Daikin Altherma ground source heat pump Air Conditioning Technical Data

EGSAH-D9W / EGSAX-D9W / EGSAX-D9WG

EGSAH06DA9W
EGSAH10DA9W
EGSAX06DA9W
EGSAX10DA9W
EGSAX06DA9WG
EGSAX10DA9WG

EEDEN20

Table of contents
EGSAH-D9W / EGSAX-D9W / EGSAX-D9WG

1 Features
1 - 1 EGSAH-D9W

Ground source heat pump for heating & hot water

1

- Space heating comfort guaranteed even in the coldest winter conditions
- 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

Online controller

1 Features
1 - 2 EGSAX-D9W, EGSAX-D9WG

Ground source heat pump for heating, cooling & hot water

- 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
- Space heating comfort guaranteed even in the coldest winter conditions

Online controller

2 Specifications

1 - 2 EGSAX-D9W, EGSAX-D9WG

Technical specifications					EGSAH06D9W	EGSAH10D9W
Heating capacity	Min.			kW	0.85	
	Nom.			kW	3.35	5.49
	Max.			kW	7.98	9.55
Power input	Nom.			kW	0.74	1.17
COP					4.51	4.70
Casing	Colour				White + Black	
	Material				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	
Weight	Unit			kg	222	
	Packed unit			kg	237	
Packing	Material				Wood / Carton / PE wrapping foil / Metal	
	Weight			kg	15	
Compressor	Type				Hermetically sealed swing compressor	
	Model				2YC40JXD#C	
PED	Category				Category II	
	Most critical part	Name			Compressor	
		Ps*DN		bar	42	
		Ps*V		Bar*l	64	
Pump	Type				Grundfos UPM3LK	
	Nr of speeds				PWM	
	Power input			W	75	
Water side Heat exchanger	Type				Plate heat exchanger	
	Quantity				1	
	Water volume			l	1.76	
	Insulation material				Elastomeric foam	
Brine pump	Type				Grundfos UPMXL Geo	
	Power input			W	180	
Brine heat exchanger	Quantity				1	
	Brine volume			l	1.94	
Tank	Energy efficiency class				A	
	Standing heat loss			W	50	
Tank	Water volume			l	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	
3-way valve	Coefficient of flow (kV)	Space heating		m^3/h	10	
		Domestic hot water tank		m^3/h	8	
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	
Water circuit - Domestic hot water side	Piping connections	Cold water in / Hot water out	Diameter	mm	22	
			Recirculation connection	inch	G 3/4" FEMALE	
Brine circuit	Piping connections diameter			mm	28	
	Safety valve			bar	3	
Space heating	Cold climate water outlet	General	SCOP		4.00 (1)	4.15 (1)
Brine circuit	Drain valve / fill valve				Yes	
	Air purge valve				No	
	Total volume			l	5.0	
Refrigerant	Type				R-32	
	GWP				675.0	
	Charge			TCO2Eq	1.15	
	Charge			kg	1.70	
	Circuits	Quantity			1	
Refrigerant oil	Type				FW68DA	
	Charged volume			l	0.7	

2 Specifications

1 - 2 EGSAX-D9W, EGSAX-D9WG

Technical specifications					EGSAH06D9W	EGSAH10D9W
Operation range	Installation space	Min.		°C	5	
		Max.		°C	35	
	Brine side	Min.		°C	-10	
		Max.		°C	30	
	Heating	Water side	Min.	°C	5	
Operation range	Heating	Water side	Max.	°C	65	
	Domestic hot water	Water side	Min.	°C	25	
			Max.	°C	60	
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	Indoor		dB(A)	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	
Sound power level	Range			dB(A)	From 36 to 44 (46 in boost mode), condition B0/-3 W30/35	From 36 to 47, condition B0/-3 W30/35
Tank	Name				Stainless steel domestic hot water tank 180 l	
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	
		Qelec (Daily electricity consumption)		kWh	4.140	
		Qfuel (Daily fuel consumption)		kWh	0.000	
		ηwh (water heating efficiency)		%	117	
		Water heating energy efficiency class			A+	
	Cold climate	AEC (Annual electricity consumption)		kWh	877	
		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	
		ηwh (water heating efficiency)		%	117	
		Qelec (Daily electricity consumption)		kWh	4.140	
		Qfuel (Daily fuel consumption)		kWh	0.000	
Space heating	Average climate water outlet 55°C	General	Annual energy consumption	kWh	3,447	4,393
			ηs (Seasonal space heating efficiency)	%	141	152
			Prated at -10°C	kW	6	9
			SCOP		3.72 (1)	4.00 (1)

2 Specifications

1 - 2 EGSAX-D9W, EGSAX-D9WG

Technical specifications					EGSAH06D9W	EGSAH10D9W
Space heating	Average climate water outlet 55°C	General	Seasonal space heating eff. class		A++	A+++
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0	-
			COPd		3.13	3.15
			Pdh	kW	5.5	7.5
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0	
			COPd		3.81	4.09
			Pdh	kW	3.3	4.7
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0	
			COPd		4.33	4.54
			Pdh	kW	2.2	3.0
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0	0.9
			COPd		3.65	4.59
			Pdh	kW	1.0	1.4
		Tol (temperature operating limit)	COPd		2.90	2.85
			Pdh	kW	6.4	8.5
			TOL	°C	-10	
		Tbiv (bivalent temperature)	COPd		2.90	2.85
			Pdh	kW	6.4	8.5
			Tbiv	°C	-10	
	Cold climate water outlet 55°C	General	Annual energy consumption	kWh	3,820	5,047
			ηs (Seasonal space heating efficiency)	%	152	158
			Prated at -22°C	kW	6	9
	Cold climate water outlet	General	SCOP		5.13 (1)	5.32 (1)
	Cold climate water outlet 55°C	A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0	
			COPd		3.84	3.92
			Pdh	kW	3.8	5.4
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0	
			COPd		4.32	4.58
			Pdh	kW	2.3	3.3
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		0.9	1.0
			COPd		4.60	4.73
			Pdh	kW	1.6	2.1
		D Condition (12°CDB/11°CWB)	COPd		3.99	3.82
			Pdh	kW	1.0	
		Tol (temperature operating limit)	COPd		2.90	2.85
			Pdh	kW	6.4	8.5
			TOL	°C	-22	

2 Specifications

1 - 2 EGSAX-D9W, EGSAX-D9WG

Technical specifications					EGSAH06D9W	EGSAH10D9W
Space heating	Cold climate water outlet 55°C	Tbiv (bivalent temperature)	COPd		2.90	2.85
			Pdh	kW	6.4	8.5
			Tbiv	°C	-22	
	Warm climate water outlet 55°C	General	Annual energy consumption	kWh	2,189	2,837
			ηs (Seasonal space heating efficiency)	%	143	152
			Prated at 2°C	kW	6	9
			SCOP		3.78 (1)	4.00 (1)
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0	
			COPd		2.90	2.85
			Pdh	kW	6.4	8.5
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0	
			COPd		3.58	3.72
			Pdh	kW	4.1	5.4
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0	
			COPd		4.47	4.76
			Pdh	kW	1.9	2.5
		Tbiv (bivalent temperature)	COPd		2.90	2.85
			Pdh	kW	6.4	8.5
			Tbiv	°C	2	
	Average climate water outlet 35°C	General	Annual energy consumption	kWh	2,447	3,428
			ηs (Seasonal space heating efficiency)	%	195	197
			Prated at -10°C	kW	6	9
			SCOP		5.06 (1)	5.12 (1)
			Seasonal space heating eff. class		A+++	
		A Condition (-7°CDB/-8°CWB)	COPd		4.84	4.51
			Pdh	kW	5.6	7.7
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0	
			COPd		5.36	5.43
			Pdh	kW	3.4	4.6
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0	
			COPd		5.42	5.38
			Pdh	kW	2.1	2.9
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		0.9	
			COPd		4.57	5.10
			Pdh	kW	1.1	1.4
		Tol (temperature operating limit)	COPd		4.67	4.29
			Pdh	kW	6.0	8.6

2 Specifications

1 - 2 EGSAX-D9W, EGSAX-D9WG

Technical specifications					EGSAH06D9W	EGSAH10D9W
Space heating	Average climate water outlet 35°C	Tol (temperature operating limit)	TOL	°C	-10	
		Tbiv (bivalent temperature)	COPd		4.67	4.29
			Pdh	kW	6.0	8.6
			Tbiv	°C	-10	
	Cold climate water outlet 35°C	General	Annual energy consumption	kWh	2,884	3,938
			ηs (Seasonal space heating efficiency)	%	197	205
			Prated at -22°C	kW	6	9
			SCOP		5.13 (1)	5.32 (1)
		A Condition (-7°CDB/-8°CWB)	COPd		5.34	5.45
			Pdh	kW	3.6	5.0
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0	
			COPd		5.18	5.49
			Pdh	kW	2.2	3.1
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		0.9	
			COPd		5.46	5.74
			Pdh	kW	1.5	2.1
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		0.9	
			COPd		4.73	4.64
			Pdh	kW	1.2	
		Tol (temperature operating limit)	COPd		4.84	4.29
			Pdh	kW	5.9	8.6
			TOL	°C	-22	
		Tbiv (bivalent temperature)	COPd		4.84	4.29
			Pdh	kW	5.9	8.6
			Tbiv	°C	-22	
	Warm climate water outlet 35°C	General	Annual energy consumption	kWh	1,683	2,244
			ηs (Seasonal space heating efficiency)	%	183	194
			Prated at 2°C	kW	6	9
			SCOP		4.76 (1)	5.06 (1)
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0	
			COPd		4.67	4.29
			Pdh	kW	6.0	8.6
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0	
			COPd		5.13	5.23
			Pdh	kW	3.9	5.7
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		0.9	1.0
			COPd		5.32	5.48
Space heating	Warm climate water outlet 35°C	D Condition (12°CDB/11°CWB)	Pdh	kW	1.8	2.5
		Tbiv (bivalent temperature)	COPd		4.67	4.29
			Pdh	kW	6.0	8.6
			Tbiv	°C	2	
Space cooling	Low temperature application	General	Pdesign	kW	8	
			SEER		14	
	Medium temperature application	General	Pdesign	kW	8	
			SEER		15	

Electrical specifications				EGSAH06D9W	EGSAH10D9W
Power supply	Phase			1~/3~	
	Frequency		Hz	50	
	Voltage		V	230/400	
	Voltage range	Min.	%	10	
		Max.	%	10	
Electrical power consumption	Standby		W	15	
Current	Recommended fuses		A	16/32	
Electric heater	Type			9W	

(1)According to EN14825 and EN14511:2013 |
See operation range drawing: range increase by support booster heater or backup heater

