

SNOL 1100°C Laboratory Furnaces

The Fibre Muffle 1100 series from AML Instruments are a range of precision laboratory electric muffle furnaces, with a counter balanced lift-up door, for use up to 1100°C.

They are designed for materials testing, heat treatment, ceramic and stoneware samples firing and ashing (models with chimney). And are used in laboratories, educational institutions, ceramic studios and in industry for thermal processing.

The chamber is made of high thermal efficiency vacuum-formed ceramic fibre, with heating elements embedded in four sides and a ceramic tile to protect the fibre base from wear.

An Omron E5CC digital PID temperature controller is fitted as standard and provides precise temperature control with good stability and minimal over-shoot. Other options are available, see the following page.

By default AML offers these furnaces without over-temperature protection, as a product to compete with equivalent models from other suppliers. Provided the furnace is not left unattended, this is acceptable. However, the Health and Safety Directive mandates that where units are left unattended they must have over-temperature protection fitted. We offer two types of over-temperature protection as optional extras (see following page).

A chimney is optionally available at extra cost, fitted to the rear of the furnace, and is recommended for processes producing fumes or giving off carbon (e.g. ashing or burn-off operations).

A metal tray is optionally available for each model and is

recommended to protect the furnace from spills or debris produced by some processes.

Our furnaces are available with optional UKAS (ISO17025) calibration of the temperature control system or also with a 5-point thermal survey of the chamber volume.

AML Instruments offers models customised to meet AMS 2750F (aerospace & automotive heat treatment specification), complete with UKAS (ISO17025) calibration and thermal survey meeting NADCAP requirements. For customisation to this specification or others please contact us.



- Lift-up door for efficient use of work space and better safety
- Good stability and uniformity
- Fast heating and cooling time due to low thermal mass construction
- Low power consumption for reduced running costs and energy savings

| Model <i>AML Stock Code</i> | Capacity <i>(WxDxH in mm)</i> | External Size <i>(WxDxH in mm)</i> | Voltage / Power / Connector | Weight | Price |
|---|---|--|--|---------------|---------------|
| SNOL 3/1100 LHM01 <i>FCESNOL3/1100LHM01</i> | 3 Litres 125 x 200 x 115 | 340 x 470 x 430 | 230Vac / 1.8kW / UK 13A style Plug | 18kg | £980 |
| SNOL 8.2/1100 LHM01 <i>FCESNOL8/1100LHM01</i> | 8.2 Litres 200 x 300 x 133 | 440 x 620 x 510 | 230Vac / 1.8kW / UK 13A style Plug | 28kg | £1,140 |
| SNOL 13/1100 LHM01 <i>FCESNOL13/1100LHM01</i> | 13 Litres 225 x 360 x 180 | 500 x 700 x 550 | 230Vac / 1.8kW / UK 13A style Plug | 38kg | £1,440 |
| SNOL 22/1100 LHM01 <i>FCESNOL22/1100LHM01</i> | 22 Litres 275 x 500 x 155 | 600 x 890 x 610 | 230Vac / 3kW / Blue Round 16A Plug | 58kg | £1,880 |
| SNOL 39/1100 LHM01 <i>FCESNOL39/1100LHM01</i> | 39 Litres 315 x 515 x 225 | 650 x 900 x 740 | 400Vac (3P+N) / 6kW / Red Round 16A Plug | 74kg | £2,380 |

