Daikin Altherma mid temperature split Technical Data

EPRA08-12EW

EEDEN22A

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EPRA08-12EW

1 Features

EPRA08-12EW

- Outdoor unit extracts heat from the outdoor air, even at -28°C
- By heat pump operation only, the outdoor unit delivers a leaving water temperature of 65°C at -15°C ambient temperature
- By -15°C ambient temperature, the outdoor unit limits heating capacity loss
- Choosing for an R-32 product, reduces the environmental impact with 68% compared to R-410A, leads directly to lower energy consumption thanks to its high energy efficiency and has a 30% lower refrigerant charge
- WLAN cartridge included

Guaranteed operation down to -28°C

Onecta app (optional)

2 Specifications

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Technical specifications					ETBH12E6V + EPRA08EW1	ETBH12E6V + EPRA10EW1	ETBH12E6V + EPRA12EW1
Heating capacity	Min.			kW		3.44 (1)	
	Nom.			kW		6.17 (2)	
	Max.			kW	7.95 (1)	9.25 (1)	9.97 (1)
Power input	Heating	Min.		kW		0.70 (3)	
		Nom.		kW		1.21 (2)	
		Max.		kW	1.63 (3)	1.98 (3)	2.21 (3)
COP						5.10 (2)	
Pump	Type					Grundfos UPM3LK	
	Nominal ESP unit	Heating		kPa		63.0 (4)	
Water side Heat exchanger	Water flow rate	Heating	Nom.	l/min		18.3 (2)	
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				Yes	
		Brine-to-water heat pump				No	
		Heat pump combination heater				No	
		Low-temperature heat pump				No	
		Supplementary heater integrated				Yes	
		Water-to-water heat pump				No	
	LW(A) Sound power level (according to EN14825)	Indoor		dB(A)		44.0	
LW(A) Sound power level (according to EN14825)	Outdoor			dB(A)		53.0	
Sound condition Ecodesign and energy label						Sound power in heating mode, measured according to the EN12102 under conditions of the EN14825	
Space heating general	Air to water unit	Rated airflow (outdoor)		m^3/h		3,542	
	Other	Capacity control				Inverter	
		Pck (Crankcase heater mode)		kW		0.000	
		Poff (Off mode)		kW		0.027	
		Psb (Standby mode)		kW		0.027	
		Pto (Thermostat off)		kW		0.024	
	Integrated supplementary heater	Psup		kW		6.0	
		Type of energy input				Electrical	
Space heating	Average climate water outlet 55°C	General	Annual energy consumption	kWh	4,993	4,970	
			ηs (Seasonal space heating efficiency)	%		138	
			Prated at -10°C	kW		8.5	
			Qhe Annual energy consumption (GCV)	Gj		18	
			SCOP		3.52	3.53	
			Seasonal space heating eff. class			A++	
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)			1.0	

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Technical specifications					ETBH12E6V + EPRA08EW1	ETBH12E6V + EPRA10EW1	ETBH12E6V + EPRA12EW1
Space heating	Average climate water outlet 55°C	A Condition (-7°CDB/-8°CWB)	COPd		2.30		
			Pdh	kW	7.6		
			PERd	%	91.9		
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0		
			COPd		3.50		
			Pdh	kW	4.6		
			PERd	%	140.0		
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0		
			COPd		4.61		
			Pdh	kW	3.0		
			PERd	%	184.2		
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0		
			COPd		6.16		
			Pdh	kW	3.7		
			PERd	%	246.4		
		Tol (temperature operating limit)	COPd		2.01	2.05	
			Pdh	kW	7.0	8.3	
			PERd	%	80.2	82.1	
			TOL	°C	-10		
			WTOL	°C	55		
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.5	0.0	
		Tbiv (bivalent temperature)	COPd		2.30	2.05	
			Pdh	kW	7.6	8.3	
			PERd	%	91.9	82.1	
			Tbiv	°C	-7	-10	
	Cold climate water outlet 55°C	General	Annual energy consumption	kWh	7,088	6,950	6,921
			ηs (Seasonal space heating efficiency)	%	122	125	
			Prated at -22°C	kW	9.0		
			Qhe Annual energy consumption (GCV)	Gj	26	25	
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0		
			COPd		2.61		
			Pdh	kW	5.2		
			PERd	%	104.2	104.4	
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0		
			COPd		3.90		
			Pdh	kW	3.3		
			PERd	%	156.0		

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Technical specifications					ETBH12E6V + EPRA08EW1	ETBH12E6V + EPRA10EW1	ETBH12E6V + EPRA12EW1
Space heating	Cold climate water outlet 55°C	C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)			1.0	
			COPd			4.96	
			Pdh	kW		3.4	
			PERd	%		198.3	
		D Condition (12°CDB/11°CWB)	COPd			6.56	
			Pdh	kW		4.2	
			PERd	%		262.5	
		Tol (temperature operating limit)	COPd		1.49	1.56	1.62
			Pdh	kW	4.9	6.1	7.2
			PERd	%	59.6	62.3	64.7
			TOL	°C		-22	
			WTOL	°C		55	
		G Condition (-15°CDB/-)	COPd		2.00	2.03	
			Pdh	kW	6.0	7.2	
			PERd	%	80.0	81.2	
		Tbiv (bivalent temperature)	COPd		2.25	2.03	
			Pdh	kW	6.6	7.2	
			PERd	%	90.0	81.2	
			Tbiv	°C	-12	-15	
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1	2.9	1.8
	Warm climate water outlet 55°C	General	Annual energy consumption	kWh		2,972	
			ηs (Seasonal space heating efficiency)	%		170	
			Prated at 2°C	kW		9.6	
			Qhe Annual energy consumption (GCV)	Gj		11	
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)			1.0	
			COPd			2.66	
			Pdh	kW		8.0	
			PERd	%		106.5	
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)			1.0	
			COPd			3.79	
			Pdh	kW		6.7	
			PERd	%		151.5	
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)			1.0	
			COPd			5.87	
			Pdh	kW		3.6	
			PERd	%		234.9	
		Tbiv (bivalent temperature)	COPd			3.13	

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Technical specifications					ETBH12E6V + EPRA08EW1	ETBH12E6V + EPRA10EW1	ETBH12E6V + EPRA12EW1
Space heating	Warm climate water outlet 55°C	Tbiv (bivalent temperature)	Pdh	kW	8.4		
			PERd	%	125.4		
			Tbiv	°C	4		
	Average climate water outlet 35°C	General	Annual energy consumption	kWh	3,561	3,539	
			ηs (Seasonal space heating efficiency)	%	190	191	
			Prated at -10°C	kW	8.3		
			Qhe Annual energy consumption (GCV)	Gj	13		
			SCOP		4.81	4.84	
			Seasonal space heating eff. class		A+++		
		A Condition (-7°CDB/-8°CWB)	COPd		3.20		
			Pdh	kW	7.5		
			PERd	%	128.0		
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0		
			COPd		4.93		
			Pdh	kW	4.4		
			PERd	%	197.2		
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0		
			COPd		6.37		
			Pdh	kW	4.3		
			PERd	%	254.8		
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0		
			COPd		8.13		
			Pdh	kW	6.6		
			PERd	%	325.2		
		Tol (temperature operating limit)	COPd		2.90	2.86	
			Pdh	kW	6.9	8.1	
			PERd	%	116.0	114.4	
			TOL	°C	-10		
			WTOL	°C	35		
		Tbiv (bivalent temperature)	COPd		3.20	2.86	
			Pdh	kW	7.5	8.1	
			PERd	%	128.0	114.4	
			Tbiv	°C	-7	-10	
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.4	0.0	
	Cold climate water outlet 35°C	General	Annual energy consumption	kWh	5,394	5,239	5,224
			ηs (Seasonal space heating efficiency)	%	162	166	167
			Prated at -22°C	kW	9.0		

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Technical specifications					ETBH12E6V + EPRA08EW1	ETBH12E6V + EPRA10EW1	ETBH12E6V + EPRA12EW1
Space heating	Cold climate water outlet 35°C	General	Qhe Annual energy consumption (GCV)	Gj		19	
		A Condition (-7°CDB/-8°CWB)	COPd			3.48	
			Pdh	kW		5.4	
			PERd	%		139.2	
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)			1.0	
			COPd			5.40	
			Pdh	kW		3.6	
			PERd	%		216.0	
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)			1.0	
			COPd			6.53	
			Pdh	kW		5.3	
			PERd	%		261.2	
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)			1.0	
			COPd			7.98	
			Pdh	kW		6.6	
			PERd	%	319.0	319.2	
		Tol (temperature operating limit)	COPd		2.11	2.14	2.16
			Pdh	kW	4.9	5.9	6.5
			PERd	%	84.3	85.6	86.4
			TOL	°C		-22	
			WTOL	°C		35	
		G Condition (-15°CDB/-)	COPd		2.68	2.64	
			Pdh	kW	6.0	7.0	
			PERd	%	107.1	105.6	
		Tbiv (bivalent temperature)	COPd		2.95	2.64	
			Pdh	kW	6.5	7.0	
			PERd	%	118.1	105.6	
			Tbiv	°C	-12	-15	
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1	3.1	2.6
	Warm climate water outlet 35°C	General	Annual energy consumption	kWh		1,954	
			ηs (Seasonal space heating efficiency)	%		232	
			Prated at 2°C	kW		8.6	
			Qhe Annual energy consumption (GCV)	Gj		7	
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)			1.0	
			COPd			4.07	
			Pdh	kW		7.7	
			PERd	%		162.9	
Space heating	Warm climate water outlet 35°C	C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)			1.0	
			COPd			5.85	
			Pdh	kW		5.5	
			PERd	%		234.1	
		Tbiv (bivalent temperature)	COPd			4.97	
			Pdh	kW		6.9	
			PERd	%		198.9	
			Tbiv	°C		5	
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)			1.0	
			COPd			7.85	
			Pdh	kW		6.2	
			PERd	%		313.9	

(1)Capacity according to standard EN14511 and valid for heated water range dT = 3~8°C at Ta 7°C |
(2)Condition: Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C) |
(3)Power input is total input of indoor and outdoor units, including the circulation pump; according to EN14511 |
(4)DB/WB 7°C/6°C - LWC 35°C (dT=5°C) with pump at full speed |
Cooling: EW 12°C; LW 7°C; ambient conditions: 35°CDB |
Cooling: EW 23°C; LW 18°C; ambient conditions: 35°CDB |
Test at Ta DB/WB 7°C/6°C. According to EN 16147.

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Technical specifications					ETBH12E9W + EPRA08EW1	ETBH12E9W + EPRA10EW1	ETBH12E9W + EPRA12EW1
Heating capacity	Min.			kW	3.44 (1)		
	Nom.			kW	6.17 (2)		
	Max.			kW	7.95 (1)	9.25 (1)	9.97 (1)
Power input	Heating	Min.		kW	0.70 (3)		
		Nom.		kW	1.21 (2)		
		Max.		kW	1.63 (3)	1.98 (3)	2.21 (3)
COP					5.10 (2)		
Pump	Type				Grundfos UPM3LK		
	Nominal ESP unit	Heating		kPa	63.0 (4)		
Water side Heat exchanger	Water flow rate	Heating	Nom.	l/min	18.3 (2)		
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			Yes		
		Brine-to-water heat pump			No		
		Heat pump combination heater			No		
		Low-temperature heat pump			No		
		Supplementary heater integrated			Yes		
		Water-to-water heat pump			No		
	LW(A) Sound power level (according to EN14825)	Indoor		dB(A)	44.0		
LW(A) Sound power level (according to EN14825)	Outdoor			dB(A)	53.0		
Sound condition Ecodesign and energy label					Sound power in heating mode, measured according to the EN12102 under conditions of the EN14825		
Space heating general	Air to water unit	Rated airflow (outdoor)		m^3/h	3,542		
	Other	Capacity control			Inverter		
		Pck (Crankcase heater mode)		kW	0.000		
		Poff (Off mode)		kW	0.027		
		Psb (Standby mode)		kW	0.027		
		Pto (Thermostat off)		kW	0.024		
	Integrated supplementary heater	Psup		kW	9.0		
		Type of energy input			Electrical		
Space heating	Average climate water outlet 55°C	General	Annual energy consumption	kWh	4,993	4,970	
			ηs (Seasonal space heating efficiency)	%	138		
			Prated at -10°C	kW	8.5		
			Qhe Annual energy consumption (GCV)	Gj	18		
			SCOP		3.52	3.53	
			Seasonal space heating eff. class		A++		
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0		

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Technical specifications					ETBH12E9W + EPRA08EW1	ETBH12E9W + EPRA10EW1	ETBH12E9W + EPRA12EW1
Space heating	Average climate water outlet 55°C	A Condition (-7°CDB/-8°CWB)	COPd			2.30	
			Pdh	kW		7.6	
			PERd	%		91.9	
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)			1.0	
			COPd			3.50	
			Pdh	kW		4.6	
			PERd	%		140.0	
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)			1.0	
			COPd			4.61	
			Pdh	kW		3.0	
			PERd	%		184.2	
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)			1.0	
			COPd			6.16	
			Pdh	kW		3.7	
			PERd	%		246.4	
		Tol (temperature operating limit)	COPd		2.01	2.05	
			Pdh	kW	7.0	8.3	
			PERd	%	80.2	82.1	
			TOL	°C		-10	
			WTOL	°C		55	
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.5	0.0	
		Tbiv (bivalent temperature)	COPd		2.30	2.05	
			Pdh	kW	7.6	8.3	
			PERd	%	91.9	82.1	
			Tbiv	°C	-7	-10	
	Cold climate water outlet 55°C	General	Annual energy consumption	kWh	7,088	6,950	6,921
			ηs (Seasonal space heating efficiency)	%	122	125	
			Prated at -22°C	kW		9.0	
			Qhe Annual energy consumption (GCV)	Gj	26	25	
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)			1.0	
			COPd			2.61	
			Pdh	kW		5.2	
			PERd	%	104.2	104.4	
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)			1.0	
			COPd			3.90	
			Pdh	kW		3.3	
			PERd	%		156.0	

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Technical specifications					ETBH12E9W + EPRA08EW1	ETBH12E9W + EPRA10EW1	ETBH12E9W + EPRA12EW1
Space heating	Cold climate water outlet 55°C	C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)			1.0	
			COPd			4.96	
			Pdh	kW		3.4	
			PERd	%		198.3	
		D Condition (12°CDB/11°CWB)	COPd			6.56	
			Pdh	kW		4.2	
			PERd	%		262.5	
		Tol (temperature operating limit)	COPd		1.49	1.56	1.62
			Pdh	kW	4.9	6.1	7.2
			PERd	%	59.6	62.3	64.7
			TOL	°C		-22	
			WTOL	°C		55	
		G Condition (-15°CDB/-)	COPd		2.00	2.03	
			Pdh	kW	6.0	7.2	
			PERd	%	80.0	81.2	
		Tbiv (bivalent temperature)	COPd		2.25	2.03	
			Pdh	kW	6.6	7.2	
			PERd	%	90.0	81.2	
			Tbiv	°C	-12	-15	
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1	2.9	1.8
	Warm climate water outlet 55°C	General	Annual energy consumption	kWh		2,972	
			ηs (Seasonal space heating efficiency)	%		170	
			Prated at 2°C	kW		9.6	
			Qhe Annual energy consumption (GCV)	Gj		11	
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)			1.0	
			COPd			2.66	
			Pdh	kW		8.0	
			PERd	%		106.5	
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)			1.0	
			COPd			3.79	
			Pdh	kW		6.7	
			PERd	%		151.5	
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)			1.0	
			COPd			5.87	
			Pdh	kW		3.6	
			PERd	%		234.9	
		Tbiv (bivalent temperature)	COPd			3.13	

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Technical specifications					ETBH12E9W + EPRA08EW1	ETBH12E9W + EPRA10EW1	ETBH12E9W + EPRA12EW1
Space heating	Warm climate water outlet 55°C	Tbiv (bivalent temperature)	Pdh	kW	8.4		
			PERd	%	125.4		
			Tbiv	°C	4		
	Average climate water outlet 35°C	General	Annual energy consumption	kWh	3,561	3,539	
			ηs (Seasonal space heating efficiency)	%	190	191	
			Prated at -10°C	kW	8.3		
			Qhe Annual energy consumption (GCV)	Gj	13		
			SCOP		4.81	4.84	
			Seasonal space heating eff. class		A+++		
		A Condition (-7°CDB/-8°CWB)	COPd		3.20		
			Pdh	kW	7.5		
			PERd	%	128.0		
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0		
			COPd		4.93		
			Pdh	kW	4.4		
			PERd	%	197.2		
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0		
			COPd		6.37		
			Pdh	kW	4.3		
			PERd	%	254.8		
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0		
			COPd		8.13		
			Pdh	kW	6.6		
			PERd	%	325.2		
		Tol (temperature operating limit)	COPd		2.90	2.86	
			Pdh	kW	6.9	8.1	
			PERd	%	116.0	114.4	
			TOL	°C	-10		
			WTOL	°C	35		
		Tbiv (bivalent temperature)	COPd		3.20	2.86	
			Pdh	kW	7.5	8.1	
			PERd	%	128.0	114.4	
			Tbiv	°C	-7	-10	
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.4	0.0	
	Cold climate water outlet 35°C	General	Annual energy consumption	kWh	5,394	5,239	5,224
			ηs (Seasonal space heating efficiency)	%	162	166	167
			Prated at -22°C	kW	9.0		

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Technical specifications					ETBH12E9W + EPRA08EW1	ETBH12E9W + EPRA10EW1	ETBH12E9W + EPRA12EW1
Space heating	Cold climate water outlet 35°C	General	Qhe Annual energy consumption (GCV)	Gj		19	
		A Condition (-7°CDB/-8°CWB)	COPd			3.48	
			Pdh	kW		5.4	
			PERd	%		139.2	
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)			1.0	
			COPd			5.40	
			Pdh	kW		3.6	
			PERd	%		216.0	
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)			1.0	
			COPd			6.53	
			Pdh	kW		5.3	
			PERd	%		261.2	
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)			1.0	
			COPd			7.98	
			Pdh	kW		6.6	
			PERd	%	319.0	319.2	
		Tol (temperature operating limit)	COPd		2.11	2.14	2.16
			Pdh	kW	4.9	5.9	6.5
			PERd	%	84.3	85.6	86.4
			TOL	°C		-22	
			WTOL	°C		35	
		G Condition (-15°CDB/-)	COPd		2.68	2.64	
			Pdh	kW	6.0	7.0	
			PERd	%	107.1	105.6	
		Tbiv (bivalent temperature)	COPd		2.95	2.64	
			Pdh	kW	6.5	7.0	
			PERd	%	118.1	105.6	
			Tbiv	°C	-12	-15	
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1	3.1	2.6
	Warm climate water outlet 35°C	General	Annual energy consumption	kWh		1,954	
			ηs (Seasonal space heating efficiency)	%		232	
			Prated at 2°C	kW		8.6	
			Qhe Annual energy consumption (GCV)	Gj		7	
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)			1.0	
			COPd			4.07	
			Pdh	kW		7.7	
			PERd	%		162.9	
Space heating	Warm climate water outlet 35°C	C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)			1.0	
			COPd			5.85	
			Pdh	kW		5.5	
			PERd	%		234.1	
		Tbiv (bivalent temperature)	COPd			4.97	
			Pdh	kW		6.9	
			PERd	%		198.9	
			Tbiv	°C		5	
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)			1.0	
			COPd			7.85	
			Pdh	kW		6.2	
			PERd	%		313.9	

(1)Capacity according to standard EN14511 and valid for heated water range dT = 3~8°C at Ta 7°C |
(2)Condition: Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C) |
(3)Power input is total input of indoor and outdoor units, including the circulation pump; according to EN14511 |
(4)DB/WB 7°C/6°C - LWC 35°C (dT=5°C) with pump at full speed |
Cooling: EW 12°C; LW 7°C; ambient conditions: 35°CDB |
Cooling: EW 23°C; LW 18°C; ambient conditions: 35°CDB |
Test at Ta DB/WB 7°C/6°C. According to EN 16147.

2 Specifications

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Technical specifications					ETBX12E6V + EPRA08EW1	ETBX12E6V + EPRA10EW1	ETBX12E6V + EPRA12EW1
Heating capacity	Min.			kW	3.44 (1)		
	Nom.			kW	6.17 (2)		
	Max.			kW	7.95 (1)	9.25 (1)	9.97 (1)
Cooling capacity	Nom.			kW	6.81 (3) / 6.47 (4)	7.97 (3) / 6.47 (4)	8.62 (3) / 6.47 (4)
Power input	Heating	Min.		kW	0.70 (5)		
		Nom.		kW	1.21 (2)		
		Max.		kW	1.63 (5)	1.98 (5)	2.21 (5)
	Cooling	Nom.		kW	2.08 (3) / 1.13 (4)	2.57 (3) / 1.13 (4)	2.86 (3) / 1.13 (4)
COP					5.10 (2)		
EER					3.28 (3) / 5.75 (4)	3.10 (3) / 5.75 (4)	3.01 (3) / 5.75 (4)
Pump	Type				Grundfos UPM3LK		
	Nominal ESP unit	Heating		kPa	63.0 (6)		
Water side Heat exchanger	Water flow rate	Heating	Nom.	l/min	18.3 (2)		
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			Yes		
		Brine-to-water heat pump			No		
		Heat pump combination heater			No		
		Low-temperature heat pump			No		
		Supplementary heater integrated			Yes		
		Water-to-water heat pump			No		
	LW(A) Sound power level (according to EN14825)	Indoor		dB(A)	44.0		
LW(A) Sound power level (according to EN14825)	Outdoor			dB(A)	53.0		
Sound condition Ecodesign and energy label					Sound power in heating mode, measured according to the EN12102 under conditions of the EN14825		
Space heating general	Air to water unit	Rated airflow (outdoor)		m^3/h	3,542		
	Other	Capacity control			Inverter		
		Pck (Crankcase heater mode)		kW	0.000		
		Poff (Off mode)		kW	0.027		
		Psb (Standby mode)		kW	0.027		
		Pto (Thermostat off)		kW	0.024		
	Integrated supplementary heater	Psup		kW	6.0		
		Type of energy input			Electrical		
Space heating	Average climate water outlet 55°C	General	Annual energy consumption	kWh	4,894	4,871	
			ηs (Seasonal space heating efficiency)	%	141		
			Prated at -10°C	kW	8.5		
			Qhe Annual energy consumption (GCV)	Gj	18		

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Technical specifications					ETBX12E6V + EPRA08EW1	ETBX12E6V + EPRA10EW1	ETBX12E6V + EPRA12EW1
Space heating	Average climate water outlet 55°C	General	SCOP		3.59	3.60	
			Seasonal space heating eff. class			A++	
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)			1.0	
			COPd			2.30	
			Pdh	kW		7.6	
			PERd	%		91.9	
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)			1.0	
			COPd			3.50	
			Pdh	kW		4.6	
			PERd	%		140.0	
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)			1.0	
			COPd			4.61	
			Pdh	kW		3.0	
			PERd	%		184.2	
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)			1.0	
			COPd			6.16	
			Pdh	kW		3.7	
			PERd	%		246.4	
		Tol (temperature operating limit)	COPd		2.01	2.05	
			Pdh	kW	7.0	8.3	
			PERd	%	80.2	82.1	
			TOL	°C		-10	
			WTOL	°C		55	
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.5	0.0	
		Tbiv (bivalent temperature)	COPd		2.30	2.05	
			Pdh	kW	7.6	8.3	
			PERd	%	91.9	82.1	
			Tbiv	°C	-7	-10	
	Cold climate water outlet 55°C	General	Annual energy consumption	kWh	7,028	6,890	6,861
			ηs (Seasonal space heating efficiency)	%	123	126	
			Prated at -22°C	kW		9.0	
			Qhe Annual energy consumption (GCV)	Gj		25	
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)			1.0	
			COPd			2.61	
			Pdh	kW		5.2	
			PERd	%	104.2	104.4	
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)			1.0	

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Technical specifications					ETBX12E6V + EPRA08EW1	ETBX12E6V + EPRA10EW1	ETBX12E6V + EPRA12EW1
Space heating	Cold climate water outlet 55°C	B Condition (2°CDB/1°CWB)	COPd		3.90		
			Pdh	kW	3.3		
			PERd	%	156.0		
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0		
			COPd		4.96		
			Pdh	kW	3.4		
			PERd	%	198.3		
		D Condition (12°CDB/11°CWB)	COPd		6.56		
			Pdh	kW	4.2		
			PERd	%	262.5		
		Tol (temperature operating limit)	COPd		1.49	1.56	1.62
			Pdh	kW	4.9	6.1	7.2
			PERd	%	59.6	62.3	64.7
			TOL	°C	-22		
			WTOL	°C	55		
		G Condition (-15°CDB/-)	COPd		2.00	2.03	
			Pdh	kW	6.0	7.2	
			PERd	%	80.0	81.2	
		Tbiv (bivalent temperature)	COPd		2.25	2.03	
			Pdh	kW	6.6	7.2	
			PERd	%	90.0	81.2	
			Tbiv	°C	-12	-15	
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1	2.9	1.8
	Warm climate water outlet 55°C	General	Annual energy consumption	kWh	2,853		
			ηs (Seasonal space heating efficiency)	%	177		
			Prated at 2°C	kW	9.6		
			Qhe Annual energy consumption (GCV)	Gj	10		
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0		
			COPd		2.66		
			Pdh	kW	8.0		
			PERd	%	106.5		
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0		
			COPd		3.79		
			Pdh	kW	6.7		
			PERd	%	151.5		
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0		
			COPd		5.87		

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Technical specifications					ETBX12E6V + EPRA08EW1	ETBX12E6V + EPRA10EW1	ETBX12E6V + EPRA12EW1
Space heating	Warm climate water outlet 55°C	D Condition (12°CDB/11°CWB)	Pdh	kW	3.6		
			PERd	%	234.9		
		Tbiv (bivalent temperature)	COPd		3.13		
			Pdh	kW	8.4		
			PERd	%	125.4		
			Tbiv	°C	4		
	Average climate water outlet 35°C	General	Annual energy consumption	kWh	3,462	3,440	
			ηs (Seasonal space heating efficiency)	%	195	196	
			Prated at -10°C	kW	8.3		
			Qhe Annual energy consumption (GCV)	Gj	12		
			SCOP		4.95	4.98	
			Seasonal space heating eff. class		A+++		
		A Condition (-7°CDB/-8°CWB)	COPd		3.20		
			Pdh	kW	7.5		
			PERd	%	128.0		
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0		
			COPd		4.93		
			Pdh	kW	4.4		
			PERd	%	197.2		
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0		
			COPd		6.37		
			Pdh	kW	4.3		
			PERd	%	254.8		
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0		
			COPd		8.13		
			Pdh	kW	6.6		
			PERd	%	325.2		
		Tol (temperature operating limit)	COPd		2.90	2.86	
			Pdh	kW	6.9	8.1	
			PERd	%	116.0	114.4	
			TOL	°C	-10		
			WTOL	°C	35		
		Tbiv (bivalent temperature)	COPd		3.20	2.86	
			Pdh	kW	7.5	8.1	
			PERd	%	128.0	114.4	
			Tbiv	°C	-7		-10
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.4	0.0	

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Technical specifications					ETBX12E6V + EPRA08EW1	ETBX12E6V + EPRA10EW1	ETBX12E6V + EPRA12EW1
Space heating	Cold climate water outlet 35°C	General	Annual energy consumption	kWh	5,334	5,180	5,165
			ηs (Seasonal space heating efficiency)	%	163	168	169
			Prated at -22°C	kW	9.0		
			Qhe Annual energy consumption (GCV)	Gj	19		
		A Condition (-7°CDB/-8°CWB)	COPd		3.48		
			Pdh	kW	5.4		
			PERd	%	139.2		
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0		
			COPd		5.40		
			Pdh	kW	3.6		
			PERd	%	216.0		
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0		
			COPd		6.53		
			Pdh	kW	5.3		
			PERd	%	261.2		
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0		
			COPd		7.98		
			Pdh	kW	6.6		
			PERd	%	319.0	319.2	
		Tol (temperature operating limit)	COPd		2.11	2.14	2.16
			Pdh	kW	4.9	5.9	6.5
			PERd	%	84.3	85.6	86.4
			TOL	°C	-22		
			WTOL	°C	35		
		G Condition (-15°CDB/-)	COPd		2.68	2.64	
			Pdh	kW	6.0	7.0	
			PERd	%	107.1	105.6	
		Tbiv (bivalent temperature)	COPd		2.95	2.64	
			Pdh	kW	6.5	7.0	
			PERd	%	118.1	105.6	
			Tbiv	°C	-12	-15	
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1	3.1	2.6
	Warm climate water outlet 35°C	General	Annual energy consumption	kWh	1,835		
			ηs (Seasonal space heating efficiency)	%	247		
			Prated at 2°C	kW	8.6		
			Qhe Annual energy consumption (GCV)	Gj	7	0	7
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0		
Space heating	Warm climate water outlet 35°C	B Condition (2°CDB/1°CWB)	COPd		4.07		
			Pdh	kW	7.7		
			PERd	%	162.9		
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0		
			COPd		5.85		
			Pdh	kW	5.5		
			PERd	%	234.1		
		Tbiv (bivalent temperature)	COPd		4.97		
			Pdh	kW	6.9		
			PERd	%	198.9		
			Tbiv	°C	5		
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0		
			COPd		7.85		
			Pdh	kW	6.2		
			PERd	%	313.9		

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(1)Capacity according to standard EN14511 and valid for heated water range dT = 3~8°C at Ta 7°C |
(2)Condition: Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C) |
(3)Cooling: EW 12°C; LW 7°C; ambient conditions: 35°CDB |
(4)Cooling: EW 23°C; LW 18°C; ambient conditions: 35°CDB |
(5)Power input is total input of indoor and outdoor units, including the circulation pump; according to EN14511 |
(6)DB/WB 7°C/6°C - LWC 35°C (dT=5°C) with pump at full speed |
Test at Ta DB/WB 7°C/6°C. According to EN 16147.

