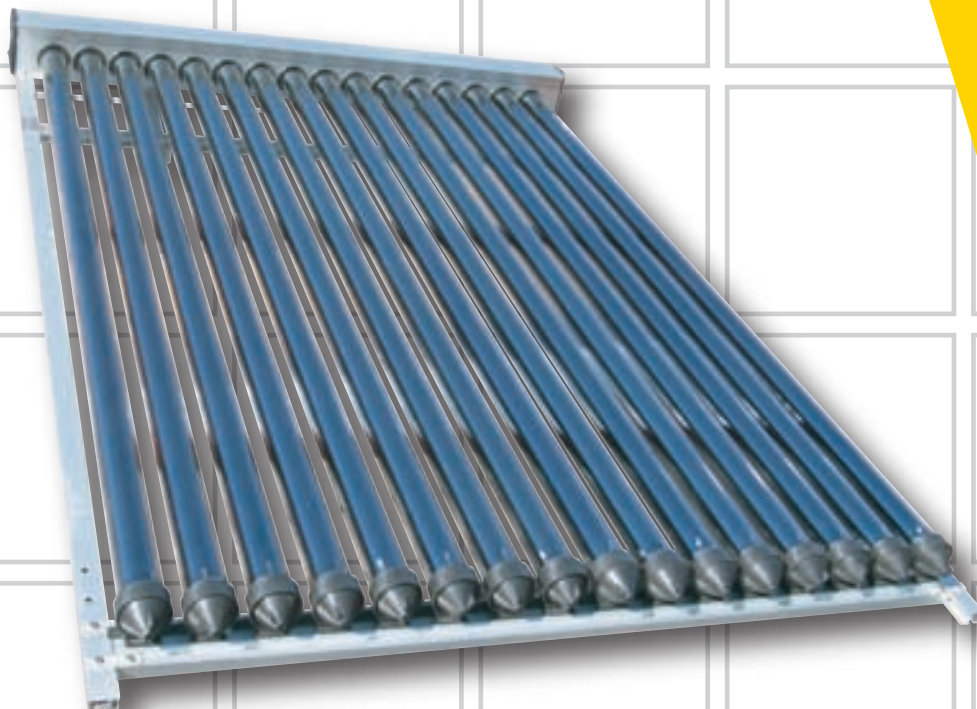
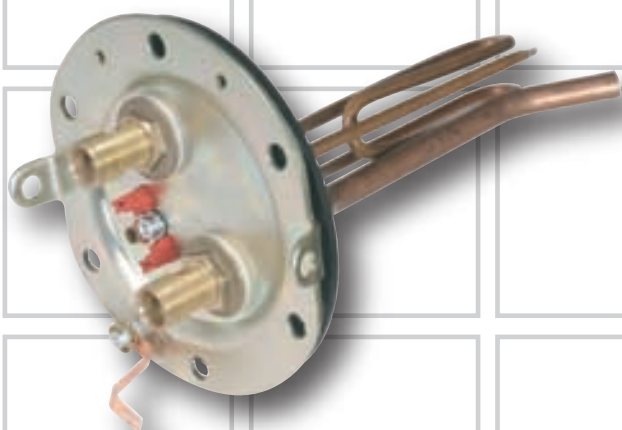


