Juniper SS XL

stainless steel hot water calorifier

MODELS

SC

TC

CAPACITY (litres)

200-1000

modutherm

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.

5yr Tank Warranty

ErP Part L Compliant

WRAS Approved PENDING

Energy Efficiency Class B&C

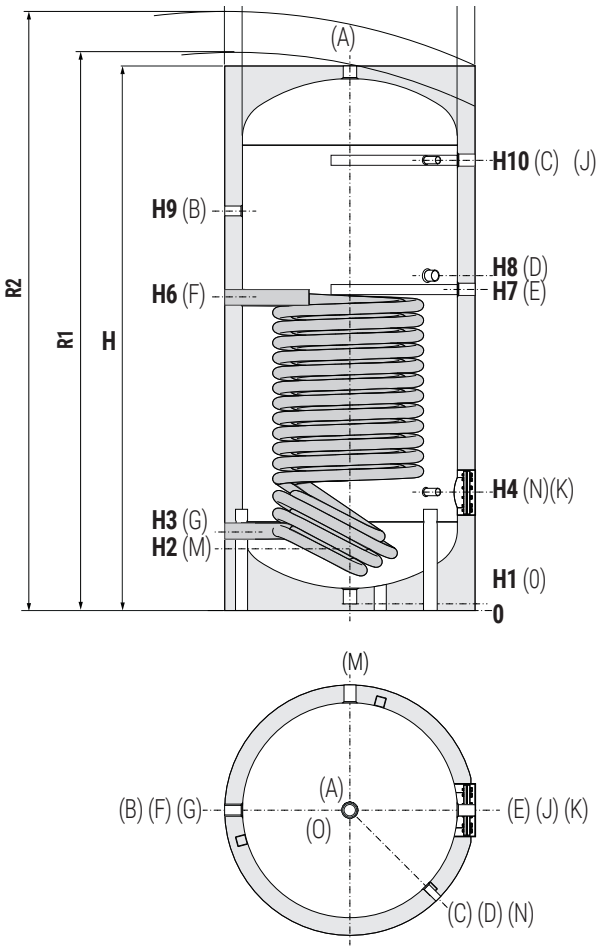
key features

- **200-1000 litre capacity**
- **10 calorifer models**
- **Optional electrical element**
  (3kW single phase)
- **Unvented kits**
- **Cathode protection**

warranty

- 5 year warranty* on tank body
- 2 year warranty* on all other components

*subject to Terms & Conditions



- (A) domestic hot water outlet / T&P connection
- (B) recirculation (1" F)
- (C) connection for intrumentation (½" F)
- (D) connection for electric immersion heater
- (E) connection for magnesium anode (1¼" F)
- (F) primary circuit inlet (1¼" F)
- (G) primary circuit outlet (1¼" F)
- (K) blind flange for inspection
- (M) domestic cold water circuit inlet
- (N) connection for instrumentation (½" F)
- (O) drain

dimensions

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

HARD FOAM INSULATION

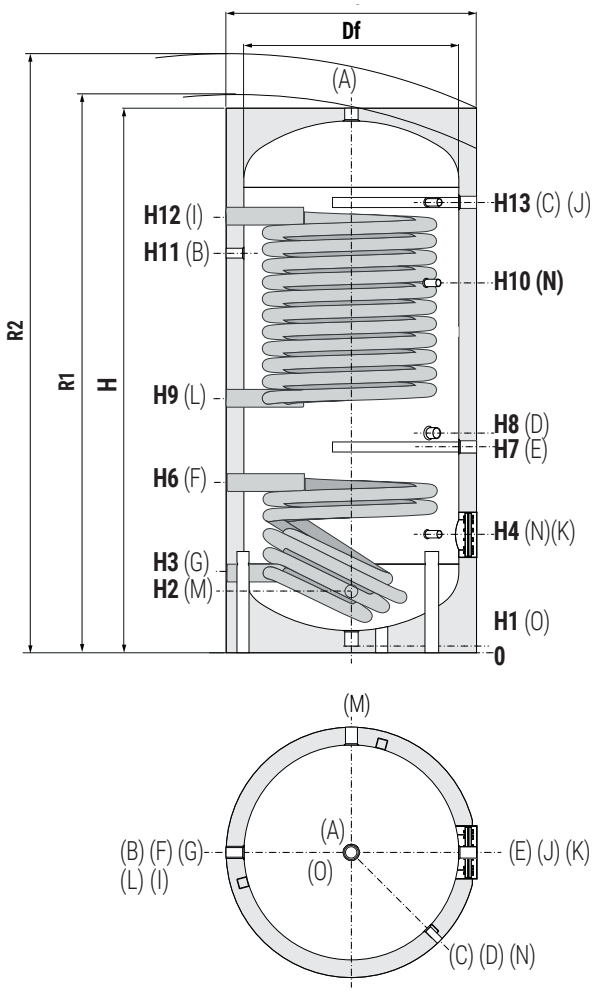
MODEL	Capacity (litres)	De	H	R2	H1	H2	H3	H4	H6	H7	H8	H9	H10
						(mm)							
200	191	550	1446	1547	71	206	296	326	713	866	926	1100	1206
300	293	650	1501	1636	76	236	326	386	1022	1036	1096	1176	1236
500	503	750	1796	1946	71	256	356	411	1232	1272	1340	1396	1496

