

Muffle Furnaces | Built-in Heating Wires

FP111C/311C/511C

Operating temp. range 100~1150°C

Temp. adjusting accuracy ±1.5°C

Internal capacity 1.5L 7.5L 11.3L

High-function muffle furnace with built-in heater.

Features

- High-quality ceramic furnace body, built-in heater, not contaminated by samples. Program operation is available.
- Simple operation with up/down key settings, equipped with a high-operability controller for precise temperature control.
- Temperature, time and indicated values can be digitally displayed.
- Use a controller with integrated digital settings and overheat protection. Support self-diagnosis functions, overcurrent leakage protection switch, and other safety controls in case of anomalies.
- Use R-type thermocouple for long life.
- Equipped with exhaust vent.
- Optional features available, such as exhaust unit, sample trays, nitrogen gas introduction device (with flow meter), temperature output terminal and so on.



Specifications

Model		FP111C	FP311C	FP511C
Performance	Operating temp. range	100~1150°C		
	Temp. adjusting accuracy	±1.5°C (at 1150°C)		
	Time to reach maximum temp. at room temp.	Approx. 80 min	Approx. 100 min	Approx. 120 min
Composition	Exterior material	Cold rolled steel plate with chemical proofing coating		
	Furnace body	Ceramic fiber		
	Sensors	Dual R-type thermocouple		
	Heater	FeCrAl alloy heating wire		
		1.1kW	2.4kW	3.5kW
	Exhaust vent	Inner diameter 20mm, upper part		
	Cooling fan blade	Axial flow fan		
Controllers	Temp. control method	The heater output is controlled by a microcomputer PID controller		
	Temp. setting/display	Digital setting via function menu key and ▲▼ keys		
	Overheating protection	Integrated controller		
	Overheat protection setting method	Digital setting		
	Operation functions	Fixed temp. operation, program operation, auto start, quick auto stop, auto stop, programmable controller with 3 modes (30 segments×1, 15 segments×2, 10 segments×3)		
	Additional functions	Deviation correction function, power failure compensation function, key lock function		
Timer	1 min~99 h 59 min and 100~999 h 50 min (including timer function)			
Safety device		Self-diagnostic: Temperature sensor malfunction, display malfunction, automatic overheat prevention malfunction, measured temperature malfunction, leakage protection switch, overheat prevention device (controller integrated electronic type)		
Specifications	Internal dimensions (W×D×H mm)	100×150×100	200×250×150	300×250×150
	External dimensions (W×D×H mm)	376×405×516	446×505×566	507×505×626
	Internal capacity	1.5L	7.5L	11.3L
	Power supply (50/60Hz) rated current	AC220V 5.5A	AC220V 11A	AC220V 16A
	Weight	Approx. 24kg	Approx. 42kg	Approx. 48kg
Accessories		Insulating cover 1 pcs, firing plate 1 pcs		
Options	Stand	ON30C		ON61C
	Others	Setter plate, exhaust unit (AC220V), sample box, N ₂ introduction device (with flow meter), mini printer, data logger, combination warning light (standby/operation/failure), external communication function (RS485), temperature output terminal (4~20mA), external alarm output terminal, time-up output terminal, central monitoring software		

1 Sterilizers

2 Granulation and Spray Dryers

3 Furnaces

4 Ovens

5 Incubators

6 Plasma Equipment

7 Water Purifiers

8 Baths

9 Water Circulators

10 Rotary Evaporators

11 Stirrers & Shakers

12 Options

Automatic Overheating Preventer

Overheat Preventer

Self-diagnostic Function

Key Lock Function

Power Failure Compensation Function

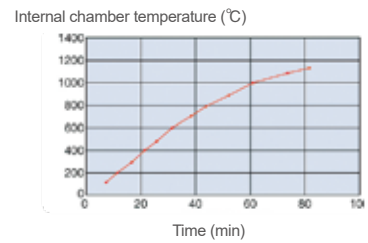
Overcurrent Leakage Circuit Breaker



Control panel



Temperature rise curve (FP311C)



Exhaust unit (optional)



Able to quickly exhaust gases generated by rising temperature inside the chamber.

Piping: flexible pipe, aluminum

Length 1.5m

Diameter 50mm

Exhaust unit power:

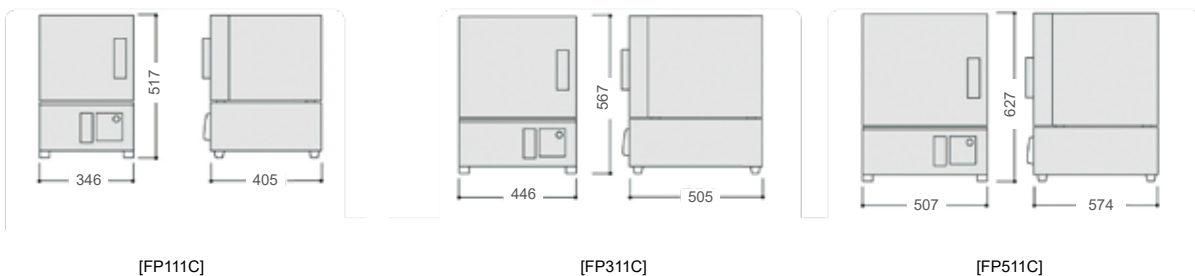
Single phase AC220V 0.15A

Internal chamber



Heater not exposed, improved thermal insulation features and temperature distribution accuracy by adopting a reasonable thermal insulation structure.

Dimension diagram (mm)



Sterilizers	1
Granulation and Spray Dryers	2
Furnaces	3
Ovens	4
Incubators	5
Plasma Equipment	6
Water Purifiers	7
Baths	8
Water Circulators	9
Rotary Evaporators	10
Stirrers & Shakers	11
Options	12