

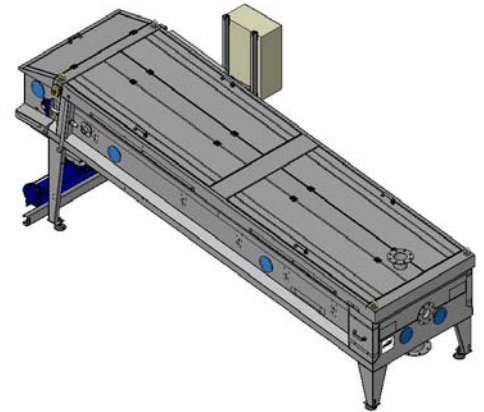
## GRAVITY BELT THICKENER OMEGA LD

Leader in the design and the manufacturing of sludge treatment systems for drinking water, waste water and sludge, EMO is present in 5 continents of the globe and holds more than 2500 recommendations to its credit since the company's creation in 1985.

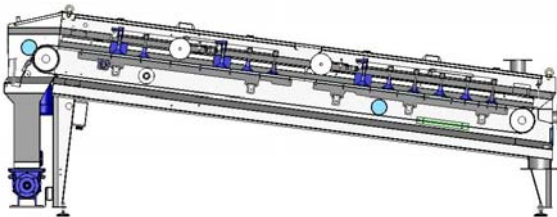
The OMEGA Gravity Belt Thickener is designed for the continuous mechanical thickening of municipal or industrial sludge.

This simple and efficient technology aims at reducing the sludge volume at least 4 times with following characteristics:

- ✓ Low energy consumption,
- ✓ Reliable and long life time components (stainless steel frame...)
- ✓ Easy and low maintenance and supervision



### Technical data



The Gravity Belt Thickener OMEGA LD can be used:

- ✓ As a final step to increase the sludge Dry Solids concentration to 6–8%. Therefore, replacing conventional gravity static thickener, flotation system,..
- ✓ As a pre-dewatering stage when combined in-line with a Belt Filter Press to optimize the Belt Filter Press operation and performances,
- ✓ As a pre-dewatering stage before a Plate Filter Press or centrifuge to downsize the dewatering equipment,
- ✓ For sludge volume reduction before anaerobic digestion process to reduce

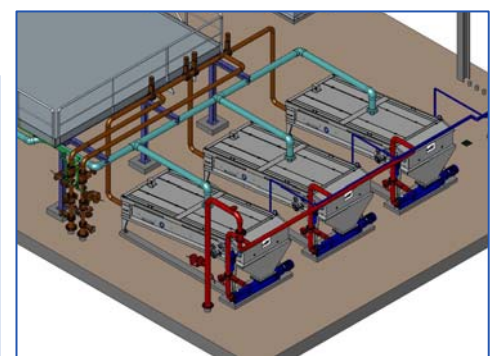
### Installations



Gravity belt thickener OMEGA 15 LD



Gravity belt thickener OMEGA 25 LD



3 sets OMEGA 15 LD



## Operating principle

The OMEGA LD belt thickener consists of a stainless steel frame, sludge distribution tank, gravity drainage zone, variable speed drive, continuous belt washing system, compression zone, mechanical belt tracking and tensioning systems, filtrate collection pans, internal wiring and pipe-work, electric control panel (optional), safety operation devices.



