



Daikin Altherma mid
temperature split
Technical Data
EPRA08-12EW



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EPRA08-12EW

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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

2 - 1 Specifications

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/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				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				
	Inte- grated supple- mentary 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		
			η_s (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		


2 Specifications

2 - 1 Specifications

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/-B/1°CWB)	Cdh (Degradation heating)		1.0		
			COPd		3.50		
			Pdh	kW	4.6		
		C Condition (7°CDB/-B/6°CWB)	PERd	%	140.0		
			Cdh (Degradation heating)		1.0		
			COPd		4.61		
		D Condition (12°CDB/11°CWB)	Pdh	kW	3.0		
	PERd		%	184.2			
	Cdh (Degradation heating)			1.0			
	Tol (temperature operating limit)	COPd		2.01		2.05	
			Pdh	kW	7.0		8.3
			PERd	%	80.2		82.1
		TOL				-10	
			WTOL			55	
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.5		0.0
			Tbiv (bivalent temperature)				
			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/-B/1°CWB)	Cdh (Degradation heating)			1.0	
	COPd				3.90		
Pdh	kW			3.3			
PERd	%			156.0			

2 Specifications

2 - 1 Specifications

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)	4.1	2.9	1.8		
Warm climate water outlet 55°C	General	Annual energy consumption	2,972 kWh				
		ηs (Seasonal space heating efficiency)	170 %				
		Prated at 2°C	9.6 kW				
		Qhe Annual energy consumption (GCV)	11 GJ				
		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				

2 Specifications

2 - 1 Specifications

Technical specifications					ETBH12E6V + EPRA08EW1	ETBH12E6V + EPRA10EW1	ETBH12E6V + EPRA12EW1	
Space heating	Warm climate water outlet 55°C	Tbiv	Pdh	kW		8.4		
		(bivalent temperature)	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	
			Cdh (Degradation heating)				1.0	
B Condition (2°CDB- B/1°CWB)	COPd				4.93			
	Pdh		kW		4.4			
	PERd		%		197.2			
C Condition (7°CDB- B/6°CWB)	Cdh (Degradation heating)				1.0			
	COPd				6.37			
	Pdh		kW		4.3			
D Condition (12°CDB/11°CWB)	PERd		%		254.8			
	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		

2 Specifications

2 - 1 Specifications

Technical specifications				ETBH12E6V + EPRA08EW1	ETBH12E6V + EPRA10EW1	ETBH12E6V + EPRA12EW1	
Space heating 	Cold climate water outlet 35°C	General	Qhe Annual energy consumption (GCV)		19		
			A Condition (7°CDB/4-8°CWB)	COPd		3.48	
		B Condition (2°CDB/11°CWB)	Cdh (Degradation heating)		1.0		
			COPd		5.40		
			Pdh kW		3.6		
		C Condition (7°CDB/6°CWB)	PERd %		216.0		
			Cdh (Degradation heating)		1.0		
			COPd		6.53		
		D Condition (12°CDB/11°CWB)	Pdh kW		5.3		
			PERd %		261.2		
			Cdh (Degradation heating)		1.0		
		Tol (temperature operating limit)	COPd		7.98		
			Pdh kW		6.6		
			PERd %		319.0	319.2	
		G Condition (-15°CDB/)	COPd		2.11	2.14	2.16
			Pdh kW		4.9	5.9	6.5
			PERd %		84.3	85.6	86.4
		Tbiv (bivalent temperature)	TOL °C		-22		
			WTOL °C		35		
			COPd		2.68		2.64
Rated heat output supplementary capacity	Pdh kW		6.0		7.0		
	PERd %		107.1		105.6		
	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)		7			
		B Condition (2°CDB/11°CWB)	Cdh (Degradation heating)		1.0		
			COPd		4.07		
			Pdh kW		7.7		
		C Condition (7°CDB/6°CWB)	PERd %		162.9		
			Cdh (Degradation heating)		1.0		
			COPd		5.85		
D Condition (12°CDB/11°CWB)	Pdh kW		5.5				
	PERd %		234.1				
	COPd		4.97				
Tbiv (bivalent temperature)	Pdh kW		6.9				
	PERd %		198.9				
	Tbiv °C		5				
Space heating 	Warm climate water outlet 35°C	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

2 - 1 Specifications

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/Manu- facturer 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)			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		
			η_s (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		

2 Specifications

2 - 1 Specifications

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 (Degradation heating)				1.0	
		COPd			3.50		
		Pdh	kW		4.6		
		PERd	%		140.0		
		C Condition (Degradation heating)				1.0	
		COPd			4.61		
	Pdh	kW		3.0			
	PERd	%		184.2			
	D Condition (12°CDB/11°CWB)				1.0		
	COPd			6.16			
	Pdh	kW		3.7			
	PERd	%		246.4			
	Tol (temperature operating limit)			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			1.5		0.0	
	Cold climate water outlet 55°C	Tbiv (bivalent temperature)	COPd		2.30		2.05
			Pdh	kW	7.6		8.3
			PERd	%	91.9		82.1
Tbiv			°C	-7		-10	
General			7,088	6,950	6,921		
Annual energy consumption			kWh				
A Condition (7°CDB/-8°CWB)		Cdch (Degradation heating)	ηs (Seasonal space heating efficiency)	%	122		125
			Prated at -22°C	kW		9.0	
			Qhe Annual energy consumption (GCV)	Gj	26		25
			COPd			1.0	
			Pdh	kW		2.61	
			PERd	%	104.2		104.4
B Condition (2°CDB/-1°CWB)	Cdch (Degradation heating)				1.0		
		COPd			3.90		
		Pdh	kW		3.3		
		PERd	%		156.0		

2 Specifications

2 - 1 Specifications

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



2 Specifications

2 - 1 Specifications

Technical specifications					ETBH12E9W + EPRA08EW1	ETBH12E9W + EPRA10EW1	ETBH12E9W + EPRA12EW1	
Space heating	Warm climate water outlet 55°C	Tbiv	Pdh	kW		8.4		
		(bivalent tempera- ture)	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		COPd			3.20	
		(-7°CDB/-8°CWB)		Pdh		kW	7.5	
				PERd		%	128.0	
		B Con- dition		Cdh (Degradation heating)			1.0	
		(2°CDB- B/1°CWB)		COPd			4.93	
				Pdh		kW	4.4	
				PERd		%	197.2	
		C Con- dition		Cdh (Degradation heating)			1.0	
(7°CDB- B/6°CWB)		COPd			6.37			
		Pdh		kW	4.3			
		PERd		%	254.8			
D Condition		Cdh (Degradation heating)			1.0			
(12°CDB/11°CWB)		COPd			8.13			
		Pdh		kW	6.6			
		PERd		%	325.2			
Tol (tem- perature operat- ing 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 tempera- ture)		COPd			3.20		2.86	
		Pdh		kW	7.5		8.1	
		PERd		%	128.0		114.4	
		Tbiv		°C		-7		-10
Rated heat output supple- mentary 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		

2 Specifications

2 - 1 Specifications

Technical specifications				ETBH12E9W + EPRA08EW1	ETBH12E9W + EPRA10EW1	ETBH12E9W + EPRA12EW1			
Space heating 	Cold climate water outlet 35°C	General	Qhe Annual energy consumption (GCV)		19				
			A Condition (7°CDB/4-8°CWB)	COPd		3.48			
				Pdh	kW	5.4			
				PERd	%	139.2			
				B Condition (2°CDB/11°CWB)	Cdh (Degradation heating)	1.0			
					COPd	5.40			
					Pdh	3.6			
					PERd	216.0			
					C Condition (7°CDB/6°CWB)	1.0			
					COPd	6.53			
					Pdh	5.3			
					PERd	261.2			
					D Condition (12°CDB/11°CWB)	1.0			
					COPd	7.98			
					Pdh	6.6			
					PERd	319.0	319.2		
					Tol (temperature operating limit)	COPd	2.11	2.14	2.16
						Pdh	4.9	5.9	6.5
						PERd	84.3	85.6	86.4
						TOL	-22		
						WTOL	35		
						G Condition (-15°CDB/)	2.68		
						COPd	2.64		
			Pdh	6.0					
			PERd	107.1					
			Tbiv (bivalent temperature)	2.95					
			COPd	2.64					
			Pdh	6.5					
			PERd	118.1					
			Tbiv	-12					
			Rated heat output supplementary capacity	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/11°CWB)	Cdh (Degradation heating)	1.0				
				COPd	4.07				
				Pdh	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	5.5		
						PERd	234.1		
						Tbiv (bivalent temperature)	COPd	4.97	
					Pdh	6.9			
					PERd	198.9			
					Tbiv	5			
					D Condition (12°CDB/11°CWB)	1.0			
					COPd	7.85			
		Pdh	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)			
	Cooling	Max.	kW	1.63 (5)	1.98 (5)	2.21 (5)		
		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			
		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) °C	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- B/1°CWB)	COPd		3.90	
			Pdh	kW	3.3	
			PERd	%	156.0	
		C Condition (7°CDB- B/6°CWB)	Cdh (Degradation heating)		1.0	
			COPd		4.96	
			Pdh	kW	3.4	
		D Condition (12°CDB/11°CWB)	PERd	%	198.3	
			COPd		6.56	
			Pdh	kW	4.2	
		Tol (temperature operating limit)	PERd	%	262.5	
	TOL		°C			
	WTOL		°C			
	COPd			1.49	1.56	1.62
	Pdh		kW	4.9	6.1	7.2
	G Condition (-15°CDB/-)	PERd	%	59.6	62.3	64.7
		Tbiv	°C			
		COPd		2.00		2.03
		Pdh	kW	6.0		7.2
		PERd	%	80.0		81.2
	Rated heat output supplementary capacity	Tbiv	°C	2.25		2.03
Pdh		kW	6.6		7.2	
PERd		%	90.0		81.2	
Tbiv		°C	-12		-15	
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		
		Cdh (Degradation heating)		1.0		
	B Condition (2°CDB- B/1°CWB)	COPd		2.66		
		Pdh	kW	8.0		
		PERd	%	106.5		
	C Condition (7°CDB- B/6°CWB)	Cdh (Degradation heating)		1.0		
		COPd		3.79		
Pdh		kW	6.7			
D Condition (12°CDB/11°CWB)	PERd	%	151.5			
	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		
Average climate water outlet 35°C	General	Tbiv (bivalent temperature)	COPd		3.13		
			Pdh	kW	8.4		
			PERd	%	125.4		
			Tbiv	°C	4		
		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			
C Condition (7°CDB/6°CWB)		Cdh (Degradation heating)		1.0			
		COPd		6.37			
		Pdh	kW	4.3			
D Condition (12°CDB/11°CWB)		PERd	%	254.8			
		Cdh (Degradation heating)		1.0			
		COPd		8.13			
Tol (temperature operating limit)		Pdh	kW	6.6			
		PERd	%	325.2			
		TOL	°C	-10			
Tbiv (bivalent temperature)		WTOL	°C	35			
		COPd		2.90	2.86		
		Pdh	kW	6.9	8.1		
Rated heat output supplementary capacity		PERd	%	116.0	114.4		
		Tbiv	°C	-10			
		WTOL	°C	35			
Tbiv (bivalent temperature)		COPd		3.20	2.86		
		Pdh	kW	7.5	8.1		
		PERd	%	128.0	114.4		
Rated heat output supplementary capacity		Tbiv	°C	-7			
		Psup (at Tdesign -10°C)	kW	1.4	0.0		
						-10	

