Atmos Partners
If you are an installer or service engineer then you can join the Atmos Partners scheme to get the most out of the Atmos opportunity. We offer extra exclusive discounts, website listing, sales lead preference, training and on going support. In return you will promote the Atmos range and build business for yourself.

For more details contact **atmospartners@atmos.uk.com** or telephone our sales department on our special freephone 0800 698 5588.

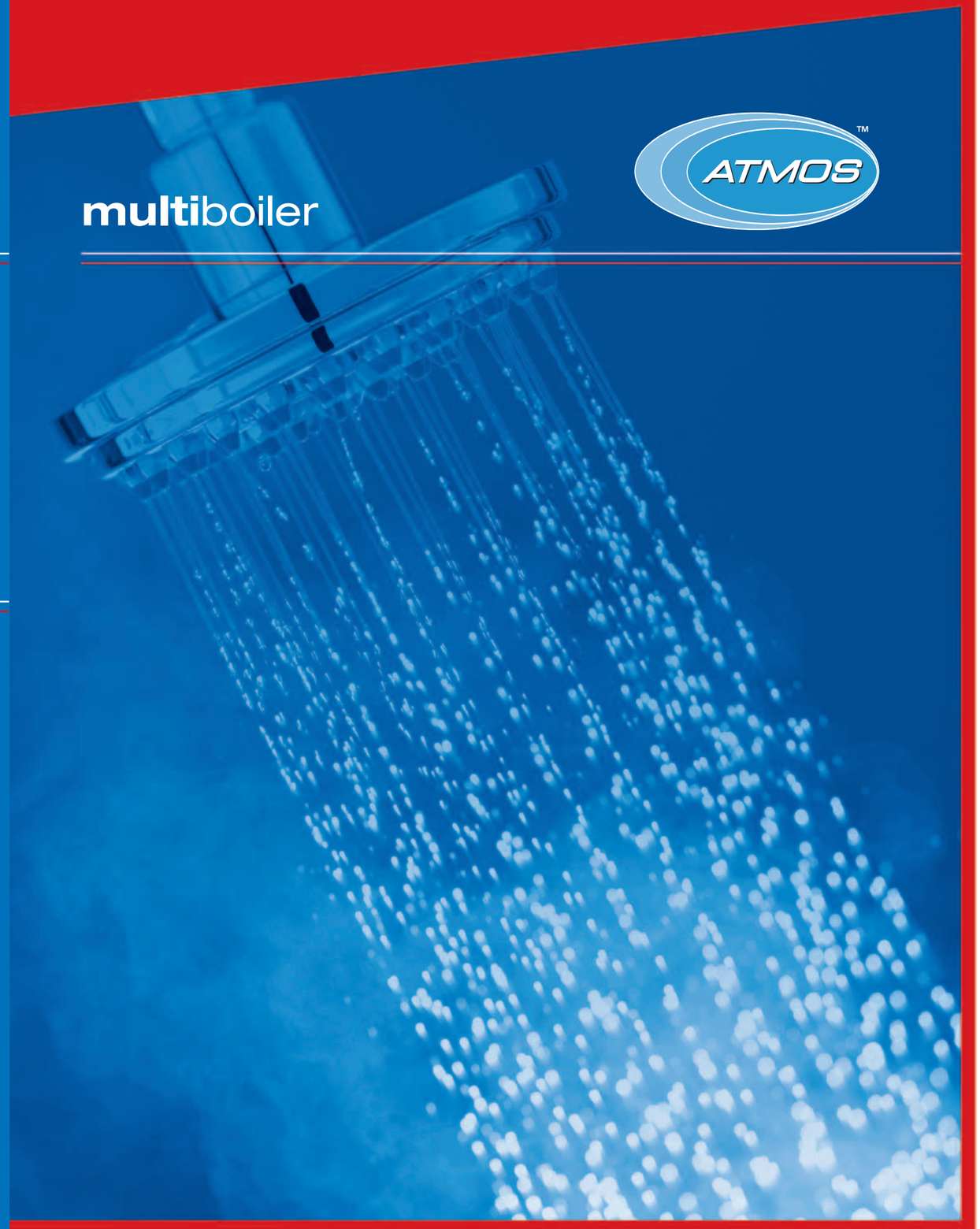
Atmos Heating Systems
West March, Daventry, Northants NN11 4SA

t 01327 871 990
f 01327 871 905
e sales@atmos.uk.com

w www.atmos.uk.com

Ref: 09/07

multiboiler



atmos heating systems

welcome to atmos

Atmos Heating Systems started business in 1976 as Skaino Services, a heating and plumbing company operating in the Midlands. The company installed all types of heating systems, but always tried to design systems that were energy efficient. In the 1980's Skaino Services became Northamptonshire's only 'Registered Energy Efficient Heating Company' with the fledgling Energy Saving Trust, promoting energy efficient heating systems.

