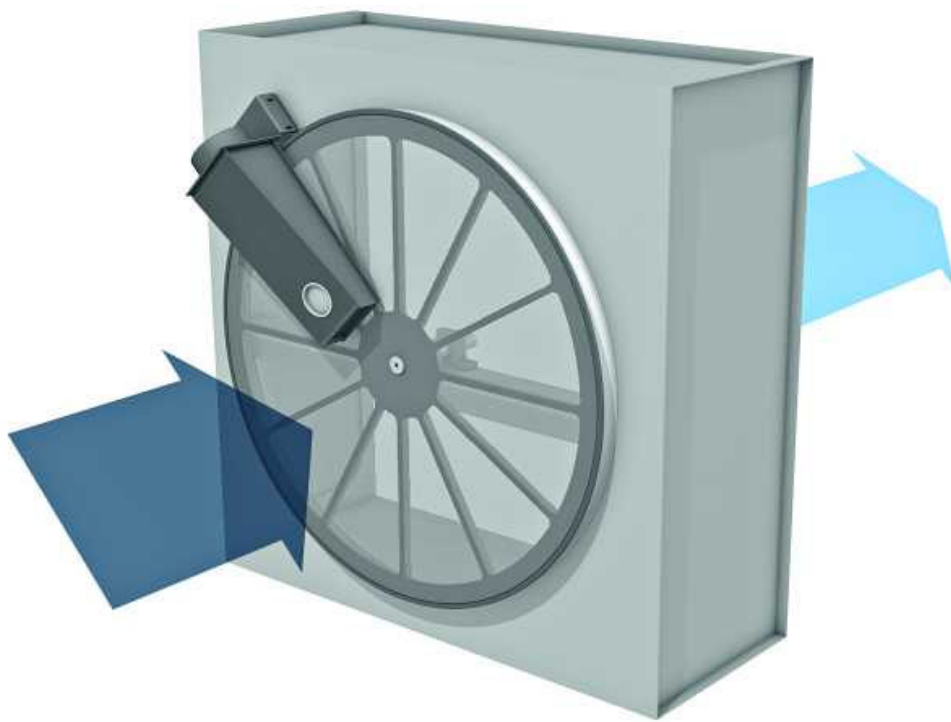


AIR TECH
SYSTEMS



Technical Documentation
LTG Prefilters
Series TVM / TVN

Technical Documentation · LTG Prefilters Series TVM / TVN

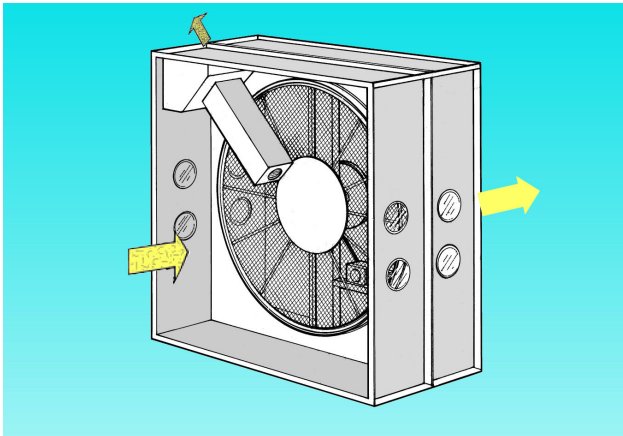
To filter out the coarse particles from large air streams, it is best to use an appropriate prefilter screen. Its characteristics are:

- high air permeability
- exact adaptation to the material to be separated by using different mesh sizes
- good separation of various size particles
- low maintenance

The LTG Prefilters Type TVM and TVN are rotating, continuously cleaned filter discs.

They can be used within an extremely large air volume range of 9,000 - 80,000 cfm (15,000 - 135,000 m³/h).

The compact and robust design offers the highest degree of reliability and safety.



Prefilter Type TVM with front and rear housing

Application

The LTG Prefilters Type TVM and TVN are most effective for extract air streams with a high content of fibers and particles of varying materials, sizes and shapes. The type TVM is preferred for use in case of heavy loads of individual fibers and particles. Type TVN is used for smaller loads of fibers and mixed particles that may get to the filter continuously or intermittently. They are used in industries such as

- textile industry
- nonwovens industry
- wood working industry
- paper industry
- cellulose industry
- tobacco industry
- fiberglass industry

Advantages

- regenerative filter unit
- no pressure fluctuations in the suction system due to continuous cleaning
- space saving installation due to the disc shape and the compact design
- optimum velocity is achieved by exact adaptation to the total air quantity
- no fiber contamination of drive elements and easy access by installation behind the prefilter screen
- easy filter media change
- pressure drop is minimized by optimal airflow design



Prefilter Type TVM with front housing

Function

The LTG Prefilters series TVM and TVN consist of an enclosure which is separated by a dividing wall in which the rotating filter disc is mounted. The dirty and clean air side is sealed off by a felt seal around the filter disc.

