

# THE MAIN RANGE GUIDE

**JOB DONE**



**Solar  
Panels  
and  
cylinders  
now  
included**

The Main range of affordable combi, system and heat only boilers, cylinders, solar panels and water heaters.

**MAIN**

**WITH  
MAIN  
IT'S**

**JOB DONE**

At Main, we only offer products and services that are straightforward, effective, efficient – and don't break the bank.

That means a wide range of reliable, easy-to-install, low maintenance boilers, cylinders, solar panels and water heaters – as well as a training and support service that offers help when you want it.

It's everything you need. It's JOB DONE.



## Our range

Main has a wide range of award-winning combi, system and heat only boilers – in a range of outputs to suit every job. So whether you're replacing an old boiler or installing a new system, we have everything you need to get the job done.

Of course, we don't just offer boilers and accessories, we now have a competitive renewable solution for our customers with our Main on-roof solar package. We also have a range of unvented hot water cylinders to complement them. You'll find all the details you need on all our products in this easy-to-understand brochure – including technical specifications and flue options.



## Our service

To make it easier for you to get the job done, we offer FREE training courses and technical support, so you'll always have the very latest Main product knowledge. And because our dedicated training centres are spread across the UK, you'll always be within easy reach, wherever you are.

Although our products are easy to install and simple to maintain, sometimes you just need a bit of help and advice. That's why we also have **heateam** – our service division with a dedicated service centre and a field of over 280 engineers.

You can reach them on 0844 871 1570 and there's more about them on page 38.



## Our promise

As part of the BDR Thermea Group, we understand what you need from a boiler manufacturer and we offer you just that. But we don't expect you to just take our word for it. We were awarded the 2009 CORGI Heating Manufacturer of the Year. That should give you the peace of mind you need to install with confidence – while our 2-year warranty<sup>†</sup> gives you the security of total technical support if problems do arise.



## Our heritage



We've been designing and building boilers in the UK for more than 75 years, working to the highest standards and ensuring the highest quality.

It's given us a proud reputation for excellence in our industry – a reputation that's strengthened with each outstandingly reliable boiler, cylinder or water heater we develop.




It all means that when you install Main, you install a product you can depend on to get the job done.

<sup>†</sup> See page 39 for details

**MAIN**

**Combi Eco**

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 SEDBUK (2005) Band A (>90%)

# THE MAIN COMBI ECO

## SIMPLY **A** RATED

### PERFECT FOR:

- Replacing existing combi boilers
- Energy-efficient heating and hot water
- Instant hot water, 24/7



### Easy installation

The Main Combi Eco is designed to offer fuel efficiency to your customers, while keeping things simple for you. It has a central flue, making it ideal for boiler replacements, while the pre-plumbing jig saves time and money by helping you get the pipework in the right place, first time.

When it comes to wiring, this boiler couldn't be more installer-friendly. The dedicated electrical power terminal is easily accessible and housed separately to the PCB, making the job quick and easy to finish.



### A-rated value

With a SEDBUK (2005) rating of over 90% efficiency, the Main Combi Eco is our most efficient boiler, meaning it has lower carbon emissions and consumes less fuel.

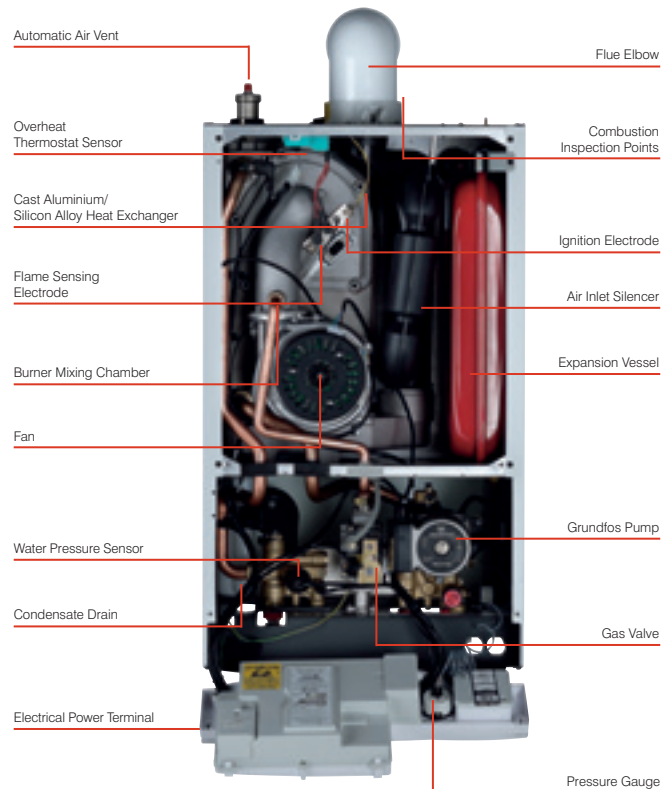
That's better for the planet and better for your customers.



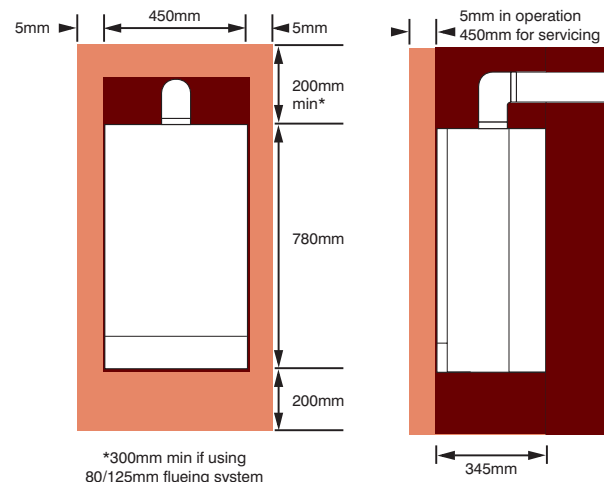
### Low maintenance

We combine simple design with high-quality parts, like a Grundfos pump. The user-friendly controls, integral frost protection and quiet operation (less than 50 dBA), should give you complete peace of mind. If something does go wrong, though, you can rest assured that our 2-year warranty† on all SEDBUK (2005) band A (>90%) boilers is there to back you up.

† See page 39 for more details



### Dimensions and minimum clearances







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Flap down on boiler for illustration purposes.

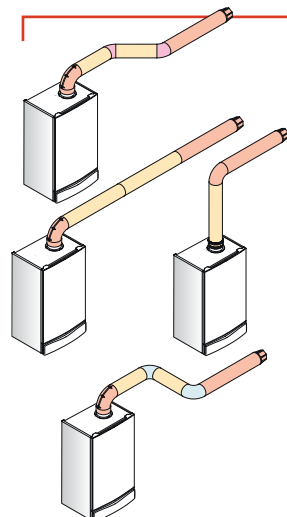
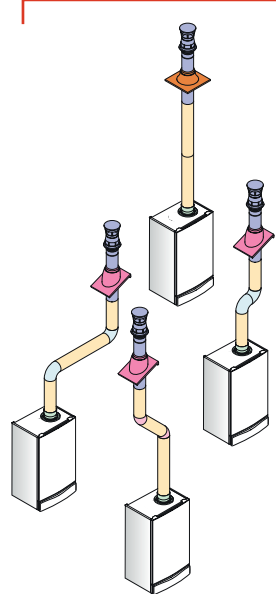
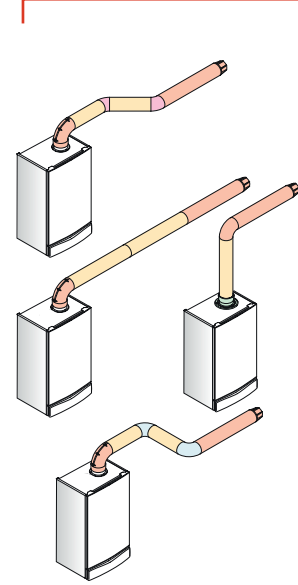
# SPECIFICATIONS

Model	Units	Main Combi 25 Eco	Main Combi 30 Eco
Boiler only code		5116329	5118139
<b>Controls</b>			
User adjustable CH & DHW temperature		Yes	Yes
Fault status display		Yes	Yes
Integral 24 hr electro-mechanical timer		Optional	Optional
Integral 7 day electronic timer		Optional	Optional
Wireless programmable room thermostat		Optional	Optional
<b>Gas</b>			
Natural gas		Yes	Yes
Inlet supply pressure (Natural gas)	mbar	20	20
Gas rate	m <sup>3</sup> /hr	2.76	3.17
Heat input (maximum)	kW	28.92	32.54
Heat output – condensing (maximum)	kW	26.95	30.2
Heat output – condensing (minimum)	kW	8.37	9.42
Heat output – non-condensing (maximum)	kW	25.94	28.63
Heat output – non-condensing (minimum)	kW	7.61	8.56
Domestic hot water flow rate (maximum) @ 35°C rise	litres/min	10.2	12.3
Domestic hot water flow rate (minimum)*	litres/min	2*	2*
Seasonal efficiency band	SEDBUK (2005)	A	A
NO <sub>x</sub>	Class	5	5
<b>Electrical</b>			
Electrical supply	Volts/Hz	230/50	230/50
Power consumption	Watts	150	150
External fuse rating	Amps	3	3
Ingress protection rating (as supplied)		IPX4D	IPX4D
Pump overrun		Yes	Yes
24hr pump exercise		Yes	Yes
Integral frost thermostat (Boiler protection only)		Yes	Yes
<b>Weight</b>			
Installation lift weight	kg	47.5	47.5
<b>Mechanical &amp; Hydraulic</b>			
DHW system pressure (maximum)	bar	8	8
DHW operating pressure (minimum)	bar	0.15	0.15
Safety pressure discharge	bar	3	3
Integral automatic bypass		Yes	Yes
CH system capacity (maximum)	litres	125	155
Gas supply pipe size	mm	22	22
Flow & return pipe size (CH)	mm	22	22
Flow & return pipe size (DHW)	mm	15	15
Temporary filling loop		Optional	Optional
Compartment ventilation required		No	No
Pre-plumbing jig		Standard	Standard
<b>Flue Systems</b>			
Standard concentric flue diameter	mm	60/100	60/100
Maximum equivalent length (60/100)	m	10	10

## Flue options

Maximum permissible equivalent flue lengths are:	Main Combi 25 Eco	Main Combi 30 Eco
Concentric Horizontal (60/100)	10m	10m
Concentric Vertical (60/100)	10m	10m
Concentric Vertical (80/125)	20m	20m
Twin Pipe Vertical (80/80)	20m	20m
Any additional "in line" bends in the flue system must be taken into consideration. Their equivalent lengths are:		
Concentric Pipes	135° bend	0.5m
	93° bend	1.0m
Twin Flue Pipe	135° bend	0.25m
	90° bend	0.5m
The elbow supplied with the standard horizontal flue is not included in any equivalent length calculations.		

\* Where low flow taps or fittings are intended to be used in DHW systems connected to BDR Thermea Group combination boilers, it is recommended that the DHW flow rate DOES NOT fall below 2.5 lpm to ensure reliable operation.





# MULTIFIT – FLUE OPTIONS



## Horizontal Concentric Flues – 60/100mm

Flue system A – Maximum permissible equivalent flue length = 10m. Any additional 'in line' bends in the flue system must be taken into consideration. The equivalent lengths for concentric pipes are: 135° bend – 0.5m, 93° bend – 1.0m.

Item Description (MULTIFIT) Flue System A	Specification	Key & OD Dimensions	Multifit Sales Code
Standard Horizontal Flue inc Elbow	685mm	60/100	5118489
Flue Extension	1000mm	100mm	5111074
Flue Bend	93 degree	100mm	5111075
Flue Bend (Pair)	135 degree	100mm	5111085
Flue Bend	135 degree	100mm	5111076
Pipe Support	Painted White	100mm	5111080
Flue Through Wall Liner		100mm	5111067
Flue Terminal Deflector		60mm	5111068
Flue Vertical Adaptor (Boiler)	Main HE only	100mm	5111065

The 3° fall back on concentric flues can be reduced to 1.5° providing the flue system is adequately clamped in accordance with the installation instructions.



## Vertical Concentric Flues – 60/100mm

Flue system A – Maximum permissible equivalent flue length = 10m. Any additional 'in line' bends in the flue system must be taken into consideration. The equivalent lengths for concentric pipes are: 135° bend – 0.5m, 93° bend – 1.0m.

Item Description (MULTIFIT) Flue System A	Specification	Key & OD Dimensions	Multifit Sales Code
Vertical Flue Terminal		125mm	5118576
Roof Cover Plate	4"	125mm	246143
Flue Bend	93 degree	100mm	5111075
Flue Bend	135 degree	100mm	5111076
Flue Bend Pair	135 degree	100mm	5111085
Flue Extension	1000mm	100mm	5111074
Pipe Support	Painted White	100mm	5111080
Pitched Roof Flashing	25/50 degree	125mm	5122151
Flat Roof Flashing		125mm	246144
Flue Vertical Adaptor (Boiler)	Main HE only	100mm	5111065



## Horizontal Concentric Flues – 80/125mm

Flue system G – Maximum permissible equivalent length = 20m. Any additional 'in line' bends in the flue system must be taken into consideration. The equivalent lengths for concentric pipes are: 135° bend – 0.5m, 93° bend – 1.0m.

