Compact filter KF

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Properties	Benefits
Compact design	Space-saving setup
Good price-performance ratio	Short amortization time
Greater hydrostatic pressure as compared to flat-bed filters	Higher delivery rate, lower fleece consumption and better degree of purity
Sweeping strips and scraper	Problem-free discharge of chips, even light metal ones
Can be used universally for different working processes, materials, cooling lubricants, delivery rates and degrees of purity	Simple design and planning

Areas of application

KNOLL compact filters KF are belt filters for cleaning cooling lubricants of machining processes

- Use as stand-alone cleaning unit or combined with chip conveyors (e.g. in machining centres)
- Local (for one machine tool) or central (for several machine tools) use possible

Description

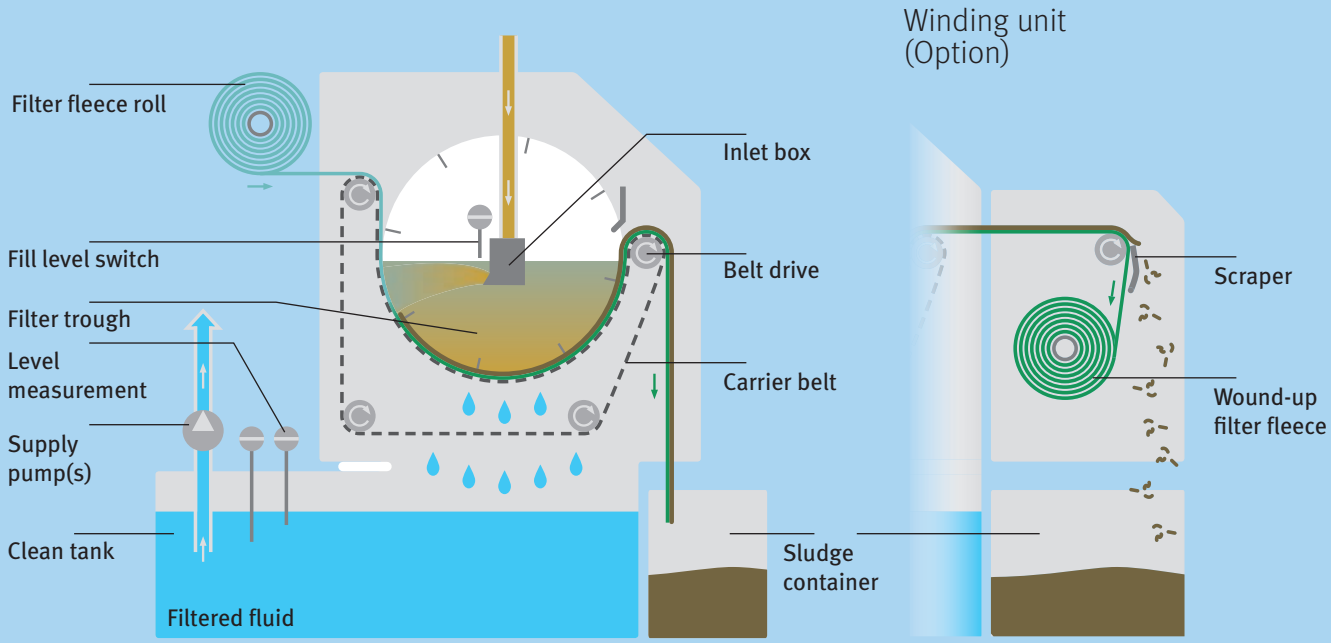
Filtration process

1. Contaminated liquid flows from the side through the inlet box into the filter trough
2. The filter fleece holds back the contaminant particles during streaming
3. The contaminant particles form a filter cake, which separates even tiny dirt particles
4. The filtered fluid collects in the clean tank

Regeneration process

1. The growing filter cakes increase the flow resistance
2. The fluid 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 to the filter surface
5. The fluid level decreases again
6. A sludge container or a winding unit (Option) takes up the dirty filter fleece

