



**INSTALLATION MANUAL  
OF EZINC OPEN LOOP THERMO SIPHON  
SOLAR WATER HEATING SYSTEMS**



- 1) INTRODUCTION**
- 2) GENERAL FEATURES**
- 3) OPERATION INSTRUCTIONS**
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## 1) INTRODUCTION

Thank you very much to prefer high quality, long-term durable and efficient EZINC solar thermal systems.

**Important notice:** Please read this manual carefully before starting installation of solar water heater.

This solar water heating system is working according to the natural circulation (thermo siphon principle).

### General

These instructions describe mounting and installation of thermo siphon solar water heaters. All installations must be done by authorized staff. Please read these instructions carefully before starting the installation. If you do not suit to the instructions, product will be out of any guarantee.

### Position of the system

Thermo siphon solar water heaters are able to convert the maximum solar energy to the heat, when the cover of the collector faces to the south. Local climatic conditions, wrong installation, inclination of the collector according to the coordinates of the location may effect the performance of the system.

### Transportation

During transportation and installation you should pay attention to the following points:

- Protect the glass and the back sheet of solar collectors from damages.
- Do not put heavy materials on the collectors which can cause any damage.

### Protection recommendations

During the installation, please cover the glass side of the collector with a non-transparent blanket which will avoid transmittance of the direct sunlight into the collector.

### Maintenance requirements

To get the maximum efficiency from your thermo siphon solar water heater and to increase its' lifetime, please check the following points annually:

- Check the hydraulic connections.

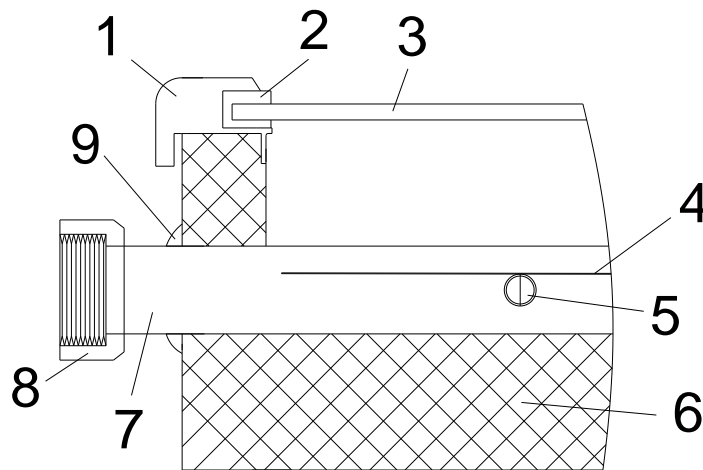


**Important notice:** If necessary, please install a pressure reducer between cold water inlet of the tank and main supply to avoid any problems because of high pressure of main supply. Our kit package is not including pressure reducer.

## 2) GENERAL CHARACTERISTICS

### Collector specifications:

COLLECTORS		M XBA	L XBA	M USB	L USB
DIMENSIONS (mm)	HEIGHT	1727	1891	1727	1891
	WIDTH	1204	1204	1204	1204
	DEPTH	99	99	99	99
WEIGHT		36 kg	41 kg	36 kg	41 kg
GROSS COLLECTOR AREA (sqm.)		2,08	2,28	2,08	2,28
NET ABSORBER AREA (sqm.)		1,96	2,12	1,96	2,12
MANIFOLD TUBES		COPPER Ø25 mm	COPPER Ø25 mm	COPPER Ø25 mm	COPPER Ø25 mm
RISER TUBES		COPPER Ø16 mm	COPPER Ø16 mm	COPPER Ø12 mm	COPPER Ø12 mm
ABSORBER SHEET		ALUMINIUM	ALUMINIUM	COPPER	COPPER
SURFACE COATING		BLACK SOLAR PAINT	BLACK SOLAR PAINT	BLUE SELECTIVE COATING	BLUE SELECTIVE COATING
CASING MATERIAL		ELECTROSTATIC POWDER COATED ALUMINIUM PROFILE	ELECTROSTATIC POWDER COATED ALUMINIUM PROFILE	ELECTROSTATIC POWDER COATED ALUMINIUM PROFILE	ELECTROSTATIC POWDER COATED ALUMINIUM PROFILE
INSULATION		POLYURETHANE	POLYURETHANE	POLYURETHANE	POLYURETHANE
GLASS		TEMPERED SOLAR GLASS	TEMPERED SOLAR GLASS	TEMPERED SOLAR GLASS	TEMPERED SOLAR GLASS
GASKETS-SEALING		EPDM	EPDM	EPDM	EPDM



