



**Fusar Bassini Astorre e C. Snc**

## **LUMINOUS FLAME BURNERS "Z" SERIES**

### **APPLICATIONS**

The burner "Z" series is suitable for applications to industrial furnaces, for combustion with stoichiometric ratio or with excess of air; are plans in order to obtain luminous flames to high wavelength, for the fast transmission of the heat furnaces and/or attended of the aluminum, with assembly in wall.

### **GENERAL**

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

The burner "Z" series is fitted with three housing one center for the pilot burner, one center for UV detector in order to reveal the flame pilot, one center for UV detector in order to reveal the main burner's flame.

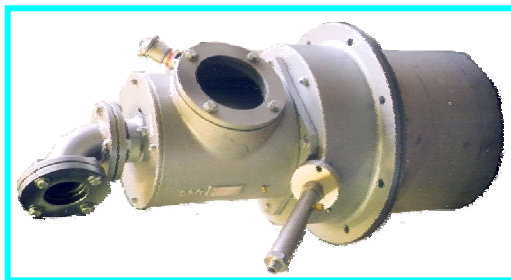
**Pilot burner, main burner and the automatic burner control unit must be designed, installed and setted meeting the law regulations in force.**

The burner "Z" 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.

### **TECHNICAL CHARACTERISTICS**

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

**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; the flow rate of combustion air can be known by measuring the air pressure in the burner's inlet; the flow rate of gas can be metered by the pressure drops across the gas orifice. After this initial pre-setting the regulation will be automatically maintained.

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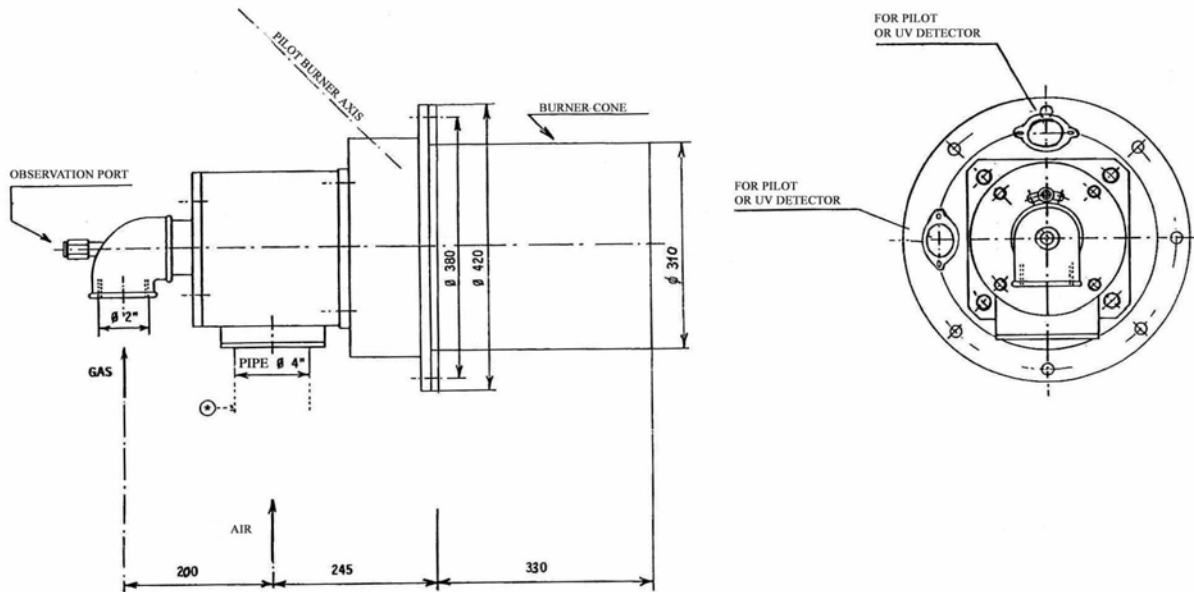
GAS BURNERS AND COMPONENTS FOR COMBUSTION SYSTEMS

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# Fusar Bassini Astorre e C. Snc Z-80 BURNER



## Z-80 BURNER

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

**PRESSURE:** 700 – 800 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	97000	154000	218000	308000	378000	436000	487000	534000	617000	689000	755000	816000
LPG	91000	143000	202000	286000	351000	405000	453000	496000	573000	640000	701000	757000

