

BAXI



# **BAXI Solar Water Heating Systems**

# BAXI Solar Water



Solar thermal energy is clean, free, abundant and the preferred choice of green builders and energy efficiency-minded consumers. Solar heating becomes even more compelling when you consider rising energy prices, depleting fossil fuels and growing conservation initiatives.

Baxi's commitment to finding alternative energy sources has fueled its development of an integrated solar heating system. The Baxi heating system may include Baxi Luna wall-hung boilers to ensure optimum performance and sustainable comfort.

**Solar energy is the clear choice for building a better future.**

# Heating Systems

## Maximum Use of the Sun's Energy

The Baxi integrated solar water heating system maximizes the sun's energy by using high-performance, laser-welded flat plate collectors.

Baxi Advanced XL collectors are the right solution for any application – providing domestic hot water, supplement pool heating systems, or low temperature space heating via heat exchangers.

A solar water heating system that maximizes the sun's energy typically provides up to 65% of the annual domestic hot water heating energy requirements for a single family home, depending upon geographic location.



## Laser-Welded Solar Collectors

Baxi Advanced XL flat plate collectors are designed to last, while providing an optimal combination of high 95% absorption efficiency with a nominal 5% reflective loss.

Low iron-tempered glass, the absorber plate and thermal insulation are housed in a 2 mm thick aluminum casing. The absorber plate is glazed with a high temperature, metal ceramic powder coating with low reflective properties. Baxi uses laser technology to join the collector's copper riser pipes with the copper absorber plate, leaving a clean surface.



## Dual-Coil Indirect Storage Tank

Baxi indirect storage tanks, designed to be integrated with the solar heating system, are supplied standard with dual serpentine coils.

Baxi tanks are available in six sizes, ranging from 50 gallons (180L) to 265 gallons (1000L) in capacity. (See *Baxi Dual-Coil Indirect Storage Tanks* table on back panel.)



## Pump Station

Baxi employs a line of quality, pre-engineered pumping stations that meet the needs of all solar water heating systems.

The station includes temperature gauges, supply and return, flow meter, pressure relief valve with pressure gauge, and filling and flushing port in an insulated enclosure.



## Differential Controller

The Baxi system features a proven solar differential controller.

This controller facilitates a clear system monitoring display, multiple system options, energy metering, V-Bus connection, special functions settings, and extra thermostat functions. Set-up is user friendly, and may read in either °C or °F.



## Heat Transfer Fluid

The propylene glycol is a non-toxic and virtually odorless heat transfer fluid that is formulated especially for solar systems.

When mixed to a 50/50 ratio of distilled water with heat transfer fluid, the fluid provides frost protection to -32 °C (-26 °F) and a boiling point threshold up to 120 °C (248 °F).



## Quality and Reliability

Other components include Baxi Solar Expansion Tanks (3 sizes) and pre-insulated, corrugated stainless steel Interconnecting Pipe.

Baxi has been making proven solar thermal water heating systems for five decades, delivering reliable and durable heating solutions.

