

NEW

SHERPA S3



Compatible with:
SIOS
CONTROL

Traditional split heat pumps, suspended and tower versions



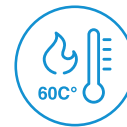
COMPACT TECHNOLOGY

The engineering of the components and the reduced shapes allow it to be installed inside a kitchen cabinet.



DOMESTIC HOT WATER UP TO 60°C

Sherpa supplies Domestic Hot Water with temperatures up to 60°C.



LOW GWP GAS

All power sizes use the R32 refrigerant, characterised by greater efficiency and a greenhouse effect reduced by almost 70% (compared to R410A).



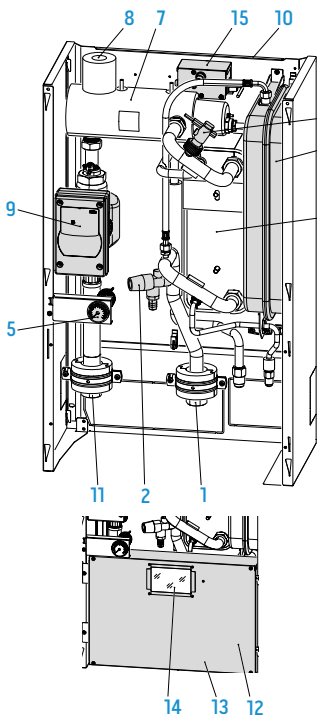
FEATURES

- **Inverter air-water heat pump**
- **Energy efficiency class** in average climate heating up to: A+++ (35°C) and A++ (55°C)
- **Powers available:** 10 powers with refrigerant R32 single-phase (4-6-8-10-12-14-16 kW) and three-phase (12-14-16 kW).
- **Supplies DHW** with temperature up to 60° C.
- **DHW management:** Sherpa is used to manage Domestic Hot Water with extreme flexibility through two management modes: water probe inserted in the storage tank or thermostat contact of the storage tank.
- **Climatic curves** based on the external air temperature:
 - two curves available, one for cooling and one for heating.
 - The climatic curves allow the temperature of the system to be varied according to the external climatic conditions, adjusting the heat input to the building's thermal needs, in order to obtain energy savings.
- **Two configurable** cooling set points, **Three set points** configurable in heating mode (one of which for DHW): the set points can also be selected from a remote contact.
- **Standard double-stage electric heating elements:** configurable as single or double-stage can be activated to support the heat pump, with checking, via the electronic control, of the actual thermal output of the heat pump. Each stage is activated according to the actual need for thermal power, in order to optimise electricity consumption.
- **Daily holiday** and weekly programmer: heating/cooling, DHW, night..
- **Complete management** of anti-legionella cycles
- **R32* refrigerant gas**
- **Storage tank 200 L high efficiency** (tower version only).
- **Components included** (tower version only): system filling valve, 3-way valve.
- **Optional kit** (tower version only): thermostatic mixer and DHW expansion tank.
- **Operating limits:** down to -25°C, + 43°C (see technical manuals for details).

* Equipment not hermetically sealed containing fluorinated gases with an equivalent GWP of 675 (R32)



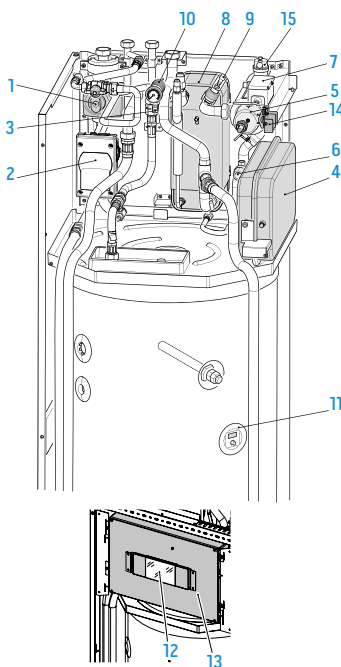
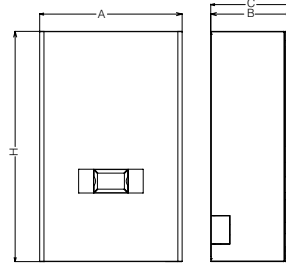
LAYOUT, DIMENSIONS, WEIGHT



1. Water inlet
2. 3 bar safety valve
3. Plate heat exchanger
4. Flow switch
5. Pressure gauge
6. Expansion tank
7. Electric heating element manifold
8. Automatic vent valve
9. Water pump
10. Support for wall installation
11. System water outlet
12. Electrical panel covers
13. Electrical panel assembly
14. Touch screen display
15. Manual reset electric heating element safety thermostat

Suspended indoor units

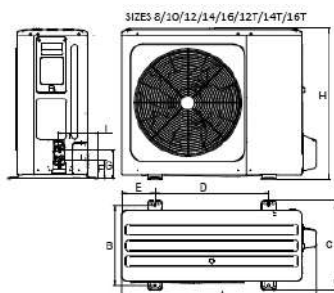
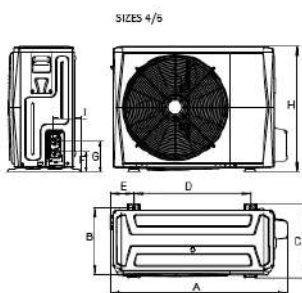
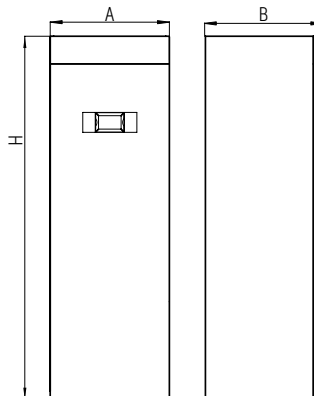
		4	6	8	10	12	14	16	12T	14T	16T
		SMALL					BIG				
A	mm	500	500	500	500	500	500	500	500	500	500
B	mm	280	280	280	280	280	280	280	280	280	280
C	mm	296	296	296	296	296	296	296	296	296	296
H	mm	810	810	810	810	810	810	810	810	810	810
Weight	kg	36	36	36	36	36	36	36	36	36	36