2 Specifications

1 - 2 EGSAX-D9W, EGSAX-D9WG

Technical specifications					EGSAX06D9W	EGSAX10D9W
Heating capacity	Min.			kW	0.85	
	Nom.			kW	3.35	5.49
	Max.			kW	7.98	9.55
Power input	Nom.			kW	0.74	1.17
COP					4.51	4.70
Casing	Colour				White + Black	
	Material				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	
Weight	Unit			kg	222	
	Packed unit			kg	237	
Packing	Material				Wood / Carton / PE wrapping foil / Metal	
	Weight			kg	15	
Compressor	Type				Hermetically sealed swing compressor	
	Model				2YC40JXD#C	
PED	Category				Category II	
	Most critical part	Name			Compressor	
		Ps*DN		bar	42	
		Ps*V		Bar*l	64	
Pump	Type				Grundfos UPM3LK	
	Nr of speeds				PWM	
	Power input			W	75	
Water side Heat exchanger	Type				Plate heat exchanger	
	Quantity				1	
	Water volume			l	1.76	
	Insulation material				Elastomeric foam	
Brine pump	Type				Grundfos UPMXL Geo	
	Power input			W	180	
Brine heat exchanger	Quantity				1	
	Brine volume			l	1.94	
Tank	Energy efficiency class				A	
	Standing heat loss			W	50	
Tank	Storage volume			l	-	180
	Water volume			l	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	
3-way valve	Coefficient of flow (kV)	Space heating		m^3/h	10	
		Domestic hot water tank		m^3/h	8	
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	
Water circuit - Domestic hot water side	Piping connections	Cold water in / Hot water out	Diameter	mm	22	
			Recirculation connection	inch	G 3/4" FEMALE	
Brine circuit	Piping connections diameter			mm	28	
	Safety valve			bar	3	
Latent cooling capacity	7/12°C	Max.		kW	8	
Space heating	Cold climate water outlet	General	SCOP		4.03 (1)	4.18 (1)
Brine circuit	Drain valve / fill valve				Yes	
	Air purge valve				No	
	Total volume			l	5.0	
Refrigerant	Type				R-32	
	GWP				675.0	
	Charge			TCO2Eq	1.15	
	Charge			kg	1.70	
	Circuits	Quantity			1	

2 Specifications

1 - 2 EGSAX-D9W, EGSAX-D9WG

Technical specifications					EGSAX06D9W	EGSAX10D9W
Refrigerant oil	Type				FW68DA	
	Charged volume			l	0.7	
Operation range	Installation space	Min.		°C	5	
		Max.		°C	35	
	Brine side	Min.		°C	-10	
Operation range	Brine side	Max.		°C	30	
	Heating	Water side	Min.	°C	5	
			Max.	°C	65	
	Domestic hot water	Water side	Min.	°C	25	
			Max.	°C	60	
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	Indoor		dB(A)	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	
Sound power level	Range			dB(A)	From 36 to 44 (46 in boost mode), condition B0/-3 W30/35	From 36 to 47, condition B0/-3 W30/35
Tank	Name				Stainless steel domestic hot water tank 180 l	
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	
		Qelec (Daily electricity consumption)		kWh	4.140	
		Qfuel (Daily fuel consumption)		kWh	0.000	
		ηwh (water heating efficiency)		%	117	
		Water heating energy efficiency class			A+	
	Cold climate	AEC (Annual electricity consumption)		kWh	877	
		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	
		ηwh (water heating efficiency)		%	117	
		Qelec (Daily electricity consumption)		kWh	4.140	
		Qfuel (Daily fuel consumption)		kWh	0.000	
Space heating	Average climate water outlet 55°C	General	Annual energy consumption	kWh	3,393	4,339
			ηs (Seasonal space heating efficiency)	%	143	154

2 Specifications

1 - 2 EGSAX-D9W, EGSAX-D9WG

Technical specifications					EGSAX06D9W	EGSAX10D9W
Space heating	Average climate water outlet 55°C	General	Prated at -10°C	kW	6	9
			SCOP		3.77 (1)	4.05 (1)
			Seasonal space heating eff. class		A++	A+++
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0	-
			COPd		3.13	3.15
			Pdh	kW	5.5	7.5
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0	
			COPd		3.81	4.09
			Pdh	kW	3.3	4.7
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0	
			COPd		4.33	4.54
			Pdh	kW	2.2	3.0
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0	0.9
			COPd		3.65	4.59
			Pdh	kW	1.0	1.4
		Tol (temperature operating limit)	COPd		2.90	2.85
			Pdh	kW	6.4	8.5
			TOL	°C	-10	
		Tbiv (bivalent temperature)	COPd		2.90	2.85
			Pdh	kW	6.4	8.5
			Tbiv	°C	-10	
	Cold climate water outlet 55°C	General	Annual energy consumption	kWh	3,787	5,015
			ηs (Seasonal space heating efficiency)	%	153	159
			Prated at -22°C	kW	6	9
	Cold climate water outlet	General	SCOP		5.19 (1)	5.36 (1)
	Cold climate water outlet 55°C	A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0	-
			COPd		3.84	3.92
			Pdh	kW	3.8	5.4
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0	
			COPd		4.32	4.58
			Pdh	kW	2.3	3.3
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		0.9	1.0
			COPd		4.60	4.73
			Pdh	kW	1.6	2.1
		D Condition (12°CDB/11°CWB)	COPd		3.99	3.82
			Pdh	kW	1.0	
		Tol (temperature operating limit)	COPd		2.90	2.85

2 Specifications

1 - 2 EGSAX-D9W, EGSAX-D9WG

Technical specifications					EGSAX06D9W	EGSAX10D9W
Space heating	Cold climate water outlet 55°C	Tol (temperature operating limit)	Pdh	kW	6.4	8.5
			TOL	°C	-22	
		Tbiv (bivalent temperature)	COPd		2.90	2.85
			Pdh	kW	6.4	8.5
			Tbiv	°C	-22	
	Warm climate water outlet 55°C	General	Annual energy consumption	kWh	2,124	2,771
			ηs (Seasonal space heating efficiency)	%	148	156
			Prated at 2°C	kW	6	9
			SCOP		3.90 (1)	4.10 (1)
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0	
			COPd		2.90	2.85
			Pdh	kW	6.4	8.5
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0	-
			COPd		3.58	3.72
			Pdh	kW	4.1	5.4
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0	
			COPd		4.47	4.76
			Pdh	kW	1.9	2.5
		Tbiv (bivalent temperature)	COPd		2.90	2.85
			Pdh	kW	6.4	8.5
			Tbiv	°C	2	
	Average climate water outlet 35°C	General	Annual energy consumption	kWh	2,393	3,373
			ηs (Seasonal space heating efficiency)	%	199	200
			Prated at -10°C	kW	6	9
			SCOP		5.18 (1)	5.20 (1)
			Seasonal space heating eff. class		A+++	
		A Condition (-7°CDB/-8°CWB)	COPd		4.84	4.51
			Pdh	kW	5.6	7.7
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0	
			COPd		5.36	5.43
			Pdh	kW	3.4	4.6
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0	
			COPd		5.42	5.38
			Pdh	kW	2.1	2.9
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		0.9	
			COPd		4.57	5.10
			Pdh	kW	1.1	1.4

2 Specifications

1 - 2 EGSAX-D9W, EGSAX-D9WG

Technical specifications					EGSAX06D9W	EGSAX10D9W
Space heating	Average climate water outlet 35°C	Tol (temperature operating limit)	COPd		4.67	4.29
			Pdh	kW	6.0	8.6
			TOL	°C	-10	
		Tbiv (bivalent temperature)	COPd		4.67	4.29
			Pdh	kW	6.0	8.6
			Tbiv	°C	-10	
	Cold climate water outlet 35°C	General	Annual energy consumption	kWh	2,851	3,905
			ηs (Seasonal space heating efficiency)	%	199	207
			Prated at -22°C	kW	6	9
			SCOP		5.19 (1)	5.36 (1)
		A Condition (-7°CDB/-8°CWB)	COPd		5.34	5.45
			Pdh	kW	3.6	5.0
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0	
			COPd		5.18	5.49
			Pdh	kW	2.2	3.1
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		0.9	
			COPd		5.46	5.74
			Pdh	kW	1.5	2.1
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		0.9	
			COPd		4.73	4.64
			Pdh	kW	1.2	
		Tol (temperature operating limit)	COPd		4.67	4.29
			Pdh	kW	6.0	8.6
			TOL	°C	-22	
		Tbiv (bivalent temperature)	COPd		4.67	4.29
			Pdh	kW	6.0	8.6
			Tbiv	°C	-22	
	Warm climate water outlet 35°C	General	Annual energy consumption	kWh	1,564	2,179
			ηs (Seasonal space heating efficiency)	%	197	200
			Prated at 2°C	kW	6	9
			SCOP		5.12 (1)	5.21 (1)
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0	
			COPd		4.67	4.29
			Pdh	kW	6.0	8.6
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0	
			COPd		5.13	5.23
			Pdh	kW	3.9	5.7
Space heating	Warm climate water outlet 35°C	D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		0.9	1.0
			COPd		5.32	5.48
			Pdh	kW	1.8	2.5
		Tbiv (bivalent temperature)	COPd		4.67	4.29
			Pdh	kW	6.0	8.6
			Tbiv	°C	2	
Space cooling	Low temperature application	General	Pdesign	kW	8	
			SEER		14	
	Medium temperature application	General	Pdesign	kW	8	
			SEER		15	

Electrical specifications				EGSAX06D9W	EGSAX10D9W
Power supply	Phase			1~/3~	
	Frequency		Hz	50	
	Voltage		V	230/400	
	Voltage range	Min.	%	10	
		Max.	%	10	
Electrical power consumption	Standby		W	15	
Current	Recommended fuses		A	16/32	
Electric heater	Type			9W	

(1)According to EN14825 and EN14511:2013 |
See operation range drawing: range increase by support booster heater or backup heater

2 Specifications

1 - 2 EGSAX-D9W, EGSAX-D9WG

Technical specifications					EGSAX06D9WG	EGSAX10D9WG
Heating capacity	Min.			kW	0.85	
	Nom.			kW	3.35	5.49
	Max.			kW	7.98	9.55
Power input	Nom.			kW	0.74	1.17
COP					4.51	4.70
Casing	Colour				Grey + Black	
Dimensions	Unit	Height		mm	1,891	
		Width		mm	597	
		Depth		mm	666	
	Packed unit	Height		mm	2,202	
		Width		mm	720	
		Depth		mm	775	
Weight	Unit			kg	222	
	Packed unit			kg	237	
Packing	Material				Wood / Carton / PE wrapping foil / Metal	
	Weight			kg	15	
Compressor	Type				Hermetically sealed swing compressor	
	Model				2YC40JXD#C	
PED	Category				Category II	
	Most critical part	Name			Compressor	
		Ps*DN		bar	42	
		Ps*V		Bar*l	64	
Pump	Type				Grundfos UPM3LK	
	Nr of speeds				PWM	
	Power input			W	75	
Water side Heat exchanger	Type				Plate heat exchanger	
	Quantity				1	
	Water volume			l	1.76	
	Insulation material				Elastomeric foam	
Brine pump	Type				Grundfos UPMXL Geo	
	Power input			W	180	
Brine heat exchanger	Quantity				1	
	Brine volume			l	1.94	
Tank	Energy efficiency class				A	
	Standing heat loss			W	50	
	Storage volume			l	-	180
Tank	Water volume			l	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	
3-way valve	Coefficient of flow (kV)	Space heating		m^3/h	10	
		Domestic hot water tank		m^3/h	8	
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	
Water circuit - Domestic hot water side	Piping connections	Cold water in / Hot water out	Diameter	mm	22	
			Recirculation connection	inch	G 3/4" FEMALE	
Brine circuit	Piping connections diameter			mm	28	
	Safety valve			bar	3	
Latent cooling capacity	7/12°C	Max.		kW	8	
Space heating	Cold climate water outlet	General	SCOP		4.03 (1)	4.18 (1)
Brine circuit	Drain valve / fill valve				Yes	
	Air purge valve				No	
	Total volume			l	5.0	
Refrigerant	Type				R-32	
	GWP				675.0	
	Charge			TCO2Eq	1.15	
	Charge			kg	1.70	
	Circuits	Quantity			1	
Refrigerant oil	Type				FW68DA	
	Charged volume			l	0.7	

