



The Mechanical Workshop

Applications & Solutions



The mechanical workshop is an ideal customer type for the DUPUY Oil&Chip product line, as it provides many varieties of applications for which we can offer solutions.

Our products are essential to the production cycle as they contribute to **improve production efficiency and performance** as well as **safety in the workplace**.

Let us see how.....

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The Machining Centre



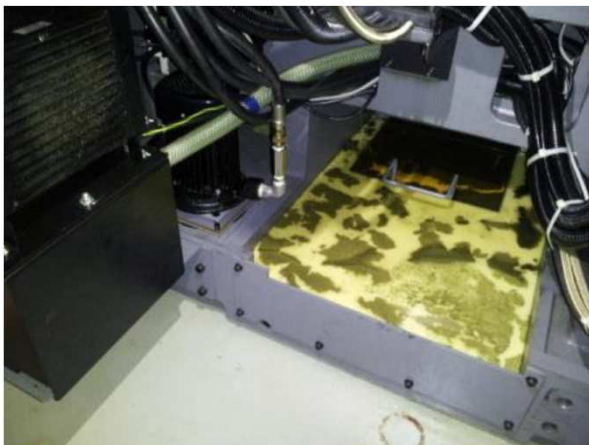
This is a typical customer for our Oil&Chips line, which was developed in answer to maintenance requirements for these types of machines.

Machining centres typically process many pieces at a time simultaneously, removing quantities of material by means of tools and utensils, and by so doing produce chips.

A chip conveying system transfers this material to the outside of the machine.

Below (or in proximity of) the machine there is **ALWAYS** a tank containing liquid which is used to cool off the tools and utensils during the production process.

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The Machining Centre

Here we find a tank containing dirty emulsion.

The machine's hydraulic oil, lighter in density, floats on the surface.

Below this surface we will find a layer of «good» emulsion and then a layer of sludge and fine chips which escaped from the conveyor and deposited to the bottom of the tank.

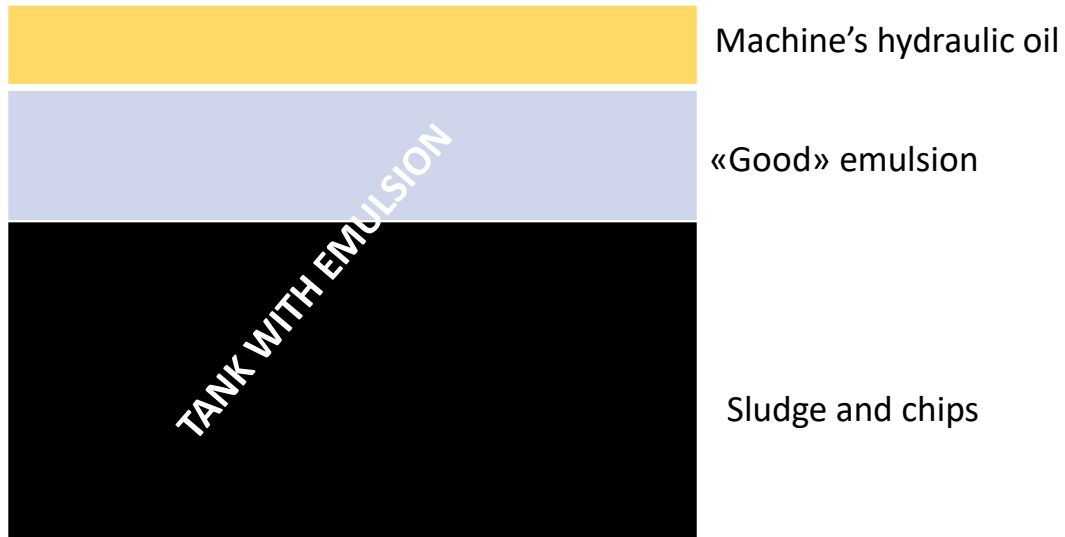


This is an example of a conveyor which carries bigger chips to a collecting tank away from the machine.

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The Machining Centre

This is the conformation of the coolant inside the tank:



As time passes, the top and bottom layers increase, causing problems to the production cycle:

- ❖ Stop production
- ❖ Empty tank
- ❖ Clean tank

This must be undertaken at least twice a year – a difficult and dirty job, considering also the large quantities involved.

