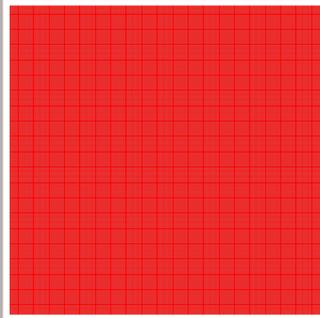
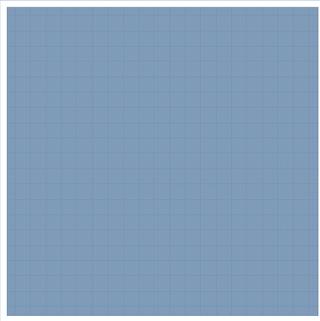


CHIRYU HEATER



Thermosiphon Water Heater

Long seller
250-S



direct alignment
250-SFD



big 280L capacity
300-S

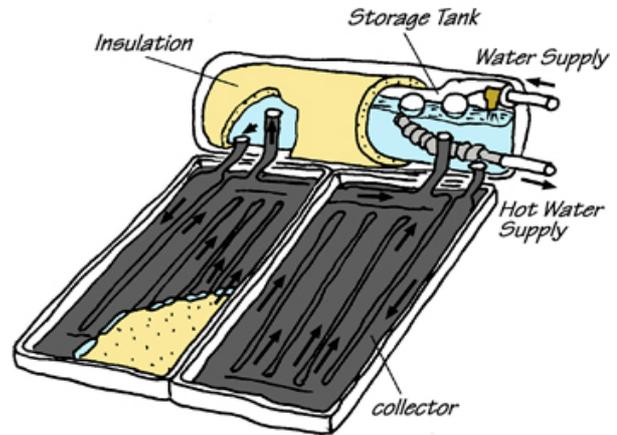


Thermosiphon solar water heater is one of the most cost effective utilization of natural energy. Chiryu Heater has been manufacturing thermosiphon 1963. Solar heated water become light and float up to the storage tank, and cold water in the tank flows down to the collectors. Hot water is kept warm even in the midnight when the outside temperature goes down chilly.

● Standard fixtures for all roof-types

250S	○	○	○
250SFD	○	○	○
300S	○	○	○

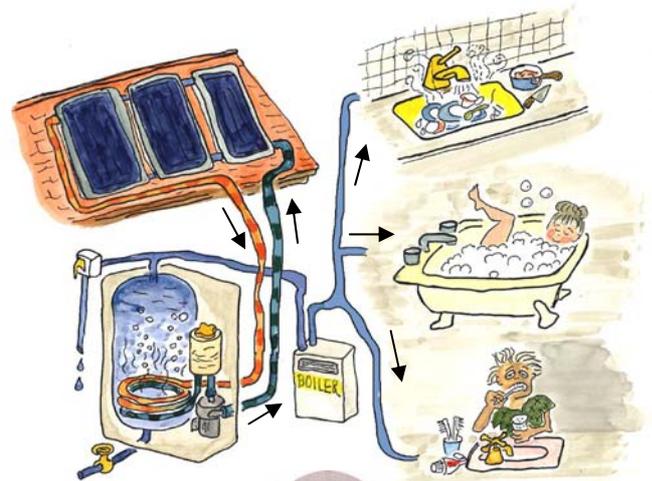
	○	○	○	○
	○	—	—	—
	○	○	○	○



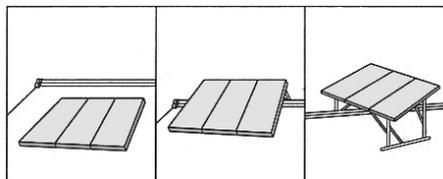
Forced circulation system



Name	CSC305	CSC308	CSC3710
Storage Tank	300 liter	300 liter	370 liter
Collector area	6 m ²	8 m ²	10 m ²

