

Ferrol

AquaCyl solar system

solar water heating solution

for the larger home with greater hot water demand (2 or more bathrooms in use simultaneously)



solar collector



AquaCyl cylinder



system boiler



Making life easier



nice one sun



Solar energy made easy

Solar thermal system

There are two types of solar technology available: solar photovoltaic, where the sun's energy is used to "trickle charge" special batteries which contribute electrical power to the home; and solar thermal, the type developed by Ferrolì.

In a Ferrolì solar thermal system the sun's radiant energy is absorbed by a water-filled solar collector, and exchanged to heat hot water supply to the tap or shower.

Radiant energy

Solar radiant energy can be absorbed efficiently even if the sun is not shining, and by collector panels which are not even directly facing the sun.

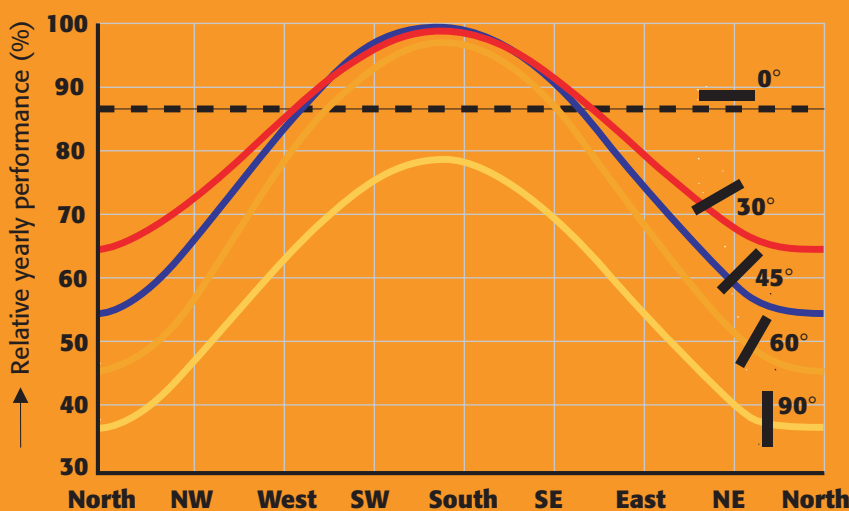
Solar collectors mounted on the roof can be fitted horizontally, vertically or on the roof pitch to collect sunlight and convert it into useful heat. South facing panels can transfer over 90% of the collected solar energy to heat water.

Savings and grants

Cost-effective solar energy which can substantially reduce domestic hot water heating bills. Dream or reality? Free solar energy is now very much a real, cost-effective possibility even in the relatively weak sunshine of Northern Europe.

A Ferrolì solar installation can reduce the amount of conventional gas, oil or electricity used to heat water by over 50% throughout the whole year. That translates into both cost savings and also a significant reduction in CO₂ emissions – typically saving many tonnes of CO₂ per household per year.

At the time of printing this brochure, the UK Government is encouraging the installation of such solar cylinder systems by offering grants of up to £400 to assist the installation, and a reduction in VAT to 5% for an installation by a registered professional installer.

