

# Filtration Group Application Example– Turning Machines

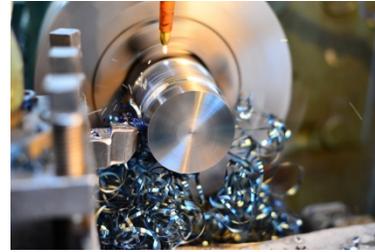
## FG Low pressure filter for bar loading magazines



Factory Equipment

### Initial situation

In order to be able to turn highly productively, manufacturing companies require peripherals suitable for the lathes, including high-pressure cooling lubricant systems. A process-safe and stable material feed, combined with efficient cooling of the tools and the targeted flushing away of the resulting chips, forms the basis for optimum use of the lathe. Suitable for short and long lathes, Filtration Group low-pressure filters are used here for loading magazine technology, which forms a compact unit with innovative and energy-efficient high-pressure technology.



### Solution statement

- The FG low-pressure filter is used here as main filter
- In this application, the FG low-pressure filter is connected downstream of the working filter.
- FG low pressure filter offers a safety function. Chips are reliably flushed out of the cutting area. Depending on the high-pressure pump selected, up to eight nozzles or tools can be supplied with max. 28 or 24 l/min cutting oil or emulsion at max. 100 or 150 bar pressure.



### Customer value

- The complete tank module with the pump and filter technology is integrated under the loading magazine. Filtration Group low-pressure filters ensure reliable operation without downtimes
- The tried and tested Pi 2045-015 filter ensures reliable production and energy-efficient cooling of the tools
- Even with large quantities of chips, even long-chipping materials are reliably crushed and flushed away



### Challenge

Bar feeders feed semi-finished products in the form of bars with different cross-sections to lathes or CNC lathes fully automatically. Material bars are provided on a lateral support (inclined plane). As a rule, these are rods with round, hexagonal or square outer contours, whereby both full cross-sections and tubular cross-sections made of a wide variety of materials can occur. The bar diameters or wrench widths range between approx. 1 and 100 mm. The length of the bars varies between 1,000 and 6,000 mm depending on the application of the loading magazine. Bar loading magazines are ideally matched to lathes for single-spindle and multi-spindle turning.

#### Info

In a bar loading magazine, the space below the loading magazine is filled by a central electrical cabinet and a specially developed tank with two chambers. The chambers contain the oil for hydrodynamic storage in the guide channel of the loading magazine. In the other chamber is the cooling lubricant for the high-pressure system.



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