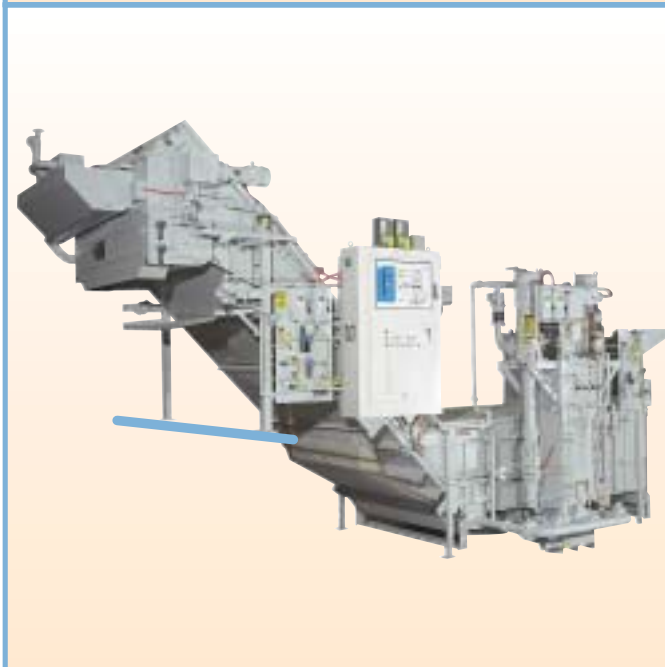
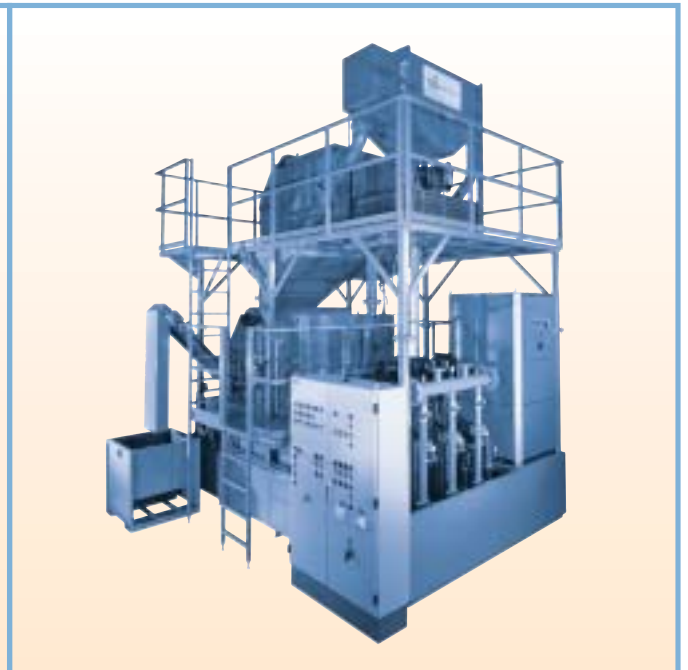
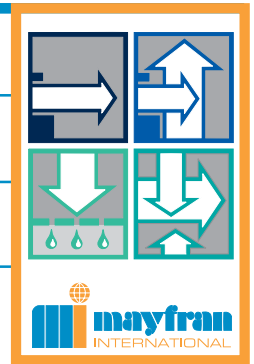


# Coolant Filtration Systems

For single machines or central systems

Savings through environmental protection



## MAYFRAN Filter Program: a broad offering ...

for single systems ...

