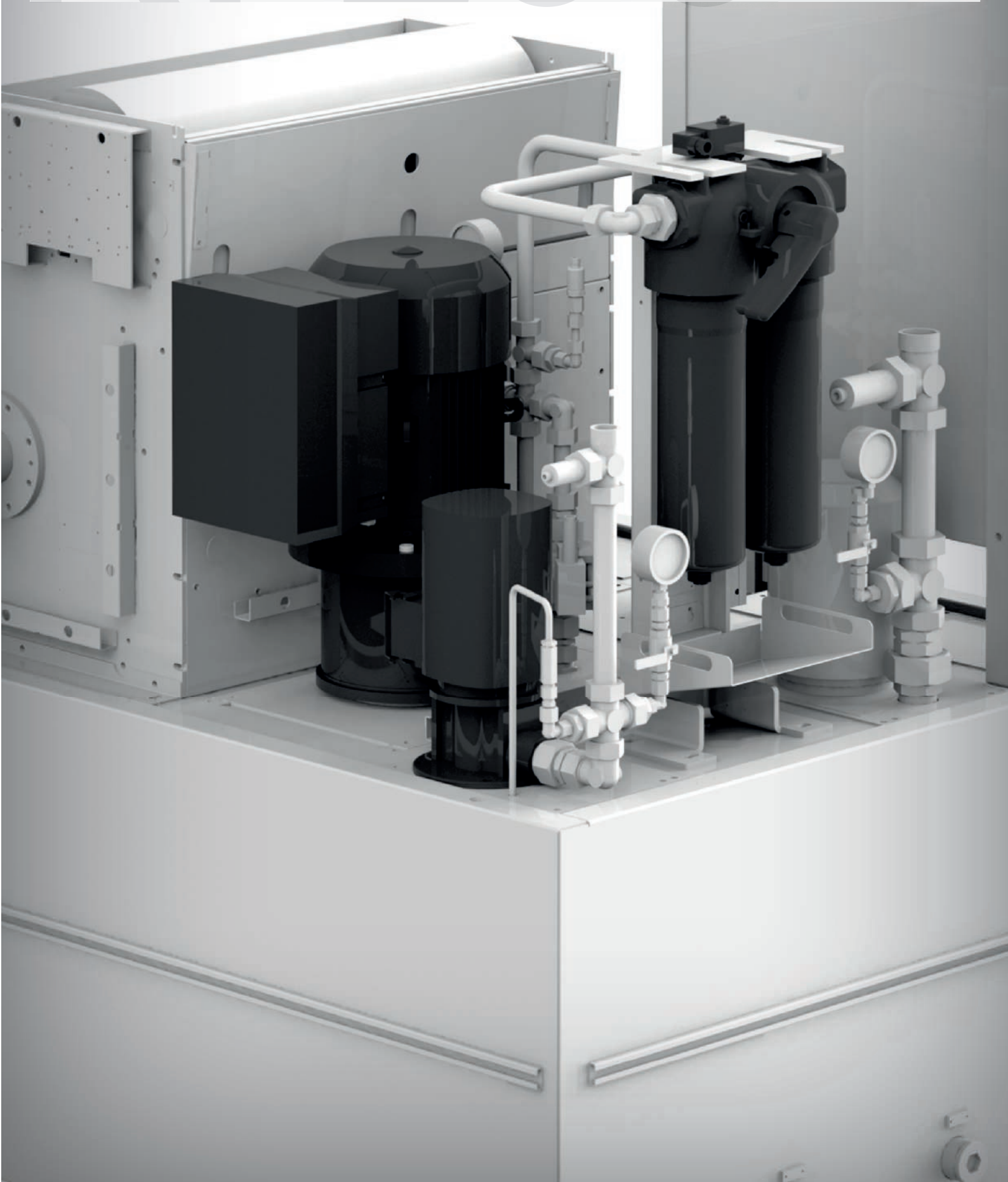


Standard filter system KF 200/950

KNOLL
.It works

Version 02-2020



Areas of application

The compact filter KF is a band filter for cleaning cooling lubricants in metal machining. As a cleaning and supply unit for chip-producing machine tools, it is usually combined with chip conveyors.

