



**Mineral
Technologies**
A Downer Company



FLEXSERIES

Modular Plants



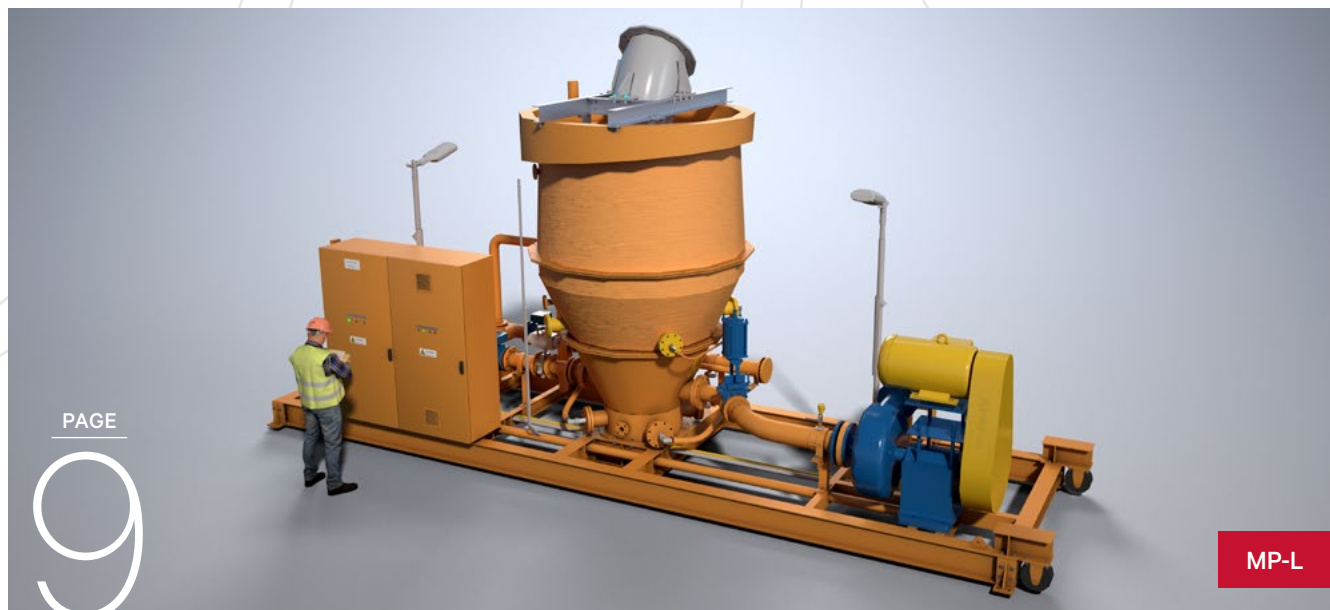
**Combining simple modular design
with large-scale engineering.**

***FLEXSERIES* offers a range of
evolutionary features.**

Downer
Relationships creating success



FLEXSERIES delivers superior metallurgical performance with fully customisable options to suit any fine mineral resource no matter how complex.





Customised process solutions

Unlike traditional modular plants, *FLEXSERIES* was designed with the agility to be adapted to any flowsheet model.

With expertise in fine mineral separations across the globe, our experienced process engineers can easily adapt the *FLEXSERIES* to suit your specific resource.

Mineral Technologies' process support

- Metallurgical testwork
- Mass flow balance
- Flowsheet design
- Flexible modular arrangement
- Multiple combinations and permutations.

