

ACO

WALL-HUNG HIGH EFFICIENCY (CONDENSING) GAS BOILERS



5 FREE 5
YEAR
GUARANTEE



**SETTING NEW STANDARDS
IN HIGH EFFICIENCY**





The BEST Choice.



Ariston in the UK

Ariston is the main brand 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, elegance and enhancing home comfort. Wider environmental concerns and green issues are addressed by research and development that continue to offer the most advanced 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 plumbers merchants through out 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) boilers. 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 CO₂ emissions.

Legislation that will make the installation of high efficiency boilers compulsory in the majority of cases from April 2005 in order to reduce CO₂ emissions throughout the UK has been introduced. CO₂ 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 CO₂ a year. A high efficiency boiler's typical production of CO₂ 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.



ACO = home comfort with confidence

ACO the user benefits

- 5 year guarantee
- Energy efficient – saving fuel and money
- Simple to use controls – instant display of operational status
- Stylish design – looks good anywhere
- Compact, space saving design
- Lots of hot water – Brilliant D.H.W flow rates of up to 14.3 l/min
- Built in mechanical time clock
- Comfort switch (pre-heat function) guarantees hot water within 5 seconds



5 year guarantee offers peace of mind

To enable Ariston to offer a free 5 year guarantee with the **ACO** boiler range there are a few simple conditions. The boiler must be installed and serviced annually by a competent installer (i.e. CORGI registered). The installer must also complete the detailed installation log / guarantee registration card (which enables the minimum one year guarantee) and inform the homeowner of the annual service requirement.

Ariston will issue an annual service reminder to the homeowner when a service is due. It is the responsibility of the homeowner to arrange and pay for the service and to ensure the service engineer completes the service log sheet provided by Ariston. This enables the FREE guarantee to be extended for one more year (up to a maximum of five years). After the full free 5 year guarantee is completed satisfactorily, the homeowner may wish to purchase further cover year-by-year with Ariston's existing insurance-backed scheme to protect the boiler for the rest of its life.



ACO from Ariston is the answer.

ACO making change easy

The Domestic Heating Industry faces its biggest challenge since the introduction of Natural Gas with the impending changes to the Building Regulations. The amendment to Part L of the Building Regulations in 2005 will set higher standards for energy efficiency in homes and will drive the boiler market to SEDBUK Band A and B boilers. The new **ACO** boiler from Ariston is the most value packed and easiest-to-install Band A boiler in the UK. The **ACO** boiler is not a knee jerk reaction to the impending revision to regulations but is the result of over 3 years research and development combined with Ariston's 50 years or more experience of producing gas appliances. The confidence Ariston has in this new product is reflected by the fact that an inclusive 5 year guarantee is offered.

The **ACO** combi boiler comes in three model sizes 27kW, 32kW and 35kW. At just 750 x 450 x 280mm (27 & 32kW models) **ACO** combi weighs in as little as 39kg for easy lifting. D.H.W production is impressive across the entire range. The 27kW model produces 10.8 l/min at a 35°C rise, whilst the 32kW and 35kW **ACO** combi models produce 13.1 l/min and 14.3 l/min respectively.

The Band A **ACO** system boiler comes complete with all the technological benefits of the **ACO** combi, but is designed for connection to any indirect hot water cylinder (ideally Ariston unvented) and comes factory fitted with all system components, including pump, expansion vessel and by-pass.



ACO the installer benefits

- 5 year guarantee
- SEDBUK Band A - Energy efficient
- High outputs for both combi and system
- ACO Combi - D.H.W flow rates of up to 14.3 l/min
- Quick and easy installation
- Installation made easier with Ariston system cleaner
- Compact and light weight – install in the tightest spaces
- Multiple flueing options – maximum siting flexibility
- Combustion analysis device
- Built in mechanical time clock





Advanced yet simple.

ACO making installation easy

ACO is compact and easy to install with plenty of hand and tool room and easy access to all connections from the front. This all-new high efficiency boiler has a comprehensive specification including electronic ignition, automatic by-pass, anti-scale, anti-frost device and self-diagnostics sequence. Ariston's standard water and gas connections jig-kit is supplied as standard with the **ACO** combi (along with a filling loop) – this means that the new **ACO** combi can be fitted as a replacement for an older Ariston combi on its existing jig-kit.

