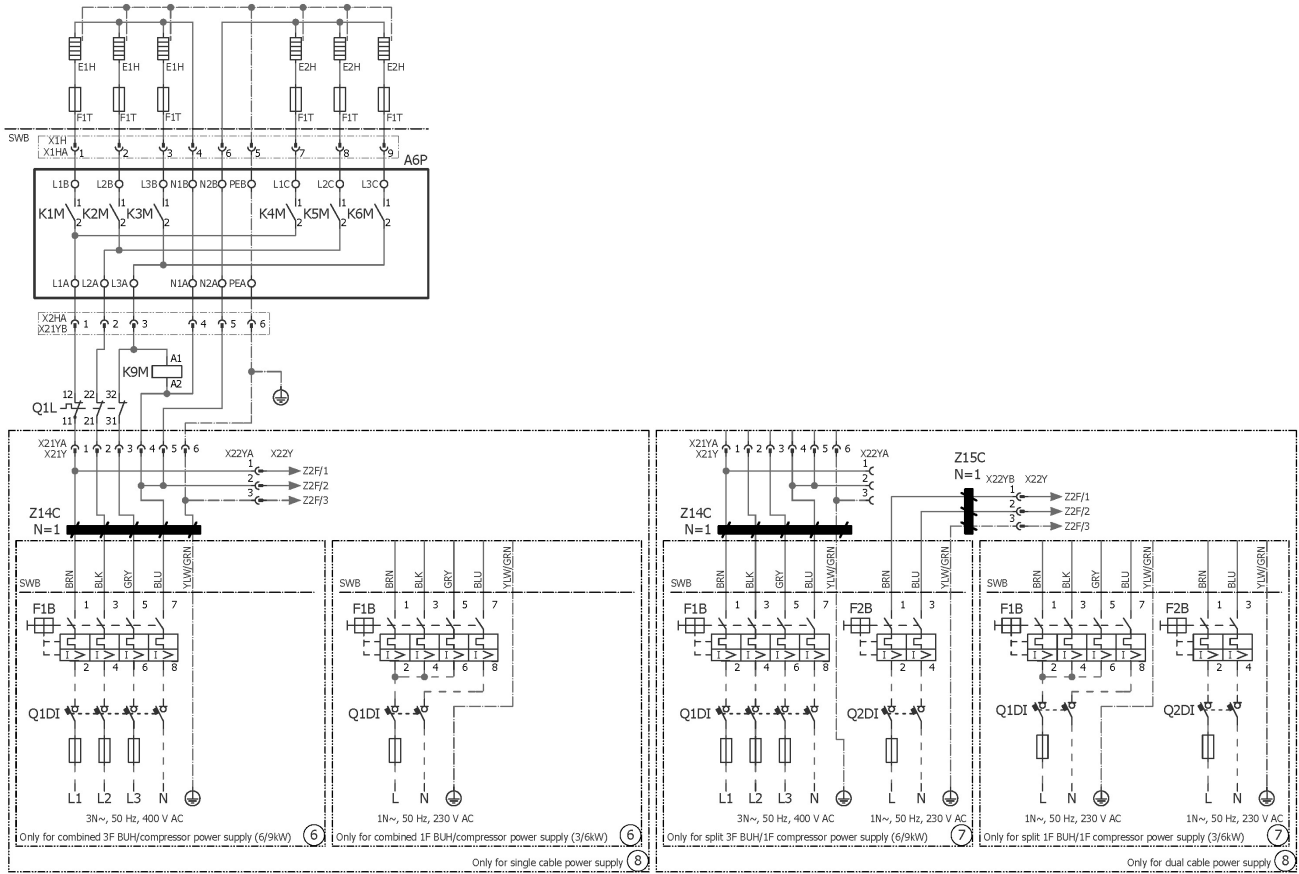
9



9 Wiring diagrams

9 - 3 Power Supply, Back-up Heater

EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG



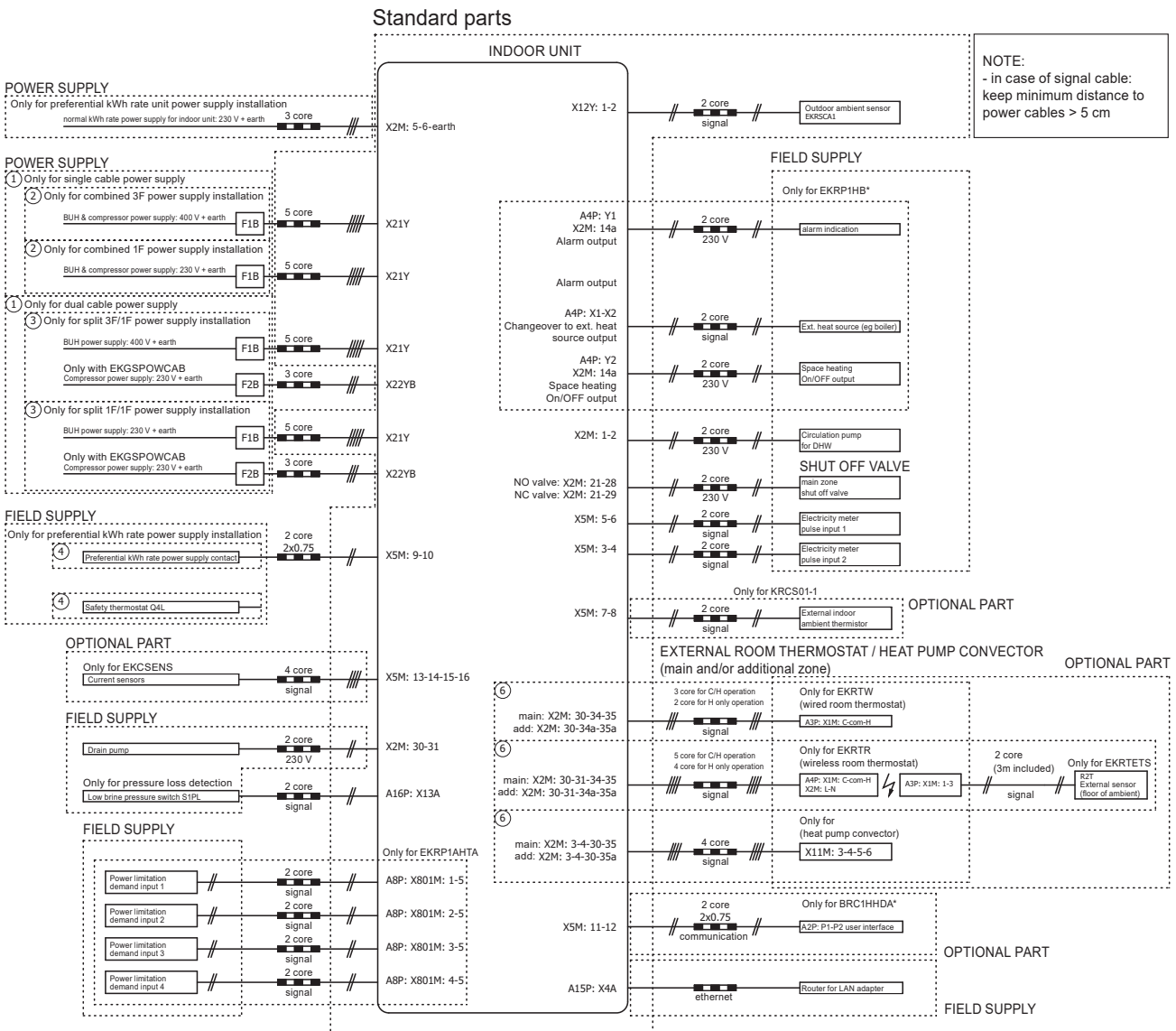
10 External connection diagrams

10 - 1 External Connection Diagrams

EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG

Electrical connection diagram Daikin Altherma Ground Source

For more details: please check unit wiring



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