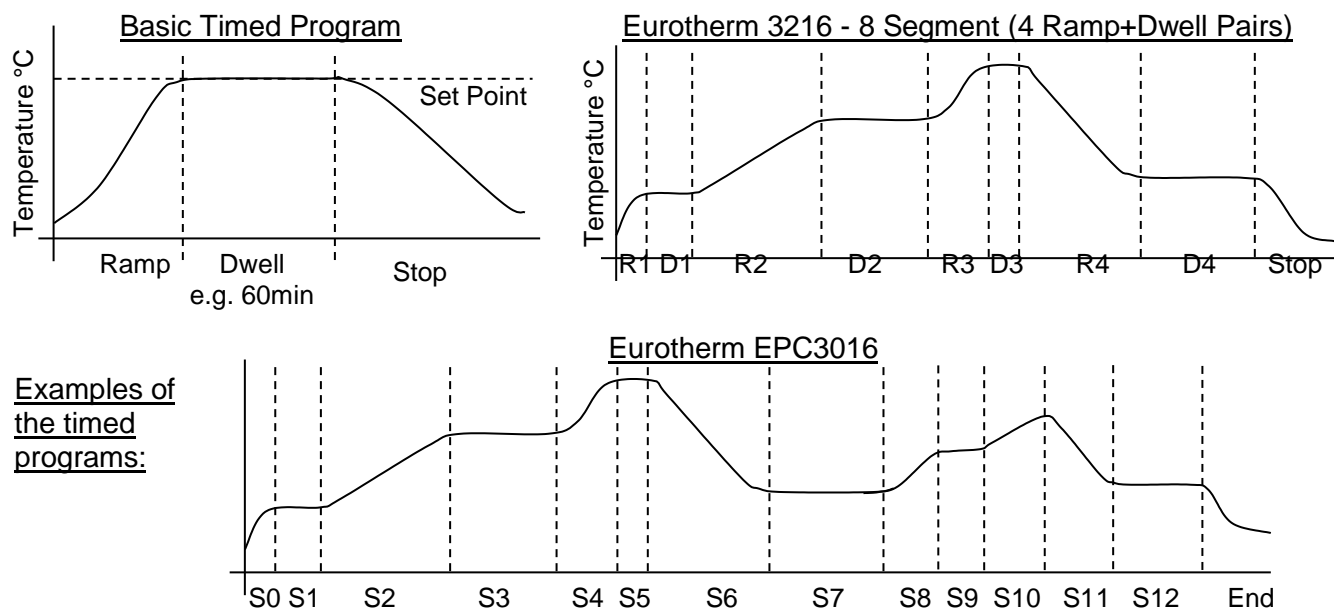
Note: At least 1/10th of the chamber dimensions should be left unused on each side. External Size not including optional chimney. If used below 200°C these units (especially larger models) may over-shoot the set temperature, depending on load. Weights exclude options and transportation packaging. WxDxH = Width (Left-right) x Depth (Front-back) x Height (Top-bottom).

Prices Exclude VAT and Delivery and are correct at the time of writing. Specification and price subject to change without notice. All trade marks acknowledged. Appearance may vary from images shown.

Temperature Controller Options for Furnaces

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|--|---|
| <p align="center">Omron E5CC</p> | <p align="center">Eurotherm 3216</p> |
|  |  |
| <p align="center">1/16th DIN Size Run/Stop Modes Settable Heating Ramp Rate Basic Timed Program: Ramp, Dwell, Stop.</p> | <p align="center">1/16th DIN Size Run/Stop (Auto/Off) Modes Settable Heating Ramp Rate Basic Timed Program: Ramp, Dwell, Stop.</p> |
| <p align="center">Fitted as standard.</p> | <p align="center">Optional at extra cost. +£245</p> |
| <p align="center">Eurotherm 3216 Programmer, 1 Program, 8 Segments Optional at extra cost. +£335</p> | <p align="center">Eurotherm EPC3016 Programmer, 10 Program, 24 Segments each, RJ45 Ethernet PC Network Port Optional* at extra cost. +£635</p> |
|  |  |
| <p align="center">1/16th DIN Size (~48x48mm). Run/Stop (Auto/Off) Modes. Settable Heating Ramp Rate. 8 Segment Timed Program: 4 Ramp+Dwell pairs, Stop.</p> | <p align="center">1/16th DIN Size (~48x48mm). Run/Stop (Auto/Off) Modes. Settable Heating Ramp Rate. 10 Timed Programs with 24 Segments each (Ramp, Dwell, etc).</p> |
| <p align="center">Eurotherm 3216 Programmer, 5 Program, 8 Segments each Optional at extra cost. +£455</p> | <p align="center">Connection to a laptop or PC network via Ethernet RJ45 port on front panel. Includes PC software for easier creation, editing and backup of timed programs. <i>(*Only available when an OTP option is fitted.)</i></p> |

Other instruments can be fitted to order, to give features such as timed programs with more segments, audible alarms, remote communications and data recording. Please contact us for details.



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Over-temperature Protection Options for Furnaces

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| | |
|--------------------------------------|--|
| <p>OTP 1 +£180</p> | <p>An internally fitted self-resetting temperature limit controller, which users cannot access or change the temperature setting. Protects the furnace from exceeding its maximum safe temperature.</p> |
| <p>OTP 2 +£250</p> | <p>A digital temperature limit controller mounted in the front panel. Displays its temperature reading and can be set by the user to protect their load from exceeding their desired temperature. If the furnace temperature exceeds the temperature set on the over-temperature protection controller, the furnace will be prevented from heating until the user resets the over-temperature protection controller, by pressing a button.</p> |

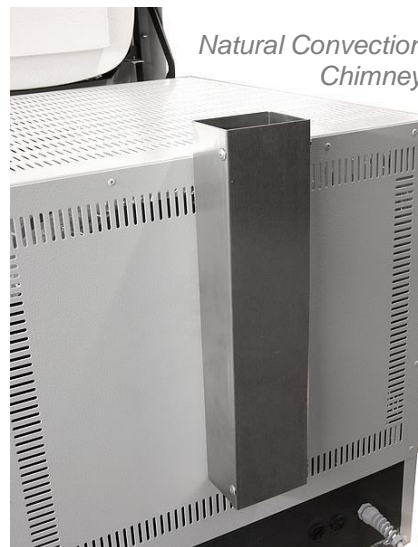


Optional OTP 2 and standard Temperature Controller. 'ALM' flashes on the display when over temperature.

