

SHERPA COLD

Split heat pump for cold climates



HIGH PERFORMANCE ALSO AT LOW TEMPERATURE

The defrosting cycles of the machine are optimised to guarantee high performance even with low external temperatures.



WIDE OPERATING LIMITS

Sherpa Cold can work up to outdoor air temperatures of -32°C and + 48°C



INVERTER SCROLL COMPRESSORS WITH STEAM INJECTION

Technology that improves performance in low temperature applications.



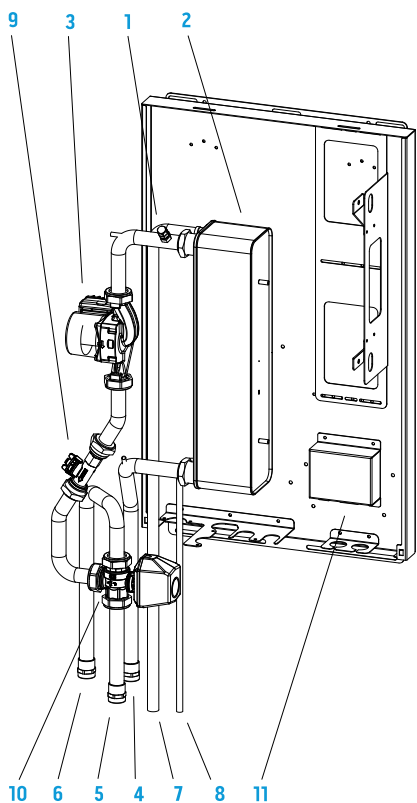
FEATURES

- **Air-to-water inverter heat pump**
- **energy efficiency class** in heating medium climate: up to A+++ (35°C) and A++ (55°C)
- **Energy efficiency class** in heating cold climate: up to A+ (35°C) and A+ (55°C)
- **Available powers:** 2 powers with single-phase R410A refrigerant (10-15 kW) and 2 powers with three-phase R410A refrigerant (15-18 kW)
- **Provides DHW** with temperature up to 55° C.
- Inverter steam-injected Scroll **compressor**
- **Expansion valve:** electronic
- **Refrigerant circuit** with economizer
- Color touchscreen **remotecontrol panel**
- **Maintenance** of machine **output** even in cold outside temperatures
- **Optimization** of machine **defrost cycles** and excellent performance even at cold outside temperatures
- **Operating limits:** down to -32°C, +48°C (see technical manuals for details)
- **Refrigerant gas** R410A*
- **External air probe** integrated in the machine
- **Devices supplied with the machine:**
 - metal frame for outdoor installation touch panel
 - pair of 250 mm high metal feet with vibration dampers
 - rear metal mesh for battery protection
 - integration kit - relay for activation of boiler or other electrical resistance
 - domestic hot water management kit - k1 relay, 1"1/4" 3-way valve, b3 probe
 - heating resistor condensation drain pipe
 - fan grille for noise reduction 800mm diameter (sizes 15,15T,18T)

* Equipment not hermetically sealed containing fluorinated gases with an equivalent GWP of 2088.



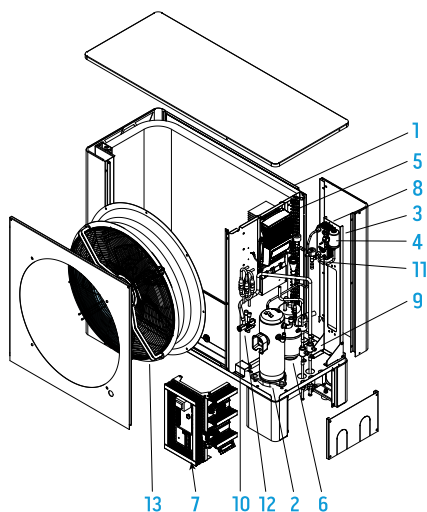
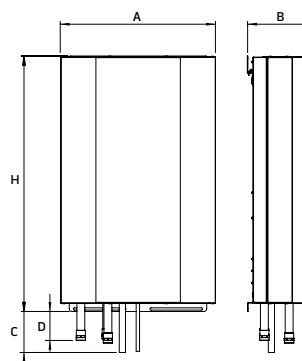
LAYOUT, DIMENSIONS, WEIGHT



1. Vent valve
2. Plate heat exchanger
3. Circulation pump
4. Water inlet hose
5. Water outlet hose (system)
6. Water outlet hose (DHW)
7. Gas passage hose
8. Liquid passage hose
9. Flow meter
10. 3-way valve
11. Electrical panel

