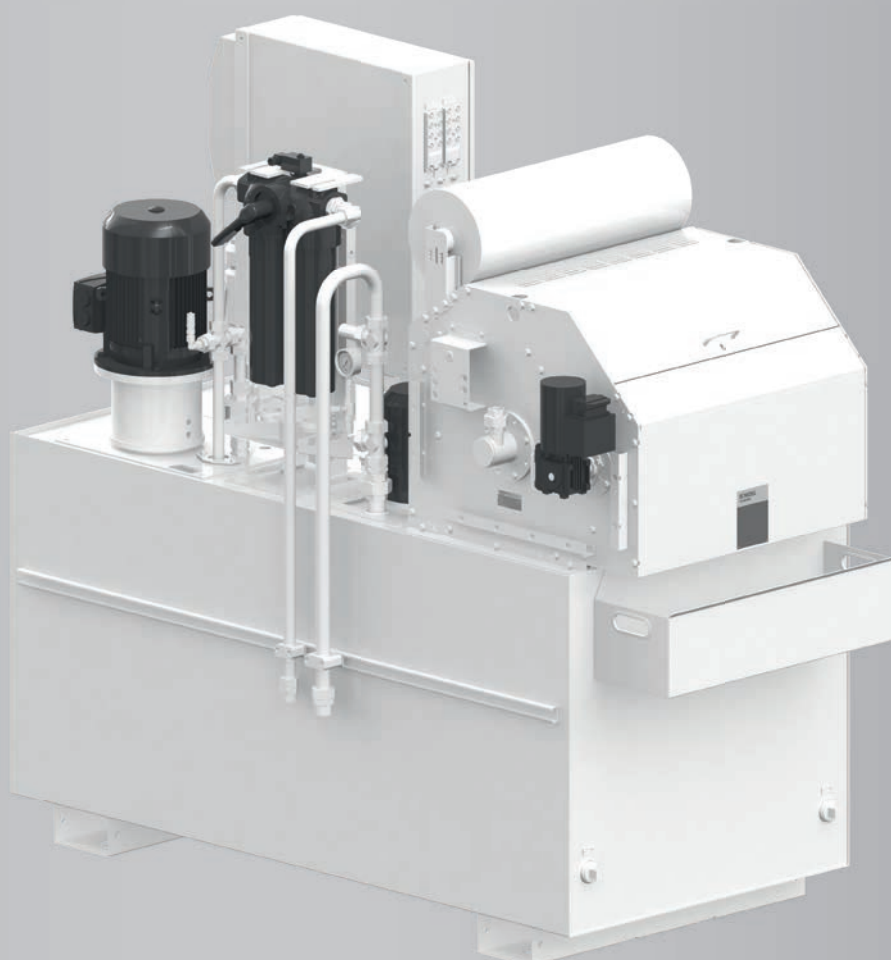


Modular compact filter KF

KNOLL
.It works

Edition 06-2025



Properties

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 processes, 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

