Mineral Oil Separators
Westfalia Separator® eagleclass

Technical Data | OSE 5, OSE 10, OSE 20, OSE 40, OSE 80, OSE 120
with Westfalia Separator® unitrolplus system
Operating Principles and Constructional Features

Mineral oil separators Westfalia Separator® eagle class

OSE… - 0136 - 067
OSE… - 0196 - 067

1 Dirty oil feed/displacement water feed
2 Clean oil discharge
3 Pressure gauge
4 Pressure transmitter
5 WMS sensor
6 SMS sensor
7 Solenoid valve (circulation)
8 Sensing liquid line
9 Centripetal pump, sensing liquid
10 Centripetal pump, clean oil
11 Separating disc
12 Sludge holding space
13 Dirty water discharge
14 Sludge discharge
15 Operating water discharge
16 Operating water feed

OSE… - 91 - 067

1 Dirty oil feed/displacement water feed
2 Clean oil discharge
3 Pressure gauge
4 Pressure transmitter
5 Pressure transmitter
6 Dirty water discharge
7 Centripetal pump, dirty water
8 Centripetal pump, clean oil
9 Separating disc
10 Sludge holding space
11 Sludge discharge
12 Operating water discharge
13 Operating water feed
The Westfalia Separator® eagleclass separators are equipped with a Westfalia Separator® softstream inlet system for gentle product treatment. This results in optimum separating efficiency and higher specific capacities. The patented Westfalia Separator® hydrostop system of the Westfalia Separator® eagleclass separators enables controlled bowl ejections to be carried out at full operating speed.

Separators OSE...-0136-067/
OSE...-0196-067 with new
Westfalia Separator® unitrolplus system

The centrifuges are equipped with a self-cleaning disc-type bowl. They are employed for clarification and purification in fuel oil (up to a density of 1.01 g / ml) and lube oil treatment plants. The oil is conveyed to the centrifuge by means of a separate pump. The feed (1) is via a closed line system. The clean oil is discharged under pressure (2) by means of a centrifugal pump (10). The centrifuges operate without regulating rings.

New Westfalia Separator®
unitrolplus system

The separators with new Westfalia Separator® unitrolplus system are provided with two monitoring systems:

- Water Monitoring System – WMS
- Sludge Monitoring System – SMS

Water Monitoring System (WMS)

The small volume of liquid (8) which is branched off via the separating disc (11) and the sensing liquid pump (9) is monitored by the WMS sensor (5). If the WMS sensor registers water, the solenoid valve (10) opens and the water flows off through the dirty water discharge (13). As soon as the WMS sensor detects a change brought about by an increased proportion of oil, the solenoid valve (10) closes and the solenoid valve (7) opens intermittently. The sensing liquid flow (8) is recycled into the feed (1).

Sludge Monitoring System (SMS)

A small amount of product (8) is diverted via the separating disc (11). It is conveyed by the sensing liquid pump (9) through the SMS sensor (6) and is fed back into the feed line (1) of the centrifuge. If this flow of sensing liquid is interrupted by solids accumulated in the sludge space (12), the SMS sensor (6) transmits a pulse to the control unit and the automatic ejection program is initiated. The control and monitoring unit guarantees unsupervised operation "round-the-clock".

Separators OSE...-91-067

The separators are equipped with a self-cleaning disc-type bowl. They are employed for clarification and purification in fuel oil (fuel oil up to a density of 0.991 g / ml) and lube oil treatment plants. The product (1) is fed in through a system of closed lines. The heavy liquid phase (6) is pressure discharged by means of a centrifugal pump (7). The clean oil (2) is also discharged by means of a centrifugal pump (8). The centrifuges operate with regulating rings for the heavy phase.

