CDE
EvoWash

At CDE, we are proud of our environment. That's why we have chosen the dragonfly as our symbol of constant quality improvement. Usually only seen near exceptionally clean water, these fastidious insects hold the same standards that we continue to aspire to every day of every year. By promoting the reuse of waste materials and continually improving our water filtration technology, this symbol reminds us of our commitment to preserving the earth's natural resources as best we can.

Constantly evolving sector-defining equipment, a dynamic and innovative team, award winning business management and unrivalled dedication to giving each client a professional experience.

These factors have made us the world's leading materials washing company.

CDE

# EvoWash

## Compact Sand Washing Plant

# The CDE EvoWash™ sand washing plant offers unrivalled control of silt cut points, eliminating loss of quality fines to your settling ponds or water treatment phase.

**Introduction of an EvoWash™ sand washing plant to your production processes allows you to:**

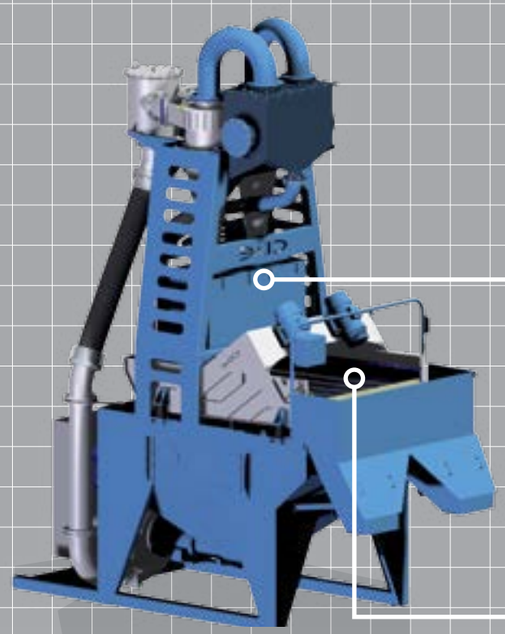
1. Guarantee production of in-specification sands to your desired grade.
2. Eliminate costs of expensive pond dredging to recover quality sand.
3. Eliminate loss of quality fines to your settling ponds or water treatment phase.
4. Ensure your final sand products are of the highest quality, therefore commanding the highest commercial value.

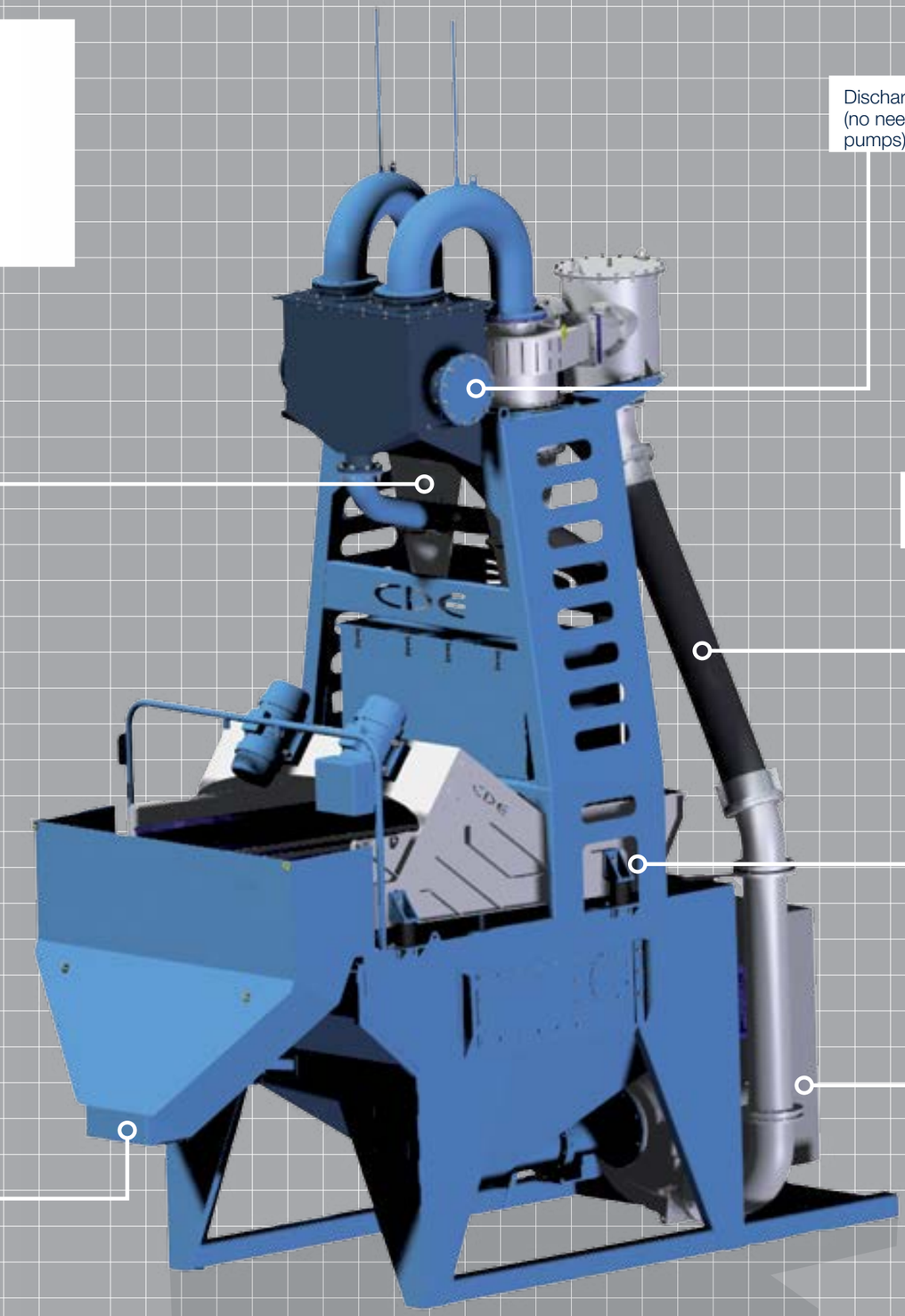
**EvoWash™ Applications**

The EvoWash™ can be introduced to quarrying, recycling and mining operations where the following materials are being processed through a washing plant:

- Sand & Gravel
- Crushed Rock
- Crusher dust
- Iron ore
- Other mineral ores

# EvoWash™
## Key Benefits





Hydrocyclone Technology

Discharge via Gravity (no need for additional pumps)

Rubber lined feedbox

Mining Grade Pipework

Marshmallow Screen Mounts

Polyurethane Screen Media

Integrated Centrifugal Slurry Pump

Discharged Sand Dewatered to ≈ 12% moisture content

**EvoWash™**
EvoWash 101™ with Galvanised Sump & cyclone frame

**EvoWash™**
Ultra Fines Recovery Unit

## A World Leading Product



To ensure maximum efficiency from your washing plant the introduction of sand washing equipment is widely accepted as the number one choice.

