

Standard Muffle Furnace



FO Series

| | | | | | | | | | | | | |
|-----------------------|------------|------------------------|------------------|-------------------|----------------------|-----------------------|----------------------|--------------|-----------------|-----------------|-----------------|---------------|
| Operating temp. range | 100~1150°C | Temp. control accuracy | ±2°C (at 1150°C) | Internal capacity | 1.5L (FO100CR/110CR) | 3.75L (FO200CR/210CR) | 7.5L (FO300CR/310CR) | 9L (FO410CR) | 11.3L (FO510CR) | 17.5L (FO610CR) | 23.6L (FO710CR) | 30L (FO810CR) |
|-----------------------|------------|------------------------|------------------|-------------------|----------------------|-----------------------|----------------------|--------------|-----------------|-----------------|-----------------|---------------|

- Wide selection of space-saving compact units with maximum inner capacity
- Easy to use controller
- Excellent heat tightness with a firmly sealed chamber door
- High temperature accuracy at ±2.0°C
- Program operation of maximum of 6 patterns: 30 steps x 1 pattern, 15 steps x 2 patterns or 10 steps x 3 patterns
- Safety features include self-diagnostic functions, calibration off-set, lock function, auto-recovery after power failure, earth leakage breaker and automatic overheat prevention device
- Selectable options include exhaust system unit, N₂ gas loading device (with flow meter), temperature output terminal, time up / alarm output terminal and sample tray
- Upgraded with long life R-thermocouple sensors
- Designed with communication port



1.5L
FO100CR



7.5L
FO310CR



17.5L
FO610CR



30L
FO810CR

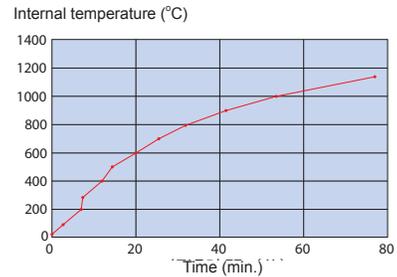
Specifications

| Model | FO100CR/110CR | FO200CR/210CR | FO300CR/310CR | FO410CR | FO510CR | FO610CR | FO710CR | FO810CR |
|------------------------------|---|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Operating temp. range | 100~1150°C | | | | | | | |
| Temp. control accuracy | ±2°C (at 1150°C) | | | | | | | |
| Max. temp. reaching time | ~60min. | | ~70min. | | ~80min. | | | |
| Exterior material | Cold rolled steel plate with baked-on melamine resin finish | | | | | | | |
| Interior material | Ceramic fiber | | | | | | | |
| Sensor | R-thermocouple | | | | | | | |
| Heater | Iron-chrome wire | | | | | | | |
| | 1kW | 1.5kW | 2kW | 2.2kW | 2.5kW | 3kW | 3.5kW | 4kW |
| Exhaust port | ø20mm (top) | | | | | | | |
| Cooling Fan Type | Axial fan motor | | | | | | | |
| Temp. controller | PID control by microprocessor | | | | | | | |
| Temp. setting/display method | Digital setting by ▲/▼ keys / Digital display | | | | | | | |
| Operation function | Fixed temperature, quick auto stop, auto stop, auto start, program (maximum 6 patterns: 30 steps x 1 pattern, 15 steps x 2 patterns or 10 steps x 3 patterns) | | | | | | | |
| Additional function | Calibration offset, power failure compensation, key lock | | | | | | | |
| Timer | 1 min. to 99 Hrs. 59 min. and 100 Hrs. to 999 Hrs. | | | | | | | |
| Safety Device | Self diagnostic (memory error, heater disconnection, sensor error, SSR short circuit), Electric leakage breaker, Overheat prevention device | | | | | | | |
| Internal dimensions(WxDxHmm) | 100×150×100 | 100×250×150 | 200×250×150 | 200×300×150 | 250×300×150 | 250×350×200 | 270×350×250 | 300×400×250 |
| External dimensions(WxDxHmm) | 346×405×517 | 346×505×567 | 446×505×567 | 446×554×567 | 507×504×627 | 507×604×677 | 507×605×727 | 507×655×727 |
| Internal capacity | 1.5L | 3.75L | 7.5L | 9L | 11.3L | 17.5L | 23.6L | 30L |
| Power source (50/60Hz) | AC115V / 220V | | | | AC220V single phase | | | |
| | 10A / 5A | 14.5A / 7.5A | 19A / 9.5A | 10.5A | 12A | 15A | 18A | 20A |
| | <i>no plug, round terminal</i> | <i>no plug, round terminal</i> | <i>no plug, round terminal</i> | <i>no plug, round terminal</i> | <i>no plug, round terminal</i> | <i>no plug, round terminal</i> | <i>no plug, round terminal</i> | <i>no plug, round terminal</i> |
| Weight | ~24kg | ~30kg | ~37kg | ~38kg | ~44kg | ~52kg | ~58kg | ~62kg |
| Included accessory | Exhaust port cap 1 pc. | | | | | | | |

Control Panel



Temperature Rising Curve (FO300CR)



Optional items

| Product code | Description |
|--|---|
| *214096 | Exhaust unit, 115V |
| *214097 | Exhaust unit, 220V |
| *281301 | Time up output terminal |
| *Contact Customer Service for part number 281310 | N ₂ gas inlet system w/ flow meter |
| | Sample tray |

* Please specify when ordering main unit.

Interior



Adoption of reasonable insulation structure increased thermal insulation characteristics and temperature distribution accuracy

Sample tray



Exhaust unit



Gas generated due to the increase of temperature in the furnace will be quickly exhausted.

Power source of exhaust device :
AC115V 0.27A
Single phase AC220V 0.15A

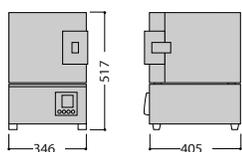
Aluminum flexible duct
Length 1.5m / Diameter 50mm

Temperature Output Terminal

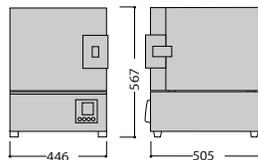


- Record and monitor internal temperature
- Temperature output: 4-20mA
- Time up output

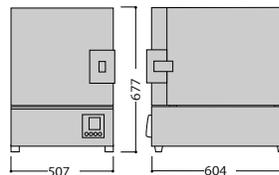
Dimensions (mm)



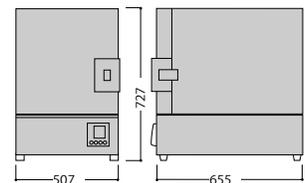
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