RCA-MI
RESIDUAL CARBON ANALYSER MICROWAVE
ONLINE MONITORING OF FLY ASH

- The RCA-MI is an online monitoring instrument for automatic and isokinetic sampling of ash in the flue gas duct from boilers.
- The RCA-MI provides continuous information for:
  - Combustion efficiency
  - Coal mill performance
  - The quality of fly-ash
GENERAL DESCRIPTION

The Residual Carbon Analyser Microwave (RCA-MI) provides the operators with vital real time information about the combustion efficiency through continuous monitoring of the unburnt carbon content in the fly ash.

The RCA-MI will assist coal fired power plants by improving their operation in the following three areas:
- Combustion efficiency
- Coal mill performance
- Production of high quality fly ash for sale

The Ash Sampler
The pumping power is provided by utilising the pressure difference between the ambient and inside of the duct. This pressure difference drives an adjustable ejector. This design also means that extraction velocity automatically adapts to changes in the flow rate in the duct.

The Transducer
The measurement principle is based on the established fact that microwave transmission properties relates to the amount of unburned carbon in the ash sample. The critical electronics circuits are embedded in the transducer to obtain optimal results.

The Control Unit
The control unit undertakes the processing of the transducer signals and controls all functions of the individual RCA components. An operator’s control panel with display is located on the control cabinet front.

TECHNICAL DATA

- Power supply: 230V/50Hz or as required
- Air supply: Min. 6 bar clean oil-free air
- Measurement range: 0-20% carbon in weight
- Accuracy: +/- 0.3% residual carbon
- Measurement output: 4-20mA, isolated current loop, 4mA=0%, 20mA=20% carbon
- Dimensions: (WxHxD): Sampling unit: 800x760x230 mm Control cabinet: 600x750x350 mm
- Weight: Sampling unit: 35 kg Control unit: 40 kg

DRAWING