Within the range of options available, our sand washing plants have developed a reputation for ensuring efficiencies are maximised. With many installations throughout the world with the major construction materials producers our systems have been proven to deliver high quality washed sand to the global construction market.

The specific sand washing element is performed by our EvoWash™ sand plant. This unit includes:

1. Hydrocyclone
2. Dewatering Screen
3. Sump
4. Slurry Pump

The modular design of the CDE EvoWash™ sand washing plant facilitates highly accurate separation of silts and clays from the final washed sand product. Since 1992 our sand washing systems have been employed throughout the world to replace traditional sand washing systems.

Cut points of 40 micron and below can be achieved through the introduction of one of our fines recovery sand washing systems. These washing systems are employed in the production of specialist sands such as golf sand and filter sand for use in municipal water treatment.

Throughout the EvoWash™ sand washing plant there are examples of design features and innovations which have established this system as the number one choice on the global market. Some of these features are explained in more detail here:

- Modular Isenmann Polyurethane non-bolted screen media for;

1. Maximum dewatering of your sand product
2. Maximum wear resistance
3. Efficient grading of your sand product
4. Ease of maintenance

- Replaceable polyurethane side wall protection on the EvoWash™ screen minimises material on steel contact, reducing wear and increasing the working life of the machine.

- **Rubber lined pipework** ensures maximum wear resistance to minimise lifetime cost of ownership.

- The position and size of the **rubber lined feedbox** minimises the impact of material directly onto the screen deck, increasing operational life.

- The positioning of the **rubber lined feedbox** also allows for cyclone underflow to be discharged across the full width of the dewatering screen maximising the screen area and ensuring high efficiency dewatering.

- **Integrated Centrifugal slurry pump** as standard.

- Centrifugal slurry pump mounted at rear of the EvoWash™ ensuring **safe and easy access to the pump & motor for maintenance**. Increasing the safety of plant operation and reducing maintenance time.

- **Mining grade pipework** used to connect slurry pump to the hydrocyclone ensuring maximum wear resistance.

- **Extensive use of steel pipework lined with natural rubber** to ensure maximum wear resistance.

- The EvoWash™ uses CDE hydrocyclone technology, developed through our experience in the delivery of more sand washing plants than any other global supplier.

- The use of **marshmallow screen mounts** ensures 10-15% more energy is transferred to the dewatering screen. Increasing the dewatering achieved on the screen and reducing oscillating variable stress – one of the major causes of plant failure.

- All galvanised walkways, handrails and access stairs are **compliant with European Health & Safety** specifications.

- Splash cover on the EvoScreen ensures water is retained within the circuit rather than splashing around the site. This leads to a safer, cleaner site.

- **Dewatered sand** is discharged from the EvoWash™ at typically

**EvoWash™**
Washed & Dewatered Concrete Sand

**EvoWash™**
EvoWash 151™ Compact
Sand Washing Plant

**EvoWash™**
Hydrocyclone



12% moisture content ready for market straight from the belts.

- Cyclone overflow containing waste material is discharged at the highest point of the plant which **facilitates easy delivery to the settling ponds** or water treatment phase. Other systems have a low discharge point which requires secondary pumping.

- The cyclones on the EvoWash™ sand washing plant discharge directly to the next phase of processing rather than returning this material to the sand plant sump. **The EvoWash™ ensures fines recovery** – fines are lost when the overflow is returned to the sump as this causes the sump to overflow, taking good quality sand with it.

- High frequency vibrating motors ensure a **high power to area ratio** ensuring the most efficient dewatering of your sand product.

- The routing of all cabling for the EvoWash™ on our unique 'goal post' arrangement **isolates them from damage, enhances plant safety and minimises installation time.**

- The EvoWash™ discharge chute is rubber lined to **prevent abrasion of material on steel** to offer superior wear resistance.

**But surely polyurethane is the same whatever supplier it comes from?**

Simply not true. There are many varying grades of polyurethane with a huge variance in performance levels. Isenmann is the world leader in the provision of polyurethane screen media and it is for this reason that we have chosen them to provide the screen media on our EvoWash™ plant.

Isenmann is part of the Steinhaus group who developed the first polyurethane screen in 1970 for application in sand and gravel screening. This innovation was a response to industry concerns over the wear life of traditional wire mesh. Following the successful introduction of this first polyurethane screen the company went on to introduce the first modular polyurethane system in 1975.

Today, Isenmann composite polyurethane screening panels lead the industry in resistance to abrasion, corrosion and wear. Each of the Isenmann systems are engineered to offer operators the lowest possible screening cost per ton.

Each product offered by Isenmann is built around their 3-point guarantee:

1. To screen efficiently
2. To produce properly graded material
3. To ensure cost effective service life

There are a variety of production techniques and processes that ensure Isenmann polyurethane screen media is the best that the industry has to offer.

- Isenmann offer more proprietary polyurethane types than any other manufacturer to ensure maximum impact resistance and excellent wear properties.

- The use of high precision two headed milling machines during production guarantees every screen panel will install quickly and tightly thereby optimising performance to ensure long life and minimal plant downtime.

- Aperture, base height and material is tested on every screen produced by Isenmann. Using durometers, Isenmanns Quality Control Technicians also ensure proper screen hardness before your panels leave the plant.

- An aggressive re-investment policy assures you of the most technically advanced equipment, the highest quality control, efficiency and productivity.

# CDE ProMan
# World Class Project Management

The CDE ProMan system is proven to deliver highly efficient and productive plants through a process which ensures that lines of communication are clear and everyone involved from both your side and ours knows exactly where the project sits at any given time.

This system has been implemented effectively on numerous worldwide projects from the UK and Ireland to India, Middle East, Africa and South America.

A dedicated project team is appointed as soon as the project goes live which contains all the major disciplines required to deliver you a truly world class project.

Through this process you are allocated a dedicated Single Point Of Contact (SPOC) who is ultimately responsible for the delivery of your project in its entirety.

Our wish and yours is for a project that is delivered on time, on budget and performs to the highest possible standards. ProMan is the methodology that has been proven to consistently deliver this outcome.

The key to success here is the same as with our design philosophy – each project must be constructed individually to take into account the individual characteristics of the site, the material, the deadline, the requirements of the process.

