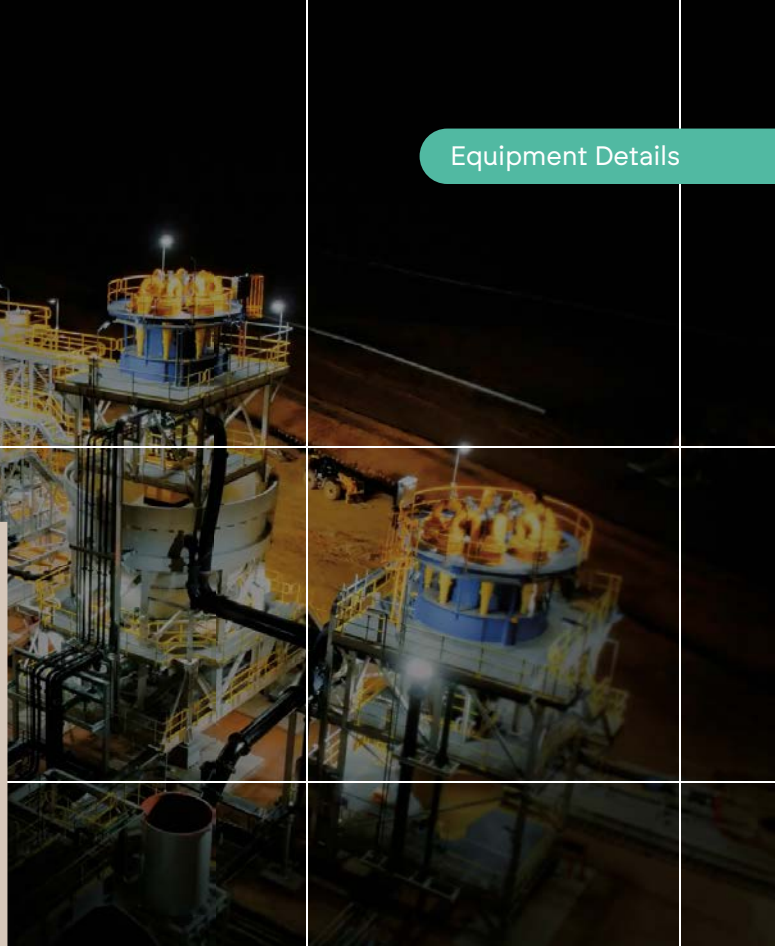




CLASSIFIERS

# mtLyonsUnit

A feed control unit turning unstable feeds  
into predictable performance.

# A surge bin that de-slimes, densifies and feeds on demand.

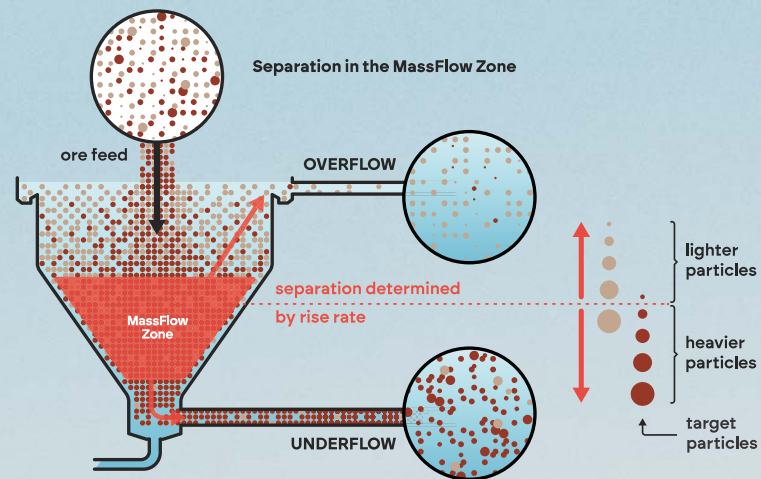
mtLyons Unit is a surge and feed-control unit that stabilises slurry density with within +/- 1%. In addition it de-slimes and densifies your feed.

## Technical Features

Slurry bins have long been sized by volume alone, with little understanding of how fine solids actually behave inside one. Most run in funnel flow, draining through a narrow channel while the rest sits stagnant, ratholing and flushing.

The Lyons Unit started from a different insight. Consolidated slurry behaves like a bulk solid, so proven bulk solids design principles put the whole bin in mass flow. Everything moves whenever anything is drawn off, and the bin empties completely, every time.

