Properties | Benefits
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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

Standardized construction | • Short delivery time
• Favourable price-performance ratio

Modular design with configurable functional units | Optimal coverage of customer requirements

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

Application
The HydroPur filter system is a fleece filter for cleaning the cooling lubricant (KSS) in machining processes. It is used as an independent cleaning unit (e.g., when grinding) or as a supplement to chip transport systems (e.g., when milling).

Description

Filtration process
1. The dirty coolant goes from the machine tool into the filter trough
2. Due to the hydrostatic pressure, the liquid flows through the filter fleece, which holds back the dirt particles
3. The dirt particles form a filter cake that separates even the smallest particles
4. The clean liquid flows into the filter chamber and collects in the clean tank
5. Supply pumps supply the machine tool with cleaned coolant as required

Regeneration process
1. The growing filter cake increases the flow resistance
2. The liquid level in the filter trough increases
3. The belt drive switches on at a defined level
4. The carrier belt transports a piece of clean filter fleece onto the filter surface
5. The level of the liquid decreases again
6. A sludge container or a take-up unit takes up the dirty filter fleece
Scheme

Options

1. Supply Pump 1
   - (0) Without pump
   - (1) Centrifugal pump, single-stage, 2.2 kW, 100-150 l/min, 3 bar
   - (2) Centrifugal pump, single-stage, 4.0 kW, 120-150 l/min, 5 bar
   - (3) Centrifugal pump, multi-stage, 3.0 kW, 100-150 l/min, 7 bar
   - (4) Centrifugal pump, multi-stage, 4.0 kW, 250 l/min, 5 bar
   - (5) Centrifugal pump, multi-stage, 5.5 kW, 320 l/min, 5 bar

2. Supply Pump 2
   - (0) Without pump
   - (1) Centrifugal pump, single-stage, 2.2 kW, 30-70 l/min, 3 bar
   - (2) Centrifugal pump, single-stage, 1.5 kW, 50 l/min, 2.5 bar, 80-100 l/min, 2 bar

3. Supply Pump 3
   - (0) Without pump
   - (1) Centrifugal pump, multi-stage, 4.0 kW, 80-100 l/min, 10-12 bar
   - (2) Centrifugal pump, multi-stage, 5.5 kW, 150 l/min, 12 bar
   - (3) Centrifugal pump, multi-stage, 7.5 kW, 100 l/min, 20 bar

4. Initial separation
   - (0) Without magnetic roller
   - (1) With magnetic roller

5. Take-up unit
   - (0) Without take-up unit
   - (1) With take-up unit

6. Surface skimming and circulation pump
   - (0) Without surface skimmer and circulation pump
   - (1) With surface skimmer and circulation pump

7. Cooling unit
   - (0) Without cooling unit
   - (1) Temperature sensor
   - (2) Immersion cooler 10 kW
   - (3) Immersion cooler 16 kW
   - (4) Immersion cooler 20 kW
   - (5) Plate heat exchanger

8. Lifting station
   - (0) Without controller for lifting station
   - (1) With controller for lifting station

9. Safety catch pan
   - (0) Without safety catch pan
   - (1) With safety catch pan

10. Covering
    - (0) Without covering
    - (1) With covering
Dimensions and technical specifications

Volume flow: up to 400 l/min
Filter fineness: up to 20 μm
Cooling lubricant: emulsion
Power supply: 400 V/50 Hz and 60 Hz
Coolant volume: 3,000 l
Dimensions (L x W x H): 1892 x 2373 x 2307 mm

Service
- Delivery time: 6 weeks
- KNOLL portal - high availability of consumables and replacement parts

Experience the HydroPur.
More information at www.knoll-mb.com or scan the QR code.