1. 3-way valve
2. Air conditioner circuit circulation pump
3. Safety valves
4. Air conditioner circuit expansion tank
5. Post-heating electric heating element manifold
6. Safety valves air conditioner circuit 3 bar
7. Electric heating elements safety thermostats
8. Air conditioner circuit heat exchanger
9. Flow switches
10. Air conditioning circuit pressure gauge
11. Anode tester
12. Touchscreen display
13. Electrical panel assembly
14. Cable clamp
15. Automatic air vent valves

Tower indoor units

		4	6	8	10	12	14	16	12T	14T	16T
		SMALL					BIG				
A	mm	600	600	600	600	600	600	600	600	600	600
B	mm	600	600	600	600	600	600	600	600	600	600
H	mm	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980
Weight	kg	183	183	183	183	183	183	183	183	183	183



Outdoor units

		4	6	8	10	12	14	16	12T	14T	16T
A	mm	1008	1008	1118	1118	1118	1118	1118	1118	1118	1118
B	mm	375	375	456	456	456	456	456	456	456	456
C	mm	426	426	523	523	523	523	523	523	523	523
D	mm	663	663	656	656	656	656	656	656	656	656
E	mm	134	134	191	191	191	191	191	191	191	191
F	mm	110	110	110	110	110	110	110	110	110	110
G	mm	170	170	170	170	170	170	170	170	170	170
H	mm	712	712	865	865	865	865	865	865	865	865
I	mm	160	160	230	230	230	230	230	230	230	230
Weight	kg	58	58	77	77	96	96	96	112	112	112

