

AIR-TO-WATER HEAT PUMPS



# SHERPA MONOBLOC

[S2E]

Size	<b>6, 8, 10, 12, 14, 16, 12T, 14T</b>
Energy class	<b>A+++</b>
Type	<b>monobloc</b>
Refrigerant	<b>R32</b>
DHW Temperature	<b>60°C</b>



### Compact single-fan unit

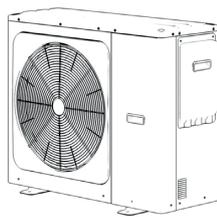
Compact heat pump with particularly small dimensions: all power sizes have the same dimensions (footprint 104x42 cm) and a single fan unit (86 cm high), making it suitable for any renovation or new-build application.

### Cascade management

Up to 6 units (of the same size) can be connected to make up a system with power up to 96 kW. The system consists of 1 master and 5 slaves, and only the master unit can produce domestic hot water.

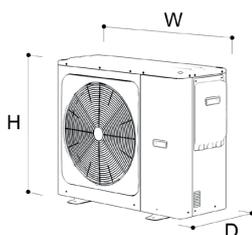


### LAYOUT



- Twin Rotary DC Compressor
- Electronic expansion valve
- Fan with Brushless DC Motors
- External air probe integrated with the machine
- Circulation pump
- DHW boiler probe supplied as standard

## DIMENSIONS AND WEIGHT



		6	8	10	12	14	16	12T	14T
W	mm	1040	1040	1040	1040	1040	1040	1040	1040
H	mm	865	865	865	865	865	865	865	865
D	mm	523	523	523	523	523	523	523	523
WEIGHT	kg	87	87	87	106	106	106	120	120

## COMPATIBLE ACCESSORIES

CATEGORY	ACCESSORY CODE	DESCRIPTION	COMPATIBILITY
HY- DRAU- LICS	B0916	Kit 3-way valve for DHW	○
STORAGE TANKS	01804	HE 200 L storage tank	○
	01805	HE 300 L storage tank	○
	01806	HES 300 L solar storage tank	○
	01807	Hybride boiler HY 300 L	○
	01808	HYS 300 L solar hybrid storage tank	○
RESISTANCES	B0618	Resistance for boiler 2 kW	○
	B0666	Resistance for boiler 3 kW	○
	B0617	Resistance flange kit	○
STORAGE TANKS	01199	Thermal accumulation 50 L	○
	01200	Thermal accumulation 100 L	○
SER- VICES	AV001	Heat pump startup	○

- Standard accessory; ○ Optional accessory; - Incompatible accessory

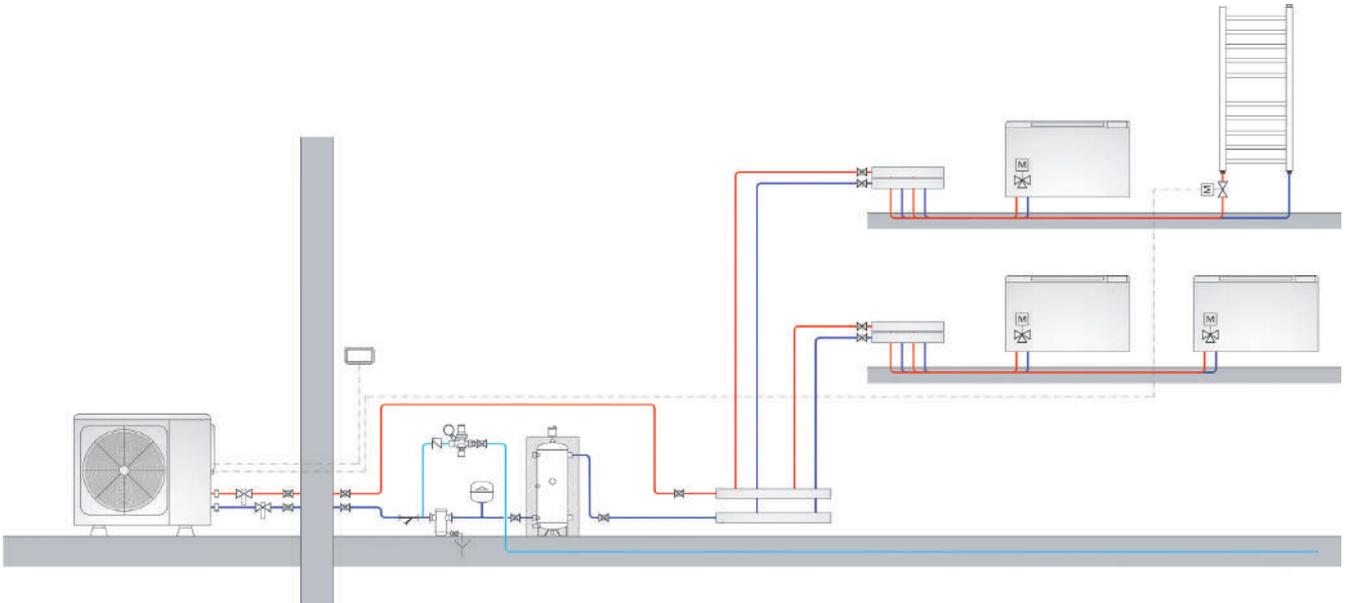
When compatibility is only possible with certain sizes or models, the information is given in the table. Accessory description available at end of chapter.



