

ferroli

Maxima

35kW combination or system models
SEDBUK "A" high efficiency condensing boilers



combi

system

band A



Maxima

Maximum performance
Maximum efficiency

Model	Output	SEDBUK Band	Type
35 C	35kW	A	combi
35 S	35KW	A	system



The FERROLI Maxima range of System and Combination boilers is part of new developments: gas-fired condensing boilers designed specifically to burn less gas and therefore reduce CO₂ emissions and NO_x. This in turn saves the home owner money and helps to conserve energy and the environment.

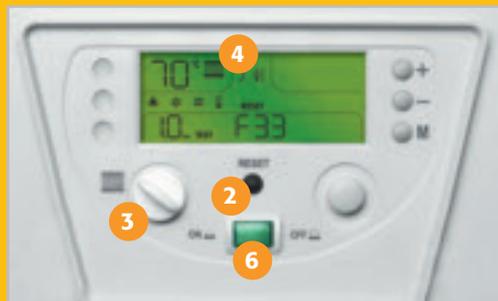
extract more sensible heat from the flue gases. This provides greater efficiency in operation. As more heat is extracted, the flue gases cool to a lower temperature. By cooling the flue gases below 54°C a change of state occurs when the water vapour in the products of combustion condenses. This change of state will release the latent heat of vapourisation into the system and thus increase the boiler's efficiency. This is normally lost into the atmosphere via the flue.

HOW DOES IT WORK?

By using a large heat exchanger, condensing boilers are designed to



35 C display



35 S display

Simplified controls

1. SUMMER/WINTER MODE BUTTON
2. RESET BUTTON
3. CENTRAL HEATING TEMPERATURE CONTROL
4. SIMPLE L.C.D. USER INTERFACE
5. HOT WATER TEMPERATURE CONTROL
6. POWER BUTTON

The range features

AUTO OUTPUT SELECTION

The auto output selection control system developed by FERROLI enables **Maxima** to set its own output automatically each time there is a demand for central heating, thus saving fuel and lowering emissions.

HOT WATER PRODUCTION†

Maxima can produce up to 16.5 litres/min of domestic hot water at 30°C rise and 14.2 litres/min of domestic hot water at 35°C rise. This is due to **Maxima's** highly efficient heat exchanger and its twin pump setup, one for central heating and the other for domestic hot water; this allows total control without the use of a diverter valve.

O.T.C. CONTROL‡

Maxima has the option of "outside temperature compensation". The software allows user adjustments to suit individual comfort levels*. **Maxima** will maintain heating output control at minimum levels based on external temperatures. This enables the appliance to exploit fully the potential of its condensing technology.

ADVANCED CERAMIC BURNER

By the use of a large ceramic plaque burner, the flames are evenly spread which ensures ease of ignition and an exceptionally quiet and efficient operation. The pre-mix ceramic burner offers a longer life, greater reliability and a cleaner burn.

PRE-MIX FAN ASSEMBLY

To ensure maximum combustion efficiency, **Maxima** accurately mixes the air and the gas prior to combustion resulting in the perfect flame.

GUARANTEE

When you buy a **Maxima** boiler you'll benefit from 2 years warranty on the boiler and 5 years warranty** on the domestic heat exchanger against scale.

*Optional outside sensor kit required.

**Replacement item only after standard two year appliance guarantee expires.

†Maxima C only

FROST PROTECTION

Maxima incorporates a useful frost protection facility which will protect the boiler from extreme cold weather conditions.

MULTI-FUNCTION DISPLAY

Maxima incorporates a customer friendly L.C.D., simple to use and operate.

SOLAR PANEL LINK UP

Maxima is the perfect partner to increase energy efficiency for hot water production; when designing your heating system you have the option to link up with solar panel/s. For further details contact FERROLI on 08707 282 885 (Option 1).

UNDERFLOOR HEATING

Maxima can easily be linked to any underfloor heating system. For further details contact FERROLI on 08707 282 885 (Option 1).

EXTENDED SERVICE CONTRACTS

Once the normal guarantee period expires, why not extend your guarantee with one of FERROLI's flexible service contracts. Call FERROLI Caresafe for a free information pack on 08707 282 884.

