

NEW

SHERPA AQUADUE

Compatible with:



Multi-purpose split heat pumps, suspended and tower versions



DHW AND COMFORT AT THE SAME TIME

The two interconnected refrigerator cycles allow the decoupling of the heating/cooling from the DHW production, enabling them to operate in parallel, avoiding thus interruptions in the domestic comfort supply.



DOMESTIC HOT WATER UP TO 75°C

The storage of DHW at high temperature makes it possible to reduce the volume of the storage tank by up to 30%, and to avoid energy-intensive consumption of the anti-Legionnaire's disease cycles, since they are normally carried out by the use of electric heating elements.



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).



CARATTERISTICHE

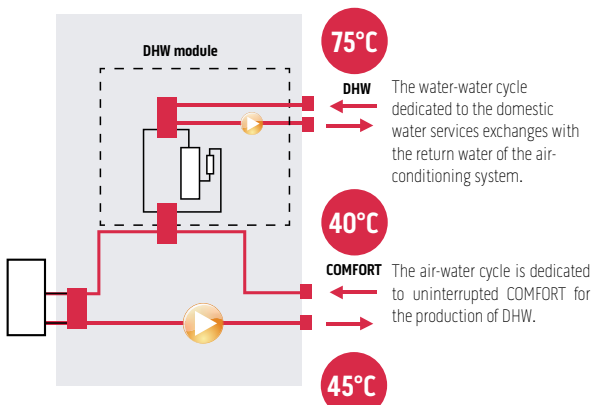
- **Inverter air-water heat pump**
- **Energy efficiency class in heating medium climate:** A+++ (35°C) e A++ (55°C)
- **Available powers:** 10 powers with R32 refrigerant (4-6-8-10-12-14-16 kW single-phase and 12-14-16 kW three-phase)
- **Production of DHW** (Domestic Hot Water) at high temperature, up to 75°C
- **DHW management:** a water-to-water heat pump unit integrated in the indoor unit provides high-temperature hot water irrespective of outside climatic conditions
- **Absolute continuity of DHW availability:** ensured by the redundancy of the dual cooling circuit system.
- **Anti-legionella cycles** can be avoided by using the high-temperature refrigeration cycle.
- **Two-stage electric heaters as standard:** activation of single or dual heaters to support the heat pump via a simple configuration of the electronic control. Each stage is activated according to the actual need for heat output in order to optimise electricity consumption (supplied disabled at the factory)
- **Configurable set points:** two set points in cooling, three set points in heating (one of which for DHW); set points can also be selected by remote contact.
- **Holiday and weekly programmer:** heating/cooling, DHW, night.
- **Climatic curves** with outside air temperature probe: two curves available, one for cooling and one for heating. The climatic curves make it possible to vary the water supply temperature of the system according to the external climatic conditions, adjusting the building's heating requirements in order to achieve energy savings.
- **Refrigerant gases:** R32* for the reversible circuit dedicated to air conditioning and R134a** for the high temperature circuit dedicated to DHW production.
- **Integrated 150 L high-efficiency cylinder** (tower version), with exchange coil surface area of 1.5 m².
- **Operating limits:** down to -25°C, +43°C (see technical manuals for details).

AQUADUE TECHNOLOGY

HEATING MODE

+DHW at high temperature

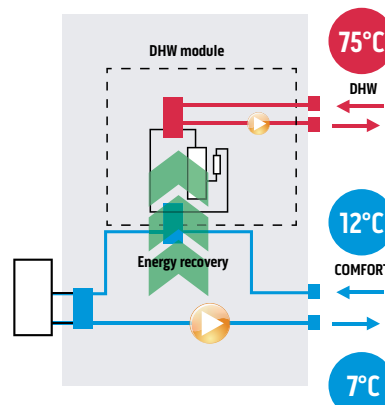
Guaranteed DHW production regardless of temperature outside temperature for optimal operation all year round, not guaranteed by conventional heat pumps.



