

MBBR20 Moving Bed Bio-Reactor

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The OSSO MBBR20 is a modular automated biological treatment system for municipal wastewater secondary treatment including BOD₅, ammoniacal nitrogen, COD and TPC removal to support AMP8 discharge requirements of 0.5–3 mg/L ammoniacal nitrogen and 20 mg/L BOD₅.

The system comprises three aerobic chambers containing 40% fill of HDPU carrier media with a specific surface area of 840 m²/m³ to maximise aerobic biofilm growth. Aeration is delivered through two perforated diffusers per chamber with adjustable valves for oxygen control and media agitation.

The unit includes a dissolved oxygen (DO) sensor, antifoam pump, soft-start blower control, pressure indicators, discharge flowmeter and a low-level protection sensor. Its compact design enables MLSS concentrations 1.5–2 times higher than conventional activated sludge systems, maximising treatment capacity within a smaller footprint.

Benefits

- Mobile DO sensor
- Duty and standby diffuser and blower set
- Downloadable historic data
- High efficiency/footprint ratio
- Easy to transport, easy set up with minimal lifts

Scope of use

- Secondary wastewater/ municipal treatment
- Agricultural
- Industrial (food, beverage, paper, textile, chemical)

Specifications

- Transport Size (L W H): 7.5 x 2.5 x 3.3 m
- Dry weight: 6340kg; Wet Weight: 50340kg
- Flow capacity up to 600m³/d
- Power supply: 3phase 11.5kW
- Power socket: 5 pin 32A 415V ~50Hz
- Inlet 4" / Outlet 4" (flange/bauer)
- Ground Bearing Pressure (empty): 35 kN/m²
- Ground Bearing Pressure (operational): 279 kN/m²