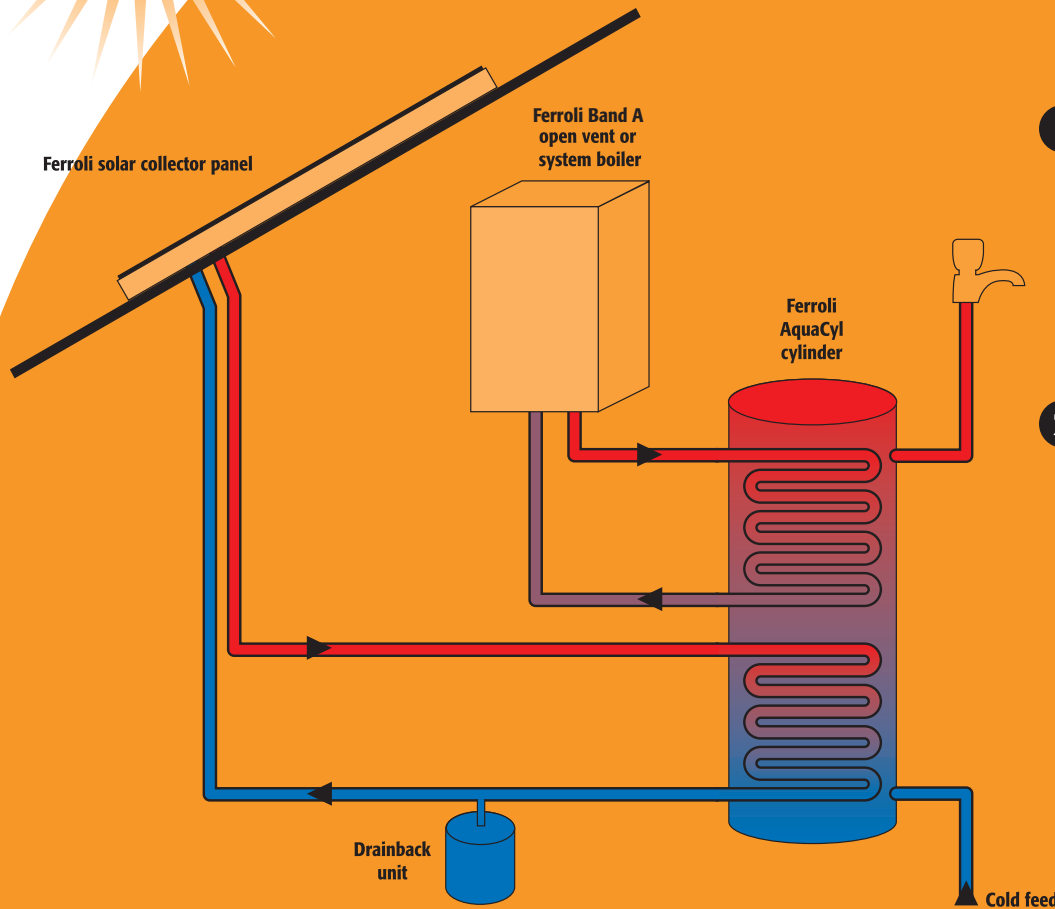


Solar facts

- The sun's energy can be used to heat water in Ferrolì solar collector panels, which in turn heat water in a Ferrolì solar cylinder
- During the summer months a simple Ferrolì solar installation can supply as much as 95% of a home's domestic hot water requirements
- Even during winter months a Ferrolì solar installation can make substantial savings in conventional energy costs
- The Ferrolì solar hot water solution is ideal for the UK climate and has a proven track record. For example in Northern Europe we already have over 100,000 solar installations
- The Ferrolì AquaCyl solar twin coil cylinder is the optimum solution for the larger home
- The Ferrolì AquaSol solar combi is the optimum solution for the small to medium sized home (up to typical three bedrooms / one principal bathroom)

How it works:

the AquaCyl twin coil cylinder solar heating solution



- 1** Solar energy heats water in the Ferroli AquaCyl cylinder by the lower heating coil. A drainback unit is installed so that the solar collector will be emptied automatically at times of frost or solar overheat
- 2** Should the hot water in the Ferroli AquaCyl cylinder require additional heat the system boiler will boost the temperature by heating the upper heating coil

Water in the solar collector is pumped through a heat exchanger to heat water in the AquaCyl hot water cylinder. For larger projects solar collectors can be used in tandem on the roof.

Water from the AquaCyl cylinder is used directly at the DHW tap or shower. If necessary, water temperature in the cylinder is topped up by a Ferroli high efficiency system or open vent boiler.

A separate drainback cylinder is used to store water from the solar collector during the periods when it may be damaged by frost or extreme temperature, or there is no demand for hot water.

Other manufacturers may offer a Glycol (antifreeze) filled system to avoid the need for a drainback unit. However, Glycol is a less efficient heat exchanger than water. It has further disadvantages in being an environmentally unfriendly

HazChem which breaks down over time and requires an annual check and top-up to ensure optimum concentration.

In addition to the AquaCyl twin coil cylinder solar heating solution shown here, Ferroli can also help you to specify a bespoke AquaSol solar combi cylinder solution. See page 10 for initial details or call 08707 282 882 for an AquaSol solar water heating solution brochure.

