

# GN1 N ★★

**GAS/OIL FIRED  
CAST IRON  
FREE-STANDING BOILER**

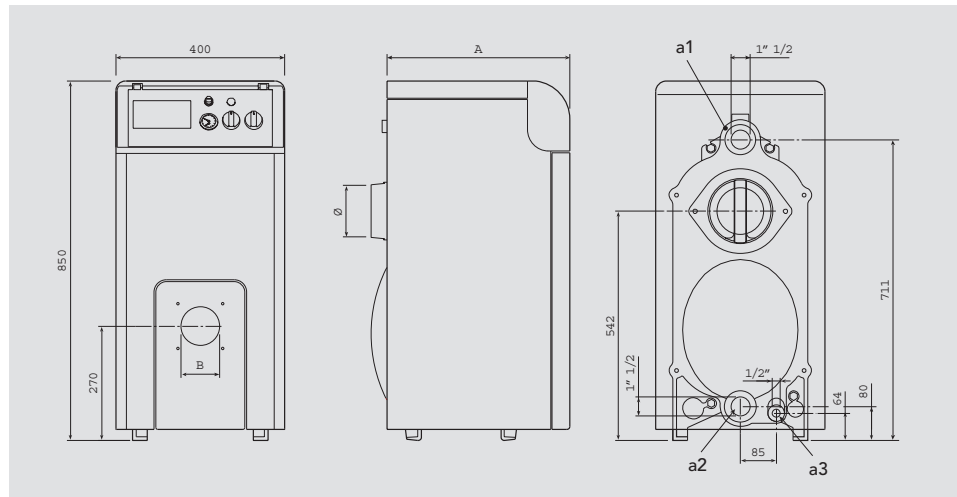


**FERROLI**  
**COMMERCIAL**

# GN1 N

## GENERAL DESCRIPTION

The GN1 N is a highly efficient boiler suitable for use with forced gas, pressure jet oil (28 or 35 sec) or dual fuel, with the option of ON/OFF or HIGH/LOW operating burners. The boiler body is built by cast iron sections joined together by means of high density fibres. Sections fins are especially developed to achieve the best efficiency of the boiler in order to save on fuel consumption. The boiler body insulation is provided by mineral high density fibers that minimizes the body heat lost.



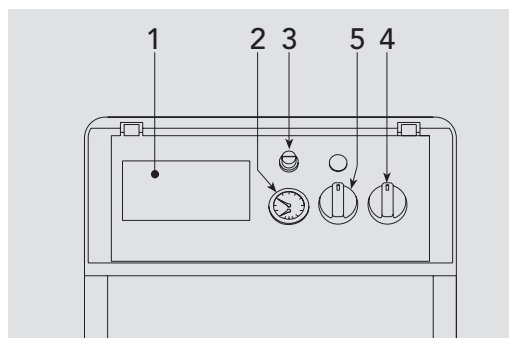
## TECHNICAL DATA

MODELS GN1 N		02	03	04	05	06	07	08
HEAT (GROSS) GAS	max. kW	28,6	43,0	57,3	71,6	86,1	100,4	114,7
	min. kW	18,2	18,2	39,3	49,1	59,1	68,8	78,6
HEAT (NET) GAS + OIL	max. kW	25,8	38,7	51,6	64,5	77,5	90,4	103,3
	min. kW	16,4	16,4	35,4	44,2	53,2	62,0	70,8
HEAT OUTPUT	max. kW	23,3	34,9	46,5	58,1	69,8	81,4	93,0
	min. kW	15,0	15,0	32,5	40,5	48,8	57,0	65,0
SECTIONS	n°	2	3	4	5	6	7	8
WATER CONTENT	dm <sup>3</sup>	11	14	17	20	23	26	29
COMBUSTION CHAMBER	length mm	286	386	486	586	686	786	886
	dimension ø mm	260x310	260x310	260x310	260x310	260x310	260x310	260x310
WORKING PRESSURE	bar	4	4	4	4	4	4	4
A boiler length	mm	300	400	500	600	700	800	900
B blast tube diameter	mm	105	105	105	105	125	125	125
ø flue diameter	mm	130	130	130	180	180	180	180
PRESSURE DROP COMBUSTION CHAMBER	load loss Δp mbar	0,2	0,2	0,2	0,2	0,2	0,2	0,2
	volume dm <sup>3</sup>	12,09	20,15	28,21	36,27	52,39	60,45	68,51
WATER LOAD LOSSES	Δt 10°	1	1,8	4,2	7,2	11	15	20
	Δt 20°	—	—	1	1,6	2,3	3,3	4,5
WEIGHT OF UNIT	kg	75	100	125	150	175	200	225

N.B. - Max. water temperature for the heating system is 90°C. - Min. water temperature for the heating system is 45°C.