Technical specifications					ETBX12E9W + EPRA08EW1	ETBX12E9W + EPRA10EW1	ETBX12E9W + EPRA12EW1
Heating capacity	Min.			kW	3.44 (1)		
	Nom.			kW	6.17 (2)		
	Max.			kW	7.95 (1)	9.25 (1)	9.97 (1)
Cooling capacity	Nom.			kW	6.81 (3) / 6.47 (4)	7.97 (3) / 6.47 (4)	8.62 (3) / 6.47 (4)
Power input	Heating	Min.		kW	0.70 (5)		
		Nom.		kW	1.21 (2)		
		Max.		kW	1.63 (5)	1.98 (5)	2.21 (5)
	Cooling	Nom.		kW	2.08 (3) / 1.13 (4)	2.57 (3) / 1.13 (4)	2.86 (3) / 1.13 (4)
COP					5.10 (2)		
EER					3.28 (3) / 5.75 (4)	3.10 (3) / 5.75 (4)	3.01 (3) / 5.75 (4)
Pump	Type				Grundfos UPM3LK		
	Nominal ESP unit	Heating		kPa	63.0 (6)		
Water side Heat exchanger	Water flow rate	Heating	Nom.	l/min	18.3 (2)		
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			Yes		
		Brine-to-water heat pump			No		
		Heat pump combination heater			No		
		Low-temperature heat pump			No		
		Supplementary heater integrated			Yes		
		Water-to-water heat pump			No		
	LW(A) Sound power level (according to EN14825)	Indoor		dB(A)	44.0		
LW(A) Sound power level (according to EN14825)	Outdoor			dB(A)	53.0		
Sound condition Ecodesign and energy label					Sound power in heating mode, measured according to the EN12102 under conditions of the EN14825		
Space heating general	Air to water unit	Rated airflow (outdoor)		m^3/h	3,542		
	Other	Capacity control			Inverter		
		Pck (Crankcase heater mode)		kW	0.000		
		Poff (Off mode)		kW	0.027		
		Psb (Standby mode)		kW	0.027		
		Pto (Thermostat off)		kW	0.024		
	Integrated supplementary heater	Psup		kW	9.0		
		Type of energy input			Electrical		
Space heating	Average climate water outlet 55°C	General	Annual energy consumption	kWh	4,894	4,871	
			ηs (Seasonal space heating efficiency)	%	141		
			Prated at -10°C	kW	8.5		
			Qhe Annual energy consumption (GCV)	Gj	18		

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Technical specifications					ETBX12E9W + EPRA08EW1	ETBX12E9W + EPRA10EW1	ETBX12E9W + EPRA12EW1
Space heating	Average climate water outlet 55°C	General	SCOP		3.59	3.60	
			Seasonal space heating eff. class			A++	
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)			1.0	
			COPd			2.30	
			Pdh	kW		7.6	
			PERd	%		91.9	
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)			1.0	
			COPd			3.50	
			Pdh	kW		4.6	
			PERd	%		140.0	
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)			1.0	
			COPd			4.61	
			Pdh	kW		3.0	
			PERd	%		184.2	
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)			1.0	
			COPd			6.16	
			Pdh	kW		3.7	
			PERd	%		246.4	
		Tol (temperature operating limit)	COPd		2.01	2.05	
			Pdh	kW	7.0	8.3	
			PERd	%	80.2	82.1	
			TOL	°C		-10	
			WTOL	°C		55	
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.5	0.0	
		Tbiv (bivalent temperature)	COPd		2.30	2.05	
			Pdh	kW	7.6	8.3	
			PERd	%	91.9	82.1	
			Tbiv	°C	-7	-10	
	Cold climate water outlet 55°C	General	Annual energy consumption	kWh	7,028	6,890	6,861
			ηs (Seasonal space heating efficiency)	%	123	126	
			Prated at -22°C	kW		9.0	
			Qhe Annual energy consumption (GCV)	Gj		25	
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)			1.0	
			COPd			2.61	
			Pdh	kW		5.2	
			PERd	%	104.2	104.4	
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)			1.0	

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Technical specifications					ETBX12E9W + EPRA08EW1	ETBX12E9W + EPRA10EW1	ETBX12E9W + EPRA12EW1
Space heating	Cold climate water outlet 55°C	B Condition (2°CDB/1°CWB)	COPd			3.90	
			Pdh	kW		3.3	
			PERd	%		156.0	
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)			1.0	
			COPd			4.96	
			Pdh	kW		3.4	
			PERd	%		198.3	
		D Condition (12°CDB/11°CWB)	COPd			6.56	
			Pdh	kW		4.2	
			PERd	%		262.5	
		Tol (temperature operating limit)	COPd		1.49	1.56	1.62
			Pdh	kW	4.9	6.1	7.2
			PERd	%	59.6	62.3	64.7
			TOL	°C		-22	
			WTOL	°C		55	
		G Condition (-15°CDB/-)	COPd		2.00	2.03	
			Pdh	kW	6.0	7.2	
			PERd	%	80.0	81.2	
		Tbiv (bivalent temperature)	COPd		2.25	2.03	
			Pdh	kW	6.6	7.2	
			PERd	%	90.0	81.2	
			Tbiv	°C	-12	-15	
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1	2.9	1.8
	Warm climate water outlet 55°C	General	Annual energy consumption	kWh		2,853	
			ηs (Seasonal space heating efficiency)	%		177	
			Prated at 2°C	kW		9.6	
			Qhe Annual energy consumption (GCV)	Gj		10	
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)			1.0	
			COPd			2.66	
			Pdh	kW		8.0	
			PERd	%		106.5	
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)			1.0	
			COPd			3.79	
			Pdh	kW		6.7	
			PERd	%		151.5	
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)			1.0	
			COPd			5.87	

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Technical specifications					ETBX12E9W + EPRA08EW1	ETBX12E9W + EPRA10EW1	ETBX12E9W + EPRA12EW1
Space heating	Warm climate water outlet 55°C	D Condition (12°CDB/11°CWB)	Pdh	kW		3.6	
			PERd	%		234.9	
		Tbiv (bivalent temperature)	COPd			3.13	
			Pdh	kW		8.4	
			PERd	%		125.4	
			Tbiv	°C		4	
	Average climate water outlet 35°C	General	Annual energy consumption	kWh	3,462	3,440	
			ηs (Seasonal space heating efficiency)	%	195	196	
			Prated at -10°C	kW		8.3	
			Qhe Annual energy consumption (GCV)	Gj		12	
			SCOP		4.95	4.98	
			Seasonal space heating eff. class			A+++	
		A Condition (-7°CDB/-8°CWB)	COPd			3.20	
			Pdh	kW		7.5	
			PERd	%		128.0	
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)			1.0	
			COPd			4.93	
			Pdh	kW		4.4	
			PERd	%		197.2	
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)			1.0	
			COPd			6.37	
			Pdh	kW		4.3	
			PERd	%		254.8	
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)			1.0	
			COPd			8.13	
			Pdh	kW		6.6	
			PERd	%		325.2	
		Tol (temperature operating limit)	COPd		2.90	2.86	
			Pdh	kW	6.9	8.1	
			PERd	%	116.0	114.4	
			TOL	°C		-10	
			WTOL	°C		35	
		Tbiv (bivalent temperature)	COPd		3.20	2.86	
			Pdh	kW	7.5	8.1	
			PERd	%	128.0	114.4	
			Tbiv	°C	-7		-10
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.4	0.0	

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Technical specifications					ETBX12E9W + EPRA08EW1	ETBX12E9W + EPRA10EW1	ETBX12E9W + EPRA12EW1
Space heating	Cold climate water outlet 35°C	General	Annual energy consumption	kWh	5,334	5,180	5,165
			ηs (Seasonal space heating efficiency)	%	163	168	169
			Prated at -22°C	kW	9.0		
			Qhe Annual energy consumption (GCV)	Gj	19		
		A Condition (-7°CDB/-8°CWB)	COPd		3.48		
			Pdh	kW	5.4		
			PERd	%	139.2		
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0		
			COPd		5.40		
			Pdh	kW	3.6		
			PERd	%	216.0		
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0		
			COPd		6.53		
			Pdh	kW	5.3		
			PERd	%	261.2		
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0		
			COPd		7.98		
			Pdh	kW	6.6		
			PERd	%	319.0	319.2	
		Tol (temperature operating limit)	COPd		2.11	2.14	2.16
			Pdh	kW	4.9	5.9	6.5
			PERd	%	84.3	85.6	86.4
			TOL	°C	-22		
			WTOL	°C	35		
		G Condition (-15°CDB/-)	COPd		2.68	2.64	
			Pdh	kW	6.0	7.0	
			PERd	%	107.1	105.6	
		Tbiv (bivalent temperature)	COPd		2.95	2.64	
			Pdh	kW	6.5	7.0	
			PERd	%	118.1	105.6	
			Tbiv	°C	-12	-15	
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1	3.1	2.6
	Warm climate water outlet 35°C	General	Annual energy consumption	kWh	1,835		
			ηs (Seasonal space heating efficiency)	%	247		
			Prated at 2°C	kW	8.6		
			Qhe Annual energy consumption (GCV)	Gj	7	0	7
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0		
Space heating	Warm climate water outlet 35°C	B Condition (2°CDB/1°CWB)	COPd		4.07		
			Pdh	kW	7.7		
			PERd	%	162.9		
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0		
			COPd		5.85		
			Pdh	kW	5.5		
			PERd	%	234.1		
		Tbiv (bivalent temperature)	COPd		4.97		
			Pdh	kW	6.9		
			PERd	%	198.9		
			Tbiv	°C	5		
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0		
			COPd		7.85		
			Pdh	kW	6.2		
			PERd	%	313.9		

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(1)Capacity according to standard EN14511 and valid for heated water range dT = 3~8°C at Ta 7°C |
(2)Condition: Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C) |
(3)Cooling: EW 12°C; LW 7°C; ambient conditions: 35°CDB |
(4)Cooling: EW 23°C; LW 18°C; ambient conditions: 35°CDB |
(5)Power input is total input of indoor and outdoor units, including the circulation pump; according to EN14511 |
(6)DB/WB 7°C/6°C - LWC 35°C (dT=5°C) with pump at full speed |
Test at Ta DB/WB 7°C/6°C. According to EN 16147.

Technical specifications				ETVH12S18E6V + EPRA08EW1	ETVH12S23E6V + EPRA08EW1	ETVH12S18E6V + EPRA10EW1	ETVH12S23E6V + EPRA10EW1	ETVH12S18E6V + EPRA12EW1	ETVH12S23E6V + EPRA12EW1
Heating capacity	Min.		kW	3.44 (1)					
	Nom.		kW	6.17 (2)					
	Max.		kW	7.95 (1)		9.25 (1)		9.97 (1)	
Power input	Heating	Min.	kW	0.70 (3)					
		Nom.	kW	1.21 (2)					
		Max.	kW	1.63 (3)		1.98 (3)		2.21 (3)	
	Domestic hot water from 10°C to 50°C	Nom.	kWh	2.54 (4)	3.09 (4)	2.54 (4)	3.09 (4)	2.54 (4)	3.09 (4)
Heat up time from 10°C to 50°C			hr	1h 51min	2h 10min	1h 51min	2h 10min	1h 51min	2h 10min
COP				5.10 (2)					
Pump	Type			Grundfos UPM3LK					
	Nominal ESP unit	Heating	kPa	59.8 (5)					
Water side Heat exchanger	Water flow rate	Heating Nom.	l/min	18.3 (2)					
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		Yes					
		Brine-to-water heat pump		No					
		Heat pump combination heater		Yes					
		Low-temperature heat pump		No					
		Supplementary heater integrated		Yes					
		Water-to-water heat pump		No					
	LW(A) Sound power level (according to EN14825)	Indoor	dB(A)	44.0					
LW(A) Sound power level (according to EN14825)	Outdoor		dB(A)	53.0					
Sound condition Ecodesign and energy label				Sound power in heating mode, measured according to the EN12102 under conditions of the EN14825					
Tank	Name			Stainless steel domestic hot water tank 180 l	Stainless steel domestic hot water tank 230 L	Stainless steel domestic hot water tank 180 l	Stainless steel domestic hot water tank 230 L	Stainless steel domestic hot water tank 180 l	Stainless steel domestic hot water tank 230 L
Space heating general	Air to water unit	Rated airflow (outdoor)	m^3/h	3,542					
	Other	Capacity control		Inverter					
		Pck (Crankcase heater mode)	kW	0.000					
		Poff (Off mode)	kW	0.027					
		Psb (Standby mode)	kW	0.027					
		Pto (Thermostat off)	kW	0.024					
Domestic hot water heating	General	Declared load profile		L					
Space heating general	Integrated supplementary heater	Psup	kW	6.0					
		Type of energy input		Electrical					
Domestic hot water heating	Average climate	AEC (Annual electricity consumption)	kWh	851	787	851	787	851	787
		COPdhw		2.80	3.05	2.80	3.05	2.80	3.05
		Heat up time		1h 57min	2h 14min	1h 57min	2h 14min	1h 57min	2h 14min

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Technical specifications					ETVH12S18E6V + EPRA08EW1	ETVH12S23E6V + EPRA08EW1	ETVH12S18E6V + EPRA10EW1	ETVH12S23E6V + EPRA10EW1	ETVH12S18E6V + EPRA12EW1	ETVH12S23E6V + EPRA12EW1
Domestic hot water heating	Average climate	ηwh (water heating efficiency)		%	120	130	120	130	120	130
		Qelec (Daily electricity consumption)		kWh	4.160	3.830	4.160	3.830	4.160	3.830
		Reference hot water temperature		°C	53.0	52.0	53.0	52.0	53.0	52.0
		Stand-by power input		W	50.7	43.9	50.7	43.9	50.7	43.9
		Water heating energy efficiency class			A+					
	Cold climate	AEC (Annual electricity consumption)		kWh	937	866	937	866	937	866
		COPdhw			2.55	2.77	2.55	2.77	2.55	2.77
		Heat up time			1h 55min	2h 02min	1h 55min	2h 02min	1h 55min	2h 02min
		ηwh (water heating efficiency)		%	109	118	109	118	109	118
		Qelec (Daily electricity consumption)		kWh	4.570	4.200	4.570	4.200	4.570	4.200
		Reference hot water temperature		°C	53.0	52.0	53.0	52.0	53.0	52.0
		Stand-by power input		W	54.3	46.7	54.3	46.7	54.3	46.7
	Warm climate	AEC (Annual electricity consumption)		kWh	699	648	699	648	699	648
		COPdhw			3.40	3.68	3.40	3.68	3.40	3.68
		Heat up time			1h 54min	2h 06min	1h 54min	2h 06min	1h 54min	2h 06min
		ηwh (water heating efficiency)		%	147	158	147	158	147	158
		Qelec (Daily electricity consumption)		kWh	3.430	3.160	3.430	3.160	3.430	3.160
		Reference hot water temperature		°C	53.0	52.0	53.0	52.0	53.0	52.0
		Stand-by power input		W	44.6	39.0	44.6	39.0	44.6	39.0
Space heating	Average climate water outlet 55°C	General	Annual energy consumption	kWh	4,993		4,970			
			ηs (Seasonal space heating efficiency)	%	138					
			Prated at -10°C	kW	8.5					
			Qhe Annual energy consumption (GCV)	Gj	18					
			SCOP		3.52		3.53			
			Seasonal space heating eff. class		A++					
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.30					
			Pdh	kW	7.6					
			PERd	%	91.9					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.50					
			Pdh	kW	4.6					
			PERd	%	140.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.61					
			Pdh	kW	3.0					
			PERd	%	184.2					

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Technical specifications					ETVH12S18E6V + EPRA08EW1	ETVH12S23E6V + EPRA08EW1	ETVH12S18E6V + EPRA10EW1	ETVH12S23E6V + EPRA10EW1	ETVH12S18E6V + EPRA12EW1	ETVH12S23E6V + EPRA12EW1
Space heating	Average climate water outlet 55°C	D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.16					
			Pdh	kW	3.7					
			PERd	%	246.4					
		Tol (temperature operating limit)	COPd		2.01		2.05			
			Pdh	kW	7.0		8.3			
			PERd	%	80.2		82.1			
			TOL	°C	-10					
			WTOL	°C	55					
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.5		0.0			
		Tbiv (bivalent temperature)	COPd		2.30		2.05			
			Pdh	kW	7.6		8.3			
			PERd	%	91.9		82.1			
			Tbiv	°C	-7		-10			
	Cold climate water outlet 55°C	General	Annual energy consumption	kWh	7,088		6,950		6,921	
			ηs (Seasonal space heating efficiency)	%	122		125			
			Prated at -22°C	kW	9.0					
			Qhe Annual energy consumption (GCV)	Gj	26		25			
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.61					
			Pdh	kW	5.2					
			PERd	%	104.2		104.4			
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.90					
			Pdh	kW	3.3					
			PERd	%	156.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.96					
			Pdh	kW	3.4					
			PERd	%	198.3					
		D Condition (12°CDB/11°CWB)	COPd		6.56					
			Pdh	kW	4.2					
			PERd	%	262.5					
		Tol (temperature operating limit)	COPd		1.49		1.56		1.62	
			Pdh	kW	4.9		6.1		7.2	
			PERd	%	59.6		62.3		64.7	
			TOL	°C	-22					

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Technical specifications					ETVH12S18E6V + EPRA08EW1	ETVH12S23E6V + EPRA08EW1	ETVH12S18E6V + EPRA10EW1	ETVH12S23E6V + EPRA10EW1	ETVH12S18E6V + EPRA12EW1	ETVH12S23E6V + EPRA12EW1
Space heating	Cold climate water outlet 55°C	Tol (temperature operating limit)	WTOL	°C	55					
		G Condition (-15°CDB/-)	COPd		2.00		2.03			
			Pdh	kW	6.0		7.2			
			PERd	%	80.0		81.2			
		Tbiv (bivalent temperature)	COPd		2.25		2.03			
			Pdh	kW	6.6		7.2			
			PERd	%	90.0		81.2			
			Tbiv	°C	-12		-15			
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1		2.9		1.8	
	Warm climate water outlet 55°C	General	Annual energy consumption	kWh	2,972					
			ηs (Seasonal space heating efficiency)	%	170					
			Prated at 2°C	kW	9.6					
			Qhe Annual energy consumption (GCV)	Gj	11					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.66					
			Pdh	kW	8.0					
			PERd	%	106.5					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.79					
			Pdh	kW	6.7					
			PERd	%	151.5					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.87					
			Pdh	kW	3.6					
			PERd	%	234.9					
		Tbiv (bivalent temperature)	COPd		3.13					
			Pdh	kW	8.4					
			PERd	%	125.4					
			Tbiv	°C	4					
	Average climate water outlet 35°C	General	Annual energy consumption	kWh	3,561		3,539			
			ηs (Seasonal space heating efficiency)	%	190		191			
			Prated at -10°C	kW	8.3					
			Qhe Annual energy consumption (GCV)	Gj	13					
			SCOP		4.81		4.84			
			Seasonal space heating eff. class		A+++					
		A Condition (-7°CDB/-8°CWB)	COPd		3.20					
			Pdh	kW	7.5					

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Technical specifications					ETVH12S18E6V + EPRA08EW1	ETVH12S23E6V + EPRA08EW1	ETVH12S18E6V + EPRA10EW1	ETVH12S23E6V + EPRA10EW1	ETVH12S18E6V + EPRA12EW1	ETVH12S23E6V + EPRA12EW1
Space heating	Average climate water outlet 35°C	A Condition (-7°CDB/-8°CWB)	PERd	%	128.0					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.93					
			Pdh	kW	4.4					
			PERd	%	197.2					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.37					
			Pdh	kW	4.3					
			PERd	%	254.8					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		8.13					
			Pdh	kW	6.6					
			PERd	%	325.2					
		Tol (temperature operating limit)	COPd		2.90		2.86			
			Pdh	kW	6.9		8.1			
			PERd	%	116.0		114.4			
			TOL	°C	-10					
			WTOL	°C	35					
		Tbiv (bivalent temperature)	COPd		3.20		2.86			
			Pdh	kW	7.5		8.1			
			PERd	%	128.0		114.4			
			Tbiv	°C	-7		-10			
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.4		0.0			
	Cold climate water outlet 35°C	General	Annual energy consumption	kWh	5,394		5,239		5,224	
			ηs (Seasonal space heating efficiency)	%	162		166		167	
			Prated at -22°C	kW	9.0					
			Qhe Annual energy consumption (GCV)	Gj	19					
		A Condition (-7°CDB/-8°CWB)	COPd		3.48					
			Pdh	kW	5.4					
			PERd	%	139.2					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.40					
			Pdh	kW	3.6					
			PERd	%	216.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.53					
			Pdh	kW	5.3					

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Technical specifications					ETVH12S18E6V + EPRA08EW1	ETVH12S23E6V + EPRA08EW1	ETVH12S18E6V + EPRA10EW1	ETVH12S23E6V + EPRA10EW1	ETVH12S18E6V + EPRA12EW1	ETVH12S23E6V + EPRA12EW1
Space heating	Cold climate water outlet 35°C	C Condition (7°CDB/6°CWB)	PERd	%	261.2					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		7.98					
			Pdh	kW	6.6					
			PERd	%	319.0		319.2			
		Tol (temperature operating limit)	COPd		2.11		2.14		2.16	
			Pdh	kW	4.9		5.9		6.5	
			PERd	%	84.3		85.6		86.4	
			TOL	°C	-22					
			WTOL	°C	35					
		G Condition (-15°CDB/-)	COPd		2.68		2.64			
			Pdh	kW	6.0		7.0			
			PERd	%	107.1		105.6			
		Tbiv (bivalent temperature)	COPd		2.95		2.64			
			Pdh	kW	6.5		7.0			
			PERd	%	118.1		105.6			
			Tbiv	°C	-12		-15			
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1		3.1		2.6	
	Warm climate water outlet 35°C	General	Annual energy consumption	kWh	1,954					
			ηs (Seasonal space heating efficiency)	%	232					
			Prated at 2°C	kW	8.6					
			Qhe Annual energy consumption (GCV)	Gj	7					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.07					
			Pdh	kW	7.7					
			PERd	%	162.9					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.85					
			Pdh	kW	5.5					
			PERd	%	234.1					
		Tbiv (bivalent temperature)	COPd		4.97					
			Pdh	kW	6.9					
			PERd	%	198.9					
			Tbiv	°C	5					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		7.85					
			Pdh	kW	6.2					
Space heating	Warm climate water outlet 35°C	D Condition (12°CDB/11°CWB)	PERd	%	313.9					

(1)Capacity according to standard EN14511 and valid for heated water range dT = 3~8°C at Ta 7°C |
(2)Condition: Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C) |
(3)Power input is total input of indoor and outdoor units, including the circulation pump; according to EN14511 |
(4)Test at Ta DB/WB 7°C/6°C. According to EN 16147. |
(5)DB/WB 7°C/6°C - LWC 35°C (dT=5°C) with pump at full speed |
Cooling: EW 12°C; LW 7°C; ambient conditions: 35°CDB |
Cooling: EW 23°C; LW 18°C; ambient conditions: 35°CDB

Technical specifications			ETVH12S18E9W + EPRA08EW1	ETVH12S23E9W + EPRA08EW1	ETVH12S18E9W + EPRA10EW1	ETVH12S23E9W + EPRA10EW1	ETVH12S18E9W + EPRA12EW1	ETVH12S23E9W + EPRA12EW1
Heating capacity	Min.	kW	3.44 (1)					
	Nom.	kW	6.17 (2)					
	Max.	kW	7.95 (1)		9.25 (1)		9.97 (1)	

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Technical specifications				ETVH12S18E9W + EPRA08EW1	ETVH12S23E9W + EPRA08EW1	ETVH12S18E9W + EPRA10EW1	ETVH12S23E9W + EPRA10EW1	ETVH12S18E9W + EPRA12EW1	ETVH12S23E9W + EPRA12EW1
Power input	Heating	Min.	kW	0.70 (3)					
		Nom.	kW	1.21 (2)					
		Max.	kW	1.63 (3)		1.98 (3)		2.21 (3)	
	Domestic hot water from 10°C to 50°C	Nom.	kWh	2.54 (4)	3.09 (4)	2.54 (4)	3.09 (4)	2.54 (4)	3.09 (4)
Heat up time from 10°C to 50°C			hr	1h 51min	2h 10min	1h 51min	2h 10min	1h 51min	2h 10min
COP				5.10 (2)					
Pump	Type			Grundfos UPM3LK					
	Nominal ESP unit	Heating	kPa	59.8 (5)					
Water side Heat exchanger	Water flow rate	Heating Nom.	l/min	18.3 (2)					
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		Yes					
		Brine-to-water heat pump		No					
		Heat pump combination heater		Yes					
		Low-temperature heat pump		No					
		Supplementary heater integrated		Yes					
		Water-to-water heat pump		No					
	LW(A) Sound power level (according to EN14825)	Indoor	dB(A)	44.0					
LW(A) Sound power level (according to EN14825)	Outdoor		dB(A)	53.0					
Sound condition Ecodesign and energy label				Sound power in heating mode, measured according to the EN12102 under conditions of the EN14825					
Tank	Name			Stainless steel domestic hot water tank 180 l	Stainless steel domestic hot water tank 230 L	Stainless steel domestic hot water tank 180 l	Stainless steel domestic hot water tank 230 L	Stainless steel domestic hot water tank 180 l	Stainless steel domestic hot water tank 230 L
Space heating general	Air to water unit	Rated airflow (outdoor)	m^3/h	3,542					
	Other	Capacity control		Inverter					
		Pck (Crankcase heater mode)	kW	0.000					
		Poff (Off mode)	kW	0.027					
		Psb (Standby mode)	kW	0.027					
		Pto (Thermostat off)	kW	0.024					
Domestic hot water heating	General	Declared load profile		L					
Space heating general	Integrated supplementary heater	Psup	kW	9.0					
		Type of energy input		Electrical					
Domestic hot water heating	Average climate	AEC (Annual electricity consumption)	kWh	851	787	851	787	851	787
		COPdhw		2.80	3.05	2.80	3.05	2.80	3.05
		Heat up time		1h 57min	2h 14min	1h 57min	2h 14min	1h 57min	2h 14min

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Technical specifications					ETVH12S18E9W + EPRA08EW1	ETVH12S23E9W + EPRA08EW1	ETVH12S18E9W + EPRA10EW1	ETVH12S23E9W + EPRA10EW1	ETVH12S18E9W + EPRA12EW1	ETVH12S23E9W + EPRA12EW1
Domestic hot water heating	Average climate	ηwh (water heating efficiency)		%	120	130	120	130	120	130
		Qelec (Daily electricity consumption)		kWh	4.160	3.830	4.160	3.830	4.160	3.830
		Reference hot water temperature		°C	53.0	52.0	53.0	52.0	53.0	52.0
		Stand-by power input		W	50.7	43.9	50.7	43.9	50.7	43.9
		Water heating energy efficiency class			A+					
	Cold climate	AEC (Annual electricity consumption)		kWh	937	866	937	866	937	866
		COPdhw			2.55	2.77	2.55	2.77	2.55	2.77
		Heat up time			1h 55min	2h 02min	1h 55min	2h 02min	1h 55min	2h 02min
		ηwh (water heating efficiency)		%	109	118	109	118	109	118
		Qelec (Daily electricity consumption)		kWh	4.570	4.200	4.570	4.200	4.570	4.200
		Reference hot water temperature		°C	53.0	52.0	53.0	52.0	53.0	52.0
		Stand-by power input		W	54.3	46.7	54.3	46.7	54.3	46.7
	Warm climate	AEC (Annual electricity consumption)		kWh	699	648	699	648	699	648
		COPdhw			3.40	3.68	3.40	3.68	3.40	3.68
		Heat up time			1h 54min	2h 06min	1h 54min	2h 06min	1h 54min	2h 06min
		ηwh (water heating efficiency)		%	147	158	147	158	147	158
		Qelec (Daily electricity consumption)		kWh	3.430	3.160	3.430	3.160	3.430	3.160
		Reference hot water temperature		°C	53.0	52.0	53.0	52.0	53.0	52.0
		Stand-by power input		W	44.6	39.0	44.6	39.0	44.6	39.0
Space heating	Average climate water outlet 55°C	General	Annual energy consumption	kWh	4,993		4,970			
			ηs (Seasonal space heating efficiency)	%	138					
			Prated at -10°C	kW	8.5					
			Qhe Annual energy consumption (GCV)	Gj	18					
			SCOP		3.52		3.53			
			Seasonal space heating eff. class		A++					
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.30					
			Pdh	kW	7.6					
			PERd	%	91.9					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.50					
			Pdh	kW	4.6					
			PERd	%	140.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.61					
			Pdh	kW	3.0					
			PERd	%	184.2					

