

## Solids-ejecting centrifuge, type WHPX 410TGD-24G

### Applications

The WHPX 410 is a solids-ejecting centrifuge. It is used for cleaning of cutting and grinding oils.

Waste oil can be recovered and used as fuel or fuel supplement. Upgrading of residual fuels.

### Working principle

The feed is introduced to the rotating centrifuge bowl (fig 2) from the top via a stationary inlet pipe (1), and is accelerated in a distributor (2) before entering the disc stack (3). It is between the discs that the separation of the two liquid phases and the solids takes place.

The oil phase moves towards the centre of the bowl and is discharged by a paring disc (4).

The water phase leaves the bowl over the top disc (5) and through a paring disc (6).

The heavier solids phase is collected at the bowl periphery, from where it is discharged intermittently.

The solids discharge is achieved by a hydraulic system below the separation space in the bowl, which at preset intervals forces the sliding bowl bottom (7) to drop down, thus opening the solids ports (8) at the bowl periphery.

The bowl is mounted on a vertical spindle (9) driven by a horizontally mounted motor, via a worm gear.

### Features

The WHPX 410 is characterized by the following main features:

- Heavy-duty design**  
 The heavy-duty design constructions of the WHPX 410 means that those parts, e.g. sliding bowl bottom and sludge ports, subjected to heavy wear by feed solids, have been specially erosion-protected.
- Controlled Partial discharge**  
 The centrifuge utilizes a unique technique, controlled partial discharge for intermittent removal of accumulated sludge from the bowl during operation. The sludge is ejected in small portions at frequent intervals with no interruption of oil-flow through the centrifuge. Only sludge and a small volume of water is ejected during the very short period of bowl opening with virtually no oil losses

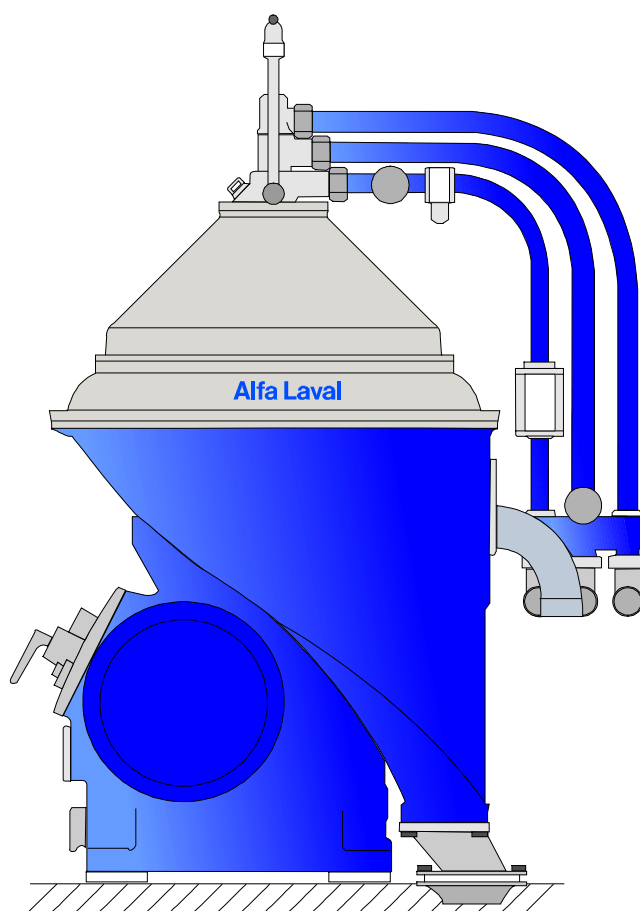


Fig 1. WHPX 410TGD-24G.

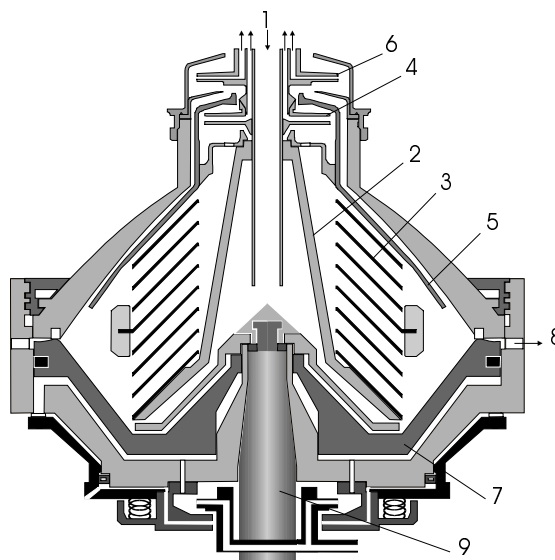


Fig 2. Typical bowl drawing for a solids-ejecting centrifuge in purifier execution. The bowl can also be arranged as clarifier. Drawing details do not necessarily correspond to the centrifuge described.

## Standard design

All liquid-wetted parts in the bowl are in high-grade stainless steel except the top disc, which is in red metal and gaskets in nitrile.

The centrifuge is available with main connections according to SMS standard.

## Technical data

Max. throughput capacity	16 m <sup>3</sup> /h <sup>1)</sup>
Max. solids-handling capacity	126 l/h
Feed temperature range	0 - 100 °C
Installed motor power	11 kW
Noise level (ISO 3744 or 3746)	84 dB(A)

<sup>1)</sup> Actual consumption depends on composition of feed and separation demands.

## Utilities consumption

Electric power	4.5 - 8.1 kW <sup>1)</sup>
Discharge and make-up liquid	1.4 l/discharge

<sup>1)</sup> Depends on feed flowrate.

## Shipping data (approximate)

Centrifuge with bowl and motor	
Net weight:	1151 kg
Gross weight:	1251 kg
Volume:	2.7 m <sup>3</sup>

## Main dimensions (approximate)