Frame, hood and drive

The separators are of enclosed design and meet the requirements of the classification societies. The separators are driven by a 3-phase AC motor. Power is transferred to the bowl spindle via a centrifugal clutch and a flat belt. All bearings are splash-lubricated from a central oil bath.
Materials of construction
- Frame: grey cast iron
- Hood: Silumin
- Main bowl parts: stainless steel

Standard equipment
- 3-phase AC motor
- Rubber cushions with welding plates
- Flexible feed and discharge lines
- Pressure gauge
- Pressure transmitter clean oil discharge
- Valve block for operating, filling and displacement water
- 1 set of commissioning parts
- Ejection monitoring
- Motor temperature monitoring

Additional equipment
(available at extra cost, must comply with the specification of GEA Westfalia Separator Group)
- Motor control
- Control unit for automatic operation
- Pump
- Prestrainer
- Preheater
- Automatic steam valve
- Shut-off valve
- Controls for electric heaters
- Set of tools
- Set of spare parts
- Vibrocontrol
- Product temperature monitoring
- Flow indicator
- 3/2 way valve
Technical Data
Mineral Oil Separators Westfalia Separator® eagleclass

Operating principles and constructional features

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<th>Technical data</th>
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<th>OSE 10</th>
<th>OSE 20</th>
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<th>OSE 120</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-phase AC motor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rating (50 Hz)</td>
<td>up to 4 kW</td>
<td>up to 4 kW</td>
<td>up to 7.5 kW</td>
<td>up to 18.5 kW</td>
<td>up to 30 kW</td>
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<tr>
<td>Rating (60 Hz)</td>
<td>up to 4.6 kW</td>
<td>up to 4.6 kW</td>
<td>up to 8.6 kW</td>
<td>up to 21 kW</td>
<td>up to 35 kW</td>
<td>up to 60 kW</td>
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<tr>
<td>Speed at 50 Hz</td>
<td>3000 rpm</td>
<td>3000 rpm</td>
<td>3000 rpm</td>
<td>3000 rpm</td>
<td>1500 rpm</td>
<td>–</td>
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<tr>
<td>Speed at 60 Hz</td>
<td>3600 rpm</td>
<td>3600 rpm</td>
<td>3600 rpm</td>
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<td>1800 rpm</td>
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<td>Type of protection</td>
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<tr>
<td>Centripetal pump</td>
<td>1 bar</td>
<td>1 bar</td>
<td>1–2 bar</td>
<td>2 bar</td>
<td>2 bar</td>
<td>2–3 bar</td>
</tr>
</tbody>
</table>

Weights and shipping data

Separator with bowl and motor

<table>
<thead>
<tr>
<th>Weights</th>
<th>150 kg</th>
<th>205 kg</th>
<th>320 kg</th>
<th>1060 kg</th>
<th>1620 kg</th>
<th>2500 kg</th>
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</thead>
<tbody>
<tr>
<td>Case dimensions (L x B x H)</td>
<td>1100 x 600 x 1000 mm</td>
<td>1280 x 700 x 1030 mm</td>
<td>1300 x 870 x 1030 mm</td>
<td>1800 x 1000 x 1400 mm</td>
<td>1800 x 1050 x 1600 mm</td>
<td>2000 x 1500 x 2100 mm</td>
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<tr>
<td>Shipping volume</td>
<td>0.66 m³</td>
<td>0.92 m³</td>
<td>1.17 m³</td>
<td>2.5 m³</td>
<td>3.0 m³</td>
<td>6.0 m³</td>
</tr>
</tbody>
</table>

Dimensions

| A    | 760 mm | 846 mm | 1005 mm | 1283 mm | 1611 mm | 1778 mm |
| B    | 401 mm | 544 mm | 550 mm  | 737 mm  | 867 mm  | 1190 mm |
| C    | 759 mm | 880 mm | 1009 mm | 1288 mm | 1503 mm | 1942 mm |

Weights and shipping data

The information contained in this brochure merely serves as a non-binding description of our products and is without guarantee.

Binding information, in particular relating to capacity data and suitability for specific applications, can only be provided within the framework of concrete inquiries.

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www.westfalia-separator.com

GEA Westfalia Separator Group GmbH

Werner-Habig-Straße 1 · 59302 Oelde (Germany)
Phone +49 2522 77-0 · Fax +49 2522 77-1778
www.westfalia-separator.com