

Material type

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Utilization

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General description

Performing raw material or electrode evaluations under laboratory conditions is necessary in terms of time consumption and cost optimizations. For this purpose, the RDC-164 apparatus can be used for the calcination or baking of different materials under well-controlled laboratory conditions.

In the case of green coke, a vertical shaft kiln calcination can be simulated, or a specific calcination degree can be achieved for a semi-calcined coke. This furnace can also be used for the baking of green electrodes or electrodes produced at the bench scale (see RDC-161). Depending on the application, typical calcination and baking curves with given heat-up rates are already programmed, the goal being to reach typical calcination or baking temperature. Custom-made heating curves can also be implemented for research projects, such as simulating the impact of the final baking temperature on the electrode quality in well-controlled conditions or creating calibration curves for comparison with the real production (for instance, for evaluating the temperature distribution of a baking furnace).

Approximately 4 kg of green coke or ten electrode cores with Ø50 mm can be loaded in one batch. The electrode samples or the green coke bucket are surrounded by packing material to prevent any air oxidation. The equipment is supplied with a tar incinerator unit for fume treatment purposes.

When a greater quantity of material is needed, the RDC-167 furnace is an option instead of the RDC-164 furnace.

Technical information

Function:	Calcination of green coke or baking of electrodes
Maximum Temperature:	1100 °C
Sample:	Bench scale electrodes or green coke
Process time:	~ 70 hours
Installation:	Floor standing under fume hood
Dimensions (LxWxH):	130 x 80 x 196 cm
Weight:	380 kg
Electrical Property:	400V 3/N/PE, 50 Hz 8 kW, 20 A
Fluid Property:	Air, 3 7 bar
Database Connection:	No

Additional Recommended Equipment:
 Test equipment for analysis
 Bench Scale Anode Production (RDC 161)
 Weighing scale with an accuracy of 0.1 g