2 Specifications

1 - 2 EGSAX-D9W, EGSAX-D9WG

Technical specifications					EGSAX06D9WG	EGSAX10D9WG
Operation range	Installation space	Min.		°C	5	
		Max.		°C	35	
	Brine side	Min.		°C	-10	
		Max.		°C	30	
Operation range	Heating	Water side	Min.	°C	5	
			Max.	°C	65	
	Domestic hot water	Water side	Min.	°C	25	
			Max.	°C	60	
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	Indoor		dB(A)	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	
Sound power level	Range			dB(A)	From 36 to 44 (46 in boost mode), condition B0/-3 W30/35	From 36 to 47, condition B0/-3 W30/35
Tank	Name				Stainless steel domestic hot water tank 180 l	
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	
		Qelec (Daily electricity consumption)		kWh	4.140	
		Qfuel (Daily fuel consumption)		kWh	0.000	
		ηwh (water heating efficiency)		%	117	
		Water heating energy efficiency class			A+	
	Cold climate	AEC (Annual electricity consumption)		kWh	877	
		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	
		ηwh (water heating efficiency)		%	117	
		Qelec (Daily electricity consumption)		kWh	4.140	
		Qfuel (Daily fuel consumption)		kWh	0.000	
Space heating	Average climate water outlet 55°C	General	Annual energy consumption	kWh	3,393	4,339
			ηs (Seasonal space heating efficiency)	%	143	154
			Prated at -10°C	kW	6	9

2 Specifications

1 - 2 EGSAX-D9W, EGSAX-D9WG

Technical specifications					EGSAX06D9WG	EGSAX10D9WG
Space heating	Average climate water outlet 55°C	General	SCOP		3.77 (1)	4.05 (1)
			Seasonal space heating eff. class		A++	A+++
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0	-
			COPd		3.13	3.15
			Pdh	kW	5.5	7.5
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0	
			COPd		3.81	4.09
			Pdh	kW	3.3	4.7
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0	
			COPd		4.33	4.54
			Pdh	kW	2.2	3.0
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0	0.9
			COPd		3.65	4.59
			Pdh	kW	1.0	1.4
		Tol (temperature operating limit)	COPd		2.90	2.85
			Pdh	kW	6.4	8.5
			TOL	°C	-10	
		Tbiv (bivalent temperature)	COPd		2.90	2.85
			Pdh	kW	6.4	8.5
			Tbiv	°C	-10	
	Cold climate water outlet 55°C	General	Annual energy consumption	kWh	3,787	5,015
			ηs (Seasonal space heating efficiency)	%	153	159
			Prated at -22°C	kW	6	9
	Cold climate water outlet	General	SCOP		5.19 (1)	5.36 (1)
	Cold climate water outlet 55°C	A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0	-
			COPd		3.84	3.92
			Pdh	kW	3.8	5.4
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0	
			COPd		4.32	4.58
			Pdh	kW	2.3	3.3
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		0.9	1.0
			COPd		4.60	4.73
			Pdh	kW	1.6	2.1
		D Condition (12°CDB/11°CWB)	COPd		3.99	3.82
			Pdh	kW	1.0	
		Tol (temperature operating limit)	COPd		2.90	2.85
			Pdh	kW	6.4	8.5

2 Specifications

1 - 2 EGSAX-D9W, EGSAX-D9WG

Technical specifications					EGSAX06D9WG	EGSAX10D9WG
Space heating	Cold climate water outlet 55°C	Tol (temperature operating limit)	TOL	°C	-22	
		Tbiv (bivalent temperature)	COPd		2.90	2.85
			Pdh	kW	6.4	8.5
			Tbiv	°C	-22	
	Warm climate water outlet 55°C	General	Annual energy consumption	kWh	2,124	2,771
			ηs (Seasonal space heating efficiency)	%	148	156
			Prated at 2°C	kW	6	9
			SCOP		3.90 (1)	4.10 (1)
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0	
			COPd		2.90	2.85
			Pdh	kW	6.4	8.5
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0	-
			COPd		3.58	3.72
			Pdh	kW	4.1	5.4
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0	
			COPd		4.47	4.76
			Pdh	kW	1.9	2.5
		Tbiv (bivalent temperature)	COPd		2.90	2.85
			Pdh	kW	6.4	8.5
			Tbiv	°C	2	
	Average climate water outlet 35°C	General	Annual energy consumption	kWh	2,393	3,373
			ηs (Seasonal space heating efficiency)	%	199	200
			Prated at -10°C	kW	6	9
			SCOP		5.18 (1)	5.20 (1)
			Seasonal space heating eff. class		A+++	
		A Condition (-7°CDB/-8°CWB)	COPd		4.84	4.51
			Pdh	kW	5.6	7.7
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0	
			COPd		5.36	5.43
			Pdh	kW	3.4	4.6
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0	
			COPd		5.42	5.38
			Pdh	kW	2.1	2.9
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		0.9	
			COPd		4.57	5.10
			Pdh	kW	1.1	1.4
		Tol (temperature operating limit)	COPd		4.67	4.29

2 Specifications

1 - 2 EGSAX-D9W, EGSAX-D9WG

Technical specifications					EGSAX06D9WG	EGSAX10D9WG
Space heating	Average climate water outlet 35°C	Tol (temperature operating limit)	Pdh	kW	6.0	8.6
			TOL	°C	-10	
		Tbiv (bivalent temperature)	COPd		4.67	4.29
			Pdh	kW	6.0	8.6
			Tbiv	°C	-10	
	Cold climate water outlet 35°C	General	Annual energy consumption	kWh	2,851	3,905
			ηs (Seasonal space heating efficiency)	%	199	207
			Prated at -22°C	kW	6	9
			SCOP		5.19 (1)	5.36 (1)
		A Condition (-7°CDB/-8°CWB)	COPd		5.34	5.45
			Pdh	kW	3.6	5.0
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0	
			COPd		5.18	5.49
			Pdh	kW	2.2	3.1
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		0.9	
			COPd		5.46	5.74
			Pdh	kW	1.5	2.1
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		0.9	
			COPd		4.73	4.64
			Pdh	kW	1.2	
		Tol (temperature operating limit)	COPd		4.67	4.29
			Pdh	kW	6.0	8.6
			TOL	°C	-22	
		Tbiv (bivalent temperature)	COPd		4.67	4.29
			Pdh	kW	6.0	8.6
			Tbiv	°C	-22	
	Warm climate water outlet 35°C	General	Annual energy consumption	kWh	1,564	2,179
			ηs (Seasonal space heating efficiency)	%	197	200
			Prated at 2°C	kW	6	9
			SCOP		5.12 (1)	5.21 (1)
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0	
			COPd		4.67	4.29
			Pdh	kW	6.0	8.6
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0	
			COPd		5.13	5.23
			Pdh	kW	3.9	5.7
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		0.9	1.0
Space heating	Warm climate water outlet 35°C	D Condition (12°CDB/11°CWB)	COPd		5.32	5.48
			Pdh	kW	1.8	2.5
		Tbiv (bivalent temperature)	COPd		4.67	4.29
			Pdh	kW	6.0	8.6
			Tbiv	°C	2	
Space cooling	Low temperature application	General	Pdesign	kW	8	
			SEER		14	
	Medium temperature application	General	Pdesign	kW	8	
			SEER		15	

Electrical specifications				EGSAX06D9WG	EGSAX10D9WG
Power supply	Phase			1~/3~	
	Frequency		Hz	50	
	Voltage		V	230/400	
	Voltage range	Min.	%	10	
		Max.	%	10	
Electrical power consumption	Standby		W	15	
Current	Recommended fuses		A	16/32	
Electric heater	Type			9W	

(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

EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG

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

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

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*			
EGSAH*	Heating only indoor unit		9W		9W	
EGSAX*	Reversible indoor unit			9W		9W
EKRP1HBAA	Digital I/O PCB	(1) (2)	o	o	o	o
EKRP1AHTA	Demand 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
EKPCCAB4	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 module		o	o	o	o
EKGSPOWCAB	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 Capacity Table Legend

EGSAH-D9W / EGSAX-D9W / EGSAX-D9WG

Model			EGSAH06DA9W	EGSAH10DA9W
Domestic hot water heating mode	Load profile	-	L	
According to EN16147.	ηwh (Water heating energy efficiency)	[%]	117	
	Domestic hot water COP	-	2,82	
	Heat-up time	hh:mm	1:43	
	Standby power input	W	26,2	
	Reference hot water temperature	[°C]	53,0	
	Equivalent domestic hot water volume	[l]	238,7	

Model			EGSAH06DA9W		EGSAH10DA9W	
Application			35	55	35	55
Sound power	Measured according to ·EN12102·	[dBa]	39,0	39,0	41,0	41,0

Rated data for certification programmes - heating mode	Heating capacity	[kW]	3,4	3,3	5,5	5,6
·· according to ·EN14511:2018·	Power input	[kW]	0,7	1,3	1,2	2,0
Entering brine temperature = ·0·°C	COP	-	4,5	2,5	4,7	2,9
	Nominal water flow rate	m^3/h				

Seasonal data - heating						
Average climate (design temperature: ·-10·°C)						
Space heating	Prated at ·-10·°C	[kW]	6,0	6,2	8,5	8,5
	ηs (Seasonal space heating efficiency)	[%]	195	141	197	152
	Annual energy consumption	kWh	2447	3447	3428	4393
Colder climate (design temperature: ·-22·°C)						
Space heating	Prated at ·-22·°C	[kW]	6,0	6,2	8,5	8,5
	ηs (Seasonal space heating efficiency)	[%]	197	152	205	158
	Annual energy consumption	kWh	2884	3820	3938	5047
Warmer climate (design temperature: ·2·°C)						
Space heating	Prated at ·2·°C	[kW]	6,0	6,2	8,5	8,5
	ηs (Seasonal space heating efficiency)	[%]	183	143	194	152
	Annual energy consumption	kWh	1683	2189	2244	2837
Space heating - general						
Other	Capacity control method	-	Inverter			
	P_{off} (Off mode)	[kW]	0,015			
	P_{to} (Thermostat off)	[kW]	0,024			
	P_{sb} (Standby mode)	[kW]	0,015			
	Pck (Crankcase heater mode)	[kW]	0,000			

