

Drumfilter Type TFB/TFC

For extracting dust from large air volumes



Functional Description

The design of the Drumfilters completely departs from that of most previously filter systems. The filter drum is stationary and can be bolted directly to a wall opening. The incoming air flows from the inside to the outside, leaving the drum through the whole filter surface. This means that the air inside the filter chamber is clean. Rotating and changing suction nozzles on the inside of the drum continuously vacuum off any dust and waste from the filter media. Only very little air is required to clean the filter medium as the suction nozzles are very small.

The nozzles are fluidic optimized and touch the filter media, which guarantees high and efficient cleaning. The drumfilter combination TFC features an additional coarse particle filter in form of a prefilter disc that is installed at the air intake side of the drumfilter. Coarse particles will adhere on the rotating disc while the fine dust passes through it into the drum. A stationary suction nozzle cleans the prefilter disc. The suction nozzles inside the filter drum and the prefilter disc can be driven by the same motor

Drumfilter

The drumfilters are perfectly suitable for energy-efficient filtration of large volumes of air with fibrous dust such as wood, polystyrene, insulation material, natural material, etc.

Application in various industrial sectors

- Textile industry
- Non-woven industry
- Woodworking industry
- Paper and Cellulose industry
- Tobacco industry
- Fiberglass industry
- Hygienic industry
- Automotive industry

Advantages

- Clean filter chamber since air flows from the inside to the outside
- Drive is easily accessible on the clean gas side
- Regenerative filter unit
- Continuous cleaning, therefore no pressure fluctuations within the system
- Precise adaptation to the total air volume due to the modular design
- No dust build-up between prefilter and filter drum
- Energy-efficient operation due to low pressure loss
- Sturdy construction
- Energy-efficient

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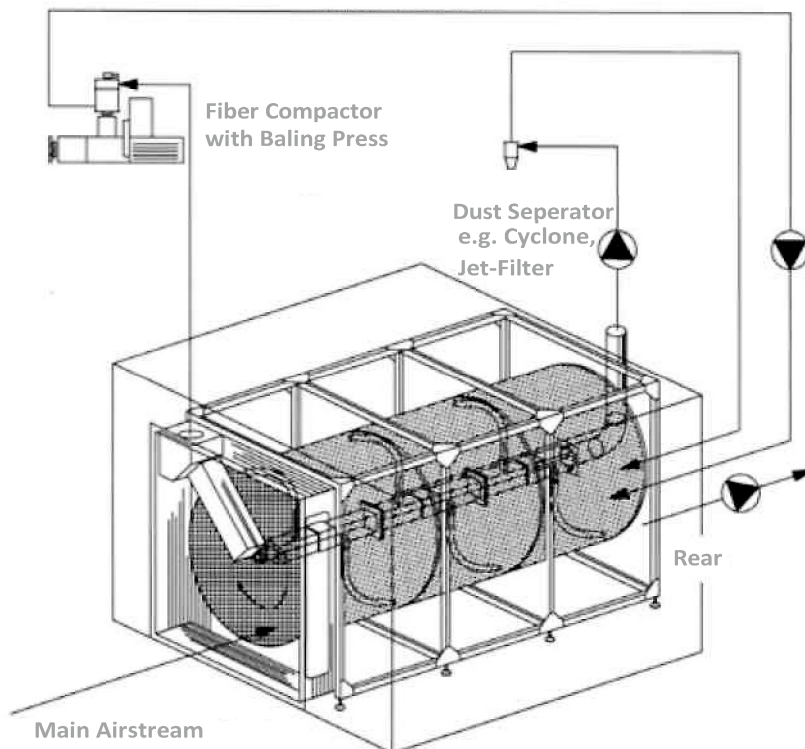
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Technical Data

