

Package burner with stable combustion and wide turndown.

Feature

1 Stable combustion can be obtained

By adopting a special structure body and blower, it corresponds widely to the pressure condition inside the combustion chamber, and stable combustion can be obtained.

2 Integrated blower / burner and safety combustion equipment

The blower and the burner body / piping are integrated, it does not require troublesome on-site construction, installation and handling is easy. Safety combustion equipment (gas shutoff valve · air pressure switch, flame detection with ultraviolet photoelectric tube etc.) is also incorporated.

3 Easy adjustment

Both the pilot line and main line of combustion adjustment section are arranged compactly around the burner, making it very easy to adjust. Ignition correspondence by pilot line is possible.

4 Burner top can be selected according to various uses.

ex) for air heating----SUS
for heat treatment---tile
for metal melting----without top
(duct on the furnace body side)
etc.

5 A wide turndown can be obtained

ex) open combustion(in our factory)-----20:1

6 Easy maintenance

The main nozzle and ultraviolet phototube can be removed while still set the burner to the furnace body, it can maintenance is easy.

7 Blower with a filter

Because the blower is equipped with filter (standard), it prevents suction of foreign matter and protects the burner.

8 Two types of control method

Hi-Low control by control motor or proportional control(PID).



Model table

SP	combustion capacity		gas type		burner top		control		wiring method	
	signal	Select Specifications	signal	Select Specifications	signal	Select Specifications	signal	Select Specifications	signal	Select Specifications
	100	116kW	N	natural gas (45MJ/m ³ N)	M	with burner metal top (SUS)	H	High/Low	0	without wiring
	200	233kW	P	LPG (100MJ/m ³ N)	T	with burner tile top	P	PI (PI control)	1	terminal box
			O	the others	S	without burner top	O	the others		
					O	the others				

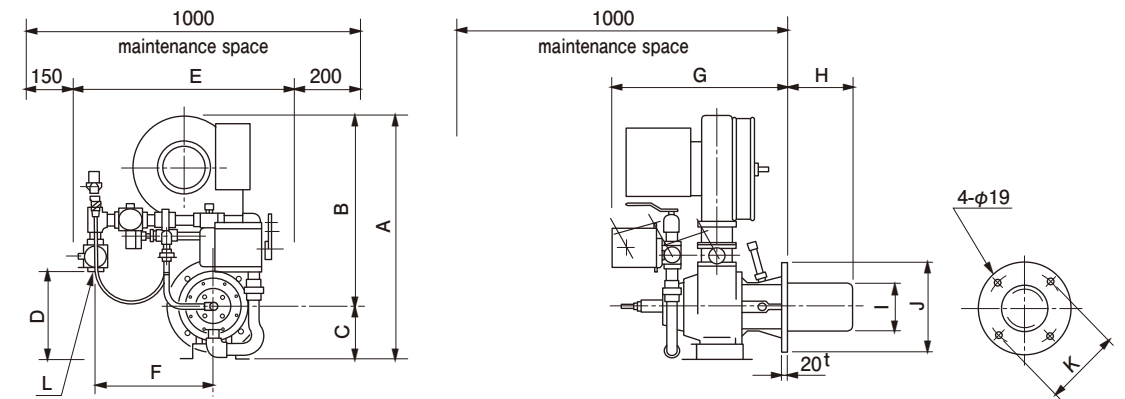
Note) Direct ignition is the standard ignition method of this burner. Please consult separately about ignition by the pilot burner.

