

Electric Drives
and Controls

Hydraulics

Linear Motion and
Assembly Technologies

Pneumatics

Service

Rexroth
Bosch Group

Vacuum band filter Type StUF

RE 50400/09.09

1/4

Technical information

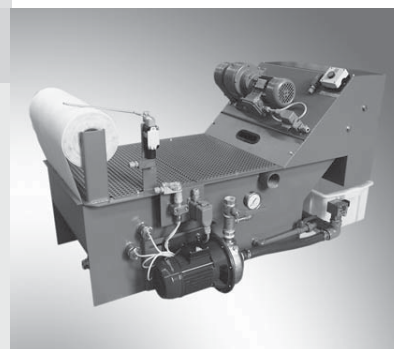


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Introduction

Page	Full-flow filtration of oils or emulsions containing swarf and metal particles with continuous band or consumable fleece.
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2	The band filters are particularly used in case of high requirements on the filtration rating particularly on machine tools, in the chemical industry and with washing systems.
2	
3	The output is 50 - 12000 l/min. Numerous optional structural components like movable dirt tank or dirt tank suitable for transport by forklift truck and magnetic or slotted screen pre-extractor are available.
4	
	Designed as single- and multi-pump system.

Application

Filtration of emulsions, solutions, waters, oils up to 200 mm²/s (approx. 30°E) with filtration ratings of ca. 20 – 100 µm possible depending on the filter medium quality and depending on the perfect filter cake structure.

- on machine tools
- in the chemical industry
- with washing systems

Standard construction

- Filter horizontally divided into dirty section and vacuum chamber by punched-hole screen or slotted screen
- Optional steel or stainless steel slotted screens, slot width 125 µm to 5 mm
- Removal slope with adapted discharge height (standard 1200 mm)
- Double-stranded chain with drag-chain angle (standard t = 40 mm)
- Drive station with geared motor IP 44, insul. class B
- Vacuum monitoring for discontinuous filter operation
- Regeneration tank or clean tank
- Automatic valve with solenoid valve for regeneration
- Filter medium holder with filter medium of 50 to 250 g/m²
- Transfer pump as filter or filter/feed pump
- Optionally equipped with reel for used fleece
- Dirt tank