INSTALL ANYWHERE

Maxima is a room sealed wall hung fan-flue appliance with a wide range of flue options that enable it to be installed almost anywhere. No air for combustion is required from the room in which it is installed and it can be hidden away conveniently in a suitably sized kitchen unit or in an airing cupboard.

SAFETY

The most important features any home owner expects from a boiler are safety, reliability and economy. FERROLI domestic heating appliances are renowned for their quality and reliability, meeting all current European standards of manufacture, and now **Maxima** offers higher levels of efficiency.

Safety in operation is of prime importance. **Maxima** is CE approved, has IP44 electrical protection and incorporates many safety protection devices in its design to ensure total peace of mind for the user.

REMOTE CONTROL (OPENTHERM)

The OpenTherm unit is a fully modulating heating and time control designed to optimise the high efficiency of the heating appliance it is connected to. Working on a pulse system it obtains information from the boiler's microprocessor and constantly feeds back information relating to the room temperature rise or fall. It can display any fault codes (should they occur) and also the operating status of the appliance, be it in heating or hot water mode.



STAINLESS STEEL DOMESTIC
PLATE HEAT EXCHANGER



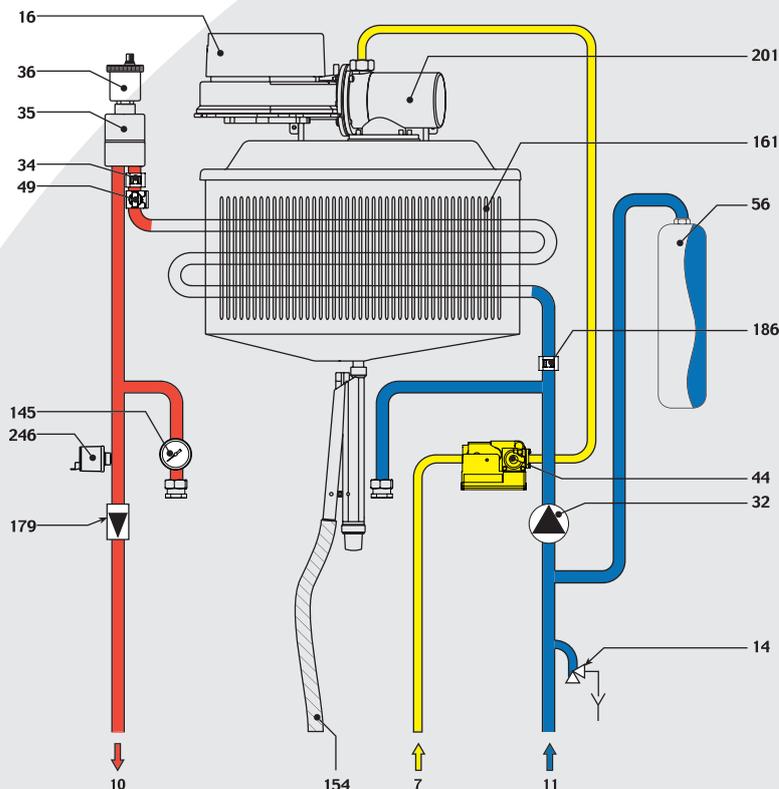
ALUMINIUM HEAT EXCHANGER



OPENTHERM REMOTE CONTROL UNIT

Maxima 35 S (system)