Functional scheme



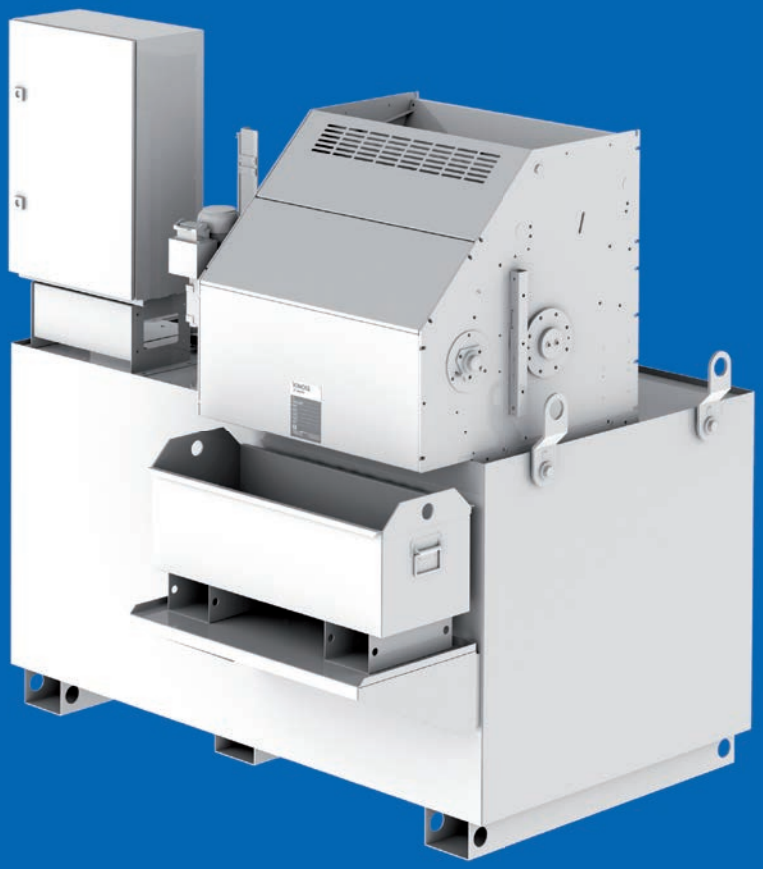
Equipment

Belt drive	●
Circulating carrier belt	●
Filter fleece (original equipment)	●
Fleece shortage switch	●
Fleece roll integrated into housing	●
Fill level measuring technology i.a.w. WRA	●
Control system	●
Magnetic roller as pre-separator	○
Cooling lubricant tank system with supply pump(s)	○
Duplex switch filter	○
Tempering (cooling/heating)	○
Fleece roll arranged on the back (standard starting with KF 300)	○
Winding unit with drive and scraper	○
Sludge container	○
Filter fleece shortage early warning	○
Side panel	○

