Eco Systems Direct Ltd
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1. Pictures of collector

Eco Systems Direct Evacuated Tube Solar Collector (Thermal Solar Heating)

The Eco Systems Direct Collector is a device that absorbs thermal energy from the sun and converts it into usable heat. The heat is normally absorbed by water, or a freeze resistant water mix(glycol), which can be used to supplement hot water heating, space heating and shower system.

2. Below are the key features of the Eco Systems Direct Solar Collector design

1. Internationally certified product: solar keymark
2. Reliable, efficient, twin-glass evacuated tubes
3. Copper heat pipes for rapid heat transfer
4. Easy plug-in installation
5. Maintenance Free
6. Suitable for mains pressure water (up to 8 bar/116psi)
7. Good quality rose red copper heat pipe TU1
8. All aluminum alloy frame
9. Black or Silver aluminum out chest
10. Stable solar conversion throughout the day (tubes passively track the sun)
11. The perfect solar collector for domestic solar water heater systems
12. Ideal for commercial solar water heating applications
13. Comprehensive 5 year limited warranty

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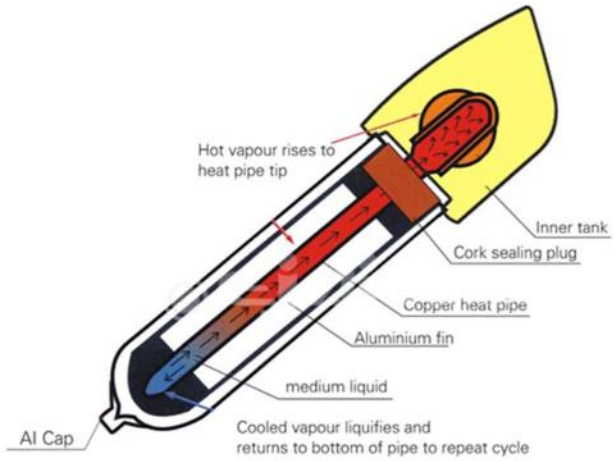


3. The operation of the solar collector is very simple.

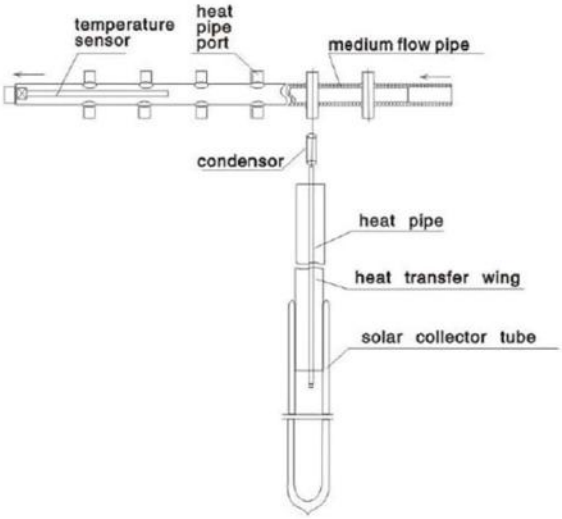
1). Solar Absorption: Solar radiation is absorbed by the evacuated tubes and converted into heat.

2). Solar Heat Transfer: Heat pipes conduct the heat from within the solar tube up to the header.

3). Solar Energy Storage: Water is ciruclated through the header, via intermittent pump cycling. Each time the water circulates through the header the temperatures is raised by 5-10°C / 9-18°F. Throughout the day, the water in the storage tank is gradually heated.

3、The principle of solar collector

Vacuum tube is composed of inner and outer glass pipe,inspiratory layer,vacuum space,inspriatory membrane.The surface of inner and outer glass tube is plated with selective absorption layer ,the layer absorb the solar energy and turn it into heat energy ,aluminium wing pass the heat energy to the heat pipe,the liquide medium in the heat pipe is heated by the heat energy,then turns into the gas medium,the gas medium flows up to the top of the heat pipe(condensor)and transfer the energy to the copper manifold header heat pipe,at the same time the gas medium turns into the liquid when cooled,then flows down.Keep recycling,the carrier in the system will become hot at last.