SINGLE-PHASE R32 TECHNICAL DATA

				4			6			8			10				
ODU Sherpa S3 E				02284			02285			02286			02287				
IDU Sherpa S3 E				02294			02294			02294			02294				
IDU Sherpa Tower S3 E				02300			02300			02300			02300				
Compressor frequency				Minimum Nominal Maximum			Minimum Nominal Maximum			Minimum Nominal Maximum			Minimum Nominal Maximum				
PUNCTUAL PERFORMANCE	Heating power	a7/6 - w30/35	(a)	kW	2,42	4,25	5,66	3,53	6,20	8,26	4,73	8,30	11,05	5,70	10,0	13,32	
	COP	a7/6 - w30/35	(a)	W/W	-	5,15	-	-	5,00	-	-	5,20	-	-	5,00	-	
	Heating power	a2/1 - w30/35	(b)	kW	2,54	4,45	5,93	3,13	5,50	7,32	4,05	7,10	9,46	4,67	8,20	10,92	
	COP	a2/1 - w30/35	(b)	W/W	-	4,05	-	-	3,95	-	-	4,10	-	-	4,05	-	
	Heating power	a-7/8 - w30/35	(c)	kW	2,74	4,80	6,39	3,48	6,10	8,12	4,05	7,10	9,46	4,70	8,25	10,99	
	COP	a-7/8 - w30/35	(c)	W/W	-	3,15	-	-	3,05	-	-	3,25	-	-	3,15	-	
	Heating power	a-15/-16 - w30/35	(d)	kW	1,75	3,07	4,09	2,15	3,77	5,02	3,31	5,80	7,72	3,48	6,10	8,12	
	COP	a-15/-16 - w30/35	(d)	W/W	-	2,88	-	-	2,83	-	-	2,98	-	-	3,01	-	
	Heating power (fancoils)	a7/6 - w40/45	(f)	kW	2,48	4,35	5,79	3,62	6,35	8,46	4,67	8,20	10,92	5,70	10,00	13,32	
	COP (fancoils)	a7/6 - w40/45	(f)	W/W	-	3,80	-	-	3,75	-	-	3,95	-	-	3,80	-	
	Heating power (fancoils)	a2/1 - w40/45	(g)	kW	2,91	5,10	6,79	3,31	5,80	7,72	4,22	7,40	9,86	4,47	7,85	10,45	
	COP (fancoils)	a2/1 - w40/45	(g)	W/W	-	3,00	-	-	3,00	-	-	3,25	-	-	3,20	-	
	Heating power (fancoils)	a-7/8 - w40/45	(h)	kW	2,45	4,30	5,73	3,08	5,40	7,19	3,76	6,60	8,79	4,19	7,35	9,79	
	COP (fancoils)	a-7/8 - w40/45	(h)	W/W	-	2,35	-	-	2,40	-	-	2,55	-	-	2,55	-	
	Heating power (fancoils)	a-15/-16 - w40/45	(i)	kW	1,52	2,66	3,54	1,86	3,27	4,35	2,87	5,04	6,71	3,03	5,31	7,07	
	COP (fancoils)	a-15/-16 - w40/45	(i)	W/W	-	2,02	-	-	1,98	-	-	2,32	-	-	2,34	-	
	Cooling power	a35 - w23/18	(l)	kW	2,41	4,50	5,52	3,51	6,55	8,03	4,50	8,40	10,30	5,36	10,00	12,27	
	EER	a35 - w23/18	(l)	W/W	-	5,55	-	-	4,90	-	-	5,05	-	-	4,80	-	
	Cooling power (fancoils)	a35 - w12/7	(m)	kW	2,52	4,70	5,77	3,75	7,00	8,59	3,97	7,40	9,08	4,40	8,20	10,06	
	EER (fancoils)	a35 - w12/7	(m)	W/W	-	3,45	-	-	3,00	-	-	3,38	-	-	3,30	-	
	Energy efficiency class in water heating 35°C	Warmer Climate				A+++		A+++		A+++		A+++		A+++			
	SCOP	Warmer Climate				6,46			6,57			6,99			7,09		
	s (Seasonal efficiency for space heating)	Warmer Climate	ηs %			255,4%			259,8%			276,6%			280,5%		
	Energy efficiency class in water heating 35°C	Average Climate				A+++		A+++		A+++		A+++		A+++			
	SCOP	Average Climate				4,85			4,95			5,22			5,20		
	s (Seasonal efficiency for space heating)	Average Climate	ηs %			191,0%			195,0%			205,6%			204,8%		
	Energy efficiency class in water heating 35°C	Cold Climate				A++		A++		A++		A++		A++			
	SCOP	Cold Climate				4,06			4,21			4,33			4,32		
	s (Seasonal efficiency for space heating)	Cold Climate	ηs %			159,5%			165,3%			170,0%			169,8%		
Energy efficiency class in water heating 55°C	Warmer Climate				A+++		A+++		A+++		A+++		A+++				
SCOP	Warmer Climate				4,15			4,21			4,51			4,62			
s (Seasonal efficiency for space heating)	Warmer Climate	ηs %			163,1%			165,4%			177,2%			181,7%			
Energy efficiency class in water heating 55°C	Average Climate				A++		A++		A++		A++		A++				
SCOP	Average Climate				3,31			3,52			3,37			3,47			
s (Seasonal efficiency for space heating)	Average Climate	ηs %			129,5%			137,9%			131,6%			135,7%			
Energy efficiency class in water heating 55°C	Cold Climate				A+		A+		A+		A+		A+				
SCOP	Cold Climate				2,63			2,85			2,88			2,99			
s (Seasonal efficiency for space heating)	Cold Climate	ηs %			102,1%			111,1%			112,1%			116,5%			
Indoor unit sound power (reg. EU 811-2013/UNI EN 12102:2022)				dB(A)	46/40			46/40			46/42			46/42			
Indoor unit sound pressure (reg. EU 811-2013/UNI EN 12102:2022)	(n)	dB(A)			38/32			38/32			38/36			38/36			
Outdoor unit sound power (reg. EU 811-2013/UNI EN 12102:2022)		dB(A)			56/52			58/53			59/54			60/55			
Outdoor unit sound pressure (reg. EU 811-2013/UNI EN 12102:2022)	(o)	dB(A)			36/32			38/33			39/34			40/35			
System circulator absorption		W			3 - 87			3 - 87			3 - 87			3 - 87			
Supply voltage indoor unit		V/ph/Hz			220-240/1/50			220-240/1/50			220-240/1/50			220-240/1/50			
Maximum current absorbed indoor unit with additional active heating elements		A			18,00			18,00			18,00			18,00			
Maximum power absorbed indoor unit with additional active heating elements		kW			4,05			4,05			4,05			4,05			
Additional electric heating elements		kW			1,5+1,5			1,5+1,5			1,5+1,5			1,5+1,5			
Supply voltage outdoor unit		V/ph/Hz			220-240/1/50			220-240/1/50			220-240/1/50			220-240/1/50			
Outdoor unit maximum absorbed current		A			10			11			14			16			
Outdoor unit maximum absorbed power		kW			2,2			2,6			3,3			3,6			
Compressor type					Twin Rotary DC Inverter			Twin Rotary DC Inverter			Twin Rotary DC Inverter			Twin Rotary DC Inverter			
Refrigerant inlet connection diameter		"			1/4"-5/8"			1/4"-5/8"			3/8"-5/8"			3/8"-5/8"			
Coolant gas	(p)				R32			R32			R32			R32			
Global warming potential		GWP			675			675			675			675			
Refrigerant gas charge		kg			1,5			1,5			1,65			1,65			
Additional charge above 15m		g/m			20			20			38			38			
Refrigerant piping length limit	min - max	m			2 - 30			2-30			2 - 30			2 - 30			
Refrigerant piping length limit without minimum surface check according to IEC 60335-2-40:2018	max	(q)	m		30			30			20			20			
Hydraulic connections		"			1"			1"			1"			1"			
Capacity of expansion vessel		l			8			8			8			8			
Load profile according to EN16147					XL			XL			XL			XL			
DHW production energy efficiency class	Average Climate				A+		A+		A+		A+		A+				
η ₁ HW (seasonal production efficiency DHW)	Average Climate	%			125%		125%		125%		123%		123%				
Boiler volume		l			200			200			200			200			
Boiler interior surface material					DD12 glazed steel S235JR			DD12 glazed steel S235JR			DD12 glazed steel S235JR			DD12 glazed steel S235JR			
Heat exchanger in the boiler		m ²			2,4			2,4			2,4			2,4			
Type and thickness of boiler insulation					Hard expanded polyurethane 55 mm			Hard expanded polyurethane 55 mm			Hard expanded polyurethane 55 mm			Hard expanded polyurethane 55 mm			
Specific dispersion		W/K			2			2			2			2			
DHW expansion tank capacity		l			7			7			7			7			
DHW hydraulic connections		"			3/4"			3/4"			3/4"			3/4"			