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Technical specifications					ETVH12S18E9W + EPRA08EW1	ETVH12S23E9W + EPRA08EW1	ETVH12S18E9W + EPRA10EW1	ETVH12S23E9W + EPRA10EW1	ETVH12S18E9W + EPRA12EW1	ETVH12S23E9W + EPRA12EW1
Space heating	Average climate water outlet 55°C	D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.16					
			Pdh	kW	3.7					
			PERd	%	246.4					
		Tol (temperature operating limit)	COPd		2.01		2.05			
			Pdh	kW	7.0		8.3			
			PERd	%	80.2		82.1			
			TOL	°C	-10					
			WTOL	°C	55					
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.5		0.0			
		Tbiv (bivalent temperature)	COPd		2.30		2.05			
			Pdh	kW	7.6		8.3			
			PERd	%	91.9		82.1			
			Tbiv	°C	-7		-10			
	Cold climate water outlet 55°C	General	Annual energy consumption	kWh	7,088		6,950		6,921	
			ηs (Seasonal space heating efficiency)	%	122		125			
			Prated at -22°C	kW	9.0					
			Qhe Annual energy consumption (GCV)	Gj	26		25			
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.61					
			Pdh	kW	5.2					
			PERd	%	104.2		104.4			
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.90					
			Pdh	kW	3.3					
			PERd	%	156.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.96					
			Pdh	kW	3.4					
			PERd	%	198.3					
		D Condition (12°CDB/11°CWB)	COPd		6.56					
			Pdh	kW	4.2					
			PERd	%	262.5					
		Tol (temperature operating limit)	COPd		1.49		1.56		1.62	
			Pdh	kW	4.9		6.1		7.2	
			PERd	%	59.6		62.3		64.7	
			TOL	°C	-22					

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Technical specifications					ETVH12S18E9W + EPRA08EW1	ETVH12S23E9W + EPRA08EW1	ETVH12S18E9W + EPRA10EW1	ETVH12S23E9W + EPRA10EW1	ETVH12S18E9W + EPRA12EW1	ETVH12S23E9W + EPRA12EW1
Space heating	Cold climate water outlet 55°C	Tol (temperature operating limit)	WTOL	°C	55					
		G Condition (-15°CDB/-)	COPd		2.00		2.03			
			Pdh	kW	6.0		7.2			
			PERd	%	80.0		81.2			
		Tbiv (bivalent temperature)	COPd		2.25		2.03			
			Pdh	kW	6.6		7.2			
			PERd	%	90.0		81.2			
			Tbiv	°C	-12		-15			
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1		2.9		1.8	
	Warm climate water outlet 55°C	General	Annual energy consumption	kWh	2,972					
			ηs (Seasonal space heating efficiency)	%	170					
			Prated at 2°C	kW	9.6					
			Qhe Annual energy consumption (GCV)	Gj	11					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.66					
			Pdh	kW	8.0					
			PERd	%	106.5					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.79					
			Pdh	kW	6.7					
			PERd	%	151.5					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.87					
			Pdh	kW	3.6					
			PERd	%	234.9					
		Tbiv (bivalent temperature)	COPd		3.13					
			Pdh	kW	8.4					
			PERd	%	125.4					
			Tbiv	°C	4					
	Average climate water outlet 35°C	General	Annual energy consumption	kWh	3,561		3,539			
			ηs (Seasonal space heating efficiency)	%	190		191			
			Prated at -10°C	kW	8.3					
			Qhe Annual energy consumption (GCV)	Gj	13					
			SCOP		4.81		4.84			
			Seasonal space heating eff. class		A+++					
		A Condition (-7°CDB/-8°CWB)	COPd		3.20					
			Pdh	kW	7.5					

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Technical specifications					ETVH12S18E9W + EPRA08EW1	ETVH12S23E9W + EPRA08EW1	ETVH12S18E9W + EPRA10EW1	ETVH12S23E9W + EPRA10EW1	ETVH12S18E9W + EPRA12EW1	ETVH12S23E9W + EPRA12EW1
Space heating	Average climate water outlet 35°C	A Condition (-7°CDB/-8°CWB)	PERd	%	128.0					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.93					
			Pdh	kW	4.4					
			PERd	%	197.2					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.37					
			Pdh	kW	4.3					
			PERd	%	254.8					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		8.13					
			Pdh	kW	6.6					
			PERd	%	325.2					
		Tol (temperature operating limit)	COPd		2.90		2.86			
			Pdh	kW	6.9		8.1			
			PERd	%	116.0		114.4			
			TOL	°C	-10					
			WTOL	°C	35					
		Tbiv (bivalent temperature)	COPd		3.20		2.86			
			Pdh	kW	7.5		8.1			
			PERd	%	128.0		114.4			
			Tbiv	°C	-7		-10			
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.4		0.0			
	Cold climate water outlet 35°C	General	Annual energy consumption	kWh	5,394		5,239		5,224	
			ηs (Seasonal space heating efficiency)	%	162		166		167	
			Prated at -22°C	kW	9.0					
			Qhe Annual energy consumption (GCV)	Gj	19					
		A Condition (-7°CDB/-8°CWB)	COPd		3.48					
			Pdh	kW	5.4					
			PERd	%	139.2					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.40					
			Pdh	kW	3.6					
			PERd	%	216.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.53					
			Pdh	kW	5.3					

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Technical specifications					ETVH12S18E9W + EPRA08EW1	ETVH12S23E9W + EPRA08EW1	ETVH12S18E9W + EPRA10EW1	ETVH12S23E9W + EPRA10EW1	ETVH12S18E9W + EPRA12EW1	ETVH12S23E9W + EPRA12EW1
Space heating	Cold climate water outlet 35°C	C Condition (7°CDB/6°CWB)	PERd	%	261.2					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		7.98					
			Pdh	kW	6.6					
			PERd	%	319.0		319.2			
		Tol (temperature operating limit)	COPd		2.11		2.14		2.16	
			Pdh	kW	4.9		5.9		6.5	
			PERd	%	84.3		85.6		86.4	
			TOL	°C	-22					
			WTOL	°C	35					
		G Condition (-15°CDB/-)	COPd		2.68		2.64			
			Pdh	kW	6.0		7.0			
			PERd	%	107.1		105.6			
		Tbiv (bivalent temperature)	COPd		2.95		2.64			
			Pdh	kW	6.5		7.0			
			PERd	%	118.1		105.6			
			Tbiv	°C	-12		-15			
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1		3.1		2.6	
	Warm climate water outlet 35°C	General	Annual energy consumption	kWh	1,954					
			ηs (Seasonal space heating efficiency)	%	232					
			Prated at 2°C	kW	8.6					
			Qhe Annual energy consumption (GCV)	Gj	7					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.07					
			Pdh	kW	7.7					
			PERd	%	162.9					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.85					
			Pdh	kW	5.5					
			PERd	%	234.1					
		Tbiv (bivalent temperature)	COPd		4.97					
			Pdh	kW	6.9					
			PERd	%	198.9					
			Tbiv	°C	5					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		7.85					
			Pdh	kW	6.2					
Space heating	Warm climate water outlet 35°C	D Condition (12°CDB/11°CWB)	PERd	%	313.9					

(1)Capacity according to standard EN14511 and valid for heated water range dT = 3~8°C at Ta 7°C |
(2)Condition: Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C) |
(3)Power input is total input of indoor and outdoor units, including the circulation pump; according to EN14511 |
(4)Test at Ta DB/WB 7°C/6°C. According to EN 16147. |
(5)DB/WB 7°C/6°C - LWC 35°C (dT=5°C) with pump at full speed |
Cooling: EW 12°C; LW 7°C; ambient conditions: 35°CDB |
Cooling: EW 23°C; LW 18°C; ambient conditions: 35°CDB

Technical specifications			ETVX12S18E6V + EPRA08EW1	ETVX12S23E6V + EPRA08EW1	ETVX12S18E6V + EPRA10EW1	ETVX12S23E6V + EPRA10EW1	ETVX12S18E6V + EPRA12EW1	ETVX12S23E6V + EPRA12EW1
Heating capacity	Min.	kW	3.44 (1)					
	Nom.	kW	6.17 (2)					
	Max.	kW	7.95 (1)		9.25 (1)		9.97 (1)	
Cooling capacity	Nom.	kW	6.81 (3) / 6.47 (4)		7.97 (3) / 6.47 (4)		8.62 (3) / 6.47 (4)	

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Technical specifications				ETVX12S18E6V + EPRA08EW1	ETVX12S23E6V + EPRA08EW1	ETVX12S18E6V + EPRA10EW1	ETVX12S23E6V + EPRA10EW1	ETVX12S18E6V + EPRA12EW1	ETVX12S23E6V + EPRA12EW1
Power input	Heating	Min.	kW	0.70 (5)					
		Nom.	kW	1.21 (2)					
		Max.	kW	1.63 (5)		1.98 (5)		2.21 (5)	
	Cooling	Nom.	kW	2.08 (3) / 1.13 (4)		2.57 (3) / 1.13 (4)		2.86 (3) / 1.13 (4)	
	Domestic hot water from 10°C to 50°C	Nom.	kWh	2.54 (6)	3.09 (6)	2.54 (6)	3.09 (6)	2.54 (6)	3.09 (6)
Heat up time from 10°C to 50°C			hr	1h 51min	2h 10min	1h 51min	2h 10min	1h 51min	2h 10min
COP				5.10 (2)					
EER				3.28 (3) / 5.75 (4)		3.10 (3) / 5.75 (4)		3.01 (3) / 5.75 (4)	
Pump	Type			Grundfos UPM3LK					
	Nominal ESP unit	Heating	kPa	59.8 (7)					
Water side Heat exchanger	Water flow rate	Heating Nom.	l/min	18.3 (2)					
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		Yes					
		Brine-to-water heat pump		No					
		Heat pump combination heater		Yes					
		Low-temperature heat pump		No					
		Supplementary heater integrated		Yes					
		Water-to-water heat pump		No					
	LW(A) Sound power level (according to EN14825)	Indoor	dB(A)	44.0					
LW(A) Sound power level (according to EN14825)	Outdoor		dB(A)	53.0					
Sound condition Ecodesign and energy label				Sound power in heating mode, measured according to the EN12102 under conditions of the EN14825					
Tank	Name			Stainless steel domestic hot water tank 180 l	Stainless steel domestic hot water tank 230 L	Stainless steel domestic hot water tank 180 l	Stainless steel domestic hot water tank 230 L	Stainless steel domestic hot water tank 180 l	Stainless steel domestic hot water tank 230 L
Space heating general	Air to water unit	Rated airflow (outdoor)	m^3/h	3,542					
	Other	Capacity control		Inverter					
		Pck (Crankcase heater mode)	kW	0.000					
		Poff (Off mode)	kW	0.027					
		Psb (Standby mode)	kW	0.027					
		Pto (Thermostat off)	kW	0.024					
Domestic hot water heating	General	Declared load profile		L					
Space heating general	Integrated supplementary heater	Psup	kW	6.0					
		Type of energy input		Electrical					

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Technical specifications					ETVX12S18E6V + EPRA08EW1	ETVX12S23E6V + EPRA08EW1	ETVX12S18E6V + EPRA10EW1	ETVX12S23E6V + EPRA10EW1	ETVX12S18E6V + EPRA12EW1	ETVX12S23E6V + EPRA12EW1
Domestic hot water heating	Average climate	AEC (Annual electricity consumption)		kWh	851	787	851	787	851	787
		COPdhw			2.80	3.05	2.80	3.05	2.80	3.05
		Heat up time			1h 57min	2h 14min	1h 57min	2h 14min	1h 57min	2h 14min
		ηwh (water heating efficiency)		%	120	130	120	130	120	130
		Qelec (Daily electricity consumption)		kWh	4.160	3.830	4.160	3.830	4.160	3.830
		Reference hot water temperature		°C	53.0	52.0	53.0	52.0	53.0	52.0
		Stand-by power input		W	50.7	43.9	50.7	43.9	50.7	43.9
		Water heating energy efficiency class			A+					
	Cold climate	AEC (Annual electricity consumption)		kWh	937	866	937	866	937	866
		COPdhw			2.55	2.77	2.55	2.77	2.55	2.77
		Heat up time			1h 55min	2h 02min	1h 55min	2h 02min	1h 55min	2h 02min
		ηwh (water heating efficiency)		%	109	118	109	118	109	118
		Qelec (Daily electricity consumption)		kWh	4.570	4.200	4.570	4.200	4.570	4.200
		Reference hot water temperature		°C	53.0	52.0	53.0	52.0	53.0	52.0
		Stand-by power input		W	54.3	46.7	54.3	46.7	54.3	46.7
	Warm climate	AEC (Annual electricity consumption)		kWh	699	648	699	648	699	648
		COPdhw			3.40	3.68	3.40	3.68	3.40	3.68
		Heat up time			1h 54min	2h 06min	1h 54min	2h 06min	1h 54min	2h 06min
		ηwh (water heating efficiency)		%	147	158	147	158	147	158
		Qelec (Daily electricity consumption)		kWh	3.430	3.160	3.430	3.160	3.430	3.160
		Reference hot water temperature		°C	53.0	52.0	53.0	52.0	53.0	52.0
		Stand-by power input		W	44.6	39.0	44.6	39.0	44.6	39.0
Space heating	Average climate water outlet 55°C	General	Annual energy consumption	kWh	4,894		4,871			
			ηs (Seasonal space heating efficiency)	%	141					
			Prated at -10°C	kW	8.5					
			Qhe Annual energy consumption (GCV)	Gj	18					
			SCOP		3.59		3.60			
			Seasonal space heating eff. class		A++					
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.30					
			Pdh	kW	7.6					
			PERd	%	91.9					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.50					
			Pdh	kW	4.6					
			PERd	%	140.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					

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Technical specifications					ETVX12S18E6V + EPRA08EW1	ETVX12S23E6V + EPRA08EW1	ETVX12S18E6V + EPRA10EW1	ETVX12S23E6V + EPRA10EW1	ETVX12S18E6V + EPRA12EW1	ETVX12S23E6V + EPRA12EW1
Space heating	Average climate water outlet 55°C	C Condition (7°CDB/6°CWB)	COPd		4.61					
			Pdh	kW	3.0					
			PERd	%	184.2					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.16					
			Pdh	kW	3.7					
			PERd	%	246.4					
		Tol (temperature operating limit)	COPd		2.01		2.05			
			Pdh	kW	7.0		8.3			
			PERd	%	80.2		82.1			
			TOL	°C	-10					
			WTOL	°C	55					
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.5		0.0			
		Tbiv (bivalent temperature)	COPd		2.30		2.05			
			Pdh	kW	7.6		8.3			
			PERd	%	91.9		82.1			
			Tbiv	°C	-7		-10			
	Cold climate water outlet 55°C	General	Annual energy consumption	kWh	7,028		6,890		6,861	
			ηs (Seasonal space heating efficiency)	%	123		126			
			Prated at -22°C	kW	9.0					
			Qhe Annual energy consumption (GCV)	Gj	25					
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.61					
			Pdh	kW	5.2					
			PERd	%	104.2		104.4			
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.90					
			Pdh	kW	3.3					
			PERd	%	156.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.96					
			Pdh	kW	3.4					
			PERd	%	198.3					
		D Condition (12°CDB/11°CWB)	COPd		6.56					
			Pdh	kW	4.2					
			PERd	%	262.5					
		Tol (temperature operating limit)	COPd		1.49		1.56		1.62	

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Technical specifications					ETVX12S18E6V + EPRA08EW1	ETVX12S23E6V + EPRA08EW1	ETVX12S18E6V + EPRA10EW1	ETVX12S23E6V + EPRA10EW1	ETVX12S18E6V + EPRA12EW1	ETVX12S23E6V + EPRA12EW1
Space heating	Cold climate water outlet 55°C	Tol (temperature operating limit)	Pdh	kW	4.9		6.1		7.2	
			PERd	%	59.6		62.3		64.7	
			TOL	°C	-22					
			WTOL	°C	55					
		G Condition (-15°CDB/-)	COPd		2.00		2.03			
			Pdh	kW	6.0		7.2			
			PERd	%	80.0		81.2			
		Tbiv (bivalent temperature)	COPd		2.25		2.03			
			Pdh	kW	6.6		7.2			
			PERd	%	90.0		81.2			
			Tbiv	°C	-12		-15			
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1		2.9		1.8	
	Warm climate water outlet 55°C	General	Annual energy consumption	kWh	2,853					
			ηs (Seasonal space heating efficiency)	%	177					
			Prated at 2°C	kW	9.6					
			Qhe Annual energy consumption (GCV)	Gj	10					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.66					
			Pdh	kW	8.0					
			PERd	%	106.5					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.79					
			Pdh	kW	6.7					
			PERd	%	151.5					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.87					
			Pdh	kW	3.6					
			PERd	%	234.9					
		Tbiv (bivalent temperature)	COPd		3.13					
			Pdh	kW	8.4					
			PERd	%	125.4					
			Tbiv	°C	4					
	Average climate water outlet 35°C	General	Annual energy consumption	kWh	3,462		3,440			
			ηs (Seasonal space heating efficiency)	%	195		196			
			Prated at -10°C	kW	8.3					
			Qhe Annual energy consumption (GCV)	Gj	12					
			SCOP		4.95		4.98			

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Technical specifications					ETVX12S18E6V + EPRA08EW1	ETVX12S23E6V + EPRA08EW1	ETVX12S18E6V + EPRA10EW1	ETVX12S23E6V + EPRA10EW1	ETVX12S18E6V + EPRA12EW1	ETVX12S23E6V + EPRA12EW1
Space heating	Average climate water outlet 35°C	General	Seasonal space heating eff. class		A+++					
		A Condition (-7°CDB/-8°CWB)	COPd		3.20					
			Pdh	kW	7.5					
			PERd	%	128.0					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.93					
			Pdh	kW	4.4					
			PERd	%	197.2					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.37					
			Pdh	kW	4.3					
			PERd	%	254.8					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		8.13					
			Pdh	kW	6.6					
			PERd	%	325.2					
		Tol (temperature operating limit)	COPd		2.90		2.86			
			Pdh	kW	6.9		8.1			
			PERd	%	116.0		114.4			
			TOL	°C	-10					
			WTOL	°C	35					
		Tbiv (bivalent temperature)	COPd		3.20		2.86			
			Pdh	kW	7.5		8.1			
			PERd	%	128.0		114.4			
			Tbiv	°C	-7				-10	
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.4		0.0			
	Cold climate water outlet 35°C	General	Annual energy consumption	kWh	5,334		5,180		5,165	
			ηs (Seasonal space heating efficiency)	%	163		168		169	
			Prated at -22°C	kW	9.0					
			Qhe Annual energy consumption (GCV)	Gj	19					
		A Condition (-7°CDB/-8°CWB)	COPd		3.48					
			Pdh	kW	5.4					
			PERd	%	139.2					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.40					
			Pdh	kW	3.6					
			PERd	%	216.0					

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Technical specifications					ETVX12S18E6V + EPRA08EW1	ETVX12S23E6V + EPRA08EW1	ETVX12S18E6V + EPRA10EW1	ETVX12S23E6V + EPRA10EW1	ETVX12S18E6V + EPRA12EW1	ETVX12S23E6V + EPRA12EW1
Space heating	Cold climate water outlet 35°C	C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.53					
			Pdh	kW	5.3					
			PERd	%	261.2					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		7.98					
			Pdh	kW	6.6					
			PERd	%	319.0		319.2			
		Tol (temperature operating limit)	COPd		2.11		2.14		2.16	
			Pdh	kW	4.9		5.9		6.5	
			PERd	%	84.3		85.6		86.4	
			TOL	°C	-22					
			WTOL	°C	35					
		G Condition (-15°CDB/-)	COPd		2.68		2.64			
			Pdh	kW	6.0		7.0			
			PERd	%	107.1		105.6			
		Tbiv (bivalent temperature)	COPd		2.95		2.64			
			Pdh	kW	6.5		7.0			
			PERd	%	118.1		105.6			
			Tbiv	°C	-12		-15			
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1		3.1		2.6	
	Warm climate water outlet 35°C	General	Annual energy consumption	kWh	1,835					
			ηs (Seasonal space heating efficiency)	%	247					
			Prated at 2°C	kW	8.6					
			Qhe Annual energy consumption (GCV)	Gj	7		0		7	
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.07					
			Pdh	kW	7.7					
			PERd	%	162.9					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.85					
			Pdh	kW	5.5					
			PERd	%	234.1					
		Tbiv (bivalent temperature)	COPd		4.97					
			Pdh	kW	6.9					
			PERd	%	198.9					
			Tbiv	°C	5					
Space heating	Warm climate water outlet	D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		7.85					
			Pdh	kW	6.2					
			PERd	%	313.9					

(1)Capacity according to standard EN14511 and valid for heated water range dT = 3~8°C at Ta 7°C |
(2)Condition: Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C) |
(3)Cooling: EW 12°C; LW 7°C; ambient conditions: 35°CDB |
(4)Cooling: EW 23°C; LW 18°C; ambient conditions: 35°CDB |
(5)Power input is total input of indoor and outdoor units, including the circulation pump; according to EN14511 |
(6)Test at Ta DB/WB 7°C/6°C. According to EN 16147. |
(7)DB/WB 7°C/6°C - LWC 35°C (dT=5°C) with pump at full speed

Technical specifications			ETVX12S18E9W + EPRA08EW1	ETVX12S23E9W + EPRA08EW1	ETVX12S18E9W + EPRA10EW1	ETVX12S23E9W + EPRA10EW1	ETVX12S18E9W + EPRA12EW1	ETVX12S23E9W + EPRA12EW1
Heating capacity	Min.	kW	3.44 (1)					
	Nom.	kW	6.17 (2)					
	Max.	kW	7.95 (1)		9.25 (1)		9.97 (1)	
Cooling capacity	Nom.	kW	6.81 (3) / 6.47 (4)		7.97 (3) / 6.47 (4)		8.62 (3) / 6.47 (4)	

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Technical specifications				ETVX12S18E9W + EPRA08EW1	ETVX12S23E9W + EPRA08EW1	ETVX12S18E9W + EPRA10EW1	ETVX12S23E9W + EPRA10EW1	ETVX12S18E9W + EPRA12EW1	ETVX12S23E9W + EPRA12EW1
Power input	Heating	Min.	kW	0.70 (5)					
		Nom.	kW	1.21 (2)					
		Max.	kW	1.63 (5)		1.98 (5)		2.21 (5)	
	Cooling	Nom.	kW	2.08 (3) / 1.13 (4)		2.57 (3) / 1.13 (4)		2.86 (3) / 1.13 (4)	
	Domestic hot water from 10°C to 50°C	Nom.	kWh	2.54 (6)	3.09 (6)	2.54 (6)	3.09 (6)	2.54 (6)	3.09 (6)
Heat up time from 10°C to 50°C			hr	1h 51min	2h 10min	1h 51min	2h 10min	1h 51min	2h 10min
COP				5.10 (2)					
EER				3.28 (3) / 5.75 (4)		3.10 (3) / 5.75 (4)		3.01 (3) / 5.75 (4)	
Pump	Type			Grundfos UPM3LK					
	Nominal ESP unit	Heating	kPa	59.8 (7)					
Water side Heat exchanger	Water flow rate	Heating Nom.	l/min	18.3 (2)					
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		Yes					
		Brine-to-water heat pump		No					
		Heat pump combination heater		Yes					
		Low-temperature heat pump		No					
		Supplementary heater integrated		Yes					
		Water-to-water heat pump		No					
	LW(A) Sound power level (according to EN14825)	Indoor	dB(A)	44.0					
LW(A) Sound power level (according to EN14825)	Outdoor		dB(A)	53.0					
Sound condition Ecodesign and energy label				Sound power in heating mode, measured according to the EN12102 under conditions of the EN14825					
Tank	Name			Stainless steel domestic hot water tank 180 l	Stainless steel domestic hot water tank 230 L	Stainless steel domestic hot water tank 180 l	Stainless steel domestic hot water tank 230 L	Stainless steel domestic hot water tank 180 l	Stainless steel domestic hot water tank 230 L
Space heating general	Air to water unit	Rated airflow (outdoor)	m^3/h	3,542					
	Other	Capacity control		Inverter					
		Pck (Crankcase heater mode)	kW	0.000					
		Poff (Off mode)	kW	0.027					
		Psb (Standby mode)	kW	0.027					
		Pto (Thermostat off)	kW	0.024					
Domestic hot water heating	General	Declared load profile		L					
Space heating general	Integrated supplementary heater	Psup	kW	9.0					
		Type of energy input		Electrical					

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Technical specifications					ETVX12S18E9W + EPRA08EW1	ETVX12S23E9W + EPRA08EW1	ETVX12S18E9W + EPRA10EW1	ETVX12S23E9W + EPRA10EW1	ETVX12S18E9W + EPRA12EW1	ETVX12S23E9W + EPRA12EW1
Domestic hot water heating	Average climate	AEC (Annual electricity consumption)		kWh	851	787	851	787	851	787
		COPdhw			2.80	3.05	2.80	3.05	2.80	3.05
		Heat up time			1h 57min	2h 14min	1h 57min	2h 14min	1h 57min	2h 14min
		ηwh (water heating efficiency)		%	120	130	120	130	120	130
		Qelec (Daily electricity consumption)		kWh	4.160	3.830	4.160	3.830	4.160	3.830
		Reference hot water temperature		°C	53.0	52.0	53.0	52.0	53.0	52.0
		Stand-by power input		W	50.7	43.9	50.7	43.9	50.7	43.9
		Water heating energy efficiency class			A+					
	Cold climate	AEC (Annual electricity consumption)		kWh	937	866	937	866	937	866
		COPdhw			2.55	2.77	2.55	2.77	2.55	2.77
		Heat up time			1h 55min	2h 02min	1h 55min	2h 02min	1h 55min	2h 02min
		ηwh (water heating efficiency)		%	109	118	109	118	109	118
		Qelec (Daily electricity consumption)		kWh	4.570	4.200	4.570	4.200	4.570	4.200
		Reference hot water temperature		°C	53.0	52.0	53.0	52.0	53.0	52.0
		Stand-by power input		W	54.3	46.7	54.3	46.7	54.3	46.7
	Warm climate	AEC (Annual electricity consumption)		kWh	699	648	699	648	699	648
		COPdhw			3.40	3.68	3.40	3.68	3.40	3.68
		Heat up time			1h 54min	2h 06min	1h 54min	2h 06min	1h 54min	2h 06min
		ηwh (water heating efficiency)		%	147	158	147	158	147	158
		Qelec (Daily electricity consumption)		kWh	3.430	3.160	3.430	3.160	3.430	3.160
		Reference hot water temperature		°C	53.0	52.0	53.0	52.0	53.0	52.0
		Stand-by power input		W	44.6	39.0	44.6	39.0	44.6	39.0
Space heating	Average climate water outlet 55°C	General	Annual energy consumption	kWh	4,894		4,871			
			ηs (Seasonal space heating efficiency)	%	141					
			Prated at -10°C	kW	8.5					
			Qhe Annual energy consumption (GCV)	Gj	18					
			SCOP		3.59		3.60			
			Seasonal space heating eff. class		A++					
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.30					
			Pdh	kW	7.6					
			PERd	%	91.9					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.50					
			Pdh	kW	4.6					
			PERd	%	140.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					