Item Description (MULTIFIT) Flue System G	Specification	Key & OD Dimensions	Multifit Sales Code
Standard Horizontal Flue inc Elbow	685mm	80/125	5118580
Flue Extension	1000mm	125mm	5118584
Flue Bend	93 degree	125mm	5118588
Flue Bend (Pair)	135 degree	125mm	5118597
Pipe Support	Painted White	125mm	5118610

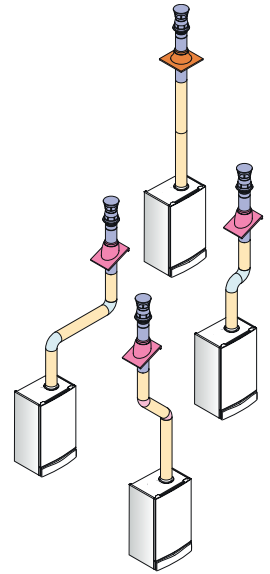
The 3° fall back on concentric flues can be reduced to 1.5° providing the flue system is adequately clamped in accordance with the installation instructions.



## Vertical Concentric Flues – 80/125mm

Flue system G – Maximum permissible equivalent length = 20m. Any additional 'in line' bends in the flue system must be taken into consideration. The equivalent lengths for concentric pipes are: 135° bend – 0.5m, 93° bend – 1.0m.

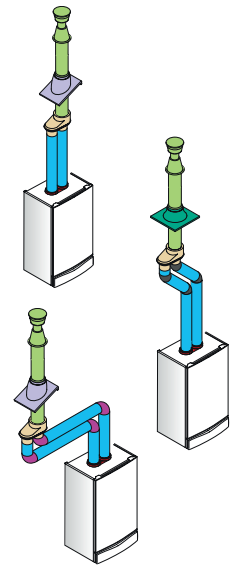
Item Description (MULTIFIT) Flue System G	Specification	Key & OD Dimensions	Multifit Sales Code
Vertical Flue Terminal		125mm	5111078
Vertical Flue Adaptor		125mm	5111070
Roof Cover Plate		125mm	246143
Flue Bend	93 degree	125mm	5118588
Flue Bend Pair	135 degree	125mm	5118597
Flue Extension	1000mm	125mm	5118584
Pipe Support	Painted White	125mm	5118610
Pitched Roof Flashing	25/50 degree	125mm	5122151
Flat Roof Flashing		125mm	246144



## Twin Pipe Flues – 80/80mm

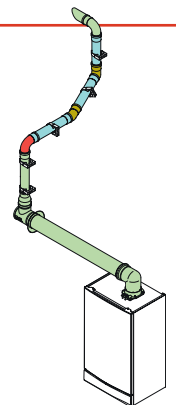
Maximum permissible equivalent flue length = 20m. Any additional 'in line' bends in the flue system must be taken into consideration. The equivalent lengths for concentric pipes are: 135° bend – 0.25m, 90° bend – 0.5m.

Item Description (MULTIFIT) Flue System N	Specification	Key & OD Dimensions	Multifit Sales Code
Twin Pipe Flue Adaptor (Boiler)		80/80mm	720089801
Twin to Concentric Adaptor 80/80 – 80/125		80/125mm	5111084
Twin Pipe Flue Bend (Pair)	90 degree	80mm	5111072
Twin Pipe Flue Bend (2 Pair)	135 degree	80mm	5111086
Twin Pipe Extension (Pair inc Brackets)	1000mm	80mm	5111087
Twin Pipe Support (Pair)	Painted White	80mm	5111081
Vertical Flue Terminal		125mm	5111078
Roof Cover Plate		100mm	246143
Pitched Roof Flashing		125mm	5122151
Flat Roof Flashing	25/50 degree	125mm	246144



## Plume Displacement Kits – 60/100mm

Item Description (MULTIFIT) Flue System K	Specification	Key & OD Dimensions	Multifit Sales Code
Plume Displacement Kit inc Elbow + clips		100mm	5118638
Plume Displacement Kit Extension + clips	1000mm	60mm	5121368
Plume Displacement Kit Bend	93 degree	60mm	5121369
Plume Displacement Kit Bend (Pair)	135 degree	60mm	5121370



Please refer to page 36 for flue positioning guide.

# THE MAIN SYSTEM ECO

## SIMPLY **A** RATED

### PERFECT FOR:

- Replacing old system boilers
- Providing energy efficient heating and domestic hot water
- Offering an easy-to-use solution to your customer



### Easy installation

The Main System Eco is designed to offer you an energy efficient boiler for your customer, while keeping things really simple for you. Its central flue makes it ideal for boiler replacements, and its pre-plumbing jig helps you to get the pipework in the right place, first time. That saves you time as well as money.

The System Eco also boasts a built-in pump overrun and integral system bypass to prolong the life of the boiler.



### A-rated value

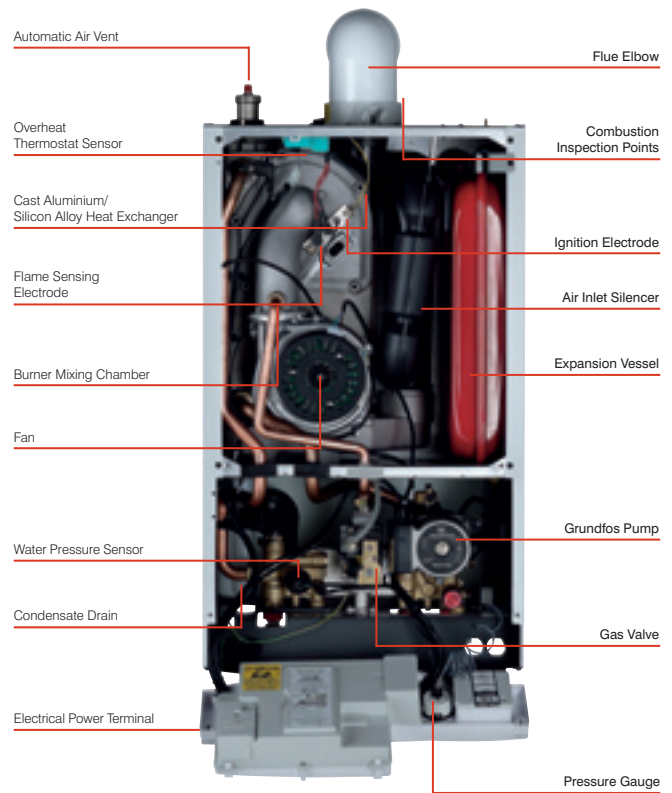
With a SEDBUK (2005) rating of over 90% efficiency, the Main System Eco is our most efficient system boiler, which means it has lower carbon emissions and consumes less fuel. That's great for the planet and your customers.



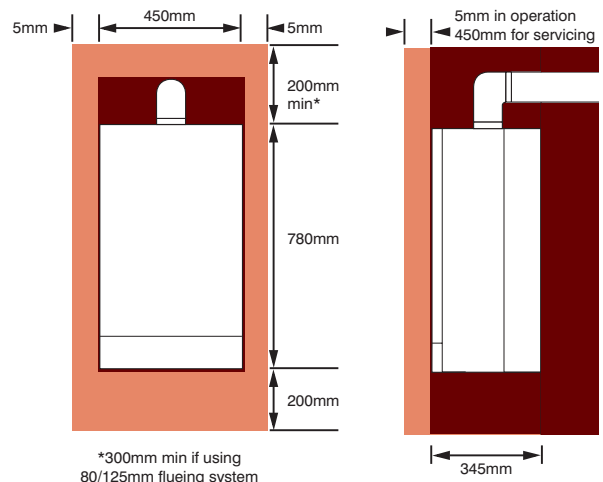
### Low maintenance

With high quality components such as a Grundfos pump, you can trust the product you install to do the job without time-consuming call backs. If something does go wrong, you can rest assured that you have the back up of the 2-year warranty† on all SEDBUK (2005) Band A (>90%) boilers.

† See page 39 for more details



### Dimensions and minimum clearances





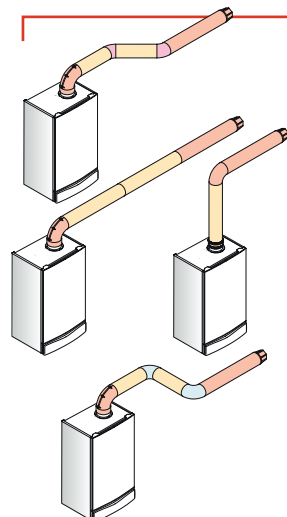
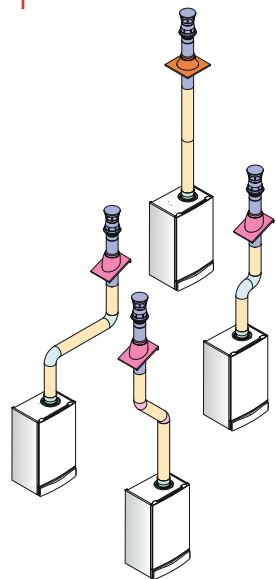
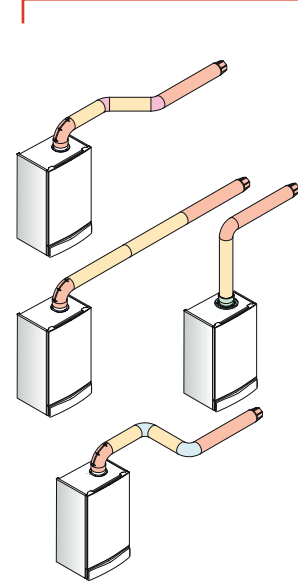
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# SPECIFICATIONS

Model	Units	Main System 24 Eco	Main System 28 Eco
Boiler only code		5118141	5119734
<b>Controls</b>			
User adjustable CH temperature		Yes	Yes
Fault status display		Yes	Yes
Integral 24 hr electro-mechanical timer		Optional	Optional
Integral 7 day electronic timer		Optional	Optional
Wireless programmable room thermostat		Optional	Optional
<b>Gas</b>			
Natural gas		Yes	Yes
Inlet supply pressure (Natural gas)	mbar	20	20
Gas rate	m <sup>3</sup> /hr	2.76	3.10
Heat input (maximum)	kW	28.92	32.54
Heat output – condensing (maximum)	kW	26.95	30.20
Heat output – condensing (minimum)	kW	8.37	9.42
Heat output – non-condensing (maximum)	kW	25.94	28.63
Heat output – non-condensing (minimum)	kW	7.61	8.56
Domestic hot water flow rate (maximum) @ 35°C rise	litres/min	N/A	N/A
Domestic hot water flow rate (minimum)	litres/min	N/A	N/A
Seasonal efficiency band	SEDBUK (2005)	A	A
NO <sub>x</sub>	Class	5	5
<b>Electrical</b>			
Electrical supply	Volts/Hz	230/50	230/50
Power consumption	Watts	150	150
External fuse rating	Amps	3	3
Ingress protection rating (as supplied)		IPX4D	IPX4D
Pump overrun		Yes	Yes
24hr pump exercise		Yes	Yes
Integral frost thermostat (Boiler protection only)		Yes	Yes
<b>Weight</b>			
Installation lift weight	kg	44.5	44.5
<b>Mechanical &amp; Hydraulic</b>			
DHW system pressure (maximum)	bar	N/A	N/A
DHW operating pressure (minimum)	bar	N/A	N/A
Safety pressure discharge	bar	3	3
Integral automatic bypass		Yes	Yes
CH system capacity (maximum)	litres	125	155
Gas supply pipe size	mm	22	22
Flow & return pipe size (CH)	mm	22	22
Flow & return pipe size (DHW)	mm	N/A	N/A
Temporary filling loop		Optional	Optional
Compartment ventilation required		No	No
Pre-plumbing jig		Standard	Standard
<b>Flue Systems</b>			
Standard concentric flue diameter	mm	60/100	60/100
Maximum equivalent length (60/100)	m	10	10

## Flue options

Maximum permissible equivalent flue lengths are:	Main System 24 Eco	Main System 28 Eco
Concentric Horizontal (60/100)	10m	10m
Concentric Vertical (60/100)	10m	10m
Concentric Vertical (80/125)	20m	20m
Twin Pipe Vertical (80/80)	20m	20m
Any additional "in line" bends in the flue system must be taken into consideration. Their equivalent lengths are:		
Concentric Pipes	135° bend	0.5m
	93° bend	1.0m
Twin Flue Pipe	135° bend	0.25m
	90° bend	0.5m
The elbow supplied with the standard horizontal flue is not included in any equivalent length calculations. There is also a Plume Displacement Kit Flue System available.		