MODEL	K (mm)	A	D	M	O
			F connections		
200	Øi20Øe180	1"	1½"	1"	½"
300	Øi20Øe180	1"	1½"	1"	½"
500	Øi20Øe180	1"	1½"	1"	½"

SOFT FOAM INSULATION

MODEL	Capacity (litres)	Df	De	H	R1	R2	H1	H2	H3	H4	H6	H7	H8	H9	H10
								(mm)							
800	759	790	1010	1943	2105	2195	114	323	423	478	1151	1223	1293	1331	1533
1000	902	800	1020	2192	2340	2425	112	317	412	477	1225	1282	1337	1557	1792

MODEL	K (mm)	A	D	M	O
			F connections		
800	Øi20Øe180	1¼"	2"	1"	¾"
1000	Øi20Øe180	1½"	2"	1¼"	¾"



- (A) domestic hot water outlet / T&P connection
- (B) recirculation (1" F)
- (C) connection for intrumentation (½" F)
- (D) connection for electric immersion heater
- (E) connection for magnesium anode (1¼" F)
- (F) primary circuit inlet (1¼" F)
- (G) primary circuit outlet (1¼" F)
- (I) upper heat exchanger inlet (1¼" F)
- (K) blind flange for inspection
- (M) domestic cold water circuit inlet
- (N) connection for instrumentation (½" F)
- (O) drain

dimensions

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

HARD FOAM INSULATION

MODEL	Capacity (litres)	De	H	R2	H1	H2	H3	H4	H6	H7	H8	H9	H10
						(mm)							
200	191	550	1446	1555	71	206	296	326	533	646	726	801	886
300	293	650	1501	1640	76	236	326	386	572	626	706	741	1096
500	503	750	1796	1955	71	256	356	411	601	686	766	810	1299

MODEL	H11	H12	H13 (mm)	K	A	D F connections	M	O
200	1046	1206	960	Øi20Øe180	1"	1½"	1"	½"
300	989	1236	1236	Øi20Øe180	1"	1½"	1"	½"
500	1148	1485	1496	Øi20Øe180	1"	1½"	1"	½"

SOFT FOAM INSULATION

MODEL	Capacity (litres)	Df	De	H	R1	R2	H1	H2	H3	H4	H6	H7	H8
							(mm)						
800	759	790	1010	1943	2105	2195	114	323	423	478	664	696	756
1000	902	800	1020	2192	2340	2425	112	317	412	477	873	908	963

MODEL	H9	H10	H11	H12 (mm)	H13	K	A	D F connections	M	O
800	800	1383	1213	1548	1568	Øi20Øe180	1¼"	2"	1"	¾"
1000	1008	1564	1452	1756	1792	Øi20Øe180	1½"	2"	1¼"	¾"

SINGLE COIL PERFORMANCE DATA

		MODEL				
		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
coil surface area	m²	1.95	3.5	5.5	6	6
coil max operating temperature/pressure	°C/bar	110/12	110/12	110/12	110/12	110/12
maximum working temperature/pressure, tank (secondary)	°C/bar	95/6	95/6	95/6	95/6	95/6
weight empty/full	kg	87/278	108/401	149/652	180/939	224/1126
heat up time 35°CΔT 3Kw immersion only	hr	1	1.1	1.7	3.5	5.2
immersion heater option power/phase	kW/ph	3/1	3/1	3/1	3/1	3/1
standby loss at 65°C	kWh/24hr	1.31	1.53	2.15	2.53	2.57

