

# MICROGENUS HE

WALL-HUNG HIGH EFFICIENCY GAS COMBINATION BOILER



**minimum space**  
**HIGH EFFICIENCY**





# Compact, performance and reliability?



## Ariston in the UK

Ariston is one of the main brands of the MTS Group, worldwide leaders in the production of central heating and hot water production appliances. Ariston (meaning the best, in Greek) was established in 1960; over the decades that have followed, the name has been given to a variety of domestic appliances. Ariston products are dedicated to design, simplicity and elegance enhancing and home comfort. Wider environmental concerns and green issues are addressed by research and development that continue to offer the most ecologically advanced products and services available. All Ariston products and production facilities are covered by a 'European corporate certificate' that certifies quality control procedures in line with ISO 9001 giving consumers peace of mind. The product portfolio covers domestic gas boilers, unvented cylinders and water heaters. The famous Ariston brand has a powerful market presence through an extensive network of builders and plumber merchants throughout the UK and Ireland.

## What are high efficiency boilers?

A *high efficiency* boiler (also known as condensing) always extracts more heat from the combustion process and does not waste heat through the flue when compared to a standard efficiency (also known as non-condensing) boiler. A high efficiency boiler produces the same amount of heat output whilst burning less fuel and therefore creating less greenhouse emissions.

High efficiency boilers burn gas in a traditional manner, but rather than losing energy in the form of high temperature gases from the flue, they recover that useful heat through the use of an enlarged primary heat exchanger or an additional heat exchanger. The extra surface area of the heat exchanger allows more heat to be extracted from the combustion process for the same amount of fuel that is used by a standard efficiency boiler. The system does not need to be designed to condense all the time to achieve improved efficiency;

therefore it requires less fuel to apply the same amount of heat to the system when using a high efficiency boiler rather than a standard efficiency boiler. A high efficiency boiler is always saving on gas, money and reducing CO<sub>2</sub> emissions.

Legislation that will make the installation of high efficiency boilers compulsory in the majority of cases from April 2005 in order to reduce CO<sub>2</sub> emissions throughout the UK has been introduced. CO<sub>2</sub> is the major cause of global warming, adding to the greenhouse effect that is produced by burning fossil fuel. A central heating and hot water system in a typical household using a standard efficiency boiler will produce around 5 tonnes of CO<sub>2</sub> a year. A high efficiency boiler's typical production of CO<sub>2</sub> given the same factors is around 3 tonnes a year.



**Ariston works  
to Benchmark standards**



**Energy Efficiency Recommended is an Energy Saving Trust initiative backed by the government. The logo is only found on products that have been carefully selected for their energy efficiency. Buy where you see the sign and help save energy, money and the environment.**



## microGENUS HE is the answer.



- Domestic hot water (D.H.W.) temperature regulation knob
- Central heating (C.H.) selector and temperature regulation knob
- Economy/Comfort mode selector
- Boiler reset button
- Boiler ON/OFF selector knob
- Display for:
  - Auto-diagnostics
  - Temperature
  - Heating function
  - Lock-out
  - Holiday mode

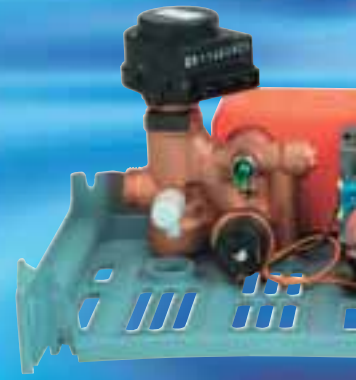
### microGENUS HE the user benefits

- 2-year guarantee – extendable up to 5 years
- Energy Efficiency Recommended – saving fuel and money
- Simple to use controls – instant display of operational status
- Compact, space saving design
- Hot water on demand – flow rates of up to 12.5 l/min
- Comfort switch – pre-heat function guarantees hot water within seconds
- Easy-to-use mechanical time clock for central heating

### Reliable technology – **microGENUS** withstands the test of time

When the **microGENUS** range was first introduced it heralded a new era in central heating boilers. The **microGENUS** was designed not only to be compact and offer high levels of comfort but also was launched with a 2-year guarantee. This parts and labour guarantee was not intended to be a gimmick but a true commitment to the level of quality and longevity incorporated in to the boiler. It is said that 'time will tell' and this was certainly true for the **microGENUS** as now it is one of the UK's best selling gas boilers and has scored favourably not only in terms of popularity but more importantly in reliability.