Specifications

Model	SP-100	SP-200
Maximum combustion capacity (kW)	116	233
Ignition method	direct ignition	
Detection method	ultravision	
Standard specification gas (kPa)	2.8(2.0*)	2.8(2.0*)
Maximum combustion head gas pressure (kPa)	0.73(0.5)	0.65(0.5)
power consumption (W)	590/660	570/990
Gas piping connection hole diameter	Rc 3/4(1)	Rc 1(1 1/2)
Control method	Hi-Low control by control motor or proportional control	
Weight (kg)	52(56*)	58(62*)
Power supply (V)	100/200	

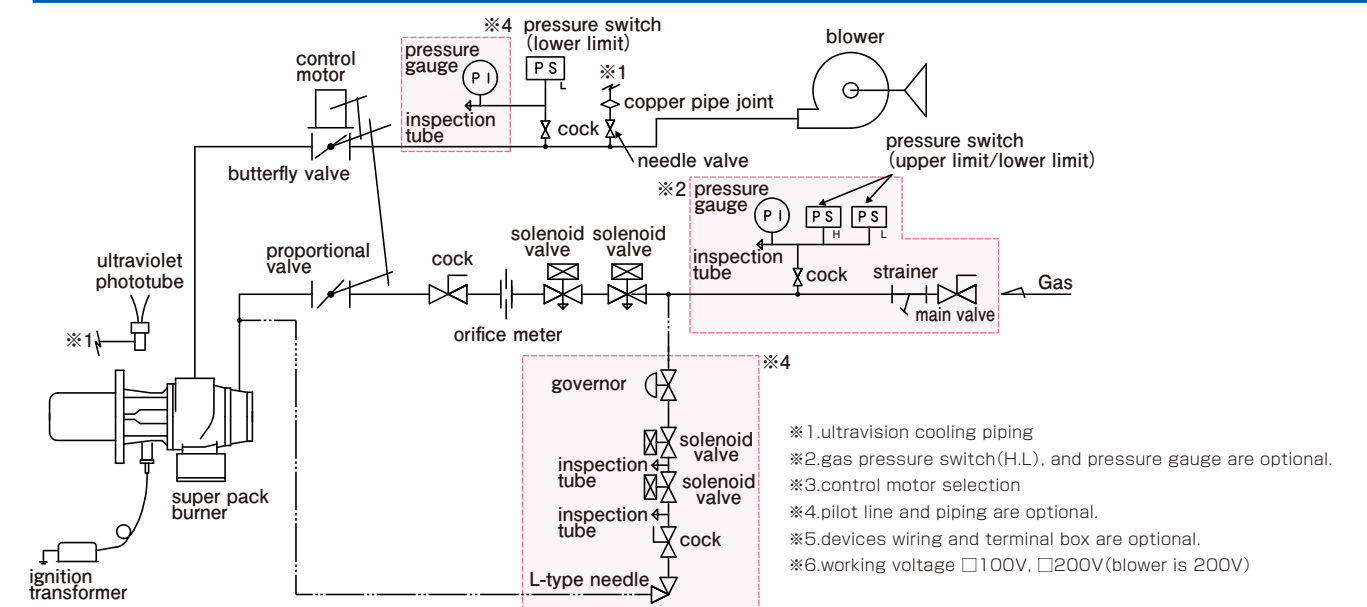
* Inside of () is natural gas specification

Overall size



	A	B	C	D	E	F	G	H	I	J	K	L
SP-100	665	520	145	300	600	350	530	165	115	235	200	20
SP-200	750	590	160	320	600	350	550	190	140	265	230	25
										Flange OD	Flange PCD	gas connection (A)

