



Task 38

Solar Air-Conditioning and Refrigeration

D-A5: Appendix 1

List of existing small scale solar heating and cooling plants

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Edited by Anita Preisler

Institution	AIT – Austrian Institute of Technology, Energy Department
Address	Giefinggasse 2, A-1210 Vienna, Austria
Phone	+43 (0) 50550-6634
Fax	+43 (0) 50550-6613
e-mail	anita.preisler@ait.ac.at

Country	Name/ Company	City	Application type	Technology cold production			Solar thermal technology			Hot water l	Storage		Year of completion	Divers
				Absorption kW	Adsorption kW	Flat plate m ²	Vacuum Tube m ²	CPC m ²	Parabolic Through m ²		Ice storage l	PCM kg		
1 Australia	CSIRO Energy Centre	Newcastle	office building	17,5					60	-			2008	Yasaki (Water/LiBr)
2 Australia	Milk Factory	Wyong	industry		10		34,8			1.500			2009	Invensor (Water/Zeolith)
3 Austria	Weinbaubetrieb Peitler	Leutschach	wine cellar	10			100			4.000			2003	Pink (Ammonia/Water)
4 Austria	Fa. SOLID	Graz	office building	2		7				-			2003	Kunze (Ammonia/Water)
5 Austria	Fa. SOLution	Sattledt	office building	15		40				2.000			2005	EAW (Water/LiBr)
6 Austria	Privathaus Jungreithmayr	Sattledt	residential building		5,5	38				3x2.000			2007	Sortech (Water/Silicagel)
7 Austria	Fa. Bachler	Gröbming	training center	9		46				3x1.500			2007	Pink (Ammonia/Water)
8 Austria	Fa. Manschein	Gaweinstal	office and industrial building		7,5	32				2.000			2008	Sortech (Water/Silicagel)
9 Austria	Fa. Kreuzroither	Schörfing	office and industrial building		15	160				1.500 cold water			2008	Sortech (Water/Silicagel)
10 Austria	Fa. SOLID	Graz	office building	17		57,5				2000			2008	Yasaki (Water/LiBr)
11 Austria	Municipality of Vienna Section 34	Vienna	office building		7	32,4				2000			2009	Sortech (Water/Silicagel)
12 China	Public building	Hong Kong	Public building	4,5		?				?			2007	Rotartica (Water/LiBr)
13 China	residential building	Beijing	residential building		7,5		20,5			1.000			2008	Sortech (Water/Silicagel)
14 Egypt	Hostel	Sharm el Sheikh	Hostel	13,5		?				?			2008	Rotartica (Water/LiBr)
15 France	Laboratory	Lannion	laboratory set up	4,5		?				?			2006	Rotartica (Water/LiBr)
16 France	Laboratory	Moret sur Loing	laboratory set up	4,5		?				?			2007	Rotartica (Water/LiBr)
17 France	Résidence du Lac / SIEL	Maclas	residential building	10			24			500			2007	Sonnenklima (Water/LiBr)
18 France	SOLAACLIM	Perpignan	laboratory set up		7,5	25				?			2008	Sortech (Water/Silicagel)
19 Germany	FH Ingolstadt	Ingolstadt	test plant	15		30				2.000			2004	EAW (Water/LiBr)
20 Germany	WEGRA-Anlagenbau GmbH	Westenfeld	Office building	15		50				2.000			2004	EAW (Water/LiBr)
21 Germany	Schüco International KG	Bielefeld	office building	15		45				1.500			2005	EAW (Water/LiBr)
22 Germany	Private company	Braunschweig	offices	4,5		?				?			2006	Rotartica (Water/LiBr)
23 Germany	Conergy AG	Rangsdorf	office building	15		50				800			2006	EAW (Water/LiBr)
24 Germany	Fa. Solar Next	Rimsting	office building	15		37	34			2.000			2007	EAW (Water/LiBr)
25 Germany	Sonnenalternativtechnik	Strukum	officebuilding / workshop	15		45				1.000			2007	EAW (Water/LiBr)
26 Germany	QS-Grimm GmbH	Gutach	Office / production rooms	15		45				1.500			2007	EAW (Water/LiBr)
27 Germany	ZAE Bayern	Garching	laboratory set up	10		20				2.000	2.500 Calcium Hexahydrat		2007	Sonnenklima (Water/LiBr)
28 Germany	Fraunhofer ISE	Freiburg	canteen		5,5	20				?			2007	Sortech (Water/Silicagel)
29 Germany	Citrin Solar	Moosburg	office building		5,5	?				?			2007	Sortech (Water/Silicagel)
30 Germany	TKIZ GmbH	Barby	office building	15		45				1.000			2008	EAW (Water/LiBr)
31 Germany	radiological practice	Berlin	radiological practice	10			40			1000			2008	Sonnenklima (Water/LiBr)
32 Germany	residential building	Wiesloch	residential building		7,5	36				2.000			2008	Sortech (Water/Silicagel)
33 Germany	Office and apartment building	Bad Waldsee	Office and apartment building		7,5	?				?			2008	Sortech (Water/Silicagel)
34 Germany	residential building	Alzenau	residential building		7,5	24				2.000			2008	Sortech (Water/Silicagel)
35 Germany	Fa. Schneider	Megesheim	office building		5,5	?				?			2008	Sortech (Water/Silicagel)
36 Germany	Fa. Zink	Unterensingen	office building		5,5	?				?			2008	Sortech (Water/Silicagel)
37 Germany	Solarzentrum	Wietow	office building / showroom	15		45				1.000			2009	EAW (Water/LiBr)
38 Germany	Siemens Erlangen	Erlangen	test plant	15		50				1.000			2009	EAW (Water/LiBr)