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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	
		C Condition (7°CDB/6°CWB)	PERd	%		216.0	
			Cdh (Degradation heating)			1.0	
			COPd			6.53	
		D Condition (12°CDB/11°CWB)	Pdh	kW		5.3	
			PERd	%		261.2	
			Cdh (Degradation heating)			1.0	
		Tol (temperature operating limit)	COPd		319.0		319.2
			Pdh	kW	2.11	2.14	2.16
			PERd	%	84.3	85.6	86.4
		G Condition (-15°CDB/)	TOL	°C		-22	
			WTOL	°C		35	
			COPd		2.68		2.64
		Tbiv (bivalent temperature)	Pdh	kW	6.0		7.0
			PERd	%	107.1		105.6
Tbiv	°C		2.95		2.64		
Rated heat output supplementary capacity	Pdh	kW	6.5		7.0		
	PERd	%	118.1		105.6		
	Tbiv	°C	-12		-15		
Warm climate water outlet 35°C	Psup (at Tdesign -22°C)	kW	4.1	3.1	2.6		
	General	Annual energy consumption	kWh		1,835		
		ηs (Seasonal space heating efficiency)	%		247		
Prated at 2°C		kW		8.6			
B Condition (2°CDB/1°CWB)	Qhe Annual energy consumption (GCV)	Gj	7	0	7		
	Cdh (Degradation heating)			1.0			
	C Condition (7°CDB/6°CWB)	COPd			4.07		
Pdh		kW		7.7			
PERd		%		162.9			
Tbiv (bivalent temperature)	Cdh (Degradation heating)			1.0			
	COPd			5.85			
	Pdh	kW		5.5			
D Condition (12°CDB/11°CWB)	PERd	%		234.1			
	COPd			4.97			
	Pdh	kW		6.9			
Space heating	Warm climate water outlet 35°C	PERd	%		198.9		
		Tbiv	°C		5		
		Cdh (Degradation heating)			1.0		
Space heating	Warm climate water outlet 35°C	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)			
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 climate water outlet 55°C	General	Annual energy consumption			kWh	4,894	4,871	
		η _{sp} (Seasonal space heating efficiency)			%	141		
		Prated at -10°C			kW	8.5		
		Q _{he} 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		
		D Condition (12°CDB/11°CWB)	PERd	%	198.3		
			COPd		6.56		
			Pdh	kW	4.2		
		Tol (temperature operating limit)	PERd	%	262.5		
	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	
	Warm climate water outlet 55°C	G Condition (-15°CDB/)	WTOL	°C		55	
			COPd		2.00		2.03
			Pdh	kW	6.0		7.2
		Tbiv (bivalent temperature)	PERd	%	80.0		81.2
			COPd		2.25		2.03
			Pdh	kW	6.6		7.2
Rated heat output supplementary capacity		PERd	%	90.0		81.2	
		Tbiv	°C	-12		-15	
General		Psup (at Tdesign -22°C)	Rated heat output supplementary capacity	kW	4.1	2.9	1.8
			Annual energy consumption ηs (Seasonal space heating efficiency)	Prated at 2°C	kW		2,853
	Qhe Annual energy consumption (GCV)			Gj		177	
	PERd			%		9.6	
	B Condition (2°CDB/1°CWB)		Qhe Annual energy consumption (GCV)	Gj		10	
		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			
	Average climate water outlet 35°C	General	Annual energy consumption		kWh	3,462	3,440	
			η_s (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)	Cd (Degradation heating)			1.0		
	COPd			4.93				
	Pdh			kW	4.4			
	C Condition (7°CDB/6°CWB)	Cd (Degradation heating)			1.0			
		COPd		6.37				
		Pdh		kW	4.3			
	D Condition (12°CDB/11°CWB)	Cd (Degradation heating)			1.0			
COPd			8.13					
Pdh			kW	6.6				
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					
	Pdh		kW	7.5	8.1			
	PERd		%	128.0	114.4			
Rated heat output supplementary capacity	Tbiv		°C	-7				
	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/-B/1°CWB)	Cdh (Degradation heating)			1.0	
				COPd			5.40	
				Pdh	kW		3.6	
			C Condition (7°CDB/-B/6°CWB)	PERd	%		216.0	
				Cdh (Degradation heating)			1.0	
				COPd			6.53	
			D Condition (12°CDB/11°CWB)	Pdh	kW		5.3	
				PERd	%		261.2	
				Cdh (Degradation heating)			1.0	
			Tol (temperature operating limit)	COPd		319.0		319.2
				Pdh	kW	2.11	2.14	2.16
				PERd	%	4.9	5.9	6.5
			G Condition (-15°CDB/)	PERd	%	84.3	85.6	86.4
				TOL	°C		-22	
				WTOL	°C		35	
			Tbiv (bivalent temperature)	COPd		2.68		2.64
Pdh	kW	6.0			7.0			
PERd	%	107.1			105.6			
Rated heat output supplementary capacity	COPd		2.95		2.64			
	Pdh	kW	6.5		7.0			
	PERd	%	118.1		105.6			
Warm climate water outlet 35°C	Tbiv	°C	-12	-15				
	Psup (at Tdesign -22°C)	kW	4.1	3.1	2.6			
	General	Annual energy consumption	kWh		1,835			
B Condition (2°CDB/-B/1°CWB)	ηs (Seasonal space heating efficiency)	%		247				
	Prated at 2°C	kW		8.6				
	Qhe Annual energy consumption (GCV)	Gj	7	0	7			
Space heating 	Warm climate water outlet 35°C	B Condition (2°CDB/-B/1°CWB)	Cdh (Degradation heating)		1.0			
			COPd		4.07			
			Pdh	kW	7.7			
C Condition (7°CDB/-B/6°CWB)	PERd	%		162.9				
	Cdh (Degradation heating)			1.0				
	COPd			5.85				
D Condition (12°CDB/11°CWB)	Pdh	kW		5.5				
	PERd	%		234.1				
	Tbiv	°C		4.97				
Tbiv (bivalent temperature)	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	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	η _{wh} (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	
	COP _{dhw}			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		
	η _{wh} (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		
	Warm climate	Stand-by power input	W	54.3	46.7	54.3	46.7	54.3	46.7		
		AEC (Annual electricity consumption)	kWh	699	648	699	648	699	648		
		COP _{dhw}		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		
		η _{wh} (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				
			η _s (Seasonal space heating efficiency)	%	138						
		Prated at -10°C	Q _{he} Annual energy consumption (GCV)	Gj			8.5			18	
			SCOP		3.52		3.53				
		Seasonal space heating eff. class			A++						
			A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0					
		B Condition (2°CDB/-1°CWB)	COP _d		2.30						
			P _{dhw}	kW	7.6						
			PER _d	%	91.9						
			Cdh (Degradation heating)		1.0						
		C Condition (7°CDB/6°CWB)	COP _d		3.50						
			P _{dhw}	kW	4.6						
			PER _d	%	140.0						
			Cdh (Degradation heating)		1.0						
		C Condition (7°CDB/6°CWB)	COP _d		4.61						
			P _{dhw}	kW	3.0						
PER _d	%	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				
	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						
C Condition (7°CDB/6°CWB)		Cdh (Degradation heating)		1.0						
		COPd		3.79						
		Pdh	kW	6.7						
D Condition (12°CDB/11°CWB)		Cdh (Degradation heating)		1.0						
		COPd		5.87						
		Pdh	kW	3.6						
Tbiv (bivalent temperature)		PERd	%	234.9						
		Tbiv	°C	4						
		Tbiv	°C	3.13						
Average climate water outlet 35°C	General	Pdh	kW	8.4		125.4				
		PERd	%	125.4						
		Tbiv	°C	4						
		Tbiv	°C	4						
	Annual energy consumption	ηs (Seasonal space heating efficiency)	%	3,561		3,539				
		Prated at -10°C	kW	190		191				
		Qhe Annual energy consumption (GCV)	Gj	8.3		13				
		SCOP		4.81		4.84				
Seasonal space heating eff. class			A+++							
			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/-B/1°CWB)	Cd _h (Degradation heating)			1.0				
			COPd		4.93					
		C Condition (7°CDB/-B/6°CWB)	Pd _h	kW	4.4					
			PERd	%	197.2					
		D Condition (12°CDB/11°CWB)	Cd _h (Degradation heating)			1.0				
			COPd		6.37					
		Tol (temperature operating limit)	Pd _h	kW	4.3					
			PERd	%	254.8					
		Tbiv (bivalent temperature)	Cd _h (Degradation heating)			1.0				
	COPd			8.13						
	Rated heat output supplementary capacity	Pd _h	kW	6.6						
		PERd	%	325.2						
	Tol (temperature operating limit)	COPd		2.90		2.86				
		Pd _h	kW	6.9		8.1				
	Tbiv (bivalent temperature)	PERd	%	116.0		114.4				
		TOL	°C	-10						
	Tbiv (bivalent temperature)	WTOL	°C	35						
		COPd		3.20		2.86				
	Rated heat output supplementary capacity	Pd _h	kW	7.5		8.1				
PERd		%	128.0		114.4					
Tbiv (bivalent temperature)	Tbiv	°C	-7		-10					
	P _{sup} (at T _{design} -10°C)	kW	1.4		0.0					
Cold climate water outlet 35°C	General	Annual energy consumption	kWh	5,394		5,239		5,224		
		η _s (Seasonal space heating efficiency)	%	162		166		167		
		Prated at -22°C	kW	9.0						
		Q _{he} Annual energy consumption (GCV)	Gj	19						
	A Condition (7°CDB/-8°CWB)	COPd		3.48						
		Pd _h	kW	5.4						
		PERd	%	139.2						
	B Condition (2°CDB/-B/1°CWB)	Cd _h (Degradation heating)			1.0					
		COPd		5.40						
	C Condition (7°CDB/6°CWB)	Pd _h	kW	3.6						
PERd		%	216.0							
Tbiv (bivalent temperature)	Cd _h (Degradation heating)			1.0						
	COPd		6.53							
Rated heat output supplementary capacity	Pd _h	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	6.6						
				PERd	319.0		319.2				
		Tol (temperature operating limit)		COPd	2.11		2.14		2.16		
				Pdh	4.9		5.9		6.5		
				PERd	84.3		85.6		86.4		
				TOL	-22						
				WTOL	35						
	G Condition (-15°CDB/-)		COPd	2.68		2.64					
			Pdh	6.0		7.0					
			PERd	107.1		105.6					
	Tbiv (bivalent temperature)		COPd	2.95		2.64					
			Pdh	6.5		7.0					
			PERd	118.1		105.6					
			Tbiv	-12		-15					
	Rated heat output supplementary capacity		Psup (at Tdesign -22°C)	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						
C Condition (7°CDB/6°CWB)		PERd	%		162.9						
		Cdh (Degradation heating)			1.0						
		COPd			5.85						
Tbiv (bivalent temperature)		Pdh	kW		5.5						
		PERd	%		234.1						
		Tbiv	°C		4.97						
D Condition (12°CDB/11°CWB)		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/Manu- facturer 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							
LW(A) Sound power level (according to EN14825)	Indoor	dB(A)	44.0							
	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	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	η _{wh} (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		
		COP _{dhw}		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		
		η _{wh} (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		
		COP _{dhw}		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		
η _{wh} (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				
			η _s (Seasonal space heating efficiency)	%	138						
		Prated at -10°C	Q _{he} Annual energy consumption (GCV)	Gj			8.5			18	
			SCOP		3.52		3.53				
		Seasonal space heating eff. class			A++						
			A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.0					
		A Condition (-7°CDB/-8°CWB)	COP _d		2.30						
			P _d	kW	7.6						
			PER _d	%	91.9						
			B Condition (2°CDB/-1°CWB)	Cdh (Degradation heating)		1.0					
		COP _d			3.50						
		P _d		kW	4.6						
		PER _d		%	140.0						
		C Condition (7°CDB/-6°CWB)	Cdh (Degradation heating)		1.0						
			COP _d		4.61						
P _d	kW		3.0								
PER _d	%		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				
	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)		Cd (Degradation heating)			1.0					
		COPd		2.66						
		Pdh	kW	8.0						
C Condition (7°CDB/6°CWB)		Cd (Degradation heating)			1.0					
		COPd		3.79						
		Pdh	kW	6.7						
D Condition (12°CDB/11°CWB)		Cd (Degradation heating)			1.0					
		COPd		5.87						
		Pdh	kW	3.6						
Tbiv (bivalent temperature)		PERd	%	234.9						
		Tbiv	°C	4						
	Tbiv	°C	3.13							
Average climate water outlet 35°C	General	Pdh	kW	8.4		125.4				
		PERd	%	125.4						
		Tbiv	°C	4						
		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							
A Condition (7°CDB/-8°CWB)	SCOP		4.81		4.84					
	Seasonal space heating eff. class			A+++						
	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)	Cd _h (Degradation heating)			1.0				
			COP _d			4.93				
			Pd _h		kW	4.4				
			PER _d		%	197.2				
		C Condition (7°CDB/-6°CWB)	Cd _h (Degradation heating)			1.0				
			COP _d			6.37				
			Pd _h		kW	4.3				
			PER _d		%	254.8				
		D Condition (12°CDB/11°CWB)	Cd _h (Degradation heating)			1.0				
	COP _d			8.13						
	Pd _h		kW	6.6						
	Tol (temperature operating limit)	COP _d			2.90				2.86	
		Pd _h		kW	6.9				8.1	
		PER _d		%	116.0				114.4	
		TOL		°C	-10					
		WTOL		°C	35					
	Tbiv (bivalent temperature)	COP _d			3.20				2.86	
		Pd _h		kW	7.5				8.1	
		PER _d		%	128.0				114.4	
Tbiv		°C	-7							
Rated heat output supplementary capacity	P _{sup} (at T _{design} -10°C)		kW	1.4				0.0		
Cold climate water outlet 35°C	General	Annual energy consumption	kWh	5,394		5,239		5,224		
		η _s (Seasonal space heating efficiency)	%	162		166		167		
		Prated at -22°C	kW	9.0						
		Q _{he} Annual energy consumption (GCV)	Gj	19						
	A Condition (7°CDB/-8°CWB)	COP _d			3.48					
		Pd _h		kW	5.4					
		PER _d		%	139.2					
	B Condition (2°CDB/-1°CWB)	Cd _h (Degradation heating)			1.0					
		COP _d			5.40					
Pd _h		kW	3.6							
PER _d		%	216.0							
C Condition (7°CDB/-6°CWB)	Cd _h (Degradation heating)			1.0						
	COP _d			6.53						
	Pd _h		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	6.6								
				PERd	%	319.0				319.2			
		Tol (temperature operating limit)		COPd	2.11						2.14	2.16	
				Pdh	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	6.0						7.0			
			PERd	107.1						105.6			
	Tbiv (bivalent temperature)		COPd	2.95						2.64			
			Pdh	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	
C Condition (7°CDB/6°CWB)		Cdh (Degradation heating)		1.0									
		COPd		5.85									
		Pdh		kW								5.5	
Tbiv (bivalent temperature)		COPd		234.1									
		Pdh		kW								4.97	
		PERd		%								198.9	
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	Dom.	kWh		2.54 (6)	3.09 (6)	2.54 (6)	3.09 (6)	2.54 (6)	3.09 (6)		
				1h 51min		2h 10min		1h 51min		2h 10min	
Heat up time from 10°C to 50°C			hr	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	Heating	kPa	59.8 (7)							
Water side Heat exchanger	Water flow rate	Heating	Nom.	18.3 (2)							
		l/min									
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 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			
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							

