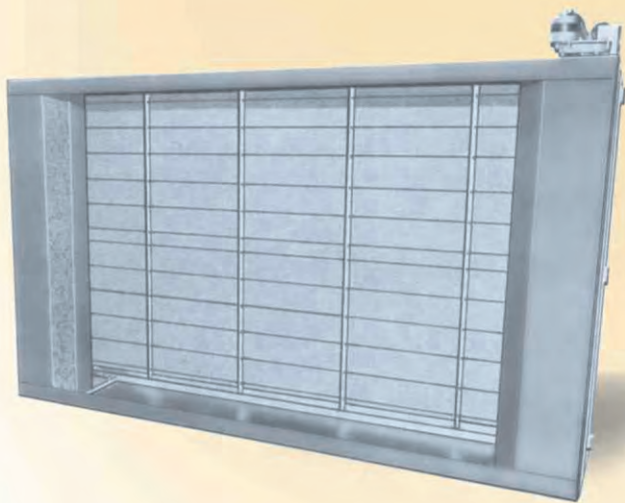


**Spectrum
Filtration's
SFVJ Type
Auto Roll
Air Filter**



Spectrum Filtration's SFVJ Type Auto Roll Air Filter

SPECTRUM FILTRATION'S SFVJ type Auto Roll Filter and Air Filter

With controls to meet the complex demands of variable air volume systems.

The roll filter concept combined with fiberglass media provides application versatility and air cleaning economy.

The Type SFVJ Auto Roll filter is the most versatile roll-type filter on the market today. This versatility is due to the many options offered.

Standard equipment for the model SFVJ includes :

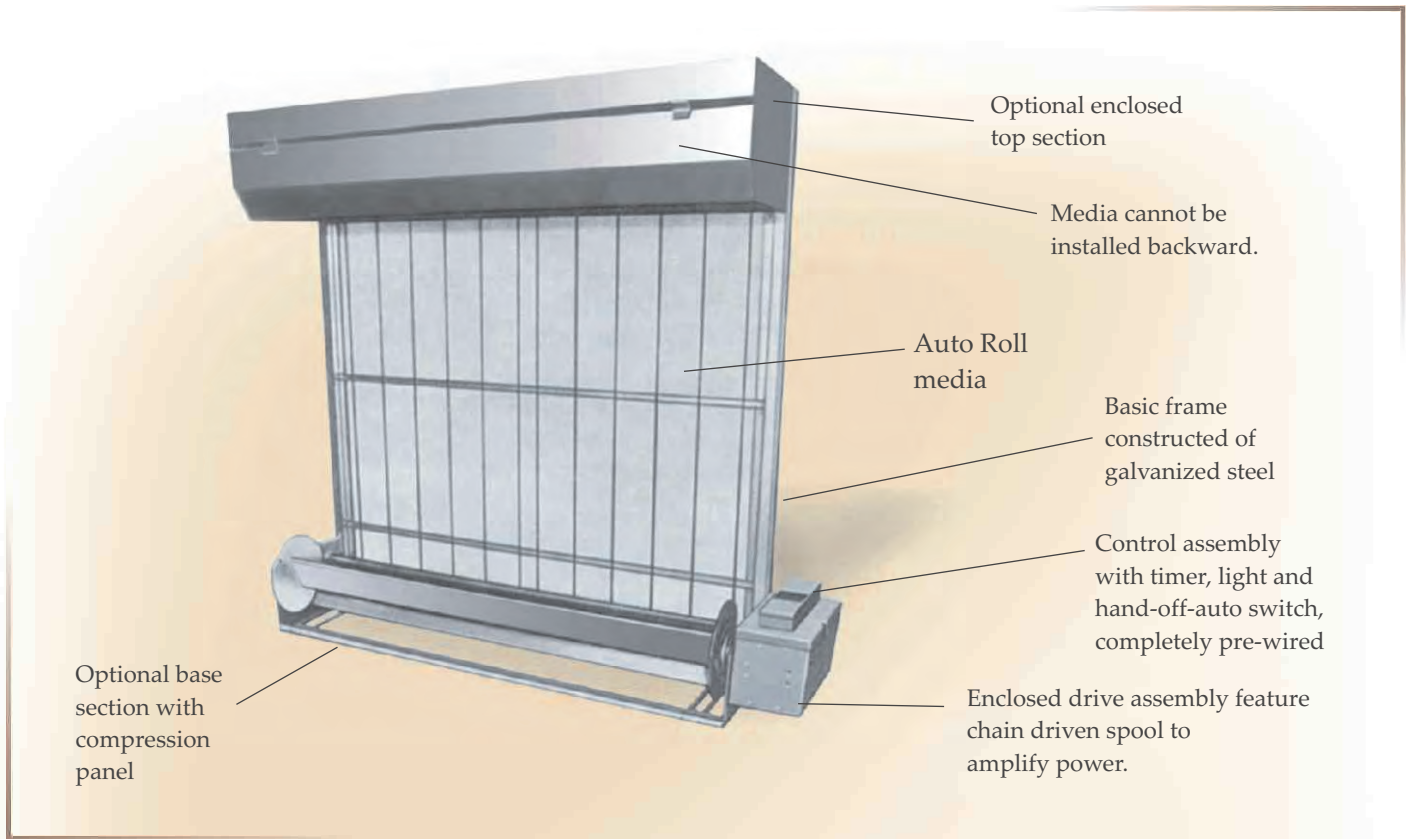
- Basic frame assembly
- Top support brackets and brace
- Base brackets and brace
- Compact, 1/4 HP enclosed gear motor drive assembly. Drive up to 3 sections in width, whether located internally or externally
- Control box containing timer, runout light and hand-off-auto selector switch completely factory wired.
- Initial filling of media and rewind spool.
- Other necessary parts and hardware