In 1995 John Thomason invented and patented a revolutionary concept in high efficiency heating for commercial properties. The Atmos Heat Recovery System was launched and a new division named Atmos Heating Systems, specialising in high energy efficient products was born.

In 1999 the Atmos team visited European companies looking for energy efficient heating products for the UK domestic market, and their eyes lighted upon the Multi. High efficiency condensing boilers were still in their infancy in the UK, but in The Netherlands they had been mainstream products for 9 years, and were already in their second generation. The Multi is made by the Dutch water heater manufacturer, Daalderop, a market leader in The Netherlands since 1896. A deal was quickly done and Atmos became Daalderop's partner in the UK.

So in 2000, Atmos launched into the domestic heating market with the innovative Atmos Multi. It was the first condensing 'Storage Combi' in the UK, and immediately won the prestigious H&V News Award 'Best domestic Product of 2001'. The judges' assessment was **"an outstanding, startling new product, pushing the boundaries of energy efficiency to greater heights"**.

Then in 2002 Atmos launched another of Daalderop's energy saving products, the unique MonoSolar Solar thermal hot water system. The MonoSolar system is approved for use as a pre-heat system with any Solar compatible boiler. Once again the Dutch had already set in place a standard for solar compatibility, the NZ standard; for which the Multi has been certified.

In 2004 Atmos decided to look for a condensing instantaneous combi boiler, and once again, the ideal product was found in The Netherlands. Intergas, another leading Dutch boiler manufacturer since 1970, made Atmos their UK partner, and so the highly successful Intergas range of boilers was launched.

Atmos are committed to the promotion of high quality, energy efficient and environmentally friendly solutions. Our products are designed for the future and built to last. They use the minimum of fossil fuels, thus reducing environmental pollution and running costs.

We are committed to continuous improvement and provide whole package innovative solutions. We work in partnership with our customers - installers, service engineers and contract customers from design to installation and service back up.

Leaders in low carbon heating.

Yours sincerely
John Thomason, Manager

introduction and benefits

The Atmos Multi is the supreme choice for energy efficient heating and hot water. Instead of the traditional boiler and separate hot water tank, the Multi combines both into one single unit, thus reducing the space and pipework requirements.

Fast heat recovery means that a generous supply of mains pressure hot water is produced from a smaller hot water tank. The sealed system eliminates the need for roof storage tanks and their associated problems. High water pressure means showers with power; without the need for a noisy and expensive pump. Producing more than twice as much hot water flow as the instantaneous combi boiler, the Multi is ideal for homes with more than one bathroom.

Reliability is of great importance, and the Multi is a product that has sold over 60,000 units since it was first produced in 1994. In that time the design has been systematically refined until it is now a proven and tested product.

The high efficiency boiler, and compact water storage system ranks the Multi as one of the most energy efficient systems on the market today. Our highly satisfied customers regularly report fuel savings of between 30 and 50%, and a saving of 35% when replacing a conventional system is normal.

Benefits

- Super efficient condensing gas boiler
- Save 30 to 50% on fuel costs year on year
- 80 litre storage of mains pressure hot water
- No need for separate water storage tanks
- Ideal for multiple bathroom homes
- Whisper quiet operation
- Compact all in one design
- Separate connection for towel rail circuit
- Suitable for use with underfloor heating systems
- Compatible with solar hot water systems
- 5 year heat exchanger guarantee

features

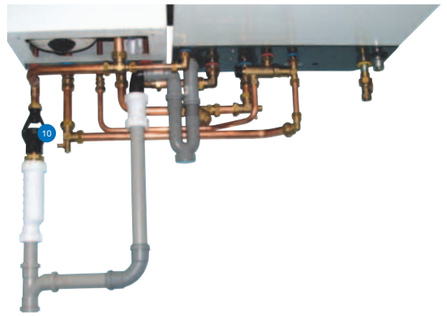
Boiler
- Output range from 22 to 34 kW
- Output modulates to match heat demand
- Pre-mix modulating gas burner
- Anti-cycling burner control
- Natural gas or Propane
- Sedbuk efficiency 89 to 91%
- Peak efficiency 98.3% gross
- Electronic spark ignition
- Sealed system, no header tanks required
- Easy lift handles to assist installation
- Air-flue system up to 64m equivalent length

