

PURE

Solar Energy Systems...
SOLAR EVOLVED

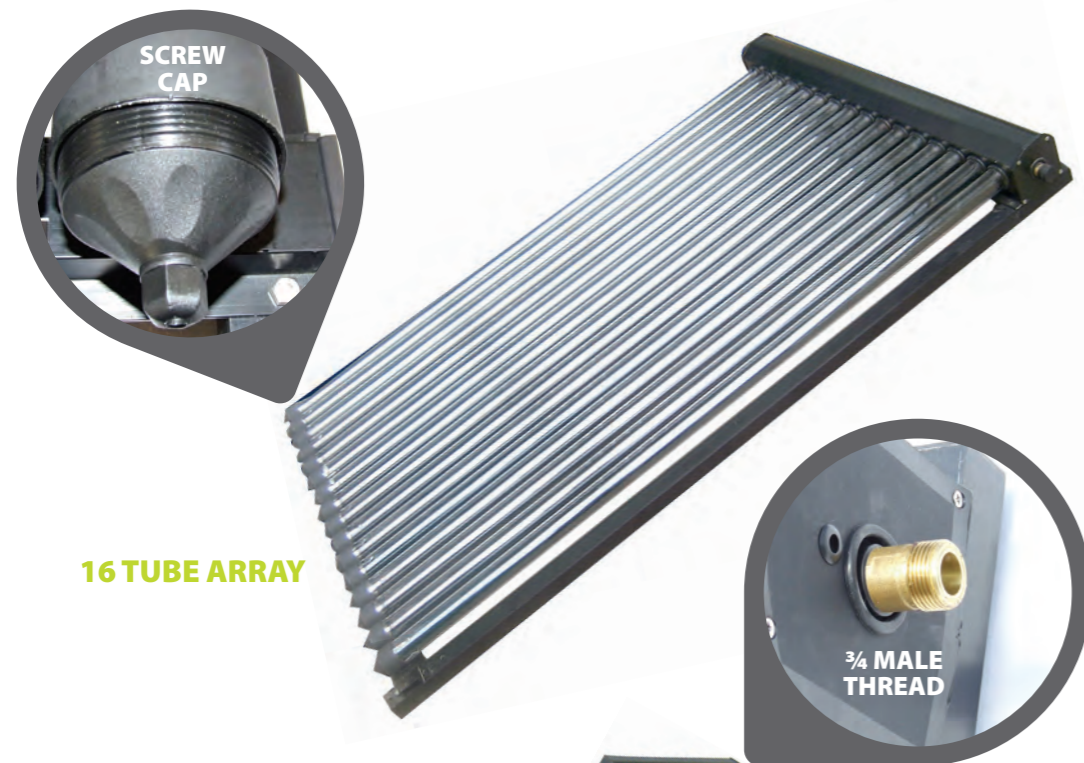


U Pipe Direct flow
Double Manifold System

The pure energy range is designed to give high performance from a small footprint.

A simple plug 'n' perform design complete with lugging handles make installations a breeze; the pure series is the ultimate choice. No other system offers the performance, reliability, mounting choices, aesthetics and warranty for such great value.

Available in either 6, 10 or 16 tube pre-assembled arrays suitable for any application including commercial & domestic heating & hot water, swimming pools and water desalination.



Direct Flow is a very simple system that works in a similar fashion to a conventional flat plate collector but with the benefit of vacuum insulation.

The U-Pipe collectors have the same copper tube as a traditional heat pipe collector, but it instead bends around on itself at the bottom of the glass tube and returns directly into the double manifold. This enables the heat transfer fluid to travel through the tube for direct gain from solar radiation. As this heat transfer fluid is heated, it is pumped around the collector tubes and eventually passes through the secondary coil in the hot water storage cylinder. The U-Pipe Collectors require fewer tubes up on the roof than heat pipe to reach the same peak efficiency levels.



6, 10 and 16 Tube Arrays

758 Kwhm² Output

Vertically, horizontally & flat walls

Quick and easy replacement

Operate up to 6 bar

No parabolic mirror

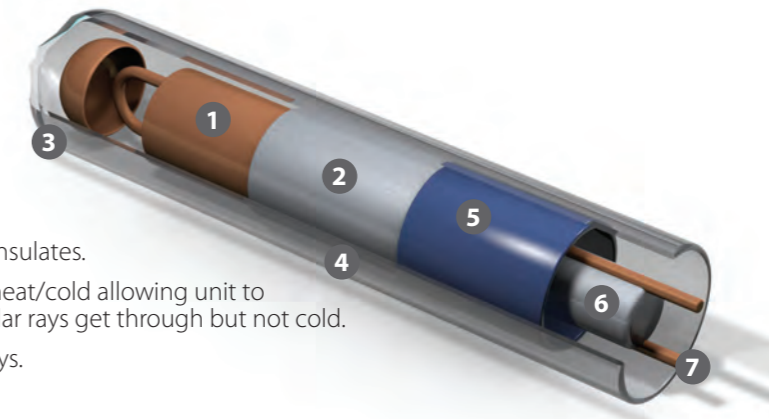
25mm hailstone tested!