ONLY FOR SHERPA TOWER

(a) Heating mode, external air temperature 7°C b.s./6°C b.u., inlet/outlet water temperature 30°C/35°C
 (b) Heating mode, external air temperature 2°C b.s./1°C b.u., inlet/outlet water temperature 30°C/35°C
 (c) Heating mode, external air temperature -2°C b.s./-8°C b.u., inlet/outlet water temperature 30°C/35°C
 (d) Heating mode, external air temperature -15°C b.s./-16°C b.u., inlet/outlet water temperature 30°C/35°C
 (f) Heating mode, external air temperature 7°C b.s./6°C b.u., inlet/outlet water temperature 40°C/45°C
 (g) Heating mode, external air temperature 2°C b.s./1°C b.u., inlet/outlet water temperature 40°C/45°C
 (h) Heating mode, external air temperature -7°C b.s./-8°C b.u., inlet/outlet water temperature 40°C/45°C
 (i) Heating mode, external air temperature -15°C b.s./-16°C b.u., inlet/outlet water temperature 40°C/45°C

(l) Cooling mode, external air temperature 35°C, inlet/outlet water temperature 23°C/18°C
 (m) Cooling mode, external air temperature 35°C, inlet/outlet water temperature 12°C/7°C
 (n) Sound pressure values measured at a distance of 1 m in a semi-anechoic chamber
 (o) Sound pressure values measured at a distance of 4 m in free field distance
 (p) Non-airtightly sealed equipment containing fluorinated GAS
 (q) maximum length of the refrigeration pipes beyond which checks on the minimum surface of the installation rooms are necessary, check the technical manual

SINGLE-PHASE R32 TECHNICAL DATA

				12			14			16				
ODU Sherpa S3 E				02288			02289			02290				
IDU Sherpa S3 E				02295			02295			02295				
IDU Sherpa Tower S3 E				02301			02301			02301				
Compressor frequency				Minimum	Nominal	Maximum	Minimum	Nominal	Maximum	Minimum	Nominal	Maximum		
PUNCTUAL PERFORMANCE	Heating power	a7/6 - w30/35	(a)	kW	5,65	12,10	15,79	6,77	14,50	18,92	7,47	16,00	20,88	
	COP	a7/6 - w30/35	(a)	W/W	-	4,95	-	-	4,70	-	-	4,50	-	
	Heating power	a2/1 - w30/35	(b)	kW	4,34	9,30	12,14	5,32	11,40	14,88	6,07	13,00	16,96	
	COP	a2/1 - w30/35	(b)	W/W	-	3,95	-	-	3,65	-	-	3,50	-	
	Heating power	a-7/-8 - w30/35	(c)	kW	4,67	10,00	13,05	5,60	12,00	15,66	6,21	13,3	17,35	
	COP	a-7/-8 - w30/35	(c)	W/W	-	3,00	-	-	2,80	-	-	2,70	-	
	Heating power	a-15/-16 - w30/35	(d)	kW	3,43	7,35	9,59	3,71	7,94	10,36	4,37	9,35	12,20	
	COP	a-15/-16 - w30/35	(d)	W/W	-	2,88	-	-	2,85	-	-	2,66	-	
	Heating power (fancoils)	a7/6 - w40/45	(f)	kW	5,74	12,30	16,05	6,63	14,20	18,53	7,47	16,00	20,88	
	COP (fancoils)	a7/6 - w40/45	(f)	W/W	-	3,80	-	-	3,65	-	-	3,60	-	
	Heating power (fancoils)	a2/1 - w40/45	(g)	kW	5,00	10,70	13,96	5,46	11,70	15,27	5,98	12,80	16,70	
	COP (fancoils)	a2/1 - w40/45	(g)	W/W	-	3,00	-	-	2,86	-	-	2,85	-	
	Heating power (fancoils)	a-7/-8 - w40/45	(h)	kW	4,76	10,20	13,31	5,51	11,80	15,40	6,02	12,90	16,83	
	COP (fancoils)	a-7/-8 - w40/45	(h)	W/W	-	2,40	-	-	2,35	-	-	2,23	-	
	Heating power (fancoils)	a-15/-16 - w40/45	(i)	kW	3,10	6,63	8,65	3,34	7,16	9,34	3,93	8,41	10,97	
	COP (fancoils)	a-15/-16 - w40/45	(i)	W/W	-	2,32	-	-	2,29	-	-	2,03	-	
	Cooling power	a35 - w23/18	(l)	kW	5,60	12,00	14,29	6,31	13,00	16,08	6,96	13,50	17,75	
	EER	a35 - w23/18	(l)	W/W	-	4,00	-	-	3,70	-	-	3,61	-	
	Cooling power (fancoils)	a35 - w12/7	(m)	kW	5,42	11,60	13,82	5,93	12,70	15,13	6,54	14,00	16,67	
	EER (fancoils)	a35 - w12/7	(m)	W/W	-	2,75	-	-	2,55	-	-	2,45	-	
	EFFICIENCIES	Energy efficiency class in water heating 35°C	Warmer Climate			A+++			A+++			A+++		
		SCOP	Warmer Climate			6,48			6,58			6,47		
		s (Seasonal efficiency for space heating)	Warmer Climate	ηs %		256,1%			260,3%			255,6%		
		Energy efficiency class in water heating 35°C	Average Climate			A+++			A+++			A+++		
		SCOP	Average Climate			4,81			4,72			4,62		
		s (Seasonal efficiency for space heating)	Average Climate	ηs %		189,4%			185,7%			181,7%		
		Energy efficiency class in water heating 35°C	Cold Climate			A+			A++			A++		
		SCOP	Cold Climate			4,08			4,07			4,02		
		s (Seasonal efficiency for space heating)	Cold Climate	ηs %		160,2%			159,6%			157,8%		
Energy efficiency class in water heating 55°C		Warmer Climate			A+++			A+++			A+++			
SCOP		Warmer Climate			4,43			4,49			4,48			
s (Seasonal efficiency for space heating)		Warmer Climate	ηs %		174,1%			176,5%			176,1%			
Energy efficiency class in water heating 55°C		Average Climate			A++			A++			A++			
SCOP		Average Climate			3,45			3,47			3,41			
s (Seasonal efficiency for space heating)		Average Climate	ηs %		135,1%			135,6%			133,3%			
Energy efficiency class in water heating 55°C		Cold Climate			A+			A+			A+			
SCOP		Cold Climate			3,02			3,05			3,12			
s (Seasonal efficiency for space heating)		Cold Climate	ηs %		117,8%			118,9%			121,8%			
NOISE LEVEL		Indoor unit sound power (reg. EU 811-2013/UNI EN 12102:2022)			dB(A)	48/46			48/46			48/46		
		Indoor unit sound pressure (reg. EU 811-2013/UNI EN 12102:2022)		(n)	dB(A)	40/38			40/38			40/38		
		Outdoor unit sound power (reg. EU 811-2013/UNI EN 12102:2022)			dB(A)	64/60			65/62			68/64		
		Outdoor unit sound pressure (reg. EU 811-2013/UNI EN 12102:2022)		(o)	dB(A)	44/40			45/42			48/44		
ELECTRICAL DATA		System circulator absorption			W	8 - 140			8 - 140			8 - 140		
		Supply voltage indoor unit			V/ph/Hz	220-240/1/50			220-240/1/50			220-240/1/50		
		Maximum current absorbed indoor unit with additional active heating elements			A	31,0			31,0			31		
		Maximum power absorbed indoor unit with additional active heating elements			kW	7,05			7,05			7,05		
		Additional electric heating elements			kW	3,0+3,0			3,0+3,0			3,0+3,0		
		Supply voltage outdoor unit			V/ph/Hz	220-240/1/50			220-240/1/50			220-240/1/50		
		Outdoor unit maximum absorbed current			A	23			25			25		
Outdoor unit maximum absorbed power			kW	5,4			5,7			5,7				
COOLING CIRCUIT	Compressor type				Twin Rotary DC Inverter			Twin Rotary DC Inverter			Twin Rotary DC Inverter			
	Refrigerant inlet connection diameter			"	3/8"-5/8"			3/8"-5/8"			3/8"-5/8"			
	Coolant gas		(p)		R32			R32			R32			
	Global warming potential			GWP	675			675			675			
	Refrigerant gas charge			kg	1,84			1,84			1,84			
	Additional charge above 15m			g/m	38			38			38			
	Refrigerant piping length limit			m	2 - 30			2 - 30			2 - 30			
	Refrigerant piping length limit without minimum surface check according to IEC 60335-2-40:2018			m	15			15			15			
	Hydraulic connections			"	1"			1"			1"			
	Capacity of expansion vessel			l	8			8			8			
HYDRAULIC DATA	Load profile according to EN16147				XL			XL			XL			
	DHW production energy efficiency class				A			A			A			
	ηHW (seasonal production efficiency DHW)			%	95%			95%			95%			
	Boiler volume			l	200			200			200			
	Boiler interior surface material				DD12 glazed steel S235JR			DD12 glazed steel S235JR			DD12 glazed steel S235JR			
	Heat exchanger in the boiler			m²	2,4			2,4			2,4			
	Type and thickness of boiler insulation				Hard expanded polyurethane 55 mm			Hard expanded polyurethane 55 mm			Hard expanded polyurethane 55 mm			
	Specific dispersion			W/K	2			2			2			
	DHW expansion tank capacity			l	7			7			7			
	DHW hydraulic connections			"	3/4"			3/4"			3/4"			

