Juniper® SS XL

Stainless steel heat pump calorifier

MODELS

5

CAPACITY (litres)

200 - 1000

Juniper® SS XL

The Juniper SS XL hot water calorifier is available as either a single coil or twin coil, both of which utilise double spiral stainless steel construction.

The calorifier is suitable for use with traditional LPHW heating systems and are ideally suited for heat pump systems providing a continuous output up to 3159L/h . The calorifier capacities range from 200-1000 litres.

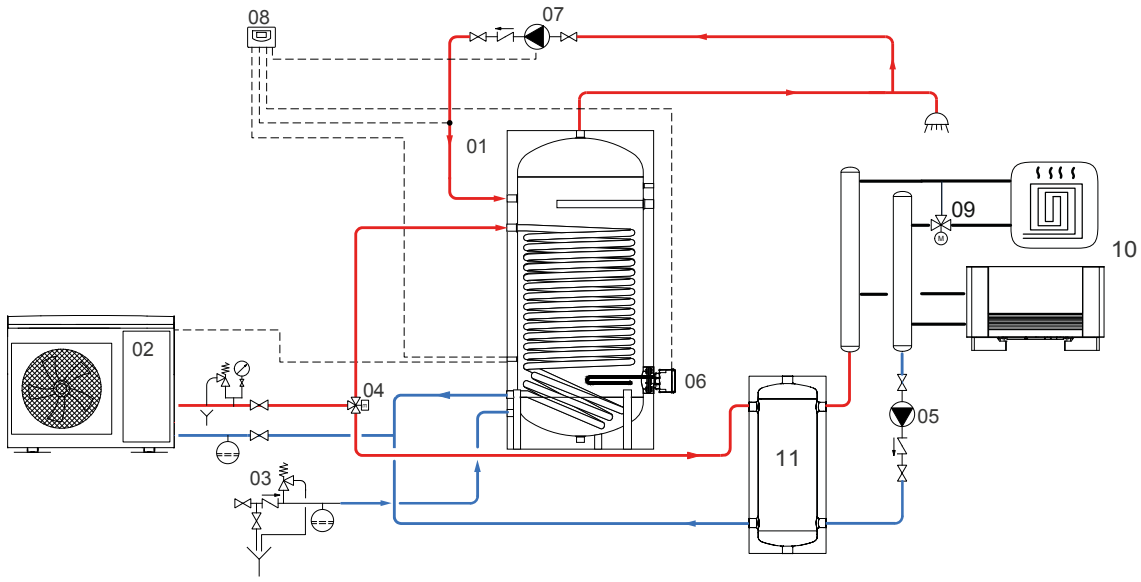
5 5 Year Tank Warranty*

2 2 Year Warranty*

ErP ErP Part L Compliant

- 200-1000 litre capacity
- 10 calorifer models
- Optional electrical element (3kW single phase)
- Unvented kits
- Cathode protection
- Energy Efficiency Class B & C