The continuous cleaning of the filter disc is by suction through a stationary slot nozzle (TVM) or by a traversing round nozzle (TVN). The nozzle does not touch the filter screen during cleaning.

The filter screen and nozzle is driven by a drive motor with belt drive mounted to the filter disc on the clean air side.

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Technical Data

Type	Diameter of filter disc inch (mm)	Screen mesh hole size*) µm	Max. Air volume cfm (m ³ /h)	Suction air quantity cfm (m ³ /h)	Suction pressure at suction nozzle "wg [Pa]**)	Enclosure with access
TVM 15	59.06 (1500)	150 - 1000	24,000 (40,000)	650-2400 (1100-4100)	9 (2200)	in front/ behind
TVM 20	78.74 (2000)		40,000 (70,000)			
TVM 25	98.43 (2500)		80,000 (135,000)			
TVN 15	59.06 (1500)	150 - 1000	24,000 (40,000)	590 (1000)	9 (2200)	in front/ behind
TVN 20	78.74 (2000)		40,000 (70,000)			
TVN 25	98.43 (2500)		80,000 (135,000)			

*) For use with high temperatures, aggressive gases, abrasive solid particles and for fire protection, stainless steel screens are available.

***) If prefilter suction loop is not coming back to the prefilter system, pressure must be added.

Electrical Equipment

		Drive for prefilter disc		
Working shaft speed	rpm	50 Hz	28	
		60 Hz	33.6	
Rotor shaft speed	rpm	50 Hz	1350	
		60 Hz	1620	
Motor power	hp (kW)	0.33 (0.25)		
Motor protection		Thermistor sensor 320 °F (160 °C)		
Voltage	V	230/400	290/500	330/575
Frequency	Hz	50/60	50/60	50/60
Rated current	A	0.85	0.68	0.59

Housings (option)

The prefilters series TVM and TVN should be ordered with front and rear housing (see pictures page 3) for applications in exhaust air plants in modular construction for example.

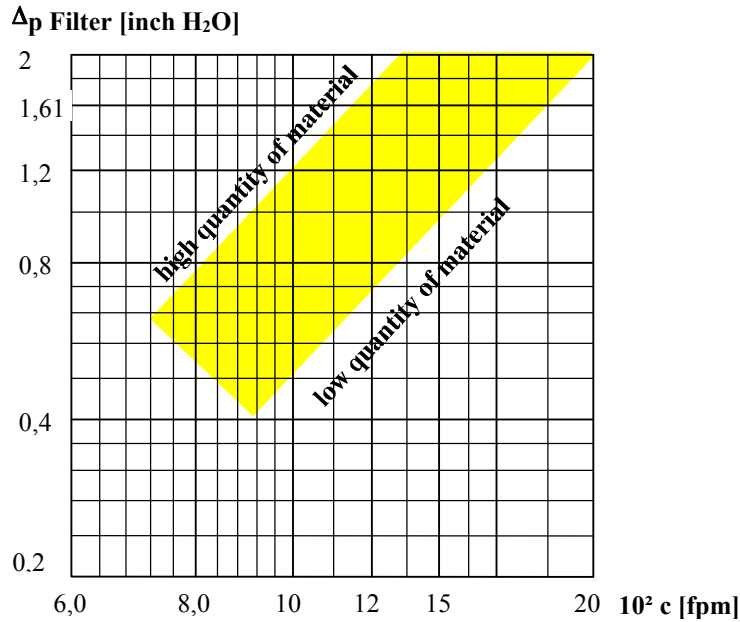
Shipping

The prefilters series TVM and TVN are shipped disassembled and assembled on site.

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Selection diagram

(Pressure drop over air flow velocity, air volume depending on size and cover plate)