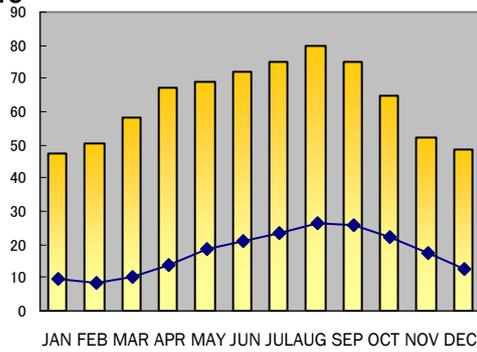


● Standard fixtures



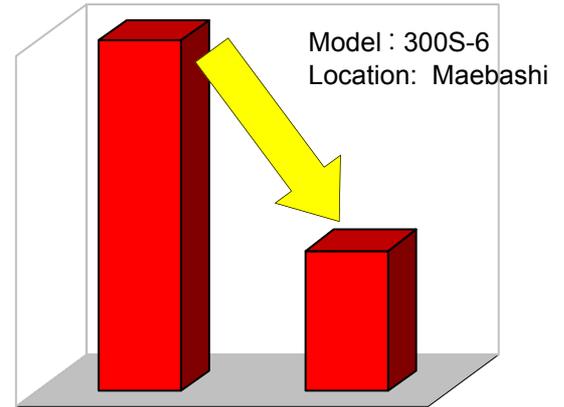
● Hot water temperature

Monthly hot water temperature
 Hot water temperature
 City water temperature



Model : 250S-4
 Tilt : 35 deg. South
 Location : Nagoya

● Reduce fuel expense



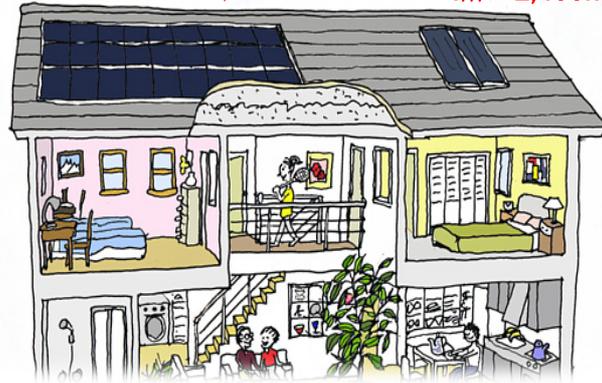
● 5 X more efficient than Solar

Solar Cell (4m²-0.5kW) get **500kWh** annually, while the solar water heater(4m²) earns **2,400kWh** annually.

Solar water heater is a good way to use the power of SUN.

Same energy gain with different solar area

Solar cells 20m² = 2,500kWh/year
 Solar water heater 4m² = 2,400kWh/year



No freezing.

Anti-freeze prevention system: freezing would otherwise cause damage to system.



Rust free.

Storage tank made of Molybdenum Ferrite Stainless steel. Rust-free, contamination-free, anode-free, with no cleaning required.



Well insulated 300 liter tank

Large 300/370 liter tank keeps water temperature insulated. Due to large capacity, hot water is available evenings and following mornings.

Light load for roof

Heavy storage tank stays on the ground. Solar collector weighs only 37 kg per 1 unit, 2m².

Integrated roof-solar collector

For renovated and new-built homes, integrated roof-solar collectors are available, taking role of

