



**INCLUDING  
32KW BOILER  
WITH IMPROVED DOMESTIC HOT  
WATER FLOW RATE**



- automatic boiler bypass
- anti-scale control system
- electronic ignition system
- ultra-compact dimensions
- 24 hour electronic programmer
- no compartment ventilation required



*Combi Boilers, Italian Style.*

*the ultimate use of space*

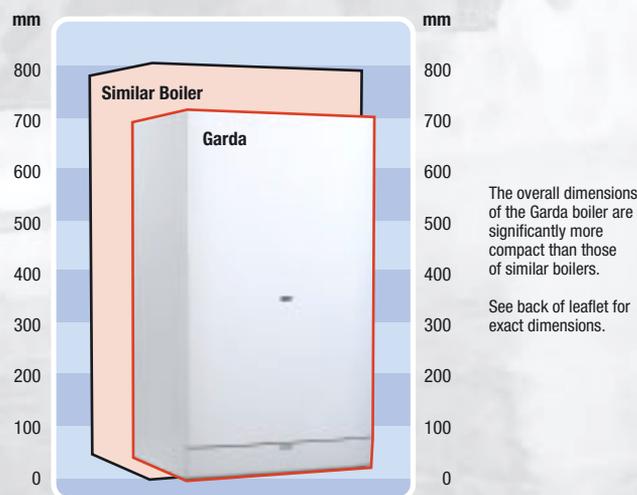


# t h e u l t i m a



## WHY CHOOSE A BIASI COMBI BOILER?

- Ultra-compact design
- Elegant Italian styling
- Beautiful, gloss white casing
- Designed to be wall mounted thus saving valuable space
- Hot water supplied at mains pressure
- Wide choice of flueing options including vertical and multi-directional room-sealed balanced flues that expel flue gases to the outside via integral fan units.
- New, advanced 24 hour Electronic Programmer
- All Biasi combi boilers are manufactured to comply with all EU Safety Standards
- Choice of 3 outputs from 24.3 KW (82,906 BTU's), 28.4 KW (96,895 BTU's) to 32kW (109,184 BTU's).



## SIMPLE CONTROLS SAVE YOU EVEN MORE

All Garda combi boilers have electronic ignition, without a pilot flame - saving on gas bills. They also come with a fitted 24 hour electronic programmer as standard so you can control your heating and hot water needs precisely according to the demands of your household.

