## Data acquisition Simulation of a solar thermal system

**Basic data** 

Name: First Name: Date: Place: Street: Postal code: Location of the object if deviant from address above: Postal code: Place: Please give your data as accurate as possible. For missing data standard values will be assumed. This could affect the accuracy of the calculated data. The simulation results do not replace the professional planning. They are only reference values for the dimensioning of a solar system and indicate if the solar system could work efficiently. Favoured solar system? (please mark with a cross) with swimming pool heating (page 1-3) with room heating without swimming pool heating (page 1-2) Domestic water heating with swimming pool heating (page 1-3) without swimming pool heating (page 1-2) Pipe installation for the solar system: inside of the building outside of the building Distance between collectors and tank: Kind of collector plate installation: ☐ Flat roof installation ■ External roof installation ☐ Integrated roof installation ■ Wall mounting Arrangement of the roof or wall area: ☐ East (-90°) ☐ West (+90°) other direction: South (0°) Roof pitch in degrees (only for in-roof / on-roof or flat roof installation): Shading: (trees, chimneys, antenna etc.) ☐ No (If 'yes' please add a drawing!) ☐ Yes Heat generator conventional heating system: □ Condensing boiler ☐ Standard boiler Type of boiler: Year of manufacture: Output in kW: ☐ Coal ■ Electricity ■ Wood pellets Energy source: ■ Natural gas ☐ Liquid gas ☐ Other: Fuel consumption: (m<sup>3</sup>/year, or litres/year) Number of persons in the household using hot water: Hot water demand: per year according to invoice: Assumption of hot water demand: (per person and day) ☐ low (30-40 litres) ☐ medium (40-60 litres) ☐ high (60-80 litres) Hot water demand profile of the building: ■ Detached house (Hot water consumption with a morning peak) ☐ Bed & breakfast (please complete page 4 as well) ☐ Hotel (please complete page 4 as well) Detached house (Hot water consumption with an evening peak) ☐ Apartment residence (No. of accommodation units: ☐ Sports facilities (please complete page 4 as well) ☐ Office building ☐ Retail shop ☐ Civil service ☐ Hall of residence with cafeteria ☐ Youth hostel (please complete page 4 as well) ■ Hall of residence without cafeteria ■ Nursing home ☐ Camping ground



page 1

Domestic hot water page 2

Are there periods	(months, weeks, da		t which times:				
•		you at	t William times.				
<b>Circulation:</b> Are there existent cirl f yes,	culation pipes?:	☐ yes	□no				
appr. length of circul Operation times of c	irculation pump:		m				
Temperatur spread fl Specific heat loss:	ow line/return line:		K W/(m²xK)				
Domestic water ta Is/Are there any dom ☐ yes		ristent? Shall	they also be used in the future?				
If yes:	☐ boiler-integrate	d	separate				
Year of constr							
Occupancy of the existent tank in the solar system:  Tank volume:  litres							
	at exchangers: (please add a drawing	a of the tank):	:				
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	9,-					
Heating supp	ort						
Type of building:	onstruction	edium-weight o	construction  heavy-weight construction				
	l insulation glazing d insulation glazing (w	rith coating)	<ul> <li>□ Double glazing</li> <li>□ Double glazed insulation glazing (not coated)</li> <li>□ Triple glazed insulation glazing</li> </ul>				
Heated floor space:	m²						
Heating category ter	mperature: °C	(ambient ter	mperature at which the heating system switches-off)				
Type of heater circuit High tempera Low temperat	ture: 🔲 90	0/70 °C 0/40 °C	☐ 75/55 °C ☐ Other: °C ☐ 45/35 °C				
Percentages of High	/ Low temperature re	elating to total	al space heating area: % / %"				
Standard hea	t requirement:		kW				
or Specific heat	demand:		kWh/(m²xyr)				



Pool heating page 3

Type of pool: ☐ Indoor swimming pool ☐ Open air bath		
If it is an Indoor swimming pool:	which room temperature: °C Relative air humidity: %	
Bathing season? from: to: Number of bathers per day:		
Set temperature bath water?:	°C	
Fresh water input per day:	litres/day	
Shape of pool:  rectangular round Length: Width: Height: Diagonal:  Colour of flagstones:	free m m m (average depth) m	
Wind deflector:		
Type of cover sheet:  none Roller blind non-transparent Roller blind part-transparent Roller blind clear-transparent Foil clear-transparent Foil Foamed plastic	Times of covering:	(All days the same)
<b>Temperatures:</b> Set temperature: Maximum pool temperature:	°C °C	
Auxiliary:  ☐ yes ☐ no		
Output: Boiler type:		



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Additional data for hostels (hotel, bed & breakfast, youth hostel)

	e <b>gory</b> ] standard [	☐ middl	le		] luxury	,									
Num	siber of rooms Single rooms: Double bedroom Shared rooms:		S (total r	umber	of beds)										
Num	ber of tap conne Wash basins: Showers: Bath tubs:	ctions													
Оссі	All-season, Summer, from: Winter, from:		to:		g	uests p uests p uests p	oer day	<b>/</b> :							
<b>Hot</b> or	water consumpti according to invo			³/yr ³/yr											
	ditional data		sport	s fa	cilitie	es									
	Wash basins: Showers:		,	with a	parallel	use o	f maxir	mal:	;	showe	rs (for	peak (	deman	d).	
Load	l profile														
	<b>Weekly profile</b> Weekday:		Mon	Tue	Wed	Thu	Fri	Sat	Sun						
	Number of athlete Monthly profile														
	Month: Number of athlet	es:	J ,	F	M	A	M	J	J	A	S	0	N	D	
Hot	water consumpti	on													
	according to invo	ice:	m	³/yr											
or	estimated:		m	³/yr											
refer	ring to a hot water	tempera	ture of:		°C										



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