OPTIONS :

- Standard or reverse airflow
- Vertical or horizontal installation
- Separate motor and gear reducer or manual drive
- The standard control incorporates a solid state timer which is easily field adjusted to compensate for the height of the filter and dust concentration of the air being handled.

- DP based Controls for variable or constant air volume systems
- Timer control available with pressure override or media economizer control for constant air volume systems
- Runout switch in master section standard available with runout switch in each section
- Available in 3, 4, 5 and 6 foot wide sections heights from 5 to 15 feet
- Media rolls drive in parallel from solid steel jackshaft with external drive
- Complete factory wiring available
- Normally wired for 24 DV 120 volt, 50 Hertz, single phase/3Ph currents
- Extended drive shafts available
- Factory assembly available
- Enclosed clean media cover available
- Used media compression panel available
- Drive and controls may be mounted internally or externally
- Media cannot be installed backwards in the airstream

Every part of the Model SFVJ has been selected or designed to give complete reliability and lifetime service. Structural components are constructed of galvanized steel. Operating parts are of aluminum, bronze, or high quality steel.



Optional features

The Type SFVJ can be equipped with any of the following optional extra features desired :

- Heavy Duty Top Section includes media cover that completely encloses the clean media
- Compression Panel in Base Section applies a minimum of 50 lbs pressure to tightly rewind used media for ease of handling
- Solid Steel Jackshaft as required, turns the rewind spools through a rugged, heavy duty chain and sprocket assembly to amplify power from the drive. Insures that all media spools are driven in parallel. (Furnished in all sections with an external drive but in only two sections of a three-section unit with internal drive.)
- Drive with Separate 1/4 HP Motor and Gear Reducer may be located internally or externally. External mounting of the drive makes for more accessibility and easier maintenance. A single external drive may serve as many as 3 sections or a maximum of 18 feet width (with jackshafts). A jackshaft will be supplied in all sections with external mounted drive. When located internally a drive handles a maximum of three sections or 18 feet width.
- Timer with Pressure Switch Override or Economizer Control for Constant Volume Systems pressure switch may be utilized to override the timer for temporary heavy dust loads, or it may be applied as a media economizer which will not allow the timer to operate until a preset pressure drop is attained. The economizer switch eliminates the need for a fan interlock.
- Reverse Flow permits servicing of the filter from the clean air side. A used media cover is available on reverse flow filters.
- Three Optional Arrangements can be installed for horizontal airflow, vertical downward or vertical upward airflow. Either standard or reverse airflow is available for all arrangements.
- A Special Corrosion Resistant Coating with Stainless Steel Hardware (better known as Papermill Design) insures long life service for installations subjected to corrosive atmosphere.
- Manual Drive