11 Sound data

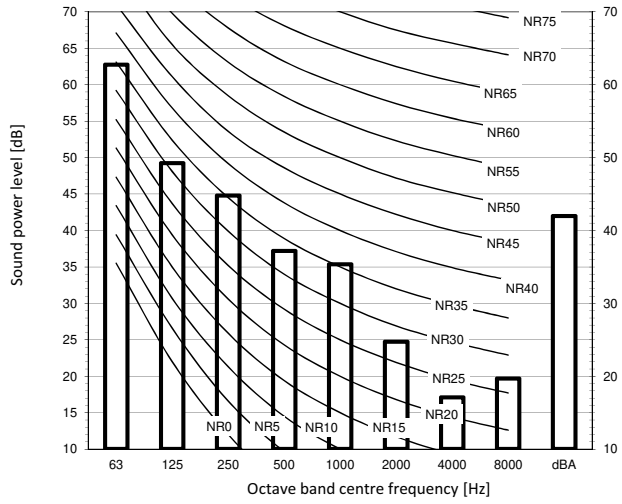
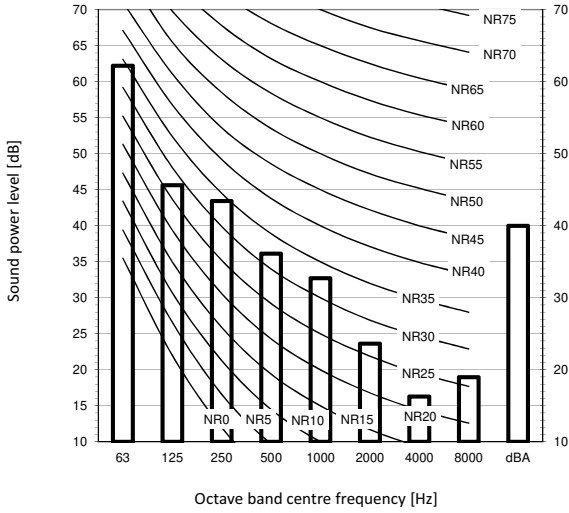
11 - 1 Sound Power Spectrum

EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG

Heating

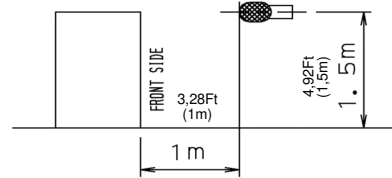
EGSA*06*

EGSA*10*



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 μPa
5. If the sound is measured under actual installation conditions, the measured value will be higher due to environmental noise and sound reflections.