ACO boasts the very latest in technology. A bespoke PCB, designed and produced in-house by Ariston, allows true flexibility of boiler function. Two dry NTC probes enable maximum energy efficiency by monitoring flow and return temperatures, and the boiler's functions are automatically set to ensure the return temperature is kept at an optimum 55°C. At the heart of the boiler is a new aluminium-silicon primary heat exchanger, produced using the most advanced automotive technology, has been designed for long life. And **ACO** is designed from the outset to be compatible with Ariston's futuristic remote diagnostics package, currently under development, that could change the way boiler servicing is carried out.





WALL-HUNG HIGH EFFICIENCY GAS COMBINATION BOILER

- The first UK boiler with a **FREE 5 Year Guarantee**
- SEDBUK Band A
- Available in three outputs of 27, 32 and 35 kW (35kW model available early 2005)
- Brilliant hot water flow rates
- Compact Dimensions 750x450x280 mm
- D.H.W with accuracy to $\pm 1^\circ\text{C}$
- Comfort switch (pre-heat function) guaranteeing hot water to the outlet in less than 5 seconds (depending upon installation)
- Auto-diagnostic system and integrated advanced controls built in to advanced PCB with microprocessor
- Simple maintenance with easy access all from the front of appliance
- Two speed modulating pump: decreases noise and increases efficiency
- Anti-frost device
- Anti-scale device
- Anti seizing device for the pump
- Built in automatic by-pass
- Built in mechanical time clock
- Multiple flueing options: up to 4m coaxial and 40 m twin pipe
- Split exhaust and intake pipes for built-in combustion analysis
- Includes jig-kit and filling loop
- Optional outdoor sensor: regulated heating temperature automatically increasing efficiency
- **Guarantee extendable year on year for life of boiler after first FREE 5 years**



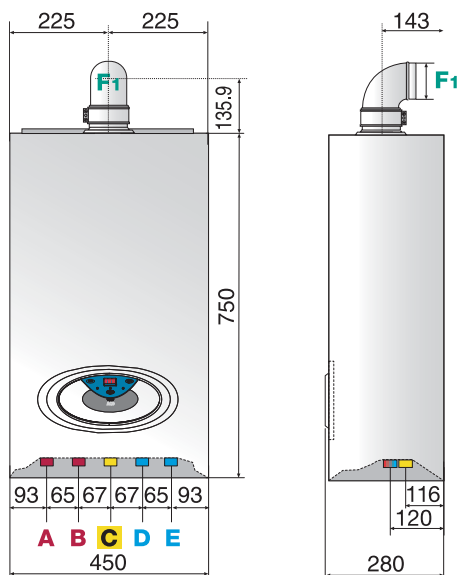
This product has an energy rating of **A** on a scale of **A-G** for more information see www.SEDBUK.com

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)

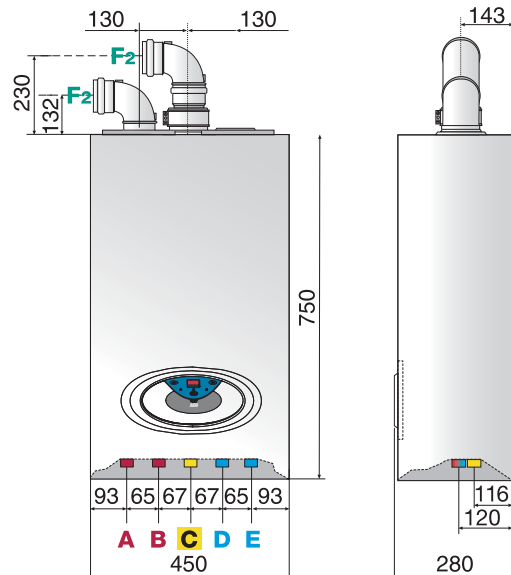
DIMENSIONS – PIPE FITTINGS – EXHAUST OUTLETS

	A Central heating flow	B Domestic hot water outlet	C Gas inlet	D Domestic hot water inlet	E Central heating return	F Flue (Ø mm)
ACO COMBI 27 MFFI	22mm copper tail	15mm copper tail	15mm copper tail	15mm copper tail	22mm copper tail	F1 60/100, 80/125 F2 80
ACO COMBI 32 MFFI	22mm copper tail	15mm copper tail	15mm copper tail	15mm copper tail	22mm copper tail	F1 60/100, 80/125 F2 80