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 @35°CΔT (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 @35°CΔT (10/45°C) with primary 55°C and tank warmed @ 50°C	litres	282	277	449	441	754	742	1065	1052	1228	1216
recovery time DHW @40°CΔT (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 and DHW @35°CΔT (10/45°C)	kW	20.6	19	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	15.4	4.5	22.9	6.6	22.9	6.6
continuous DHW output @50°CΔT (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 @50°CΔT (10/60°C) with primary 80°C and tank warmed @ 60°C	litres	303	292	492	472	811	779	1100	1067	1243	1210
recovery time DHW @50°CΔT (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 and DHW @50°CΔT (10/60°C)	kW	39	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	15.4	4.5	22.9	6.6	22.9	6.6

TWIN COIL PERFORMANCE DATA

		MODEL				
		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 max operating temperature/pressure	°C/bar	110/12	110/12	110/12	110/12	110/12
maximum working temperature/pressure, tank (secondary)	°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 35°CΔT 3Kw immersion only	hr	1.5	2.3	4.1	6.3	8
immersion heater option power/phase	kW/ph	3/1	3/1	3/1	3/1	3/1
standby loss at 65°C	kWh/24hr	1.31	1.53	2.15	2.53	2.57

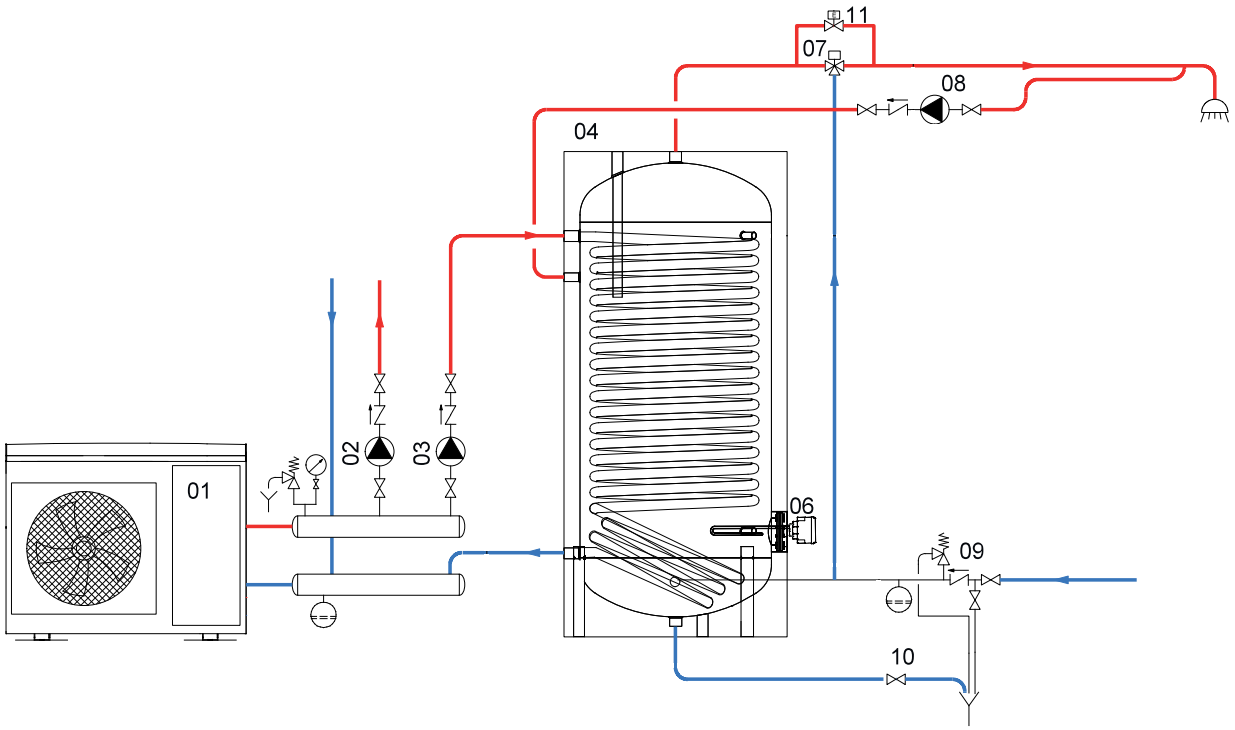
PRIMARY FLOW RATE (Lower Coil) (Litres (m³/hr))		0.833 (3)	0.417 (1.5)	1.111 (4)	0.556 (2)	1.389 (5)	0.694 (2.5)	1.67 (6)	0.833 (3)	1.67 (6)	0.833 (3)
continuous DHW output @35°CΔT (10/45°C) with primary 55°C on upper coil	litres/hour	161	151	271	257	382	364	494	471	812	765
10 min peak DHW draw off @35°CΔT (10/45°C) with primary 55°C on upper coil and tank warmed @ 50°C	litres	300	298	464	461	782	779	1167	1163	1424	1416
recovery time DHW @40°CΔT (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 and DHW @35°CΔT (10/45°C)	kW	6.6	6.2	11.1	10.5	15.6	14.8	20.1	19.1	32.9	31