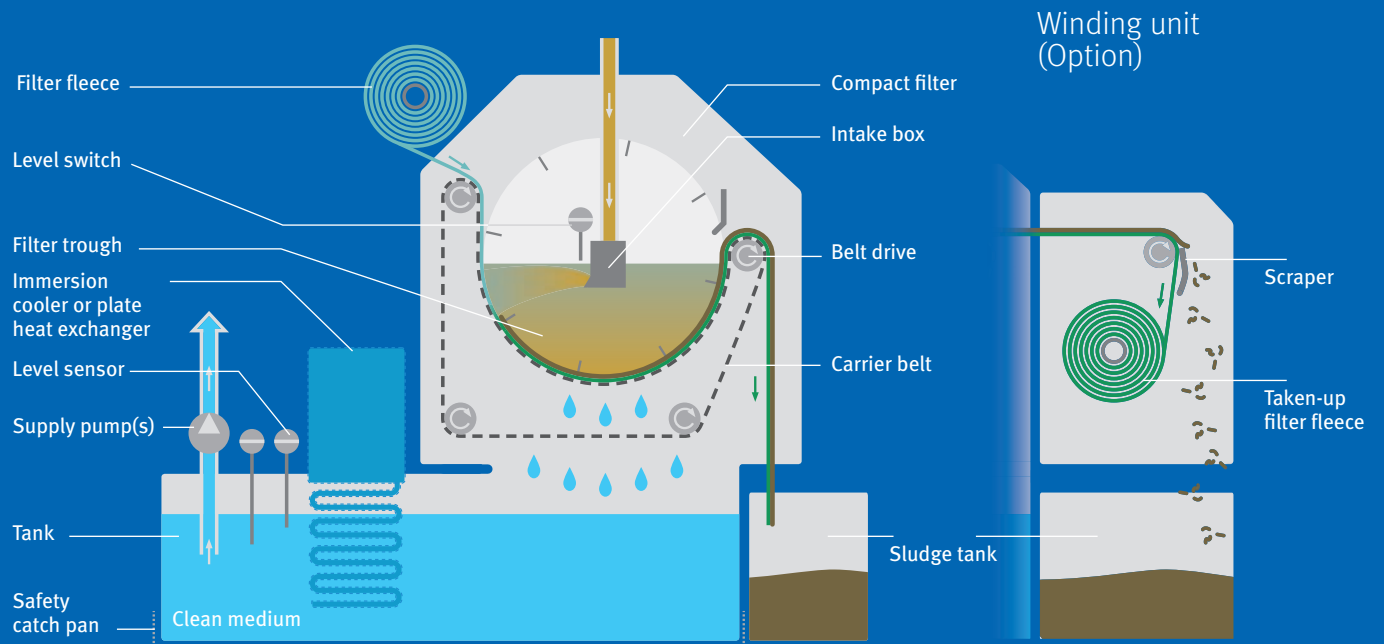
Filtering process

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

Compact filter

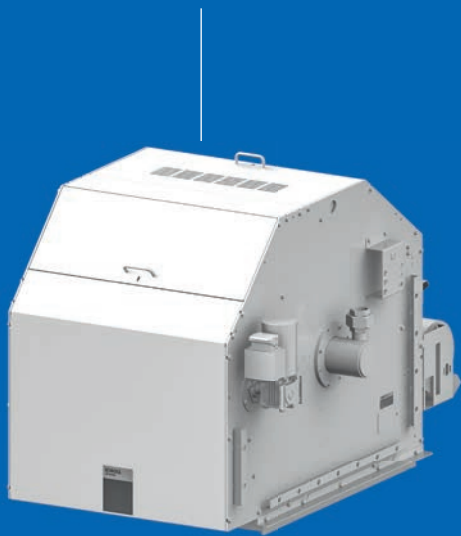


Plate heat exchanger



Duplex switch filter



High-pressure pump(s)



Control cabinet



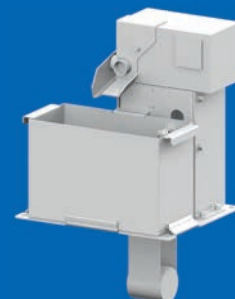
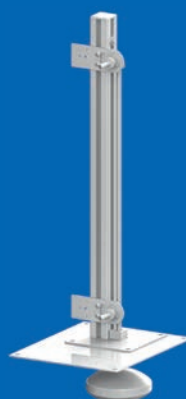
Immersion cooler



Low-pressure pump(s)