COOLING MODE

+DHW at a high temperature with energy recovery

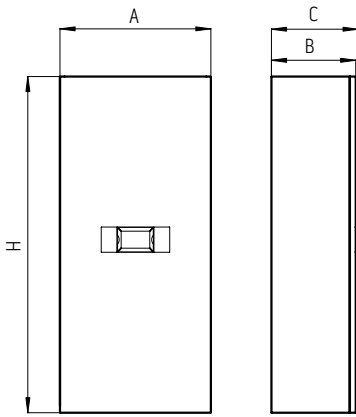
The energy normally dissipated outside is recovered and used to produce DHW up to 75°C.



* Equipment not hermetically sealed containing fluorinated gases with an equivalent GWP of 675 (R32) and 2088 (R410A)

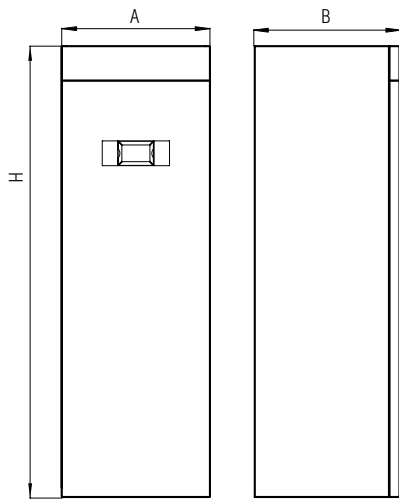
** Not-hermetically sealed equipment containing fluorinated gases with GWP equivalent 1430

DIMENSIONS AND WEIGHT



Suspended indoor units

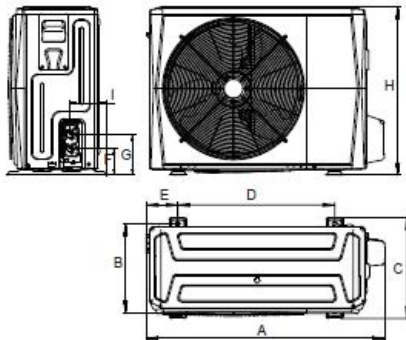
		4	6	8	10	12	14	16	12T	14T	16T
		SMALL					BIG				
A	mm	500	500	500	500	500	500	500	500	500	500
B	mm	280	280	280	280	280	280	280	280	280	280
C	mm	288	288	288	288	288	288	288	288	288	288
H	mm	1116	1116	1116	1116	1116	1116	1116	1116	1116	1116
Net weight	kg	70	70	70	70	72	72	72	72	72	72



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
Net weight	kg	171	171	171	171	173	173	173	173	173	173

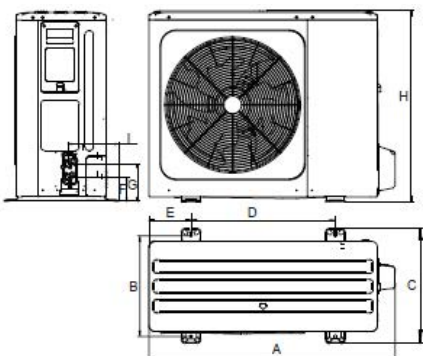
Sizes 4/6



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
Net weight	kg	58	58	77	77	96	96	96	112	112	112

