

MUFU-CA

Laboratory Muffle Furnaces • 2 L to 36 L • 100–1200 °C • high-precision controller • optional 64-segment program

MUFU-CA muffle furnaces are bench-top laboratory furnaces with a ceramic fibre chamber, a powder-coated steel housing and a high-precision single-stage controller with a K-type thermocouple. Alloy wire heaters on three sides of the chamber (left, right and top) reach the working temperature of up to 1200 °C in ≤ 30 min, and the controller holds it within ± 1 °C. The series covers five chamber sizes from 2 L to 36 L for ashing, loss on ignition, sample preparation and heat treatment in the routine laboratory. Every model can be ordered with the factory-fitted **MUFU-PRG64** program controller for multi-step temperature profiles.

100–1200 °C

± 1 °C

1 °C RESOLUTION

2 • 7.2 • 12 • 16 • 36 L

K-TYPE SENSOR

CERAMIC FIBRE CHAMBER

CHIMNEY Ø30 MM

OPTION: 64-SEGMENT PROGRAM

Document type: **Technical Specification Sheet**

Product series: **MUFU-CA Laboratory Muffle Furnaces 1200 °C**

Models: **MUFU-CA2 • MUFU-CA7 • MUFU-CA12 • MUFU-CA16 (380V / 230V) • MUFU-CA36**

Option: **MUFU-PRG64 program controller • SKU PRO8072**

Format: **A4 landscape • CORE-TECHSPEC 1.0**

MUFU-CA PRODUCT PAGE

HEATING — OVERVIEW

HEATING CATALOGUE

REQUEST QUOTE



MUFU-CA • laboratory muffle furnace • high-precision controller



MUFU-CA • ceramic fibre chamber with heaters on three sides, door open

SERIES
MUFU-CA

ADDRESS / HQ
**Polje ob Sotli 4
SI-3255, Slovenia**

CONTACT
**sales@colo.si
+386 70 713 437**

MUFU-CA • technical specification

Laboratory muffle furnaces 1200 °C with ceramic fibre chamber and high-precision controller, 2 L to 36 L

HEATING ON 3 SIDES

≤ 30 MIN TO 1200 °C

K-TYPE THERMOCOUPLE

SENSOR OFFSET CORRECTION

OVER-TEMPERATURE ALARM

DOOR SAFETY SWITCH

— Ashing and ignition at a stable, documented temperature

Product Overview

Application profile

Ashing: total ash, sulfated ash and acid-insoluble ash in pharmaceutical, food and feed laboratories.

Loss on ignition (LOI): cement, soil, sludge, coal, minerals and catalysts.

Sample preparation: dry ashing before AAS, ICP-OES or heavy-metal determination.

Heat treatment: annealing, hardening and tempering of small metal parts.

Materials: firing of ceramics and glass, calcination of powders.

Key features

High-precision controller: touch-button setting, two-row LED display of measured and set temperature, fixed-temperature operation.

Housing: cold-rolled steel with electrostatic powder coating.

Controller functions: sensor offset correction, overshoot self-tuning, parameter lock, power-failure memory.

Double housing with air gap: mirror-finish stainless steel chamber mouth keeps the outer surface cooler.

Exhaust: Ø30 mm opening into the chamber, chimney 80 × 60 mm.

Safety: mechanical door lock, over-temperature sound and light alarm, heating cut-off when the door opens, thermocouple failure alarm.

Why MUFU-CA

High-precision controller: single-stage controller with a high-precision K-type thermocouple for stable routine ashing.

Ceramic fibre chamber: low mass, fast heating — ≤ 30 min to maximum temperature.

Calibration-ready: sensor offset correction lets the reading be adjusted to a reference thermometer during calibration.

Five sizes, one series: 2 L to 36 L; 16 L for 230 V single-phase or 380 V three-phase, 36 L on 380 V.

Upgrade when the method needs it: factory-fitted 64-segment program controller MUFU-PRG64, page 4.

Core technical summary

Parameter	Specification
Temperature range	100–1200 °C
Temperature fluctuation	±1 °C
Display resolution	1 °C
Heating time to max.	≤ 30 min
Chamber volume	2 · 7.2 · 12 · 16 · 36 L
Housing	Powder-coated steel
Power	1.5 to 6.0 kW

MAX. TEMPERATURE
1200 °C

STABILITY
±1 °C

HEATING
≤ 30 min to max.

