



# Fusar Bassini Astorre e C. Snc

## CONICAL FLAME BURNERS "F" SERIES

### APPLICATIONS

The burner "F" series is suitable for applications to industrial furnaces, for combustion with stoichiometric ratio or with excess of air; particularly indicated for applications on the aluminum melting furnaces, with assembly in flat and on furnaces for the ferrous alloy heat treatment.



### TECHNICAL CHARACTERISTICS

- Intense combustion
- High choking ratio
- Mixing head
- High flame stability
- Automatic lighting by pilot burner
- Micrometric gas metering device

### CAPACITY

	BURNER TYPE	CAPACITY KW	CAPACITY Kcal/h
▷	F40	380	320000
▷	F60	570	490000
▷	F90	860	740000

### GENERAL

The burner "F" series can burn natural gas or industrial LPG. The comburent air and the combustible gas are mixed in the burner head avoiding in such way the phenomenon "backfire" and allowing a wide ratio of choking with a good flame stability. The refractory tile burner's internal shape made of high temperature refractory flame of conical shape, generates in the walls of the furnace, assures a clean and complete combustion.

The threaded gas inlet can be easily turned according to one's own requirements. The air inlet fitted with a weld counter-flange can be rotated every 90°.

The burner "F" series lighting always must be carried out in the minimum position by the pilot burner YP22-S.

The burner "F" series is fitted with three housing for observation port, pilot burner and UV detector.

**Pilot burner, main burner and the automatic burner control unit must be designed, installed and setted meeting the law regulations in force.**

The burner "F" series can be automatically controlled by regulating and controlling the comburent air and the combustible gas. The required air-gas ratio can be maintained by the air zero governor in every regulation area. The pre-setting of the required air-gas ratio is much easier if you know the flow rates of the air and of the combustible gas; the flow rate of gas can be measured by the diaphragms set to gas supply; the air flow rate can be measured by the pressure present in the air inlet at the burner or by the diaphragms set to air supply.



**CAUTION: The combustion system must be designed and installed meeting the law regulations in force. If the installation, the use and the maintenance are not carried out correctly, severe damages to things or persons might occur.**

### TENDING OF THE BURNER

The minimum supply pressure of the combustible gas inside the system can be determined by calculating all the resistance due to the piping and to the accessories.

Before starting the burner, be sure that the safety valves for the gas supply are closed. Set the gas adjuster device to the minimum gas flow rate, start the combustion air fan and upon completion of the washing phase, regulate the control valve for the zone air to the low flame position (opening set to 1/4 or less with respect to the maximum position).

Excite the gas solenoid valve on the pilot burner and light it. The flame must be rigid and blue and can be adjusted by the gas adjuster devices assembled on the pilot burner pre-mixer; be sure that the flame retention on the pilot burner head functions correctly (this is absolutely necessary to ensure the flame stability in the pilot burner). Repeat the pilot burner's lighting more times in order to check the setting in working conditions.

Connect the air zero governor's reference line to the air pressure intake and discharge the air up to the gas pressure at the zero governor ZG inlet is over 10 mbar than the maximum pressure of the air supply to the burner: so the gas flow rate is always maintained proportional to the comburent air; the regulation of the heat potentiality can be performed by a air control valve. Excite the main solenoid valve for the gas supply and light the main burner at the minimum flow rate. Then gradually open the manual butterfly valve for the combustion air and the manual gas adjuster device to the burner up to obtaining the maximum potentiality condition required; after this initial pre-setting the regulation will be automatically maintained.

