

2 Specifications

CONNECTABLE INDOOR UNITS					1	2	3
2-1 Capacity and Power input							
Space heating	Average climate water outlet 55°C	General	Annual energy consumption	kWh	7,320	9,010	10,300
			ηs (Seasonal space heating efficiency)	%	115	116	117
			Prated at -10°C	kW	10.5	13.0	15.0
			SCOP		2.96	2.98	3.01
			Seasonal space heating eff. class		A+		
		A Condition (-7°CDB/-8°CWB)	Cdh (Degradation heating)		1.00		
			COPd		2.25	2.15	2.11
			Pdh	kW	9.36	11.4	12.1
			PERd	%	90.0	86.0	84.4
		B Condition (2°CDB/1°CWB)	Cdh (Degradation heating)		0.970	1.00	
			COPd		3.06	3.02	3.01
			Pdh	kW	6.22	7.61	8.54
			PERd	%	122	121	120
		C Condition (7°CDB/6°CWB)	Cdh (Degradation heating)		0.950	1.00	
			COPd		3.90	3.97	4.26
			Pdh	kW	4.54	4.53	5.39
			PERd	%	156	159	170
		D Condition (12°CDB/11°CWB)	Cdh (Degradation heating)		0.940		
			COPd		4.67		
			Pdh	kW	4.68		
			PERd	%	187		
		Tol (temperature operating limit)	COPd		2.02		2.01
			Pdh	kW	10.5	11.6	11.9
			PERd	%	80.8		80.4
	TOL		°C	-10.0			
	WTOL		°C	55.0			
	Rated heat output supplementary capacity	Psup (at Tdesign -10°C)	kW	0.00	1.40	3.10	
		Tbiv (bivalent temperature)	COPd		2.02	2.15	2.16
Pdh	kW		10.5	11.4	12.6		
Tbiv	°C		-10.0	-7.00	-6.00		
Cold climate water outlet 55°C	General	Annual energy consumption	kWh	10,200	12,700	13,600	
		ηs (Seasonal space heating efficiency)	%	95.0	94.0	93.0	
		Prated at -22°C	kW	10.5	12.9	13.7	

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Space heating	Warm climate water outlet 55°C	General	Annual energy consumption	kWh	4,520	5,490	6,200		
			η_s (Seasonal space heating efficiency)	%	110	114			
			Prated at 2°C	kW	9.50	12.1	13.4		
		B Condition (2°CDB/1°CWB)	Cd _h (Degradation heating)		1.00				
			COP _d		2.67	2.56	2.42		
			Pd _h	kW	9.54	12.1	13.4		
			PER _d	%	107	102	96.8		
		C Condition (7°CDB/6°CWB)	Cd _h (Degradation heating)		0.968	1.00			
			COP _d		4.13	4.03	3.86		
			Pd _h	kW	7.71	7.55	8.44		
			PER _d	%	165	161	154		
		D Condition (12°CDB/11°CWB)	Cd _h (Degradation heating)		0.964				
			COP _d		2.89				
	Pd _h		kW	4.80					
	PER _d		%	116					
	Tbiv (bivalent temperature)	COP _d		2.67	2.49	2.42			
		Pd _h	kW	9.54	12.0	13.4			
		PER _d	%	107	99.6	96.8			
		Tbiv	°C	2.00					
	Average climate water outlet 35°C	General	SCOP		2.70	2.81	2.88		
Annual energy consumption			kWh	7,740	9,590	10,800			
η_s (Seasonal space heating efficiency)			%	105	110	112			
Prated at -10°C			kW	11.0	14.0	16.0			
Seasonal space heating eff. class			C		B				
A Condition (-7°CDB/-8°CWB)		COP _d		2.17	2.46	2.45			
		Pd _h	kW	9.47	11.5	12.4			
		PER _d	%	86.8	98.4	98.0			
B Condition (2°CDB/1°CWB)		Cd _h (Degradation heating)		1.00					
		COP _d		2.83	2.82	2.94			
		Pd _h	kW	6.60	7.54	8.62			
		PER _d	%	113		118			
C Condition (7°CDB/6°CWB)		Cd _h (Degradation heating)		1.00					
		COP _d		3.84					
		Pd _h	kW	8.03					
		PER _d	%	154					
D Condition (12°CDB/11°CWB)		Cd _h (Degradation heating)		1.00					
		COP _d		4.29					
		Pd _h	kW	8.05					
		PER _d	%	172					
Tol (temperature operating limit)	COP _d		2.07	2.39	2.38				
	Pd _h	kW	9.58	11.4	12.0				
	PER _d	%	82.8	95.6	95.2				
	TOL	°C	-10.0						
	WTOL	°C	35.0						
Tbiv (bivalent temperature)	COP _d		2.17	2.54	2.52				
	Pd _h	kW	9.47	11.5	12.6				
	PER _d	%	86.8	102	101				
	Tbiv	°C	-7.00	-5.00					
Rated heat output supplementary capacity	Psup (at T _{design} -10°C)	kW	1.42	2.59	3.99				