Schematic

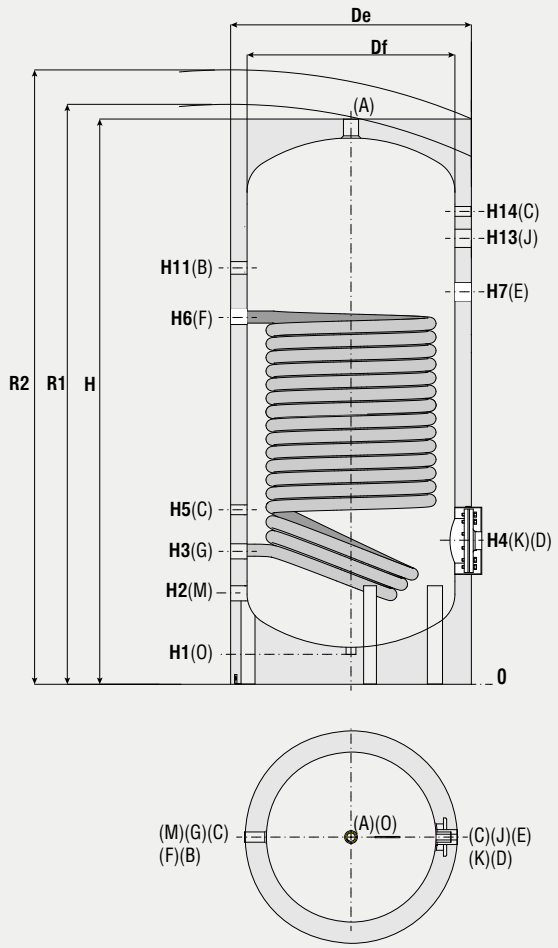


01	Juniper SS XL	**05**	Pump	**09**	Thermostatic mixing valve
02	Heat pump	**06**	Electric immersion heater	**10**	Radiator/fan coils
03	Hydraulic safety group	**07**	DHW recirculation group	**11**	Buffer tank
04	Motorised three-way valve	**08**	Thermostat		

Dimensions

SINGLE COIL

All dimensions are distances from the floor, except for R1 & R2 which is a lateral dimension.



A	Domestic hot water outlet / T&P connection
B	Recirculation
C	Connection for thermometer (½" F)
D	Connection for electric immersion heater
E	Connection for magnesium anode (1¼" F)
F	Primary circuit inlet (1" F)
G	Primary circuit outlet (1" F)
J	Connection for second magnesium anode (1¼" F) > 800
K	Inspection flange/electric element (1½")
M	Domestic cold water inlet
O	Drain

HARD FOAM INSULATION

Model	Volume	Df	De	H	R2	H1	H2	H3	H4	H5	H6	H7	H11	H14
	litres	mm												
200	192	450	550	1440	1510	65	210	320	320	430	845	900	1090	1190
300	293	550	650	1495	1630	70	240	350	380	460	1059	1110	1170	1220
500	503	650	750	1796	1950	65	260	370	405	480	1285	1380	1400	1490

Model	Weight	K	A	B	C	D	E	F	G	M	O
	kg	mm	F Connections								
200	47	Øi20Øe180	1"	¾"	1½"	1½"	1¼"	1"	1"	¾"	½"
300	75	Øi20Øe180	1"	1"	1½"	1½"	1¼"	1"	1"	1"	½"
500	110	Øi20Øe180	1"	1"	1½"	1½"	1¼"	1"	1"	1"	½"

SOFT FOAM INSULATION

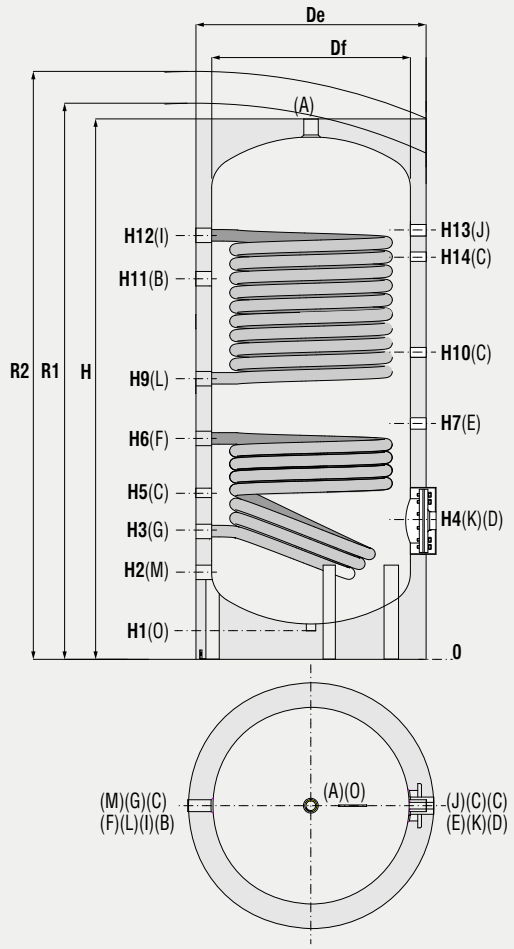
Model	Volume	Df	De	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H11	H13	H14
	litres	mm														
800	759	790	990	1943	2180	2195	114	323	443	478	553	1403	1483	1513	-	1563
1000	902	790	990	2193	2410	2425	114	323	443	478	553	1613	1463	1613	1703	1813

Model	Weight	K	A	B	C	D	E	F	G	J	M	O
	kg	mm	F Connections									
800	169	Øi20Øe180	1¼"	1"	1½"	2"	1¼"	1"	1"	-	1"	¾"
1000	183	Øi20Øe180	1½"	1"	1½"	2"	1¼"	1"	1"	1¼"	1¼"	¾"

Dimensions

TWIN COIL

All dimensions are distances from the floor, except for R1 & R2 which is a lateral dimension.