But what happens when the 2-year guarantee is over? Simple, Ariston also offers a unique scheme that means the guarantee can be extended at the time of installation to 5 years in total and then annually for the life of the boiler; so simply **microGENUS** offers total peace-of-mind.



## microGENUS HE from Ariston.



### microGENUS HE the installer benefits

- 2-year guarantee
- SEDBUK Band B – complies with latest regulations
- D.H.W. flow rates of up to 12.5 l/min
- Quick and easy installation
- Built-in mechanical time clock
- Filling-loop as standard
- Multiple flueing options – maximum siting flexibility

## 10 reasons to choose microGENUS HE

Meets the latest requirements for High Efficiency boilers

Three outputs to suit most situations

2



3



4



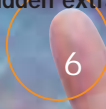
Needs just one extra connection

5



All inclusive package – no hidden extras

6



Complete selection of accessories available

7



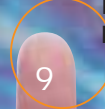
Self-diagnostics

8



First-class back-up service

9



Brilliant guarantee with flexible options for extending cover

10



Compact and light-weight

1





# Reassuringly Familiar.

## microGENUS HE – High Efficiency with a familiar face



**microGENUS HE** is SEDBUK Band B rated, it achieves this level of efficiency by incorporating an additional latent heat exchanger or recuperator, which significantly increases efficiency by extracting heat from the flue gases. The recuperator takes this heat, which is normally lost through the boiler flue, and uses this energy to pre-heat the boiler primary circuit water before it enters the main heat exchanger. This energy is usually wasted in standard efficiency boilers. The benefit of this is that it is based on existing technology and offers the installer a known boiler layout whilst meeting the requirement of the latest regulatory changes.

**microGENUS HE** of course offers all the benefits of the **microGENUS** range such as compact dimensions, built-in time clock, anti-frost device, by-pass and filling-loop as standard plus a myriad of flue and standard accessories making it one of the most flexible and popular combi boilers available. In addition to the shared features above **microGENUS HE** also features a condensate trap that is accessible from the outside of the boiler casing, thus eliminating the need for any disassembling for periodical maintenance. **microGENUS HE** is simply the perfect solution for both the end-user and installer alike.



## WALL-HUNG HIGH EFFICIENCY GAS COMBI BOILER ROOM SEALED COMBUSTION CHAMBER



- SEDBUK Band B - complies with latest Building Regulations
- Compact dimensions (700x400x315 mm)
- Available in 3 outputs of 23.3 kW - 79,500 Btu/h, 27.0 kW - 92,100 Btu/h or 30.5 kW - 104,000 Btu/h
- Fully modulating in C.H./D.H.W. with an accuracy to  $\pm 1^\circ\text{C}$
- Auto-diagnostic system
- Comfort switch (pre-heat function) guaranteeing hot water at the outlet in seconds
- High D.H.W. flow rates up to 12.5 l/min (2.8 gal/min) (30.5 kW - 104,000 Btu/h)
- Anti-frost device
- Anti-scale device
- Anti seizing device for the pump
- Built-in automatic by-pass
- Built-in mechanical time clock
- Built-in condensate trap accessible from outside of boiler casing.
- Coaxial flue system up to 4 m, twin pipe flue system up to 40 m
- Split exhaust and intake pipes for built-in combustion analysis
- Optional outdoor sensor: regulates the heating temperature automatically
- D.H.W. stainless steel plate heat exchanger guaranteed for 5 years
- **2 year manufacturer's guarantee**
- **Guarantee extendable up to 5 years**



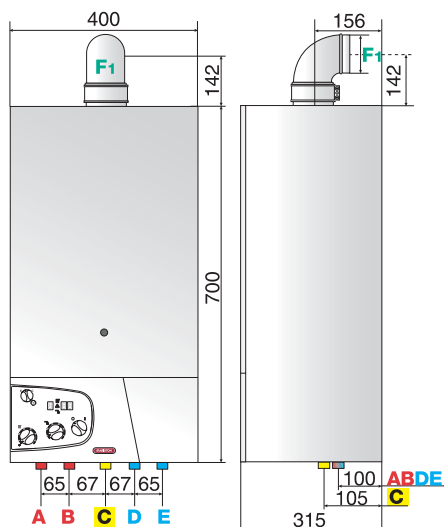
This product has an energy rating of **A** on a scale of **A-G** for more information see [www.SEDBUK.com](http://www.SEDBUK.com)