## SYSTEM DIAGRAMS

### WITHOUT SOLAR THERMAL SYSTEM AND INTEGRATED INERTIAL BUFFER TANK

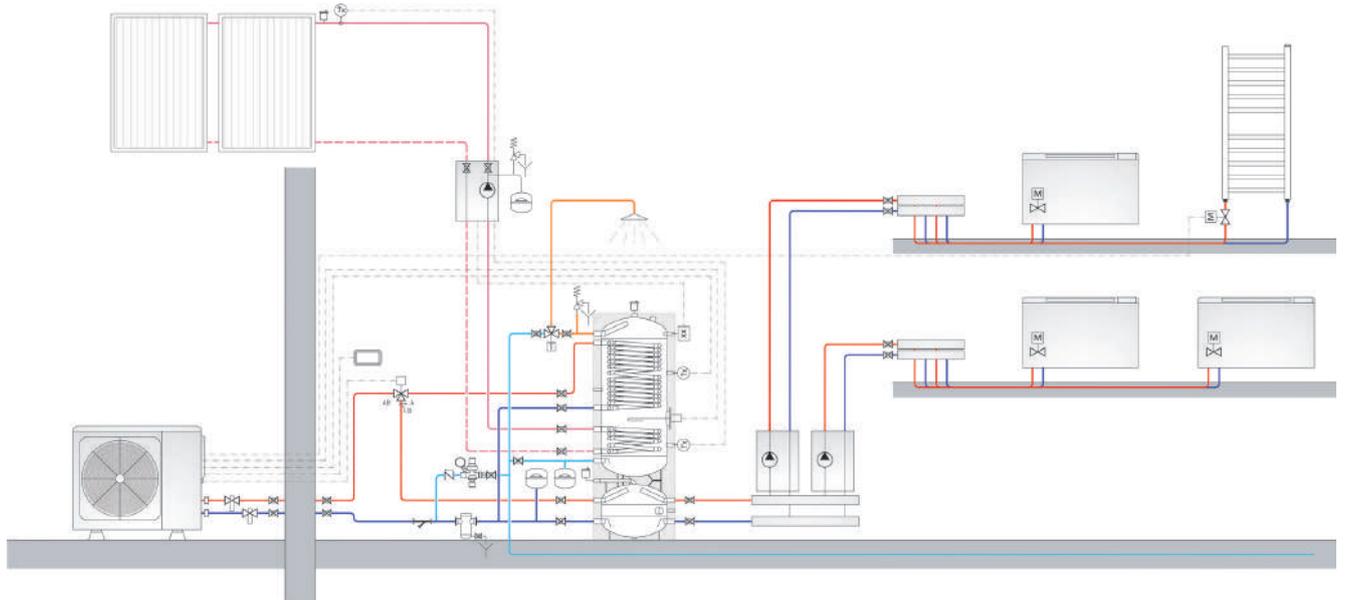
Monobloc heat pump (heating and air conditioning) and Bi2 SLR fan coil radiator terminals with 3-way valves and inertial buffer tank installed in series on the return line of the air conditioning system.



Schematic diagram, refer to the installation manual. In particular, the water filtration and treatment system is not shown.