WATER CIRCUIT DIAGRAM

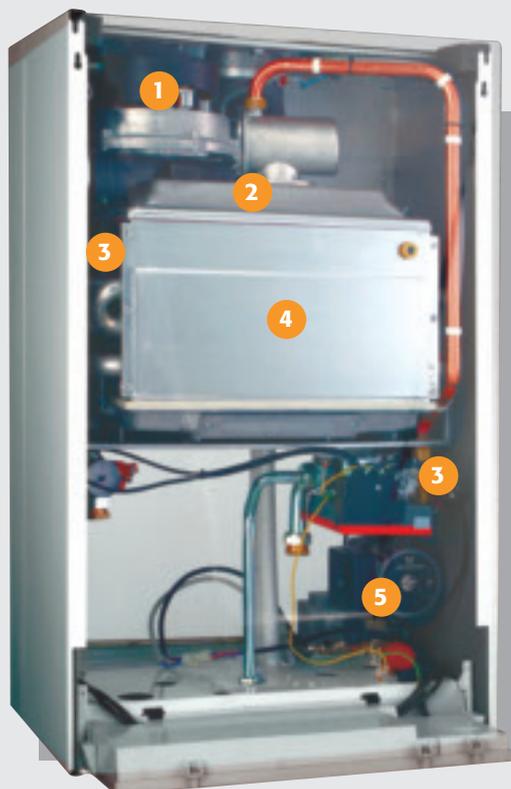


KEY

- 7** Gas inlet
- 10** CH flow
- 11** CH return
- 14** Heating safety valve
- 16** Premix fan assembly
- 32** Heating pump
- 34** Flow temperature sensor
- 35** Air separator
- 36** Automatic air vent
- 44** Gas valve
- 49** Safety thermostat
- 56** Expansion vessel
- 145** System pressure gauge (water gauge)
- 154** Condensate outlet pipe
- 161** Heat exchanger
- 179** Heating flow non return valve
- 186** Return sensor
- 201** Fan venturi
- 246** System pressure sensor

Note: This numbering system is consistent with the installation manual.

The Maxima 35 S system boiler is factory assembled with the sealed system pump and pressure expansion vessel "on-board". Because these components are pre-installed within the boiler casing space, time and money are saved during installation.



1. PRE-MIX FAN ASSEMBLY

The 24 volt pre-mix fan is extremely quiet in operation and in conjunction with our down firing ceramic burner ensures the most efficient process of combustion possible.

2. CERAMIC PLAQUE BURNER

Maxima allows viewing of the flame through a conveniently positioned window within the combustion cover. The Ceramic Plaque Burner provides the optimum in clean burn technology, silent in operation with spark generated ignition, which being an extremely reliable and proven system gives peace of mind for the end user.

3. CLIP ON SENSORS

Negative Temperature Co-efficient sensors (NTC) are of the dry clip-on type. This helps to prevent premature failure from system contamination.

In the unlikely event of a sensor failure, they can easily be changed without draining down the system.

4. ALUMINIUM HEAT EXCHANGER

Designed and built at our "State of the Art" research and development department in San Bonifacio, Northern Italy, this aluminium heat exchanger ensures proven reliability and energy efficiency in conjunction with standard heating system design. (Typical flow and return temperature differential of 15°C.)

5. GRUNDFOS 15/60 HIGH HEAD PUMP

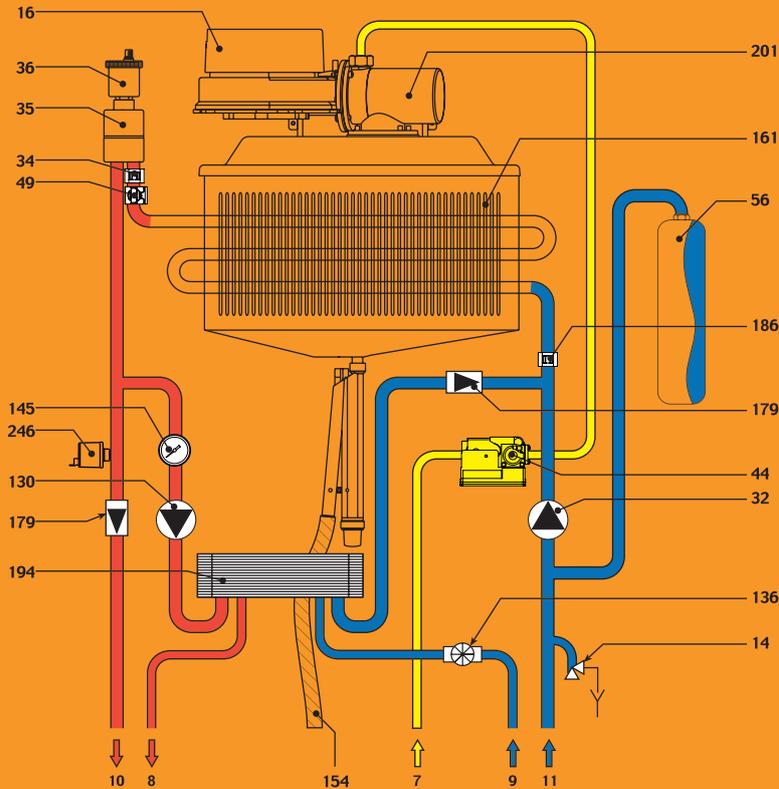
The Grundfos 15/60 high head pump is used to ensure reliable delivery of heating for most domestic properties.