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Technical specifications					ETVX12S18E9W + EPRA08EW1	ETVX12S23E9W + EPRA08EW1	ETVX12S18E9W + EPRA10EW1	ETVX12S23E9W + EPRA10EW1	ETVX12S18E9W + EPRA12EW1	ETVX12S23E9W + EPRA12EW1
Space heating	Average climate water outlet 55°C	C Condition (7°CDB/6°CWB)	COPd		4.61					
			Pdh	kW	3.0					
			PERd	%	184.2					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.16					
			Pdh	kW	3.7					
			PERd	%	246.4					
		Tol (temperature operating limit)	COPd		2.01		2.05			
			Pdh	kW	7.0		8.3			
			PERd	%	80.2		82.1			
			TOL	°C	-10					
			WTOL	°C	55					
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.5		0.0			
		Tbiv (bivalent temperature)	COPd		2.30		2.05			
			Pdh	kW	7.6		8.3			
			PERd	%	91.9		82.1			
			Tbiv	°C	-7		-10			
	Cold climate water outlet 55°C	General	Annual energy consumption	kWh	7,028		6,890		6,861	
			ηs (Seasonal space heating efficiency)	%	123		126			
			Prated at -22°C	kW	9.0					
			Qhe Annual energy consumption (GCV)	Gj	25					
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.61					
			Pdh	kW	5.2					
			PERd	%	104.2		104.4			
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.90					
			Pdh	kW	3.3					
			PERd	%	156.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.96					
			Pdh	kW	3.4					
			PERd	%	198.3					
		D Condition (12°CDB/11°CWB)	COPd		6.56					
			Pdh	kW	4.2					
			PERd	%	262.5					
		Tol (temperature operating limit)	COPd		1.49		1.56		1.62	

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Technical specifications					ETVX12S18E9W + EPRA08EW1	ETVX12S23E9W + EPRA08EW1	ETVX12S18E9W + EPRA10EW1	ETVX12S23E9W + EPRA10EW1	ETVX12S18E9W + EPRA12EW1	ETVX12S23E9W + EPRA12EW1
Space heating	Cold climate water outlet 55°C	Tol (temperature operating limit)	Pdh	kW	4.9		6.1		7.2	
			PERd	%	59.6		62.3		64.7	
			TOL	°C	-22					
			WTOL	°C	55					
		G Condition (-15°CDB/-)	COPd		2.00		2.03			
			Pdh	kW	6.0		7.2			
			PERd	%	80.0		81.2			
		Tbiv (bivalent temperature)	COPd		2.25		2.03			
			Pdh	kW	6.6		7.2			
			PERd	%	90.0		81.2			
			Tbiv	°C	-12		-15			
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1		2.9		1.8	
	Warm climate water outlet 55°C	General	Annual energy consumption	kWh	2,853					
			ηs (Seasonal space heating efficiency)	%	177					
			Prated at 2°C	kW	9.6					
			Qhe Annual energy consumption (GCV)	Gj	10					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.66					
			Pdh	kW	8.0					
			PERd	%	106.5					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.79					
			Pdh	kW	6.7					
			PERd	%	151.5					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.87					
			Pdh	kW	3.6					
			PERd	%	234.9					
		Tbiv (bivalent temperature)	COPd		3.13					
			Pdh	kW	8.4					
			PERd	%	125.4					
			Tbiv	°C	4					
	Average climate water outlet 35°C	General	Annual energy consumption	kWh	3,462		3,440			
			ηs (Seasonal space heating efficiency)	%	195		196			
			Prated at -10°C	kW	8.3					
			Qhe Annual energy consumption (GCV)	Gj	12					
			SCOP		4.95		4.98			

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Technical specifications					ETVX12S18E9W + EPRA08EW1	ETVX12S23E9W + EPRA08EW1	ETVX12S18E9W + EPRA10EW1	ETVX12S23E9W + EPRA10EW1	ETVX12S18E9W + EPRA12EW1	ETVX12S23E9W + EPRA12EW1
Space heating	Average climate water outlet 35°C	General	Seasonal space heating eff. class		A+++					
		A Condition (-7°CDB/-8°CWB)	COPd		3.20					
			Pdh	kW	7.5					
			PERd	%	128.0					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.93					
			Pdh	kW	4.4					
			PERd	%	197.2					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.37					
			Pdh	kW	4.3					
			PERd	%	254.8					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		8.13					
			Pdh	kW	6.6					
			PERd	%	325.2					
		Tol (temperature operating limit)	COPd		2.90		2.86			
			Pdh	kW	6.9		8.1			
			PERd	%	116.0		114.4			
			TOL	°C	-10					
			WTOL	°C	35					
		Tbiv (bivalent temperature)	COPd		3.20		2.86			
			Pdh	kW	7.5		8.1			
			PERd	%	128.0		114.4			
			Tbiv	°C	-7				-10	
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.4		0.0			
	Cold climate water outlet 35°C	General	Annual energy consumption	kWh	5,334		5,180		5,165	
			ηs (Seasonal space heating efficiency)	%	163		168		169	
			Prated at -22°C	kW	9.0					
			Qhe Annual energy consumption (GCV)	Gj	19					
		A Condition (-7°CDB/-8°CWB)	COPd		3.48					
			Pdh	kW	5.4					
			PERd	%	139.2					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.40					
			Pdh	kW	3.6					
			PERd	%	216.0					

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Technical specifications					ETVX12S18E9W + EPRA08EW1	ETVX12S23E9W + EPRA08EW1	ETVX12S18E9W + EPRA10EW1	ETVX12S23E9W + EPRA10EW1	ETVX12S18E9W + EPRA12EW1	ETVX12S23E9W + EPRA12EW1
Space heating	Cold climate water outlet 35°C	C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.53					
			Pdh	kW	5.3					
			PERd	%	261.2					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		7.98					
			Pdh	kW	6.6					
			PERd	%	319.0		319.2			
		Tol (temperature operating limit)	COPd		2.11		2.14		2.16	
			Pdh	kW	4.9		5.9		6.5	
			PERd	%	84.3		85.6		86.4	
			TOL	°C	-22					
			WTOL	°C	35					
		G Condition (-15°CDB/-)	COPd		2.68		2.64			
			Pdh	kW	6.0		7.0			
			PERd	%	107.1		105.6			
		Tbiv (bivalent temperature)	COPd		2.95		2.64			
			Pdh	kW	6.5		7.0			
			PERd	%	118.1		105.6			
			Tbiv	°C	-12		-15			
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1		3.1		2.6	
	Warm climate water outlet 35°C	General	Annual energy consumption	kWh	1,835					
			ηs (Seasonal space heating efficiency)	%	247					
			Prated at 2°C	kW	8.6					
			Qhe Annual energy consumption (GCV)	Gj	7		0		7	
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.07					
			Pdh	kW	7.7					
			PERd	%	162.9					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.85					
			Pdh	kW	5.5					
			PERd	%	234.1					
		Tbiv (bivalent temperature)	COPd		4.97					
			Pdh	kW	6.9					
			PERd	%	198.9					
			Tbiv	°C	5					
Space heating	Warm climate water outlet	D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		7.85					
			Pdh	kW	6.2					
			PERd	%	313.9					

(1)Capacity according to standard EN14511 and valid for heated water range dT = 3~8°C at Ta 7°C |
(2)Condition: Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C) |
(3)Cooling: EW 12°C; LW 7°C; ambient conditions: 35°CDB |
(4)Cooling: EW 23°C; LW 18°C; ambient conditions: 35°CDB |
(5)Power input is total input of indoor and outdoor units, including the circulation pump; according to EN14511 |
(6)Test at Ta DB/WB 7°C/6°C. According to EN 16147. |
(7)DB/WB 7°C/6°C - LWC 35°C (dT=5°C) with pump at full speed

Technical specifications				ETVZ12S18E6V + EPRA08EW1	ETVZ12S23E6V + EPRA08EW1	ETVZ12S18E6V + EPRA10EW1	ETVZ12S23E6V + EPRA10EW1	ETVZ12S18E6V + EPRA12EW1	ETVZ12S23E6V + EPRA12EW1
Heating capacity	Min.		kW	3.44 (1)					
	Nom.		kW	6.17 (2)					
	Max.		kW	7.95 (1)		9.25 (1)		9.97 (1)	
Power input	Heating	Min.	kW	0.70 (3)					
		Nom.	kW	1.21 (2)					
		Max.	kW	1.63 (3)		1.98 (3)		2.21 (3)	
	Domestic hot water from 10°C to 50°C	Nom.	kWh	2.54 (4)	3.09 (4)	2.54 (4)	3.09 (4)	2.54 (4)	3.09 (4)
Heat up time from 10°C to 50°C			hr	1h 51min	2h 10min	1h 51min	2h 10min	1h 51min	2h 10min

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Technical specifications				ETVZ12S18E6V + EPRA08EW1	ETVZ12S23E6V + EPRA08EW1	ETVZ12S18E6V + EPRA10EW1	ETVZ12S23E6V + EPRA10EW1	ETVZ12S18E6V + EPRA12EW1	ETVZ12S23E6V + EPRA12EW1
COP				5.10 (2)					
Pump	Type			Grundfos UPM3 K					
Pump Additional Zone	Nominal ESP unit	Heating	kPa	44.9 (5)					
Pump Main Zone	Nominal ESP unit	Heating	kPa	50.0 (5)					
Water side Heat exchanger	Water flow rate	Heating Nom.	l/min	18.3 (2)					
General	Supplier/ Manu-facturer details	Name and address		Daikin Europe N.V. - Zandvoordestraat 300, 8400 Oostende, Belgium					
		Name or trademark		Daikin Europe N.V.					
	Product descrip-tion	Air-to-water heat pump		Yes					
		Brine-to-water heat pump		No					
		Heat pump combination heater		Yes					
		Low-temperature heat pump		No					
		Supplementary heater integrated		Yes					
		Water-to-water heat pump		No					
	LW(A) Sound power level (according to EN14825)	Indoor	dB(A)	44.0					
LW(A) Sound power level (according to EN14825)	Outdoor		dB(A)	53.0					
Sound condition Ecodesign and energy label				Sound power in heating mode, measured according to the EN12102 under conditions of the EN14825					
Tank	Name			Stainless steel domestic hot water tank 180 l	Stainless steel domestic hot water tank 230 L	Stainless steel domestic hot water tank 180 l	Stainless steel domestic hot water tank 230 L	Stainless steel domestic hot water tank 180 l	Stainless steel domestic hot water tank 230 L
Space heating general	Air to water unit	Rated airflow (outdoor)	m^3/h	3,542					
	Other	Capacity control		Inverter					
		Pck (Crankcase heater mode)	kW	0.000					
		Poff (Off mode)	kW	0.027					
		Psb (Standby mode)	kW	0.027					
		Pto (Thermostat off)	kW	0.024					
Domestic hot water heating	General	Declared load profile		L					
Space heating general	Inte-grated supple-mentary heater	Psup	kW	6.0					
		Type of energy input		Electrical					
Domestic hot water heating	Average climate	AEC (Annual electricity consumption)	kWh	851	787	851	787	851	787
		COPdhw		2.80	3.05	2.80	3.05	2.80	3.05

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Technical specifications					ETVZ12S18E6V + EPRA08EW1	ETVZ12S23E6V + EPRA08EW1	ETVZ12S18E6V + EPRA10EW1	ETVZ12S23E6V + EPRA10EW1	ETVZ12S18E6V + EPRA12EW1	ETVZ12S23E6V + EPRA12EW1
Domestic hot water heating	Average climate	Heat up time			1h 57min	2h 14min	1h 57min	2h 14min	1h 57min	2h 14min
		ηwh (water heating efficiency)		%	120	130	120	130	120	130
		Qelec (Daily electricity consumption)		kWh	4.160	3.830	4.160	3.830	4.160	3.830
		Reference hot water temperature		°C	53.0	52.0	53.0	52.0	53.0	52.0
		Stand-by power input		W	50.7	43.9	50.7	43.9	50.7	43.9
		Water heating energy efficiency class			A+					
	Cold climate	AEC (Annual electricity consumption)		kWh	937	866	937	866	937	866
		COPdhw			2.55	2.77	2.55	2.77	2.55	2.77
		Heat up time			1h 55min	2h 02min	1h 55min	2h 02min	1h 55min	2h 02min
		ηwh (water heating efficiency)		%	109	118	109	118	109	118
		Qelec (Daily electricity consumption)		kWh	4.570	4.200	4.570	4.200	4.570	4.200
		Reference hot water temperature		°C	53.0	52.0	53.0	52.0	53.0	52.0
		Stand-by power input		W	54.3	46.7	54.3	46.7	54.3	46.7
	Warm climate	AEC (Annual electricity consumption)		kWh	699	648	699	648	699	648
		COPdhw			3.40	3.68	3.40	3.68	3.40	3.68
		Heat up time			1h 54min	2h 06min	1h 54min	2h 06min	1h 54min	2h 06min
		ηwh (water heating efficiency)		%	147	158	147	158	147	158
		Qelec (Daily electricity consumption)		kWh	3.430	3.160	3.430	3.160	3.430	3.160
		Reference hot water temperature		°C	53.0	52.0	53.0	52.0	53.0	52.0
		Stand-by power input		W	44.6	39.0	44.6	39.0	44.6	39.0
Space heating	Average climate water outlet 55°C	General	Annual energy consumption	kWh	4,993		4,970			
			ηs (Seasonal space heating efficiency)	%	138					
			Prated at -10°C	kW	8.5					
			Qhe Annual energy consumption (GCV)	Gj	18					
			SCOP		3.52		3.53			
			Seasonal space heating eff. class		A++					
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.30					
			Pdh	kW	7.6					
			PERd	%	91.9					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.50					
			Pdh	kW	4.6					
			PERd	%	140.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.61					
			Pdh	kW	3.0					

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Technical specifications					ETVZ12S18E6V + EPRA08EW1	ETVZ12S23E6V + EPRA08EW1	ETVZ12S18E6V + EPRA10EW1	ETVZ12S23E6V + EPRA10EW1	ETVZ12S18E6V + EPRA12EW1	ETVZ12S23E6V + EPRA12EW1
Space heating	Average climate water outlet 55°C	C Condition (7°CDB/6°CWB)	PERd	%	184.2					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.16					
			Pdh	kW	3.7					
			PERd	%	246.4					
		Tol (temperature operating limit)	COPd		2.01		2.05			
			Pdh	kW	7.0		8.3			
			PERd	%	80.2		82.1			
			TOL	°C	-10					
			WTOL	°C	55					
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.5		0.0			
		Tbiv (bivalent temperature)	COPd		2.30		2.05			
			Pdh	kW	7.6		8.3			
			PERd	%	91.9		82.1			
			Tbiv	°C	-7		-10			
	Cold climate water outlet 55°C	General	Annual energy consumption	kWh	7,088		6,950		6,921	
			ηs (Seasonal space heating efficiency)	%	122		125			
			Prated at -22°C	kW	9.0					
			Qhe Annual energy consumption (GCV)	Gj	26		25			
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.61					
			Pdh	kW	5.2					
			PERd	%	104.2		104.4			
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.90					
			Pdh	kW	3.3					
			PERd	%	156.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.96					
			Pdh	kW	3.4					
			PERd	%	198.3					
		D Condition (12°CDB/11°CWB)	COPd		6.56					
			Pdh	kW	4.2					
			PERd	%	262.5					
		Tol (temperature operating limit)	COPd		1.49		1.56		1.62	
			Pdh	kW	4.9		6.1		7.2	
			PERd	%	59.6		62.3		64.7	

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Technical specifications					ETVZ12S18E6V + EPRA08EW1	ETVZ12S23E6V + EPRA08EW1	ETVZ12S18E6V + EPRA10EW1	ETVZ12S23E6V + EPRA10EW1	ETVZ12S18E6V + EPRA12EW1	ETVZ12S23E6V + EPRA12EW1
Space heating	Cold climate water outlet 55°C	Tol (temperature operating limit)	TOL	°C	-22					
			WTOL	°C	55					
		G Condition (-15°CDB/-)	COPd		2.00		2.03			
			Pdh	kW	6.0		7.2			
			PERd	%	80.0		81.2			
		Tbiv (bivalent temperature)	COPd		2.25		2.03			
			Pdh	kW	6.6		7.2			
			PERd	%	90.0		81.2			
			Tbiv	°C	-12		-15			
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1		2.9		1.8	
	Warm climate water outlet 55°C	General	Annual energy consumption	kWh	2,972					
			ηs (Seasonal space heating efficiency)	%	170					
			Prated at 2°C	kW	9.6					
			Qhe Annual energy consumption (GCV)	Gj	11					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.66					
			Pdh	kW	8.0					
			PERd	%	106.5					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.79					
			Pdh	kW	6.7					
			PERd	%	151.5					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.87					
			Pdh	kW	3.6					
			PERd	%	234.9					
		Tbiv (bivalent temperature)	COPd		3.13					
			Pdh	kW	8.4					
			PERd	%	125.4					
			Tbiv	°C	4					
	Average climate water outlet 35°C	General	Annual energy consumption	kWh	3,561		3,539			
			ηs (Seasonal space heating efficiency)	%	190		191			
			Prated at -10°C	kW	8.3					
			Qhe Annual energy consumption (GCV)	Gj	13					
			SCOP		4.81		4.84			
			Seasonal space heating eff. class		A+++					
		A Condition (-7°CDB/-8°CWB)	COPd		3.20					

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Technical specifications					ETVZ12S18E6V + EPRA08EW1	ETVZ12S23E6V + EPRA08EW1	ETVZ12S18E6V + EPRA10EW1	ETVZ12S23E6V + EPRA10EW1	ETVZ12S18E6V + EPRA12EW1	ETVZ12S23E6V + EPRA12EW1
Space heating	Average climate water outlet 35°C	A Condition (-7°CDB/-8°CWB)	Pdh	kW	7.5					
			PERd	%	128.0					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.93					
			Pdh	kW	4.4					
			PERd	%	197.2					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.37					
			Pdh	kW	4.3					
			PERd	%	254.8					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		8.13					
			Pdh	kW	6.6					
			PERd	%	325.2					
		Tol (temperature operating limit)	COPd		2.90		2.86			
			Pdh	kW	6.9		8.1			
			PERd	%	116.0		114.4			
			TOL	°C	-10					
			WTOL	°C	35					
		Tbiv (bivalent temperature)	COPd		3.20		2.86			
			Pdh	kW	7.5		8.1			
			PERd	%	128.0		114.4			
			Tbiv	°C	-7		-10			
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.4		0.0			
	Cold climate water outlet 35°C	General	Annual energy consumption	kWh	5,394		5,239		5,224	
			ηs (Seasonal space heating efficiency)	%	162		166		167	
			Prated at -22°C	kW	9.0					
			Qhe Annual energy consumption (GCV)	Gj	19					
		A Condition (-7°CDB/-8°CWB)	COPd		3.48					
			Pdh	kW	5.4					
			PERd	%	139.2					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.40					
			Pdh	kW	3.6					
			PERd	%	216.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.53					

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Technical specifications					ETVZ12S18E6V + EPRA08EW1	ETVZ12S23E6V + EPRA08EW1	ETVZ12S18E6V + EPRA10EW1	ETVZ12S23E6V + EPRA10EW1	ETVZ12S18E6V + EPRA12EW1	ETVZ12S23E6V + EPRA12EW1
Space heating	Cold climate water outlet 35°C	C Condition (7°CDB/6°CWB)	Pdh	kW	5.3					
			PERd	%	261.2					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		7.98					
			Pdh	kW	6.6					
			PERd	%	319.0		319.2			
		Tol (temperature operating limit)	COPd		2.11		2.14		2.16	
			Pdh	kW	4.9		5.9		6.5	
			PERd	%	84.3		85.6		86.4	
			TOL	°C	-22					
			WTOL	°C	35					
		G Condition (-15°CDB/-)	COPd		2.68		2.64			
			Pdh	kW	6.0		7.0			
			PERd	%	107.1		105.6			
		Tbiv (bivalent temperature)	COPd		2.95		2.64			
			Pdh	kW	6.5		7.0			
			PERd	%	118.1		105.6			
			Tbiv	°C	-12		-15			
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1		3.1		2.6	
	Warm climate water outlet 35°C	General	Annual energy consumption	kWh	1,954					
			ηs (Seasonal space heating efficiency)	%	232					
			Prated at 2°C	kW	8.6					
			Qhe Annual energy consumption (GCV)	Gj	7					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.07					
			Pdh	kW	7.7					
			PERd	%	162.9					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.85					
			Pdh	kW	5.5					
			PERd	%	234.1					
		Tbiv (bivalent temperature)	COPd		4.97					
			Pdh	kW	6.9					
			PERd	%	198.9					
			Tbiv	°C	5					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		7.85					
Space heating	Warm climate water	D Condition (12°CDB/11°CWB)	Pdh	kW	6.2					
			PERd	%	313.9					

(1)Capacity according to standard EN14511 and valid for heated water range dT = 3~8°C at Ta 7°C |
(2)Condition: Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C) |
(3)Power input is total input of indoor and outdoor units, including the circulation pump; according to EN14511 |
(4)Test at Ta DB/WB 7°C/6°C. According to EN 16147. |
(5)DB/WB 7°C/6°C - LWC 35°C (dT=5°C) with pump at full speed |
Cooling: EW 12°C; LW 7°C; ambient conditions: 35°CDB |
Cooling: EW 23°C; LW 18°C; ambient conditions: 35°CDB

Technical specifications				ETVZ12S18E9W + EPRA08EW1	ETVZ12S23E9W + EPRA08EW1	ETVZ12S18E9W + EPRA10EW1	ETVZ12S23E9W + EPRA10EW1	ETVZ12S18E9W + EPRA12EW1	ETVZ12S23E9W + EPRA12EW1
Heating capacity	Min.		kW	3.44 (1)					
	Nom.		kW	6.17 (2)					
	Max.		kW	7.95 (1)		9.25 (1)		9.97 (1)	
Power input	Heating	Min.	kW	0.70 (3)					
		Nom.	kW	1.21 (2)					
		Max.	kW	1.63 (3)		1.98 (3)		2.21 (3)	
	Domestic hot water from 10°C to 50°C	Nom.	kWh	2.54 (4)	3.09 (4)	2.54 (4)	3.09 (4)	2.54 (4)	3.09 (4)

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Technical specifications				ETVZ12S18E9W + EPRA08EW1	ETVZ12S23E9W + EPRA08EW1	ETVZ12S18E9W + EPRA10EW1	ETVZ12S23E9W + EPRA10EW1	ETVZ12S18E9W + EPRA12EW1	ETVZ12S23E9W + EPRA12EW1
Heat up time from 10°C to 50°C			hr	1h 51min	2h 10min	1h 51min	2h 10min	1h 51min	2h 10min
COP				5.10 (2)					
Pump	Type			Grundfos UPM3 K					
Pump Additional Zone	Nominal ESP unit	Heating	kPa	44.9 (5)					
Pump Main Zone	Nominal ESP unit	Heating	kPa	50.0 (5)					
Water side Heat exchanger	Water flow rate	Heating Nom.	l/min	18.3 (2)					
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		Yes					
		Brine-to-water heat pump		No					
		Heat pump combination heater		Yes					
		Low-temperature heat pump		No					
		Supplementary heater integrated		Yes					
		Water-to-water heat pump		No					
	LW(A) Sound power level (according to EN14825)	Indoor	dB(A)	44.0					
LW(A) Sound power level (according to EN14825)	Outdoor		dB(A)	53.0					
Sound condition Ecodesign and energy label				Sound power in heating mode, measured according to the EN12102 under conditions of the EN14825					
Tank	Name			Stainless steel domestic hot water tank 180 l	Stainless steel domestic hot water tank 230 L	Stainless steel domestic hot water tank 180 l	Stainless steel domestic hot water tank 230 L	Stainless steel domestic hot water tank 180 l	Stainless steel domestic hot water tank 230 L
Space heating general	Air to water unit	Rated airflow (outdoor)	m^3/h	3,542					
	Other	Capacity control		Inverter					
		Pck (Crankcase heater mode)	kW	0.000					
		Poff (Off mode)	kW	0.027					
		Psb (Standby mode)	kW	0.027					
		Pto (Thermostat off)	kW	0.024					
Domestic hot water heating	General	Declared load profile		L					
Space heating general	Integrated supplementary heater	Psup	kW	9.0					
		Type of energy input		Electrical					
Domestic hot water heating	Average climate	AEC (Annual electricity consumption)	kWh	851	787	851	787	851	787
		COPdhw		2.80	3.05	2.80	3.05	2.80	3.05

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Technical specifications					ETVZ12S18E9W + EPRA08EW1	ETVZ12S23E9W + EPRA08EW1	ETVZ12S18E9W + EPRA10EW1	ETVZ12S23E9W + EPRA10EW1	ETVZ12S18E9W + EPRA12EW1	ETVZ12S23E9W + EPRA12EW1
Domestic hot water heating	Average climate	Heat up time			1h 57min	2h 14min	1h 57min	2h 14min	1h 57min	2h 14min
		ηwh (water heating efficiency)		%	120	130	120	130	120	130
		Qelec (Daily electricity consumption)		kWh	4.160	3.830	4.160	3.830	4.160	3.830
		Reference hot water temperature		°C	53.0	52.0	53.0	52.0	53.0	52.0
		Stand-by power input		W	50.7	43.9	50.7	43.9	50.7	43.9
		Water heating energy efficiency class			A+					
	Cold climate	AEC (Annual electricity consumption)		kWh	937	866	937	866	937	866
		COPdhw			2.55	2.77	2.55	2.77	2.55	2.77
		Heat up time			1h 55min	2h 02min	1h 55min	2h 02min	1h 55min	2h 02min
		ηwh (water heating efficiency)		%	109	118	109	118	109	118
		Qelec (Daily electricity consumption)		kWh	4.570	4.200	4.570	4.200	4.570	4.200
		Reference hot water temperature		°C	53.0	52.0	53.0	52.0	53.0	52.0
		Stand-by power input		W	54.3	46.7	54.3	46.7	54.3	46.7
	Warm climate	AEC (Annual electricity consumption)		kWh	699	648	699	648	699	648
		COPdhw			3.40	3.68	3.40	3.68	3.40	3.68
		Heat up time			1h 54min	2h 06min	1h 54min	2h 06min	1h 54min	2h 06min
		ηwh (water heating efficiency)		%	147	158	147	158	147	158
		Qelec (Daily electricity consumption)		kWh	3.430	3.160	3.430	3.160	3.430	3.160
		Reference hot water temperature		°C	53.0	52.0	53.0	52.0	53.0	52.0
		Stand-by power input		W	44.6	39.0	44.6	39.0	44.6	39.0
Space heating	Average climate water outlet 55°C	General	Annual energy consumption	kWh	4,993		4,970			
			ηs (Seasonal space heating efficiency)	%	138					
			Prated at -10°C	kW	8.5					
			Qhe Annual energy consumption (GCV)	Gj	18					
			SCOP		3.52		3.53			
			Seasonal space heating eff. class		A++					
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.30					
			Pdh	kW	7.6					
			PERd	%	91.9					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.50					
			Pdh	kW	4.6					
			PERd	%	140.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.61					
			Pdh	kW	3.0					

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Technical specifications					ETVZ12S18E9W + EPRA08EW1	ETVZ12S23E9W + EPRA08EW1	ETVZ12S18E9W + EPRA10EW1	ETVZ12S23E9W + EPRA10EW1	ETVZ12S18E9W + EPRA12EW1	ETVZ12S23E9W + EPRA12EW1
Space heating	Average climate water outlet 55°C	C Condition (7°CDB/6°CWB)	PERd	%	184.2					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.16					
			Pdh	kW	3.7					
			PERd	%	246.4					
		Tol (temperature operating limit)	COPd		2.01		2.05			
			Pdh	kW	7.0		8.3			
			PERd	%	80.2		82.1			
			TOL	°C	-10					
			WTOL	°C	55					
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.5		0.0			
		Tbiv (bivalent temperature)	COPd		2.30		2.05			
			Pdh	kW	7.6		8.3			
			PERd	%	91.9		82.1			
			Tbiv	°C	-7		-10			
	Cold climate water outlet 55°C	General	Annual energy consumption	kWh	7,088		6,950		6,921	
			ηs (Seasonal space heating efficiency)	%	122		125			
			Prated at -22°C	kW	9.0					
			Qhe Annual energy consumption (GCV)	Gj	26		25			
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.61					
			Pdh	kW	5.2					
			PERd	%	104.2		104.4			
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.90					
			Pdh	kW	3.3					
			PERd	%	156.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.96					
			Pdh	kW	3.4					
			PERd	%	198.3					
		D Condition (12°CDB/11°CWB)	COPd		6.56					
			Pdh	kW	4.2					
			PERd	%	262.5					
		Tol (temperature operating limit)	COPd		1.49		1.56		1.62	
			Pdh	kW	4.9		6.1		7.2	
			PERd	%	59.6		62.3		64.7	

