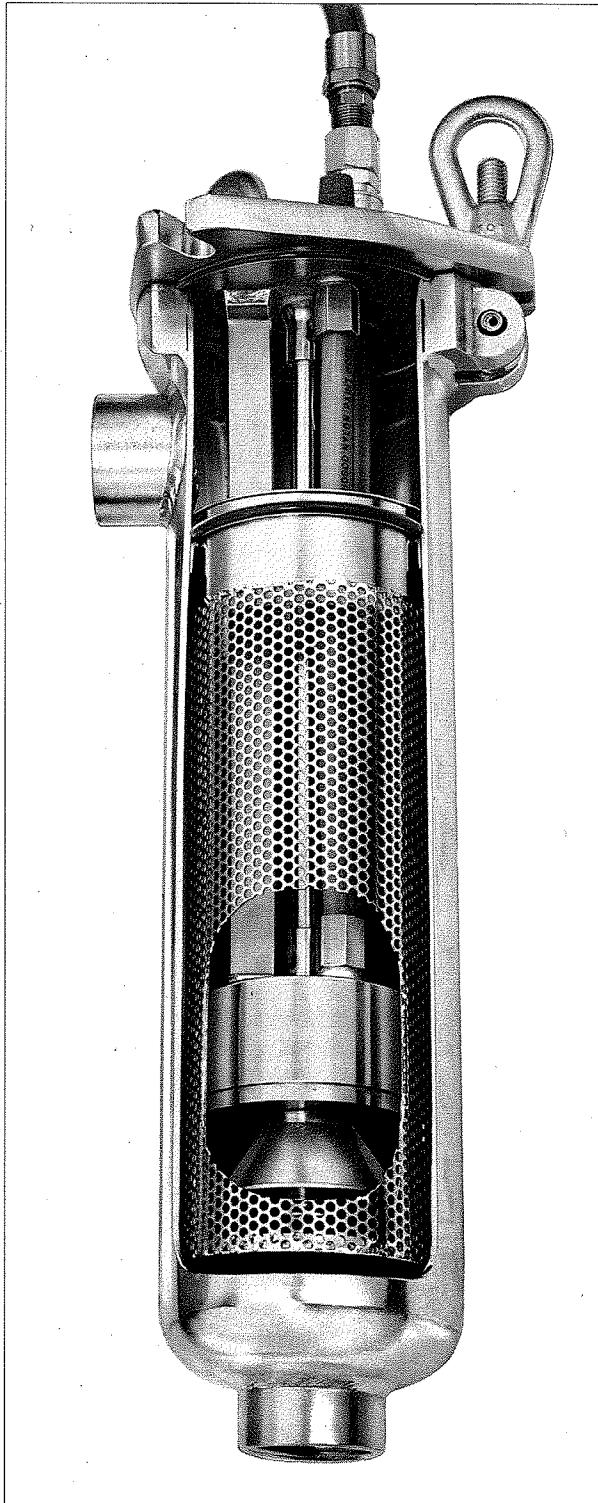


ROSEDALE VIBRATING FILTER OPERATING INSTRUCTIONS

Model VF4-12



SPECIFICATIONS

Unlubricated plant air at 20 psi
40 gpm maximum flow
300 psi maximum pressure
20 psi maximum pressure drop
3 psi pressure drop when clean

INTRODUCTION

The Rosedale Vibrating Filter is for use in filtering liquids containing desirable solid materials. It permits the passage of these solids for extended periods of time by preventing filter cake from forming on the element surface. It does this by vibrating the element. This is a high-frequency sieving action that keeps oversized particles or lumps bouncing off the screen. They either break down into sizes that can pass through or they stay filtered out. Meanwhile, small, acceptable particles are not prevented from reaching the screen and passing through. Applications are paints, medicines, paper coatings, foods, or any product containing desirable solids that can be classified by size.

INSTALLATION

The Housing

Pipe the housing into the system you wish to filter. The upper NPT or flanged connection is the inlet, and the one on the bottom is the outlet.

Be sure to provide sufficient clearance above the housing to allow for removing the cover-vibrator-basket assembly.

Install two suitable line shutoff valves: one as close as possible to the inlet, the other as close as possible to the outlet. These valves should be of the same pipe size as the housing ports. This will permit you to isolate the filter when purging it of contaminant or removing the filter basket.

