

# LC3 'Low Cut' Coal Spiral Separator



## Overview

After an extensive research and development program, Mineral Technologies' new LC3 Spiral Separator marks a breakthrough in spiral technology.

Comparative test results show that the LC3, with its unique trough design, is capable of d50 cut points significantly lower than those achievable with conventional coal spirals. The ability to target a cut point in the sg range 1.45 to 1.60, opens up new possibilities for coal processors who recognise the operational simplicity and reliability of spiral separation. With demonstrated effectiveness at reducing losses of clean coal to reject, the performance potential can be considerably enhanced by integrating the LC3 into a multi-stage circuit solution (even one as simple as recirculating the middling to spiral feed).

The LC3's capabilities are not limited to low cut-points. Testing indicates that the LC3 is also effective in traditional applications with traditional cut points, making it attractive for selection in a flexible and robust processing solution.

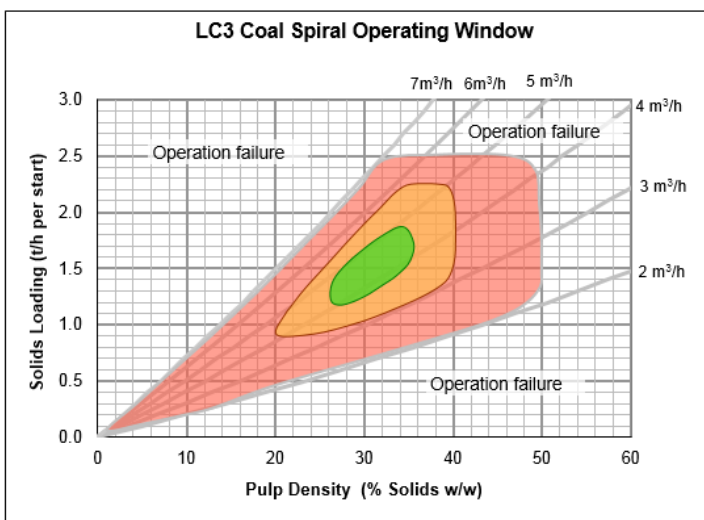
## Mechanical Features

- 8 turns with continuously changing trough profiles
- 2 slide style reject splitters at turns 4 and 6
- Number of starts – single, twin and triple
- Highly wear-resistant polyurethane materials of construction.

## Design Data

### Head Feed (per start)

Capacity:	Up to 3.0 t/h per start (optimal separation at 1.0 to 2.0 t/h/start)
Pulp Density:	20 to 40% solids (typically 30 to 35 solids)
Size Range:	Particle size range 0.1 – 1.5mm (ideally 0.2 – 1.0mm)
Pulp Volume:	Optimal performance 4.0 – 5.0 m <sup>3</sup> /h per start (up to 6.0 m <sup>3</sup> /h)

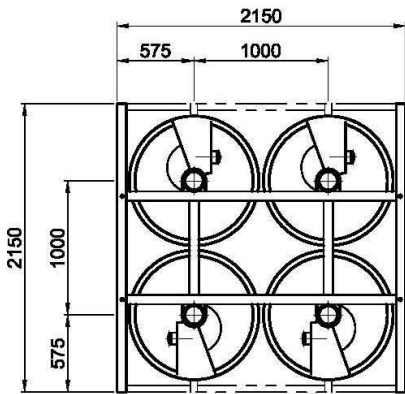


### Note:

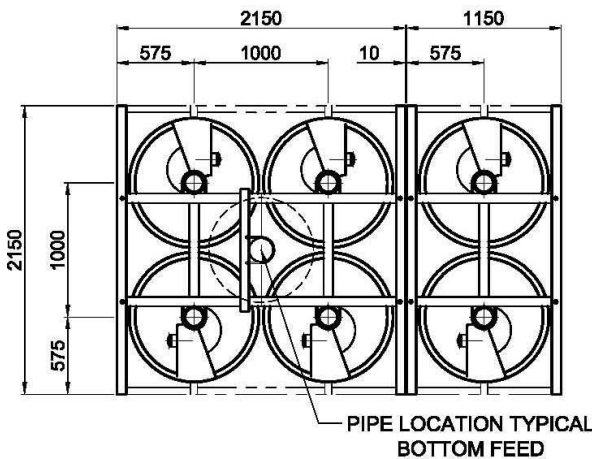
1. The above operational data is indicative only. Please consult Mineral Technologies for advice on optimal settings for specific applications.
2. In some cases, elevated levels of coarse material have been found to accelerate wear rates.