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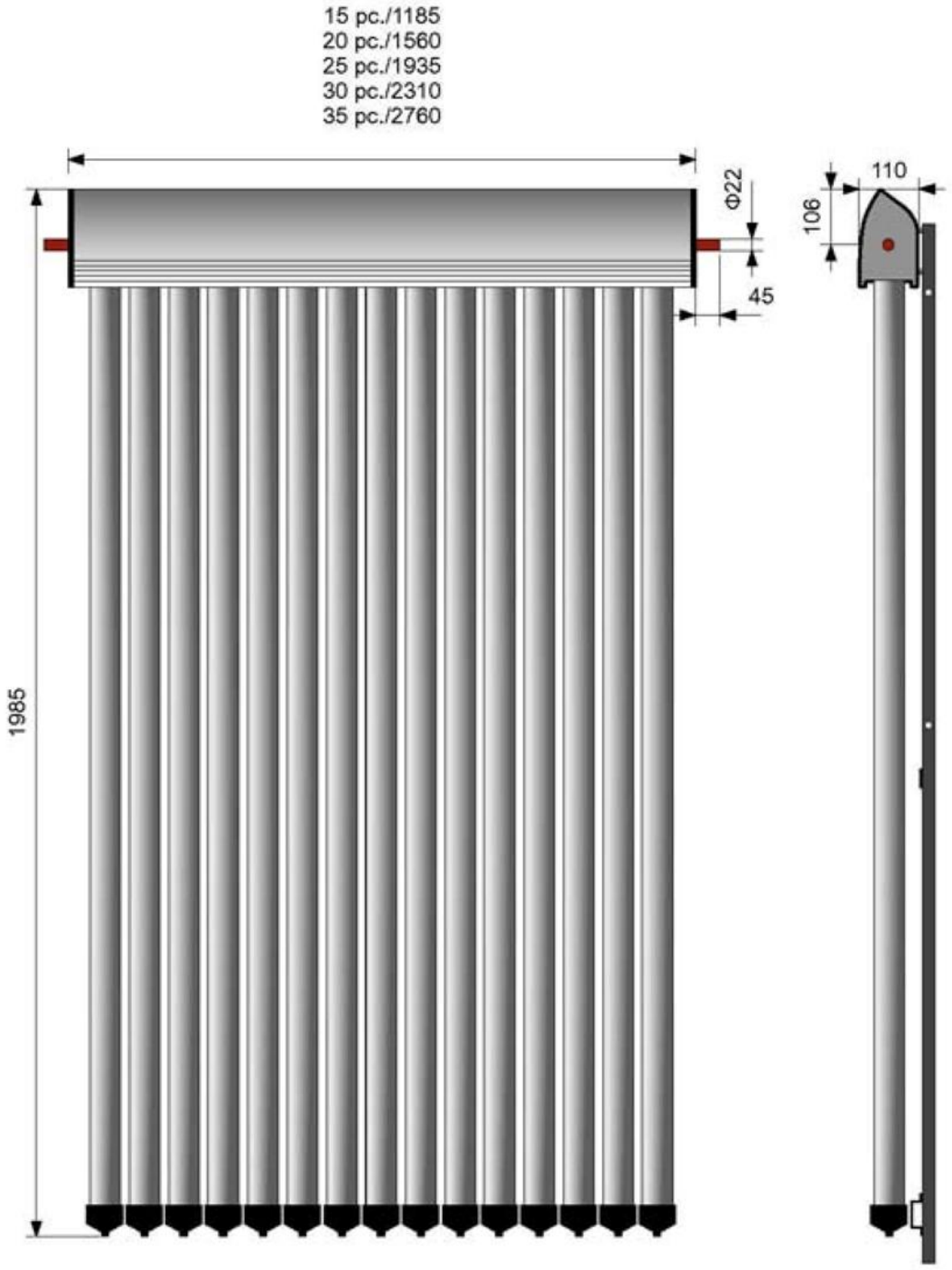
4. Size of the collector