Install two fluid pressure gauges: one in the filter cover (1/4-in. NPT port), one in the

outlet line. This enables you to determine the differential pressure across the filter.

A drain valve should be installed in the outlet line just ahead of the shutoff valve so that unfiltered material can be drained out whenever the filter basket is removed for servicing.

The Air System

Connect the air filter-regulator (supplied) to your plant compressed air system. A shutoff valve should be installed just upstream, to act as an "off-on switch" for the vibrator. (The quick-disconnect fitting can be used as a shut-off valve.) The vibrating filter will require clean, dry, unlubricated air at pressures from 10 to 25 psi.

Connect the hose from the filter-regulator to the air port marked "IN" on the cover of the vibrating filter, using the quick-disconnect fitting.

It is recommended that an air muffler (pipe size 3/8 in.) (supplied) be inserted in the air "OUT" port.

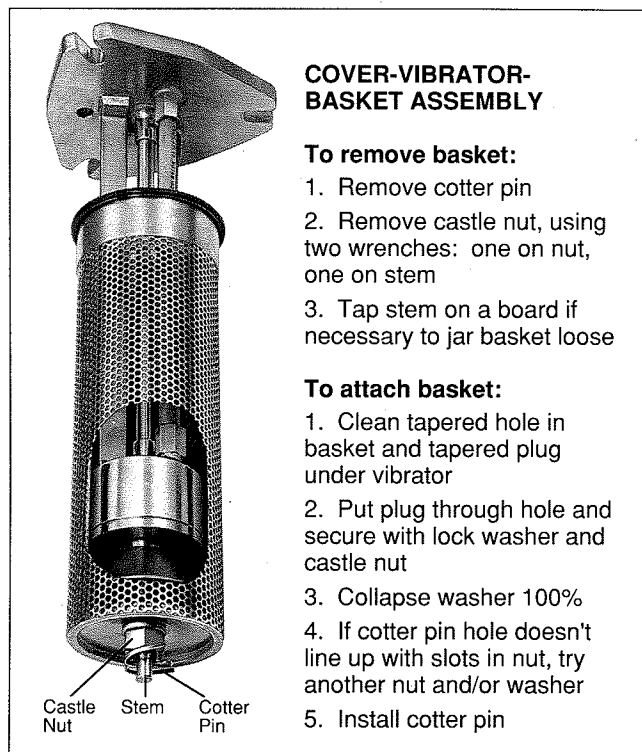
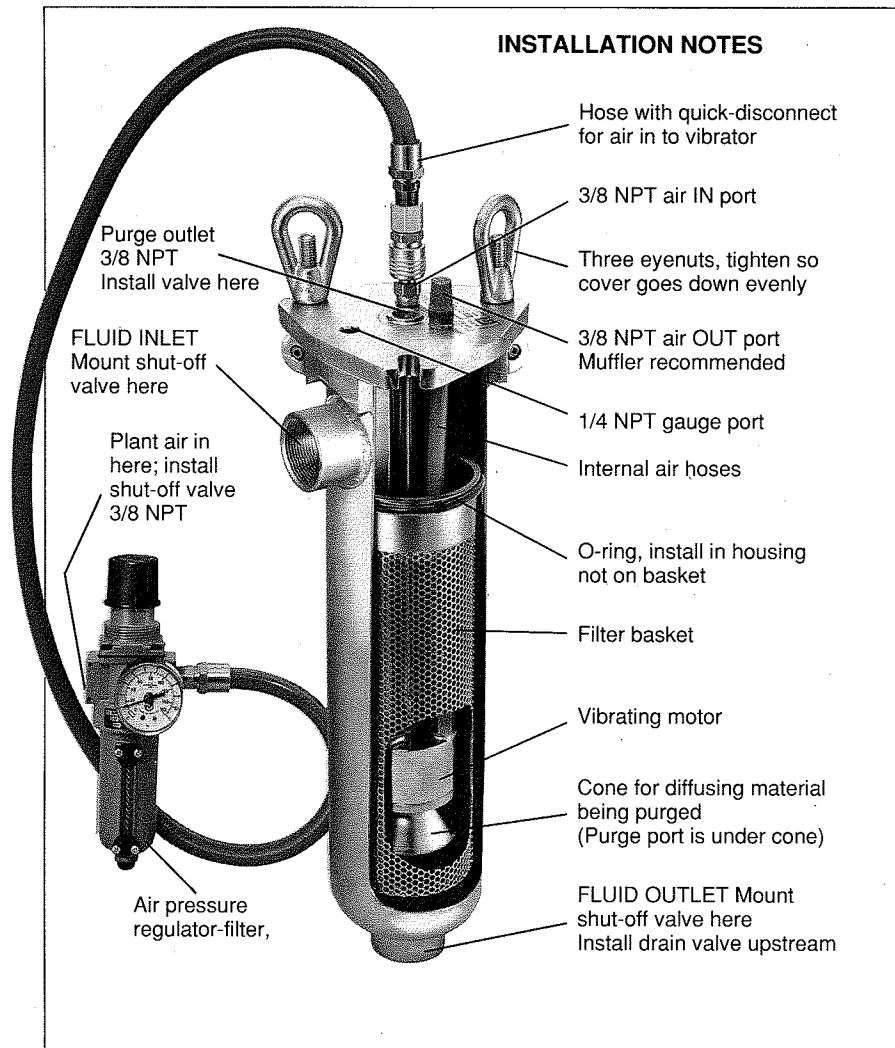
The Purge System

