

EcoCharger Hybrid HWHC Water Heaters



UK Water Supply Compliant

- Hot Water recovery rates from 740 to 1100 l/h at a 50°C temperature rise
- Integral Solar Coil
- Integral water heater/solar controller to maximise solar output
- Suitable for use with high efficiency flat plate solar collectors
- Natural gas and LPG models available
- HeatPak option; can provide up to 40kW space heating
- BMS interface option; for detailed information on system parameters
- Remote Display available
- Built in legionella cycle
- Reduced footprint as no Pre-heat vessel required



Lochinvar[®]
HIGH EFFICIENCY BOILERS & WATER HEATERS

Lochinvar

EcoCharger Hybrid HWHC Water Heaters

Lochinvar EcoCharger Hybrid (HWHC) Condensing Gas-fired Water Heaters have been designed to work with Solar Thermal installations and contain an integral Solar coil. This allows for the installation of a small Solar system (up to 8m² net collector area) without the requirement for a separate Pre-heat vessel, thus reducing plant room space requirements.

Solar Priority

Hot water from Solar gain is stored within the Hybrid Water Heater and the integral controller ensures that maximum use of Solar energy is achieved. The burner within the HWHC Water Heater is only activated if the hot water from the Solar gain cannot satisfy hot water demand.

The integral controller within the HWHC Water Heater gives priority to the Solar-generated hot water, ensuring maximum utilisation of the Renewable energy source.



EcoCharger Hybrid
HWHC Water Heaters
2 models available

Ancillary Options

A range of ancillary items are available as follows:

Ancillary Description	Part No.
BMS Interface	LV311290
Solar Remote Display	LV311405
Isolating Transformer	LV311289
Unvented Kit	WH17
Solar Dummy Sensor	LV309152
HeatPak	
HeatPak, 20kW and $\Delta T = 6^{\circ}C$	H 20 06
HeatPak, 20kW and $\Delta T = 10^{\circ}C$	H 20 10
HeatPak, 20kW and $\Delta T = 20^{\circ}C$	H 20 20
HeatPak, 30kW and $\Delta T = 6^{\circ}C$	H 30 06
HeatPak, 30kW and $\Delta T = 10^{\circ}C$	H 30 10
HeatPak, 30kW and $\Delta T = 20^{\circ}C$	H 30 20
HeatPak, 40kW and $\Delta T = 6^{\circ}C$	H 40 06
HeatPak, 40kW and $\Delta T = 10^{\circ}C$	H 40 10
HeatPak, 40kW and $\Delta T = 20^{\circ}C$	H 40 20
Horizontal Concentric Flue Kits	
Models HWHC44-370GCE and HWHC63-370GCE	ECBH001
Vertical Concentric Flue Kits	
Models HWHC44-370GCE and HWHC63-370GCE	ECBV001
Horizontal Parallel (Twin pipe) Flue Kits	
Models HWHC44-370GCE and HWHC63-370GCE	ECPH001
Vertical Parallel (Twin pipe) Flue Kits	
Models HWHC44-370GCE and HWHC63-370GCE	ECPV001
Horizontal Conventional Flue Kits	
Models HWHC44-370GCE and HWHC63-370GCE	ECCH001
Vertical Conventional Flue Kits	
Models HWHC44-370GCE and HWHC63-370GCE	ECCV001

Additional flue components are available for longer flue runs - Contact us for details.

BMS Interface Ancillary Option

The BMS interface option provides the facility to extract data such as hot water temperature, solar system temperatures, solar system contribution, operating hours from the EcoCharger Hybrid water heater. This data can be converted for use with Building Management software, giving the user the opportunity to monitor the Water Heater and Solar Thermal installation.

For further information please refer to BMS Interface specification sheet

HeatPak Ancillary Option

HeatPak is a module which will provide a small amount of space heating. This option combined with the high efficiency of the EcoCharger Hybrid condensing water heater, is ideal for applications with a low demand for space heating, but high demand for hot water.

Modules of 20, 30 and 40kW are available – dependent upon Water Heater model selected.

For further information please refer to HeatPak specification sheet

Solar Remote Display Option

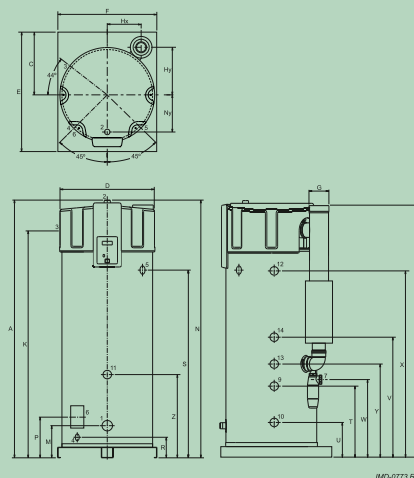
Using VBus low voltage protocol, this option provides the user with the ability to remotely view details of the Solar installation, including Collector temperature, Solar store temperature and energy gain from the Solar thermal system.