39	Germany	University Stuttgart	Stuttgart	laboratory set up	10		32	-	2x500	2009	ITW-Stuttgart (Ammonia/Water)
40	Germany	Raiffeisenbank Miesbach	Miesbach	bank	2x10		100	7.500		2009	Pink (Ammonia/Water)
41	Germany	Technologiezentrum Köthen	Köthen	office building	15			79	?	?	?
42	Italy	Private company	Arezzo	Private company	4,5		?		?	2007	Rotartica (Water/LiBr)
43	Italy	Private company	Perugia	Private company			?		?	2007	Rotartica (Water/LiBr)
44	Italy	Paradigma	Darzo	office building	15		45		1.500	2006	EAW (Water/LiBr)
45	Italy	ISSA	Milano	office building	4,5			19,5	1.800	2007	Rotartica (Water/LiBr)
46	Italy	CRA-VIV	Pescia	green house		7,5		19	1.500	2008	Sortech (Water/Silicagel)
47	Italy	University Palermo	Palermo	test plant	12			40,5	2.000	2008	Pink (Ammonia/Water)
48	Italy	Schüco International	Sarmeola	office building	15		45		1.000	2008	EAW (Water/LiBr)
49	Italy	Kindergarden Polimi	Milano	kindergarden		8,5	25,7		1.000	2009	Sortech (Water/Silicagel)
50	Italy	Ebner Solartechnik	Eppan	office building	15		150		2 x 8.000	2009	EAW (Water/LiBr)
51	Lichtenstein	Baugemeinschaft Rietli	Schaan	Wohnungen	15			50	1.500	2008	EAW (Water/LiBr)
52	Malta	Retirement home Kalkhara	Kalkhara	retirement home	10		38		1.000	2008	Pink (Ammonia/Water)
53	Malta	Headquater of Eco Group	Kordin	office building	10		30,5	7	400	2009	Pink (Ammonia/Water)
54	Portugal	Private company	Lisbon	Private company	4,5		?		?	2007	Rotartica (Water/LiBr)
55	Portugal	Private company	Chegancas	Private company	4,5		?		?	2008	Rotartica (Water/LiBr)
56	Portugal	AoSol	Lisbon	office building	8			36	1.000	2009	AO SOL (Ammonia/Water)
57	Spain	Private House	Barcelona	residential building	4,5		?		?	2006	Rotartica (Water/LiBr)
58	Spain	Sports Centre	Zaragoza	Sports Centre	4,5		?		?	2006	Rotartica (Water/LiBr)
59	Spain	Private Company	Sarriguren-Navarra	Offices	4,5		?		?	2006	Rotartica (Water/LiBr)
60	Spain	Public Building	Puerto Lumbreras-Murcia	Sport centre	4,5		?		?	2006	Rotartica (Water/LiBr)
61	Spain	Private Company	Sevilla	Offices	4,5		?		?	2006	Rotartica (Water/LiBr)
62	Spain	Private House	Madrid	residential building	4,5		?		?	2006	Rotartica (Water/LiBr)
63	Spain	Private Company (Food)	Noreña-Asturias	Private Company (Food)	4,5		?		?	2006	Rotartica (Water/LiBr)
64	Spain	Private House	Bilbao	residential building	4,5		?		?	2006	Rotartica (Water/LiBr)
65	Spain	School	Segovia	School	4,5		?		?	2006	Rotartica (Water/LiBr)
66	Spain	School	Santurtzi	School	4,5		?		?	2006	Rotartica (Water/LiBr)
67	Spain	Private hospital	Tenerife	hospital	4,5		?		?	2006	Rotartica (Water/LiBr)
68	Spain	Retirement home	Las Palmas-Canarias	Retirement home	4,5		?		?	2006	Rotartica (Water/LiBr)
69	Spain	Private Company	Sevilla	Offices	9		?		?	2006	Rotartica (Water/LiBr)
70	Spain	Private Company	Basauri-Bizkaia	Offices	9		?		?	2006	Rotartica (Water/LiBr)
71	Spain	Public Building	Errenteria-Gipuzkoa	Public Building	4,5		?		?	2006	Rotartica (Water/LiBr)
72	Spain	Private Company	Basauri-Bizkaia	Offices	13,5		?		?	2006	Rotartica (Water/LiBr)
73	Spain	Trainning Centre	Guadalajara	Trainning Centre	4,5		?		?	2006	Rotartica (Water/LiBr)
74	Spain	Trade Exhibition Center	Gijón	Trade Exhibition Center	4,5		?		?	2006	Rotartica (Water/LiBr)
75	Spain	Experimental Installation	Arganda del Rey-Madrid	Experimental Installation	4,5		?		?	2006	Rotartica (Water/LiBr)
76	Spain	Private House	Villajoyosa-Alicante	residential building	4,5		?		?	2007	Rotartica (Water/LiBr)
77	Spain	School	Molina de Segura	School	4,5		?		?	2007	Rotartica (Water/LiBr)
78	Spain	Private House	Madrid	residential building	4,5		?		?	2007	Rotartica (Water/LiBr)