The port in the center of the vibrating filter cover can be used to discharge the accumulated matter that has been stopped by the filter. To do this a shutoff valve (pipe size 3/8-in.) should be installed in this port. A hose connected to this valve can then carry purged material to some remote vessel. (To reclaim much of what is purged, the discharge can be directed into a filter bag and left to drain by gravity.)

The Cover-Vibrator-Basket Assembly

The cover and vibrator are one unit. This is attached to the filter basket at only one point, at the bottom. It is critical that this connection be made correctly.

Put the vibrator end into the basket. The tapered hole in the basket and the tapered



plug under the vibrator must be completely clean so they can fully engage. Put a lock washer on and then a castle nut. Tighten, using two wrenches, one on the nut and one on the wrench flats on the end of the stem. Collapse the lock washer completely. Put the cotter pin through the hole in the stem to prevent the nut from loosening.

Installing the Assembly

The basket is sealed at the top by an O-ring. Don't put the O-ring on the basket; insert it into the housing and place it on the lip which supports the basket. Put the cover sealing O-ring into the groove in the top of the housing.

Carefully insert the vibrator-basket-cover assembly into the housing. Tighten the three eye-nuts. Do this in steps, evenly, to prevent leakage.

FILTER OPERATION

Before operating check that:

1. The air line valve is closed.
2. The air pressure regulator setting is as low as possible.
3. The purge valve is closed.
4. The housing cover is secure.

Open the fluid inlet valve slowly and open the fluid outlet valve. Flow rate should be adjusted if necessary to produce no more than a 3-psi pressure differential (with a clean basket element).

Open the air line valve. Adjust air pressure regulator to create vibration of the basket. A pressure of 20 psi is usually sufficient to provide optimum vibration. (When first putting into service run for a few minutes at 30 psi.)

Higher air pressures and resultant higher vibrating motor rpms will **reduce** vibration amplitude, due to the harmonic phenomenon. Vibrations at 1500 to 3000 per minute provide optimum amplitude. More would be counter-productive, as well as destructive to the equipment.