Type	Diameter of Drum and Filter Disc (TFC) [mm/inch]	Fine-filter Surface [m ²]	Max. primary Air Volume *) [m ³ /h • cft./min.]	Suction Air Volume *) [m ³ /h • cft. /min.]	Suction Pressure at the nozzle [Pa]	Motor Power [kW]
TFB 15	1,500 (59)	6 - 19	80,000 (47,000)	250 – 800 (150 - 470)	4,000 – 6,000	0,37
TFB 20	2,000 (79)	16 - 32	140,000 (80,000)	250 – 1,000 (150-590)	4,000 – 6,000	0,37
TFB 25	2,500 (98)	21 - 52	224,000 (132,000)	250 – 1,200 (150-710)	4,000 – 6,000	0,37
TFB 30	3,000 (118)	25 - 63	270,000 (160,000)	250 – 1,500 (150-890)	4,000 – 6,000	0,37
TFC 15	1,500 (59)	6 - 19	40,000 (23,550)	250 – 800 (150-470)	4,000 – 6,000	0,37
TFC 20	2,000 (79)	16 - 24	70,000 (40,000)	250 – 1,000 (150-590)	4,000 - 6.000	0,37
TFC 25	2,500 (98)	21 - 52	135,000 (80,000)	250 – 1,200 (150-710)	4,000 – 6,000	0,37

*) Depends on filter media

Functional Diagram



Models/ Accessories

- Excl. / incl. prefilter (TFB/TFC)
- Wiper
- Pressure monitor
- Speed control
- Wall frame

Special Designs

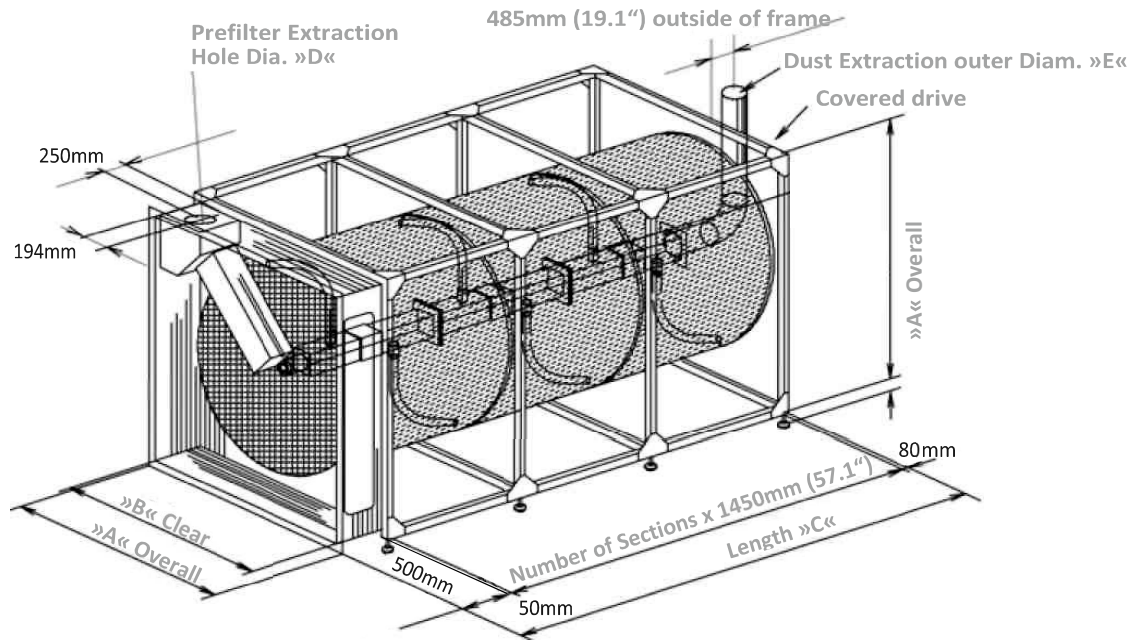
- Antistatic design
- Stainless steel prefilter screen
- With traversing nozzles ("Butterfly")
- High temperature version to 200°C
- ATEX-version

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Version with / without prefilter