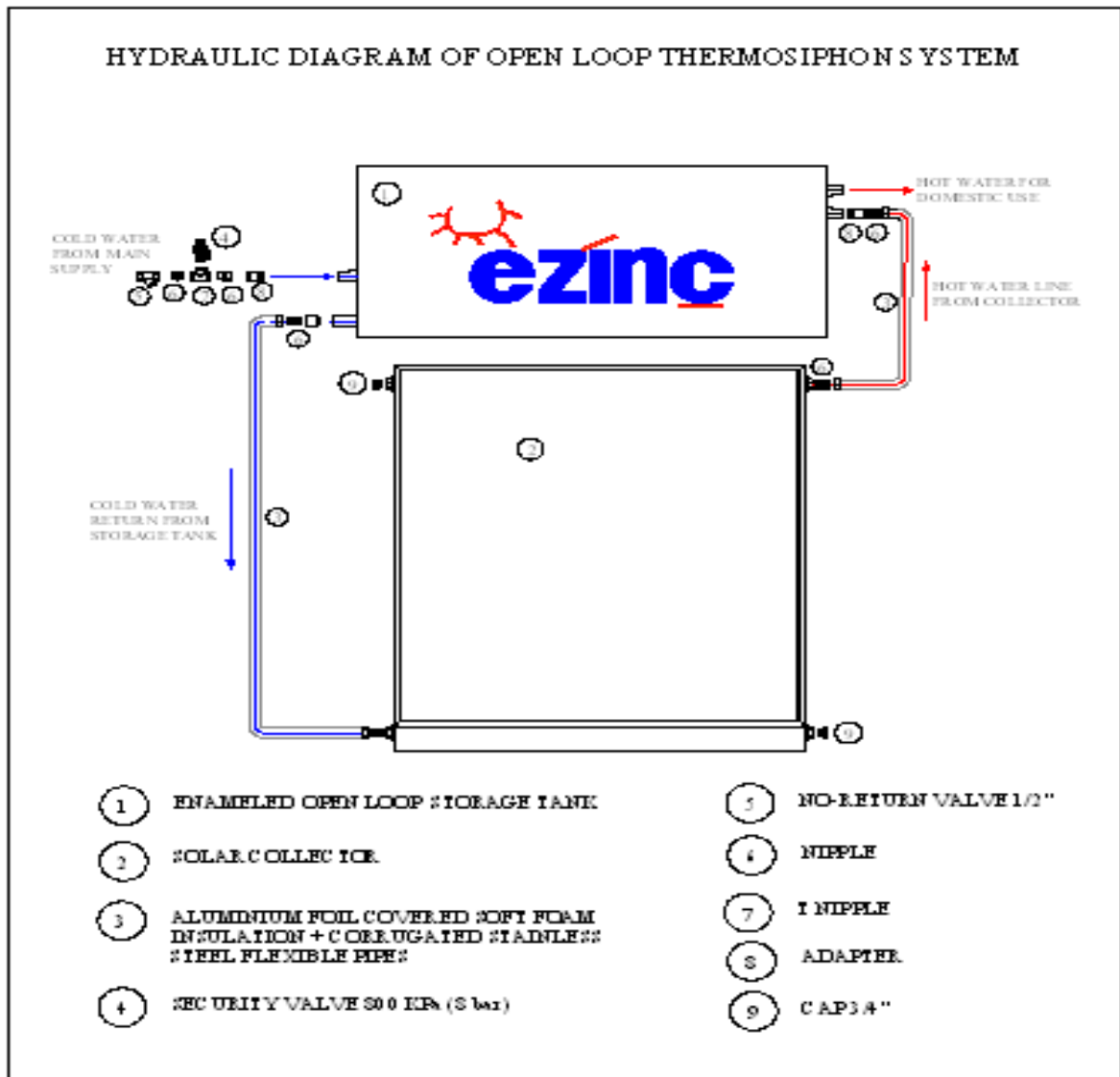
- 1- Glass profile
- 2- Glass sealing
- 3- Glass (frontal cover)
- 4- Absorber sheet
- 5- Absorber riser pipe
- 6- Insulation
- 7- Absorber manifold (header) pipe
- 8- Female connection fitting
- 9- Gasket