Sizes 8/10/12/14/16/12T/14T/16T



PRELIMINARY TECHNICAL DATA

		4			6			8			10					
IDU Sherpa S3		02284			02285			02286			02287					
IDU Sherpa Aquadue S3		02296			02296			02296			02296					
IDU Sherpa Aquadue Tower S3		02298			02298			02298			02298					
Compressor frequency		Min	Nom	Max	Min	Nom	Max	Min	Nom	Max	Min	Nom	Max			
Punctual performance	Heating power	a/7/6 - w30/35	(a)	kW	2,42	4,25	5,66	3,53	6,20	8,26	4,73	8,30	11,05	5,70	10,00	13,32
	COP	a/7/6 - 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)	a/7/6 - 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)	a/7/6 - 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	4,5	5,52	3,51	6,55	8,03	4,50	8,4	10,30	5,36	10,00	12,27
	EER	a35 - w23/18	(l)	W/W	-	5,55	-	-	4,9	-	-	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	-
	Efficiencies	Energy efficiency class in water heating 35°C SCOP	Warmer Climate			A+++			A+++			A+++			A+++	
		η_s (Seasonal efficiency for space heating)		%		255,4%			259,8%			276,6%			280,5%	
		Energy efficiency class in water heating 35°C SCOP	Average Climate			A+++			A+++			A+++			A+++	
		η_s (Seasonal efficiency for space heating)		%		4,85			4,95			5,22			5,20	
Energy efficiency class in water heating 35°C SCOP		Cold Climate			A++			A++			A++			A++		
η_s (Seasonal efficiency for space heating)			%		159,5%			165,3%			170,0%			169,8%		
Energy efficiency class in water heating 55°C SCOP		Warmer Climate			A+++			A+++			A+++			A+++		
η_s (Seasonal efficiency for space heating)			%		4,15			4,21			4,51			4,62		
Energy efficiency class in water heating 55°C SCOP		Average Climate			A++			A++			A++			A++		
η_s (Seasonal efficiency for space heating)			%		3,31			3,52			3,37			3,47		
Energy efficiency class in water heating 55°C SCOP		Cold Climate			A+			A+			A+			A+		
η_s (Seasonal efficiency for space heating)			%		2,63			2,85			2,88			2,99		
Noise level	Indoor unit sound power			dB (A)	46			46			46			46		
	Indoor unit sound pressure	(n)		dB (A)	38			38			38			38		
	Outdoor unit sound power (nominal)			dB (A)	56			58			59			60		
	Outdoor unit sound pressure (nominal)	(o)		dB (A)	36			38			39			40		
Electrical data	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			18,0			18,0		
	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			
Cooling circuit	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"		
	Refrigerant 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			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)		30			30			20			20			
Hydraulic data	Hydraulic connections			"	1"			1"			1"			1"		
	System expansion valve capacity			l	8			8			8			8		
	Load profile according to EN16147				L			L			L			L		
	DHW production energy efficiency class	Average Climate			A			A			A			A		
	η_{hw} (seasonal production efficiency DHW)	Average Climate	%		106%			106%			86%			86%		
	Boiler volume			l	150			150			150			150		
	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	1,5			1,5			1,5			1,5		
	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		
Secondary DHW cooling circuit	DHW expansion tank capacity			l	7			7			7			7		
	DHW hydraulic connections			"	3/4"			3/4"			3/4"			3/4"		
	DHW circuit heating capacity	w35 - w55	(r)	kW	2,15			2,15			2,15			2,15		
	COP DHW circuit	w35 - w55	(r)	W/W	3,12			3,12			3,12			3,12		
	DHW circuit heating capacity	w12 - w55	(s)	kW	1,60			1,60			1,60			1,60		
	COP DHW circuit	w12 - w55	(s)	W/W	2,58			2,58			2,58			2,58		
	Sound power indoor unit in heating/cooling + DHW circuit			dB (A)	49			49			49			49		
	DHW circuit circulator absorption			W	3 - 43			3 - 43			3 - 43			3 - 43		
	DHW circuit coolant gas		(t)		R134a			R134a			R134a			R134a		
	DHW circuit global warming potential			GWP	1430			1430			1430			1430		
DHW circuit coolant gas load			kg	0,35			0,35			0,35			0,35			