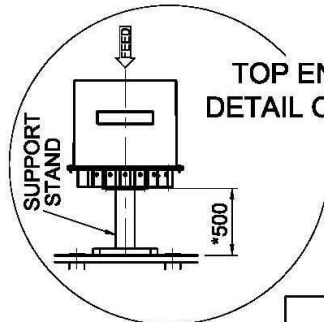
**LC3 SPIRALS**



**DOUBLE ROW SPIRAL BANK  
BANK OF 4**

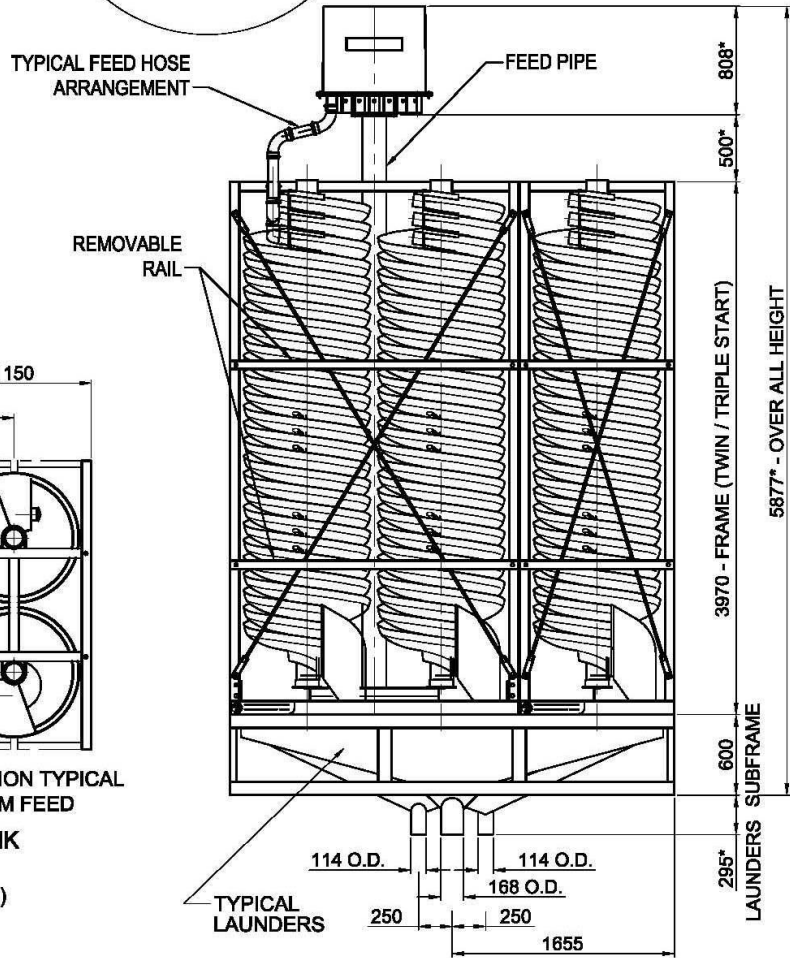


**DOUBLE ROW SPIRAL BANK  
BANK OF 6  
(REFER TYPICAL ELEVATION)**



**TOP ENTRY  
DETAIL OPTION**

\*SPIRAL AVAILABLE IN SINGLE / TWIN / TRIPLE CONFIGURATIONS  
  
\*DISTRIBUTOR AVAILABLE AS MK9 OR MK7 T.E. OR B.E.



**TYPICAL ELEVATION  
BOTTOM ENTRY**

\*NOTE: LAUNDER/ FEED PIPE/ DISTRIBUTOR/ SUPPORT STAND DIMENSIONS, SPECIFICATIONS & LOCATIONS MAY VARY TO SUIT SPIRAL BANK COMBINATIONS - TRIPLE START SPIRALS DRAWN FOR ILLUSTRATION PURPOSES ONLY

ESTIMATED MASS (tonnes)				
SPIRAL BANK	4x2	6x2	8x2	10x2
TWIN START	1.80	2.94	3.70	4.50
TRIPLE START	2.20	3.40	4.20	5.27
FOR CERTIFIED DRAWINGS SUITABLE FOR ENGINEERING DESIGN PURPOSES PLEASE REFER TO MINERAL TECHNOLOGIES				

**Mineral Technologies**  
Mineral Technologies Pty. Ltd. - ABN 52 105 309 260  
11 ELYSIUM RD., CARRARA, QLD. 4211, AUSTRALIA. Ph: +61 7 55691300  
P.O. Box 2589 Nerang MDC, Qld. Australia, 4211  
Fax: +61 7 55253810  
www.mineraltechnologies.com  
info@mineraltechnologies.com

NOTE: MINERAL TECHNOLOGIES RESERVES THE RIGHT TO ALTER SPECIFICATIONS WITHOUT PRIOR NOTICE

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