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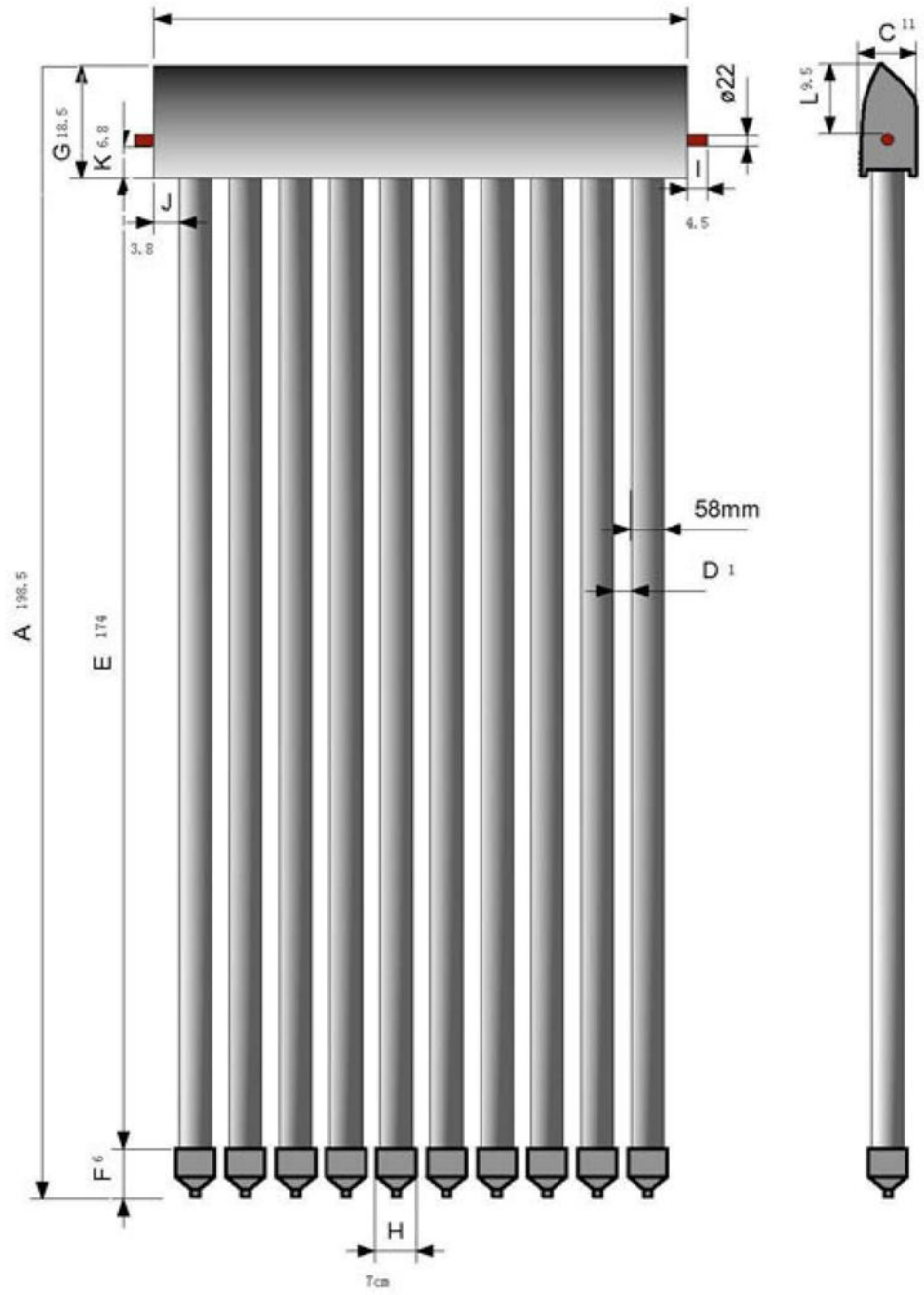