Dimensional Diagram



Type without prefilter disc	Sections	»A« [mm/inch]	»B« [mm/inch]	»C« [mm/inch]	Diam. »E« [mm/inch]
TFB-4 15/15	1	1,700 (67)	1,600 (63)	1,580 (62)	Ø 160
TFB-4 15/30	2	1,700 (67)	1,600 (63)	3,030 (119)	Ø 160
TFB-4 15/45	3	1,700 (67)	1,600 (63)	4,480 (176)	Ø 160
TFB-4 20/30	2	2,200 (87)	2,100 (82.5)	3,030 (119)	Ø 160
TFB-4 20/45	3	2,200 (87)	2,100 (82.5)	4,480 (176)	Ø 160
TFB-4 20/60	4	2,200 (87)	2,100 (82.5)	5,930 (233)	Ø 160
TFB-4 25/30	2	2,740 (108)	2,640 (104)	3,030 (119)	Ø 160
TFB-4 25/45	3	2,740 (108)	2,640 (104)	4,480 (176)	Ø 160
TFB-4 25/60	4	2,740 (108)	2,640 (104)	5,930 (233)	Ø 160
TFB-4 25/75	5	2,740 (108)	2,640 (104)	7,380 (291)	Ø 160
TFB-4 30/45	3	3,280 (129)	3,180 (125)	4,480 (176)	Ø 160
TFB-4 30/60	4	3,280 (129)	3,180 (125)	5,930 (233)	Ø 160
TFB-4 30/75	5	3,280 (129)	3,180 (125)	7,380 (291)	Ø 160

Type with prefilter disc	Sections	»A« [mm/inch]	»B« [mm/inch]	»C« [mm/inch]	Diam. »D« Aperture [mm/inch]	Diam. «E» [mm/inch]
TFC-4 15/15	1	1,700 (67)	1,600 (63)	2,080 (82)	Aperture Ø 203	Ø 160
TFC-4 15/30	2	1,700 (67)	1,600 (63)	3,530 (139)	Circle Ø 235	Ø 160
TFC-4 15/45	3	1,700 (67)	1,600 (63)	4,980 (196)	6 x M6 (sealed hole)	Ø 160
TFC-4 20/30	2	2,200 (87)	2,100 (82.5)	3,530 (139)	Aperture Ø 254	Ø 160
TFC-4 20/45	3	2,200 (87)	2,100 (82.5)	4,980 (196)	Circle Ø 286 6 x M6 (sealed hole)	Ø 160
TFC-4 25/30	2	2,740 (108)	2,640 (104)	3,530 (139)	Aperture Ø 318	Ø 160
TFC-4 25/45	3	2,740 (108)	2,640 (104)	4,980 (196)	Circle Ø 356	Ø 160
TFC-4 25/60	4	2,740 (108)	2,640 (104)	6,430 (253)	8 x M6 (sealed hole)	Ø 160
TFC-4 25/75	5	2,740 (108)	2,640 (104)	7,880 (310)		Ø 160

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Caution!

The service life is reduced when the filter media are loaded to the maximum. When large quantities of material are involved, it is recommended that a design using considerably less than the maximum quantity of air is chosen.

Applications

The fine filter media are suitable for various dry materials with an average particle size of $>3\mu$. Applications in the textile industry are listed with examples in the table below

Applications	Exhaust air from machine	Exhaust air from room
Spinning, natural fibers	PES 279 (W/A)	AR 580 (W/A) AN 300 (W/A)
Weaving, natural fibers	PES 279 (W/A)	AR 580 (W/A)
Combing, natural fibers		AR 580 (W/A)
Knitted fabric, mixed fibers	AN 300 (W/A)	AN 300 (W/A)
Spinning, synthetic fibers	PES 279 (W/A)	AN 300 (W/A)
Weaving, synthetic fibers	PES 279 (W/A)	AN 300 (W/A)
Wool-combing	PES 279 (W/A)	
Cellular material, paper, hygiene	PES 279 (W/A)	
Fiber conditioning, non-woven	AR 580 US (W/A)	
Fiber formation, non-woven	AR 580 US (W/A)	
Fiber solidification, non-woven	AR 580 US (W/A) AR 580 (W/A)	
Fiber refinement, non-woven	AR 580 (W/A)	



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