### Tank specifications:

### Open loop (direct) tanks:

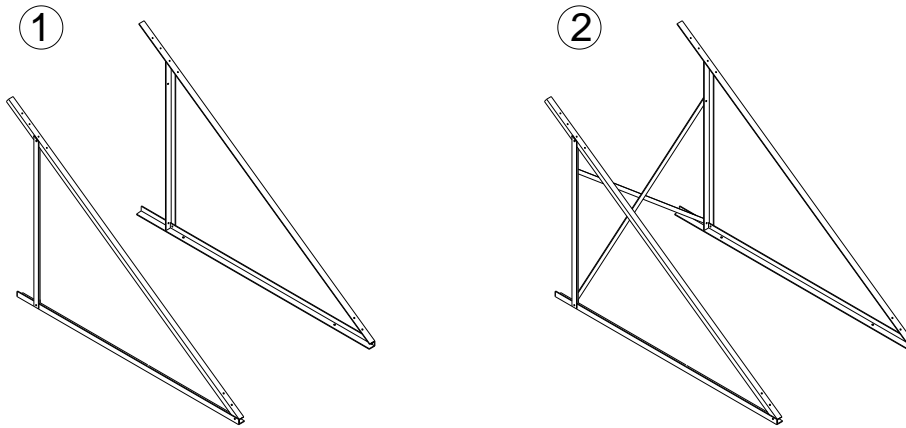
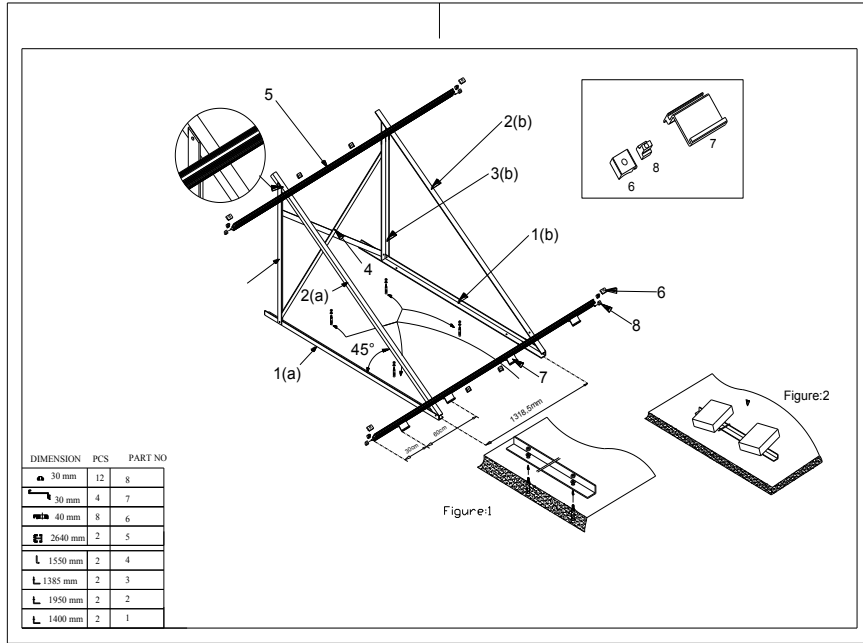
MODEL		AG-120	AG-170	AG-300
NOMINAL CAPACITY		120 LT	170 LT	300 LT
TANK TYPE		OPEN LOOP	OPEN LOOP	OPEN LOOP
TANK DIMENSIONS (mm)	DIAMETER	1270	1170	1810
	LENGTH	Ø 510	Ø 600	Ø 600
NET WEIGHT		~58 kg	~70 kg	~100kg
INTERIOR TANK COATING		GLASSLINE ENAMEL	GLASSLINE ENAMEL	GLASSLINE ENAMEL
OUTSIDE COVER MATERIAL	ELECTROSTATIC POWDER COATED	ELECTROSTATIC POWDER COATED	ELECTROSTATIC POWDER COATED	ELECTROSTATIC POWDER COATED
	GALVANISED STEEL	GALVANISED STEEL	GALVANISED STEEL	GALVANISED STEEL
INSULATION		DIRECT-INJECTED POLYURETHANE FOAM	DIRECT-INJECTED POLYURETHANE FOAM	DIRECT-INJECTED POLYURETHANE FOAM
MAX. OPERATION PRESSURE STORAGE TANK		8 BAR	8 BAR	8 BAR
ELECTRICAL BACKUP HEATER		2 kW (OPTIONAL)	2 kW (OPTIONAL)	2 kW (OPTIONAL)
PROTECTION AGAINST CORROSION		MAGNESIUM ANODE BAR	MAGNESIUM ANODE BAR	MAGNESIUM ANODE BAR