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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			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					
B Condition (2°CDB/-1°CWB)			PERd	%	91.9					
			Cdh (Degradation heating)		1.0					
			COPd		3.50					
C Condition (7°CDB/-6°CWB)			Pdh	kW	4.6					
			PERd	%	140.0					
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
		Tol (temperature operating limit)	PERd	%						246.4
			COPd		2.01					2.05
			Pdh	kW	7.0					8.3
	Rated heat output supplementary capacity	PERd	%	80.2					82.1	
		TOL	°C						-10	
		WTOL	°C						55	
	Cold climate water outlet 55°C	General	Psup (at Tdesign -10°C)	kW	1.5					0.0
			Tbiv	COPd	2.30					2.05
			Pdh	kW	7.6					8.3
		(bivalent temperature)	PERd	%	91.9					82.1
			Tbiv	°C	-7					-10
			Annual energy consumption	kWh	7,028			6,890		6,861
A Condition (-7°CDB/-8°CWB)		ηs (Seasonal space heating efficiency)	%	123					126	
		Prated at -22°C	kW						9.0	
		Qhe Annual energy consumption (GCV)	Gj						25	
B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)							1.0		
	COPd							2.61		
	Pdh	kW						5.2		
C Condition (7°CDB/6°CWB)	PERd	%	104.2					104.4		
	Cdh (Degradation heating)							1.0		
	COPd							3.90		
D Condition (12°CDB/11°CWB)	Pdh	kW						3.3		
	PERd	%						156.0		
	Cdh (Degradation heating)							1.0		
Tol (temperature operating limit)	COPd							4.96		
	Pdh	kW						3.4		
	PERd	%						198.3		
Tol (temperature operating limit)	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				
	G Condition (-15°CDB/-)	COPd	Pdh	kW	2.00			2.03		
			PERd	%	6.0			7.2		
			Tbiv	°C	80.0			81.2		
	(bivalent temperature)	COPd	Pdh	kW	2.25			2.03		
			PERd	%	6.6			7.2		
			Tbiv	°C	90.0			81.2		
	Rated heat output supplementary capacity	Psup (at Tdesign -22°C)	Pdh	kW	4.1		2.9		1.8	
			PERd	%						
			Tbiv	°C						
	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/B/1°CWB)		COPd	Cdh (Degradation heating)				1.0			
			Pdh	kW			2.66			
			PERd	%			8.0			
C Condition (7°CDB/B/6°CWB)		COPd	Cdh (Degradation heating)				106.5			
			Pdh	kW			1.0			
			PERd	%			3.79			
D Condition (12°CDB/11°CWB)		COPd	Cdh (Degradation heating)				6.7			
			Pdh	kW			151.5			
			PERd	%			1.0			
Tbiv (bivalent temperature)	COPd	Pdh	kW			5.87				
		PERd	%			3.6				
		Tbiv	°C			234.9				
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/ B/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		
	Tol (temperature operating limit)	PERd	%		319.0				319.2		
			COPd		2.11		2.14		2.16		
			Pdh	kW	4.9		5.9		6.5		
		TOL	°C		84.3		85.6		86.4		
			°C								
			°C								
	G Condition (-15°CDB/-)	PERd	%		107.1				105.6		
			COPd		2.68				2.64		
			Pdh	kW	6.0				7.0		
		Tbiv (bivalent temperature)	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/ B/1°CWB)		PERd	%						162.9		
			Cdh (Degradation heating)						1.0		
			COPd						4.07		
C Condition (7°CDB/ B/6°CWB)		PERd	%						234.1		
			Cdh (Degradation heating)						1.0		
			COPd						5.85		
Tbiv (bivalent temperature)	PERd	%						198.9			
		Tbiv	°C					5			
		Pdh	kW					6.9			
		COPd						4.97			
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	Dom.	kWh		2.54 (6)	3.09 (6)	2.54 (6)	3.09 (6)	2.54 (6)	3.09 (6)		
				1h 51min		2h 10min		1h 51min		2h 10min	
Heat up time from 10°C to 50°C			hr	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	Heating	kPa	59.8 (7)							
Water side Heat exchanger	Water flow rate	Heating	Nom.	18.3 (2)							
		l/min									
General	Supplier/	Name and address		Daikin Europe N.V. - Zandvoordestraat 300, 8400 Oostende, Belgium							
	Manu- facturer details	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							
		Poff (Off mode)		kW							
		Psb (Standby mode)		kW							
Pto (Thermostat off)		kW									
0.000		0.027		0.027		0.024					
Domestic hot water heating	General	Declared load profile		L							
Space heating general	Inte- grated supple- mentary 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					
B Condition (2°CDB/-1°CWB)			PERd	%	91.9					
			Cdh (Degradation heating)		1.0					
			COPd		3.50					
C Condition (7°CDB/6°CWB)			Pdh	kW	4.6					
			PERd	%	140.0					
	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	
		Tol (temperature operating limit)	PERd	%						246.4	
			COPd		2.01					2.05	
			Pdh	kW	7.0					8.3	
	Rated heat output supplementary capacity	PERd	%	80.2					82.1		
		TOL	°C						-10		
		WTOL	°C						55		
	Cold climate water outlet 55°C	General	Psup (at Tdesign -10°C)	kW	1.5				0.0		
			Tbiv	COPd	2.30				2.05		
			Pdh	kW	7.6				8.3		
		Annual energy consumption	PERd	%	91.9					82.1	
			Tbiv	°C	-7					-10	
			Annual energy consumption	kWh	7,028			6,890		6,861	
A Condition (-7°CDB/-8°CWB)		ηs (Seasonal space heating efficiency)	%	123					126		
		Prated at -22°C	kW						9.0		
		Qhe Annual energy consumption (GCV)	Gj						25		
B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)							1.0			
	COPd							2.61			
	Pdh	kW						5.2			
C Condition (7°CDB/6°CWB)	PERd	%	104.2					104.4			
	Cdh (Degradation heating)							1.0			
	COPd							3.90			
D Condition (12°CDB/11°CWB)	Pdh	kW						3.3			
	PERd	%						156.0			
	Cdh (Degradation heating)							1.0			
Tol (temperature operating limit)	COPd							4.96			
	Pdh	kW						3.4			
	PERd	%						198.3			
Tol (temperature operating limit)	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 (tem- perature operat- ing limit)	Pdh	kW	4.9		6.1		7.2		
		PERd	%	59.6		62.3		64.7		
	G Con- dition (-15°CDB/ -)	TOL	°C			-22				
		WTOL	°C			55				
	Tbiv (bivalent tempera- ture)	COPd		2.00			2.03			
		Pdh	kW	6.0			7.2			
	Rated heat output supple- mentary capacity	PERd	%	80.0			81.2			
		Tbiv	°C	-12			-15			
	Warm climate water outlet 55°C	General	Psup (at Tdesign -22°C)	kW	4.1		2.9		1.8	
			Annual energy consumption ηs (Seasonal space heating efficiency)	kWh %			2,853 177			
Average climate water outlet 35°C	B Con- dition (2°CDB- B/1°CWB)	Prated at 2°C	kW			9.6				
		Qhe Annual ener- gy consumption (GCV)	Gj			10				
	C Con- dition (7°CDB- B/6°CWB)	Cdh (Degradation heating)				1.0				
		COPd				2.66				
	D Condition (12°CDB/11°CWB)	Pdh	kW			8.0				
		PERd	%			106.5				
	Tbiv (bivalent tempera- ture)	Cdh (Degradation heating)				1.0				
		COPd				3.79				
	General	Pdh	kW			6.7				
		PERd	%			151.5				
Annual energy consumption ηs (Seasonal space heating efficiency)	Cdh (Degradation heating)				1.0					
	COPd				5.87					
Prated at -10°C	Pdh	kW			3.6					
	PERd	%			234.9					
Qhe Annual ener- gy consumption (GCV)	Tbiv	°C			3.13					
	Pdh	kW			8.4					
SCOP	PERd	%			125.4					
	Tbiv	°C			4					
Annual energy consumption ηs (Seasonal space heating efficiency)	Annual energy consumption	kWh	3,462			3,440				
	ηs (Seasonal space heating efficiency)	%	195			196				
Prated at -10°C	Prated at -10°C	kW			8.3					
	Qhe Annual ener- gy consumption (GCV)	Gj			12					
SCOP	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								
		Pd _h kW		5.3								
		PER _d %		261.2								
		D Condition (12°CDB/11°CWB)		Cdh (Degradation heating)		1.0						
		COPd		7.98								
	Pd _h kW		6.6									
	PER _d %		319.0		319.2							
	Tol (temperature operating limit)	COPd		2.11		2.14		2.16				
		Pd _h kW		4.9		5.9		6.5				
		PER _d %		84.3		85.6		86.4				
		TOL °C		-22		-22		-22				
	WTOL °C		35		35		35					
	G Condition (-15°CDB/-)	COPd		2.68		2.64		2.64				
		Pd _h kW		6.0		7.0		7.0				
		PER _d %		107.1		105.6		105.6				
		Tbiv (bivalent temperature)	COPd		2.95		2.64		2.64			
			Pd _h kW		6.5		7.0		7.0			
			PER _d %		118.1		105.6		105.6			
	Rated heat output supplementary capacity	Tbiv °C		-12		-15		-15				
P _{sup} (at T _{design} -22°C) kW		4.1		3.1		2.6						
Warm climate water outlet 35°C	General	Annual energy consumption kWh		1,835								
		η _s (Seasonal space heating efficiency) %		247								
		Prated at 2°C kW		8.6								
		Q _{he} Annual energy consumption (GCV) GJ		7		0		7				
	B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		1.0								
		COPd		4.07								
		Pd _h kW		7.7								
	C Condition (7°CDB/6°CWB)	PER _d %		162.9								
		Cdh (Degradation heating)		1.0								
		COPd		5.85								
Tbiv (bivalent temperature)	Pd _h kW		5.5									
	PER _d %		234.1									
	Tbiv °C		4.97									
D Condition (12°CDB/11°CWB)	Pd _h kW		6.9									
	PER _d %		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								
		Pd _h kW		6.2								
		PER _d %		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)	
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 Heating ESP unit	kPa	44.9 (5)						
Pump Main Zone	Nominal Heating ESP unit	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 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