For further information please refer to the Remote Display specification sheet

Dimensional Drawings & Connection Details

Legend	Description	Unit	HWHC 44-370GCE and 63-370GCE
A	Height	mm	2055
C	Steel base (centre to rear)	mm	490
D	Diameter	mm	705
E	Steel base (depth)	mm	925
F	Steel base (width)	mm	850
G	Flue Diameter	mm	100/150
H	Height to Flue Outlet	mm	2020
Hx	Flue Gas Outlet (centre to right)	mm	260
Hy	Flue Gas Outlet (centre to rear)	mm	370
K	Gas Valve Connection	mm	1960
M	Cold Water Inlet	mm	185
N	Hot Water Outlet	mm	2055
Ny	Hot Water Outlet (from centre point)	mm	205
P	Clean Out Opening	mm	365
R	Drain	mm	180
S	T&P Tapping	mm	1555
T	Coil Inlet	mm	630
U	Coil Outlet	mm	305
V	Building Return Connection	mm	1035
W	Condensate Drain	mm	765

Legend	Description	Unit	Size
1	Cold Water Inlet	BSP R (External Taper)	1½"
2	Hot Water Outlet	BSP R (External Taper)	1½"
3	Gas Valve	BSP R (External Taper)	¾"
4	Drain	n/a	1"
5	T&P Tapping	n/a	1"
6	Clean Out Opening (height x width)	mm	95 x 70
7	Condensate Drain	n/a	Ø40
9	Solar Flow connection	BSP Rp (Internal Parallel)	1"
10	Solar return connection	BSP Rp (Internal Parallel)	1"
11	Immersion Element	BSP Rp (Internal Parallel)	1½"
12	Plate Heat Exchanger Inlet	BSP Rp (Internal Parallel)	1"
13	Plate Heat Exchanger Outlet	BSP Rp (Internal Parallel)	1"
14	Building Return	BSP Rp (Internal Parallel)	1"



HWHC44-370GCE and HWHC63-370GCE

Flue Details

EcoCharger Hybrid HWHC Water Heater- Flue Sizes and Maximum Equivalent Flue Runs

Room Sealed Concentric Flue

Water Heater Model	Diameter (mm)	Max. Length (meters)	Max. Number of Bends
HWHC44-370GCE	100/150	40	7
HWHC63-370GCE	100/150	40	7

Note. Maximum flue lengths should not be exceeded under any circumstances.

Conventional Flue

Water Heater Model	Diameter (mm)	Max. Total Length (meters)	Length for 90° Bend (meters)	Length for 45° Bend (meters)
HWHC44-370GCE	100	55	4.6	1.2
HWHC63-370GCE	100	55	4.6	1.2

Note. Lochinvar supplied flue is suitable for internal installation only, for external flue applications please consult a flue specialist.

Room Sealed Parallel (Twin Pipe) Flue

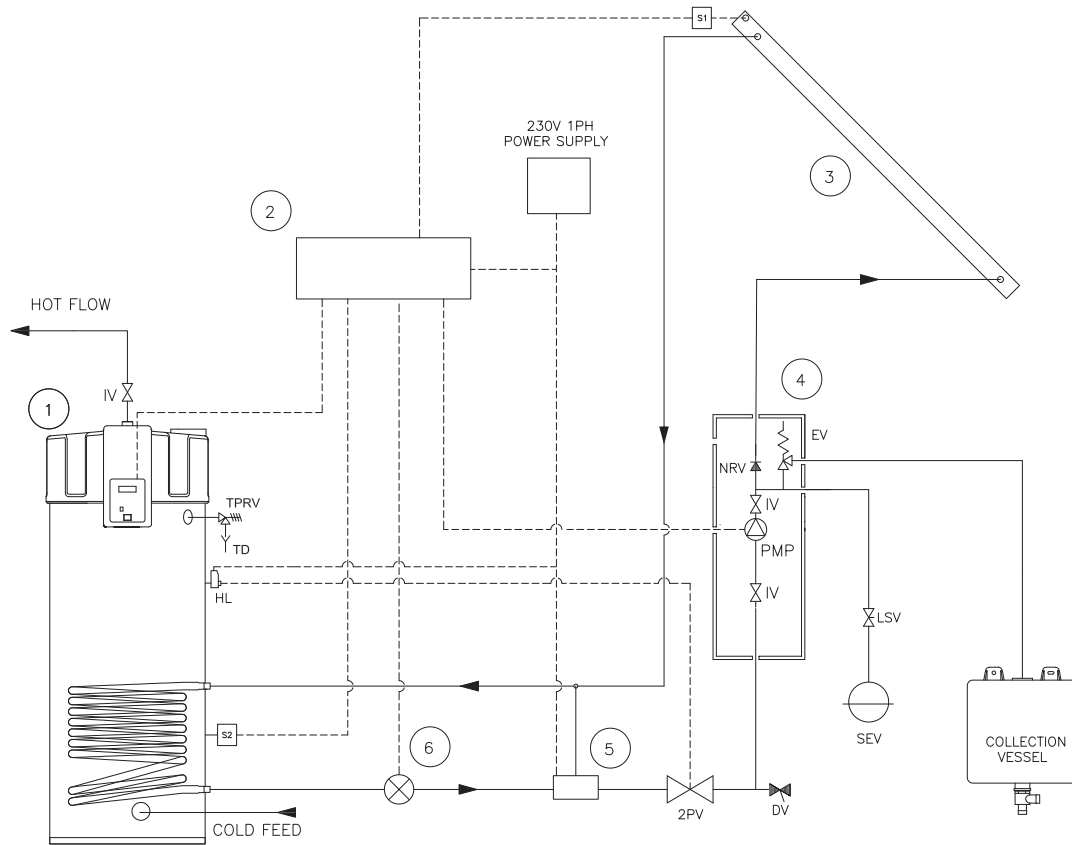
Water Heater Model	Diameter (mm)	Max. Total Length (meters)	Length for 90° Bend (meters)	Length for 45° Bend (meters)
STANDARD				
HWHC44-370GCE	100	55	4.6	1.2
HWHC63-370GCE	100	55	4.6	1.2
ALTERNATIVE				
HWHC44-370GCE	130	100	2.4	1.4
HWHC63-370GCE	130	100	2.4	1.4

