



Coal Spirals

CPG Resources – Mineral Technologies

Leaders in Mineral Separation



Expertise. Experience. Superior Technology.

MD coal spiral technology has been at the leading edge of fine coal processing for more than 25 years. MD coal spirals ensure low capital and operating costs while achieving single-stage relative density cut points between 1.5 and 2.0, with EPs ranging from 0.10 to 0.25 depending on size and d50.



Continuous product improvement by Mineral Technologies metallurgists and engineers translates into more cost-effective and efficient solutions for coal processing clients.

MD coal spirals incorporate state-of-the-art design and manufacturing technology, and are installed in coal preparation plants worldwide.

Products

Mineral Technologies offers both a general purpose coal spiral and a combined rougher/cleaner coal spiral.

General Purpose Spiral – LD7

This spiral supersedes the LD4E, which for more than a decade, was highly successful in coal plants around the world. The LD7 is available in three- and four-turn configurations and with the reduced height, will meet most plant space requirements. The LD7 features an improved tramp oversize handling capability. It has been designed to be easily retrofitted into existing LD4E installations with height savings.

Combined Rougher/Cleaner Spiral – LD7RC

This is a seven-turn spiral consisting of three rougher turns and four cleaner turns and offers reduced overall height when compared with standard 2-stage systems. This spiral is particularly effective on feeds with high levels of near-gravity material and other difficult coal separations.

The unique patented rougher/cleaner transition stage ensures thorough repulping of the slurry for maximum separation. This system operates within the trough, saving space/height and dispenses with separate inter-stage components.



Features

Our high-quality polyurethane lined fibreglass spirals include:

- Replaceable modular cast polyurethane feed box for high wear resistance and positive feed line connection
- Reverse cast trough manufacture for a precise and reproducible separating surface profile
- Ganged pivot splitters for accurate setting of cut points plus an auxiliary refuse cutter for use with high ash feeds
- Stainless steel splitter indicator for reproducible plant set-ups
- Integral polyurethane trough edge instead of rubber
- Single piece replaceable polyurethane product box with integrated engaged launder system
- Accurate top or bottom entry feed distribution systems (coefficient of variation nominally three per cent)
- Simplicity of process circuit.

Benefits

- Spiral configurations in single, twin and triple troughs per column to suit capacity requirements
- High capacity 12 x 3 start spiral modules can process in excess of 150 tonnes per hour
- Low capital and operating costs
- Minimal maintenance requirements with long operating life expectancy
- Consistent separation efficiency with minimal operator attention
- Comprehensive process engineering support

Applications

- Supplementation of coal washing jigs by treating the fraction finer than 2.0mm
- Replacement of coarse flotation by treating the fraction coarser than 0.1mm
- Supplementation of heavy media circuits by treating the fraction finer than one millimetre
- Re-treatment of 2.0 x 0.1mm material from slurry ponds, gob piles and coal reparation plant waste streams.



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