			Average climate (design temperature: ·-10·°C)				Colder climate (design temperature: ·-22·°C)			
Model			EGSAH06DA9W		EGSAH10DA9W		EGSAH06DA9W		EGSAH10DA9W	
Application			35	55	35	55	35	55	35	55
·(A)· condition (·-7·°C DB / ·-8·°C WB)	Pdh (Declared heating capacity)	[kW]	5,57	5,46	7,67	7,45	3,57	3,75	4,97	5,43
	COPd (Declared COP)	-	4,84	3,13	4,51	3,15	5,34	3,84	5,45	3,92
	Cdh (Degradation heating)	-	0,98	1	1	1	1	1	1	0,98
·(B)· condition (·2·°C DB / ·1·°C WB)	Pdh (Declared heating capacity)	[kW]	3,35	3,25	4,59	4,68	2,17	2,28	3,05	3,32
	COPd (Declared COP)	-	5,36	3,81	5,43	4,09	5,18	4,32	5,49	4,58
	Cdh (Degradation heating)	-	0,96	1	1	1	1	1	1	0,97
·(C)· condition (·7·°C DB / ·6·°C WB)	Pdh (Declared heating capacity)	[kW]	2,05	2,24	2,93	2,98	1,5	1,63	2,11	2,07
	COPd (Declared COP)	-	5,42	4,33	5,38	4,54	5,46	4,6	5,74	4,73
	Cdh (Degradation heating)	-	1	0,95	1	1	0,91	0,93	0,94	1
·(D)· condition (·12·°C DB / ·11·°C WB)	Pdh (Declared heating capacity)	[kW]	1,05	0,96	1,36	1,37	1,15	1,01	1,19	0,98
	COPd (Declared COP)	-	4,57	3,65	5,1	4,59	4,73	3,99	4,64	3,82
	Cdh (Degradation heating)	-	0,9	1	0,91	0,92	0,9	0,91	0,91	0,91
·(E)· condition (Tol (temperature operating limit))	Tol (Temperature operating limit)	[°C]	-10	-10	-10	-10	-22	-22	-22	-22
	Pdh (Declared heating capacity)	[kW]	5,95	6,44	8,55	8,49	5,95	6,44	8,55	8,49
	COPd (Declared COP)	-	4,67	2,9	4,29	2,85	4,67	2,9	4,29	2,89
	Wtol (Heating water operation limit)	[°C]	35	55	35	55	35	55	35	55
·(F)· condition (Tbiv (bivalent temperature))	Tbiv (Bivalent temperature)	[°C]	-10	-10	-10	-10	-22	-22	-22	-22
	Pdh (Declared heating capacity)	[kW]	5,95	6,44	8,55	8,49	5,95	6,44	8,55	8,49
	COPd (Declared COP)	-	4,67	2,9	4,29	2,85	4,67	2,9	4,29	2,89
Psup BUH (Capacity of integrated backup heater)		[kW]	9,0	9,0	9,0	9,0	9,0	9,0	9,0	9,0
Psup (Supplementary capacity at design temperature)		[kW]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

Remark

·P_{dh} (Declared Heating Capacity)· according to ·EN14511:2018·

·COP_{dh} (Declared COP)· according to ·EN14511:2018·

3D122777

4 Capacity tables

4 - 2 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 = ·3~8·°C
Capacity values may not be extrapolated below 7°C leaving water temperature.

3D124144

4 Capacity tables

4 - 3 Heating Capacity Tables

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

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4 Capacity tables

4 - 4 Certification Programs

EGSAH-D9W / EGSAX-D9W / EGSAX-D9WG

Rated data for certification programmes - heating mode

EGSA(H/X)-06							
			Low temperature				
Space heating - Average climate - Part load			Entering brine temperature [°C]	Leaving water temperature [°C]	Heating capacity [kW]	COP	Cdh (Degradation heating)
A	-7		20	35	5,1	10,29	0,96
B	2		20	35	3,06	10,01	0,94
C	7		20	35	1,85	9,3	0,9
D	12		20	35	1,85	9,3	0,9
E	-10	Tol (Temperature operating limit)	20	35	5,66	9,67	0,97
F	-10	Tbiv (Bivalent temperature)	20	35	5,66	9,67	0,97

EGSA(H/X)-10							
			Low temperature				
Space heating - Average climate - Part load			Entering brine temperature [°C]	Leaving water temperature [°C]	Heating capacity [kW]	COP	Cdh (Degradation heating)
A	-7		20	35	9,66	9,04	0,98
B	2		20	35	5,27	9,59	0,96
C	7		20	35	3,49	8,94	0,95
D	12		20	35	1,65	6,42	0,93
E	-10	Tol (Temperature operating limit)	20	35	10,53	8,95	0,98
F	-10	Tbiv (Bivalent temperature)	20	35	10,53	8,95	0,98

EGSA(H/X)-06							
			Medium temperature				
Space heating - Average climate - Part load			Entering brine temperature [°C]	Leaving water temperature [°C]	Heating capacity [kW]	COP	Cdh (Degradation heating)
A	-7		20	55	5,75	4,75	0,98
B	2		20	55	3,71	3,94	0,98
C	7		20	55	2,08	3,11	0,97
D	12		20	55	1,52	2,7	0,97
E	-10	Tol (Temperature operating limit)	20	55	6,51	4,81	0,99
F	-10	Tbiv (Bivalent temperature)	20	55	6,51	4,81	0,99

EGSA(H/X)-10							
			Medium temperature				
Space heating - Average climate - Part load			Entering brine temperature [°C]	Leaving water temperature [°C]	Heating capacity [kW]	COP	Cdh (Degradation heating)
A	-7		20	55	8,77	4,94	0,99
B	2		20	55	5,83	4,65	0,98
C	7		20	55	3,83	4,29	0,98
D	12		20	55	2,06	3,47	0,97
E	-10	Tol (Temperature operating limit)	20	55	10,19	4,96	0,99
F	-10	Tbiv (Bivalent temperature)	20	55	10,19	4,96	0,99

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4 Capacity tables
4 - 4 Certification Programs

EGSAH-D9W / EGSAX-D9W / EGSAX-D9WG

EGSA(H/X)-06									
Heating capacity									
Minimum					Maximum				
Flow rate Brine circuit [l/min]	Entering brine temperature [°C]	Leaving water temperature [°C]	Heating capacity [kW]	COP	Flow rate Brine circuit [l/min]	Entering brine temperature [°C]	Leaving water temperature [°C]	Heating capacity [kW]	COP
9	20	35	1,50	9,48	9	20	25	10,62	7,57
9	25	35	2,01	16,19	9	20	35	10,52	5,91
9	20	45	1,31	5,05	9	20	45	10,28	4,68
9	25	45	1,49	6,51	9	20	55	9,23	3,99
9	20	55	1,88	2,87	9	25	25	11,79	8,71
9	25	55	1,60	3,17	9	25	35	11,62	6,57
					9	25	45	11,38	5,16
					9	25	55	9,23	4,54

Domestic hot water operation

EGSA(H/X)-06 , -10					
Flow rate Brine circuit [l/min]	Entering brine temperature [°C]	Domestic hot water tank temperature	Heat-up time (hh:mm:ss)	Capacity Brine side Maximum [kW]	Capacity Brine side Average [kW]
9	20	10 -> 55	01:16:56	7,7	5,94
9	25	10 -> 55	01:10:04	8,5	6,53
9	20	37 -> 55	00:43:58	4,6	3,67
9	25	37 -> 55	00:38:59	5,3	4,39

Installation Restrictions

Safety Valve
The safety valve which is delivered with the unit opens at 3 bar. If design pressure is higher, then this should not be used. Maximum allowed design pressure on brine side is 4 bar. The safety valve selected must open at maximum 4 bar pressure.

Balancing Valve/ Regulating Valve
A balancing valve must be installled on the inlet or outlet brine pipe to limit maximum flow. Without such a valve, brine pump cannot operate correctly and operation of unit cannot be guaranteed. The recommended value for maximum flow rate is 9 l/min.

Hydraulic Separator
A Hydraulic Separator must be installed to separate primary flow circuit (chiller) from secondary flow circuit (EGSA unit)

Expansion Vessel
The brine level vessel delivered with the unit is only meant for single application, not collecive application. An expansion vessel must be installed to avoid issues with pump cavitation and to compensate for change in volume of medium as a result of temperature fluctuation.

Freeze Temperature Setting
If water is used as medium, field setting A-04 must be changed to value 0 to avoid break-down.

Check Valve
A check valve must be installed on brine outlet pipe.

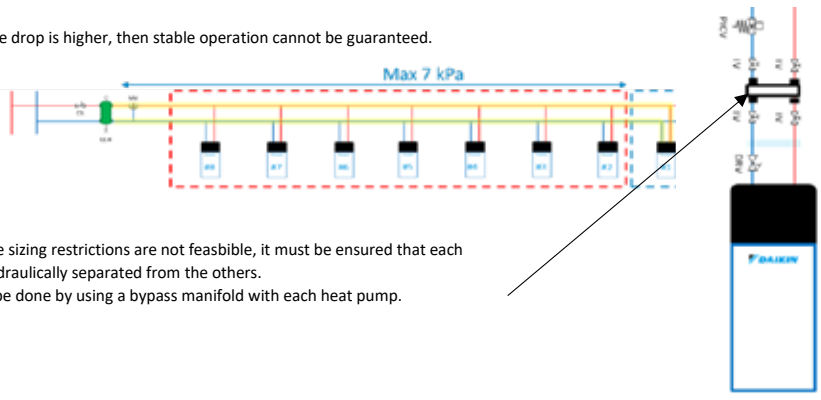
Pipe Sizing

Pressure Drop Restirctions
When the units are installed in a parallel circuit, the maximum allowed pressure drop for the brine pump which is furthest away from the balancing bottle is 7 kPa. (illustrated below)

This pressure drop is calculated at a flow 8 l/min less than the design flow of the common pipe.

For example, if number of units = N and design flow for each apartment = 9 l/min , then 7 kPa is maximum pressure drop at a flow of (9N-8) l/min

If pressure drop is higher, then stable operation cannot be guaranteed.



If the pipe sizing restrictions are not feasbible, it must be ensured that each unit is hydraulically separated from the others.
This can be done by using a bypass manifold with each heat pump.

