

A well-proven technology adapted to a wide range of industrial products: cement raw mix, cement, solid fuels, minerals, etc

APPLICATIONS

Product	Cut size	Comments / Highlights
Raw cement meal	≈ 60 μm	Very low power consumption. Possible combination of pneumatic dryer (FCB Aerodecantor or FCB Flash dryer)
Solid fuels	60-80 μm	Reliability on fineness control. Combustion and burning lines optimization. Adaptability to vertical mills (E-mill or others)
Cement	15-45 μm	Cement performance enhancement. Accurate quality control. Possible combination with dryer (FCB Aerodecantor or FCB Flash dryer) for wet additives
Mineral sands & fillers (carbonates, silica ...)	15-250 μm	Coarse products optimal defillerization (rejects of separator). Fine products homogeneity
Calcium Carbonate	5-300 μm	Flexibility and top cut size sharp control
Phosphate, ilmenite, MnO ₂ ...		Ore dry beneficiation
GBFS, steel slag	10-30 μm	Fineness down to d50 = 5μm

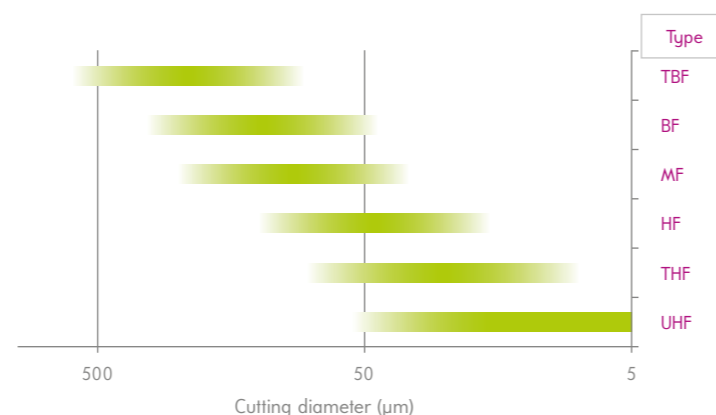
FCB TSV™ Classifier

The high-efficiency dynamic classifier



FCB TSV™ Classifier with FCB Aerodecantor

RANGE OF PERFORMANCES



- Maximal compressive strength with the minimal cement Blaine set point
- Enhanced raw meal burnability
- Best solid fuel reactivity
- Accurate filler control and ore dry beneficiation



FCB TSV™ Classifier offers the highest efficient separation, thus enabling enhanced finished product quality and improved grinding plant performances

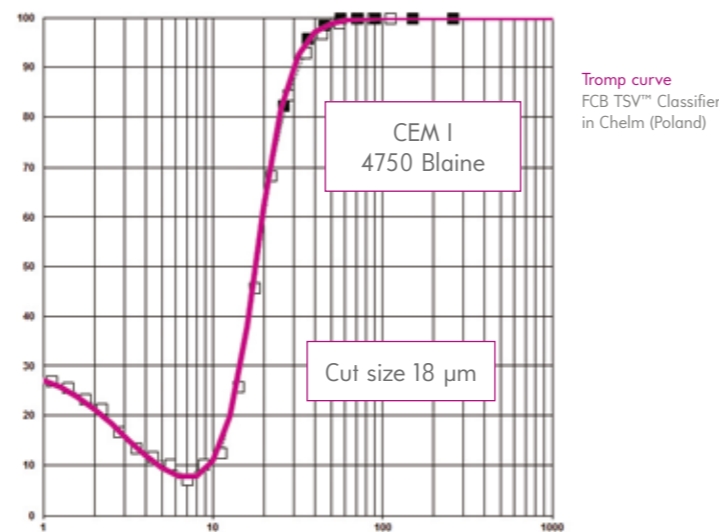
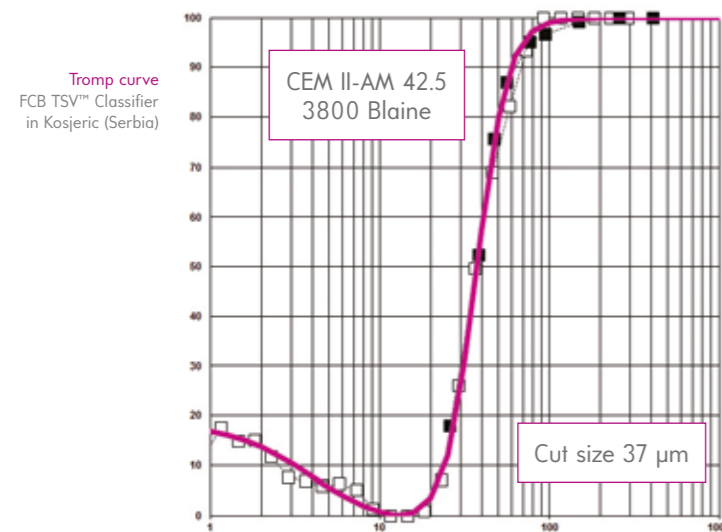
- Minimal by-pass
- Reduced imperfection on Tromp curve
- Very low pressure drop
- Very low power consumption
- Sharp control of product fineness

