

Handbook

Series SG Fully Automatic Gas Burners Model SG 5

FOREWORD

The Selectos SG5 is a forced draught gas burner and is suitable for firing all commercial gases, towns gas, natural gas and LPG. The combustion head is manufactured for expanded flame start with our standard HT spark ignition. It is of simple robust construction giving a good mixture capable of stable and efficient combustion throughout the firing range.

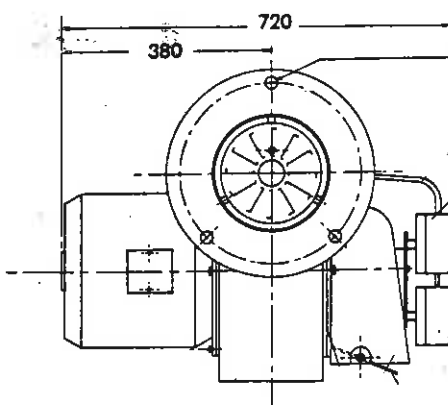
The SG5 is the larger brother to the well proven SG62 and SG82 range. It is supplied complete with high low controls as standard, three phase power supply and is ideally suited for firing most commercial appliances.

Technical Data

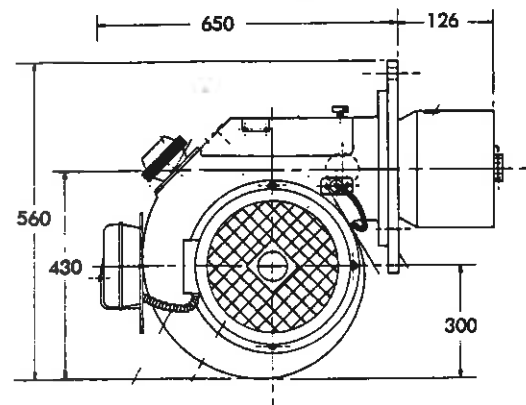
GAS

Model	Firing Rate		Boiler Output @ 80% eff		Gas Line Size BSP	Motor W HP	Weight Kg
	kW	Btu/h	kW	Btu/h			
FD	513-733	1,750,000-2,500,000	410-586	1,400,000-2,000,000	2"	2237	2" 90kg
	733-879	2,500,000-3,000,000	586-703	2,000,000-2,400,000	2½"		
SG5 CN	550-735	1,875,000-2,500,000	440-586	1,500,000-2,000,000	2"	3	2½" 131kg
	733-1282	2,500,000-4,375,000	586-1026	2,000,000-3,500,000	2½"		

SG/5



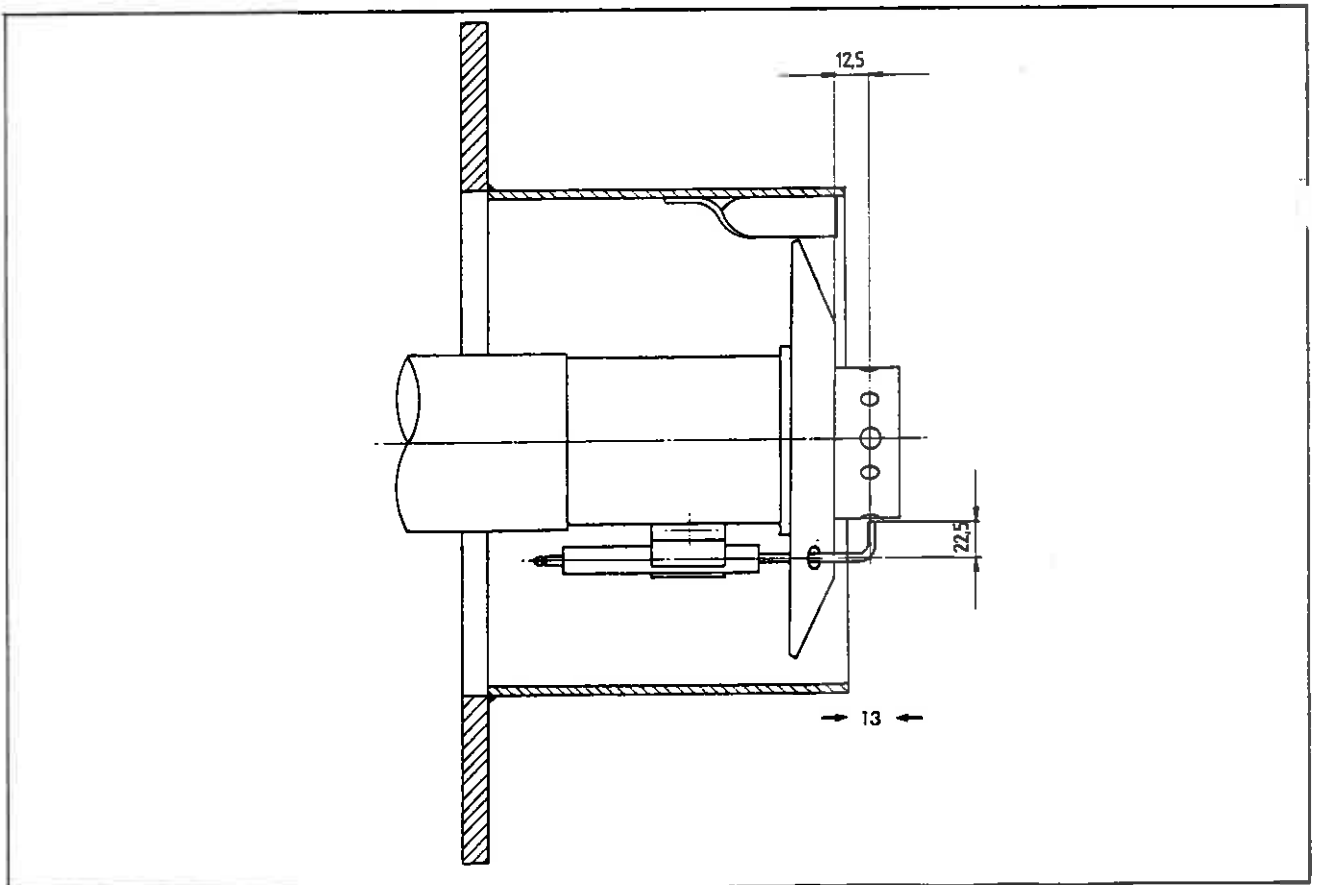
Three boiler fixing holes
equi-spaced. 143 dia.
on a 255 P.C.D.