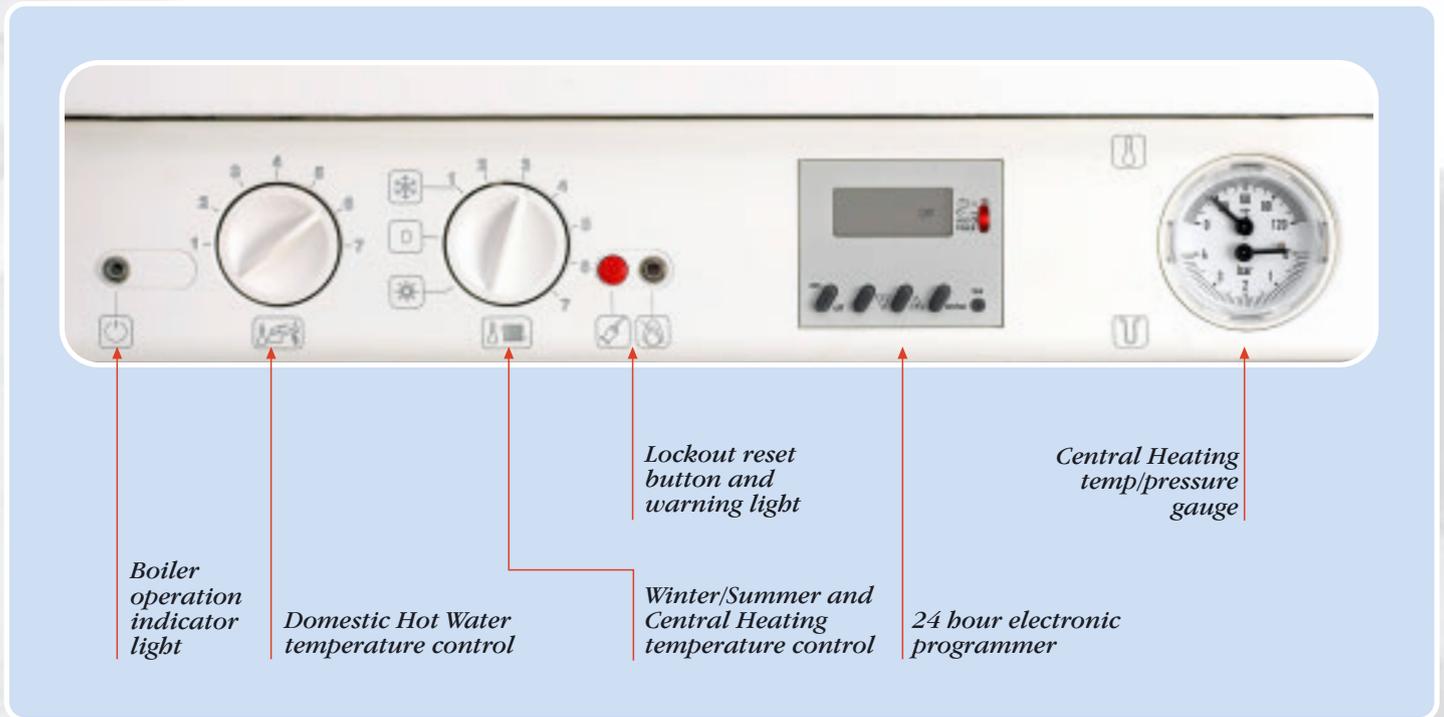
## SO EASY TO INSTALL AND MAINTAIN

- No tank or cylinder
- Minimal pipework
- Substantial savings on materials
- Quick & easy installation
- Easy access to all main components
- Servicing time and bills greatly reduced

*Unlike a conventional domestic central heating and hot water system, a combi (short for combination) boiler heats water taken directly from the cold mains - but only as you use it.*



# the use of space



## SAFE AS HOUSES

Biasi Garda boilers come with all the safety features and devices as standard, unlike many other makes where they are optional 'extras'.

### Anti-Scale System

The build-up of limescale in any system can cause problems. With Garda combi boilers, regulation is the key minimising the formation of limescale. Temperatures within the critical zone main circuit are kept below 75°C, so restricting scale formation. And even if it should accumulate, the INOX steel domestic hot water plate exchanger is easy to clean in minutes by your service engineer.

### Safety Flow Switch

This is a device, positioned on the main circuit, which monitors the flow and protects the main heat exchanger from thermal shock should the system lack water.

### Radio Disturbance Immunity

The electronic p.c.b. is equipped with devices that protect the operation of the boiler from radio frequencies which can be harmful.

## Temperature Fluctuation ( $\pm 1^\circ\text{C}$ )

A gas valve modulates continuously when operating in both heating and hot water cycles. The central heating output can be adjusted during commissioning to match your heating requirements, the temperature fluctuation is always maintained within 1°C.



## LPG KITS MAKE BIASI COMBIS A NATURAL CHOICE

You don't have to have a natural gas supply to enjoy the advantages of a Garda combi. One of the real benefits is that conversion kits are available for liquefied petroleum gas users.

Available for 24S and 28S only.