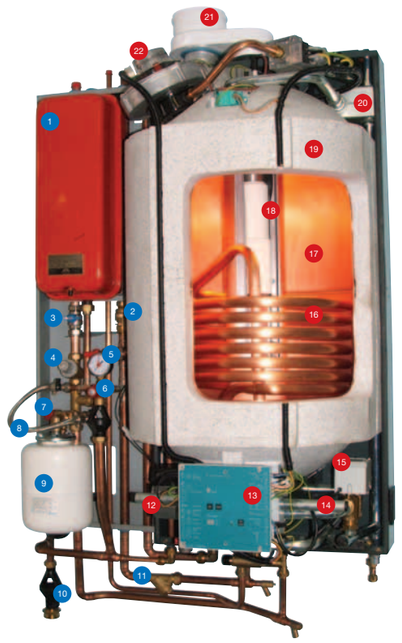
Hot Water
- 80 litre unvented copper hot water tank
- G3 Building regulations approved
- 35mm insulation for minimum heat loss
- 25 litres/min flow at 1.5 bar and above
- Works with water pressure down to 0.5bar
- Compatible with MonoSolar hot water system

Environmental Benefits
- Low NOx, CO and CO_2 emmissions
- WRAS approved
- 100% recyclable CFC free construction

Built Components & Functions
- Circulation pump
- Daily pump on to prevent pump sticking
- Mid position diverter valve
- Hot water thermostat
- Frost protection feature
- Pre-wired with plug connectors
- Flow temperature and/or pressure display
- Fault diagnostic and operating status display
- Computer port to download operating history

Combined Safety Discharge and Condensate Drain
This is a unique option which means that there is no need for an external copper discharge pipe, as is normally required for unvented hot water systems. The 32mm waste pipe is taken to the nearest soil pipe or internal drain connection. Optional from 10





1 Central heating expansion vessel
2 Central heating isolation valve
3 Cold water isolation valve
4 Pressure reducing valve (3.5 bar)
5 Central heating pressure gauge
6 Central heating pressure relief valve (3 bar)
7 Cold water pressure relief valve (6 bar)
8 Central heating filler loop
9 Hot water expansion vessel
10 Safety valve discharge tundish
11 Central heating filter
12 Circulation pump
13 Control panel
14 Easy lift handle
15 Three way valve
16 Heat exchanger coil
17 80 litre copper unvented hot water tank
18 Condensing gas boiler
19 Insulating jacket
20 Automatic air seperator and vent
21 Air and flue connection
22 Modulating pre-mix gas burner

Multi shown with optional pipework kit which is not supplied with the standard boiler

options

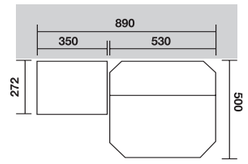
Pipework Kit
To reduce installation time Atmos have designed this new kit for use with the Multi as shown. It is a pre-assembled kit including expansion vessels, valves and connecting pipework with white cover to match the Multi.

Controls
The UK Building Regulations require that all boilers are fitted with a time clock programmer and a thermostat or room temperature control. Atmos recommends the following options:

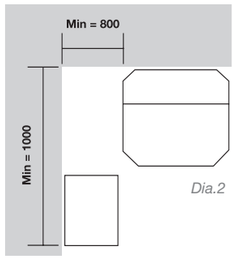
- **Programmable Room Thermostat:** The Danfoss TP5E provides seven day control with three time and temperature options per day. *Fig.1*
- **Danfoss TP5000RF** wireless Programmable room thermostat provides the same control but without the need for hard wiring between the boiler and the controller. *Fig.1*
- **Opentherm:** The Timeguard programmable room thermostat is a modulating control that lowers the boiler flow temperature with indoor heat demand. This forces the boiler to operate in the condensing mode and thus at peak efficiency. *Fig.2*
- **Weather Compensating System:** The Multi controller has built in software so that by fitting an outside sensor it enables the Multi to modulate the central heating water temperature according to the outside temperature, and thus improve overall efficiency.