P.C.B. with microprocessor	Automatic by-pass	Highly Efficient	Low NOx	Electronic ignition	Fully modulating	C.H. Temp. adjustment	D.H.W. temp. adjustment
Insufficient system pressure shutdown	Combustion analysis device	Anti-frost device	IP24D	Anti-scale device	D.H.W. plate heat exchanger	Integral auto-diagnostics	Outdoor sensor (optional)

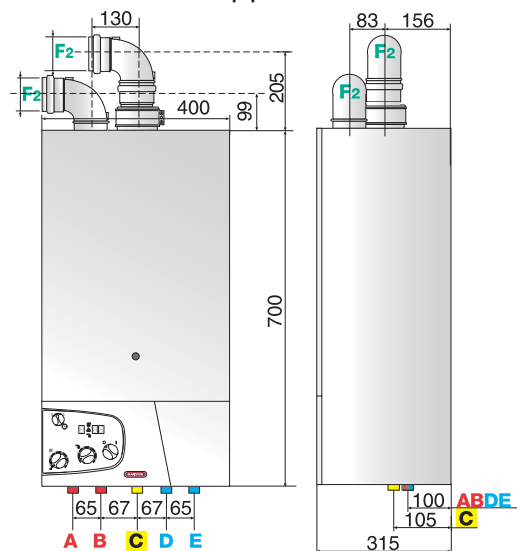
### CLEARANCE DIMENSIONS - PIPE FITTINGS - EXHAUST OUTLETS

	<b>A</b> Central heating flow	<b>B</b> Domestic hot water outlet	<b>C</b> Gas inlet	<b>D</b> Domestic hot water inlet	<b>E</b> Central heating return	<b>F</b> Flue (Ø mm)
MICROGENUS HE 24 MFFI	22mm copper tail	15mm copper tail	15mm copper tail	15mm copper tail	22mm copper tail	<b>F1</b> 60/100, 80/125 <b>F2</b> 80
MICROGENUS HE 28 MFFI	22mm copper tail	15mm copper tail	15mm copper tail	15mm copper tail	22mm copper tail	<b>F1</b> 60/100, 80/125 <b>F2</b> 80
MICROGENUS HE 32 MFFI	22mm copper tail	15mm copper tail	15mm copper tail	15mm copper tail	22mm copper tail	<b>F1</b> 60/100, 80/125 <b>F2</b> 80

