

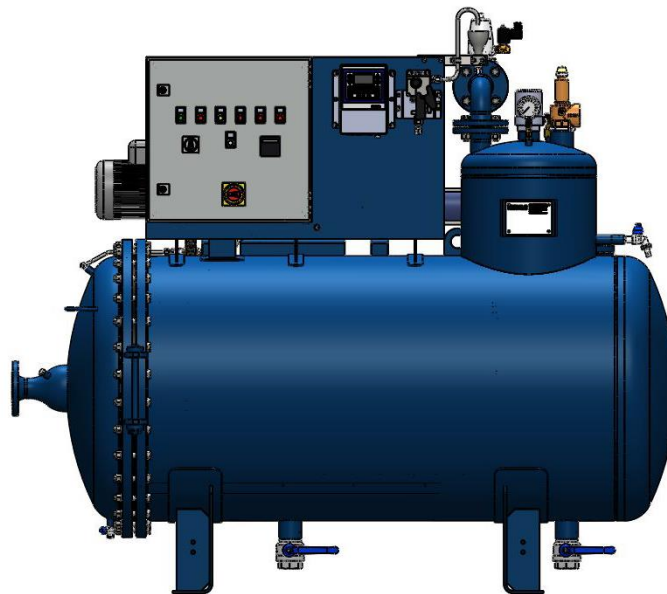
Oil-Water Separator MESB

Flow capacity: 1 m³/h to 100 m³/h

1. Brief description

Safe, fully automatic separation of oils from process water

- Use in industry, power stations and oil & gas
- Fully automatic operation
- Maximum effectiveness combined with long service times
- Mature technology and sturdy design
- High operational safety
- No chemicals
- Residual oil content down to less than 5 ppm
- Little space required thanks to compact design
- Low operating costs
- Low maintenance requirement
- Service-friendly and easy to use
- Global sales and service network in place



2. Function

The MESB (Mechanical Emulsion and Foam Breaker) is used for the separation of oil from different kinds of water.

The eccentric screw pump fitted to the system pumps the medium to the MESB, where it is separated. The tiny droplets of oil are grouped together in a microfibre bed (coalescence elements) to form large drops which then rise into the oil dome.

The oil is detected by a probe and discharged automatically. The medium at the MESB tank outlet is almost oil-free.

The service life of the coalescence elements is monitored using the differential pressure. If the differential pressure reaches 1.5 bar, the main alarm appears and the coalescence elements must be replaced.

3. Purpose

| | |
|---------------------|----------------------------------|
| Medium: | Deoiling of water containing oil |
| Viscosity: | max.380 cST(at 100 °C) |
| Density: | max. 990 kg/m ³ |
| Oil content inlet: | max. 1 – 2% |
| Oil content outlet: | down to ≤ 5ppm |

4. Operating parameters

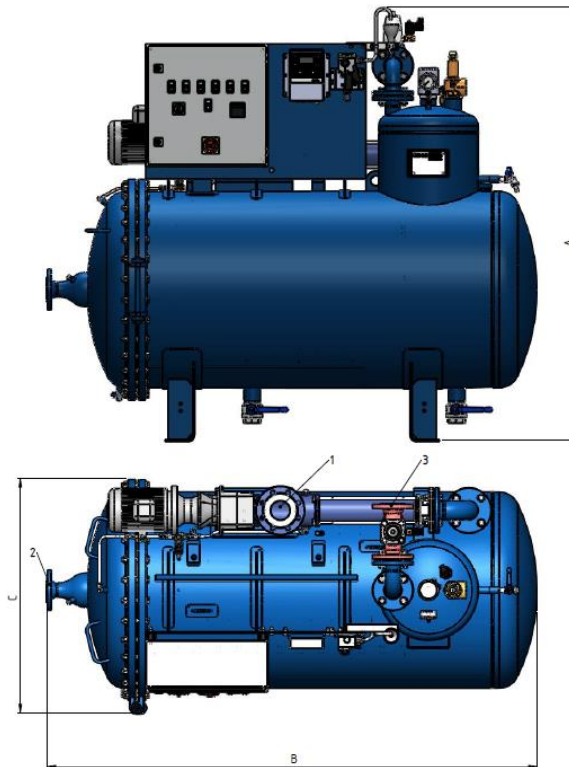
| MESB type | 1.0 | 2.5 | 5.0 | 10 | 20 | 50 | 100 |
|-----------------------------------|---------------------|-----|-----|----|----|----|-----|
| Flow capacity [m ³ /h] | 1.0 | 2.5 | 5.0 | 10 | 20 | 50 | 100 |
| Ambient temperature [°C] | min. 2 - max. 55 | | | | | | |
| Operating temperature [°C] | min. 10 - max. 50 | | | | | | |
| Operating pressure [bar] | min. 0.7 - max. 3.5 | | | | | | |
| Pressure loss [bar] | max. 2.2 | | | | | | |