The solar collector

10
year
solar panel
guarantee



The solar collectors are available in both landscape and portrait options. An integrated panel is used for pitched roofs that fits neatly into the roofing tiles to provide a waterproof seal with the roof. Alternatively a flat mounting kit may be specified.



Technical data

Solar collectors					
Model Name	Height (mm)	Width (mm)	Weight (kg)	Depth (mm)	Area (m ²)
14P	1776	910	31	105	1.38
14L	910	1776	31	105	1.38
28S	1776	1751	60	105	2.76
28L	910	3491	55	105	2.55
28P	3491	910	55	105	2.55
42L	1776	2596	84	105	4.12
42P	2596	1776	84	105	4.12
56P	3433	1777	117	105	5.50
70P	4276	1776	146	105	6.88
84P	5119	1776	175	105	8.26

The AquaCyl cylinder

twin coil cylinder for solar water heating

25
year
cylinder vessel
guarantee



The Ferroli AquaCyl cylinder range includes 6 twin coil models suitable for use in the AquaCyl solar water heating solution. The lower coil is heated by energy from the solar collector. If the DHW is required at a higher temperature than can be achieved by solar energy alone, then a Ferroli High Efficiency boiler fires and heats the upper coil to boost the DHW temperature. Alternatively the cylinder's electric immersion heater(s) may be used to boost the DHW temperature.

Ferroli's AquaCyl cylinder range is easy to install and commission. Each model is supplied complete with all necessary temperature and pressure expansion valves and vessels.

The AquaCyl cylinder vessel has a 25 year manufacturer's guarantee as standard.

Technical data

AquaCyl twin coil models

Storage Capacity (litres)	150	200	250	300	510	1000
Overall diameter (mm)	545	545	545	545	700	800
Including immersion (mm)	610	610	610	610	700	800
Overall height (mm)	1097	1447	1747	2057	2087	2250
Overall height with expansion vessel on top (mm)	1433	1816	2150	2460	Floor mounted	Floor mounted
Weight when full (kg)	188	246	299	353	596	1215
Primary flow/return connections (mm)	22	22	22	22	22	22
Cold feed/hot draw off connections (mm)	22	22	22	28	22	22
Maximum water supply pressure (bar)	12	12	12	12	12	12
System operating pressure (bar)	3	3	3	3	3	3
Expansion vessel charge pressure (bar)	3	3	3	3	3	3
Expansion relief valve set pressure (bar)	6	6	6	6	6	6
Temp & pressure relief valve set pressure (bar)	7	7	7	7	7	7
Lift temperature (0°)	90	90	90	90	90	90
Maximum primary work pressure (bar)	3	3	3	3	3	3

System management

the pumping station

The essential heart of the AquaCyl solar solution. The pumping station has a 6m pump head and comes complete with

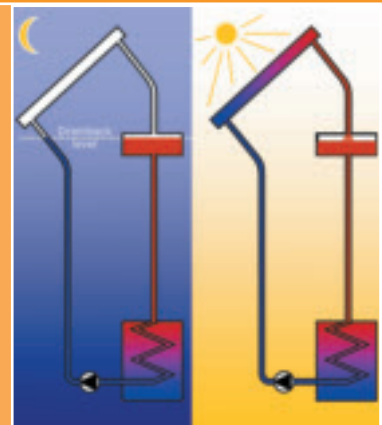
- built in controller for
 - system monitoring display
 - up to 4 temperature sensors
 - heat balancing
 - pump speed control
 - system function control
- temperature and pressure gauges
- pressure relief valve
- connections for filling and emptying



the drainback unit

Ferroli offers a separate drainback unit to allow the solar collector to empty during periods of freezing temperature or risk of solar over-heat. The drainback unit is best sited near the solar collector, normally in the attic or loft (must be kept frost free).

A separate drainback unit must be used with the Ferroli AquaCyl solar heating solution.