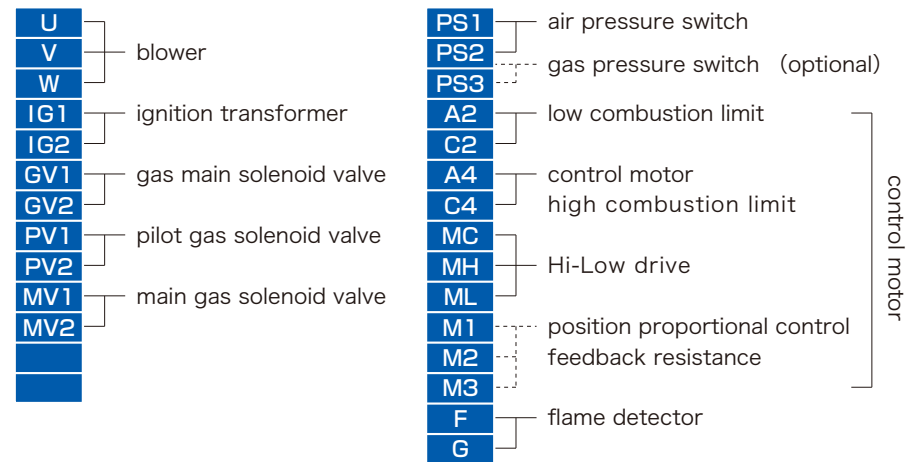
Example of flow sheet



- *1. ultravision cooling piping
- *2. gas pressure switch(H.L.) and pressure gauge are optional.
- *3. control motor selection
- *4. pilot line and piping are optional.
- *5. devices wiring and terminal box are optional.
- *6. working voltage □100V, □200V(blower is 200V)

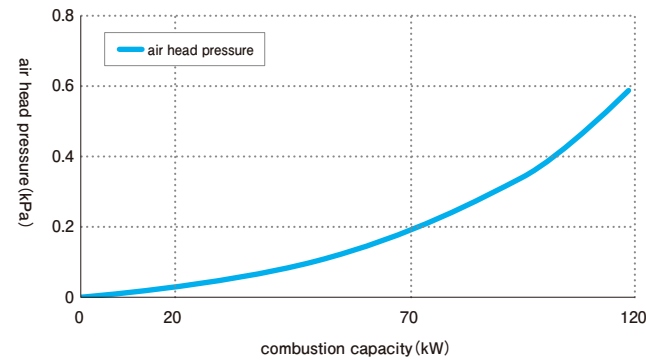
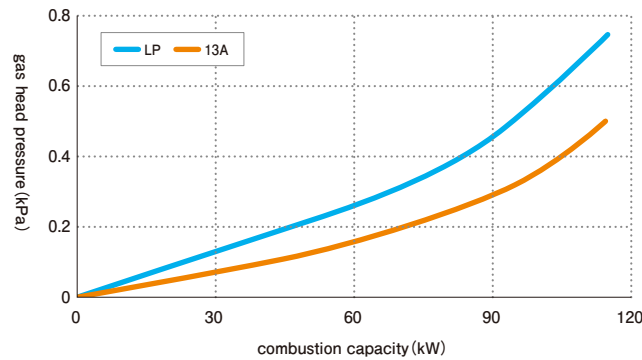
Terminal block chart

It is an example of a terminal block in case of terminal box specification.

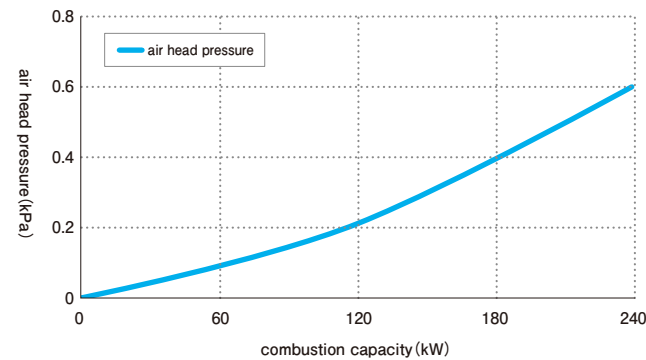
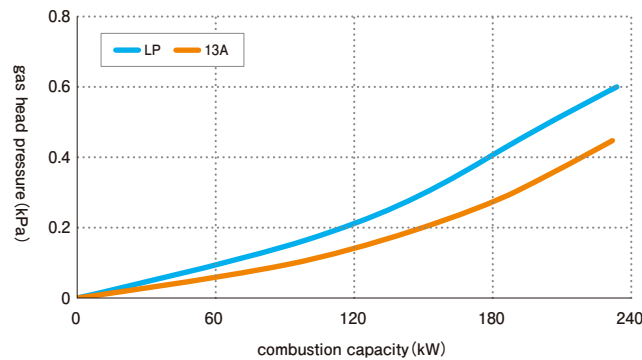