# MULTIFIT – FLUE OPTIONS



## Horizontal Concentric Flues – 60/100mm

Flue system A – Maximum permissible equivalent flue length = 10m. Any additional 'in line' bends in the flue system must be taken into consideration. The equivalent lengths for concentric pipes are: 135° bend – 0.5m, 93° bend – 1.0m.

Item Description (MULTIFIT) Flue System A	Specification	Key & OD Dimensions	Multifit Sales Code
Standard Horizontal Flue inc Elbow	685mm	60/100	5118489
Flue Extension	1000mm	100mm	5111074
Flue Bend	93 degree	100mm	5111075
Flue Bend (Pair)	135 degree	100mm	5111085
Flue Bend	135 degree	100mm	5111076
Pipe Support	Painted White	100mm	5111080
Flue Through Wall Liner		100mm	5111067
Flue Terminal Deflector		60mm	5111068
Flue Vertical Adaptor (Boiler)	Main HE only	100mm	5111065

The 3° fall back on concentric flues can be reduced to 1.5° providing the flue system is adequately clamped in accordance with the installation instructions.



## Vertical Concentric Flues – 60/100mm

Flue system A – Maximum permissible equivalent flue length = 10m. Any additional 'in line' bends in the flue system must be taken into consideration. The equivalent lengths for concentric pipes are: 135° bend – 0.5m, 93° bend – 1.0m.

Item Description (MULTIFIT) Flue System A	Specification	Key & OD Dimensions	Multifit Sales Code
Vertical Flue Terminal		100mm	5118576
Roof Cover Plate	4"	125mm	246143
Flue Bend	93 degree	100mm	5111075
Flue Bend	135 degree	100mm	5111076
Flue Bend Pair	135 degree	100mm	5111085
Flue Extension	1000mm	100mm	5111074
Pipe Support	Painted White	100mm	5111080
Pitched Roof Flashing	25/50 degree	125mm	5122151
Flat Roof Flashing		125mm	246144
Flue Vertical Adaptor (Boiler)	Main HE only not required for the combi/system range	100mm	5111065



## Horizontal Concentric Flues – 80/125mm

Flue system G – Maximum permissible equivalent length = 20m. Any additional 'in line' bends in the flue system must be taken into consideration. The equivalent lengths for concentric pipes are: 135° bend – 0.5m, 93° bend – 1.0m.

Item Description (MULTIFIT) Flue System G	Specification	Key & OD Dimensions	Multifit Sales Code
Standard Horizontal Flue inc Elbow	685mm	80/125	5118580
Flue Extension	1000mm	125mm	5118584
Flue Bend	93 degree	125mm	5118588
Flue Bend (Pair)	135 degree	125mm	5118597
Pipe Support	Painted White	125mm	5118610

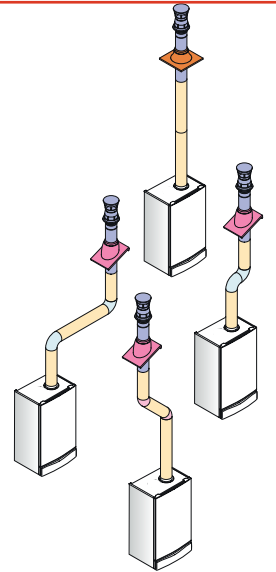
The 3° fall back on concentric flues can be reduced to 1.5° providing the flue system is adequately clamped in accordance with the installation instructions.



## Vertical Concentric Flues – 80/125mm

Flue system G – Maximum permissible equivalent length = 20m. Any additional 'in line' bends in the flue system must be taken into consideration. The equivalent lengths for concentric pipes are: 135° bend – 0.5m, 93° bend – 1.0m.

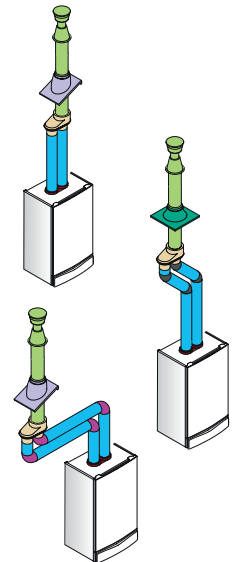
Item Description (MULTIFIT) Flue System G	Specification	Key & OD Dimensions	Multifit Sales Code
Vertical Flue Terminal		125mm	5111078
Vertical Flue Adaptor		125mm	5111070
Roof Cover Plate		125mm	246143
Flue Bend	93 degree	125mm	5118588
Flue Bend Pair	135 degree	125mm	5118597
Flue Extension	1000mm	125mm	5118584
Pipe Support	Painted White	125mm	5118610
Pitched Roof Flashing	25/50 degree	125mm	5122151
Flat Roof Flashing		125mm	246144



## Twin Pipe Flues – 80/80mm

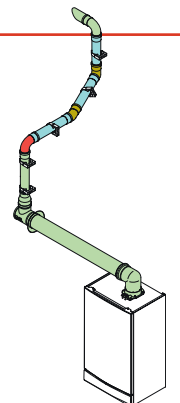
Maximum permissible equivalent flue length = 20m. Any additional 'in line' bends in the flue system must be taken into consideration. The equivalent lengths for concentric pipes are: 135° bend – 0.25m, 90° bend – 0.5m.

Item Description (MULTIFIT) Flue System N	Specification	Key & OD Dimensions	Multifit Sales Code
Twin Pipe Flue Adaptor (Boiler)		80/80mm	720089801
Twin to Concentric Adaptor 80/80 – 80/125		80/125mm	5111084
Twin Pipe Flue Bend (Pair)	90 degree	80mm	5111072
Twin Pipe Flue Bend (2 Pair)	135 degree	80mm	5111086
Twin Pipe Extension (Pair inc Brackets)	1000mm	80mm	5111087
Twin Pipe Support (Pair)		80mm	5111081
Vertical Flue Terminal		125mm	5111078
Roof Cover Plate		100mm	246143
Pitched Roof Flashing		125mm	5122151
Flat Roof Flashing	25/50 degree	125mm	246144



## Plume Displacement Kits – 60/100mm

Item Description (MULTIFIT) Flue System K	Specification	Key & OD Dimensions	Multifit Sales Code
Plume Displacement Kit inc Elbow + clips		100mm	5118638
Plume Displacement Kit Extension + clips	1000mm	60mm	5121368
Plume Displacement Kit Bend	93 degree	60mm	5121369
Plume Displacement Kit Bend (Pair)	135 degree	60mm	5121370



Please refer to page 36 for flue positioning guide.



# THE MAIN HE A SIMPLY **A** RATED

## PERFECT FOR:

- **A-rated energy efficient heating**
- **Heat only boiler replacements**
- **A wide range of applications - 12kW to 30kW outputs**
- **Cupboard fit**



### Easy installation

Like all our boilers, the new Main HE A is easy to install. It can be installed with push-fit or copper pipe, so plumbing it in is simple. The wiring is straightforward too as there is **no need for a permanent live feed and no need for a pump overrun.**

It's lightweight, compact in size, has minimal installation clearances and comes with a range of flue systems and accessories for simpler and safer siting.

We also have a range of unvented hot water cylinders to work alongside our heat only boilers. And because we can offer the whole solution, you know our products are compatible and easy to specify.



### A-rated value

With a SEDBUK (2005) rating of over 90% efficiency, the Main HE A is our most efficient heat only boiler, with lower carbon emissions and reduced fuel consumption – which is great for the planet and your customers.

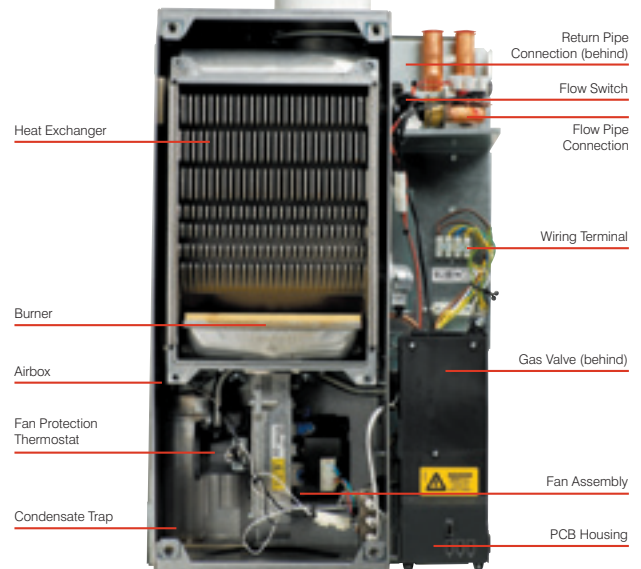


### Low-maintenance

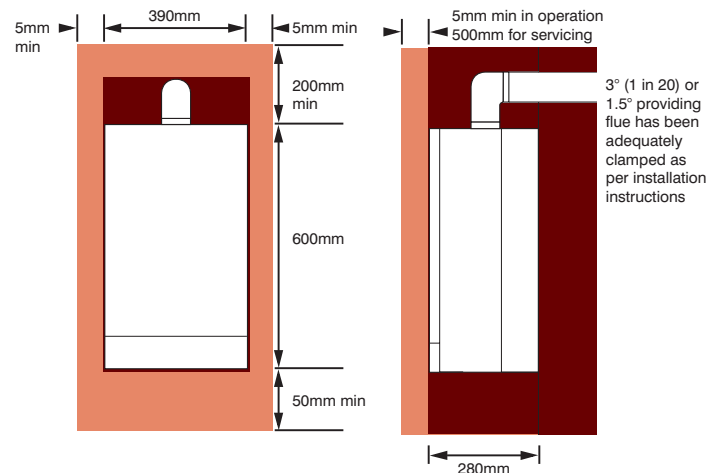
Yes, our new Main HE A boilers won't cost the earth, but we know that call backs can be expensive. That's why we use quality components from trusted manufacturers – giving you complete confidence in their reliability. What's more, our simple design means we can keep the cost of our boilers down while limiting the number of problems that can occur. If something does go wrong, though, you can rest assured that our 2-year warranty† on all SEDBUK (2005) band A (>90%) boilers is there to back you up.

† See page 39 for more details

**NEW**



### Dimensions and minimum clearances

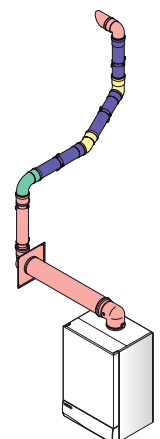
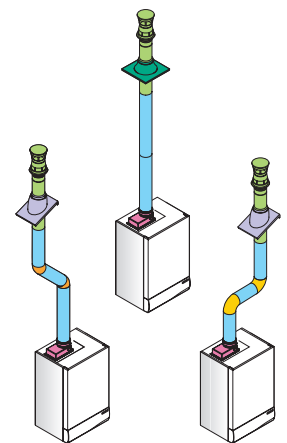
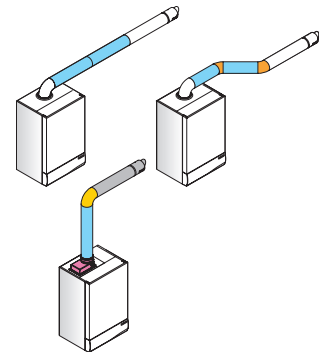


**JOB DONE**

Condensation pipe not shown.