Coaxial exhaust



Twin pipe exhaust

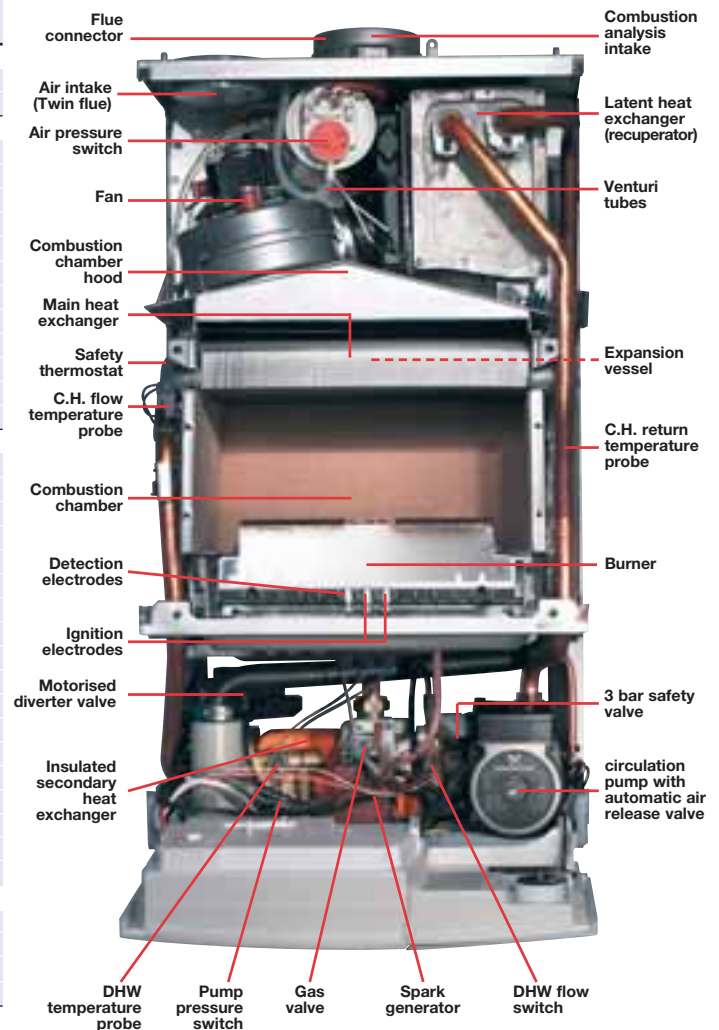


## TECHNICAL DATA

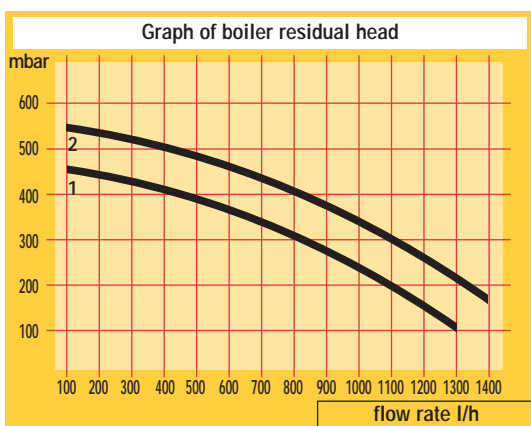
		24 MFFI	28 MFFI	32 MFFI
<b>EFFICIENCY</b>				
SEDBUK rating	band	B	B	B
SAP efficiency	%	TBC	TBC	TBC
<b>POWER &amp; PERFORMANCE</b>				
Heat input min. (net)	kW-Btu/h	12.2-41,600	13.3-45,400	13.3-45,400
Heat input max. (net)	kW-Btu/h	26.7-91,100	31.1-106,100	35.0-119,400
Heat output min.	kW-Btu/h	10.4-35,500	11.4-38,900	11.3-38,600
Heat output max.	kW-Btu/h	23.3-79,500	27.0-92,100	30.5-104,000
Central heating temp. max. (high temp.)	°C	82	82	82
Central heating temp. min. (high temp.)	°C	42	42	42
Central heating temp. max. (low temp.)	°C	44	44	44
Central heating temp. min. (low temp.)	°C	38	38	38
D.H.W. temperature maximum	°C	56	56	56
D.H.W. temperature minimum	°C	36	36	36
D.H.W. flow rate ΔT =35°C	l/min	9.5	11.0	12.5
D.H.W. flow rate ΔT =35°C	gal/min	2.1	2.4	2.8
<b>CHARACTERISTICS</b>				
Consumption at nominal capacity G20 <sup>1)</sup>	m <sup>3</sup> /h	2.54	2.98	3.33
Exhaust gas temperature at nominal capacity	°C	72	65	64.5
Minimum ambient temperature	°C	5	5	5
Pressure loss through boiler (max) (ΔT=20°C)	mbar	200	200	200
Residual head of system	bar	0.25	0.25	0.25
D.H.W. minimum flow rate	l/min	2.5	2.5	2.5
Domestic hot water pressure maximum	bar	6	6	6
Domestic hot water pressure minimum	bar	0.2	0.2	0.2
Built-in expansion vessel capacity	l	7	7	7
Built-in expansion vessel pre-charged vessel	bar	0.7	0.7	0.7
Maximum water content of system	l	130	130	130
Maximum heating pressure	bar	3	3	3
Gas inlet pressure - Natural Gas (G20)	mbar	20	20	20
Servicing clearances - top/front/bottom	mm	250/450/200	250/450/200	250/450/200
Servicing clearances - left/right	mm	35/35	35/35	35/35
Zero compartment ventilation		Yes	Yes	Yes
Weight	kg	37	38	39
G.C. number		47-116-37	47-116-38	47-116-39
<b>ELECTRICAL DATA</b>				
Electrical supply	V/Hz	230/50	230/50	230/50
Power consumption	W	120	140	165
Protection grade of electrical system	IP	X4D	X4D	X4D
Internal fuse rating		FAST 2 AT	FAST 2 AT	FAST 2 AT

