

RDC-161

Name BENCH SCALE ANODE PRODUCTION

Material type
**GRANULAR
PITCH
ELECTRODES
LINING**

Utilization
**R&D
IN-PLANT
LAB**

General description
Evaluating raw materials or manufacturing parameters on bench scale is necessary to avoid trial and error testing on full electrodes, which is the most expensive way of proof-testing. Tests on bench scale also have the advantage of keeping stable conditions with a specific testing procedure in a laboratory environment, which allows obtaining comparable data for the results interpretation. This type of evaluation is mainly performed to compare the quality of different raw materials or for research and development projects.

The RDC-161 apparatus is used to produce small electrodes with a 50 mm diameter and approximately 100 mm length, starting from a batch of dry aggregate and finishing with green electrode samples. The unit is composed of:

- an oven, for preheating the batch of dry aggregate and for keeping the paste at the needed temperature for forming.
- an intensive impeller mixer (Eirich) with an electrical heater for paste mixing.
- a press, for forming the green electrodes from the paste.

Depending on the application, additional equipment is potentially needed to prepare the dry aggregate batches, bake the green electrodes, and test their properties.

Technical information

Function:	Production of Bench Scale Electrodes
Maximum Temperature:	180 °C
Sample:	Electrode Paste up to 8 kg
Installation:	Floor standing under Fume hood
Dimensions (LxWxH):	
Furnace	125 x 82 x 180 mm
Mixer	162 x 82 x 210 mm
Press	122 x 82 x 220 mm
Weight:	
Furnace	260 kg
Mixer	510 kg
Press	550 kg
Electrical Property:	
Furnace	400V 3/N/PE, 50 Hz 3.4 kW, 8.5 A
Mixer	400V 3/N/PE, 50 Hz 7.1 kW, 18 A
Press	400V 3/N/PE, 50 Hz 1.5 kW, 4 A
Database Connection:	No

Additional Recommended Equipment:

Baking Furnace (RDC-164 or RDC-167)
Test equipment for analysis
Weighing scale with an accuracy of 0.1 g