Level sensor

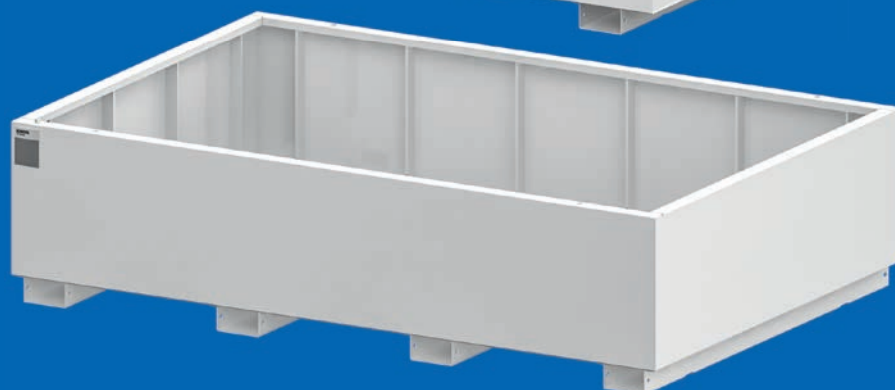
Belt skimmer



Cover plate

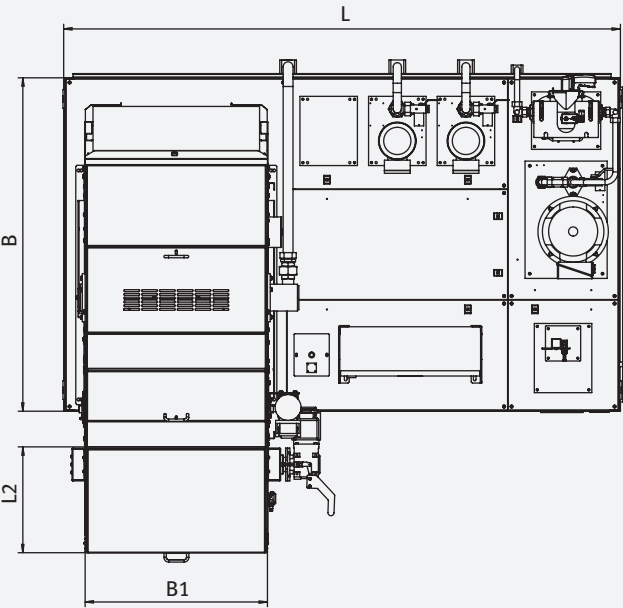
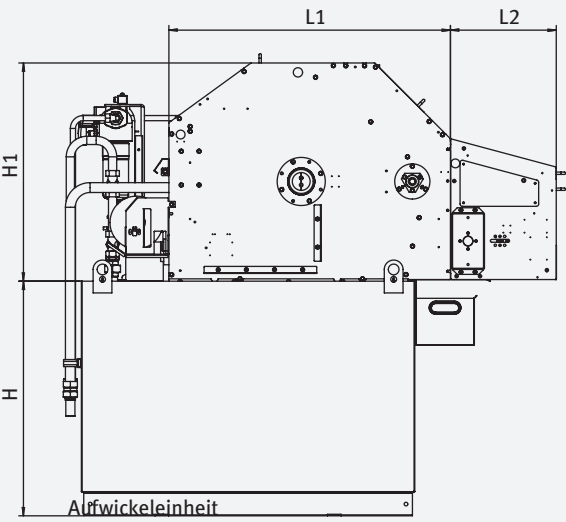


Tank



Safety catch pan

Dimensions



Configuring an individual filter system

1. Select the compact filter

Type*	Filter capacity (l/min)		Intake DN	Fleece width	H1	B1	L1	L2 (optional)
	Emulsion**	Oil						
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	1200	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	○		
		Duplex switch filter	○		

3. Select variants

Filter fleece (initial equipment)	PW 70/70	PW 100/100	PW 150/150
Fleece roll arrangement	top	rear	
Level indicator	optical	digital	
Level sensor	digital	analog	
Cooler	side cooler	immersion cooler	plate heat exchanger
Control	absolute temperature	room temperature	
Control panel	KTP 400	KTP 700	SmartConnect (starting in 2023)
Interface connection	mating connector	open end	custom
BUS interface	none	Profinet	Profibus