ONLY FOR SHERPA AQUADUE TOWER S3

(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 1 m in a semi-anechoic chamber
 (p) Airtight sealed equipment containing fluorinated GAS
 (q) Maximum length of refrigeration pipework beyond which minimum installation room area checks are required, see technical manual
 (r) Heating circuit water temperature 35°C/Outlet water temperature 55°C
 (s) Heating circuit water temperature 12°C/Outlet water temperature 55°C
 (t) Non-hermetically sealed circuit containing fluorinated gas

PRELIMINARY TECHNICAL DATA

		12			14			16					
		02288			02289			02290					
IDU Sherpa S3		02297			02297			02297					
IDU Sherpa Aquadue S3		02299			02299			02299					
IDU Sherpa Aquadue Tower S3		02299			02299			02299					
Compressor frequency													
			Min	Nom	Max	Min	Nom	Max	Min	Nom	Max		
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	-	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	-	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	-	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	-	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	-	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	-	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	-	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	-	2,03	-
	Cooling power	a35 - w23/18	(l)	kW	5,60	12,0	14,29	6,31	13,5	16,08	6,96	14,9	17,75
	EER	a35 - w23/18	(l)	W/W	-	4,0	-	3,61	-	3,4	-	3,4	-
	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	-	2,45	-
Efficiencies	Energy efficiency class in water heating 35°C				A+++			A+++			A+++		
	SCOP	Warmer Climate			6,48			6,58			6,47		
	η_s (Seasonal efficiency for space heating)		%		256,1%			260,3%			255,6%		
	Energy efficiency class in water heating 35°C				A+++			A+++			A+++		
	SCOP	Average Climate			4,81			4,72			4,62		
	η_s (Seasonal efficiency for space heating)		%		189,4%			185,7%			181,7%		
	Energy efficiency class in water heating 35°C				A+			A++			A++		
	SCOP	Cold Climate			4,08			4,07			4,02		
	η_s (Seasonal efficiency for space heating)		%		160,2%			159,6%			157,8%		
	Energy efficiency class in water heating 55°C				A+++			A+++			A+++		
	SCOP	Warmer Climate			4,43			4,49			4,48		
	η_s (Seasonal efficiency for space heating)		%		174,1%			176,5%			176,1%		
Energy efficiency class in water heating 55°C				A++			A++			A++			
SCOP	Average Climate			3,45			3,47			3,41			
η_s (Seasonal efficiency for space heating)		%		135,1%			135,6%			133,3%			
Energy efficiency class in water heating 55°C				A+			A+			A+			
SCOP	Cold Climate			3,02			3,05			3,12			
η_s (Seasonal efficiency for space heating)		%		117,8%			118,9%			121,8%			
Noise level	Indoor unit sound power				48			48			48		
	Indoor unit sound pressure	(n)			40			40			40		
	Outdoor unit sound power (nominal)				64			65			68		
	Outdoor unit sound pressure (nominal)	(o)			44			45			48		
Electrical data	System circulator absorption				W			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			31,0		
	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"		
	Refrigerant 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			2 - 30			2 - 30			2 - 30		
Refrigerant piping length limit without minimum surface check according to IEC 60335-2-40:2018	max	(q)		15			15			15			
Hydraulic data	Hydraulic connections				1"			1"			1"		
	System expansion valve capacity			l	8			8			8		
	Load profile according to EN16147				L			L			L		
Integrated DHW boiler	DHW production energy efficiency class	Average Climate			A			A			A		
	η_{hw} (seasonal production efficiency DHW)	Average Climate	%		81%			81%			81%		
	Boiler volume			l	150			150			150		
	Boiler interior surface material				DD12 glazed steel S235JR			DD12 glazed steel S235JR			DD12 glazed steel S235JR		
	Heat exchanger in the boiler			m ²	1,5			1,5			1,5		
	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"		
	DHW circuit heating capacity	w35 - w55	(r)	kW	2,15			2,15			2,15		
Secondary DHW cooling circuit	COP DHW circuit	w35 - w55	(r)	W/W	3,12			3,12			3,12		
	DHW circuit heating capacity	w12 - w55	(s)	kW	1,60			1,60			1,60		
	COP DHW circuit	w12 - w55	(s)	W/W	2,58			2,58			2,58		
	Sound power indoor unit in heating/cooling + DHW circuit			dB (A)	49			49			49		
	DHW circuit circulator absorption			W	3 - 43			3 - 43			3 - 43		
	DHW circuit coolant gas		(t)		R134a			R134a			R134a		
	DHW circuit global warming potential			GWP	1430			1430			1430		
DHW circuit coolant gas load			kg	0,35			0,35			0,35			