FCB TSV™ Classifier has been widely selected by major players in Cement and Minerals industries for its decisive advantages

CAPACITY

Thanks to its patented blade design, the highest efficiency of FCB TSV™ Classifier results in:

- A minimal bypass, allowing the maximal mill grinding efficiency
- An extremely steep slope of the Tromp curve with a strong reduction of coarse particles in the product, enabling the optimization of the target values of fineness and the consequential increase of capacity



PRODUCT QUALITY

The high-efficient separation reduces the amount of coarse particles in the fine products and the amount of fines in the oversize product (defillerization), thus enabling:

- A maximal compressive strength with the minimal Blaine set point
- An enhanced cement/clinker ratio
- A higher reactivity of solid fuels in cement kilns and precalciners, and the consequent reduction of fuel consumption
- A better burnability of raw meal in the cement kilns
- A better mass yield *versus* sifting machines

ENERGY SAVINGS

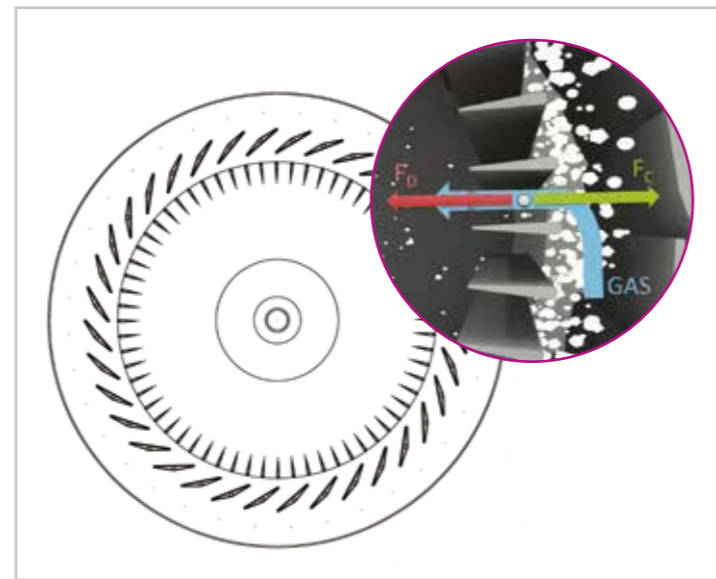
Energy savings thanks to the patented vortex breaking system:

- Low pressure drop of the separator
- Very low power consumption

The enhancement of the mill system efficiency leads to additional specific energy savings

RELIABILITY

- Automatic lubrication system for minimal maintenance
- Bearings calculated for more than 100,000 h lifetime
- Adapted wear protection based on experience



FLEXIBILITY

FCB TSV™ Classifier can be combined with different types of mills: ball mill, FCB Horomill®, and vertical mill (E-mill, Raymond mill, roller mill).

The different types of feed system and corresponding wear liners allow the installation of FCB TSV™ Classifier in a wide range of process configurations.

In a ball mill plant, FCB TSV™ Classifier can be either:

- Integrated into the mill venting system for total or semi-air-swept mills
- Installed in a separate air circuit with axial or tangential air inlet duct
- Associated with two mills operating in parallel

With ball mill or FCB Horomill® plant, if necessary, FCB TSV™ Classifier can be installed above FCB Flash dryer or FCB Aerodecantor.

ADAPTABILITY

The versatile design of FCB TSV™ Classifier enables its adaptation to a large range of industrial applications:

- Available from 800 to 8,000 mm diameter (up to 500 t/h finish product)
- With axial or tangential air inlet, dusty or not, top or bottom feeding, even both
- Product fineness from 5 µm to 500 µm
- From OPC cement to blended cements, slag, limestone, minerals powders and ores

DRY BENEFICIATION

- Dry processing to concentrate a product when two fractions show a difference of density
- Applicable to phosphate, magnesite, silica fumes, pyroxenite, etc

FILLER CONTROL

- An easy and efficient way to control or remove the ultrafine fraction of a powder
- Applied to limestone, silicon metal, ilmenite slag and other aggregates

KEY COMPONENTS

- Circular damper with swiveling counter-blades simultaneously controlled
- Turbine with patented rotor blades and anti-vortex plates
- Drive system with speed variation
- Smart sealing system for top cut size steadiness