3 stage family

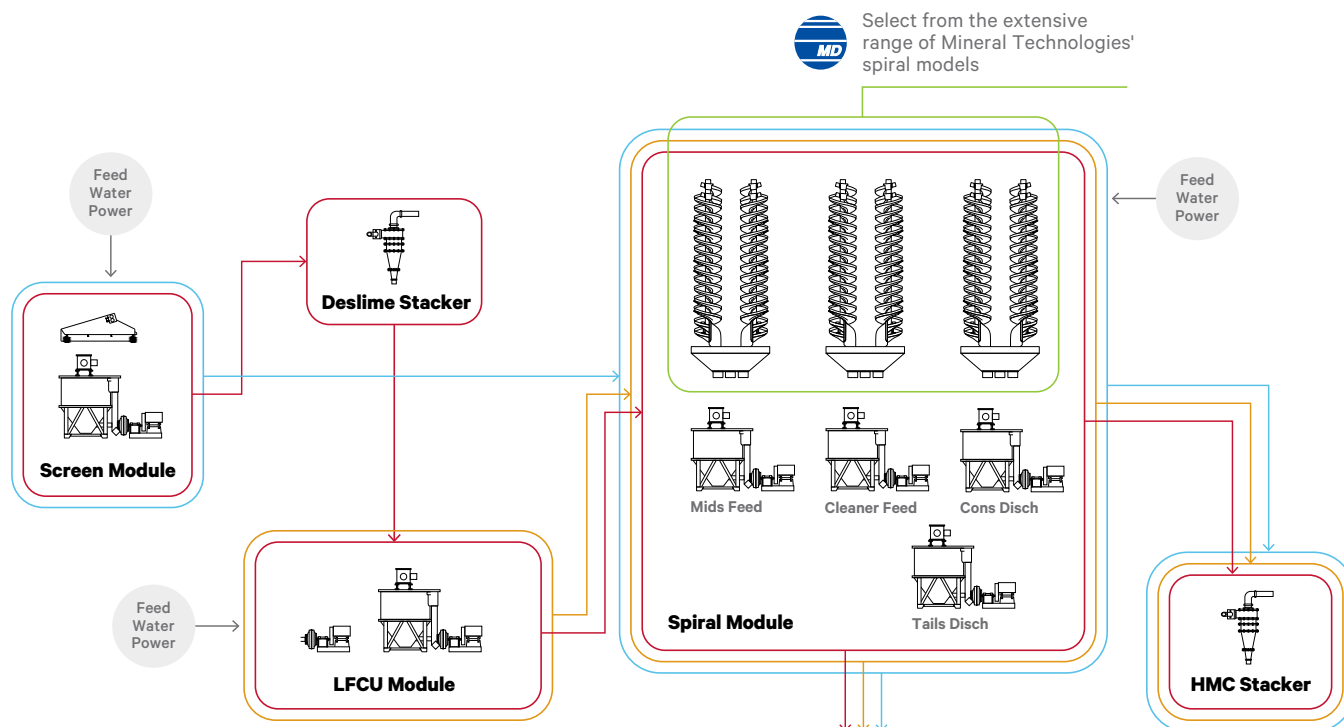
The full package arrangement - select from any of the modular options to design a flowsheet that delivers the best outcomes for your project.

LFCU and Spirals

Suited to external slurry fed system such as dredge and hydromining or as a new circuit for an existing operation. Can be configured to single or multi-stage processing.

Direct feed family

Dry or wet feed stream for more robust mineral processes that are less sensitive to feed preparation. Can be configured to single or multi-stage processing.







Smart engineering and design

Cleverly conceived as an ‘off-the-shelf’, affordable solution which does not compromise on metallurgical performance.

Developed with a focus on how we better design plants, to be more efficient, improve access to complex ore bodies, reduce water consumption and tailings output, and/or process existing tailings deposits.

Designed to have the least environmental impact making it easier to return the site to pre-mine condition.