# technical characteristics

TECHNICAL DATA		M90F.24S	M90F.28S	M90F.32S
<b>CENTRAL HEATING</b>				
Heat Output	kW	24.3	28.4	32.0
	Btu's	82,906	96,895	109,184
Heat Input	kW	26.6	31.1	35.2
	Btu's	90,754	106,107	120,102
Minimum Heat Output	kW	9.1	10.8	12.7
	Btu's	31,047	36,847	43,435
Temperature Setting Range	°C	38/85	38/85	38/85
Expansion Vessel Capacity	litres	6	6	6
Maximum Working Pressure	bar	3.0	3.0	3.0
System Cold Fill Pressure	bar	1.3	1.3	1.3
Normal Operating Pressure Range	bar	1.3 to 2.7	1.3 to 2.7	1.3 to 2.7
Available Pump Pressure (at 1000 litres/hr)	bar	0.3	0.3	0.3
	m.w.c.	3.0	3.0	3.0
<b>DOMESTIC HOT WATER</b>				
Heat Output	kW	24.3	28.4	32.0
	Btu's	82,906	96,895	109,184
Heat Input	kW	26.6	31.1	35.2
	Btu's	90,754	106,107	120,102
Temperature Setting Range Normal Working	°C	35/55	35/55	35/55
Pressure Range	bar	0.3 to 5.0	0.3 to 5.0	0.3 to 5.0
Minimum Working Pressure	bar	0.3	0.3	0.3
Maximum Pressure	bar	10.0	10.0	10.0
Minimum Flow Rate	l/min	2.5	2.5	2.5
Flow Rate (30° rise)*	l/min	11.6	13.6	15.3
Flow Rate (35° rise)*	l/min	10.0	11.6	13.1
* Calculated values				

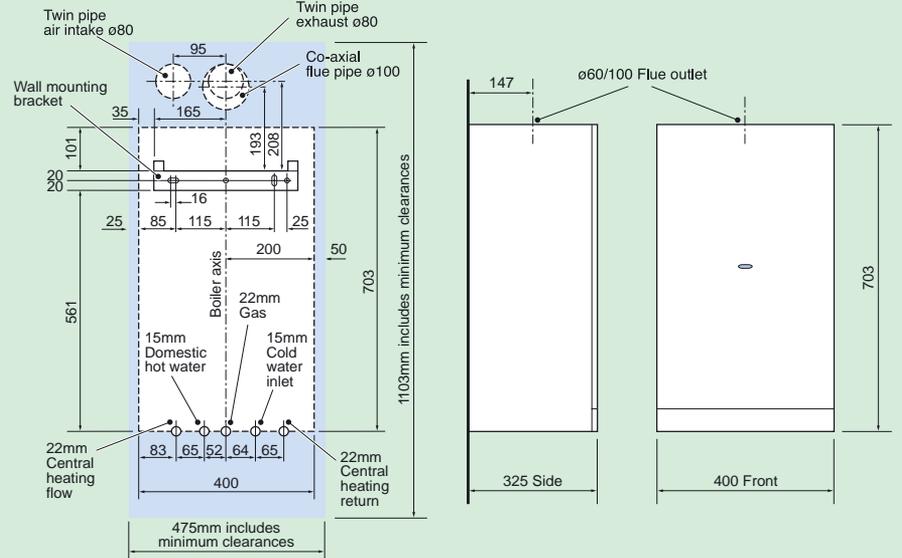
OTHER DATA				
Voltage/Frequency	V/Hz	230/50	230/50	230/50
Power	W	150	170	180
Height	mm	703	703	703
Width	mm	400	400	400
Depth	mm	325	325	325
Weight	kg	37	39	39
C.H. Inlet & Outlet Connections	mm"/"	22/ 3/4	22/ 3/4	22/ 3/4
Gas Inlet Connection	mm"/"	22/ 3/4	22/ 3/4	22/ 3/4
D.H.W. Inlet & Outlet Connections	mm"/"	15/ 1/2	15/ 1/2	15/ 1/2
Standard Flue Pipe ø (Nominal Length 1m)	mm	60/100	60/100	60/100
Maximum Horizontal Length of Flue Pipe	m	3.00	3.00	2.00
Minimum Horizontal Length of Flue Pipe	m	0.5	0.5	0.5

See Boiler Accessories Brochure for Specific Flue Component Details.

