

April 2021

# Spence™ P125 Trip Stop Pilot



*Figure 1. Type P125 Trip Stop Pilot*

## Features

- Spring Operated
- Packless Construction
- Quickly shuts off steam flow in the event of an over pressure condition
- Factory pre-set and tested for desired trip set point
- Trip setting unaffected by service conditions
- Manual reset feature keeps system safely shut down until control is regained
- Easy In-line Maintenance

## Introduction

The Type P125 trip stop pilot is used in conjunction with a Spence™ main valve. This combination is known as a trip stop valve.

Type P125 is a manually resettable trip pilot that, once “tripped”, results in the closing of the main valve; therefore preventing further overpressure of the downstream system. The trip pilot is set at a pressure slightly greater than the desired delivery pressure. This setting procedure is completed at the factory before the pilot is shipped.

# Type P125

## Specifications

The Specifications section gives some general specifications for the Type P125 pilot. The nameplates give detailed information for a specific pilot as built in the factory.

<b>Maximum Inlet Pressure<sup>(1)</sup></b> <b>Cast Iron:</b> 250 psig / 17.2 bar <b>Carbon Steel:</b> 600 psig / 41.4 bar  <b>Maximum Inlet Temperature<sup>(1)</sup></b> <b>Cast Iron:</b> 450°F / 232°C <b>Carbon Steel:</b> 750°F / 400°C  <b>Outlet Pressure Ranges</b> 5 to 25 psig / 0.35 to 1.72 bar 10 to 50 psig / 0.69 to 3.45 bar 40 to 150 psig / 2.76 to 10.3 bar 150 to 175 psig / 10.3 to 12.1 bar	<b>Construction Materials</b> <b>Body:</b> Cast Iron, Carbon Steel <b>Stem, Disk and Seat:</b> Stainless steel <b>Gasket:</b> Graphite  <b>Application</b> Safety Shutoff for Overpressure Conditions Used When Conditions Disallow Use of Safety Relief Valve  <b>Approximate Weights</b> <b>Cast Iron:</b> 26 lbs / 12 kg <b>Carbon Steel:</b> 28 lbs / 13 kg
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1. The pressure/temperature limits in this Bulletin and any applicable standard or code limitation should not be exceeded.

## Principle of Operation

During normal operation, the Type P125 trip stop pilot is mechanically held open (latched). Steam supply pressure is piped to the diaphragm of the trip stop main valve (Spence™ Type E, E2 or E5), holding it in the open position. Reduced pressure is then controlled by the pressure reducing valve. If the reduced pressure increases to the set pressure of the Type P125 trip stop pilot, two things happen. The weighted lever is unlatched, shutting off the steam supply to the trip stop main valve diaphragm chamber and the actuating steam in the diaphragm chamber of the trip stop main valve is vented downstream. Venting of the actuating steam allows the spring in the trip stop main valve to shut the valve. The Type P125 Pilot must be manually reset after being tripped. The reduced steam pressure must be less than the Type P125 set pressure for the Type P125 to remain reset.

## Installation

1. Mount the bracket on the long stud extending above the trip stop main valve top flange. Bracket should be perpendicular to pipe run. Tubing is supplied pre-bent when the Type P125 pilot and the trip stop main valve are ordered together. No further bending is needed.
2. Connect the 1/4 NPT pipe tee installed on top of the trip stop pilot to the reduced pressure control point using 1/4 in. / 6.35 mm pipe. This is the Type P125 sensing line.
3. Pitch sensing line to avoid water pockets. Connect it to a dedicated connection on the top of the steam pipe.
4. Connect the vent line from the tee installed on top of the pilot to the pilot body. 5B open elbow is used at the body and 4B open straight coupling is used at the tee.
5. Connect the steam supply line from the upstream connection on the trip stop valve to the inlet connection on the bottom flange of the Type P125 trip stop pilot. This line must have the needle valve installed with flow direction arrow away from the main valve. A No. 4B open straight coupling is used at the trip stop main valve and a 5B open elbow is used at the pilot.
6. Connect the pilot outlet to the trip stop main valve hood.

