

# Micrograder

Wet Processing System  
for Critical Mineral Recovery

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## Critical Mineral Recovery

Recovering essential minerals for high-tech industries, including EV batteries, renewable energy, and advanced manufacturing.

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### Minerals Refined

Silica | Rare Earth | Copper | Tin | Titanium | Zircon  
Molybdenum | Cobalt | Graphite | Gold | Kaolin

**Our patented plug and play modular systems are factory assembled, shipped worldwide in containers, and deployed quickly at project sites.**



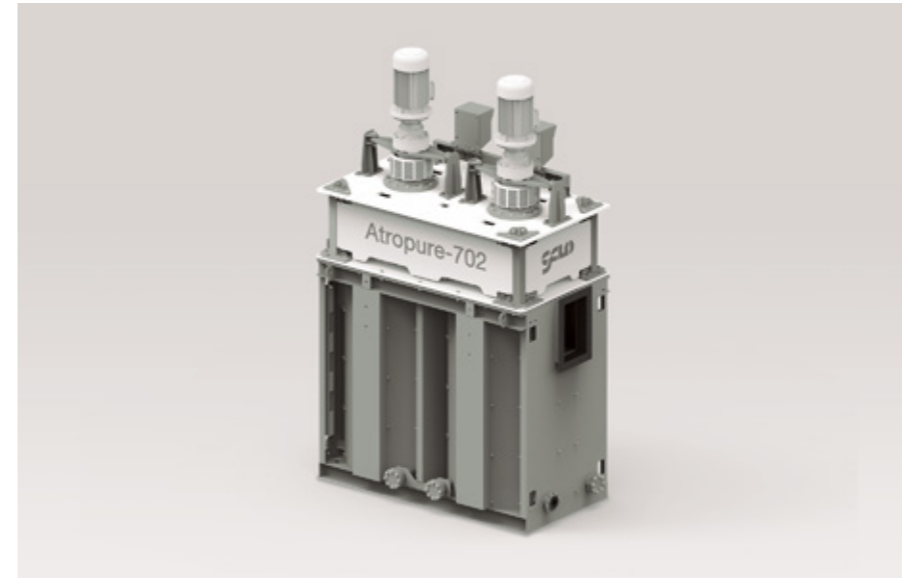
### **Feed Point Efficiency**

The feed hopper features an integrated belt feeder to ensure the efficient transfer of material from the hopper to the next stage of processing.



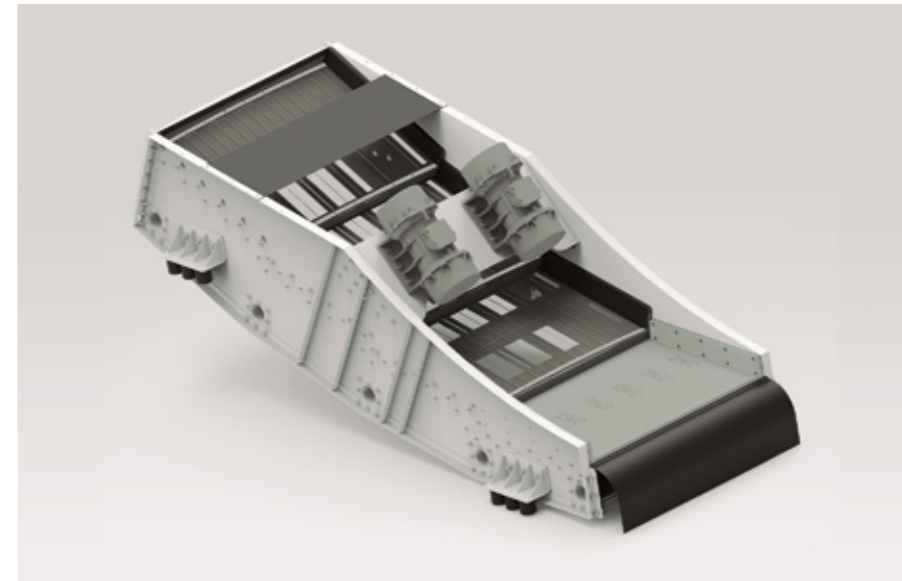
### **Jet Attrition System (JAS)**

It is an in-line light scrubbing equipment where scrubbing is effected by rubbing of particles against each other in a small space by repeatedly changing the flow direction of the particles by high pressure water jets.



### **Atropure Heavy-duty Attrition Scrubber**

A dynamic attrition scrubber that maximises product yield by efficient contaminant removal for consistently graded sand products. It is designed to operate at 80% solids concentration for maximum scrubbing efficiency and a higher specific capacity requiring less power - hence lower running costs.

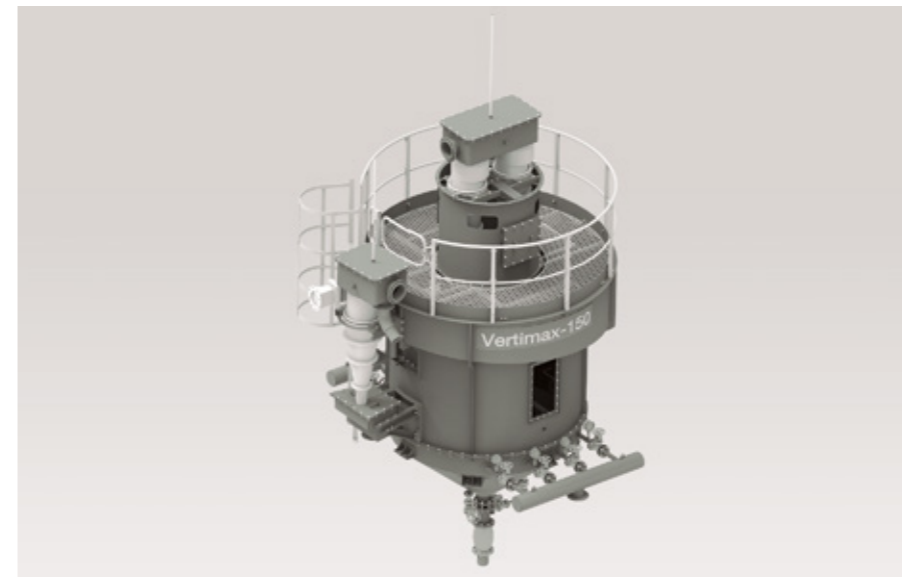


### **Screenmax: High Precision Fines Screen**

Superior screening & classification of Fine Sand

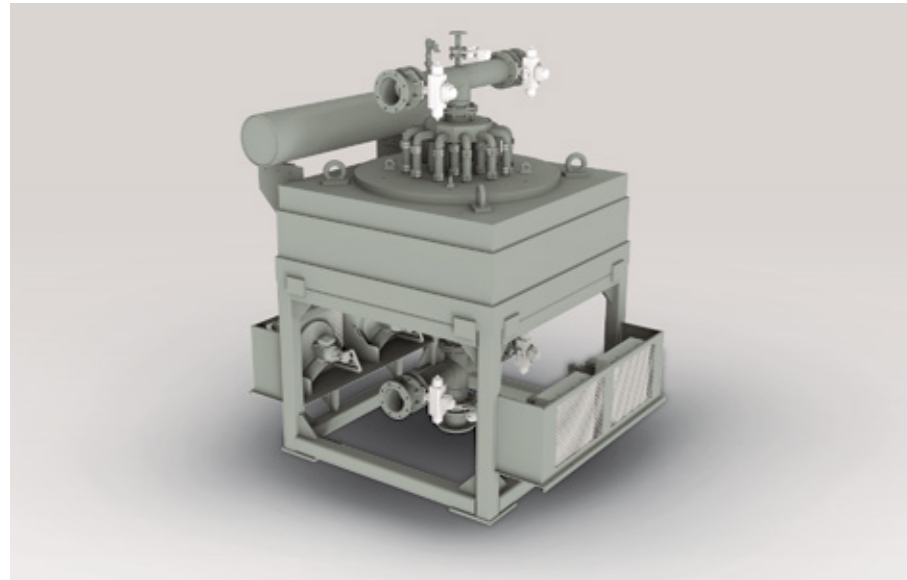
Robust side wall construction ensures long life

- Superior abrasion resistance ensures maximum operational life
- Even distribution of power across the full screening area ensures efficient screening and dewatering performance



### **Vertimax Upward Flow Classifier**

- Classifies particles by size.
- Upgrades the feed material of two or more groups of particles of differing specific gravity. Heavy material settling faster and building up within the tank and lighter material reporting to the overflow of the tank.