CHAMBER
2 L to 36 L

Values from the manufacturer's technical documentation. Final configuration, supply voltage and accessories are confirmed in the COLO.Science quotation.

MUFU-CA PRODUCT PAGE

HEATING — OVERVIEW

HEATING CATALOGUE

REQUEST QUOTE

Technical Specifications by Model

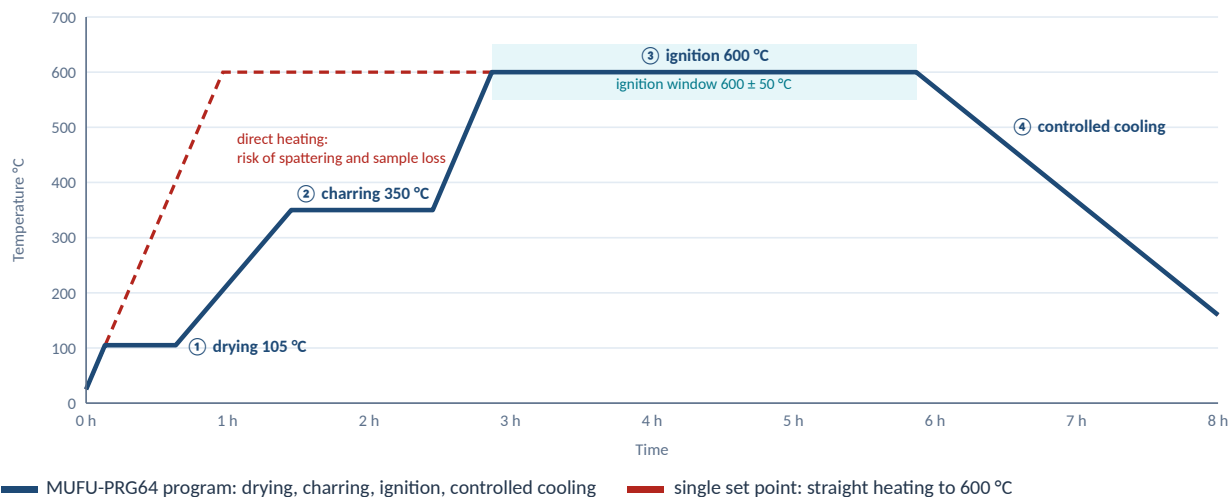
Parameter	MUFU-CA2	MUFU-CA7	MUFU-CA12	MUFU-CA16 (380V)	MUFU-CA16 (230V)	MUFU-CA36
SKU	PRO8048	PRO8049	PRO8050	PRO8051	PRO8052	PRO8053
Chamber volume	2 L	7.2 L	12 L	16 L	16 L	36 L
Chamber W × D × H, mm	120 × 200 × 80	200 × 300 × 120	200 × 300 × 200	250 × 400 × 160	250 × 400 × 160	300 × 400 × 300
Exterior W × D × H, mm	450 × 685 × 600	530 × 785 × 640	530 × 785 × 720	600 × 895 × 700	600 × 895 × 700	on request
Power	1.5 kW	3.0 kW	4.5 kW	6.0 kW	6.0 kW	on request
Supply	AC 220 V · 6.6 A	AC 220 V · 13.6 A	AC 220 V · 20.4 A	AC 380 V 3-phase · 9.9 A	AC 220-230 V 1-phase	AC 380 V 3-phase
Net / gross weight, kg	33 / 37	45 / 50	62 / 68	77 / 96	77 / 96	on request
Packing W × D × H, cm	58 × 78 × 73	66 × 88 × 77	66 × 88 × 85	73 × 99 × 83	73 × 99 × 83	on request

Exterior dimensions without chimney. The 16 L model draws 6.0 kW; for the 230 V single-phase version the supply circuit is confirmed with COLO.Science before installation.