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The Machining Centre



Other disadvantages when the coolant layers increase:

- Cooling nozzles will clog
- Coolant transfer pump will clog
- The bottom layer occupies increasingly more volume inside the tank leaving less space for clean coolant.
- Coolant cannot cool sufficiently and is sent back to the machine still warm.
- As the top layer of oil thickens the «good» coolant is not oxygenated and spoils.

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ANOTHER TYPE OF CUSTOMER INTERESTED IN OUR OIL&CHIP LINE: THE TURNING MILL



Large quantities of coarse material are removed.

Chip conveyors are not always present.

Machining also without coolant (which means no tank present).

In this case, chip removal is the main requirement.



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WHO ELSE COULD BE INTERESTED IN VACUUMING OF CHIPS (WET OR DRY)?



Gear Producers (neat oil)



Moulding Machines



Turbine producers
(energy sector)

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SOLUTIONS

DU-PUY Oil&Chips Line

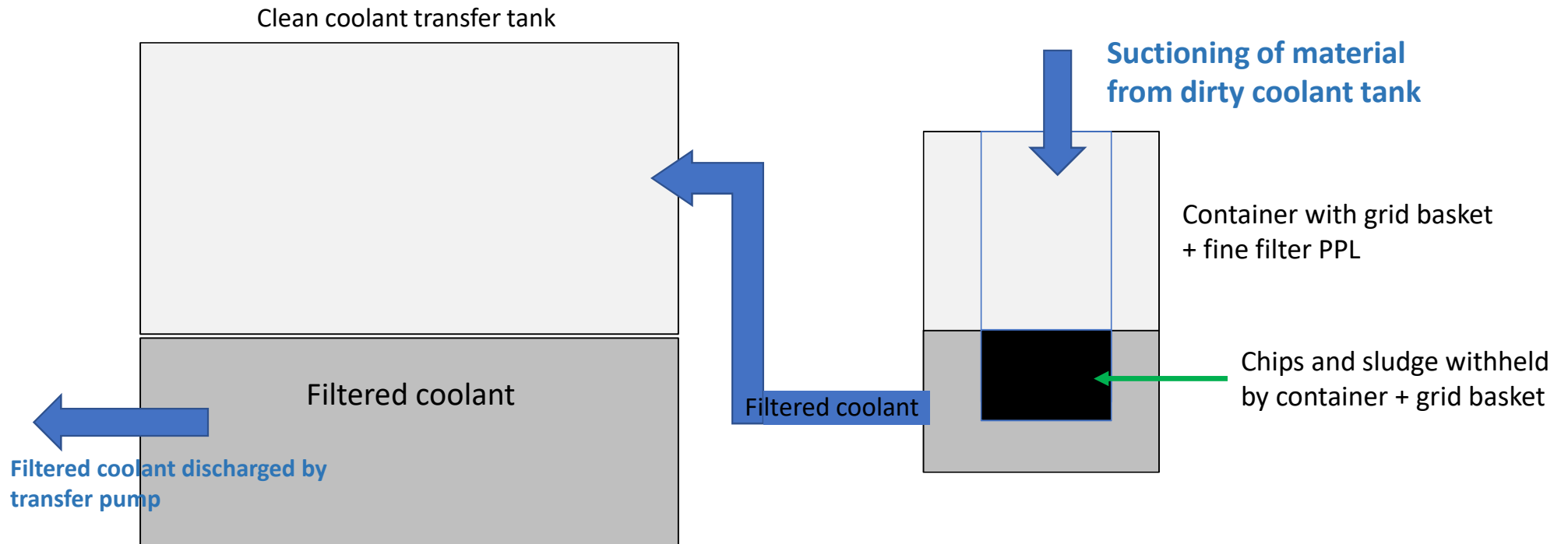
Benefits for the customer:

- Clean the emulsion in the tank and separate chips **rapidly** (tank capacities can range from 60L to 450L of coolant).
- Coolant transfer pump (if present) with by-pass system allows **simultaneous operation** of vacuuming and emptying of coolant from vacuum unit's tank: no need to stop the vacuum system, direct transfer of clean coolant back into production process.
- Coolant recovery/**recycling** thanks to finer filtration option (100 and 300 micron) with PPL filters.
- Recycling of chips
- **Fast** emptying and **easy** cleaning of coolant tank



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Oil&Chip Line – Working Principles



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OIL&CHIP LINE - Single Phase



OILVAC 60



1 by-pass motor 1000W



Float for liquid level control.



