



# Electrostatic Separators

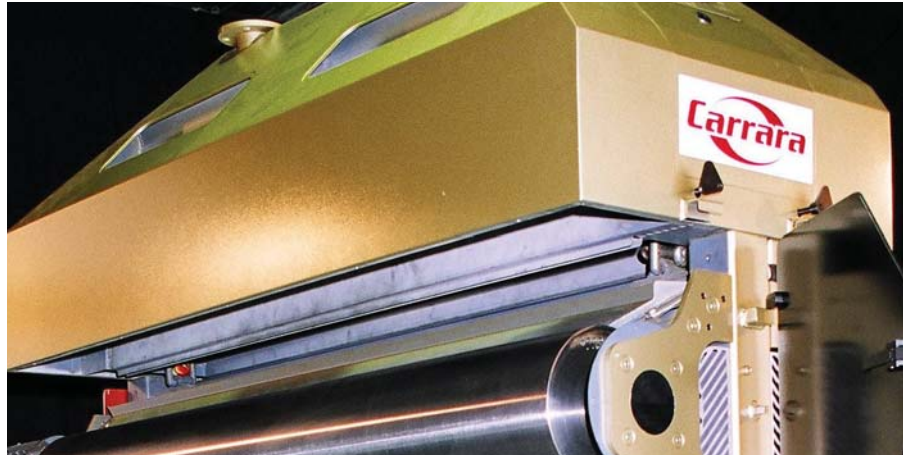
**CPG Resources – Mineral Technologies**

*Leaders in Mineral Separation*



# Expertise. Experience. Superior Technology.

The Carrara range of electrostatic separators represents a new generation of separation equipment that includes high tension roll, electrostatic plate, electrostatic screen and tribostatic separators.



Electrostatic separators are used to separate dry, free flowing materials with particles sizes between 40 and 800 microns that exhibit electrical conductivity differences.

## High Tension Roll Separator

### Features

- Light weight, thermally stable composite induction electrodes for long life
- Super non-conductor splitter for ultra clean zircon
- Labyrinth sealed, long life, maintenance free bearings
- Individual inspection doors to limit heat loss
- Internal splitter system accommodates middlings, conductor or non-conductor retreat without chute changes
- Removable roll cassette for ease of maintenance
- Full dust enclosures incorporating mesh doors permit inspection without compromising operator safety
- Machines are designed to fit previous generation machine footprints
- Suitable for PLC control systems

The separator is supplied with either two or three roll stages for non-conductor cleaning, conductor cleaning, or middlings re-treatment. The rolls are 270mm in diameter and 1,800mm long. A laboratory scale separator is also available.

### Applications

- Separation of titaniferous mineral sands, hard rock ilmenite and rutile, cassiterite, chromite, tantalite, wolframite and iron ore.



### Plate and Screen Electrostatic Separators

#### Features

- Independently adjustable electrode systems
- Feed control options
  - Electro/pneumatic feed gate control systems for each unit start with feed slides for feed rate control
  - Proprietary feed roller
- One undercarriage product receiver chute with pipe launder connection plates
- Interlocked doors for operator safety
- Complete dustproof enclosures and spillage chute assembly.

Separators are supplied with five stages of separation for re-treating the non-conductors from the preceding stage. Laboratory scale separators are also available.

#### Applications

- Separation of titaniferous mineral sands, hard rock ilmenite and rutile, cassiterite, tantalite, wolframite, iron ore, plastics from metals in waste recycling systems and PVC from other plastics.



### Glassman High Voltage DC Power Supplies

These enhanced solid state DC high voltage power supplies meet all output and current requirements; provide ripple suppression, static line and load regulation; and operate with available AC input line voltage and frequency. Models are available with 0 to 40 kV output at current ratings of 1.8, 2.5, 7.5, 15 and 75 milliamps, with either negative or positive polarity.



### Tribostatic Separator

When different non-conducting particles are subject to inter-particle friction at elevated temperatures, the particles with the highest dielectric constant acquire a positive charge and those with a lower dielectric constant become negatively charged. When these pre-charged particles fall through a strong electric field created by an anode and cathode, they are attracted to the electrode with opposite charge.

Machines are designed to suit particular separations and embody the total feed preparation and product collection systems. Typical systems include multi-stage machines with inter-stage particle conditioning.

#### Applications

- Widely used in industrial minerals industry applications, such as silica removal from feldspar, barite, phosphate, calcite and shell-sand mixtures
- Separation of impurities from kaolin, bentonite, silicon, pegmatite, iron oxide and wheat flour.



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