combi

band A

Maxima 35 C (combi)

WATER CIRCUIT DIAGRAM



KEY

- 7 Gas inlet
- 8 DHW outlet
- 9 Cold main inlet
- 10 CH flow
- 11 CH return
- 14 Heating safety valve
- 16 Premix fan assembly
- 32 Heating pump
- 34 Flow temperature sensor
- 35 Air separator
- 36 Automatic air vent
- 44 Gas valve
- 49 Safety thermostat
- 56 Expansion vessel
- 130 DHW pump
- 136 Flow meter
- 145 System pressure gauge (water gauge)
- 154 Condensate outlet pipe
- 161 Heat exchanger
- 179 Check valve
- 186 Return / DHW sensor
- 194 DHW plate heat exchanger
- 201 Fan venturi
- 246 System pressure sensor

Note: This numbering system is consistent with the installation manual.

The Maxima 35 C combi boiler is a compact modern combi that delivers hot water for central heating (CH) for a large family home. When hot water is demanded at the tap (DHW) it temporarily suspends pumping CH supply to focus 100% of its heat exchanger capacity on producing a huge 16.5 litres per minute of DHW at 30°C temperature rise (eg mains water in at 7°C, DHW flow at 37°C).

1. PRE-MIX FAN ASSEMBLY

The 24 volt pre-mix fan is extremely quiet in operation and in conjunction with our down firing ceramic burner ensures the most efficient process of combustion possible.

2. CERAMIC PLAQUE BURNER

Maxima allows viewing of the flame through a conveniently positioned window within the combustion cover. The Ceramic Plaque Burner provides the optimum in clean burn technology, silent in operation with spark generated ignition, which being an extremely reliable and proven system gives peace of mind for the end user.

3. CLIP ON SENSORS

Negative Temperature Co-efficient sensors (NTC) are of the dry clip-on type. This helps to prevent premature failure from system contamination. In the unlikely event of a sensor failure, they can easily be changed without draining down the system.

4. ALUMINIUM HEAT EXCHANGER

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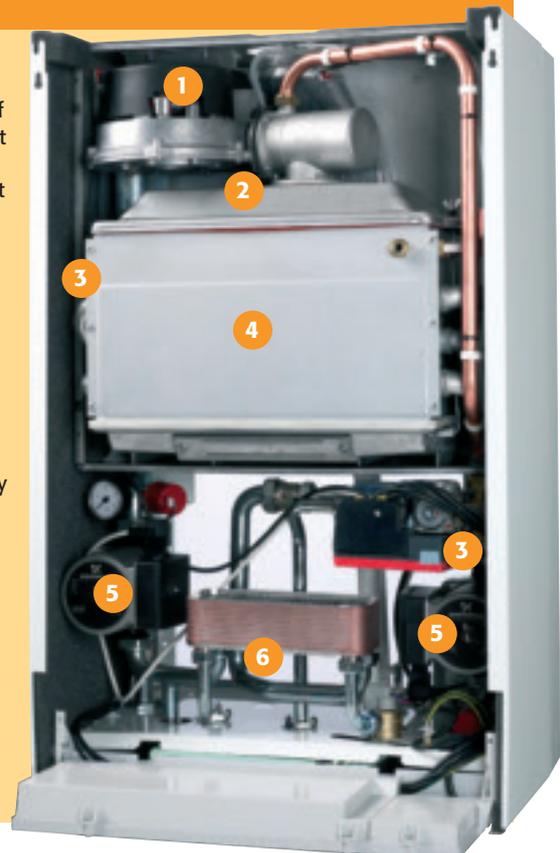
5. GRUNDFOS 15/60 HIGH HEAD PUMP

Grundfos 15/60 high head pumps are used to ensure reliable delivery of hot water and heating without the need of a diverter valve.