ONLY FOR SHERPA TOWER

(a) Heating mode, external air temperature 7°C b.s./6°C b.u., inlet/outlet water temperature 30°C/35°C
 (b) Heating mode, external air temperature 2°C b.s./1°C b.u., inlet/outlet water temperature 30°C/35°C
 (c) Heating mode, external air temperature -7°C b.s./-8°C b.u., inlet/outlet water temperature 30°C/35°C
 (d) Heating mode, external air temperature -15°C b.s./-16°C b.u., inlet/outlet water temperature 30°C/35°C
 (e) Heating mode, external air temperature 7°C b.s./6°C b.u., inlet/outlet water temperature 40°C/45°C
 (f) Heating mode, external air temperature 2°C b.s./1°C b.u., inlet/outlet water temperature 40°C/45°C
 (g) Heating mode, external air temperature -7°C b.s./-8°C b.u., inlet/outlet water temperature 40°C/45°C
 (h) Heating mode, external air temperature -15°C b.s./-16°C b.u., inlet/outlet water temperature 40°C/45°C
 (i) Heating mode, external air temperature -15°C b.s./-16°C b.u., inlet/outlet water temperature 40°C/45°C

(l) Cooling mode, external air temperature 35°C, inlet/outlet water temperature 23°C/18°C
 (m) Cooling mode, external air temperature 35°C, inlet/outlet water temperature 12°C/7°C
 (n) Sound pressure values measured at a distance of 1 m in a semi-anechoic chamber
 (o) Sound pressure values measured at a distance of 4 m in free field distance
 (p) Non-airtightly sealed equipment containing fluorinated GAS
 (q) maximum length of the refrigeration pipes beyond which checks on the minimum surface of the installation rooms are necessary, check the technical manual

