

HydroPur hydrostatic filter

**KNOLL**  
.It works

Issue 09-2025



## Properties

Higher hydrostatic pressure compared to flat bed filters

Build-up of a homogeneous filter cake, especially when grinding

Less residual moisture in fleece and dirt discharge

Plug-and-Play via universal, digital interface

Control with KNOLL SmartConnect

Standardised design

Compact design

## Benefits

- Higher volume flow
- Less fleece consumption
- Better level of purity

Good filter quality

- Lower loss of cooling lubricant
- Reduction of waste disposal costs

Quick installation and start-up

Simple operation and monitoring, also with a smartphone or tablet

- Short delivery time
- Favourable price-performance ratio

Space-saving installation

## Areas of application

The HydroPur hydrostatic filter is a filter fleece for cleaning cooling lubricants during material removal operations.

- Use as an independent cleaning unit (e.g. when grinding) or in combination with chip conveyors (e.g. when milling, turning)
- Local (for one machine tool) or central use (for several machine tools) possible

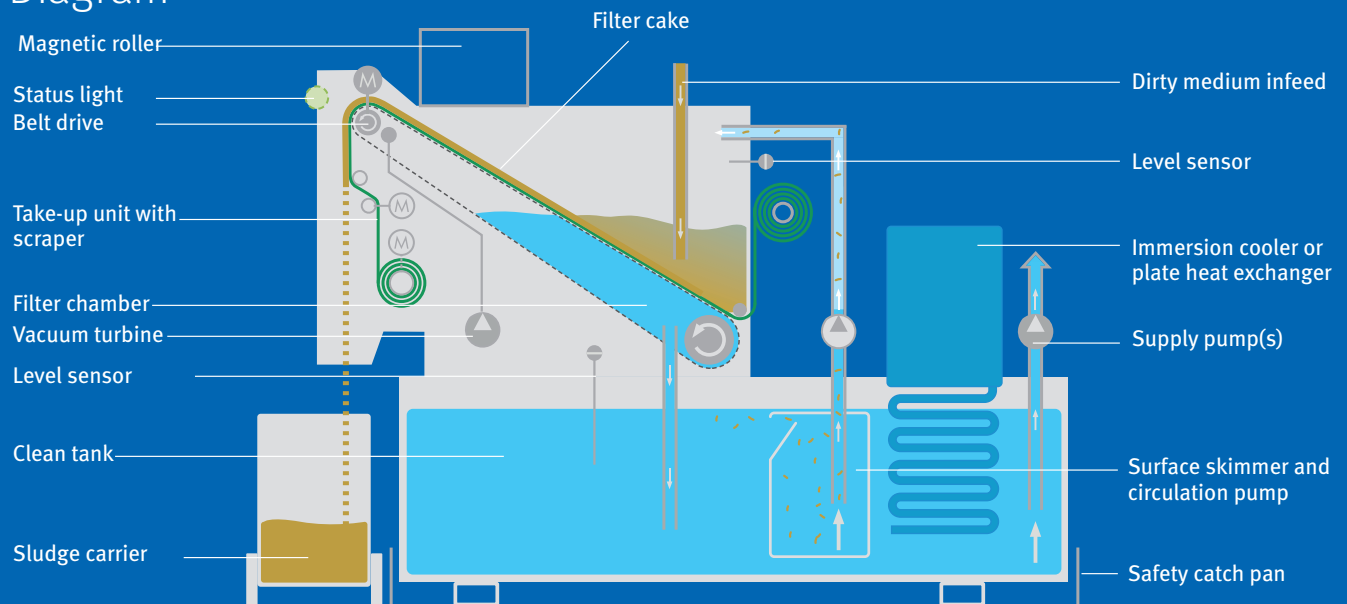
The combination of vacuum technology and filter fleece cuts operating costs through low fleece consumption and reduced loss of cooling lubricants. Thanks to a modular system, the HydroPur hydrostatic filter can be configured to individual requirements.



## Powerful electrical technology

Customised electrical technology with modular design – optimally prepared for your application

## Diagram \*



\* Image with options

## Description

### Filtration process

1. Contaminated fluid flows through the inlet into the filter
2. The filter fleece retains the dirt particles as they pass through
3. The dirt particles form a filter cake that separates even the smallest dirt particles
4. The optional vacuum support favours the filtration
5. The clean fluid is collected in the clean tank
6. Low- and high-pressure pumps supply the machine tool with clean cooling lubricant as required

### Regeneration process

1. The growing filter cake increases the flow resistance
2. The fluid level in the filter increases
3. The belt drive switches on at a defined level and transports the filter fleece onwards
4. The carrier belt transports a piece of clean filter fleece onto the filter surface
5. The level of the dirty medium decreases again
6. After leaving the dirty medium, the filter fleece runs across a drying section into the sludge container or into an optional take-up unit