# SPECIFICATIONS

	Units	Main 12 HE A	Main 15 HE A	Main 18 HE A	Main 24 HE A	Main 30 HE A
Part Number		720357201	720357301	720357401	720357501	720357601
<b>Controls</b>						
Concealed User Controls		Yes	Yes	Yes	Yes	Yes
LED Operating Status Display		Yes	Yes	Yes	Yes	Yes
<b>Gas</b>						
Natural Gas		Yes	Yes	Yes	Yes	Yes
Inlet Supply Pressure	mbar	20	20	20	20	20
Maximum Gas Rate	m <sup>3</sup> /hr	1.34	1.64	1.94	2.31	2.95
Central Heating Input (max)	kW	13.34	16.9	20.2	24.5	33.8
Central Heating Output – Condensing (max)	kW	12.81	16.5	19.3	23.8	32.6
Central Heating Output – Non Condensing (max)	kW	11.82	15.2	17.8	22	30.2
Seasonal Efficiency	%	90.5	91.3	90.4	90.9	90.9
SEDBUK (2005) Rating	Band	A	A	A	A	A
NOx Class		5	5	5	5	5
EcoHomes	Credits	3	3	3	3	2
<b>Electrical</b>						
Electrical Supply	Volts/Hz	230/50	230/50	230/50	230/50	230/50
Permanent Live Required		No	No	No	No	No
Power Consumption	Watts	80	80	80	80	80
External Fuse Rating	Amps	3	3	3	3	3
Boiler IPX Rating (Electrical Protection)		IPX2	IPX2	IPX2	IPX2	IPX2
Integral 'Boiler Only' Frost Thermostat		No	No	No	No	No
<b>Weights</b>						
Maximum Installation Lift Weight	kg	26	26	26	26	26
<b>Mechanical &amp; Hydraulic</b>						
Gas Supply Connection		1/2" BSPT	1/2" BSPT	1/2" BSPT	1/2" BSPT	1/2" BSPT
Central Heating Connections	mm	22	22	22	22	22
Condensate Drain Connection		1/2" BSP	1/2" BSP	1/2" BSP	1/2" BSP	1/2" BSP
Upward piping route		Yes	Yes	Yes	Yes	Yes
Compartment ventilation required		No	No	No	No	No
<b>Flue Systems</b>						
Concentric Flue Diameter	mm	70/110				
Max. Equivalent Vertical Length (70/110)	m	4	4	4	4	4
Max. Equivalent Horizontal Length (70/110)	m	4	4	4	4	4
<b>Twin Flue System</b>						
Twin Pipe Flue Diameter	mm	80/80	80/80	80/80	80/80	80/80
Max. Equivalent Vertical Length	m	75	75	75	75	75
Max. Equivalent Horizontal Length	m	75	75	75	75	75
<b>Plume Displacement Kit</b>						
Max. Equivalent Vertical Length	m	29	29	29	29	22



## Flue options

		Any additional 'in line' bends in the flue system must be taken into consideration. Their equivalent lengths are:	
<b>Concentric Flue</b> The maximum equivalent lengths are 4m (horizontal and vertical). These lengths exclude the standard elbow and flue/terminal assembly (horizontal) and terminal assembly (vertical).	Concentric Pipes:	135° bend	0.5m
		93° bend	1.0m
<b>Twin Flue</b> The total maximum equivalent flue length is 75m. Note: Air and flue tubes parallel.	Twin Flue Pipe:	135° bend (air duct)	1.3m
		135° bend (flue duct)	2.6m
		90° bend (air duct)	4.8m
		90° bend (flue duct)	9.6m
Detailed examples of equivalent flue length calculations are given in the Installation Guidance Notes for each flue system type (Documents 243501 and 243502 for concentric and twin pipe respectively).			

# MULTIFIT – FLUE OPTIONS



## Horizontal Concentric Flues - 70/110mm

Item Description (MULTIFIT) Flue System B	Specification	Key & OD Dimensions	Multifit Sales Code
Standard Horizontal Flue inc Elbow	850mm	110mm	236921
Horizontal Flue/Wall Terminal	850mm	110mm	243013BAX
Flue Extension	1000mm	110mm	241695
Flue Extension	500mm	110mm	241694
Flue Extension	250mm	110mm	241692
Flue Bend	90 degree	110mm	241687
Flue Bend (Pair)	135 degree	110mm	241689
Flue Terminal Deflector		70mm	248167
Vertical Flue Adaptor (Boiler)		110mm	5106888
Pipe Support	Painted White	110mm	243014BAX



## Vertical Concentric Flues - 70/110mm

Item Description (MULTIFIT) Flue System B	Specification	Key & OD Dimensions	Multifit Sales Code
Vertical Roof Terminal		70/110mm	242802
Vertical Flue Adaptor (Boiler)		110mm	5106888
Flue Extension	1000mm	110mm	241695
Flue Extension	500mm	110mm	241694
Flue Extension	250mm	110mm	241692
Flue Bend	90 degree	110mm	241687
Flue Bend (Pair)	135 degree	110mm	241689
Roof Cover Plate			243131
Pipe Support	Painted White	110mm	243014BAX
Flat Roof Flashing		125mm	243016BAX
Pitched Roof Flashing	25/50 degree	125mm	243015



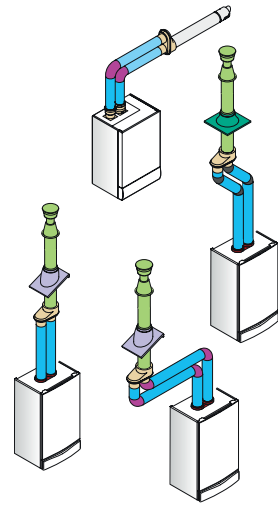
## Plume Displacement Kits - 70/100mm to 70mm PDK

Item Description (MULTIFIT) Flue System L	Specification	Key & OD Dimensions	Multifit Sales Code
Plume Displacement Kit inc Elbow & clips	All HE Plus	110mm	5121371
Plume Displacement Kit Extension inc clip	1000mm	70mm	5121372
Plume Displacement Kit Bend	93 degree	70mm	5121373
Plume Displacement Kit Bend (Pair)	135 degree	70mm	5121374



## Twin Pipe Flues - 80/80mm

Item Description (MULTIFIT) Flue System P	Specification	Key & OD Dimensions	Multifit Sales Code
Horizontal Flue Terminal	850mm	110mm	243013BAX
Vertical Roof Terminal		70/110mm	242802
Twin Pipe Flue Extension	1000mm	80mm	246137
Twin Pipe Flue Extension	500mm	80mm	246136
Twin Pipe Flue Extension	250mm	80mm	246135
Twin Pipe Flue Bend (2 Pair)	135 degree	80mm	5121561
Twin Pipe Flue Bend (Pair)	90 degree	80mm	5121560
Twin Pipe Support (Pair)	Painted White	80mm	5111081
Pipe Support	Painted White	110mm	243014BAX
Pitched Roof Flashing	25/50 degree	125mm	243015
Flat Roof Flashing		125mm	243016BAX
Twin Pipe Flue Adaptor Set		80/80mm	242757
Flue Terminal Deflector			248167
Roof Cover Plate			243131



Please refer to page 36 for flue positioning guide.

# THE MAIN COMBI HE

## PERFECT FOR:

- Replacing existing combi boilers
- Instant hot water 24/7
- Off mains gas customers (with LPG supply)



## Easy installation

The Main Combi HE packs a range of features into one compact case, but its simple design and wide range of flue accessories makes installation easy.



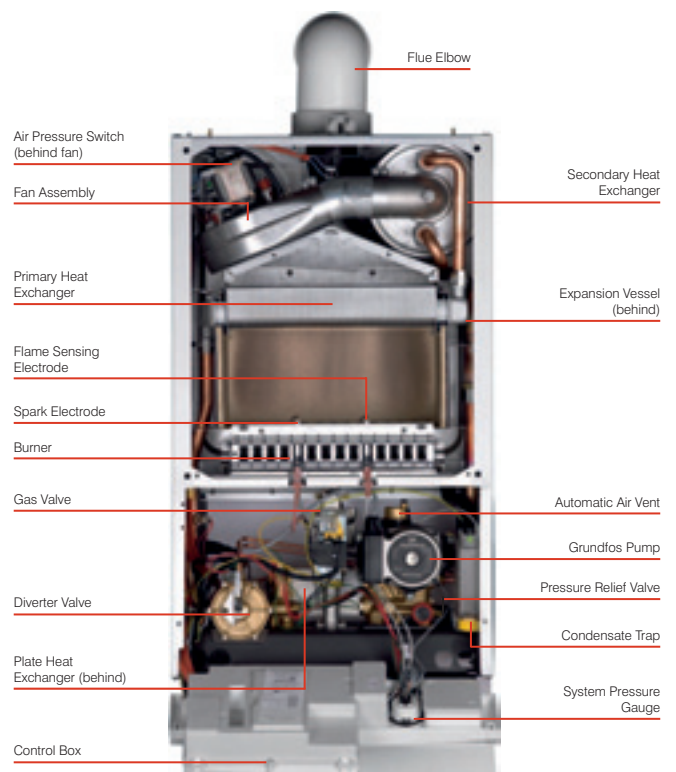
## Low maintenance

Like all our boilers, the Main Combi HE has a simple design and high quality parts such as a Grundfos pump, so you can be sure it's up to the job. It also has three LED status indicators for simple diagnostics and an easy-to-use operating mode selector switch with reset – all keeping maintenance simple and call backs to a minimum.



## Easy to use

This boiler is simple to use but still offers great control. It has independent hot water and heating controls to increase user comfort and increase efficiency, while its integral timer and LED status indicators make it straightforward to operate and maintain.







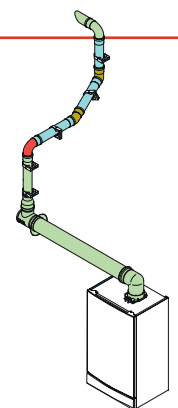
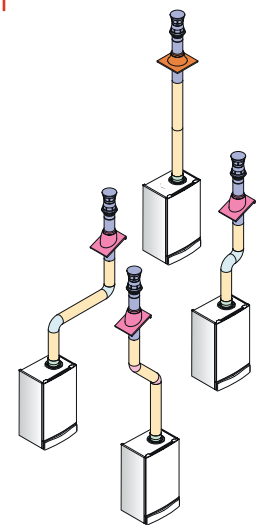
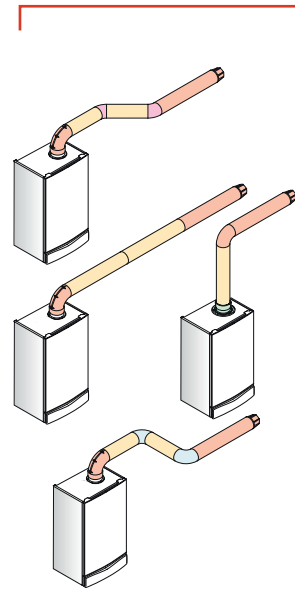
**JOB DONE**

# SPECIFICATIONS

Model	Units	Main Combi 24 HE	Main Combi 30 HE
Boiler only code		5115752	5115753
<b>Controls</b>			
User adjustable CH & DHW temperature		Yes	Yes
LED operating/fault status display		Yes	Yes
Integral 24 hr electro-mechanical timer		Optional	Optional
Integral 7 day electronic timer		Optional	Optional
Wireless programmable room thermostat		Optional	Optional
Operating mode selector switch		Yes	Yes
<b>Gas</b>			
Natural gas		Yes	Yes
Optional LPG conversion kit		Yes	Yes
Inlet supply pressure (Natural gas)	mbar	20	20
Inlet supply pressure (Propane)	mbar	37	37
Gas rate	m <sup>3</sup> /hr	2.62	3.22
Heat input (maximum)	kW	24.8	30.5
Heat input (minimum)	kW	10.6	11.3
Heat output – condensing (maximum)	kW	25.2	30.5
Heat output – condensing (minimum)	kW	10.1	11.9
Heat output – non-condensing (maximum)	kW	24	29.6
Heat output – non-condensing (minimum)	kW	9.8	11
Domestic hot water flow rate (maximum) @ 35°C rise	litres/min	9.8	12.1
Domestic hot water flow rate (minimum)	litres/min	2.5	2.5
Seasonal efficiency band	SEDBUK (2005)	B	B
NO <sub>x</sub>	Class	3	3
<b>Electrical</b>			
Electrical supply	Volts/Hz	230/50	230/50
Power consumption	Watts	170	180
External fuse rating	Amps	3	3
Ingress protection rating (as supplied)		IPX4D	IPX5D
Pump overrun		No	Yes
24hr pump exercise		No	Yes
Integral frost thermostat (Boiler protection only)		No	Yes
<b>Weight</b>			
Installation lift weight	kg	43.5	44
<b>Mechanical &amp; Hydraulic</b>			
DHW system pressure (maximum)	bar	8	8
DHW operating pressure (minimum)	bar	0.2	0.2
Safety pressure discharge	bar	3	3
Integral automatic bypass		Yes	Yes
CH system capacity (maximum)	litres	125	125
Gas supply pipe size	mm	22	22
Flow & return pipe size (CH)	mm	22	22
Flow & return pipe size (DHW)	mm	15	15
Condensate drain connection	mm	25.4 (1" BSP)	25.4 (1" BSP)
Temporary filling loop		Optional	Optional
Compartment ventilation required		No	No
Pre-plumbing jig		Standard	Standard
<b>Flue Systems</b>			
Standard concentric flue diameter	mm	60/100	60/100

## Flue options

Maximum permissible equivalent flue lengths are:	Main Combi 24 HE	Main Combi 30 HE
Concentric Horizontal (60/100)	4m	3m
Concentric Vertical (60/100)	4m	3m
Any additional "in line" bends in the flue system must be taken into consideration. Their equivalent lengths are:		
Concentric Pipes	45° bend	0.5m
	93° bend	1.0m
The elbow supplied with the standard horizontal flue is not included in any equivalent length calculations. There is also a Plume Displacement Kit Flue System available.		



# MULTIFIT – FLUE OPTIONS



## Horizontal Concentric Flues – 60/100mm

Flue system A – Maximum permissible equivalent flue length = 10m. Any additional 'in line' bends in the flue system must be taken into consideration. The equivalent lengths for concentric pipes are: 135° bend – 0.5m, 93° bend – 1.0m.

