EUROVAC

EUROVAC I

OPERATION & MAINTENANCE MANUAL

Central Systems

EUROVAC

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START UP PROCEDURE:

Prior to starting the vacuum system ensure the high voltage supply is properly sized to match the vacuum system. Bump the motor momentarily and check for proper rotation (see rotation direction on motor). If motor is rotating in the wrong direction reverse any two of the three high voltage wires at the control panel. On 24 VAC control systems connect a toggle switch across the low voltage terminals in the control panel and use it to bump the motor. Once proper rotation has been determined use a clamp on ammeter and run motor to make sure continuous duty limits are not exceeded. Duty limits are determined by setting the vacuum relief valve(s). Vacuum relief valves are pre-set at the factory and should not require adjustment. If, however, you need to set the vacuum relief valve obtain a vacuum gauge that measures 0 to 160 inches water column or 0 to 10 inches Hg. and follow the procedure “Setting Vacuum Relief Valves” below. Generally, all Eurovac I systems with regenerative type blowers are set to a maximum continuous vacuum limit of 85 inches water column or 6.15 inches Hg.

SETTING VACUUM RELIEF VALVES:

For setting the vacuum relief valves you will require the following accessories:
- One toggle switch (if 24 VAC control system)
- One $^1/_2$" wrench
- One flat screwdriver
- One vacuum gauge 0 to 160 inches water column or 0 to 10 inches Hg.
- One amp probe

Note: Contact factory if you need a vacuum gauge. For testing vacuum at any inlet you will require a gauge that makes a seal to the inlet itself.

Remove the cap(s) from the vacuum relief valve(s) to expose the adjusting nut.

Start the unit using the panel push button (or toggle switch on 24 VAC control systems). This will activate the vacuum system with all inlets closed. **Note: There must be no air flow through the system when setting the vacuum relief valve(s) except for the air flowing through the relief valve(s) themselves.**

Go to the nearest inlet or the access port on the separator if provided and attach the vacuum gauge. Note the reading on the gauge. Using the $^1/_2$" wrench and flat head screwdriver and adjust the nylon lock nut until the reading matches Table 1.

When setting valves on a double pump system be sure to maintain even flow through each valve. This will ensure protection to both motors.

Once the valves are set use the amp probe to check current to each leg of the power supply line to each motor. Current draw should not exceed the maximum amps allowed for each motor (eg: 7 HP-240V should be running at approximately 14 amps.

You will find a spec. plate on the side or top of each motor or you can refer to table 2 for correct settings. Check line voltage while system is running to ensure proper line voltage.

Table 1 Continuous Duty Vacuum Limits

Fuji model VFC604A	4.5 HP	80" W.C.
Fuji model VFC704A	6.7 HP	80" W.C.
Fuji model VFC804A	10 HP	85" W.C.
Rotron model DR858BB72X	10 HP	85" W.C.
Rotron model DR858BB86X	10 HP	85" W.C.
Rotron model DR707D89X	5 HP	80" W.C.
Rotron model DR707D86X	5 HP	80" W.C.
Rotron model DR606CK5M	4 HP	80" W.C.

Table 2 Full Load Current (Regenerative Blowers Only)

Full load current of motor varies depending on line voltage. Line voltage should be within 3-5% of specified voltage.

Example - a 208 V 3 phase system should be no less than 200 V and no more than 215 V.