DRAWING NO.: C01071211
DATE: 20071211

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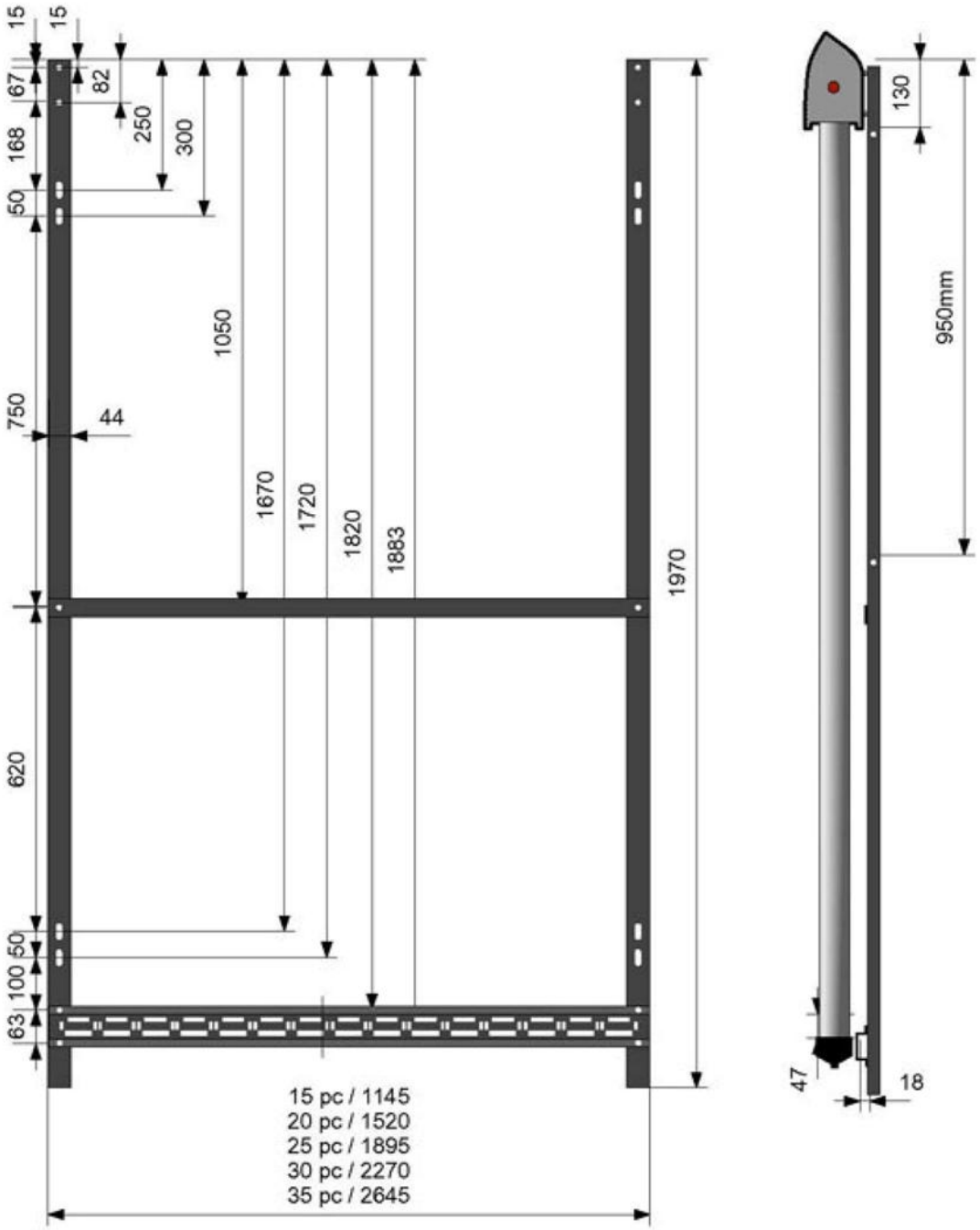

DRAWING NO.:C01071212 DATE: 20071212

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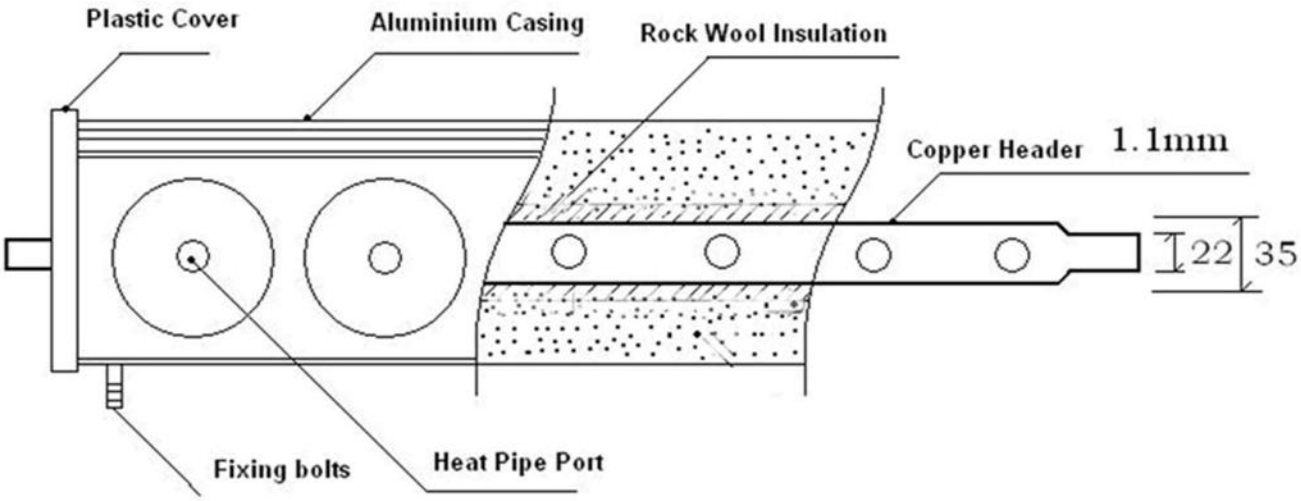
5. Collector header



6. Specifications of the solar collector

Part name	description
Out casing of collector	Aluminum alloy material in 2mm thickness
Side cover	Nylon materia
Manifold	Red copper
Fixing bolts	Stainless steel
Insulation	High density rockwool
Frame	Aluminum alloy