ONLY FOR SHERPA AQUADUE TOWER S3

(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 1 m in a semi-anechoic chamber
 (p) Airtightily sealed equipment containing fluorinated GAS
 (q) Maximum length of refrigeration pipework beyond which minimum installation room area checks are required, see technical manual
 (r) Heating circuit water temperature 35°C/Outlet water temperature 55°C
 (s) Heating circuit water temperature 12°C/Outlet water temperature 55°C
 (t) Non-hermetically sealed circuit containing fluorinated gas

PRELIMINARY TECHNICAL DATA

		12 l			14 l			16 l					
IDU Sherpa S3		02291			02292			02293					
IDU Sherpa Aquadue S3		02297			02297			02297					
IDU Sherpa Aquadue Tower S3		02299			02299			02299					
Compressor frequency		Min	Nom	Max	Min	Nom	Max	Min	Nom	Max			
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	12,0	14,29	6,31	13,5	16,08	6,96	14,9	17,75
	EER	a35 - w23/18	(l)	W/W	-	4,0	-	-	3,61	-	-	3,4	-
	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 SCOP	Warmer Climate			A+++			A+++			A+++		
	η_s (Seasonal efficiency for space heating)		%		6,47			6,57			6,28		
	Energy efficiency class in water heating 35°C SCOP	Average Climate			A+++			A+++			A+++		
	η_s (Seasonal efficiency for space heating)		%		255,6%			259,8%			248,1%		
	Energy efficiency class in water heating 35°C SCOP	Cold Climate			A++			A++			A++		
	η_s (Seasonal efficiency for space heating)		%		4,81			4,72			4,62		
	Energy efficiency class in water heating 55°C SCOP	Warmer Climate			A+++			A+++			A+++		
	η_s (Seasonal efficiency for space heating)		%		189,3%			185,6%			181,6%		
	Energy efficiency class in water heating 55°C SCOP	Average Climate			A++			A++			A++		
	η_s (Seasonal efficiency for space heating)		%		4,42			4,49			4,47		
	Energy efficiency class in water heating 55°C SCOP	Cold Climate			A+			A+			A+		
	η_s (Seasonal efficiency for space heating)		%		173,8%			176,4%			175,9%		
Noise level	Indoor unit sound power			dB (A)	48			48			48		
	Indoor unit sound pressure	(n)		dB (A)	40			40			40		
	Outdoor unit sound power (nominal)			dB (A)	64			65			68		
	Outdoor unit sound pressure (nominal)	(o)		dB (A)	44			45			48		
	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			31,0		
	Maximum power absorbed indoor unit with additional active heating elements		kW		7,05			7,05			7,05		
Electrical data	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		
	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"		
	Refrigerant 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		
Cooling circuit	Refrigerant piping length limit	min - max			2 - 30			2 - 30			2 - 30		
	Refrigerant piping length limit without minimum surface check according to IEC 60335-2-40:2018	max	(q)		15			15			15		
	Hydraulic connections		"		1"			1"			1"		
	System expansion valve capacity		l		8			8			8		
	Load profile according to EN16147		L		L			L			L		
	DHW production energy efficiency class	Average Climate			A			A			A		
	η_{hw} (seasonal production efficiency DHW)	Average Climate	%		81%			81%			81%		
	Boiler volume		l		150			150			150		
	Boiler interior surface material				DD12 glazed steel S235JR			DD12 glazed steel S235JR			DD12 glazed steel S235JR		
	Heat exchanger in the boiler		m ²		1,5			1,5			1,5		
Integrated DHW boiler	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"		
	DHW circuit heating capacity	w35 - w55	(r)	kW	2,15			2,15			2,15		
	COP DHW circuit	w35 - w55	(r)	W/W	3,12			3,12			3,12		
	DHW circuit heating capacity	w12 - w55	(s)	kW	1,60			1,60			1,60		
	COP DHW circuit	w12 - w55	(s)	W/W	2,58			2,58			2,58		
	Sound power indoor unit in heating/cooling + DHW circuit		dB (A)		49			49			49		
	DHW circuit circulator absorption		W		3 - 43			3 - 43			3 - 43		
Secondary DHW cooling circuit	DHW circuit coolant gas	(t)			R134a			R134a			R134a		
	DHW circuit global warming potential		GWP		1430			1430			1430		
	DHW circuit coolant gas load		kg		0,35			0,35			0,35		