Separate drainback unit for use with AquaCyl

	10	20	30	50
Capacity (litres)	10	20	30	50
External h x w x d (mm)	260 x 310 x 260	400 x 365 x 355	400 x 520 x 355	400 x 830 x 355
Material	Mild steel	Mild steel	Mild steel	Mild steel
Pressure tested (bar)	4.5	4.5	4.5	4.5
Max peak temp (°C)	200	200	200	200
Max collector array (m ²)	6	12.5	21	33

The boiler

5

**year parts
and labour
guarantee**



Ferrol manufactures a leading range of high efficiency gas (and LPG) fired boilers. The new Optimax HE is a SEDBUK Band A boiler; the range includes combi, system and open vented models in various sizes.

The Optimax HE is backed by a 5 year manufacturer's guarantee. Each of the combi models listed below is compatible with the AquaCyl solar water heating solution and the OpenTherm control.



Technical data

Range	Type	SEDBUK	Output (kW)
New Optimax HE 31S	system	A	31
New Optimax HE 25S	system	A	25
New Optimax HE 18S	system	A	18
New Optimax HE 180V	open vented	A	18

Please ask for separate brochures for full technical data

Typical kits

AquaCyl solar kit 1

200 litre AquaCyl twin coil cylinder
Collector 42P
42P tile flashing
Flowcon RF pumping station
ReSol DeltaSol BS controller
10 litre drainback unit
Optimax HE system boiler

AquaCyl solar kit 2

250 litre AquaCyl twin coil cylinder
Collector 42P
42P tile flashing
Flowcon RF pumping station
ReSol DeltaSol BS controller
10 litre drainback unit
Optimax HE system boiler

AquaCyl solar kit 3

200 litre AquaCyl twin coil cylinder
Collector 42L
42L tile flashing
Flowcon RF pumping station
ReSol DeltaSol BS controller
10 litre drainback unit
Optimax HE system boiler

AquaCyl solar kit 4

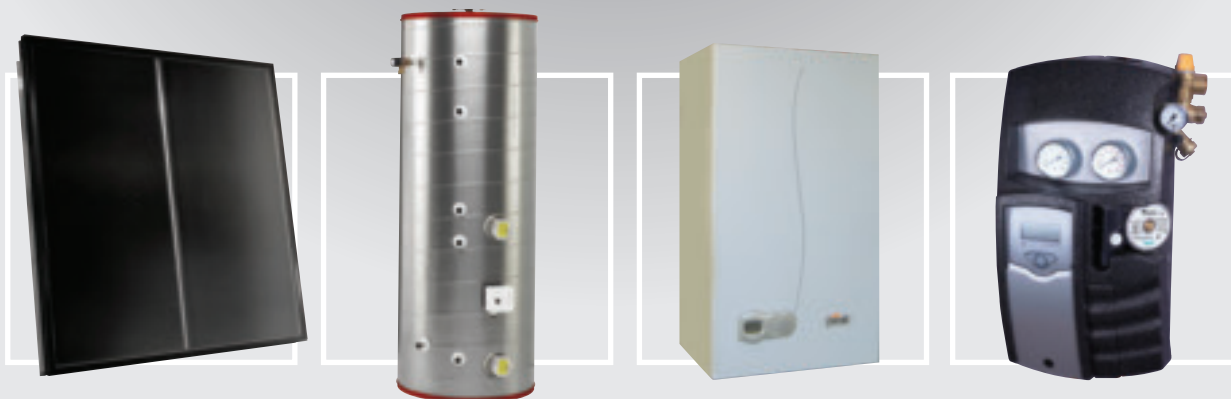
250 litre AquaCyl twin coil cylinder
Collector 42L
42L tile flashing
Flowcon RF pumping station
ReSol DeltaSol BS controller
10 litre drainback unit
Optimax HE system boiler

AquaCyl solar kit 5

300 litre AquaCyl twin coil cylinder
Collector 56P
56P tile flashing
Flowcon RF pumping station
ReSol DeltaSol BS controller
20 litre drainback unit
Optimax HE system boiler

Typical kits for larger cylinder configurations are available

All calculations for the above systems are based on a South facing panel at 35° angle. Please contact the Ferroli technical department on 08707 282 882 option 1 for advice when sizing your system



Installer training courses

Solar heating is a growing market and installers need to be able to respond to the demand from today's increasingly environmentally conscious domestic and commercial customers.