5. Technical data

| 5.1 MESB type | 1.0 | 2.5 | 5.0 | 10 | 20 | 50 | 100 |
|--------------------------|-------------------|-----|-----|----|----|----|-----|
| Design pressure [bar] | 3.5 | | | | 6 | | |
| Design temperature [°C] | 80 | | | | | | |
| Design code | GL / PED – AD2000 | | | | | | |
| Material | Steel | | | | | | |
| Corrosion allowance [mm] | 1 | | | | | | |

| 5.2 Steel structure finishing | |
|---|----------------------------|
| Pipes: | Sand-blasted SA 2½, coated |
| Outside of tank: | Sand-blasted SA 2½, coated |
| Inside of tank: | Sand-blasted SA 2½ |
| Colour: | RAL 5019 |
| (double coating comprising primer coat and top coat – dry layer thickness: 120µm) | |

6. Dimensions and main connections



| | A [mm] | B [mm] | C [mm] | 1 [Inlet] | 2 [Outlet] | 3 [Oil outlet] |
|-------------------|------------------|------------------|------------------|---------------------|----------------------|--------------------------|
| MESB - 1.0 | 1400 | 750 | 1550 | DN 32 | DN 25 | DN 20 |
| MESB - 2.5 | 1850 | 850 | 2250 | DN 50 | DN 40 | DN 25 |
| MESB - 5.0 | 2000 | 1050 | 2300 | DN 65 | DN 50 | DN 40 |
| MESB - 10 | 2000 | 1050 | 2300 | DN 65 | DN 50 | DN 40 |
| MESB - 20 | 4000 | 1300 | 3000 | DN 100 | DN 80 | DN 50 |
| MESB - 50 | 5000 | 1800 | 3500 | DN 150 | DN 100 | DN 50 |
| MESB - 100 | 7500 | 2400 | 4000 | DN 200 | DN 150 | DN 80 |

7. Features

| MESB type | 1.0 | 2.5 | 5.0 | 10 | 20 | 50 | 100 |
|------------------------------------|------------|------------|------------|-----------|-----------|-----------|------------|
| Pressure container | X | X | X | X | X | X | X |
| 1 x set valve fittings | X | X | X | X | Option | Option | Option |
| 1 x set MSR | X | X | X | X | Option | Option | Option |
| 1 x oil alarm monitor | X | X | X | X | Option | Option | Option |
| Pump | X | X | X | X | Option | Option | Option |
| Switch cabinet | X | X | X | X | Option | Option | Option |
| Heaters | X | X | X | X | Option | Option | Option |
| Corrosion protection tank interior | X | X | X | X | Option | Option | Option |

X = Standard

Option = Optionally available

8. Documentation

- Installation instructions
- Operating manual
- Maintenance instructions
- Spare parts list
- Declaration of conformity

9. Additional options

Deviating design (wall system), coating, voltage supply, volume flows and many other options available on request.