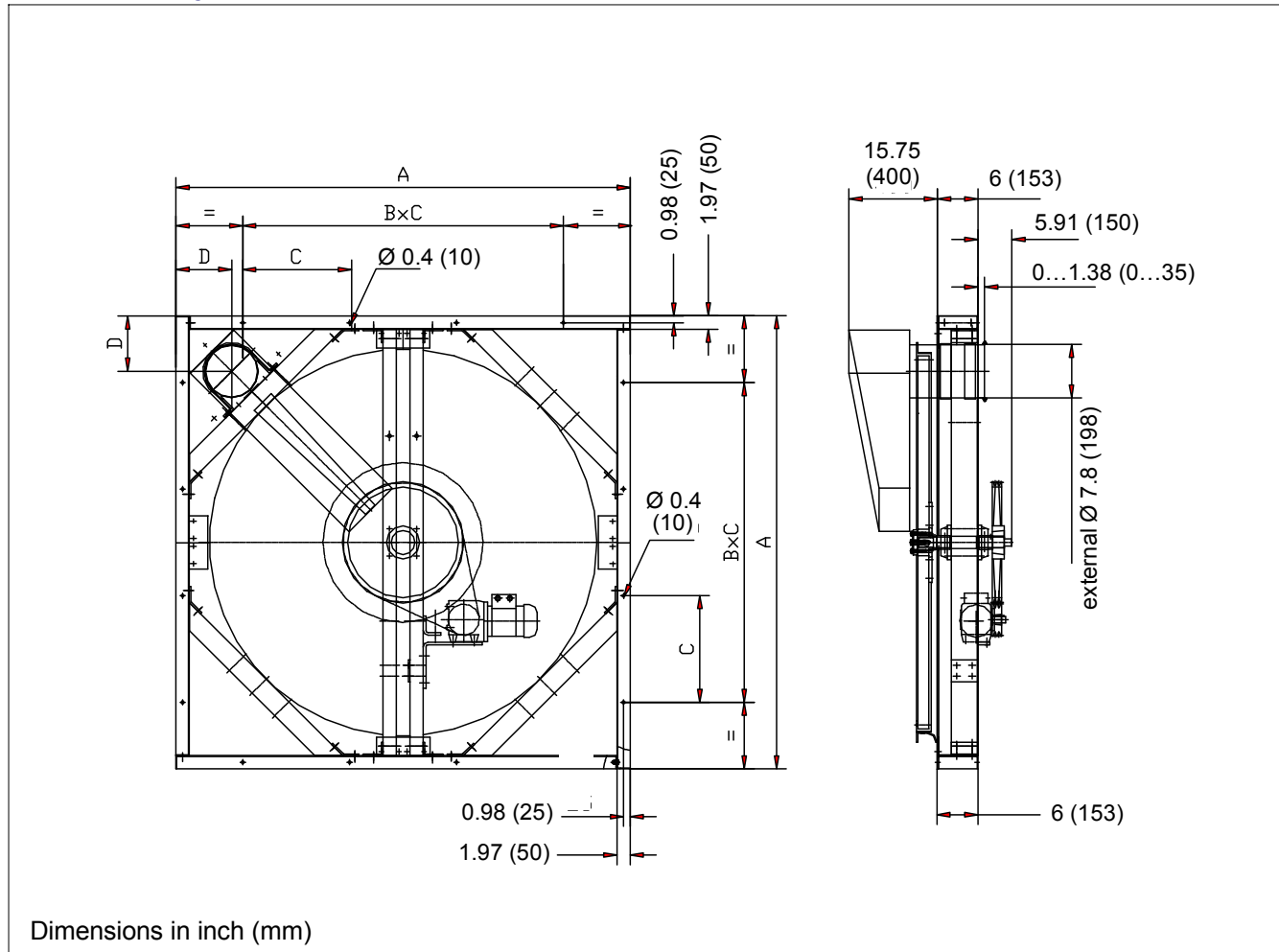
Size	4,1	4,7	5,8	7,1	8,2	9,4	11	12	13	Cover plate	
15										cfm · 10 ³ 39.37	
	7	8,2	9,4	10,6	12	13,2	15	16	17,6	19	cfm 10 ² 29.53
	8,8	11,8	15	17,6	20,6	23,5	26,5			cfm 10 ² 15.75	
20		7	8,2	9,4	11,8	14,7	17,6			cfm 10 ² 58.27	
		11,8	15	17,6	20,6	23,5	29,5			fm 10 ² 49.21	
		15	17,6	20,6	23,5	29,5	35			cfm 10 ² 39.37	
		15	17,6	20,6	23,5	29,5	35	41		cfm 10 ² 29.53	
		17,6	20,6	23,5	29,5	35	41	47		cfm 10 ² 23.62	
25			23,5	29,5	35	41	47	63		cfm 10 ² 58.27	
		23,5	29,5	35	41	47	63	68,9		cfm 10 ² 49.21	
		29,5	35	41	47	63	68,9	70,6		cfm 10 ² 39.37	
		29,5	35	41	47	63	68,9	70,6	82,4	cfm 10 ² 29.53	
		29,5	35	41	47	63	68,9	70,6	82,4	cfm 10 ² 23.62	

recommended range of application

Diameter [inch]