3D122374

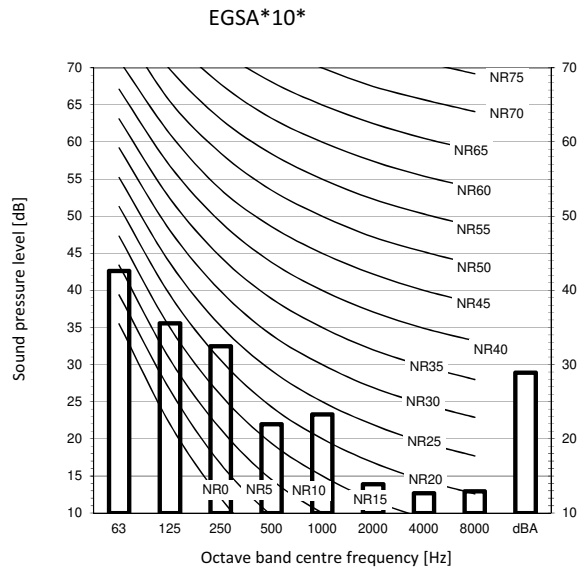
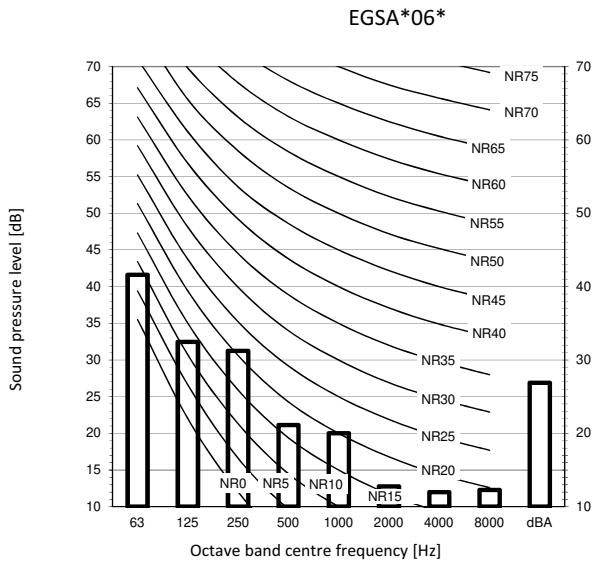
11 Sound data

11 - 2 Sound Pressure Spectrum - Heating

11

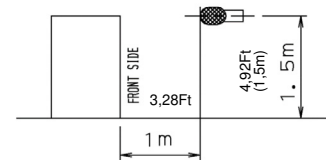
EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG

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 µPa
5. If the sound is measured under actual installation conditions, the measured value will be higher due to environmental noise and sound reflections.



