



Technical Data

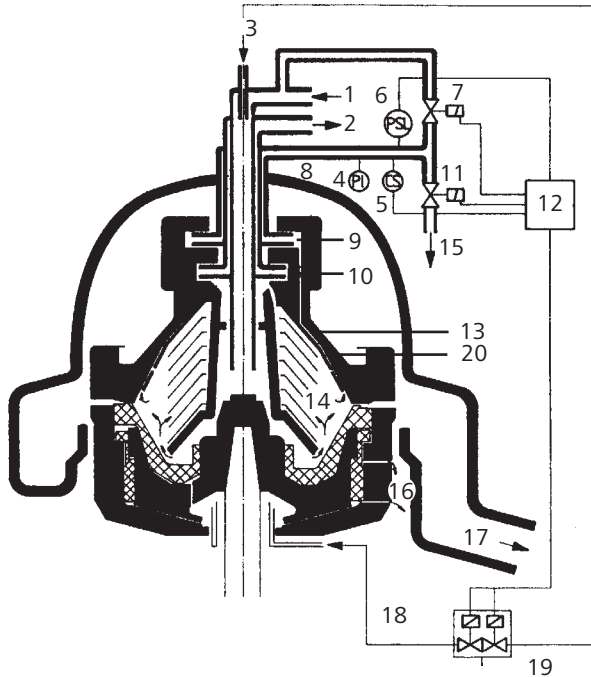
Westfalia Separator D-Type Mineral Oil Separators

OSD 6, OSD 18, OSD 35, OSD 60

with Westfalia Separator UNITROL® system

Operating principles and constructional features

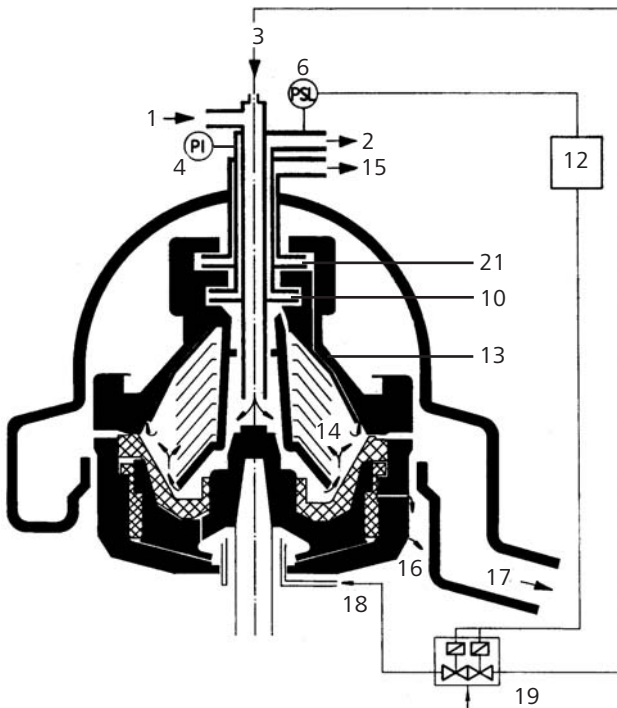
Westfalia Separator D-Type Separators



OSD...-0136-067

OSD...-0196-067

- 1 Dirty oil feed
- 2 Clean oil discharge
- 3 Displacement water
- 4 Pressure gauge
- 5 WMS sensor
- 6 Pressure switch
- 7 Solenoid valve
- 8 Sensing liquid flow
- 9 Sensing liquid pump
- 10 Centripetal pump, clean oil
- 11 Solenoid valve
- 12 Control unit
- 13 Separating disc
- 14 Sludge holding space
- 15 Dirty water discharge
- 16 Operating-water discharge
- 17 Sludge discharge
- 18 Operating-water
- 19 Solenoid valve
- 20 Control holes



OSD...-91-067

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- 10 Centripetal pump, clean oil
- 12 Control unit
- 13 Separating disc
- 14 Sludge holding space
- 15 Dirty water discharge
- 16 Operating-water discharge
- 17 Sludge discharge
- 18 Operating-water feed
- 19 Solenoid valve block
- 21 Centripetal pump, dirty water

The Westfalia Separator D-Type 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 D-Type separators enables controlled bowl ejections to be carried out at full operating speed.