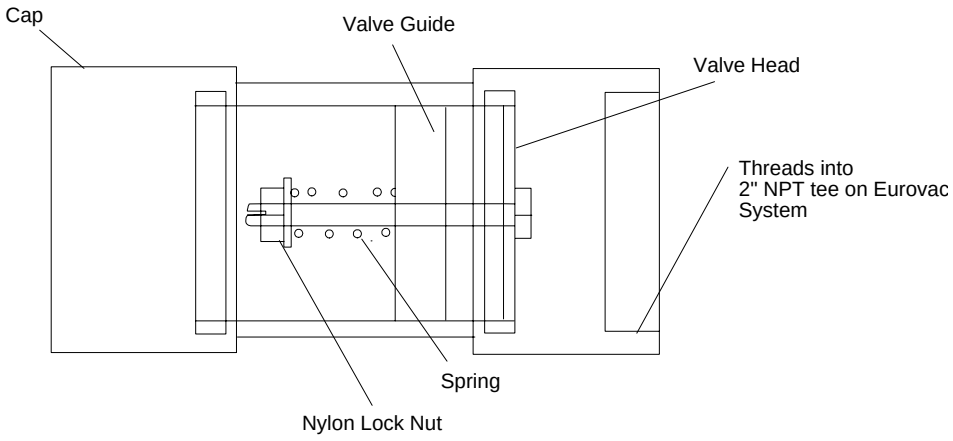
	208V	240V	480V	575V
Fuji VFC604A - 4.4 HP	12A	11A	5.5A	4.4A
Fuji VFC704A - 6.7 HP	16A	16A	8A	6.7A
Fuji VFC804A - 10 HP	26A	23A	11.5A	9.2A
Rotron DR858BB72X - 10 HP	30A	27A	13.3A	
Rotron DR858BB86X - 10 HP				11A
Rotron DR707D89X - 5 HP	18.5A	18A	9A	
Rotron DR707D86X - 5 HP				6.9A
Rotron DR606CK5M - 4HP - 1 PH	18A			

CHANGING VACUUM RELIEF VALVE SPRINGS:

Should it be necessary to change a vacuum relief valve spring follow the procedure below:

1. Remove vacuum relief valves.
2. Unscrew cap off valve.
3. Using a flat screwdriver and a $^{1}/_{2}$" wrench remove nylon lock nut.
4. Remove washers and spring. Make sure that the valve stem slides smoothly along the guide.
5. Replace spring provided.
6. Tighten lock nut down so that roughly $^{3}/_{8}$" of thread is sticking out beyond the lock nut. This is only a rough setting. (Please refer to setting relief valves)
7. Re-attach valve to Eurovac system.

Note: Only replace one washer; the other is not necessary with new spring (see diagram).



MAINTENANCE OF PULSE JET - SINGLE FILTER UNITS:

Daily Maintenance:

Empty the dust container every 8 hours of operation or more frequently if necessary. When replacing the container be sure to align the rim with the gasket on the separator to ensure a good seal.

Drain the header tank with the valve at the bottom of the tank.

Bleed off moisture from the regulator bowl using the valve at the bottom of the bowl.

IMPORTANT: Only clean dry air will ensure continued, trouble free operation of the pulse jet system.

Monthly Maintenance:

Filter Cleaning:

Remove the cyclone top. Undo the pipe union in the blow tube and remove it. Lift the cartridge filter out of the separator and inspect it for dust build between the pleats and damage to the filter media. Clean the filter by tapping the metal ends against the side of a waste receptacle. Be sure to remove any dust which is clogged between the pleats of the filter. It is not necessary to remove all of the surface dust as this actually enhances the filter performance.

Air Regulator Filter:

Visually inspect the regulator filter and clean with cleaning solvent. Replace as necessary. Clean filter bowl with soapy water (do not use a solvent).

Pilot Operated Diaphragm Valve: (Automatic Systems Only)

With the panel push button manually check the operation of the diaphragm valve. Replace the solenoid valve as necessary.

Maintenance of FilterBag Units:

Filter Cleaning: Extent of filter cleaning required depends on the system usage and application and can only be determined after initial period of use. In average situations you should manually shake the filter 4-5 times at every break period. The filters should not exceed 4 hours with out cleaning. The pump should be shut down during shaking operation, in addition the filter should be inspected for leaks, tears, and blockages. If replacement of filters bags are required, be sure to show serial number and job name on the inquiry. Filters should be replaced every year and washed every six months depending on usage.