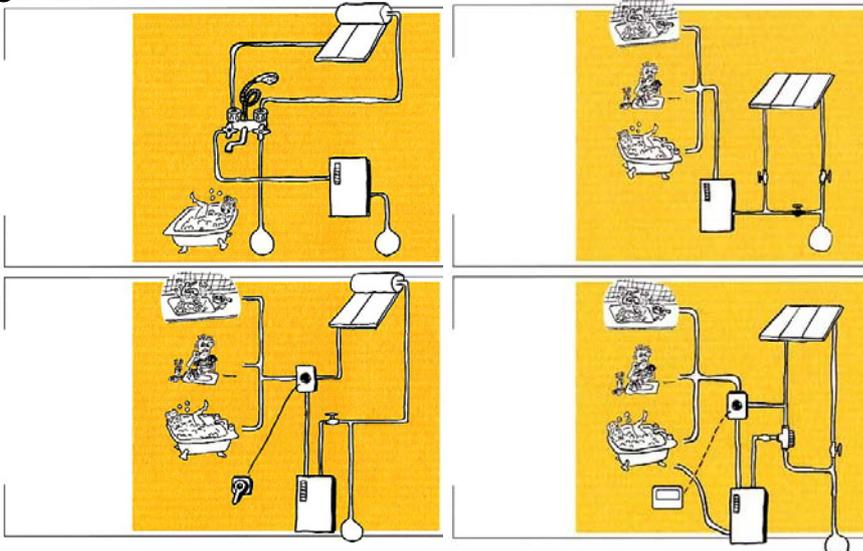




● Solar systems around the world



● Standard connections



● Options

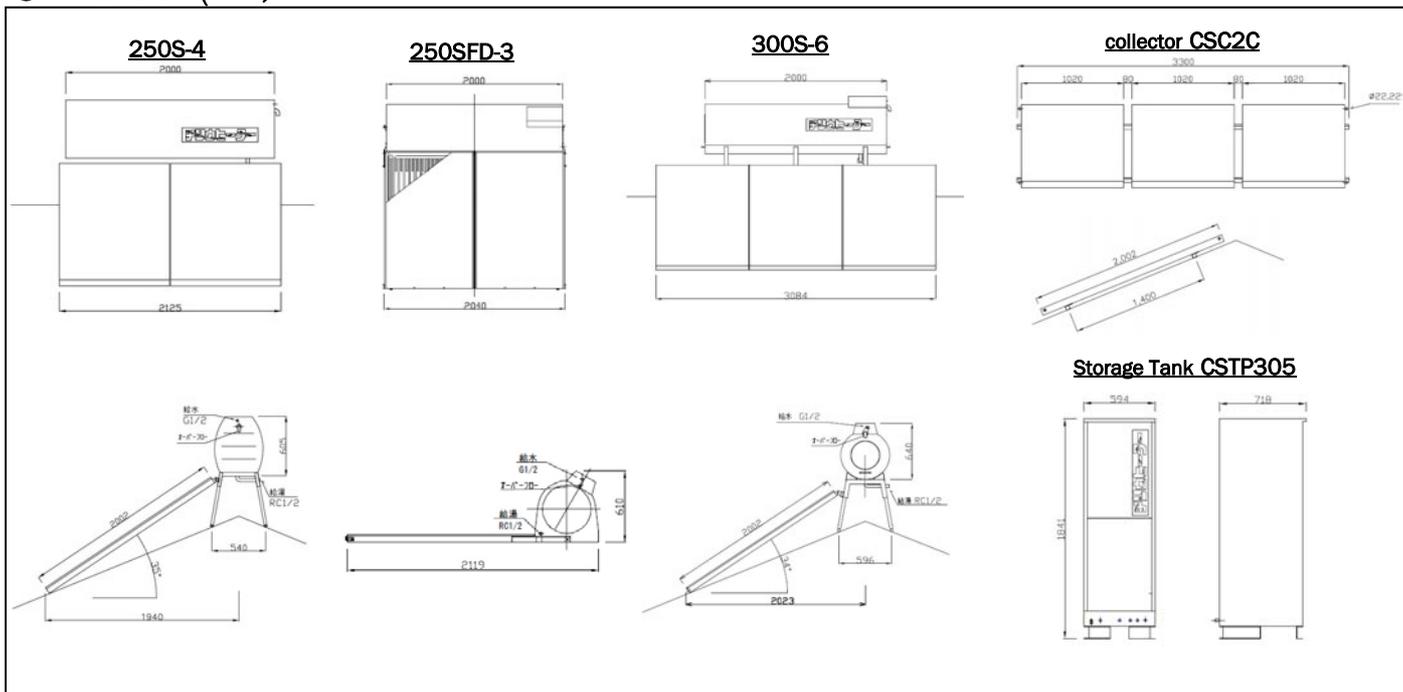


Thermo mixing valve
Solar hot water and tap water is mixed to be supplied at desired temperature.



Manual remote controller
To switch solar hot water and boiler hot water in the room.

● Dimension (mm)



● Specifications

Model	250S-3	250S-4	250SFD-3	250SFD-4	300S-6	
System	Thermosiphon Water Heater					
Tank capacity (liter)	230	230	220	220	280	
Collector area (m ²)	3.0	4.0	3.0	4.0	6.0	
Weight	Storage tank	32kg	32kg	35kg	35kg	33kg
	Collector	33kg×2	41kg×2	33kg×2	41kg×2	41kg×3
	Standard stand	10kg	10kg	10kg	10kg	25kg
	Weight with water	338kg	354kg	321kg	337kg	461kg
Inner tank	Ultra High Molecular Weight Polyethylene – UHPE					
Insulation	Formed Polystyrene					
Exterior tank	Stainless steel & else					
Absorber	Stainless steel					
Transparent cover	3.2mm tempered glass					
Collector case	Stainless steel & else					

