

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.



TOUCH SCREEN REMOTE CONTROL PANEL

Touch screen remote control panel as standard, with connection cable of up to 30 m.

FEATURES

Inverter air-water heat pump

Energy efficiency class in average climate heating: up to A+++ (35°C) and A++ (55°C)

Energy efficiency class in cold climate heating: up to A+ (35°C) and A+ (55°C)

Powers available: 2 Powers with single-phase R410A refrigerant: 10-15 kW and 4 Powers with three-phase R410A refrigerant: 10-12-15-18 kW

Supplies DHW with temperatures up to 55°C. C.

Compressor Scroll Inverter with steam injection

Expansion valve: electronic

Refrigerant circuit with economiser

Remote control colour touch-screen panel

Maintaining of the power of the machine even with very cold outside temperatures

Optimisation of the machine defrosting cycles and excellent performance even with harsh external temperatures

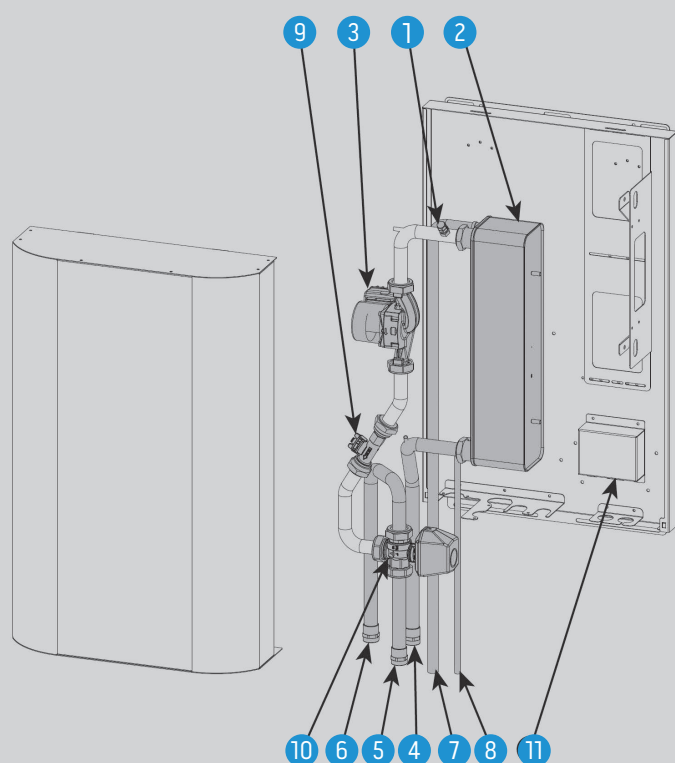
Operating limits: -32°C +48°C

Refrigerant gas R410A*

External air probe integrated in the machine

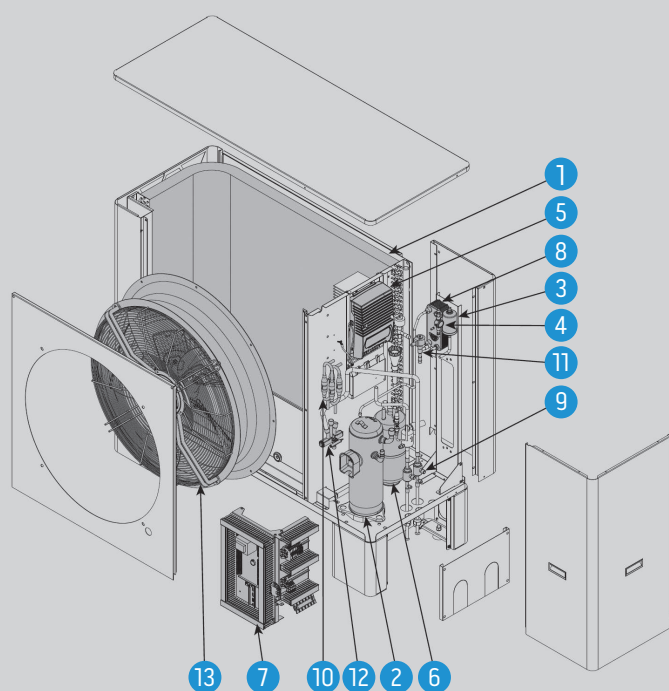
* Equipment not hermetically sealed containing fluorinated gases with an equivalent GWP of 2088

