



Fusar Bassini Astorre e C. Snc

PILOT BURNER P211-S

APPLICATION

Gas pilot burner with blast air supply and with single electrode fully incorporated, complete with pre-mixer air/gas unit, with sensitive flow gas adjuster to the pilot burner.

Specially fit for burning chambers in pressure.

TECHNICAL DATA

GASES: Natural gas, liquid gas

COMBUSTION AIR PRESSURE: 600 mm H₂O

GAS PRESSURE: 600 mm H₂O

HIGH VOLTAGE ELECTRIC SWITCH: V.8000

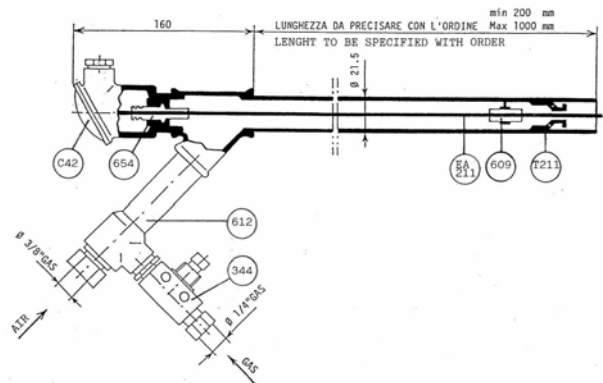
PILOT LENGHT: Between 200 and 1000 mm

EFFICIENCY

The maximum efficiency of the pilot depends on the effective pressure of the combustion air feed, measured immediately before the pre-mixer of the pilot burner and the back pressure in the combustion chamber.

AIR PRESSURE:	MAXIMUM POWER:
300 mm H ₂ O	Q = 4.000 Cal/hour
400 mm H ₂ O	Q = 4.800 Cal/hour
from 500 to 600 mm H ₂ O	Q = 5.700 Cal/hour

N.B. – The maximum power in Nmc/h of the gas can be found by dividing the maximum power, throught the calorific value, of the gas burning in the pilot.



N.	DESCRIPTION OF PARTS
344	Gas adjuster
612	Air – Gas premixer
C-42	Protection aluminium housing
EA-211	Ignition electrode (pilot lenght to be specified)
T-211	Flame retention nozzle
609	Insulator
654	Insulator

CAUTION

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

Before every lighting of the pilot burner carry out the cycle of the pre-purge with air like 5 times of the quantity to the combustion chamber.

Verify eletrrical links and air-gas plant are executed correctly.

Check tightness outside of the joint pipe to the gas cock of the pilot burner.

The efficiency of the pilot burner must be between 2% and 5% of the efficiency of the main burner.

The assembling and the regulation of the pilot burner will be easier by using flexible pipes for the air and gas supply.

It is recommended to provide clean air and gas free from dust.

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GAS BURNERS AND COMPONENTS FOR COMBUSTION SYSTEMS

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REGULATION OF THE PILOT BURNER FLAME

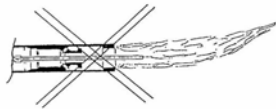
For a correct functioning of the pilot burner it is recommended to set the settingshall of the pilot burner; in a specials cases can be useful to examine the flame visually, the settingshall be carried out removing the pilot burner from its housing, **verifying stick in one's earth connection of the pilot extract.**

- Fully close the gas adjuster device pin on the pilot burner.
- Fully open the gas cock and the air cock on the pilot burner.
- Check the air and gas supply to the in the pilot pre-mixer.

CAUTION: before trying to light the pilot burner you must close the gas interception cock on the corresponding main burner

- Connect the electronic control and regulation equipment of the pilot burner following the instructions given by the supplier of the equipment of electrical control.
- Simultaneously with the excitation of the electric arc gradually open the adjuster pin on the gas adjuster device until the flame of the pilot burner is light
- If the flame of the pilot burner is yellowish and luminous, it means that there is an excess of gas (or lack of air) therefore the flame regulator will stop after the ignition time has elapsed.
- If so reduce the gas flow rate by the gas adjuster pin until obtaining a stronger, extremely rigid and pale blue flame. **The flame shall start to form inside the ends of the flame-thrower.**

NO



Incorrect regulation: absence of flame retention; flame with excess of gas (or air failure)

If so, reduce the gas flow rate by the gas adjuster pin until obtaining a stronger, extremely rigid and pale blue flame. The flame shall start to form inside the ends of the flame-thrower.

YES



Correct regulation of the flame with flame retention ignited inside the point of the pilot burner head.



Correct regulation of the flame with flame retention ignited inside the point of the pilot burner head.

Try a few more times the flame ignition and detection of the pilot burner in the open air, then fit the pilot burner extinguished into its housing.

CAUTION: be sure that the pilot burner is rightly fit into its housing in the main burner head.

Now check whether the functioning of the pilot burner is affected by the pressure in the combustion chamber and whether an additional regulation is needed. It can be useful to use a d.c. micro-amperometer applied to the terminal board of the automatic burner control unit following the instructions given by the supplier of the apparatus. By the microamperometer measure the "flame current" (ionisation) depending on the air-gas ratio of the mixture in the pilot burner: the flame current represents the maximum value for the stoichiometric mixture that is the best air-gas mixture. The current strength decreases very rapidly in the mixtures rich of gas (or with lack of air) whereas it decreases more slowly in the mixtures rich of air (or with lack of gas). The value of the flame current expressed in micro amperes is shown in the instructions given by the supplier of the automatic burner control unit.

Under this condition, the automatic burner control unit, after the lighting time,through the flame rod of the pilot burner detects the flame and continues the control cycle.

MAINTENANCE

It is recomended a regular functional test taking into consideration the working cicle to be carried out.

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.

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