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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		
		η _{wh} (water heating efficiency)	%	120	130	120	130	120	130	
		Q _{elec} (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
	COP _{dhw}			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	
	η _{wh} (water heating efficiency)		%	109	118	109	118	109	118	
	Q _{elec} (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	
COP _{dhw}			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		
η _{wh} (water heating efficiency)		%	147	158	147	158	147	158		
Q _{elec} (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			
		η _s (Seasonal space heating efficiency)	%	138						
		Prated at -10°C	kW	8.5						
		Q _{he} Annual energy consumption (GCV)	Gj	18						
		SCOP		3.52		3.53				
		Seasonal space heating eff. class		A++						
		A Condition (7°CDB/-8°CWB)	C _{dh} (Degradation heating)		1.0					
			COP _d		2.30					
			P _{dh}	kW	7.6					
			PER _d	%	91.9					
		B Condition (2°CDB/-1°CWB)	C _{dh} (Degradation heating)		1.0					
			COP _d		3.50					
			P _{dh}	kW	4.6					
		C Condition (7°CDB/6°CWB)	PER _d	%	140.0					
			C _{dh} (Degradation heating)		1.0					
			COP _d		4.61					
P _{dh}	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					
		Tol (temperature operating limit)	PERd	%	246.4					
			COPd		2.01				2.05	
			Pdh	kW	7.0				8.3	
		Rated heat output supplementary capacity	PERd	%	80.2				82.1	
			TOL	°C	-10					
	WTOL		°C	55						
	Cold climate water outlet 55°C	General	Psup (at Tdesign -10°C)	kW	1.5				0.0	
			Tbiv	COPd		2.30				2.05
			Pdh	kW	7.6				8.3	
		Annual energy consumption	PERd	%	91.9				82.1	
			Tbiv	°C	-7				-10	
			Annual energy consumption	kWh	7,088		6,950		6,921	
		ηs (Seasonal space heating efficiency)	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							
B Condition (2°CDB/1°CWB)	PERd	%	104.2				104.4			
	Cdh (Degradation heating)		1.0							
	COPd		3.90							
C Condition (7°CDB/6°CWB)	Pdh	kW	3.3							
	PERd	%	156.0							
	Cdh (Degradation heating)		1.0							
D Condition (12°CDB/11°CWB)	COPd		4.96							
	Pdh	kW	3.4							
	PERd	%	198.3							
Tol (temperature operating limit)	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				
	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)		Cd (Degradation heating)			1.0					
		COPd		2.66						
		Pdh	kW	8.0						
C Condition (7°CDB/6°CWB)		Cd (Degradation heating)			1.0					
		COPd		3.79						
		Pdh	kW	6.7						
D Condition (12°CDB/11°CWB)		Cd (Degradation heating)			1.0					
		COPd		5.87						
		Pdh	kW	3.6						
Tbiv (bivalent temperature)		PERd	%	234.9						
		Tbiv	°C	4						
	Tbiv	°C	3.13							
Average climate water outlet 35°C	General	Pdh	kW	8.4		125.4				
		PERd	%	125.4						
		Tbiv	°C	4						
		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							
A Condition (-7°CDB/-8°CWB)	SCOP		4.81		4.84					
	Seasonal space heating eff. class		A+++							
	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)	Cd _h (Degradation heating)								1.0
			COP _d								4.93
		C Condition (7°CDB/-6°CWB)	Pdh	kW							4.4
			PERd	%							197.2
		D Condition (12°CDB/11°CWB)	Cd _h (Degradation heating)								1.0
			COP _d								6.37
		Tol (temperature operating limit)	Pdh	kW							4.3
			PERd	%							254.8
		Tbiv (bivalent temperature)	Cd _h (Degradation heating)								1.0
			COP _d								8.13
		Rated heat output supplementary capacity	Pdh	kW							6.6
			PERd	%							325.2
		Tbiv (bivalent temperature)	COP _d			2.90				2.86	
			Pdh	kW		6.9				8.1	
		Tbiv (bivalent temperature)	PERd	%		116.0				114.4	
			TOL	°C						-10	
		Tbiv (bivalent temperature)	WTOL	°C						35	
			COP _d			3.20				2.86	
Rated heat output supplementary capacity	Pdh	kW		7.5				8.1			
	PERd	%		128.0				114.4			
Rated heat output supplementary capacity	Tbiv	°C		-7				-10			
	P _{sup} (at T _{design} -10°C)	kW		1.4				0.0			
Cold climate water outlet 35°C	General	Annual energy consumption	kWh	5,394		5,239		5,224			
		η _s (Seasonal space heating efficiency)	%	162		166		167			
	Prated at -22°C	Q _{he} Annual energy consumption (GCV)	Gj						19		
		COP _d							3.48		
	A Condition (7°CDB/-8°CWB)	Pdh	kW						5.4		
		PERd	%						139.2		
	B Condition (2°CDB/-1°CWB)	Cd _h (Degradation heating)								1.0	
		COP _d								5.40	
	C Condition (7°CDB/-6°CWB)	Pdh	kW							3.6	
		PERd	%							216.0	
C Condition (7°CDB/-6°CWB)	Cd _h (Degradation heating)								1.0		
	COP _d								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						
		Tol (temperature operating limit)	PERd	%	319.0				319.2		
			COPd		2.11		2.14			2.16	
			Pdh	kW	4.9		5.9			6.5	
			PERd	%	84.3		85.6			86.4	
		G Condition (-15°CDB/-)	TOL	°C	-22						
	WTOL		°C	35							
	Warm climate water outlet 35°C	General	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			
		Rated heat output supplementary capacity	Tbiv	°C	-12			-15			
			Psup (at Tdesign -22°C)	kW	4.1		3.1			2.6	
		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							
C Condition (7°CDB/6°CWB)	PERd		%	162.9							
	CdH (Degradation heating)		1.0								
	COPd			5.85							
Tbiv (bivalent temperature)	Pdh	kW	5.5								
	PERd	%	234.1								
	Tbiv	°C	4.97								
D Condition (12°CDB/11°CWB)	Pdh	kW	6.9								
	PERd	%	198.9								
Space heating Warm climate water	D Condition (12°CDB/11°CWB)	Tbiv	°C	5							
		CdH (Degradation heating)		1.0							
Space heating Warm climate water	D Condition (12°CDB/11°CWB)	COPd		7.85							
		Pdh	kW	6.2							
Space heating Warm climate water	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				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 Heating	ESP unit	kPa	44.9 (5)						
Pump Main Zone	Nominal Heating	ESP unit	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 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						
LW(A) Sound power level (according to EN14825)	Indoor		dB(A)	44.0						
	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					
Domestic hot water heating	General	Pto (Thermostat off)	kW	0.024						
		Declared load profile		L						
Space heating general	Inte- grated supple- mentary 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		
		η _{wh} (water heating efficiency)	%	120	130	120	130	120	130	
		Q _{elec} (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
	COP _{dhw}			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	
	η _{wh} (water heating efficiency)		%	109	118	109	118	109	118	
	Q _{elec} (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	
COP _{dhw}			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		
η _{wh} (water heating efficiency)		%	147	158	147	158	147	158		
Q _{elec} (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			
		η _s (Seasonal space heating efficiency)	%	138						
		Prated at -10°C	kW	8.5						
		Q _{he} Annual energy consumption (GCV)	Gj	18						
		SCOP		3.52		3.53				
		Seasonal space heating eff. class		A++						
		A Condition (7°CDB/-8°CWB)	C _{dh} (Degradation heating)		1.0					
			COP _d		2.30					
			P _{dh}	kW	7.6					
			PER _d	%	91.9					
		B Condition (2°CDB/-1°CWB)	C _{dh} (Degradation heating)		1.0					
			COP _d		3.50					
			P _{dh}	kW	4.6					
		C Condition (7°CDB/6°CWB)	C _{dh} (Degradation heating)		1.0					
			COP _d		4.61					
			P _{dh}	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						
		Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	1.5			0.0			
			Tbiv (bivalent temperature)	°C	-7						
		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				
	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)		Cd (Degradation heating)			1.0					
		COPd		2.66						
		Pdh	kW	8.0						
C Condition (7°CDB/6°CWB)		Cd (Degradation heating)			1.0					
		COPd		3.79						
		Pdh	kW	6.7						
D Condition (12°CDB/11°CWB)		Cd (Degradation heating)			1.0					
		COPd		5.87						
		Pdh	kW	3.6						
Tbiv (bivalent temperature)		PERd	%	234.9						
		Tbiv	°C	4						
		Tbiv	°C	3.13						
Average climate water outlet 35°C		General	Pdh	kW	8.4		125.4			
	PERd		%	125.4						
	Tbiv		°C	4						
	Tbiv		°C	4						
	Annual energy consumption	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	
	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.	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	
		η _{wh} (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
η _{wh} (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	
	η _{wh} (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	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	
	Cold climate water outlet 55°C	Tbiv (bivalent temperature)	COPd			2.30				2.05	
			Pdh	kW		7.6				8.3	
		General	PERd	%		92.0				82.0	
			Tbiv	°C		-7				-10	
		Annual energy consumption	ηs (Seasonal space heating efficiency)	kWh		7,088		6,950			6,921
%					122				125		
Prated at -22°C			Qhe Annual energy consumption (GCV)	kW				9			
				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/-B/1°CWB)	CdH (Degradation heating)							1.0			
		COPd						3.90			
		Pdh	kW					3.3			
PERd	%							156.0			
	C Condition (7°CDB/-B/6°CWB)	CdH (Degradation heating)						1.0			
COPd								4.96			
Pdh			kW					3.5			
PERd	%							198.4			
	D Condition (12°CDB/11°CWB)	CdH (Degradation heating)						6.56			
COPd								4.2			
Pdh			kW					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	Pdh	kW	6.6		7.2			
		(bivalent tempera- ture)	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- B/1°CWB)	Cdh (Degradation heating)			1.0				
		COPd			2.66					
		Pdh		kW	8.0					
		PERd		%	106.4					
	C Condition (7°CDB- B/6°CWB)	Cdh (Degradation heating)			1.0					
		COPd			3.79					
		Pdh		kW	6.7					
	D Condition (12°CDB/11°CWB)	PERd		%	151.6					
		Cdh (Degradation heating)			1.0					
		COPd			5.87					
	Tbiv (bivalent tempera- ture)	Pdh		kW	3.6					
PERd			%	234.8						
COPd				3.13						
Average climate water outlet 35°C	General	Pdh		kW	8.4					
		PERd		%	125.2					
		Tbiv		°C	4					
		Annual energy consumption		kWh	3,561		3,539			
		ηs (Seasonal space heating efficiency)		%	190		191			
	A Condition (-7°CDB/-8°CWB)	Prated at -10°C		kW	8					
		Qhe Annual energy consumption (GCV)		Gj	13					
		SCOP			4.81		4.84			
		Seasonal space heating eff. class			A+++					
		COPd			3.20					
B Condition (2°CDB- B/1°CWB)	Pdh		kW	7.5						
	PERd		%	128.0						
	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	
	Tbiv (bivalent temperature)	TOL °C						-10	
		WTOL °C						35	
		COPd		3.20				2.86	
	Rated heat output supplementary capacity	Pdh kW		7.5				8.1	
		PERd %		128.0				114.4	
		Tbiv °C		-7				-10	
	Cold climate water outlet 35°C	General	Psup (at Tdesign -10°C) kW		1.4			0.0	
			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 (temper- ature operat- ing 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 Con- dition (-15°CDB/-)	COPd		2.68		2.64		2.64		
		Pdh	kW	6.0		7.0		7.0		
		PERd	%	107.2		105.6		105.6		
		Tbiv	COPd	2.95		2.64		2.64		
		Pdh	kW	6.5		7.0		7.0		
	(bivalent tempera- ture)	PERd	%	118.0		105.6		105.6		
		Tbiv	°C	-12		-15		-15		
		Rated heat output supple- mentary 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 ener- gy consumption (GCV)	Gj			7			
			B Con- dition (2°CDB- B/1°CWB)	Cdh (Degradation heating)			1.0		1.0	
		COPd				4.07		4.07		
		Pdh	kW			7.7		7.7		
PERd		%			162.8		162.8			
C Con- dition (7°CDB- B/6°CWB)		Cdh (Degradation heating)			1.0		1.0			
COPd					5.85		5.85			
Pdh		kW			5.5		5.5			
PERd		%			234.0		234.0			
Tbiv		COPd			4.97		4.97			
Pdh		kW			6.9		6.9			
PERd		%			198.8		198.8			
Tbiv	°C			5		5				
D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)			1.0		1.0				
COPd				7.85		7.85				
Pdh	kW			6.2		6.2				
PERd	%			314.0		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.			17.7 (1)			

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Technical specifications			ETSHB12P30E + EPRA08EW1	ETSHB12P50E + EPRA08EW1	ETSHB12P30E + EPRA10EW1	ETSHB12P50E + EPRA10EW1	ETSHB12P30E + EPRA12EW1	ETSHB12P50E + EPRA12EW1	
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		No					
		Water-to-water heat pump		No					
	LW(A) Sound power level (according to EN14825)	Indoor	dB(A)	47.3					
	LW(A) Sound pow- er 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
		η _{wh} (water heating effi- ciency)	%	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 tem- perature	°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
	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
Domestic hot water heating 	Cold climate	η _{wh} (water heating effi- ciency)	%	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 tem- perature	°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
		AEC (Annual electricity consumption)	kWh	759	1,109	759	1,109	759	1,109
	Warm climate	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
		η _{wh} (water heating effi- ciency)	%	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 tem- perature	°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	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	
	Cold climate water outlet 55°C	Tbiv (bivalent temperature)	COPd			2.30				2.05	
			Pdh	kW		7.6				8.3	
		General	PERd	%		92.0				82.0	
			Tbiv	°C		-7				-10	
		Annual energy consumption	ηs (Seasonal space heating efficiency)	kWh		7,088		6,950			6,921
%					122				125		
Prated at -22°C			Qhe Annual energy consumption (GCV)	kW				9			
				Gj		26				25	
A Condition (-7°CDB/-8°CWB)		CdH (Degradation heating)	COPd					1.0			
								2.61			
	Pdh		kW				5.3				
	PERd		%				104.4				
B Condition (2°CDB/-B/1°CWB)	CdH (Degradation heating)	COPd					1.0				
							3.90				
		Pdh	kW				3.3				
PERd	%						156.0				
	C Condition (7°CDB/-B/6°CWB)	CdH (Degradation heating)	COPd				1.0				
							4.96				
Pdh			kW				3.5				
PERd	%						198.4				
	D Condition (12°CDB/11°CWB)	COPd					6.56				
							4.2				
PERd	%						262.4				
	Tol (temperature operating limit)	COPd			1.49		1.56		1.62		
							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			
								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	Pdh	kW	6.6		7.2				
		(bivalent tempera- ture)	PERd	%	90.0		81.2				
		Tbiv	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- B/1°CWB)	Cdh (Degradation heating)	1.0						
		C Condition (7°CDB- B/6°CWB)	COPd	2.66							
			Pdh	kW	8.0						
			PERd	%	106.4						
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)	1.0							
			COPd	3.79							
			Pdh	kW	6.7						
		Average climate water outlet 35°C	General	PERd	%	151.6					
	Cdh (Degradation heating)			1.0							
	COPd			5.87							
	Pdh			kW	3.6						
	Average climate water outlet 35°C	General	PERd	%	234.8						
Tbiv			COPd	3.13							
Pdh			kW	8.4							
PERd			%	125.2							
Tbiv			°C	4							
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						
A Condition (-7°CDB/-8°CWB)	Seasonal space heating eff. class	A+++									
	COPd	3.20									
	Pdh	kW	7.5								
B Condition (2°CDB- B/1°CWB)	PERd	%	128.0								
	Cdh (Degradation heating)	1.0									
	COPd	4.93									
B Condition (2°CDB- B/1°CWB)	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
	PERd		%							116.0	
	TOL		°C							-10	
	WTOL		°C							35	
	Tbiv (bivalent temperature)	COPd								3.20	
		PdH		kW							7.5
		PERd		%							128.0
		Tbiv		°C							-7
		Rated heat output supplementary capacity		Psup (at Tdesign -10°C)							1.4
	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		
		WTOL	TOL	°C			-22				
			WTOL	°C			35				
			G Con- dition (-15°CDB/-)	COPd		2.68		2.64		2.64	
		Tbiv (bivalent tempera- ture)	Pdh	kW		6.0		7.0		7.0	
			PERd	%		107.2		105.6		105.6	
			Tbiv	°C		-12		-15		-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 Con- dition (2°CDB/ B/1°CWB)	Cd	Cdh (Degradation heating)				1.0				
			COPd				4.07				
			Pdh	kW			7.7				
	C Con- dition (7°CDB/ B/6°CWB)	Cd	Cdh (Degradation heating)				1.0				
			COPd				5.85				
Pdh			kW			5.5					
Tbiv (bivalent tempera- ture)	PERd	Tbiv	°C			234.0					
		COPd				4.97					
		Pdh	kW			6.9					
D Condition (12°CDB/11°CWB)	PERd	Tbiv	°C			198.8					
		COPd				5					
		Pdh	kW			6.2					
D Condition (12°CDB/11°CWB)	PERd	Tbiv	°C			314.0					
		COPd				7.85					
		Pdh	kW			6.2					
D Condition (12°CDB/11°CWB)	PERd	Tbiv	°C			314.0					
		COPd				7.85					
		Pdh	kW			6.2					
D Condition (12°CDB/11°CWB)	PERd	Tbiv	°C			314.0					
		COPd				7.85					
		Pdh	kW			6.2					