### **Magpure Wet High Intensity Magnetic Separator**

An essential equipment for producing Silica sand with less than 100ppm iron as is required in solar glass panels for generating Green energy



### **Spiropure Spiral Gravity Concentrator**

Spiral Concentrators provide an accurate density separation to remove contamination from your final sand product. Our Spiral concentrators separate solid particles in slurry, based upon a combination of the particle density as well as the particle hydrodynamic properties



### **Hydromax Water Recycling System (WRS)**

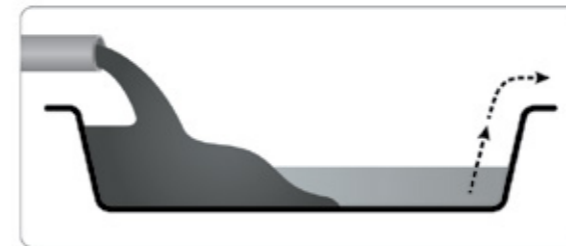
Delivers 95% water recycling with the smallest equipment footprint.

- ✔ Minimize environmental impact.
- ✔ Reduce the space required to accommodate settling ponds.
- ✔ Reduce health & safety risks on site.
- ✔ Maximize the efficiency of your wet processing plant reinforced rubber pipe work.



### **Superior Sand Dewatering**

Our patented Centriscreen Dewatering & Sizing technology delivers washed sand that's ready for market straight from the belts - allowing you to turn your products into revenue as quickly as possible.



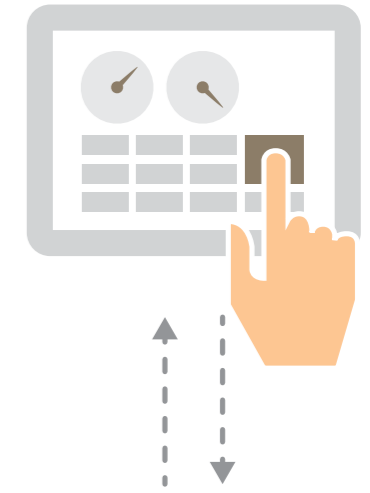
### **Easysettle**

Easysettle deploys high performance polymer technology to rigidify your tailings at the point of disposal by effecting instantaneous water release from the treated slurry.

### **Sludge Management**

Our unique sludge management technology accelerates the drying time of your tailings for a smaller pond footprint and allows for recycled water to be returned to the Micrograder washing plant much more quickly than other systems.

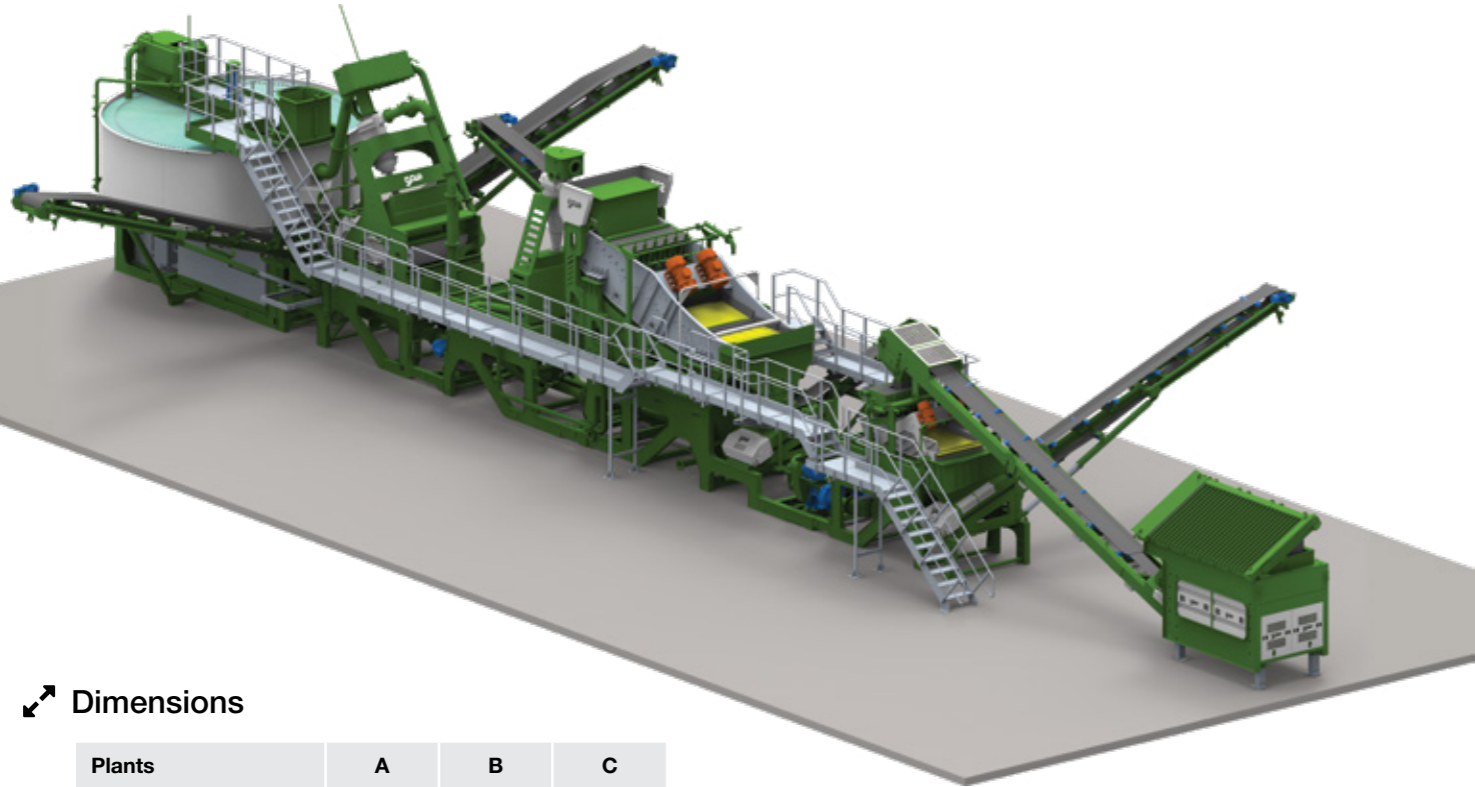
Keeps your Micrograder Software up-to-date for optimum performance



Enables contact-free troubleshooting

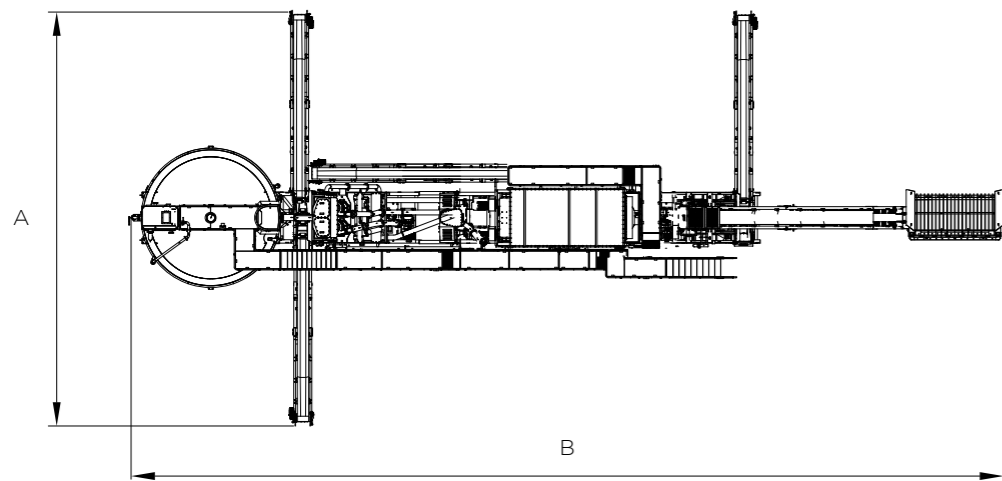
\*Features available in Smart variant only

# Micrograder BTW 50

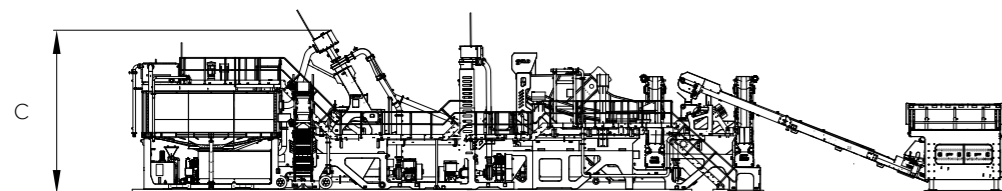


## Dimensions

Plants	A	B	C
Micrograder BTW 50	19000	40000	8000
Micrograder BT 50	19000	37000	8000