INDOOR UNIT



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

OUTDOOR UNIT



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

PRELIMINARY TECHNICAL DATA

PRELIMINARY TECHNICAL DATA						Sherpa Cold - Single-phase R410A					
						10			15		
Size						02108			02109		
INDOOR UNIT CODE						02100			02103		
OUTDOOR UNIT CODE											
Compressor frequency						Minimum	Nominal	Maximum	Minimum	Nominal	Maximum
Precise performance	Heating output	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 output	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 output	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 output	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 output	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 output (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 output (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 output (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 output (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 output (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 output (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		
	ηs (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		
	ηs (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		
	ηs (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		
	ηs (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		
	Noise level	ηs (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		
ηs (Seasonal efficiency for space heating)		Cold Climate		ηs %		104.2			107.3		
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		
Internal unit electrical power supply					V/ph/Hz	230/1/50			230/1/50		
Maximum absorbed current of the internal unit					A	0.33			0.33		
Maximum power consumption of the internal unit					kW	0.75			0.75		
Additional electric heating elements					kW	-			-		
External unit electrical power supply					V/ph/Hz	230/1/50			230/1/50		
Electrical data		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		
	Coolant gas		(p)			R410A			R410A		
Cooling circuit	Global warming potential				GWP	2088			2088		
	Coolant gas load				kg	5			6.5		
	Refrigerant piping length limit without minimum surface verification		(q)			-			-		
Hydraulic data	Hydraulic connections				"	1"			1"		
	Capacity of expansion vessel				l	-			-		

(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
(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
(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

