

CTL 001 - 10 g Screening Tool (Carius Tube) Data Sheet

NEW

An instrument for thermal stability and pressure rate screening to search for exothermic activity and gas generation of powders and liquids.



Carius Tube Furnace with Controller, databox, mini-PC (Windows 11), tube assembly, tube holder and funnel, all supplied with the instrument.

Benefits

- Larger 10 g or 15 ml test sample size makes it easier to test a representative multiphase sample compared to other thermal instability measurement techniques
- Can be re-configured to enable mid-test sample addition.
- Enables permanent measurement of pressure and temperature to determine vapour pressure vs permanent gas generation.
- Useful as a preliminary screening technique prior to conducting large scale Adiabatic Dewar Calorimeter testing.
- UKAS traceable calibration
- Tested with known calibration sample prior to delivery

Functional specifications

VOLTS/WATTS	220-240 v ac 50Hz/60Hz- 1kW oven
TEMPERATURE RANGE	0-400°C (ramp typical 0.5°C)
TEMPERATURE ACCURACY	within +/- 1°C
MEASUREMENT PRESSURE RANGE	0-100 barg
PRESSURE ACCURACY	within +/- 0.1 barg from 0-50 barg and within +/- 0.2 barg above 50 barg
DATA LOGGING	slow log rate – every 5 sec (operator configurable) Dynamically triggered auto fast log rate – every 0.1 sec default (operator configurable) Now with operator configurable temperature and pressure rate of rise trigger points
ACCESSORIES	Carius system program and Win 11 miniPC, cables, set of Carius glass tubes and miscellaneous fittings, 1/6" pressure tubing supplied as standard, RS232 programmer link to pre-set oven heat up program.

Optional extras

- Spare pressure transducers, temperature sensors and 10 g glass Carius tubes available
- Acoustic cowl available to enable tests to be conducted during the normal working day rather than in an unattended laboratory (larger 4ft wide fume cupboard required to house this 13kg accessory).

Note – when this accessory is not supplied then tests must only be run overnight or in an empty lab due to loud tube rupture. Note that ALL Carius tests must be conducted within a fume extraction cupboard.

- Remote training / set up assistance (up to 2 hours).

Location recommendations and specifications

- Transformer (relevant for 100-120V supply customers only): Locate away from test area. (Adjacent to fume cupboard suggested)
- Control unit : Recommendation to locate beside furnace adjacent to (separated from) fume cupboard on shelving with signal and power cables running via side wall letter box style cable gland.
- Furnace : Locate inside the fume cupboard.
- Data card: Locate adjacent to the fume cupboard on shelving
- Mini PC which is supplied (Win 11) - Locate adjacent to fume cupboard on shelving. Allow space for monitor (not supplied)
- Dimensions:

Controller : 48cm (w) x 14cm (h) x 42cm (d)

Furnace: 43cm (h) x 28cm (dia)

- Air requirements : 7 barg Air regulator capable of reducing pressure inlet via the supplied 6mm od nylon hose, to the 1 barg max required test pressure.
A separate compressed air line may be connected to the bottom of the furnace to assist cooling.



DEKRA Organisational & Process Safety

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