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Dimensions Type TVM

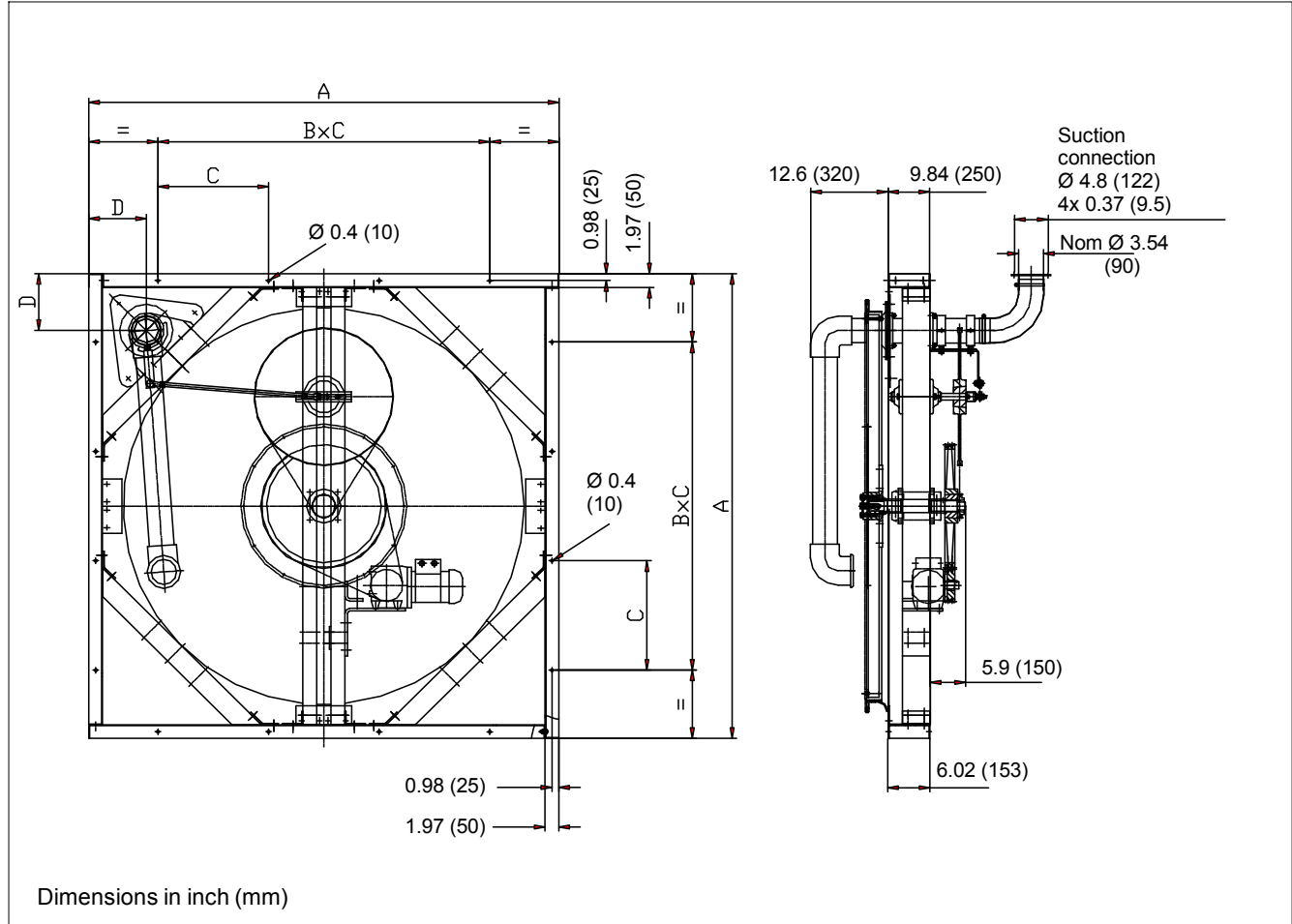


	TVM 15	TVM 20	TVM 25
A inch (mm)	66.93 (1700)	86.61 (2200)	107.87 (2740)
B	3	5	5
C inch (mm)	15.75 (400)	15.75 (400)	19.67 (500)
D inch (mm)	8.18 (208)	11.06 (281)	14.72 (374)

	TVM 15	TVM 20	TVM 25
Suction Connection			
Opening Ø inch [mm]	8 (203)	10 (254)	12.52 (318)
Screw holes inch [mm]	9.26 (235)	11.26 (286)	14.02 (356)
Hole circle inch [mm]	6 x Ø 0.28 (6 x Ø 7)	6 x Ø 0.28 (6 x Ø 7)	8 x Ø 0.28 (8 x Ø 7)