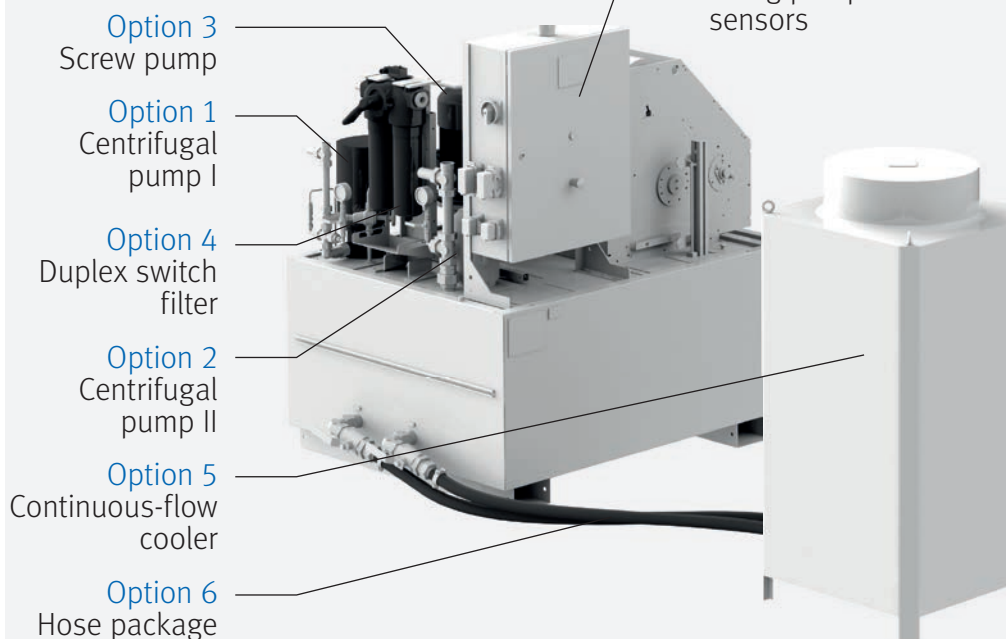
System configuration

Machine manufacturer:	freely selectable
Number of machines:	1
Processing:	turning, drilling, milling (others after consultation)
Customer specification:	no, KNOLL standard model
Energy supply:	400 V, 50 Hz
Compressed air connection:	min. 5 bar, provided by the customer
Volumetric flow:	200 l/min for emulsion and steel or aluminum < 8% Si 100 l/min for emulsion and cast (GG, GGG) or aluminum > 8% Si 90 l/min for oil up to max. 10 mm ² /s at operating temperature and steel
Filter fineness:	nominally 40 µm with filter fleece PW70/70
Chip pre-separation:	via chip conveyor provided by the customer (with edge filter or strainer basket)
Colors:	system RAL 7035*, control cabinet RAL 7035*, components RAL 9005, cooler RAL 7005*
Documentation:	on CD, languages: German / English / French / Italian / Spanish / Czech / Dutch / Swedish
Equipment labeling:	local languages named + English
User guidance:	local languages named / English / German*

* Other colors available at extra charge (see price list) after consultation with KNOLL. All systems and components except electrical users are powder-coated (textured paint Emil Frei GmbH & Co., gloss level 60% at an angle of 60°, tolerance of gloss level +/- 10%).

Equipment

Options



Basic equipment

- Compact filter KF 200
- Electronic control cabinet
- 2 level sensors
- Coolant container FKA 950
- Connection for continuous-flow cooler

Basic equipment

Compact filter KF 200, fleece installation on top | **Coolant container FKA 950**, content 950 l, holders for max. 2 low-pressure pumps, holder for max. 1 high-pressure pump, connection for continuous-flow cooler | **2 level sensors** with visual display (overflow alarm, cooling lubricant min. alarm) | **Electric control cabinet** (see back)

Option 1 – Centrifugal pump I (for external cooling lubricant supply)

- 0 without pump, holder sealed with sheet metal piece
- 1 MTR 5-18/18, 40 l/min @ 11.5 bar (100 l/min @ 9 bar), 3.0 kW Han-Drive, DBD and pressure gauge
- 2 MTR 5-18/8, 40 l/min @ 5 bar (80 l/min @ 4 bar), 1.1 kW Han-Drive, pressure gauge

Option 2 – Centrifugal pump II (for flushing)

- 0 without pump, holder sealed with sheet metal piece
- 1 TG 40-42/22533, 120 l/min @ 2.7 bar (75 l/min @ 2.7 bar | 200 l/min @ 2.3 bar), 2.2 kW Han-Drive, pressure gauge

Option 3 – Screw pump (for internal cooling lubricant supply)

- 0 without pump, holder sealed with sheet metal piece
- 1 KTS 25-60-T, 37 l/min @ 70 bar, 7.5 kW Han-Drive, Vario valve SPB-H-15 with pressure gauge
- 2 KTS 25-38-T with FI (PQ-Tronic), 5.5 kW with FI Kostal (piggyback), Vario valve SPB-H-15 with pressure gauge | 8.7 l/min @ 70 bar @ 1,450 mm⁻¹ | 24.2 l/min @ 70 bar @ 2,900 mm⁻¹ | 30.6 l/min @ 70 bar @ 3,500 mm⁻¹
- 3 KTS 25-38-T, 26,8 l/min @ 40 bar, 3.0 kW Han-Drive, DBD with pressure gauge

