



Global standard in filtration systems

## Central Coolant (Emulsion / Pure Oil) Filtration and Management System

In the metal processing sector, we refer to the connection of all independent machining units using coolant fluid with a proper piping system to the main filtration and management unit, where the fluid is controlled centrally, as the "Central Coolant Filtration and Management System".

The main features of the Central Management System (CMS):

**Main Tank:** the System's main tank serves not only as an indispensable coolant fluid reserve but the upper surface too serves as a platform to install the CMS equipment.

**Filtration Groups:** the used cooling fluid is brought through a piping line to the filtration equipment. Once through the CMS, the coolant is taken through various filtering processes:

**Magnetic Filtering phase:** the magnetic (ferro) particles are first separated through a non-consumable device which works similarly to paper filter.

**Paper Filtering phase:** the next phase separates solid particles, using paper filters of different weight and thickness to ensure the complete automatic separation of all impurities from the coolant fluid.

**Waste Mineral Oil Separation:** these units efficiently separate foreign oils mixed within the coolant fluid. They serve as auxiliary technical components within CMS.

**Main Tank Sludge Removal:** A technical component that enhances the efficiency of the CMS by preventing the long-term accumulation of very small particles from the liquid passing through magnetic and paper filters, on the bottom of the tank.

**Vacation Mode:** especially for maintenance during longer time-frames, it keeps the fluid from stagnating and developing anaerobic bacteria by circulating and oxygenating it.

**Automatic Filling:** this system compensates operational or environment-related coolant losses by regulating the tank volume, for any desired concentration.

**Digital Emulsion Condition Monitoring:** this fully automatic system allows for the monitoring and control of all conditions of the coolant fluid within the tank (pH, temperature, concentration, conductivity) through digital means.



## Central Filtration Systems

These are fully automatic systems where multiple filtration units are connected to a central filtration system and operate in sync with the CNC machines.

### Features:

- Maintaining 24/7 control over the level of contamination in coolant fluids and ensuring the homogeneity of the fluid
- Effective filtration of dirty emulsion to the desired degree, resulting in the purification of the coolant fluid
- Coolant fluid consumption is reduced significantly
- Machines are ready to operate with homogenous, refreshed, purified emulsion, leading to reduced tool wear and improved surface quality of the processed parts
- It eliminates the laborious task of coolant tank cleaning
- Automatically compensates any depleted coolant, no work needed to refill the fluid tank.
- CMS's ability to operate in vacation mode prevents coolant from spoiling during factory downtime.
- It significantly extends the emulsion's lifespan.

### APPLICATION AREAS

Chip Manufacturing Production lines /  
Copper Wire Drawing lines /  
Rolling Pipes / Profile Production lines

CNC Grinding Production lines  
Wheel (Aluminium / Steel) Production lines  
Sheet Metal Rolling lines



Application example



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