Kwik SOL

SOLARFIT CONVERSION KIT

DIRECT

**SYSTEM FOR FROST AND
FROST-FREE LOCATIONS**



*solar conversion for
kwikot electric water heaters*

SOLARFIT CONVERSION KIT - DIRECT SYSTEM FOR ALL LOCATIONS

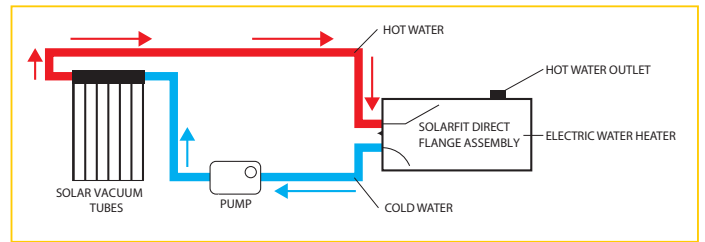


Solarfit Conversion Kit - Direct System

direct system

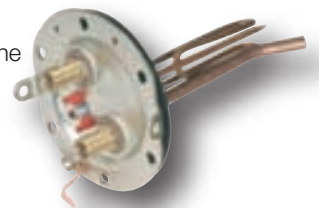
This direct system can be used in frost and frost-free locations and where the water quality is good (less than 600ppm Total Dissolved Solids/Minerals).

The solarfit conversion kit direct system is used in conjunction with an existing installed Kwikot domestic electric water heater, which is installed inside the roof (Split System) and without an integrated heat exchanger. The water from the electric water heater is circulated through the solar vacuum tubes by means of a 12V solar circulating pump (pump circulating method), transferring solar energy into the electric water heater and heating the water directly.



product features

- The Kwikot Kwiksol Solarfit Conversion Kit Direct System has been specifically designed to convert the following Kwikot high pressure electric water heater models to a solar system:
 - 600 Dual and 600i Dual (Slimline and Standard formats) 150lt; 200lt and 250lt
 - Megaflo Dual and Megaflo i Dual 150lt and 200lt
 - Megaflo Dual 1000 150lt and 200lt
 - Econoflo Dual 1000 150lt; 200lt and 250lt
- The conversion kit includes a new heating element and Kwiktherm Thermostat.

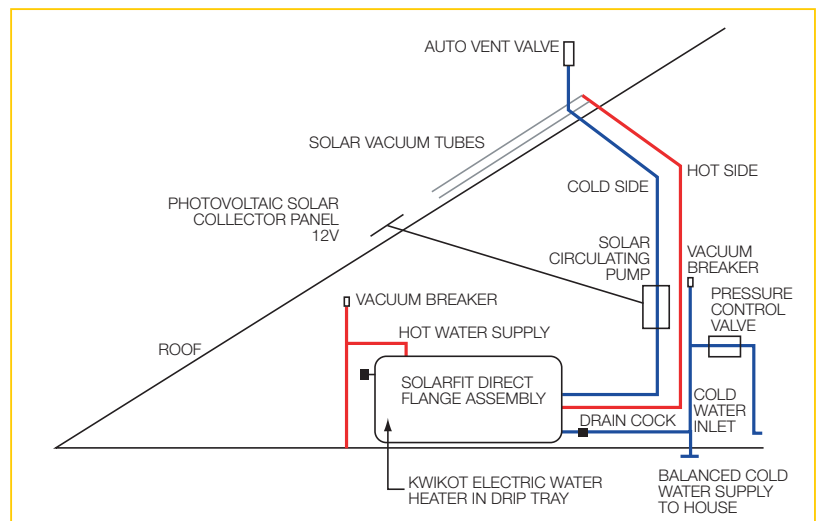


Solarfit Direct Flange Assembly

product installation data

(A comprehensive Instruction and Installation Manual is supplied with the purchase of the Solarfit Conversion Kit Direct System)

- The existing flange assembly behind the electric plastic cover is unscrewed from the inner storage tank of the electric water heater and replaced with a purpose made flange including water distributor pipes, new element and thermostat, called a Solarfit Direct Flange Assembly.
- The short cold water pipe on the Solarfit Flange Assembly must face downwards into the tank and the longer, hot water pipe points upwards in the tank.
- The solar vacuum tubes and 12V photovoltaic solar collector are installed outside on the roof with a north facing orientation and inclined as close to 30° from the horizontal as possible.
- A 15mm copper pipe is fitted between the solar vacuum tubes and the new Solarfit Direct Flange Assembly to allow the water to circulate between the electric water heater and the solar vacuum tubes.
- The 12V solar pump is installed between the solar vacuum tubes and electric water heater (cold side) to ensure positive flow. The pump is powered by a 12V photovoltaic solar collector.
- The 22mm copper piping (hot and cold side), which is exposed outside of the roof and lead from the manifold above the solar vacuum tubes to the electric water heater, must be fitted with a silicone insert, which prevents pipe freezing, in areas that incur frost. Thermal pipe lagging must also be placed around the outside copper piping. To keep the silicone insert in place, the 22mm copper piping is to be reduced to 15mm copper piping.