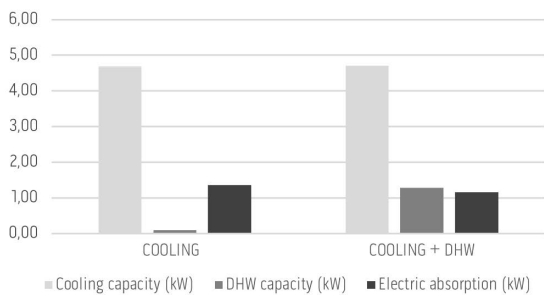
ONLY FOR SHERPA AQUADUE TOWER S3

(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 1 m in a semi-anechoic chamber
 (p) Airtightily sealed equipment containing fluorinated GAS
 (q) Maximum length of refrigeration pipework beyond which minimum installation room area checks are required, see technical manual
 (r) Heating circuit water temperature 35°C/Outlet water temperature 55°C
 (s) Heating circuit water temperature 12°C/Outlet water temperature 55°C
 (t) Non-hermetically sealed circuit containing fluorinated gas

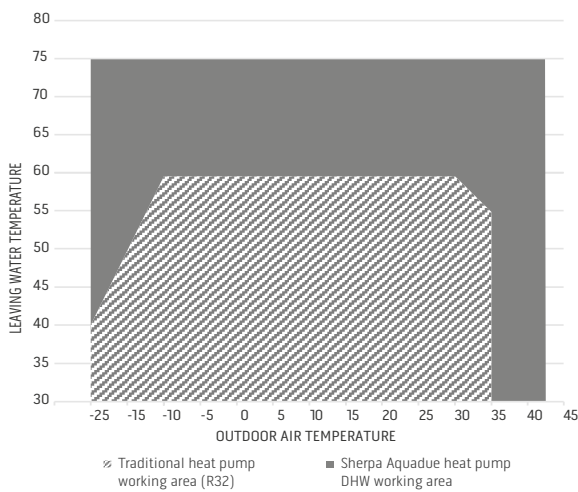
		4			6			8			10		
		Cooling w7 - a35	ACS w65 - w12	Cooling w7 - A35 ACS w65 - w12	Cooling w7 - a35	ACS w65 - w12	Cooling w7 - A35 ACS w65 - w12	Cooling w7 - a35	ACS w65 - w12	Cooling w7 - A35 ACS w65 - w12	Cooling w7 - a35	ACS w65 - w12	Cooling w7 - A35 ACS w65 - w12
Data first circuit + second circuit	Cooling capacity kw	4.70	0.64	4.70	7.00	0.64	7.00	7.40	0.64	7.40	8.20	0.64	8.20
	DHW yield kw	0.00	1.28	1.28	0.00	1.28	1.28	0.00	1.28	1.28	0.00	1.28	1.28
	Absorption kw	1.36	0.56	1.17	2.33	0.56	2.00	2.19	0.56	1.87	2.48	0.56	2.13
	EER COP	3.45	2.30	4.03	3.00	2.30	3.50	3.38	2.30	3.95	3.30	2.30	3.85