A	Domestic hot water outlet
B	Recirculation
C	Connection for thermometer (½" F)
D	Connection for electric immersion heater
E	Connection for magnesium anode (1¼" F)
F	Primary circuit inlet (1" F)
G	Primary circuit outlet (1" F)
J	Connection for second magnesium anode (1¼" F) > 800
K	Inspection flange/electric element (1½")
M	Domestic cold water inlet
L	Upper exchanger outlet (1¼" F)
I	Upper exchanger inlet (1¼" F)
O	Drain

HARD FOAM INSULATION

Model	Volume	Df	De	H	R2	H1	H2	H3	H4	H5	H6	H7	H9	H10	H11	H12	H14
	(litres)	(mm)															
200	192	450	550	1440	1510	65	210	320	320	430	539	660	705	886	1094	1190	1200
300	293	550	650	1495	1630	70	240	345	380	459	559	590	669	896	1109	1219	1230
500	503	650	750	1796	1950	65	260	480	400	480	666	690	795	1099	1355	1479	1490

Model	Weight	K	A	B	C	D	E	F	G	M	O
	(kg)	mm	F Connections								
200	43	Øi20Øe180	1"	¾"	½"	1½"	1¼"	1"	1"	¾"	½"	1"	1"
300	69	Øi20Øe180	1"	1"	½"	1½"	1¼"	1"	1"	1"	½"	1"	1"
500	99	Øi20Øe180	1"	1"	½"	1½"	1¼"	1"	1"	1"	½"	1"	1"

SOFT FOAM INSULATION

Model	Volume	Df	De	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H9	H10	H11	H12
	litres	mm															
800	759	790	990	1943	2180	2195	114	323	443	473	553	718	763	825	1163	1163	1573
1000	902	790	990	2193	2410	2425	114	323	443	473	553	802	862	918	1162	1557	1792

Model	Weight	H13	H14	K	A	B	C	D	E	F	G	J	M	O	L	I
	kg	mm			F Connections											
800	156	-	1573	Øi20Øe180	1¼"	1"	½"	1½"	1¼"	1¼"	1¼"	-	1"	¾"	1¼"	1¼"
1000	193	1822	1712	Øi20Øe180	1½"	1"	½"	2"	1¼"	1¼"	1¼"	1¼"	1"	¾"	1¼"	1¼"

Performance data

SINGLE COIL

		200		300		500		800		1000	
Nominal storage capacity	litres	191		293		503		759		902	
Energy class		B						C			
Coil tube Ø	mm	32									
Coil surface area	m²	1.95		3.5		5.5		6.0		6.0	
Coil max operating temperature / pressure	°C / bar	110 / 12									
Tank (secondary) maximum working temperature/pressure	°C / bar	95 / 6									
Weight (empty/full)	kg	87 / 278		108 / 401		149 / 652		180 / 939		224 / 1126	
Heat up time at 35°C ΔT (3kW immersion only)	hr	1.0		1.1		1.7		3.5		5.2	
Optional immersion heater (power/phase)	kW / ph	3 / 1									
Standby loss at 65°C	kWh/24hr	1.31		1.53		2.15		2.53		2.57	
Primary flow rate	l/s (m³/hr)	**0.833 (3.0)**	**0.417 (1.5)**	**1.111 (4.0)**	**0.556 (2.0)**	**1.389 (5.0)**	**0.694 (2.5)**	**1.67 (6.0)**	**0.833 (3.0)**	**1.67 (6.0)**	**0.833 (3.0)**
Continuous DHW output at 35°C ΔT (10/45°C) with primary 55°C	litres/hour	510	467	911	834	1420	1296	1568	1441	1568	1441
10 minute peak DHW draw off at 35°C ΔT (10/45°C) with primary 55°C and tank warmed at 50°C	litres	282	277	449	441	754	742	1065	1052	1228	1216
Recovery time DHW at 40°C ΔT (10/50°C) full tank without draw off with primary 55°C	minutes	41	48	36	43	41	49	55	66	65	78
Nominal heat transferred with primary 55°C DHW at 35°C ΔT (10/45°C)	kW	20.6	19.0	36.9	33.8	57.4	52.4	63.4	58.2	63.4	58.2
Primary hydraulic resistance	kPa	2.8	0.8	7.1	2.0	15.4	4.5	22.9	6.6	22.9	6.6
Continuous DHW output at 50°C ΔT (10/60°C) with primary 80°C	litres/hour	680	616	1209	1090	1873	1680	2073	1873	2073	1873
10 minute peak DHW draw off at 50°C ΔT (10/60°C) with primary 80°C and tank warmed at 60°C	litres	303	292	492	472	811	779	1100	1067	1243	1210
Recovery time DHW at 50°C ΔT (10/60°C) full tank without draw off with primary 80°C	minutes	20	24	18	21	20	25	27	33	32	40
Nominal heat transferred with primary 80°C DHW at 50°C ΔT (10/60°C)	kW	39.0	35.4	69.3	62.5	107.4	96.3	118.8	107.3	118.8	107.4
Primary hydraulic resistance	kPa	2.8	0.8	7.1	2.0	15.4	4.5	22.9	6.6	22.9	6.6