Filter Bag Removal:

1. Lock-out pump main disconnect to assure electrical power source is isolated
2. Open front door of the filter separator
3. Using your two thumps apply pressure to the snap ring at the bottom of the filter tube to release the filter from the filter cell plate
4. Unhook the filter from the hold down ring located at the top of the filter
5. After removal of the filter bags inspect the filters and hold-down ring springs inspect for breakage and ware. Replace springs and bags as required.

Filter Bag Installation:

1. Hook filter bag into slot of hold down ring at of separator
2. Make sure the filters are lined up straight with th cell plte hole. Insert the back center of the snap ring into the cell plate then push in center of ring to collapse the filter. Release the snap ring make sure all fingers are clear then check the filters for tightness all around the filter.
3. Repeat 1 and 2 until all filters are installed then close the filter access door.
4. Remove isolation lock from the pump disconnect and start the system.

OPERATION OF PULSE JET - SINGLE FILTER UNITS:

Control of the pulse jet can be automatic or manual depending on the unit installed. Units with automatic control have a switch marked Pulse Jet ON/OFF on the control panel. Units with manual control have a manual push button air valve located on the side of the header tank.

Automatic Control:

If your unit is fitted with automatic control turn the pulse jet switch to ON. The timer in the control panel is pre-set at the factory for a 5 min. cycle time (5 min. off) and a 0.15 sec. dwell time. Cycle time is the top dial on the timer; dwell time is the bottom dial. Cycle time can be adjusted with the dial labelled time % on the timer. In all cases leave the dwell time at its minimum (e.g.: 10%). To over ride the automatic control punch the button to give a short duration pulse (do not hold the button down more than 1/4 sec.)

Manual Control:

Punch the manual air valve button on the side of the header tank to create a pulse (do not hold the button down more than 1/4 sec.)

Air Regulator Setting:

For the 14 inch diameter separators (8" x 16" cartridge) set the air pressure regulator to 40 psi. For all others set it to 65 psi.

PROBLEM SOLVING GUIDE

Symptom	Cause	Solution
System won't run.	1. High Voltage Breaker or Fuse is tripped.	1. Reset breaker or replace fuse.
	2. Control fuse blown.	2. Replace fuse.
	3. Overload relay is tripped.	3. Reset overload in control panel.
	4. Hose not fully engaged with inlet . (24 V. System only)	4. Push hose into inlet
	5. Inlet micro switch broken or stuck. (24 V. System only)	5. Replace inlet switch
System won't shut off.	1. Defective inlet switch (24 V. System only)	1. Replace inlet
	2. Delay timer set-up too high (24 V. System only)	2. Reset timer.
	3. Defective relay timer (24 V. System only)	3. Replace timer.

Poor Suction.	1. Canister not fastened to separator.	1. Secure canister securely.
	2. Obstruction in tubing or separator.	2. Locate obstruction and remove.
	3. Filter clogged.	3. Pulse filter manually (pulse type) Clean or replace filter if necessary.
	4. Too many hoses plugged in system.	4. Reduce the number of hoses to the proper number.
	5. Spring loaded door on inlet broken.	5. Replace inlet.
Poor Dirt Separation	1. Dirt canister full.	1. Empty canister.
	2. Filter damaged.	2. Replace filter.
	3. Filter gasket failure.	3. Replace gasket(s) as necessary (pulse type)
	4. Rubber seal between canister and separator deteriorated.	4. Replace seal.
	5. Canister not secured to separator.	5. Secure canister properly.
	6. Obstruction in tubing or separator.	6. Locate and remove obstruction.
	7. Clogged filter.	7. Clean or replace filter.
Pulse Jet Not Working	1. Air line not connected.	1. Connect air line.
	2. Air line obstructed.	2. Clear air line.
	3. Solenoid valve malfunction.	3. Replace solenoid valve.
	4. Diaphragm operated valve malfunction.	4. Replace diaphragm valve.

Any foreign objects that may enter the vacuum pump will cause a noticeably high pitched whine or vibration. This includes dust accumulation from the intake line. Be sure to clean filters as specified for your system and empty the canister before it is 3/4 full. Check the rubber seal between the canister and the separator regularly.