



Ronningen-Petter presents

ASK FILTERMAN™

## How to Easily Avoid Filter Installation Problems.

Correctly installing your Ronningen-Petter filter is the first step to ensuring the life expectancy of your unit – as well as optimal performance. Incorrect installation can affect the filter's systems, cause it to operate poorly or damage the equipment.

The following list is a brief collection of easily-avoidable installation conditions that may cause problems during filter installation:

### **Low System Pressure**

Since DCF and MCF filters rely on a purge operation to clear captured solids from the filter, having enough pressure is important to successful purging. We recommend a minimum of 30 psi of system pressure to ensure an adequate purge. This pressure may need to be higher when the process liquid has high viscosity or the solids are sticky. The Stealth Purge option with external water flushing is an alternate solution that is independent of system pressure.

### **Purge Line Plumbing**

A common error when installing mechanically-cleaned filters is incorrectly plumbing the purge line. The best situation for a purge line is to make it short in length, placing it on a downhill grade from the filter, and draining it into a collection tank. Since

typical purge operations are less than 1 second in duration, there is very little flow in a purge line due to system pressure. If the line runs uphill, solids will collect in the line and never flush away. In addition, a water flush line on the purge header may be needed if the purged materials are especially challenging.

### **Check Valves On The Filter Outlet Plumbing**

Running an outlet line into long, head-high runs (such as uphill) is an uncommon, yet potentially damaging situation. When the filter purges, a water-hammer situation may develop if flow reverses from the outlet side of the filter. In the worst case scenario, this may cause the elements to collapse. However, this situation is easily prevented by placing a flow check valve on the outlet line from the filter.

### **Filter Placement Around The Pumps**

Since Ronningen-Petter filters are pressure filters, they should always be placed on the outlet side of pumps. Placing the filter on the suction side of a pump may result in erratic operation or damage to the filter elements.

### **Backpressure On Outlet Lines**

Ronningen-Petter filters always work best when there is some backpressure on the filter's outlet. The worst performance scenario for a filter is when the outlet runs directly to an atmospheric tank. For this reason, we recommend the installation of a flow orifice or control valve on the outlet header of the filter. By providing a slight amount of back pressure, the system will operate much more evenly and avoid pressure blinding.

### **Backwash Filter Media**

When your filter's backwash outlet line runs to an atmospheric tank, Ronningen-Petter recommends using a flow orifice sized to prevent excessive differential pressure across the filter media during the backwash operation. This will prolong the life of the filter media.

### **External Backwash Liquid**

The fluid source used in external backwash filter systems should be clean – and have particles smaller than the rated retention of the filter elements in the system. If these conditions are not met, the backwashing process can actually plug the elements instead of cleaning them.

For more information on resolving these and other filter installation challenges, contact your representative. Or, email your questions to FilterMan at [info@eaton.com](mailto:info@eaton.com)