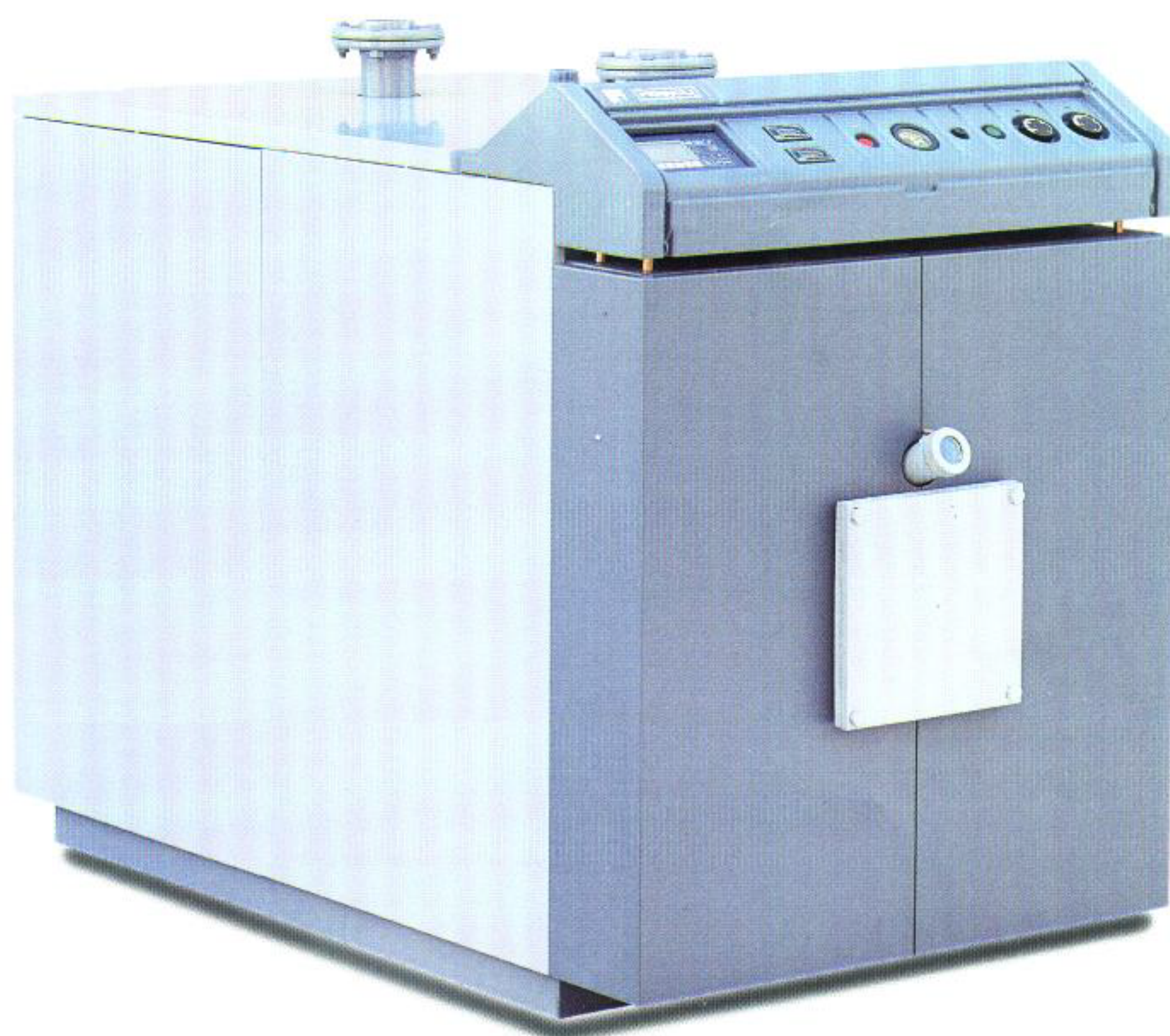


PREXTHERM

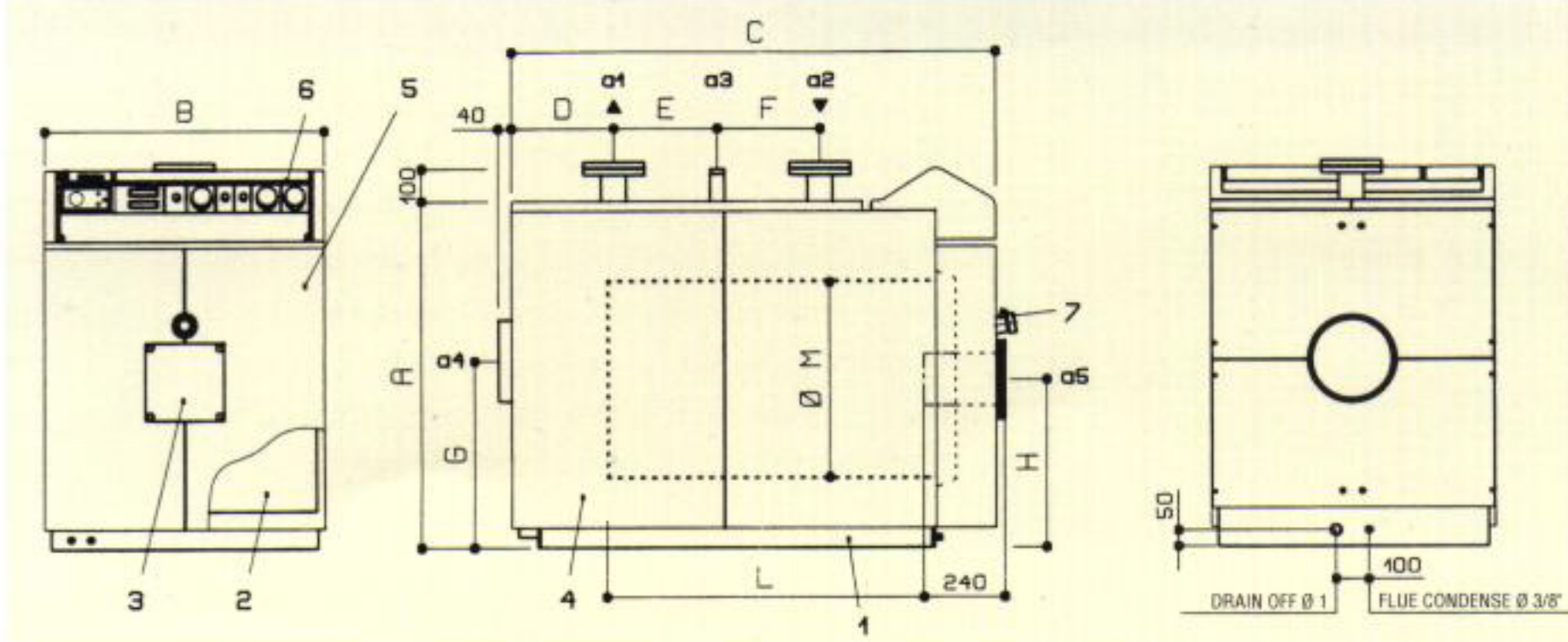
MODELS 100 to 470 kW



FERROLI

GENERAL DESCRIPTION

The PREXTHERM range of welded steel boilers are available in 16 sizes from 100 kW to 2000 kW and are suitable for oil (35 sec class D) natural gas, L.P.G. or dual fuel. Manufactured from the highest quality steel the standard range is suitable for indirect central heating and hot water services up to a maximum working pressure of 5 bar, and a flow temperature of 85°C. Subject to special order 6,8 or 10 bar versions are also available. Working on the flame reversal principle and 3 pass flue system the PREXTHERM series will provide combustion efficiencies in excess of 90% net. All PREXTHERM boilers are supplied with control panels that include control thermostat, high-low thermostat, limit thermostat (manual reset), hours run indicators, for high and low fire, burner ON/OFF switch, burner lockout, thermometer and pressure gauge. All PREXTHERM boilers are CE approved and conform to the relevant European Standards.