Your project team is guaranteed to contain a team of individuals with a combined experience in excess of 50 years in the delivery of numerous processing systems in wide range of industries covering the full range of materials.



## Easy, Safe Access for Operation & Maintenance

The inclusion of galvanised walkways and access stairs as standard on the EvoWash™ sets it apart from other attrition systems.

Safe and easy access for operators and maintenance personnel.

Minimises time required for maintenance

All walkways are compliant with European Health and Safety Specifications.

## Ensure Optimum Efficiency with CustomCare

Following installation of your EvoWash™ system the focus switches to ensuring optimum efficiency is maintained.

CDE CustomCare service offers a variety of Preventative Maintenance packages including the following services:

- Your own individual CDE Account Manager

- Comprehensive Operator Training to ensure the highest levels of health & safety and plant efficiency are maintained.

- Regular plant audits to highlight improvements in plant operation & maintenance that will lead to a safer, cleaner, more productive site.

- Recommended Spares Lists detailing plant wear parts that should be held in stock to minimise plant downtime when maintenance work is required.

- Access to your own tailored ‘MyCDE’ area of the CDE web site where all documentation relating to your plant is stored for quick and easy access. This also includes a facility where you can arrange a service visit from one of our team of qualified EvoWash™ Service Engineers.

# EvoWash (Single Sand) Product Information

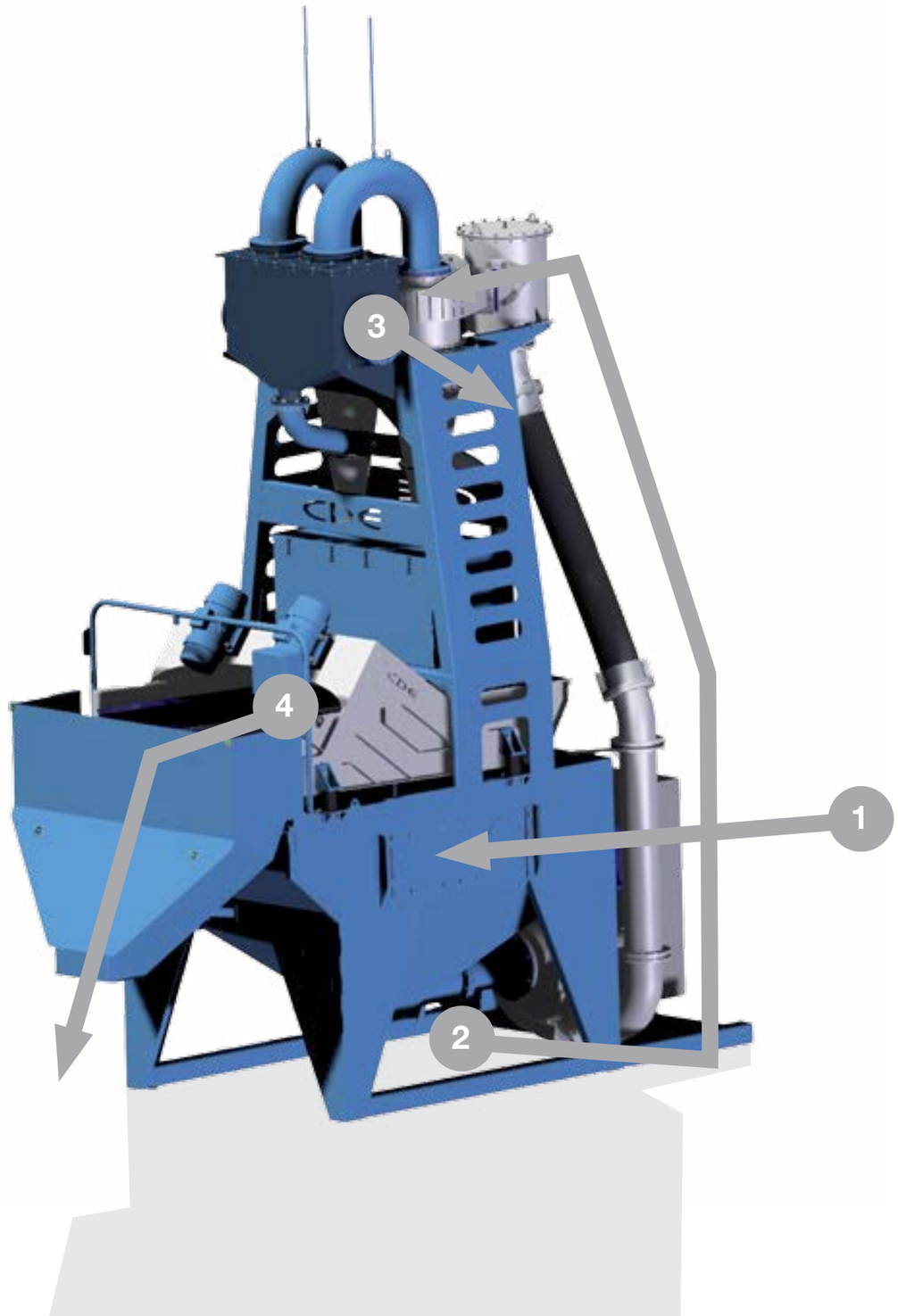
## Standard Features

- CDE Blue paint finish
- W585 Modular Isenmann non-bolted
- Polyurethane screen media
- Stainless Steel sump float
- Rubber lined feedbox
- Splash cover on screen
- Rubber lined pump protection mats
- Mining grade hose
- Galvanised walkways (1 side) and access stairs
- Pre-wire, isolator and emergency stop
- Control panel

## Optional Extras

- Spray bars
- Flat bottom cyclone
- Galvanised sump and cyclone frame
- Remove control panel
- Remove pre-wire isolator and emergency stop
- Boiler box, 15mm rubber lining, manifold with 3 independent valves
- Remove galvanised walkways (1 side) and access stairs
- Add galvanised walkways and stairs on chute end and second side
- CDE Performance guarantee
- Non standard paint finish

