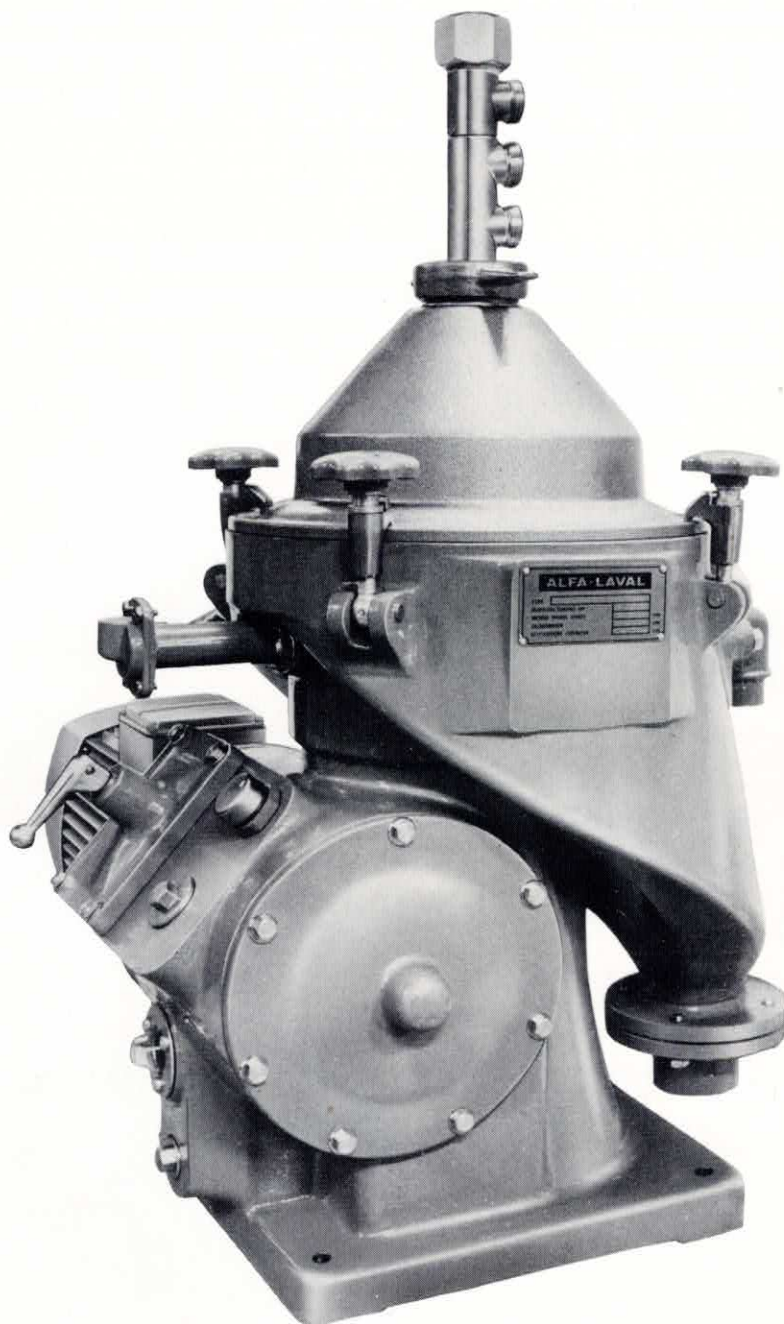


THE WSPX 204 COOLANT CLEANING UNIT



The benefits of centrifugal cleaning of coolants are now available also to small and medium-sized metalworking plants.

Compact unit for small and medium-sized plants

Centrifugal separators for continuous removal of tramp oil and other contaminants from coolants — including both oil-based and synthetic fluids — have been known for years.

With the compact Alfa-Laval WSPX 204 separator small and medium-sized metalworking plants with sumps of 0.1-100 m³ can take advantage of the benefits of centrifugal treatment that were previously available mainly to plants with large central sumps. The WSPX 204 unit is designed to handle 300-1000 l/h. Users with larger sumps may desire multiple-unit installations or one of the larger Alfa-Laval coolant separators.