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- | | | | |
|----|----------------------|---|-----------------------|
| a1 | Flow connection | 1 | Boiler shell |
| a2 | Return connection | 2 | Door |
| a3 | Safety valve tapping | 3 | Burner mounting plate |
| a4 | Flue outlet | 4 | Casing |
| a5 | Burner flange | 5 | Door insulation |
| | | 6 | Control panel |

TECHNICAL DATA

PREXTHERM	A	B	C	D	E	F	G	H	L	M	a1-a2	a3	a4	a5
100	970	760	1110	235	215	145	540	470	660	400	DN 50	1" 1/4	200	160
125	970	760	1260	235	365	145	540	470	810	400	DN 50	1" 1/4	200	160
150	970	760	1410	235	465	195	540	470	960	400	DN 50	1" 1/4	200	160
200	1060	850	1452	306	415	205	585	515	930	480	DN 65	1" 1/4	250	160
250	1060	850	1652	306	515	305	585	515	1130	480	DN 65	1" 1/4	250	160
300	1060	850	1652	306	515	305	585	515	1330	480	DN 65	1" 1/4	250	160
350	1230	1040	1832	484	405	395	670	600	1250	540	DN 80	1" 1/2	300	210
400	1230	1040	2032	484	605	395	670	600	1450	540	DN 80	1" 1/2	300	210
470	1230	1040	2232	484	805	395	670	600	1650	540	DN 80	1" 1/2	300	210

PREXTHERM	OUTPUT kW		INPUT kW		COMBUSTION CHAMBER Volume m ³	WATER CAPACITY dm ³	PRESSURE DROP WATER m/bar		WORKING Press. bar	WEIGHT kg
	Min.	Max.	Min.	Max.			Δt 11°C	Δt 15°C		
100	60	100	65	109	0,083	120	7.4	4	5	270
125	75	125	82	136	0,102	142	13.0	7	5	290
150	90	150	98	163	0,124	162	18.5	10	5	320
200	120	200	131	218	0,174	214	13.2	7	5	430
250	150	250	163	272	0,204	247	18.5	10	5	490
300	180	300	196	327	0,241	283	29.6	16	5	560
350	210	350	229	381	0,286	528	20.4	11	5	830
400	240	400	362	436	0,332	598	28.0	15	5	910
470	282	470	307	512	0,378	667	35.2	19	5	980

BASE REQUIREMENTS

It is recommended that all the PREXTHERM boilers should be installed on a load bearing non combustible base not less than 80 mm high and extending to at least 100 mm in excess of the overall boiler dimensions. The base can be level with but not extend beyond the front of the boiler casing. Certain burners may require a higher base. Please consult FERROLI technical services for further details.

INSTALLATION REQUIREMENTS

All PREXTHERM boilers should be installed in accordance with the relevant requirements of the building Regulations, Health and Safety Executive Regulation PMS, IEE Regulations and the Byelaws of the Local Authority and the local water company.

British Standard Codes of Practice

CP341.300-307: Central heating by low pressure hot water.

CP341.342: Part 2 Centralised hot water supply.

CIBSE Guide: Reference sections B7, B11 & B13.

IGE/UP/2: Gas Installation pipework, boosters and compressors on Industrial and Commercial premises.

BS6644: Installation of gas fired hot water boilers rated inputs above 60 kW but not greater than 2 Mw.