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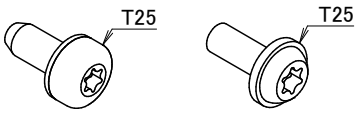
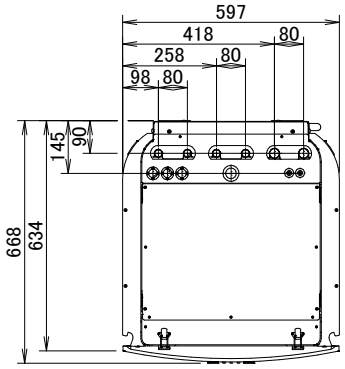
5 Dimensional drawings

5 - 1 Dimensional Drawings

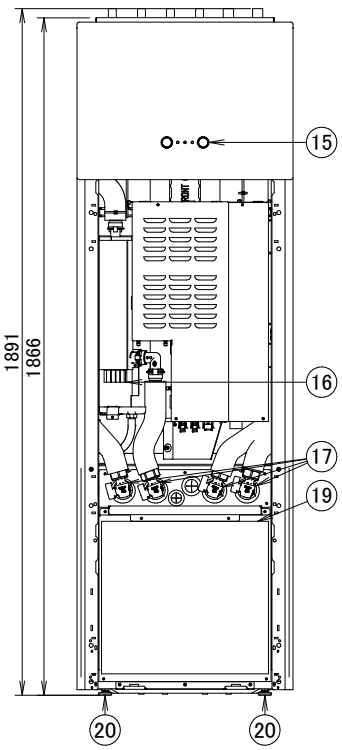
EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG

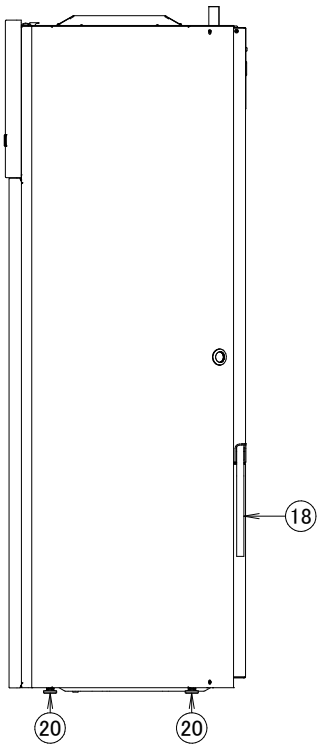
Screws used in this unit:

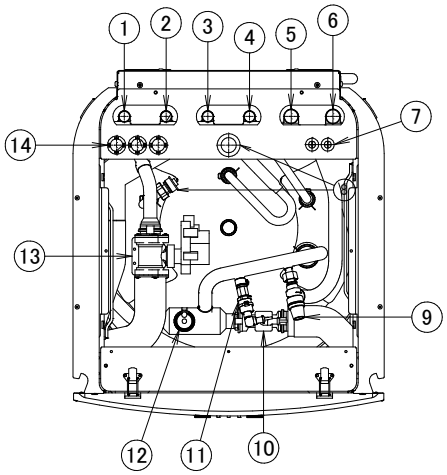




1. Water out connection Ø22mm straight
2. Water in connection Ø22mm straight
3. Tank out connection Ø22mm straight
4. Tank in connection Ø22mm straight
5. Brine out connection Ø28mm straight
6. Brine in connection Ø28mm straight
7. Low voltage wiring intake Ø13.5mm
8. Recirculation connection G3/4" (female)
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

5 Dimensional drawings

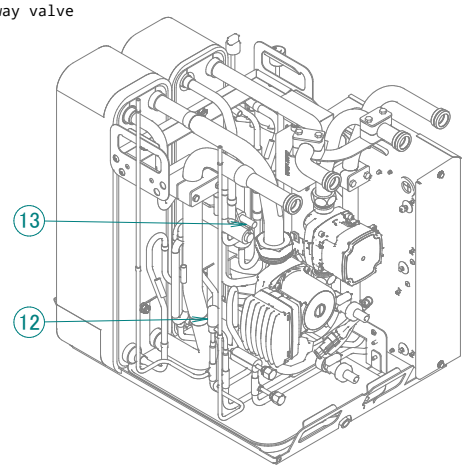
5 - 1 Dimensional Drawings

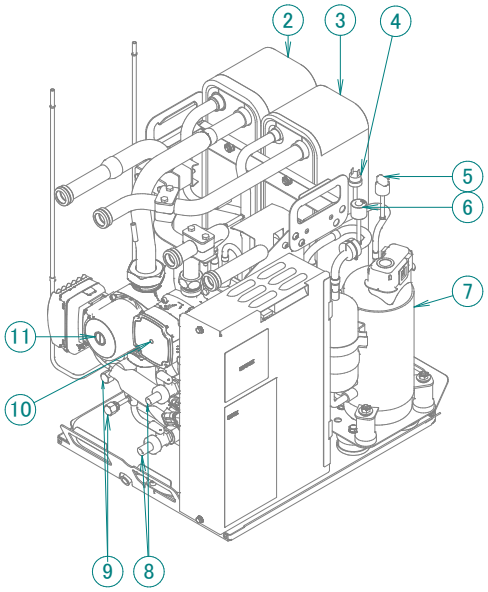
EGSAH-D9W / EGSAX-D9W / EGSAX-D9WG

(2) Plate heat exchanger Brine side
(3) Plate heat exchanger Water side
(4) High pressure switch
(5) Refrigerant pressure sensor
(6) Low pressure sensor
(7) Compressor
(8) Drain valve
(9) Service port 5/16" flare
(10) Pump Water side
(11) Pump Brine side
(12) Electronic expansion valve
(13) 4-way valve

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

For examples, refer to the installer reference guide.





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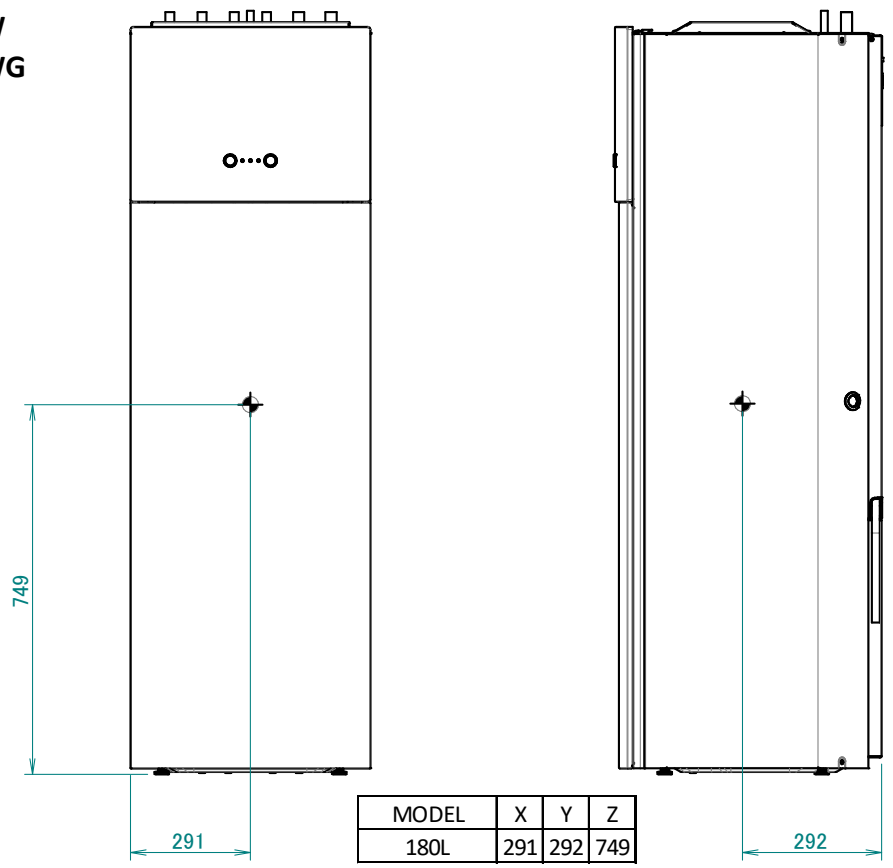
6 Centre of gravity

6 - 1 Centre of Gravity

EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG



MODEL	X	Y	Z
180L	291	292	749

3D122238

7 Piping diagrams

7 - 1 Piping Diagrams

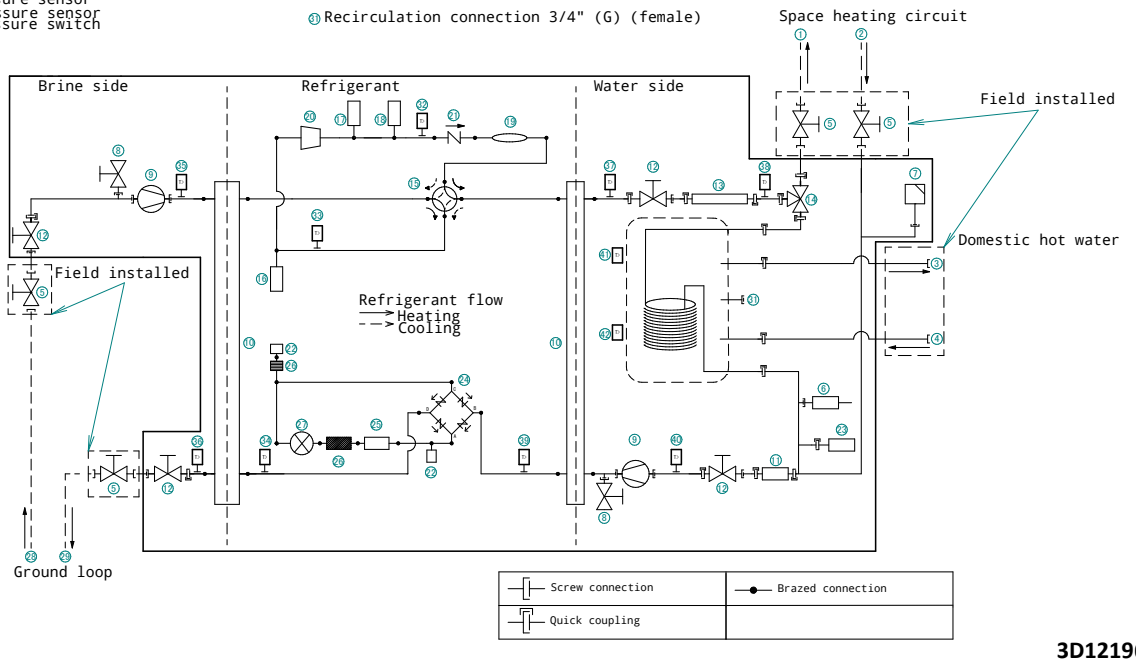
EGSAH-D9W / EGSAX-D9W / EGSAX-D9WG

① Water out connection ø 22mm
② Water in connection ø 22mm
③ Tank out connection ø 22mm
④ Tank in connection ø 22mm
⑤ Shut-off valve
⑥ Safety valve
⑦ Automatic air purge valve
⑧ Drain valve
⑨ Pump
⑩ Plate heat exchanger
⑪ Flow sensor
⑫ Shut-off valve
⑬ Backup heater
⑭ 3-way valve
⑮ 4-way valve
⑯ Low pressure sensor
⑰ High pressure sensor
⑱ High pressure switch

⑲ Muffler
⑳ Compressor
㉑ Check valve
㉒ Service port
㉓ Space heating water pressure sensor
㉔ Rectifier
㉕ Heat sink
㉖ Filter
㉗ Electronic expansion valve
㉘ Brine in connection ø 28mm
㉙ Brine out connection ø 28mm

㉛ Recirculation connection 3/4" (G) (female)

㉜ R2T (A7P) Thermistor (discharge)
㉝ R3T (A7P) Thermistor (suction compressor)
㉞ R4T (A7P) 2-phase sensor (Tx)
㉟ R5T (A7P) Entering brine temperature
㊱ R6T (A7P) Leaving brine temperature
㊲ R1T (A1P) Outlet water heat exchanger thermistor
㊳ R2T (A1P) Outlet water backup heater thermistor
㊴ R3T (A1P) Refrigerant temperature sensor (liquid)
㊵ R4T (A1P) Inlet water thermistor
㊶ R5T (A1P) Tank thermistor
㊷ R6T (A1P) Tank thermistor



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8 Wiring diagrams

8 - 1 Notes & Legend

EGSAH-D9W / EGSAX-D9W / EGSAX-D9WG

NOTES to go through before starting the unit

X1M : Main terminal
X2M : Field wiring terminal for AC
X5M : Field wiring terminal for DC
: 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 switch box
: PCB