● Standard equipment
○ Option

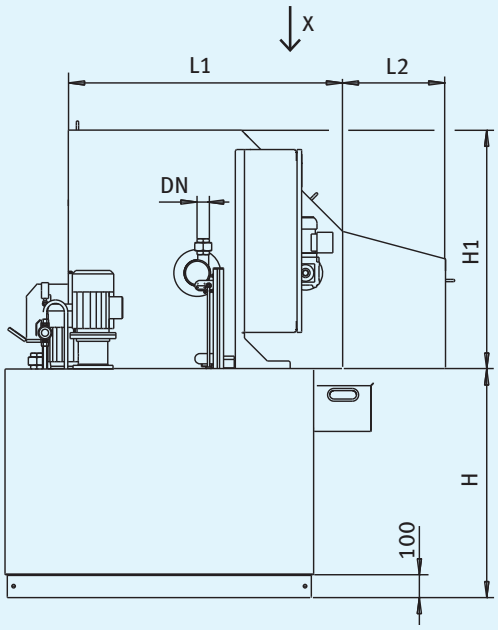
Design example

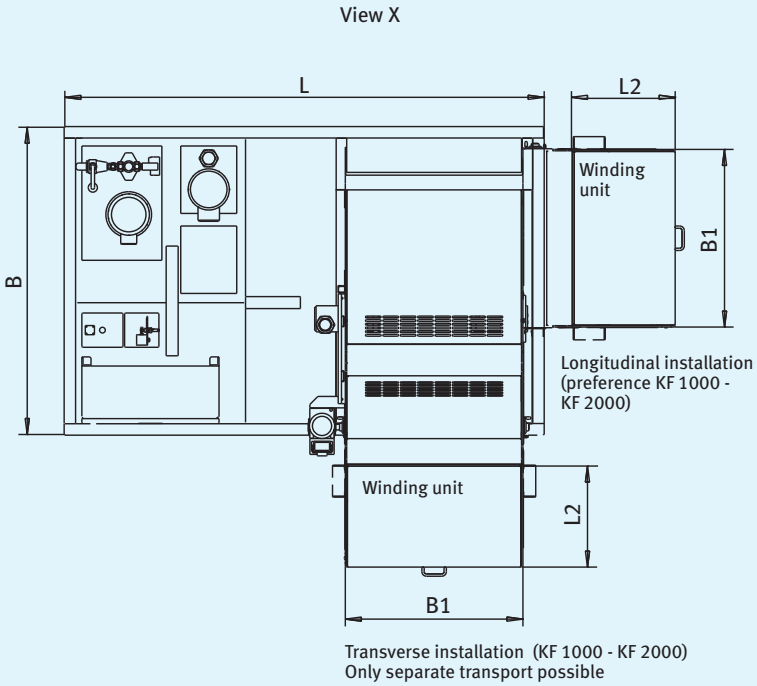
Version A



Version B/C
without winding unit

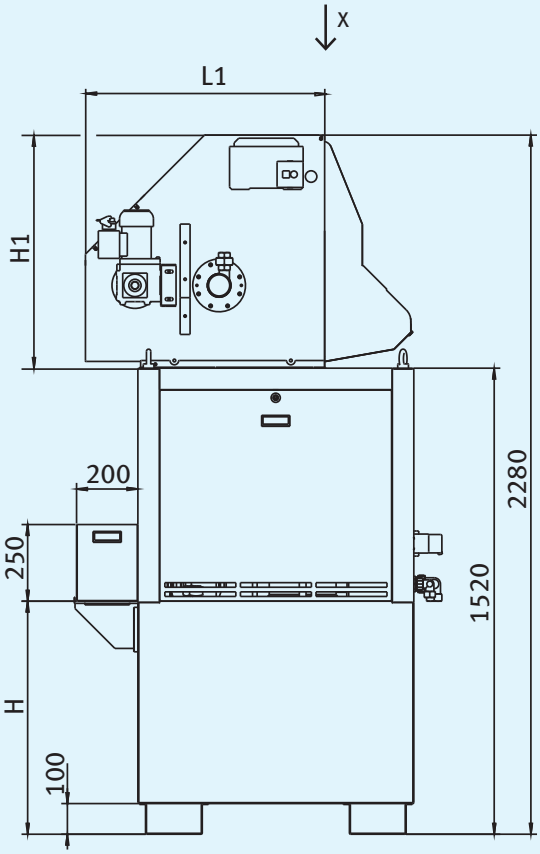
Version A

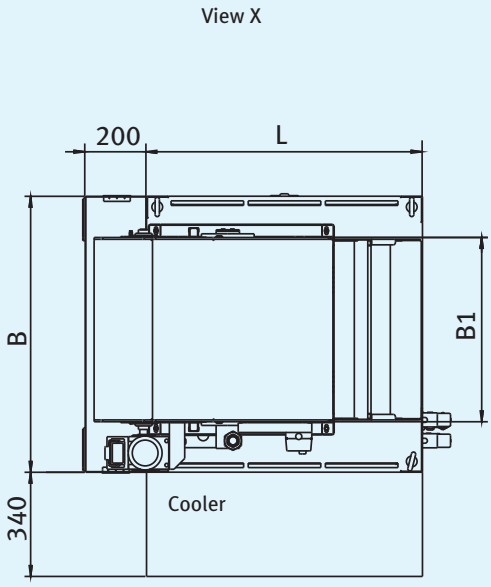




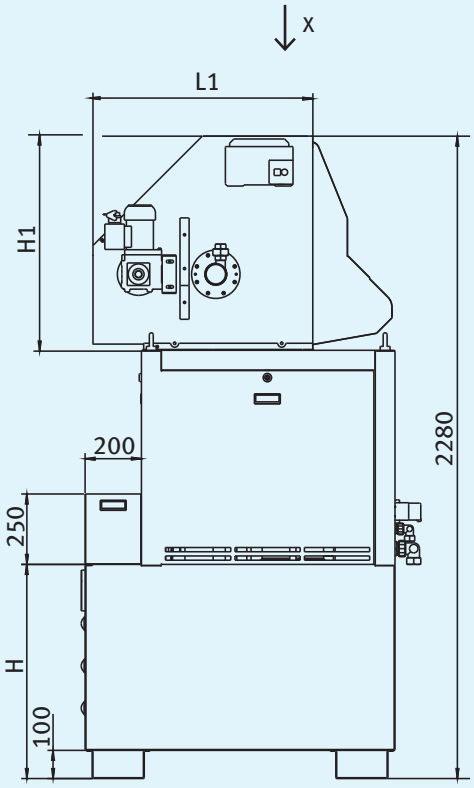
Transverse installation (KF 1000 - KF 2000)
Only separate transport possible

Version B

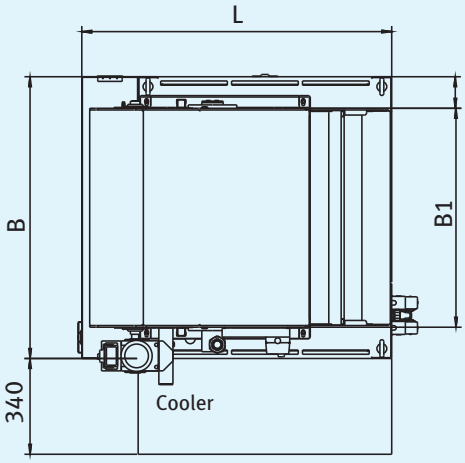




Version C



View X



Technical data

Type	Version	Filter capacity**(l/min) Emulsion	Oil	Inlet DN	Tank capacity(l)	Fleece-width	H	H1	B	B1	L	L1	L2 (Option)
KF 110*	A	110	40	25	700	390	650	740	1100	455	1450	780	415
KF 150*	A	150	60	25	900	540	700	740	1100	600	1600	780	415
KF 200*	A	200	90	25	1200	710	800	740	1100	780	1800	780	415
KF 300*	A	300	130	40	1800	540	800	1045	1350	600	2200	1200	450
KF 400*	A	400	175	40	2200	710	1000	1045	1350	780	2100	1200	450
KF 600*	A	600	250	40	3400	1020	1100	1045	1500	1100	2500	1200	450
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[3]	2080	6800	1495	450
KF 110	B	110	40	25	480	390	760	740	900	455	900	780	
KF 150	B	150	60	25	480	540	760	740	900	600	900	780	
KF 150	C	150	60	25	650	540	760	740	1000	600	1100	780	
KF 200	C	200	90	25	650	710	760	740	1000	780	1100	780	

Dimensions without units given in mm.

* KF 110 – KF 200, KF 1000 – KF 2000 fleece roll at the top, KF 400 – KF 600 fleece roll back (standard)

** Metal cutting with standard fleece

[1] $\upsilon = 1\ mm^2/s$

[2] $\upsilon = 10\ mm^2/s$ (at operating temperature)

[3] during longitudinal installation min. 2200 mm

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