

## IFDR SOLUTIONS: innovative engineering

IFDR fine filtration systems are born to take care of the complete management of the coolant, whose role is essential both for the success of the mechanical processing and for the right maintenance of the machine tool.

They are suitable for any type of machine tool on the market that uses emulsion as a coolant, and tailored according to each customer's needs, with the possibility of being fitted with a wide range of available delivery pumps, with different pressures and flow rates.

IFDR systems are identified by the numerical initials of the considered model, which represent the overall system volume and the Filstar unit.

The IFDR fine filtration systems meet four basic needs of the machine tool:

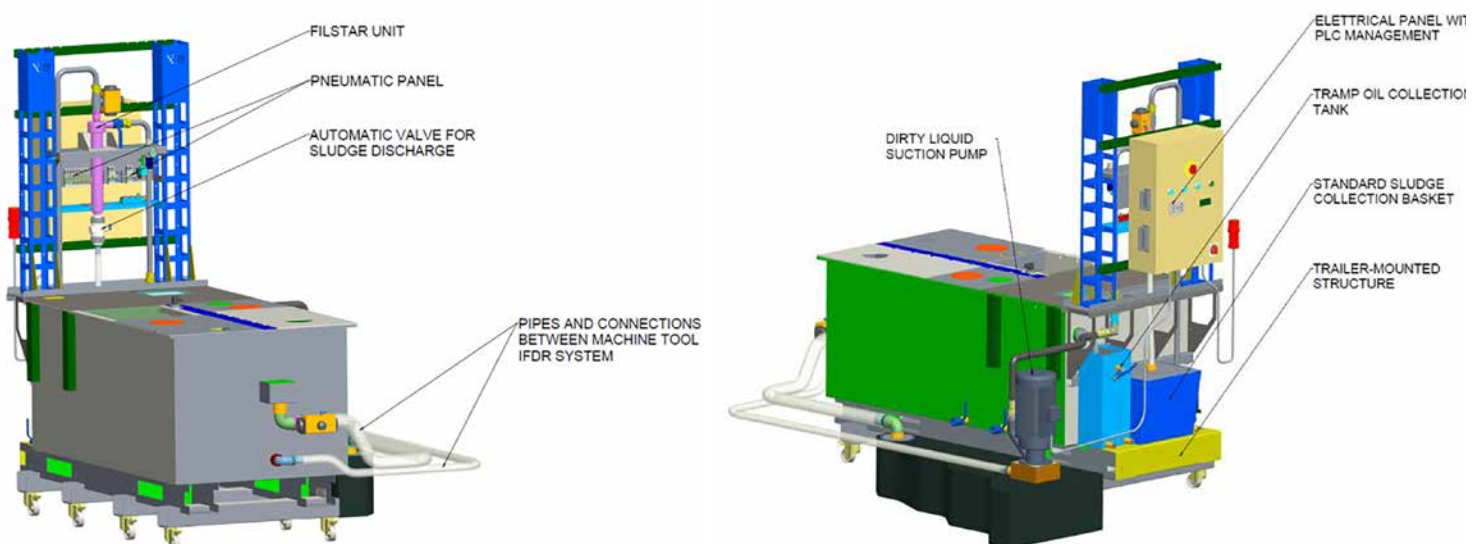
- To clean the coolant from highly abrasive micrometric metal particles that are formed during processing.
- To remove all oily substances that stop on the surface of the coolant.
- To reduce the bacterial contamination of the coolant, extending its life.
- To relaunch the perfectly clean liquid in the working area to the maximum pressure required by the tool used.

The advantages of IFDR fine filtration systems are:

- Patented filtration system below 10  $\mu\text{m}$ .
- Integrated dynamic tramp oil separation system.
- High-pressure coolant towards the spindle.
- Reduction of the total volume of coolant used.
- Reduction of maintenance costs due to the lack of filtering elements.
- The increase in tool life due to the reduction of the polluting granulometry present in the coolant and to pressure and flow rate conditions required by the manufacturer.