Data

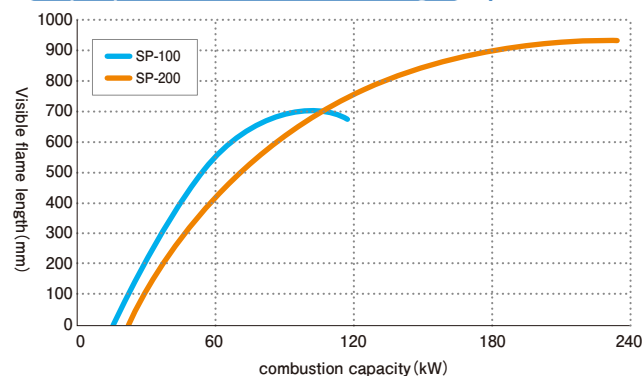
SP-100 head pressure metal top open test (burner top open test)



SP-200 head pressure metal top open test (burner top open test)



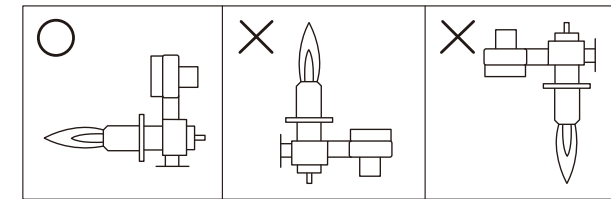
Super pack burner visual flame length open test



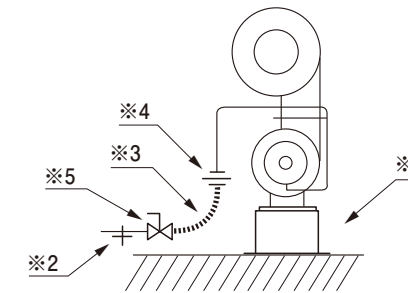
Burner selection and Installation Precautions

Installation conditions

- Please install so that the blower is on top of the burner body. In any other cases, please be sure to consult our company. (If the burner top is facing upwards and downwards, it is not possible due to the structure of the blower.)



- On fire prevention or after-sales service, please ensure sufficient maintenance space. (Refer to attached dimensional outline drawing maintenance space.)



- In addition to the burner furnace wall mounting flange, we recommend supporting the main body.※1 (In the unlikely case, considering the case where the furnace wall is distorted during operation, it is desirable not to fix it.)
- Gas temporary side piping, please support the piping so that its load does not reach the burner.※2 And also, please arrange flexible parts(ex. flexible tube)※3, detachable parts(ex. union)※4 and origin cock※5 for the furnace wall warp or maintenance.

Flow chart

- When main cut is done leaving the pilot, please be sure to cut after becoming Low state.
- Be sure to provide after-purge as well for the protection of electrical equipment.

Installation location

Please observe the following about the installation location

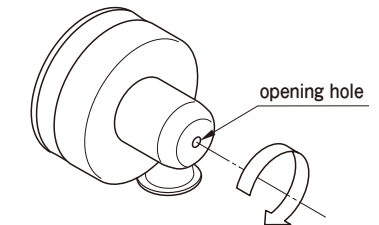
- Keep away from water and chemicals.
- The atmosphere temperature is 40°C or less and the humidity is low.
- Keep away from ignitable objects.
- Avoid the burner used as a scaffold.

Structure of furnace

- Burner furnace wall and inner constitution of mounting flange should be built strongly.
- For installation, be sure to set up a peep window so that the entire flame can be seen.
- Please design combustion chamber with the visual flame length X1.5+α. α = Safety increment by various conditions
- The inlet of fresh air and circulating air in furnace should not effect on the burner flame directly. For instance, install an inner tube (patching) etc.

Before ignition

- Be sure to keep the installation precautions in manual.



- Check the rotation direction of the blower. (Refer to the above chart)
- Check the operation of each electrical equipment. Also, make sure that the operation is in sequence.
- Please air bleeding of gas line sufficiently.