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HEAT PUMPS

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PORTABLES

THREE-PHASE R32 TECHNICAL DATA

				12T			14T			16T				
ODU Sherpa S3 E				02291			02292			02293				
IDU Sherpa S3 E				02295			02295			02295				
IDU Sherpa Tower S3 E				02301			02301			02301				
Compressor frequency				Minimum	Nominal	Maximum	Minimum	Nominal	Maximum	Minimum	Nominal	Maximum		
PUNCTUAL PERFORMANCE	Heating power	a7/6 - w30/35	(a)	kW	5,65	12,10	15,79	6,77	14,50	18,92	7,47	16,00	20,88	
	COP	a7/6 - w30/35	(a)	W/W	-	4,95	-	-	4,70	-	-	4,50	-	
	Heating power	a2/1 - w30/35	(b)	kW	4,34	9,30	12,14	5,32	11,40	14,88	6,07	13,00	16,96	
	COP	a2/1 - w30/35	(b)	W/W	-	3,95	-	-	3,65	-	-	3,50	-	
	Heating power	a-7/-8 - w30/35	(c)	kW	4,67	10,00	13,05	5,60	12,00	15,66	6,21	13,30	17,35	
	COP	a-7/-8 - w30/35	(c)	W/W	-	3,00	-	-	2,80	-	-	2,70	-	
	Heating power	a-15/-16 - w30/35	(d)	kW	3,43	7,35	9,59	3,71	7,94	10,36	4,37	9,35	12,20	
	COP	a-15/-16 - w30/35	(d)	W/W	-	2,88	-	-	2,85	-	-	2,66	-	
	Heating power (fancoils)	a7/6 - w40/45	(f)	kW	5,74	12,30	16,05	6,63	14,20	18,53	7,47	16,00	20,88	
	COP (fancoils)	a7/6 - w40/45	(f)	W/W	-	3,80	-	-	3,65	-	-	3,60	-	
	Heating power (fancoils)	a2/1 - w40/45	(g)	kW	5,00	10,70	13,96	5,46	11,70	15,27	5,98	12,80	16,70	
	COP (fancoils)	a2/1 - w40/45	(g)	W/W	-	3,00	-	-	2,86	-	-	2,85	-	
	Heating power (fancoils)	a-7/-8 - w40/45	(h)	kW	4,76	10,20	13,31	5,51	11,80	15,40	6,02	12,90	16,83	
	COP (fancoils)	a-7/-8 - w40/45	(h)	W/W	-	2,40	-	-	2,35	-	-	2,23	-	
	Heating power (fancoils)	a-15/-16 - w40/45	(i)	kW	3,10	6,63	8,65	3,34	7,16	9,34	3,93	8,41	10,97	
	COP (fancoils)	a-15/-16 - w40/45	(i)	W/W	-	2,32	-	-	2,29	-	-	2,03	-	
	Cooling power	a35 - w23/18	(l)	kW	5,60	12,00	14,29	6,31	13,00	16,08	6,96	13,50	17,75	
	EER	a35 - w23/18	(l)	W/W	-	4,00	-	-	3,70	-	-	3,61	-	
	Cooling power (fancoils)	a35 - w12/7	(m)	kW	5,42	11,60	13,82	5,93	12,70	15,13	6,54	14,00	16,67	
	EER (fancoils)	a35 - w12/7	(m)	W/W	-	2,75	-	-	2,55	-	-	2,45	-	
EFFICIENCIES	Energy efficiency class in water heating 35°C	Warmer Climate			A+++			A+++			A+++			
	SCOP	Warmer Climate			6,47			6,57			6,28			
	s (Seasonal efficiency for space heating)	Warmer Climate	ηs %		255,6%			259,8%			248,1%			
	Energy efficiency class in water heating 35°C	Average Climate			A+++			A+++			A+++			
	SCOP	Average Climate			4,81			4,72			4,62			
	s (Seasonal efficiency for space heating)	Average Climate	ηs %		189,3%			185,6%			181,6%			
	Energy efficiency class in water heating 35°C	Cold Climate			A++			A++			A++			
	SCOP	Cold Climate			4,08			4,07			4,02			
	s (Seasonal efficiency for space heating)	Cold Climate	ηs %		160,2%			159,6%			157,8%			
	Energy efficiency class in water heating 55°C	Warmer Climate			A+++			A+++			A+++			
	SCOP	Warmer Climate			4,42			4,49			4,47			
	s (Seasonal efficiency for space heating)	Warmer Climate	ηs %		173,8%			176,4%			175,9%			
	Energy efficiency class in water heating 55°C	Average Climate			A++			A++			A++			
	SCOP	Average Climate			3,45			3,47			3,41			
	s (Seasonal efficiency for space heating)	Average Climate	ηs %		135,1%			135,6%			133,2%			
	Energy efficiency class in water heating 55°C	Cold Climate			A+			A+			A+			
	SCOP	Cold Climate			3,02			3,05			3,12			
	s (Seasonal efficiency for space heating)	Cold Climate	ηs %		117,7%			118,9%			121,8%			
	NOISE LEVEL	Indoor unit sound power (reg. EU 811-2013/UNI EN 12102:2022)			dB(A)	48/46			48/46			48/46		
		Indoor unit sound pressure (reg. EU 811-2013/UNI EN 12102:2022)		(n)	dB(A)	40/38			40/38			40/38		
Outdoor unit sound power (reg. EU 811-2013/UNI EN 12102:2022)				dB(A)	64/60			65/62			68/64			
Outdoor unit sound pressure (reg. EU 811-2013/UNI EN 12102:2022)			(o)	dB(A)	44/40			45/42			48/44			
ELECTRICAL DATA	System circulator absorption			W	8 - 140			8 - 140			8 - 140			
	Supply voltage indoor unit			V/ph/Hz	220-240/1/50			220-240/1/50			220-240/1/50			
	Maximum current absorbed indoor unit with additional active heating elements			A	31			31			31			
	Maximum power absorbed indoor unit with additional active heating elements			kW	7,05			7,05			7,05			
	Additional electric heating elements			kW	3,0+3,0			3,0+3,0			3,0+3,0			
	Supply voltage outdoor unit			V/ph/Hz	380-415/3/50			380-415/3/50			380-415/3/50			
	Outdoor unit maximum absorbed current			A	8			8			8			
	Outdoor unit maximum absorbed power			kW	5,4			5,7			5,7			
COOLING CIRCUIT	Compressor type				Twin Rotary DC Inverter			Twin Rotary DC Inverter			Twin Rotary DC Inverter			
	Refrigerant inlet connection diameter			"	3/8"-5/8"			3/8"-5/8"			3/8"-5/8"			
	Coolant gas		(p)		R32			R32			R32			
	Global warming potential			GWP	675			675			675			
	Refrigerant gas charge			kg	1,84			1,84			1,84			
	Additional charge above 15m			g/m	38			38			38			
	Refrigerant piping length limit	min - max		m	2 - 30			2 - 30			2 - 30			
	Refrigerant piping length limit without minimum surface check according to IEC 60335-2-40:2018	max	(q)	m	15			15			15			
HYDRAULIC DATA	Hydraulic connections			"	1"			1"			1"			
	Capacity of expansion vessel			l	8			8			8			
ONLY FOR SHERPA TOWER	Load profile according to EN16147				XL			XL			XL			
	DHW production energy efficiency class	Average Climate			A			A			A			
	η _{HW} (seasonal production efficiency DHW)	Average Climate		%	95%			95%			95%			
	Boiler volume			l	200			200			200			
	Boiler interior surface material				DD12 glazed steel S235JR			DD12 glazed steel S235JR			DD12 glazed steel S235JR			
	Heat exchanger in the boiler			m ²	2,4			2,4			2,4			
	Type and thickness of boiler insulation				Hard expanded polyurethane 55 mm			Hard expanded polyurethane 55 mm			Hard expanded polyurethane 55 mm			
	Specific dispersion			W/K	2			2			2			
	DHW expansion tank capacity			l	7			7			7			
	DHW hydraulic connections			"	3/4"			3/4"			3/4"			