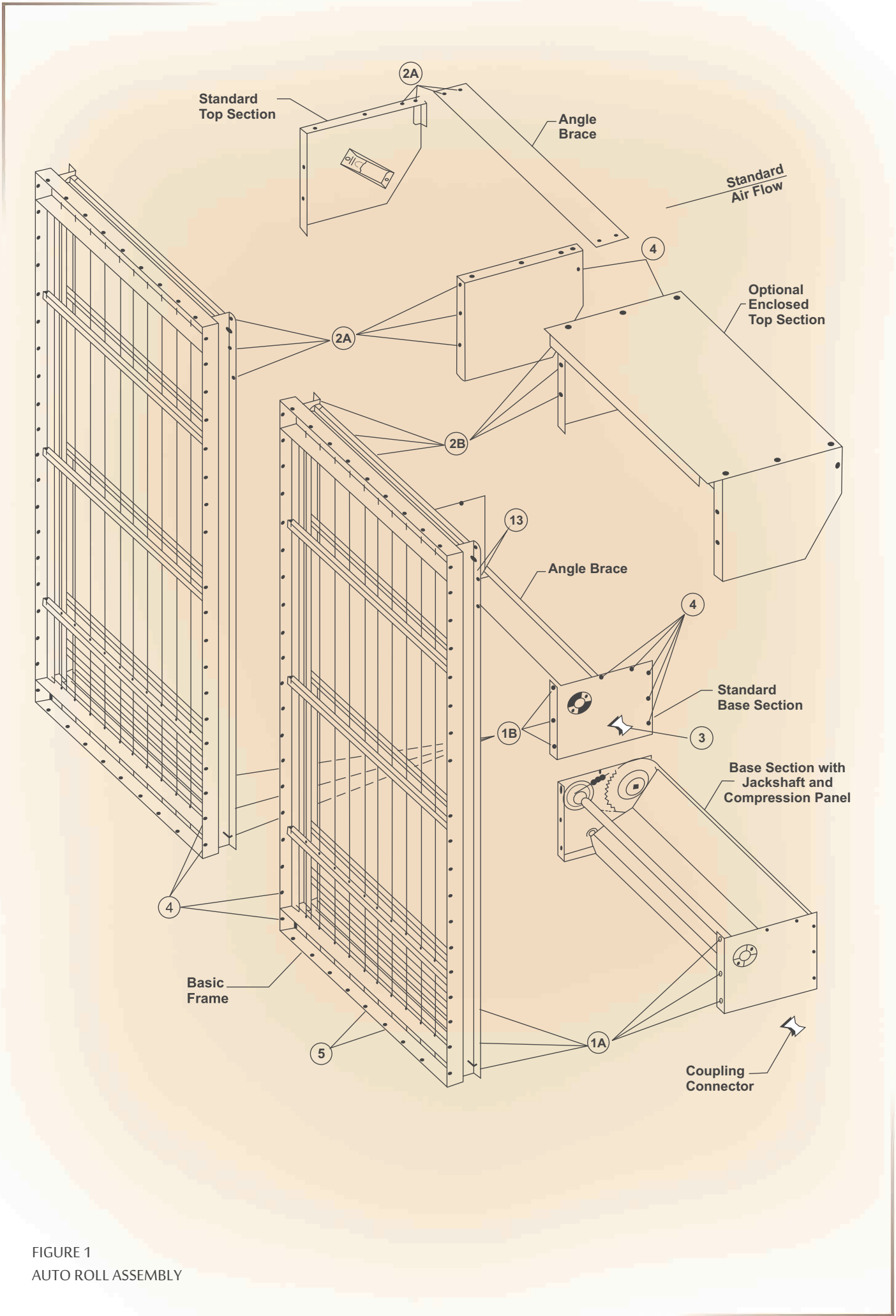


FIGURE 1
 AUTO ROLL ASSEMBLY

SFVJ Type Design permits economical, on-the job assembly

The SFVJ Auto Roll Filter offers the advantages of sub-assembly construction. All major components are designed for simple fast erection.