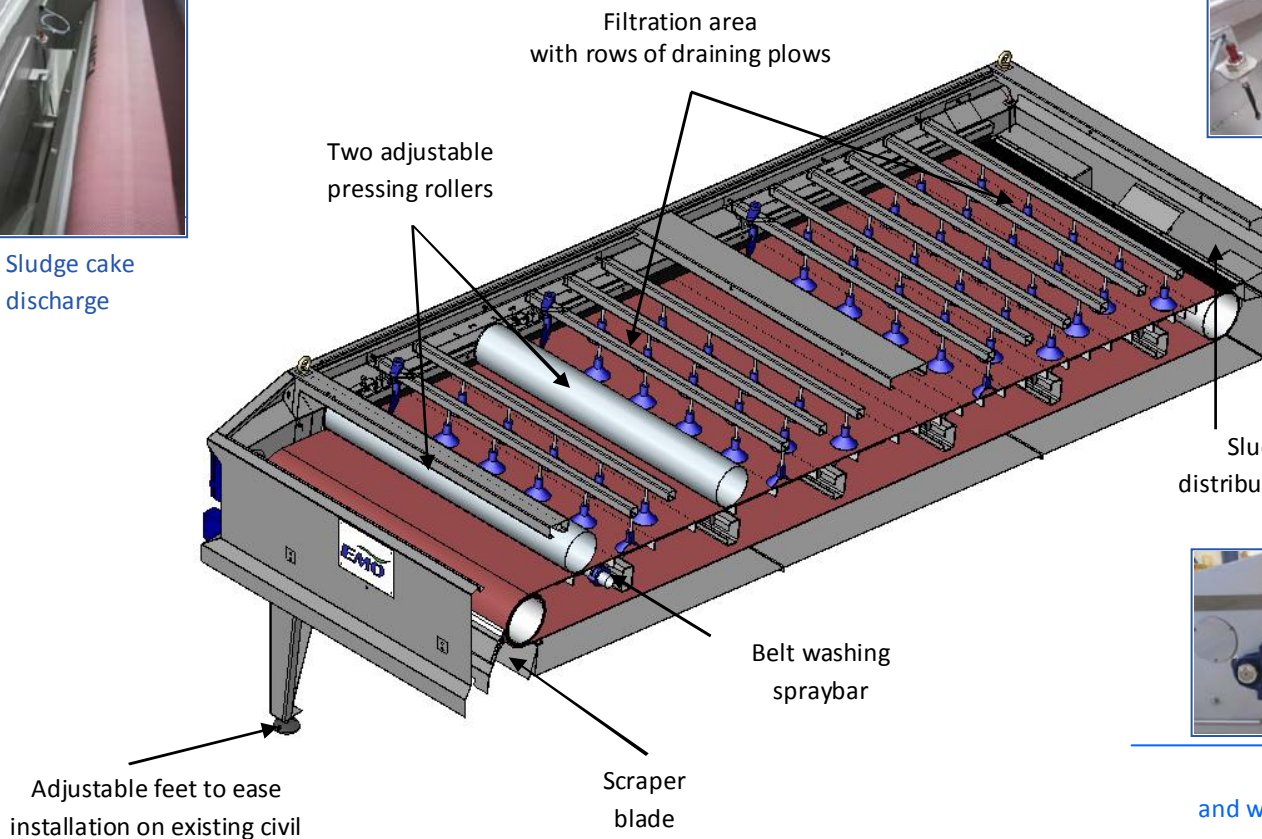
Sludge cake discharge



Sludge distribution pan



Belt tensioning and washing systems



## Selection table

The capacity of the Gravity Belt Thickener is determined by the inlet DS concentration, and hydraulic flow-rate parameters – together with the output DS concentration required.

The figures shown below are values for inlet DS % 5 to 10 g/l and an expected output of DS % of 70 g/l.

These values can be revised for other parameters – for example – if the inlet DS % is greater than 10 g/l or if the expected output DS % less than 50 g/l.

|                           | <b>Ω 10 LD</b>            | <b>Ω 15 LD</b>            | <b>Ω 20 LD</b>            | <b>Ω 25 LD</b>            | <b>Ω 30 LD</b>             |
|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|----------------------------|
| Dimensions                | 4,25 x 1,50 x 1,56 m      | 4,25 x 2,00 x 1,56 m      | 4,25 x 2,50 x 1,56 m      | 4,25 x 3,00 x 1,56 m      | 4,25 x 3,50 x 1,56 m       |
| Acceptable hydraulic flow | 1 to 25 m <sup>3</sup> /h | 3 to 35 m <sup>3</sup> /h | 5 to 50 m <sup>3</sup> /h | 8 to 70 m <sup>3</sup> /h | 10 to 90 m <sup>3</sup> /h |
| Belt width                | 1 m                       | 1,5 m                     | 2 m                       | 2,5 m                     | 3 m                        |
| Belt length               | 8 m                       | 8 m                       | 8 m                       | 8 m                       | 8 m                        |
| Thickening :              |                           |                           |                           |                           |                            |
| - active width            | 1 m                       | 1,5 m                     | 2 m                       | 2,5 m                     | 3 m                        |
| - active surface          | 3,5 m <sup>2</sup>        | 5,25 m <sup>2</sup>       | 7 m <sup>2</sup>          | 8,75 m <sup>2</sup>       | 10,5 m <sup>2</sup>        |