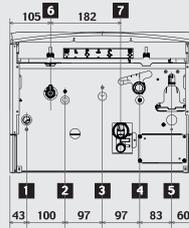
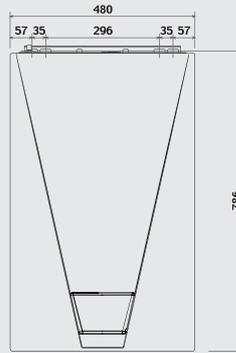
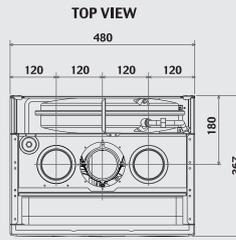
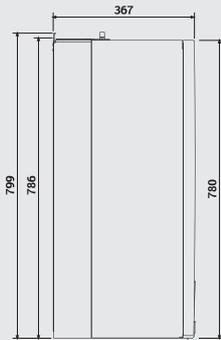
6. DOMESTIC PLATE HEAT EXCHANGER

The 20 plate heat exchanger is guaranteed* for 5 years against scale build up, it allows a hot water flow rate of 16.5 litres per minute at 30°C t. (temp.rise).

*Replacement item only after standard two year appliance guarantee expires.



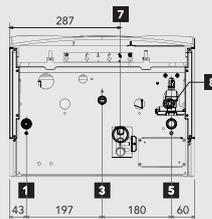
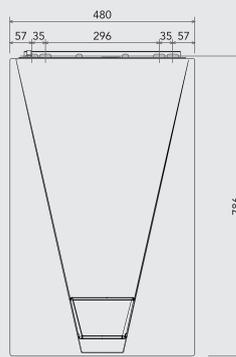
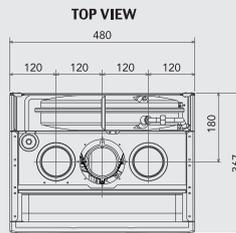
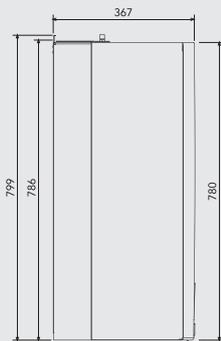
Dimensions



MODEL 35 C

KEY

- 1** System flow (22mm with isolation valve fitted)
- 2** DHW outlet (15mm with compression elbow fitted)
- 3** Gas inlet (22mm with isolation valve fitted)
- 4** Cold mains inlet (15mm with isolation valve fitted)
- 5** System return (22mm with isolation valve fitted, c/w filter)
- 6** System drain
- 7** Condensate outlet



MODEL 35 S

KEY

- 1** System flow (22mm with isolation valve fitted)
- 3** Gas inlet (22mm with isolation valve fitted)
- 5** System return (22mm with isolation valve fitted, c/w filter)
- 7** Condensate outlet
- 8** Safety valve discharge Ø 1/2" F/Iron