NB! The silicone insert is only supplied for installations in frost locations (see Product codes SOL-DCKIT-FR and SOL-DCKIT-20 on back page).



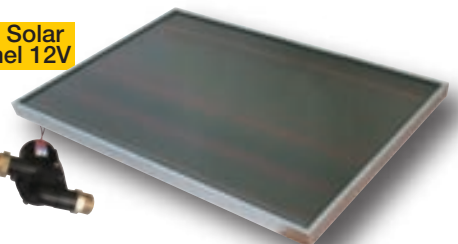
Silicone Insert 1m

Auto Vent Valve



Photovoltaic Solar Collector Panel 12V

Solar Circulating Pump 12V



product warranty

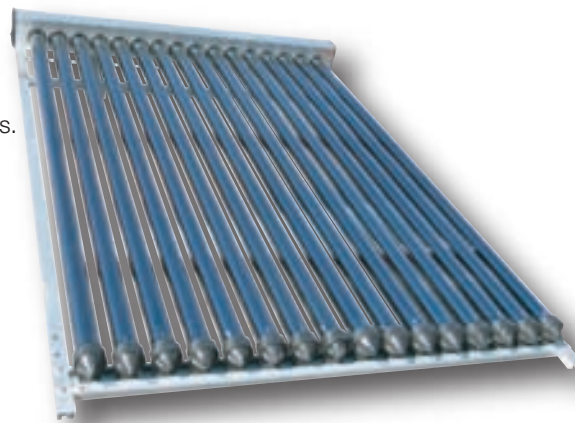
The warranty period on the Kwikot solarfit conversion kit (new parts) is one year from the date of installation providing that documented proof of installation is furnished. On existing parts the balance of the original warranty of the Kwikot Electric Water Heater will apply. The installation must be carried out by a Kwikot Approved Installer, failing this the warranty will become void.



Solar Vacuum Tubes

solar vacuum tubes features

- The Kwiksol Solar Vacuum Tubes have been approved to use in frost areas.
- The solar vacuum tubes consist of two glass tubes manufactured from borosilicate glass.
- The outer glass tube is transparent allowing light rays to pass through it with minimum reflection.
- The inner glass tube is coated with a solar special selective coating (Al-N/A1), which provides excellent solar radiation absorption.
- The top of the two vacuum tubes are fused together and the air is extracted, which forms a vacuum and is key to the efficiency of the vacuum tubes.
- To maintain the vacuum between the two vacuum tubes, a barium getter is used. The barium layer also provides a clear visual indication of the vacuum status. The silver coating will turn white if the vacuum is ever lost.
- Anodized Aluminium frame and manifold.
- Working pressure up to **600kPa**

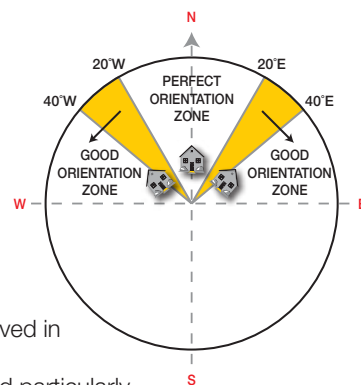


Array (number of Vacuum Tubes)	Tube Dimensions length x diameter (mm)	Absorbing Area (m ²)	Mass Empty (kg)	Mass Full (kg)	Energy Transfer Fluid
16 (2 x 8)	1800 x 58	1.6	48	49	water
20 (2 x 10)	1800 x 58	1.9	62	64	water
32 (4 x 8)	1800 x 58	2.8	96	98	water