Flat plate collector	
Collector area	2m ²
Brine capacity	1.5ℓ
Weight with brine	36.5kg
Dimension	1,020×2,002×72
Transparent Cover	3.2mm Tempered glass
Absorber	Aluminum fin with copper tube
Back insulation	Fiber glass
Collector case	Stainless steel & else
In- & Out-let	Copper tube 22.22mm

Storage Tank	
System	Forced circulation
Dimension	PVC coated steel (594×718×1,841)
Storage capacity	SUS444 300liter
Maximum Operating pressure	294KPa (3kgf/cm ²)
Inner tank	Molybdenum Stainless steel
Circulation pump	5ℓ/min – 13.4meter (60Hz) 150W (60Hz)
Source	AC100V
Supply	(Supply) R3/4 (Outlet) Rc3/4
Drain	R3/4
Collector connection	Rp1/2
Weight(full water)	378kg



3 valves, 4 valves

Specially designed tap for solar water heater



Booster pump

To add pressure to hot water



Electric remote control

To switch solar hot water and boiler hot water in the room.



Large Scale Installation

Solar collectors are used in hotels, resort areas, care homes, apartment houses, in shower for workshops and factories as well as in other industrial uses. Chiryu Heater is particularly experienced in space heating technology, used in hospitals, welfare facilities, precision engineering workshops & factories as well as in company housing.

●Hot water supply



Care home



Resort hotel



Apartment house



Cowshed



Apartment house



Riding club



Country club



Care home

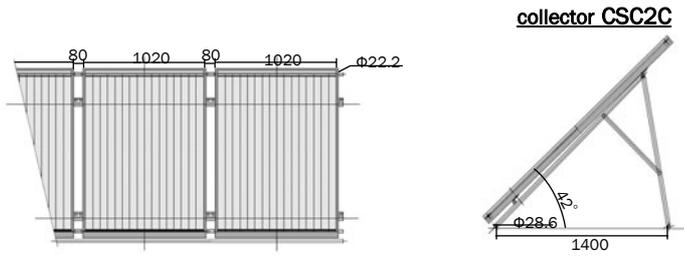


Care home



Swimming club

●dimensional drawing (mm)



●Space heating and hot water supply



Dental clinic



Care home



Apartment house



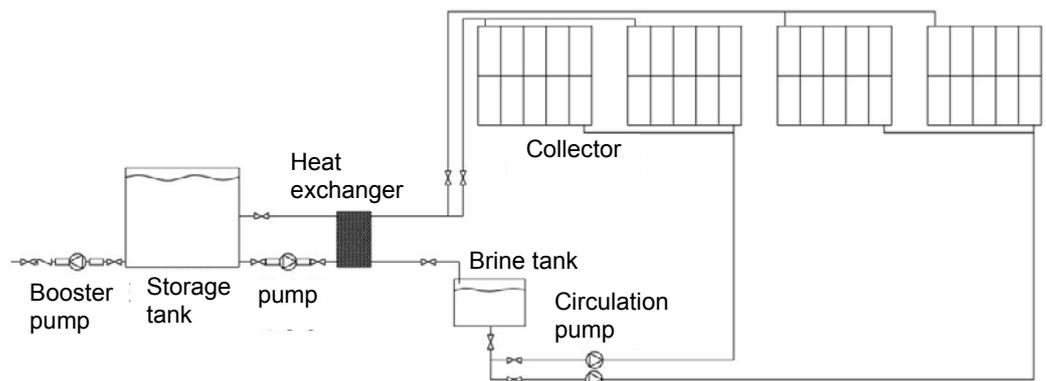
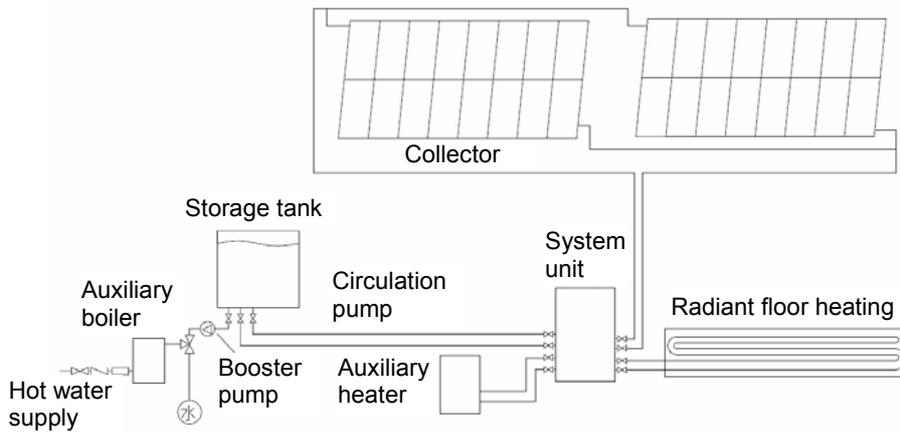
Care home