PRIMARY FLOW RATE (Upper Coil) (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 @35°CΔT (10/45°C) with primary 55°C on upper coil	litres/hour	370	343	637	591	1054	974	1322	1224	1568	1441
10 min peak DHW draw off @35°CΔT (10/45°C) with primary 55°C on upper coil and tank warmed @ 50°C	litres	190	186	335	327	594	581	795	778	987	966
recovery time DHW @40°CΔT (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 and DHW @35°CΔT (10/45°C)	kW	15	13.9	25.8	23.9	42.7	39.4	53.5	49.5	63.4	58.2
continuous DHW output @35°CΔT (10/45°C) with primary 55°C on the lower & upper coil	litres/hour	531	494	908	848	1436	1338	1816	1695	2380	2206
10 minute peak DHW draw off @35°CΔT (10/45°C) with primary 55°C on on the lower & upper coil and tank warmed @ 50°C	litres	490	484	799	788	1376	1360	1962	1941	2411	2382
recovery time DHW @40°CΔT (10/50°C) full tank without draw off with primary 55°C on the lower & upper coil	minutes	151	168	141	155	171	187	197	216	157	178
nominal heat transferred by the lower & upper coil with primary 55°C and DHW @35°CΔT (10/45°C)	kW	21.6	20.1	36.9	34.4	58.3	54.2	73.6	68.6	96.3	89.2

TWIN COIL PERFORMANCE DATA

		MODEL									
		200		300		500		800		1000	
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	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	5.1	29.7	8.5	36.9	10.7
continuous DHW output @50°CΔT (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 @50°CΔT (10/60°C) with primary 80°C on lower coil and tank warmed @ 60°C	litres	227	225	353	350	588	583	869	863	1081	1068
recovery time DHW @50°CΔT (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 and DHW @50°CΔT (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 @50°CΔT (10/60°C) with primary 80°C on upper coil	litres/hour	497	456	851	779	1400	1274	1754	1598	2072	1873
10 min peak DHW draw off @50°CΔT (10/60°C) with primary 80°C on upper coil and tank warmed @ 60°C	litres	172	165	300	288	523	503	690	665	849	816
recovery time DHW @50°CΔT (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 and DHW @50°CΔT (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 @50°CΔT (10/60°C) with primary 80°C on the lower & upper coil	litres/hour	715	660	1217	1124	1915	1760	2419	2227	3159	2884
10 minute peak DHW draw off @50°CΔT (10/60°C) with primary 80°C on on the lower & upper coil and tank warmed @ 60°C	litres	309	300	493	478	818	793	1157	1125	1027	1376
recovery time DHW @50°CΔT (10/60°C) full tank without draw off with primary 80°C on the lower & upper coil	minutes	16	18	15	16	16	17	19	21	17	19
nominal heat transferred by the lower & upper coil with primary 80°C and DHW @50°CΔT (10/60°C)	kW	41.2	38	69.9	64.6	110	101.1	138.9	127.8	181.2	165.4

SCHEMATIC



01	Alira (Heat Pump)	05	Easy Control electronic display/ thermostat	09	Hydraulic safety group
02	Heating system circulation group	06	Electric immersion heater (optional)	10	Blowdown valve
03	D.H.W. circulation group	07	Thermostatic mixing valve	11	By-pass solenoid valve
04	Juniper SS XL	08	D.H.W. recirculation group		

modutherm

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