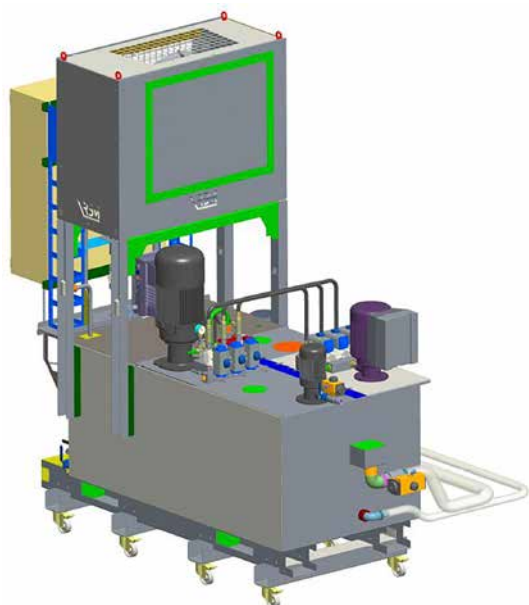
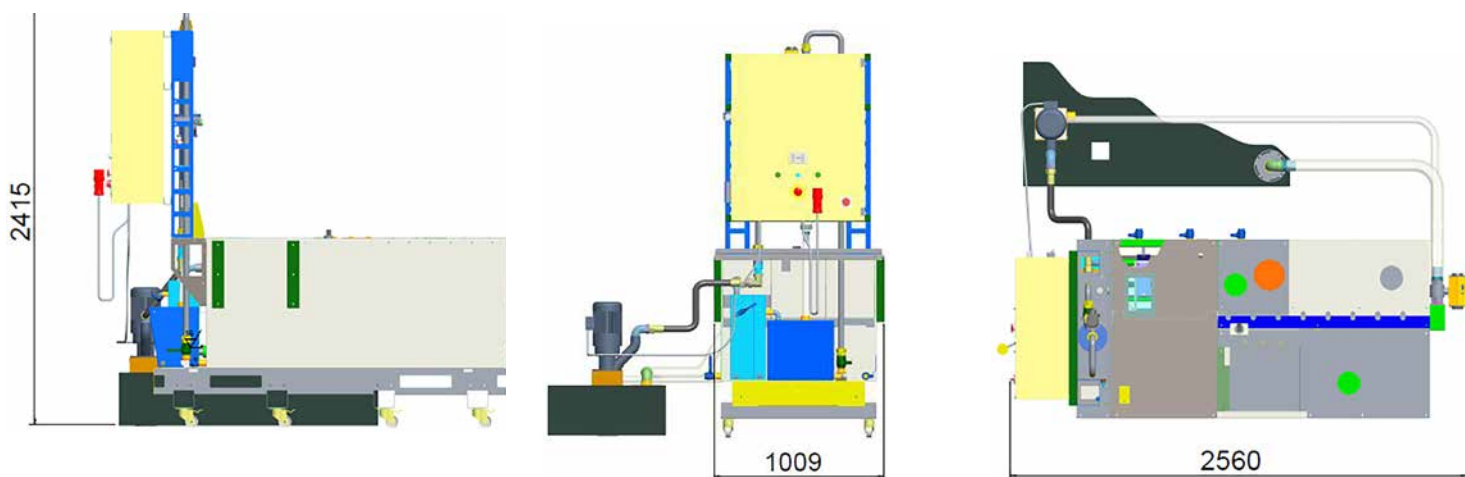
**Approval to the Machinery Directive and CE certification as a machine.**

## Fine Filtration System IFDR 800/25



## TECHNICAL FEATURES

|  |                                    |
|--|------------------------------------|
| Overall system volume                                | 800 L                              |
| Processing flow rate                                 | 80 L/min                           |
| Coolant type   | Both synthetic and mineral coolant |
| Filstar unit   | KSM25                              |
| Nominal factory space requirements (LxWxH)           | 1009 x 2560 x 2415 mm              |
| Nominal empty weight                                 | 495 kg                             |
| Automatic sludge recovery                            | In a special tank                  |
| Dynamic separation of the oil                        | Automatic integrated               |
| Dirty liquid suction pump                            | Standard                           |
| Electrical control panel with machine tool interface | Standard                           |
| Working cycle  | Continuous 24/7                    |
| Guaranteed filtration degree                         | Below 10 $\mu\text{m}$             |
| Chiller for temperature control                      | Optional                           |
| Automatic coolant top up                             | Integrated                         |



The image shows a complete IFDR 800/25 fine filtration system fitted with a delivery pump 20 bar 35 L/min and a delivery pump 70 bar managed by the inverter and the proportional valve, programmed to perform 6 pressure steps at these values: 20, 30, 40, 50, 60, 70 bar with maximum flow rate 45 L/min, and chiller for coolant's temperature control. This solution is dedicated to lathes with two spindles and 2/3 turrets, which need high and low pressure on the tools.