

Low NOx burner SNLNOx



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CHARACTERISTICS

- Suitable for directly heated furnaces with concentrated heat exchangers and heat treatment furnaces. Air preheating temperature up to 600 °C.
- The multi-stage air supply structure and the SINNOx-Flame ® combustion technology are adopted to maintain low NOx emissions even at high air preheating temperature and furnace temperature.
- Six specifications are available within the capacity range of 150~1500 kW, the recommended furnace temperature is 850~1300 °C.
- Turndown ratio: 1:3.
- Fuel: natural gas, LPG, town gas and other fuel gases.

APPLICATIONS

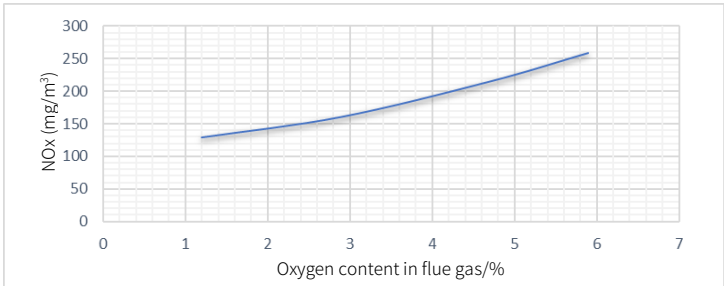
Used for continuous production of industrial furnaces with high furnace temperature and concentrated air heat exchanger, such as annular furnace, pusher-type reheating furnace, stainless steel band continuous annealing furnace and other directly heated furnace.

CONFIGURATION

- Composed of three modules: burner insert, air housing and burner block.
- SNLNOx 150~500 is ignited by burner electrode at lower capacity, or ignited by pilot burner at higher capacity. The pilot burner is installed on the burner insert, and a double-flange orifice plate should be installed separately in the gas pipeline for measurement.
- The air inlet is equipped with a double-flange orifice plate, and the air housing is equipped with internal thermal insulation by default, so the external thermal insulation is unnecessary. The combustion system is fixed on the air housing.
- The burner adopts multi-stage combustion mode, and the burner block is used to distribute primary and secondary air. For the fiber-lined furnace, the furnace bricks which attach to the burner is not required.

SPECIFICATION

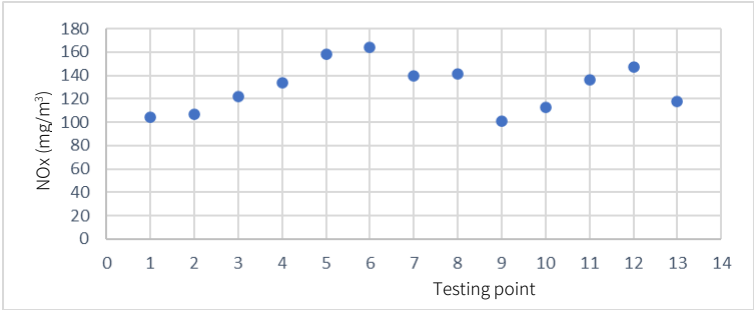
Parameters



For different air excess coefficient NOx (ref. 8% O₂).

Type of gas: natural gas. Furnace temperature: 1250 °C. Air preheating temperature: 600 °C.

2024/05



Measured data of stainless-steel continuous annealing production line.

Sampling points 1~8 are located in the furnace.

Sampling points 9~13 are located in the exhaust main line.

Type of gas: natural gas.

Furnace temperature: 1150~1200 °C.

Air preheating temperature: 450~600 °C.

ref. 8% O₂.

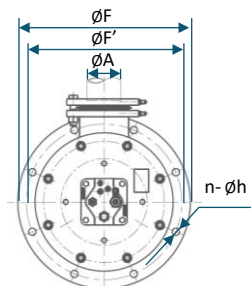
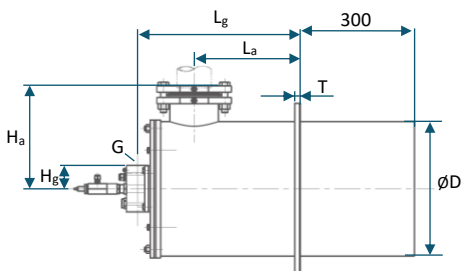
Type table

Type	SNLNOx						500	N	-300
Rated capacity/kW	150	200	300	500	1000	1500			
Fuel	N: Natural gas		P: LPG		T: Town gas				
Length of burner	300: 300mm								

Please contact us for other rated capacity needed.

