

November 2021

Spence™ Eliminator Series - Steam and Air Separator

Introduction

This installation sheet covers the installation and maintenance of the Eliminator Series.

Specifications

Models

ES-150
ES-300
ES-600

Maximum Temperature

650°F / 344°C

Maximum Pressure

990 psig / 68.2 bar

Installation



WARNING

Personal injury, property damage, equipment damage or leakage due to escaping steam or bursting of pressure containing parts may result if this separator is over pressured or is installed where service conditions could exceed the limits given in the specifications or where conditions exceed any ratings of the adjacent piping or piping connections. To avoid such injury or damage, provide pressure-relieving or pressure-limiting devices (as required by the appropriate code, regulation, or standard) to prevent service conditions from exceeding those limits.



CAUTION

The piping system must be adequately designed and supported to prevent extraordinary loads to the pressure equipment.

1. Install the steam separator as close as possible to the point of use.
2. Install the steam separator in a horizontal pipe configuration with the drain directly below the line, see Figure 1.
3. Install the steam separator according to the directional flow arrow for effective operation. The flow is from left to right with the faceplate showing.
4. Install a properly sized mechanical steam trap on the NPT drain connection at a minimum of 6 in. / 152 mm below the steam separator.

Note

For every inch of horizontal piping to trap, add one inch to the vertical piping. Do not reduce separator drain size except at trap inlet. Never allow the top of the trap to extend above separator drain connection. A Y-strainer positioned after the steam separator drain and before the steam trap will help prevent dirt and scale from reaching the steam trap and is highly recommended.

5. For steam systems where air is present, install an air vent on the top NPT connection of the steam separator. If an air vent is not installed, the standard plug must remain in the NPT connection port.

Note

An insulated steam separator provides more efficient operation.

Eliminator Series

Maintenance



WARNING

Injury or death can occur from failure to completely isolate the separator from all sources of pressure before beginning disassembly. Do not proceed until unit has been completely isolated from process stream and vented to atmosphere.

- This equipment does not require to be inspected and maintained periodically. The frequency of inspection and replacement of parts depends upon the severity of service conditions or the requirement of local, state and federal rules and regulations.
- Steam traps, Y-strainers and other associated components must be maintained and serviced as recommended. Refer to product literature for sizing information.
- When replacing a unit, the pressure in the system should be isolated and vented to atmosphere. Allow time for the unit temperature to normalize before conducting removal.

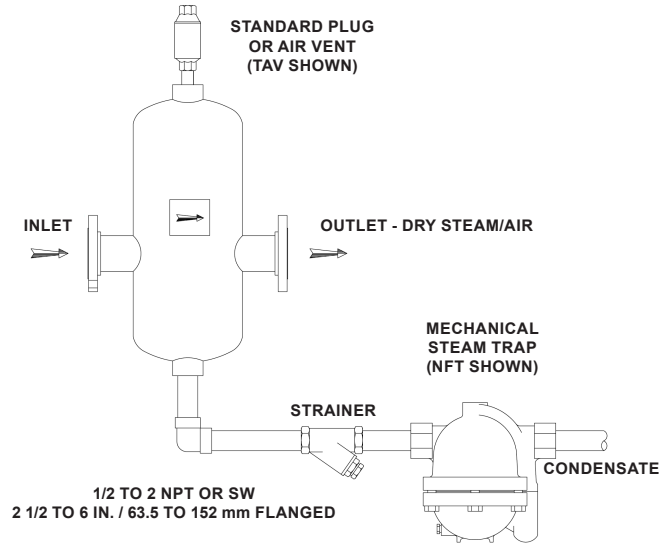


Figure 1. Typical Installation

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