Precision workshops

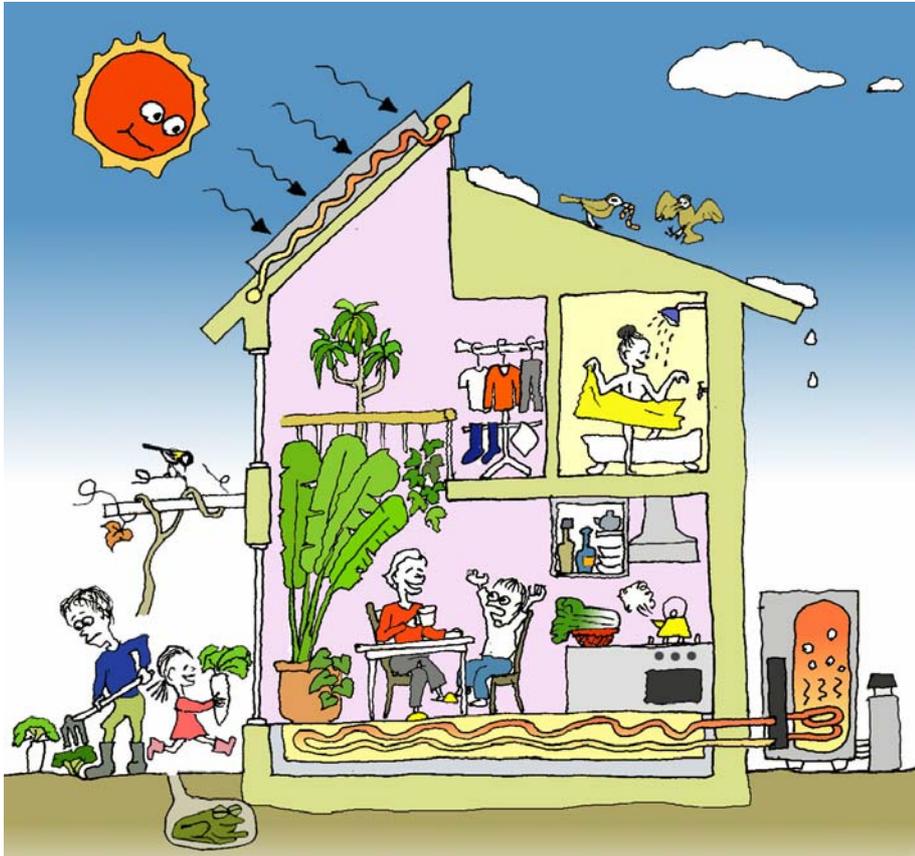


Apartment house



Solar heating and DHW ~Hybrid Solar House~

Hybrid Solar House system supplies solar heat for space heating and DHW. Under-floor heat storage holds solar to create extremely comfortable radiation heating, as well as sufficient hot water for shower and household.



- **Integrated-roof collector**

No exposed piping or plumbing with neat fitting to roof. Tempered Glass surface is safe from hailstones and other external damage.

