

# Products for Industry

High Performance Muffle Furnace

## FP413

Item Code : 214148

Model : FP413

[Page Top](#)[Product Summary](#)[Specifications](#)[Optional items](#)[Same series products](#)

FP413

## High Performance Muffle Furnace (FP413)

[Contact Us](#)[Printing](#)

### Product Summary

RCF-free (alumina fiber) that complies with RCF regulations is used for the furnace chamber.

#### Features of High Performance Muffle Furnace (FP413)

##### Features

RCF-free, safe and secure

##### Features

Since the heater does not appear, it is ideal for microanalysis and contamination prevention.

##### Features

Equipped with program operation

## Features

Enhanced with safety functions

## Features

Uses R thermocouple

## Features

Equipped with a variety of options

## Specifications

### Specifications

<b>Item Code</b>	<b>214148</b>
<b>Model</b>	<b>FP413</b>
<b>Operating temp. range</b>	100~1,150°C
<b>Temp. control accuracy</b>	±1.0°C (at 1150°C)
<b>Temp. fluctuation</b>	2.0°C (at 1150°C)
<b>Temp. distribution</b>	±4.0°C (at 1150°C)
<b>Temp. gradient</b>	14°C (at 1150°C)
<b>Max. temp. reaching time</b>	Approx. 80 min
<b>Exterior material</b>	Chrome-free electro-galvanized steel plate, Chemical proof painting
<b>Interior material</b>	Alumina fiber
<b>Sensor</b>	R-thermocouple
<b>Heater</b>	Iron-chrome wire (Pyromax) 3.25kW
<b>Exhaust port</b>	ø20mm (top)
<b>Cooling fan</b>	19/16W (50/60Hz)
<b>Temp. controller</b>	PID Z control
<b>Temp. and timer setting</b>	Digital setting by ▲/▼ keys
<b>Temp. display</b>	Setting temperature: Orange 5-digit LED digital display (resolution: 1°C), Temperature display: Green 4-digit LED digital display (resolution: 1°C)
<b>Timer</b>	Time : 1 minute and 99 hours 59 minutes / 1 min 24 hour setting
<b>Operation function</b>	Fixed temperature, Quick auto stop, Auto start, Auto stop, Program (Maximum 99 steps, 99 patterns, Repeat operation)
<b>Additional function</b>	Power on and Operation Time Integrating Function(up to 65,535 hours); calendar timer (24hours) Calibration Offset; Power Consumption, Total CO2 Emission, and Heater operating Output; Power Recovery Mode; Save and Access of Operator's Setting Information;
<b>Heater circuit control</b>	Triac with zero cross control
<b>Safety device</b>	Self-diagnosis Functions (Temp. Sensor Failure Detection, TRIAC Short Circuit, Heater Line Disconnection, Main Relay Failure Detection, Automatic Overheat Prevention) Key Lock Function, Independent Overheat Prevention Device, ELB
<b>Accessories</b>	Exhaust port cap, fuse, furnace floor plate

<b>Internal dimensions (W×D×H mm)</b>	300×250×150mm
<b>External dimensions (W×D×H mm)</b>	506×504×625mm
<b>Remarks(dimensions)</b>	11.3L
<b>Power Source</b>	Single phase AC200V 16.5A Plug is not attached, Electric code length is 2m
<b>Weight</b>	51kg

## Maintenance and warranty

Conditions: temperature and humidity: 23 deg.C+/-5 deg.C, 65%RH+/-20% (no load)

External dimensions do not include protrusions.

## Optional items



Sample Tray (OFP22)

NO IMAGE

Alumina hearth plate for FP412  
(OFP72)

NO IMAGE

Operating signal output terminal  
(OFP62)



## Same series products



High Performance Muffle  
Furnace (FP103)



High Performance Muffle  
Furnace (FP302)



High Performance Muffle  
Furnace (FP303)