### WITH SOLAR THERMAL AND INTEGRATED INERTIAL BUFFER TANK

Monobloc heat pump (heating and air conditioning; DHW production) Bi2 SLR fan coil radiator terminals; DHW integration with solar thermal system and integrated inertial buffer tank (used as a hydraulic separator) for the air conditioning system.



Schematic diagram, refer to the installation manual. In particular, the water filtration and treatment system is not shown.

TECHNICAL DATA				6			8			10						
				Product code				02303			02304			02305		
				Compressor frequency				Minimum	Nominal	Maximum	Minimum	Nominal	Maximum	Minimum	Nominal	Maximum
PUNCTUAL PERFORMANCE	Heating power	a7/6 - w30/35	(a)	kW	-	6,5	8,47	-	8,4	9,56	-	10	11,16			
	COP	a7/6 - w30/35	(a)	W/W	-	5,3	-	-	5,05	-	-	4,7	-			
	Heating power	a2/1 - w30/35	(a)	kW	-	5,6	7,64	-	7,1	8,52	-	8,2	9,94			
	COP	a2/1 - w30/35	(a)	W/W	-	4,2	-	-	3,95	-	-	3,8	-			
	Heating power	a-7/-8 - w30/35	(a)	kW	-	6,2	6,67	-	7,1	7,65	-	8	8,4			
	COP	a-7/-8 - w30/35	(a)	W/W	-	3,2	-	-	3,15	-	-	3	-			
	Heating power	a-15/-16 - w30/35	(a)	kW	-	5,59	5,59	-	6,07	6,07	-	6,48	6,48			
	COP	a-15/-16 - w30/35	(a)	W/W	-	2,58	-	-	2,54	-	-	2,5	-			
	Heating power (fancoils)	a7/6 - w40/45	(a)	kW	-	6,6	8,14	-	8,5	9,28	-	10,2	10,87			
	COP (fancoils)	a7/6 - w40/45	(a)	W/W	-	4	-	-	3,8	-	-	3,65	-			
	Heating power (fancoils)	a2/1 - w40/45	(a)	kW	-	6,5	7,03	-	7,5	8,22	-	8,5	9,42			
	COP (fancoils)	a2/1 - w40/45	(a)	W/W	-	3,15	-	-	3,05	-	-	2,95	-			
	Heating power (fancoils)	a-7/-8 - w40/45	(a)	kW	-	6,1	6,47	-	6,8	7,43	-	7,4	8,16			
	COP (fancoils)	a-7/-8 - w40/45	(a)	W/W	-	2,6	-	-	2,5	-	-	2,4	-			
	Heating power (fancoils)	a-15/-16 - w40/45	(a)	kW	-	5,45	5,45	-	5,92	5,92	-	6,33	6,33			
	COP (fancoils)	a-15/-16 - w40/45	(a)	W/W	-	2,23	-	-	2,2	-	-	2,14	-			
	Cooling power	a35 - w23/18	(a)	kW	-	6,5	9,27	-	8,3	10,31	-	10	10,31			
	EER	a35 - w23/18	(a)	W/W	-	5,1	-	-	4,85	-	-	4,3	-			
Cooling power (fancoils)	a35 - w12/7	(a)	kW	-	5,5	6,84	-	7,4	8,66	-	9	9				
EER (fancoils)	a35 - w12/7	(a)	W/W	-	3,25	-	-	3,15	-	-	2,9	-				
EFFICIENCIES	Energy efficiency class in water heating 35°C	Warmer Climate			A+++			A+++			A+++					
	SCOP	Warmer Climate			6,78			6,94			7,05					
	s (Seasonal efficiency for space heating)	Warmer Climate	ηs %		268,2			274,7			279,1					
	Energy efficiency class in water heating 35°C	Average Climate			A+++			A+++			A+++					
	SCOP	Average Climate			5,12			5,17			5,12					
	s (Seasonal efficiency for space heating)	Average Climate	ηs %		201,8			204			201,9					
	Energy efficiency class in water heating 35°C	Cold Climate			A+++			A+++			A+++					
	SCOP	Cold Climate			4,41			4,44			4,44					
	s (Seasonal efficiency for space heating)	Cold Climate	ηs %		173,4			174,6			174,6					
	Energy efficiency class in water heating 55°C	Warmer Climate			A++			A++			A++					
	SCOP	Warmer Climate			4,35			4,71			4,91					
	s (Seasonal efficiency for space heating)	Warmer Climate	ηs %		170,9			185,3			193,4					
	Energy efficiency class in water heating 55°C	Average Climate			A++			A++			A++					
	SCOP	Average Climate			3,59			3,67			3,71					
	s (Seasonal efficiency for space heating)	Average Climate	ηs %		140,7			143,6			145,5					
Energy efficiency class in water heating 55°C	Cold Climate			A++			A++			A++						
SCOP	Cold Climate			2,9			3,02			3,14						
s (Seasonal efficiency for space heating)	Cold Climate	ηs %		113,1			117,7			122,4						
NOISE LEVEL	Outdoor unit sound power (nominal)			dB(A)	60			63			65					
	Outdoor unit sound pressure (nominal)		(b)	dB(A)	48			51			53					
ELECTRICAL DATA	System circulator absorption			W	4-95			4-95			4-95					
	Outdoor unit power supply			V/ph/Hz	220-240/1/50			220-240/1/50			220-240/1/50					
	Outdoor unit maximum absorbed current			A	13			14,5			16					
	Outdoor unit maximum absorbed power			kW	3,2			3,5			3,8					
COOLING CIRCUIT	Compressor type				Twin Rotary			Twin Rotary			Twin Rotary					
	Refrigerant gas		(c)		R32			R32			R32					
	Global warming potential			GWP	675			675			675					
HYDRAULIC DATA	Refrigerant gas charge			kg	1,25			1,25			1,25					
	Hydraulic connections			"	G1 BSP			G1 BSP			G1 BSP					
	Capacity of expansion vessel			l	5			5			5					