(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		2.08 (2)		2.57 (2)		2.86 (2)	
COP							5.10 (1)			
EER							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	ETSX12P50E	ETSX12P30E	ETSX12P50E	ETSX12P30E	ETSX12P50E	
			+	+	+	+	+	+	
			EPRA08EW1	EPRA08EW1	EPRA10EW1	EPRA10EW1	EPRA12EW1	EPRA12EW1	
General	Supplier/	Name and address	Daikin Europe N.V. - Zandvoordestraat 300, 8400 Oostende, Belgium						
	Manu- facturer details	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		No					
	LW(A) Sound power level (according to EN14825)	Indoor	dB(A)	47.3					
		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
		η _{wh} (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
Domestic hot water heating 	Average climate	Water heating energy efficiency class	A+						
		AEC (Annual electricity consumption)	kWh	1,152	1,485	1,152	1,485	1,152	1,485
	Cold climate	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
		η _{wh} (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
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	
η _{wh} (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	ETSX12P50E	ETSX12P30E	ETSX12P50E	ETSX12P30E	ETSX12P50E
				+	+	+	+	+	+
				EPRA08EW1	EPRA08EW1	EPRA10EW1	EPRA10EW1	EPRA12EW1	EPRA12EW1
Space heating 	Average climate water outlet 55°C	General	Annual energy consumption	4,894		4,871			
			ηs (Seasonal space heating efficiency)			141			
			Prated at -10°C			9			
			Qhe Annual energy consumption (GCV)			18			
			SCOP	3.59		3.60			
			Seasonal space heating eff. class			A++			
			A Condition (7°CDB/-8°CWB)	Cd _h (Degradation heating)		1.0			
				COP _d		2.30			
				Pd _h		7.6			
				PER _d		92.0			
			B Condition (2°CDB/-1°CWB)	Cd _h (Degradation heating)		1.0			
				COP _d		3.50			
				Pd _h		4.6			
				PER _d		140.0			
			C Condition (7°CDB/6°CWB)	Cd _h (Degradation heating)		1.0			
				COP _d		4.61			
				Pd _h		3.0			
				PER _d		184.4			
			D Condition (12°CDB/11°CWB)	Cd _h (Degradation heating)		1.0			

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Technical specifications				ETSX12P30E	ETSX12P50E	ETSX12P30E	ETSX12P50E	ETSX12P30E	ETSX12P50E		
				+	+	+	+	+	+		
				EPRA08EW1	EPRA08EW1	EPRA10EW1	EPRA10EW1	EPRA12EW1	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	
		Rated heat output supplementary capacity	TOL	°C							-10
			WTOL	°C							55
			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
				%		123				126	
Prated at -22°C				kW							9
			Qhe Annual energy consumption (GCV)	Gj							25
A Condition (-7°CDB/-8°CWB)		CdH (Degradation heating)	COPd							1.0	
			Pdh	kW						2.61	
			PERd	%						5.3	
										104.4	
B Condition (2°CDB/1°CWB)		CdH (Degradation heating)	COPd							1.0	
			Pdh	kW						3.90	
			PERd	%						3.3	
C Condition (7°CDB/6°CWB)		CdH (Degradation heating)	PERd	%						156.0	
			COPd							1.0	
			Pdh	kW						4.96	
D Condition (12°CDB/11°CWB)		CdH (Degradation heating)	Pdh	kW						3.5	
	PERd		%						198.4		
	COPd								6.56		
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	ETSX12P50E	ETSX12P30E	ETSX12P50E	ETSX12P30E	ETSX12P50E	
				+	+	+	+	+	+	
				EPRA08EW1	EPRA08EW1	EPRA10EW1	EPRA10EW1	EPRA12EW1	EPRA12EW1	
Space heating 	Cold climate water outlet 55°C	G Condition	COPd	2.00				2.03		
		Pdh	kW	6.1				7.2		
		PERd	%	80.0				81.2		
	(bivalent temperature)	Tbiv	COPd	2.25				2.03		
		Pdh	kW	6.6				7.2		
		PERd	%	90.0				81.2		
	Rated heat output supplementary capacity	Tbiv	°C	-12				-15		
		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			
C Condition (7°CDB/6°CWB)		Pdh	kW			8.0				
		PERd	%			106.4				
D Condition (12°CDB/11°CWB)		Cdh (Degradation heating)				1.0				
		COPd				3.79				
Tbiv (bivalent temperature)	Pdh	kW			6.7					
	PERd	%			151.6					
	Tbiv	°C			234.8					
Average climate water outlet 35°C	General	Cdh (Degradation heating)				3.13				
		COPd				8.4				
		Pdh	kW			125.2				
		PERd	%			4				
	A Condition (-7°CDB/-8°CWB)	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				
	Seasonal space heating eff. class	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	ETSX12P50E	ETSX12P30E	ETSX12P50E	ETSX12P30E	ETSX12P50E
				+	+	+	+	+	+
				EPRA08EW1	EPRA08EW1	EPRA10EW1	EPRA10EW1	EPRA12EW1	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
			WTOL °C						-10
	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	ETSX12P50E	ETSX12P30E	ETSX12P50E	ETSX12P30E	ETSX12P50E	
				+	+	+	+	+	+	
				EPRA08EW1	EPRA08EW1	EPRA10EW1	EPRA10EW1	EPRA12EW1	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						
		Tol (temperature operating limit)	PERd %	319.2						
			COPd	2.11		2.14		2.16		
			Pdh kW	4.9		5.9		6.5		
		G Condition (-15°CDB/-)	PERd %	84.4		85.6		86.4		
			TOL °C	-22						
			WTOL °C	35						
		Tbiv (bivalent temperature)	COPd	2.68		2.64				
			Pdh kW	6.0		7.0				
			PERd %	107.2		105.6				
		Rated heat output supplementary capacity	Tbiv °C	2.95		2.64				
			Pdh kW	6.5		7.0				
			PERd %	118.0		105.6				
		Warm climate water outlet 35°C	General	Tbiv °C	-12		-15			
				Psup (at Tdesign -22°C) kW	4.1		3.1		2.6	
				Annual energy consumption kWh	1,835					
ηs (Seasonal space heating efficiency) %	247									
B Condition (2°CDB- B/1°CWB)	Prated at 2°C kW		9							
	Qhe Annual energy consumption (GCV) GJ		7							
C Condition (7°CDB- B/6°CWB)	Cdh (Degradation heating)		1.0							
	COPd		4.07							
	Pdh kW		7.7							
D Condition (12°CDB/11°CWB)	PERd %		162.8							
	Cdh (Degradation heating)	1.0								
	COPd	5.85								
Tbiv (bivalent temperature)	Pdh kW	5.5								
	PERd %	234.0								
	Tbiv °C	4.97								
D Condition (12°CDB/11°CWB)	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								
D Condition (12°CDB/11°CWB)	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			ETSB12P30E + EPRA08EW1	ETSB12P50E + EPRA08EW1	ETSB12P30E + EPRA10EW1	ETSB12P50E + EPRA10EW1	ETSB12P30E + EPRA12EW1	ETSB12P50E + 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					
	LW(A) Sound power level (according to EN14825)	Indoor	dB(A)	47.3					
		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
		η _{wh} (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
Domestic hot water heating	Average climate	Water heating energy efficiency class	A+						
		Cold climate	AEC (Annual electricity consumption)	kWh	1,152	1,485	1,152	1,485	1,152
	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
	η _{wh} (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	
η _{wh} (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				ETSB12P30E + EPRA08EW1	ETSB12P50E + EPRA08EW1	ETSB12P30E + EPRA10EW1	ETSB12P50E + EPRA10EW1	ETSB12P30E + EPRA12EW1	ETSB12P50E + EPRA12EW1		
Space heating	Average climate water outlet 55°C	General	Annual energy consumption	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		7.6							
		PERd		92.0							
B Condition (2°CDB/-1°CWB)		CdH (Degradation heating)		1.0							
		COPd		3.50							
		PdH		4.6							
C Condition (7°CDB/6°CWB)		CdH (Degradation heating)		1.0							
		COPd		4.61							
D Condition (12°CDB/11°CWB)		PdH		3.0							
		PERd		184.4							
CdH (Degradation heating)		1.0									

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Technical specifications				ETSB12P30E + EPRA08EW1	ETSB12P50E + EPRA08EW1	ETSB12P30E + EPRA10EW1	ETSB12P50E + EPRA10EW1	ETSB12P30E + EPRA12EW1	ETSB12P50E + 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				
C Condition (7°CDB/6°CWB)		PERd %				156.0				
		Cdh (Degradation heating)				1.0				
D Condition (12°CDB/11°CWB)		COPd				4.96				
		Pdh kW				3.5				
		PERd %				198.4				
Tol (temperature operating limit)		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				ETSB12P30E + EPRA08EW1	ETSB12P50E + EPRA08EW1	ETSB12P30E + EPRA10EW1	ETSB12P50E + EPRA10EW1	ETSB12P30E + EPRA12EW1	ETSB12P50E + 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		
		Rated heat output supplementary capacity	Tbiv	°C	-12				-15		
			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					
Cdh (Degradation heating)						1.0					
B Condition (2°CDB/1°CWB)	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					
D Condition (12°CDB/11°CWB)	PERd		%			151.6					
	Cdh (Degradation heating)					1.0					
	COPd					5.87					
Tbiv (bivalent temperature)	Pdh		kW			3.6					
	PERd		%			234.8					
	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	Seasonal space heating eff. class			4.95				4.98		
							A+++				
	A Condition (7°CDB/8°CWB)	COPd				3.20					
		Pdh	kW			7.5					
	PERd	%			128.0						

2 Specifications

2 - 1 Specifications

Technical specifications				ETSB12P30E + EPRA08EW1	ETSB12P50E + EPRA08EW1	ETSB12P30E + EPRA10EW1	ETSB12P50E + EPRA10EW1	ETSB12P30E + EPRA12EW1	ETSB12P50E + 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

2

Technical specifications				ETSB12P30E + EPRA08EW1	ETSB12P50E + EPRA08EW1	ETSB12P30E + EPRA10EW1	ETSB12P50E + EPRA10EW1	ETSB12P30E + EPRA12EW1	ETSB12P50E + 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 (tem- perature operat- ing 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 Con- dition (-15°CDB/-)	COPd		2.68		2.64		2.64		
		Pdh kW		6.0		7.0		7.0		
		PERd %		107.2		105.6		105.6		
	Tbiv (bivalent tempera- ture)	COPd		2.95		2.64		2.64		
		Pdh kW		6.5		7.0		7.0		
		PERd %		118.0		105.6		105.6		
	Rated heat output supple- mentary capacity	Tbiv °C		-12		-15		-15		
		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 Con- dition (2°CDB- B/1°CWB)		Cdh (Degradation heating)		1.0						
	COPd		4.07							
C Con- dition (7°CDB- B/6°CWB)	Pdh kW		7.7							
	PERd %		162.8							
Tbiv (bivalent tempera- ture)	Cdh (Degradation heating)		1.0							
	COPd		5.85							
D Condition (12°CDB/11°CWB)	Pdh kW		5.5							
	PERd %		234.0							
	Tbiv °C		4.97							
	Pdh kW		6.9							
	PERd %		198.8							
	Tbiv °C		5							
	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	1,270	533
		Width	mm	1,340	1,440	690
		Depth	mm	118	150	150
	Packed unit	Height	mm	1,340	1,440	690
		Width	mm	1,440	1,440	690
		Depth	mm	690	690	690
Weight	Unit	kg	118	150	150	
	Packed unit	kg	150	150	150	
Packing	Material		Carton / Wood (pallet) / PE (Straps) / Metal			
	Weight		kg	28	28	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*I	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

2

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
 - 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

3

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
 - 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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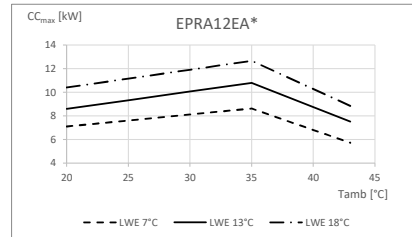
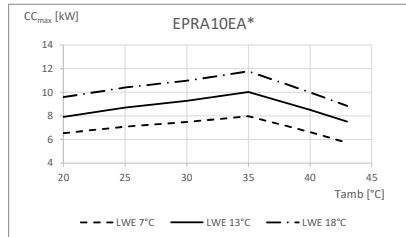
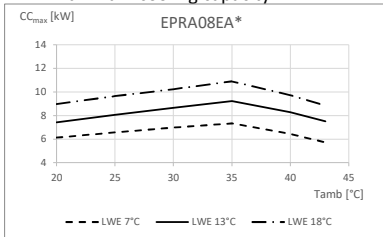
4 Capacity graphs

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 ·W1· models at ·400·V.

The capacity and the power input are at maximum operation.

