

Technical requirements

Overview of liquid removal system

The Innopipe inline gas separator and piggable drip system has three sections:

1. Separator section
2. Interconnecting piping
3. Collection reservoir

Specifications for each section:

Interconnecting piping section

Designed to allow liquid to flow from separator into collection reservoir. Lines are sized for separator conditions. Isolation valves are used to shut off flow from separator to collection reservoir or close when pigging. Extended valve stem to surface to allow for shut off and reservoir isolation.

Pipe design:

ANSI B31.3 or ANSI B31.8 piping design factor 0.5

Separator section

Separator parts:

Has a slotted inner section (to match line pipe) and a larger outer chamber that covers the slotted line pipe section.

Separator sizes:

1" to 60" pipeline designed to match pipeline size and grade. Beveled for inline welding or flanged.

Outer chamber:

Covers the slotted inner pipe and directs liquids to flow into the collection reservoir. Material selected to meet service requirements.

Overall length:

Depends on separator size and flow rate/velocity ranges.

Piggable:

Can be used for piggable or non-piggable installations.

Design pressure:

Designed to specified pipeline pressure

Gas velocity max:

Gas Typically limited only by pipeline capacity

Design temperature:

As required

Sour service:

Yes, if required

Corrosion allowance:

If required

Nozzles:

All nozzles and reinforcements are set through, full penetration welded, and magnetic particle examined. Sized for expected flow rate.

Design compliance:

Designed to ASME section VIII 2013 Edition and manufactured to ANSI B31.8, 2012 Gas Transmission and Distribution Piping Systems (DOT 192 compliant).
Design factor 0.5 (50% SMYS)

Liquids removal efficiency:

Typically 99.5% free of liquids

Installation options:

Buried, above ground or in vaults

Pressure drop:

Less than 1 psi across separator

Collection reservoir section

Size:

Size based on factors such as amount of liquid expected, ability to remove liquid on timely basis or amount of time before liquids can be removed. Consider liquids handling (i.e. blow down, tank, and pumped back into the line) – size depends on the operation.

Press/temp rating:

Designed to system requirement

Installation:

Typically buried or in vaults – eliminates freezing in cold environments.

Corrosion allowance:

As requested.

Internal coating:

As requested.

Nozzles:

2 liquid inlets from separator section

2 liquid drains off bottom

1 blow down to surface with stinger to bottom of collection reservoir

2 level indicator or HL alarm

Manway if coating required.

Sour service:

Available

Design compliance:

Designed ASME section VIII 2013 Ed and manufactured to ASME B31.8.;

NDE:

As required by specifications.

Options:

- Level control / alarms
- Valves (typically supplied by user to match installed base)