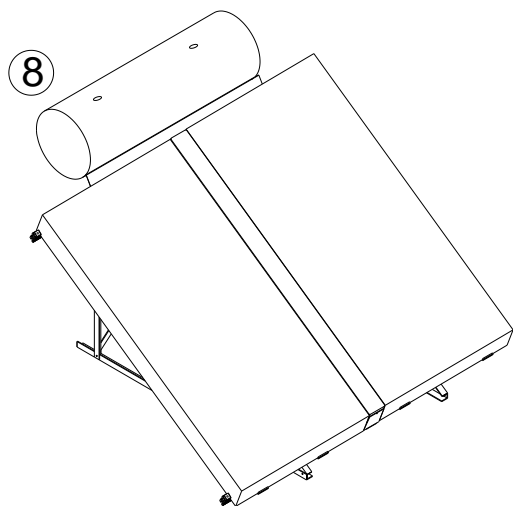
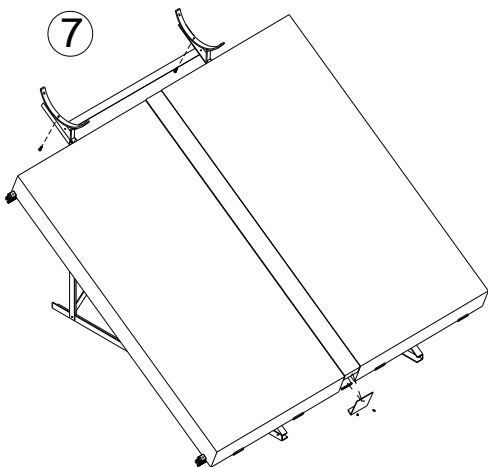
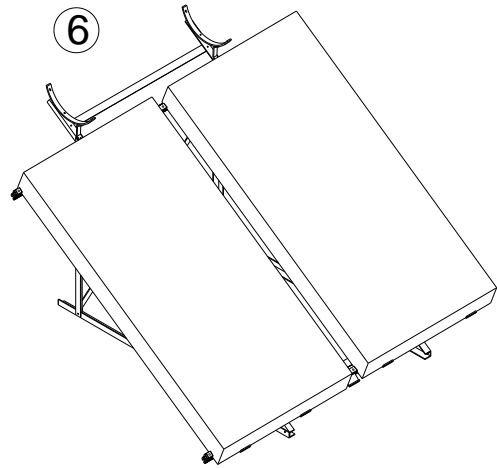
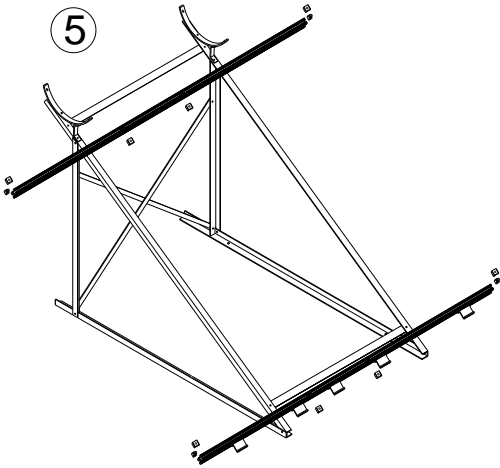
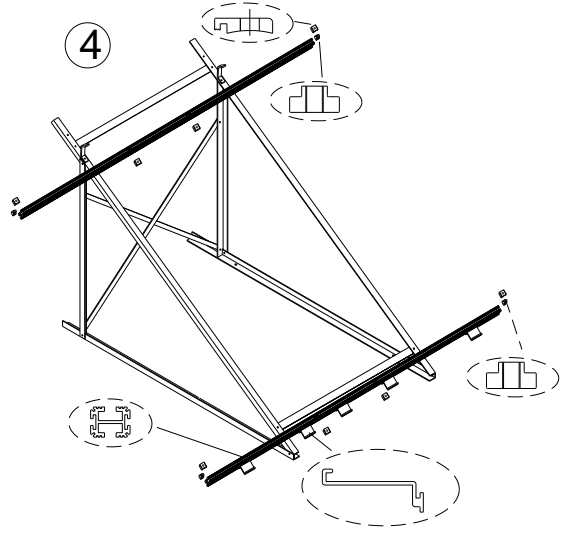
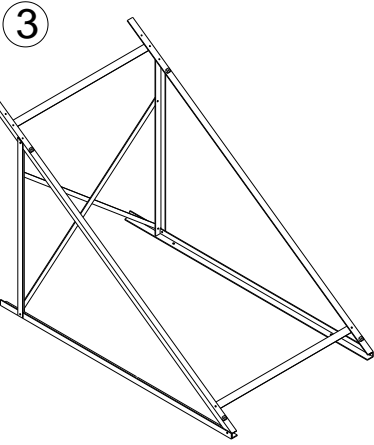
### 3) INSTALLATION & OPERATION INSTRUCTIONS