- **Under-floor heat storage**

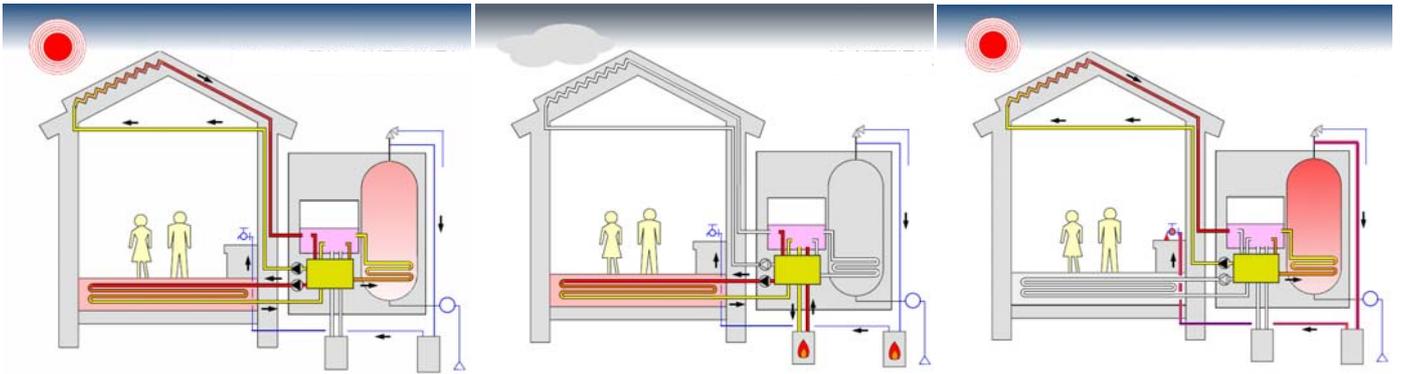
Under-floor storage system keeps sun's heat for whole-house overnight heating.

- **Radiant floor heating generates silk-smooth warmth throughout house for maximum family comfort with no visible room heaters.**

- **No vertical temperature difference even in high-ceilinged rooms and stairwell spaces.**

- **Low fuel consumption for care-free and comfortable whole house heating. Solar reduction more than 50%.**





1. Solar space and water heating

Solar heated brine heated in the roof integrated solar collectors circulate in the thermal storage floor then into the hot water storage

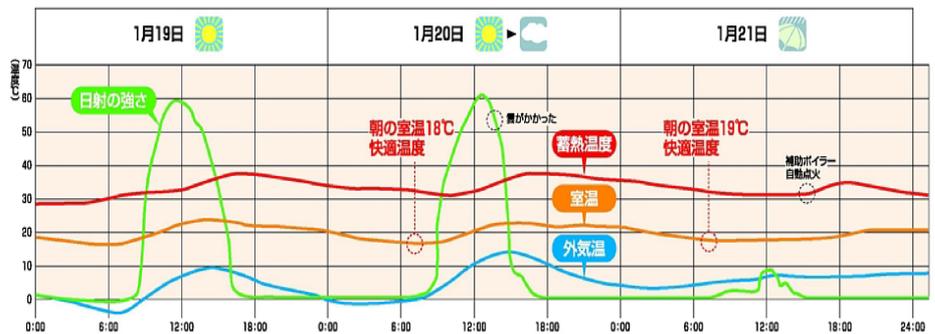
2. Auxiliary heating

The controller automatically activate auxiliary boiler when solar energy is not sufficient, but this is delicately restricted not to get in the way of solar.

3. Solar water heating

When heating demand is low or none, the system heat hot water.

Outdoor temperature, Room temperature, Under-floor heat storage temperature and Solar power is Recorded. In winter, the sun sends Effective solar energy can be obtained only 6 hours per day, 9 a.m. to 3 p.m. Under-floor heat storage keep the home warm overnight.



Other products

●Cellulose insulation

Made from fiber derived from 100% recycled newspaper and other paper products, Cellulose insulation is safe to use, fire resistant, non-toxic and environmentally friendly. A seamless blanket of insulation results in greater comfort and energy efficiency in all seasons and climate.



Fire safety

Cellulose insulation has a Class 1 rating for flame spread and smoke development when tested in accordance with ASTM E84. Because of its fire retardant treatment, it has been shown to inhibit the spread and speed of fire.

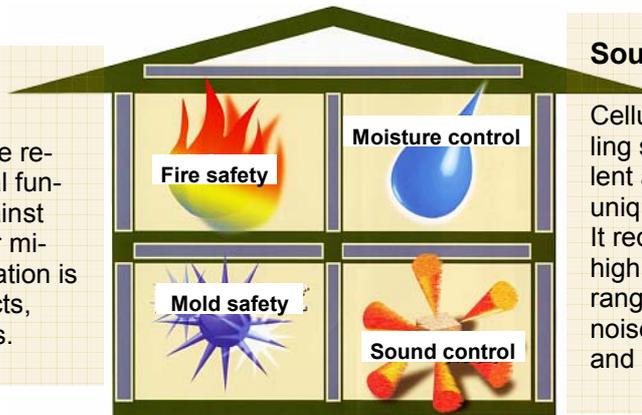


Moisture control

Cellulose insulation has the natural ability through capillary action to accept and release excess moisture that would normally condense either sheathing or oriented insulation. Moisture is then held in suspension within the individual cellulose fibers and would not run down to the bottom plate.