Galvanized steel basket for retention of metal chips and swarf.



Ball valve for liquid discharge.

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OIL&CHIP LINE - Single Phase



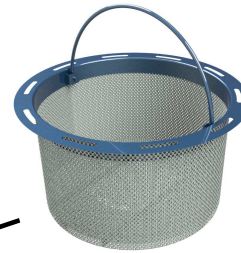
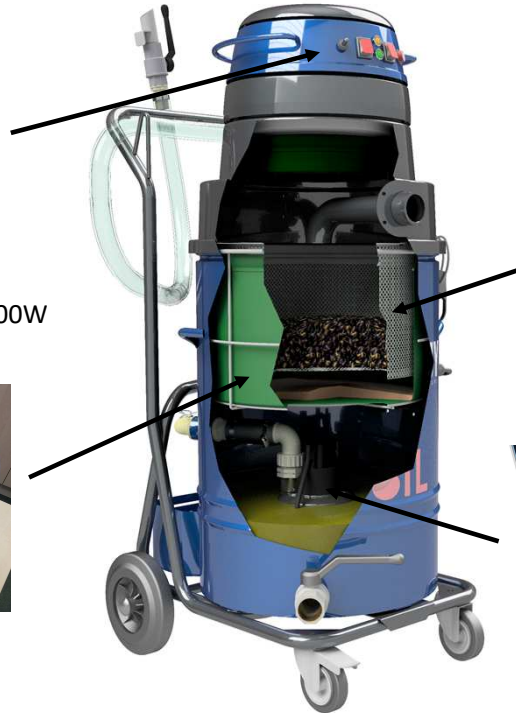
OILVAC 100/PUMP



2 by-pass Motors 1000W



PPL 300 micron
fine filtration



Steel basket for retention of
chips and swarf



Coolant transfer pump



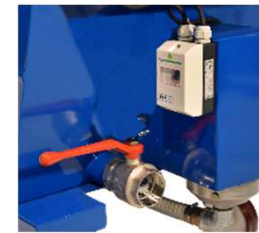
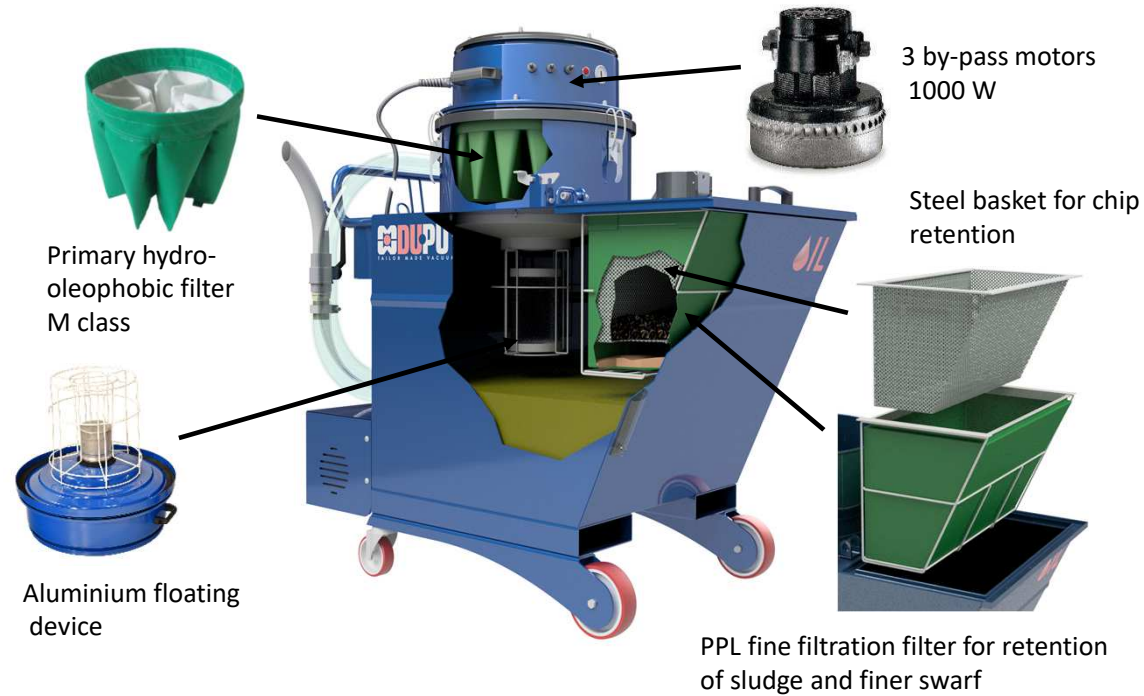
Electronic level
sensor