1. Feed material
2. Pumped to cyclone
3. Undersize slurry
4. Washed sand dewatered for stockpiling



# EvoWash (Dual Sand) Product Information

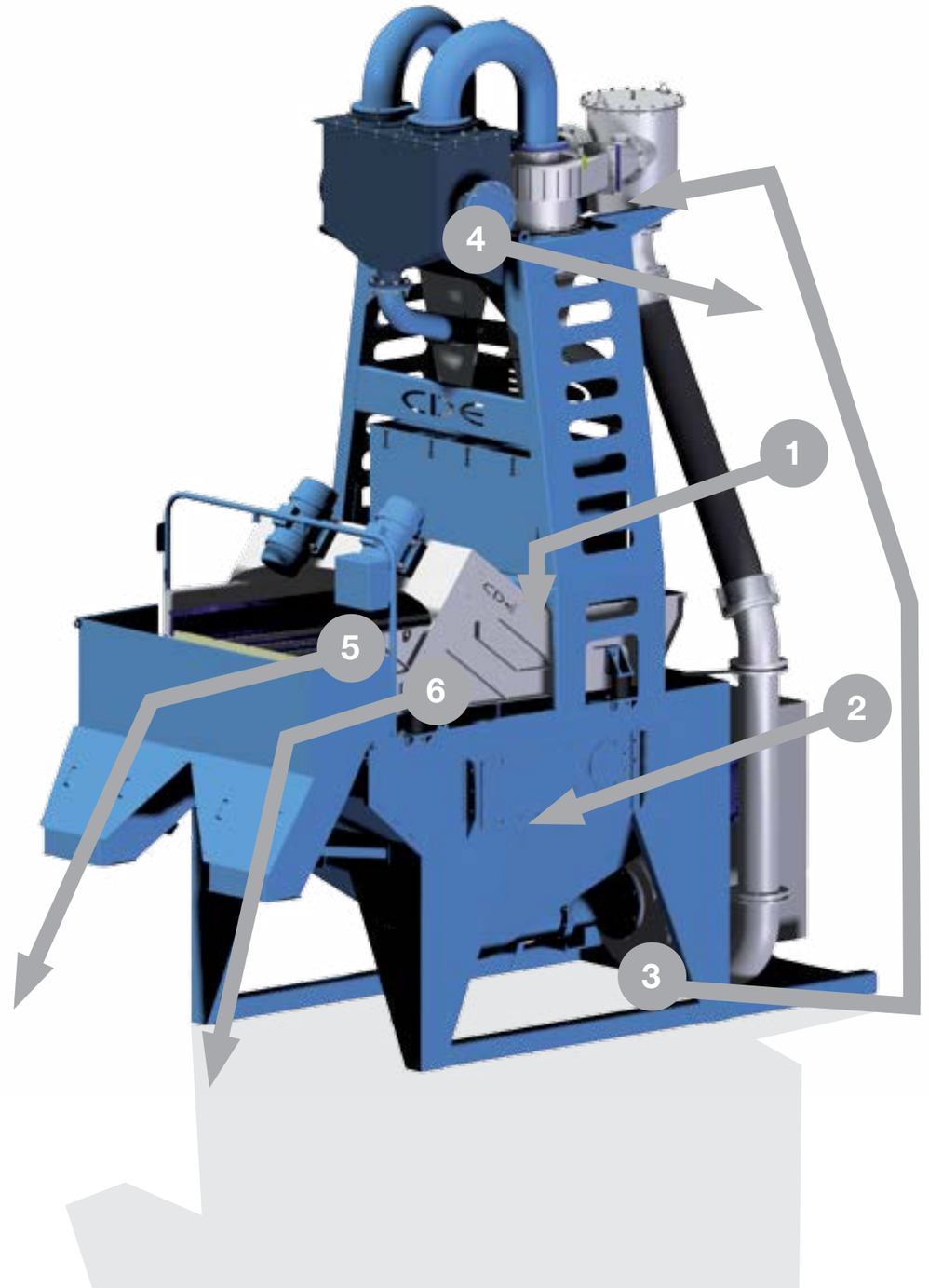
## Standard Features

- CDE Blue paint finish
- W585 Modular Isenmann non-bolted
- Polyurethane screen media
- Stainless Steel sump float
- Rubber lined feedbox
- Splash cover on screen
- Rubber lined pump protection mats
- Mining grade hose
- Galvanised walkways (1 side) and access stairs
- Pre-wire, isolator and emergency stop
- Control panel

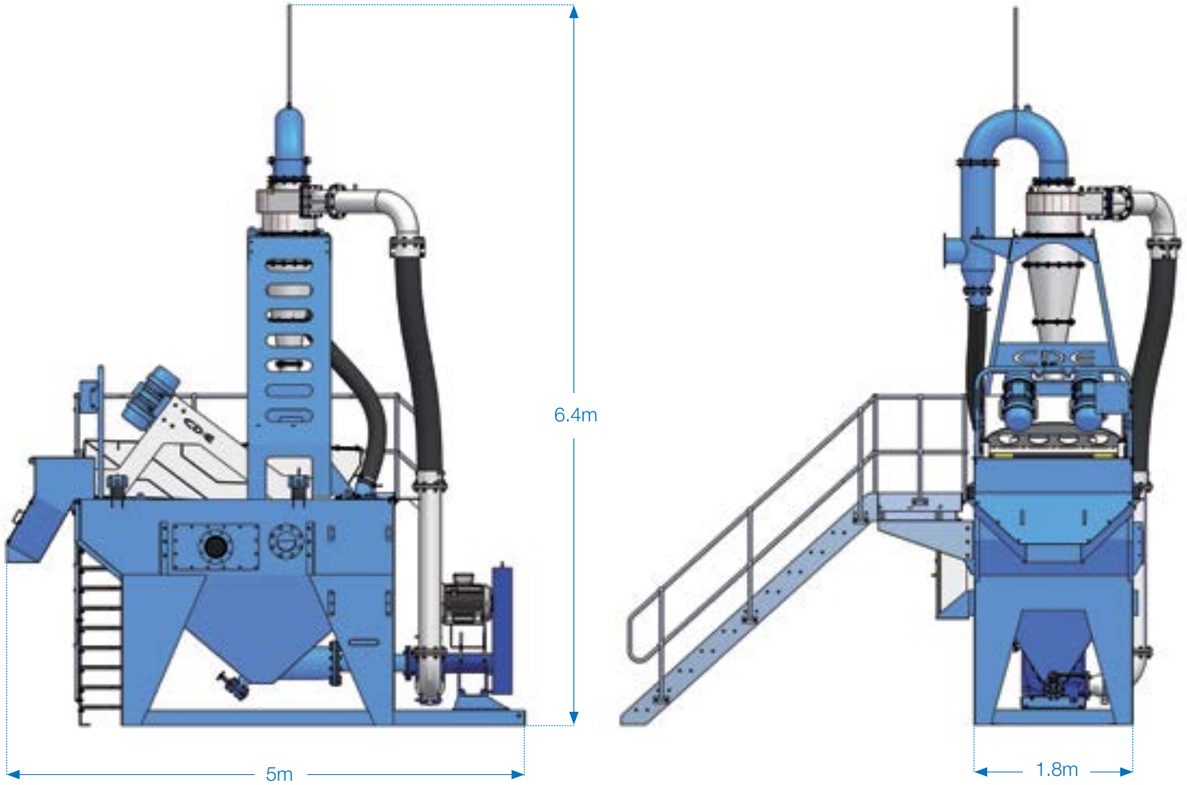
## Optional Extras

- Spray bars
- Flat bottom cyclone
- Galvanised sump and cyclone frame
- Remove control panel
- Remove pre-wire isolator and emergency stop
- Boiler box, 15mm rubber lining, manifold with 3 independent valves
- Remove galvanised walkways (1 side) and access stairs
- Add galvanised walkways and stairs on chute end and second side
- CDE Performance guarantee
- Non standard paint finish

