HydroPur hydrostatic filter

KNOLL
.It works

HydroPur

Issue 09-2025

Properties	Benefits
Higher hydrostatic pressure compared to flat bed filters	• Higher volume flow • Less fleece consumption • Better level of purity
Build-up of a homogeneous filter cake, especially when grinding	Good filter quality
Less residual moisture in fleece and dirt discharge	• Lower loss of cooling lubricant • Reduction of waste disposal costs
Plug-and-Play via universal, digital interface	Quick installation and start-up
Control with KNOLL SmartConnect	Simple operation and monitoring, also with a smartphone or tablet
Standardised design	• Short delivery time • Favourable price-performance ratio
Compact design	Space-saving installation

Areas of application

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

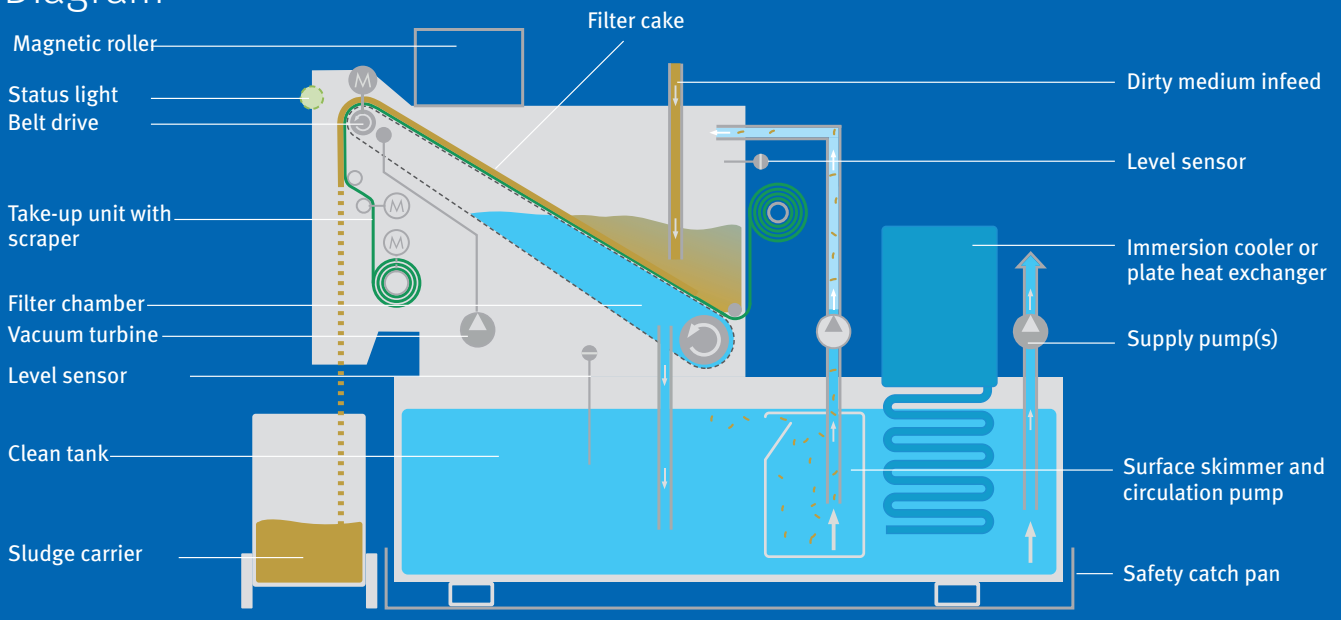
- Use as an independent cleaning unit (e.g. when grinding) or in combination with chip conveyors (e.g. when milling, turning)
- Local (for one machine tool) or central use (for several machine tools) possible

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

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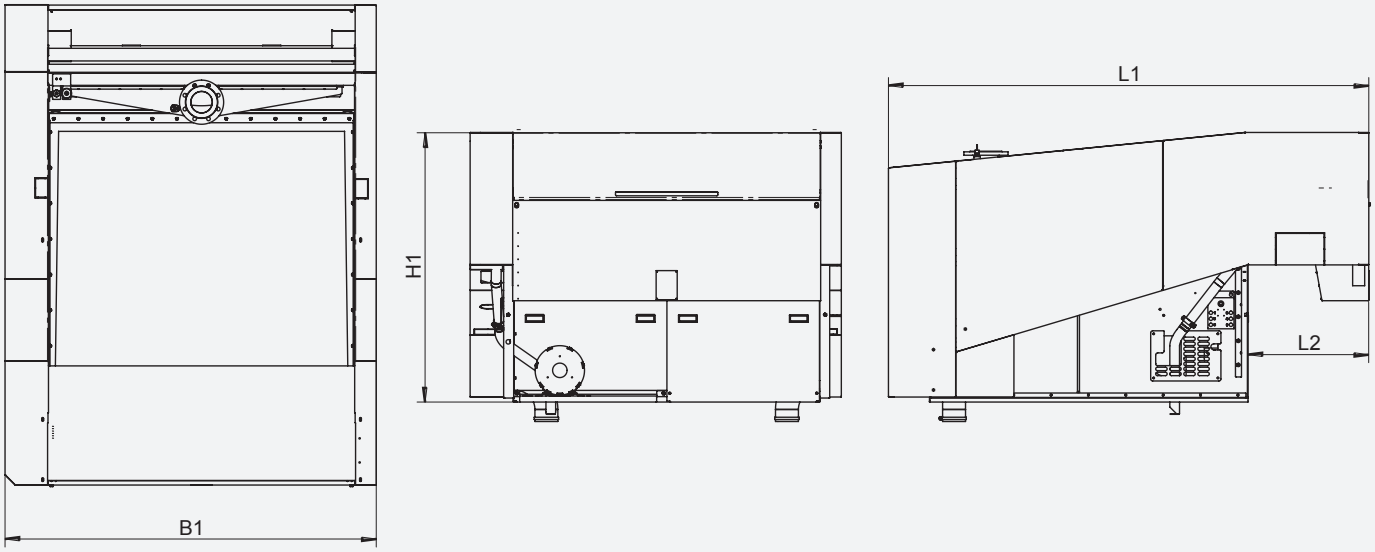
HydroPur

Dimensions and technical data



Select HydroPur

Type	Filter performance (l/min)		Infeed	Fleece width	H1	B1	L1	L2
	Emulsion	Oil**	DN	[mm]	[mm]	[mm]	[mm]	[mm]
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 mm²/s (at operating temperature)