

The **UV-156 20mm (3/4 inch) Thermodynamic Steam Trap** (frequently manufactured by brands like **UKL - Uni Klinger** or **V.K. Valves**) is a compact, robust industrial valve designed to automatically discharge condensate and non-condensable gases from steam pipelines without letting live steam escape.

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## Key Technical Specifications

- **Size:** 20 mm / Nominal Bore (NB) 3/4"
  - **Type:** Thermodynamic (works on the principle of difference in velocities between steam and condensate).
  - **Body Material (MOC):** Typically available in Carbon Steel (ASTM A217 CA15 / Cast Steel) or Stainless Steel (CF8M) for excellent corrosion and wear resistance.
  - **Trim/Disc Material:** High-grade Stainless Steel (hardened AISI 420 or SS-304/316) to withstand continuous mechanical impact.
  - **End Connections:** Available in Screwed (BSP/BSPT/NPT) or Socket Weld (SW) ends.
  - **Temperature Range:** Generally rated for operation up to **250°C to 425°C** (depending on the specific body material selection).
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## How It Works

Thermodynamic traps operate using dynamic fluid physics (specifically Bernoulli's principle):

1. **Opening:** When cold condensate enters the trap, its low velocity exerts pressure on the underside of the internal disc, lifting it up and allowing the condensate to discharge smoothly.
2. **Closing:** As hot condensate approaches steam temperature, it flashes into "flash steam." The high velocity of this flash steam creates a low-pressure zone beneath the disc, while simultaneously building up static pressure in the chamber above the disc. This pressure imbalance snaps the disc shut against the seat, preventing live steam from escaping.