Indoor Units

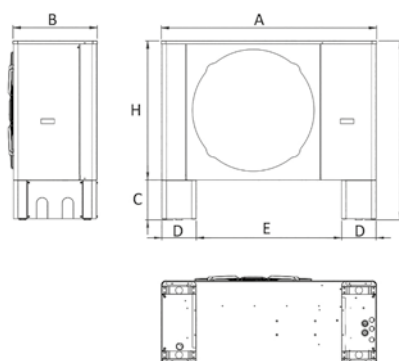
		10	15	15T	18T
A	mm	550	550	550	550
B	mm	228	228	228	228
C	mm	147	147	147	147
D	mm	100	100	100	100
H	mm	907	907	907	907
Weight	kg	50	50	50	50



1. Evaporator
2. Compressor
3. Filter
4. Liquid indicator
5. Inverter
6. Liquid tank
7. Electrical panel
8. Economiser
9. Ball valve
10. Check valve
11. Electronic expansion valve
12. 4-way valve
13. Fan

Outdoor units

		10	15	15T	18T
A	mm	1406	1591	1591	1591
B	mm	550	546	546	546
C	mm	259	259	259	259
D	mm	225	225	225	225
E	mm	949	1134	1134	1134
F	mm	1167	1271	1271	1271
H	mm	908	1012	1012	1012
Weight	kg	160	200	200	200



TECHNICAL DATA				10			15				
ODU Sherpa Cold				02269			02273				
IDU Sherpa Cold				02276			02277				
Compressor frequency				Minimum	Nominal	Maximum	Minimum	Nominal	Maximum		
PUNCTUAL PERFORMANCE	Heating power	a7/6 - w30/35	(a)	kW	3.90	9.60	-	5.51	14.40	-	
	COP	a7/6 - w30/35	(a)	W/W	-	4.27	-	-	4.68	-	
	Heating power	a2/1 - w30/35	(b)	kW	4.80	9.60	-	6.82	14.40	-	
	COP	a2/1 - w30/35	(b)	W/W	-	3.83	-	-	3.85	-	
	Heating power	a-7/-8 - w30/35	(c)	kW	4.17	9.60	-	6.26	14.40	-	
	COP	a-7/-8 - w30/35	(c)	W/W	-	2.98	-	-	2.98	-	
	Heating power	a-15/-16 - w30/35	(d)	kW	3.72	8.93	-	5.52	13.25	-	
	COP	a-15/-16 - w30/35	(d)	W/W	-	2.26	-	-	2.57	-	
	Heating power	a-20/-19 - w30/35	(r)	kW	3.28	7.87	-	4.88	11.71	-	
	COP	a-20/-19 - w30/35	(r)	W/W	-	2.09	-	-	2.43	-	
	Heating power (fancoils)	a7/6 - w40/45	(f)	kW	3.90	9.60	-	5.51	14.40	-	
	COP (fancoils)	a7/6 - w40/45	(f)	W/W	-	3.33	-	-	3.53	-	
	Heating power (fancoils)	a2/1 - w40/45	(g)	kW	4.80	9.60	-	6.82	14.40	-	
	COP (fancoils)	a2/1 - w40/45	(g)	W/W	-	2.82	-	-	3.08	-	
	Heating power (fancoils)	a-7/-8 - w40/45	(h)	kW	4.17	9.60	-	6.26	14.40	-	
	COP (fancoils)	a-7/-8 - w40/45	(h)	W/W	-	2.33	-	-	2.45	-	
	Heating power (fancoils)	a-15/-16 - w40/45	(i)	kW	3.68	8.83	-	5.36	12.86	-	
	COP (fancoils)	a-15/-16 - w40/45	(i)	W/W	-	1.90	-	-	2.03	-	
	Heating power (fancoils)	a-20/-19 - w40/45	(s)	W/W	3.17	7.61	-	4.80	11.52	-	
	COP (fancoils)	a-20/-19 - w40/45	(s)	W/W	-	1.76	-	-	1.92	-	
	Cooling power	a35 - w23/18	(l)	kW	3.53	8.40	-	4.08	11.31	-	
	EER	a35 - w23/18	(l)	W/W	-	4.26	-	-	4.45	-	
	Cooling power (fancoils)	a35 - w12/7	(m)	kW	2.71	6.44	-	3.13	8.67	-	
	EER (fancoils)	a35 - w12/7	(m)	W/W	-	3.31	-	-	3.45	-	
	EFFICIENCIES	Energy efficiency class in water heating 35°C	Warmer Climate			A+++			A+++		
		SCOP	Warmer Climate			4.62			4.79		
		s (Seasonal efficiency for space heating)	Warmer Climate	ηs %		181.8			188.6		
		Energy efficiency class in water heating 35°C	Average Climate			A+++			A+++		
		SCOP	Average Climate			4.50			4.60		
		s (Seasonal efficiency for space heating)	Average Climate	ηs %		177.3			181.1		
		Energy efficiency class in water heating 35°C	Cold Climate			A+			A+		
		SCOP	Cold Climate			3.60			3.71		
s (Seasonal efficiency for space heating)		Cold Climate	ηs %		141.1			145.3			
Energy efficiency class in water heating 55°C		Warmer Climate			A++			A++			
SCOP		Warmer Climate			3.27			3.45			
s (Seasonal efficiency for space heating)		Warmer Climate	ηs %		127.8			135.1			
Energy efficiency class in water heating 55°C		Average Climate			A+++			A+++			
SCOP		Average Climate			3.23			3.37			
s (Seasonal efficiency for space heating)		Average Climate	ηs %		126.3			131.9			
Energy efficiency class in water heating 55°C		Cold Climate			A+			A+			
SCOP		Cold Climate			2.68			2.76			
s (Seasonal efficiency for space heating)		Cold Climate	ηs %		104.2			107.3			
NOISE LEVEL		Indoor unit sound power			dB(A)	36			36		
		Indoor unit sound pressure		(n)	dB(A)	30			30		
		Outdoor unit sound power (nominal)			dB(A)	53.4			52.9		
		Outdoor unit sound pressure (nominal)		(o)	dB(A)	33.5			33		
		System circulator absorption			W	75			75		
		Supply voltage indoor unit			V/ph/Hz	230/1/50			230/1/50		
	Maximum absorbed current of the internal unit			A	0.33			0.33			
ELECTRICAL DATA	Maximum power consumption of the internal unit			kW	0.75			0.75			
	Additional electric heating elements			kW	-			-			
	Supply voltage outdoor unit			V/ph/Hz	230/1/50			230/1/50			
	Outdoor unit maximum absorbed current			A	24.6			38.7			
	Outdoor unit maximum absorbed power			kW	5.1			8.0			
	Compressor type				Scroll with injection			Scroll with injection			
	Refrigerant inlet connection diameter			"	See installation manual			See installation manual			
COOLING CIRCUIT	Coolant gas		(p)		R410A			R410A			
	Global warming potential			GWP	2088			2088			
	Refrigerant gas charge			kg	5			6.5			
	Refrigerant piping length limit without minimum surface verification		(q)		-			-			
	Hydraulic connections			"	1"			1"			
	Capacity of expansion vessel			l	-			-			
	HYDRAULIC DATA										

