

Energy systems

# Roth HelioPool® swimming pool absorber



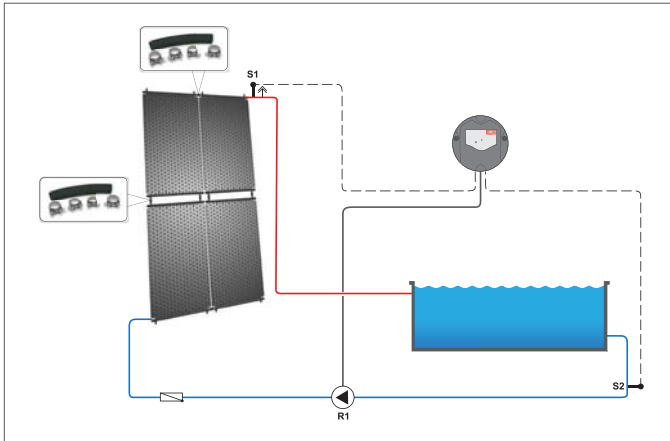
## List of products



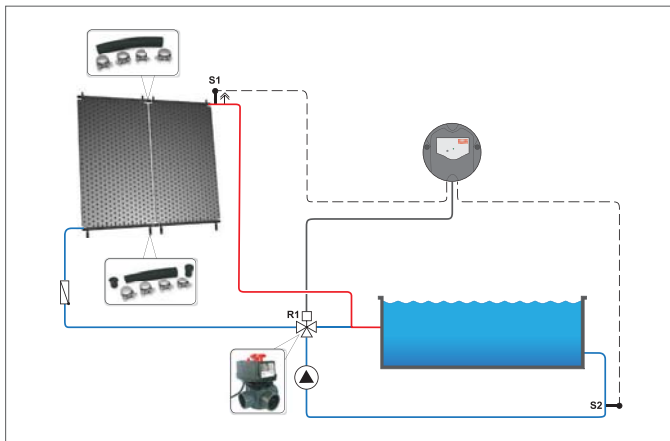
*Living full of energy*

# System hydraulics

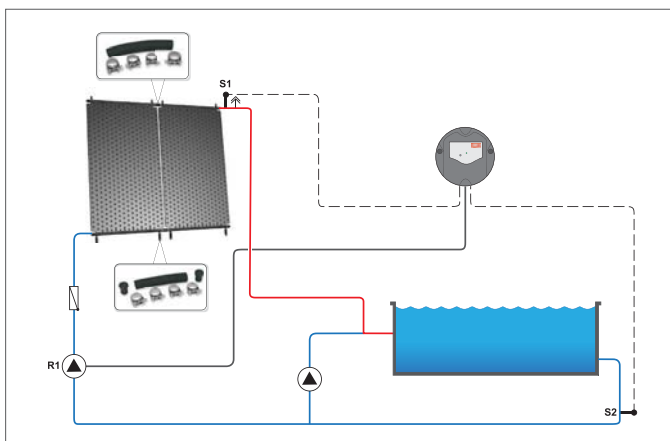
The swimming pool water flows directly through the Roth HelioPool®; it is not necessary to separate the system. Three different connection options are explained below:



**Operation with its own pump and the Roth solar control unit SW, piping separate from the filter system**



**Operation with swimming pool pump and the Roth 3-way cross-over valve in combination with the Roth solar control unit SW**



**Operation with its own pump and the Roth solar control unit SW integrated into the filter system**



## References






Actual examples that speak for themselves





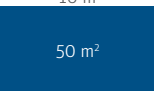
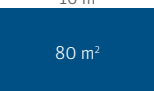
- 1 **Aranda de Duero, Spain**  
16 Roth HelioPool® swimming pool absorbers
- 2 **Valencia, Spain**  
7 Roth HelioPool® swimming pool absorbers
- 3 **Mühdorf am Inn outdoor swimming pool, Germany**  
28 Roth HelioPool® swimming pool absorbers®
- 4 **Niedereisenhausen outdoor swimming pool, Germany**  
120 Roth HelioPool® swimming pool absorbers
- 5 **Knüllwald-Remsfeld outdoor swimming pool, Germany**  
Roth HelioPool® swimming pool absorbers
- 6 **Marrabech, Marrakesh**