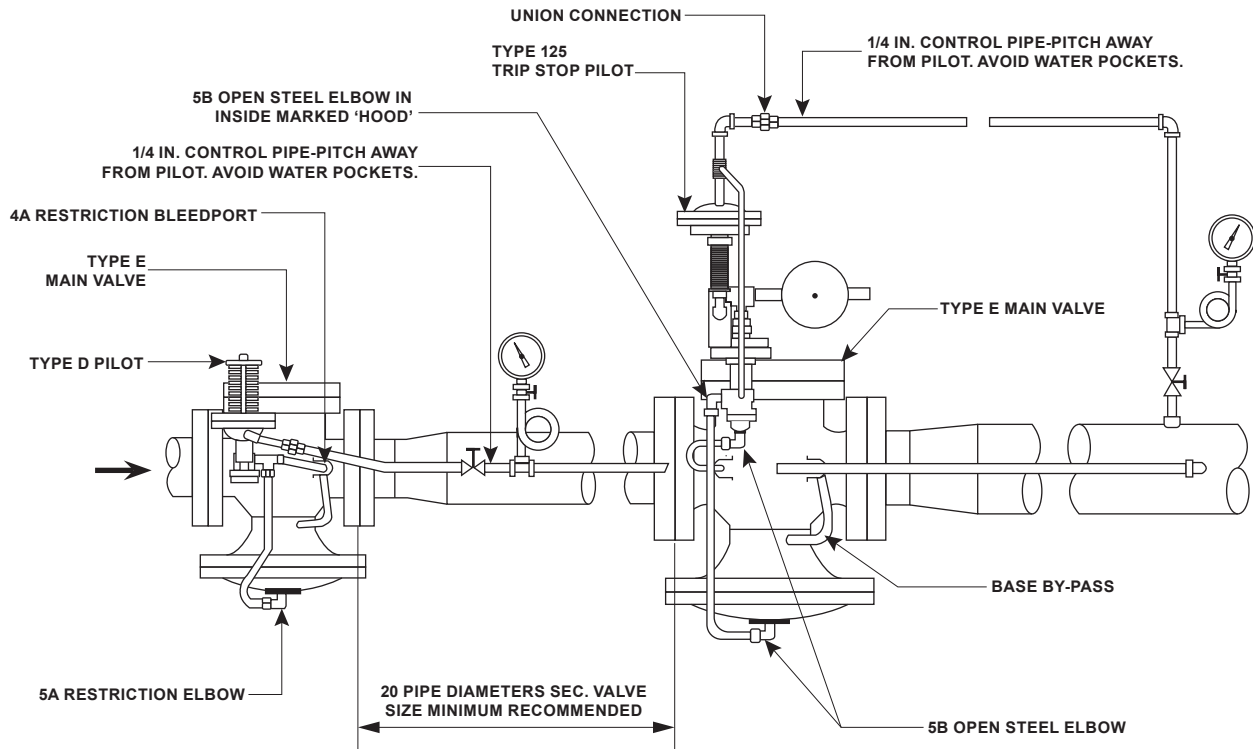


Figure 2. Type P125 Pilot Typical Installation

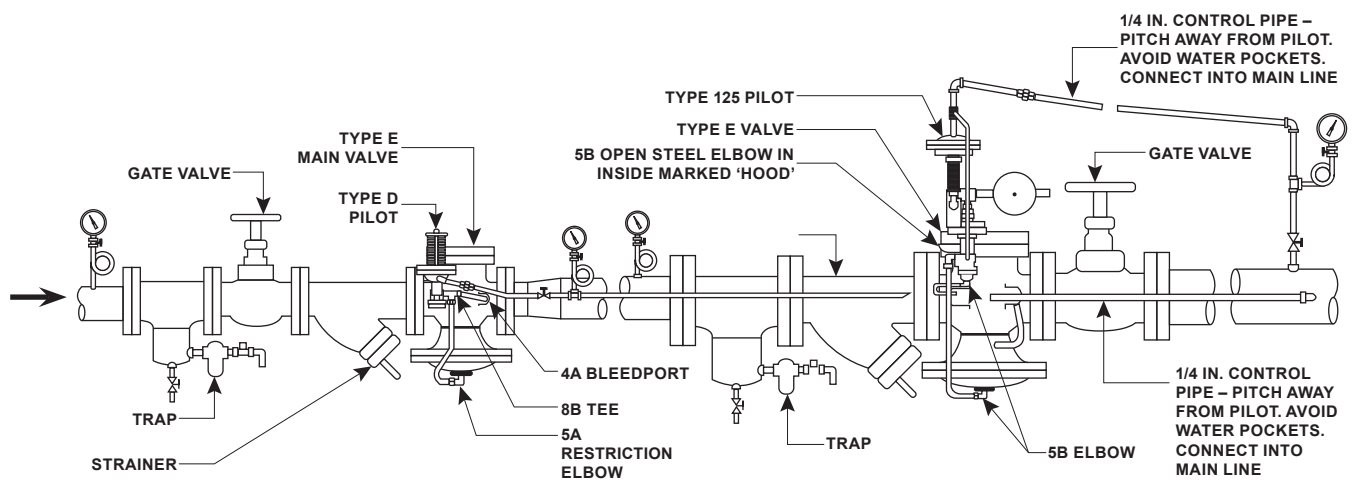


Figure 3. Type P125 Pilot Piping Installation

# Type P125

## Ordering Information

When ordering, complete the ordering guide on this page. Refer to the Specifications section. Review the description to the right of each specification and the information in each referenced table or figure. Specify your choice whenever a selection is offered.

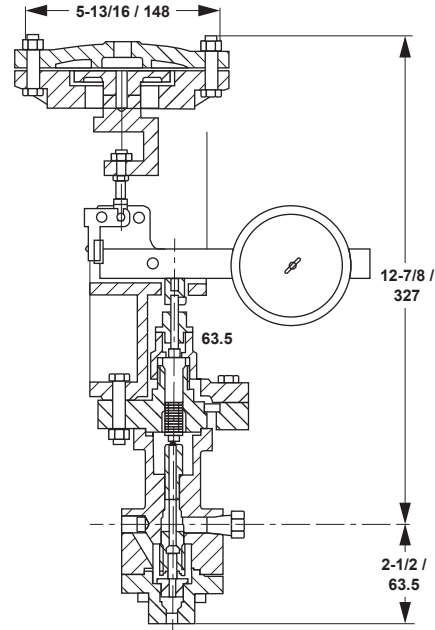
## Ordering Guide

### Body Material (Select One)

- Cast iron
- Carbon steel

### Pressure Ranges (Select One)

- 5 to 25 psig / 0.35 to 1.72 bar
- 10 to 50 psig / 0.69 to 3.45 bar
- 40 to 150 psig / 2.76 to 10.3 bar
- 150 to 175 psig / 10.3 to 12.1 bar



TYPE P125 TRIP STOP PILOT

IN. /  
mm

Figure 4. Type P125 Pilot Dimension

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