PLAN



ELEVATION

Illustration shown: BTW50

Click / Scan to see it in action



## TECHNICAL SPECIFICATIONS

	BTW50	BT 50
Feed Capacity#	50 tph	50 tph
Number of Products	1 oversize, 2 sands	2 oversize, 1 sands
Recommended Feed Size (typical)	<5mm	<5mm
Silt Handling Capacity (minus 0.106mm)	8-12%	8-12%
Moisture in Product	15-16%	15-16%
Power Requirement	~225kW	~185kW
Water Requirement	10-13m <sup>3</sup> /hr	10-13m <sup>3</sup> /hr
Plant Footprint	40 x 19 meters	37 x 19 meters

## STANDARD FEATURES

Turbo Dual Wash Technology	✓	✓
Feedmax: Feed Hopper with Protection Grid	✓	✓
Pre-Screen for Trash Removal	✓	✓
Primary Ultrafines Removal	✓	✓
Centrimax: High-Performance Hydrocyclone Separator	✓	✓
Screenmax: High Precision Fines Screen	✓	✓
Hydromax: Water Management System (WRS)	✓	✓
Carrymax: Feed and Stockpile Conveyors	6	4
Soil Bay Manager	✓	✓
Galvanised Walkway & Access Stairs for Durability	✓	✓
Belt Weigher on Feed Conveyor	✓	✓
PLC Control Panel with Colour Touchscreen	✓	✓
Panel Door-Open Warning Feature	✓	✓
Screened Soil Discharge Pipework upto 50m Distance	✓	✓
Two-Pack Paint System for Surface Protection	✓	✓

## ACCESSORIES & SERVICES

First-Fill Lubricants	✓	✓
Set of Commissioning Spares & Maintenance Tools	✓	✓
Erection & Commissioning Assistance (Supervision only)	✓	✓
Civil Design Assistance	✓	✓
Operator Training/Certification	✓	✓
Operation & Maintenance e-Manual (in English)	✓	✓
Test Work for Sludge to Bricks	Optional	Optional
Superblu Dosing add-on for pH Conditioning	Optional	Optional
Annual Maintenance Contract (AMC) Pack*	Optional	Optional

# Standard capacity may vary with feed gradation

\* Details provided upon request

**Transport Plan:**  
13 X 40ft HCOT  
Container

**Transport Plan:**  
11 X 40ft HCOT  
Container

# Micrograder BTW 50

Centrimax:  
High-Performance  
Hydrocyclone Separator

Stockpile:  
Construction Sand

Feedmax:  
Feed Hopper with Protection Grid

Carrymax:  
Feed Conveyor with Belt Weigher

Carrymax:  
Wing Stockpile Conveyor

Hydromax:  
Water Recycling System (WRS)

Carrymax:  
Stockpile Conveyor

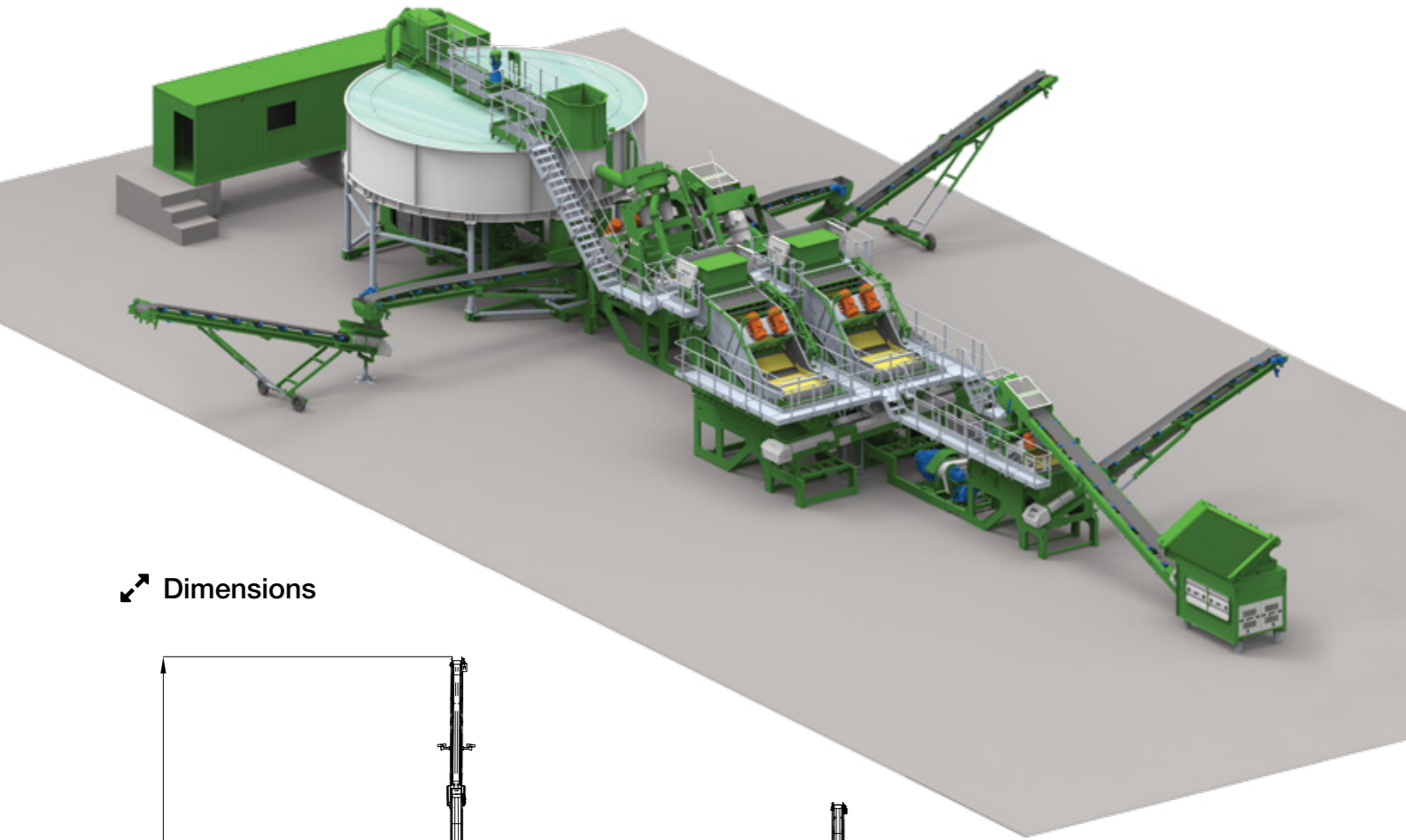
Turbo Dual Wash Technology

Full Accessibility

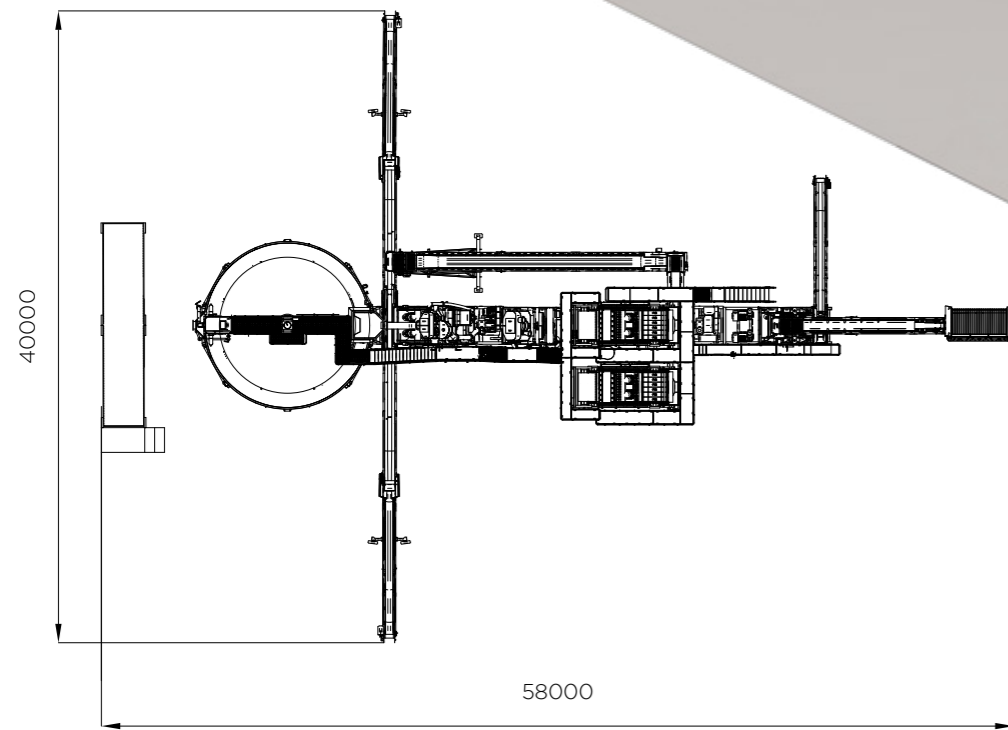
Screenmax:  
High Precision Fines Screen



