SUNSYSTEM®

Energy from the sun

FULL PLATE SOLAR COLLECTORS model PK SL AL

New Line **SUNSYSTEM** flat plate solar collectors with aluminum selective absorber.

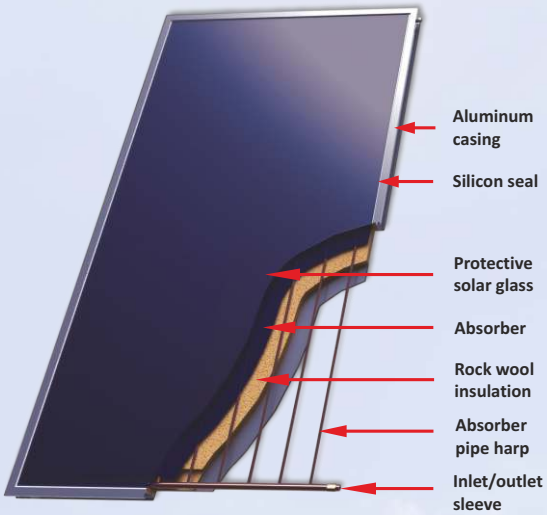
High grade of efficiency PK CL AL collectors, appropriate for exploitation throughout **all seasons**.

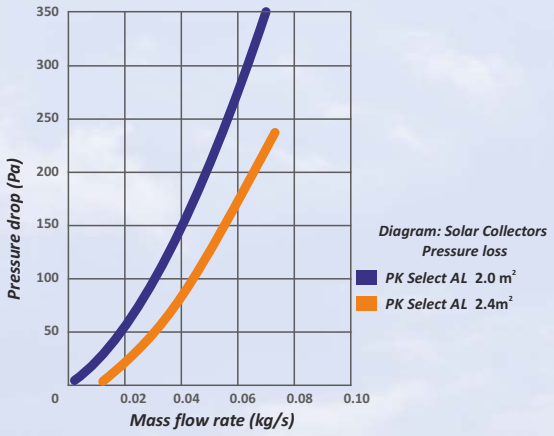
Orientation variant: portrait .

Connections: bare copper tube Ø 22 without any threading or union nuts.

Mounting: Inclined roof; Flat roof; In-roof

Sizes: 2.0 m^2 and 2.4 m^2





Product Features

The aluminum casing is designed to withstand the rough conditions of the outdoor environment and ensures long life of the product.
The frame design provides for easy fixation and multiple mounting possibilities.
Rock wool insulation with excellent heat insulating capabilities keeps thermal loss at minimum even in harsh climate conditions. The insulation consists of high quality black rock wool of 30mm thickness and 50kg/m^3 density.
The absorber is made of **full aluminum plate** , with thickness 0,5mm and Tinox selective coating.
The harp type absorber construction ensures low hydraulic resistance and economic energy consumption. Each unit is tested for liquid-tightness. Made of copper pipes with diameter Ø 8mm.
The collecting manifold pipes are made of copper, with diameter Ø22 mm. Laser welding guarantees perfect heat transfer.
Protective solar glass, thickness 4mm . Due to its prismatic pattern it captures even the indirect sun rays and directs them straight onto the absorber. It lets the sun rays in and restricts their reflection out of the collector. Being a low-iron glass (FeO ≤ 0.02 %) it has higher energy transmission rate than regular glass, with a solar energy transmission value Tsol=90.7%. The solar glass heat-tempered to withstand the strains of the open environment such as wind, snow and hail.
The back plate is made of Aluzinc 0,4mm thickness with high durability (7 times more resistant to corrosion than galvanized steel)
Two point ventilation of the collector.
UV resistant **silicon seal.** Sealing materials used are EPDM, silicon and polyurethane sealant for high resistance to extreme temperatures and for guaranteed water proofing.

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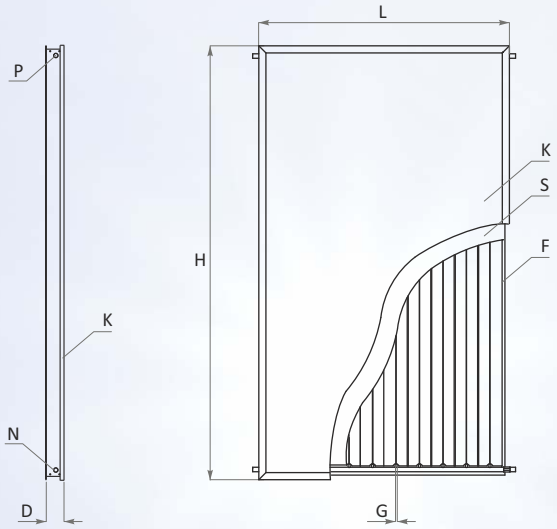
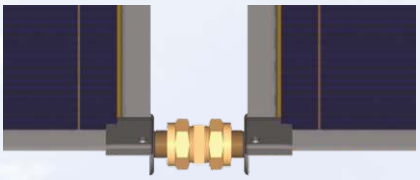


PK Select AL
Inlet/Outlet connections
Ø22 mm

Connection of 2x PK Select AL



			Sunsystem Select	
			PK AL 2,0	PK AL 2,4
Overall dimensions	Width L	mm	1010	1230
	Height H	mm	1980	1930
	Thickness D	mm	86	86
Overall surface/Gross area/		m^2	2.00	2.37
Aperture/Absorber surface		m^2	1.86/1.86	2.23/2.23
Volume of heat carrier		Liter	1.40	1.70
Test pressure		bar	15	15
Max. Operating pressure		bar	10	10
Weight of empty collector		kg	34	41.5
Thickness of solar glass		mm	4	4
Material of solar glass		K	Heat tempered prismatic glass	
Material of absorber pipe harp		F	Copper	
Absorber pipes, psc/diameter		G	9 x ø8	11 x ø8
Collecting pipes, psc/diameter			2 x ø22	
Inlet / outlet heat carrier		P/N	ø22	
Material of absorber		S	Aluminum in 0,5mm thickness	
Coating of absorber			PVD High Selective (α=95%, ε=5%).	
Thermal loss coefficient -κ_1		W/m^2K	5.140	
Thermal loss coefficient -κ_2		W/m^2K^2	0.017	
Efficiency factor-η_0		η_o	0.788	
Insolation			Black rock wool g=50kg/m^3 δ=30mm	
Heat carrier fluid			Propylene Glycol PG 50% (freezing point - 34°C)	
Stagnation temperature		°C	152	
Recommended orientation / mounting angle			Facing the equator/10°÷ 90°	
Resistance to hail / snow mass / wind			Size up to 25 mm / Load up to 1,25 kN/m^2 / Speed up to 150 km/h	
Certificates			EN 12975:2006; SKM 9949/2	

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