Properties

<table>
<thead>
<tr>
<th>Properties</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good price-performance ratio</td>
<td>Short amortization time</td>
</tr>
<tr>
<td>Low maintenance and wear</td>
<td>Low operating costs</td>
</tr>
<tr>
<td>Simple layout, easy access to all components</td>
<td>Easy maintenance</td>
</tr>
<tr>
<td>Can be used universally for different working processes, materials, cooling lubricants, delivery rates and degrees of purity</td>
<td>Simple design and planning</td>
</tr>
</tbody>
</table>

Application

KNOLL gravity belt filters PF and belt filters for cleaning cooling lubricants chip-removing working processes.
- Use as stand-alone cleaning unit on machine tools or in combination with chip conveyors
- Generally local use (for one machine tool)

Description

Filtration process
1. Contaminated liquid flows through the inlet box into the filter trough
2. The filter fleece holds back the contaminant particles during streaming
3. The contaminant particles form a filter cake, which itself separates even the smallest dirt particles
4. The filtered fluid collects in the filtered fluid tank

Regeneration process
1. The growing filter cake increases the flow resistance
2. The fluid level in the filter trough increases
3. At a defined level, the belt drive switches on (alternatively: time-controlled)
4. The carrier belt transports a piece of clean filter fleece to the filter surface
5. The fluid level sinks again
6. A sludge container takes up the dirty filter fleece
## Equipment

- **Belt drive**
- **Circulation carrier belt**
- **Filter fleece (initial equipment)**
- **Filter fleece shortage switch**
- **Fleece roll integrated into housing**
- **Level measurement technology**
- **Control**
- **Magnetic roller as pre-separator**
- **Cooling lubricant tank system with supply pump(s)**
- **Duplex switch filter**
- **Tempering (cooling/heating)**
- **Sludge container**
- **Filter fleece shortage early warning**
- **Inlet box**
- **Inlet plate**

- **Standard equipment**
- **Option**
Gravity belt filter PF

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Dimensions and technical data

<table>
<thead>
<tr>
<th>Type</th>
<th>Filter capacity l/min</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>K</th>
<th>Fleece width</th>
<th>Content (l)</th>
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</thead>
<tbody>
<tr>
<td>PF 70</td>
<td>70 / 50</td>
<td>1200</td>
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<td>385</td>
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<td>400</td>
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<td>300</td>
<td>640</td>
<td>540</td>
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<tr>
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<td>920</td>
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<td>640</td>
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<tr>
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<tr>
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<td>500</td>
<td>385</td>
<td>3415</td>
<td>520</td>
<td>575</td>
<td>300</td>
<td>760</td>
<td>1020</td>
<td>1700</td>
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<tr>
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<td>1700</td>
<td>200</td>
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<td>385</td>
<td>3390</td>
<td>620</td>
<td>550</td>
<td>300</td>
<td>900</td>
<td>1020</td>
<td>3000</td>
</tr>
</tbody>
</table>

Dimensions without units given in mm.

1 $\mu = 1 \text{ mm}^2/\text{s}$

2 $\mu = 12 \text{ mm}^2/\text{s}$ (at operating temperature)

Drive motor up to PF 160 in the fleece compartment

Driving power 0.015 to 0.06 kW depending on series