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4 Capacity graphs

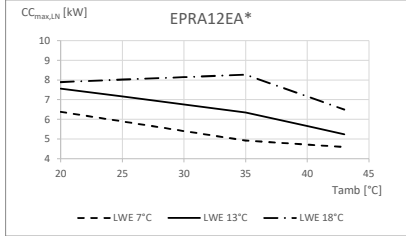
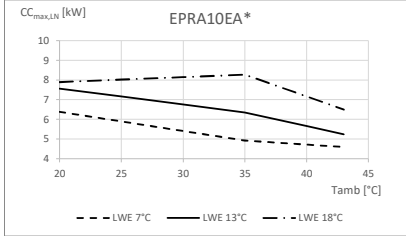
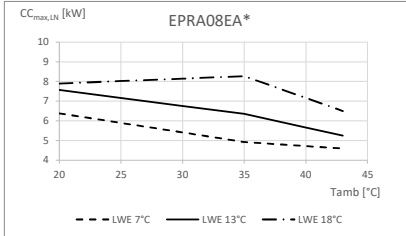
4 - 2 Cooling Capacity Graphs - quiet mode

4

EPRA08-12EV

EPRA08-12EW

Maximum cooling capacity



Symbols

CC_{maxLN} 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 -W1- models at -400-V.

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

Low noise level -1-

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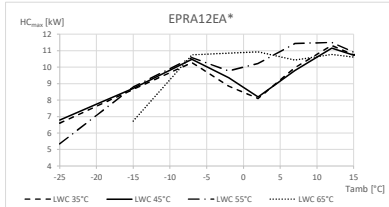
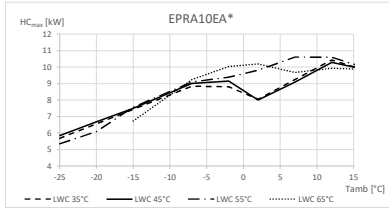
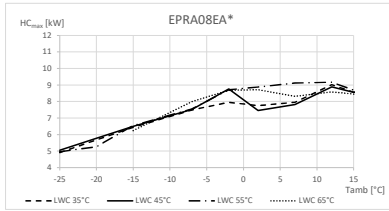
4 Capacity graphs

4 - 3 Heating Capacity Graphs

EPRA08-12EV

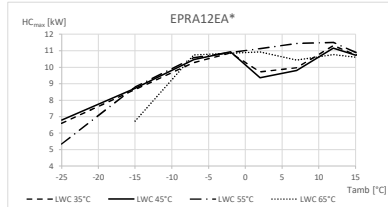
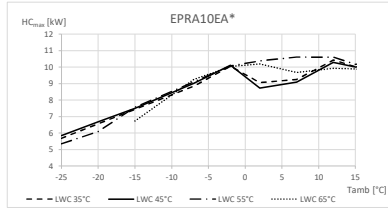
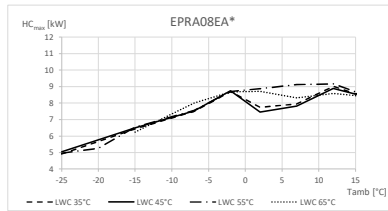
EPRA08-12EW

Maximum heating capacity - integrated value



Symbols
 HC_{max} Heating capacity for maximum load, measured according to EN 14511
 LWC Leaving water condenser temperature [°C]
 Tamb Ambient temperature [°C DB]

Maximum heating capacity - peak values



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 -W1- models at -400-V.
 The capacity and the power input are at maximum operation.

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4 Capacity graphs

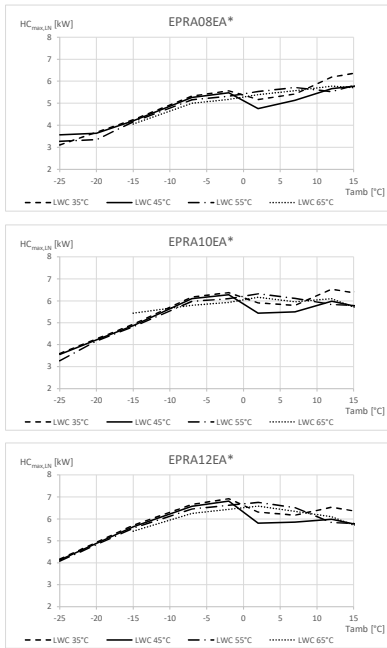
4 - 4 Heating Capacity Graphs - quiet mode

4

EPRA08-12EV

EPRA08-12EW

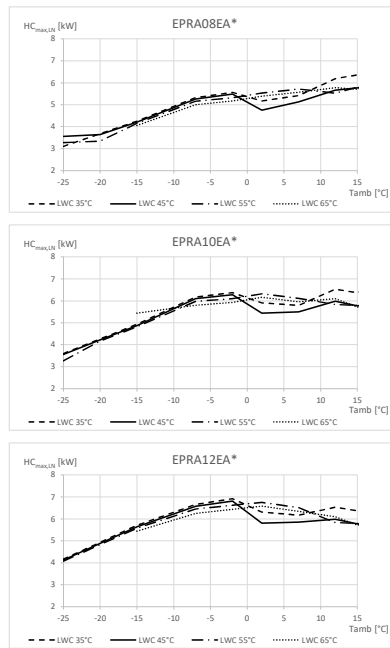
Maximum heating capacity - integrated value



Symbols

HC_{max,IN} Heating capacity for maximum load, measured according to EN 14511
 LWC Leaving water condenser temperature [°C]
 Tamb Ambient temperature [°C DB]

Maximum heating capacity - peak values



Conditions

Heating capacity

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

Notes

The capacity and power input is valid for -V3- models at -230-V and for -W1- models at -400-V.
 Full load (maximum fan rpm and maximum compressor rpm 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	COP	HC	COP	HC	COP	HC	COP	HC	COP	HC	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	EER	CC	EER	CC	EER	CC	EER	CC	EER	CC	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)-J18EA*		ETV*12S(U)-J23EA*		ETS(X/H)(B)-J12P30EF		ETS(X/H)(B)-J12P50EF		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		Keymark
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		
P _{es} [W]	51,7	50,7	44,8	43,9	38,1	37,4	32,7	32,1	
V _{eq40} [l]	240		298		194,0		246,0		
η _{wh} [%]	116,7	120,3	126,4	130	116	119	128	131	
COP _{DHW} [l]	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 condenser 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	COP	HC	COP	HC	COP	HC	COP	HC	COP	HC	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	EER	CC	EER	CC	EER	CC	EER	CC	EER	CC	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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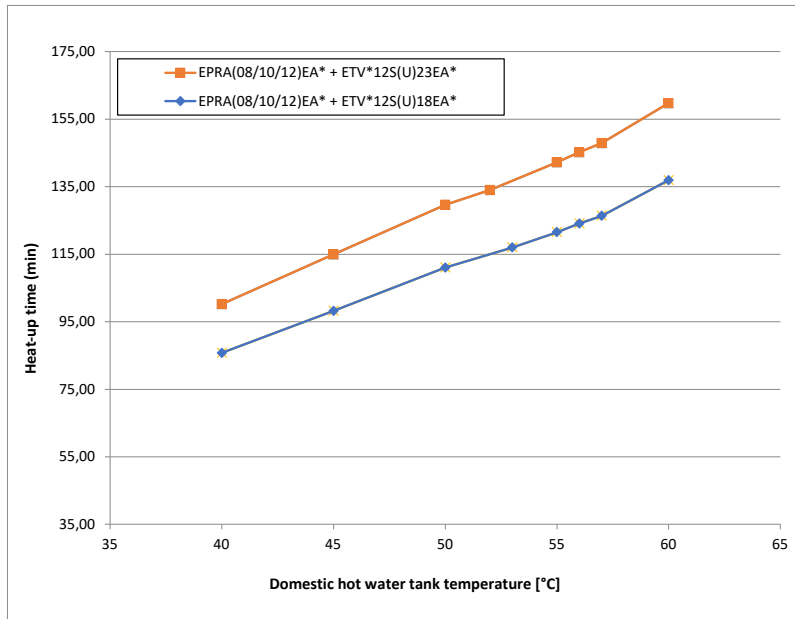
5 Capacity tables

5 - 2 Domestic Hot Water performance

5

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.

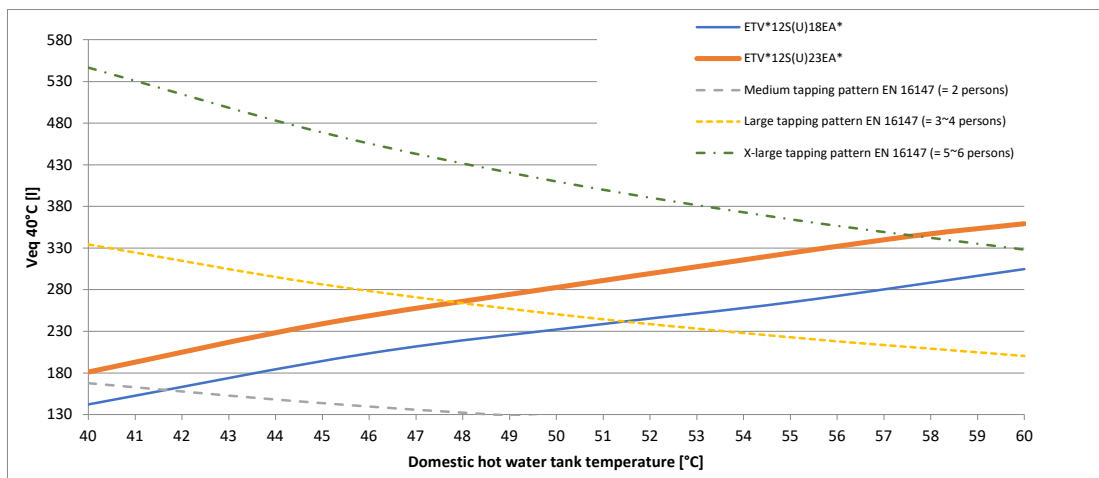
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EPRA08-12EV
EPRA08-12EW

Selection guide for the domestic hot water tank volume

(1)

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

Notes

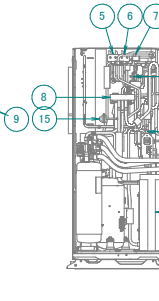
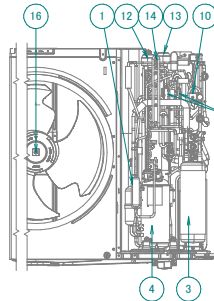
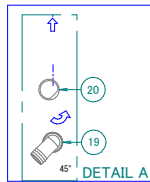
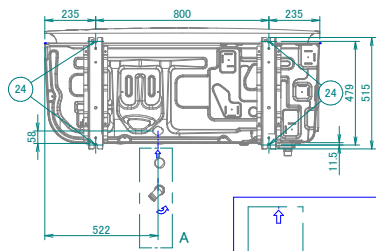
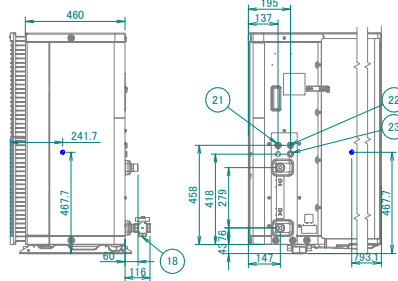
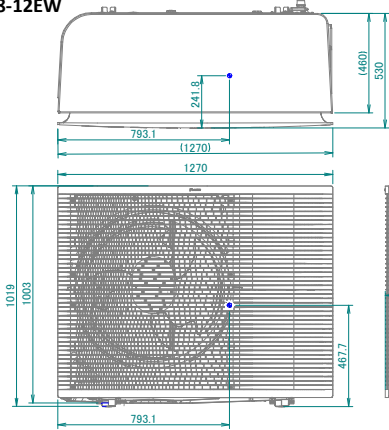
- (1) According to EN16147.