## Equipment

HydroPur hydrostatic filter ●

Filter fleece (initial equipment) ●

Supply pump(s) ●

Fleece shortage switch ●

Level sensor ●

Control system ●

Tank ●

Vacuum support ○

Take-up unit ○

Magnetic roller ○

LED status light ○

Panelling ○

Continuous roll\* ○

Surface skimmer ○

Cooling ○

Safety catch pan ○

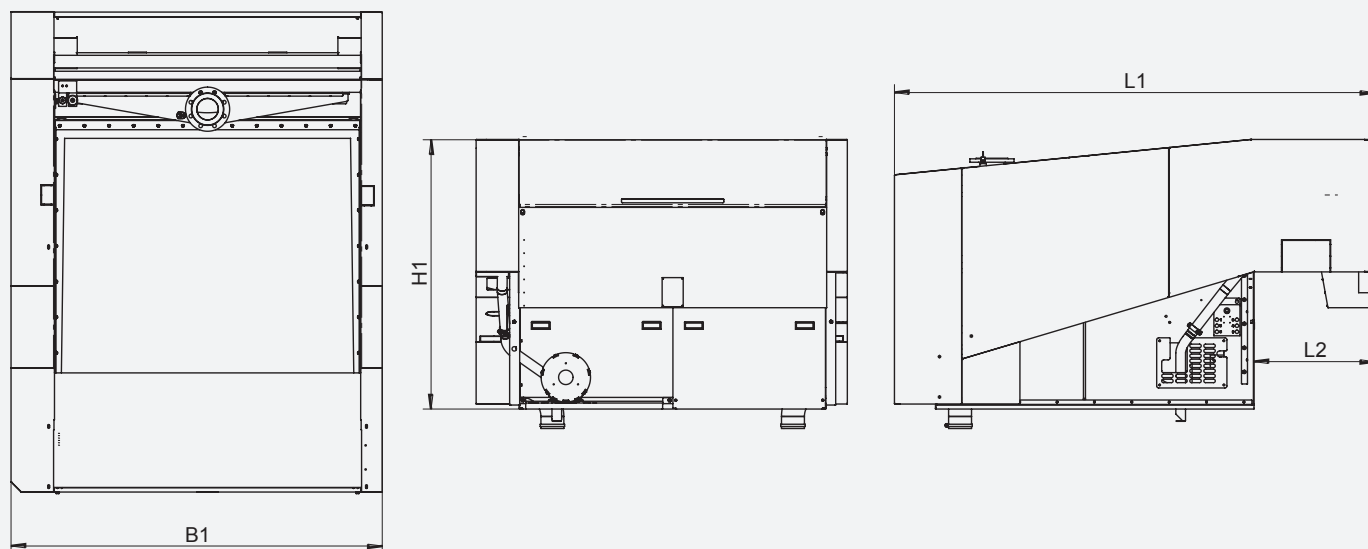
\*Only with vacuum support

**KNOLL Maschinenbau GmbH**

Schwarzachstraße 20  
 DE-88348 Bad Saulgau  
 Tel. +49 7581 2008-0  
 Fax +49 7581 2008-90140  
 info.itworks@knoll-mb.de  
 www.knoll-mb.com

HydroPur

## Dimensions and technical data



## Select HydroPur

| Type             | Filter performance<br>(l/min) |       | Infeed<br>DN | Fleece<br>width<br>[mm] | H1<br>[mm] | B1<br>[mm] | L1<br>[mm] | L2<br>[mm] |
|------------------|-------------------------------|-------|--------------|-------------------------|------------|------------|------------|------------|
|                  | Emulsion                      | Oil** |              |                         |            |            |            |            |
| HydroPur 250     | 150                           | 75    | 50           | 540                     | 1002       | 837        | 1785       | 602        |
| HydroPur 400     | 240                           | 120   | 80           | 726                     | 1342       | 1055       | 2392       | 602        |
| HydroPur 700     | 420                           | 210   | 80           | 1020                    | 1342       | 1350       | 2392       | 602        |
| HydroPur 1000    | 600                           | 300   | 100          | 1520                    | 1342       | 1850       | 2392       | 602        |
| HydroPur H 250*  | 250                           | 125   | 50           | 540                     | 1002       | 837        | 1785       | 602        |
| HydroPur H 400*  | 400                           | 200   | 80           | 726                     | 1342       | 1055       | 2392       | 602        |
| HydroPur H 700*  | 700                           | 350   | 80           | 1020                    | 1342       | 1350       | 2392       | 602        |
| HydroPur H 1000* | 1000                          | 500   | 100          | 1520                    | 1342       | 1850       | 2392       | 602        |

\*Vacuum-supported filtration

\*\*v = 13 mm<sup>2</sup>/s (at operating temperature)