(a) aX/Y indicates air temperature (dry bulb X / wet bulb Y) - wA/B indicates water temperature (A inlet / B outlet).

(b) Sound pressure values measured at a distance of 1 m in a semi-anechoic chamber

(c) Airtightly sealed equipment containing fluorinated GAS  
Energy efficiency classes refer to a range between A+++ and D.

TECHNICAL DATA					12			14			16		
					02306			02307			02308		
Product code					Minimum	Nominal	Maximum	Minimum	Nominal	Maximum	Minimum	Nominal	Maximum
Compressor frequency					Minimum	Nominal	Maximum	Minimum	Nominal	Maximum	Minimum	Nominal	Maximum
PUNCTUAL PERFORMANCE	Heating power	a7/6 - w30/35	(a)	kW	-	12,2	13,42	-	14,1	15,27	-	16	18,23
	COP	a7/6 - w30/35	(a)	W/W	-	4,9	-	-	4,7	-	-	4,5	-
	Heating power	a2/1 - w30/35	(a)	kW	-	12,3	12,3	-	13	13,56	-	14,5	14,76
	COP	a2/1 - w30/35	(a)	W/W	-	3,6	-	-	3,5	-	-	3,25	-
	Heating power	a-7/-8 - w30/35	(a)	kW	-	11,6	12,1	-	12,5	13,2	-	13,5	14,1
	COP	a-7/-8 - w30/35	(a)	W/W	-	2,85	-	-	2,8	-	-	2,7	-
	Heating power	a-15/-16 - w30/35	(a)	kW	-	10,35	10,35	-	11,22	11,22	-	11,82	11,82
	COP	a-15/-16 - w30/35	(a)	W/W	-	2,39	-	-	2,35	-	-	2,22	-
	Heating power (fancoils)	a7/6 - w40/45	(a)	kW	-	12,5	13,14	-	14,5	14,87	-	16,2	18,07
	COP (fancoils)	a7/6 - w40/45	(a)	W/W	-	3,7	-	-	3,55	-	-	3,45	-
	Heating power (fancoils)	a2/1 - w40/45	(a)	kW	-	12	12	-	13	13,28	-	14,3	14,74
	COP (fancoils)	a2/1 - w40/45	(a)	W/W	-	2,9	-	-	2,8	-	-	2,7	-
	Heating power (fancoils)	a-7/-8 - w40/45	(a)	kW	-	11,5	11,5	-	12,5	12,5	-	13,5	13,5
	COP (fancoils)	a-7/-8 - w40/45	(a)	W/W	-	2,4	-	-	2,3	-	-	2,25	-
	Heating power (fancoils)	a-15/-16 - w40/45	(a)	kW	-	9,62	9,62	-	10,3	10,3	-	10,96	10,96
	COP (fancoils)	a-15/-16 - w40/45	(a)	W/W	-	2,11	-	-	2,07	-	-	1,98	-
	Cooling power	a35 - w23/18	(a)	kW	-	12,2	16,11	-	13,9	17,13	-	15,4	17,13
	EER	a35 - w23/18	(a)	W/W	-	4,6	-	-	4,4	-	-	4,2	-
Cooling power (fancoils)	a35 - w12/7	(a)	kW	-	11,6	13,44	-	13,4	15,48	-	14	16,01	
EER (fancoils)	a35 - w12/7	(a)	W/W	-	3,1	-	-	2,93	-	-	2,9	-	
EFFICIENCIES	Energy efficiency class in water heating 35°C	Warmer Climate			A+++			A+++			A+++		
	SCOP	Warmer Climate			6,63			6,59			6,46		
	s (Seasonal efficiency for space heating)	Warmer Climate	ηs %		262,3			260,5			255,4		