PRELIMINARY TECHNICAL DATA

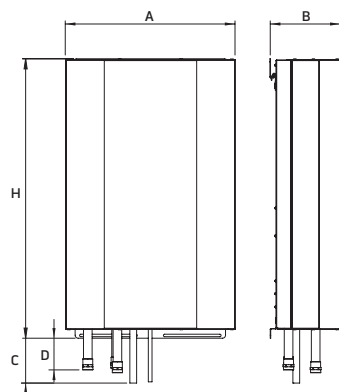
PRELIMINARY TECHNICAL DATA										Sherpa Cold - Three-phase R410A											
										10 T			12 T			15 T			18 T		
Size										02108			02108			02109			02110		
INDOOR UNIT CODE										02101			02102			02104			02105		
OUTDOOR UNIT CODE																					
Compressor frequency										Minimum	Nominal	Maximum	Minimum	Nominal	Maximum	Minimum	Nominal	Maximum	Minimum	Nominal	Maximum
Precise performance	Heating output	a7/6 - w30/35	(a)							kW	3.90	9.60	-	4.40	11.52	-	5.51	14.40	-	6.24	17.28
	COP	a7/6 - w30/35	(a)							W/W	-	4.27	-	-	4.24	-	-	4.68	-	-	4.34
	Heating output	a2/1 - w30/35	(b)							kW	4.80	9.60	-	5.76	11.52	-	6.82	14.40	-	7.78	17.28
	COP	a2/1 - w30/35	(b)							W/W	-	3.83	-	-	4.04	-	-	3.85	-	-	3.37
	Heating output	a7/8 - w30/35	(c)							kW	4.17	9.60	-	5.76	11.52	-	6.26	14.40	-	7.20	17.28
	COP	a7/8 - w30/35	(c)							W/W	-	2.98	-	-	3.22	-	-	2.98	-	-	2.61
	Heating output	a15/16 - w30/35	(d)							kW	3.72	8.93	-	5.24	11.52	-	5.52	13.25	-	6.40	15.36
	COP	a15/16 - w30/35	(d)							W/W	-	2.26	-	-	2.30	-	-	2.57	-	-	2.23
	Heating output	a20/19 - w30/35	(r)							kW	3.28	7.87	-	4.80	11.52	-	4.88	11.71	-	5.60	13.44
	COP	a20/19 - w30/35	(r)							W/W	-	2.09	-	-	1.97	-	-	2.43	-	-	2.03
	Heating output (fancoils)	a7/6 - w40/45	(f)							kW	3.90	9.60	-	4.44	11.62	-	5.51	14.40	-	6.24	17.28
	COP (fancoils)	a7/6 - w40/45	(f)							W/W	-	3.33	-	-	3.47	-	-	3.53	-	-	3.05
	Heating output (fancoils)	a2/1 - w40/45	(g)							kW	4.80	9.60	-	5.81	11.62	-	6.82	14.40	-	7.78	17.28
	COP (fancoils)	a2/1 - w40/45	(g)							W/W	-	2.82	-	-	3.08	-	-	3.08	-	-	2.80
	Heating output (fancoils)	a7/8 - w40/45	(h)							kW	4.17	9.60	-	5.76	11.52	-	6.26	14.40	-	7.20	17.28
	COP (fancoils)	a7/8 - w40/45	(h)							W/W	-	2.33	-	-	2.55	-	-	2.45	-	-	2.20
	Heating output (fancoils)	a15/16 - w40/45	(i)							kW	3.68	8.83	-	5.02	11.04	-	5.36	12.86	-	5.80	13.92
	COP (fancoils)	a15/16 - w40/45	(i)							W/W	-	1.90	-	-	1.91	-	-	2.03	-	-	1.90
	Heating output (fancoils)	a20/19 - w40/45	(s)							W/W	3.17	7.61	-	4.44	10.66	-	4.80	11.52	-	5.20	12.48
	COP (fancoils)	a20/19 - w40/45	(s)							W/W	-	1.76	-	-	1.68	-	-	1.92	-	-	1.79
	Cooling power	a35 - w23/18	(l)							kW	3.53	8.40	-	3.74	10.36	-	4.08	11.31	-	6.62	15.72
	EER	a35 - w23/18	(l)							W/W	-	4.26	-	-	4.08	-	-	4.45	-	-	4.11
	Cooling output (fancoils)	a35 - w12/7	(m)							kW	2.71	6.44	-	2.87	7.94	-	3.13	8.67	-	5.08	12.34
	EER (fancoils)	a35 - w12/7	(m)							W/W	-	3.31	-	-	3.15	-	-	3.45	-	-	2.99
Efficiencies	Energy efficiency class in water heating 35°C	Warmer Climate								A+++				A+++			A+++			A+++	
	SCOP	Warmer Climate								4.51				4.69			4.79			4.66	
	ηs (Seasonal efficiency for space heating)	Warmer Climate								177.6				184.8			188.6			183.7	
	Energy efficiency class in water heating 35°C	Average Climate								A+++				A+++			A+++			A+++	
	SCOP	Average Climate								4.50				4.58			4.60			4.45	
	ηs (Seasonal efficiency for space heating)	Average Climate								177.3				180.3			181.1			175	
	Energy efficiency class in water heating 35°C	Cold Climate								A+				A+			A+			A+	
	SCOP	Cold Climate								3.60				3.65			3.71			3.44	
	ηs (Seasonal efficiency for space heating)	Cold Climate								141.1				143			145.3			134.6	
	Energy efficiency class in water heating 55°C	Warmer Climate								A++				A++			A++			A+	
	SCOP	Warmer Climate								3.27				3.43			3.45			3.19	
	ηs (Seasonal efficiency for space heating)	Warmer Climate								127.8				134.2			135.1			124.7	
	Energy efficiency class in water heating 55°C	Average Climate								A+++				A+++			A+++			A+	
	SCOP	Average Climate								3.23				3.33			3.37			3.13	
	ηs (Seasonal efficiency for space heating)	Average Climate								126.3				130.1			131.9			122.2	
	Energy efficiency class in water heating 55°C	Cold Climate								A+				A+			A+			A+	
	SCOP	Cold Climate								2.68				2.60			2.76			2.51	
	ηs (Seasonal efficiency for space heating)	Cold Climate								104.2				101.2			107.3			97.4	
Noise level	Indoor unit sound power									dB (A)	36			36			36			37	
	Indoor unit sound pressure		(n)							dB (A)	30			30			30			31	
	Outdoor unit sound power (nominal)									dB (A)	53.4			53.4			52.9			54	
	Outdoor unit sound pressure (nominal)		(o)							dB (A)	33.5			33.5			33			34	
	System circulator absorption									W	75			75			75			85	
Electrical data	Internal unit electrical power supply									V/ph/Hz	230/1/50			230/1/50			230/1/50			230/1/50	
	Maximum absorbed current of the internal unit									A	0.33			0.33			0.33			0.33	
	Maximum power consumption of the internal unit									kW	0.75			0.75			0.75			0.75	
	Additional electric heating elements									kW	-			-			-			-	
	External unit electrical power supply									V/ph/Hz	400/3/50			400/3/50			400/3/50			400/3/50	
	Outdoor unit maximum absorbed current									A	8.2			11.4			12.8			13.6	
Cooling circuit	Outdoor unit maximum absorbed power									kW	5.1			7.1			8.0			8.5	
	Compressor type										Scroll with injection			Scroll with injection			Scroll with injection			Scroll with injection	
	Refrigerant inlet connection diameter									"	See installation manual			See installation manual			See installation manual			See installation manual	
	Coolant gas		(p)								R410A			R410A			R410A			R410A	
	Global warming potential										2088			2088			2088			2088	
Hydraulic data	Coolant gas load									kg	5			5			6.5			6.5	
	Refrigerant piping length limit without minimum surface verification		(q)								-			-			-			-	
	Hydraulic connections									"	1"			1"			1"			1"	
Capacity of expansion vessel											-			-			-			-	
											-			-			-			-	