Item Description (MULTIFIT) Flue System A	Specification	Key & OD Dimensions	Multifit Sales Code
Standard Horizontal Flue inc Elbow	685mm	60/100	5118489
Flue Extension	1000mm	100mm	5111074
Flue Bend	93 degree	100mm	5111075
Flue Bend (Pair)	135 degree	100mm	5111085
Flue Bend	135 degree	100mm	5111076
Pipe Support	Painted White	100mm	5111080
Flue Through Wall Liner		100mm	5111067
Flue Terminal Deflector		60mm	5111068
Flue Vertical Adaptor (Boiler)	Main HE only	100mm	5111065

The 3° fall back on concentric flues can be reduced to 1.5° providing the flue system is adequately clamped in accordance with the installation instructions.



## Vertical Concentric Flues – 60/100mm

Flue system A – Maximum permissible equivalent flue length = 10m. Any additional 'in line' bends in the flue system must be taken into consideration. The equivalent lengths for concentric pipes are: 135° bend – 0.5m, 93° bend – 1.0m.

Item Description (MULTIFIT) Flue System A	Specification	Key & OD Dimensions	Multifit Sales Code
Vertical Flue Terminal		125mm	5118576
Roof Cover Plate	4"	125mm	246143
Flue Bend	93 degree	100mm	5111075
Flue Bend	135 degree	100mm	5111076
Flue Bend Pair	135 degree	100mm	5111085
Flue Extension	1000mm	100mm	5111074
Pipe Support	Painted White	100mm	5111080
Pitched Roof Flashing	25/50 degree	125mm	5122151
Flat Roof Flashing		125mm	246144
Flue Vertical Adaptor (Boiler)	Main HE only	100mm	5111065



## Plume Displacement Kits – 60/100mm

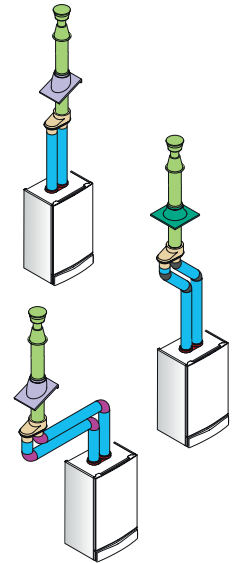
Item Description (MULTIFIT) Flue System K	Specification	Key & OD Dimensions	Multifit Sales Code
Plume Displacement Kit inc Elbow + clips		100mm	5118638
Plume Displacement Kit Extension + clips	1000mm	60mm	5121368
Plume Displacement Kit Bend	93 degree	60mm	5121369
Plume Displacement Kit Bend (Pair)	135 degree	60mm	5121370



## Twin Pipe Flues – 80/80mm

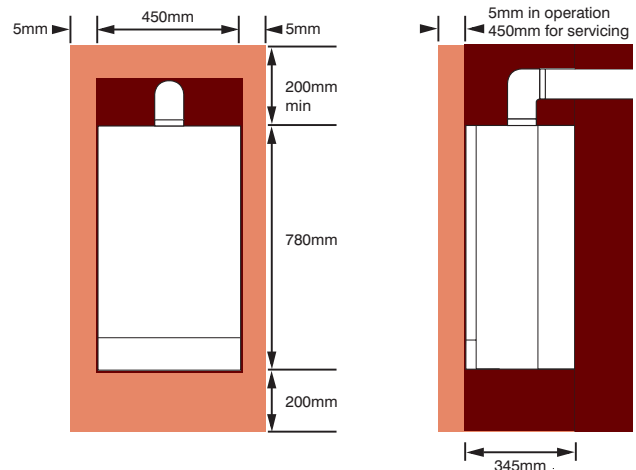
Maximum permissible equivalent flue length = 20m. Any additional 'in line' bends in the flue system must be taken into consideration. The equivalent lengths for concentric pipes are: 135° bend – 0.25m, 90° bend – 0.5m.

Item Description (MULTIFIT) Flue System N	Specification	Key & OD Dimensions	Multifit Sales Code
Twin Pipe Flue Adaptor (Boiler)		80/80mm	720089801
Twin to Concentric Adaptor 80/80 – 80/125		80/125mm	5111084
Twin Pipe Flue Bend (Pair)	90 degree	80mm	5111072
Twin Pipe Flue Bend (2 Pair)	135 degree	80mm	5111086
Twin Pipe Extension Pair inc Brackets)	1000mm	80mm	5111087
Twin Pipe Support (Pair)	Painted White	80mm	5111081
Vertical Flue Terminal		125mm	5111078
Roof Cover Plate		100mm	246143
Pitched Roof Flashing		125mm	5122151
Flat Roof Flashing	25/50 degree	125mm	246144



The Combi HE is also suitable for LPG.	
	Sales Code
LPG Conversion Kit	5113144

### Dimensions and minimum clearances



Please refer to page 36 for flue positioning guide.

# THE MAIN UNVENTED CYLINDER



## Easy installation

All of the controls and connections have been positioned in the front quadrant of the cylinder, making it easier for you to install.

Compatible with Main System Eco and Main HE A ranges, this cylinder is available as indirect models of 120, 150, 170, 210, 250 and 300 litre capacities and as direct models of 170 and 210 litre capacities, so you'll always have the perfect solution for your project. But, because our boilers and unvented cylinders are designed to work together, you know you'll have no compatibility issues.



## Energy efficient

The indirect cylinder's coil-in-coil heat exchanger ensures rapid heat recovery while promoting energy efficiency.

We manufacture all of our cylinders in the UK where we inject 50mm of polyurethane foam between the cylinder and the casing to increase insulation and save energy.



## Low maintenance

The high grade stainless steel inner cylinder gives this product a long life and ensures low maintenance. The Incoloy 800 alloy sheathed elements are designed to resist corrosion, a common problem with other unvented cylinders.

Our indirect heating coil is factory fitted with an electric immersion heater as a back up – leaving you and your customers confident they will have hot water whenever they need it.

And, because we are so confident in the quality of our unvented cylinder, we will offer a one year on-site service support including parts and labour and will then guarantee the stainless steel cylinder against leaks for a further 24 years (subject to registration and a reasonable labour charge).

## PERFECT FOR:

- **Replacing existing cylinders**
- **Low mains pressure areas**
- **Homes with more than one bathroom**
- **Indirect and direct models available**

Compatible with:	
	<b>Main System Eco</b>
	<b>Main HE A</b>

MAIN

**JOB DONE**

**25-YEAR  
WARRANTY**



# SPECIFICATIONS

**Element** – Long-life removable Incoloy 800 sheathed element, rated 3.0kW @ 240V. Direct models are fitted with two 3.0kW immersion heaters as standard.

**Outer Casing** – A combination of resilient thermoplastic mouldings and plastic coated corrosion proofed steel sheet.

**Thermal Insulation** – CFC/HCFC free (ODP ZERO) fire retardant expanded polyurethane. 50mm thickness.

**Inner Container** – High Grade stainless steel, pressure tested to 15 bar.

**Primary Coil** – 22mm diameter stainless steel. Coil-in-coil design for improved performance.

**Thermostat** – Element thermostat adjustable from 10°C to 70°C.

**Safety Features** – Temperature and pressure relief valve, factory set to operate at 10 bar and 90°C. High limit thermostat, factory set at 80°C. Direct models – Manually re-settable cut-out on heating element operates at 80°C.

**Indirect models** – Must be wired in series with the supplied two-port motorised valve to provide primary over temperature protection.

**Anode** – None required.

**Approvals** – KIWA approved for water regulations and Building Regulation G3. Manufactured in the UK in a BS EN ISO 9001:2008 registered factory. CE marked for compliance with LVD, EMC & pressure equipment directives.

## Installation

Main Unvented Cylinders must be installed by a competent installer in accordance with Local Regulations:

England & Wales – Building Regulation G3.

Scotland – Technical Standards P3.

N. Ireland – Building Regulation P5.

**Fixing** – Feet on bottom moulding for floor mounting.

**Plumbing Connections** – Inlet/Outlet, 22mm compression fittings / 3/4" BSP parallel thread.

**Primary Coil** – 22mm compression fittings / 3/4" BSP parallel thread.

**Temperature and Pressure Relief Valve** – 15mm compression outlet.

**Cold Water Control** – Integrated cold water control set comprising pressure reducing valve and strainer – factory set at 3.5 bar, expansion relief valve – factory set at 6 bar and check valve. 22mm compression fittings.

**Mains pressure** – Min 1.5 bar, Max 16 bar. A 2-port motorised valve is supplied with indirect models.

**Flow Rates** – Up to 55 litres per minute @ 6 bar pressure.

**Operating Pressure** – 3.5 bar.

**Expansion Relief Valve Pressure** – 6.0 bar.

**Operating Temperature** – Recommended 60°C. Adjustable 10 - 70°C.

**Water Expansion** – Remote expansion vessel  
12 litre vessel supplied with 120 and 150 litre models.  
18 litre vessel supplied with 170 and 210 litre models.  
24 litre vessel supplied with 250 and 300 litre models.

**Minimum Water Supply Requirements** – Recommended minimum supply pressure – 1.5 bar/20 l/min flow rate.

If there are any doubts about water supply pressure or flow rates, please contact our Specification Advice Team to discuss on 0845 026 4620.

**Secondary Circulation** – Via 22 x 22 x 15mm swept tee, which should be fitted to the inlet pipework. Secondary Circulation is not recommended for direct units being used with off-peak electricity tariffs.

**Pressure Testing** – Units are tested to 15 bar.

**Tundish** – 15mm compression inlet and 22mm compression outlet.

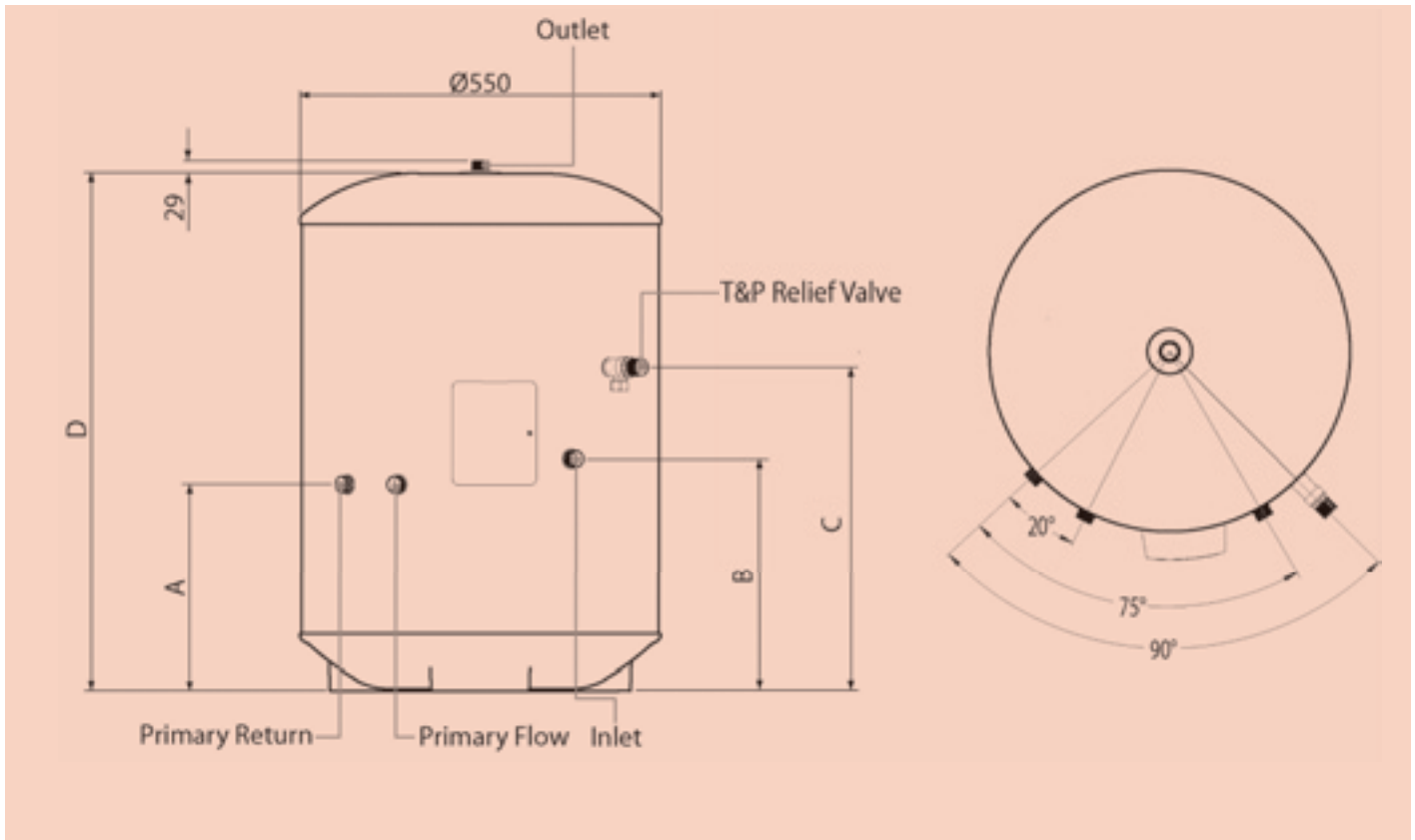
## Electrical

**Indirect models** – Controls should be wired to the boiler, programmer etc., in accordance with the control scheme being used.

