High Temperature Burners

Flat frame burner

Osaka gas development product

FF-20K, 40K, 60K, 130K

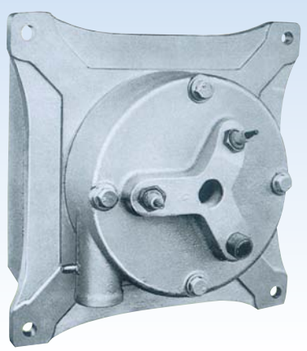
Because the flame is thin and spreads to the periphery, Proximity heating is possible, the device is compact.

Feature

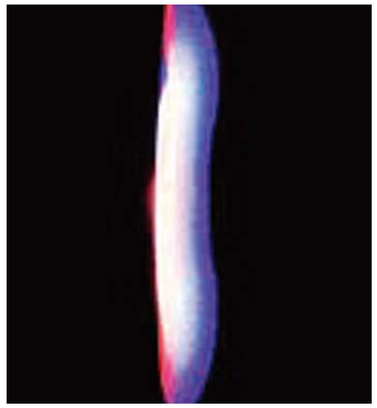
1. Turn down is large.
2. Mounting direction of the burner up, down, freely and landscape.
3. Since it burns even at excess air, it can be used from high temperature range to low temperature range

Main Usage

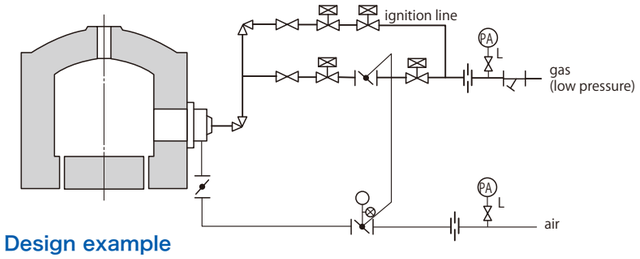
- Quenching and tempering of steel
- Forging heating of steel
- Annealing of copper alloys and aluminum alloys
- Melting of low melting point metal



● flame



Flow sheet

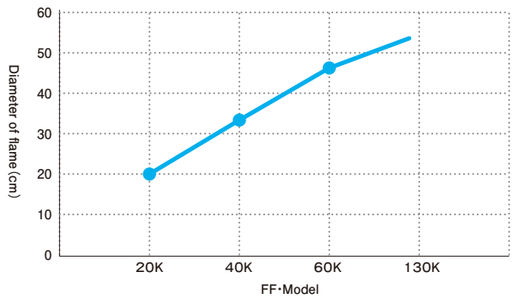


■ Design example

When used in a bogie furnace, by attaching a burner to the furnace bottom as shown on the left,A uniform temperature distribution can be obtained.

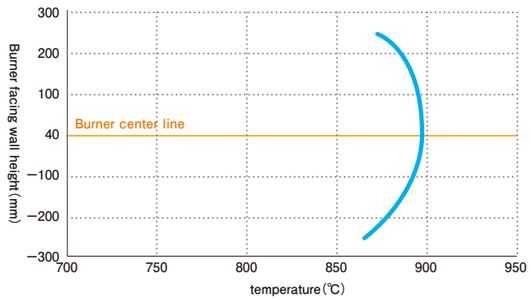
Data

■ Flame diameter (air ratio m = 1.25 open test)

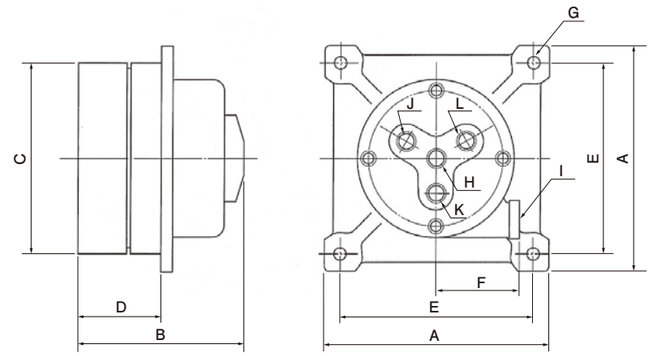


■ FF-20K temperature distribution (6C)

(Distance to the burner surface 105 mm, combustion amount 24 kW, m = 1.25)



Specifications · Dimensions



Model		FF-20K	FF-40K	FF-60K	FF-130K	Remarks
Gas type		13A				
Rated burning capacity (kW)		24	48	72	144	Low calorific value
Standard gas quantity (m³/h)		2.1	4.2	6.3	12.5	
Standard gas head pressure (kPa)		0.39	0.34	0.25	0.29	
Standard air head pressure (kPa)		2.4	3.3	3.2	3.7	
Overall size (mm)	A(□)	260	310	375	425	
	B	232	247	254		
	C(□)	180	230	295	345	Single sided taper
	D	130				
	E(□)	220	270	335	385	
	F	95	110	125	150	
Mounting size	G (Mounting bolt hole)	4-ϕ14		4-ϕ16		
Connecting size (Rc)	H (Gas)	1/2	3/4	1	1 1/4	
	I (Air)	3/4	1	1 1/4	1 1/2	
Connecting	J (Ignition)	M18 P1.5				
	K (Flame monitoring)	M18 P1.5				
Connecting size (Rc)	L (Sight hole)	3/4				
Weight (kg)		20	35	55	65	
Turndown		3:1				
Ignition method		direct ignition				
Detection method		ultraviolet phototube or flame rod				

Handling Precautions

- burner tile front and the furnace wall be the same.
- In the case of downward installation, support the burner tile with furnace material.
- When controlling a multi-burner with one controller, piping should be designed so as not to cause air and gas drift.
- When electric ignition is directly performed to the main burner, the gas amount is set to the minimum flow rate, and after the ignition confirmation, the gas amount is gradually increased
- Use ignition transformer with capacity of 6 kV or more, 100 VA or more
- When using large turndowns, do premix air piping.
- Ultraviolet photoelectric tube system is desirable for flame monitoring.
- Cooling air should flow in the ultraviolet photoelectric tube.