Coaxial exhaust



Twin pipe exhaust

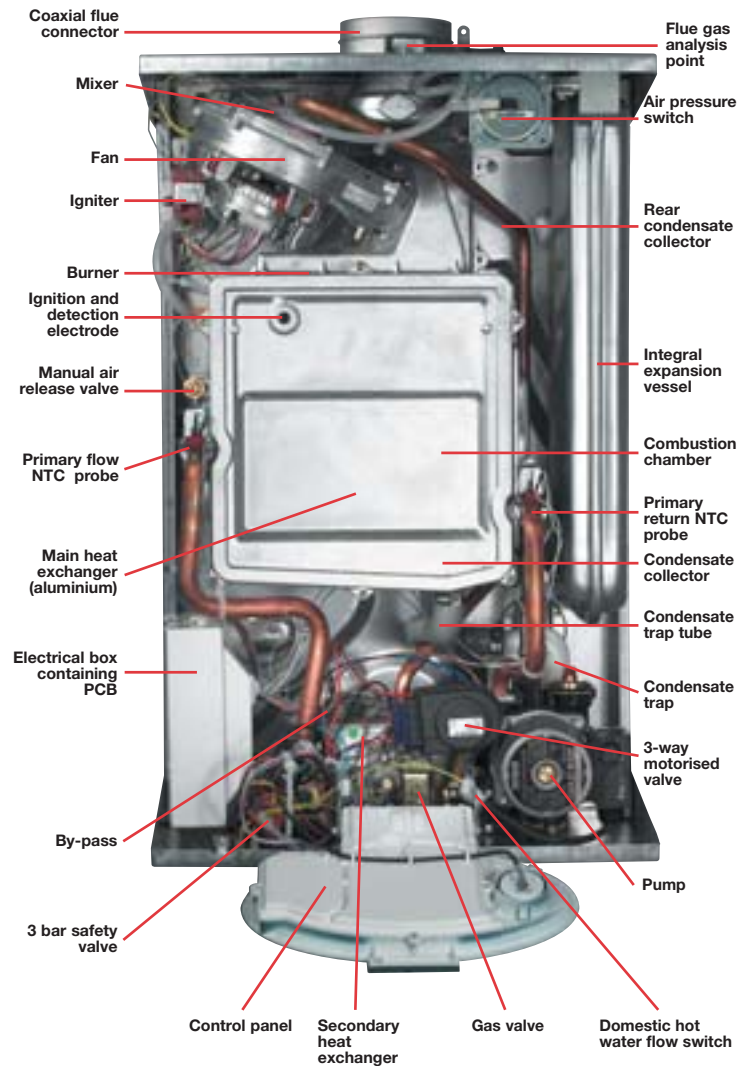


TECHNICAL INFORMATION

		ACO COMBI 27 MFFI	ACO COMBI 32 MFFI
Category		II 2H 3B/P	II 2H 3B/P
Type		C*	C*
POWER			
Heating (net) input min	kW - Btu/h	8.0 - 27,300	9.5 - 32,400
Heating (net) input max	kW - Btu/h	23.0 - 78,483	28.5 - 97,300
Heating (gross) input min	kW - Btu/h	8.9 - 30,400	10.5 - 36,000
Heating (gross) input max	kW - Btu/h	25.5 - 87,000	31.6 - 107,800
Heating output min	kW - Btu/h	7.7 - 26,300	9.5 - 32,300
Heating output max	kW - Btu/h	22.5 - 76,800	28.0 - 95,600
Output for hot water production min/max	kW - Btu/h	27.0 - 92,100	32.0 - 109,200
EFFICIENCY			
SEDBUK Rating	Band	A	A
CHARACTERISTICS			
NOx class		5	5
Consumption at nominal capacity G20	m ³ /h	2.85	2.85
Consumption at nominal capacity G30-G31	kg/h	2.13-2.10	2.13-2.10
Maximum exhaust gas temperature	°C	67.1	67.1
CO ₂ content (G20)	%	9.8	9.8
Minimum ambient temperature	°C	+5	+5
Pressure loss through boiler (max) (ΔT = 20°C)	mbar	200	200
Total residual head for heating system (60/80°C)	bar	0.2	0.2
Minimum D.H.W. flow rate	l/min	2.5	2.5
Maximum domestic hot water pressure	bar	6	6
Minimum domestic hot water pressure	bar	0.2	0.2
Built-in expansion vessel capacity	litres	6	6
Maximum water content of system	litres	130	130
Maximum heating pressure	bar	3	3
Gas inlet pressure - Natural Gas (G20)	mbar	20	20
Gas inlet pressure - LPG (G30-G31)	mbar	30-37	30-37
Condensate pH	pH	4	4
Weight	kg	40	42
Gas Council No.		47-116-34	47-116-35
PERFORMANCE			
Maximum heating temperature	°C	82	82
Minimum heating temperature	°C	42	42
Maximum domestic hot water temperature	°C	56	56
Minimum domestic hot water temperature	°C	36	36
D.H.W. flow rate ΔT = 35°C	gal/min	2.4	2.9
D.H.W. flow rate ΔT = 35°C	l/min	10.8	13.1
ELECTRICAL DATA			
Electrical supply	V/Hz	230-50	230-50
Power consumption	W	118	118
Protection grade of electrical system	IP	24D	24D
Internal fuse rating		3.15A Slow	3.15A Slow