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Technical specifications					ETVZ12S18E9W + EPRA08EW1	ETVZ12S23E9W + EPRA08EW1	ETVZ12S18E9W + EPRA10EW1	ETVZ12S23E9W + EPRA10EW1	ETVZ12S18E9W + EPRA12EW1	ETVZ12S23E9W + EPRA12EW1
Space heating	Cold climate water outlet 55°C	Tol (temperature operating limit)	TOL	°C	-22					
			WTOL	°C	55					
		G Condition (-15°CDB/-)	COPd		2.00		2.03			
			Pdh	kW	6.0		7.2			
			PERd	%	80.0		81.2			
		Tbiv (bivalent temperature)	COPd		2.25		2.03			
			Pdh	kW	6.6		7.2			
			PERd	%	90.0		81.2			
			Tbiv	°C	-12		-15			
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1		2.9		1.8	
	Warm climate water outlet 55°C	General	Annual energy consumption	kWh	2,972					
			ηs (Seasonal space heating efficiency)	%	170					
			Prated at 2°C	kW	9.6					
			Qhe Annual energy consumption (GCV)	Gj	11					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.66					
			Pdh	kW	8.0					
			PERd	%	106.5					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.79					
			Pdh	kW	6.7					
			PERd	%	151.5					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.87					
			Pdh	kW	3.6					
			PERd	%	234.9					
		Tbiv (bivalent temperature)	COPd		3.13					
			Pdh	kW	8.4					
			PERd	%	125.4					
			Tbiv	°C	4					
	Average climate water outlet 35°C	General	Annual energy consumption	kWh	3,561		3,539			
			ηs (Seasonal space heating efficiency)	%	190		191			
			Prated at -10°C	kW	8.3					
			Qhe Annual energy consumption (GCV)	Gj	13					
			SCOP		4.81		4.84			
			Seasonal space heating eff. class		A+++					
		A Condition (-7°CDB/-8°CWB)	COPd		3.20					

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Technical specifications					ETVZ12S18E9W + EPRA08EW1	ETVZ12S23E9W + EPRA08EW1	ETVZ12S18E9W + EPRA10EW1	ETVZ12S23E9W + EPRA10EW1	ETVZ12S18E9W + EPRA12EW1	ETVZ12S23E9W + EPRA12EW1
Space heating	Average climate water outlet 35°C	A Condition (-7°CDB/-8°CWB)	Pdh	kW	7.5					
			PERd	%	128.0					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.93					
			Pdh	kW	4.4					
			PERd	%	197.2					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.37					
			Pdh	kW	4.3					
			PERd	%	254.8					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		8.13					
			Pdh	kW	6.6					
			PERd	%	325.2					
		Tol (temperature operating limit)	COPd		2.90		2.86			
			Pdh	kW	6.9		8.1			
			PERd	%	116.0		114.4			
			TOL	°C	-10					
			WTOL	°C	35					
		Tbiv (bivalent temperature)	COPd		3.20		2.86			
			Pdh	kW	7.5		8.1			
			PERd	%	128.0		114.4			
			Tbiv	°C	-7		-10			
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.4		0.0			
	Cold climate water outlet 35°C	General	Annual energy consumption	kWh	5,394		5,239		5,224	
			ηs (Seasonal space heating efficiency)	%	162		166		167	
			Prated at -22°C	kW	9.0					
			Qhe Annual energy consumption (GCV)	Gj	19					
		A Condition (-7°CDB/-8°CWB)	COPd		3.48					
			Pdh	kW	5.4					
			PERd	%	139.2					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.40					
			Pdh	kW	3.6					
			PERd	%	216.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.53					

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Technical specifications					ETVZ12S18E9W + EPRA08EW1	ETVZ12S23E9W + EPRA08EW1	ETVZ12S18E9W + EPRA10EW1	ETVZ12S23E9W + EPRA10EW1	ETVZ12S18E9W + EPRA12EW1	ETVZ12S23E9W + EPRA12EW1
Space heating	Cold climate water outlet 35°C	C Condition (7°CDB/6°CWB)	Pdh	kW	5.3					
			PERd	%	261.2					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		7.98					
			Pdh	kW	6.6					
			PERd	%	319.0		319.2			
		Tol (temperature operating limit)	COPd		2.11		2.14		2.16	
			Pdh	kW	4.9		5.9		6.5	
			PERd	%	84.3		85.6		86.4	
			TOL	°C	-22					
			WTOL	°C	35					
		G Condition (-15°CDB/-)	COPd		2.68		2.64			
			Pdh	kW	6.0		7.0			
			PERd	%	107.1		105.6			
		Tbiv (bivalent temperature)	COPd		2.95		2.64			
			Pdh	kW	6.5		7.0			
			PERd	%	118.1		105.6			
			Tbiv	°C	-12		-15			
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1		3.1		2.6	
	Warm climate water outlet 35°C	General	Annual energy consumption	kWh	1,954					
			ηs (Seasonal space heating efficiency)	%	232					
			Prated at 2°C	kW	8.6					
			Qhe Annual energy consumption (GCV)	Gj	7					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.07					
			Pdh	kW	7.7					
			PERd	%	162.9					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.85					
			Pdh	kW	5.5					
			PERd	%	234.1					
		Tbiv (bivalent temperature)	COPd		4.97					
			Pdh	kW	6.9					
			PERd	%	198.9					
			Tbiv	°C	5					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		7.85					
Space heating	Warm climate water	D Condition (12°CDB/11°CWB)	Pdh	kW	6.2					
			PERd	%	313.9					

(1)Capacity according to standard EN14511 and valid for heated water range dT = 3~8°C at Ta 7°C |
(2)Condition: Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C) |
(3)Power input is total input of indoor and outdoor units, including the circulation pump; according to EN14511 |
(4)Test at Ta DB/WB 7°C/6°C. According to EN 16147. |
(5)DB/WB 7°C/6°C - LWC 35°C (dT=5°C) with pump at full speed |
Cooling: EW 12°C; LW 7°C; ambient conditions: 35°CDB |
Cooling: EW 23°C; LW 18°C; ambient conditions: 35°CDB

Technical specifications					ETSH12P30E + EPRA08EW1	ETSH12P50E + EPRA08EW1	ETSH12P30E + EPRA10EW1	ETSH12P50E + EPRA10EW1	ETSH12P30E + EPRA12EW1	ETSH12P50E + EPRA12EW1
Heating capacity	Nom.			kW	6.17 (1)					
Power input	Heating	Nom.		kW	1.21 (1)					
COP					5.10 (1)					
Pump	Type				Grundfos UPM3L K 20-75 CHBL AZA 3 RT					
	Nominal ESP unit	Heating		kPa	53.5 (2)					
Water side Heat exchanger	Water flow rate	Heating	Nom.	l/min	17.7 (1)					

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Technical specifications				ETSH12P30E + EPRA08EW1	ETSH12P50E + EPRA08EW1	ETSH12P30E + EPRA10EW1	ETSH12P50E + EPRA10EW1	ETSH12P30E + EPRA12EW1	ETSH12P50E + EPRA12EW1
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		Yes					
		Brine-to-water heat pump		No					
		Heat pump combination heater		Yes					
		Low-temperature heat pump		No					
		Supplementary heater integrated		No					
		Water-to-water heat pump		No					
	LW(A) Sound power level (according to EN14825)	Indoor	dB(A)	47.3					
LW(A) Sound power level (according to EN14825)	Outdoor		dB(A)	53.0					
Sound condition Ecodesign and energy label				Sound power in heating mode, measured according to the EN12102 under conditions of the EN14825					
Space heating general	Air to water unit	Rated airflow (outdoor)	m^3/h	3,542					
	Other	Capacity control		Inverter					
		Pck (Crankcase heater mode)	kW	0.000					
		Poff (Off mode)	kW	0.027					
		Psb (Standby mode)	kW	0.027					
		Pto (Thermostat off)	kW	0.024					
Domestic hot water heating	General	Declared load profile		L					
		Function to fix water heating during off peak hours		No					
	Average climate	AEC (Annual electricity consumption)	kWh	858	1,281	858	1,281	858	1,281
		COPdhw		2.83	3.17	2.83	3.17	2.83	3.17
		Heat up time		2h 29min	3h 13min	2h 29min	3h 13min	2h 29min	3h 13min
		Mixed water at 40°C	l	194.0	246.0	194.0	246.0	194.0	246.0
		ηwh (water heating efficiency)	%	119	131	119	131	119	131
		Qelec (Daily electricity consumption)	kWh	4.116	6.008	4.116	6.008	4.116	6.008
		Reference hot water temperature	°C	47.2	44.5	47.2	44.5	47.2	44.5
		Stand-by power input	W	37.4	32.1	37.4	32.1	37.4	32.1
		Water heating energy efficiency class		A+					
	Cold climate	AEC (Annual electricity consumption)	kWh	1,152	1,485	1,152	1,485	1,152	1,485
		COPdhw		2.12	2.74	2.12	2.74	2.12	2.74
Domestic hot water heating	Cold climate	Heat up time		2h 23min	3h 36min	2h 23min	3h 36min	2h 23min	3h 36min
		Mixed water at 40°C	l	175.0	246.0	175.0	246.0	175.0	246.0
		ηwh (water heating efficiency)	%	89	113	89	113	89	113
		Qelec (Daily electricity consumption)	kWh	5.498	6.961	5.498	6.961	5.498	6.961
		Reference hot water temperature	°C	46.3	44.5	46.3	44.5	46.3	44.5
		Stand-by power input	W	45.5	35.9	45.5	35.9	45.5	35.9
	Warm climate	AEC (Annual electricity consumption)	kWh	759	1,109	759	1,109	759	1,109
		COPdhw		3.19	3.65	3.19	3.65	3.19	3.65
		Heat up time		2h 19min	3h 24min	2h 19min	3h 24min	2h 19min	3h 24min
		Mixed water at 40°C	l	194.0	246.0	194.0	246.0	194.0	246.0
		ηwh (water heating efficiency)	%	135	151	135	151	135	151
		Qelec (Daily electricity consumption)	kWh	3.652	5.219	3.652	5.219	3.652	5.219
		Reference hot water temperature	°C	47.2	44.5	47.2	44.5	47.2	44.5
		Stand-by power input	W	35.2	30.7	35.2	30.7	35.2	30.7

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Technical specifications					ETSH12P30E + EPRA08EW1	ETSH12P50E + EPRA08EW1	ETSH12P30E + EPRA10EW1	ETSH12P50E + EPRA10EW1	ETSH12P30E + EPRA12EW1	ETSH12P50E + EPRA12EW1
Space heating	Average climate water outlet 55°C	General	Annual energy consumption	kWh	4,993		4,970			
			ηs (Seasonal space heating efficiency)	%	138					
			Prated at -10°C	kW	9					
			Qhe Annual energy consumption (GCV)	Gj	18					
			SCOP		3.52		3.53			
			Seasonal space heating eff. class		A++					
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.30					
			Pdh	kW	7.6					
			PERd	%	92.0					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.50					
			Pdh	kW	4.6					
			PERd	%	140.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.61					
			Pdh	kW	3.0					
			PERd	%	184.4					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.16					
			Pdh	kW	3.7					
			PERd	%	246.4					
		Tol (temperature operating limit)	COPd		2.01		2.05			

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Technical specifications					ETSH12P30E + EPRA08EW1	ETSH12P50E + EPRA08EW1	ETSH12P30E + EPRA10EW1	ETSH12P50E + EPRA10EW1	ETSH12P30E + EPRA12EW1	ETSH12P50E + EPRA12EW1
Space heating	Average climate water outlet 55°C	Tol (temperature operating limit)	Pdh	kW	7.0		8.3			
			PERd	%	80.4		82.0			
			TOL	°C	-10					
			WTOL	°C	55					
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.5		0.0			
		Tbiv (bivalent temperature)	COPd		2.30		2.05			
			Pdh	kW	7.6		8.3			
			PERd	%	92.0		82.0			
			Tbiv	°C	-7		-10			
	Cold climate water outlet 55°C	General	Annual energy consumption	kWh	7,088		6,950		6,921	
			ηs (Seasonal space heating efficiency)	%	122		125			
			Prated at -22°C	kW	9					
			Qhe Annual energy consumption (GCV)	Gj	26		25			
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.61					
			Pdh	kW	5.3					
			PERd	%	104.4					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.90					
			Pdh	kW	3.3					
			PERd	%	156.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.96					
			Pdh	kW	3.5					
			PERd	%	198.4					
		D Condition (12°CDB/11°CWB)	COPd		6.56					
			Pdh	kW	4.2					
			PERd	%	262.4					
		Tol (temperature operating limit)	COPd		1.49		1.56		1.62	
			Pdh	kW	4.9		6.1		7.2	
			PERd	%	59.6		62.4		64.8	
			TOL	°C	-22					
			WTOL	°C	55					
		G Condition (-15°CDB/-)	COPd		2.00		2.03			
			Pdh	kW	6.1		7.2			
			PERd	%	80.0		81.2			
		Tbiv (bivalent temperature)	COPd		2.25		2.03			

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Technical specifications					ETSH12P30E + EPRA08EW1	ETSH12P50E + EPRA08EW1	ETSH12P30E + EPRA10EW1	ETSH12P50E + EPRA10EW1	ETSH12P30E + EPRA12EW1	ETSH12P50E + EPRA12EW1
Space heating	Cold climate water outlet 55°C	Tbiv (bivalent temperature)	Pdh	kW	6.6		7.2			
			PERd	%	90.0		81.2			
			Tbiv	°C	-12		-15			
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1		3.0		1.8	
	Warm climate water outlet 55°C	General	Annual energy consumption	kWh	2,972					
			ηs (Seasonal space heating efficiency)	%	170					
			Prated at 2°C	kW	10					
			Qhe Annual energy consumption (GCV)	Gj	11					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.66					
			Pdh	kW	8.0					
			PERd	%	106.4					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.79					
			Pdh	kW	6.7					
			PERd	%	151.6					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.87					
			Pdh	kW	3.6					
			PERd	%	234.8					
		Tbiv (bivalent temperature)	COPd		3.13					
			Pdh	kW	8.4					
			PERd	%	125.2					
			Tbiv	°C	4					
	Average climate water outlet 35°C	General	Annual energy consumption	kWh	3,561		3,539			
			ηs (Seasonal space heating efficiency)	%	190		191			
			Prated at -10°C	kW	8					
			Qhe Annual energy consumption (GCV)	Gj	13					
			SCOP		4.81		4.84			
			Seasonal space heating eff. class		A+++					
		A Condition (-7°CDB/-8°CWB)	COPd		3.20					
			Pdh	kW	7.5					
			PERd	%	128.0					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.93					
			Pdh	kW	4.4					
			PERd	%	197.2					

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Technical specifications					ETSH12P30E + EPRA08EW1	ETSH12P50E + EPRA08EW1	ETSH12P30E + EPRA10EW1	ETSH12P50E + EPRA10EW1	ETSH12P30E + EPRA12EW1	ETSH12P50E + EPRA12EW1
Space heating	Average climate water outlet 35°C	C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.37					
			Pdh	kW	4.3					
			PERd	%	254.8					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		8.13					
			Pdh	kW	6.6					
			PERd	%	325.2					
		Tol (temperature operating limit)	COPd		2.90		2.86			
			Pdh	kW	6.9		8.1			
			PERd	%	116.0		114.4			
			TOL	°C	-10					
			WTOL	°C	35					
		Tbiv (bivalent temperature)	COPd		3.20		2.86			
			Pdh	kW	7.5		8.1			
			PERd	%	128.0		114.4			
			Tbiv	°C	-7		-10			
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.4		0.0			
	Cold climate water outlet 35°C	General	Annual energy consumption	kWh	5,394		5,239		5,224	
			ηs (Seasonal space heating efficiency)	%	162		166		167	
			Prated at -22°C	kW	9					
			Qhe Annual energy consumption (GCV)	Gj	19					
		A Condition (-7°CDB/-8°CWB)	COPd		3.48					
			Pdh	kW	5.4					
			PERd	%	139.2					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.40					
			Pdh	kW	3.6					
			PERd	%	216.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.53					
			Pdh	kW	5.3					
			PERd	%	261.2					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		7.98					
			Pdh	kW	6.6					
			PERd	%	319.2					

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Technical specifications					ETSH12P30E + EPRA08EW1	ETSH12P50E + EPRA08EW1	ETSH12P30E + EPRA10EW1	ETSH12P50E + EPRA10EW1	ETSH12P30E + EPRA12EW1	ETSH12P50E + EPRA12EW1
Space heating	Cold climate water outlet 35°C	Tol (temperature operating limit)	COPd		2.11		2.14		2.16	
			Pdh	kW	4.9		5.9		6.5	
			PERd	%	84.4		85.6		86.4	
			TOL	°C	-22					
			WTOL	°C	35					
		G Condition (-15°CDB/-)	COPd		2.68		2.64			
			Pdh	kW	6.0		7.0			
			PERd	%	107.2		105.6			
		Tbiv (bivalent temperature)	COPd		2.95		2.64			
			Pdh	kW	6.5		7.0			
			PERd	%	118.0		105.6			
			Tbiv	°C	-12		-15			
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1		3.1		2.6	
	Warm climate water outlet 35°C	General	Annual energy consumption	kWh	1,954					
			ηs (Seasonal space heating efficiency)	%	232					
			Prated at 2°C	kW	9					
			Qhe Annual energy consumption (GCV)	Gj	7					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.07					
			Pdh	kW	7.7					
			PERd	%	162.8					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.85					
			Pdh	kW	5.5					
			PERd	%	234.0					
		Tbiv (bivalent temperature)	COPd		4.97					
			Pdh	kW	6.9					
			PERd	%	198.8					
			Tbiv	°C	5					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		7.85					
			Pdh	kW	6.2					
			PERd	%	314.0					

(1)Condition 1: cooling Ta 35°C - LWE 18°C (DT = 5°C); heating Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C) |
(2)DB/WB 7°C/6°C - LWC 35°C (dT=5°C) with pump at full speed |
Condition 2: cooling Ta 35°C - LWE 7°C (DT = 5°C); heating Ta DB/WB 7°C/6°C - LWC 45°C (DT = 5°C) |
Condition: Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C)

Technical specifications					ETSHB12P30E + EPRA08EW1	ETSHB12P50E + EPRA08EW1	ETSHB12P30E + EPRA10EW1	ETSHB12P50E + EPRA10EW1	ETSHB12P30E + EPRA12EW1	ETSHB12P50E + EPRA12EW1
Heating capacity	Nom.			kW	6.17 (1)					
Power input	Heating	Nom.		kW	1.21 (1)					
COP					5.10 (1)					
Pump	Type				Grundfos UPM3L K 20-75 CHBL AZA 3 RT					
	Nominal ESP unit	Heating		kPa	53.5 (2)					
Water side Heat exchanger	Water flow rate	Heating	Nom.	l/min	17.7 (1)					

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Technical specifications				ETSHB12P30E + EPRA08EW1	ETSHB12P50E + EPRA08EW1	ETSHB12P30E + EPRA10EW1	ETSHB12P50E + EPRA10EW1	ETSHB12P30E + EPRA12EW1	ETSHB12P50E + EPRA12EW1
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		Yes					
		Brine-to-water heat pump		No					
		Heat pump combination heater		Yes					
		Low-temperature heat pump		No					
		Supplementary heater integrated		No					
		Water-to-water heat pump		No					
	LW(A) Sound power level (according to EN14825)	Indoor	dB(A)	47.3					
LW(A) Sound power level (according to EN14825)	Outdoor		dB(A)	53.0					
Sound condition Ecodesign and energy label				Sound power in heating mode, measured according to the EN12102 under conditions of the EN14825					
Space heating general	Air to water unit	Rated airflow (outdoor)	m^3/h	3,542					
	Other	Capacity control		Inverter					
		Pck (Crankcase heater mode)	kW	0.000					
		Poff (Off mode)	kW	0.027					
		Psb (Standby mode)	kW	0.027					
		Pto (Thermostat off)	kW	0.024					
Domestic hot water heating	General	Declared load profile		L					
		Function to fix water heating during off peak hours		No					
	Average climate	AEC (Annual electricity consumption)	kWh	858	1,281	858	1,281	858	1,281
		COPdhw		2.83	3.17	2.83	3.17	2.83	3.17
		Heat up time		2h 29min	3h 13min	2h 29min	3h 13min	2h 29min	3h 13min
		Mixed water at 40°C	l	194.0	246.0	194.0	246.0	194.0	246.0
		ηwh (water heating efficiency)	%	119	131	119	131	119	131
		Qelec (Daily electricity consumption)	kWh	4.116	6.008	4.116	6.008	4.116	6.008
		Reference hot water temperature	°C	47.2	44.5	47.2	44.5	47.2	44.5
		Stand-by power input	W	37.4	32.1	37.4	32.1	37.4	32.1
		Water heating energy efficiency class		A+					
	Cold climate	AEC (Annual electricity consumption)	kWh	1,152	1,485	1,152	1,485	1,152	1,485
		COPdhw		2.12	2.74	2.12	2.74	2.12	2.74
Domestic hot water heating	Cold climate	Heat up time		2h 23min	3h 36min	2h 23min	3h 36min	2h 23min	3h 36min
		Mixed water at 40°C	l	175.0	246.0	175.0	246.0	175.0	246.0
		ηwh (water heating efficiency)	%	89	113	89	113	89	113
		Qelec (Daily electricity consumption)	kWh	5.498	6.961	5.498	6.961	5.498	6.961
		Reference hot water temperature	°C	46.3	44.5	46.3	44.5	46.3	44.5
		Stand-by power input	W	45.5	35.9	45.5	35.9	45.5	35.9
	Warm climate	AEC (Annual electricity consumption)	kWh	759	1,109	759	1,109	759	1,109
		COPdhw		3.19	3.65	3.19	3.65	3.19	3.65
		Heat up time		2h 19min	3h 24min	2h 19min	3h 24min	2h 19min	3h 24min
		Mixed water at 40°C	l	194.0	246.0	194.0	246.0	194.0	246.0
		ηwh (water heating efficiency)	%	135	151	135	151	135	151
		Qelec (Daily electricity consumption)	kWh	3.652	5.219	3.652	5.219	3.652	5.219
		Reference hot water temperature	°C	47.2	44.5	47.2	44.5	47.2	44.5
		Stand-by power input	W	35.2	30.7	35.2	30.7	35.2	30.7

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Technical specifications					ETSHB12P30E + EPRA08EW1	ETSHB12P50E + EPRA08EW1	ETSHB12P30E + EPRA10EW1	ETSHB12P50E + EPRA10EW1	ETSHB12P30E + EPRA12EW1	ETSHB12P50E + EPRA12EW1
Space heating	Average climate water outlet 55°C	General	Annual energy consumption	kWh	4,993		4,970			
			ηs (Seasonal space heating efficiency)	%	138					
			Prated at -10°C	kW	9					
			Qhe Annual energy consumption (GCV)	Gj	18					
			SCOP		3.52		3.53			
			Seasonal space heating eff. class		A++					
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.30					
			Pdh	kW	7.6					
			PERd	%	92.0					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.50					
			Pdh	kW	4.6					
			PERd	%	140.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.61					
			Pdh	kW	3.0					
			PERd	%	184.4					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.16					
			Pdh	kW	3.7					
			PERd	%	246.4					
		Tol (temperature operating limit)	COPd		2.01		2.05			

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Technical specifications					ETSHB12P30E + EPRA08EW1	ETSHB12P50E + EPRA08EW1	ETSHB12P30E + EPRA10EW1	ETSHB12P50E + EPRA10EW1	ETSHB12P30E + EPRA12EW1	ETSHB12P50E + EPRA12EW1
Space heating	Average climate water outlet 55°C	Tol (temperature operating limit)	Pdh	kW	7.0		8.3			
			PERd	%	80.4		82.0			
			TOL	°C	-10					
			WTOL	°C	55					
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.5		0.0			
		Tbiv (bivalent temperature)	COPd		2.30		2.05			
			Pdh	kW	7.6		8.3			
			PERd	%	92.0		82.0			
			Tbiv	°C	-7		-10			
	Cold climate water outlet 55°C	General	Annual energy consumption	kWh	7,088		6,950		6,921	
			ηs (Seasonal space heating efficiency)	%	122		125			
			Prated at -22°C	kW	9					
			Qhe Annual energy consumption (GCV)	Gj	26		25			
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.61					
			Pdh	kW	5.3					
			PERd	%	104.4					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.90					
			Pdh	kW	3.3					
			PERd	%	156.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.96					
			Pdh	kW	3.5					
			PERd	%	198.4					
		D Condition (12°CDB/11°CWB)	COPd		6.56					
			Pdh	kW	4.2					
			PERd	%	262.4					
		Tol (temperature operating limit)	COPd		1.49		1.56		1.62	
			Pdh	kW	4.9		6.1		7.2	
			PERd	%	59.6		62.4		64.8	
			TOL	°C	-22					
			WTOL	°C	55					
		G Condition (-15°CDB/-)	COPd		2.00		2.03			
			Pdh	kW	6.1		7.2			
			PERd	%	80.0		81.2			
		Tbiv (bivalent temperature)	COPd		2.25		2.03			

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Technical specifications					ETSHB12P30E + EPRA08EW1	ETSHB12P50E + EPRA08EW1	ETSHB12P30E + EPRA10EW1	ETSHB12P50E + EPRA10EW1	ETSHB12P30E + EPRA12EW1	ETSHB12P50E + EPRA12EW1
Space heating	Cold climate water outlet 55°C	Tbiv (bivalent temperature)	Pdh	kW	6.6		7.2			
			PERd	%	90.0		81.2			
			Tbiv	°C	-12		-15			
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1		3.0		1.8	
	Warm climate water outlet 55°C	General	Annual energy consumption	kWh	2,972					
			ηs (Seasonal space heating efficiency)	%	170					
			Prated at 2°C	kW	10					
			Qhe Annual energy consumption (GCV)	Gj	11					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.66					
			Pdh	kW	8.0					
			PERd	%	106.4					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.79					
			Pdh	kW	6.7					
			PERd	%	151.6					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.87					
			Pdh	kW	3.6					
			PERd	%	234.8					
		Tbiv (bivalent temperature)	COPd		3.13					
			Pdh	kW	8.4					
			PERd	%	125.2					
			Tbiv	°C	4					
	Average climate water outlet 35°C	General	Annual energy consumption	kWh	3,561		3,539			
			ηs (Seasonal space heating efficiency)	%	190		191			
			Prated at -10°C	kW	8					
			Qhe Annual energy consumption (GCV)	Gj	13					
			SCOP		4.81		4.84			
			Seasonal space heating eff. class		A+++					
		A Condition (-7°CDB/-8°CWB)	COPd		3.20					
			Pdh	kW	7.5					
			PERd	%	128.0					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.93					
			Pdh	kW	4.4					
			PERd	%	197.2					

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Technical specifications					ETSHB12P30E + EPRA08EW1	ETSHB12P50E + EPRA08EW1	ETSHB12P30E + EPRA10EW1	ETSHB12P50E + EPRA10EW1	ETSHB12P30E + EPRA12EW1	ETSHB12P50E + EPRA12EW1
Space heating	Average climate water outlet 35°C	C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.37					
			Pdh	kW	4.3					
			PERd	%	254.8					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		8.13					
			Pdh	kW	6.6					
			PERd	%	325.2					
		Tol (temperature operating limit)	COPd		2.90		2.86			
			Pdh	kW	6.9		8.1			
			PERd	%	116.0		114.4			
			TOL	°C	-10					
			WTOL	°C	35					
		Tbiv (bivalent temperature)	COPd		3.20		2.86			
			Pdh	kW	7.5		8.1			
			PERd	%	128.0		114.4			
			Tbiv	°C	-7		-10			
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.4		0.0			
	Cold climate water outlet 35°C	General	Annual energy consumption	kWh	5,394		5,239		5,224	
			ηs (Seasonal space heating efficiency)	%	162		166		167	
			Prated at -22°C	kW	9					
			Qhe Annual energy consumption (GCV)	Gj	19					
		A Condition (-7°CDB/-8°CWB)	COPd		3.48					
			Pdh	kW	5.4					
			PERd	%	139.2					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.40					
			Pdh	kW	3.6					
			PERd	%	216.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.53					
			Pdh	kW	5.3					
			PERd	%	261.2					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		7.98					
			Pdh	kW	6.6					
			PERd	%	319.2					

