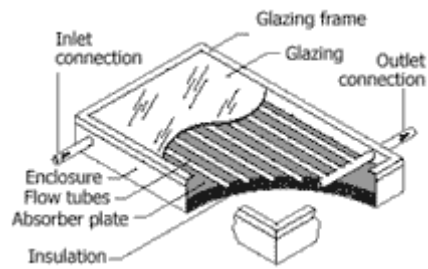


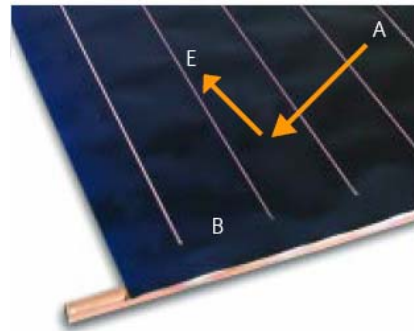
## FLAT-PLATE COLLECTOR

A typical flat-plate collector is a metal box with a glass or plastic cover (called glazing) on top and a dark-colored absorber plate on the bottom. The sides and bottom of the collector are usually insulated to minimize heat loss.



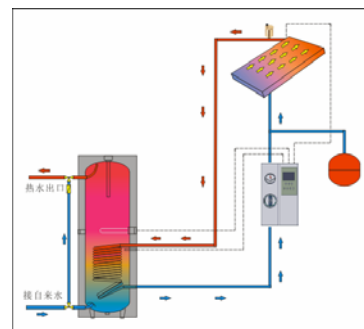
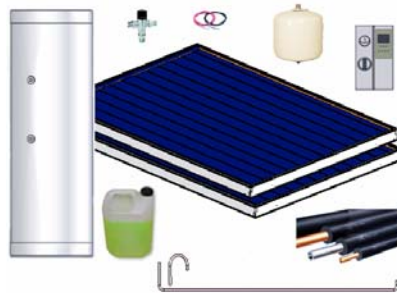
### DESCRIPTION:

Sunlight passes through the glazing and strikes the absorber plate, which heats up, changing solar energy into heat energy. The heat is transferred to liquid passing through pipes attached to the absorber plate. Absorber plates are commonly painted with "selective coatings," which absorb and retain heat better than ordinary black paint. Absorber plates are usually made of metal typically copper or aluminum because the metal is a good heat conductor. Copper is more expensive, but is a better conductor and less prone to corrosion than aluminum. In locations with average available solar energy, flat plate collectors are sized approximately one-half- to one-square foot per gallon of one-day's hot water use.

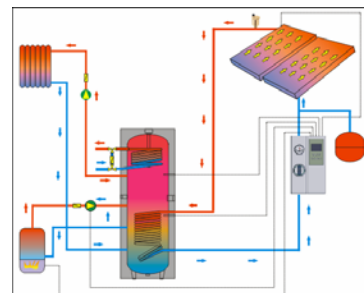


### APPLICATION:

#### IN RESIDENTIAL BUILDINGS



#### COMMERCIAL APPLICATION:



## FLAT-PLATE SOLAR COLLECTOR

### Technical Parameters(Flat-plate Collector)

Collector		flat plate solar collector		
NO.	Item			
01	Type	PGT2.0	PGT3.0	PGT-JG-2.0
02	Dimension	2000 × 1000 × 82	3000 × 1000 × 82	2000 × 1000 × 85
03	Cover	4mm tempered glass;		
04	Absorber	material	All copper core;	
	dimension	Mother-pipe $\varnothing 25 \times 0.75 \text{mm}$ ; sub-pipe $\varnothing 12 \times 0.5 \text{mm}$ ; wings; $140 \times 0.15 \text{mm}$		
	Amount of wings	7		
05	Frame	material	Colored Aluminium alloy	
	dimension	Thickness 1.2mm		
06	Absorber coating	I	TXT, absorption 93%, Emissivity: 45~50%;	
		II	Black chrom ecoatine plating, absorption 95~96%, Emissivity <10%;	
		III	TINOX, absorption ratio 96%, Emissivity: 6%;	
07	Collector efficiency equation	II Coating: $\eta_c = 0.7318 - 5.68T_f^*$		
		III Coating: $\eta_c = 0.7637 - 5.38T_f^*$		
08	Insulation	material	Polyurethane+Rockwool	
	thickness	30mm(Polyurethane)20mm(Rockwool)		
09	Test pressure	0.9Mpa		