### RBF FILTERS

<b>Primary function:</b>	filtering of coolant
<b>To be used for:</b>	machining and grinding of steel, gray cast iron, brass, copper and aluminium
<b>Chip types:</b>	short chips, max. size <b>20 mm</b> , 25 [kg/h]
<b>Cooling lubricant quantity:</b>	from <b>100 l/min</b> to <b>1.500 l/min</b>
<b>Filtration quality:</b>	<b>15 - 50 µm</b> , depending on application and filter mat
<b>Selection criteria:</b>	no additional filter material compact design permanent V-2A filter mat

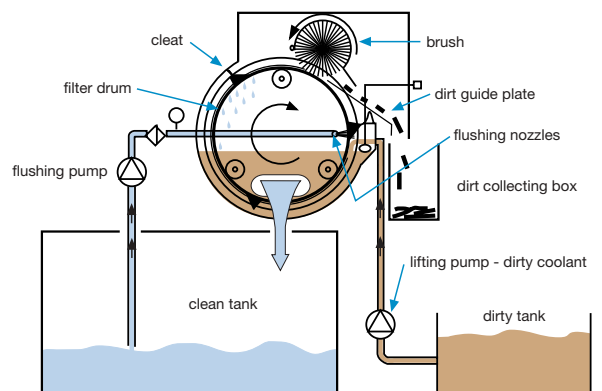


### Advantages

- no vacuum required
- simple handling and low maintenance
- no consumption of filter auxiliary materials
- V-2A filter mat
- (permanent belt) double cleaning of permanent belt
- compact and modular design

### Function

This filter is based on the build-up of a filter cake which is periodically removed through rotation. During the periodic rotation, the coarse particles deposited in the filter housing are also carried out by special cleats. Simultaneously, the accumulated filter cake is removed by the brush, and the filter mat pores are additionally cleaned using a separate clean coolant (flushing) pump from inside to outside. This lowers the coolant level and completes the cleaning cycle. The dimensions of the clean tank are matched to your local conditions.



... to reduce your coolant costs

... or centralized systems



Filter-Modul	Machining Soluble (l/min.)	Machining oil 20 Cst. (l/min.)	Grinding Soluble (l/min.)	Grinding oil 20 Cst. (l/min.)
RBF-E 100	100	70	60	40
RBF-E 200	200	140	120	80
RBF-E 300	300	210	180	120
RBF-E 400	400	280	240	160
RBF-E 600	600	420	360	240
RBF-E 1000	1000	700	600	400
RBF-E 1500	1500	1050	900	600

### Modular centralized units

Next to its solid and simple design (no vacuum required), the RBF filter can be expanded to form larger central units through a combination of the standard modules. This kind of compact system is the perfect solution for the growing demand in smaller centralized units (from 1.000 l to 4.000 l).



## PERMA-FLOW Vacuum filter ...

... the modular vacuum system for central systems.

### PERMA-FLOW Vacuum Filter

<b>Primary function:</b>	Filtering of coolant
<b>To be used for:</b>	Cutting and machining of steel, gray cast iron, brass, copper and aluminium
<b>Chip types:</b>	Short chips
<b>Cooling lubricant quantity:</b>	from <b>200</b> l/min to <b>8.000</b> l/min
<b>Filtration quality:</b>	<b>20 - 50</b> µm
<b>Selection criteria:</b>	Media free filter Save operating costs (consumables) No conveyer for pre-separation required No clean tank required Flexibility through modular design



Permaflow vacuum filter

### The function principle

Chips and coolants are fed into the dirty tank together. The filter drum elements connected to a vacuum source are located in this dirty coolant tank. The dirty cooling lubricant is then sucked through the filter drum wall by the vacuum pump and pumped back to the machine tool. When penetrating the perforated drum walls, contaminations and fine chips form a filter cake. The regeneration process of the filter is triggered by a time and vacuum switch. Here, only one drum

segment is flushed with clean cooling lubricant before the drum is indexed by one cycle.

As 98% of the filter surface is always being used under vacuum according to this principle, the coolant flow is not interrupted (permanent flow) so that no clean tank is required. The flushed back filter cake is carried out by a scraper conveyor in the filter tank together with the chips.