	Energy efficiency class in water heating 35°C	Average Climate			A+++			A+++			A+++		
	SCOP	Average Climate			5,08			4,89			4,84		
	s (Seasonal efficiency for space heating)	Average Climate	ηs %		200,1			192,5			190,5		
	Energy efficiency class in water heating 35°C	Cold Climate			A+++			A+++			A+++		
	SCOP	Cold Climate			4,3			4,36			4,35		
	s (Seasonal efficiency for space heating)	Cold Climate	ηs %		168,8			171,3			170,9		
	Energy efficiency class in water heating 55°C	Warmer Climate			A++			A++			A++		
	SCOP	Warmer Climate			4,55			4,69			4,68		
	s (Seasonal efficiency for space heating)	Warmer Climate	ηs %		179			184,6			184		
	Energy efficiency class in water heating 55°C	Average Climate			A++			A++			A++		
	SCOP	Average Climate			3,62			3,62			3,59		
	s (Seasonal efficiency for space heating)	Average Climate	ηs %		141,6			141,8			140,6		
Energy efficiency class in water heating 55°C	Cold Climate			A++			A++			A++			
SCOP	Cold Climate			3,23			3,24			3,18			
s (Seasonal efficiency for space heating)	Cold Climate	ηs %		126			126,6			124,3			
NOISE LEVEL	Outdoor unit sound power (nominal)			dB(A)	70			72			72		
	Outdoor unit sound pressure (nominal)		(b)	dB(A)	56			58			58		
ELECTRICAL DATA	System circulator absorption			W	4-95			4-95			4-95		
	Outdoor unit power supply			V/ph/Hz	220-240/1/50			220-240/1/50			220-240/1/50		
	Outdoor unit maximum absorbed current			A	25			26,5			28		
	Outdoor unit maximum absorbed power			kW	5,8			6,2			6,6		
COOLING CIRCUIT	Compressor type				Twin Rotary			Twin Rotary			Twin Rotary		
	Refrigerant gas		(c)		R32			R32			R32		
	Global warming potential			GWP	675			675			675		
HYDRAULIC DATA	Refrigerant gas charge			kg	1,8			1,8			1,8		
	Hydraulic connections			"	G5/4 BSP			G5/4 BSP			G5/4 BSP		
	Capacity of expansion vessel			l	5			5			5		

(a) aX/Y indicates air temperature (dry bulb X / wet bulb Y) - wA/B indicates water temperature (A inlet / B outlet).  
 (b) Sound pressure values measured at a distance of 1 m in a semi-anechoic chamber

(c) Airtightly sealed equipment containing fluorinated GAS  
 Energy efficiency classes refer to a range between A+++ and D.