Performance data

TWIN COIL

		200		300		500		800		1000	
Nominal storage capacity	litres	191		293		503		759		902	
Energy class		B		B		C		C		C	
Coil tube Ø	mm	32		32		32		32		32	
Lower coil surface area	m²	0.4/0.6		0.9/1		1.4		1.8		3	
Upper coil surface area	m²	1.4		1.9/2.4		3.1/4		5		6	
Coil maximum operating temperature / pressure	°C / bar	110 / 12									
Tank (secondary) maximum working temperature/pressure	°C / bar	90/10 / 95/6		90/10 / 95/6		90/10 / 95/6		95/6		95/6	
Weight (empty/full)	kg	109 / 300		120 / 413		161 / 664		205 / 964		221 / 1123	
Heat up time at 35°C ΔT (3kW immersion only)	hr	1.5		2.3		4.1		6.3		8.0	
Optional immersion heater power / phase	kW / ph	3 / 1									
Standby loss at 65°C	kWh/24hr	1.31		1.53		2.15		2.53		2.57	
Lower coil primary flow rate	litres (m³/hr)	**0.833 (3)**	**0.417 (1.5)**	**1.111 (4)**	**0.556 (2)**	**1.389 (5)**	**0.694 (2.5)**	**1.67 (6)**	**0.833 (3)**	**1.67 (6)**	**0.833 (3)**
Continuous DHW output at 35°C ΔT (10/45°C) with primary 55°C on upper coil	litres/hour	161	151	271	257	382	364	494	471	812	765
10 minute peak DHW draw off at 35°C ΔT (10/45°C) with primary 55°C on upper coil and tank warmed at 50°C	litres	300	298	464	461	782	779	1167	1163	1424	1416
Recovery time DHW at 40°C ΔT (10/50°C) full tank without draw off with primary 55°C on upper coil	minutes	125	138	114	124	140	151	163	176	120	134
Nominal heat transferred by upper coil with primary 55°C DHW at 35°C ΔT (10/45°C)	kW	6.6	6.2	11.1	10.5	15.6	14.8	20.1	19.1	32.9	31.0
Upper coil primary flow rate	litres (m³/hr)	**0.833 (3)**	**0.417 (1.5)**	**1.111 (4)**	**0.556 (2)**	**1.389 (5)**	**0.694 (2.5)**	**1.67 (6)**	**0.833 (3)**	**1.67 (6)**	**0.833 (3)**
Continuous DHW output at 35°C ΔT (10/45°C) with primary 55°C on upper coil	litres/hour	370	343	637	591	1054	974	1322	1224	1568	1441
10 minute peak DHW draw off at 35°C ΔT (10/45°C) with primary 55°C on upper coil and tank warmed at 50°C	litres	190	186	335	327	594	581	795	778	987	966
Recovery time DHW at 40°C ΔT (10/50°C) full tank without draw off with primary 55°C on upper coil	minutes	26	30	27	31	31	36	34	40	37	44
Nominal heat transferred by upper coil with primary 55°C DHW at 35°C ΔT (10/45°C)	kW	15.0	13.9	25.8	23.9	42.7	39.4	53.5	49.5	63.4	58.2
Continuous DHW output at 35°C ΔT (10/45°C) with primary 55°C on lower & upper coil	litres/hour	531	494	908	848	1436	1338	1816	1695	2380	2206
10 minute peak DHW draw off at 35°C ΔT (10/45°C) with primary 55°C on lower & upper coil and tank warmed at 50°C	litres	490	484	799	788	1376	1360	1962	1941	2411	2382
Recovery time DHW at 40°C ΔT (10/50°C) full tank without draw off with primary 55°C on lower & upper coil	minutes	151	168	141	155	171	187	197	216	157	178
Nominal heat transferred by lower & upper coil with primary 55°C DHW at 35°C ΔT (10/45°C)	kW	21.6	20.1	36.9	34.4	58.3	54.2	73.6	68.6	96.3	89.2