<sup>1)</sup>15°C, 1013 mbar

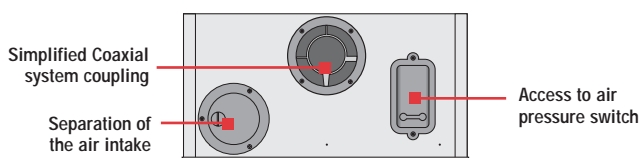
## MICROGENUS HE 32 MFFI



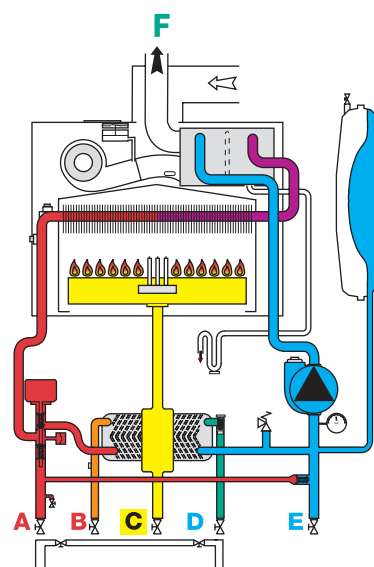
## SCHEMATIC



1 - 24 kW model  
2 - 28 & 31 kW models



### ROOM-SEALED FAN FLUE 24 MFFI - 28MFFI - 32 MFFI



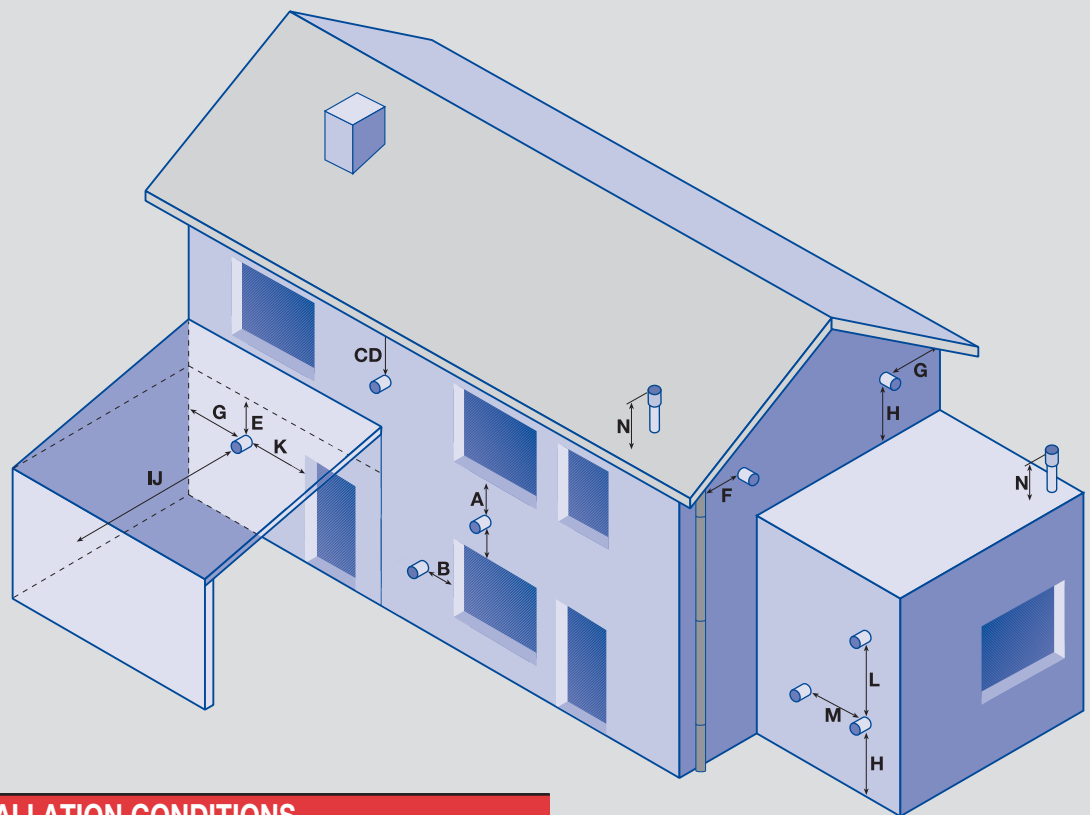


# FLUE PIPE ACCESSORIES - EASY INSTALLATION WITH UNRIVALED FLEXIBILITY

Ariston boilers are designed to be completely adaptable to every possible flue situation that may be encountered in boiler installation.

The need for alteration to flue components is almost completely eliminated, making installation of the boiler quick and easy.