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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·

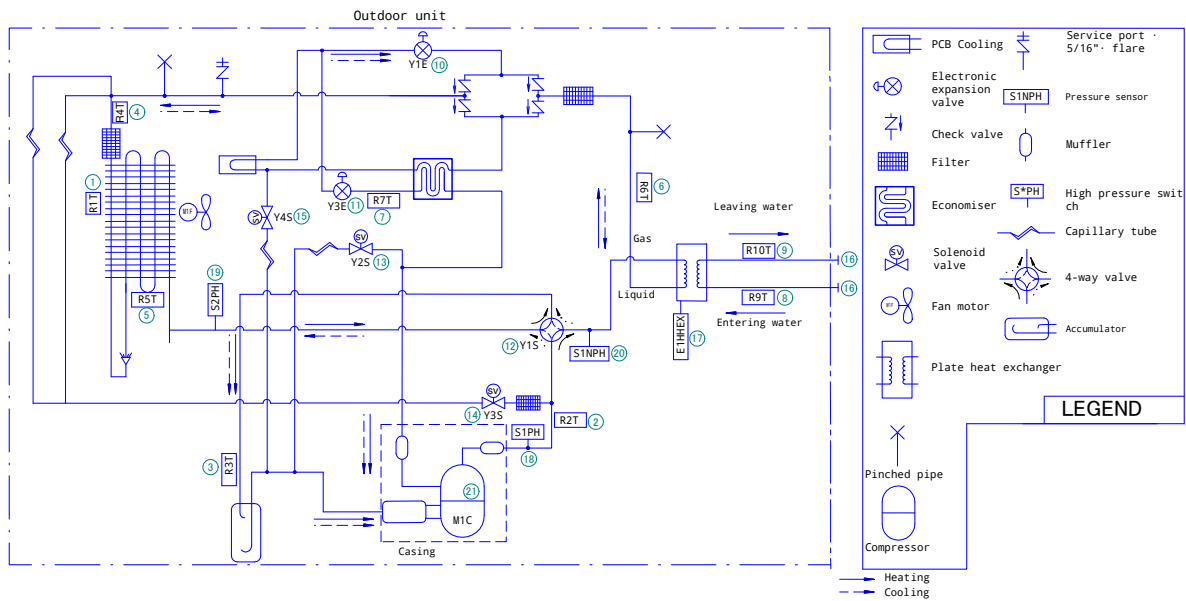
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7 Piping diagrams

7 - 1 Piping Diagrams

7

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)

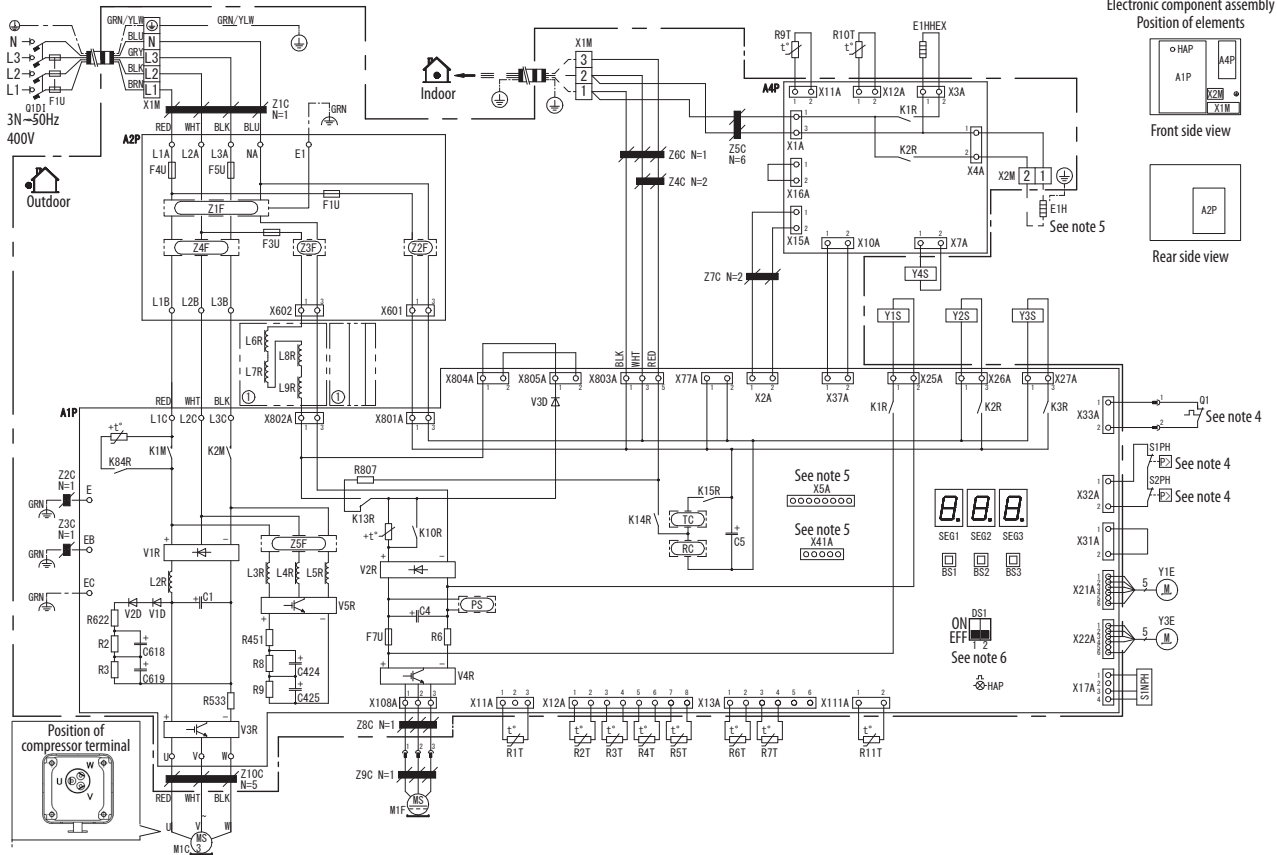
- ⑮ Y4S: Solenoid valve (liquid injection)
- ⑯ Screw connection ·1"·
- ⑰ E1HHEX: Plate heat exchanger Heater
- ⑱ S1PH: High pressure switch ·4.6MPa·
- ⑲ S2PH: High pressure switch ·4.17MPa·
- ⑳ S1NPH: High pressure sensor
- ㉑ Q1E Overload

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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)
B51 ~ B53 (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 (noise core)
Z1F ~ Z5F (A1P,A2P)	Noise filter

NOTES

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

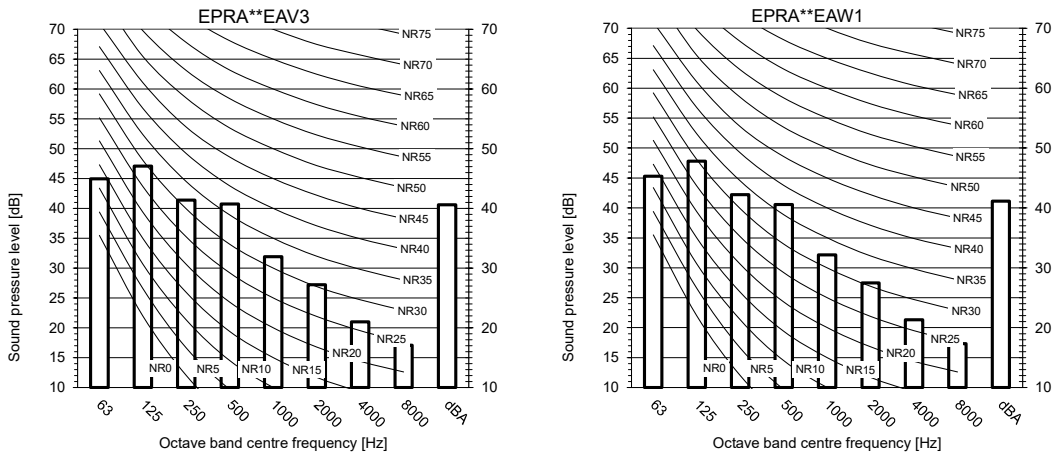
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9 Sound data

9 - 1 Sound Pressure Spectrum

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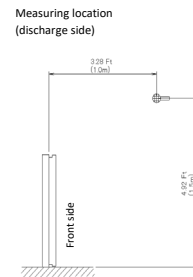
EPRA08-12EV
EPRA08-12EW



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

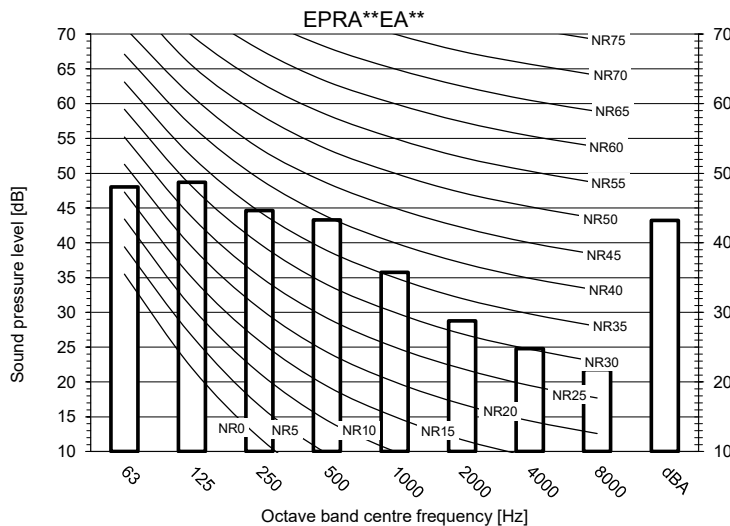
Full load (maximum fan rps and maximum compressor rps for the dedicated low noise mode)

- 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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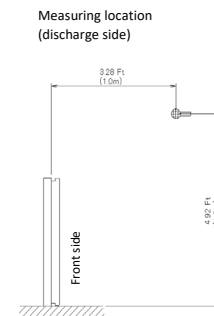
EPRA08-12EV
EPRA08-12EW



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)

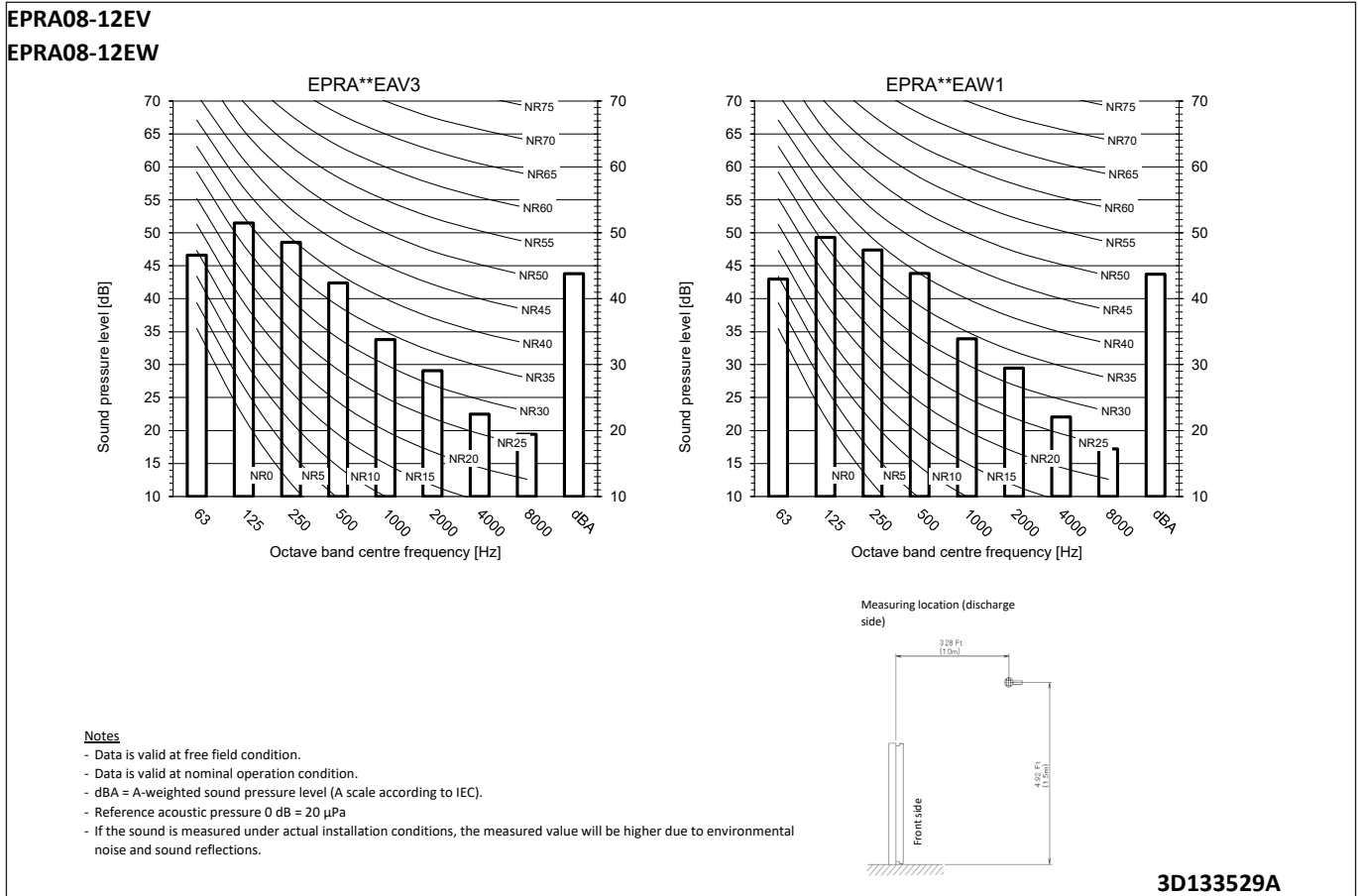
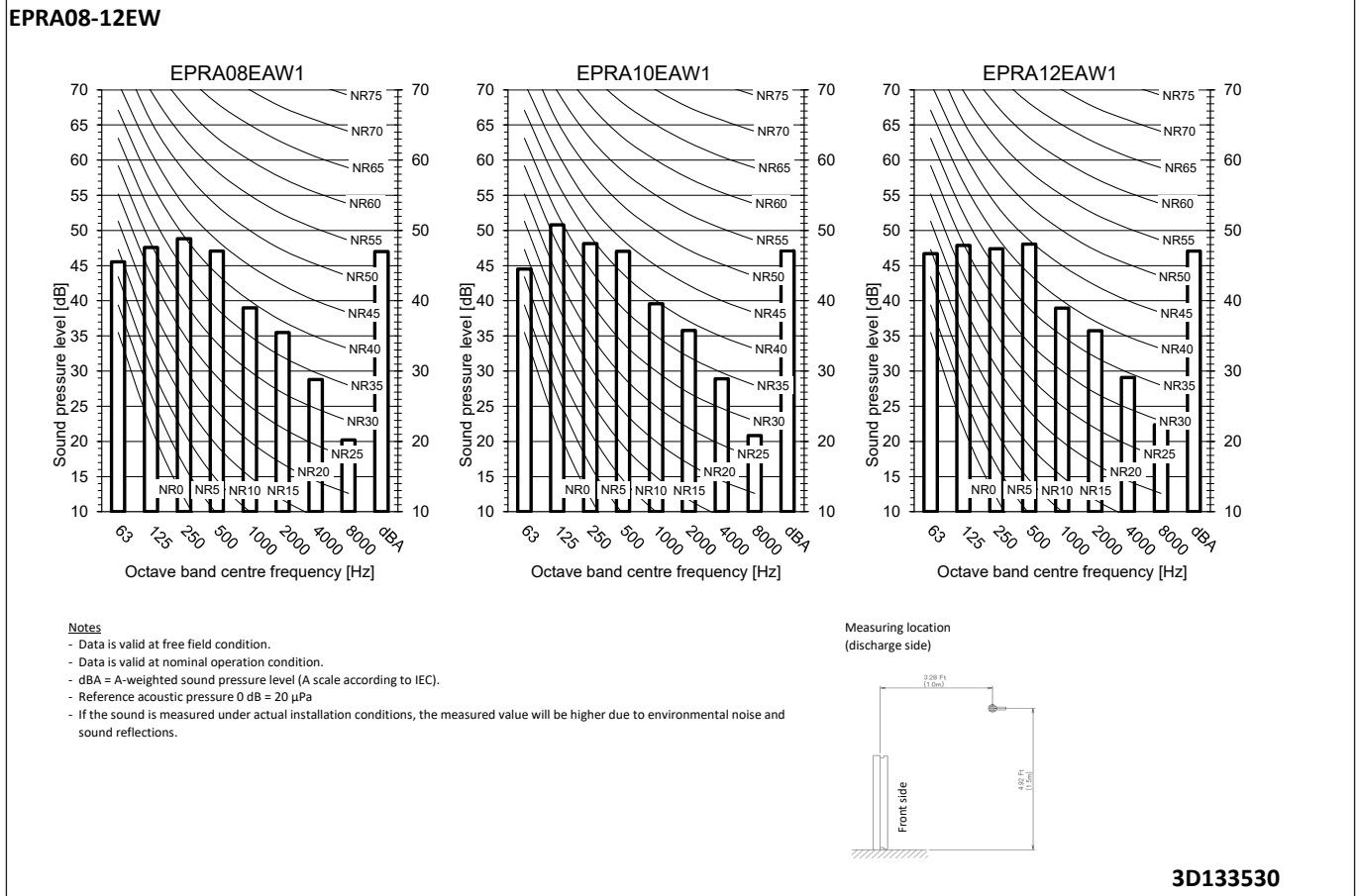
- Notes**
- Data is valid at free field condition.
 - Data is valid at nominal operation condition.
 - Conditions: Ta DB/WB -7/-6°C - LWC -55°C
 - dBA = A-weighted sound pressure level (A scale according to IEC).
 - Reference acoustic pressure 0 dB = 20 µPa
 - If the sound is measured under actual installation 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



