

STET BENEFITS

ADVANCED ELECTROSTATIC SEPARATION OF FINE POWDERS

- Environmentally Preferred
- Continuous, Single Step
- Proven & Robust
- Broad Applications



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What Is Triboelectrostatic Separation?

ST Equipment & Technology LLC (STET) is a developer and supplier of specialized processing technology for beneficiation of fine particle materials. Founded in 1989, ST capitalized on proprietary technology to develop a unique, triboelectrostatic belt separator. Since then, the compact and easy to permit separator has beneficiated fine materials within several industries. Today, the US based company has deployed many separators, with well over 100 machine years of operation, in North America, Europe and Asia. A state of the art Engineering Center in Needham, MA, USA conducts research and development, including pilot testing of new materials and further development of the technology.

In STET's technology the feed enters the top of the unit via one of three ports and are conveyed through the electrode gap (separation zone) by a continuous loop, open mesh belt. The belt operates at high speed. The geometry of the belt serves to sweep fine particles off the surface of the electrodes, preventing the accumulation of fine particles that degrades the performance and voltage field of traditional free fall parallel plate type separation devices. In addition, the belt generates a high sheer, high turbulence zone between the two electrodes, promoting tribo-charging. The counter-current travel of the separator belt allows for continuous charging and re-charging of particles within the separator, eliminating the need for a pre-charging system upstream of the STET separator. The STET separator is a high feed rate, commercially proven processing system. The maximum processing capacity of the STET separator is mostly a function of the volumetric feed rate that can be conveyed through the electrode gap by the STET separator belt. Other variables, such as the speed of the belt, the distance between the electrodes and the aerated density of the powder effect the maximum feed rate, typically to a lesser extent. For relatively high density materials, for example fly ash, the maximum processing rate of a 42 inch (106 cm) electrode width commercial separation unit is roughly 40 – 45 Tons per hour of feed. For less dense feed materials, the maximum feed rate is lower.

STET Process

- Entirely Dry Process: No Water or Chemicals
- High Rate, Continuous Electrostatic Separator
- Single-Step Process
- High Feed Rate: 15 – 20 tons / hour for DDGS
- Low Energy Consumption: 2-4 kWh / ton
- Designed for Processing Combustible Dusts
- Fully Commercialized – 25 Years of Operation
- Water-Free separation
- Environmentally friendly
- Low energy consumption and maintenance
- High capacity – up to 40 tons per hour
- Compact Machine – easy to fit within process layouts
- Easy to permit
- Wide range of particle sizes
- Broad range of materials
- Automated

Global Separators

Location	Units	Starting
United States	13	(1995)
United Kingdom	4	(2002)
Canada	2	(2005)
Europe	3	(2011)
South Korea	2	(2014)
India	1	(2015)
Japan	1	(2018)
Philippines	1	(2019)