**Direct Models** – Connection is direct to terminals in the immersion heater which must be permanently connected to the supply through a double-pole lined isolating switch with a minimum breaking capacity of 13A.

All electrical wiring must conform to the latest IEE Wiring Regulations.

## Dimensions and performance



Nominal Capacity (litres)	Type		Dimensions (mm)				Coil			Heating Time Direct (mins)	Product Code	Standing Heat Loss Per Day (kWh/24h)
	Direct	Indirect	A	B	C	D	Rating (kW)	Heat Up Time (mins)	Recovery (mins)			
120		✓	315	364	925	1216	12.5	27	23	110	5133561	1.47
150		✓	315	364	1378	1731	12.5	38	24	142	5133562	1.70
170	✓			364	1693	2045				163	720636101	1.92
170		✓	315	364	493	784	16.0	33	25		5133563	
210	✓			364	615	906				205	720636201	2.30
210		✓	315	364	800	1090	16.0	41	29		5133564	
250		✓	315	364	1184	1474	18.0	40	30	252	5135327	2.22
300		✓	315	364	1693	2045	19.0	47	35	304	5135328	2.52

## Unvented Cylinder Specification Enquiries

Telephone: 0845 026 4620.

# THE MAIN SOLAR PACKAGE

**Main's on-roof Solar Package gives you an easy to install competitive renewable solution.**

## PERFECT FOR:

- **Energy efficient domestic hot water**
- **Reducing carbon dioxide emissions**
- **Quick and easy installation**
- **Reducing fuel bills**



## Easy installation

We want to make being green as easy as we can, so we've made our solar panels simple. To reduce installation and commission times we've pre-wired the pump and controller into the pump station, included an adjustable flow meter with scale and added an integral air separator.

We've also incorporated an integral mounting bracket, to ensure the pump station is fitted correctly as well as a really simple menu to enable smooth system set up.

We also know that compatibility can be an issue, especially with new technologies, so we've designed our solar panels to work alongside our range of Main unvented hot water cylinders.

Our solar pack is also split into 1st and 2nd kits to aid installation.

## The complete on-roof solar flat plate package

These panels are installed above the slate/tile roof and are the perfect solution for homeowners wishing to install solar on to an existing roof with minimal disruption.

- 1, 2 or 3 panel(s)
- Solar controller
- On-roof mounting rail and brackets
- Solar fluid
- Hydraulic pump station
- 2 x 2m flexible pipes
- Solar expansion vessel



## MCS Approved

The Microgeneration Certification Scheme (MCS) is a recognised mark of quality and reliability. Our Main solar panels are MCS approved.



## Low maintenance

The robust and compact panel design makes our solar panels so durable that they come with a 10-year warranty. To aid maintenance, there is built-in system status and fault finding technology, multi-functional pictorial LCD solar controller display and a battery back-up that stores controller settings, preventing unnecessary reprogramming.





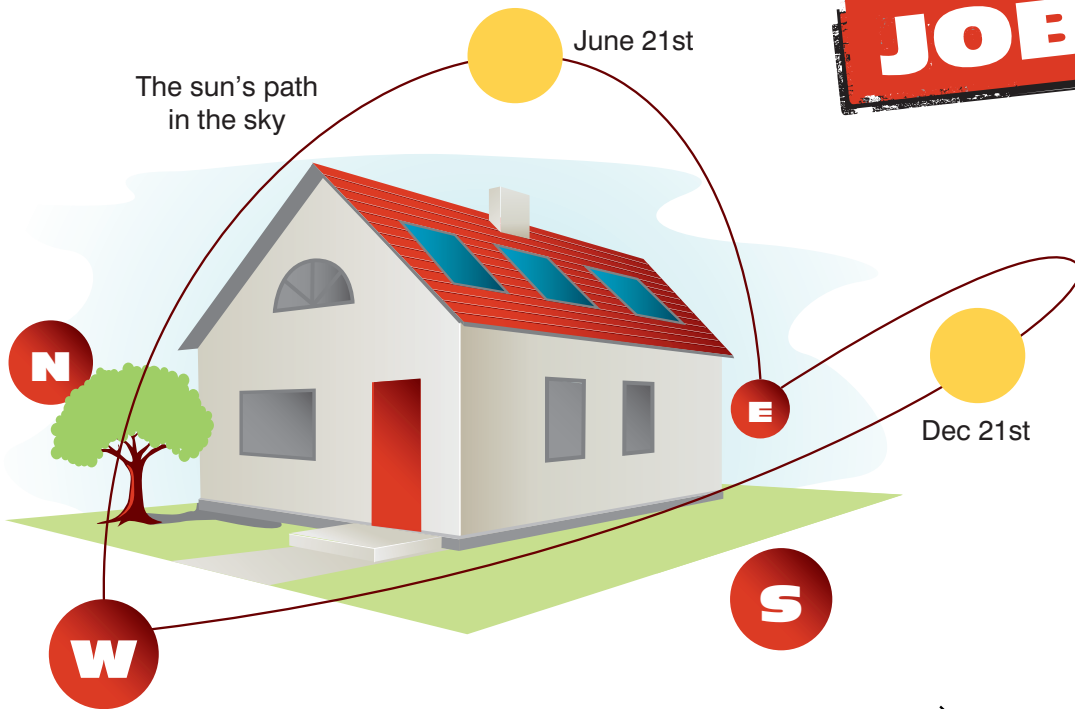
A photograph of a single-story brick house with a dark tiled roof. A solar panel is mounted on the roof. A brick chimney is visible on the left. The house has a dark brown door and a window with light-colored curtains. A small number '2' is on the wall next to the door. A red banner with white text is in the upper right corner. The house is set on a green lawn under a clear blue sky.

**10 YEAR  
WARRANTY**

**JOB DONE**

# EFFECTIVE INSTALLATION

**JOB DONE**



## How to position panels

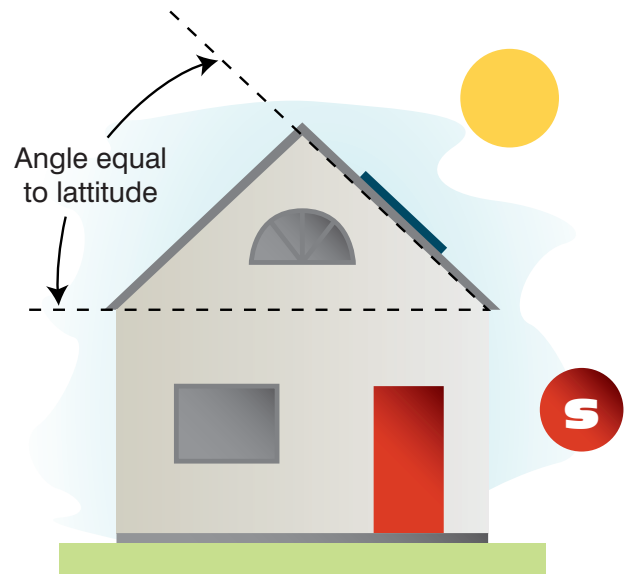
We've designed our solar panels to be as simple to install as all our products.

Where possible, panels should face south – though their efficiency is only slightly reduced if sited 30 degrees east and 40 degrees west of south. Ideally, panels should also be mounted at an angle equal to latitude. (Remember, the effectiveness of a panel can be changed by altering the angle and direction of its mounting – and by preventing shadows being cast over it.)

When you mount a panel flush to a roof for aesthetic reasons, its performance shouldn't be reduced significantly, though you should make sure shadows don't fall over it during peak sunlight hours.

## East West Array Kits

When a roof doesn't face south, our East West Array Kits allow you to install Main solar panels anyway. The kit is designed to have one panel facing east and the other west, with each panel on separate roof aspects. (If you want to install a third solar panel, it should be added to the west side – so two panels face west and one faces east.)



## Purpose-designed Main cylinders

The Main Solar unvented hot water cylinder is purpose designed to be compatible with our solar packages. It also offers extra insulation to improve energy efficiency levels and is supplied with everything you need for a simple connection.



# SPECIFICATIONS

## Main Solar Collector



Length	1754mm
Width	1148mm
Height	87mm
Gross area	2.01m <sup>2</sup>
Aperture area	1.89m <sup>2</sup>
Operating pressure	2.5 bar
Dry weight	34.5 Kg
Fluid content	1.87 Ltr
Max. operating pressure	10 bar
Zero loss co-efficient ( $\eta_0$ )	0.798
Heat loss co-efficient ( $a_1$ )	4.333 W/m <sup>2</sup> K
Heat loss co-efficient ( $a_2$ )	0.012 W/m <sup>2</sup> K

## Solar Pump Station



Height	375mm
Width	250mm
Depth	190mm
Max Continuous Working Temperature	120°C
Max Short Term Starting Temperature	160°C
Solar Pump	Grundfos UPS 25-60
Flow Measuring Device	1-6 l/min
Pressure Relief Valve Setting	6 bar
Check Valve Operating Pressure	20 mbar

## Solar Controller



Height	134mm
Width	175mm
Depth	56mm
Systems	Can control up to 2 Collector fields or 2 Solar Cylinders
Display Functions	Solar Circulation
Auxiliary Heat Control	Additional Sensor Required (optional)

## Multifit Product Codes

These tables contain the Multifit product codes for each of the Main Solar collector set and additional accessories available as part of the range. For further technical or Multifit information, please contact 0844 871 1560.

Main On-Roof Collector Sets Product Code	Product Code
Main 1 panel on-roof slate & tile	720594101
Main 2 panel on-roof slate & tile	720594201
Main 3 panel on-roof slate & tile	720594301

Main East West Array Kits	Product Code
Multifit On-Roof East West Array Kit	5129979

## Main Solar Accessories

There are a number of optional accessories available with Main Solar to allow installation where slight variation on the existing kit is required. These are shown in the table below along with the product codes.

Solar Accessories	Product Code
13M solar sensor wire	5122237
Stainless steel flexible pipe kit – 30m – solar accessory	5122238
6 off 22mm pipe elbow compression fitting – male (for stainless steel flexible pipe kit)	5122762
6 off 22mm pipe elbow compression fitting – female (for stainless steel flexible pipe kit)	5122763
2 off 22mm tee compression fittings	5122764
Solar thermostatic blending valve	720223301
Re-heat sensor	84515063
Relay-direct heating	5122235
Antifreeze test kit	5119559
Heat transfer fluid 20l	5119549

# THE MAIN

## SOLAR THERMAL UNVENTED HOT WATER CYLINDER



### Energy efficient water heating

The Main unvented solar thermal cylinder has been designed specifically for solar applications to make sure it does the job perfectly. It offers all of the benefits of the standard Main unvented cylinder to give powerful mains pressure showering and fast filling baths, with the added benefit of lower running costs – as much as 60% less than traditional systems.\*

Unlike some other 'twin coil' cylinders (which simply use heating coils designed for traditional boiler heated cylinders), our cylinders have a purpose designed solar heating coil at the base of the cylinder, which ensures maximum heat input and efficiency from the solar energy.



### Easy installation

It is available in both direct and indirect models so can be used in a range of applications. To make things simple, it works alongside most solar thermal systems now available in the UK, but is the perfect companion for our solar thermal package (see page 26).

They come complete with safety and hot water controls and have a remote expansion vessel which can be located in various places, to suit your installation.



### Low maintenance

Our solar thermal unvented hot water cylinder, with its Duplex stainless steel interior, is designed to last, but if something does fail, it comes with a range of guarantees, so you've got nothing to worry about.

And, because we are so confident in the quality of our unvented cylinder, we will offer a one year on-site service support including parts and labour and will then guarantee the stainless steel cylinder against leaks for a further 24 years (subject to registration and a reasonable labour charge).

### PERFECT FOR:

- **Energy efficient domestic hot water**
- **Fast filling showers and baths**
- **Powerful hot water from your solar thermal water heating system**

Compatible with:	
	<b>Main System Eco</b>
	<b>Main HE A</b>
	<b>Main Solar Panels</b>

\*Savings vary depending on type of solar system used, location and usage patterns.