(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 -7°C b.s./-8°C b.u., inlet/outlet water temperature 40°C/45°C
(j) Heating mode, external air temperature -15°C b.s./-16°C b.u., inlet/outlet water temperature 40°C/45°C
(k) 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 are necessary on the minimum surface of the installation rooms, check the technical manual
(r) Heating mode, external air temperature -20°C b.s./-19°C b.u., inlet/outlet water temperature 30°C/35°C
(s) Heating mode, external air temperature -20°C b.s./-19°C b.u., inlet/outlet water temperature 40°C/45°C

TECHNICAL DATA				15 T			18 T				
ODU Sherpa Cold				02274			02275				
IDU Sherpa Cold				02277			02278				
Compressor frequency				Minimum	Nominal	Maximum	Minimum	Nominal	Maximum		
PUNCTUAL PERFORMANCE	Heating power	a7/6 - w30/35	(a)	kW	5.51	14.40	-	6.24	17.28	-	
	COP	a7/6 - w30/35	(a)	W/W	-	4.68	-	-	4.34	-	
	Heating power	a2/1 - w30/35	(b)	kW	6.82	14.40	-	7.78	17.28	-	
	COP	a2/1 - w30/35	(b)	W/W	-	3.85	-	-	3.37	-	
	Heating power	a-7/8 - w30/35	(c)	kW	6.26	14.40	-	7.20	17.28	-	
	COP	a-7/8 - w30/35	(c)	W/W	-	2.98	-	-	2.61	-	
	Heating power	a-15/16 - w30/35	(d)	kW	5.52	13.25	-	6.40	15.36	-	
	COP	a-15/16 - w30/35	(d)	W/W	-	2.57	-	-	2.23	-	
	Heating power	a-20/19 - w30/35	(r)	kW	4.88	11.71	-	5.60	13.44	-	
	COP	a-20/19 - w30/35	(r)	W/W	-	2.43	-	-	2.03	-	
	Heating power (fancoils)	a7/6 - w40/45	(f)	kW	5.51	14.40	-	6.24	17.28	-	
	COP (fancoils)	a7/6 - w40/45	(f)	W/W	-	3.53	-	-	3.05	-	
	Heating power (fancoils)	a2/1 - w40/45	(g)	kW	6.82	14.40	-	7.78	17.28	-	
	COP (fancoils)	a2/1 - w40/45	(g)	W/W	-	3.08	-	-	2.80	-	
	Heating power (fancoils)	a-7/8 - w40/45	(h)	kW	6.26	14.40	-	7.20	17.28	-	
	COP (fancoils)	a-7/8 - w40/45	(h)	W/W	-	2.45	-	-	2.20	-	
	Heating power (fancoils)	a-15/16 - w40/45	(i)	kW	5.36	12.86	-	5.80	13.92	-	
	COP (fancoils)	a-15/16 - w40/45	(i)	W/W	-	2.03	-	-	1.90	-	
	Heating power (fancoils)	a-20/19 - w40/45	(s)	W/W	4.80	11.52	-	5.20	12.48	-	
	COP (fancoils)	a-20/19 - w40/45	(s)	W/W	-	1.92	-	-	1.79	-	
	Cooling power	a35 - w23/18	(l)	kW	4.08	11.31	-	6.62	15.72	-	
	EER	a35 - w23/18	(l)	W/W	-	4.45	-	-	4.11	-	
	Cooling power (fancoils)	a35 - w12/7	(m)	kW	3.13	8.67	-	5.08	12.34	-	
	EER (fancoils)	a35 - w12/7	(m)	W/W	-	3.45	-	-	2.99	-	
	EFFICIENCIES	Energy efficiency class in water heating 35°C	Warmer Climate			A+++			A+++		
		SCOP	Warmer Climate			4.79			4.66		
		s (Seasonal efficiency for space heating)	Warmer Climate	ηs %		188.6			183.7		
		Energy efficiency class in water heating 35°C	Average Climate			A+++			A+++		
		SCOP	Average Climate			4.60			4.45		
		s (Seasonal efficiency for space heating)	Average Climate	ηs %		181.1			175		