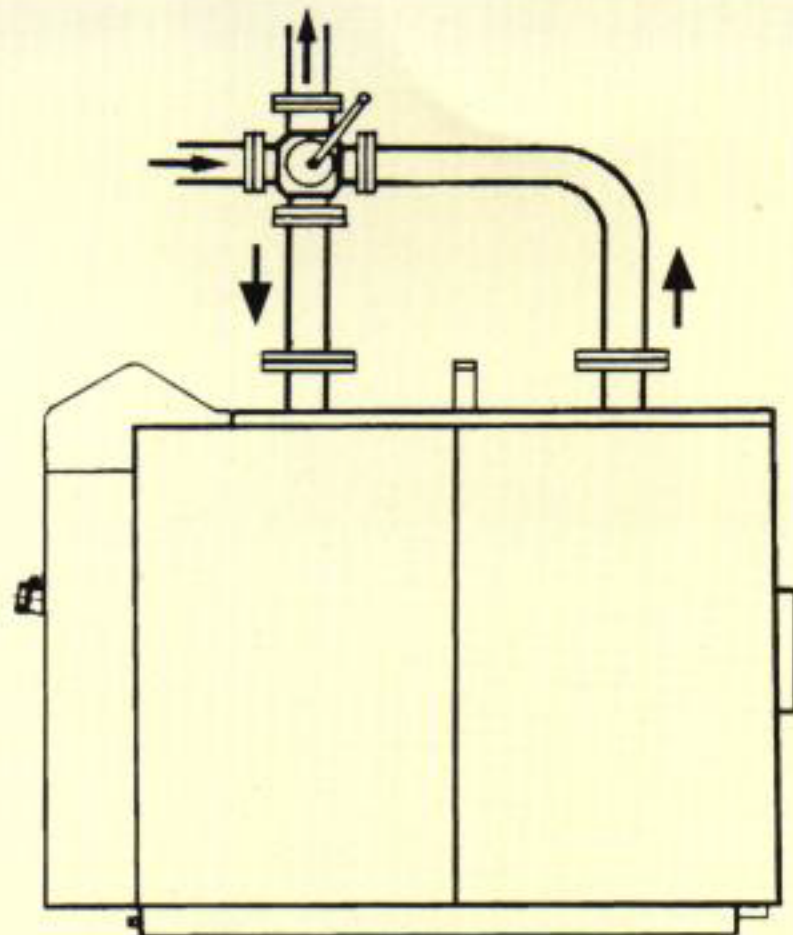
BS5410: Part 2 oil-fired installation of 44 kW and above.

FLUE SYSTEMS

Flue should be designed and installed to effectively evacuate the products of combustion. For guidance consult BS6644 British Gas Publication No IM11. Further information in respect of oil-fired installations may be obtained from BS5410 Part 3.

SYSTEMS REQUIREMENTS

The PREX THERM range of boilers can operate against a maximum temperature difference (Δt) of 20°C. Beyond this value the use of shunt pumps will be mandatory. Furthermore to reduce the risk of corrosion within the boiler tubes it is essential that the flow temperature should never drop below 65°C particularly with fuels having a sulphur content in excess of 3%. Regardless of the system temperature needs, a 4-way mixing valve should be installed.



VENTILATION

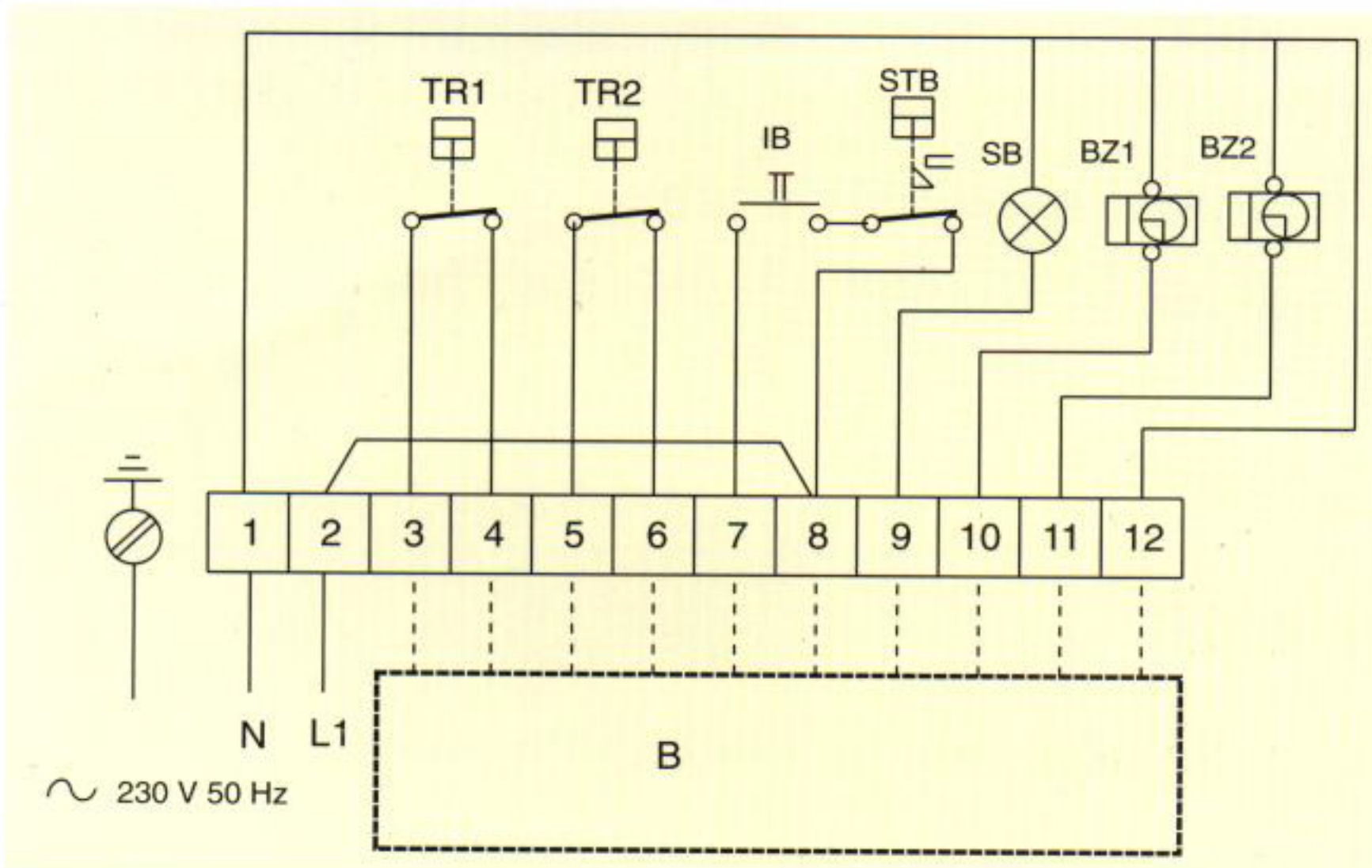
Safe, efficient, and trouble-free operation of boilers is vitally dependent on the provision of an adequate supply of fresh air to the room in which the appliance is installed. Ventilation by grilles communicating directly with the outside, air is required at both high and low levels. The minimum free areas of these grilles must be in accordance with the table below. The use of an extractor fan in the same room as the boiler (or in an adjacent room in communication) can, in certain conditions, adversely effect the safe operation of the boiler. Where such a fan is already fitted, or if an extractor fan is likely to be installed at a later date, then further advice should be obtained.

