



## Oil separator CMS 801

### Description:

Metal working fluids are exposed to fungus, yeast, bacteria in warm damp and dark environment of a coolant sump. Tramp oil is one of the most common contaminants in metalworking fluids as a function of the process or the equipment. The sources can be from Hydraulic fluid -- Slide ways, Gear and spindle lubricants -- corrosion preventive stamping lubricant and other oils on the parts from previous process. It remains in machine at 3 status:

- Film or skin on the surface of the coolant
- Floating drops of oil in coolant
- Solved in coolant

### Tramp oil existence cause:

#### Corrosion:

Oil layer on sump cut off oxygen flow to MWF and anaerobic bacteria start to thrive and revive sulfate and generate acidic gas that cause corrosion in tank and other parts of machine. Sulfide reacts with metal parts of machine and cause corrosion. Also acidic corrosion in machine parts is a result of PH reduction.

#### Fluid delivery problems:

Tramp oil reacts with salts in the water and form insoluble soaps which block pipes, pumps and sediment in sump. This sediment is reason of corrosion and block of pipes, filters and other parts.

#### Waste fluid volume growth:

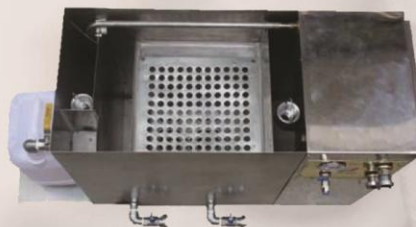
Early destruction of coolant and growth in number of discharge increase waste materials volume and sewage treatment costs.

#### Microbial destruction and unpleasant smell:

Oil layer on sump cut off oxygen flow to MWF, and anaerobic bacteria start to thrive in absence of oxygen. Anaerobic bacteria excrete hydrogen sulfide ( $H_2S$ ) in their metabolic process. Bacteria thrive in addition to PH decreasing and sludge production of emulsion cause microbial pollution of air and respiratory disease.

#### Suspended oil particles and smoke production in cutting zone:

Oil existence in cutting zone cause oil spraying and smoke production that are harmful for health.







**RTS / Lub**



**Decrease cutting tool life:**

Tool life and surface finish can suffer since the loose emulsion droplets cannot get between the tool and work piece as efficiently as a fresh emulsion. As cutting tools perform less effectively, this results higher tool wear and possibly poor surface finish. This can also result in more smoke and mist at the point of cut.

**Machine dirtiness:**

Oil vaporize and sprayed to all parts of machine and accumulation of these oils cause machine dirtiness, machine parts destruction, such as hoses, belts packings

**Benefits of tramp oil separation:**

- Concurrent elimination of tramp oil and suspended particles.
- Prevention from unpleasant smell of emulsion.
- Prevention from early destruction of emulsion.
- Increase coolant life time.
- Corrosion protection of machine parts.
- Increase in cutting tool life.
- Keep machines clean.
- Keep a clean working environment and prevention from operator sicken.



**Oil separator function:**

Tramp Oil Separators have been designed to both effectively and economically remove harmful tramp oils. Via a floating suction device and a pump, lubricant is sucked from machine sump. In a continuous flow of fluid, tramp oil is separated from lubricant and collected in a container. Pure lubricant returns to machine tank from other side of separator. Separation is a physical function so doesn't effect on lubricating properties. Separation is a concurrent function so we don't need to turn of the machine.

**Application:**

- Milling                      Cleaning machine
- Turning                     Grinding

**Technical properties:**

- Driven by compressed air and no need for electricity
- Stainless steel components
- Permanent steel filter
- Quick connect pipe's couplings
- No need for consumable equipment
- Mobile



Weight	Capacity	Max pressure	Dimensions (mm)		
			Length	width	Height
kg	L/h	bar			
40	900	7	1300	550	950