(a) Heating mode, external air temperature 7°C b.s./6°C b.u., inlet/outlet water temperature 30°C/35°C
 (b) Heating mode, external air temperature 2°C b.s./1°C b.u., inlet/outlet water temperature 30°C/35°C
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 (f) Heating mode, external air temperature 7°C b.s./6°C b.u., inlet/outlet water temperature 40°C/45°C
 (g) Heating mode, external air temperature 2°C b.s./1°C b.u., inlet/outlet water temperature 40°C/45°C
 (h) Heating mode, external air temperature -7°C b.s./-8°C b.u., inlet/outlet water temperature 40°C/45°C
 (i) Heating mode, external air temperature -15°C b.s./-16°C b.u., inlet/outlet water temperature 40°C/45°C

(l) Cooling mode, external air temperature 35°C, inlet/outlet water temperature 23°C/18°C
 (m) Cooling mode, external air temperature 35°C, inlet/outlet water temperature 12°C/7°C
 (n) Sound pressure values measured at a distance of 1 m in a semi-anechoic chamber
 (o) Sound pressure values measured at a distance of 4 m in free field distance
 (p) Non-airtightly sealed equipment containing fluorinated GAS
 (q) maximum length of the refrigeration pipes beyond which checks on the minimum surface of the installation rooms are necessary, check the technical manual

ACCESSORIES

		suspended	tower	
CONTROLS	B0971	Thermostatic mixing valve kit for DHW	—	○
	B0972	Expansion tank kit for DHW	—	○
	B0916	Kit 3-way valve for DHW	○	●
	B0917	Solar thermal probe kit	○	—
	B0623	Outdoor air temperature probe kit	○	○
	B0624	Kit DHW storage tank sensor	○	●
	B0931	Remote control display kit 10 m	○	○
STORAGE TANKS / PUFFER	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	○	—
	B0618	Resistance for boiler 2 kW	○	—
	B0666	Resistance for boiler 3 kW	○	—
	B0617	Resistance flange kit	○	—
	01199	Thermal accumulation 50 L	○	○
	01200	Thermal accumulation 100 L	○	○

○ Optional accessory | ● Standard accessory | — Accessory not compatible

Accessory description on page 56

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HEAT PUMPS

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PORTABLES

Please note that optional accessories are available for purchase with all models of the heat pump. When compatibility is only possible with certain sizes, the information is shown in the table. Standard accessories are already included in the heat pump code.

Touchscreen interface

Sherpa Aquadue and Sherpa heat pumps, suspended and tower versions

HOME PAGE

The home page shows the following information:

A - System date and time

B - Current mode active (Stand-by, cooling, heating, DHW only)

C - Active functions (Climate Curve, Turbo DHW, DHW OFF, anti-legionella, Night, ECO)

D - Alarms/overrides in progress (flashing)

E - System water temperature values, system active timers, Holiday, Rating

F - DHW tank water temperature values, domestic hot water timers active, Holiday

G - Activation icons:

Mode: operation

Tset: system and domestic hot water set point

Tshow: temperature probe reading

Timers: hourly programming

Menu: machine functions



OPERATING MODE

By touching the Mode icon, the page for configuring the operating mode is accessed. This page shows the selection icons for all the available operating modes.