## Key

- 1 Timer socket
- 2 Thermomanometer
- 3 High limit thermostat - manual reset
- 4 Main switch
- 5 Control thermostat



## HIGH LIMIT THERMOSTAT - MANUAL RESET

This operates when the boiler temperature reaches such a level that can cause a dangerous situation. Before resetting this thermostat ask a qualified engineer to inspect the appliance.

## CONTROL THERMOSTAT

This allows the control of the boiler operating temperature by means of switching the burner on or off.

## EXTERNAL CONTROLS

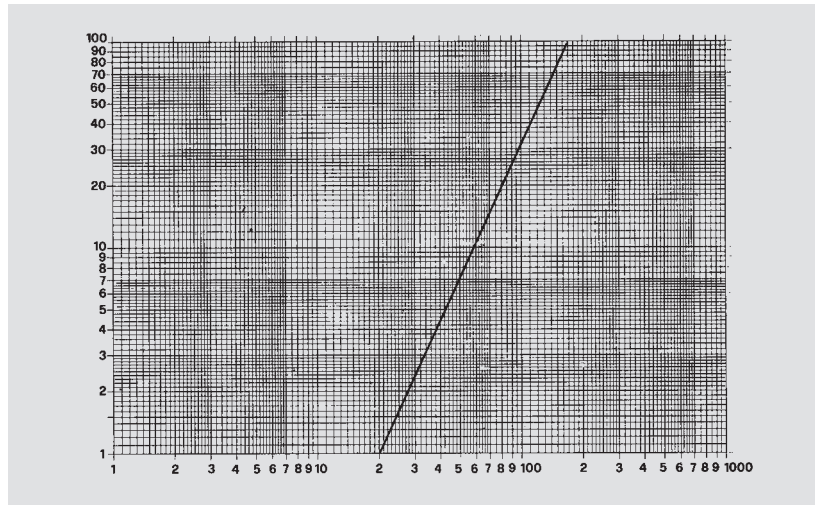
The use of external controls such as a 240 volt time clock, room stat or both can be used by removing the link wire from terminals 9 and 10 and wiring to suit. This is connected in series to the control thermostat and manages both the burner and pump during timed mode.

## CE MARK

The CE mark indicates that the appliance satisfies all the essential requisites of the gas appliance directive (90/396/CEE) and the technical standards referred to.

## PRESSURE DROP

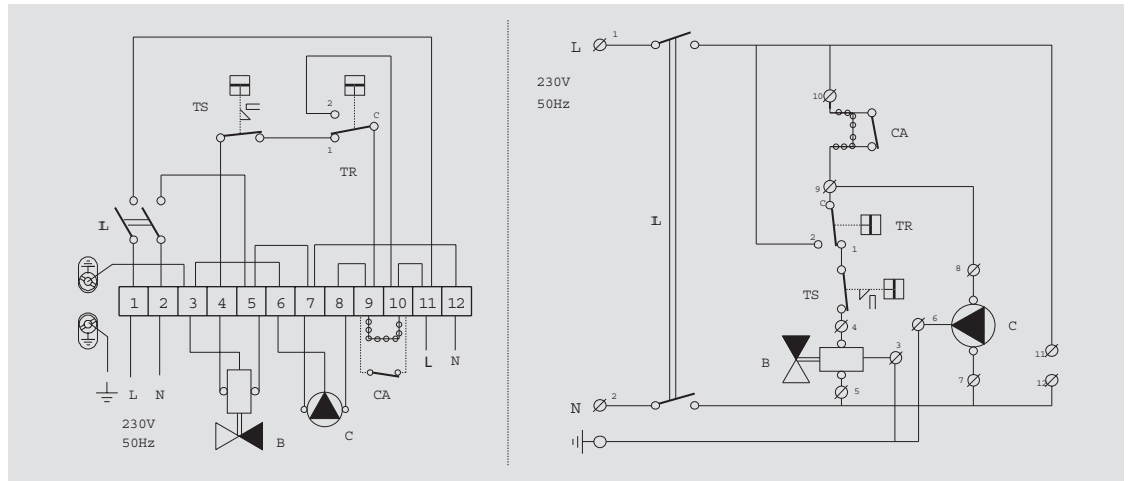
Pressure drops according to the boiler size are specified on the following diagram and refer to temperature difference between flow and return comprises between 10 and 20°C.



## ELECTRICAL DIAGRAM

- IL** Main switch
- CA** External controls link
- TR** Boiler thermostat
- TS** Safety thermostat
- B** Burner
- C** Circulating pump
- 11-12** Auxiliary power

⊖⊖⊖ Remove link wire from terminals 9 and 10 should external controls be used, and wire to suit



## 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.**

*Ferrolì pursues a policy of continuous product improvement and reserves the right to alter specifications, design and price without prior notice.  
All information was correct a time of going to print.*

