# Modular compact filter KF



Edition 06-2025





Properties
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### Benefits

Compact design	Space-saving installation
Good value for the money	Short amortization period
Higher hydrostatic pressure compared to flat bed filters	Higher flow volume, lower fleece consumption and better level of purity
Sweeper blades and scrapers	Trouble-free removal of chips, including light metal
Universally applicable for different machining pro- cesses, materials, cooling lubricants, volume flows and levels of purity	Simple design and planning
Plug-and-Play through universal, digital interfaces	Quick installation and start-up
Available as a modular system, standard system or special system	Individual choice with influence on price, delivery time and desired design

## Areas of application

KNOLL Compact Filters KF are belt filters for cleaning cooling lubricants (KSS) from machining processes

- Used as a stand-alone cleaning unit or in combination with chip conveyors (e.g., at machining centers)
- Local (for one machine tool) or central use (for several machine tools) possible

### Description

### Filtering process

- 1. Dirty liquid flows laterally through the intake box into the filter trough
- 2. The filter fleece retains the dirt particles as they flow through it
- 3. The dirt particles form a filter cake that separates even the smallest dirt particles
- 4. The clean liquid collects in the clean tank
- 5. Low and high pressure pumps supply the machine tool with cleaned KSS as required

### Regenerations 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 (alternatively: time-controlled)
- 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

### Diagram



### Basic equipment

- Compact filter
- Filter fleece (initial equipment)
- Supply pump(s)
- Low fleece switch

- Level measurement technology
- Control unit
- Tank



### Powerful electrical engineering

Customized electrical engineering with modular design - optimally prepared for your application



# Modular systems





KNOLL .lt works



### Dimensions





## Configuring an individual filter system

## 1. Select the compact filter

Type*	pe* Filter capacity (l/min)		Intake	Fleece width	H1	B1	L1	L2	
	Emulsion**	Oil	DN					(optional)	
KF 110	110	40	25	390	740	455	780	415	
KF 150	150	60	25	540	740	600	780	415	
KF 200	200	90	25	710	740	780	780	415	
KF 300	300	130	40	540	1050	600	1200	450	
KF 400	400	175	40	710	1050	780	1200	450	
KF 600	600	250	40	1020	1240	1100	1495	450	

Dimensions without specification of units in mm

\* KF 110 - KF 200 Fleece roll at the top, KF 300 - KF 600 fleece roll at the rear (standard)

\*\* Machining with standard fleece

## 2. Select pump assembly and design

Maximum number of high-pressure pumps	Maximum number of low-pressure pumps	Pump 1-5	High- pressure	Low-pressure	
2	3	Motor circuit	direct	plug connection	Inverter
1	4	Valve	Vario	Standard	
0	5	Pressure sensor	0		
		Duplex switch filter	0		



## 3. Select variants

PW 70/70	PW 100/100	PW 150/150
top	rear	
optical	digital	
digital	analog	
side cooler	immersion cooler	plate heat exchanger
absolute temperature	room temperature	
KTP 400	KTP 700	SmartConnect (starting in 2023)
mating connector	open end	custom
none	Profinet	Profibus
	PW 70/70topopticaldigitalside coolerabsolute temperatureKTP 400mating connectornone	PW 70/70PW 100/100toprearopticaldigitaldigitalanalogside coolerimmersion coolerabsolute temperatureroom temperatureKTP 400KTP 700mating connectoropen endnoneProfinet

Highlighted= recommended standard

## 4. Select options

Take-up device	0
Belt skimmer	0
Magnetic roller as pre-separator	0
Side panel	0
Fill level measuring technology i.a.w. WRA	0
Safety catch pan i.a.w. WRA	0

## 5. Select tank

Filters	Tank	Dimensions LxWxH [mm]	Volume [l] approx.
<b>KF 110, KF 150,</b> KF 200	RO	1431 x 950 x 800	800
<b>KF 110, KF 150,</b> KF 200		1431 x 950 x 1000	1100
KF 110, KF 150, KF 200	R1	1902 x 950 x 800	1100
KF 150, KF 200		1902 x 950 x 1000	1500
<b>KF 150, KF 200</b>	R2	2373 x 950 x 800	1400
<b>KF 200,</b> KF 300		2373 x 950 x 1000	1850
<b>KF 150, KF 200,</b> KF 300	R3	1902 x 1421 x 800	1700
<b>KF 200, KF 300,</b> KF 400		1902 x 1421 x 1000	2200
KF 200, KF 300, KF 400	R4	2373 x 1421 x 800	2100
KF 300, KF 400		2373 x 1421 x 1000	2800
<b>KF 300, KF 400</b>	R5	2844 x 1421 x 800	2500
<b>KF 300, KF 400,</b> KF 600		2844 x 1421 x 1000	3300
KF 300, KF 400	R6	2373 x 1892 x 800	2800
KF 400, KF 600		2373 x 1892 x 1000	3700
KF 300, <b>KF 400,</b> KF 600	R7	2844 x 1892 x 800	3350
<b>KF 400, KF 600</b>		2844 x 1892 x 1000	4400
<b>KF 110</b>	QO	950 x 950 x 800	580
<b>KF 110,</b> KF 150		950 x 950 x 1000	760
KF 110, <b>KF 150, KF 200</b>	Q1	1431 x 1421 x 800	1300
KF 150, <b>KF 200, KF 300</b>		1431 x 1421 x 1000	1700
KF 200, KF 300, KF 400	Q2	1902 x 1892 x 800	2200
KF 300, KF 400		1902 x 1892 x 1000	3000
<b>KF 400,</b> KF 600	Q3	2373 x 2363 x 800	3500
<b>KF 600</b>		2373 x 2363 x 1000	4600
<b>Highlighted</b> = standard filter for the tank size			



### 6. Place components with mounting plates on the tank

#### Mounting plate



#### XS = 469 x 469 mm

Components (except for compact filter, control cabinet, immersion cooler, high-pressure pump)



#### $S = 469 \times 940 \text{ mm}$

Components (except for compact filter, immersion cooler)

#### M = 940 x 940 mm

- KF 110, 150, 200
- Components (except for plate heat exchanger)

 $L = 469 \times 1411 \text{ mm}$ Components (except for compact filter, immersion cooler, plate heat exchanger)

#### XL = 940 x 1411 mm

- KF 300, 400
- Components (except for immersion cooler, high pressure pump, plate heat exchanger)

### XXL = 1411 x 1411 mm

- KF 600
- Components (except for immersion cooler, high pressure pump, plate heat exchanger)

#### Examples









# Standardanlagen

# Version A





### Version B



View X



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# Technical data

Type V si	Ver- sion	Filter capacity* [l/min]		Inlet	Tank-	Fleece-	H	H1 [mm]	B	B1	L	L1	L2 Option
		Emulsion	Oill	DN	[l]	[mm]	[11111]	1] [111111]	[11111]	[11111]	[11111]	[11111]	[mm]
KF 1000*	А	1000	450	100	6000	1020	1100	1240	1950	1100	3400	1495	450
KF 1500*	А	1500	750	100	9000	1520	1100	1240	1950	1605	5000	1495	450
KF 2000*	А	2000	1000	100	12000	2000	1100	1240	1950*	2080	6800	1495	450
KF 110	В	110	40	25	480	390	760	650	900	455	900	780	
KF 150	В	150	60	25	480	540	760	650	900	600	900	780	
KF 150	В	150	60	25	650	540	760	650	1000	600	1100	780	
KF 200	В	200	90	25	650	710	760	650	1000	780	1100	780	

\* Metal cutting with standard fleece \*\* During longitudinal installation min. 2200 mm







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### Compact filter KF



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