Reducing Limescale
UK Building Regulations state that a suitable anti-scale device must be fitted in areas with over 200 ppm (parts per million of calcium carbonate). For areas with hard water, the optional Hydroflow protects the hot water tank against scale formation. It also protects the whole cold and hot water system of the house and can be built into the Atmos Multi. *Fig.3*

LPG
The Multi can be easily converted for use with Liquid Petroleum Gas. Kit ref ATSWCS



Dia.1



Dia.2

The Multi can have the pipework kit fitted as standard on the left hand side (Dia.1) or remotely on a left hand return wall (Dia.2). In this case extra pipework will have to be fitted by the installer. NOTE: the pipework kit can NOT be used on the right hand side at all.

Condensate Pump
Where there is no drain, such as a cellar, the condensate can be removed by means of the Sauermann condensate pump. It has a capacity of 2 litres and comes complete with 6 metres of 12mm flexible hose and adaptor to connect to standard overflow pipe. *Fig.4*

Solar Hot Water
Solar powered hot water can from the Atmos MonoSolar or twin coil systems can be connected to the boiler as the Multi has the Dutch NZ solar compatibility label. See our Solar Hot Water brochure for more details. *Fig.5*

Fig.1

Fig.2

Fig.3

Fig.4

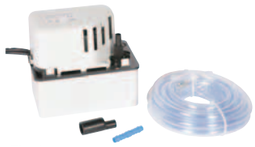
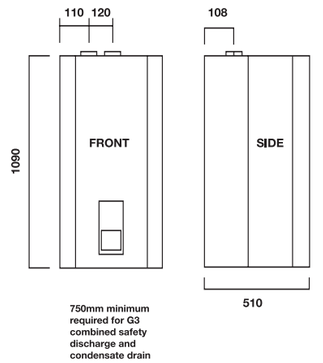
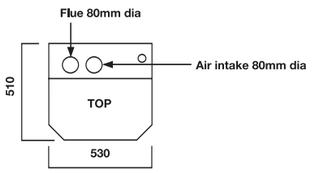


Fig.5

technical

Technical Data	Natural Gas & Propane (Propane in brackets where different) 24/80	24/80 Plus	32/80 Plus	38/80 Plus
Heat output to radiators kW min - max	7.5 - 25.0	7.5 - 25.0	10 0 - 32.7	11.3 – 37.8
Condensing Mode (Return <55˚c)				
Heat output to radiators kW min - max	7.3 - 23.0	7.3 - 23.0	9.8 - 29.0 (29.9)	10.9 - 34.4
Maximum heat to radiators Btu/hr	78,500	78,500	99,000 (102,000)	117,400
Gross efficiency max -min	98 - 91%	98 - 91%	98 - 91%	96.7 – 91%
Non-Condensing Mode (80/60˚c flow/return)				
Heat output to radiators kW min - max	6.9 - 22.0	6.9 - 22.0	9.3 - 27.6 (28.5)	10.5 – 32.0
Maximum heat to radiators Btu/hr	75,000	75,000	94,200 (97,300)	109,200
Gross efficiency max - min	93 - 87%	93 - 87%	93 - 86%	93 - 85%
Seasonal efficiency (Sedbuk certified) %	91.3	91.3	91.0	TBA
Gas flow rate m3/hr natural gas min/max	0.8 - 2.6	0.8 - 3.1	1.0 - 3.5	1.2 – 4.0
Gas flow rate m3/hr propane gas min/max	(0.3 - 0.9)	(0.3 - 1.1)	(0.4 - 1.5)	(0.5 – 1.7)
Flue gas temperature min/max ˚c	35/110	35/110	40/115	35/110
Hot Water System				
Maximum heat to hot water kW	17.4	26.4	27.6 (28.5)	32.2
Hot water flow rate maximum litres/min at 2 bar	25	25	25	25
Reheat time from 10 to 60˚c minutes	20	12	11 (10)	10
70% reheat time minutes	17	10	9	8
Hot water at 40˚c instantaneously (litres)	133	133	133	133
Hot water per hour at 40˚c (litres)	450	700	725 (750)	TBA
Hot water per hour at 40˚c (gallons)	100	150	160 (165)	TBA
Emissions				
NOx (average) emission ppm	18	18	19	TBA
CO (average) emission ppm	10	10	20	TBA
GC Number	41 - 249 - 02	41 - 249 - 03	41 - 249 - 04	TBA
Common Data				
Hot water flow rate maximum litres/min (60˚c)	25	25	25	25
Hot water temperature setting range	60 to 70˚c			
Central heating setting range	60 to 90˚c			
Hot water tank capacity	80 litres			
Primary water capacity	2.2 litres			
Hot water expansion vessel capacity	5 litres			
Central heating expansion vessel capacity	12 litres			
Electrical connection	220/240v			
Outlet pressure hot and cold water	3.5 bar			
Connections				
Air supply pipe diameter	80mm			
Flue pipe diameter	80mm			
Heating flow and return	22mm			
Hot water outlet	22mm			
Cold water supply	22mm			
Gas pipe connection	22mm			
Safety valve discharge connection	22mm			
Condensate discharge drain connection (plastic)	32mm			
Auxillary heating flow connection	15mm			
Dimensions and Weights				
Height (bolier)	1080mm			
Width	530mm			
Depth	495mm			
Weight empty (boiler only)	75kg			
Weight full	150kg			
Height with mounting frame	1850mm			
Width with mounting frame	530mm			
Depth with mounting frame	550mm			