Weight: Kg. 92

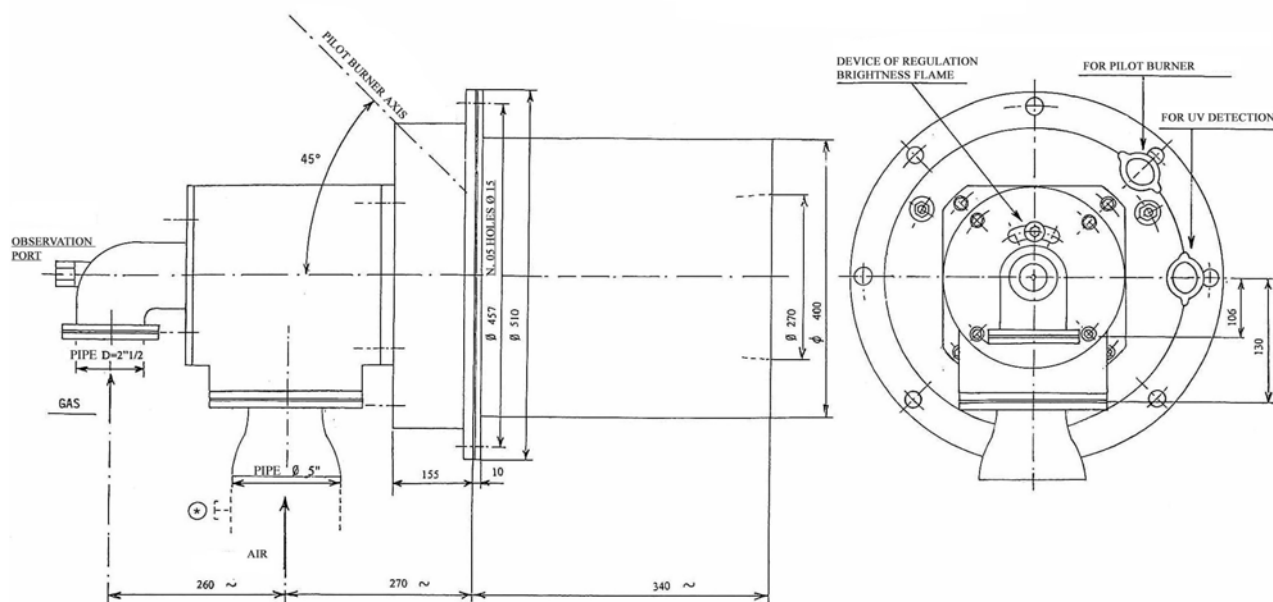
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# Fusar Bassini Astorre e C. Snc

## Z-120 BURNER



### Z-120 BURNER

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

**GAS PRESSURE:** 700 – 800 mm H<sub>2</sub>O

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

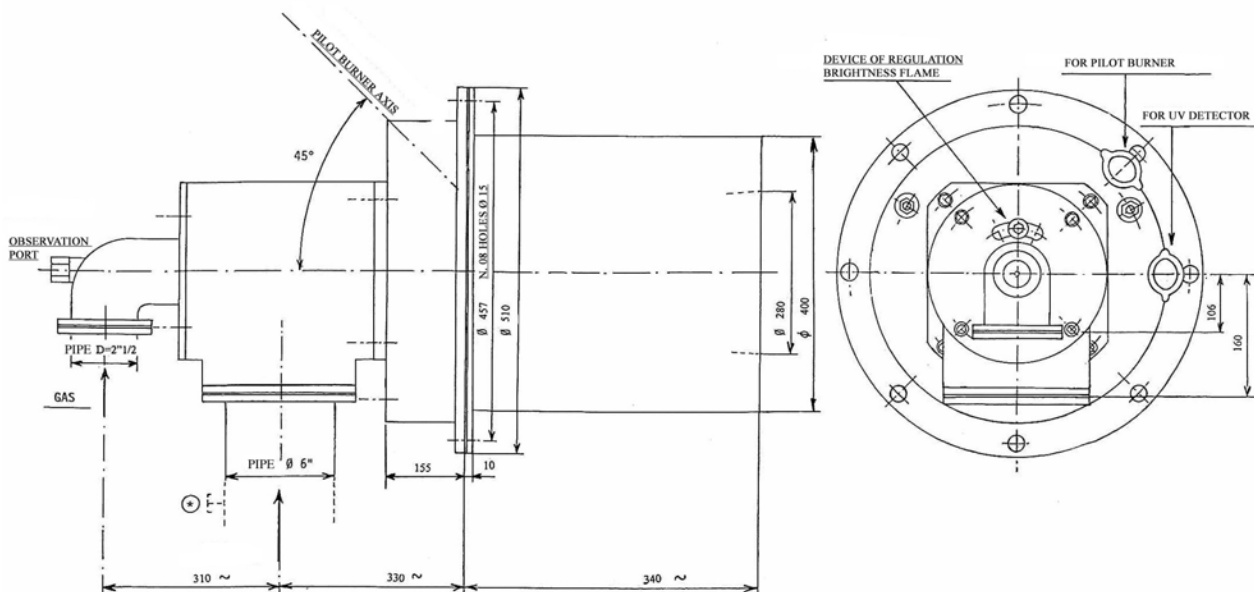
BURNER CAPACITY Kcal/h WITH AIR PRESSURE IN mm H <sub>2</sub> O												
AIR PRESSURE	10	25	50	100	150	200	250	300	400	500	600	700
NATURAL GAS	112000	200000	280000	408000	504000	576000	656000	704000	800000	848000	964000	880000
LPG	104000	185000	259000	378000	467000	533000	607000	652000	741000	785000	800000	815000

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# Fusar Bassini Astorre e C. Snc Z-180 BURNER



## Z-180 BURNER

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

**GAS PRESSURE:** 700 – 800 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	176000	288000	416000	584000	712000	816000	896000	968000	1088000	1160000	1200000
LPG	163000	267000	385000	541000	659000	756000	830000	896000	1007000	1074000	1111000

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