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Technical specifications					ETSHB12P30E + EPRA08EW1	ETSHB12P50E + EPRA08EW1	ETSHB12P30E + EPRA10EW1	ETSHB12P50E + EPRA10EW1	ETSHB12P30E + EPRA12EW1	ETSHB12P50E + EPRA12EW1
Space heating	Cold climate water outlet 35°C	Tol (temperature operating limit)	COPd		2.11		2.14		2.16	
			Pdh	kW	4.9		5.9		6.5	
			PERd	%	84.4		85.6		86.4	
			TOL	°C	-22					
			WTOL	°C	35					
		G Condition (-15°CDB/-)	COPd		2.68		2.64			
			Pdh	kW	6.0		7.0			
			PERd	%	107.2		105.6			
		Tbiv (bivalent temperature)	COPd		2.95		2.64			
			Pdh	kW	6.5		7.0			
			PERd	%	118.0		105.6			
			Tbiv	°C	-12		-15			
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1		3.1		2.6	
	Warm climate water outlet 35°C	General	Annual energy consumption	kWh	1,954					
			ηs (Seasonal space heating efficiency)	%	232					
			Prated at 2°C	kW	9					
			Qhe Annual energy consumption (GCV)	Gj	7					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.07					
			Pdh	kW	7.7					
			PERd	%	162.8					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.85					
			Pdh	kW	5.5					
			PERd	%	234.0					
		Tbiv (bivalent temperature)	COPd		4.97					
			Pdh	kW	6.9					
			PERd	%	198.8					
			Tbiv	°C	5					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		7.85					
			Pdh	kW	6.2					
			PERd	%	314.0					

(1)Condition 1: cooling Ta 35°C - LWE 18°C (DT = 5°C); heating Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C) |
(2)DB/WB 7°C/6°C - LWC 35°C (dT=5°C) with pump at full speed |
Condition 2: cooling Ta 35°C - LWE 7°C (DT = 5°C); heating Ta DB/WB 7°C/6°C - LWC 45°C (DT = 5°C) |
Condition: Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C)

Technical specifications					ETSX12P30E + EPRA08EW1	ETSX12P50E + EPRA08EW1	ETSX12P30E + EPRA10EW1	ETSX12P50E + EPRA10EW1	ETSX12P30E + EPRA12EW1	ETSX12P50E + EPRA12EW1
Heating capacity	Nom.			kW	6.17 (1)					
Cooling capacity	Nom.			kW	6.81 (2)		7.97 (2)		8.62 (2)	
Power input	Heating	Nom.		kW	1.21 (1)					
	Cooling	Nom.		kW	2.08 (2)		2.57 (2)		2.86 (2)	
COP					5.10 (1)					
EER					3.28 (2)		3.10 (2)		3.01 (2)	
Pump	Type				Grundfos UPM3L K 20-75 CHBL AZA 3 RT					
	Nominal ESP unit	Heating		kPa	53.5 (3)					
Water side Heat exchanger	Water flow rate	Cooling	Nom.	l/min	19.5 (2)		22.9 (2)		24.7 (2)	
		Heating	Nom.	l/min	17.7 (1)					

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Technical specifications				ETSX12P30E + EPRA08EW1	ETSX12P50E + EPRA08EW1	ETSX12P30E + EPRA10EW1	ETSX12P50E + EPRA10EW1	ETSX12P30E + EPRA12EW1	ETSX12P50E + EPRA12EW1
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		Yes					
		Brine-to-water heat pump		No					
		Heat pump combination heater		Yes					
		Low-temperature heat pump		No					
		Supplementary heater integrated		No					
		Water-to-water heat pump		No					
	LW(A) Sound power level (according to EN14825)	Indoor	dB(A)	47.3					
LW(A) Sound power level (according to EN14825)	Outdoor		dB(A)	53.0					
Sound condition Ecodesign and energy label				Sound power in heating mode, measured according to the EN12102 under conditions of the EN14825					
Space heating general	Air to water unit	Rated airflow (outdoor)	m^3/h	3,542					
	Other	Capacity control		Inverter					
		Pck (Crankcase heater mode)	kW	0.000					
		Poff (Off mode)	kW	0.027					
		Psb (Standby mode)	kW	0.027					
		Pto (Thermostat off)	kW	0.024					
Domestic hot water heating	General	Declared load profile		L					
		Function to fix water heating during off peak hours		No					
	Average climate	AEC (Annual electricity consumption)	kWh	858	1,281	858	1,281	858	1,281
		COPdhw		2.83	3.17	2.83	3.17	2.83	3.17
		Heat up time		2h 29min	3h 13min	2h 29min	3h 13min	2h 29min	3h 13min
		Mixed water at 40°C	l	194.0	246.0	194.0	246.0	194.0	246.0
		ηwh (water heating efficiency)	%	119	131	119	131	119	131
		Qelec (Daily electricity consumption)	kWh	4.116	6.008	4.116	6.008	4.116	6.008
		Reference hot water temperature	°C	47.2	44.5	47.2	44.5	47.2	44.5
Domestic hot water heating	Average climate	Stand-by power input	W	37.4	32.1	37.4	32.1	37.4	32.1
		Water heating energy efficiency class		A+					
	Cold climate	AEC (Annual electricity consumption)	kWh	1,152	1,485	1,152	1,485	1,152	1,485
		COPdhw		2.12	2.74	2.12	2.74	2.12	2.74
		Heat up time		2h 23min	3h 36min	2h 23min	3h 36min	2h 23min	3h 36min
		Mixed water at 40°C	l	175.0	246.0	175.0	246.0	175.0	246.0
		ηwh (water heating efficiency)	%	89	113	89	113	89	113
		Qelec (Daily electricity consumption)	kWh	5.498	6.961	5.498	6.961	5.498	6.961
		Reference hot water temperature	°C	46.3	44.5	46.3	44.5	46.3	44.5
		Stand-by power input	W	45.5	35.9	45.5	35.9	45.5	35.9
	Warm climate	AEC (Annual electricity consumption)	kWh	759	1,109	759	1,109	759	1,109
		COPdhw		3.19	3.65	3.19	3.65	3.19	3.65
		Heat up time		2h 19min	3h 24min	2h 19min	3h 24min	2h 19min	3h 24min
		Mixed water at 40°C	l	194.0	246.0	194.0	246.0	194.0	246.0
		ηwh (water heating efficiency)	%	135	151	135	151	135	151
		Qelec (Daily electricity consumption)	kWh	3.652	5.219	3.652	5.219	3.652	5.219
		Reference hot water temperature	°C	47.2	44.5	47.2	44.5	47.2	44.5
		Stand-by power input	W	35.2	30.7	35.2	30.7	35.2	30.7

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Technical specifications					ETSX12P30E + EPRA08EW1	ETSX12P50E + EPRA08EW1	ETSX12P30E + EPRA10EW1	ETSX12P50E + EPRA10EW1	ETSX12P30E + EPRA12EW1	ETSX12P50E + EPRA12EW1
Space heating	Average climate water outlet 55°C	General	Annual energy consumption	kWh	4,894		4,871			
			ηs (Seasonal space heating efficiency)	%	141					
			Prated at -10°C	kW	9					
			Qhe Annual energy consumption (GCV)	Gj	18					
			SCOP		3.59		3.60			
			Seasonal space heating eff. class		A++					
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.30					
			Pdh	kW	7.6					
			PERd	%	92.0					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.50					
			Pdh	kW	4.6					
			PERd	%	140.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.61					
			Pdh	kW	3.0					
			PERd	%	184.4					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					

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Technical specifications					ETSX12P30E + EPRA08EW1	ETSX12P50E + EPRA08EW1	ETSX12P30E + EPRA10EW1	ETSX12P50E + EPRA10EW1	ETSX12P30E + EPRA12EW1	ETSX12P50E + EPRA12EW1
Space heating	Average climate water outlet 55°C	D Condition (12°CDB/11°CWB)	COPd		6.16					
			Pdh	kW	3.7					
			PERd	%	246.4					
		Tol (temperature operating limit)	COPd		2.01		2.05			
			Pdh	kW	7.0		8.3			
			PERd	%	80.4		82.0			
			TOL	°C	-10					
			WTOL	°C	55					
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.5		0.0			
		Tbiv (bivalent temperature)	COPd		2.30		2.05			
			Pdh	kW	7.6		8.3			
			PERd	%	92.0		82.0			
			Tbiv	°C	-7		-10			
	Cold climate water outlet 55°C	General	Annual energy consumption	kWh	7,028		6,890		6,861	
			ηs (Seasonal space heating efficiency)	%	123		126			
			Prated at -22°C	kW	9					
			Qhe Annual energy consumption (GCV)	Gj	25					
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.61					
			Pdh	kW	5.3					
			PERd	%	104.4					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.90					
			Pdh	kW	3.3					
			PERd	%	156.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.96					
			Pdh	kW	3.5					
			PERd	%	198.4					
		D Condition (12°CDB/11°CWB)	COPd		6.56					
			Pdh	kW	4.2					
			PERd	%	262.4					
		Tol (temperature operating limit)	COPd		1.49		1.56		1.62	
			Pdh	kW	4.9		6.1		7.2	
			PERd	%	59.6		62.4		64.8	
			TOL	°C	-22					
			WTOL	°C	55					

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Technical specifications					ETSX12P30E + EPRA08EW1	ETSX12P50E + EPRA08EW1	ETSX12P30E + EPRA10EW1	ETSX12P50E + EPRA10EW1	ETSX12P30E + EPRA12EW1	ETSX12P50E + EPRA12EW1
Space heating	Cold climate water outlet 55°C	G Condition (-15°CDB/-)	COPd		2.00		2.03			
			Pdh	kW	6.1		7.2			
			PERd	%	80.0		81.2			
		Tbiv (bivalent temperature)	COPd		2.25		2.03			
			Pdh	kW	6.6		7.2			
			PERd	%	90.0		81.2			
			Tbiv	°C	-12		-15			
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1		3.0		1.8	
	Warm climate water outlet 55°C	General	Annual energy consumption	kWh	2,853					
			ηs (Seasonal space heating efficiency)	%	177					
			Prated at 2°C	kW	10					
			Qhe Annual energy consumption (GCV)	Gj	10					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.66					
			Pdh	kW	8.0					
			PERd	%	106.4					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.79					
			Pdh	kW	6.7					
			PERd	%	151.6					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.87					
			Pdh	kW	3.6					
			PERd	%	234.8					
		Tbiv (bivalent temperature)	COPd		3.13					
			Pdh	kW	8.4					
			PERd	%	125.2					
			Tbiv	°C	4					
	Average climate water outlet 35°C	General	Annual energy consumption	kWh	3,462		3,440			
			ηs (Seasonal space heating efficiency)	%	195		196			
			Prated at -10°C	kW	8					
			Qhe Annual energy consumption (GCV)	Gj	12					
			SCOP		4.95		4.98			
			Seasonal space heating eff. class		A+++					
		A Condition (-7°CDB/-8°CWB)	COPd		3.20					
			Pdh	kW	7.5					
			PERd	%	128.0					

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Technical specifications					ETSX12P30E + EPRA08EW1	ETSX12P50E + EPRA08EW1	ETSX12P30E + EPRA10EW1	ETSX12P50E + EPRA10EW1	ETSX12P30E + EPRA12EW1	ETSX12P50E + EPRA12EW1
Space heating	Average climate water outlet 35°C	B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.93					
			Pdh	kW	4.4					
			PERd	%	197.2					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.37					
			Pdh	kW	4.3					
			PERd	%	254.8					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		8.13					
			Pdh	kW	6.6					
			PERd	%	325.2					
		Tol (temperature operating limit)	COPd		2.90		2.86			
			Pdh	kW	6.9		8.1			
			PERd	%	116.0		114.4			
			TOL	°C	-10					
			WTOL	°C	35					
		Tbiv (bivalent temperature)	COPd		3.20		2.86			
			Pdh	kW	7.5		8.1			
			PERd	%	128.0		114.4			
			Tbiv	°C	-7				-10	
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.4		0.0			
	Cold climate water outlet 35°C	General	Annual energy consumption	kWh	5,334		5,180		5,165	
			ηs (Seasonal space heating efficiency)	%	161		168		169	
			Prated at -22°C	kW	9					
			Qhe Annual energy consumption (GCV)	Gj	19					
		A Condition (-7°CDB/-8°CWB)	COPd		3.48					
			Pdh	kW	5.4					
			PERd	%	139.2					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.40					
			Pdh	kW	3.6					
			PERd	%	216.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.53					
			Pdh	kW	5.3					
			PERd	%	261.2					

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Technical specifications					ETSX12P30E + EPRA08EW1	ETSX12P50E + EPRA08EW1	ETSX12P30E + EPRA10EW1	ETSX12P50E + EPRA10EW1	ETSX12P30E + EPRA12EW1	ETSX12P50E + EPRA12EW1
Space heating	Cold climate water outlet 35°C	D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		7.98					
			Pdh	kW	6.6					
			PERd	%	319.2					
		Tol (temperature operating limit)	COPd		2.11		2.14		2.16	
			Pdh	kW	4.9		5.9		6.5	
			PERd	%	84.4		85.6		86.4	
			TOL	°C	-22					
			WTOL	°C	35					
		G Condition (-15°CDB/-)	COPd		2.68		2.64			
			Pdh	kW	6.0		7.0			
			PERd	%	107.2		105.6			
		Tbiv (bivalent temperature)	COPd		2.95		2.64			
			Pdh	kW	6.5		7.0			
			PERd	%	118.0		105.6			
			Tbiv	°C	-12		-15			
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1		3.1		2.6	
	Warm climate water outlet 35°C	General	Annual energy consumption	kWh	1,835					
			ηs (Seasonal space heating efficiency)	%	247					
			Prated at 2°C	kW	9					
			Qhe Annual energy consumption (GCV)	Gj	7					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.07					
			Pdh	kW	7.7					
			PERd	%	162.8					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.85					
			Pdh	kW	5.5					
			PERd	%	234.0					
		Tbiv (bivalent temperature)	COPd		4.97					
			Pdh	kW	6.9					
			PERd	%	198.8					
			Tbiv	°C	5					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		7.85					
			Pdh	kW	6.2					
			PERd	%	314.0					

(1)Condition 1: cooling Ta 35°C - LWE 18°C (DT = 5°C); heating Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C) |
(2)Condition 2: cooling Ta 35°C - LWE 7°C (DT = 5°C); heating Ta DB/WB 7°C/6°C - LWC 45°C (DT = 5°C) |
(3)DB/WB 7°C/6°C - LWC 35°C (dT=5°C) with pump at full speed |
Condition: Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C)

Technical specifications					ETSXB12P30E + EPRA08EW1	ETSXB12P50E + EPRA08EW1	ETSXB12P30E + EPRA10EW1	ETSXB12P50E + EPRA10EW1	ETSXB12P30E + EPRA12EW1	ETSXB12P50E + EPRA12EW1
Heating capacity	Nom.			kW	6.17 (1)					
Cooling capacity	Nom.			kW	6.81 (2)		7.97 (2)		8.62 (2)	
Power input	Heating	Nom.		kW	1.21 (1)					
	Cooling	Nom.		kW	2.08 (2)		2.57 (2)		2.86 (2)	
COP					5.10 (1)					
EER					3.28 (2)		3.10 (2)		3.01 (2)	
Pump	Type				Grundfos UPM3L K 20-75 CHBL AZA 3 RT					
	Nominal ESP unit	Heating		kPa	53.5 (3)					
Water side Heat exchanger	Water flow rate	Cooling	Nom.	l/min	19.5 (2)		22.9 (2)		24.7 (2)	
		Heating	Nom.	l/min	17.7 (1)					

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Technical specifications				ETSXB12P30E + EPRA08EW1	ETSXB12P50E + EPRA08EW1	ETSXB12P30E + EPRA10EW1	ETSXB12P50E + EPRA10EW1	ETSXB12P30E + EPRA12EW1	ETSXB12P50E + EPRA12EW1
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		Yes					
		Brine-to-water heat pump		No					
		Heat pump combination heater		Yes					
		Low-temperature heat pump		No					
		Supplementary heater integrated		No					
		Water-to-water heat pump		No					
	LW(A) Sound power level (according to EN14825)	Indoor	dB(A)	47.3					
LW(A) Sound power level (according to EN14825)	Outdoor		dB(A)	53.0					
Sound condition Ecodesign and energy label				Sound power in heating mode, measured according to the EN12102 under conditions of the EN14825					
Space heating general	Air to water unit	Rated airflow (outdoor)	m^3/h	3,542					
	Other	Capacity control		Inverter					
		Pck (Crankcase heater mode)	kW	0.000					
		Poff (Off mode)	kW	0.027					
		Psb (Standby mode)	kW	0.027					
		Pto (Thermostat off)	kW	0.024					
Domestic hot water heating	General	Declared load profile		L					
		Function to fix water heating during off peak hours		No					
	Average climate	AEC (Annual electricity consumption)	kWh	858	1,281	858	1,281	858	1,281
		COPdhw		2.83	3.17	2.83	3.17	2.83	3.17
		Heat up time		2h 29min	3h 13min	2h 29min	3h 13min	2h 29min	3h 13min
		Mixed water at 40°C	l	194.0	246.0	194.0	246.0	194.0	246.0
		ηwh (water heating efficiency)	%	119	131	119	131	119	131
		Qelec (Daily electricity consumption)	kWh	4.116	6.008	4.116	6.008	4.116	6.008
		Reference hot water temperature	°C	47.2	44.5	47.2	44.5	47.2	44.5
Domestic hot water heating	Average climate	Stand-by power input	W	37.4	32.1	37.4	32.1	37.4	32.1
		Water heating energy efficiency class		A+					
	Cold climate	AEC (Annual electricity consumption)	kWh	1,152	1,485	1,152	1,485	1,152	1,485
		COPdhw		2.12	2.74	2.12	2.74	2.12	2.74
		Heat up time		2h 23min	3h 36min	2h 23min	3h 36min	2h 23min	3h 36min
		Mixed water at 40°C	l	175.0	246.0	175.0	246.0	175.0	246.0
		ηwh (water heating efficiency)	%	89	113	89	113	89	113
		Qelec (Daily electricity consumption)	kWh	5.498	6.961	5.498	6.961	5.498	6.961
		Reference hot water temperature	°C	46.3	44.5	46.3	44.5	46.3	44.5
		Stand-by power input	W	45.5	35.9	45.5	35.9	45.5	35.9
	Warm climate	AEC (Annual electricity consumption)	kWh	759	1,109	759	1,109	759	1,109
		COPdhw		3.19	3.65	3.19	3.65	3.19	3.65
		Heat up time		2h 19min	3h 24min	2h 19min	3h 24min	2h 19min	3h 24min
		Mixed water at 40°C	l	194.0	246.0	194.0	246.0	194.0	246.0
		ηwh (water heating efficiency)	%	135	151	135	151	135	151
		Qelec (Daily electricity consumption)	kWh	3.652	5.219	3.652	5.219	3.652	5.219
		Reference hot water temperature	°C	47.2	44.5	47.2	44.5	47.2	44.5
		Stand-by power input	W	35.2	30.7	35.2	30.7	35.2	30.7

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Technical specifications					ETSXB12P30E + EPRA08EW1	ETSXB12P50E + EPRA08EW1	ETSXB12P30E + EPRA10EW1	ETSXB12P50E + EPRA10EW1	ETSXB12P30E + EPRA12EW1	ETSXB12P50E + EPRA12EW1
Space heating	Average climate water outlet 55°C	General	Annual energy consumption	kWh	4,894		4,871			
			ηs (Seasonal space heating efficiency)	%	141					
			Prated at -10°C	kW	9					
			Qhe Annual energy consumption (GCV)	Gj	18					
			SCOP		3.59		3.60			
			Seasonal space heating eff. class		A++					
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.30					
			Pdh	kW	7.6					
			PERd	%	92.0					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.50					
			Pdh	kW	4.6					
			PERd	%	140.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.61					
			Pdh	kW	3.0					
			PERd	%	184.4					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					

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Technical specifications					ETSXB12P30E + EPRA08EW1	ETSXB12P50E + EPRA08EW1	ETSXB12P30E + EPRA10EW1	ETSXB12P50E + EPRA10EW1	ETSXB12P30E + EPRA12EW1	ETSXB12P50E + EPRA12EW1
Space heating	Average climate water outlet 55°C	D Condition (12°CDB/11°CWB)	COPd		6.16					
			Pdh	kW	3.7					
			PERd	%	246.4					
		Tol (temperature operating limit)	COPd		2.01		2.05			
			Pdh	kW	7.0		8.3			
			PERd	%	80.4		82.0			
			TOL	°C	-10					
			WTOL	°C	55					
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.5		0.0			
		Tbiv (bivalent temperature)	COPd		2.30		2.05			
			Pdh	kW	7.6		8.3			
			PERd	%	92.0		82.0			
			Tbiv	°C	-7		-10			
	Cold climate water outlet 55°C	General	Annual energy consumption	kWh	7,028		6,890		6,861	
			ηs (Seasonal space heating efficiency)	%	123		126			
			Prated at -22°C	kW	9					
			Qhe Annual energy consumption (GCV)	Gj	25					
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.61					
			Pdh	kW	5.3					
			PERd	%	104.4					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.90					
			Pdh	kW	3.3					
			PERd	%	156.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.96					
			Pdh	kW	3.5					
			PERd	%	198.4					
		D Condition (12°CDB/11°CWB)	COPd		6.56					
			Pdh	kW	4.2					
			PERd	%	262.4					
		Tol (temperature operating limit)	COPd		1.49		1.56		1.62	
			Pdh	kW	4.9		6.1		7.2	
			PERd	%	59.6		62.4		64.8	
			TOL	°C	-22					
			WTOL	°C	55					

2 Specifications

2 - 1 Specifications

Technical specifications					ETSXB12P30E + EPRA08EW1	ETSXB12P50E + EPRA08EW1	ETSXB12P30E + EPRA10EW1	ETSXB12P50E + EPRA10EW1	ETSXB12P30E + EPRA12EW1	ETSXB12P50E + EPRA12EW1
Space heating	Cold climate water outlet 55°C	G Condition (-15°CDB/-)	COPd		2.00		2.03			
			Pdh	kW	6.1		7.2			
			PERd	%	80.0		81.2			
		Tbiv (bivalent temperature)	COPd		2.25		2.03			
			Pdh	kW	6.6		7.2			
			PERd	%	90.0		81.2			
			Tbiv	°C	-12		-15			
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1		3.0		1.8	
	Warm climate water outlet 55°C	General	Annual energy consumption	kWh	2,853					
			ηs (Seasonal space heating efficiency)	%	177					
			Prated at 2°C	kW	10					
			Qhe Annual energy consumption (GCV)	Gj	10					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		2.66					
			Pdh	kW	8.0					
			PERd	%	106.4					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		3.79					
			Pdh	kW	6.7					
			PERd	%	151.6					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.87					
			Pdh	kW	3.6					
			PERd	%	234.8					
		Tbiv (bivalent temperature)	COPd		3.13					
			Pdh	kW	8.4					
			PERd	%	125.2					
			Tbiv	°C	4					
	Average climate water outlet 35°C	General	Annual energy consumption	kWh	3,462		3,440			
			ηs (Seasonal space heating efficiency)	%	195		196			
			Prated at -10°C	kW	8					
			Qhe Annual energy consumption (GCV)	Gj	12					
			SCOP		4.95		4.98			
			Seasonal space heating eff. class		A+++					
		A Condition (-7°CDB/-8°CWB)	COPd		3.20					
			Pdh	kW	7.5					
			PERd	%	128.0					

2 Specifications

2 - 1 Specifications

Technical specifications					ETSXB12P30E + EPRA08EW1	ETSXB12P50E + EPRA08EW1	ETSXB12P30E + EPRA10EW1	ETSXB12P50E + EPRA10EW1	ETSXB12P30E + EPRA12EW1	ETSXB12P50E + EPRA12EW1
Space heating	Average climate water outlet 35°C	B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.93					
			Pdh	kW	4.4					
			PERd	%	197.2					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.37					
			Pdh	kW	4.3					
			PERd	%	254.8					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		8.13					
			Pdh	kW	6.6					
			PERd	%	325.2					
		Tol (temperature operating limit)	COPd		2.90		2.86			
			Pdh	kW	6.9		8.1			
			PERd	%	116.0		114.4			
			TOL	°C	-10					
			WTOL	°C	35					
		Tbiv (bivalent temperature)	COPd		3.20		2.86			
			Pdh	kW	7.5		8.1			
			PERd	%	128.0		114.4			
			Tbiv	°C	-7				-10	
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.4		0.0			
	Cold climate water outlet 35°C	General	Annual energy consumption	kWh	5,334		5,180		5,165	
			ηs (Seasonal space heating efficiency)	%	161		168		169	
			Prated at -22°C	kW	9					
			Qhe Annual energy consumption (GCV)	Gj	19					
		A Condition (-7°CDB/-8°CWB)	COPd		3.48					
			Pdh	kW	5.4					
			PERd	%	139.2					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.40					
			Pdh	kW	3.6					
			PERd	%	216.0					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		6.53					
			Pdh	kW	5.3					
			PERd	%	261.2					

2 Specifications

2 - 1 Specifications

Technical specifications					ETSXB12P30E + EPRA08EW1	ETSXB12P50E + EPRA08EW1	ETSXB12P30E + EPRA10EW1	ETSXB12P50E + EPRA10EW1	ETSXB12P30E + EPRA12EW1	ETSXB12P50E + EPRA12EW1
Space heating	Cold climate water outlet 35°C	D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		7.98					
			Pdh	kW	6.6					
			PERd	%	319.2					
		Tol (temperature operating limit)	COPd		2.11		2.14		2.16	
			Pdh	kW	4.9		5.9		6.5	
			PERd	%	84.4		85.6		86.4	
			TOL	°C	-22					
			WTOL	°C	35					
		G Condition (-15°CDB/-)	COPd		2.68		2.64			
			Pdh	kW	6.0		7.0			
			PERd	%	107.2		105.6			
		Tbiv (bivalent temperature)	COPd		2.95		2.64			
			Pdh	kW	6.5		7.0			
			PERd	%	118.0		105.6			
			Tbiv	°C	-12		-15			
		Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	kW	4.1		3.1		2.6	
	Warm climate water outlet 35°C	General	Annual energy consumption	kWh	1,835					
			ηs (Seasonal space heating efficiency)	%	247					
			Prated at 2°C	kW	9					
			Qhe Annual energy consumption (GCV)	Gj	7					
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0					
			COPd		4.07					
			Pdh	kW	7.7					
			PERd	%	162.8					
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		1.0					
			COPd		5.85					
			Pdh	kW	5.5					
			PERd	%	234.0					
		Tbiv (bivalent temperature)	COPd		4.97					
			Pdh	kW	6.9					
			PERd	%	198.8					
			Tbiv	°C	5					
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		1.0					
			COPd		7.85					
			Pdh	kW	6.2					
			PERd	%	314.0					

(1)Condition 1: cooling Ta 35°C - LWE 18°C (DT = 5°C); heating Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C) |
(2)Condition 2: cooling Ta 35°C - LWE 7°C (DT = 5°C); heating Ta DB/WB 7°C/6°C - LWC 45°C (DT = 5°C) |
(3)DB/WB 7°C/6°C - LWC 35°C (dT=5°C) with pump at full speed |
Condition: Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C)

Technical Specifications				EPRA08EW1	EPRA10EW1	EPRA12EW1
Casing	Colour			Silver / Black		
	Material			Polyester painted galvanised steel plate		
Dimensions	Unit	Height	mm	1,003		
		Width	mm	1,270		
		Depth	mm	533		
	Packed unit	Height	mm	1,340		
		Width	mm	1,440		
		Depth	mm	690		
Weight	Unit		kg	118		
	Packed unit		kg	150		
Packing	Material			Carton / Wood (pallet) / PE (Straps) / Metal		
	Weight		kg	28		

2 Specifications

2 - 1 Specifications

Technical Specifications					EPRA08EW1	EPRA10EW1	EPRA12EW1
Heat exchanger	Length			mm	1,200		
	Rows	Quantity			2		
	Fin pitch			mm	2.00		
	Passes	Quantity			10		
	Face area			m^2	1.19		
	Stages	Quantity			44		
	Tube type				ø7 Hi-XSL		
	Fin	Type			WF fin		
		Treatment			Anti-corrosion treatment (PE)		
Fan	Type				Propeller fan		
	Quantity				1		
	Air flow rate	Heating	Nom.	m^3/min	59.0		
			High	m^3/min	80.1		
		Cooling	Nom.	m^3/min	80		
			High	m^3/min	80.1		
	Discharge direction				Horizontal		
Fan motor	Quantity				1		
	Model				Brushless DC motor		
	Output			W	234		
	Drive				Direct drive		
	Speed	Steps			6		
		Heating	Nom.	rpm	390		
		Cooling	Nom.	rpm	520		
Compressor	Quantity				1		
Compressor	Model				2Y260BPDY1P#C		
	Type				Hermetically sealed swing compressor		
	Starting method				Inverter driven		
PED	Category				Category II		
Operation range	Heating	Min.		°CDB	-28.0		
		Max.		°CDB	25		
	Cooling	Min.		°CDB	10		
		Max.		°CDB	43		
	Domestic hot water	Max.		°CDB	35		
		Min.		°CDB	-28		
PED	Most critical part	Name			Accumulator		
		Ps*V		Bar*l	109		
Piping connections	Water inlet heat exchanger diameter			inch	G1" (male)		
	Water outlet heat exchanger diameter			inch	G1" (male)		
Sound power level	Heating	Nom.		dBA	55.6 (1)		
	Cooling	Nom.		dBA	61.2 (2)	61.4 (2)	60.9 (2)
Sound pressure level	Heating	Nom.		dBA	41.1 (3)		
	Cooling	Nom.		dBA	47.1 (4)		47.2 (4)
	Night quiet mode	Heating		dBA	43.2 (3)		
		Cooling		dBA	44.0 (4)		
Refrigerant	Type				R-32		
	GWP				675.0		
	Charge			kg	3.25		
	Control				Expansion valve		
	Circuits	Quantity			1		
Refrigerant oil	Type				FW68DE		
	Charged volume			l	1.1		
Piping connections	Piping length	OU - IU	Max.	m	50		
	High pressure side	Design pressure		bar	46		
	Level difference	IU - OU	Max.	m	10.0		
	Water circuit	Filter ball valve			Yes		
Defrost method					Reversed cycle		
Defrost control					Sensor for outdoor heat exchanger temperature		
Capacity control	Method				Inverter controlled		
Safety devices	Item	01			High pressure switch		
		02			High pressure switch		
		03			Thermal protector for compressor		
Safety devices	Item	04			Fuse		

2 Specifications

2 - 1 Specifications

Electrical Specifications					EPRA08EW1	EPRA10EW1	EPRA12EW1
Power supply	Name				W1		
	Phase				3~		
	Frequency			Hz	50		
	Voltage			V	400		
	Voltage range	Min.		%	-10		
		cos phi	Nom.		0.72		
			Max.		0.93		
		Max.		%	10		
Current	Minimum Ssc value			kVa	Equipment complying with EN / IEC 61000-3-12		
	Recommended fuses			A	16		
	Inverter modulation	Min.		%	44	37	35
Wiring connections	For power supply	Remark			See installation manual outdoor unit		
	For connection with indoor	Remark			See installation manual indoor unit		

(1)Cooling Ta 35°C - LWE 18°C (DT = 5°C); Heating Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C) |
(2)Condition 2: cooling Ta 35°C - LWE 7°C (DT = 5°C); heating Ta DB/WB 7°C/6°C - LWC 45°C (DT = 5°C) |
(3)Sound pressure level is a relative value, depending on the distance and acoustic environment. For more details, please refer to the sound level drawings. |
(4)The sound pressure level is measured via a microphone at a certain distance from the unit. It is a relative value depending on the distance and acoustic environment. Refer to sound spectrum drawing for more information. Condition: Ta 35°C - LWE 7°C (DT =

3 Electrical data

3 - 1 Electrical Data

EPRA08-12EV
EPRA08-12EW

* Electrical meter specification

- Pulse meter type/voltage-free contact for 5 V DC detection by PCB.
- Possible number of pulses
  - ·0.1· pulse/kWh
  - ·1· pulse/kWh
  - ·10· pulse/kWh
  - ·100· pulse/kWh
  - ·1000· pulse/kWh
- Pulse duration
  - minimum On time: ·40ms·
  - Minimum OFF time: ·100ms·
- Measurement type (depending on installation)
  - Single-phase AC meter
  - Three-phase AC meter — Balanced loads
  - Three-phase AC meter — Unbalanced loads

* Electrical meter installation guideline

- It is the responsibility of the installer to cover the complete power consumption with electrical meters (combination of estimation and metering is not allowed).