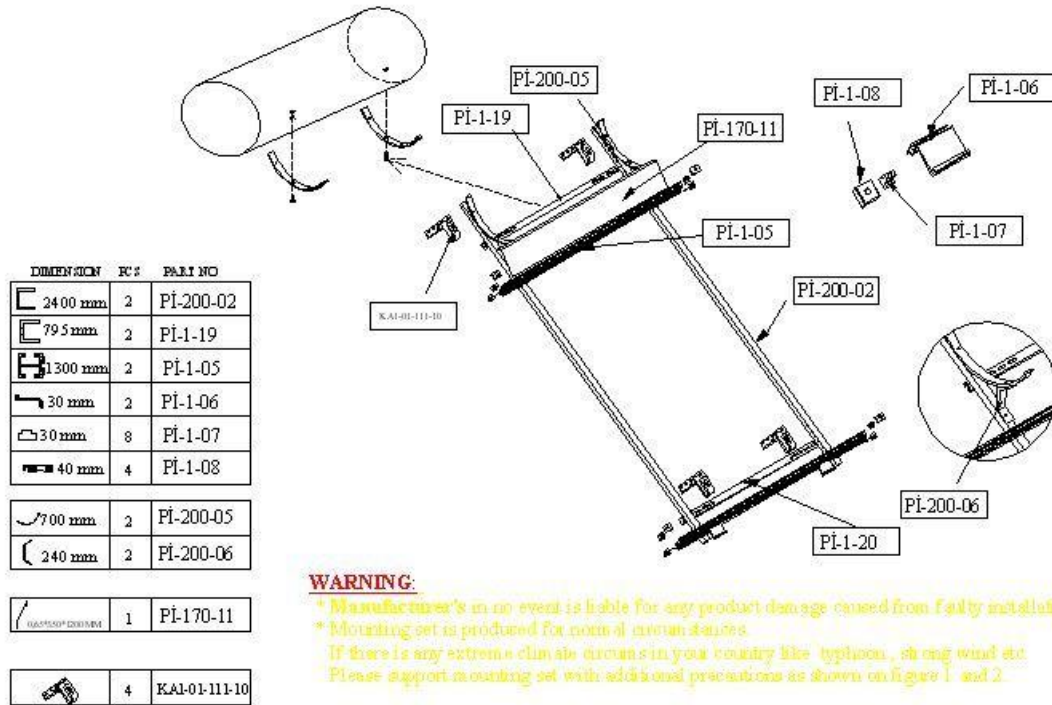
#### 4) MOUNTING SET AND MOUNTING STEPS

##### SUPPORT BASE FOR FLAT ROOF INSTALLATION:

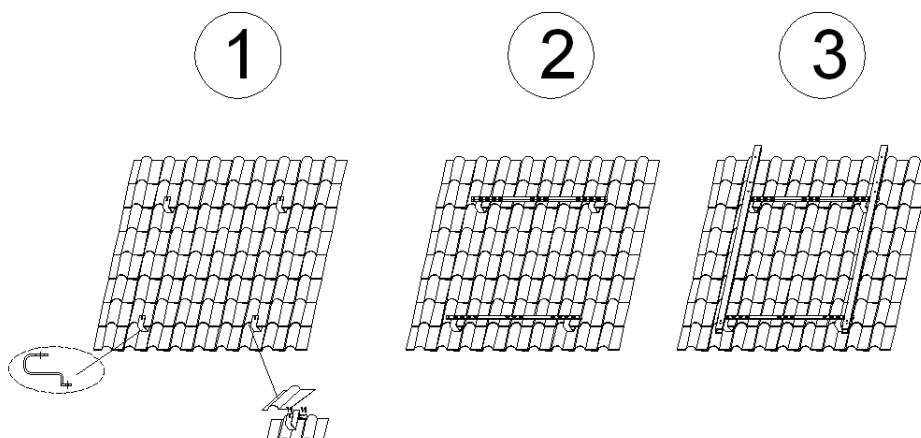




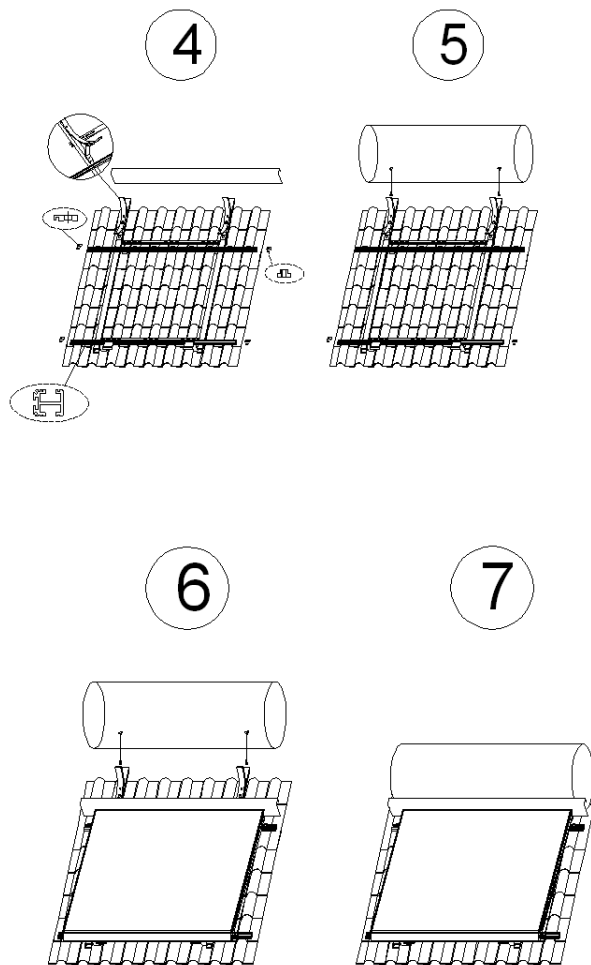
## ANGLE ROOF INSTALLATION



## MOUNTING STEPS







## 5) FITTINGS & CONNECTIONS

- Pressure relief (safety) valve for storage tank
- Insulated connection pipes between tank and collector(s)
- Other fittings

**IMPORTANT POINTS ABOUT INSTALLATION AND OPERATION OF THERMOSIPHON SOLAR WATER HEATERS**

1. You must be sure that the tank is filled with water .Otherwise system starts to operate and can damage the tank as it is empty. Also cover the glass of collector(s) during installation with a matt blanket to avoid heating up the system before filling.
2. Collector(s) must be installed according to the direction of “UP” label.
3. 3 bar solar pressure relief valve must be installed on the primary circuit to avoid problems during operation because of over temperature and over pressure.
4. 8 bar pressure relief valve must be installed before the cold water inlet of the tank and after one-way valve to protect the tank from over pressure of the water from the main supply.
5. Primaryt circuit must be filled completely by discharging the air inside the collector, and pipes.
6. Flat roof mounting sets must be installed on a flat ground and profiles parallel to the ground must contact completely with the ground.
7. Inlets and outlets axis of the tank must do a 90 degrees angle with the ground axis, otherwise system can have problems during operation.
8. All pipes between tank and collector, and connection pipes of the SWH to the house should be insulated to have the best efficiency and performance from the system.
9. Tanks must be handle and install with care. Any damages to tank can cause break of the glassline coating inside, which will cause corrosion inside from the damaged coating points.
10. Oxidation can be seen on the galvanised parts of mounting sets, if the installation done very close to the sea or humid areas.
11. Wrong and improper installations can cause accidents, damages, etc. therefore be sure that installation done by a qualified installer, properly.
12. Magnesium anode bar is a sacrificial part which protects the tank coating inside against corrosion. It should be checked annually and if it is finished, must be replaced with a new one. Please contact us or your dealer for original magnesium anode bars.
13. Pressure relief valves, one-way valves must be checked annually and if they are out of order, must be replaced with a new one.
14. These systems operate with pressurized water, therefore be sure that main water supply has a pressure of minimum 3 bars.

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