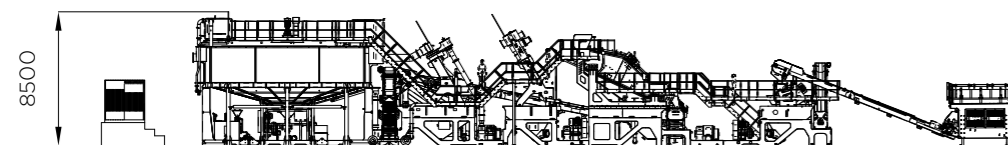
# Micrograder BT 100



## Dimensions



PLAN



ELEVATION

Click / Scan to see it in action



## TECHNICAL SPECIFICATIONS

Feed Capacity#	100 tph
Number of Products	1 oversize, 2 sands
Recommended Feed Size (typical)	<5mm
Silt Handling Capacity (minus 0.106mm)	8-12%
Moisture in Product	15-16%
Power Requirement	~385kW
Water Requirement	20-25m <sup>3</sup> /hr
Plant Footprint	58 x 40 meters

## STANDARD FEATURES

Turbo Dual Wash Technology	✓
Feedmax: Single-Load Direct Feed Hopper	✓
Pre-Screen for Trash Removal	✓
Centrimax: High-Performance Hydrocyclone Separator	✓
Screenmax: Twin High Precision Fines Screens	✓
Hydromax: Water Management System (WRS)	✓
Carrymax: Feed and Stockpile Conveyors	4
Soil Bay Manager	✓
Galvanised Walkway & Access Stairs for Durability	✓
Belt Weigher on Feed Conveyor	✓
PLC Control Panel with Colour Touch Screens Housed in an Enclosure	✓
Panel Door-Open Warning Feature	✓
Screened Soil Discharge Pipework upto 50m Distance	✓
Two-Pack Paint System for Surface Protection	✓

## ACCESSORIES & SERVICES

First-Fill Lubricants	✓
Set of Commissioning Spares & Maintenance Tools	✓
Erection & Commissioning Assistance (Supervision only)	✓
Civil Design Assistance	✓
Operator Training/Certification	✓
Operation & Maintenance e-Manual (in English)	✓
Test Work for Sludge to Bricks	Optional
Superblu Dosing add-on for pH Conditioning	Optional
Annual Maintenance Contract (AMC) Pack*	Optional

### Optional



**Nanowash**  
Ultrafine Classification  
System for Clay Recovery

### Optional



**Atropure**  
Attrition Scrubber for  
Liberating Contaminated  
Feed Materials

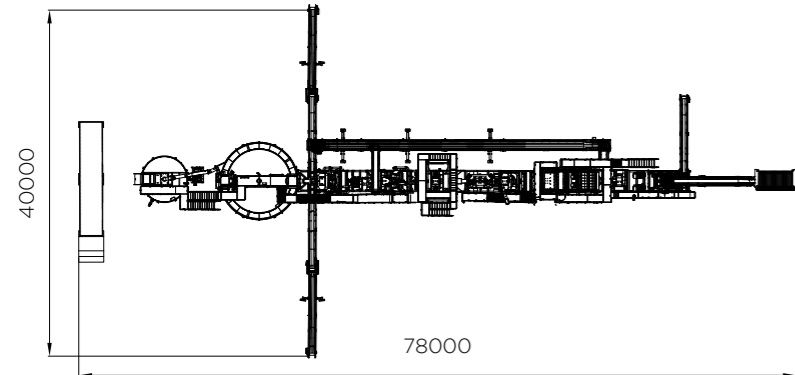
# Standard capacity may vary with feed gradation

\* Details provided upon request

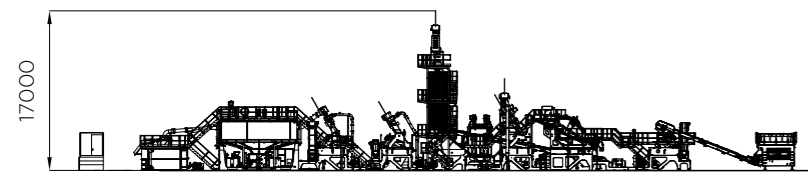
**Transport Plan:**  
14 X 40ft HCOT  
Container

# Micrograder F50

## Dimensions



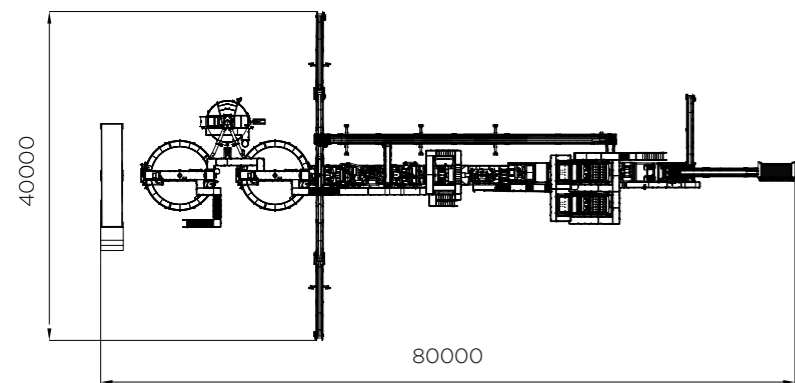
PLAN



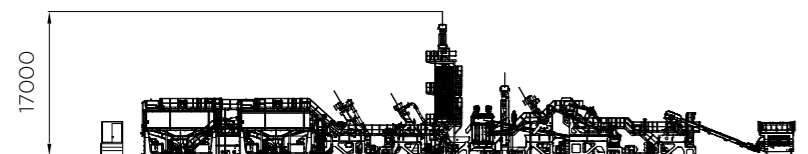
ELEVATION

# Micrograder F100

## Dimensions



PLAN



ELEVATION

Click / Scan to see it in action



## TECHNICAL SPECIFICATIONS

	F50	F100
Feed Capacity#	50 tph	100 tph
Number of Products	1 Oversize, 2 Sands	1 Oversize, 2 Sands
Recommended Feed Size (typical)	<5mm	<5mm
Sized Ore Handling Capacity (-600microns)	40tph	75tph
Silt Handling Capacity (minus 0.106mm)	10-15%	10-15%
Moisture in Product	15-16%	15-16%
Power Requirement	~405kW	~605kW
Water Requirement	10-14m <sup>3</sup> /hr	20-27m <sup>3</sup> /hr
Plant Footprint	78 x 40 meters	80 x 40 meters

## STANDARD FEATURES

Turbo Dual Wash Technology	✓	✓
Feedmax: Single-Load Direct Feed Hopper	✓	✓
Pre-Screen for Trash Removal	✓	✓
Screenmax: High Precision Fines Screen	✓	✓
Atropure: Heavy-duty Attrition Scrubber	✓	✓
Centrimax: High-Performance Hydrocyclone Separator	✓	✓
Spiropure: Spiral Gravity Concentrators	✓	✓
Centriwash: Fines Classification System	✓	✓
Hydromax: Water Management System (WRS)	✓	✓
Carrymax: Feed and Stockpile Conveyors	9	9
Soil Bay Manager	✓	✓
Galvanised Walkway & Access Stairs for Durability	✓	✓
Belt Weigher on Feed Conveyor	✓	✓
PLC Control Panel with Colour Touchscreen	✓	✓
Panel Door-Open Warning Feature	✓	✓
Screened Soil Discharge Pipework upto 50m Distance	✓	✓
Two-Pack Paint System for Surface Protection	✓	✓

## ACCESSORIES & SERVICES

First-Fill Lubricants	✓	✓
Set of Commissioning Spares & Maintenance Tools	✓	✓
Erection & Commissioning Assistance (Supervision only)	✓	✓
Civil Design Assistance	✓	✓
Operator Training/Certification	✓	✓
Operation & Maintenance e-Manual (in English)	✓	✓
Test Work for Sludge to Bricks	Optional	Optional
Superblu Dosing add-on for pH Conditioning	Optional	Optional
Annual Maintenance Contract (AMC) Pack*	Optional	Optional