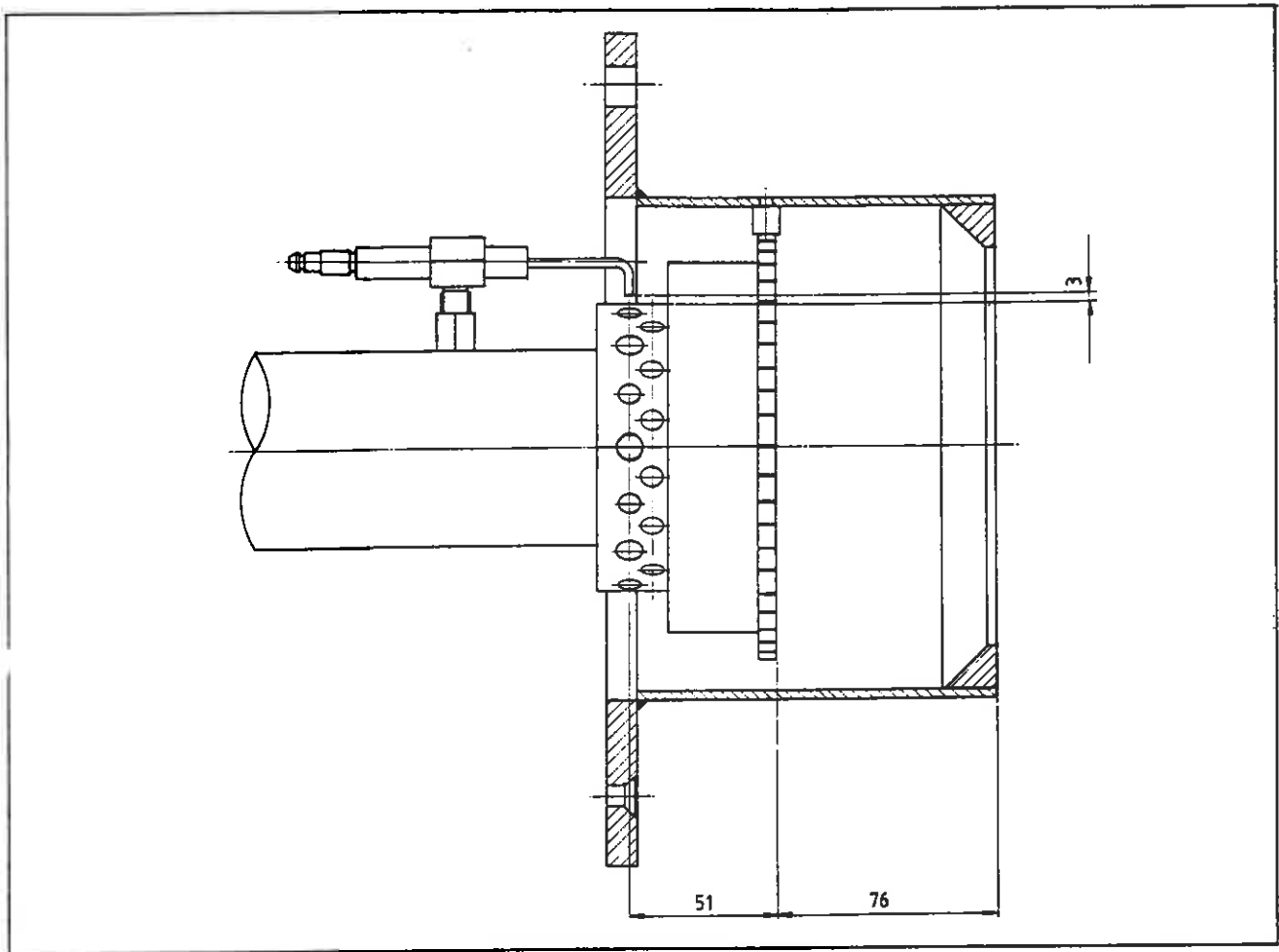


Min. firing height 600 min. to centre of draught tube

Data for Natural Gas		SG5			
		FD		CN	
		2"	2½"	2"	2½"
Burner Firing Rate	kW	513-733	733-879	550-733	733-1,282
	Btu/h	1,750,000 2,500,000	2,500,000 3,000,000	1,875,000 2,500,000	2,500,000 4,375,000
Boiler Output at 80% efficiency	kW	410-586	586-703	440-586	586-1,026
	Btu/h	1,400,000 2,000,000	2,000,000 2,400,000	1,500,000 2,000,000	2,000,000 3,500,000
Main gas line	BSP	2"	2½"	2"	2½"
Pilot gas line	BSP	½"		½"	
Electric motor	W HP	2237	3	2237	3
Fan diameter	mm	280mm		280mm	
Draught tube diameter	10mm	176mm		176mm	
Nozzle size (No. holes X size mm)		8 holes 79mm diameter		N.A.	
Ignition transformer		Danfoss 52L			
Electrical Supply		338/440 Volt 50Hz three phase AC four wire			
Starting current	amps	30		30	
Running current	amps	7.9/4.55		7.9/4.55	

HEAD ASSEMBLY SG5 FD





HEAD ASSEMBLY SG5 CN

COMMISSIONING

Important

For standard commissioning procedure refer to page 7, section 4, of main SG series manual.

Setting of high/low control mechanism

The high/low control mechanism is operated by a motorised butterfly valve incorporated in a Gastechnic type A.HMV 2 quick acting SD valve, with external rod linkage-controlling the air shutter.

The standard method of mounting the high/low motor will be on the pad at the bottom of the Gastechnic valve, with the drive to butterfly disc via a coupling marked with a graduated scale. The datum point for this scale is the lowest point of the hexagon at the valve inlet (with the longest mark on the scale in line with the V of the hexagon the butterfly disc is fully closed).