79	Spain	Private House	Olivares-Sevilla	residential building	4,5	?		?	2007	Rotartica (Water/LiBr)
80	Spain	Private Company (Food)	Estepa-Sevilla	Private Company (Food)	4,5	?		?	2007	Rotartica (Water/LiBr)
81	Spain	Private House	Brunete-Madrid	residential building	4,5	?		?	2007	Rotartica (Water/LiBr)
82	Spain	Private House	Zuia-Araba	residential building	4,5	?		?	2007	Rotartica (Water/LiBr)
83	Spain	University	Yecla-Murcia	Common Zones	4,5	?		?	2007	Rotartica (Water/LiBr)
84	Spain	Camping	Aznalcazar-Sevilla	Camping	4,5	?		?	2007	Rotartica (Water/LiBr)
85	Spain	Private Company	Gazteiz-Araba	Show Room	4,5	?		?	2007	Rotartica (Water/LiBr)
86	Spain	Technological Research Centre	Miñano-Araba	Technological Research Centre	4,5	?		?	2007	Rotartica (Water/LiBr)
87	Spain	University	Santander	University	4,5	?		?	2007	Rotartica (Water/LiBr)
88	Spain	Office	Sanlucar Lamayor-Sevilla	Office	4,5	?		?	2007	Rotartica (Water/LiBr)
89	Spain	Museum	Granada	Museum	4,5	?		?	2007	Rotartica (Water/LiBr)
90	Spain	Public Building	La Moncloa-Madrid	Public Building	18	?		?	2007	Rotartica (Water/LiBr)
91	Spain	Private House	Puerto Santamaría-Cádiz	residential building	4,5	?		?	2007	Rotartica (Water/LiBr)
92	Spain	University Rooms	Univ. Cartagena	University Rooms	4,5	?		?	2007	Rotartica (Water/LiBr)
93	Spain	Tourism Office	Matalascañas-Huelva	Tourism Office	4,5	?		?	2007	Rotartica (Water/LiBr)
94	Spain	Public Building	Molina de Segura-Murcia	Public Building	4,5	?		?	2007	Rotartica (Water/LiBr)
95	Spain	Sports Centre	La Carlota-Córdoba	Sports Centre	4,5	?		?	2007	Rotartica (Water/LiBr)
96	Spain	Private company	Fuente Alamo	Private company	9	?		?	2007	Rotartica (Water/LiBr)
97	Spain	Public Building (Room)	Tivissa-Tarragona	Public Building (Room)	9	?		?	2007	Rotartica (Water/LiBr)
98	Spain	Public Building	León	Public Building	4,5	?		?	2007	Rotartica (Water/LiBr)
99	Spain	University Laboratory	Tarragona	University Laboratory	4,5	?		?	2007	Rotartica (Water/LiBr)
100	Spain	Domolab	Miñao	showroom	4,5	22,7		-	2008	Rotartica (Water/LiBr)
