Armstrong DS Series Drain Separators

Condensate in steam and air piping reduce thermal efficiency, cause water hammer, corrode equipment such as valves and pipes, and cause other problems.

Armstrong drain separators separate condensate efficiently by using the centrifugal force of steam or air created by introducing it into a specifically shaped path. Because of the simple structure of the drain separators, pressure loss is minimized, enabling clean, dry steam or air to be fed to equipment.

With correct sizing and proper drainage, the separators are designed to eliminate 98% of all entrained liquids and particles that are 10 microns and larger in size.

Features
- A cyclone structure maximizes liquid separation efficiency
- Pressure loss is extremely low
- No moving parts means no breakdowns

Operating Principle
When steam or air flow enters the drain separator, centrifugal force is generated in the fluid because of the device's internal structural design. The fluid drains along the wall because of the difference in specific gravity with steam or air, eventually striking the baffle. The baffle guides the fluid to the drain outlet and to the trap, which drains it. As a result, both small dirt particles and condensate are separated and removed from the system through the bottom drain.

For fully certified drawings refer to:
DS-1 / DS-2 CDY1102
DS-3 CD2126
DS-4 CD2127

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All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.

Ancillary Products

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ANC-1

Next
DS Series Drain Separators

Capacities for Steam Service

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Piping/Installation

Always mount the drain separator in a horizontal pipe, with the drain discharge port facing downward. Be sure to install a trap device below the drain discharge port. The top of the trap should be lower than the separator’s drain discharge port.

Typical Installation for Steam Application

![Diagram of a typical steam application installation with labels for Globe Valve, Gate Valve, PRV, Safety Relief Valve, By-Pass, and Armstrong Drain Separator.

Note:
- Safety Relief Valve to be set at 10 psi higher or 10% higher than the downstream pressure, whichever is greater.
- It is suggested that the inlet "Y" type strainer be installed on its side to avoid collection of liquid in the body that could be carried through the regulator as a damaging slug under certain conditions.