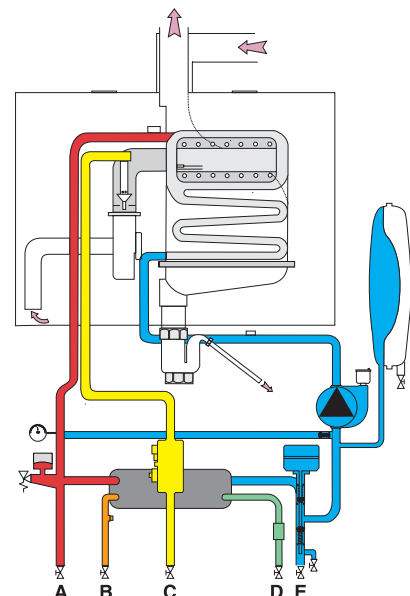
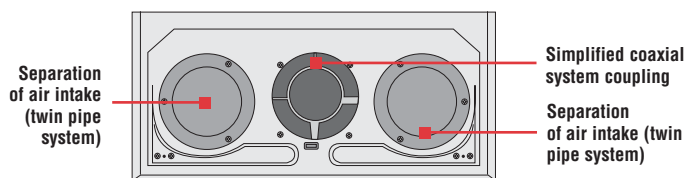
C*: C13-C33-C43-C53-C83

ACO COMBI 27 MFFI



SCHEMATIC

ROOM-SEALED FAN FLUE 27 MFFI - 32 MFFI





WALL-HUNG HIGH EFFICIENCY GAS SYSTEM BOILER

- The first UK boiler with a **FREE 5 Year Guarantee**
- SEDBUK Band A
- Available in three outputs of 27, 32 and 35 kW (35kW model available early 2005)
- Compact dimensions 750x450x280 mm
- Auto-diagnostic system and integrated advanced controls built in to advanced PCB with microprocessor
- Simple maintenance with easy access all from front of appliance
- Two speed modulating pump: decreases noise and increases efficiency
- Built in system components: pump and expansion vessel
- Anti-frost device
- Anti-scale device
- Anti seizing device for the pump
- Built in automatic by-pass
- Multiple flueing options: up to 4m coaxial and 40 m twin pipe
- Split exhaust and intake pipes for built-in combustion analysis
- Optional outdoor sensor: regulated heating temperature automatically increasing efficiency
- **Guarantee extendable year on year for life of boiler after first FREE 5 years**
- **Designed for connection to any indirect hot water cylinder (preferably Ariston Unvented Cylinders)**



This product has an energy rating of **A** on a scale of **A-G** for more information see www.SEDBUK.com