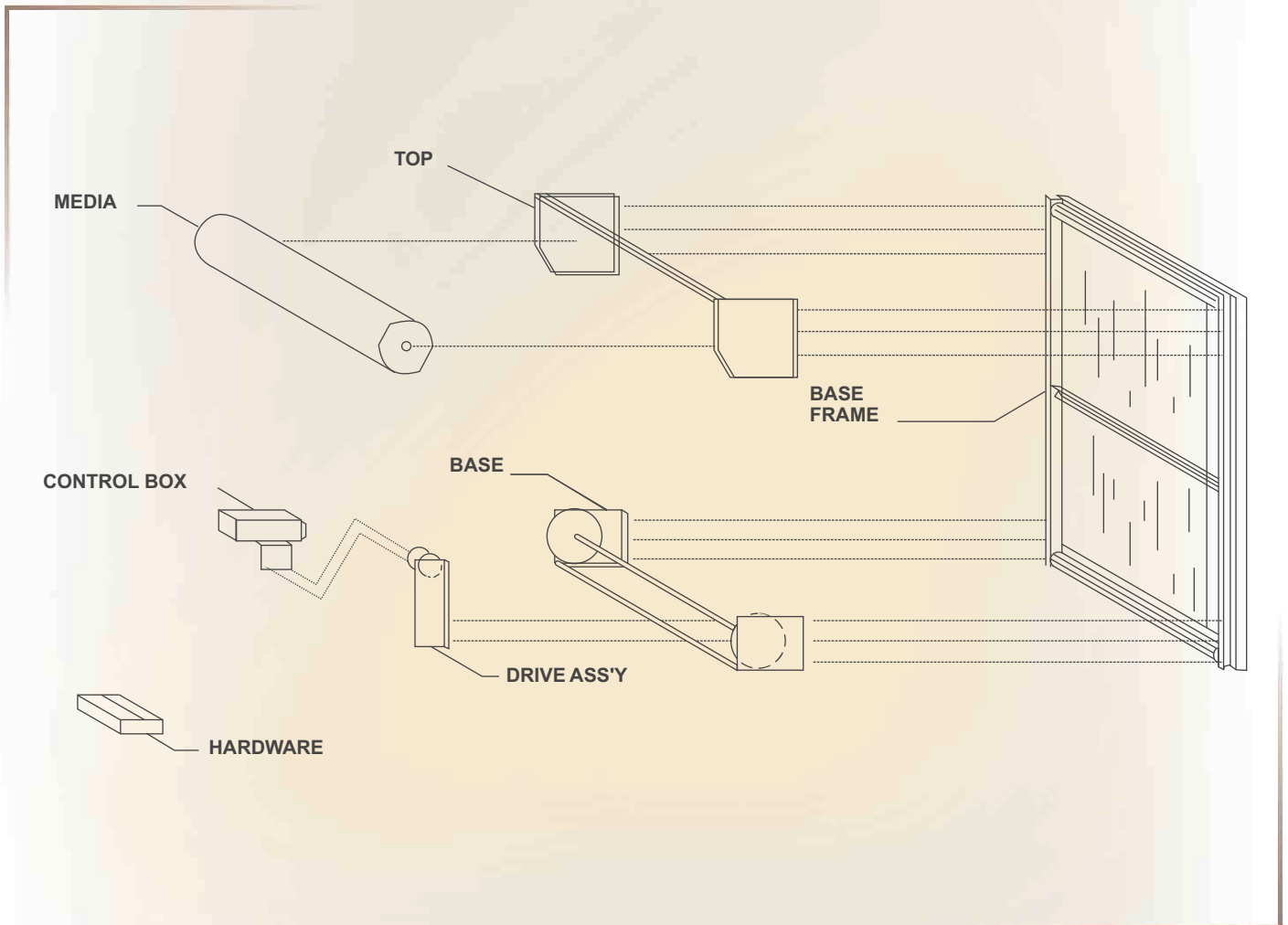
This design offers these

unquestionable advantages:

- Light weight for ease of handling
- Eliminates expensive rigging
- Facilitates shipping

- Easy storage on jobsite
- Quick, simple installation

A standard Auto Roll section is shipped in five cartons.



What is Furnished with the Auto Roll?

- The proper size and number of sections with drive mechanism(s)
- Control panel including automatic control, media runout switch with red warning signal light and hand-off-auto switch
- Initial filling of Auto Roll media
- Necessary bolts for assembling filter

What is Furnished by Purchaser ?

1. Sheet metal duct connections with access doors
2. Primary wiring to motor and control
3. Electrical wiring interlocking supply fan and filter controls, if required
4. Blanking of the areas between Auto Roll and fixing Duct

Performance data

The initial resistance of the clean Auto Roll media at its rated velocity is 0.18" w.g. The average operating resistance under normal conditions varies between 0.35" and 0.45" w.g.

because of the variation in the concentration of atmospheric dust. For fan selection purposes it is recommended that a value of 0.4" to 0.5" w.g. be allowed for filter resistance.

Specifications : Automatic Renewable Media Air Filter with DP based Control

Furnish and install automatic renewable media type air filters of the sizes and capacities shown on the plans and listed in the equipment schedule. All sheet metal parts shall be of corrosion resistant galvanized steel construction. The filters shall be of sub assembly construction for on-the-job assembly. Each filter shall be complete with initial loading of filter media, 1/4 HP drive motor and integral gear reducer, control box containing warning light to indicate either supply lamp failure or media runout, and hand-off-auto selector switch.

The drive motor shall be actuated by the DP switch which shall cause the media to be advanced in small increments only when dust accumulation dictates. The control circuit shall insure that no media is fed when the system is inoperative, shall feed uniform small increments of media for constant dirt load, and not require recalibration if the actual airflow differs from design or if the system is of the variable air volume type.