TECHNICAL DATA					12T			14T					
					02309			02310					
Product code					Minimum			Nominal			Maximum		
Compressor frequency					Minimum			Nominal			Maximum		
PUNCTUAL PERFORMANCE	Heating power	a7/6 - w30/35	(a)	kW	-	12,2	13,42	-	14,1	15,27			
	COP	a7/6 - w30/35	(a)	W/W	-	4,9	-	-	4,7	-			
	Heating power	a2/1 - w30/35	(a)	kW	-	12,3	12,3	-	13	13,56			
	COP	a2/1 - w30/35	(a)	W/W	-	3,6	-	-	3,5	-			
	Heating power	a-7/-8 - w30/35	(a)	kW	-	11,6	12,1	-	12,5	13,2			
	COP	a-7/-8 - w30/35	(a)	W/W	-	2,85	-	-	2,8	-			
	Heating power	a-15/-16 - w30/35	(a)	kW	-	10,35	10,35	-	11,22	11,22			
	COP	a-15/-16 - w30/35	(a)	W/W	-	2,39	-	-	2,35	-			
	Heating power (fancoils)	a7/6 - w40/45	(a)	kW	-	12,5	13,14	-	14,5	14,87			
	COP (fancoils)	a7/6 - w40/45	(a)	W/W	-	3,7	-	-	3,55	-			
	Heating power (fancoils)	a2/1 - w40/45	(a)	kW	-	12	12	-	13	13,28			
	COP (fancoils)	a2/1 - w40/45	(a)	W/W	-	2,9	-	-	2,8	-			
	Heating power (fancoils)	a-7/-8 - w40/45	(a)	kW	-	11,5	11,5	-	12,5	12,5			
	COP (fancoils)	a-7/-8 - w40/45	(a)	W/W	-	2,4	-	-	2,3	-			
	Heating power (fancoils)	a-15/-16 - w40/45	(a)	kW	-	9,62	9,62	-	10,3	10,3			
	COP (fancoils)	a-15/-16 - w40/45	(a)	W/W	-	2,11	-	-	2,07	-			
	Cooling power	a35 - w23/18	(a)	kW	-	12,2	16,11	-	13,9	17,13			
	EER	a35 - w23/18	(a)	W/W	-	4,6	-	-	4,4	-			
Cooling power (fancoils)	a35 - w12/7	(a)	kW	-	11,6	13,44	-	13,4	15,48				
EER (fancoils)	a35 - w12/7	(a)	W/W	-	3,1	-	-	2,93	-				
EFFICIENCIES	Energy efficiency class in water heating 35°C	Warmer Climate				A+++			A+++				
	SCOP	Warmer Climate				6,64			6,59				
	s (Seasonal efficiency for space heating)	Warmer Climate		ηs %		262,5			260,6				
	Energy efficiency class in water heating 35°C	Average Climate				A+++			A+++				
	SCOP	Average Climate				5,08			4,89				
	s (Seasonal efficiency for space heating)	Average Climate		ηs %		200,2			192,5				
	Energy efficiency class in water heating 35°C	Cold Climate				A+++			A+++				
	SCOP	Cold Climate				4,3			4,36				
	s (Seasonal efficiency for space heating)	Cold Climate		ηs %		168,8			171,3				
	Energy efficiency class in water heating 55°C	Warmer Climate				A++			A++				
	SCOP	Warmer Climate				4,55			4,69				
	s (Seasonal efficiency for space heating)	Warmer Climate		ηs %		179			184,6				
	Energy efficiency class in water heating 55°C	Average Climate				A++			A++				
	SCOP	Average Climate				3,62			3,62				
	s (Seasonal efficiency for space heating)	Average Climate		ηs %		141,6			141,8				
Energy efficiency class in water heating 55°C	Cold Climate				A++			A++					
SCOP	Cold Climate				3,23			3,24					
s (Seasonal efficiency for space heating)	Cold Climate		ηs %		126			126,6					
NOISE LEVEL	Outdoor unit sound power (nominal)			dB(A)		70			72				
	Outdoor unit sound pressure (nominal)		(b)	dB(A)		57			59				
ELECTRICAL DATA	System circulator absorption			W		4-95			4-95				
	Outdoor unit power supply			V/ph/Hz		380-415/3/50			380-415/3/50				
	Outdoor unit maximum absorbed current			A		9,5			10,5				
	Outdoor unit maximum absorbed power			kW		5,8			6,2				
COOLING CIRCUIT	Compressor type					Twin Rotary			Twin Rotary				
	Refrigerant gas		(c)			R32			R32				
	Global warming potential			GWP		675			675				
HYDRAULIC DATA	Refrigerant gas charge			kg		1,8			1,8				
	Hydraulic connections			"		G5/4 BSP			G5/4 BSP				
	Capacity of expansion vessel			l		5			5				

(a) aX/Y indicates air temperature (dry bulb X / wet bulb Y) - wA/B indicates water temperature (A inlet / B outlet).

(b) Sound pressure values measured at a distance of 1 m in a semi-anechoic chamber

(c) Airtightlly sealed equipment containing fluorinated GAS  
Energy efficiency classes refer to a range between A+++ and D.