VAC-ALERT™ INSTALLATION GUIDE – VARIABLE SPEED PUMPS

PLEASE READ ALL OF THESE INSTRUCTIONS BEFORE STARTING INSTALLATION

The location of a Vac-Alert™ Safety Vacuum Release System (SVRS) in the suction plumbing system is identical to the placement instructions for a constant speed pump. Follow the installation instructions and locate the SVRS unit on the main drain suction line. Make sure of the following:

- **15" Hg (mercury) vacuum reading or less with all flow routed from the main drain line**
- **12" minimum distance from the suction of the pump to the SVRS mounting position**

Use the vacuum gauge supplied on top of the SVRS unit. The vacuum gauge is needed to guide the setting of the highest and lowest pump speeds.

The peak rate of water flow within a circulation system is a function of pipe velocity and drain cover rating. Commercial installations are limited to 6 feet per second suction pipe velocity, while residential installations are limited to 8 feet per second suction pipe velocity. Drain covers are also flow limited to the maximum allowable rate stamped on the cover. Flow in the circulation system should be limited to whichever rate is lower, as defined by either the drain cover rating or maximum allowable pipe velocity.

To maximize the full flow potential of the pump, drain cover and suction pipe diameter must be rated and sized properly. For example, a 2" diameter suction line is limited to 62 GPM in a commercial installation, and to 82 GPM in a residential installation. For flow rates greater than these values, larger diameter suction piping is required to maintain pipe velocities within proper limits. Excessive pipe velocities contribute to plumbing and pump failure as well as increased potential for suction entrapment.

Vac-Alert™ SVRS performance in a variable speed pump application is dependent upon two important factors.

- **Maximum allowable running vacuum level of 15" Hg**
- **Maximum vacuum difference of 6" Hg between highest and lowest pump speed**

NOTE: **If the vacuum gauge on the Vac-Alert™ SVRS unit is to be used as a guide for setting the various pump speeds, the SVRS unit will require adjustment if vacuum readings are in excess of 10" Hg. Follow the enclosed Installation Instructions covering SVRS adjustment for higher vacuum levels.**

VARIABLE SPEED PUMP SETTINGS

STEP 1

- **Turn on the pump at the slowest speed. Isolate all other suction lines to route all pump flow from the main drain feed only.**
- **Increase the pump speed until a reading of 15" Hg or less is achieved. Use the vacuum gauge on the SVRS unit or a gauge installed in the pump hair and lint strainer basket as a guide. The SVRS will require adjustment for vacuum levels above 10" Hg. See the enclosed Installation Instructions covering SVRS adjustment for higher vacuum levels.**
- **Once the high vacuum level is reached, set this level as PUMP SPEED 4.**

STEP 2

- **After setting Pump Speed 4, reduce the motor speed to achieve a vacuum level 1.5" to 2" Hg less than the high vacuum level.**
- **Once this reduced vacuum level is reached, set this level as PUMP SPEED 3.**

STEP 3

- **After setting Pump Speed 3, reduce the motor speed to achieve a vacuum level 1.5” to 2” Hg less than the Pump Speed 3 vacuum level.**
- **Once this reduced vacuum level is reached, set this level as PUMP SPEED 2.**

STEP 4

- **After setting Pump Speed 2, reduce the motor speed to achieve a vacuum level 1.5” to 2” Hg less than the high vacuum level.**
- **Once this reduced vacuum level is reached, set this level as PUMP SPEED 1.**

STEP 5

- **Check the four pump speed settings to insure the maximum vacuum level does not exceed 15” Hg, and the lowest pump speed setting is no more than 6” Hg less than the maximum vacuum level at the highest pump speed.**
- **Test the SVRS at each pump speed setting three times to insure the unit is functioning properly.**

All other SVRS Installation Instructions must be followed as detailed in the information provided with the Model VA-2000 SVRS unit. All questions should be directed to your local Vac-Alert™ Industries Representative.