Highlighted= recommended standard

4. Select options

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

5. Select tank

Filters	Tank	Dimensions LxWxH [mm]	Volume [l] approx.
KF 110, KF 150, KF 200	R0	1431 x 950 x 800	800
KF 110, KF 150, 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
KF 150, KF 200	R2	2373 x 950 x 800	1400
KF 200, KF 300		2373 x 950 x 1000	1850
KF 150, KF 200, KF 300	R3	1902 x 1421 x 800	1700
KF 200, KF 300, 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
KF 300, KF 400	R5	2844 x 1421 x 800	2500
KF 300, KF 400, 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, KF 400, KF 600	R7	2844 x 1892 x 800	3350
KF 400, KF 600		2844 x 1892 x 1000	4400
KF 110	Q0	950 x 950 x 800	580
KF 110, KF 150		950 x 950 x 1000	760
KF 110, KF 150, KF 200	Q1	1431 x 1421 x 800	1300
KF 150, KF 200, KF 300		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
KF 400, KF 600	Q3	2373 x 2363 x 800	3500
KF 600		2373 x 2363 x 1000	4600

Highlighted = standard filter for the tank size

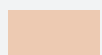
6. Place components with mounting plates on the tank

Mounting plate



XS = 469 x 469 mm

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



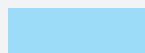
S = 469 x 940 mm

Components (except for compact filter, immersion cooler)



M = 940 x 940 mm

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



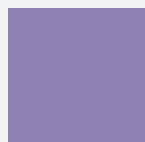
L = 469 x 1411 mm

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

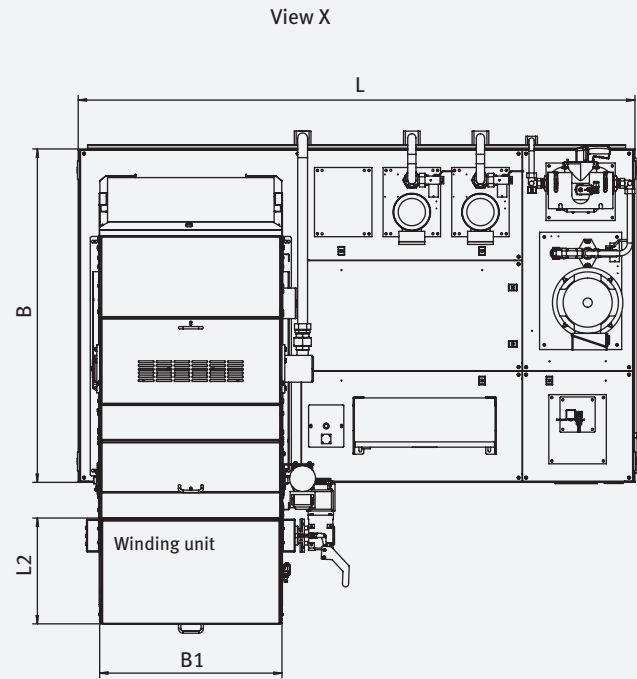
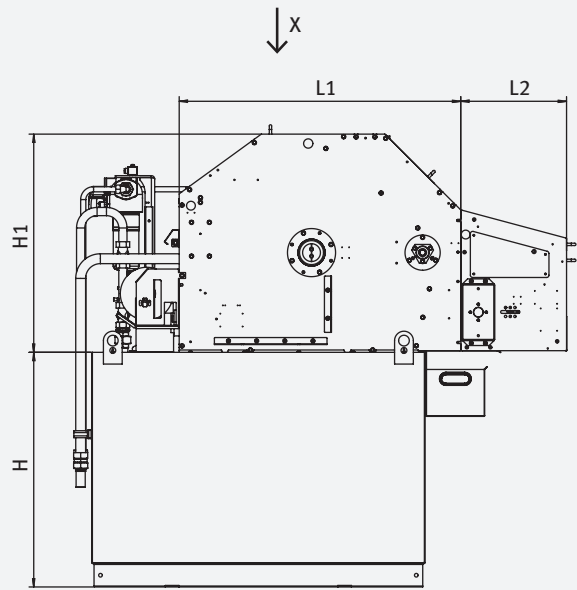
- KF 600
- Components (except for immersion cooler, high pressure pump, plate heat exchanger)