# Standard capacity may vary with feed gradation

\* Details provided upon request

**Transport Plan:**  
20 X 40ft HCOT  
Container

**Transport Plan:**  
25 X 40ft HCOT  
Container

# Micrograder F100

PLC Control Panel

Centrimax:  
High-Performance Hydrocyclone Separator

Spiropure:  
Spiral Gravity Concentrator

Atropure:  
Heavy-duty Attrition Scrubber

Stockpile:  
Construction Sand

Feedmax:  
Single-Load Direct Feed Hopper

Carrymax:  
Wing Stockpile Conveyor

Carrymax: Feed Conveyor  
with Belt Weigher

Screenmax:  
Dewatering Screen

Full Accessibility

Screenmax:  
High Precision Fines Screen

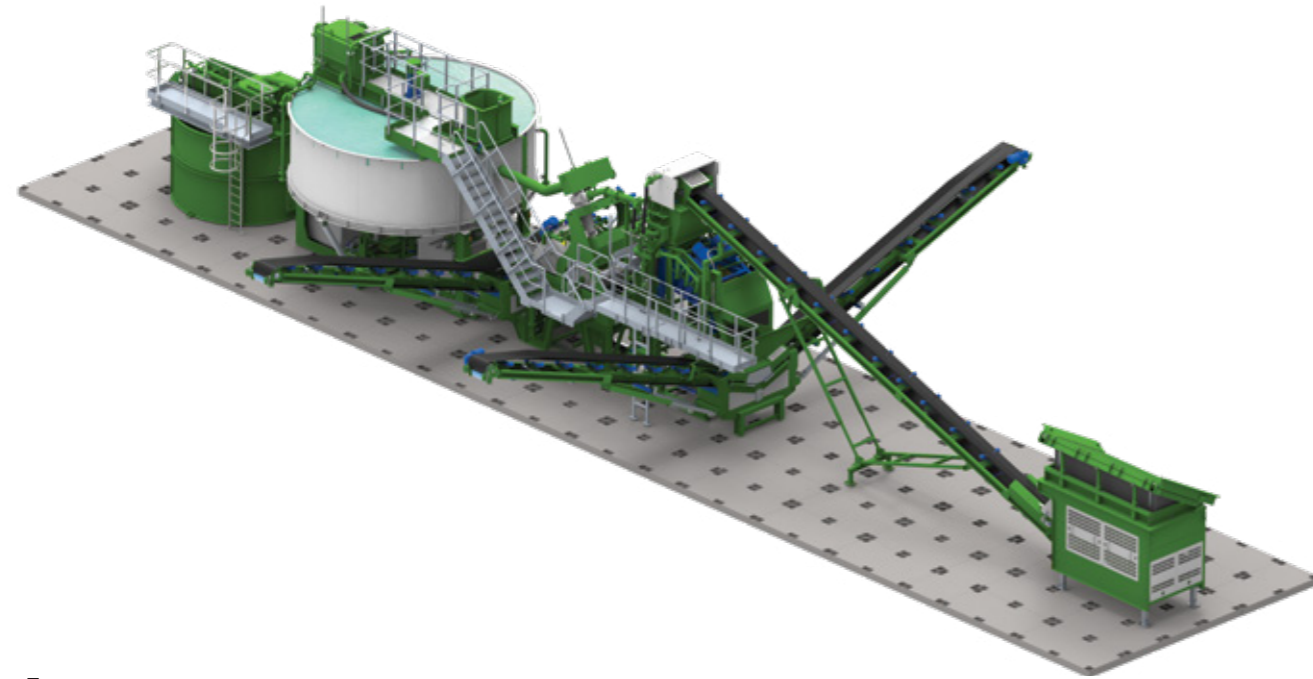
Screenmax:  
Pre-screen for Oversize Removal

Hydromax:  
Water Recycling System (WRS)

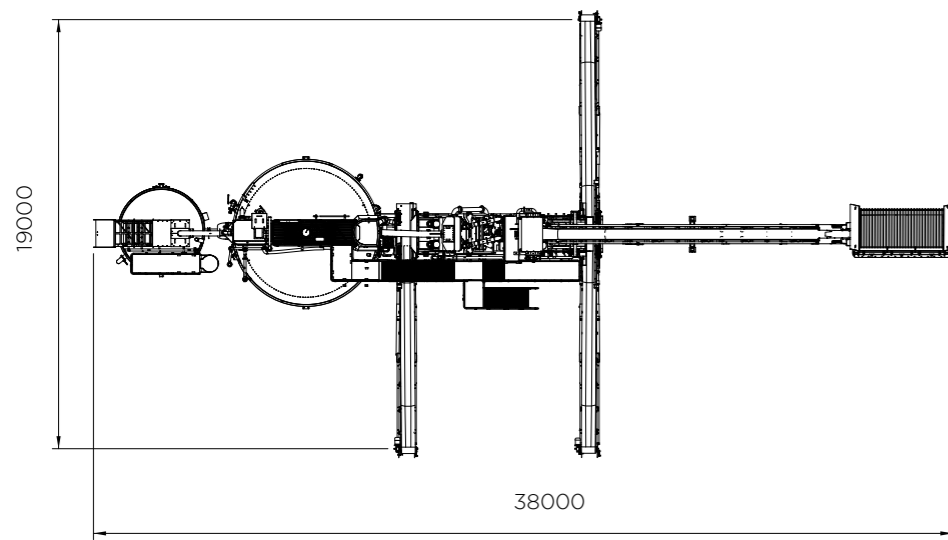
Stockpile:  
Glass Grade Sand



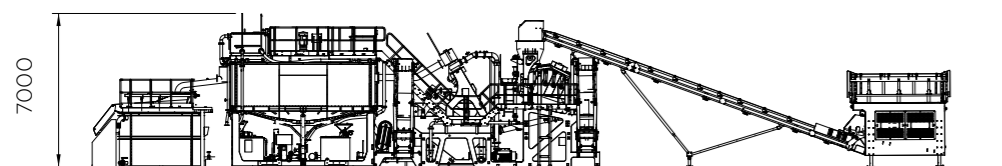
# Micrograder Exo



## Dimensions



PLAN



ELEVATION

Click / Scan to see it in action



## TECHNICAL SPECIFICATIONS

Feed Capacity#	50 tph
Number of Products	3
Recommended Feed Size (typical)	<80mm
Silt Handling Capacity (minus 0.075mm)	10-15%
Moisture in Product	10-12%
Power Requirement	~150kW
Water Requirement	9-13m <sup>3</sup> /hr
Plant Footprint	38 x 19 meters

## STANDARD FEATURES

Feedmax: Feed Hopper with Protection Grid	✓
Screenmax: Twin-Deck Circular Motion Rinsing Screen	✓
Centrimax: High-Performance Hydrocyclone Separator	✓
Hydromax: Water Management System (WRS)	✓
Carrymax: Feed and Stockpile Conveyors	4
Soil Bay Manager	✓
Galvanised Walkway & Access Stairs for Durability	✓
Belt Weigher on Feed Conveyor	✓
PLC Control Panel with Colour Touchscreen	✓
Panel Door-Open Warning Feature	✓
Screened Soil Discharge Pipework upto 50m Distance	✓
Two-Pack Paint System for Surface Protection	✓