It is possible to site flue terminals in a variety of positions in accordance with BS5440-1:2000.



## INSTALLATION CONDITIONS

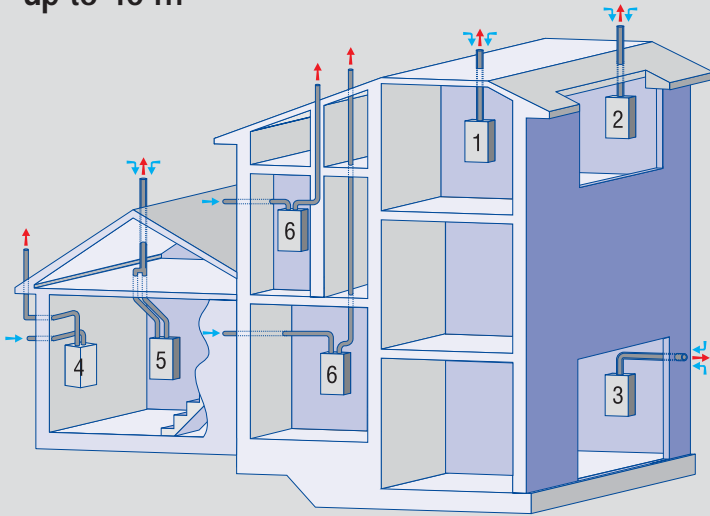
<i>TERMINAL POSITION</i>	<i>mm</i>
A Directly above/below an opening, air brick, opening windows, etc	300
B Horizontally to an opening, air brick, opening windows, etc	300
C Below gutters, soil pipes or drain pipes	75
D Below eaves	200
E Below balconies or car port roof	200
F From vertical drain or soil pipe	150
G From an internal or external corner	300
H Above ground roof or balcony level	300
I From a surface facing the terminal	600
J From a terminal facing the terminal	1200
K From an opening in the car port (e.g. door, window) into the dwelling	1200
L Vertically from a terminal on the same wall	1500
M Horizontally from a terminal in the same wall	300
N Fixed by use of terminal and matched flashing plate	-



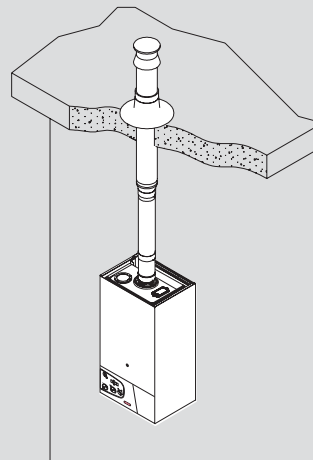
Coaxial system:  
up to 4 m (60/100) - (80/125) TBC



Twin pipe system  
up to 40 m

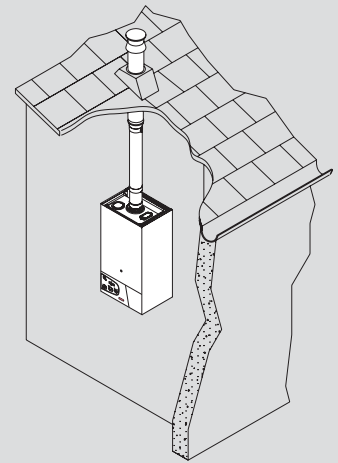


**TYPE 1 Coaxial System**



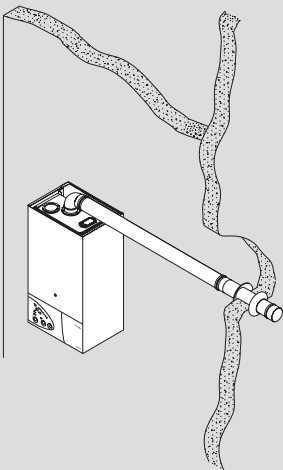
Vertical installation with coaxial piping on a flat roof.

**TYPE 2 Coaxial System**



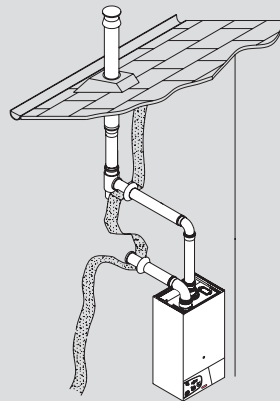
Vertical installation with coaxial piping on a pitched roof.