(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
 (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
 (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

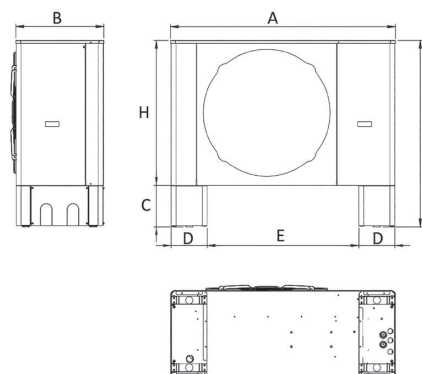
INDOOR UNIT

		10	15	10 T	12 T	15 T	18 T
A	mm	550	550	550	550	500	550
B	mm	228	228	228	228	228	228
C	mm	147	147	147	147	147	147
D	mm	100	100	100	100	100	100
H	mm	907	907	907	907	907	907
Net weight	kg	50	50	50	50	50	50



OUTDOOR UNIT

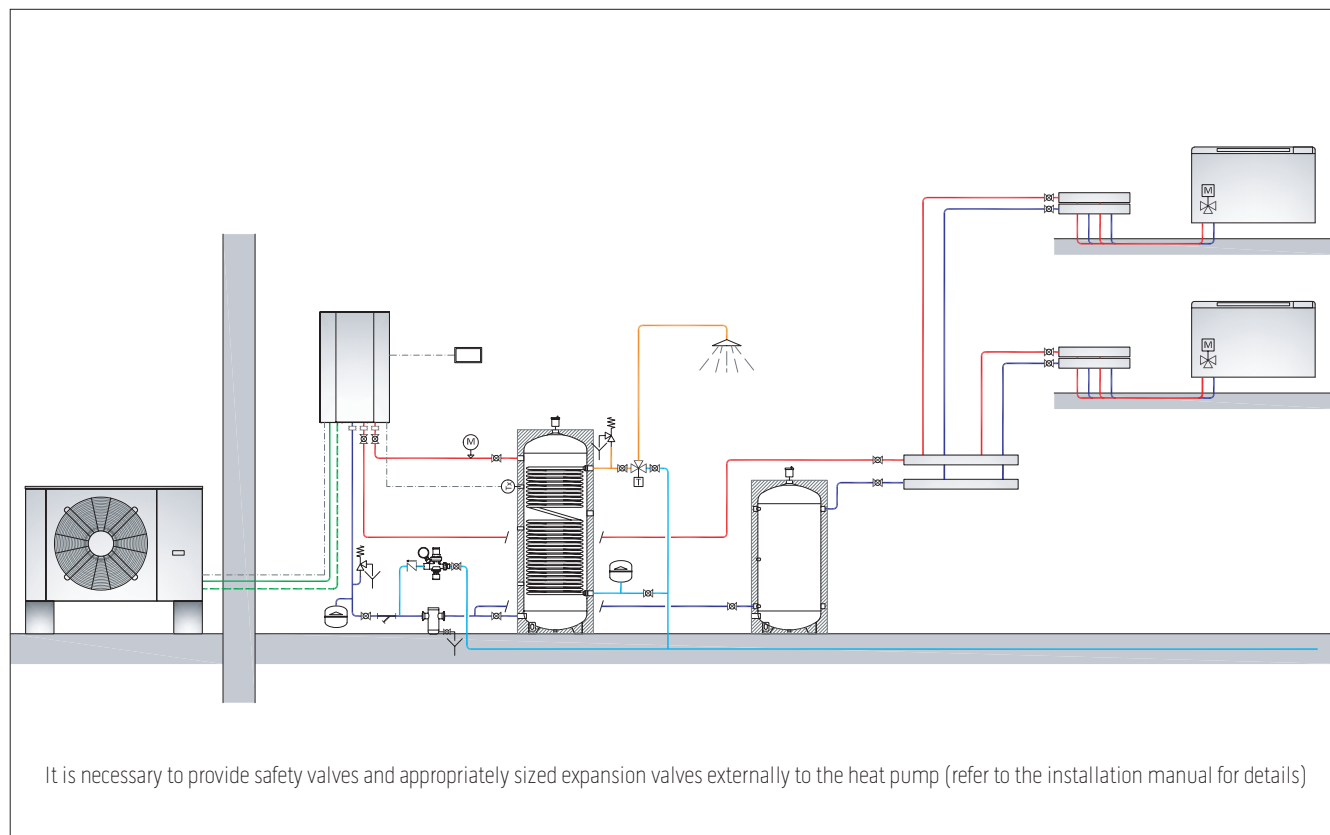
		10	15	10 T	12 T	15 T	18 T
		MONOFAN		MONOFAN			
A	mm	1406	1591	1406	1406	1591	1591
B	mm	550	546	550	550	546	546
C	mm	259	259	259	259	259	259
D	mm	225	225	225	225	225	225
E	mm	949	1134	949	949	1134	1134
F	mm	1167	1271	1167	1167	1271	1271
H	mm	908	1012	908	908	1012	1012
Net weight	kg	160	200	160	160	200	200



