



Vane Separators Horizontal Type 100H

Separation of entrained liquids from
gases and steam

*Refining • Petrochemical • Power
Natural Gas Transmission*



- High turndown ratio
- Moisture-free steam and clean gas
- 99.9% liquids removal to 8-10 microns
- Large vane surface area for maximum liquid removal

WINSTON / ROYAL GUARD CORPORATION



Horizontal Vane Separators Winston/Royal Guard Type 100H

*2-phase separators for removal of liquids from
natural gas, process gas, and steam*

The Type 100H Horizontal Vane Separator removes mist and other entrained liquids from natural gas, process gas, or steam. Liquid particles 8-10 microns and larger are removed, providing clean dry gas for the protection of compressors, turbines, meters, and other equipment in refineries, petrochemical plants, power plants, and natural gas facilities. The design of the Winston/Royal Guard vane separator provides high efficiency over a wide range of flow.



Principle of operation: As gas enters the separator, liquid slugs fall to the bottom of the vessel while the moisture-laden gas flows toward the vane separator internal. Mist and entrained liquid particles are then separated from the gas due to changes in flow direction as the gas passes through the tortuous path of the corrugated vane plates. Gas flowing through the vane is able to follow the changes in direction, however, inertial impaction causes liquid particles to separate as they are heavier and cannot change direction with the gas. Impinging on the vane surfaces, liquid particles become enlarged through coalescence as they travel along these surfaces and collect in the vane's hooks. The hooks are installed vertically and strategically placed at turns in the vane plates so as to intercept the liquid. The collected liquid moves down these hooks and falls to the bottom of the separator. Clean, dry gas exits the separator's outlet.

Benefits:

- Removes 99.9% of liquid particles 8-10 micron size and larger.
- High turndown ratio - effective operation over a wide range of flow.
- Stainless Steel vane internal provides optimum lifetime.
- Light loading of non-sticky suspended contaminants are also removed with the liquids.

Along with specific customer requirements some of the many options available are:

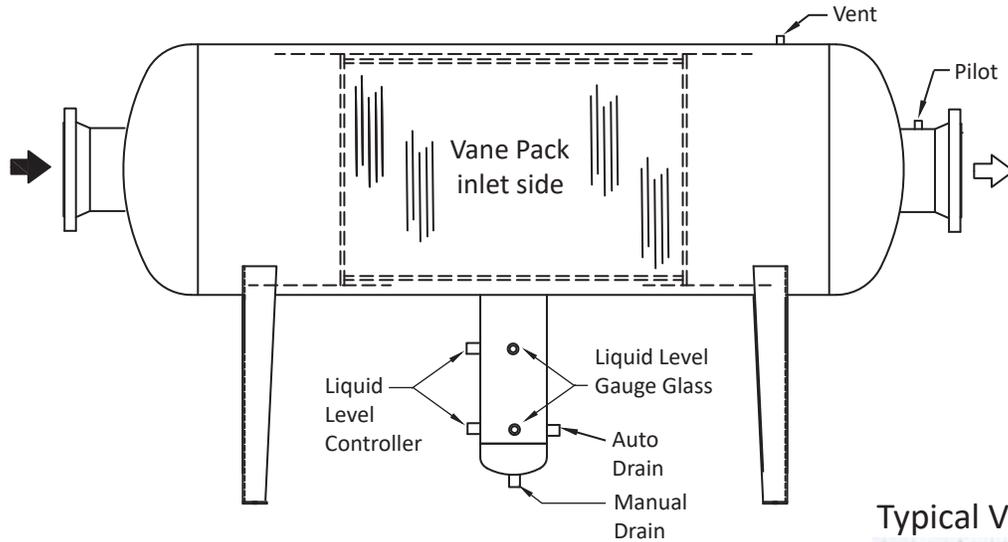
- Custom nozzle orientation
- Steel base mounting
- Lifting eyes
- Valve and control packages

ASME Code Certified: Winston/Royal Guard is an ASME Section VIII, Division 1 Code certified manufacturing facility with National Board certification. Capabilities include all types of non-destructive testing with a rigidly controlled Quality Control system.

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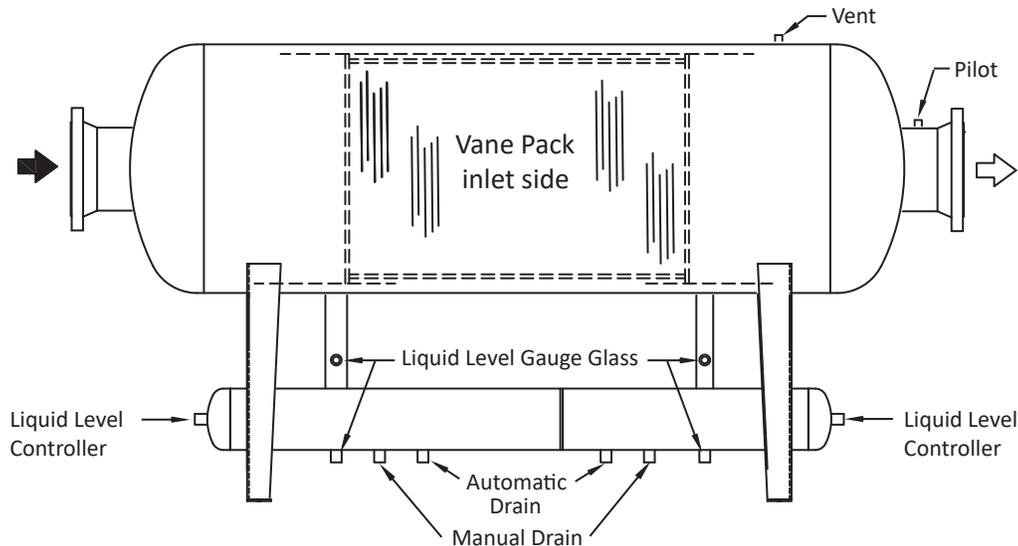
Type 100H with boot
for liquid retention

Typical Vane section



NOTE:
Connections
shown are
typical and
will vary with
customer
requirements.

Type 100H with horizontal
barrel for liquid retention



Specifications are subject to change without notice. 6-2-2022 (supersedes 6-29-2021)

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