**TYPE 3 Coaxial System**



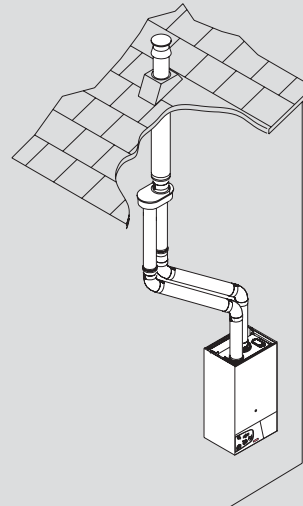
Horizontal installation with coaxial piping.

**TYPE 4 Twin pipe system**



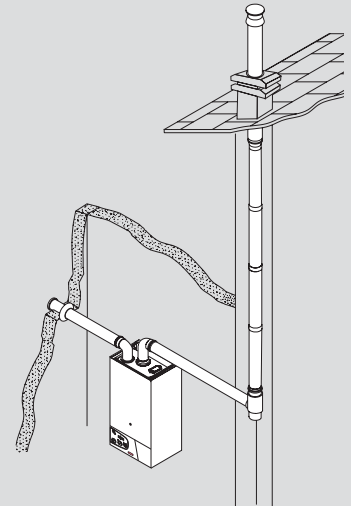
Installation with two separate pipes - exhaust on a pitched roof, air inlet through a wall.

**TYPE 5 Twin pipe system**



Installation with two separate pipes - exhaust and air inlet on a pitched roof via a coaxial adaptor.

**TYPE 6 Twin pipe system**



Installation with two separate pipes - exhaust via flue duct, air inlet through a wall.

**COAXIAL FLUE ACCESSORIES**

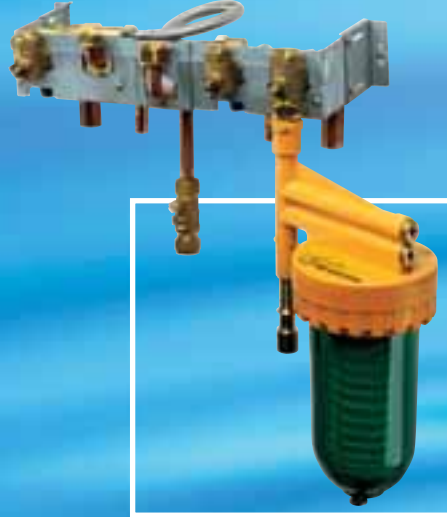
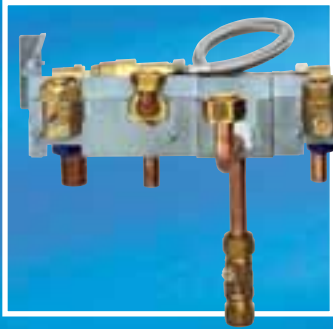
OUR REF.	DESCRIPTION
<b>COAXIAL 60/100</b>	
3318073	Horizontal coaxial kit - 1000mm
3318074	Horizontal coaxial kit
3318075	90° Coaxial Elbow
3318076	45° Coaxial Elbow (pack of 2)
3318077	Coaxial Extension - 1000mm
3318078	Coaxial Extension - 500mm
3318079	Vertical starter
3318080	Vertical flue with black terminal
3318081	Vertical flue with red terminal
<b>COAXIAL 80/125</b>	
3318090	Horizontal coaxial kit + adaptor 80/125
3318091	90° Coaxial Elbow 80/125
3318092	45° Coaxial Elbow 80/125
3318093	Coaxial Extension 80/125 - 1000mm
3318094	Coaxial Extension 80/125 - 500mm
3318095	Adaptor 60/100-80/125

**TWIN PIPE FLUE ACCESSORIES**

OUR REF.	DESCRIPTION
<b>TWIN PIPE</b>	
3318082	Adaptor (Ø 60/80)
3318083	Horizontal twin pipe systems
3318084	90° MF Elbow (Ø 80)
3318085	45° MF Elbow (Ø80) (pack of 2)
3318086	Extension (Ø 80) - 1000mm
3318087	Extension (Ø 80) - 500mm
3318088	Adaptor 80/125 - 80
3318089	Adaptor 80/125 - 80+80
<b>SUNDRY ITEMS</b>	
3318009/3318010	Lead Flashing Base Cap Black/Red
3318011/3318012	Vent Cap Base for Flat Roof Black/Red
3318015	Wall Bracket Kit (Ø 80 - Ø 125)



# ACCESSORIES AND SPARE PARTS ENGINEERED FOR PERFECT INSTALLATION



## **JIG-KIT** (Supplied within the boiler as standard)

The jig-kit makes installation easier because it allows you to fill the system even without the boiler fitted. It is equipped with 4 isolation valves: 2 for the heating circuit, 1 for the domestic water system and one for the gas.