15 Year warranty on tubes

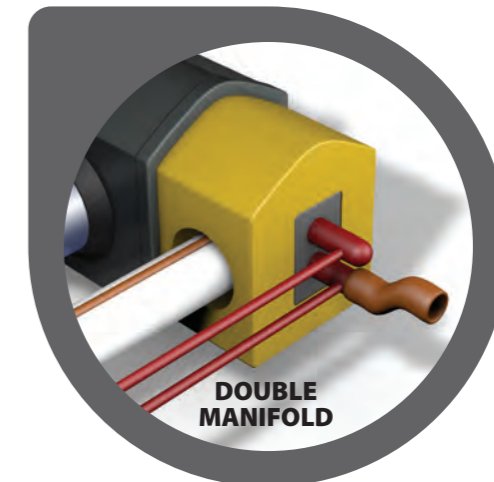
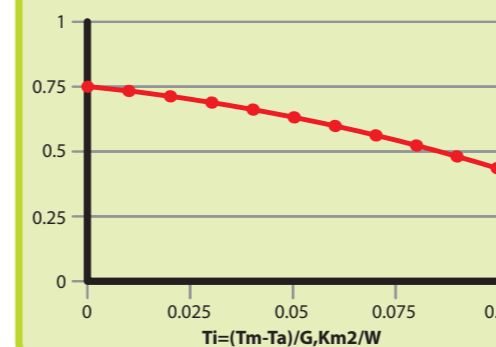
6, 10 and 16 Tube Arrays

EVACUATED TUBE DIAGRAM

- 1 Copper layer absorbs and transfers heat.
- 2 Insulating layer traps heat.
- 3 Outer glass tube protects and insulates.
- 4 Vacuum seal insulates against heat/cold allowing unit to work in cold/windy weather solar rays get through but not cold.
- 5 Selective layer captures solar rays.
- 6 Aluminum liner transfers heat
- 7 Copper u-tube design circulates fluid through collector



U TUBE COLLECTOR EFFICIENCY



758 Kwhm² Output

Vertically, horizontally & flat walls

No parabolic mirror

- Pure 758 Kwhm² output – 58mm x 1800 tubes
- Can be installed vertically, horizontally & on flat walls- allowing flexibility of system design and installation.
- U pipe collectors have a smaller footprint than Heat Pipe & Flat plate systems - Less visually intrusive.
- No parabolic mirror - No efficiency decrease during service lifetime.
- Direct flow U pipe technology - More rapid heat transfer
- Suitable for mains pressure water
- Pre- assembled in 6, 10 and 16 tube arrays - no roof assembly required
- Ideal for flat roof and Inclined up to 90°
- Black anodised aluminium casing and frame- corrosion proof sleek single colour design
- Operate up to 6 Bar
- Dry tubes - Quick & easy replacement in situ without draining system
- Tested to withstand 25mm hailstones @ 23m/s
- Outperform flat plates - Autumn , Winter & Spring
- Operates at temperatures of -40°C
- 22mm male copper manifold fitting – “plug and play” design provides fast and simple installation.
- Individually serial numbered -for commissioning and warranty
- Unrivalled 15 Year Warranty on Tubes – Peace of mind

DESCRIPTION		Pure 58mm 6-tube array	Pure 58mm 10-tube array	Pure 58mm 16-tube array
Product Code		LEU6	LEU10	LEU16
Number of evacuated tubes		6	10	16
Conversion factor	η_0	0.757	0.757	0.757
Heat transfer coefficient	a_1 a_2	1.552 W/(m ² k) 0.016 W/(m ² k ²)	1.552 W/(m ² k) 0.016 W/(m ² k ²)	1.552 W/(m ² k) 0.016 W/(m ² k ²)
Yield forecast (aperture area 3m ²) Reference location Würzburg, Germany	kWh/m ² a	758	758	758
Grid dimensions (L x W x H)	mm	1978 x 488 x 167	1978 x 768 x 167	1978 x 1210 x 167
Gross surface area	m ²	0.96	1.52	2.39
Aperture area	m ²	0.56	0.93	1.5
Collector contents	litres	0.65	1.07	1.7
Weight	kg	21	35	56
Max. working overpressure	bar	6	6	6
Max. stagnation temperature	°C	242	242	242
Manifold Connection Fitting		¾ male thread	¾ male thread	¾ male thread
Sensor sleeve	mm	6	6	6
Collector material		copper, AL profile	copper, AL profile	copper, AL profile
Glass tube material		Borosilicate 3.3	Borosilicate 3.3	Borosilicate 3.3
Selective absorber coating material		selective coating CU-AL/SS/N-ALN	selective coating CU-AL/SS/N-ALN	selective coating CU-AL/SS/N-ALN
Glass tube (Ø ext./Ø int.)	mm	58/47	58/47	58/47
Wall thickness/tube length		1.6/1800	1.6/1800	1.6/1800
Colour (frame profile, anodised)		black anodised	black anodised	black anodised
Colour (plastic parts)		black	black	black
Thermal shock test	ITW test no.	08COL700	08COL700	08COL700
Hailstone test according to DIN EN 12975-2		passed optional impact resistance tests following EN12975-2		
DIN CERTCO - Register number		011-75575 R	011-75575 R	011-75575 R



PURE

Solar Energy Systems...
SOLAR EVOLVED

www.PureSolarEnergy.co.uk