INSTALLATION AND SERVICE INSTRUCTIONS

Tuthill
atlantic fluidics®

OSR-5, 10,15 & 20

Oil sealed liquid ring vacuum pump

Vacuum & Blowers
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1. GENERAL DESCRIPTION

The OSR-5, 10, 15 & 20 oil sealed vacuum pumps are designed to operate over the full vacuum range from 0-29" Hg. Because of the unique axial flow design the pump operates at constant horsepower throughout the full vacuum range.

The oil sealed vacuum pump consists of an A5, A10, A15 or A20 atlantic fluidics® liquid ring vacuum pump close coupled to a 1, 2 or 3 HP motor, an oil separator tank with level gauge and seal flow control valve. The oil is cooled by an air-cooled heat exchanger with copper tubes and aluminum fins. An electrical controller is optional.

2. INSTALLATION

2.1 ELECTRICAL

Provide 230 or 460 Vac, 3Ø, 60Hz power to the top of the contactor in the controller. Jog motor to check rotation. When looking at front of pump, rotation is counterclockwise. Some models are single-phase 1/60/115-230 volt.

2.2 PRIMING THE SYSTEM

Oil has been provided (shipped separately for on-site filling).

When charging the system for the first time, remove the plug and add oil until the level reaches ½ to ¾ of the oil gauge. The system is ready to operate.

Some iron models could come from the factory with a rust inhibitor in them. Drain off prior to adding oil.

2.3 PIPING

Inlet connection is the 1" NPT shut-off valve. The air discharge is 1" NPT on top of the oil separator tank.

3. NORMAL OPERATION

Connection to the process is made at the shut-off valve. When energized, the liquid ring vacuum pump creates a vacuum by recirculation of the oil in the reservoir tank. The oil temperature is maintained by diverting the flow to an air-cooled heat exchanger.

The system is designed to operate continuously with little maintenance. (See Preventative Maintenance).

4. START UP

Supplemental start up instructions for the atlantic fluidics® liquid ring vacuum pump are outlined in detail in the appended “Installation and Service Manual”.

Start the atlantic fluidics® pump. The pump will immediately turn; it will clear the oil already in the pump head and begin to draw fresh oil from the tank.

On start-up when the oil is below the operating temperature, the viscosity will cause the motor to overload. This is normal. Within five (5) minutes, the oil will be warm enough to lower the load on the motor.

No other adjustments are necessary for normal operation.

5. PREVENTATIVE MAINTENANCE

5.1 Coalescing filter

The oil separator tank includes a filter, which is designed to coalesce the remaining oil in the vapor stream prior to exiting. If this filter becomes loaded with particles and other material, it will restrict the flow of air, and the increased backpressure will increase the load on the motor. The filter element should be replaced.

Replacement filter element: 058285 0000

5.2 Oil

The oil used as the sealant should be clear and free from contaminants, including particles and other debris, which could affect the pump's performance. Although the frequency oil changes will depend on the application, regular monitoring the color and clarity of the oil in the sight gauge will give the user a baseline to work from.

Although the oil separator tank is designed with maximum efficiency for reclaiming the oil, some emissions are to be expected. This will require the user to "top up" the level in the oil tank on a periodic basis. The frequency will depend on many factors, including the number of hours of operation, the vacuum level, the oil temperature and the type of oil used.

Standard Oil:	**LR Oil** **5 Gallon jug P/N 203040 0000**
Low Temp Oil:	**LT LR Oil** **1 Gallon jug P/N 203096 0000**

Note: The low temp oil should be used where starting in ambient conditions of 50 F or less. Consult factory for details.

AF Pump: Refer the AF liquid ring vacuum pump manual for details on the vacuum pump itself.