A heavy duty top section, including media cover, shall prevent media from being installed backwards, completely enclose the clean media spool and support the spool during media replacement. Rolls of clean media shall be installed at the top of the filter and advanced in small

increments.

The media shall be of non woven glass fibres bonded with a cured thermosetting resin, and shall have a nominal thickness of 2". The density of the media shall be progressive. This shall be achieved by increasing number and decreasing the diameter of the fibres from front to rear of the mat to provide progressively more efficient air cleaning and to apportion the dust load through the depth of the mat for greater dust-holding capacity.

It shall have a compressibility which will allow 65' of material to be wound on a 13" diameter, expendable, steel core spool with integral steel guide flanges at both ends. It shall be charged with an odorless and flame retardant adhesive which shall not flow while in storage nor when subjected to temperatures up to 80° C.

Media shall be reinforced by fiber glass screen running parallel to the media length. The media shall be supported on both faces in the airstream by wire rods parallel to the direction of media travel . Rod spacing shall be on not more than 3 inch centers on the air leaving face and on not more than 6 inch centers on the air entering face.

The average performance of the filter

media shall meet the following performance specifications (subject to tolerance prescribed in ARI standard 850-84 Section 7.4) based on a velocity of 500 FPM.

Initial Resistance (Inches W.G)	0.18
Average Synthetic Dust Weight Arrestance (Steady State) (%)	83
Dust Holding Capacity (Dynamic) Per Square Foot (Grams)	90

The roll media may be listed in the current edition of the U.L. Building Materials Directory and classified Class 2 when tested in accordance with U.L. Standard 900.