Common Parameters

Temperature range	100-1200 °C	Controller	High-precision single-stage controller, touch-button setting, K-type thermocouple
Temperature fluctuation	±1 °C	Display	LED, upper row measured · lower row set temperature
Display resolution	1 °C	Operation	Fixed-temperature operation; timer and programs with MUFU-PRG64
Heating time to max.	≤ 30 min	Controller functions	Sensor offset correction, overshoot self-tuning, parameter lock, power-failure memory
Heating	Alloy wire, three sides: left, right, top	Safety	Door lock, over-temperature sound and light alarm, heating cut-off on door opening, thermocouple failure alarm
Chamber · insulation	Ceramic fibre	Exhaust	Ø30 mm, chimney 80 × 60 mm
Housing	Cold-rolled steel, electrostatic powder coating, double shell with air gap	Option	MUFU-PRG64 · 64-segment program controller, colour LCD, factory fitted

Example: sulfated ash — one program instead of three manual steps



When the program controller is needed

The method has more than one temperature step — drying, charring and ignition follow each other.

The heating rate matters — fast heating makes organic samples spatter or ignite and material is lost.

Results must be repeatable — every run follows the same stored profile, independent of the operator.

GMP / GLP work — a fixed temperature profile is easier to validate and to describe in an SOP.

Unattended runs — overnight programs with delayed start and controlled cooling.

Standard controller or MUFU-PRG64

	Standard	MUFU-PRG64
Program	1 set point	64 segments
Ramps • dwells	—	Yes
Display	LED	Colour LCD
Timer	—	up to 99 h 59 min, delayed start
Sensor	K-type, high precision	K-type, high precision
Offset correction	Yes	Yes

Typical applications for the program controller

Sulfated ash • pharmacopoeia

Gentle heating until the sample is charred, then ignition at 600 ± 50 °C — without spattering.

Total ash • food and feed

Drying, slow charring of fat-rich samples, ashing at 550 °C in one run.

Loss on ignition

Drying at 105 °C, then ignition at 550 °C or 950 °C for cement, soil, sludge and coal.

Heat treatment of metals

Hardening, tempering and annealing with defined heating and cooling rates.

Ceramics, glass, dental

Firing curves with holds to burn out binders and avoid cracking.

Catalysts and powders

Calcination with slow ramps and long dwells, repeatable from batch to batch.

The profile in the chart is an example; segment temperatures, rates and times are set according to the laboratory method. MUFU-PRG64 is fitted in the factory and is ordered together with the furnace (SKU PRO8072).

[MUFU-CA PRODUCT PAGE](#)
[HEATING — OVERVIEW](#)
[HEATING CATALOGUE](#)
[REQUEST QUOTE](#)



MUFU-CA laboratory muffle furnace · powder-coated housing, high-precision controller

Ordering information

Item	SKU	Chamber
MUFU-CA2	PRO8048	2 L · 220 V
MUFU-CA7	PRO8049	7.2 L · 220 V
MUFU-CA12	PRO8050	12 L · 220 V
MUFU-CA16 (380V)	PRO8051	16 L · 380 V 3-phase
MUFU-CA16 (230V)	PRO8052	16 L · 230 V 1-phase
MUFU-CA36	PRO8053	36 L · 380 V 3-phase
Option MUFU-PRG64	PRO8072	64-segment program controller, factory fitted

Configuration checklist

Method: one ignition temperature, or a timed or multi-step profile — then add MUFU-PRG64.

Sample volume: number and size of crucibles per run decide the chamber size.

Supply: 16 L at 230 V single-phase or 380 V three-phase, 36 L at 380 V; confirm the circuit at the installation site.

Space: exterior dimensions on page 3, plus room for the chimney and ventilation.

Qualification: installation, IQ/OQ and calibration of the chamber temperature on request.

SUPPLIER AND SUPPORT

COLO Lab Experts

Polje ob Sotli 4, SI-3255, Slovenia

Selection guidance: Send the method, the maximum temperature, the number of crucibles per run and the supply available at the site. COLO.Science will confirm the chamber size and whether the program controller is needed.

QUICK CONTACT

colo.si

sales@colo.si

+386 70 713 437

COLO.SCIENCE · MUFFLE FURNACE CONFIGURATION SUPPORT

Not sure which furnace fits your method?

Send your method or SOP — ashing, loss on ignition or heat treatment. COLO.Science will propose the chamber size, the controller and the qualification package, including installation, IQ/OQ and temperature calibration.

Web: colo.si

Ask us:

Price and current discount, delivery time, installation and qualification (IQ/OQ), temperature calibration, crucibles and accessories — write to sales@colo.si or call us.

[MUFU-CA PRODUCT PAGE](#)

[HEATING — OVERVIEW](#)

[HEATING CATALOGUE](#)

[REQUEST QUOTE](#)