Economical and environmental benefits

- **Reduced machine tool downtime means increased production time.** The operator's time required for coolant changes and refilling will be reduced considerably thus resulting in increased production time.
- **Continuous coolant life.** Used coolant need not be dumped. Centrifugal separation will extend many-fold the intervals between necessary coolant disposals and replenishments.
- **Tramp oil recycling.** Formerly wasted quantities of tramp oil can be reused as boiler fuel, lubricants or road tar, or sold to recyclers.
- **Less or no sump clean-out** means reduced disposal costs.
- **Reduction of oil mist and bad odour in the plant.** The continuous removal of tramp oil will eliminate the oil mist and odour problems and thus improve the work environment. The incidence of dermatitis on the part of workers, caused by untreated coolants will then also be greatly reduced.

Cost justification

The WSPX 204 unit will usually pay for itself in 1-2 years — often in less than a year.

Savings will come through increased production time, thanks to reduced machine tool downtime, the benefits of recycling tramp oil and reduced disposal costs.

Performance

Recommended throughputs	l/h	UK gal/h
Tramp oil removal	300-1000	65-220
Emulsion splitting	100- 400	22- 90
Washing liquids cleaning	300-1000	65-220

Mobile module or permanent installation

The WSPX 204 machine can be supplied as a platform-mounted self-contained unit with separator and the necessary auxiliary equipment, which can be fork-lifted from one sump to another within the plant.

For permanent installation the separator with controls and accessories can be delivered without the platform.

Contact your nearest Alfa-Laval representative for further information about our coolant cleaning systems and how they can convert your coolant problems into cash savings.

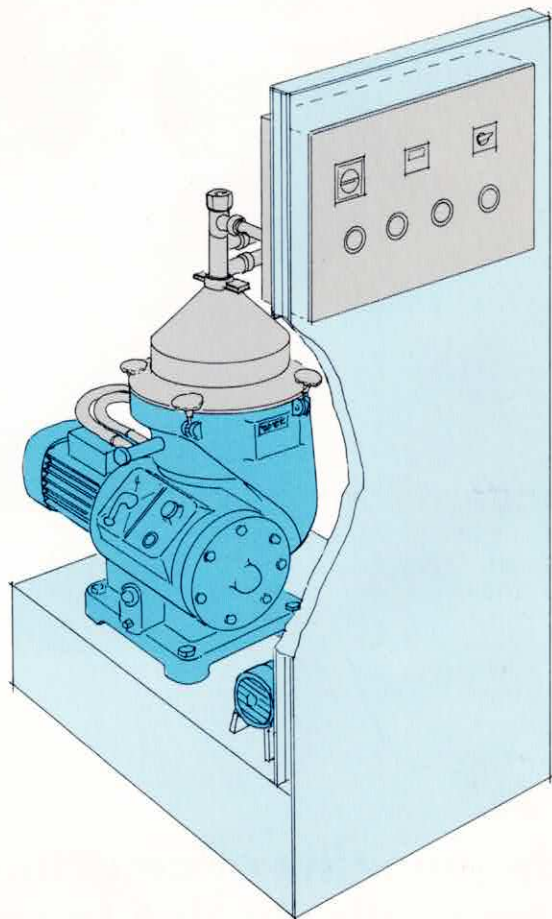


Fig. 1. The WSPX 204 self-contained mobile module.

Working principle

Separation takes place in a bowl of self-cleaning* type, the separated sludge being discharged intermittently while the machine is running at full speed. A hydraulic system incorporating a sliding bowl bottom (see fig. 2) is used to open and close the bowl allowing the sludge to discharge through a number of slots at its perimeter. This discharge cycle is normally controlled by an automatic timing device but can also be initiated manually.

The bowl is arranged for concentration. The contaminated liquid is fed into the centre of the bowl where it is separated by centrifugal force into its various phases, the heaviest phase (the solid particles) being deposited at the periphery of the bowl. Concentrator configuration (Fig. 2) is used for separating liquids containing solids and an appreciable amount of oil. The oil and water are discharged continuously through two separate outlets at the top under pressure from two separate built-in paring disk pumps.