		12			14			16			12T			14T			16T		
		Cooling w7 - a35	ACS w65 - w12	Cooling w7 - A35 ACS w65 - w12	Cooling w7 - a35	ACS w65 - w12	Cooling w7 - A35 ACS w65 - w12	Cooling w7 - a35	ACS w65 - w12	Cooling w7 - A35 ACS w65 - w12	Cooling w7 - a35	ACS w65 - w12	Cooling w7 - A35 ACS w65 - w12	Cooling w7 - a35	ACS w65 - w12	Cooling w7 - A35 ACS w65 - w12	Cooling w7 - a35	ACS w65 - w12	Cooling w7 - A35 ACS w65 - w12
Data first circuit + second circuit	Cooling capacity kw	11.60	0.64	11.60	12.70	0.64	12.70	14.00	0.64	14.00	11.60	0.64	11.60	12.70	0.64	12.70	14.00	0.64	14.00
	DHW yield kw	0.00	1.28	1.28	0.00	1.28	1.28	0.00	1.28	1.28	0.00	1.28	1.28	0.00	1.28	1.28	0.00	1.28	1.28
	Absorption kw	4.22	0.56	3.61	4.98	0.56	4.26	5.71	0.56	4.89	4.22	0.56	3.61	4.98	0.56	4.26	5.71	0.56	4.89
	EER COP	2.75	2.30	3.21	2.55	2.30	2.98	2.45	2.30	2.86	2.75	2.30	3.21	2.55	2.30	2.98	2.45	2.30	2.86



COOLING + DHW WITH ENERGY RECOVERY

During summer operation in cooling mode, the cycle dedicated to DHW production extracts heat from return water from the system circuit. The cooling requirements of the building is partially satisfied by the DHW production and the comfort refrigerating cycle must deliver less power by reducing the speed of the inverter compressor. The heat taken from the system is recovered in hot water for domestic use. The efficiency of the integrated system increases (ratio between the energy produced and the energy absorbed from the mains).



PERFORMANCE AND ENERGY ADVANTAGES

In adverse weather conditions traditional heat pumps decrease thermal output producing water at a lower temperature. Sherpa AQUADUE® as well as extending the area of operation ensures a constant heat output, in the production of Domestic Hot Water.

The double refrigerator circuit allows higher DHW production temperatures thanks to the water-water circuit which are independent of outside air temperature.

In summer cooling operation the refrigeration cycle dedicated to DHW production removes heat from the comfort circuit increasing the overall efficiency of the system.

ACCESSORIES

			suspended	tower
CONTROLS	B0916	Kit 3-way valve for DHW	●	●
	B0623	Outdoor air temperature probe kit	●	●
	B0624	Kit DHW storage tank sensor	●	●
	B0931	Remote control display kit 10 m	○	○
OTHER	B0918	Kit Sherpa Flex Box AS	≤10	—
	B0961	Kit Sherpa Flex Box AS RAL 9016	≤10	—
STORAGE TANKS / PUFFER	O1804	HE 200 L storage tank	○	—
	O1805	HE 300 L storage tank	○	—
	O1806	HES 300 L solar storage tank	○	—
	O1807	Hybride boiler HY 300 L	○	—
	O1808	HYS 300 L solar hybrid storage tank	○	—
	O1199	Thermal accumulation 50 L	○	○
	O1200	Thermal accumulation 100 L	○	○

○ Optional accessory | ● Standard accessory | — Not compatible accessory

Please note: optional accessories can be purchased in combination with all heat pump models. When compatibility is only possible with certain sizes, the information is given in the table. Standard accessories, on the other hand, are already included in the heat pump code.