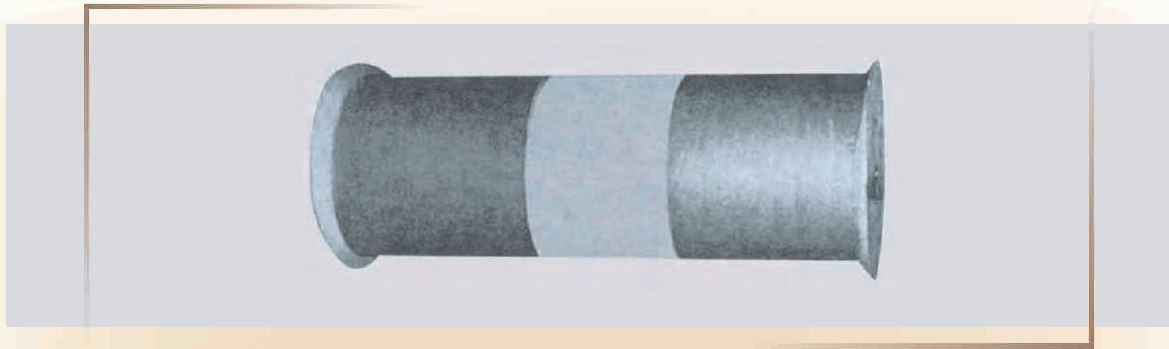
The automatic renewable media air filters shall be Auto Roll, Type V, Model J, with (DP based Control) as manufactured by Spectrum Filtration.

Selection of Auto Roll Filter Control		
Airflow	Dustload	Recommended Control
Constant	Constant	Timer, pressure switch
Constant	Normally constant but with potential for an increase in load on an intermittent bases	Timer with pressure switch override pressure switch
Constant	Variable	Pressure Switch

Control Panel Specifications :

- LED lights to indicate : "on" (green blinking), "off" (red), and "feed" (amber).
- Relay to handle One 1/4 HP motor.
- Built-in relay for customer's remote alarm.
- Terminals for options override or economizer pressure switch.
- Prewired control. Field connections include 440V supplied by others, and wiring harness connectors. Motor leads are furnished in factory supplied conduit.
- Low voltage runout switch.
- Hand-off-automatic switch
- Runout warning light (red)
- Corrosion resistant heavy gauge galvanized steel control box only.

Auto Roll Filter with Glass Fibre media



Auto Roll Media is the only glass fiber media designed specifically for renewable media air filter service which meets these basic requirements :

- High cleaning efficiency
- High dust holding capacity
- Operating velocities of 500 to 600 fpm
- Available in easy-to-handle continuous roll form
- High resiliency and flexibility
- Inexpensive from operating and replacement standpoint
- Uniform no voids or thin spots

No other media meets these specifications

This media is composed of continuous, slightly curled, inter-latched glass filaments averaging 0.001" in diameter that are held in

place at every point of contact with a thermo-setting plastic bond to form a thick resilient pad or "blanket". The density of the media is progressive. This is achieved by increasing the number and decreasing the diameter of the fibres from front to rear of the mat to provide progressively more efficient air cleaning and to apportion the dust load through the depth of the mat for greater dust holding capacity.

The glass filaments are fabricated into thick, fluffy "blankets" 65 feet in length which are impregnated with a special non-flammable jell-like viscosine adhesive with these distinct characteristics :

- Will not drip at elevated temperatures
- Retains adhesive qualities
- Won't dry out

Glass reinforcing filaments are bonded to the blanket running the full 65' length of the media.

The impregnated media is cut into strips of the desired width and tightly rolled onto spools. Resiliency and flexibility of this

amazing media permit a roll of 65 lineal feet to be compressed on a spool to about 13" diameter yet resume its original 2" thickness when exposed to the air stream. The used media, with its accumulated dust load, is tightly rewound on the bottom spool for easy disposal.



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