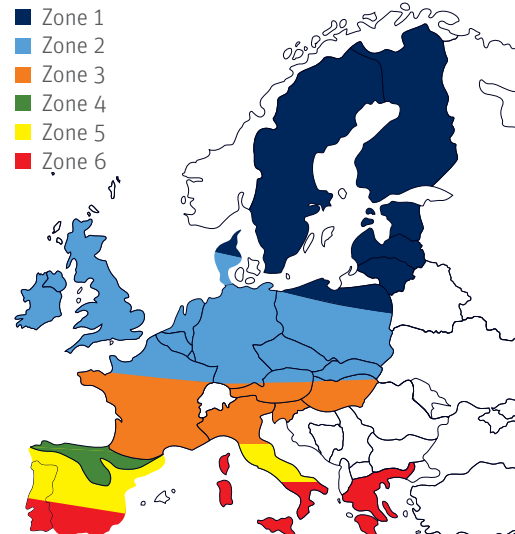
## System components

Product	Product description	Item no.
	<p><b>Roth HelioPool®</b>            The Roth HelioPool®, consisting of black HDPE, is used mainly for the direct solar heating of swimming pool water using the constant flow principle. Each absorber has eight connections (4 x 25 mm and 4 x 40 mm) with variable assignment options depending on the type of connection, meaning that only one model is needed.            Material: UV-resistant HDPE (black) in the CoEx process            Medium: swimming pool water            Installation type: horizontal or vertical            Area: 2,22 m<sup>2</sup>            Dimensions: 2000 x 1100 x 15 mm/weight 14 kg            Filling capacity: 16 l            Flow-through amount: 120–180 l/h x m<sup>2</sup></p>	1135004070
	<p><b>Roth HelioPool® 40 mm connection set</b>            The Roth 40 mm connection set enables the direct linking of the 40 mm collector connections. Comprising: 1 fabric hose 40 x 47 mm, 240 mm long, and 4 hose clamps, 32 x 50 mm.</p>	1135004071
	<p><b>Roth HelioPool® 25 mm connection set</b>            The Roth 25 mm connection set enables the direct linking of the 25 mm collector connections. Comprising: 1 fabric hose 25 x 32 mm, 240 mm long, and 4 hose clamps, 20 x 32 mm.</p>	1135004073
	<p><b>Roth HelioPool® 25 mm end stopper set</b>            The Roth 25 mm end stopper set closes off the 25 mm collector connections that are not in use. Comprising: 1 fabric hose 25 x 32 mm, 200 mm long and 4 hose clamps, 20 x 32 mm, 2 end stoppers, 35 x 40 mm.</p>	1135004072
	<p><b>Roth HelioPool® mounting set for on-roof attachment</b>            The Roth HelioPool® mounting set is designed to mount one HelioPool® collector on the roof. Comprising: 2 supports, incl. mounting material, screws and a drill guide bush for exact positioning of the bore holes in the area of the absorber.</p>	1135004075
	<p><b>Roth SW solar regulation unit</b>            The Roth SW solar regulation unit provides a simple way of controlling differences in temperature with the following functions: Fixed-speed pump control or control of the 3-way cross-over valve, collector protection, function fulfils BAW guidelines, 2 sensor inputs, 230 V power supply including 2 PT 1000 sensors, Assembly Instructions in 6 languages, max. control: 2 temperature sensors and 1 output, Dimensions: 130 x 40 mm.</p>	1135007886
	<p><b>Roth 3-way cross-over valve</b>            Roth 3-way cross-over valve for PCV pipe 50 mm (DN40), engine resetting, 10 second operating time.</p>	1135007932