**MAIN  
SOLAR**

**JOB DONE**

INLET

# SPECIFICATIONS

## Siting the unit

The MAIN SOLAR cylinder must be installed vertically. Although location is not critical, the following points should be considered:

- The MAIN SOLAR cylinder should be sited to ensure minimum dead leg distances, particularly to the point of most frequent use.
- Avoid siting where extreme cold temperatures will be experienced. All exposed pipework should be insulated.
- The discharge pipework from the safety valves must have minimum fall of 1:200 from the unit and terminate in a safe and visible position.
- Access to associated controls and immersion heaters must be available to provide for the servicing and maintenance of the system. Where these controls are installed against a wall a minimum distance of 250mm must be left.
- Ensure that the floor area for the MAIN SOLAR cylinder is level and capable of permanently supporting the weight when full of water.
- Wherever possible the mains supply pipe should be 22mm. We suggest the minimum supply requirements should be 1.5 bar pressure and 20 litres per minute flow rate.
- The MAIN SOLAR cylinder has an operating pressure of 3.5 bar which is controlled by the cold water combination valve assembly. The cold water combination valve assembly can be connected to a maximum mains pressure of 16 bar.

## Outlet/terminal fittings (taps, etc.)

- The MAIN SOLAR cylinder can be used with most types of terminal fittings.
- All fittings, pipework and connections must have a rated pressure of at least 6 bar at 80°C.

## Operational summary

Maximum mains pressure 16 bar

Operating pressure 3.5 bar

Expansion vessel charge pressure 3.5 bar

Expansion relief valve setting 6 bar

T&P relief valve setting 90°C/10 bar

Maximum primary circuit pressure  
(auxiliary coil, indirect only) 3 bar

Maximum primary circuit pressure 6 bar (Solar coil)

## Important note:

THE MAIN SOLAR CYLINDER MUST BE INCORPORATED INTO A FULLY PUMPED SOLAR PRIMARY CIRCUIT. CONTROL OF THE SOLAR PRIMARY IS ACHIEVED BY THE USE OF EXTERNAL CONTROLS NOT SUPPLIED WITH THE UNIT. CONTROL MUST BE VIA A PURPOSE DESIGNED SOLAR HYDRAULIC STATION AND SOLAR DIFFERENTIAL TEMPERATURE CONTROLLER.

## Pipe fittings

All pipe fittings are made via 22mm compression fittings directly to the unit. The fittings are threaded 3/4" BSP male parallel should threaded pipe connections be required.

## Cold feed

A 22mm cold water supply is recommended, however if a 15mm (1/2") supply exists which provides sufficient flow this may be used (although more flow noise may be experienced).

A stopcock or servicing valve should be incorporated into the cold water supply to enable the MAIN SOLAR cylinder and its associated controls to be isolated and serviced.

## Drain tap

A suitable draining tap should be installed in the cold water supply to the MAIN SOLAR cylinder unit between the expansion valve and the heater at as low a level as possible. It is recommended that the outlet point of the drain pipework be at least 1 metre below the level of the heater.

## Expansion vessel

The expansion vessel is pre-charged at 3.5 bar and must be connected between the expansion valve and the MAIN SOLAR cylinder.

## Secondary circulation

The secondary return pipe should be in 15mm pipe and incorporate a check valve to prevent backflow. A suitable WRAS approved bronze circulation pump will be required.

## Outlet

Hot water distribution pipework should be 22mm pipe with short runs of 15mm pipe to terminal fittings such as sinks and basins.

## Installation

### Connection to solar primary circuit

The lower (solar) coil of the MAIN SOLAR cylinder must be connected to a fully pumped solar primary circuit. The connections are suitable for 22mm copper pipe direct to the compression fittings provided. The connections are also threaded 3/4" BSP male parallel should BSP be required.

### Plumbing connections

Direct units require the following pipework connections.

- Cold water supply to and from inlet controls.
- Outlet to hot water draw off points.
- Discharge pipework from valve outlets to tundish.
- Connection to the auxiliary primary circuit (Auxiliary/Indirect unit only)

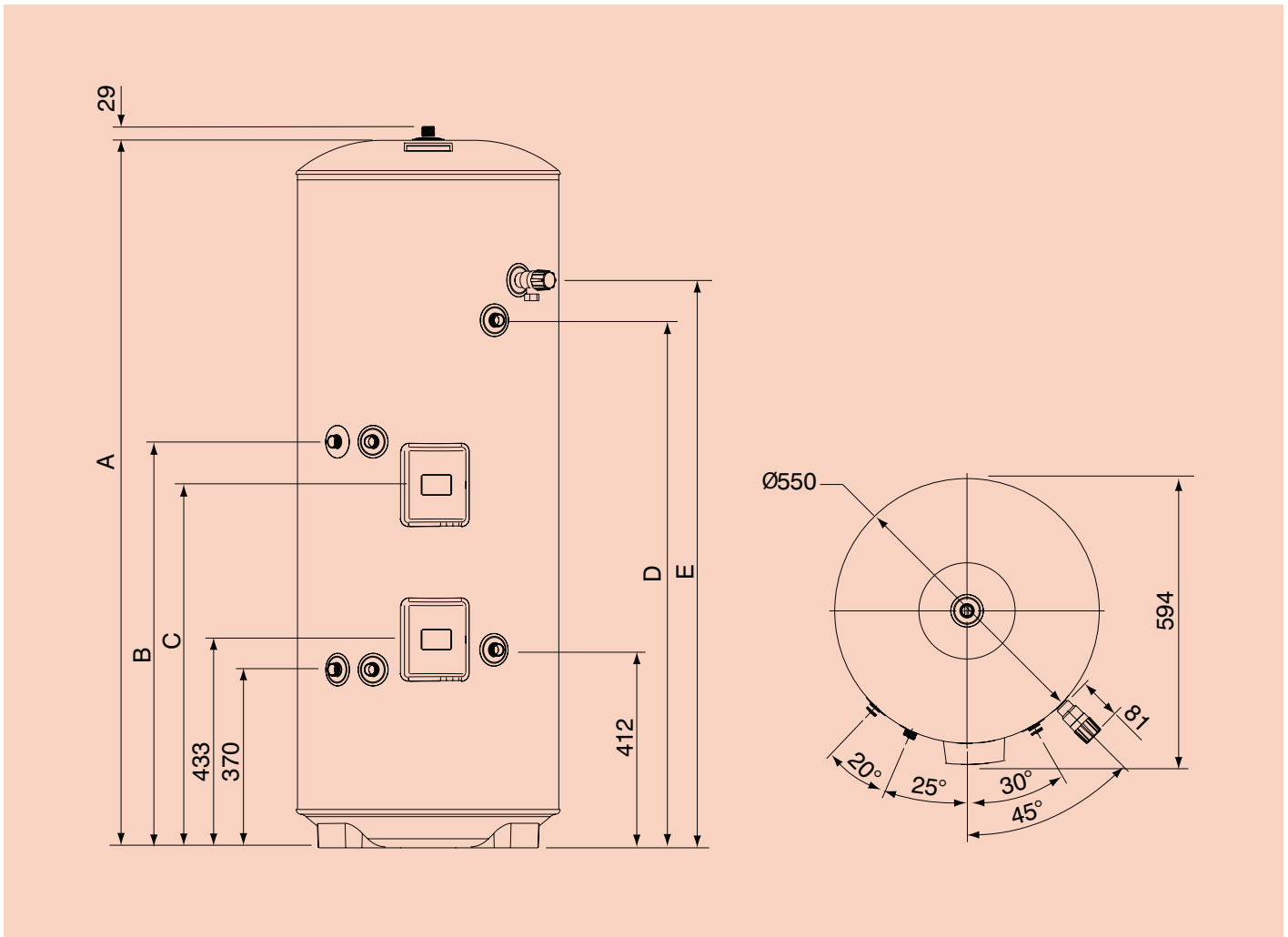
Primary connections are 22mm compression.

However, 3/4" BSP parallel threaded fittings can be fitted to the primary coil connections if required.

### Electrical supply

MAIN SOLAR units are fitted with 1 3kW immersion heater on indirect units and 2 3kW immersions on direct units as standard. The MAIN SOLAR cylinder MUST be earthed. The circuit must be protected by a suitable fuse and double pole isolating switch with a contact separation of at least 3mm in both poles.

## Dimensions and performance



Nominal Capacity (litres)	Type	Dimensions (mm)						Solar Coil Surface Area (m <sup>2</sup> )	Auxiliary Volume (litres)	Auxiliary Coil				Product Code
	Indirect	A	B	C	D	E	F			Surface Area (m <sup>2</sup> )	Rating (kW)	Heat Up (mins)	Recovery (mins)	
210	✓	1473	1000	1009	925	1095	1184	1.1	120	0.68	15.2	33	17	720634801
250	✓	1731	1072	1160	1072	1258	1391	1.1	145	0.79	15.2	40	21	720634901
300	✓	2038	1409	1438	1243	1573	1715	1.1	175	0.79	17.4	42	22	720635001



# THE MAIN WATER HEATER

## PERFECT FOR:

- **Businesses and small households with high hot water demand**
- **Energy efficiency - it only heats the water you need**
- **Creating space - no need for a storage cylinder**



### Quality you can trust

Main has an unrivalled reputation for offering reliable, safe, efficient and easy-to-use water heaters. Ideal in homes with high hot water demand, the Main FF (Fan Flue) and Main BF (Balanced Flue) Water Heaters provide instantaneous hot water without the need for a storage cylinder.



### Easy installation

Installation is straightforward, thanks to the simple 3-pipe connections with isolation valves, pre-wired standard plug (FF) and flexible flueing options.

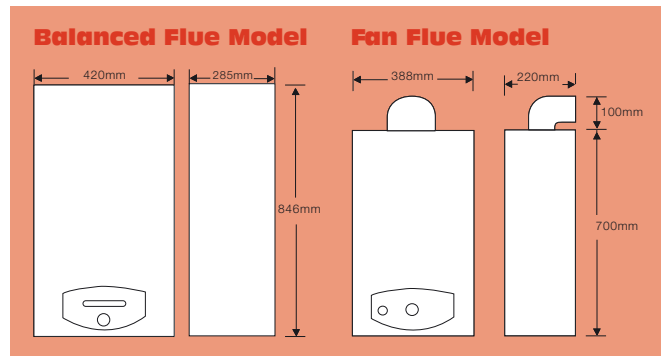
If you need to locate the heater away from an external wall, the FF model is perfect. It has a 4-metre horizontal and vertical flue option making siting easy.

The BF option comes with a Piezo Spark Igniter, meaning no batteries or wiring are needed – and both models have clear temperature controls.



### Low maintenance

The key to our success is the simplicity of our products. They do exactly what you need them to do and they do it reliably. That means you waste less time and money dealing with call backs and maintenance issues.



### Flue options - balanced flue system

Telescopic flue available in four length options to suit wall thickness from 100mm to 610mm:

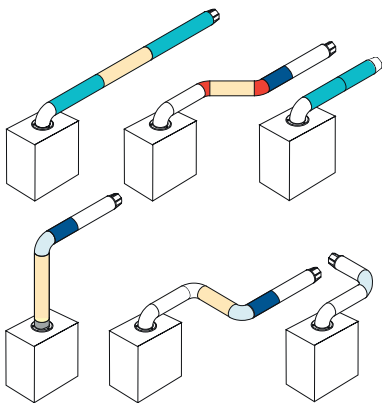
	Sales Code
Min. length 100mm (4 in.)	31/10321
Max. length 150mm (6 in.)	
Min. length 150mm (6 in.)	31/10322
Max. length 230mm (9 in.)	
Min. length 230mm (9 in.)	31/10323
Max. length 380mm (15 in.)	
Min. length 380mm (15 in.)	31/10324
Max. length 610mm (24 in.)	

The appliance may be mounted on a suitable existing terminal as above, provided the requirements of the building regulations are maintained.