Chimney

Highly recommend for any process giving off vapour, fumes or carbon. Fitted at the rear.

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|-----------------------------------|---------------------|
| <p>Natural Convection Chimney</p> | <p>+£120</p> |
| <p>Fan-assisted Chimney</p> | <p>+£280</p> |



Accessible Thermocouple Connections +£60

We can fit accessible thermocouple connections to save time with regular calibrations. Connections at the rear.

7 Day Timer +£240

A timer can be fitted to the turn on the controller at a specific time. The controller will then run at its last setting. Featuring: Daily and weekly program, Manual override, Fully automatic daylight saving time.

Cable Entry Port +£160

A 13mm inside diameter ceramic tube at the rear into the chamber for putting in thermocouples or other sensor cables.

Suitable high temperature rated material is provided to block the Entry Port. Flanges and objects passing through the Entry Port may get hot and conduct heat outside the chamber. Excessive thermal loading or insufficient insulation in the entry port can have a negative on thermal uniformity in the chamber. Thermocouples or other metal objects must be suitably earthed.

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Trays

Metal trays are available for all models, manufactured from stainless steel with a maximum temperature of 1100°C.

Note that these trays are liable to thermal distortion and degradation under the maximum temperature and so are considered a consumable item. Lower heating rates and temperatures will result in less distortion and slower aging.



| For Model | Dimensions (WxDxH) | AML Stock Code | Price |
|---------------------|--------------------|--------------------|-------|
| SNOL 3/1100 LHM01 | 105 x 180 x 10 mm | FCESNOL3/1100TRAY | £40 |
| SNOL 8.2/1100 LHM01 | 180 x 280 x 10 mm | FCESNOL8/1100TRAY | £60 |
| SNOL 13/1100 LHM01 | 210 x 330 x 10 mm | FCESNOL13/1100TRAY | £70 |
| SNOL 22/1100 LHM01 | 250 x 450 x 10 mm | FCESNOL22/1100TRAY | £80 |
| SNOL 39/1100 LHM01 | 290 x 470 x 10 mm | FCESNOL39/1100TRAY | £90 |

Other options

The range is also available with stainless steel exterior (pictured). The lead time is typically 6 – 8 week and the price of the unit and some options are higher. Please contact us for a quote.

We may be able to assist with other bespoke requirements, please contact us for further details.

Whilst most models are normally available from stock, options normally take longer. Please contact us for a quote with current lead-times.



We manufacture enhanced versions of these furnaces meeting AMS 2750F and Nadcap compliant. Complete with calibration, under our ISO 17025 (UKAS) accreditation, and thermally surveyed before leaving our factory. With thermal uniformity Furnace Class 3, or better, and Instrumentation Types up to 'A'.

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After Sales Service & Warranty

AML Instruments has been stocking and selling the SNOL range since 2008. We hold UK stock of a wide range of spares and accessories and can offer service and repairs at our factory if required at a later date. On-site service and repairs may be available subject to location and the nature of the repair. We also offer a range of on-site calibration services, see our website or contact us for more details.

Each unit has a 1 year return to base warranty from the date of purchase from AML Instruments and covers normal use of the unit in accordance with its instruction manual. It does not cover excessive 'wear and tear' to the soft fibre muffle or damage caused by careless use of the spring assisted door.

On receipt of the unit it is important to check for any transport damage and report it to AML Instruments and note it on the carrier's paperwork. It is recommended to keep the original wooden packaging in case the unit ever needs returning.

Under the warranty any manufacturing defects will be rectified by AML Instruments as the agent of the manufacturer at no charge. 'Return to base' means the customer is responsible for return of the unit to AML Instruments's site (Lincolnshire, UK) for assessment with a view to repairing under warranty. Or, if necessary, we can provide collection at a cost, provided the unit is suitably packaged. For any work performed that is solely covered by the warranty AML Instruments will provide return shipment of the unit within the UK and Republic of Ireland at no charge. Whilst AML Instruments stocks a range of spares and aims to resolve any warranty repairs quickly, typically within 3 – 8 working days, the warranty does not guarantee this or any provision of a loan unit while the customer's unit is with us.

Part of a range of thermal solutions from AML Instruments



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