Ferrolì offers a choice of one-day or two-day solar heating training courses for installers.

The one-day introduction course covers how to specify the right system along with practical hands-on experience in connecting the Ferrolì AquaSol cylinder. It also includes advice on how to make the most of the burgeoning renewable energy market by becoming one of Ferrolì's Approved Solar Installers.

To complement this free familiarisation course, Ferrolì is also able to provide BPEC Domestic Solar Hot Water Heating training. The two-day course covers all details of sizing and installing a Ferrolì solar heating system. Gaining this industry-recognised BPEC qualification gives installers access to the government's new Low Carbon Buildings Programme, which provides grants towards the installation of microgeneration technologies, including solar heating, for residential as well as public and private projects.

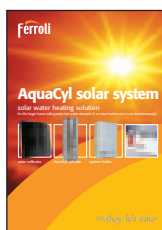
For further information on Ferrolì's solar system training programme call 08707 282891 or visit www.ferrolì.co.uk and click on the link to email an enquiry direct to the Training team.



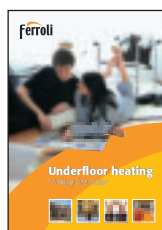
Brochure request



DOMESTIC RANGE GUIDE



AQUACYL TWIN COIL CYLINDER SOLAR WATER HEATING



UNDERFLOOR HEATING



DOMICOMPACT BAND B BOILERS



AQUACYL UNVENTED CYLINDERS

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08707 282 883

Ferroli



Ferroli Limited

Ferroli began producing heating appliances and equipment in Italy during the 1950s. Today the company is still family-owned but now operates ten ultra-modern factories in Europe and is developing new production sites and offices in China, Russia and the Ukraine. The Group employs over 2,200 people and produces more than 500,000 boilers per year in addition to its growing business in water heaters and air conditioners.



Ferroli Domestic Heating Tel: 08707 282 882

Offering gas wall mounted units with outputs from 5kW to 50kW, Ferroli's stylish, compact domestic boilers provide maximum comfort with minimal fuel usage. With a choice of conventional, condensing and combi technologies, there's a boiler to match the heating and hot water requirements of every home. In recent years Ferroli has also become a Northern European leader in solar heating, and has developed underfloor heating systems for the UK market.



Ferroli Commercial and Industrial Heating Tel: 08707 272 755

Ferroli commercial boilers for pressure jet oil, forced air gas or dual fuel are factory matched with high efficiency burners to provide outputs up to 14,000kW, while meeting the strictest emissions demands. Our range includes high efficiency aluminium, cast iron, steel and stainless steel boilers as well as stainless steel unvented hot water cylinders, pressurisation units and plate heat exchangers. We are also taking a lead in developing underfloor and solar heating solutions.



Ferroli Technical Helpline and Service Tel: 08707 282 885

The Ferroli technical help desk is able to assist heating engineers at the time of specifying, installing and in-guarantee servicing any of our products. Once the normal guarantee period on our boilers has expired, coverage can be extended cost-effectively with a choice of Ferroli service contracts. All Ferroli service engineers work to Benchmark standards and the Benchmark Code of Practice for the installation, commissioning and servicing of central heating systems.



Ferroli Spares Tel: 08707 282 882

The rapidly growing popularity of Ferroli as first choice for both domestic and commercial installations means that heating parts stockists offer readily available spares for Ferroli boilers. For less frequently needed items, we maintain a fully-stocked warehouse located centrally in the UK, enabling same-day despatch of just about any part needed to keep your Ferroli boiler running at optimum efficiency.



Ferroli Training Tel: 08707 282 891

Ferroli understands that well-trained installers are the key to a safe and efficient heating system. That's why we run comprehensive training courses in our purpose-built facilities for everyone concerned in the installation and servicing of Ferroli's range of boilers. We also offer a solar appreciation training day at Burton-upon-Trent or a three day BPEC accredited course. These courses improve installers' knowledge and skills by providing both the theory and the hands-on practical experience essential to maintaining heating system performance and safety.



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