Dimensions

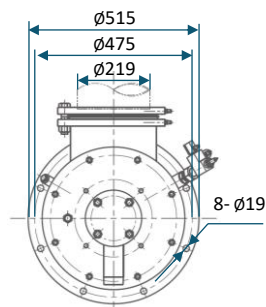
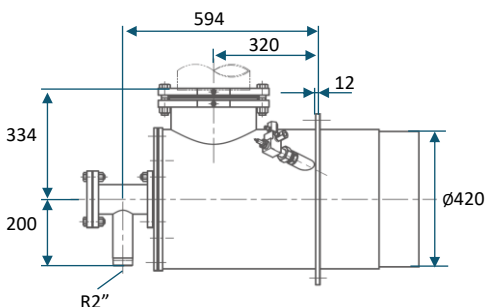
SNLNOx 150N~500N



Size	Rated capacity /kW	A/mm	G	La/mm	Lg/mm	Ha/mm	Hg/mm
150	150	76	Rp 3/4"	240	371	236	57
200	200	89	Rp 1"	275	422	268	61
300	300	114	Rp1 1/2"	320	513	270	61
500	500	168	Rp1 1/2"	350	538	300	81

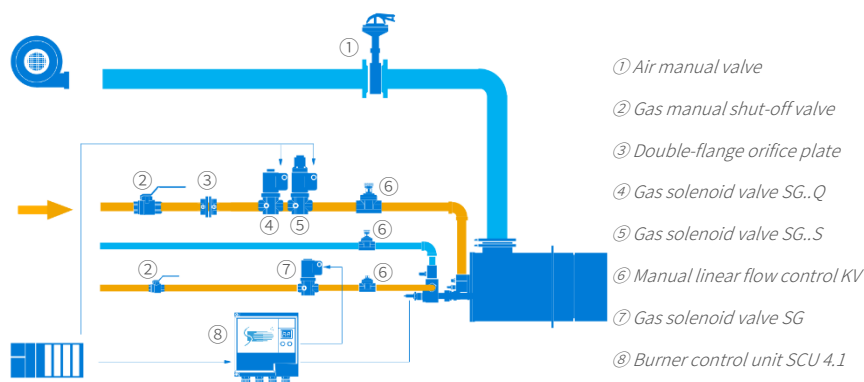
Size	Rated capacity /kW	D/mm	F/mm	F'/mm	T/mm	h/mm	n
150	150	300	400	360	12	19	8
200	200	350	450	405	12	19	8
300	300	380	460	425	12	19	8
500	500	420	515	475	12	19	8

SNLNOx 1000N~1500N (mm)



Pilot burner gas connection Rp1/4", air connection Rp1/2".

SOLUTIONS



- SNLNOx burners often use double-cross limit flow control, the recommended turndown ratio is 1:3.
- In the gas system with pilot burner, the solenoid valve ④ and ⑤ of gas branch pipe for main burner are not required, and the branch pipeline is controlled by main gas pipeline.
- In the gas system without pilot burner, the burner is directly ignited by electrode, and the SCU 4.1 controls the gas solenoid valve ④ and ⑤.

INSTALLATION

- In order to measure a stable pressure, a straight pipe segment in the length of 5*DN without any other resistance elements is required before the air and gas inlet of burner.
- Pipe access to the burner must be blown in advance to prevent welding slag or other matters from falling into the burner. After installation, ensure that no slag or fuses falls into the pipe or the burner during welding.
- The electrode in the burner without pilot burner has a cooling air whose connection is $\varnothing 8$ ferrule fitting. It is recommended to use copper pipe to take combustion air from the upstream of the air shut-off valve as cooling air.

Required pressure at the connection

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

- When there is no furnace brick which attach to the burner, make sure that the bearing capacity of burner block meets the requirements and prevent the thermal insulation materials from squeezing the burner block.

OPERATIONS

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 close, ensure that there is more than 20 m³/h air enters the burner to maintain a positive pressure to prevent the furnace atmosphere from entering the burner and damaging the burner.

Maintenance

- Checking and cleaning the burner and electrode regularly, at least once every six months.
- Increase the times of maintenance, as appropriate.