1. Coarse feed material
2. Fine feed material in
3. Pumped to cyclone
4. Undersize slurry
5. Washed fine sand - ability to blend with coarse sand
6. Washed coarse sand

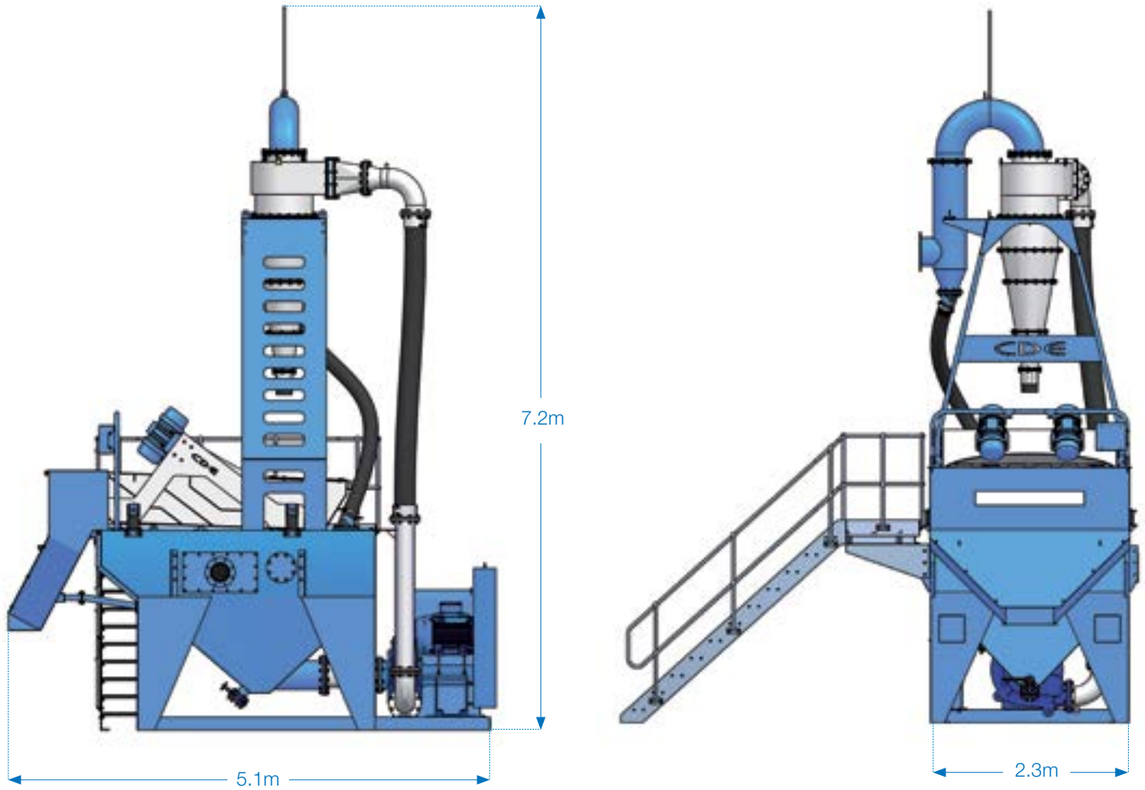


# EvoWash *Single Sand*




| **Model:** | **EvoWash 71™** |
|---|---|
| Maximum capacity: | 70TPH |
| Water required: | 100-200 $m^3$/hr |
| Power Requirement: | 37.2kW |
| Cyclone Size: | 500mm diameter |
| Dewatering screen size: | 1200x2400mm (EvoScreen DW-C) |
| Pump Size: | 6/4 |
| Feed height: | 1800mm |
| Waste Height: | 4800mm |
| Dimensions: | see diagram |
| Weight : | 6T |
| Transport Details: | 1 x 40FT (Open Top or Euro Liner) |