The high/low motor is controlled by three adjustable cams and a relay, adjustment of the cams is via a 2mm Allen key supplied taped inside the motor cover.

- Cam No. 1 minimum position
- Cam No. 2 maximum position
- Cam No. 3 not used
- Cam No. 4 adjusted to close contacts to second (high air) pressure switch

The main air control adjustment is via the connecting linkage between the air damper and the high/low motor, fine control can be made via cam no. 2.

MODEL

SG5

Preliminary settings

Disconnect wire in control box feeding high/low thermostat. Using the datum point described above set the butterfly disc to approximately mark 4 (right to left movement) on the graduated scale (longest mark = 0).

Set the air control to approximately $\frac{1}{4}$ " (6-7mm) open via the linkage rod. Reset cam no. 1 to depress its corresponding micro-switch (if when firing these settings are incorrect for low fire, readjust both disc and cam and the air damper if necessary, to give correct pilot and low fire conditions).

When low fire correct, switch off burner and reconnect wire to high/low thermostat, then allow burner to proceed to high fire.

The gas throughout for high fire is mainly controlled by the main governor fitted on the burner, but fine control can be made on cam no. 2.

On high fire care must be taken to ensure that the lever on microswitch no. 2 is depressed to prevent motor over-run, and that the electrical feed is available at terminal no. 1 of the high/low motor by adjusting cam no. 4. This electrical circuit supplies the high air pressure switch, which must be open circuit on high fire. This pressure switch can only be adjusted correctly with the burner on high fire and must be set to close circuit on loss of air pressure.