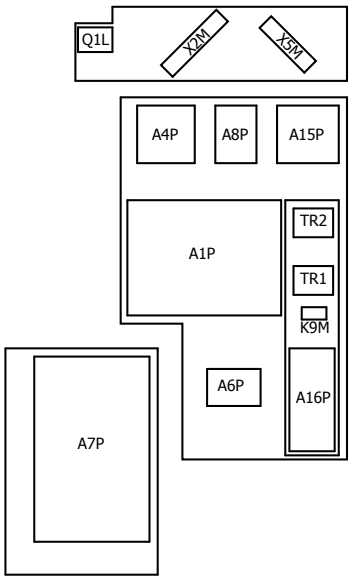
Backup heater power supply
- ☐ 1N~, 230V, 3/6 kW
- ☐ 3N~, 4000V, 6/9 kW

User installed options:
- ☐ Remote user interface
- ☐ Ext. indoor thermistor
- ☐ Digital I/O PCB
- ☐ Demand PCB
- ☐ Brine low pressure switch

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 SWITCH BOX



LEGEND

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 (A7P)		fuse (T, 6.3 A, 250 V)
F1U (A16P)		fuse (T, 1.5 A, 250 V)
F2B	#	overcurrent fuse compressor
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

Part n°		Description
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

* : optional
\# : field supply

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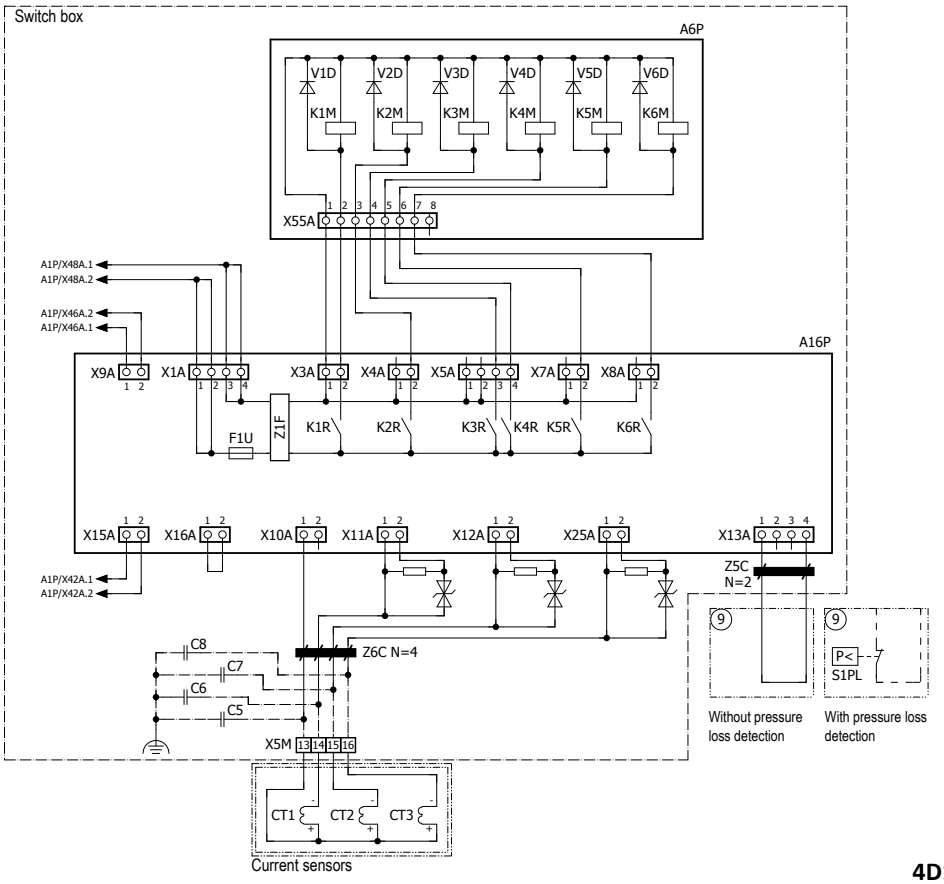
8 Wiring diagrams

8 - 2 Control Circuit

EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG



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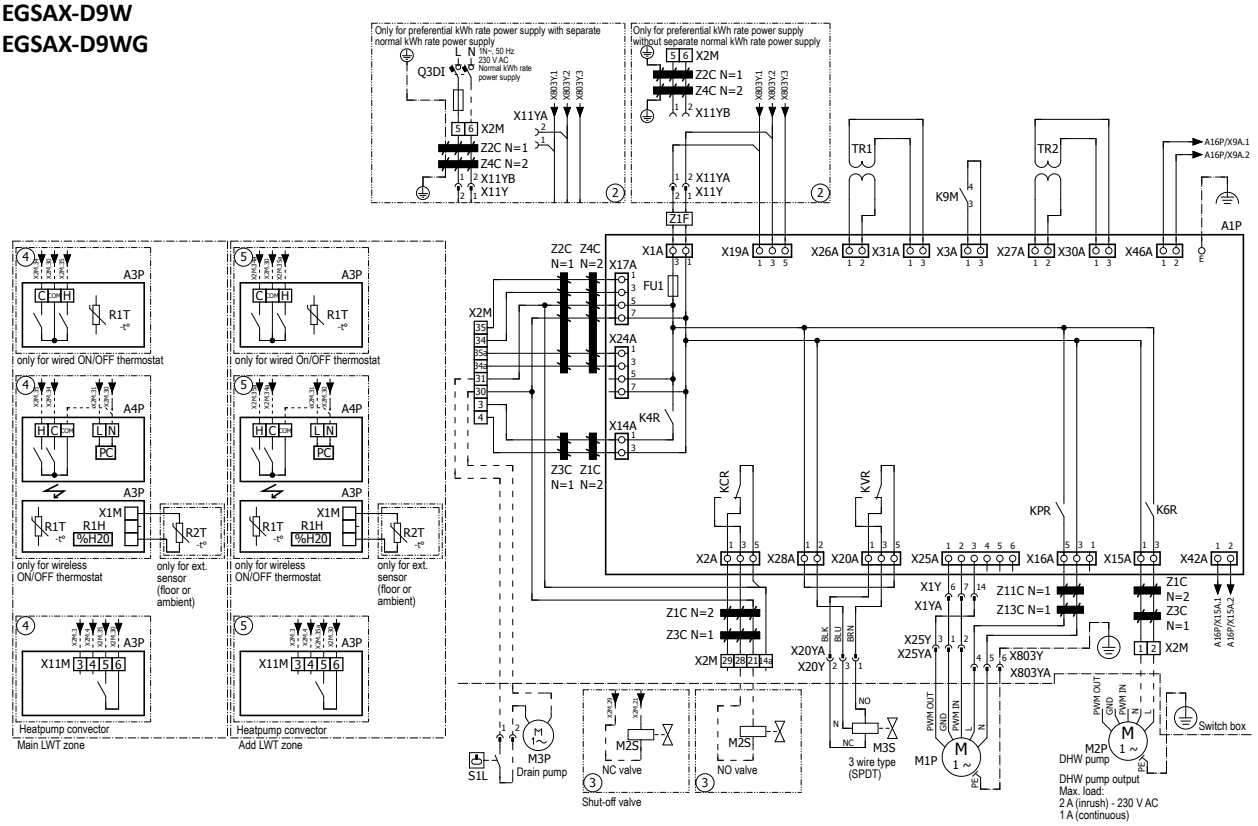
EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG



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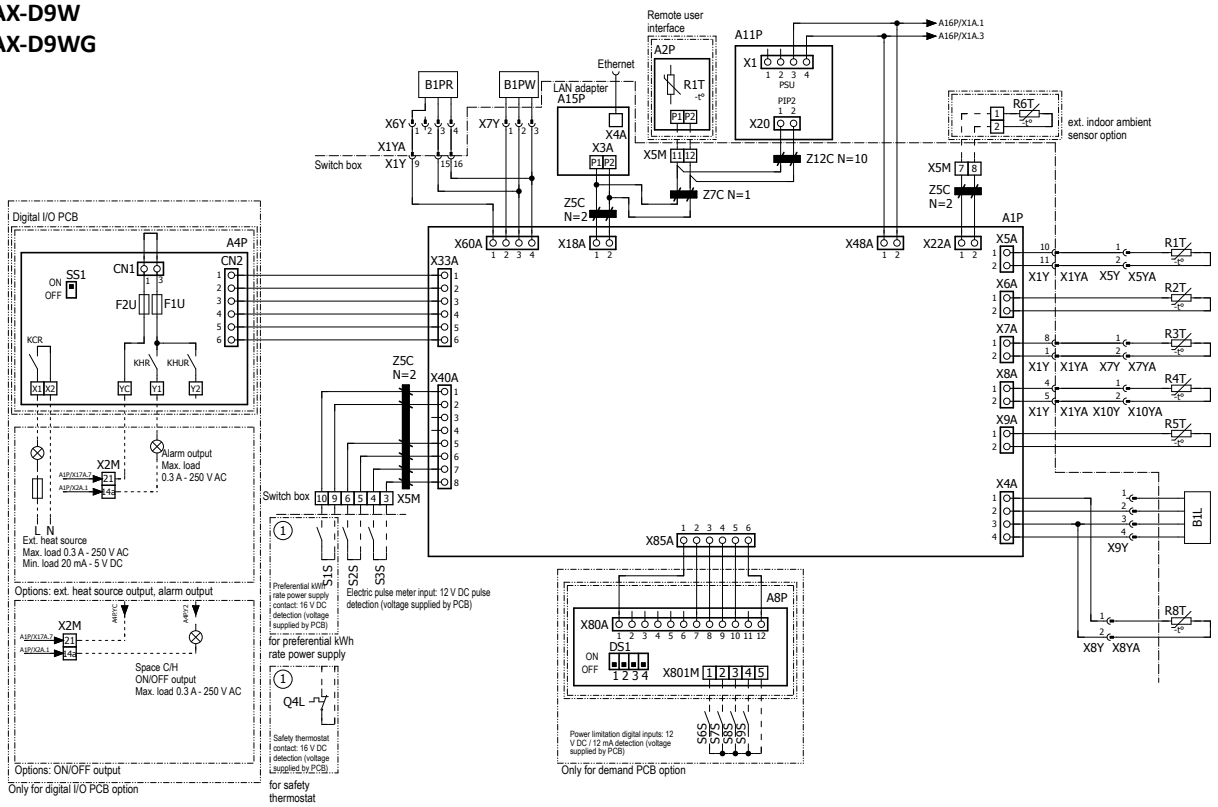
8 Wiring diagrams