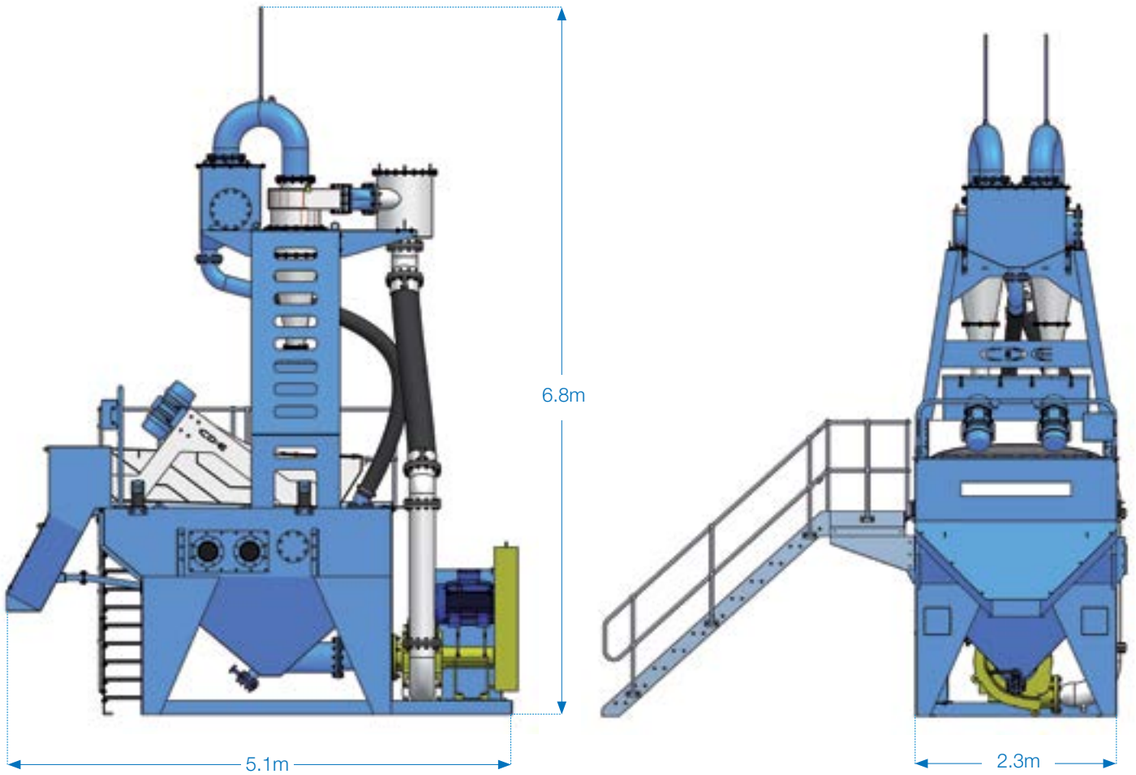
# EvoWash *Single Sand*




| **Model:** | **EvoWash 101™** |
|---|---|
| Maximum capacity: | 100TPH |
| Water required: | 200-350 m3/hr |
| Power Requirement: | 44.2kW |
| Cyclone Size: | 625mm diameter |
| Dewatering screen size: | 1800x2400mm (EvoScreen DW-B) |
| Pump Size: | 8/6 |
| Feed height: | 1800mm |
| Waste Height: | 5400mm |
| Dimensions: | See diagram |
| Weight: | 8T |
| Transport Details: | 1 x 40FT (Open Top or Euro Liner) |

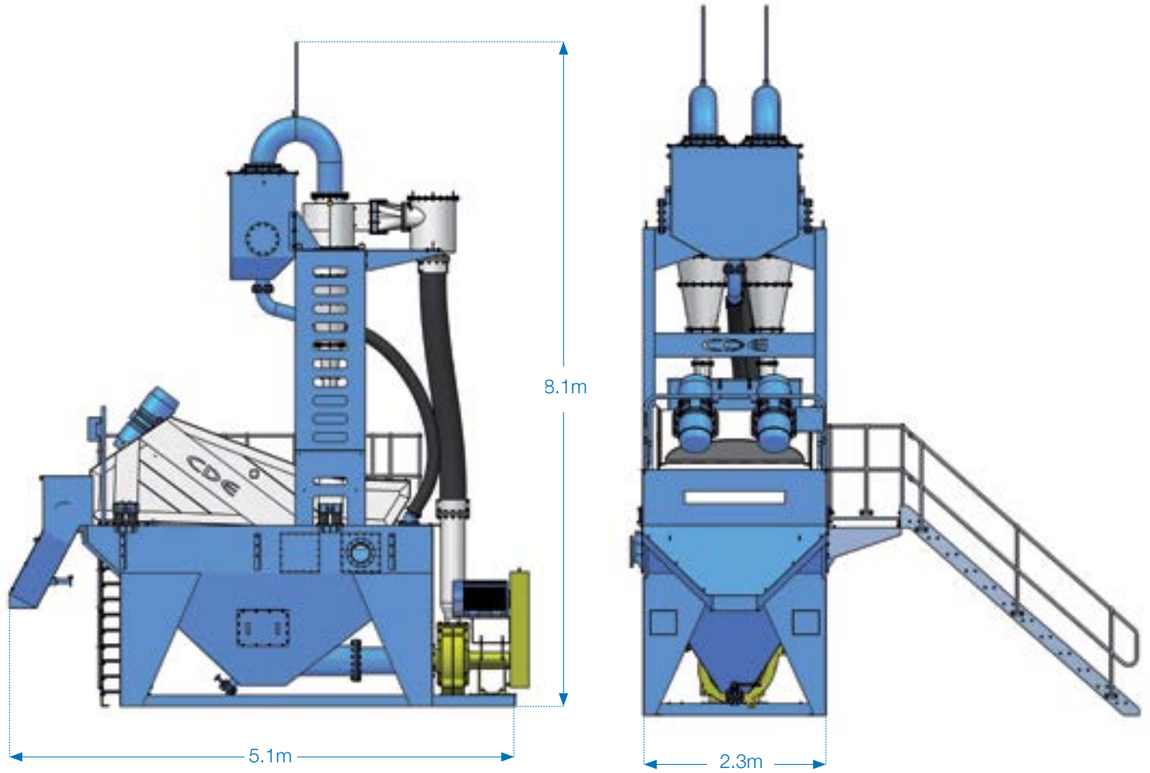
Specifications may change due to manufacturing updates or with the addition of our ‘optional extras’.

# EvoWash *Single Sand*




| **Model:** | **EvoWash 151™** |
|---|---|
| Maximum capacity: | 150TPH |
| Water required: | 300-450 m3/hr |
| Power Requirement: | 62.2kW |
| Cyclone Size: | 2 x 500mm diameter |
| Dewatering screen size: | 1800x2400mm (EvoScreen DW-B) |
| Pump Size: | 10/8 |
| Feed height: | 1800mm |
| Waste Height: | 5500mm |
| Dimensions: | See diagram |
| Weight: | 11T |
| Transport Details: | 1 x 40FT (Open Top or Euro Liner) |