- Underflow density controlled to  $\pm 1\%$  variation
- Reduction of slimes reporting to process
- Controlled slurry fluidisation
- Fully usable surge capacity
- Up to 70% underflow solids enable high-density pumping & water recycling
- Start up seamlessly after plant shut down



- 1. Feed enters**  
Variable slurry enters the vessel.
- 2. Solids settle**  
A dense, active bed forms.
- 3. Slimes overflow**  
Excess water and lighter fines rise.
- 4. Water re-fluidises**  
Base injection keeps the lower bed mobile.
- 5. Underflow is controlled**  
Controlled, consistent and optimum slurry pumped to downstream processes.



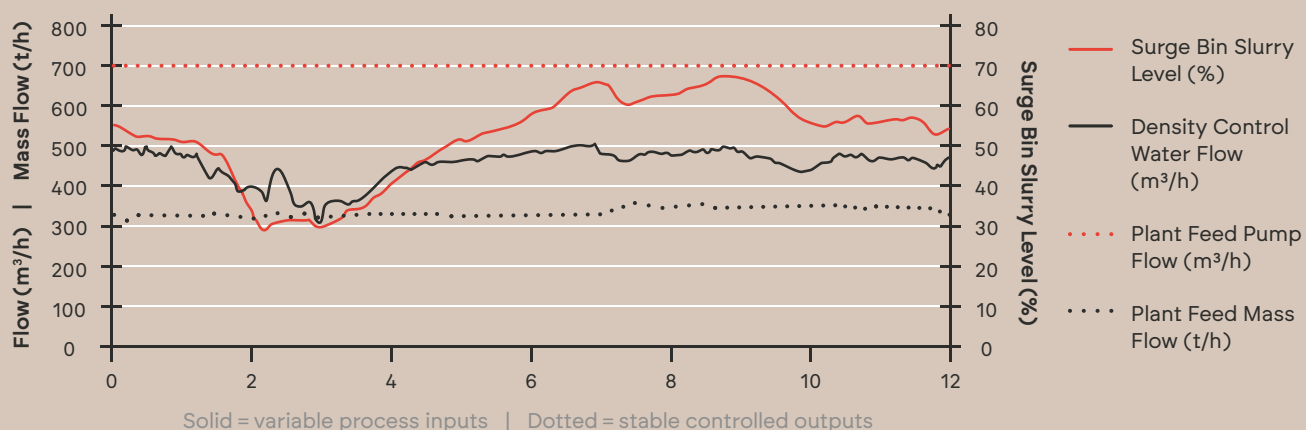
## Developed from Plant Experience

Developed by **John Lyons** from decades of mineral-processing experience, the concept is grounded in a simple principle: a surge bin should do more than store slurry. It should improve the feed before it reaches the next stage. The mtLyons Unit has perfected this principle



## Unpredictable Feed, Predictable Results

Time Window 12 hrs



### Use Cases

- > feed density
- > desliming
- > tailings dewatering
- > feed control for
  - floatation
  - filtration
  - shaking table circuit
  - spiral plant



### Controlled and buffered feed rate

A controlled underflow helps downstream equipment remain closer to its preferred operating window for longer.



### Less slimes loading

Autogenous classification removes a proportion of lighter fines before they consume valuable separation capacity.



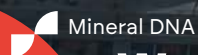
### Increased plant availability and recovery

Stop and start feed under fully loaded conditions without worrying about blockages.

### Benefits

Project examples:

|                  |  |  |  |  |
|------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Parameter        | <b>9.5 m Unit</b>                                                                 | <b>13.5 m</b><br>Desliming                                                        | <b>13.5 m</b><br>Tails Densification                                               | <b>16 m Unit</b>                                                                    |
| Duty Application | Desliming and surge capacity                                                      | Desliming and surge capacity                                                      | Tails densification, constant density                                              | Surge and constant feed                                                             |
| Diameter         | 9.5 m                                                                             | 13.5 m                                                                            | 13.5 m                                                                             | 16 m                                                                                |
| Capacity         | 350 t                                                                             | 1,000 t                                                                           | 1,000 t                                                                            | 1,500 t                                                                             |
| Duty Throughput  | 350 t/h                                                                           | 1,000 t/h                                                                         | 3,156 t/h                                                                          | 8,000 t/h                                                                           |
| Deslime Target   | D50 Target in Overflow                                                            | D50 Target in Overflow                                                            | No Target                                                                          | No Target                                                                           |



**We start with  
the mineral** not the equipment.

**FACT:** No two ore bodies behave the same. That's why one-size-fits-all solutions rarely deliver the best recovery.

Let us help you discover your ore body's Mineral DNA, and whether the mtLyons Unit is the right technology to recover more of what matters.

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