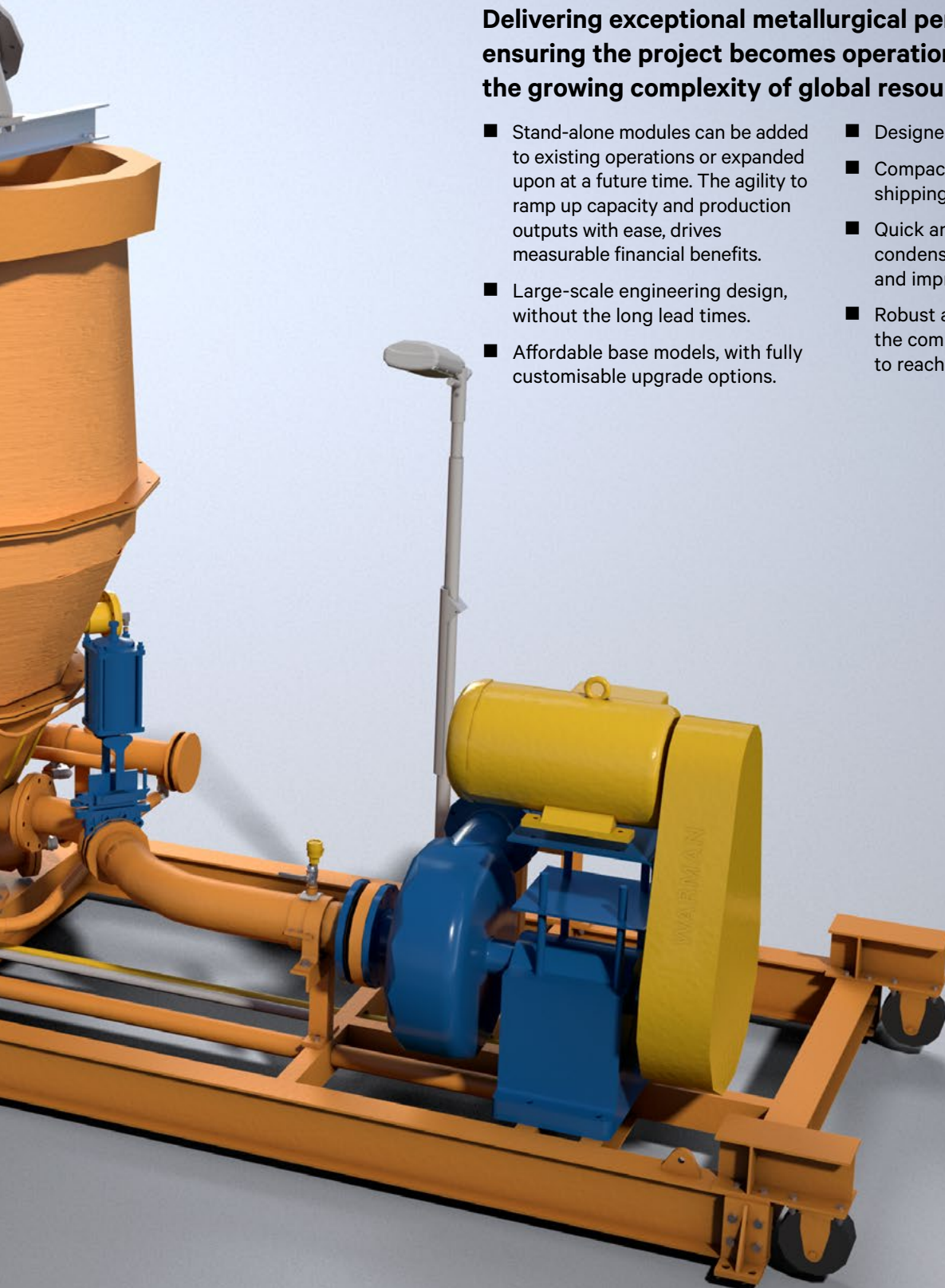




Performance ready

Delivering exceptional metallurgical performance, by ensuring the project becomes operational faster, despite the growing complexity of global resources.

- Stand-alone modules can be added to existing operations or expanded upon at a future time. The agility to ramp up capacity and production outputs with ease, drives measurable financial benefits.
- Large-scale engineering design, without the long lead times.
- Affordable base models, with fully customisable upgrade options.
- Designed to suit most MD Spirals.
- Compact modular format, reducing shipping costs and unloading time.
- Quick and easy site construction, condensing commissioning time and improving speed to market.
- Robust and relocatable, reducing the complexity of accessing hard to reach ore bodies.





MP-S Screen Module

Add the compact screening module to improve feed prep efficiency, maximise product recovery and increase overall throughput.

Ideal for coarse material, this module can provide direct feed to a cyclone, LFCU or spirals.

The two-part feed box allows dry feed via conveyor. Remove the top section and change the connection to allow wet slurry feed, or cyclone feed.

Key Features

- Up to 200tph
- Wet or dry feed options
- 0.3 - 4mm aperture
- Float valve level control.

