

One Source

Modular Dense Medium Cyclone Plants



Modular dense medium cyclone plants



FLSmidth supplies a comprehensive range of modular Wemco® Dense Media Cyclone Plants utilising either Wemco® or Krebs® HM Cyclones. Wemco systems are installed and operating on many different minerals ranging from coal, manganese, magnesite, right through to fluorspar, iron ore, and diamonds.

Particle sizes up to 100 mm can be treated depending upon the size of Wemco or Krebs Dense Media Cyclone or Cyclones selected for incorporation into the plant. The lower particle size for DMS Cyclone separation is normally 0.5 mm, but this is dependent upon cyclone diameter selected.

The specific gravity of separation (cut point) can be obtained by using either magnetite or ferrosilicon media (or a mixture) depending upon the separation density required. The accuracy of separation can be controlled to +/- 0.01 SG units by incorporation of the Wemco automatic density control system which measures the circulating density of media and controls the circuit to operate at an adjustable pre-determined setting.

DMS Cyclones are available in sizes up to 1400 mm in diameter. They are constructed with replaceable sections so only parts need replacing and not the entire Cyclone body. Wear materials can be ni-hard, high chrome, alumina tile, or silicon carbide.

Wemco plants incorporate a standard well proven circuit, in which the feed is well prepared, by washing and draining prior to DMS Cyclone treatment. The products are sprayed with intense washing jets to remove the magnetite or ferrosilicon media prior to centrifuge dewatering (if required). The magnetic Separators can be either single or twin stage. Media viscosity is controlled by special control bleed to the cleaning circuit.

Where necessary, higher separation densities can be achieved, by thickening the media by special centrifugal or spiral-type Wemco Densifier prior to being returned to the circuit.

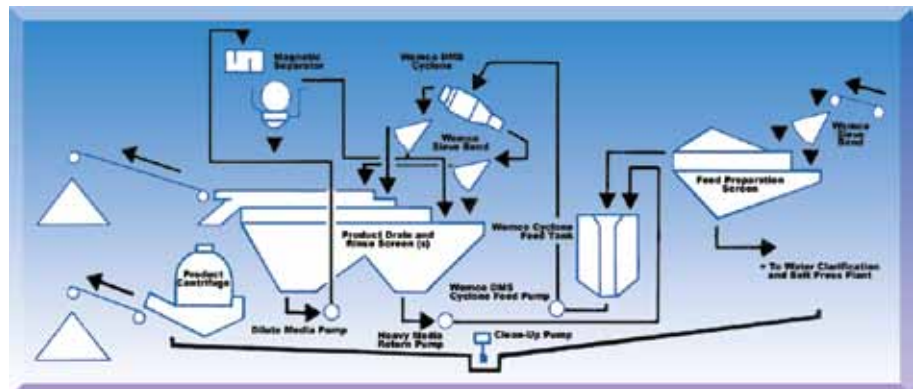
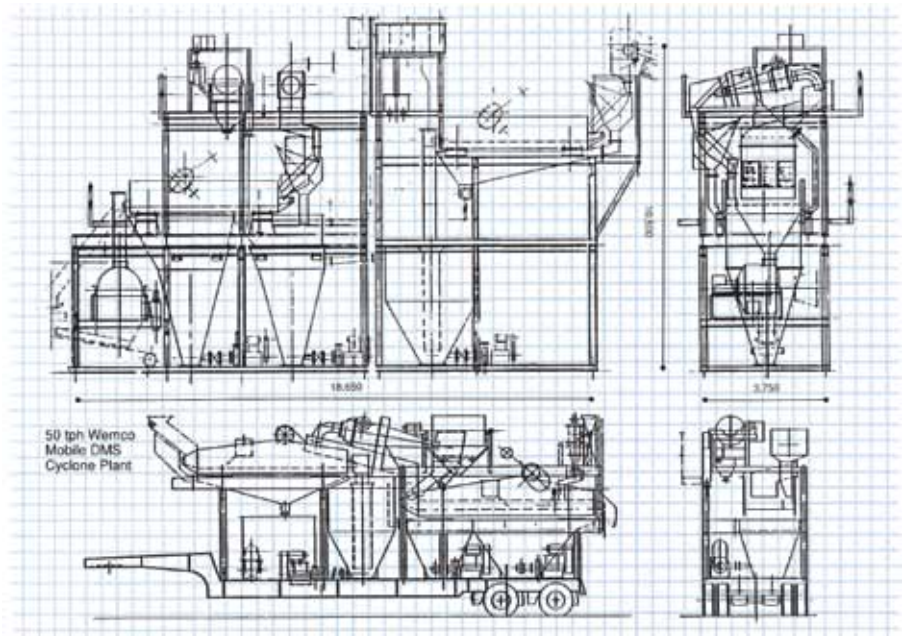
Complete DMS cyclone systems from FLSmidth

A Wide Range of Plants Available

A wide range of Dense Media Cyclones are available which Wemco incorporate into a series of standard plants ranging on capacity from a few tph right the way up to 800 tph. A combined Wemco Drum Separator and Cyclone Plant can be supplied enabling separation of 200 mm – 0.5 mm material.

Complementary Equipment

FLSmidth supplies water clarification systems to complement the DMS Cyclone Plants utilizing Eimco® Conventional or E-Cat® Clarifier-Thickeners for water clarification and recycle, and Eimco® Beltpresses or Filter Presses to produce the minus 0.5 mm material in cake form at a minimum moisture content for product blending or stocking-out. Where appropriate, a fine material treatment circuit is incorporated utilizing Wemco® Unisizers, Spiral Concentrators or Flotation Cells.



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