Mold safety

Boric acid, added as fire retardant, are also natural fungicides that protect against mold, mildew and other microbes. Cellulose insulation is highly resistant to insects, rodents and other pests.



Sound control

Cellulose is highly effective in controlling sound transmission. It is an excellent acoustical insulation because of its unique porosity and interwoven fibers. It reduces sound in both high and low frequency ranges and minimizes noise from street traffic, and other outdoor noise.



1. Spray-on filling



2. Net filling



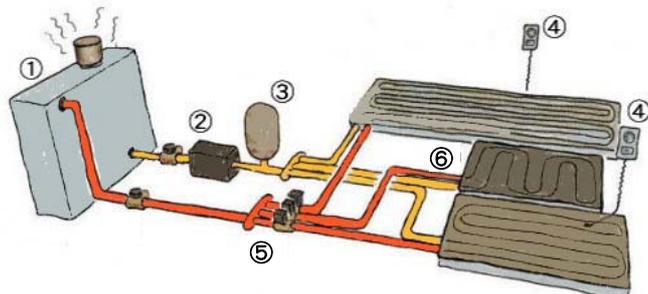
3. Blowing in the attic



Compare Cellulose fibered wall to Glass wool wall.

●Silkline Floor Heating

There are two types of underfloor heating systems One is our "Storage type" with concrete heat-storage floor and heat-supply piping. The other, our "Non-storage type" with aluminum radiator fins and heat supply piping. A Gas boiler, kerosene boiler or heat pump is available.



- ①Boiler ②Circulation pump
- ③Expander ④Controller
- ⑤Electric valve ⑥Floor piping





History of Chiryu Heater History of solar system



1962
1st solar water heater boom in Japan.

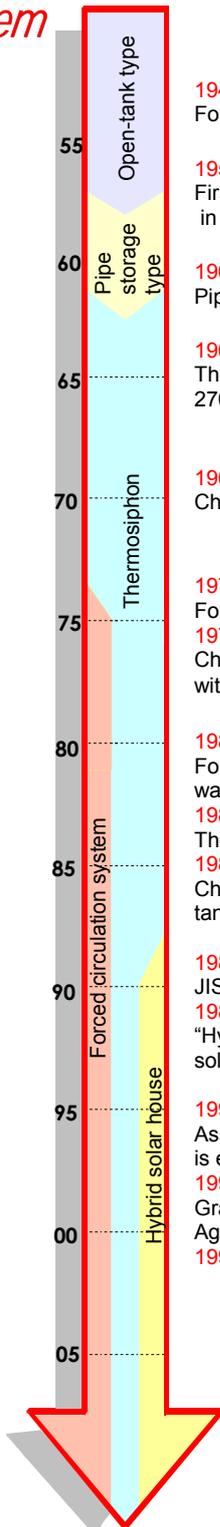
1965
The age of mass oil consumption started.

1973
The 1st oil crisis

1979
The 2nd oil crisis

1986
Catastrophe at Chernobyl Nuclear Power Plant.

1997
COP3 Kyoto



1944
Founded

1957
First factory-manufactured solar water heater in Japan.

1962
Pipe storage solar heater

1963
The first Thermosiphon in Japan, Chiryu Heater 270, with Stainless plate Absorber.

1968
Chiryu Heater 180

1974
Forced circulation solar system

1975
Chiryu Heater 270-S. The first solar water heater with stainless exterior.

1980
Forced circulation water heater for domestic hot water

1981
Thermosiphon solar water heater 250-S

1984
Chiryu Heater 300-S with large 280 liter storage tank

1986
JIS (Japan Industrial Standard) certificated

1989
"Hybrid Solar House" with integrated-roof solar collector

1994
Associated Home Builders for Hybrid Solar house is established.

1995
Granted by Japan Housing Finance Agency of Japan

1997