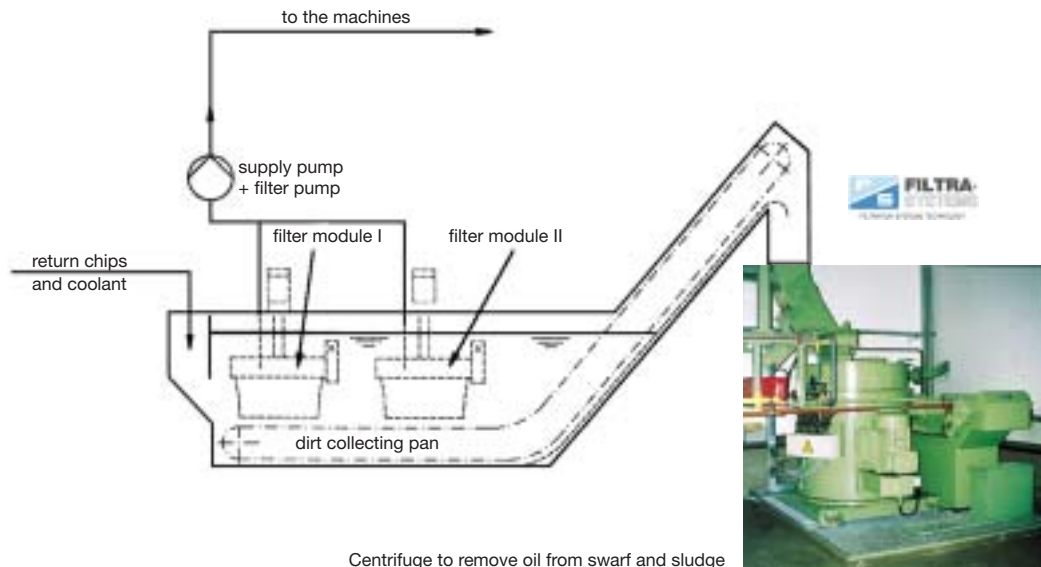
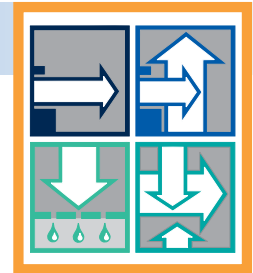
Filtermodule being installed



Permaflow filter mat

... the most reliable way to prevent malfunctions

For this filter type, MAYFRAN holds the exclusive licence of Filtra Systems for Europe.



Centrifuge to remove oil from swarf and sludge

### Advantages

Mayfran Permaflow drum filters have proven their efficiency time and over again due to their reliability, the flexible installation options, as well as their low operating costs for filtering the emulsion or the coolant. In most cases, they don't need any precipitation of the chips in the fluid and are therefore particularly well suited for the integration in a chip disposal system and easy to retrofit as expansion or upgrade of the filtering capacity. The configuration of the Permaflow vacuum filter offers a higher percentage purity without the use of filter auxiliary consumables. This does not only drastically lower the operating costs but also makes the system less sensitive to any cracks or holes in the filter mat.



Permaflow filter - aluminium

## FILTERS for all requirements

For these filter types, MAYFRAN holds the exclusive license of Filtra Systems for Europe.