Note. If the maximum total length when using 100 mm diameter flue is exceeded then it is permissible to use 130 mm diameter flue. Any diameter enlargement must be carried out on both flue and air supply.

Solar Thermal Packages

We also offer a range of Solar packages, with our established High Efficiency LSP20+ flat plate range of collectors – please refer to our separate Solar specification sheet or our website www.lochinvar.ltd.uk

In addition to the Solar Collectors each package consists of Roof Mounting Frame, Solar Pump Station, Glycol, QT Flow Sensor, RHI compliant Heat Meter and Solar Expansion Vessel.



The above drawing is for information purposes only. Please refer to our website for a detailed schematic.

Key	Description
1	EcoCharger Hybrid HWHC Water Heater
2	Solar Control
3	Flat Plate Solar Thermal Collector
4	Solar Pump Station
5	Class Two RHI Compliant Heat Meter
6	QT Flow Sensor
S1	Sensor 1
S2	Sensor 2

Key	Description
TPRV	Temperature and Pressure Relief Valve
EV	Expansion Valve
SEV	Solar Expansion Vessel
TD	Tundish
2PV	Motorised Two Port Valve (via High Limit)
HL	High Limit Stat
NRV	Non return Valve
IV	Isolation Valve
LSV	Lockshield Valve
DV	Drain Valve
PMP	Pump

Technical Specification

Water Heater Model		HWHC 44-370GCE	HWHC 63-370GCE
Nominal Input (net)	kW	40.7	58
Nominal Input (gross)	kW	45.2	64.4
Gas Flow Rate (natural gas)	m ³ /hr	4.2	6.0
Nominal Output	kW	43.5	61.5
Efficiency Data - Part L2			
Seasonal Efficiency (Part L2 Gross CV)	%	96	96
NOx emission @0% O ₂	ppm	16	18
NOx emission @0% O ₂	mg/kWh	29	31
Efficiency Data - ErP and Energy Label			
Ecodesign Energy Label rating		A	A
Water Heater efficiency	%	90	92
General Data			
Recovery Rate @ 44°C	l/hr	840	1200
Recovery Rate @ 50°C	l/hr	740	1100
Dimensions (height)	mm	2055	2055
Dimensions (diameter)	mm	705	705
Storage Capacity	litres	377	377
Weight (empty)	kg	245	245
Weight (full)	kg	622	622
Insulation Thickness	mm	50	50
Insulation Material		Polyurethane	
Hot Outlet Connection (inches)	BSP	R1½	R1½
Cold Feed Connection (inches)	BSP	R1½	R1½
Coil Connections	BSP	Rp1"	Rp1"
Gas Connection (inches)	BSP	R¾	R¾
Electrical Requirements		230V/1ph/50Hz	
Power Consumption	W	60	120
Sound Power Level	LWA(db)	51	59
Maximum Flue Gas Temperature	°C	50	60
Max Outlet Temperature	°C	80	80
Minimum Working Pressure	bar	0.5	0.5
Maximum Working Pressure	bar	8.0	8.0

Energy Label, Product Fiche and ErP Data Table are available at www.lochinvar.ltd.uk



For further information on the EcoCharger Hybrid (HWHC) Water Heaters, including ICM & User Instructions and our full Warranty Terms and Conditions, please visit our website: www.lochinvar.ltd.uk