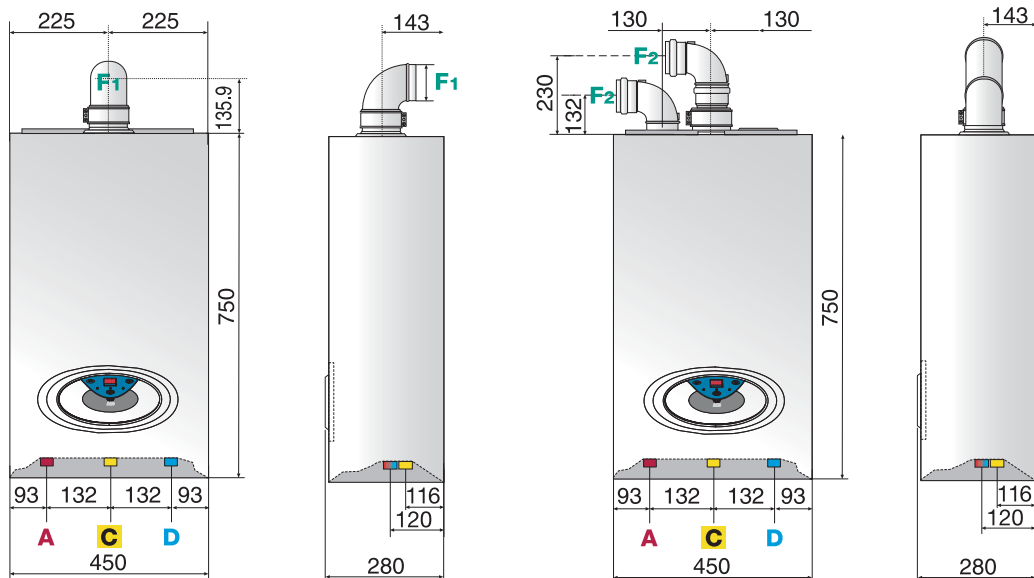
P.C.B. with microprocessor	Automatic by-pass	Highly Efficient	Low NOx	Electronic ignition	Fully modulating	C.H. Temp. adjustment
Insufficient system pressure shutdown	Combustion analysis device	Anti-frost device	IP44 (IPX4D)	Anti-scale device	Integral auto-diagnostics	Outdoor sensor (optional)

DIMENSIONS – PIPE FITTINGS – EXHAUST OUTLETS

	A Central heating flow	C Gas inlet	E Central heating return	F Flue (Ø mm)
ACO SYSTEM 27 RFFI	22mm copper tail	15mm copper tail	22mm copper tail	F1 60/100, 80/125 F2 80
ACO SYSTEM 32 RFFI	22mm copper tail	15mm copper tail	22mm copper tail	F1 60/100, 80/125 F2 80