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OIL&CHIP LINE - Single Phase



OILVAC 200



Ball valve + elec. pump
coolant discharge

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OIL&CHIP LINE - Three Phase



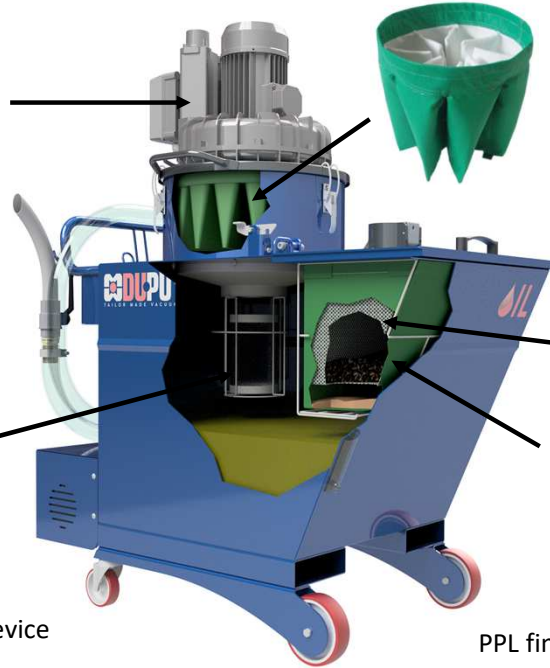
OILVAC 200 T



3-phase motor
3 kW

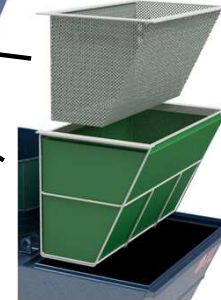


Aluminium Floating device



Primary hydro-oleophobic filter
M class

Steel basket for chip retention



PPL fine filtration filter for
retention of sludge and finer swarf



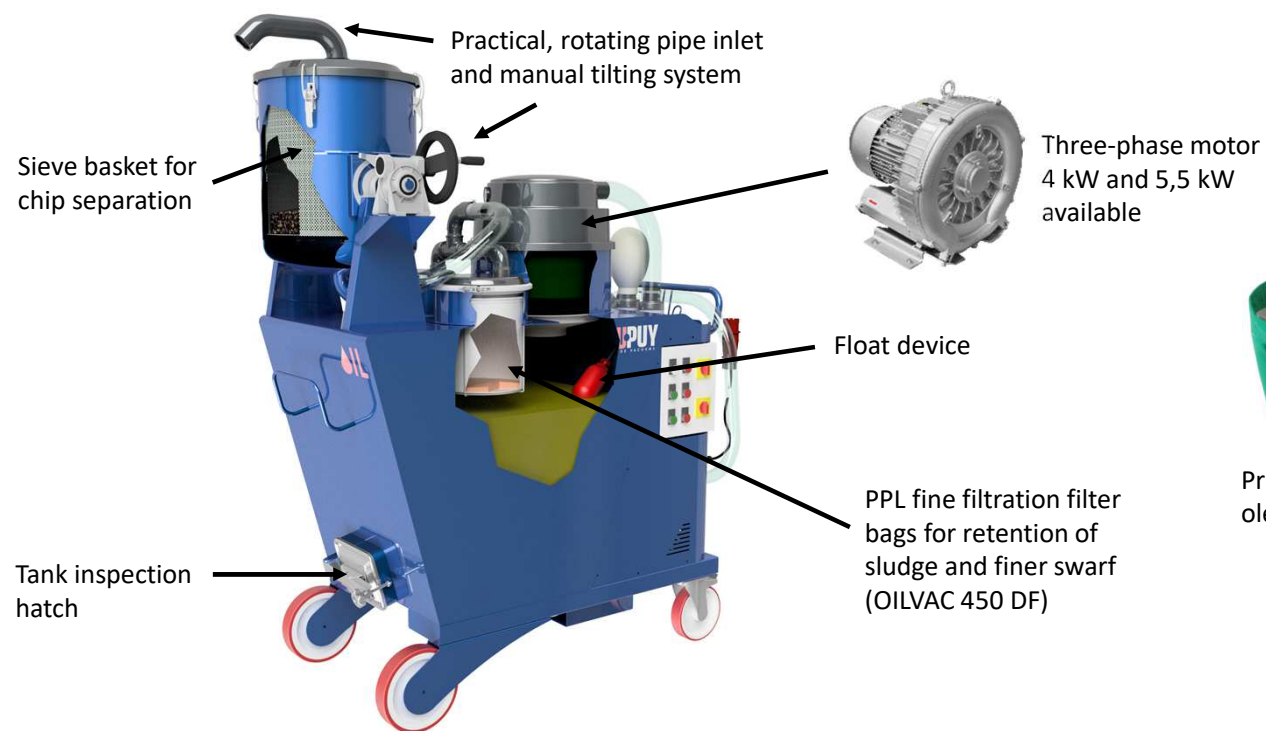
Ball valve + elec. pump
coolant discharge