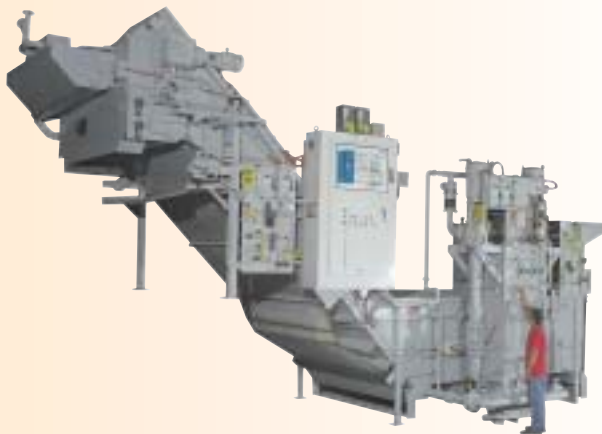
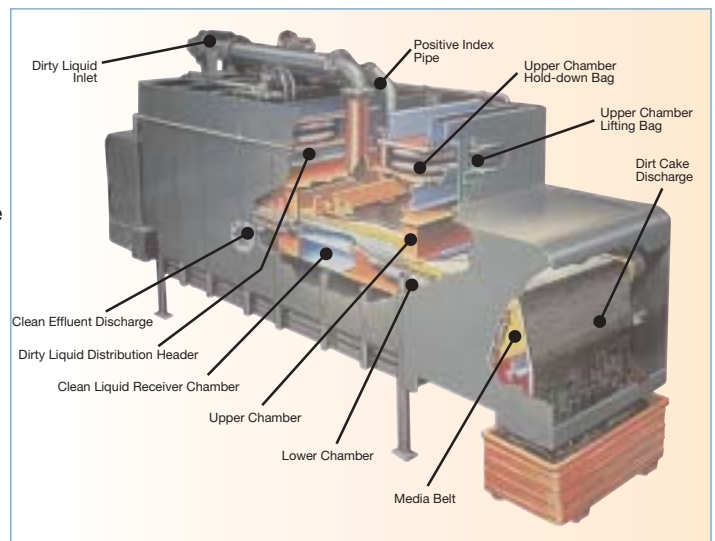
### ECONOPAC FILTER

A long proven vacuum band filter for flow rates from **100 to 2.000 l/min**. To be used both for single machines and for machine groups.

**Also available as continuous mat types.**

### PRESSURE BAND FILTER

- Capacity:** up to 20.000 l/min
- Filtration quality:** up to 10  $\mu\text{m}$  depending on the chip type and contamination
- Application:** grinding, turning
- Chip type:** fine, short
- Advantages:** good drying of the filter cake



### VACUUM BAND FILTER

**... with patented sealing of the filter auxiliary means**

- Capacity:** from 200 l/min to 3.000 l/min
- Filtration quality:** 20 to 100  $\mu\text{m}$
- Application:** Chip removal and grinding
- Advantages:** Better price/performance ration and lower space requirements as compared to pressure band filter

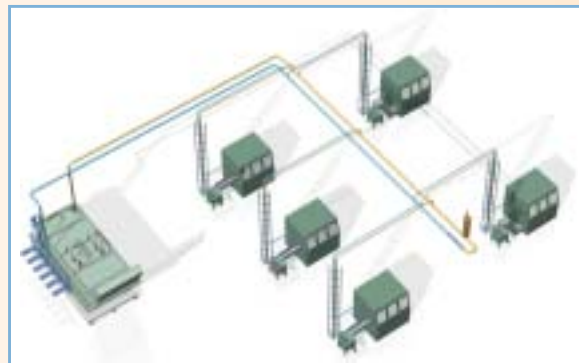
## Coolant and chip handling...

... at MAYFRAN, everything comes from a single source.



### Chips and coolant over the floor pump systems

**Viavent®** is a floor-mounted overhead piping system for the automatic pumpback of chips and cooling lubricants in combination with pumpback stations. The modular pipe system grants maximum flexibility for assembly/ disassembly as the machine tool installation is no longer bound into floor channels due to the flexible location options in Viavent®. The closed loop Viavent® piping system permits a significantly lower cooling lubricant consumption and a longer service life of the emulsion - which finally allows for smaller filters leaving more free space altogether.



#### Compact chips & coolant handling systems

The solution for smaller groups of machine tools. Due to the different modular options of the Mayfran filters and the Viavent® pumpback system, even smaller central systems can be combined in a flexible and expandable way. Available space and number of machines permitting, you may efficiently utilize the advantages of a central filtering process and cooling lubricant control.

#### Chip processing

##### *Higher profit through environmental protection*

Stricter environment regulations require the companies to process the chips produced and to take care of a dry chip disposal. The coolant thus recycled can be re-introduced to the machining process which grants essential cost savings for instance in the case of oils. Simultaneously, dry chips guarantee a higher sales profit and meet the growing environmental restrictions.





# Serving Global Markets



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