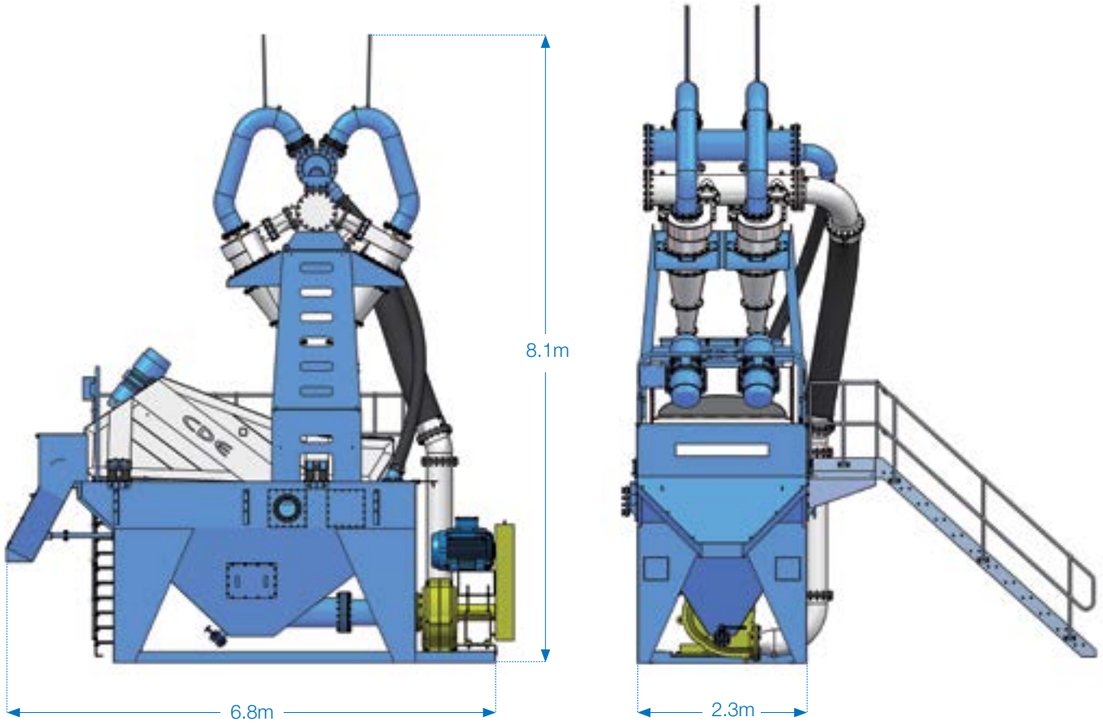
# EvoWash *Single Sand*




| **Model:** | **EvoWash 201™** |
|---|---|
| Maximum capacity: | 200TPH |
| Water required: | 450-600 m3/hr |
| Power Requirement: | 93kW |
| Cyclone Size: | 2 x 625mm diameter |
| Dewatering screen size: | 1800x4000mm (EvoScreen DW-A) |
| Pump Size: | 10/8 |
| Feed height: | 2100mm |
| Waste Height: | 6400mm |
| Dimensions: | See diagram |
| Weight: | 16T |
| Transport Details: | 1 x 40FT (Open Top or Euro Liner) |

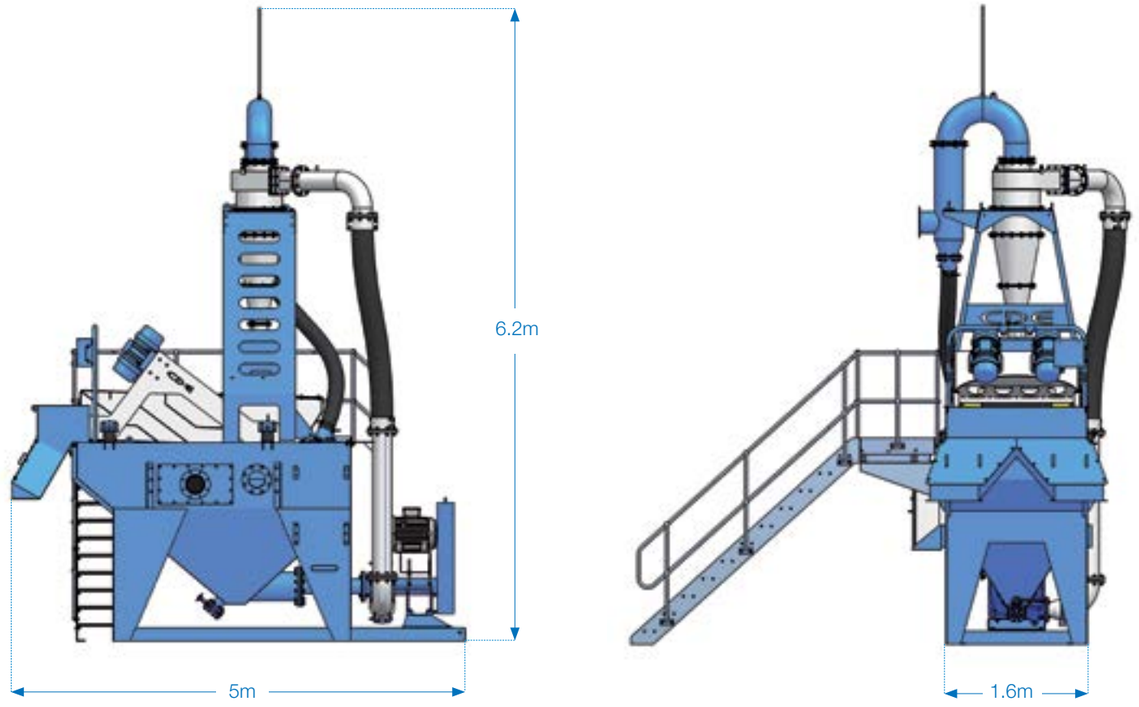
Specifications may change due to manufacturing updates or with the addition of our ‘optional extras’.

# EvoWash *Single Sand*




| **Model:** | **EvoWash 251™** |
|---|---|
| Maximum capacity: | 250TPH |
| Water required: | 500-600 m3/hr |
| Power Requirement: | 128kW |
| Cyclone Size: | 4 x 500mm diameter |
| Dewatering screen size: | 1800x4000mm (EvoScreen DW-A) |
| Pump Size: | 12/10 |
| Feed height: | 2100mm |
| Waste Height: | 6400mm |
| Dimensions: | See diagram |
| Weight: | 16T |
| Transport Details: | 1 x 40FT (Open Top or Euro Liner) |

# EvoWash *Dual Sand*




| **Model:** | **EvoWash 72™** |
|---|---|
| Maximum capacity: | 70TPH |
| Water required: | 100-200 m3/hr |
| Power Requirement: | 37.2kW |
| Cyclone Size: | 500mm diameter |
| Dewatering screen size: | 1200x2400mm (EvoScreen DW-C) |
| Pump Size: | 6/4 |
| Feed height (fine): | 1800mm |
| Feed height (coarse): | 3100mm |
| Waste Height: | 4800mm |
| Dimensions: | See diagram |
| Weight: | 6T |
| Transport Details: | 1 x 40FT (Open Top or Euro Liner) |

