

**EM2V2,0S Al.-Cu SLIM and EM2V2,0B Al.-Cu SLIM - flat solar collector with meander absorber, made of copper and aluminum designed for vertical mounting.**

Solar collector EM2V2,0S Al.-Cu SLIM and EM2V2,0B Al.-Cu SLIM is designed for changing Energy of solar radiation into useful thermal Energy used for providing warm service water, heating swimming pools or supporting a heat source in a heating system.

Collector's housing construction is based on a rigid slim frame bent from a special aluminum profile patented by ENSOL company. At the bottom the housing is closed with an aluminum sheet, whereas the cover is made of special, high-transmission solar glass. The manner of fixing the glass ensures tightness of housing and minimizes thermal tensions. There is no closing profile in the collector frame, thanks to which the collector battery forms a uniform sheet on the roof. In addition, the connecting system is covered by the collector frame, thus the distances between the collectors are limited.

The main part of the collector is an absorber, the plate of which is made of aluminum sheet covered with a high selective eta plus coat in order to ensure a high level of solar radiation absorption, which results in obtaining high efficiency of the energy conversion process. The absorber's plate is connected by means of laser welding with the copper tubes system, in which the medium circulates.

Heat losses were minimized by application of lower insulation. Specially designed assembly sets made of stainless steel are used for trouble-free and secure mounting of collectors to roof constructions with different angles inclination.



<b>Flat collector:</b>	Symbol	Unit	Value
Width	A	mm	983
Height	B	mm	1965
Depth	C	mm	62
Weight	m	kg	32,5
Surface	S	m <sup>2</sup>	1,93
Optical efficiency*	$\eta_0$	%	In TÜV testing
Coefficient *	a1	W/(m <sup>2</sup> K)	In TÜV testing
Coefficient *	a2	W/(m <sup>2</sup> K <sup>2</sup> )	In TÜV testing
Coefficient of angle of incidence	IAM	-	In TÜV testing
Connection: copper tube	$\emptyset$	mm	18
Housing	Aluminum profile		
Cover	Tempered solar glass, 4mm thick		
<b>Absorber:</b>			
Absorber's type	Hydraulic system Cu - Al. sheet		
Absorber sheet coating	High selective layer		
Execution technology	Laser welding		
Absorption coefficient	$\alpha$	%	95
Emission coefficient	$\epsilon$	%	5
Width	a	mm	909
Height	b	mm	1891
Absorber's surface	S <sub>b</sub>	m <sup>2</sup>	1,718
Liquid content	V	dm <sup>3</sup>	about 1,8
Stagnation temperature		°C	In TÜV testing
Guaranteed minimal thermal output	kWh/m <sup>2</sup> -year		525
Flow:	about.		
Recommended	l/h	60-90	
permissible	l/h	in TÜV testing	
<b>Lower insulation:</b>	Mineral wool 20mm thick		