- Required number of electrical meters

Outdoor unit type		EPRA(08/10/12)EA*		
Indoor unit type		ETS*12*EF		
	Backup heater type (optional)	EKECBU*3V	EKECBU*6V	EKECBU*9W
	Backup heater power supply	1~ 230V	1~ 230V	3~ 400V
	Backup heater configuration	1/2/3 kW	2 / 4 / 6 kW	3 / 6 / 9 kW
		Normal kWh rate power supply		
Electrical meter type	1~	1	1	-
	3~ balanced	-	-	-
	3~ unbalanced	-	-	1
		Preferential kWh rate power supply		
Electrical meter type	1~	2	2	1
	3~ balanced	-	-	-
	3~ unbalanced	-	-	1

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3 Electrical data

3 - 1 Electrical Data

EPRA08-12EV
EPRA08-12EW

* Electrical meter specification

- Pulse meter type/voltage-free contact for 5 V DC detection by PCB.
- Possible number of pulses
  - ·0.1· pulse/kWh
  - ·1· pulse/kWh
  - ·10· pulse/kWh
  - ·100· pulse/kWh
  - ·1000· pulse/kWh
- Pulse duration
  - minimum On time: ·40ms·
  - Minimum OFF time: ·100ms·
- Measurement type (depending on installation)
  - Single-phase AC meter
  - Three-phase AC meter
    - Balanced loads
  - Three-phase AC meter
    - Unbalanced loads

* Electrical meter installation guideline

- It is the responsibility of the installer to cover the complete power consumption with electrical meters (combination of estimation and metering is not allowed).

- Required number of electrical meters

Outdoor unit type		EPRA(08/10/12)E*					
Indoor unit type		ETB(H/X)12EF*			ETV(H/X/Z)12S(U)*E*		
	Backup heater type	6V		9W	6V		9W
	Backup heater power supply	1~ 230V	3~ 230V	3~ 400V	1~ 230V	3~ 230V	3~ 400V
	Backup heater configuration	2 / 4 / 6 kW	6 kW	3 / 6 / 9 kW	2 / 4 / 6 kW	6 kW	3 / 6 / 9 kW
		Normal kWh rate power supply					
Electrical meter type	1~	1	-	-	1	-	-
	3~ balanced	-	-	-	-	-	-
	3~ unbalanced	-	1	1	-	1	1
		Preferential kWh rate power supply					
Electrical meter type	1~	2	1	1	2	1	1
	3~ balanced	-	-	-	-	-	-
	3~ unbalanced	-	1	1	-	1	1

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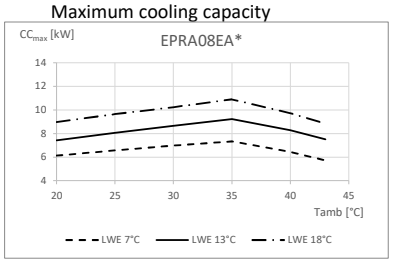
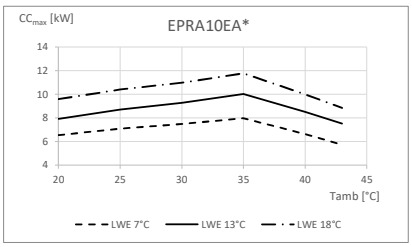
4 Capacity graphs

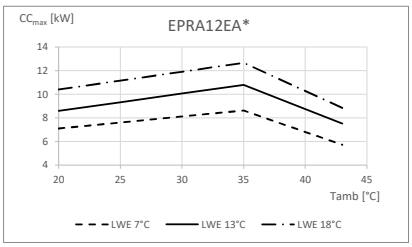
4 - 1 Cooling Capacity Graphs

EPRA08-12EV
EPRA08-12EW

Maximum cooling capacity







Symbols

CC_{max}	Cooling capacity at maximum operating frequency, measured according to EN 14511.
LWE	Leaving water evaporator temperature [°C]
Tamb	Ambient temperature [°C DB]

Conditions

Cooling capacity

Capacity according to standard EN 14511 and valid for chilled water range ΔT = 3~8°C.

Notes

The capacity and power input is valid for ·V3· models at ·230·V and for for ·W1· models at ·400·V.
The capacity and the power input are at maximum operation.

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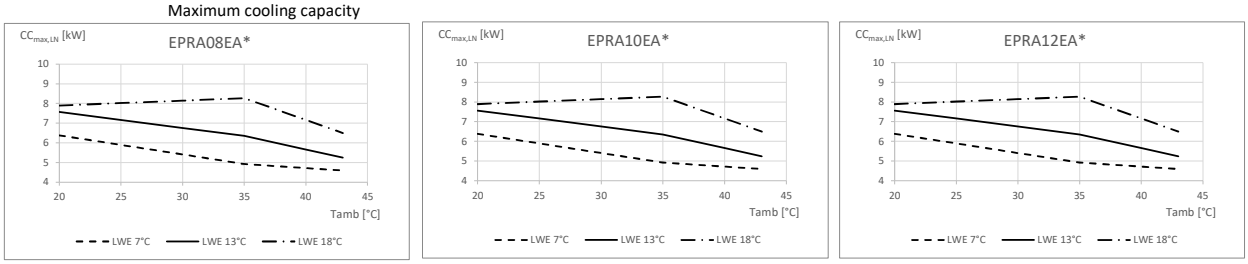
4 Capacity graphs

4 - 2 Cooling Capacity Graphs - quiet mode

EPRA08-12EV
EPRA08-12EW

Maximum cooling capacity



Symbols

$CC_{max,LN}$	Cooling capacity at maximum operating frequency, measured according to EN 14511.
LWE	Leaving water evaporator temperature [°C]
Tamb	Ambient temperature [°C DB]

Conditions

Cooling capacity

Capacity according to standard EN 14511 and valid for chilled water range ΔT = 3~8°C.

Notes

The capacity and power input is valid for ·V3· models at ·230·V and for for ·W1· models at ·400·V.
Full load (maximum fan rps and maximum compressor rps for the dedicated low noise mode)
Low noise level ·1·

4D133540

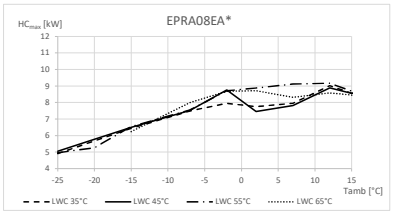
4 Capacity graphs

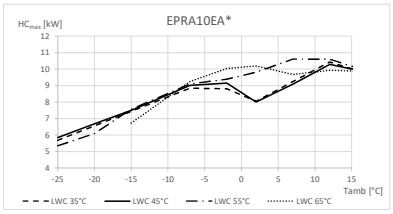
4 - 3 Heating Capacity Graphs

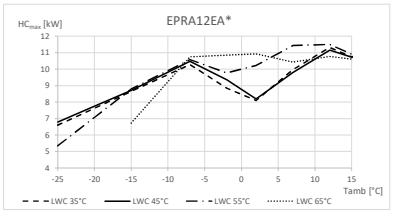
EPRA08-12EV

EPRA08-12EW

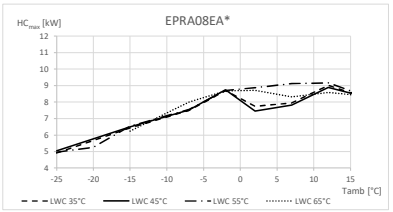
Maximum heating capacity - integrated value

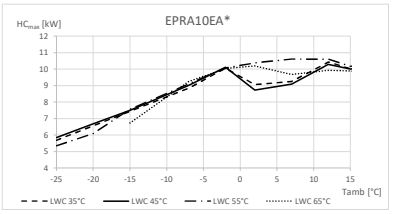


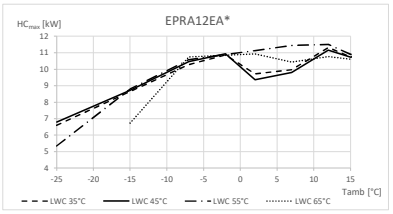




Maximum heating capacity - peak values







Symbols

HC_{max} Heating capacity for maximum load, measured according to EN 14511

LWC Leaving water condensor temperature [°C]

Tamb Ambient temperature [°C DB]

Conditions

Heating capacity

Capacity according to standard EN 14511 and valid for heated water range ΔT = 3~8°C.

Notes

The capacity and power input is valid for -V3- models at -230-V and for for -W1- models at -400-V.

The capacity and the power input are at maximum operation.

4D133537B

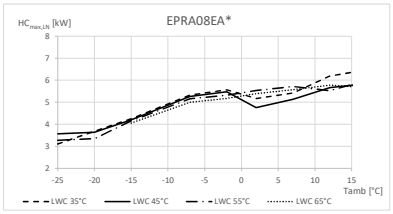
4 Capacity graphs

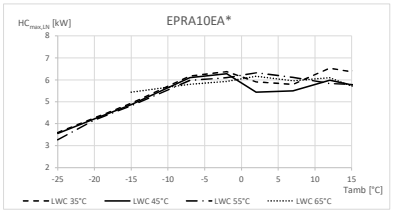
4 - 4 Heating Capacity Graphs - quiet mode

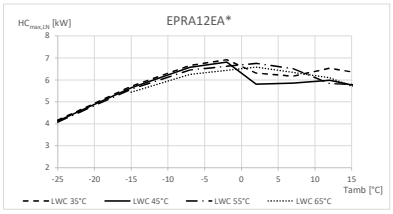
EPRA08-12EV

EPRA08-12EW

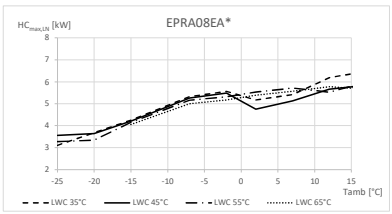
Maximum heating capacity - integrated value

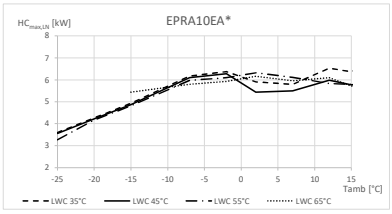


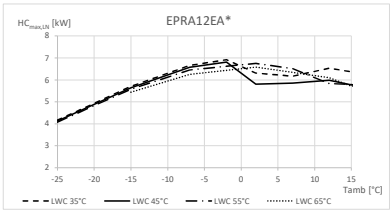




Maximum heating capacity - peak values







Symbols

$HC_{max,LN}$ Heating capacity for maximum load, measured according to EN 14511

LWC Leaving water condensor temperature [°C]

Tamb Ambient temperature [°C DB]

Conditions

Heating capacity

Capacity according to standard EN 14511 and valid for heated water range ΔT = 3~8°C.

Notes

The capacity and power input is valid for -V3- models at -230-V and for for -W1- models at -400-V.

Full load (maximum fan rps and maximum compressor rps for the dedicated low noise mode)

Low noise level -1-

4D133538A

5 Capacity tables

5 - 1 Certification Programs

EPRA08-12EV
EPRA08-12EW

Rated data for certification programmes - heating mode

Tamb	EWC	LWC	EPRA08EAV3		EPRA10EAV3		EPRA12EAV3		EPRA08EAW1		EPRA10EAW1		EPRA12EAW1		Used for:
[°C]	[°C]	[°C]	HC [kW]	COP	HC [kW]	COP	HC [kW]	COP	HC [kW]	COP	HC [kW]	COP	HC [kW]	COP	
7/6	30	35	6,17	4,92	6,17	4,92	6,17	4,92	6,17	5,10	6,17	5,10	6,17	5,10	Keymark, EHPA
2/1	(30)	35	5,74	4,08	5,74	4,08	5,74	4,08	5,74	4,23	5,74	4,23	5,74	4,23	EHPA
-7/-8	(30)	35	7,49	3,04	7,49	3,04	7,49	3,04	7,49	3,14	7,49	3,14	7,49	3,14	General
7/6	40	45	7,73	3,57	7,73	3,57	7,73	3,57	7,73	3,70	7,73	3,70	7,73	3,70	General
-2/-3	(40)	45	8,58	2,83	8,66	2,59	9,36	2,54	8,58	2,91	8,66	2,69	9,36	2,64	MCS
7/6	47	55	7,72	2,94	7,72	2,94	7,72	2,94	7,72	3,05	7,72	3,05	7,72	3,05	Keymark, EHPA
-7/-8	47	55	7,55	2,05	9,02	2,11	9,02	2,11	7,55	2,13	9,02	2,19	9,02	2,19	GET

Rated data for certification programmes - cooling mode

Nominal cooling capacity

Tamb	EWE	LWE	EPRA08EAV3		EPRA10EAV3		EPRA12EAV3		EPRA08EAW1		EPRA10EAW1		EPRA12EAW1		Used for:
[°C]	[°C]	[°C]	CC [kW]	EER	CC [kW]	EER	CC [kW]	EER	CC [kW]	EER	CC [kW]	EER	CC [kW]	EER	
35	23	18	6,47	5,56	6,47	5,56	6,47	5,56	6,47	5,75	6,47	5,75	6,47	5,75	General
35	12	7	6,81	3,17	7,97	3,00	8,62	2,91	6,81	3,28	7,97	3,10	8,62	3,01	DAPT General

Seasonal data - cooling LWE 7°C Low temperature Application

		EPRA08EAV3	EPRA10EAV3	EPRA12EAV3	EPRA08EAW1	EPRA10EAW1	EPRA12EAW1
Pdes	[kW]	6,5	7,5	8,5	6,5	7,5	8,5
SEER	[-]	5,38	5,34	5,31	5,42	5,41	5,41
ηs,c	[%]	212	211	209	214	214	213
QCE	[kWh/annum]	725	843	961	719	831	943

Rated data for certification programmes - domestic hot water performance

Indoor unit		ETV*12S(U/-)18EA*		ETV*12S(U/-)23EA*		ETS(X/H)(B/-)12P30EF		ETS(X/H)(B/-)12P50EF		Used for:
Outdoor unit		EPRA*EAV3	EPRA*EAW1	EPRA*EAV3	EPRA*EAW1	EPRA*EAV3	EPRA*EAW1	EPRA*EAV3	EPRA*EAW1	
Application		Average climate		Average climate		Average climate		Average climate		
Domestic hot water tank volume [l]		180		230		294		477		
Tapping pattern		L		L		L		XL		
Heat-up time (hh:mm:ss)		01:57:00		02:14:00		02:29:00		03:13:00		
ϑ_{wh}	[°C]	52,5		52,5		47,2		44,5		Keymark
P_{es}	[W]	51,7	50,7	44,8	43,9	38,1	37,4	32,7	32,1	
V_{40}	[l]	240		298		194,0		246,0		
η_{wh}	[%]	116,7	120,3	126,4	130	116	119	128	131	
COP_{DHW}	[]	2,72	2,8	2,96	3,05	2,75	2,83	3,1	3,17	

Symbols

HC	Heating capacity measured according to EN 14511		
CC	Cooling capacity, measured according to ·EN 14511·.		
COP/EER	Coefficient of Performance/Energy efficiency ratio according to EN 14511.		
EWC	Entering water condenser temperature [°C]		
LWC	Leaving water condensor temperature [°C]		
EWE	Entering water evaporator temperature [°C]		
LWE	Leaving water evaporator temperature [°C]		
Tamb	Ambient temperature [°C DB/WB]		
ϑ_{wh}	Reference	Domestic hot water temperature [°C]	According to EN16147.
P_{es}	Standby power input		According to EN16147.
V_{eq40}	Equivalent domestic hot water volume [l]		According to EN16147.
η_{wh}	Efficiency [%]	Domestic hot water heating mode	According to EN16147.
COP_{DHW}	Domestic hot water COP		

Rated data for certification programmes - heating mode
Measured according to ·UNI/TS 11300·

Condition · ·	Tamb	LWC	PLR	EPRA08EAV3		EPRA10EAV3		EPRA12EAV3		EPRA08EAW1		EPRA10EAW1		EPRA12EAW1	
	[°C]	[°C]	[%]	HC [kW]	COP	HC [kW]	COP	HC [kW]	COP	HC [kW]	COP	HC [kW]	COP	HC [kW]	COP
A	-7/-8	34	100	7,49	3,10	8,73	3,02	10,22	2,93	7,49	3,20	8,73	3,12	10,22	3,03
B	2/1	30	100	7,62	4,30	8,15	4,01	8,41	3,86	7,62	4,42	8,15	4,13	8,41	3,98
C	7/6	27	100	8,44	5,60	9,84	5,42	10,61	5,32	8,44	5,78	9,84	5,59	10,61	5,48
D	12/11	24	100	9,27	7,52	10,70	7,35	11,59	7,24	9,27	7,77	10,70	7,58	11,59	7,46
A	-7/-8	52	100	7,54	2,20	8,91	2,21	10,55	2,22	7,54	2,28	8,91	2,29	10,55	2,30
B	2/1	42	100	7,81	3,47	8,04	3,21	8,16	3,08	7,81	3,58	8,04	3,31	8,16	3,18
C	7/6	36	100	8,16	4,43	9,54	4,42	10,31	4,41	8,16	4,57	9,54	4,56	10,31	4,55
D	12/11	30	100	9,04	6,16	10,49	6,21	11,39	6,24	9,04	6,35	10,49	6,40	11,39	6,43

Rated data for certification programmes - cooling mode
Measured according to ·UNI/TS 11300·

Condition · ·	Tamb	LWE	PLR	EPRA08EAV3		EPRA10EAV3		EPRA12EAV3		EPRA08EAW1		EPRA10EAW1		EPRA12EAW1	
	[°C]	[°C]	[%]	CC [kW]	EER	CC [kW]	EER	CC [kW]	EER	CC [kW]	EER	CC [kW]	EER	CC [kW]	EER
A	35	18	100	10,89	4,35	11,77	4,11	12,66	3,87	10,89	4,51	11,77	4,26	12,66	4,01
B	30	18	75	7,96	6,05	8,73	5,98	9,51	5,90	7,96	6,26	8,73	6,19	9,51	6,11
C	25	18	50	5,51	8,83	5,90	8,36	6,28	7,88	5,51	9,04	5,90	8,60	6,28	8,17
D	20	18	25	3,47	12,42	3,47	12,42	3,47	12,42	3,47	12,29	3,47	12,29	3,47	12,29
A	35	7	100	7,33	3,09	7,97	3,00	8,62	2,91	7,33	3,20	7,97	3,10	8,62	3,01
B	30	7	75	5,34	4,06	5,86	4,01	6,38	3,96	5,34	4,20	5,86	4,15	6,38	4,10
C	25	7	50	3,66	5,21	3,95	5,22	4,24	5,23	3,66	5,36	3,95	5,39	4,24	5,42
D	20	7	25	2,19	6,20	2,19	6,20	2,19	6,20	2,19	6,17	2,19	6,17	2,19	6,17

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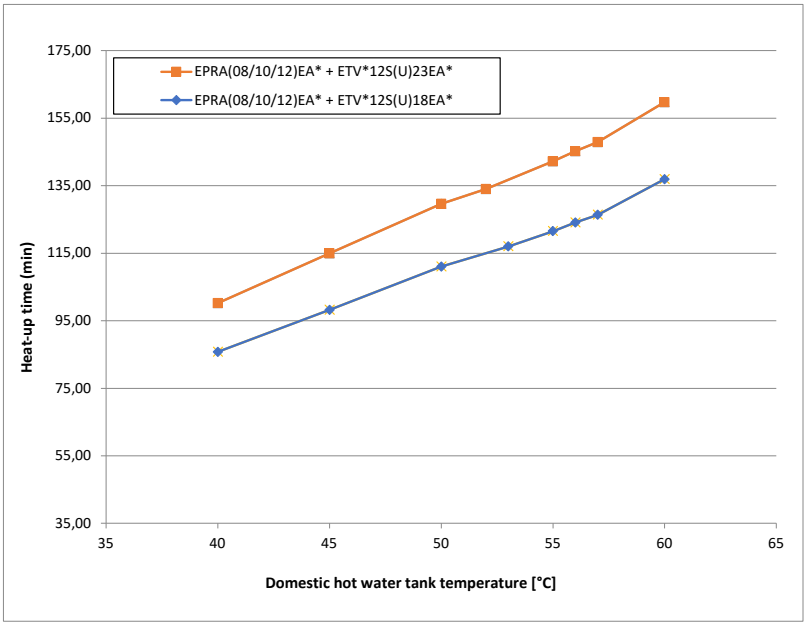
5 Capacity tables

5 - 2 Domestic Hot Water performance

EPRA08-12EV
EPRA08-12EW

Heat-up times



Notes

1. Time the indoor unit (**heat pump only operation**) requires to heat up the domestic hot water tank from 10°C to the indicated temperature.
   See the operation range for maximum domestic hot water tank temperature during heat pump only operation.

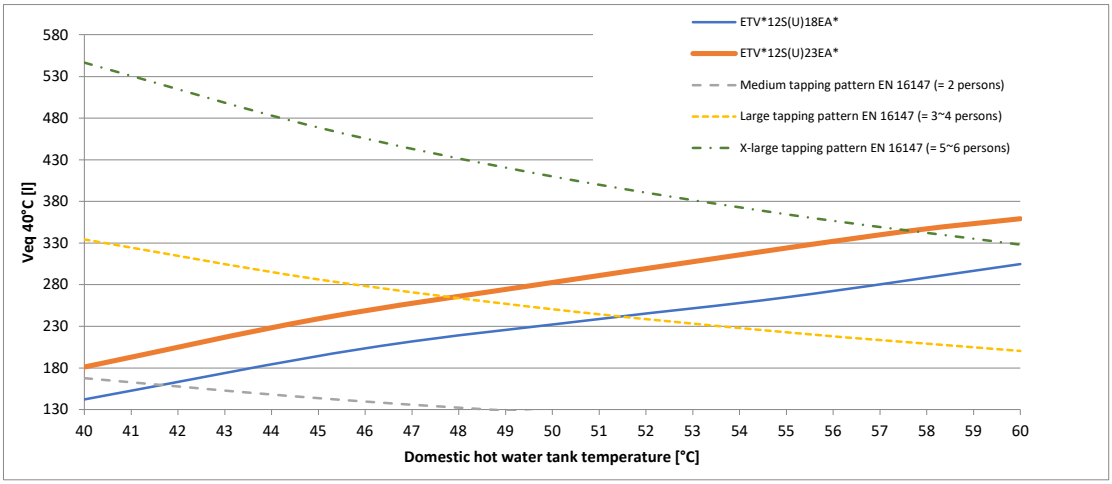
Model name	Heat-up time domestic hot water tank until 45°C
EPRA(08/10/12)EA* + ETV*12S(U)18EA*	·98· min.
EPRA(08/10/12)EA* + ETV*12S(U)23EA*	·115· min.

4D133480

EPRA08-12EV
EPRA08-12EW

Selection guide for the domestic hot water tank volume
(1)

Veq 40°C = the amount of water with a temperature of 40°C that can be tapped when the domestic hot water tank is heated to a certain temperature, and the temperature of the cold inlet water is 10°C.



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

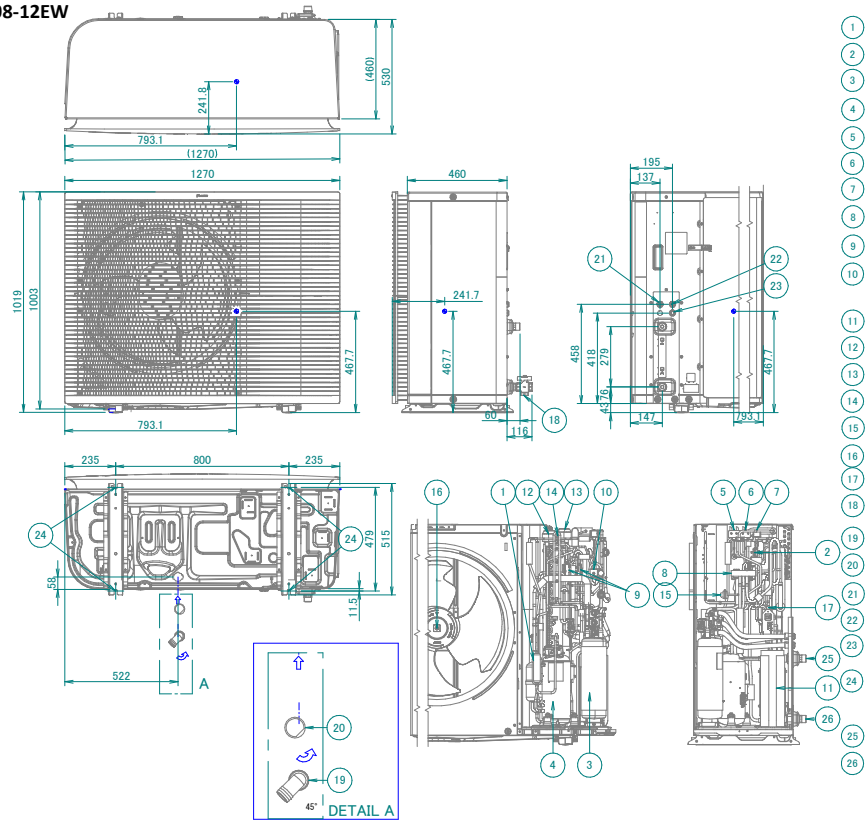
Notes
(1) According to EN16147.