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GAS BURNERS AND COMPONENTS FOR COMBUSTION SYSTEMS

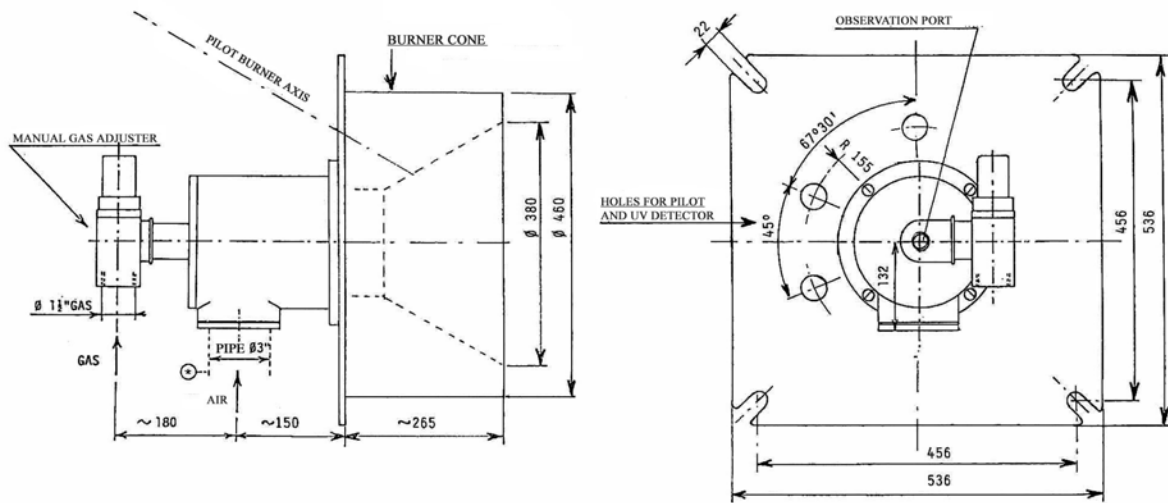
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# Fusar Bassini Astorre e C. Snc

## F-40 BURNER



### CONICAL FLAME BURNER F-40

**GASES:** \* Natural gas to be specified with order  
 \* Liquid gas – LPG

**GAS PRESSURE:** 300 – 500 mm H<sub>2</sub>O

**CAPACITY:** The burner capacity depends EXCLUSIVELY by air pressure, gauged upstream of the burner

BURNER CAPACITY Kcal/h WITH AIR PRESSURE IN mm H <sub>2</sub> O											
AIR PRESSURE	10	25	50	100	150	200	250	300	400	500	600
NATURAL GAS	56000	96000	140000	196000	236000	268000	300000	328000	372000	392000	400000
LPG	52000	89000	130000	181000	218000	248000	278000	304000	344000	363000	370000

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GAS BURNERS AND COMPONENTS FOR COMBUSTION SYSTEMS

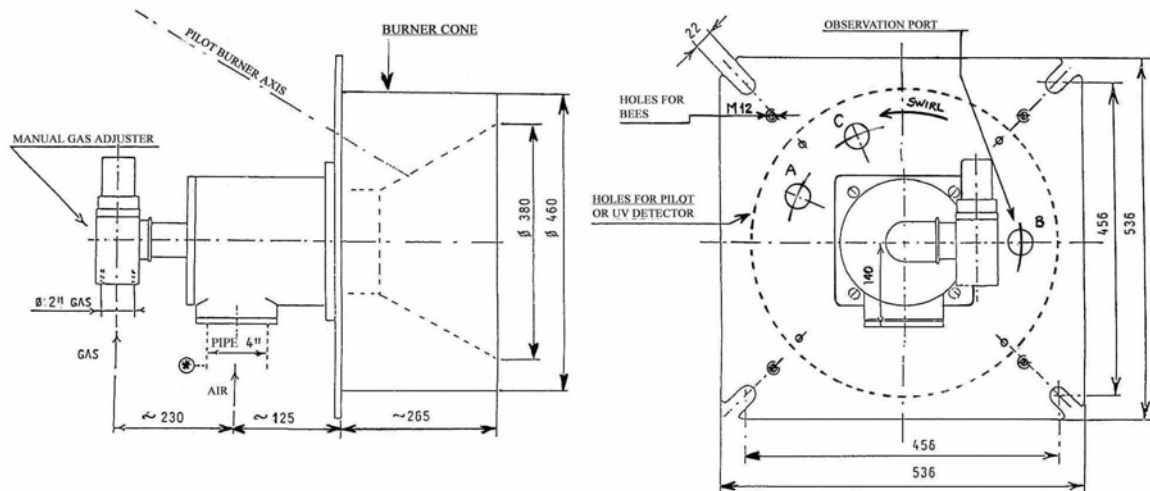
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# Fusar Bassini Astorre e C. Snc