3D122375

12 Installation

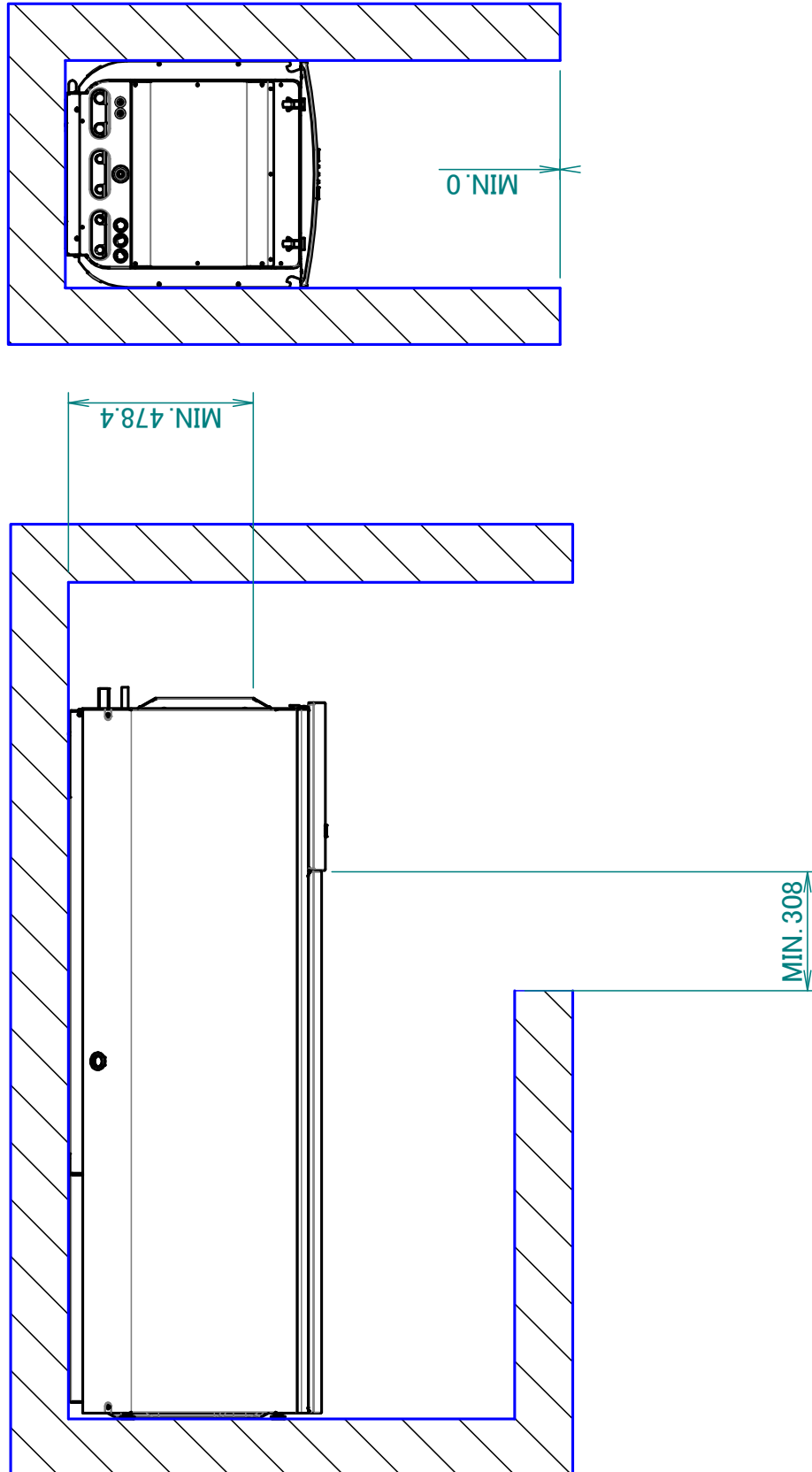
12 - 1 Installation Method

12 Installation

12 - 1 Installation Method

12

EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG



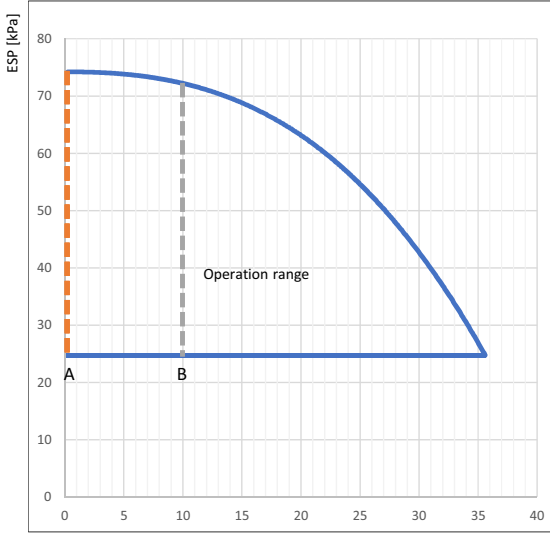
3D122277

13 Hydraulic performance

13 - 1 Static Pressure Drop Unit

EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG

Space heating/cooling circuit



ESP: External Static Pressure
Flow: water flow through the unit

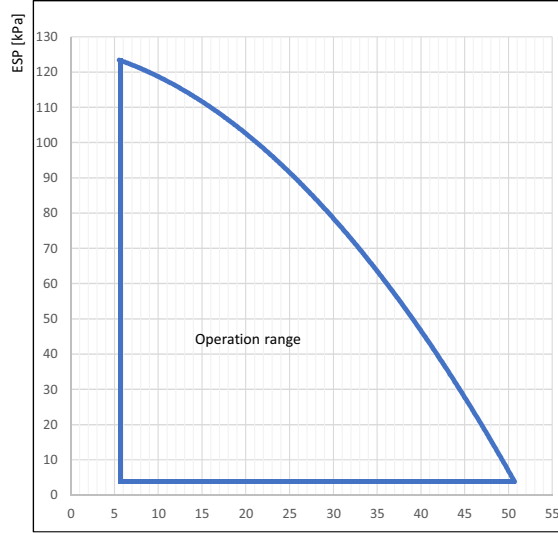
Flow [l/min]

- A: Minimum water flow rate during heat pump operation
- B: Minimum water flow rate during cooling operation

Selecting a flow outside the operating area can damage the unit or cause the unit to malfunction.

Brine circuit

Mixture of water and propylene glycol (30V%) at an entering brine temperature of -3°C



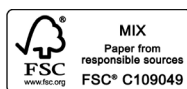
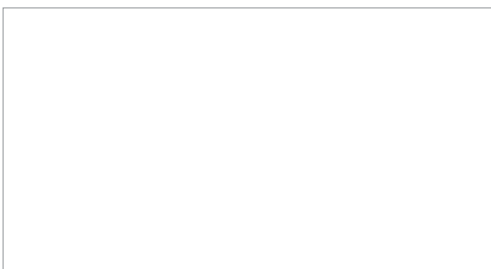
ESP: External Static Pressure
Flow: water/glycol flow through the unit

Flow [l/min]

3D12276A



Daikin Europe N.V. Naamloze Vennootschap - Zandvoordestraat 300, B-8400 Oostende - Belgium - www.daikin.eu - BE 0412 120 336 - RPR Oostende



EEDEN20 10/19



The present leaflet is drawn up by way of information only and does not constitute an offer binding upon Daikin Europe N.V.. Daikin Europe N.V. has compiled the content of this leaflet to the best of its knowledge. No express or implied warranty is given for the completeness, accuracy, reliability or fitness for particular purpose of its content and the products and services presented therein. Specifications are subject to change without prior notice. Daikin Europe N.V. explicitly rejects any liability for any direct or indirect damage, in the broadest sense, arising from or related to the use and/or interpretation of this leaflet. All content is copyrighted by Daikin Europe N.V.