4D133480

6 Dimensional drawings

6 - 1 Dimensional Drawings

EPRA08-12EV
EPRA08-12EW



1 Muffler
2 High pressure switch ·41.7 bar·
3 Accumulator
4 Compressor
5 Solenoid valve (low pressure bypass)
6 Solenoid valve (hot gas pass)
7 Solenoid valve (liquid)
8 4-way valve
9 Capillary tube
10 4-way valve
Coil
11 Plate heat exchanger
12 Electronic expansion valve (main)
13 Electronic expansion valve (injection)
14 High pressure switch ·46 bar·
15 Pressure sensor
16 Fan
17 Service port ·5/16"· flare
18 Shut-off valve / filter (included accessory)
19 Drain elbow (included accessory)
20 Sealing (included accessory)
21 Drain tube heater cable intake
22 Interconnection cable intake
23 Power supply cable intake
24 4 holes for anchor bolts
M12
25 Outlet ·1"G·
26 Inlet ·1"G·

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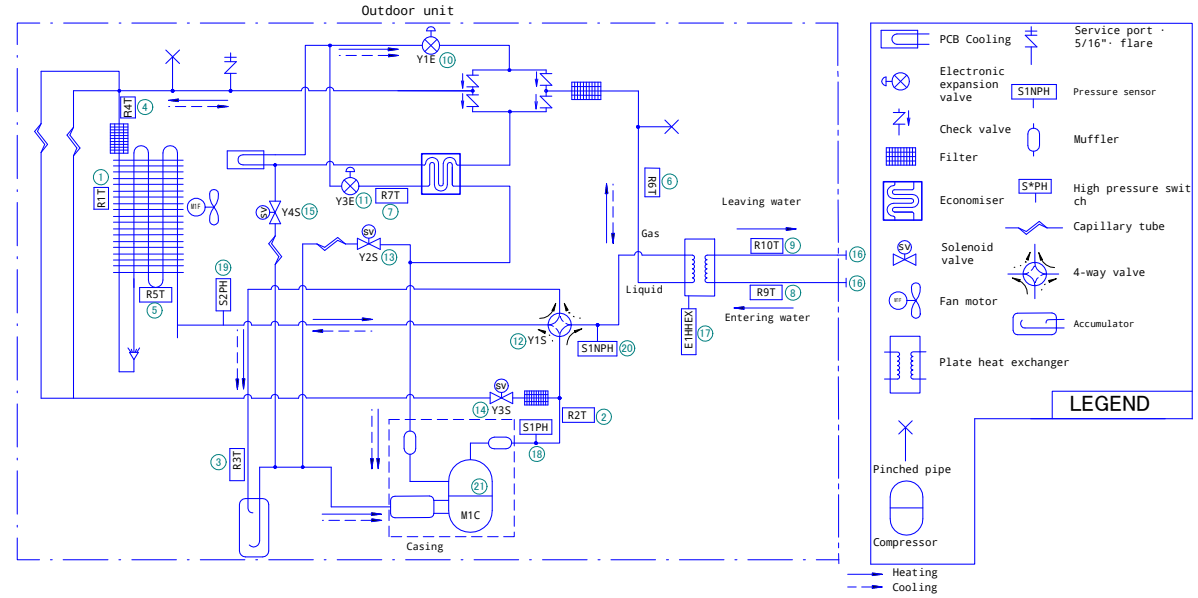
7 Piping diagrams

7 - 1 Piping Diagrams

EPRA08-12EV
EPRA08-12EW



① R1T: Ambient thermistor
② R2T: Thermistor (discharge)
③ R3T: Thermistor (suction)
④ R4T: Thermistor (heat exchanger, liquid pipe)
⑤ R5T: Thermistor (heat exchanger middle)
⑥ R6T: Thermistor (liquid)
⑦ R7T: Thermistor (injection)
⑧ R9T: Inlet water thermistor
⑨ R10T: Outlet water thermistor
⑩ Y1E: Electronic expansion valve (main)
⑪ Y3E: Electronic expansion valve (injection)
⑫ Y1S: Solenoid valve (4-way valve)
⑬ Y2S: Solenoid valve (low pressure bypass)
⑭ Y3S: Solenoid valve (hot gas pass)
⑮ Y4S: Solenoid valve (liquid injection)
⑯ Screw connection ·1"M·
⑰ E1HHEX: Plate heat exchanger
⑱ S1PH: High pressure switch ·4.6MPa·
⑲ S2PH: High pressure switch ·4.17MPa·
⑳ S1NPH: High pressure sensor
㉑ Q1E Overload

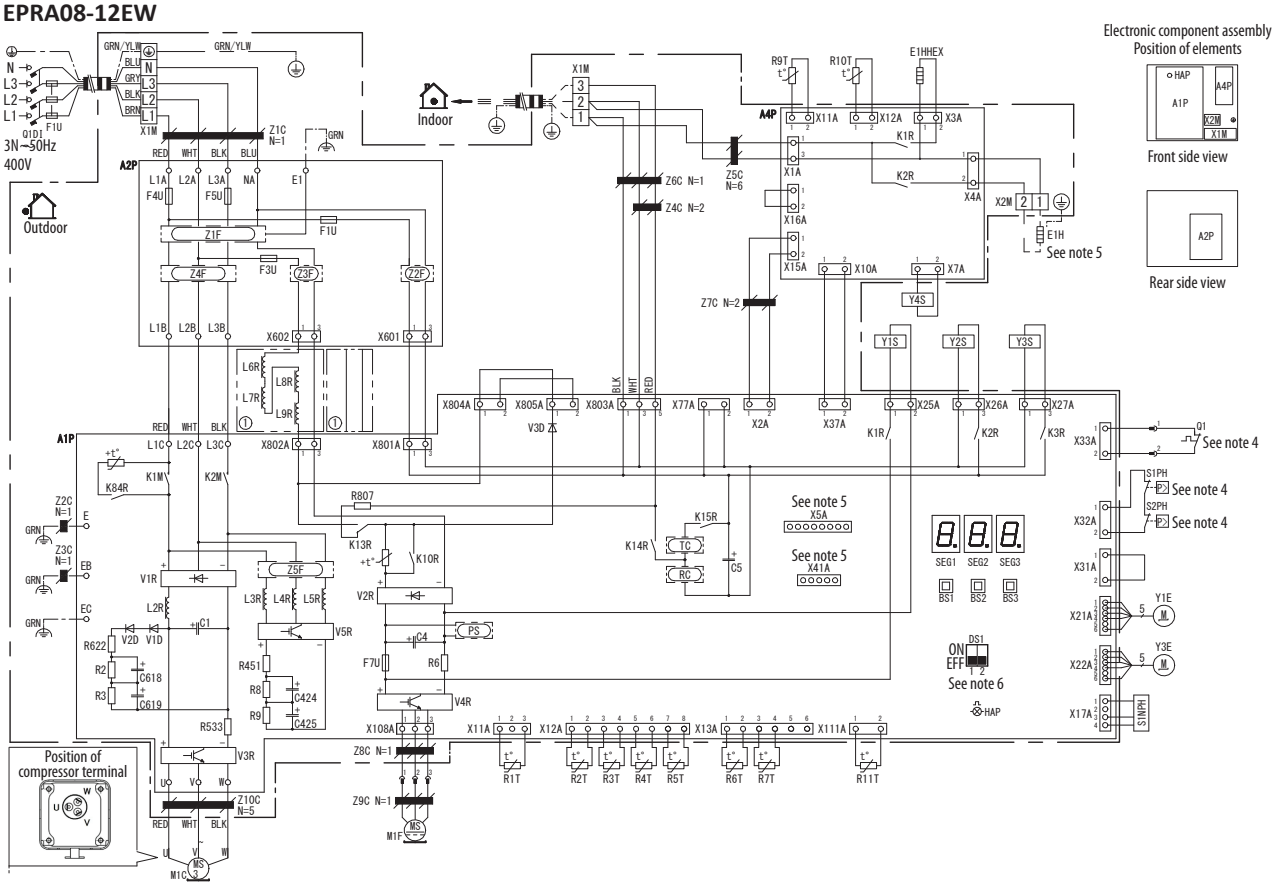
Heater

3D127127

8 Wiring diagrams

8 - 1 Wiring Diagrams - Three Phase

EPRA08-12EW



A1P	Printed circuit board (main)
A2P	Printed circuit board (noise filter)
A4P	Printed circuit board (ACS)
BS1 ~ BS3 (A1P)	Push-button switch
C1 ~ C619 (A1P)	Capacitor
DS1 (A1P)	DIP switch
E1H	Drain tube heater (field supply)
E1HHEX	PHE heater
F1U	Field fuse (field supply)
F1U, F3U (A2P)	Fuse (T 6.3A / 250V)
F4U, F5U (A2P)	Fuse (T 30A / 500V)
F7U (A1P)	Fuse (T 5.0A / 250V)
HAP (A1P)	Light-emitting diode (service monitor is green)
K1R (A1P)	Magnetic relay (Y1S)
K1R (A4P)	Magnetic relay (E1HHEX)
K2R (A1P)	Magnetic relay (Y2S)
K2R (A4P)	Magnetic relay (E1H)
K3R (A1P)	Magnetic relay (Y3S)
K10R ~ K84R (A1P)	Magnetic relay
K1M ~ K2M (A1P)	Magnetic contactor
L2R ~ L9R (A1P)	Reactor
M1C	Motor (compressor)
M1F	Motor (fan)
PS (A1P)	Switching power supply
Q1DI	Earth leakage circuit breaker (30mA)(field supply)
Q1	Thermal overcurrent protector
R2 ~ R807 (A1P)	Resistor
R1T	Thermistor (ambient)
R2T	Thermistor (discharge)
R3T	Thermistor (suction)
R4T	Thermistor (heat exchanger liquid pipe)
R5T	Thermistor (heat exchanger middle)
R6T	Thermistor (refrigerant liquid)
R7T	Thermistor (injection)
R9T	Thermistor (inlet water)
R10T	Thermistor (outlet water)
R11T	Thermistor (fin)
RC (A1P)	Signal receiver circuit
S1NPH	High pressure sensor
S1PH~S2PH	High pressure switch
SEG* (A1P)	7-segment display
TC (A1P)	Signal transmission circuit
V1D ~ V3D (A1P)	Diode

V1R ~ V2R (A1P)	Diode module
V3R ~ V5R (A1P)	IGBT power module
X1M ~ X2M	Terminal strip
Y1E	Electronic expansion valve (main - black)
Y3E	Electronic expansion valve (injection - blue)
Y1S	Solenoid valve (4-way valve)
Y2S	Solenoid valve (low pressure bypass)
Y3S	Solenoid valve (hot gas bypass)
Y4S	Solenoid valve (liquid injection)
Z1C ~ Z10C	Noise filter (ferrite core)
Z1F ~ Z5F (A1P,A2P)	Noise filter

NOTES

1. L : Live
   N : Neutral
   : Protective earth
   : Noiseless earth
   : Terminal strip
   : Terminal
   : Connector
   : Connection
   : Field wiring
   : Several wiring possibilities
   : Wiring depending on model
   : Option
3. Colours: blk:black; red:red; blu:blue; wht:white; grn:green; ylw:yellow; pnk:pink; org:orange; gry:grey; brn:brown
4. This wiring diagram applies only to the outdoor unit.
5. When operating, do not short-circuit protection device Q1, S1PH and S2PH.
6. Terminal strip
7. Refer to the combination table and the option manual for how to connect the wiring to X5A, X77A, X41A and X2M.
8. The factory setting of all switches is OFF, do not change the setting of the selector switch (DS1).

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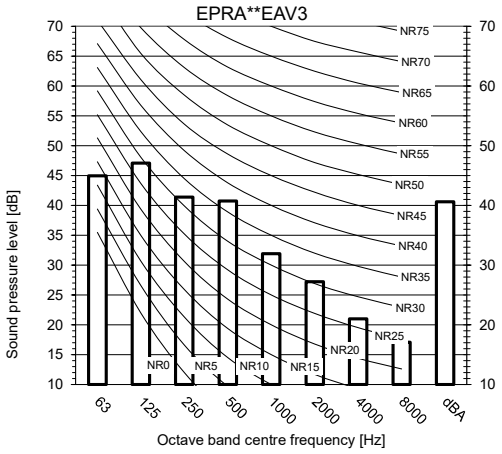
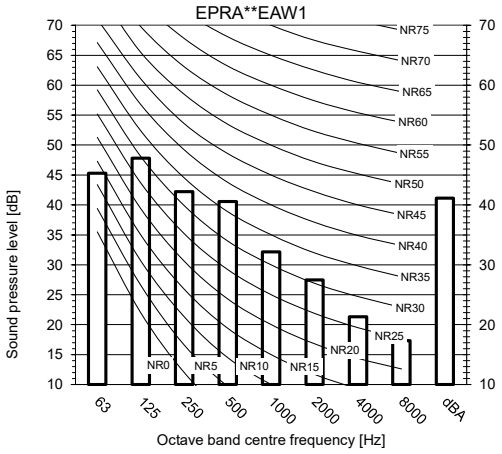
9 Sound data

9 - 1 Sound Pressure Spectrum

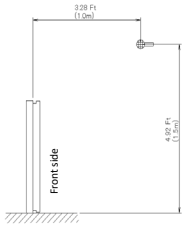
EPRA08-12EV
EPRA08-12EW





Maximum sound day	Maximum sound night	Maximum sound day Sound Power Level [dBA]			Maximum sound night Sound Power Level [dBA]		
		EPRA08EA*	EPRA10EA*	EPRA12EA*	EPRA08EA*	EPRA10EA*	EPRA12EA*
Default	Low noise level ·1·	62	62	62	58,5	58,5	58,5
Low noise level ·2·	Low noise level ·3·	53	53	53	49,8	49,8	49,8
Full load (maximum fan rps and maximum compressor rps for the dedicated low noise mode)							

Measuring location (discharge side)



Notes
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- Conditions: Ta DB/WB ·7·/·6·°C - LWC ·35·°C
- dBA = A-weighted sound pressure level (A scale according to IEC).
- Reference acoustic pressure 0 dB = 20 µPa
- 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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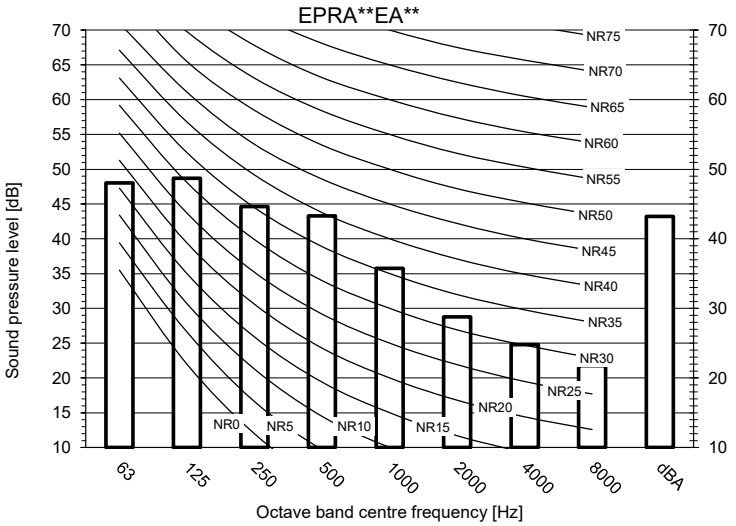
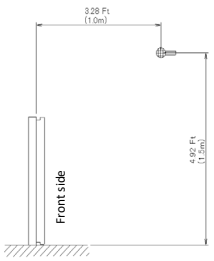
EPRA08-12EV
EPRA08-12EW



Measuring location (discharge side)



Maximum sound day	Maximum sound night	Maximum sound day Sound Power Level [dBA]			Maximum sound night Sound Power Level [dBA]		
		EPRA08EA*	EPRA10EA*	EPRA12EA*	EPRA08EA*	EPRA10EA*	EPRA12EA*
Default	Low noise level ·1·	62	62	62	58,5	58,5	58,5
Low noise level ·2·	Low noise level ·3·	53	53	53	49,8	49,8	49,8
Full load (maximum fan rps and maximum compressor rps for the dedicated low noise mode)							

Notes
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- Conditions: Ta DB/WB ·7·/·6·°C - LWC ·55·°C
- dBA = A-weighted sound pressure level (A scale according to IEC).
- Reference acoustic pressure 0 dB = 20 µPa
- 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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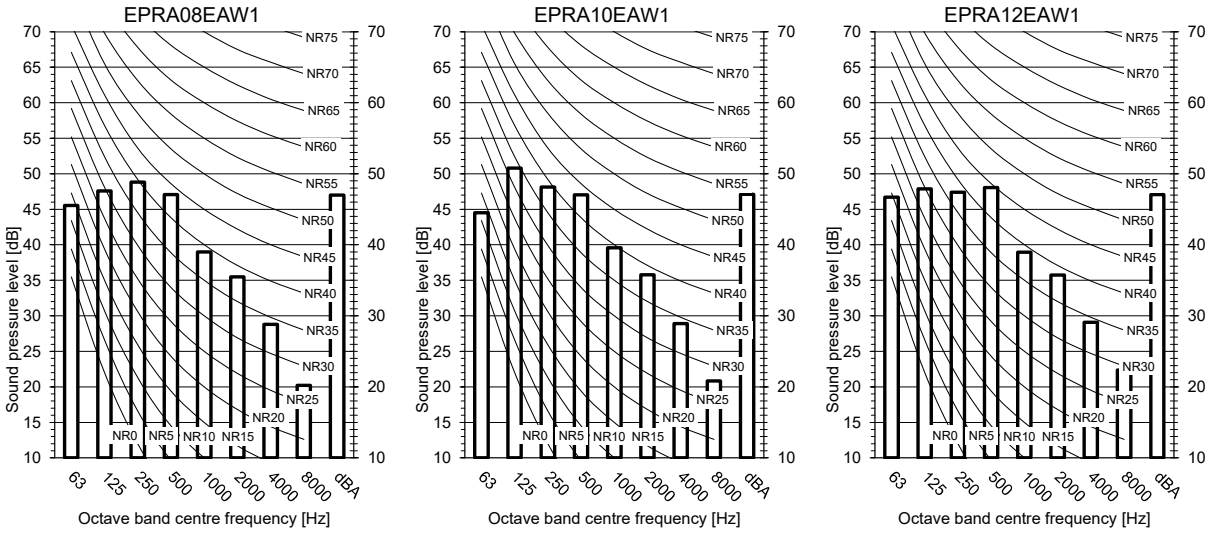
9 Sound data

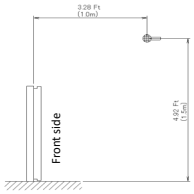
9 - 1 Sound Pressure Spectrum

EPRA08-12EW



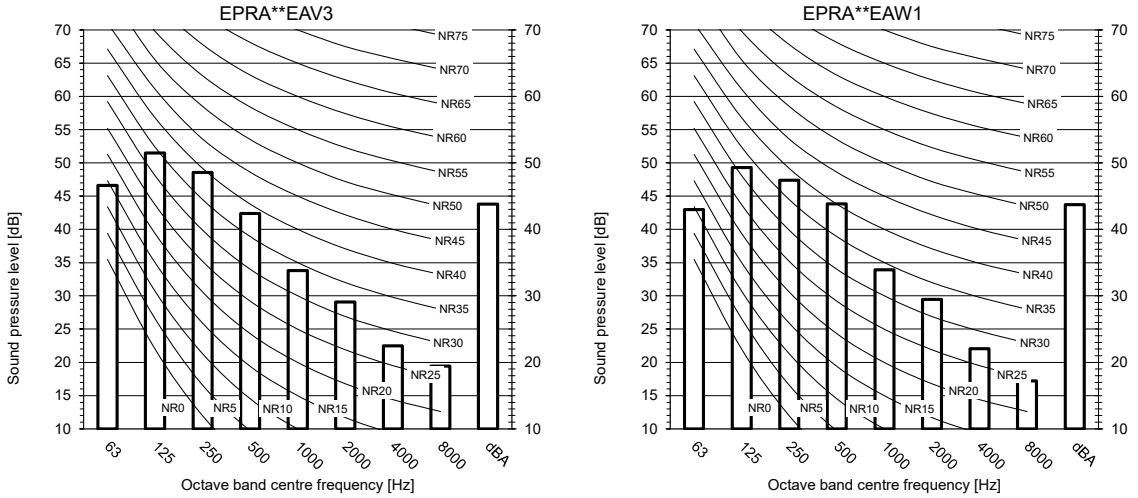
Notes
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- dBA = A-weighted sound pressure level (A scale according to IEC).
- Reference acoustic pressure 0 dB = 20 µPa
- If the sound is measured under actual installation conditions, the measured value will be higher due to environmental noise and sound reflections.

Measuring location (discharge side)

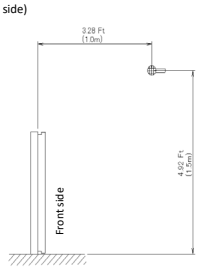


3D133530

EPRA08-12EV
EPRA08-12EW



Measuring location (discharge side)



Notes
- Data is valid at free field condition.
- Data is valid at nominal operation condition.
- dBA = A-weighted sound pressure level (A scale according to IEC).
- Reference acoustic pressure 0 dB = 20 µPa
- 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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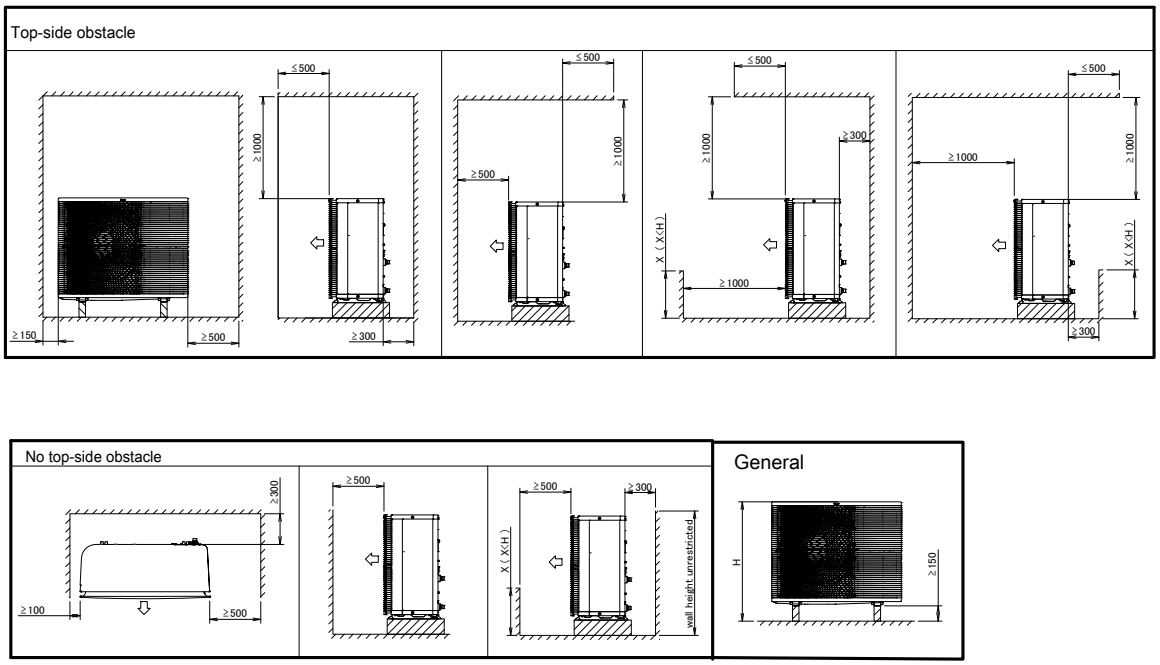
10 Installation

10 - 1 Installation Method

EPRA08-12EV
EPRA08-12EW

Minimum space for air passage



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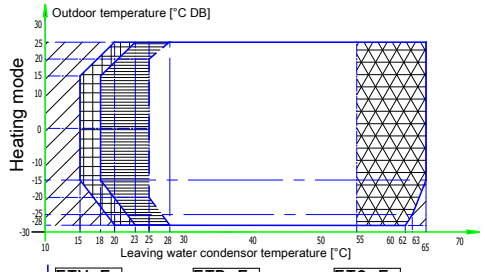
11 Operation range

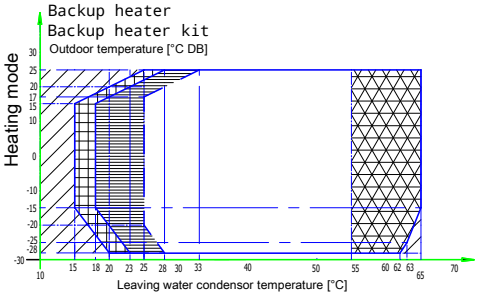
11 - 1 Operation Range

EPRA08-12EV
EPRA08-12EW ETV*E* + ETB*E*

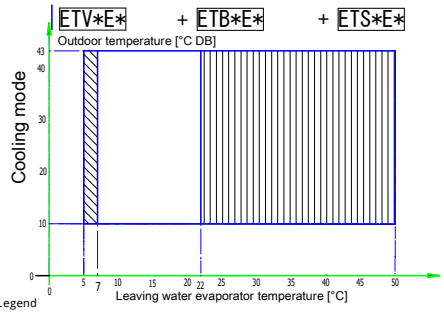


ETS*E*

Backup heater
Backup heater kit

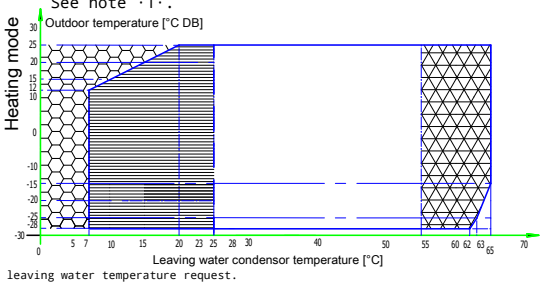


ETV*E* + ETB*E* + ETS*E*



ETS*E*

No backup heater
With tank preheating
See note ·1·.



Legend

- Backup heater only operation
  No outdoor unit operation
- Heat pump + backup heater operation
  Pull-up area
- Outdoor unit operation if controller setpoint is regulated to minimal leaving water temperature request.
  See dashed lines
- Circulation pump operation only
- Outdoor unit operation if setpoint >·55·°C and ΔT = ·10·°C (ΔT = outlet temperature – inlet temperature)
- Pull-down area
- In case valve kit ·AFVALVE1· is part of the system, then the minimum setpoint is ·7·°C.

Notes

1. Tank preheating
   For details, see the installer reference guide.
2. If negative ambient temperatures are expected, both in operation or at standstill, take adequate countermeasures against freezing.
   For more information, refer to the installation manual.
3. In restricted power supply mode, the outdoor unit and backup heater can only operate separately.

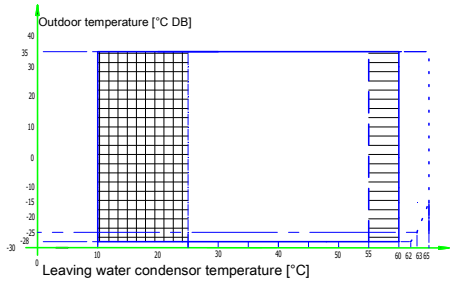
3D133531

EPRA08-12EV
EPRA08-12EW

Domestic hot water heating mode

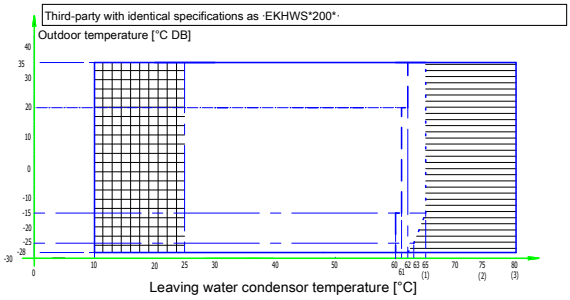
EKHWS*150*
EKHWS*180*
+

Third-party with identical specifications as ·EKHWS*150*·



ETV* + EKHWP* + ETS* + EKHWS*200* EKHWS*250* EKHWS*300*
+

Third-party with identical specifications as ·EKHWS*200*·



Legend

- Setpoint [°C]
  Domestic hot water
- Leaving water temperature [°C]
- Pull-up area
- Booster heater only operation (if a booster heater is part of the system)
  (1)ETV*12*E*· indoor units only
  (2)Combination of ·EKHWS*· and ·ETB*12*E· indoor units /·ETS*12*E· indoor units only
  (3)Combination of ·EKHWP*· and ·ETB*12*E· indoor units

Notes

1.In restricted power supply mode (·EKHW*· only), the outdoor unit, booster heater and backup heater can only operate separately.

2.Third-party with identical specifications as ·EKHWS*150*·
  Coil surface >·1.05·m² and <·3.7·m²
  Tank thermistor and booster heater above heat pump coil.

3.If negative ambient temperatures are expected, both in operation or at standstill, take adequate countermeasures against freezing.

  For more information, refer to the installation manual.

4.Third-party with identical specifications as ·EKHWS*200*·
  Coil surface >·1.8·m² and <·3.7·m²
  Tank thermistor and booster heater above heat pump coil.

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