Performance data

TWIN COIL

		200		300		500		800		1000	
Primary flow rate	litres (m³/hr)	**0.833 (3)**	**0.417 (1.5)**	**1.111 (4)**	**0.556 (2)**	**1.389 (5)**	**0.694 (2.5)**	**1.67 (6)**	**0.833 (3)**	**1.67 (6)**	**0.833 (3)**
Lower coil primary hydraulic resistance	kPa	5.8	1.6	3.2	8.9	5.9	1.6	9.6	2.7	13.5	3.9
Upper coil primary hydraulic resistance	kPa	11.0	3.2	5.5	1.6	12.1	3.5	20.1	5.8	23.4	6.8
Lower & upper coil primary hydraulic resistance	kPa	16.8	4.8	8.7	10.5	18.0	5.1	29.7	8.5	36.9	10.7
Continuous DHW output at 50°C ΔT (10/60°C) with primary 80°C on lower coil	litres/hour	218	204	366	345	515	486	665	629	1087	1011
10 minute peak DHW draw off at 50°C ΔT (10/60°C) with primary 80°C on lower coil and tank warmed at 60°C	litres	227	225	353	350	588	583	869	863	1081	1068
Recovery time DHW at 50°C ΔT (10/60°C) full tank without draw off with primary 80°C on lower coil	minutes	59	65	54	60	67	73	78	86	58	66
Nominal heat transferred by lower coil with primary 80°C DHW at 50°C ΔT (10/60°C)	kW	12.6	11.8	21.1	19.9	29.7	28	38.3	36.2	62.4	58.1
Continuous DHW output at 50°C ΔT (10/60°C) with primary 80°C on upper coil	litres/hour	497	456	851	779	1400	1274	1754	1598	2072	1873
10 minute peak DHW draw off at 50°C ΔT (10/60°C) with primary 80°C on upper coil and tank warmed at 60°C	litres	172	165	300	288	523	503	690	665	849	816
Recovery time DHW at 50°C ΔT (10/60°C) full tank without draw off with primary 80°C on upper coil	minutes	13	15	13	16	15	18	17	20	18	22
Nominal heat transferred by upper coil with primary 80°C DHW at 50°C ΔT (10/60°C)	kW	28.6	26.2	48.8	44.7	80.3	73.1	100.6	91.6	118.8	107.3
Continuous DHW output at 50°C ΔT (10/60°C) with primary 80°C on lower & upper coil	litres/hour	715	660	1217	1124	1915	1760	2419	2227	3159	2884
10 minute peak DHW draw off at 50°C ΔT (10/60°C) with primary 80°C on lower & upper coil and tank warmed at 60°C	litres	309	300	493	478	818	793	1157	1125	1027	1376
Recovery time DHW at 50°C ΔT (10/60°C) full tank without draw off with primary 80°C on lower & upper coil	minutes	16	18	15	16	16	17	19	21	17	19
Nominal heat transferred by lower & upper coil with primary 80°C DHW at 50°C ΔT (10/60°C)	kW	41.2	38	69.9	64.6	110	101.1	138.9	127.8	181.2	165.4

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