

# Acoustic Plates, Diffusers & Silencers

Please refer to IMI 3.000 for Installation and Maintenance Instructions covering Pilot Operated Pressure Regulators

## Acoustic Plates

Spirax Sarco acoustic plates are designed to be bolted between conventional ANSI class 150 or 300 piped flanges on the downstream side of a regulator or control valve usually between flanged pipe reducers.

The distance between the control valve or regulator and the plates, or between plates is not critical. A plate can be mounted in any convenient location in the downstream piping.

The hook up below will aid in planning a correction installation.

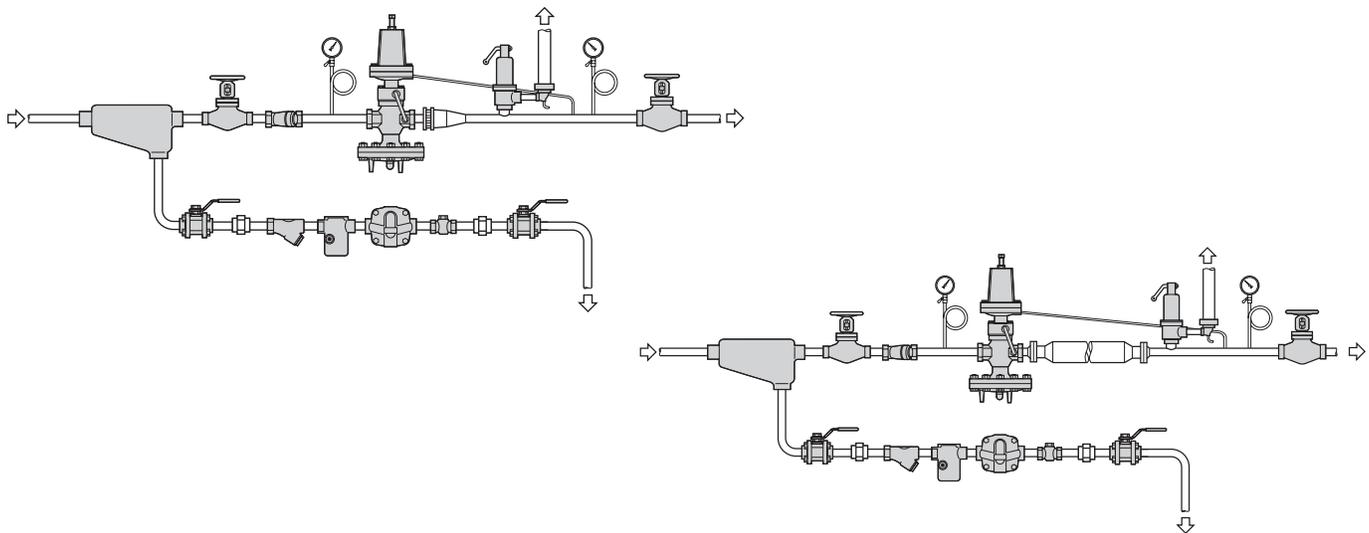
## Acoustic Silencers

Diffusers and silencers are normally installed in a horizontal pipeline and should be properly supported. Flow must be in the direction indicated by the flow arrow on the diffuser or suppressor.

The acoustic silencer is designed to be installed immediately downstream of the regulator or control valve. The high velocity, turbulent flow leaving the regulator expands inside the acoustic silencer. A large portion of the noise generated is absorbed, and thus prevented from propagating into downstream spaces. If desired, piping may then be reduced to a smaller size as long as the flow velocity will not exceed 6,000 feet per minute.

In all cases, ensure that piping is adequately supported to avoid imposing stress on the control valve, regulator, diffuser or suppressor.

The hook up below will aid in planning a correct installation.

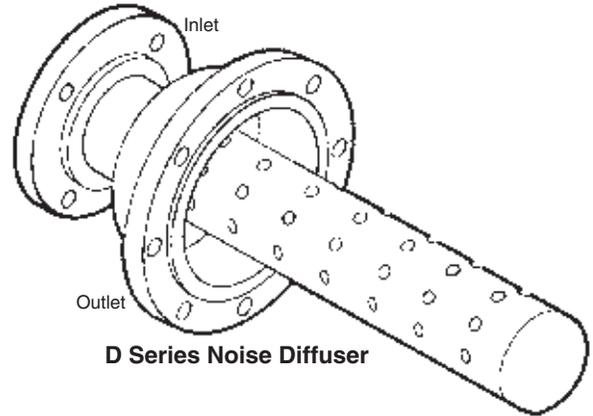


## Noise Diffusers

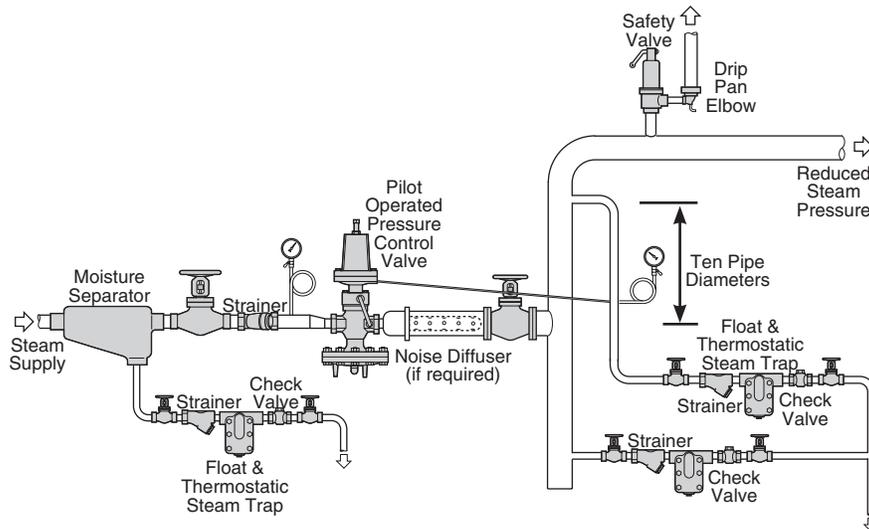
The D Series noise diffuser is designed to reduce pressure reducing valve noise generation. The diffuser breaks up normal exit turbulence of the steam flow using an engineered orifice pattern in a pipe nozzle inserted on the downstream side of a pressure reducing valve.

### **Warning!**

Before proceeding with installation, ensure that stop valves have been closed and steam supply has been shut-off.



1. Before installing the pressure reducing valve, ensure the piping is free from foreign material, scale, etc.
2. Install the pressure reducing valve in accordance with the instructions supplied with the valve.
3. Connect the inlet of the noise diffuser directly to the outlet connection of the pressure reducing valve to avoid the generation of flanking noise.
4. Provide a length of at least 10 pipe diameters of pipe equal to the nominal size of the diffuser outlet. If desired, piping may then be reduced to a smaller size as long as flow velocity will not exceed 6,000 feet per minute.
5. Ensure that piping is adequately supported to avoid imposing stress on the valve body or the diffuser.
6. The typical hook-up shown below will aid in planning a correct installation.



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