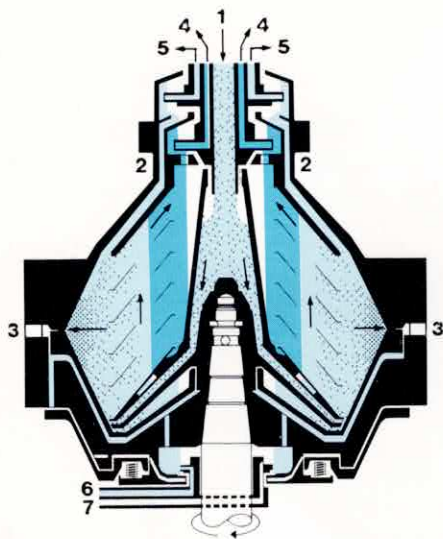


Fig. 2. Longitudinal section through bowl in concentrator design. The bowl is shown in closed position. (6) indicates water keeping the sliding bowl bottom closed against the bowl hood. (7) is the inlet for operating water for opening and closing.

1. Feed
2. Water/oil interface
3. Sludge outlet
4. Outlet for oil
5. Outlet for purified water or emulsion

Standard design

The machine comprises a frame, containing in its lower part a horizontal drive shaft with friction clutch and brake, worm gear, lubricating oil bath, and vertical bowl spindle. The bowl is fixed on top of the spindle inside the space formed by the upper part of the frame and the frame hood, which also carries the feed and discharge systems.

Materials: **frame** — cast iron («Centriblue» finish**), **frame hood** — cast iron (grey finish**), **bowl** including bowl body and hood, sliding bowl bottom, operating slide, disk stack, and gravity disks — stainless steel, **distributor, distributor cone and top disk** — stainless steel, **paring-disk pumps** — stainless steel, **other inlet and outlet parts** — tinned steel, bronze and brass.

*) Also known as solids-ejecting.

**) An epoxy enamel.

Basic equipment

Concentrator parts, revolution counter, set of gravity disks, inlet and outlet device, standard set of spares, standard set of fittings.

Extra equipment

Electric motor, starter, set of tools, set of recommended additional spares for long time service, automatic discharge control unit, operating water tank, interface control equipment.

Note. The following alternative can be ordered.

1. Fittings comprising flow meter and thermometer.
2. Set of connections comprising 3 flexible steel hoses for liquid in- and outlets.

Standard drive is direct to the horizontal drive shaft by flange motor. Other arrangements on request.

Shipping data

WSPX 204TGT, complete with set of tools, excluding motor

Net weight:	250 kg (550 lbs)
Gross weight:	350 kg (770 lbs)
Volume:	1.0 m ³ (35 cu.ft.)

Technical data

Power consumption:	50 Hz (cps)		60 Hz (cps)	
	kW	hp	kW	hp
	1.4	1.9	1.4	1.9

Dimensions

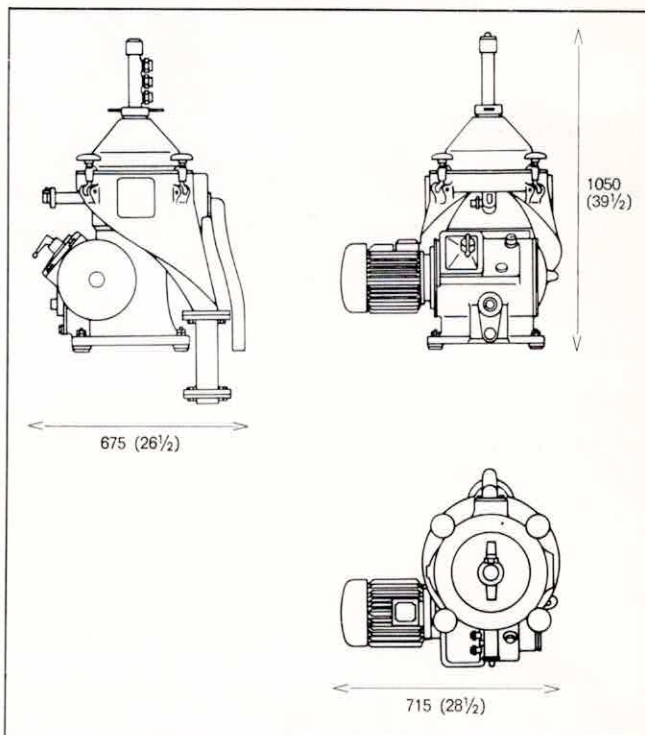


Fig. 3. Measurements in mm (in). Machine as shown here is with standard set of fittings.