product installation data

Roof Location and Pitch

- The solar vacuum tubes are to be installed in a parallel array and at an angle determined by the latitude of the installation.
- For optimum performance the solar vacuum tubes need to face the equator (facing north for southern hemisphere installations). Installation on angles of up to 45° away from the equator do not have a major effect on the annual solar output, consequently roof locations which face less than 45° away from the equator are acceptable. Solar radiance from the sun begins at about 10:00 until about 16:00 and is at its peak between 12:00 and 14:00.
- If the solar vacuum tubes are installed with an east facing bias, the best solar capture is achieved in the morning, and if installed with west facing biased, in the afternoon.
- The location should not be subject to excessive shading from trees and adjacent buildings and particularly between 9:00 and 15:00. Remember that shadows are longer in winter than in summer so a location that is free of shadows in summer may have some shadows in winter.
- The solar vacuum tubes should be installed on a roof pitch greater than 8° and less than 30°. Where the roof pitch is greater than 30°, the installation will require additional support to prevent it from moving downwards when installing and after installing. If the roof pitch is less than 8° the installation will require a mounting frame to increase the pitch to above 8°.



Electric Water Heater Capacity (Litres)	Number of Solar Vacuum Tubes
150	16 (2 x 8)
200	20 (2 x 10)
250	32 (4 x 8)

product warranty

The solar vacuum tubes have a comprehensive 5 year warranty from date of installation and subject to the following conditions:

- The warranty only applies to defects, which have arisen solely due to faulty materials and workmanship during the manufacturing process of the solar vacuum tubes.
- If any component fails during the warranty period, Kwikot will replace or repair the failed component free of charge.
- Breakage or cracks to the vacuum tubes is not covered by the Kwikot warranty.
- Any freeze damage caused as a result of an incorrect installation in frost areas is not covered by the warranty and the warranty on the installation is the responsibility of the installer.

solarfit conversion kit supplied components - direct system

Product Code for Complete Kit	Product	Quantity
SOL—DCKIT for 150 lt geyser in frost-free areas	Solarfit Flange Assembly Direct Cover Plate Vacuum Tubes Tube Thermal Paste Manifold Frame Branding Brackets Thermostat Solar Circulating Pump (12V) Solar Photovoltaic Panel (12V) Auto Vent Valve	1 1 16 1 1 1 2 1 1 1 1
SOL—DCKIT-FR for 150 lt geyser in frost areas	Solarfit Flange Assembly Direct Frost Resistant Cover Plate Vacuum Tubes Tube Thermal Paste Manifold Frame Branding Brackets Thermostat Solar Circulating Pump (12V) Solar Photovoltaic Panel (12V) Auto Vent Valve Silicone inserts (1m)	1 1 16 1 1 1 2 1 1 1 1 2
SOL—DCKIT-20 for 200 lt geyser in frost-free areas	Solarfit Flange Assembly Direct Cover Plate Vacuum Tubes Tube Thermal Paste Manifold Frame Branding Brackets Thermostat Solar Circulating Pump (12V) Solar Photovoltaic Panel (12V) Auto Vent Valve	1 1 20 1 1 1 2 1 1 1 1
SOL—DCKIT-20FR for 200 lt geyser in frost areas	Solarfit Flange Assembly Direct Frost Resistant Cover Plate Vacuum Tubes Tube Thermal Paste Manifold Frame Branding Brackets Thermostat Solar Circulating Pump (12V) Solar Photovoltaic Panel (12V) Auto Vent Valve Silicone inserts (1m)	1 1 20 1 1 1 2 1 1 1 1 2

NB. For a 250lt Electric Water Heater conversion, a complete SOL-DCKIT or SOL-DCKIT-FR is to be used together with a further 16 vacuum tubes (32 in total), tube of thermal paste, manifolds, frame and branding brackets

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