# SPECIFICATIONS

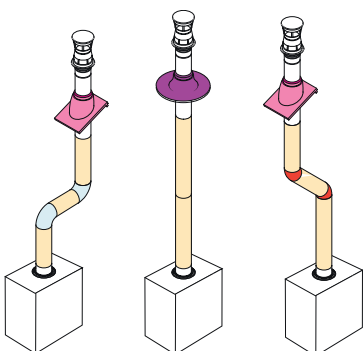
Model	Units	Balanced Flue Model	Fan Flue Model
Model name		Multipoint BF	Multipoint FF
Water heater code		5110173	5110174
Min service clearance above	mm	30mm	120mm (Includes flue elbow)
Min service clearance sides	mm	5mm	10mm
Min service clearance below	mm	75mm	50mm
Max DHW flow rate (Delta T @ 30°C max)	l/min	10.8 l/min	11.7 l/min
Max DHW flow rate (Delta T @ 35°C max)	l/min	9.3 l/min	10 l/min
Max DHW flow rate (Delta T @ 50°C max)	l/min	6.5 l/min	7 l/min
Min operating DHW pressure required	bar	0.2 bar	0.3 bar
Max DHW system pressure	bar	12 bar	12 bar
Minimum flow rate required	l/min	2.5 l/min	2.5 l/min
IP rating		N/A	IPX4D
<b>Gas</b>			
Natural gas		Yes	Yes
Heat input (net)	kW	25.5	27
Heat output to water	kW	23	23.8
<b>Electrical</b>			
Electrical connection	V	None	230 fused UK plug
<b>Mechanical &amp; Hydraulic</b>			
Gas connection pipe size	mm	15	15
Water connection pipe size	mm	15	15
<b>Flue Systems</b>			
Maximum equivalent length horizontal	mm	610	4000
Maximum equivalent length vertical	mm	N/A	4000
<b>Weight</b>			
Installer lift weight	kg	20	20

## Concentric Horizontal Flues - Water Heaters



Concentric Horizontal Flue Arrangement	Key & OD Dimension	Multifit Sales Code
Standard Horizontal Flue Kit	400mm	430183
Horizontal Flue Kit (long)	680mm	430184
Flue Extension	1000mm	B4286
90 Bend Kit		31/19034
135 Bend Kit		31/19035
Telescopic Flue Elbow Adaptor		430174
Vertical Adaptor		238014

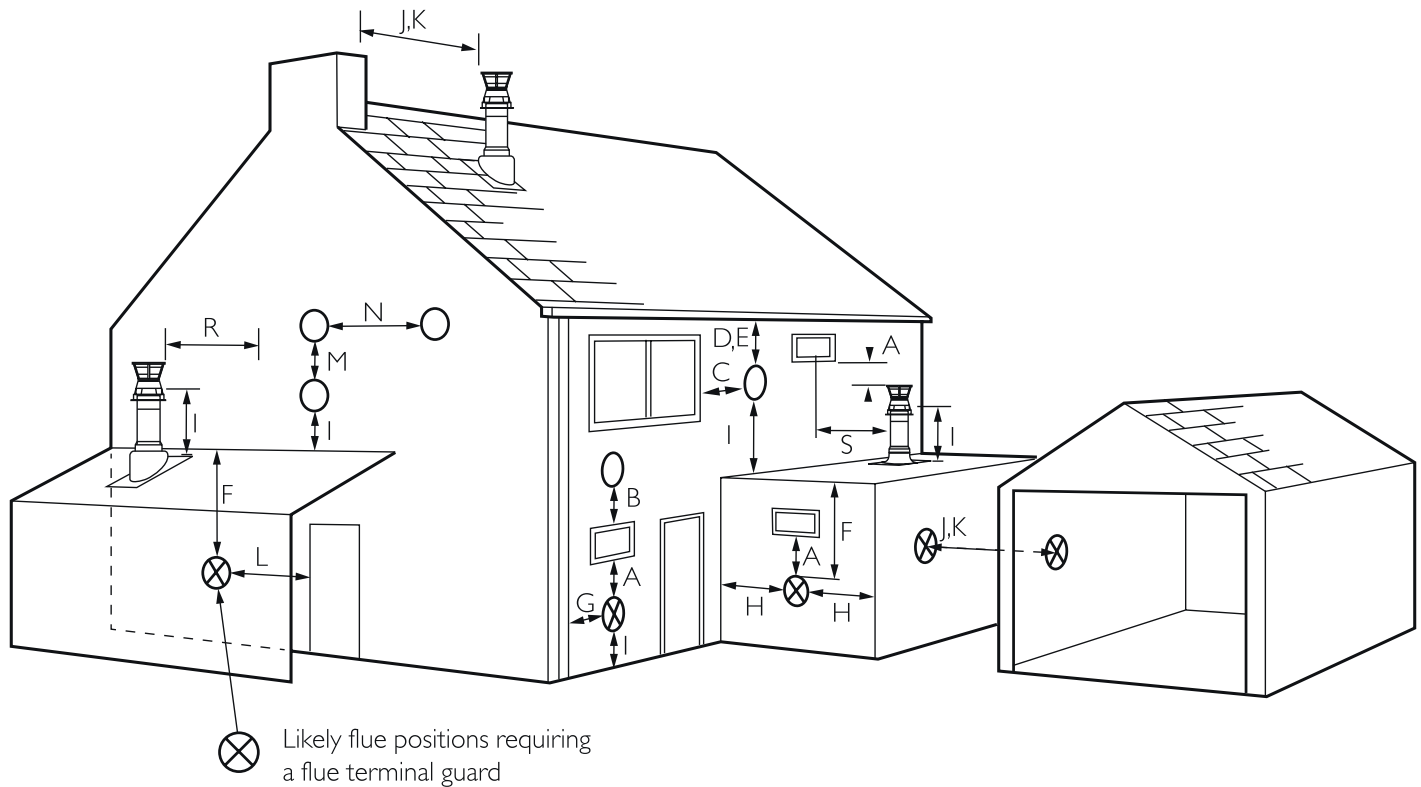
## Concentric Vertical Flues - Water Heaters



Concentric Vertical Flue Arrangement	Key & OD Dimension	Multifit Sales Code
Concentric Vertical Flue Kit		238015
Flue Extension	1000m	B4286
90 Bend Kit		31/19034
135 Bend Kit		31/19035
Flat Roof Flashing Kit		31/19040
Pitched Roof Flashing Kit		31/19041

Please refer to page 36 for flue positioning guide.

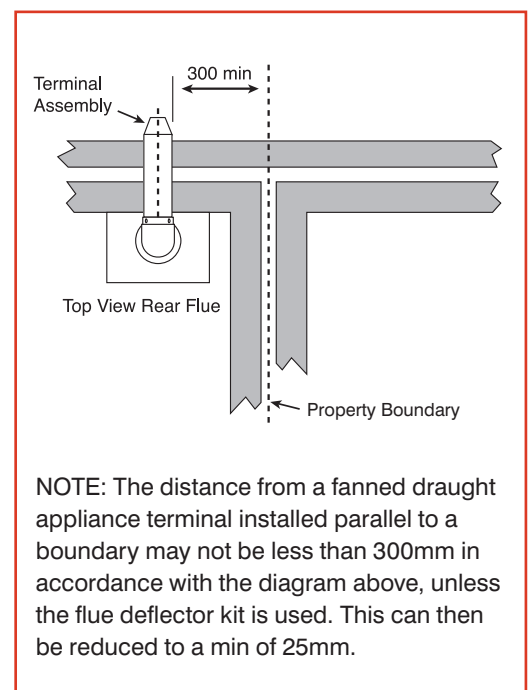
# FLUE POSITIONING GUIDE



## Terminal Position with Minimum Distance (mm)

A*	Directly below an opening, air brick, opening window etc.	300
B*	Above an opening, air brick, opening window etc.	300
C*	Horizontally to an opening, air brick, opening window etc.	300
D	Below gutters, soil pipes or drain pipes.	150
E	Below eaves.	200
F	Below balconies or carport roof.	200
G	From a vertical drain pipe or soil pipe.	150
H	From an internal (i) or external (ii) corner.	300
I	Above ground, roof or balcony level.	300
J	From a surface or boundary line facing a terminal.	600
K	From a terminal facing a terminal (horizontal flue).	1200
	From a terminal facing a terminal (vertical flue).	600
L	From an opening in carport (e.g. door, window) into the dwelling.	1200
M	Vertically from a terminal on the same wall.	1500
N	Horizontally from a terminal on the same wall.	300
R	From adjacent wall to flue (vertical only).	300
S	From an adjacent opening window (vertical only).	1000

\*In addition, the terminal should be no nearer than 150mm to an opening in the building fabric formed for the purpose of accommodating a built-in element such as a window frame. See BS 5440 Pt1.



**Reduced clearances:** This range of boilers has been tested and approved for use with certain clearances less than those shown.  
 = Horizontal flues in positions D, E, F, G & H(i) may be reduced to 25mm. H(ii) may only be reduced to 115mm.  
**Only one of these reductions may be used on a single installation.**

# OPTIONAL ACCESSORIES

	Item Description (MULTIFIT)	Multifit Sales Code
	<p><b>Integral Electronic Timer</b></p> <p>An electronic 7 day timer with a digital LCD display, offering selection of multiple on/off switching operations over a 7 day period for maximum versatility. Also features an advanced switch programme.</p>	247207
	<p><b>Integral Electro Mechanical Time Clock</b></p> <p>An electro-mechanical 24 hour timer offering selection of constantly on, constantly off or timed operation, with switching possible at 15 minute intervals using tappets set around an analogue clock for the utmost simplicity.</p>	247206
	<p><b>Wireless (RF) Electro Mechanical Room Thermostat</b></p> <p>A wireless programmable room thermostat which neatly minimizes problems of compliance with Building Regulations Part L (Energy Conservation) &amp; Part P (Electrical Safety). As simple to fit as it is to use.</p>	5117393
	<p><b>Wireless Electronic Digital Room Thermostat</b></p> <p>A 7 day programmable wall mounted room thermostat that incorporates a large blue back lit display and a simple mode selection knob for ease of use.</p>	720030701
	<p><b>Filling Loop Kit</b></p>	248221
	<p><b>Stand Off Bracket</b> (combi and system boilers)</p>	5117035
	<p><b>Stand Off Bracket (heat only boilers)</b></p>	5113380

# THE MAIN

## REASSURING BACK-UP



**TOP  
50**  
CALL CENTRES  
FOR CUSTOMER  
SERVICE  
**2010**

# heateam

**0844 871 1570**  
**www.heateam.co.uk**

With call service support available 7 days a week, 363 days a year, **heateam** offers quick and effective servicing and maintenance support through over 280 highly trained heating experts across the country.

The Main trade technical helpline offers a range of free services to Main installers:

- In-warranty support
- Help with installation problems
- Boiler selection advice
- Fault-finding assistance
- Flue queries

**heateam** achieved seventh place in the 2010 Top 50 Call Centre for Customer Service following the UK's biggest ever call centre benchmarking exercise.

The study was conducted by independent Market Research Company GfK Mystery Shopping and represents the largest ever mystery shopping exercise in the call centre industry. Over 18,500 mystery shopper enquiries were made to over fifty call centres participating in the Top 50 Call Centre for Customer Service Programme. Calls were scored according to five customer service categories: timeliness, ease of use, reliability, knowledgeable staff and personalised service.

**heateam** has been given this award for the last two years showing on-going commitment to providing top class service to all its customers.





# WARRANTY

## Main: Giving you extra

### Boilers

All Main boilers come with a 12 months parts and labour warranty.

However as a Main installer you can register your customers' Main Band A boilers (Main Combi Eco, Main System Eco and Main HE A) for a 2-year parts and labour warranty.

You'll need to be Gas Safe Registered - and the rest is simple.

Inside the box of the boiler you'll find a warranty card, remove this and go to [www.mainextra.com](http://www.mainextra.com) and click on 'register 2-year warranty'. Fill in the form and click 'submit', and it's job done.

You've got 30 days from installation to claim your warranty - so you've plenty of time to benefit from the peace of mind our warranty brings.

### Cylinders

On site service support including parts and labour for 12 months from date of installation. After an initial 12 months, a parts only guarantee will apply for a further 25 years on the stainless steel inner vessel.

Subject to registration and the replacement being carried out by one of our **heateam** engineers, for which reasonable labour charges will apply.

### Solar

Our brand new on-roof solar panels come with a 10 year warranty too so no matter what the product, it's peace of mind!

# EXPERT TRAINING

As well as superb support and technical advice, Main gives you access to the very latest training on all our products.

The courses are run by qualified instructors and cover everything from installation and commissioning to servicing and diagnostics – as well as current legislation, building regulations, energy efficiency, electronics, combi boilers, system design and condensing theory.

In short, you'll learn everything you need to install every product in the Main range successfully and profitably.

Training is available at any of our dedicated centres across the country:

- Cardiff • Coalville • Dartford • Eastleigh
- Glasgow • Liskeard • Peterlee
- Stockton-on-Tees • Warrington • Warwick

To book your place on a Main training course call: **0845 600 7402**



Benchmark places responsibilities on both manufacturers and installers. The purpose is to ensure that customers are provided with the correct equipment for their needs, that it is installed, commissioned and serviced in accordance with the manufacturer's instructions by competent persons and that it meets the requirements of the appropriate Building Regulations. The Benchmark Checklist can be used to demonstrate compliance with Building Regulations and should be provided to the customer for future reference. Installers are required to carry out installation, commissioning and servicing work in accordance with the Benchmark Code of Practice which is available from the Heating and Hot water Industry Council who manage and promote the Scheme.

Visit [www.centralheating.co.uk](http://www.centralheating.co.uk) for more information.

## Contacts

All enquiries

Tel: 0844 871 1570

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Please note – calls to the service centre may be recorded or monitored.

### Main

Brooks House, Coventry Road, Warwick CV34 4LL.

Website: [www.mainheating.co.uk](http://www.mainheating.co.uk)

[twitter.com/mainheating](https://twitter.com/mainheating)

[facebook.com/mainheating](https://facebook.com/mainheating)

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M/Range 08/10/V1

# MAIN