8 - 2 Control Circuit

EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG



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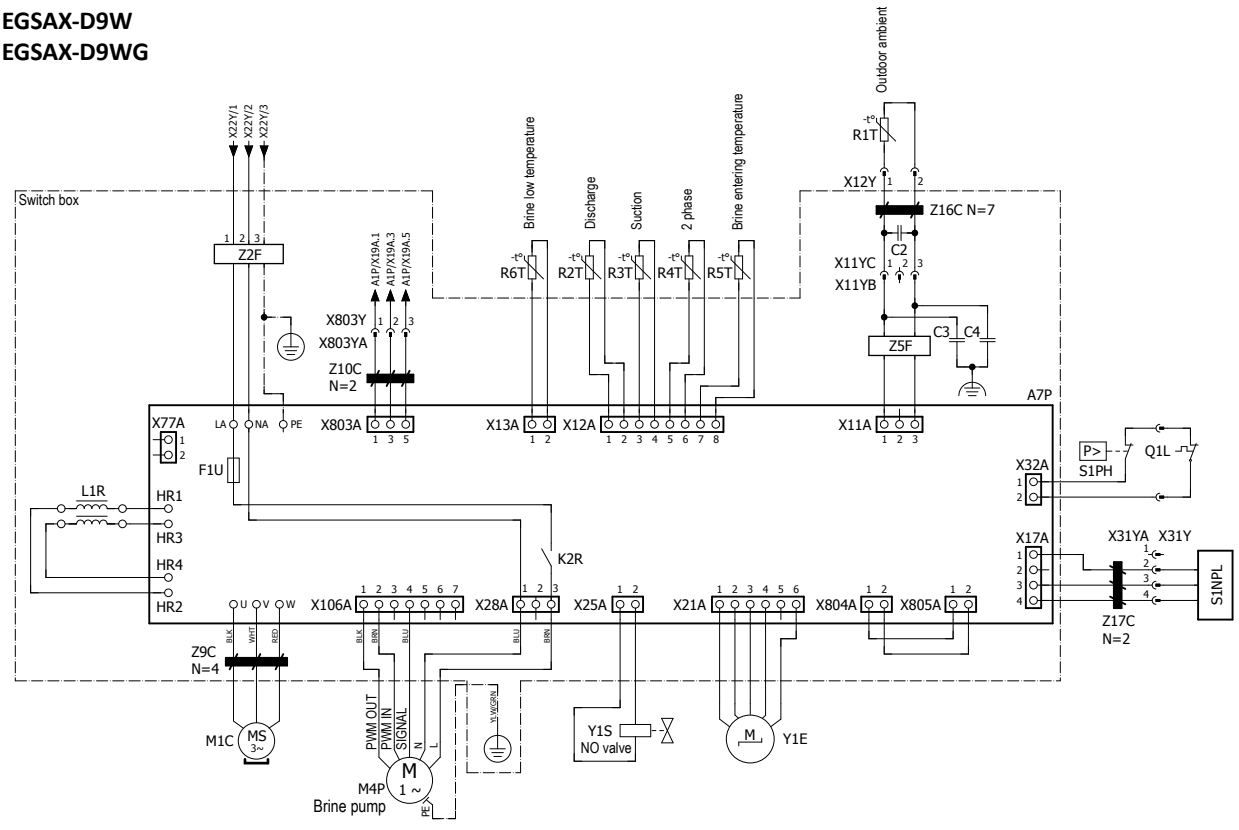
EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG



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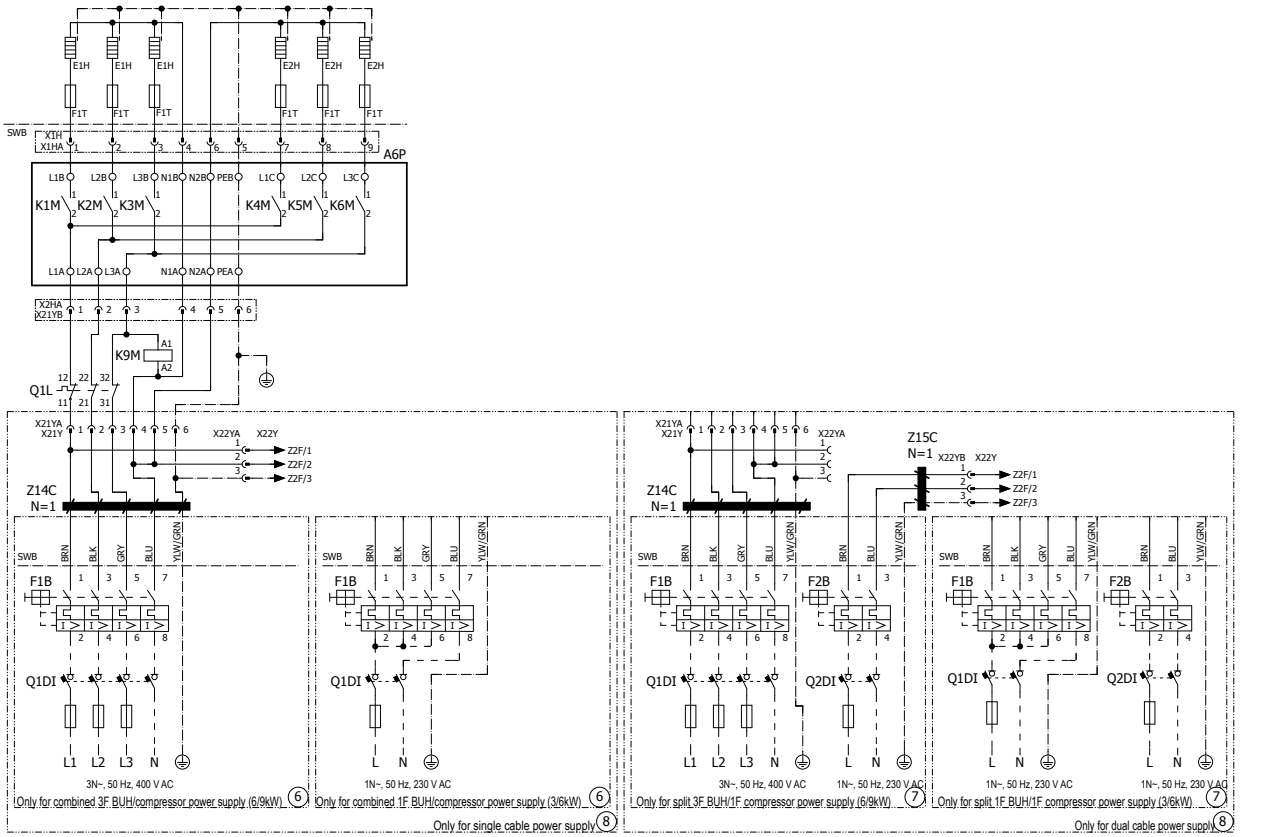
8 Wiring diagrams

8 - 3 Power Supply, Back-up Heater

EGSAH-D9W / EGSAX-D9W / EGSAX-D9WG



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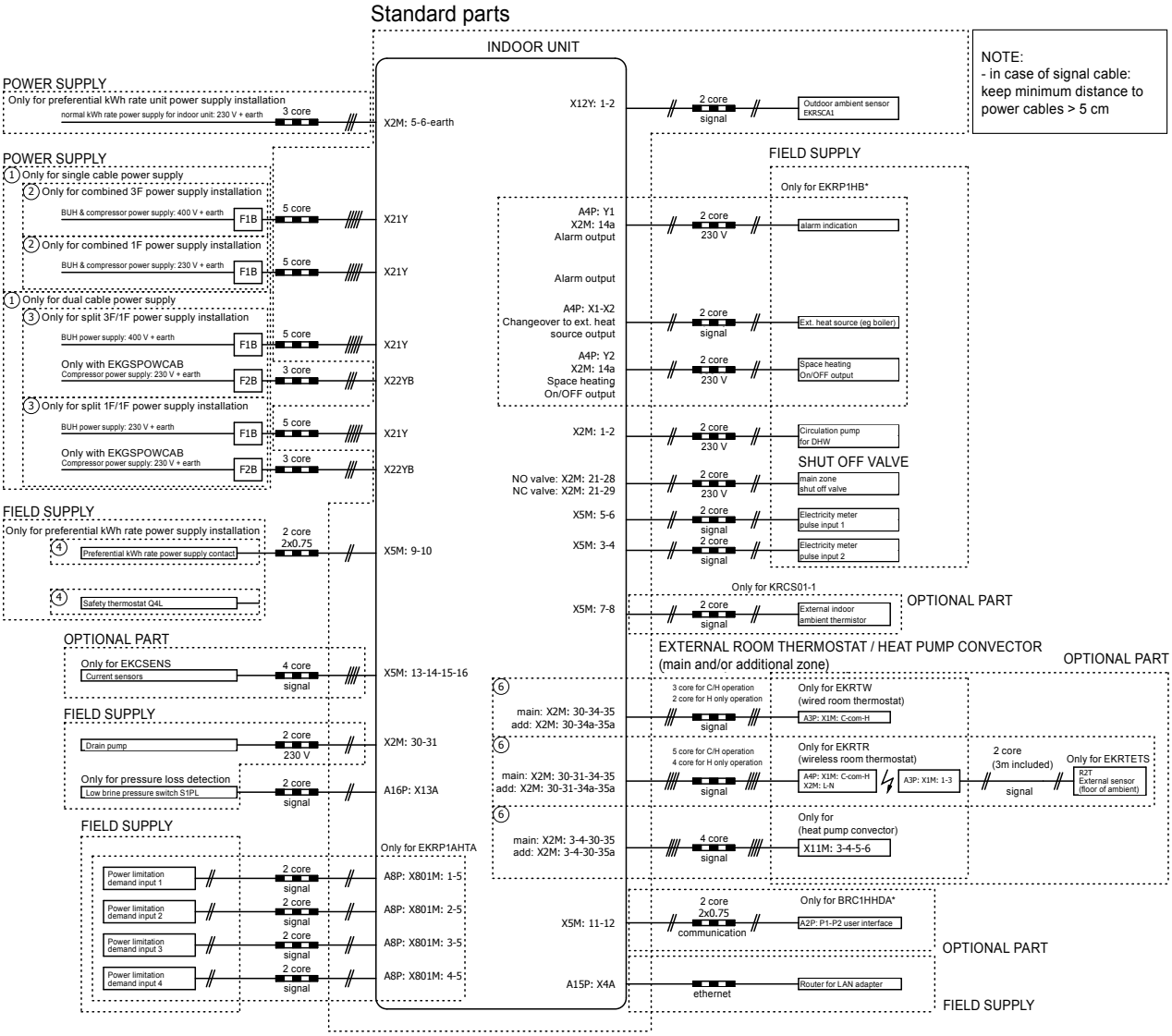
9 External connection diagrams

9 - 1 External Connection Diagrams

EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG

Electrical connection diagram Daikin Altherma Ground Source

For more details: please check unit wiring



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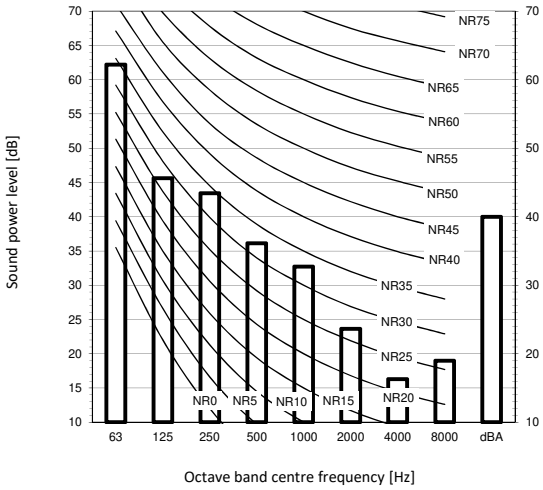
10 Sound data

10 - 1 Sound Power Spectrum

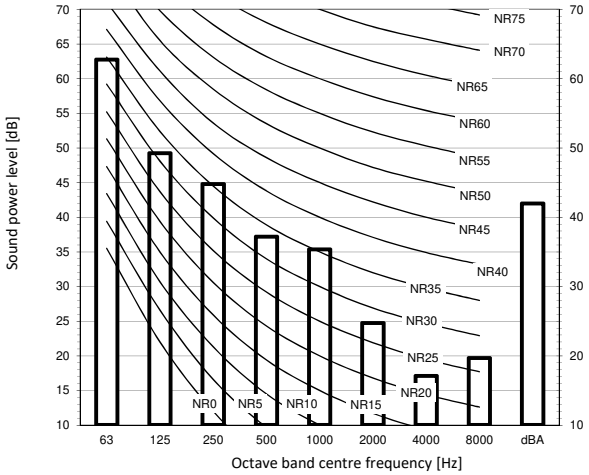
EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG

Heating

EGSA*06*

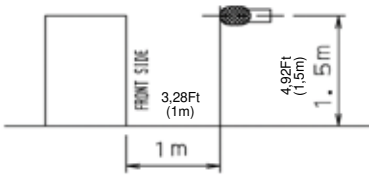


EGSA*10*



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.