Total gross input rating of boilers	Position of Air vents	Air vent areas (Air direct from outside)
Up to 2 MW	High Level	270 cm ² plus 2.25 cm ² per kW in excess of 60 kW total rated input
Up to 2 MW	Low Level	540 cm ² plus 4.5 cm ² per kW in excess of 60 kW total rated input

For further detailed recommendations consult BS5440 PART 2 and BS6644

ELECTRICAL DIAGRAM

N.B.: The wiring shown indicates control loop circuits. In those instances where 3 phase burners are used then separate supplies will need to be taken direct to the burner.



- TR1** Burner 1st stage regulation thermostat
- TR2** Burner 2nd stage regulation thermostat
- IB** Burner ON/OFF switch
- STB** Limit thermostat (manual reset)
- BZ1** Burner 1st stage hour meter
- BZ2** Burner 2nd stage hour meter
- B** Burner control panel
- SB** Burner lock out lamp

WATER TREATMENT

Water contained in all heating and indirect hot water systems, particularly open vented systems, requires basic treatment. It is wrong to assume that because boilers are operating in conjunction with what is an apparently closed circuit, an open vented system will not under normal circumstances allow damage or loss of efficiency due to hardness salts and corrosion once the initial charge of water has been heated several times. One millimetre of lime reduces the heat conversion from flame via metal to water by 10%. In practice the accumulation of these salts is liable to cause noises from the boiler body or even premature boiler failure. Corrosion and the formation of black iron oxide sludge will ultimately result in premature radiator failure. Open vented systems are not completely sealed off from the atmosphere because it is necessary to provide a tank open to atmosphere if proper venting and expansion of system water is to be achieved. The same tank is used to fill the systems with water and it is through the cold feed pipe that system water expands into the tank when the boiler passes heat into the system. Conversely, when the system cools, water previously expanded is drawn back from the tank into the system together with a quantity of dissolved oxygen. Even if leakage from the heating and hot water system is eliminated there will be evaporation losses from the surface of the tank. Depending on ambient temperature these may be high enough to evaporate a large portion of the system water capacity over a full heating season. Corrosion will always occur within a heating/hot water system to a greater or lesser degree irrespective of water characteristics, unless the initial fill water from the mains is treated. Even the water in closed systems will promote corrosion unless treated.