PARAMETER	DATA/RANGE	COMMENTS
Conveyor feed tph (assuming no water) or slurry feed at 50-60% solids by weight to slurry box (nominal)	9-200	Slurry feed or Conveyor by client
Slurry Feed Connection Hose/Pipe, dia, flange and Head at slurry box	160 NB, ANSI 150, 260kPa	Slurry Feed Hose/Pipe to slurry box by client
Installed kW	93	Power supply by client
Power, V & Hz	400 3 ph, 50	Power supply by client
Water feed to Header (m ³ - cubic metre)	Up to 63 Wet feed Up to 312 Dry feed	Water supply by client
Water Header Connection Hose/Pipe, dia, flange and Head	160 NB, ANSI 150, 100kPa	Water Hose/Pipe to header by client
Screen Aperture (mm)	0.3-4	Dependent on feed material and tph
Screen deck internal dimensions	1500x3600mm	
Approx. Dry Weight (kg)	9,500	
Approx. Length x width x height (m)	8 x 4.5 x 4.5	
Containers to be unloaded on site	1 x 40ft	Some onsite assembly required



MP-L LFCU Module

A compact 2.3m Ø, modular version of the innovative Lyons Feed Control Unit (LFCU).

The LFCU module adds the option of a mass flow storage bin, to deliver steady solids at constant slurry density.

Providing excellent throughput control, residence time, and eliminating dead zones. This module is ideal for operations that need to classify the feed by removing unwanted ultrafine particles, either by size, density, or both.

Key Features

- Provides consistent density feed for the downstream process
- Absorbs surges upstream of the separation processes
- Deslimes and upgrades feed by removing light gangue minerals
- Supplies more storage capacity than agitated tank with zero power required
- Can be stopped and restarted in fully sanded condition.

Main specs

- Up to 200tph (dependent on spiral module)
- Cyclone or Direct Feed
- Single 40ft Container
- VSD & Instrumentation included
- 0.04 - 1.5mm size range.

PARAMETER	DATA/RANGE	COMMENTS
Slurry feed tph	Up to 200tph*	Assuming 65% solids by weight
Installed kW	77	Power supply by client
Power, V & Hz	400 3 ph, 50	Power supply by client
Water feed to Process water pump PU06 (m ³ - cubic meter)	17-220	Water supply by client
Water Header Connection Hose/Pipe, dia, flange and Head	160mm NB, ANSI 150 Flange and 10m Head (100kPa)	Water Hose/Pipe to header by client
Surge Bin O/F	160 NB, ANSI 150, 100kPa	Water Hose/Pipe to water tank for recycling by client
Approx. Dry Weight (kg)	6,500	
Approx. Length x width x height (m)	8.5 x 2.5 x 4	
Containers to be unloaded on site	1 x 40ft Container	Top section of LFCU separated for transport, lights folded, one pressure sensor & conduit to be rotated & secured upon unloading

* Variable dependent upon feed & application. Contact Mineral Technologies to discuss specific requirements.



The centre-mast style design, is the most compact model within the range.

MP-4 Spiral Module

Incorporating highly efficient process layout options, with the usual exceptional performance of Mineral Technologies' Original Equipment Manufacturer (OEM) products.

Key Features

- 5-40tph
- With or without walkways
- Pre-wired and pre-plumbed
- One electrical panel provided per module
- Direct on line drives for all spiral modules
- Lighting pre-installed on each module, at each floor level
- Australian Standard compliant design - 400V, 50Hz.



PARAMETER	MP4 (MIN CASE)	COMMENTS
Number of Spirals	4	
Number of Stages	1-3	
Slurry Connection Hose/Pipe, dia, flange	90 NB, ANSI 150	Hose/pipe by client between LFCU and Spiral Module
No. Drives	3-4	Single or Three stage
Installed kW	18	Power supply by client
Power, V & Hz	400 3 ph, 50	Power supply by client
Water Header Connection Hose/Pipe, dia, flange and Head	110 NB, ANSI 150, 100kPa	Water hose/pipe to header by client
Water feed to Header (M3/hr)	10	Water supply by client
Approx. Dry Weight (kg)	8,500	
Containers to be unloaded on site	2	1 x 40ft Container + 1 x 20ft Container (Handrails & ladders)
Approx. Length x width x height (m) excluding cyclone stackers	3.5 x 3.0 x 11	