Separators

OSD...-0136-067

OSD...-0196-067

with new Westfalia Separator UNITROL® 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 centripetal pump (10). The centrifuges operate without regulating rings.

New Westfalia Separator UNITROL® system

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

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

Separators

OSD...-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 (15) is pressure discharged by means of a centripetal pump (21). The clean oil (2) is also discharged by means of a centripetal pump (10). The centrifuges operate with regulating rings for the heavy phase.

Water Monitoring System (WMS)

The small volume of liquid (8) which is branched off via the separating disc (13) and the sensing liquid pump (9) is monitored by a conductivity sensor (5). If the sensor registers water, the solenoid valve (11) opens and the water flows off through the dirty water discharge (15). As soon as the sensor detects a change in conductivity brought about by an increased proportion of oil, the solenoid valve (11) 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 (13). It is conveyed by the sensing liquid pump (9) through the pressure switch (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 (14), the pressure switch (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".

Frame, hood and drive

The separators are of enclosed design and meet the requirements of the classification societies. The hood is hinged. 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
- Flow indicator
- Pressure gauge
- Pre-set valve with connectors
- Pressure switch 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 Westfalia Separator Mineraloil Systems):

- Motor control
- Control unit for automatic operation
- Pump
- Pre-strainer
- Pre-heater
- Automatic steam
- Shut-off valve
- Controls for electric heaters
- Set of tools
- Set of spare parts
- Vibrocontrol
- Product temperature monitoring

Separators OSD 6, OSD 18, OSD 35, OSD 60



OSD 6



OSD 18



OSD 35



OSD 60

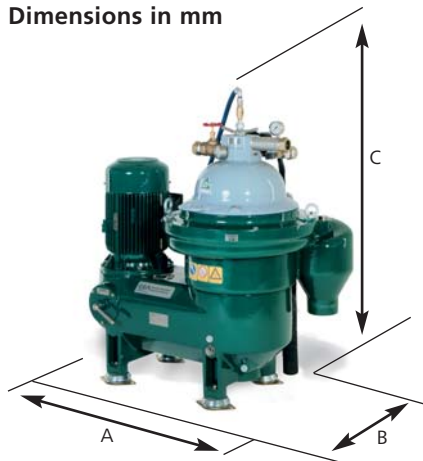
Technical data

Westfalia Separator D-Type

Technical data	OSD 6	OSD 18	OSD 35	OSD 60
Bowl				
Speed	12,000 rpm	11,500 rpm	8200 rpm	6800 rpm
Volume	1.5 l	3 l	8 l	21 l
Solids holding space	0.9 l	1.5 l	4 l	11 l
3-phase AC motor				
Rating (50 Hz)	up to 4 kW	up to 7.5 kW	up to 18.5 kW	up to 30 kW
Rating (60 Hz)	up to 4.6 kW	up to 8.6 kW	up to 21 kW	up to 35 kW
Speed at 50 Hz	3000 rpm	3000 rpm	3000 rpm	1500 rpm
Speed at 60 Hz	3600 rpm	3600 rpm	3600 rpm	1800 rpm
Type	IMV1	IMV1	IMV1	IMV1
Type of enclosure	IP55	IP55	IP55	IP55
Centripetal pump	1 bar	1 – 2 bar	2 bar	2 bar
Weights and shipping data	OSD 6	OSD 18	OSD 35	OSD 60
Separator with bowl and motor				
Weight	200 kg	310 kg	1050 kg	1600 kg
Bowl				
Weight	42 kg	72 kg	190 kg	360 kg
Case dimensions				
(L x B x H)	1280 x 700 x 1030 mm	1300 x 870 x 1030 mm	1800 x 1000 x 1400 mm	1800 x 1050 x 1600 mm
Shipping volume	0.92 m ³	1.17 m ³	2.5 m ³	3.0 m ³
Dimensions	OSD 6	OSD 18	OSD 35	OSD 60
A	753 mm	908 mm	1185 mm	1515 mm
B	540 mm	583 mm	752 mm	865 mm
C	990 mm	1097 mm	1382 mm	1606 mm

Capacities, for optimum throughputs refer to table of capacities.

Dimensions in mm



Function

Continuous treatment of fuel and lube oils.

Application

Mainly on board of ships, in power stations, industry and oilfield.

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