Coaxial exhaust

Twin pipe exhaust

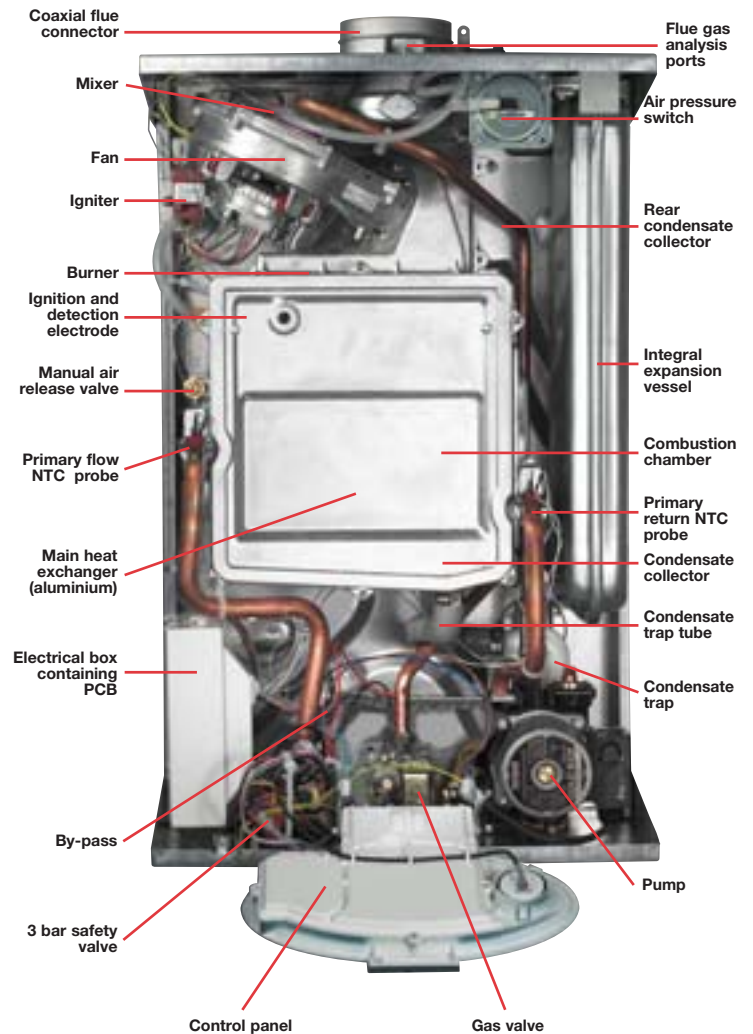


TECHNICAL INFORMATION

	ACO SYSTEM 27 RFFI	ACO SYSTEM 32 RFFI
Category	II 2H 3B/P	II 2H 3B/P
Type	C*	C*
POWER		
Heating (net) input min	kW - Btu/h 8.0 - 27,300	9.5 - 32,400
Heating (net) input max	kW - Btu/h 23.0 - 78,483	28.5 - 97,300
Heating (gross) input min	kW - Btu/h 8.9 - 30,400	10.5 - 36,000
Heating (gross) input max	kW - Btu/h 25.5 - 87,000	31.6 - 107,800
Heating output min	kW - Btu/h 7.7 - 26,300	9.5 - 32,300
Heating output max	kW - Btu/h 22.5 - 76,800	28.0 - 95,600
EFFICIENCY		
SEDBUK Rating	Band A	A
CHARACTERISTICS		
NOx class	5	5
Maximum heat loss to the casing ($\Delta T = 50^{\circ}\text{C}$)	% 0.1	0.1
Heat loss through the flue when burner on	% 1.5	1.5
Heat loss through the flue when burner off	% 0.4	0.4
Maximum exhaust discharge (G20)	kg/h 38.5	38.5
Residual head discharge	mbar 0.95	0.95
Consumption at nominal capacity G20	m ³ /h 2.85	2.85
Consumption at nominal capacity G30-G31	kg/h 2.13-2.10	2.13-2.10
Maximum exhaust gas temperature	$^{\circ}\text{C}$ 67.1	67.1
CO ₂ content (G20)	% 9.8	9.8
Minimum ambient temperature	$^{\circ}\text{C}$ +5	+5
Pressure loss through boiler (max) ($\Delta T = 20^{\circ}\text{C}$)	mbar 200	200
Total residual head for heating system (60/80 $^{\circ}\text{C}$)	bar 0.2	0.2
Maximum domestic hot water pressure	bar 6	6
Minimum domestic hot water pressure	bar 0.2	0.2
Built-in expansion vessel capacity	litres 6	6
Built-in expansion vessel pre-charged pressure	bar 1	1
Maximum water content of system	litres 130	130
Maximum heating pressure	bar 3	3
Gas inlet pressure - Natural Gas (G20)	mbar 20	20
Gas inlet pressure - LPG (G30-G31)	mbar 30-37	30-37
Condensate pH	pH 4	4
Weight	kg 40	40
Gas Council No.	47-116-09	47-116-10
PERFORMANCE		
Maximum heating temperature	$^{\circ}\text{C}$ 82	82
Minimum heating temperature	$^{\circ}\text{C}$ 42	42
ELECTRICAL DATA		
Electrical supply	V/Hz 230-50	230-50
Power consumption	W 118	118
Protection grade of electrical system	IP 24D	24D
Internal fuse rating	3.15A Slow	3.15A Slow

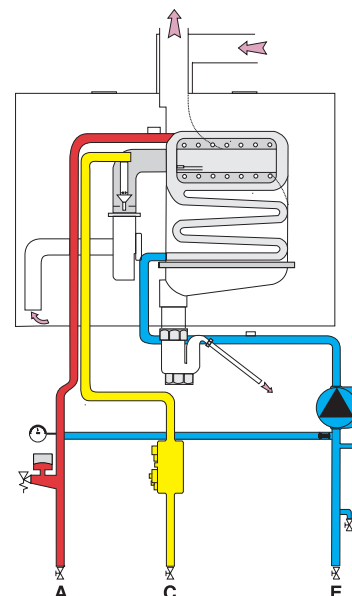
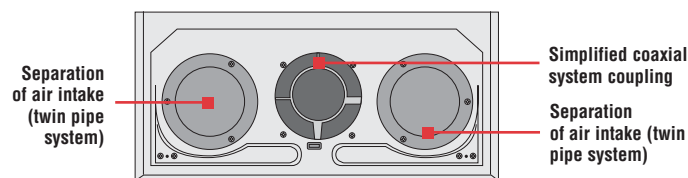
C*: C13-C33-C43-C53-C83