- Stand-by, the system is off
- Cooling, the system produces cold water until the set-point is reached (predetermined or dynamic set point defined by climatic curve)
- Heating, the system produces hot water until the set-point is reached (predetermined or dynamic set point defined by the climatic curve)
- ECO, the system produces water until the ECO energy saving set-point is reached (if activate, the climate control the ECO set point is not considered)
- Night, the system limits the output and noise of the external unit
- DHW Turbo, the system produces domestic hot water using all the power of the outdoor unit up to the set limit.



SET POINT

By touching the Tset icon, it is possible to access the set point configuration page.

- Cooling water temperature
- ECO cooling water temperature
- Heating water temperature
- ECO heating water temperature
- Domestic hot water temperature (external storage tank set point).

The cooling and heating set points are not considered by the controller if the set-point with climatic curve mode has been enabled.

The set point values are modified with a simple touch of the set value.



TIMERS

Tapping the Timers icon accesses the available schedules.

- Heating/cooling timer
- DHW timer
- Night timer
- Holidays

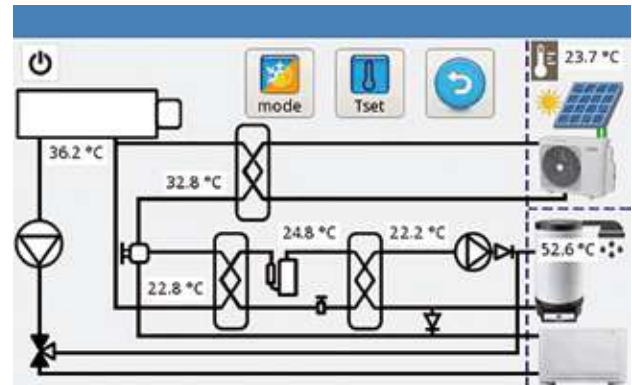
Touching the "Heating/Cooling Timer" icon or "DHW timer" or "Night timer", the page appears where it is possible to view the activation bands of each timer.



PHOTOVOLTAIC CONTACT

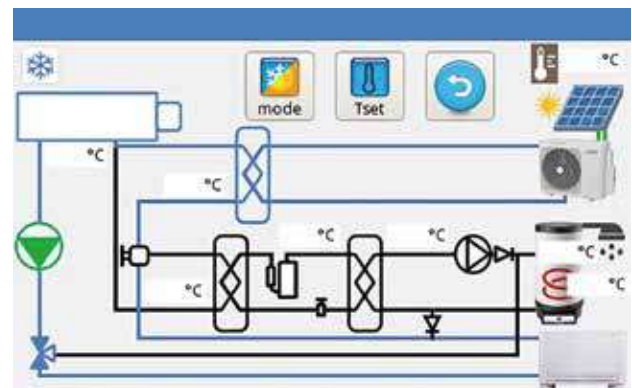
The machine has a contact that is used to activate a setpoint delta on the DHW, heating and cooling to accumulate thermal energy when there is an electrical overproduction from the photovoltaic system.

The photovoltaic function therefore allows the heat pump to force the accumulation of thermal energy in the system. Energy storage is obtained by adding a delta to the main circuit water temperature (colder water if in cooling mode, warmer water if in heating mode) and to the water contained in the DHW tank. Thanks to the possibility of storing domestic hot water at up to a maximum of 75°C, the Aquadue versions are used to store a large quantity of energy, thereby maximising photovoltaic overproduction.



SOLAR THERMAL PROBE

An additional probe that detects the temperature of the solar thermal pipes, inhibits the heat pump to produce DHW only with solar thermal if the delivery temperature of the solar panels is above a certain settable value or the difference between this temperature and the set point of the storage tank is higher than a certain settable value.



CLIMATIC CURVES

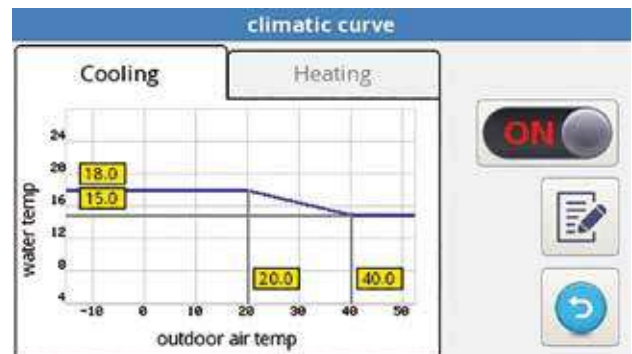
To optimise energy savings, two climatic curves are available, one for heating and one for cooling. They are used to adjust the water temperature to the outside air temperature and therefore to the thermal load.

The information displayed is:

- Cooling climatic curve and heating climatic curve diagrams,
- Values of the setting parameters of each curve
- It is possible to activate and deactivate each Climatic function
- It is possible to modify the parameters of the climatic curves

The characteristic parameters of each curve are:

- External air temperature for maximum water temperature
- Maximum water temperature
- External air temperature for minimum water temperature
- Minimum water temperature.



LOW TEMPERATURE ACTIVATION

On site when the system water is below 12°C, it is possible to activate the heating elements of the heat pump to allow the screed to be heated in the case of a heating system. By setting the specific parameter from the service menu, the installer enables one or two heating elements for low temperature start-up.

CHOICE OF COMMUNICATION PROTOCOL

Possibility of choosing between ModBus RTU or ASCII, for coupling with SIOS Control. By setting the specific parameter from the service menu, the installer enables communication with Modbus RTU protocol or with ASCII protocol.