Product	Product description	Item no.
	<p><b>Roth HelioPool® installation rail, long</b>            HelioPool® universal installation rail, long, used to fasten the HelioPool® absorbers. The HelioPool® absorbers are fastened to the aluminium rectangular pipe rails using self-tapping stainless steel screws including stainless steel washers and EPDM seal. The pre-drilled rails can be used for on-roof or floor-mounting. They have a length of 2230 mm, so two HelioPools® can be mounted next to each other.            Included in scope of delivery: 1 aluminium rectangular pipe 40 x 20 x 2230 mm drilled, 6 stainless steel screws with washers and EPDM seal.            The required number of installation rails is shown in the calculation guide table on the following pages.</p>	1115010527
	<p><b>Roth HelioPool® installation rail, short</b>            HelioPool® universal installation rail, short, used to fasten the HelioPool® absorbers. The HelioPool® absorbers are fastened to the aluminium rectangular pipe rails using self-tapping stainless steel screws including stainless steel washers and EPDM seal. The pre-drilled rails can be used for on-roof or floor-mounting. They have a length of 1110 mm, so two HelioPools® can be mounted.            Included in scope of delivery: 1 aluminium rectangular pipe 40 x 20 x 1100 mm drilled, 3 stainless steel screws with washers and EPDM seal.            The required number of installation rails is shown in the calculation guide table on the following pages.</p>	1115010528
	<p><b>Roth HelioPool® connection for installation rail</b>            Roth HelioPool® connection for connecting two installation rails (long or short).            Included in scope of delivery: 1 aluminium connection 35 x 15 x 300 mm, 4 stainless steel screws. The required number of connections is shown in the calculation guide on the following pages.</p>	1115010544
	<p><b>Roth universal attachment anchor extension vertical</b>            For each additional collector.            Comprising: 2 stainless steel universal attachment anchors (height-adjustable by 30 mm) including dry wall screws for mounting on the roof. (Suitable for roof tiles/S-shaped interlocking pantiles, plain tiles, slate and fibre cement corrugated sheets.)            Sheet metal tiles are recommended for use as the substructure!</p>	1135004084
	<p><b>Roth universal attachment anchor extension horizontal</b>            For each additional collector.            Comprising: 2 stainless steel universal attachment anchors (height-adjustable by 30 mm) including dry wall screws for mounting on the roof. (Suitable for roof tiles/S-shaped interlocking pantiles, plain tiles, slate and fibre cement corrugated sheets.)            Sheet metal tiles are recommended for use as the substructure!</p>	1135004082

# Calculation guide

Zone	Swimming pool surface	Package
1 and 4	5 m	B
2 and 5	3 m  15 m <sup>2</sup>	B
3 and 6		A
1 and 4	10 m	D
2 and 5	3 m  30 m <sup>2</sup>	C
3 and 6		B
1 and 4	10 m	2 x C
2 and 5	5 m  50 m <sup>2</sup>	D
3 and 6		C
1 and 4	16 m	3 x C
2 and 5	5 m  80 m <sup>2</sup>	2 x D
3 and 6		D

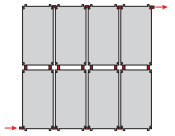


Zones 1 – 3: Swimming pool in operation June – August  
Zones 4 – 6: Swimming pool in operation May – September

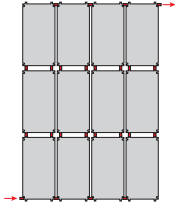
## Package A (vertical installation)

Item number	Item	Quantity	
1135004070	HelioPool®	4	
1135004071	Connection set 40 mm	4	
1135004072	End stopper set 25 mm	4	

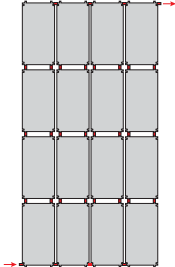
## Package B (vertical installation 2 x 4)

Item number	Item	Quantity	
1135004070	HelioPool®	8	
1135004071	Connection set 40 mm	4	
1135004073	End stopper set 25 mm	4	

## Package C (vertical installation 3 x 4)

Item number	Item	Quantity	
1135004070	HelioPool®	12	
1135004071	Connection set 40 mm	4	
1135004073	End stopper set 25 mm	8	

## Package D (vertical installation 4 x 4)

Item number	Item	Quantity	
1135004070	HelioPool®	16	
1135004071	Connection set 40 mm	4	
1135004073	End stopper set 25 mm	12	

### Design information:

The performance values of the collectors cannot be compared with those of a glass-enclosed collector with thermal insulation. Since the HelioPool® collector is not glass enclosed and has no rear panel insulation, the performance of the collector depends on the expected speed of the wind. Another key point in the design of the collector system is whether or not the swimming pool is covered at night, as this has a considerable influence on the design.

**The calculation guide is solely for orientation purposes! An exact calculation should be made in order to determine the exact quantity of HelioPool® swimming pool absorbers.**







## Roth Energy and Sanitary Systems

### Generation

- > Solar systems
- > Heat pump systems
- > Solar heat pump systems

### Storage

- Storage systems for
- > Domestic and heating water
  - > Combustibles and biofuels
  - > Rainwater and waste water

### Application

- > Floor heating and cooling systems
- > Pipe installation systems
- > Shower systems



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