ACCESSORIES

	CODE	DESCRIPTION	NOTE
	B0900	100 m cable for Modbus touch panel connection	Necessary Accessory
	B0901	10m cable for UI-EU connection (set of 4 cables with pre-wired connectors)	Necessary accessory, with a choice of three options
	B0902	20m cable for UI-EU connection (set of 4 cables with pre-wired connectors)	
	B0903	30m cable for UI-EU connection (set of 4 cables with pre-wired connectors)	
	B0904	Pair of h250 mm metal feet with small anti-vibration mounts (not compatible with cod. B0905).	
	B0908	Rear metal mesh for battery protection (sizes 10, 10T and 12T)	
	B0909	Rear metal mesh for battery protection (sizes 15, 15T and 18T)	
	B0910	Integration kit - Relay for activation of storage tank or other electric heating element. Necessary in combination with the electric heating element of the storage tank in order to perform anti-legionella thermal disinfection treatments in case of domestic hot water accumulation	Optional factory fitted accessory
	B0911	DHW management kit - K1 relay, 3W 1 1/4" valve, Probe B3	
	B0912	Condensate drain pipe electric heating element	
	B0913	Fan grille to reduce noise 800mm diameter	
	B0914	Acoustic insulation kit to reduce noise by 2dB	
	B0915	Brass Y filter with 1" 1/4 connections and 2" body	
	B0905	Pair of 200 mm high rubber feet with anti-vibration function (not compatible with cod. B0904)	
	B0906	Aesthetic fan cover front grille (sizes 10, 10T and 12T)	Necessary accessory supplied separately
	B0907	Aesthetic fan cover front grille (sizes 15, 15T and 18T)	
	B0899	Metal frame for touch panel recessed installation	

SHERPA COLD heat pump (heating and air conditioning; DHW production) Bi2 SLR fan coil radiator terminals with 3-way valves and inertial storage in series on the return pipe of the air conditioning system. Storage of technical water with instant DHW production.



STORAGE TANKS AND ACCUMULATIONS COMPATIBILITY

		Sherpa Cold 10	Sherpa Cold 10T	Sherpa Cold 12T	Sherpa Cold 15	Sherpa Cold 15T	Sherpa Cold 18T
01804	Standard cylinder 200 L	X	X				
01805	Standard cylinder 200 L	X	X	X	X	X	X
01806	Standard cylinder 200 L	X	X	X	X	X	
01807	Hybrid HY cylinder 300 L						
01808	Hybrid HYS solar cylinder 300 L						
01199	Thermal accumulation 50 L						
01200	Thermal accumulation 100 L	X*	X*				

* the correctness of this combination must be verified with particular attention by the technician assigned to designing the system based on the water content and the characteristics of the heat distribution and emission network. For installation and sizing of the system inertial storage, always refer to the instructions provided in the installation manual.