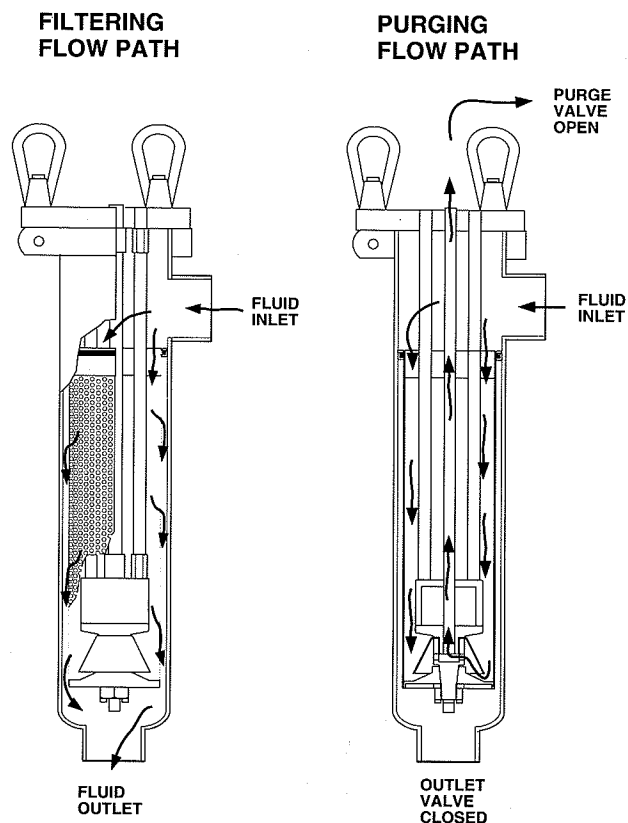
PURGE OPERATION

The accumulation of matter retained by the filter will in time make the fluid passage more difficult and so increase the pressure drop across the filter element. When the pressure drop reaches a level between 10 and 15 psi, it is time to purge the filter of much of the undesirable material. This is the procedure:

With the system still pumping and the filter vibrating, close the filter outlet valve and open the purge valve, for 6 to 10 seconds. In that time (assuming a flow rate of 10 gpm) about one gallon of fluid and contaminant will be discharged via the purge line to some secondary vessel.

After closing the purge valve and reopening the outlet valve, check the pressure differential. If it has not dropped to about 3 psi, repeat the purge process a second time. When purging is no longer able to bring the pressure drop down to 3 psi, the filter element must be removed for cleaning by conventional methods.

To avoid having to purge the filter during the processing of batches of product, it is recommended that the filter be purged near the end of a batch run, so that the next batch starts with a clean filter.



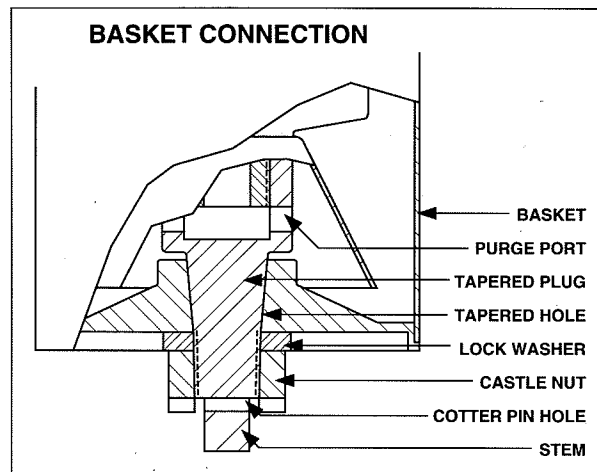
MANUAL CLEANING

CAUTION: Release system pressure before opening the housing.

1. Relieve system pressure and close inlet and outlet valves. Turn off air to the vibrating motor.
2. Loosen the three eye-bolts enough to swing rod ends free of the cover. Open the drain valve at the outlet to remove clean fluid.
3. Remove cover-vibrator-basket assembly straight up from the housing. (Contaminated fluid will now drain from the housing.)
4. Simply running the vibrator with the basket immersed in solvent is the easiest method of cleaning. If this isn't effective the basket must be removed and cleaned by hand.
5. Separate the filter basket by removing the cotter pin, castle nut and lock washer. If the basket doesn't come free, tap the top of the basket lightly. If that fails, tap the stem down on a wood board to break the basket loose.
6. Use brushes, solvents, compressed air or other suitable means to remove the contaminant from the wire cloth or wedge-wire element. Be careful not to do damage with sharp instruments.

REASSEMBLY

Before reassembling the cover-vibrator and basket, thoroughly clean the tapered hole in the bottom of the basket and the mating tapered plug section under the vibrator. An improperly seated basket will self-destruct under vibration.



Replacement Filter Baskets

Description	Part No.
Wedgewire baskets	
25-micron	FSGA-25-WW
50-micron	FSGA-50-WW
75-micron	FSGA-75-WW
100-micron	FSGA-100-WW
125-micron	FSGA-125-WW
150-micron	FSGA-150-WW
175-micron	FSGA-175-WW
200-micron	FSGA-200-WW
400-micron	FSGA-400-WW
Wire cloth baskets	
9-micron	FSGA-9-WC
25-micron	FSGA-25-WC
50-micron	FSGA-50-WC
75-micron	FSGA-75-WC
100-micron	FSGA-100-WC
125-micron	FSGA-125-WC
150-micron	FSGA-150-WC
200-micron	FSGA-200-WC
250-micron	FSGA-250-WC
325-micron	FSGA-325-WC
420-micron	FSGA-420-WC



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