The system return isolation valve can be connected to the system cleaner using the cap provided. The bracket that holds the valves can be positioned in two ways depending on whether installation is with or without the rear-piping chassis, and allows small adjustments for irregular walls.

The kit is supplied with:

- double non-return valves on the filling loop for filling the system.
- Copper tail pipes to ease soldering to the system piping.

## **SYSTEM CLEANER - 705998**

A practical accessory for cleaning the heating system.

It is simple to use: connect the system cleaner to the system return isolation valve, open the system return isolation valve, switch on the boiler, allow the pump to run for the necessary time then remove the system cleaner from the kit.

The filter provided is made up of a removable cartridge which absorbs any impurities in the system. This allows the flushing of a new heating system without the impurities damaging the boiler components.

The system cleaner can also be used to add chemical additives such as cleansers and inhibitors.

## **REAR-PIPING CHASSIS - 706190**

Allows easy installation in situations where the system pipes are required to run up the rear of the boiler.

The rear-piping chassis consists of a bracket on which the boiler is hung, this has two flanks that extend the side panel of the boiler chassis. Assemble by just bringing forward the valve kit and connecting the pipes.

The rear-piping chassis kit includes the pipe work elements for connection to the system.



### **ANTI-THEFT DEVICE - 705982**

Protects the boiler from theft and can be assembled in two ways: with or without the rear-piping chassis. The simple assembly instructions are included in the jig-kit and on the anti-theft device itself.

### **LPG CONVERSION KIT - 998717 (Not illustrated)**

This kit enables the conversion of a standard Natural Gas version of the **microGENUS HE** to be used with LPG. The kit includes burner injectors and gas type identification label.

### **JIG-KIT COVER - 706346**

To conceal the pipe-work or jig-kit below the boiler a specially designed cover is available. The cover is simply and easily mounted to the bottom of the boiler.

### **DIGITAL TIME CLOCK - 706348**

The addition of a 7 day digital time clock allows the user to program the central heating to operate in conjunction with their lifestyle and weekly routine. It is possible to set the boiler to turn on and off up to 20 preset times during the week: allowing users to differentiate setting between weekdays and the weekend for example. It is also possible to override the automatic settings and operate the boiler manually at any time.

### **OUTDOOR SENSOR - 3318059 (An optional accessory to optimise comfort and efficiency)**

The **microGENUS HE** outdoor temperature sensor kit can increase both comfort and energy efficiency. The sensor and interface PCB works in conjunction with the advanced microprocessor to monitor outside temperatures and conditions assessing the thermal power requirements. Increasing power when cold, decreasing power when warmer therefore increasing overall system efficiency.

# ARISTON QUALITY PRODUCTS EXCEPTIONAL SERVICE



 **0870 241 8180**  
technical advice

 **0870 600 9888**  
customer service

## REGIONAL TRAINING CENTRES

- Plymouth
- High Wycombe
- Gt. Manchester



## COMPREHENSIVE TRAINING

Training courses are available across the entire Ariston range including all the necessary theory and practical aspects. The courses are open to any CORGI Registered installer or engineer at fully equipped training centres in High Wycombe, Plymouth and Golbourne (near Wigan) and other venues up and down the country. The courses on offer include boiler installation, maintenance and servicing and unvented domestic hot water systems.

## TECHNICAL ADVICE

Immediate and effective technical assistance is only a phone call away. Including advice as to which product is most suited to your needs and the requirements of your system installation. Our skilled team is also trained to talk you through the trickiest problems that might crop up during an installation and answer the most obscure technical questions you could possibly think of.

for the latest product info visit:  
<http://www.ariston.co.uk>

## CUSTOMER SERVICE

Ariston offers unrivalled customer service; in the unlikely event of a problem with an Ariston appliance all of our Customer Services team are trained to deal with any situation swiftly and to offer advice where possible. Should it be necessary for an engineer to call a specially trained technician will soon be on hand, prepared for most eventualities.



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