ACO SYSTEM 27 RFFI



SCHEMATIC

ROOM-SEALED FAN FLUE 27 RFFI - 32 RFFI



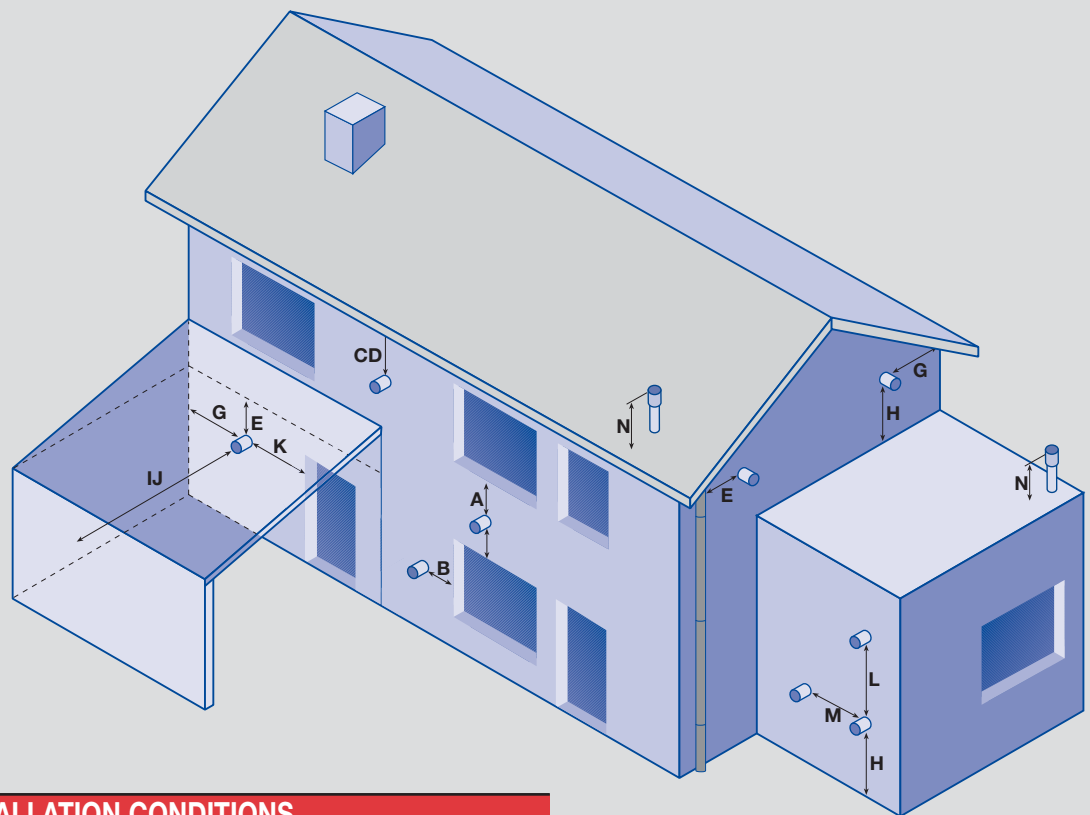


FLUE PIPE ACCESSORIES - EASY INSTALLATION WITH UNRIVALLED FLEXIBILITY

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.



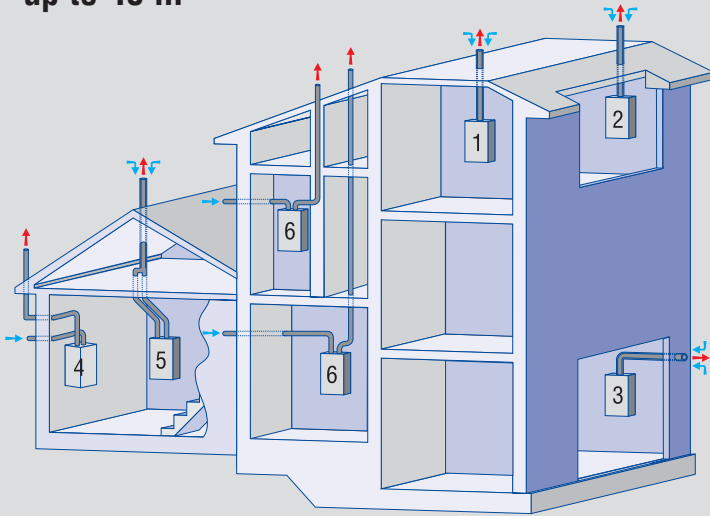
INSTALLATION CONDITIONS

TERMINAL POSITION	mm
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 (eg 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	-