PRODUCT RANGE

BOILERS

WALL-MOUNTED BOILERS

With or without water production, these high performance, electronic and fully modulating systems are suitable for both hot water and heating applications. Models with outputs from 6 kW to 35 kW.

CAST IRON BOILERS ATMOSPHERIC GAS FIRED

High performance, with or without hot water production; models with outputs from 10 kW to 289 kW.

CAST IRON BOILERS PRESSURE JET OIL AND GAS FIRED

High performance, with or without hot water production, some models operate at low temperature. Models with outputs ranging from 17 kW to 650 kW.

HOT WATER STORAGE CALORIFIERS

From 100 to 500 litre capacity.

WELDED STEEL BOILERS

High performance models with outputs ranging between 87 kW and 10,465 kW for hot water, superheated hot water and steam up to 15 bar.

SOLID FUEL BOILERS

These units are ideal for burning wood chips and fluid fuels (2 fuels) with output ranging between 174 kW and 6,990 kW for production of hot water superheated hot water and steam up to 15 bar.

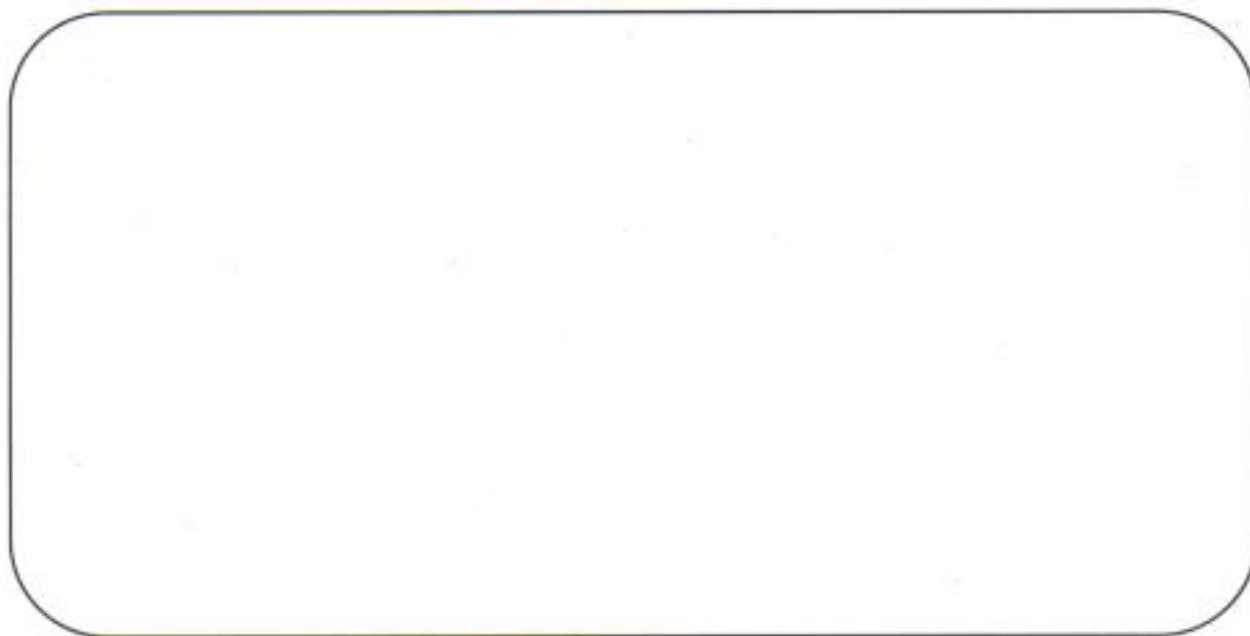
AIR-CONDITIONING

A complete range of products for air-conditioning ranging from mobile units, single and multisplit units, with chillers up to 143 kW.

WHIRLPOOL BATH

An exclusive range of whirlpool and showers complete with accessories are available in 4 colours.

ALL FERROLI BOILERS ARE CE APPROVED AND CONFORM TO THE RELEVANT EUROPEAN STANDARDS.



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