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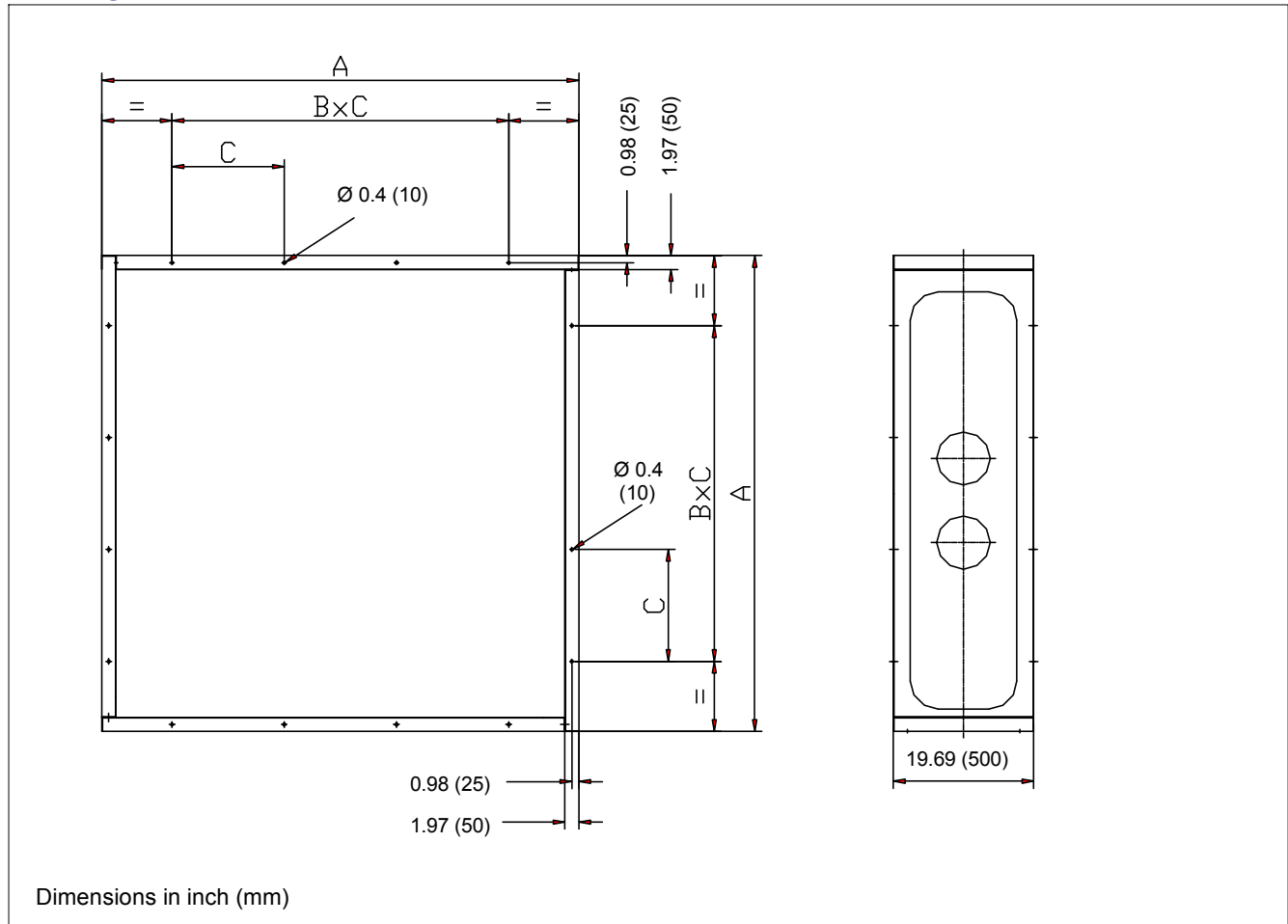
Dimensions Type TVN



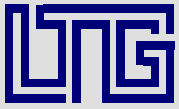
	TVN 15	TVN 20	TVN 25
A inch (mm)	66.93 (1700)	86.61 (2200)	107.87 (2740)
B	3	5	5
C inch [mm]	15.75 (400)	15.75 (400)	19.67 (500)
D inch [mm]	8.18 (208)	11.06 (281)	14.72 (374)

Technical Documentation · LTG Prefilters Series TVM / TVN

Housing dimensions



	TVM/N 15	TVM/N 20	TVM/N 25
A inch (mm)	66.93 (1700)	86.61 (2200)	107.87 (2740)
B	3	5	5
C inch (mm)	15.75 (400)	15.75 (400)	19.67 (500)



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