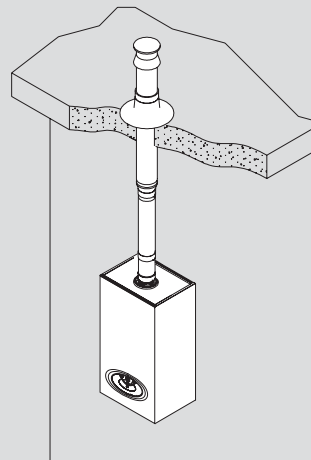
Coaxial system:
up to 4 m (60/100) & 15m (80/125)



Twin pipe system
up to 40 m

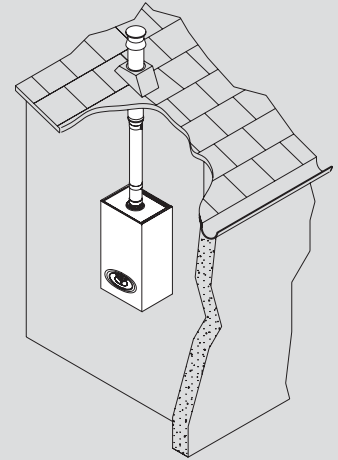


TYPE 1 Coaxial System



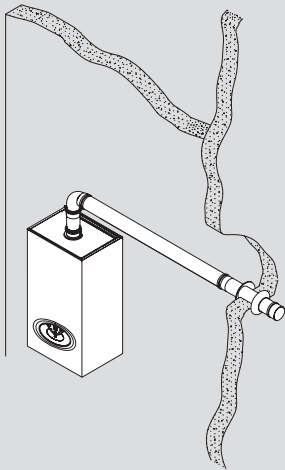
Vertical installation with coaxial piping on a flat roof.

TYPE 2 Coaxial System



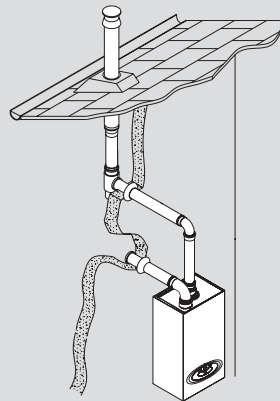
Vertical installation with coaxial piping on a pitched roof.

TYPE 3 Coaxial System



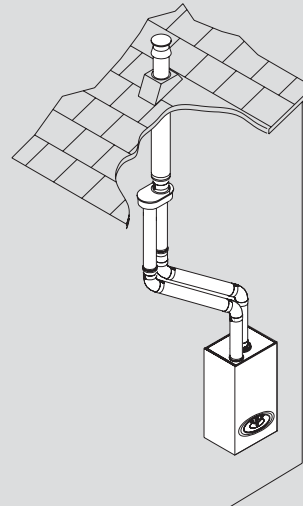
Horizontal installation with coaxial piping.

TYPE 4 Twin pipe system



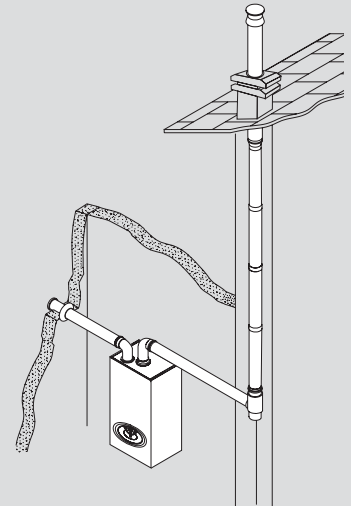
Installation with two separate pipes - exhaust on a pitched roof, air inlet through a wall.

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
COAXIAL 60/100	
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
3318080	Vertical flue with black terminal
3318081	Vertical flue with red terminal
COAXIAL 80/125	
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
TWIN PIPE	
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
SUNDRY ITEMS	
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)

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

Programmes across the entire Ariston product range covering all theoretical and practical aspects. Designed for commercial heating installers, merchants and independent gas-heating service organisations: courses are offered at 3 fully equipped training centres in the UK. In addition permanent training facilities are available at a number of technical colleges nationwide.

TECHNICAL HOT LINE

Immediate and effective technical assistance is only a phone call away. Assistance is also available for any information or advice on the product most suitable for your needs and the requirements of your system installation.

PROFESSIONAL SERVICE

Ariston service technicians are swift and prepared for any eventuality. They offer you and your customers a high level of assistance, comprising the best technical, logistic and human resources available. Ariston invests a great deal in this field to guarantee a decisive advantage that others cannot offer.

for the latest product info visit:

<http://www.ariston.co.uk>



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