Function

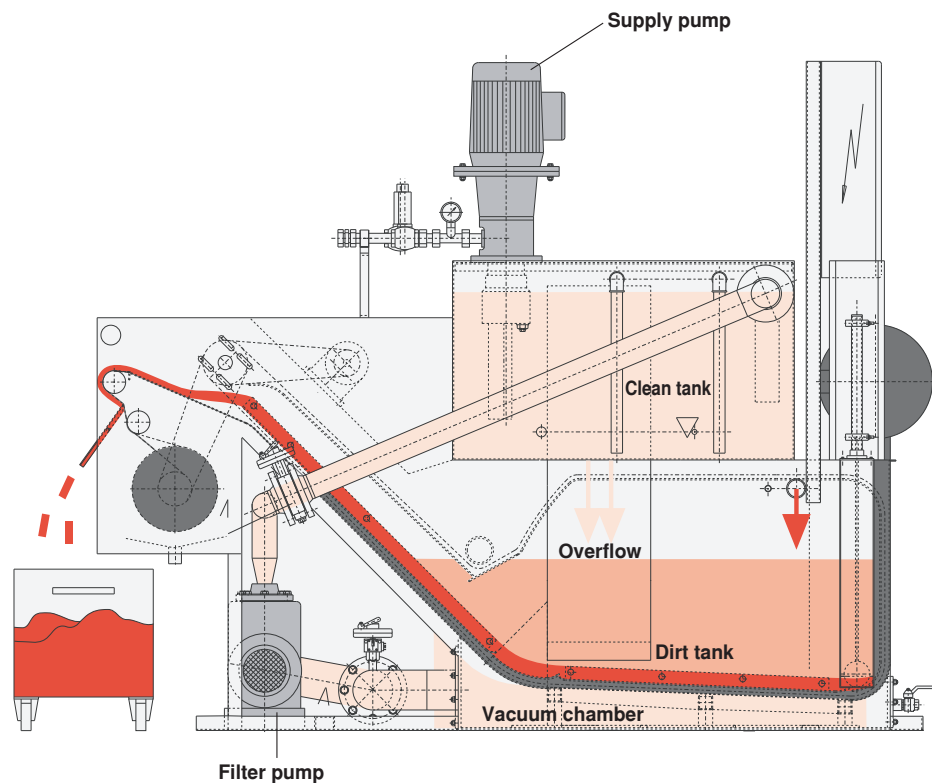
Single-pump system

The fluid to be filtered passes into the dirty section of the filter and is sucked out of the vacuum chamber by the filter/feed pump - at the same time, the supply to the consumer is endured. The impurities in the medium are retained by the filter medium, which lies on the filter bottom, and already after a short while form a filter cake which now carries out the actual fine filtration in the micro sector. As the fluid passes through, the filter cake sets up a resistance which is constantly monitored in the suction nozzle of the transfer pump. When a max. low pressure of 0.3 bar is reached, regeneration is initiated. The automatic valve opens the connection to the regeneration tank and extracts air from the vacuum chamber. During the following cycle, the transfer pump sucks purified fluid out of the regeneration tank and feeds it to the consumer. The integrated drag-chain equipment indexes in the direction of the swarf ejector and takes in approx. 20 cm of fresh filter medium.

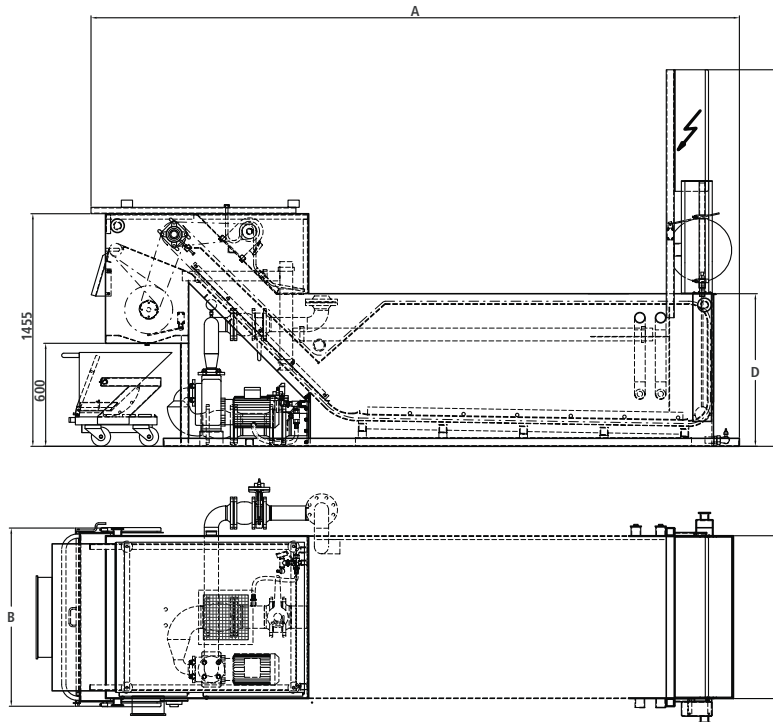
The regeneration cycle is completed - the automatic valve closes - the transfer pump once more sucks out through the fibre fleece. The filter cake on the removal slope outside the fluid dries out and is removed in a dry enough condition for shovelling out.

Multi-pump system

Identical function to that described above, except that the filter pump does not transfer to the consumer. Its job is solely to maintain filter circulation to the clean tank. During the regeneration cycle, the filter pump is shut off. One or more transfer pumps (up to max. 100 bar transfer pressure possible) take over the transfer of the filtered medium from the clean tank to the customer.



Unit dimensions (dimensions in mm)



Type StUF	StUF 50	StUF 75	StUF 100	StUF 150	StUF 200	StUF 250
A	2525	2945	2945	3195	3695	4195
B	680	1115	1115	1115	1115	1115
C	1900	2355	2355	2355	2355	2355
D (height dirt tank)	400	950	950	950	950	950
E (fleece width)	500	1000	1000	1000	1000	1000
Filter surface m²	0.5	0.75	1.0	1.5	2.0	2.5
max. supply capacity (l/min)	100	150	200	300	400	500
Tank size m³	According to customer request or required volume					

Special sizes on request

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