The RCA-IR is an online monitoring instrument for automatic and isokinetic sampling of ash in the flue gas duct from boilers.

The RCA-IR provides continuous information for:
- Combustion efficiency
- Coal mill performance
- The quality of fly-ash
GENERAL DESCRIPTION

The Residual Carbon Analyser Infrared (RCA-IR) 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-IR 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 sampling of fly ash is done by utilizing the difference between the pressure inside the flue gas duct and outside. An ejector is installed in the flue gas duct and pulls the flue gas through the sampling pipe to the cyclone where the fly-ash is separated from the flue gas.

The Transducer

The collected sample of fly ash is subjected to a special light and the reflection is a measure of the amount of unburnt carbon in the sample. The signals from the reflection are processed in a microprocessor and sent to the control unit.

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: +/- 0,5% between 2% and 7% 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

M&W Asketeknik is an internationally working engineering company specialised in design, manufacture and supply of analysing and sampling systems for optimising processes and controlling by-products in coal and biofuel fired power plants and other utility boilers. Several hundred units are successfully analysing and monitoring combustion processes in power stations world-wide.