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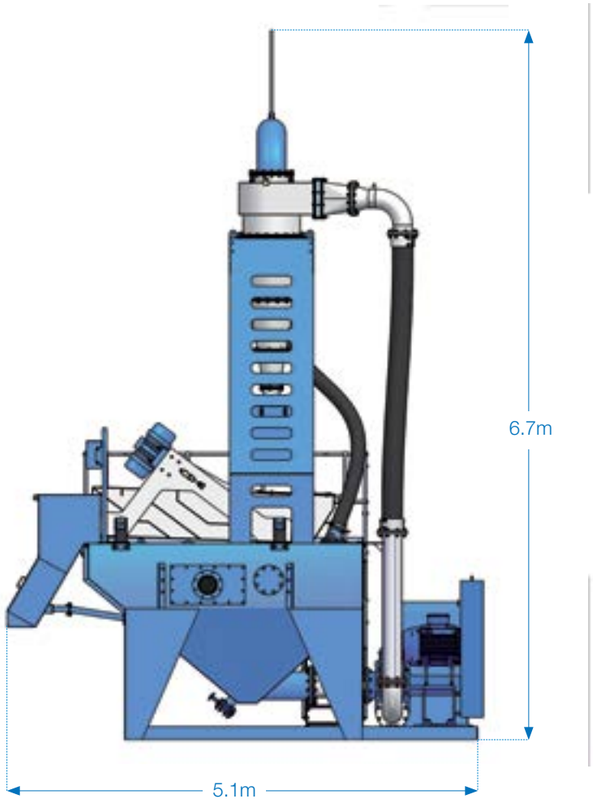
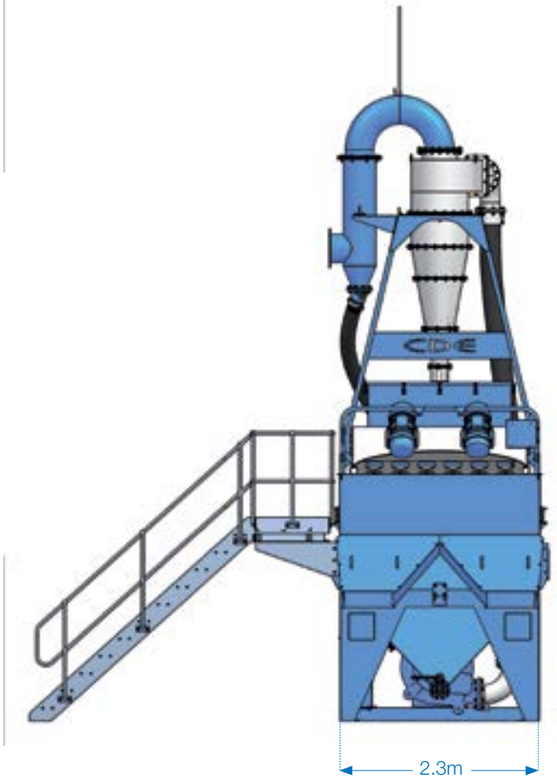
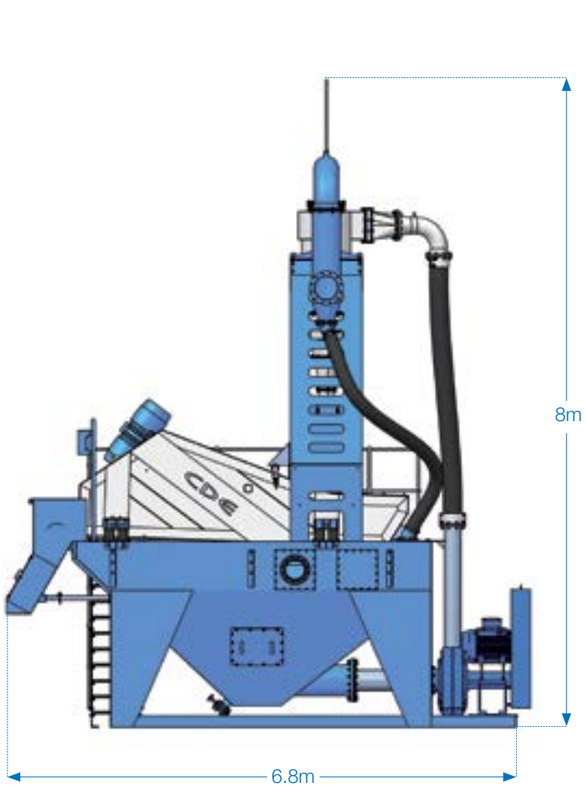
# EvoWash *Dual Sand*

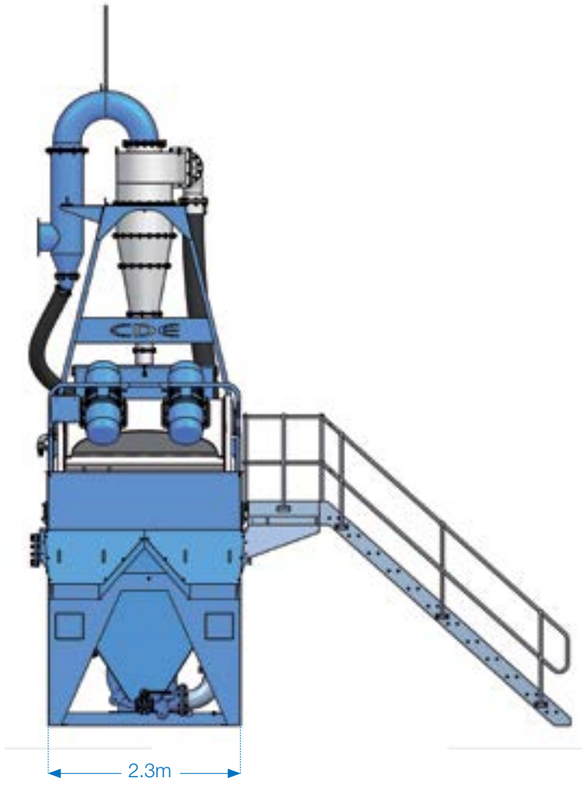



| **Model:** | **EvoWash 102™** |
|---|---|
| Maximum capacity: | 120TPH |
| Water required: | 100-200 $m^3$/hr |
| Power Requirement: | 37.2kW |
| Cyclone Size: | 500mm diameter |
| Dewatering screen size: | 1800x2400mm (DW-B) |
| Pump Size: | 6/4 |
| Feed height (fine): | 1800mm |
| Feed height (coarse): | 3600mm |
| Waste Height: | 5200mm |
| Dimensions: | See diagram |
| Weight: | 8T |
| Transport Details: | 1 x 40FT (Open Top or Euro Liner) |

# EvoWash *Dual Sand*




| **Model:** | **EvoWash 152™** |
|---|---|
| Maximum capacity: | 150TPH |
| Water required: | 200-350 $m^3$/hr |
| Power Requirement: | 55kW |
| Cyclone Size: | 625mm diameter |
| Dewatering screen size: | 1800x4000mm (DW-A) |
| Pump Size: | 8/6 |
| Feed height (fine): | 2100mm |
| Feed height (coarse): | 4000mm |
| Waste Height: | 6100mm |
| Dimensions: | see diagram |
| Weight: | 12T |
| Transport Details: | 1 x 40FT (Open Top or Euro Liner) |

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