

# Adjustable-flame burner SCSA



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## CHARACTERISTICS

- Additional independent air channel, the flame outlet temperature can be adjusted as required. Flame temperature: 50~1500 °C.
- The secondary air with large flow is supplied independently, which ensures the complete combustion of fuel even in the state of low flame outlet temperature and large excess air coefficient.
- High outlet velocity is possible even with low capacity, the convection heat exchange in the furnace is strengthened by the secondary air.
- Fuel: natural gas, LPG, town gas and other fuel gases.

## APPLICATIONS

SCSA is mostly used in tunnel kilns, shuttle kilns, roller hearth furnace or other applications need low flame temperature, uniform furnace temperature, and high excess air coefficient, or the industrial kilns need to control the furnace temperature.

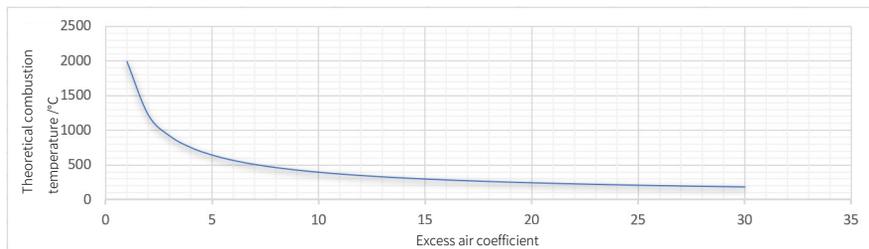
## CONFIGURATION

- The SCSA is composed of 3 modules: a center burner, a secondary air housing and a SiC ceramic burner tube.
- The center burner is conventional burner SCEC 65, SCEC 100, or SCEC 140, adopting double-electrode ignition/detection. The air and gas inlets are equipped with orifice plates for pressure measurement.
- The center burner is installed on the secondary air housing. The secondary air housing has its own air inlet and the orifice plate needs to be installed separately in the secondary air pipeline, the length of the secondary air housing can be customized as needed.

## SPECIFICATION

### Parameters

#### Theoretical flame temperature



Natural gas, not preheating air, calorific value: 34500~35600 kJ·m<sup>-3</sup>.

### Type table

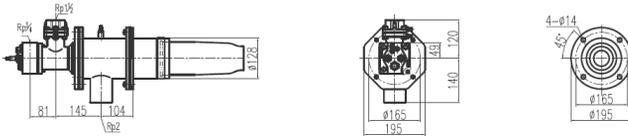
Type	SCSA			65	S	N	-100/235	-SH 0
Size	65	100	140					
Flame shape	L: Long flame		S: Short flame					
Fuel	N: Natural gas		P: LPG	T: Town gas				
Standard size	65: 100/235		100: 150/235	140: 200/285				
Secondary air housing	SH 0: Standard		SH 100: Lengthened 100	SH 100+50n: Lengthened 100+50n				

The burner is lengthened based on its standard size as the secondary air housing is lengthened. For example, the SCSA burner lengthened 50 mm is marked as SH 50.

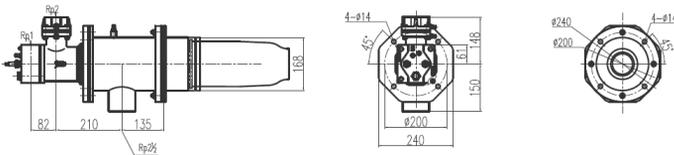
## Dimensions

Type	Size	SiC tube(interior)	SiC tube (exterior)	Rated capacity /kW	Secondary air flow/m <sup>3</sup> ·h <sup>-1</sup>
SCSA	65	065/033-300	100/050-250	50	380
SCSA	65	065/033-300	100/065-250	50	600
SCSA	65	065/040-300	100/065-250	60	400
SCSA	100	100/050-350	140/070-300	130	500
SCSA	100	100-065-350	140/085-300	200	500
SCSA	100	100/082-350	140/120-300	230	500
SCSA	140	140/085-350	200/107-300	320	650
SCSA	140	140/120-350	200/181-300	360	750

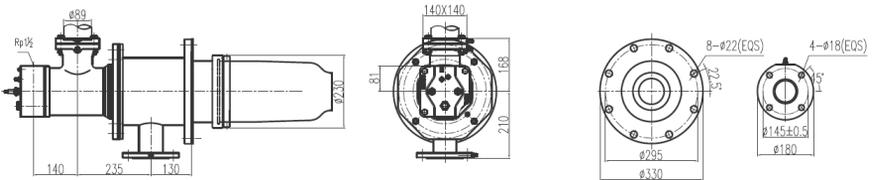
SCSA 65:



SCSA 100:

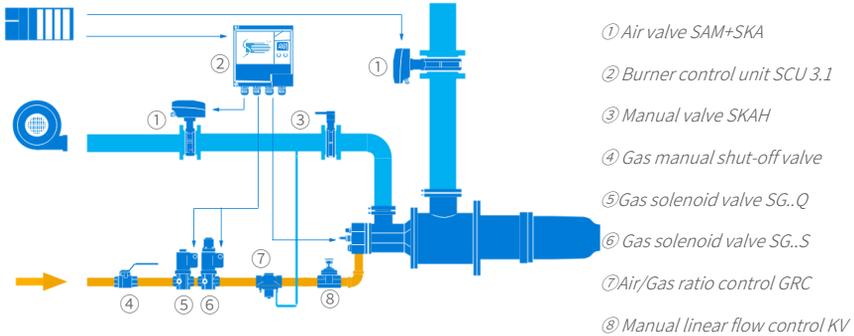


SCSA 140:



Unit: mm

## SOLUTIONS



- High/low pulse control or continuous proportional control.
- Secondary air flow rate is supplied independently and adjusted by electronic butterfly valve SAM+SKA which is controlled by PLC. The SCSA is mostly used in the furnace with low furnace temperature. Therefore, the burner can be gradually turned down when the temperature is relatively high to adjust the flame outlet temperature.

## INSTALLATION

- To ensure the measuring accuracy, the length of straight pipe section in front of the air inlet should be longer than  $5 \cdot DN$  without other resistance elements, and the length of straight pipe section in front of and behind the gas double-flange orifice plate should be longer than  $5 \cdot DN$ .

*Required pressure at the connection*

Connection	Pressure /mbar
Primary air	50
Gas	50
Secondary air	60

- The pipe access to the burner must be pre-purged. After installation, make sure that no slag or fuses falls into the pipe or the burner during welding.

## OPERATION

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