# Low NOx flat flame burner SFFF





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## **CHARACTERISTICS**

- Burner SFFF: flat flame, high radiation temperature, no air scouring when burning, the maximum preheating air temperature up to 600 °C.
- The burner burns quickly to obtain better radiation. In addition, uniform flame temperature distribution thanks to the secondary air structure, reduces the generation of NOx.
- 4 specifications are available within the capacity of 250~800 kW, and the recommended furnace temperature is 850~1300 °C.
- Turn down ratio: 1:3.
- Fuel: natural gas, LPG, town gas and other fuel gases.

### **APPLICATIONS**

SFFF series flat burners are mostly used for the furnace with direct radiant heating and centralized air heat exchanger, such as trolley furnace, chamber furnace or ring furnace and other directly heated industrial furnace



### CONFIGURATION

- The burner is composed of burner insert, air housing and burner block.
- A double-flange orifice plate is required in the gas pipeline for gas pressure measurement.
- The air inlet is equipped with a double-flange orifice plate by default.
- The SFFF burner is ignited by a pilot burner and adopts UV detection, or only detect the flame signal of pilot burner without detecting the main burner.

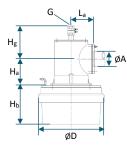
### **SPECIFICATION**

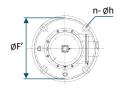
# Type table

Туре					SFFF	500	N	-350
Rated capacity/kW	200	300	500					
Fuel	N: Nat	ural gas	P: LPG	T: Town gas				
Block thickness	350: 3	50mm						

Please contact us for other rated capacity.

#### **Dimensions**





Unit: mm

Size	Rated capacity /kW	А	G	La	Hg	H₃	Нь	D	F′	n	h
200	200	89	Rp1 $^{1}/_{4}$ "	206	293	235	345	600	540	4	18
300	300	89	$Rp1\frac{1}{4}$ "	206	293	235	345	600	540	4	18
500	500	114	$Rp1^{1}/_{2}$ "	206	328	235	345	600	540	4	18



#### **SOLUTIONS**

Usually used in double-cross limit flow control, or direct on/off pulse control. Can also be used in continuous control system with an actuator and an air/gas proportional valve.

#### **INSTALLATION**

- When installing, the end of burner block and furnace inner wall must be purged, or the inner wall of the furnace wall must be fixed with a gentle excess area according to the angle of burner block. There are Hanging rings for hanging installation.
- To ensure the accuracy of orifice plate measurement, the pipe connected to the gas inlet on burner shall be straight in the length of 5\*DN without other resistance elements. And the length of straight pipe section in front of and behind the air orifice plate should be longer than 5\*DN.
- The pipeline must be purged before connected to the burner to prevent welding slag or other wastes from entering the burner. If a pipe welding is required after installing the burner, ensure that no slag or fuses falls into the pipe or burner during welding.

Required pressure at the connection

Connection	Pressure/mbar				
Main burner air	50				
Main burner gas	50				
Pilot burner air	60				
Pilot burner gas	50				

# **OPFRATION**

#### Attention

- During start-up, keep the heating rate below 100°C/hour, no holds required. When the furnace temperature is lower than 750°C, a large excess air coefficient greater than 1.5 is required.
- If the burner needs to be shut off, the air flow rate must be maintained about 20 m<sup>3</sup>/h to maintain a positive pressure inside the burner to prevent burner from being damaged by furnace chamber hot gas backflow.



# Maintenance

• Maintenance: SiC ceramic tubes, spark insert, flame state and others. At least once every six months. Increase the times of maintenance, as appropriate.