		Energy efficiency class in water heating 35°C	Cold Climate			A+			A+		
		SCOP	Cold Climate			3.71			3.44		
		s (Seasonal efficiency for space heating)	Cold Climate	ηs %		145.3			134.6		
Energy efficiency class in water heating 55°C		Warmer Climate			A++			A+			
SCOP		Warmer Climate			3.45			3.19			
s (Seasonal efficiency for space heating)		Warmer Climate	ηs %		135.1			124.7			
Energy efficiency class in water heating 55°C		Average Climate			A+++			A+			
SCOP		Average Climate			3.37			3.13			
s (Seasonal efficiency for space heating)		Average Climate	ηs %		131.9			122.2			
Energy efficiency class in water heating 55°C		Cold Climate			A+			A			
SCOP		Cold Climate			2.76			2.51			
s (Seasonal efficiency for space heating)		Cold Climate	ηs %		107.3			97.4			
NOISE LEVEL		Indoor unit sound power				dB(A)			37		
		Indoor unit sound pressure		(n)		dB(A)			31		
		Outdoor unit sound power (nominal)				dB(A)			54		
		Outdoor unit sound pressure (nominal)		(o)		dB(A)			34		
		System circulator absorption				W			75		85
		ELECTRICAL DATA	Supply voltage indoor unit			V/ph/Hz		230/1/50			230/1/50
	Maximum absorbed current of the internal unit with active heating elements				A		0.33			0.33	
	Internal unit maximum power consumption with active heating elements				kW		0.75			0.75	
	Additional electric heating elements				kW		-			-	
	Supply voltage outdoor unit				V/ph/Hz		400/3/50			400/3/50	
Outdoor unit maximum absorbed current				A		12.8			13.6		
Outdoor unit maximum absorbed power			kW		8.0			8.5			
COOLING CIRCUIT	Compressor type					Scroll with injection			Scroll with injection		
	Refrigerant inlet connection diameter			"		See installation manual			See installation manual		
	Coolant gas		(p)			R410A			R410A		
	Global warming potential			GWP		2088			2088		
	Refrigerant gas charge			kg		6.5			6.5		
	Refrigerant piping length limit without minimum surface verification		(q)			-			-		
HYDRAULIC DATA	Hydraulic connections			"		T			T		
	Capacity of expansion vessel			l		-			-		

ACCESSORIES

ACCESSORIES	DESCRIPTION	STATUS	
B0900	Cable for Modbus connection touch panel 100m	▼	
B0899	Metallic frame for touch panel external installation	○	
B0906	Aesthetic fan cover front grille	10	
B0907	Aesthetic fan cover front grille	≥ 15	
B0915	Brass Y filter	○	
STORAGE TANKS / PUFFER	01804	HE 200 L storage tank	10
	01805	HE 300 L storage tank	○
	01806	HES 300 L solar storage tank	≤ 15T
	01200	Thermal accumulation 100 L	10
	B0618	Resistance for boiler 2 kW	○
	B0666	Resistance for boiler 3 kW	○
	B0617	Resistance flange kit	○

● Standard accessory | ○ Optional accessory | ▼ Required accessory | – Accessory not compatible

Accessory description on page 54

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.