101	Spain	Private Company (Animals)	La Muela-Zaragoza	Private Company (Animals)	4,5	?		?	2008	Rotartica (Water/LiBr)
102	Spain	Private Company	Espinardo-Murcia	Private Company	4,5	?		?	2008	Rotartica (Water/LiBr)
103	Spain	Biodiesel Installation	Kaparroso-Navarra	Biodiesel Installation	9	?		?	2008	Rotartica (Water/LiBr)
104	Spain	Golf (shop and bar)	La Manga-Murcia	Golf (shop and bar)	4,5	?		?	2008	Rotartica (Water/LiBr)
105	Spain	Retirement home	Terrassa-Barcelona	Retirement home	9	?		?	2008	Rotartica (Water/LiBr)
106	Spain	Private House	Girona	residential building	18	?		?	2008	Rotartica (Water/LiBr)
107	Spain	Multi Family House	Laguna de Duero-Valladolid	Multi Family House	4,5	?		?	2008	Rotartica (Water/LiBr)
108	Spain	Hotel	Lanzarote	Hotel	4,5	?		?	2008	Rotartica (Water/LiBr)
109	Spain	Public Building	Bullas-Murcia	Public Building	4,5	?		?	2008	Rotartica (Water/LiBr)
110	Spain	Public Building	San José de la Vega-Murcia	Public Building	4,5	?		?	2008	Rotartica (Water/LiBr)
111	Spain	Public Building	Alcantarilla-Murcia	Public Building	4,5	?		?	2008	Rotartica (Water/LiBr)
112	Spain	School	Portugalete	School	4,5	?		?	2008	Rotartica (Water/LiBr)
113	Spain	Private Company (Food)	Noreña-Asturias	Private Company (Food)	4,5	?		?	2008	Rotartica (Water/LiBr)
114	Spain	Private House	Brunete-Madrid	residential building	4,5	?		?	2008	Rotartica (Water/LiBr)
115	Spain	Experimental Installation	Arganda del Rey-Madrid	Experimental Installation	4,5	?		?	2008	Rotartica (Water/LiBr)
116	Spain	University	Jaén	University	4,5	?		?	2008	Rotartica (Water/LiBr)
117	Spain	National Institute of Airospacial Techniques INTA	Huelva	laboratory set up	10	25	18	?	?	?
118	Switzerland	Weingut Schloss Salenegg	Mainfeld	wine cellar	15	70		3.200	2005	EAW (Water/LiBr)

119	Syria	Private House	Damascus	residential building	9	?	?	2008	Rotartica (Water/LiBr)
120	UK	University	Cardif	University	4,5	?	?	2007	Rotartica (Water/LiBr)
121	United Arab Emirates	Private house	Ras Al Khaimah	residential building	4,5	?	?	2008	Rotartica (Water/LiBr)
122	USA	Private house	Cincinnati	residential building	4,5	?	?	2007	Rotartica (Water/LiBr)