Option 4 – Duplex switch filter (as police filter)

- 0 without duplex switch filter
- 1 duplex switch filter PI3730 DRG100

Option 5 – Continuous-flow cooler

- 0 without continuous-flow cooler
- 1 continuous-flow cooler alpha 9 for emulsion, cooling capacity 8.3 kW, air-cooled, at ambient temperature 42 °C, medium 20 °C, temperature completely controlled, own control, own power supply, length 715 mm, width 715 mm, height 1,545 mm
- 2 continuous-flow cooler alpha 9 for oil, cooling capacity 8.3 kW, air-cooled, at ambient temperature 42 °C, medium 25 °C, temperature completely controlled, own control and power supply, length 715 mm, width 715 mm, height 1,545 mm

Option 6 – Hose package (cooler to coolant container)

- 0 without hose package
- 1 hose package 5 m (2 oil flex hoses à 5 m, each with mech. ball valve, ready for connection)
- 2 hose package 10 m (2 oil flex hoses à 10 m, each with mech. ball valve, ready for connection)

Option 7 – Electricity for customer lifting pump and level sensors

- 0 without
- 1 for lifting pump with motor 1.8 – 2.5 A
- 2 for lifting pump with motor 2.2 – 3.2 A
- 3 for lifting pump with motor 2.8 – 4.0 A
- 4 for lifting pump with motor 3.5 – 5.0 A
- 5 for lifting pump with motor 4.5 – 6.3 A
- 6 for lifting pump with motor 5.5 – 8.0 A

Order key

The performance data of the pumps named above refer to operation with emulsion. In case of operation with oil, the performance data of the low-pressure pumps is reduced by 10-20% depending on viscosity.



Electric control cabinet

E-Plan E-102578.00.x-x-x-x-x-x | Electricity for compact filters

Control cabinet AE1058 (600x800x250)

PLC control VIPA SLIO | text display KTP400

Power sections

1 x KF drive (Han-Drive)

1 x low-pressure pump 1* (Han-Drive)

1 x low-pressure pump 2* (Han-Drive)

2 x high-pressure pump 1* (Han-Drive)

Please note

400 V interface for the cooler is not included | If a cooler unit is required, it must be supplied directly via the hall energy supply | The cooler is released via a potential-free contact from the cooling lubricant system | Signal is located on the terminal strip (without connector)

Sensor system

2 level sensors KF filter | 1 light sensor fleece end |

1 button fleece transport manual operation |

1 level sensor (overflow alarm) | 1 level sensor

(cooling lubricant min. alarm) | 1 bypass valve high-pressure pump*

Interface to machine tool

- 400 V supply via 35 A Harting connector with mating plug (supplied loose)
- Signal exchange via 24-pin Harting connector with mating plug (supplied loose)
- Requirement low-pressure pump 1*
- Requirement low-pressure pump 2*
- Requirement high-pressure pump 1*
- Requirement pressure stage high-pressure 1/2/3* | Release signal charge KF filter possible

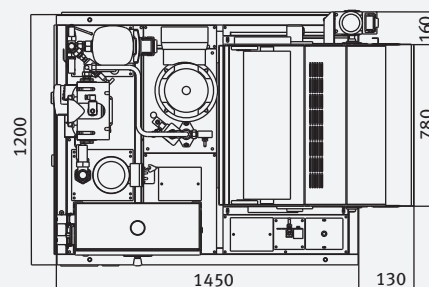
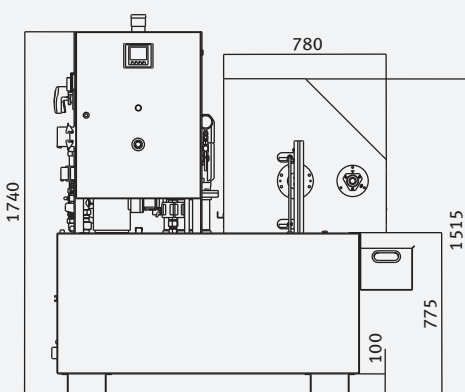
Equipment/Version

Wire marking printed wires | Range selector switch black (Eaton) | Power switch Sirius (Siemens) | Contactor Sirius (Siemens) | PLC control (VIPA) | Visualization (Siemens) | Power supply (Murr) | Terminals (Phoenix) | Connector (Harting) | Frequency inverter (Kostal) | Installation PUR line (Lapp)

Connection voltage 3 x 400 V | Frequency 50 Hz

* Only included if the associated option was selected

Dimensions



Option Continuous flow-cooler