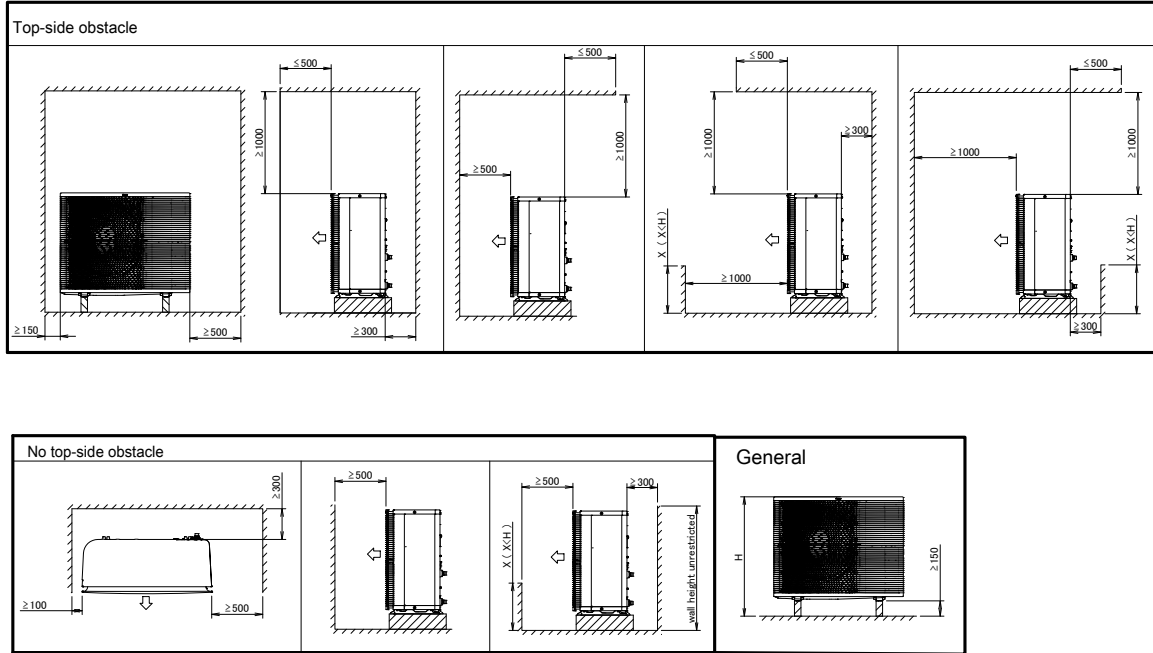
10 Installation

10 - 1 Installation Method

10

EPRA08-12EV
EPRA08-12EW

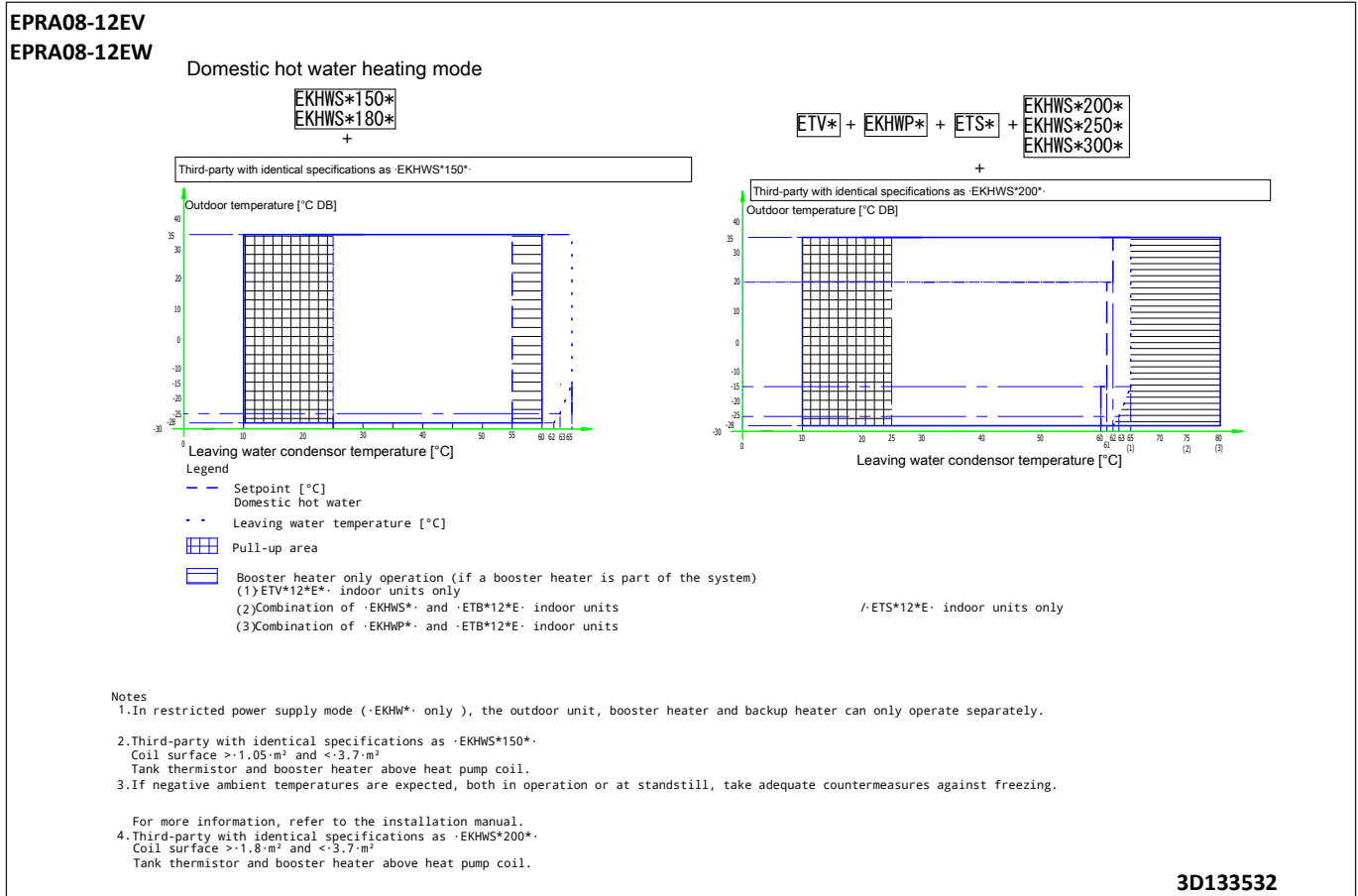
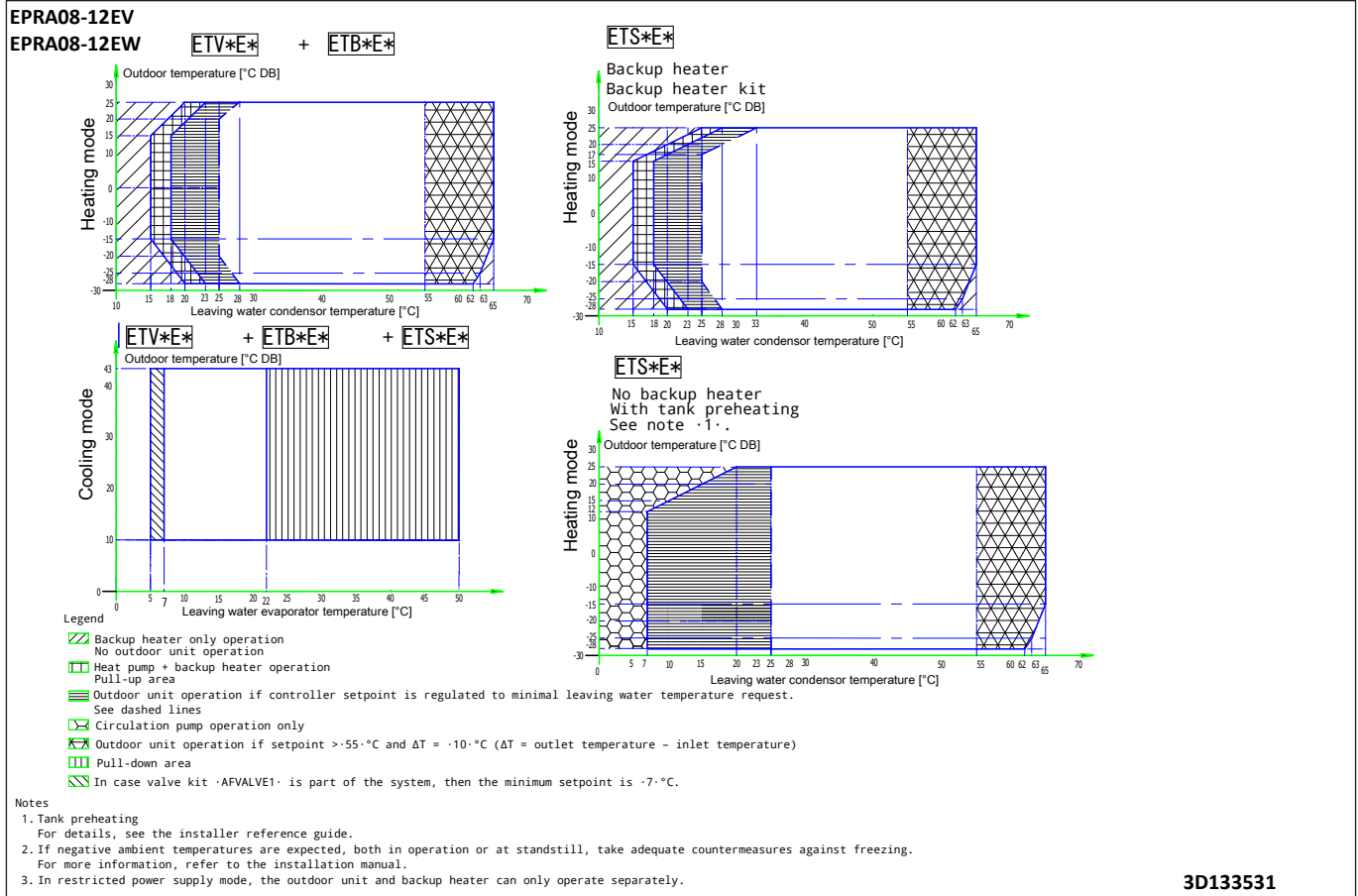
Minimum space for air passage

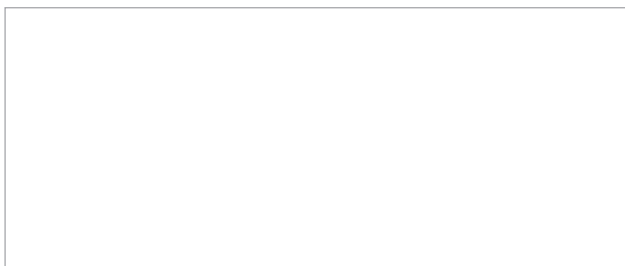


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11 Operation range

11 - 1 Operation Range





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