## ACCESSORIES & SERVICES

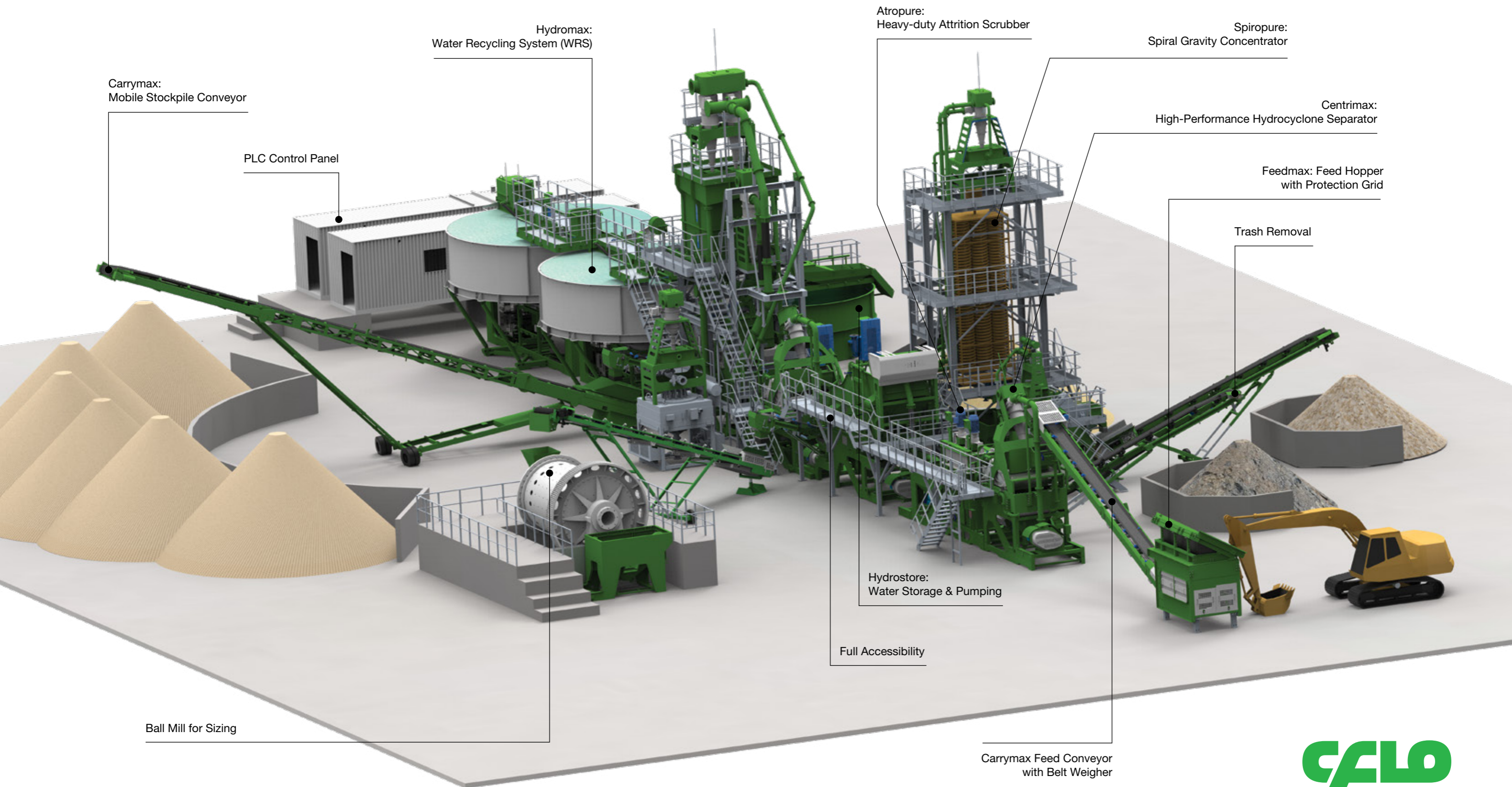
First-Fill Lubricants	✓
Set of Commissioning Spares & Maintenance Tools	✓
Erection & Commissioning Assistance (Supervision only)	✓
Civil Design Assistance	✓
Operator Training/Certification	✓
Operation & Maintenance e-Manual (in English)	✓
Test Work for Sludge to Bricks	Optional
Superblu Dosing add-on for pH Conditioning	Optional
Annual Maintenance Contract (AMC) Pack*	Optional

# Standard capacity may vary with feed gradation

\* Details provided upon request

**Transport Plan:**  
11 X 40ft HCOT  
Container

# Micrograder FW Series



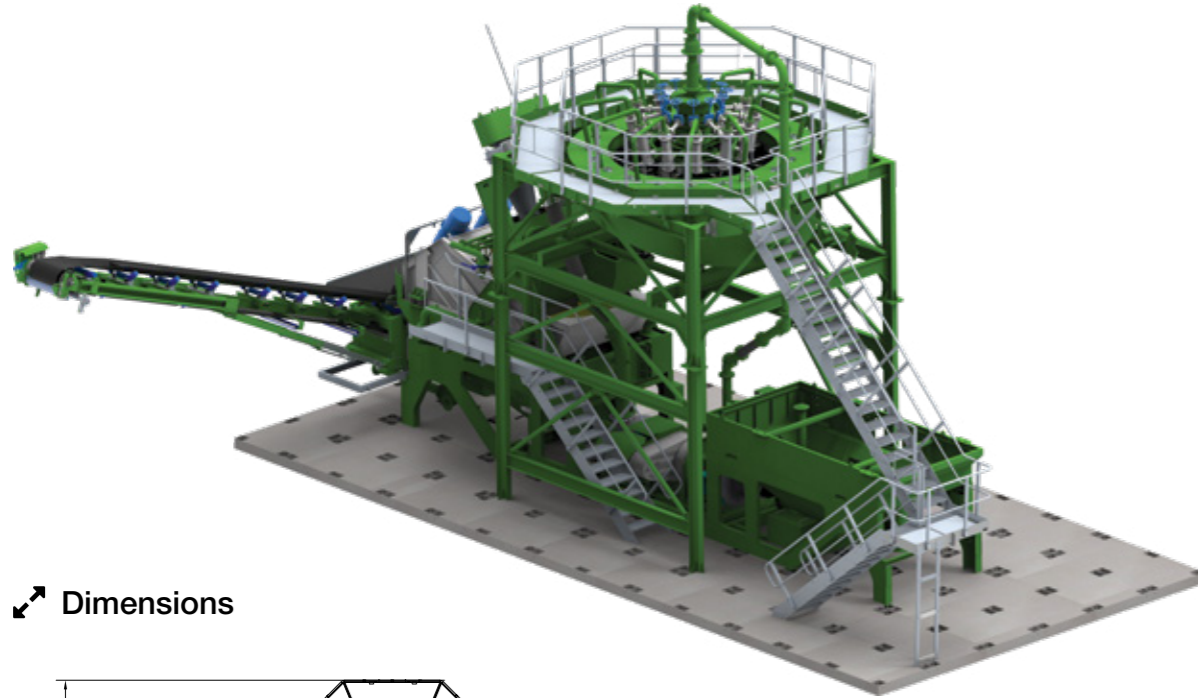


# Typical Characteristics of China Clay

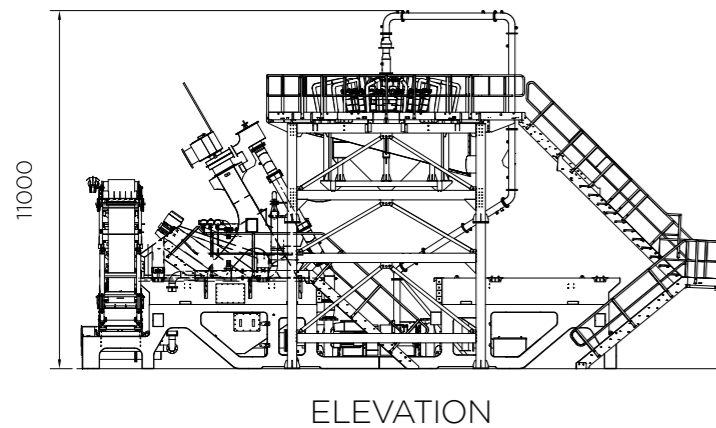
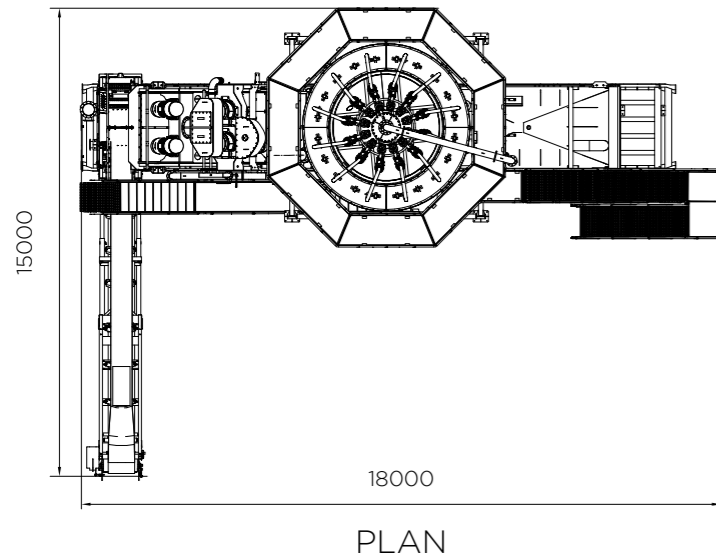
Chemical Analysis	Levigated China Clay Powder	Water washed China Clay Powder	Natural China Clay / Kaolin Powder	Water washed China Clay Lumps	Natural China Clay / Kaolin Lumps
Whiteness (%)	90% – 92%	90% – 92%	88% – 90%	90%	88%
Moisture (%)	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
SiO <sub>2</sub> (%)	47 to 48	58 to 59	74 to 75	47 to 48	74 to 75
Al <sub>2</sub> O <sub>3</sub> (%)	37 to 39	26 to 27	16 to 17	37 to 39	16 to 17
K <sub>2</sub> O (%)	3 to 3.2	0.5 to 1	0.5 to 1	3 to 3.2	0.5 to 1
Na <sub>2</sub> O (%)	0.5 to 1	0.5 to 1	1 to 2	0.5 to 1	1 to 2
CaO (%)	0.1 to 0.2	0.5 to 1	0.5 to 1	0.1 to 0.2	0.5 to 1
MgO (%)	0.2 to 0.3	0.4 to 0.5	0.3 to 0.4	0.2 to 0.3	0.3 to 0.4
LOI (%)	9 to 10	11 to 12	5 to 6	9 to 10	5 to 6
Particle Size	300 mesh	300 mesh	300 mesh	Lumps	Lumps
Top cut	50 micron	50 micron	50 micron	-	-
Applications	Paints, Plastics, Paper & Cosmetics Industry	Paints, Plastics, Paper & Cosmetics Industry	Ceramic Industry, Rubber Industry and many other uses	Paints, Plastics, Paper & Cosmetics Industry	Ceramic Industry, Rubber Industry and many other uses