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OILVAC 450/DF

OIL&CHIP LINE - Three Phase



Primary hydro-oleophobic M filter

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To Summarise:

Our Oil&Chip products are instruments **essential** to performing maintenance of machining centres.

Planned, designed and produced to **assist** and **ease** the difficult task of coolant tank maintenance.

These units are an essential asset when used in:

- ❖ Machining centres
- ❖ Transfer machining
- ❖ CNC milling machines (also neat oil)



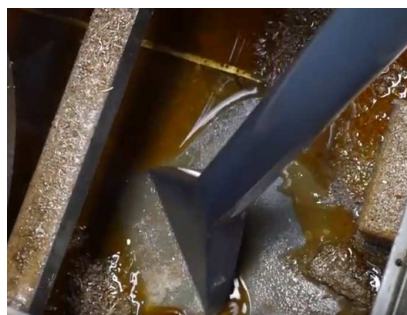
Attention:

Our Oil&Chip line cannot filter and recover emulsion from grinding machines (too much and too fine material).

They are not oil skimming machines; they can suction the oil floating on the surface and they can separate chips from the coolant.

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OIL&CHIP LINE – APPLICATION EXAMPLES



OILVAC 450



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**TO SUMMARISE:
IDEAL CUSTOMERS FOR OUR OIL&CHIP LINE**



Machining Centres
Precision Machining Centres
Taps and fittings (brass) producers
Producers of hydraulic elements
Turning Mills

NO GRINDING APPLICATIONS

Questions to arouse customers' interest:

- ✓ How do you empty your tanks?
- ✓ How do you clean around the machine?
- ✓ How much time is needed?
- ✓ Must you stop production to do so?

DUPUY OIL&CHIP range provides **fast, clean** and **easy** tank cleaning without having to shut down the machine.

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DUPUY OIL&CHIPS LINE PLUS POINTS AT A GLANCE



- Remove surface oil
- Suction chips and sludge from tank bottom
- Empty tank
- Clean tank
- Recycle coolant
- Efficient production
- Money saving
- Clean & safe working environment
- Happy workers

EASY!

QUICK!

CLEAN!



- 180 + 300L/min. transfer pumps
- Simultaneous vacuum/pump operation
- Fine filtration of chip/sludge available (PPL filter)
- Mobile units
- Tilttable chip container
- Smaller to large capacity containers
- Occasional or 24/7 operation
- Single and three phase available

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The mechanical workshop is one of our primary customers on whom we must keep our focus.

Different types of workshops can need different types of units from our Oil&Chip range.

Remember, these vacuum units are not only useful to keep the **workplace clean**, but are also essential to keep **production efficient**.

The mechanical workshop may have other instruments at hand to clean the workplace, but not necessarily do they have the correct one for their application.

Go, investigate and propose a DUPUY Oil&Chip solution!

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