# DSE mobile centrifuge decanter ZR17254

## Description

The DSE Decanter Mobile Unit ZR17254 is a self-contained, high-dewatering separation unit and comprises a 20 ft. heat-insulated container, a high-performance solid bowl centrifuge, an integrated powder polymer mixing and dosing unit, an eccentric screw feed pump, a spiral conveyor system, a central control cabinet, heating system, and further accessories.

The ZR17254 Decanter with variable speed drive (VSD) is a solid bowl decanting centrifuge and specially designed for high dewatering performance, high material throughput and high clarification performance at the same time in municipal and industrial applications.

High torques and high solid loadings are easily overcome due to its industrial model design. New drive technology has been combined with durability and reliability in a product that is easy to operate and fully adjustable. The DSE ZR17254 is directly fed by a variable eccentric screw pump.

## Structure

The DSE Decanter Mobile Unit ZR17254 including mixing and dosing unit, control panel, spiral conveyor, piping and wiring is built into a 20 ft. container (dimensions as per ISO 668; 6 058 x 2 438 x 2 880 mm) and allows therefore reduction of assembly time to a minimum.

The VSD packages allow controlled impact of motor drive power to the Centrifuge Bowl, to the Screw and to the Feed Pump. The ability to vary the speed of the Bowl, the Screw and the Feed Pump power unit independently allows the centrifuge to be operated in the most efficient and productive manner for the intended application and wastewater condition.

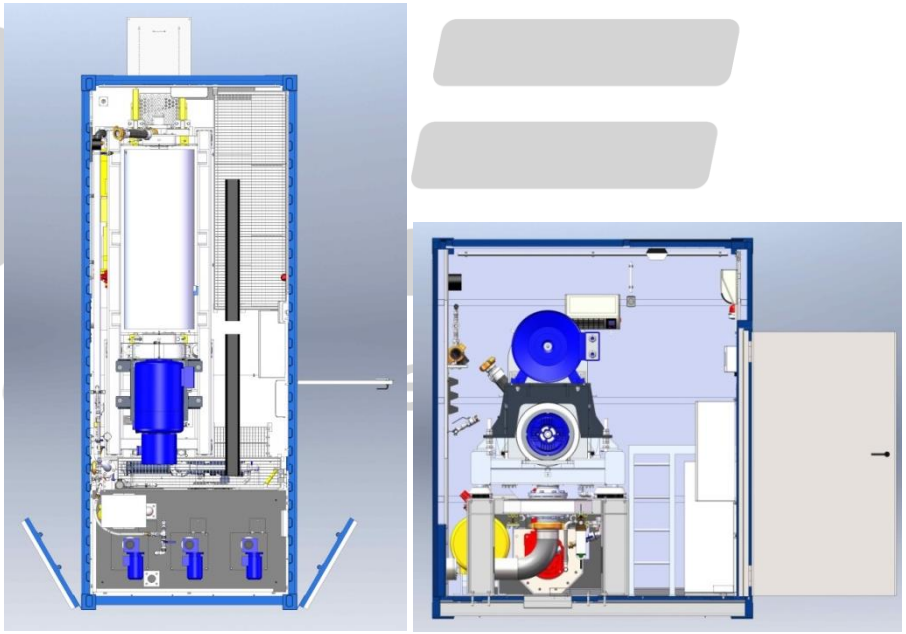
*only for visualization: Interior view of DSE Decanter ZR15046 Container 20 ft.*

The centrifuge rotating assembly is made from advanced centrifugally cast duplex stainless steel. Non-rotating components which come in contact with the process material are manufactured of corrosion resistant stainless steel. The modular centrifuge base is manufactured from carbon steel with industrial epoxy coatings. The centrifuge rotating assembly is housed in a stainless steel enclosure with fully wear protected components where the solids and liquids are discharged.

The integrated automatic powder polymer mixing and dosing unit is selected for preparation and dosing of polymer solutions for feeding of the DSE Decanter Centrifuge ZR17254. The unit control is user-friendly integrated in the touch screen display and a programmable logic controller (PLC) of the whole machinery. This integrated control system allows an automatic preparation and dosing process. The dosing of the polymer solution into the slurry circuit is controlled by measuring of flow rate. Remote control and tablet control (ipad or android) are included.

*only for visualization: polymer unit of DSE mobile centrifuge decanter ZR15046*


*iPad control*



*only for visualization: Interior view of DSE Decanter ZR17254 Container 20 ft.*

## Overall dimensions:[1]

| | | |
|---|---|---|
| Length | 6 058 | mm |
| Width | 2 438 | mm |
| Height | 2 891 | mm |
| Total weight (ca.) | 10 000 | kg |

## Technical Specifications ZR17254:

### Centrifuge parameters

| | | |
|---|---|---|
| Capacity (max.) [2] | 10 – 60 | m³/h (at 1.25 kg/l) |
| Solid output (max.)[3] | 15 | t/h |
| Inside bowl diameter | 540 | mm (21”) |
| Bowl length | 1 728 | mm |
| Bowl speed (max.) | 2 960 | rpm (at 50 Hz) |
| Differential speed | 0.5 – 50 | rpm |
| Torque (max.) | 12 650 | Nm |

### Liquid / Powder polymer unit

| | | |
|---|---|---|
| Flow rate (at 60 min maturing time): | 4 000 | l/h (15 GPM) |
| Flow rate (at 30 min maturing time): | 8 000 | l/h (30 GPM) |
| Dosing pump (against max. 3 bar): | 700 – 6 000 | l/h (2,5 – 22 GPM) |

### Power supply

| | | |
|---|---|---|
| Bowl drive | 90 | kW (122 HP) |
| Conveyor drive | 55 | kW (75 HP) |
| Feed pump | 22 | kW (30 HP) |
| Liquid / Powder polymer dosing unit | 2.95 | kW (3 HP) |
| Others | 10 | kW (13.6 HP) |
| Voltage | 400 V / 50 Hz | |

### Kontakt

diff speed engineering GmbH
Vadiesweg 1 · D - 26556 Nenndorf
www.diff-speed.de
info@diff-speed.de

Office Dresden
Moritzburger Weg 67 · D - 01109 Dresden
phone +49 (0) 351 796 286 79

[1] dimensions of the container
[2] Subject to solids loading, slurry properties, soil type properties and properties along with operating conditions!
[3] With a moisture content ranging between 25 to 40%