### Baxi Field Test Results

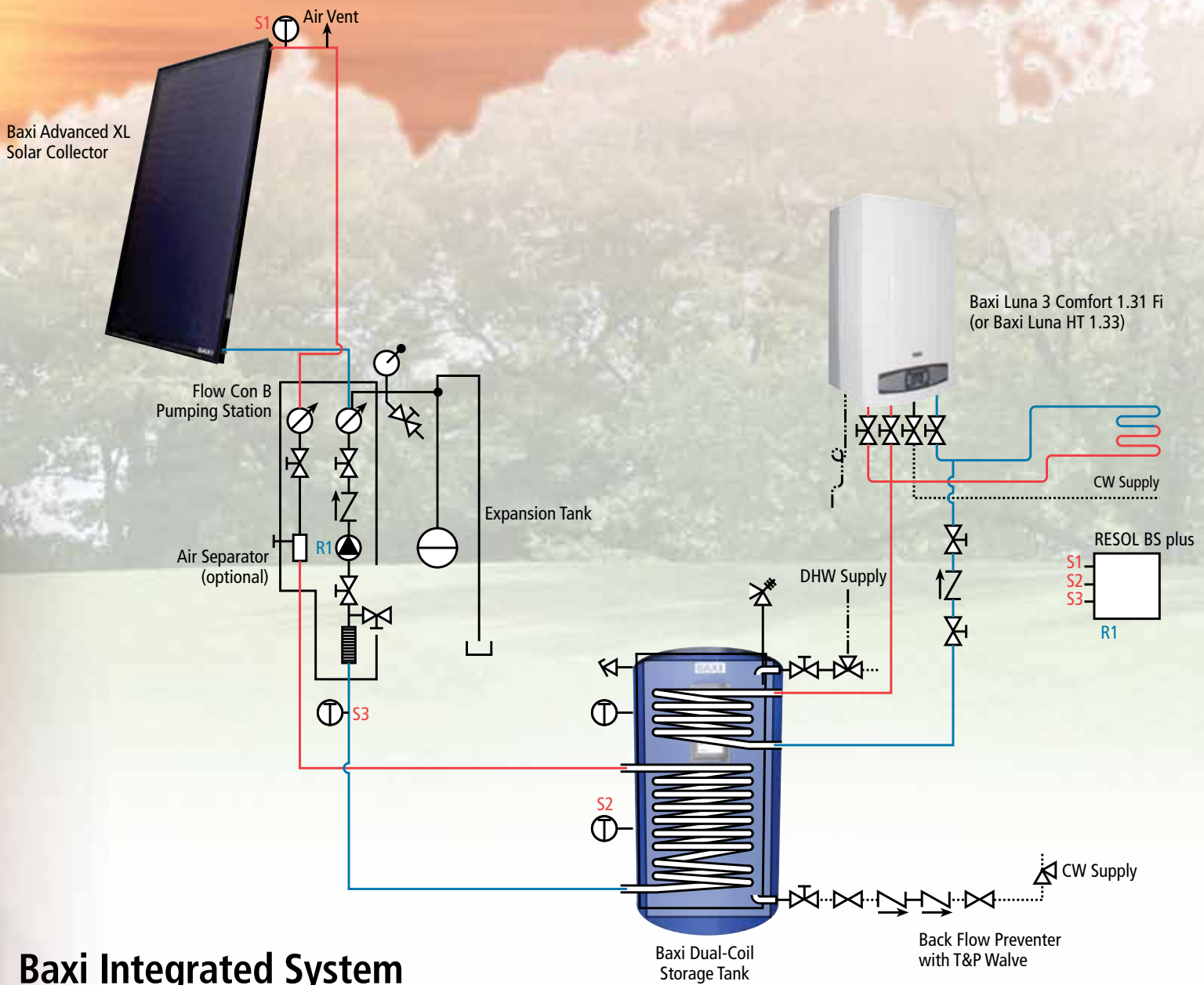
## Green and Free Energy

In a field test conducted near Cooperstown, N.Y., a two-panel Baxi Solar Water Heating System was selected to heat a new energy efficient 4,000-square-foot passive solar home located near Cooperstown, New York.

The Baxi Luna 3 Comfort modulating combination heating and domestic hot water boiler was also integrated with the system to provide supplementary heat. The first wallhung boiler built with solar in mind, the boiler accepts pre-heated water from the solar storage tank, brings it quickly and economically up to demand, and then shuts off.

The homeowners of this solar field test report they used just 115 gallons of propane from June through December. During that period, neighbors with a similar sized home (built five years previously) say they used almost five times more fuel – just to heat their home.

# Heating Systems



## Baxi Integrated System

The Baxi integrated solar heating system includes the following components:

- ◆ Baxi laser-welded solar collectors
- ◆ Pre-assembled pump station
- ◆ Manual filling pump (optional)
- ◆ Programmable 2-relay controller with temperature sensors
- ◆ Baxi dual-coil indirect storage tank, 50 gal (180L) to 265 gal (1000L)
- ◆ Baxi 6.6 gal (25L) solar expansion tank
- ◆ 2.6 gal (10L) heat transfer fluid kit
- ◆ Quick-connect fittings and system components
- ◆ Roof mounting kits

## Supplemental Boiler

The **Baxi Luna 3 Comfort** modulating wallhung boiler is solar system compatible; it economically accepts pre-heated water from a Baxi solar storage tank and brings the water temperature up to demand. The Baxi Luna HT 1.33 modulating, condensing boiler is also an ideal supplemental boiler choice.

# Baxi Solar Technical Notes



Model	Advanced XL	
	Imperial	Metric
Total Area	27.02 ft <sup>2</sup>	2.507 m <sup>2</sup>
Aperture Area	25 ft <sup>2</sup>	2.322 m <sup>2</sup>
Absorption Area	25 ft <sup>2</sup>	2.322 m <sup>2</sup>
Absorption Material	Copper	
Selective Surface Coating	Ceramic-metal structure	
Absorption	95%	
Reflective Losses	5%	
Glass Type	Tempered, low iron	
Glass Thickness	4 mm	
Glass seal	Vulcanize EPDM	
Insulation Material	Rockwool	
Insulation Thickness	1.6 inch	40mm
Manifold Diameter	3/4 inch	18mm
Fluid Capacity	0.528 USG	2 L
Maximum Pressure	145 PSI	10 bar
Maximum Stagnation Pressure	397.4°F	203 °C
Length	85.83 inch	2180 mm
Width	45.27 inch	1150 mm
Depth	3.15 inch	80 mm
Weight	116.6 lbs	49 kg
Flow Range	0.34-1.53 gpm	1.3-5.8 L/m
Recommended Flow Rate	0.55 gpm	2.08 L/m

Baxi Dual-Coil Indirect Storage Tanks						
Storage Capacity (USg/L)	50/180	80/300	106/400	132/500	212/800	265/1000
Height (in/mm)	45.2/1149	47.6/1210	61.4/1560	73.2/1860	77.2/1960	82.1/2090
Diameter (in/mm)	23.6/600	29.1/740	29.1/740	29.1/740	39.4/1000	41.3/1050
Weight (lbs/kg)	187/85	240/109	392/178	444/202	574/261	679/308

## BAXI

**Marathon International**  
 Exclusive North American Distributor  
 for Baxi Products  
 1815 Sismet Road, Mississauga  
 Ontario L4W 1P9, Canada

info@wallhungboilers.com

DISTRIBUTED BY:

[www.wallhungboilers.com](http://www.wallhungboilers.com)



Baxi is ISO 9001 certified for quality management, OHSAS 18001 for health and safety management and ISO 14001 for environmental management. The Company assumes no responsibility for any possible contents mistakes, and reserves the right to make changes in products, due to technical or commercial demands, at any time without notice.