# Nanowash A-Series

## Ultrafine Classification System



### Dimensions



Click / Scan to see it in action



### TECHNICAL SPECIFICATIONS

	NW200	NW400
Feed Capacity#	8-10 tph	18-20 tph
Number of Products	1 Oversize, 1 Clay	1 Oversize, 1 Clay
Recommended Feed Size (typical)	< 106micron	< 106micron
Slurry Volume (CUM/Hr)	180-200	380-400
Cut Point (typical)	<45micron	<45micron
Power Requirement	~80kw	~150kw
Plant Footprint	18 x 15 meters	18 x 15 meters

### STANDARD FEATURES

Single-Stage Clay Removal Technology	✓	✓
Heavy-Duty VFD Operated Slurry Sump Pump	✓	✓
Centrimax: High-Performance Hydrocyclone Separator Bank	✓	✓
Centriscreen: Dewatering & Sizing System	✓	✓
Carrymax: Stockpiling Conveyor for Byproduct	1	1
Galvanised Walkway & Access Stairs for Durability	✓	✓

# Standard capacity may vary with feed gradation

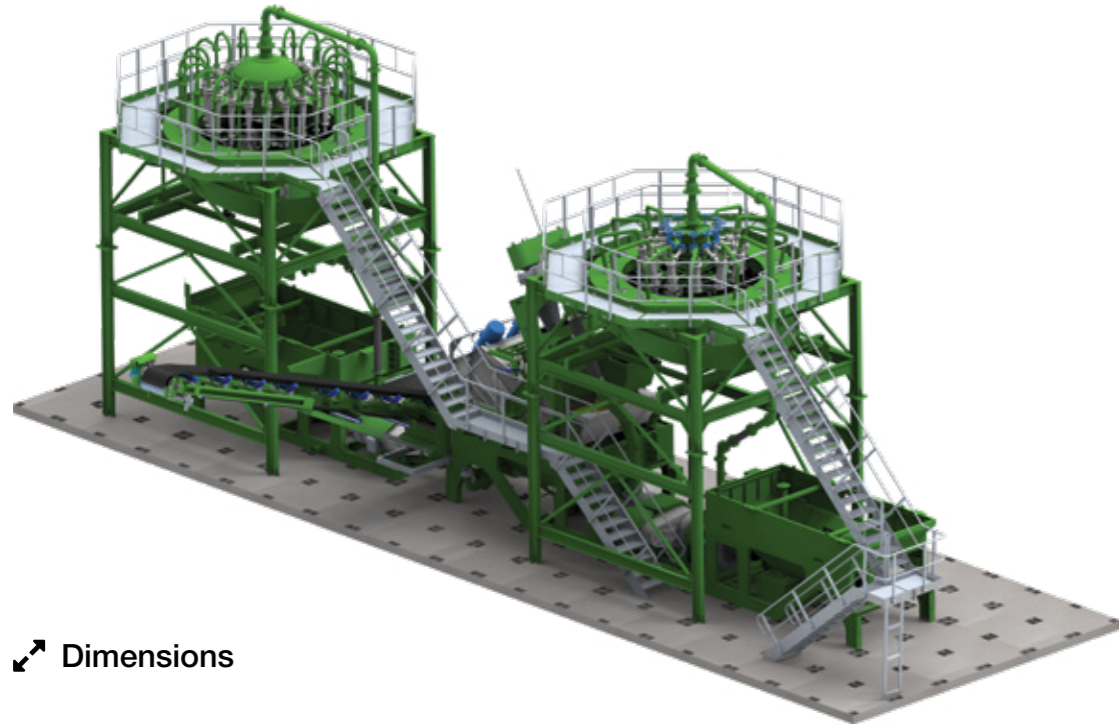
\* Details provided upon request

Transport Plan:  
4 X 40ft HCOT  
Container

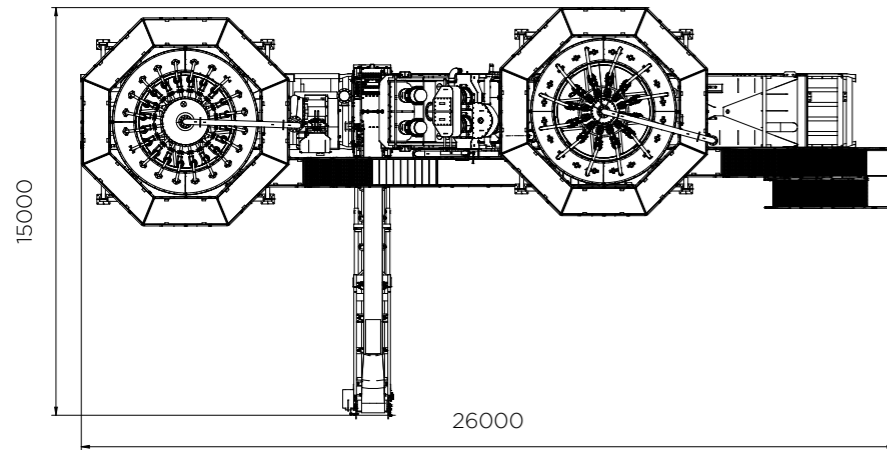
Transport Plan:  
4 X 40ft HCOT  
Container

# Nanowash D-Series

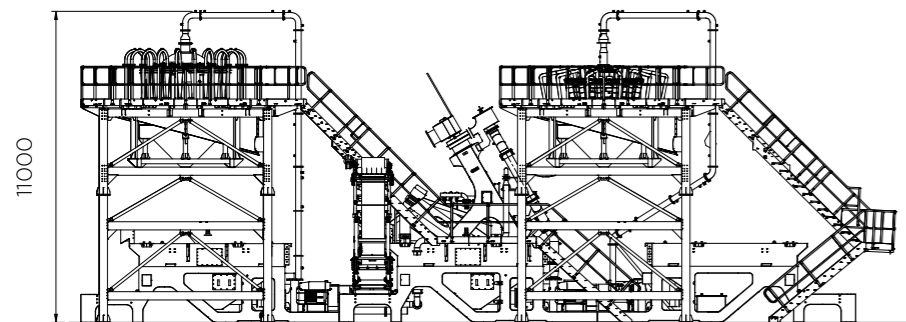
## Ultrafine Classification System



### Dimensions



PLAN



ELEVATION

Click / Scan to see it in action



### TECHNICAL SPECIFICATIONS

	NW200D	NW400D
Feed Capacity#	8-10 tph	18-20 tph
Number of Products	1 Oversize, 1 Clay	1 Oversize, 1 Clay
Recommended Feed Size (typical)	< 106micron	< 106micron
Slurry Volume (CUM/Hr)	180-200	380-400
Cut Point (typical)	<25micron	<25micron
Power Requirement	~180kw	~262kw
Plant Footprint	26 x 15 meters	26 x 15 meters

### STANDARD FEATURES

Dual-Stage Clay Removal Technology	✓	✓
Heavy-Duty VFD Operated Slurry Sump Pump	✓	✓
Centrimax: High-Performance Hydrocyclone Separator Bank	✓	✓
Centriscreen: Dewatering & Sizing System	✓	✓
Carrymax: Stockpiling Conveyor for Byproduct	1	1
Galvanised Walkway & Access Stairs for Durability	✓	✓

# Standard capacity may vary with feed gradation

\* Details provided upon request

**Transport Plan:**  
6 X 40ft HCOT  
Container

**Transport Plan:**  
6 X 40ft HCOT  
Container

# Serving Global Markets

We operate a network of service and product distribution facilities across key global markets. Our in-house manufacturing and mineral testing facility is located in Kolkata, India. We have completed over 475 projects in 17 countries over the past 18 years.

