

PRO-500 Steam Heated Acid Gas Probe

Applied Analytics Data Sheet No. DS-012A — Revised July 5, 2022



Features

- » Steam heating above 120 °C up to a maximum of 200 °C to prevent entrained liquid condensation at sample takeoff
- » No electrical connections are needed near the probe or process pipe
- » Multiple, easy-to-maintain probe filters for pre-conditioning the sample
- » Shut-off valves for process inlet and return lines built into probe body
- » Light, compact form factor simplifies installation and reduces physical footprint

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Probe Concept

The PRO-500 for acid gas is heated with steam above 120 °C and prevents entrained liquids from the process sample from condensing inside the process takeoff point. The probe is precision-machined in NACE compliant Stainless Steel 316L and has best-in-class Kalrez/FFKM O-rings internally for process handling. Internal crescent steam caps maximize heat transfer from steam to the probe body, eliminating the threat of liquid dropout, plugging, or freezing in the sample probe.

With a particulate filter and membrane filter inside the probe, the PRO-500 preconditions the sample effectively before the process enters the sample conditioning system and undergoes sample analysis.

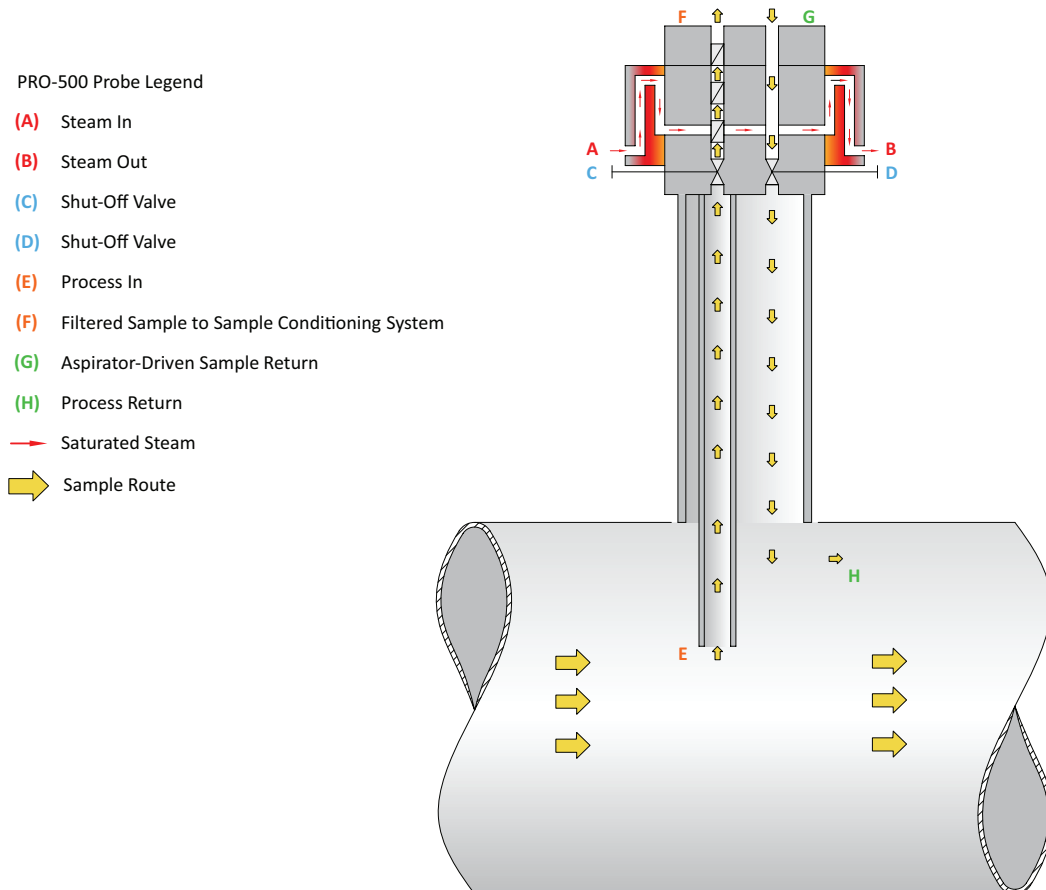
Safe Handling of Acid Gas

Acid gas is an extremely potent and lethal chemical stream beyond the range of smell. The PRO-500's precision-machined stainless steel 316L and Kalrez/FFKM O-rings ensure process containment. The PRO-500 uses steam heating and requires no electrical connections near the probe or process pipe, eliminating electrical concerns with this explosive process.

The Sample Return

An aspirator inside the sample conditioning system creates a Venturi effect which pulls the sample through the entire sampling line, through the flow cell, and down the return line. The measured sample is released back into the process pipe.

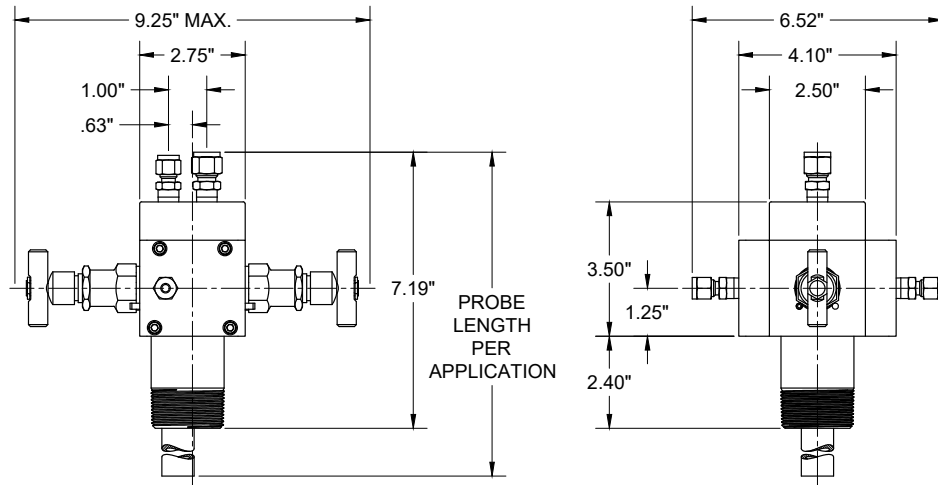
Flow Diagram



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Overall Dimensions



Technical Data

Process Connection	1 - 1/2 in. M-NPT standard
Sample Line connections	1/4" OD Tube (Filtered Sample), 3/8" OD Tube (Sample Return)
Probe Main Body Dimensions	9.25" length x 6.52" width x 7.19" height
Weight	10.5 lbs
Wetted Materials	Standard: Stainless Steel 316/316L, Kalrez/FFKM, PTFE, Quartz
Probe Material	Standard: Stainless Steel 316/316L
Utility Management	Low pressure steam minimum: 2 bar abs

Subject to modifications. Specified product characteristics and technical data do not serve as guarantee declarations.



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