## F-60 BURNER



### CONICAL FLAME BURNER F-60

**GASES:** \* Natural gas to be specified with order  
 \* Liquid gas – LPG

**GAS PRESSURE:** 500 – 600 mm H<sub>2</sub>O

**CAPACITY:** The burner capacity depends EXCLUSIVELY by air pressure, gauged upstream of the burner

BURNER CAPACITY Kcal/h WITH AIR PRESSURE IN mm H <sub>2</sub> O												
AIR PRESSURE	10	25	50	100	150	200	250	300	400	500	600	700
NATURAL GAS	101000	160000	226000	320000	391000	452000	505000	554000	640000	715000	783000	846000
LPG	93000	148000	209000	296000	362000	418000	467000	512000	592000	662000	725000	783000

CAUTION: with the pilot burner in position C, if detector UV comes disposed in the position A, reveals both the flame of the pilot burner and the flame of the main burner, while if it comes disposed in the B position reveals only the flame of the main burner and not that one of the pilot.

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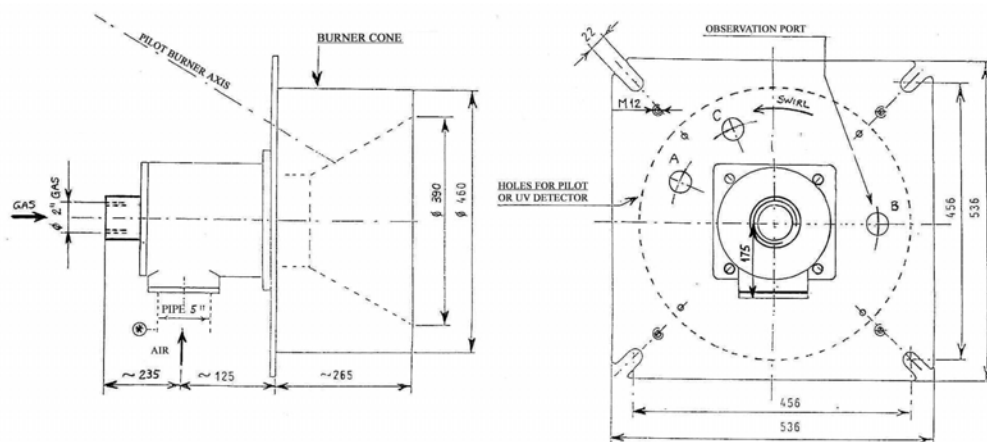
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# Fusar Bassini Astorre e C. Snc F-90 BURNER



## CONICAL FLAME BURNER F-90

**GASES:** \* Natural gas  
\* Liquid gas – LPG  
to be specified with order

**GAS PRESSURE:** 500 – 600 mm H<sub>2</sub>O

**CAPACITY:** The burner capacity depends EXCLUSIVELY by air pressure, gauged upstream of the burner

BURNER CAPACITY Kcal/h WITH AIR PRESSURE IN mm H <sub>2</sub> O												
AIR PRESSURE	10	25	50	100	150	200	250	300	400	500	600	700
NATURAL GAS	181000	287000	405000	574000	703000	811000	907000	994000	1148000	1283000	1406000	1518000
LPG	167000	265000	375000	531000	650000	750000	839000	920000	1062000	1187000	1301000	1405000

CAUTION: with the pilot burner in position C, if detector UV comes disposed in the position A, reveals both the flame of the pilot burner and the flame of the main burner, while if it comes disposed in the B position reveals only the flame of the main burner and not that one of the pilot.

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