Quartz Processing



India  
Balaji Quartz



Set up for one of India's largest quartz mine owners, this customized plant has helped the client achieve economies of cost and control over their quartz beneficiation and gradation process.

Float Glass Sands



India  
Saint Gobain Glass



Producing silica sand specifications suitable for float glass production for leading producer in the world.

Foundry Sands



India  
Livic Minerals LLP



This 100 TPH modular plant in Bharuch, Gujarat, helps the client tap into the automotive casting segment by producing high-quality foundry-grade sand (AFS 50-55) with zero liquid discharge. Rapid deployment, compact footprint, and fully automated operations make it a benchmark in sustainable foundry sand processing.

Glass Sand & China Clay



India  
Alpha Kaolin



The Micrograder BT processing plant in Bhuj helped the client maximize the recovery of china clay and increase its production 5-fold. The plant also helped them produce high quality glass grade silica sand which opened up the doors to some of the biggest glass manufacturers in the state.

Glass Sands



Vietnam  
Phenikaa



This custom-built 30-35 TPH silica sand plant installed for Phenikaa Hue Mineral Processing, Vietnam, delivers consistent, low-iron sand required for Cristobalite production, while reducing operational costs and environmental impact through advanced water recycling and plug-and-play deployment.

Float Glass Sands



Vietnam  
Chu Lai



Floating glass plant with the capacity of handling 700 tons of liquid glass per day. Glass manufactured in various thicknesses & specifications are exported worldwide.

# A world class service with Cutting-edge Technology



We have a dedicated in-house team of service engineers who are proficient in the commissioning and ongoing maintenance of our equipment. This ensures maximum plant efficiency, providing maximum profitability.

## Complete Peace of Mind

- Contact-Free

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- Avoid Losses due to Breakdown

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- Highest Yield

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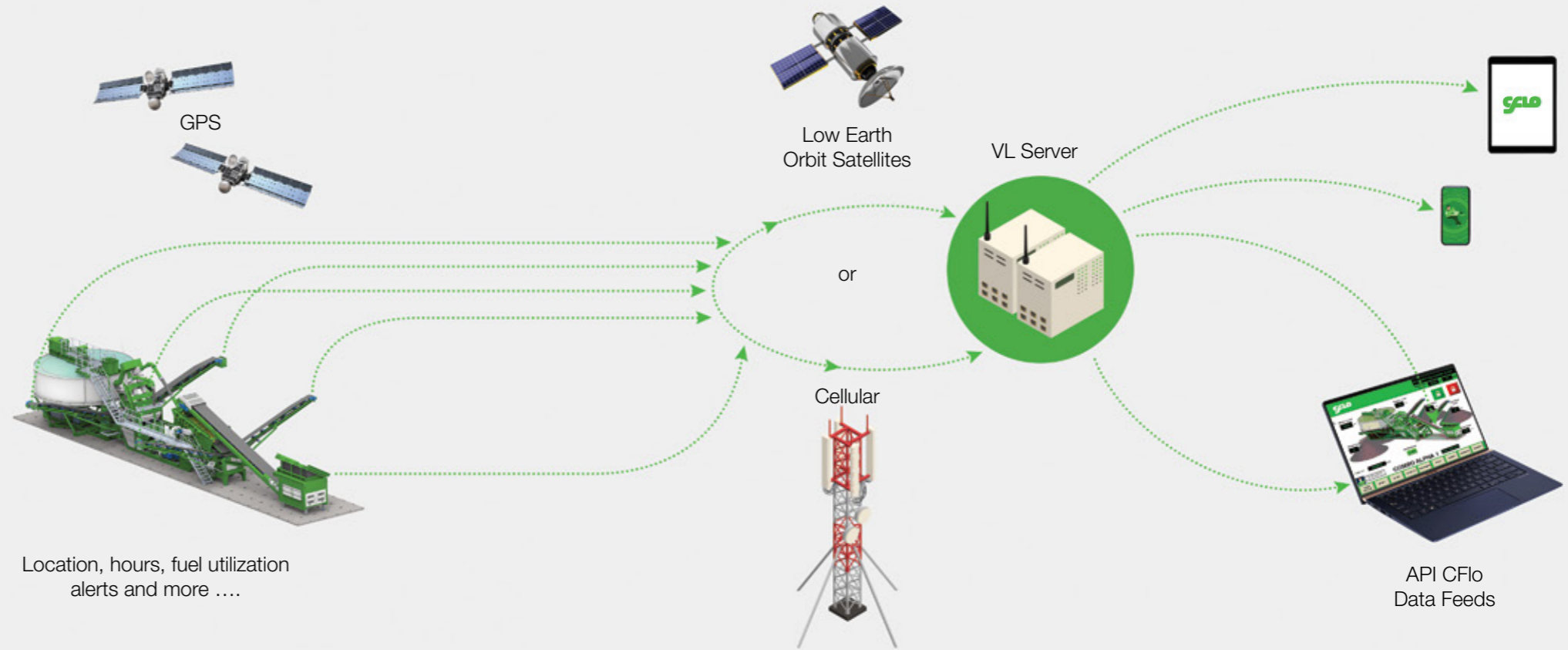
- Optimum Use of your Working Capital

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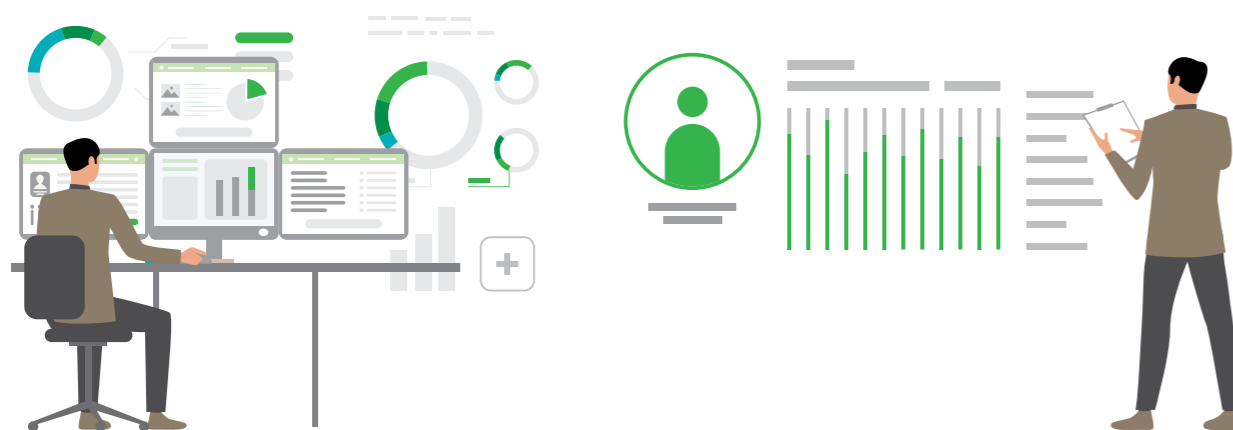
- Safe Plant Operation by Expert

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- Extended Equipment Life



## CFLO Command Center



## Fastest RoI for your Micrograder with our Annual Maintenance Packs

Run your Micrograder upto 6000 hours every year without any fear

AMC drives +90% Availability/Uptime

Why lose cash with breakdowns when you have AMC

We help you maximize your profit by monitoring and improving your Product Yield

We will work with your team to improve your Product-Mix that will fetch the best value in market

Optimize your Cost of Operation with CFlo experience of hundreds of plants across the countries

Protect your people with CFlo Safety Features

Life of your equipment increases manifold with CFlo Original Spares and Expertise

## We are CFlo

A leading innovator in modular wet processing technologies, delivering bespoke equipment solutions across waste recycling, upcycling mining waste, ore beneficiation, and critical mineral recovery.



Click / Scan  
for video

### Customer Support

Toll Free: 1800-120-3800 (India only)

Whatsapp: +91 93300 80000

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