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CONNECTABLE INDOOR UNITS							
Space heating	Cold climate water outlet 35°C	General	Annual energy consumption	kWh	10,400	11,900	13,500
			ηs (Seasonal space heating efficiency)	%	93.0	96.0	97.0
			Prated at -22°C	kW	10.6	12.4	14.2
			Qhe Annual energy consumption (GCV)	Gj	37.3	42.9	48.7
Space heating	Warm climate water outlet 35°C	General	Annual energy consumption	kWh	3,900	4,710	5,410
			ηs (Seasonal space heating efficiency)	%	120	130	132
			Prated at 2°C	kW	11.0	13.9	15.9
Space heating general	Air to water unit	Rated airflow (outdoor)		m³/h	6,360		
	Other	Capacity control			Inverter		
		Cdh (Degradation heating)			1.00		
		Pck (Crankcase heater mode)		kW	0.055		
		Poff (Off mode)		kW	0.055		
		Psb (Standby mode)		kW	0.055		
	Pto (Thermostat off)		kW	0.059			
Integrated supplementary heater	NOx emission		mg/kWh	0.00			
Domestic hot water heating	Average climate	ηwh (water heating efficiency)	%	-			
	Cold climate	ηwh (water heating efficiency)	%	-			
	Warm climate	ηwh (water heating efficiency)	%	-			
Heating capacity	Nom.		kW	11.3 (1) / 11.0 (2) / 11.2 (3)	14.5 (1) / 14.0 (2) / 14.4 (3)	16.0 (1) / 16.0 (2) / 16.0 (3)	
Power input	Heating	Nom.	kW	3.80 (1) / 4.40 (2) / 2.67 (3)	5.02 (1) / 5.65 (2) / 3.87 (3)	5.86 (1) / 6.65 (2) / 4.31 (3)	
COP					2.97 (1) / 2.50 (2) / 4.20 (3)	2.89 (1) / 2.48 (2) / 3.72 (3)	2.73 (1) / 2.41 (2) / 3.72 (3)
General	Supplier/Manufacturer details	Name and address					
		Name or trademark					
	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			No		
Water-to-water heat pump			No				
LW(A) Sound power level (according to EN14825)	Indoor		dB(A)	59.0	60.0		
	Outdoor		dB(A)	68.0	69.0	71.0	
Sound condition Ecodesign and energy label				Sound power in heating mode, measured according to the EN12102 under conditions of the EN14825			

Notes

(1) EW 55°C; LW 65°C; Dt 10°C; ambient conditions: 7°CDB/6°CWB

(2) EW 70°C; LW 80°C; Dt 10°C; ambient conditions: 7°CDB/6°CWB

(3) EW 30°C; LW 35°C; Dt 5°C; ambient conditions: 7°CDB/6°CWB