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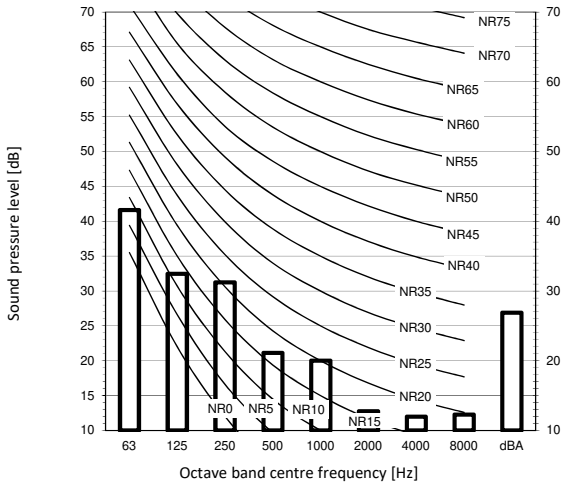
10 Sound data

10 - 2 Sound Pressure Spectrum - Heating

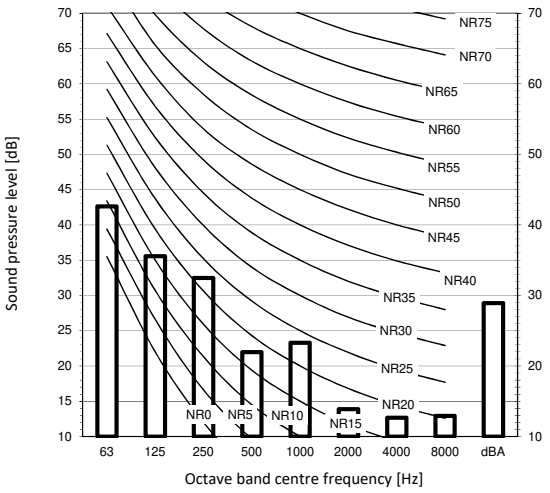
EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG

Heating

EGSA*06*

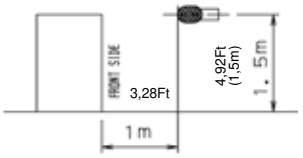


EGSA*10*



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.



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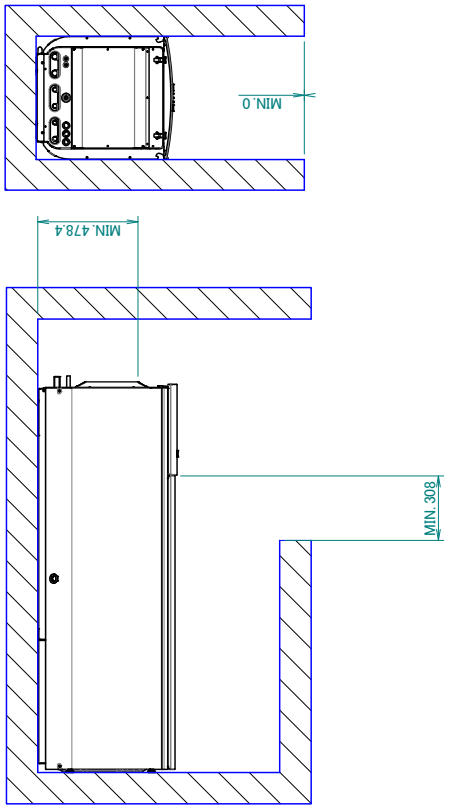
11 Installation

11 - 1 Installation Method

EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG

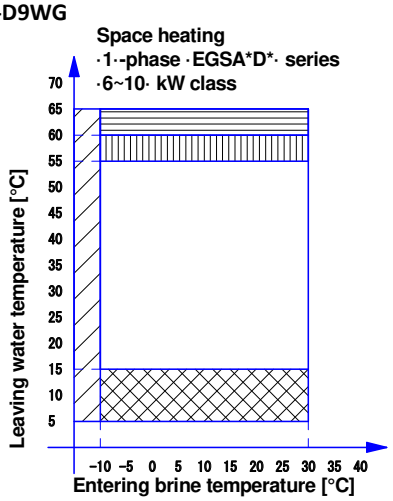


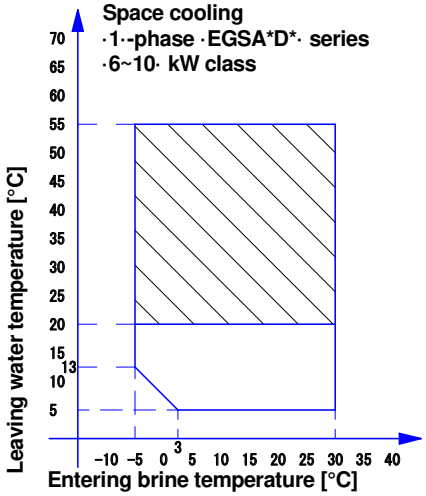
3D122277

12 Operation range

12 - 1 Operation Range

EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG





Legend

- Backup heater only operation
  Entering brine temperature = ·<-10·°C
- Heat pump operation
- Heat pump operation
  Heat pump operation if setpoint >·55·°C and ΔT = ·8·°C (ΔT = outlet temperature – inlet temperature)
- Heat pump + backup heater operation
- Pull-down area
- Heat pump operation
  Heating setpoint: ·>= 15·°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.

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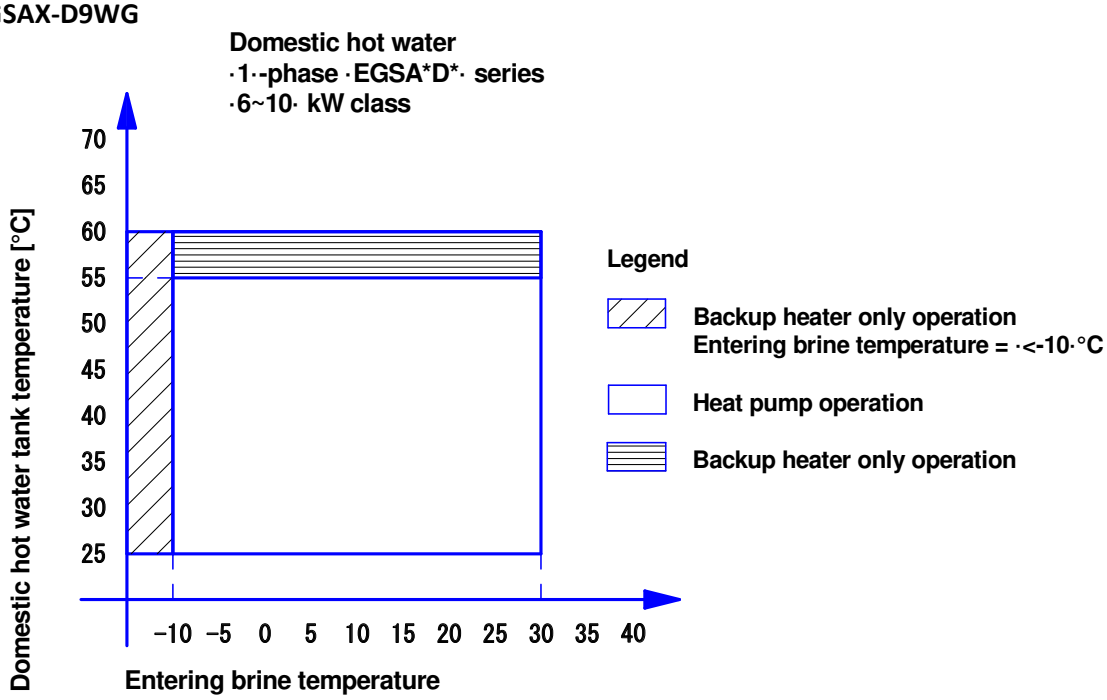
EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG



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

For more information, refer to the installation manual.

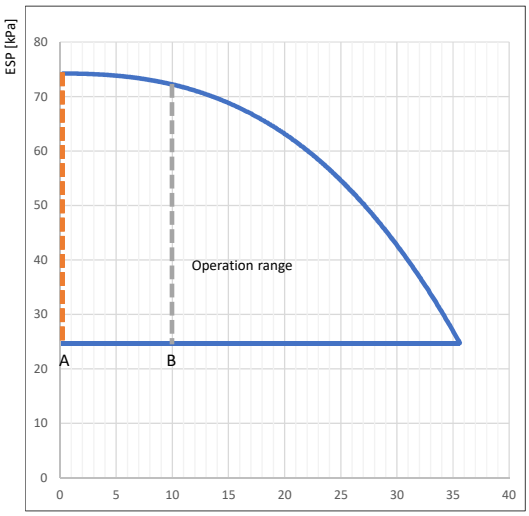
3D122773

13 Hydraulic performance

13 - 1 Static Pressure Drop Unit

EGSAH-D9W
EGSAX-D9W
EGSAX-D9WG

Space heating/cooling circuit



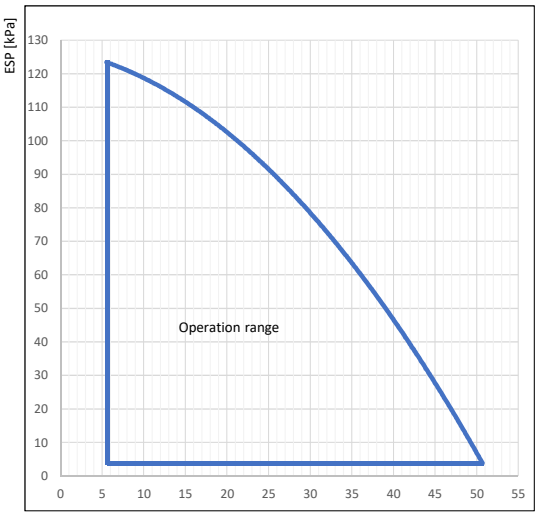
ESP: External Static Pressure
Flow: water flow through the unit
Flow [l/min]

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]

3D122776A

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