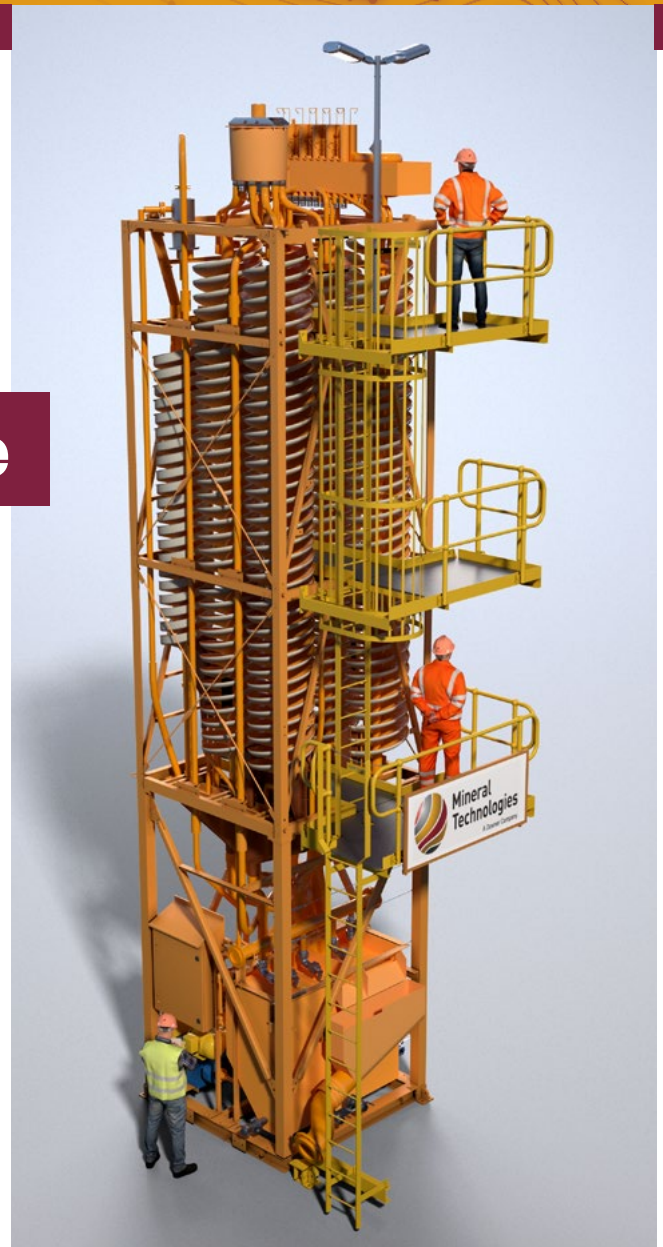
The foundation model of *FLEXSERIES* is the six spiral universal frame style design.

MP-6 Spiral Module

The world's best spiral technology, now available in a cleverly designed, off-the-shelf package. Flexible and agile, these specially designed modules allow operations to easily scale-up or add-on capacity at any time.

Key Features

- 8-60tph
- Choose between ladder or stair access - depending on your site requirements
- Pre-wired and pre-plumbed
- One electrical panel provided per module
- Direct on line drives for all spiral modules
- Lighting pre-installed on each module, at each floor level
- Australian Standard compliant design - 400V, 50Hz
- Optional cyclone stacker can be mounted on the MP-6 module.



PARAMETER	MP6 (MED GRADE)	COMMENTS
Number of Spirals	6	
Number of Stages	1-3	
Slurry Connection Hose/Pipe, dia, flange	110 NB, ANSI class 150 flange	Hose/pipe by client between LFCU and Spiral Module
No. Drives	3-4	Single or Three stage
Installed kW	32	Power supply by client
Power, V & Hz	400 3 ph, 50	Power supply by client
Water Header Connection Hose/Pipe, dia, flange and Head	140 NB, ANSI 150, 100kPa	Water hose/pipe to header by client
Water feed to Header (M3/hr)	13	Water supply by client
Approx. Dry Weight (kg)	8,500	
Containers to be unloaded on site	2	1 x 40ft Container + 1 x 20ft Container (Handrails & ladders)
Approx. Length x width x height (m) excluding cyclone stackers	3.5 x 3.0 x 11	



The mid-range option takes customisation and off-the-shelf affordability to the next level.

