CARBOLITE
a VERDER company

TEST FURNACE FOR ASH FUSIBILITY - CAF G5

De CAF G5 is een oven die is ontworpen om de smelteigenschappen van as te testen, en optioneel de steeds populairder wordende bepaling van het testen van biomassa of vaste gerecycleerde brandstoffen.

De testoven voor smelteigenschappen van kolenassen voldoet aan de normen ISO 540:2008; ASTM D 1857/ D1857M – 18; DIN 51730:2007-09; DD CEN/TS 15370-1:2006en PD CEN/TR 15404: 2010 (vaste teruggewonnen brandstoffen (SRF)).

De automatische en continue opname van digitale beelden met de CAF G5 stelt laboratoriumtechnici in staat om andere taken uit te voeren terwijl de test aan de gang is en de resultaten achteraf te beoordelen. De nieuwe CAF G5 verbetert de kwaliteit van de opgenomen beelden en testresultaten aanzienlijk, waardoor de efficiëntie in laboratoria toeneemt.

De maximale temperatuur van 1600°C maakt het testen van zowel biomassa als steenkool mogelijk. Een optioneel geïntegreerd verlichtingssysteem voor de werkbuis is ook beschikbaar voor het testen van lage 'initiële vervorming' temperatuur van SRF of biomassamonsters.

STANDAARD FUNCTIES

- Analysis software which can be used in fully automatic or manual modes for coal ash samples and manual only for biomass and SRF samples.
- Software zoom function to enable accurate post-test analysis of individual samples with improved resolution
- One configurable grid assigned to each test piece
- Temperature controller program set up within the software
- Space saving embedded computer with Windows IoT Enterprise software runs future proof firmware
- Default software settings and individual analysis form for coal ash, biomass and SRF
- An optional work tube integrated lighting system when testing low initial deformation temperature of biomass or SRF samples
- Lightweight insulation allows quick cooling permitting multiple tests to be completed during the day
- Automated digital image capture of samples. The frequency of images recorded is set by customer preference, from every 1 °C increment to every 20 °C. The maximum interval for auto analysis is 5°C.

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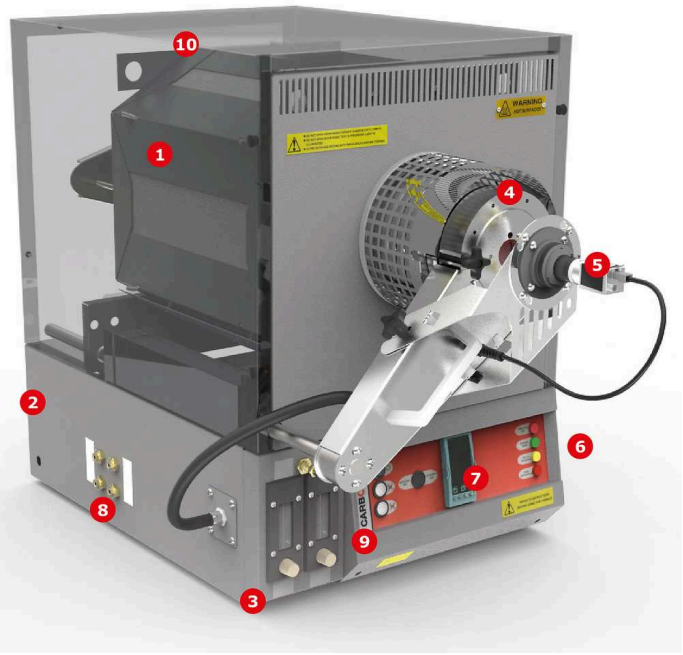
TECHNISCHE DETAILS

View inside

1. 1600 °C tube furnace with integral SiC elements
2. External link to embedded PC & software
3. Flow meters for oxidising, reducing gas flow (dependant on the requirements of the standards)

4. 79 mm inner diameter work tube allows more than 6 samples
5. Digital camera for fast and accurate image recording
6. Gas tight seal for efficient use of gases & safety of operator
7. Automatic temperature programmer with multiple PID control
8. Gas inlets for reducing, oxidising & purge gasses
9. Oxidising or reducing gas selection switch
10. Work tube integrated light for use when testing low ‘initial deformation’ temperature of biomass and SRF samples (optional)



View inside of CAF G5

Onder voorbehoud van technische wijzigingen en eventuele fouten

TECHNISCHE DETAILS (MODELLEN)

CAF G5

Temperatuursbereik	Up to 1600 °C (1600 °C required for some biomass samples)
Temperature Precision	± 3 °C above 800 °C
Temperature Ramp Rate	7 °C per minute
Temperatuurscontrole	Digital multiple PID terms with gain scheduling and multi offset parameters
Temperature Display	°C
Work Tube dimensions	79 mm internal diameter
Tube material	Mullite
Heating Elements	Silicon carbide x 6
Maximum Sample Load, Manual Analysis	8
Maximum Sample Load, Automatic Analysis	6
Conforms to Standards	BS ISO 540:2008; ASTM D 1857 / D1857M -18); DIN 51730:2007-09;DD CEN/TS 15370-1:2006; PD CEN/TR 15404:2010
Ash Fusibility Determination	Automatic or Manual (Coal & coke: DT, ST, H, FT) Manual only (Biomass / SRF: IST, DT, HT, FT)
Analysetijd	3 runs per working day (including cool down times)
Image Collection	Digital - up to 1 frame per 1 °C rise in temperature
Image Resolution	1280 x 1024 pixels
Gas Requirements: Purge	N2 or CO2
Gas Requirements: Oxidising	CO2 or Air
Gas Requirements: Reducing	CO + CO2 or H2 + CO2
Ventilation	Forced air ventilation
Exhaust	Pipe to be vented into a separate fume hood
Safety	Fail safe gas system and CO alarm supplied
Physical Dimensions (mm)	790 (h) x 505 (w) x 765 (case depth) x 970 (overall depth)
Weight (kg) (furnace)	84
Stroomvoorziening	380 - 415 V, 50/60 Hz two phase 25 A/phase or 220 - 240 V, 50/60 Hz single phase 50 A
Power switching	Solid state relays
Maximum power consumption (kW)	7

Environment Conditions - Operating Conditions	5 °C - 40 °C
Environment Conditions - Relative Humidity	maximum 80 % up to 31 °C decreasing linearly to 50 % at 40 °C
Overtemperature protection	Digital with single high alarm relay

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