Technical Specifications

Maxima		35 C		35 S	
Output					
Heat input (net)	kW	Pmax	Pmin	Pmax	Pmin
Useful heat output 80°C - 60°C	kW	34.8	10.4	34.8	10.4
Useful heat output 50°C - 30°C	kW	34.6	10.2	34.6	10.2
		36.4	11.1	36.4	11.1
Central heating					
Maximum operating temperature	°C	85		85	
Operating pressures					
Maximum	bar	3		3	
Minimum	bar	0.8		0.8	
Expansion vessel capacity	litres	10		10	
Expansion vessel pre-fill pressure	bar	1		1	
Boiler water content	litres	2		2	
DHW					
Maximum DHW production	∅ 25°C	l/min	19.8	N/A	
	∅ 30°C	l/min	16.5	N/A	
	∅ 35°C	l/min	14.2	N/A	
Operating pressure DHW	Maximum	bar	6	N/A	
	Minimum	bar	0.25	N/A	
DHW water content		litres	1.5	N/A	
Dimensions, weights, fittings					
Height	mm	780		780	
Width	mm	480		480	
Depth	mm	367		367	
Lift weight	kg	57		53	
Gas fitting	mm	22		22	
Central heating fittings	mm	22		22	
DHW circuit fittings	mm	15		15	
Power supply					
Max power input	W	150		150	
Power supply voltage/frequency	V / Hz	230 / 50		230 / 50	
Index of protection	IP	X4		X4	
Maximum permissible flue lengths					
Max Horizontal flue length 60/100mm Ø	m	5		5	
Max Vertical flue length 60/100mm Ø	m	6		6	
Max Horizontal flue length 80/125mm Ø	m	13		13	
Max Vertical flue length 80/125mm Ø	m	14		14	
Total equivalent length two pipe 80mm Ø	m	55		55	

Flue length reductions for bends

CONCENTRIC FLUE

Reduction for bends	60/100	80/125
90° bend	1m	0.5m
45° bend	0.5m	0.25m

TWO PIPE FLUE - 80MM

Equivalent permissible length of 55m

Reduction for bends	Air	Flue
90° bend	1.5m	2.0m
45° bend	1.2m	1.8m
Pipe - per metre length	1m	1.6m*/2m**
Horizontal terminals	2m	5m
Concentric vertical terminal	-	12m

*Vertical **Horizontal

Ferroli



Ferroli Limited

Ferroli began producing heating appliances and equipment in Italy during the 1950s. Today the company is still family-owned but now operates ten ultra-modern factories in Europe and is developing new production sites and offices in China, Russia and the Ukraine. The Group employs over 2,200 people and produces more than 500,000 boilers per year in addition to its growing business in water heaters and air conditioners.



Ferroli Domestic Heating Tel: 08707 282 882

Offering gas wall mounted units with outputs from 5kW to 50kW, Ferroli's stylish, compact domestic boilers provide maximum comfort with minimal fuel usage. With a choice of conventional, condensing and combi technologies, there's a boiler to match the heating and hot water requirements of every home. In recent years Ferroli has also become a Northern European leader in solar heating, and has developed underfloor heating systems for the UK market.



Ferroli Commercial and Industrial Heating Tel: 08707 272 755

Ferroli commercial boilers for pressure jet oil, forced air gas or dual fuel are factory matched with high efficiency burners to provide outputs up to 14,000kW, while meeting the strictest emissions demands. Our range includes high efficiency aluminium, cast iron, steel and stainless steel boilers as well as stainless steel unvented hot water cylinders, pressurisation units and plate heat exchangers. We are also taking a lead in developing underfloor and solar heating solutions.



Ferroli Technical Helpline and Service Tel: 08707 282 885

The Ferroli technical help desk is able to assist heating engineers at the time of specifying, installing and in-guarantee servicing any of our products. Once the normal guarantee period on our boilers has expired, coverage can be extended cost-effectively with a choice of Ferroli service contracts. All Ferroli service engineers work to Benchmark standards and the Benchmark Code of Practice for the installation, commissioning and servicing of central heating systems.



Ferroli Spares Tel: 08707 282 882

The rapidly growing popularity of Ferroli as first choice for both domestic and commercial installations means that heating parts stockists offer readily available spares for Ferroli boilers. For less frequently needed items, we maintain a fully-stocked warehouse located centrally in the UK, enabling same-day despatch of just about any part needed to keep your Ferroli boiler running at optimum efficiency.



Ferroli Training Tel: 08707 282 891

Ferroli understands that well-trained installers are the key to a safe and efficient heating system. That's why we run comprehensive training courses in our purpose-built facilities for everyone concerned in the installation and servicing of Ferroli's range of boilers. We also offer a solar appreciation training day at Burton-upon-Trent or a three day BPEC accredited course. These courses improve installers' knowledge and skills by providing both the theory and the hands-on practical experience essential to maintaining heating system performance and safety.



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