system design

In order to get the best out of your Multi, it is essential that the central heating system is properly designed, installed, maintained and commissioned. The following important information should be taken into account by the designer or installer.

Design of central heating system
The central heating temperature can only be set to three temperature levels, 90, 75 and 60˚c. We recommend that the system is designed for 75˚c flow and 55˚c return. This means that the return temperature will be below 56˚c at all times, so that the boiler always operates in the condensing mode for maximum efficiency. In addition it results in a lower pump flow rate, reduced noise and electrical power consumption. A system by-pass must be fitted and is supplied with every boiler, together with the in-line Y strainer provided in the fittings kit.

Condensate water & safety valve discharge removal
The Multi is supplied with a special trap and tundish, so that the condensate water and the safety valve discharges can all be connected together. The single 32mm push fit (polyethylene) discharge pipe should be piped to an internal soil pipe. This construction is approved under the G3 Building Regulations. The use of an external drain or soak-away risks freezing, and should be avoided. If however there is no alternative, the external discharge pipe must be insulated.

Controller
The Multi is fitted with an intelligent energy management system, which keeps the boiler running as efficiently as possible. This is achieved by the following:

1. Modulating the burner output to match the heating demand
2. Burner anti-cycling timer to minimize the number of burner on/off cycles
3. Soft start burner with automatic return water temperature reduction

This works with any of the controls shown on the Options page.

Higher efficiency can be achieved by use of the Opentherm modulating thermostat, or the outdoor weather compensated control. These controls give improved SAP ratings, and plug straight into the multi controller.

Installation
The Multi can only be installed by an installer who is CORGI registered and qualified to fit unvented hot water appliances.

Hard water areas
The Building Regulations state that an anti-scale device must be fitted where the water hardness exceeds 200ppm. We recommend the installation of the Hydroflow anti-scale unit which protects the hot water tank against scale formation. It also protects the whole cold and hot water system of the house and can be built into the Atmos Multi. See the Options page.

Commissioning
The boiler and the heating system must be properly commissioned and balanced in order to obtain the best performance. This should be done in accordance with the Benchmark system, including flushing out and the addition of an appropriate corrosion inhibitor.

Maintenance
The MULTI should be serviced once per year by a CORGI registered service engineer.

Fault diagnosis
The Multi has a control panel with a fault diagnostic system, which enables the customer to identify common faults and take appropriate action. There is also an engineer's programme which permits a more in depth diagnosis, for rapid fault identification and repair.

Guarantees
The Multi boiler comes with a two year parts and labour guarantee. In addition the heat exchanger and hot water tank is guaranteed for five years. Guarantees are subject to our terms and conditions.