MP-12 Spiral Module

Recognised product quality and engineering expertise come together, to deliver high performance quality in an easy to assemble module. Improving speed to market and return on investment are simply achievable.

Key Features

- 15-125tph
- Choose between ladder or stair access - depending on your site requirements
- Pre-wired and pre-plumbed
- One electrical panel provided per module
- Direct on line drives for all spiral modules
- Lighting pre-installed on each module, at each floor level
- Australian Standard compliant design - 400V, 50Hz
- Optional cyclone stacker can be mounted.



PARAMETER	MP12 (MED GRADE)	COMMENTS
Number of Spirals	12	
Number of Stages	1-3	
Slurry Connection Hose/Pipe, dia, flange	140 NB, ANSI class 150 flange	Hose/pipe by client between LFCU and Spiral Module
No. Drives	3-4	Single or Three stage
Installed kW	58	Power supply by client
Power, V & Hz	400 3 ph, 50	Power supply by client
Water Header Connection Hose/Pipe, dia, flange and Head	250 NB, ANSI 150, 100kPa	Water hose/pipe to header by client
Water feed to Header (M3/hr)	25	Water supply by client
Approx. Dry Weight (kg)	14,000	
Containers to be unloaded on site	3	1 x 40ft Container + 1 x 20ft Container (Handrails & ladders)
Approx. Length x width x height (m) excluding cyclone stackers	6 x 3.0 x 11	



This is large scale engineering quality in a simple, modular arrangement.

MP-24 Spiral Module

Technically superior performance from the world's best performing spiral technology, means efficient recovery and fast return on investment

Key Features

- 30-250tph
- Choose between ladder or stair access - depending on your site requirements
- Pre-wired and pre-plumbed
- One electrical panel provided per module
- Direct on line drives for all spiral modules
- Lighting pre-installed on each module, at each floor level
- Australian Standard compliant design - 400V, 50Hz
- Optional cyclone stacker can be mounted.



PARAMETER	MP24 (MAX CASE)	COMMENTS
Number of Spirals	24	
Number of Stages	1-3	
Slurry Connection Hose/Pipe, dia, flange	200 NB, ANSI 150	Hose/pipe by client between LFCU and Spiral Module
No. Drives	3-4	Single or Three stage
Installed kW	100	Power supply by client
Power, V & Hz	400 3 ph, 50	Power supply by client
Water Header Connection Hose/Pipe, dia, flange and Head	250 NB, ANSI 150 flange, 100kPa	Water hose/pipe to header by client
Water feed to Header (M3/hr)	353	Water supply by client
Approx. Dry Weight (kg)	22,000	
Containers to be unloaded on site	5	1 x 40ft Container + 1 x 20ft Container (Handrails & ladders)
Approx. Length x width x height (m) excluding cyclone stackers	6 x 4.5x 11	







**Mineral
Technologies**

A Downer Company



Australia

Head Office

Carrara, Gold Coast,
Queensland
T +61 7 5569 1300

Metallurgical Services

Carrara, Gold Coast,
Queensland
T +61 7 5569 1367

Western Australia

West Perth
M +61 0437 915 163

South Australia

Adelaide
T +61 8 8219 4410

Queensland

Milton
T+61 7 3564 5000

South Africa

Alton, Richards Bay

T +27 35 797 3230

America

North America

St Augustine, Florida
T +1 904 342 8354

South America

Belo Horizonte, Brazil
T +55 31 3201 2606

India

Kolkata, West Bengal

T +91 98 3686 8095

Kochi, Kerala

T +91 48 4278 5160

Margao, Goa

T +91 98 2389 7911
T +91 83 0818 0764



info@mineraltechnologies.com
mineraltechnologies.com



Downer
Relationships creating success