Examples

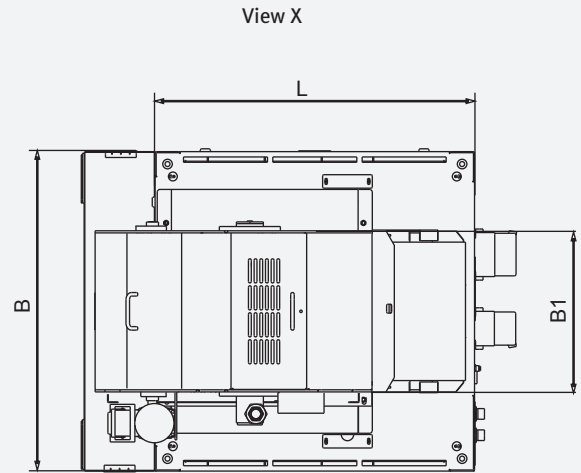
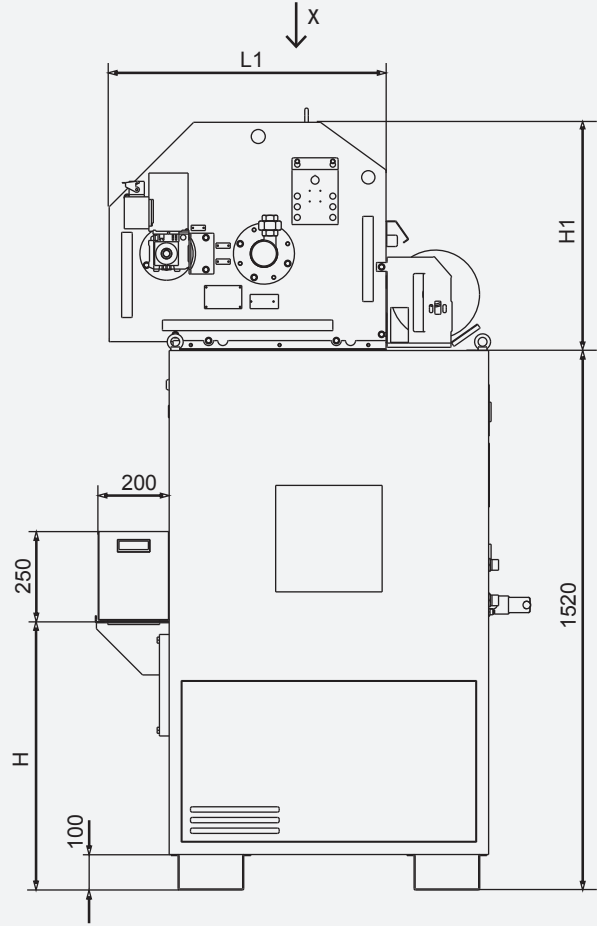


Standardanlagen

Version A



Version B



Technical data

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

* Metal cutting with standard fleece

** During longitudinal installation min. 2200 mm

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.de



<輸入総代理店>
NKワークス株式会社

URL : <https://www.nk-works.co.jp>

E-mail : info@nk-works.co.jp



●東京本社

〒 101-0032 東京都千代田区岩本町2-17-17
TEL 03-3864-5411 FAX 03-3864-6752

●名古屋営業所

〒 453-0856 愛知県名古屋市中村区並木1-336
TEL 052-419-2501 FAX 052-419-2833

●大阪営業所

〒 532-0004 大阪府大阪市淀川区西宮原2-7-38
新大阪西浦ビル602号
TEL 06-6395-2640 FAX 06-6395-2641

●広島営業所

〒 732-0052 広島県広島市東区光町2-12-10
日宝光町ビル601
TEL 082-207-2464 FAX 082-207-2465

●福島出張所

〒 961-8055 福島県西白河郡西郷村字道南西75
新白河丸昌ハイツC1
TEL 0248-21-9140 FAX 0248-21-9140

●福井営業所

〒 918-8027 福井県福井市福1丁目2808
大久保マンション101号
TEL 0776-63-5942 FAX 0776-63-5943

●つくばR&Dセンター

〒 300-2657 茨城県つくば市香取台B47-3 TEL
029-898-9111 FAX 029-898-9543