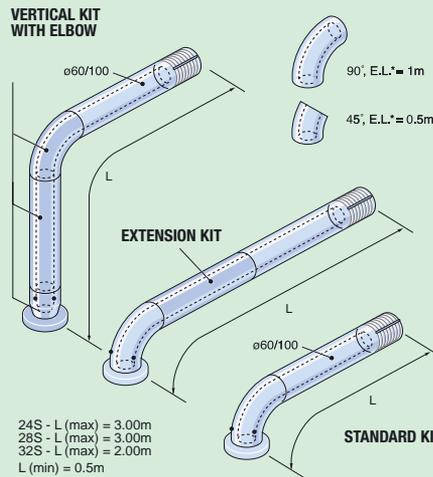
EFFICIENCY				
SEDBUK Rating		D	D	D

CLEARANCE REQUIREMENTS				
Top and Bottom:				200mm
Left Hand Side:				25mm
Right Hand Side:				50mm
Minimum Front Clearance requirement in Operation:				50mm
Minimum Front Clearance requirement for Servicing and Maintenance:				600mm

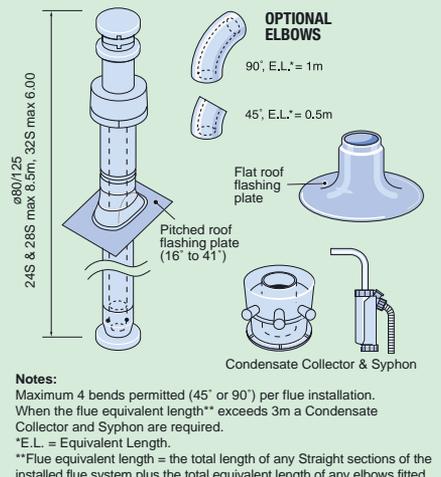
## FIXING HOLES AND CONNECTION PIPES POSITIONS



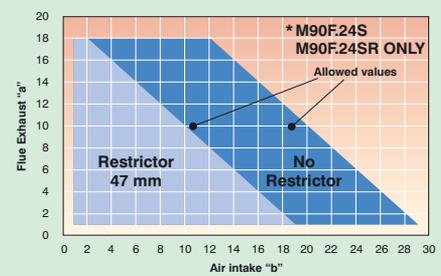
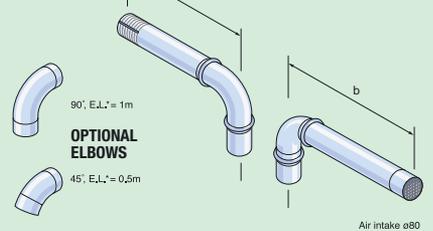
## HORIZONTAL FLUE KITS



## VERTICAL FLUE KITS



## TWIN TUBE FLUE KITS



\* See Installation Instructions for Details regarding M90F.28S, 28SR and M90F.32S.



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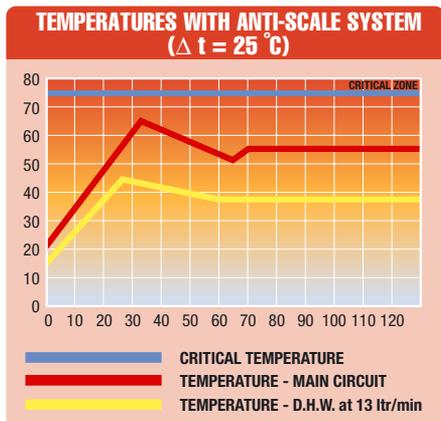
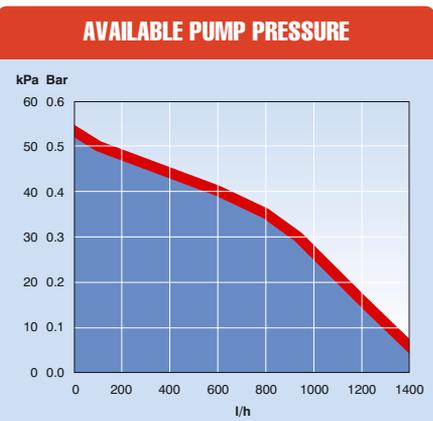
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