LNG
Sampling System

WELKER

ISO 8943

THE WELKER LNG SAMPLE SYSTEM FACILITATES THE VAPORIZATION AND CONDITIONING OF A SAMPLE OF LNG FROM ITS LIQUID STATE TO A GASEOUS STATE IN COMPLIANCE WITH THE INTERNATIONAL STANDARDS FOR LNG SAMPLING.

ISO 8943

WELKER'S REVOLUTIONARY LNG DESIGN

While other LNG probes and systems rely on maintaining temperatures up to the vaporization stage, which could cause potential compositional separation and fallout, the Welker LNG probe eliminates this possibility. The patented check valve design allows for small amounts of LNG to enter the sample system at the probe tip and immediately begin the gasification process. This not only eliminates the possibility of heavier components escaping the system and returning back into the process, it also greatly reduces the line pack and increases measurement accuracy and timeliness of results. This patented check valve design is an innovation in LNG sampling application and is yet another example of Welker products leading the way in the sampling industry.

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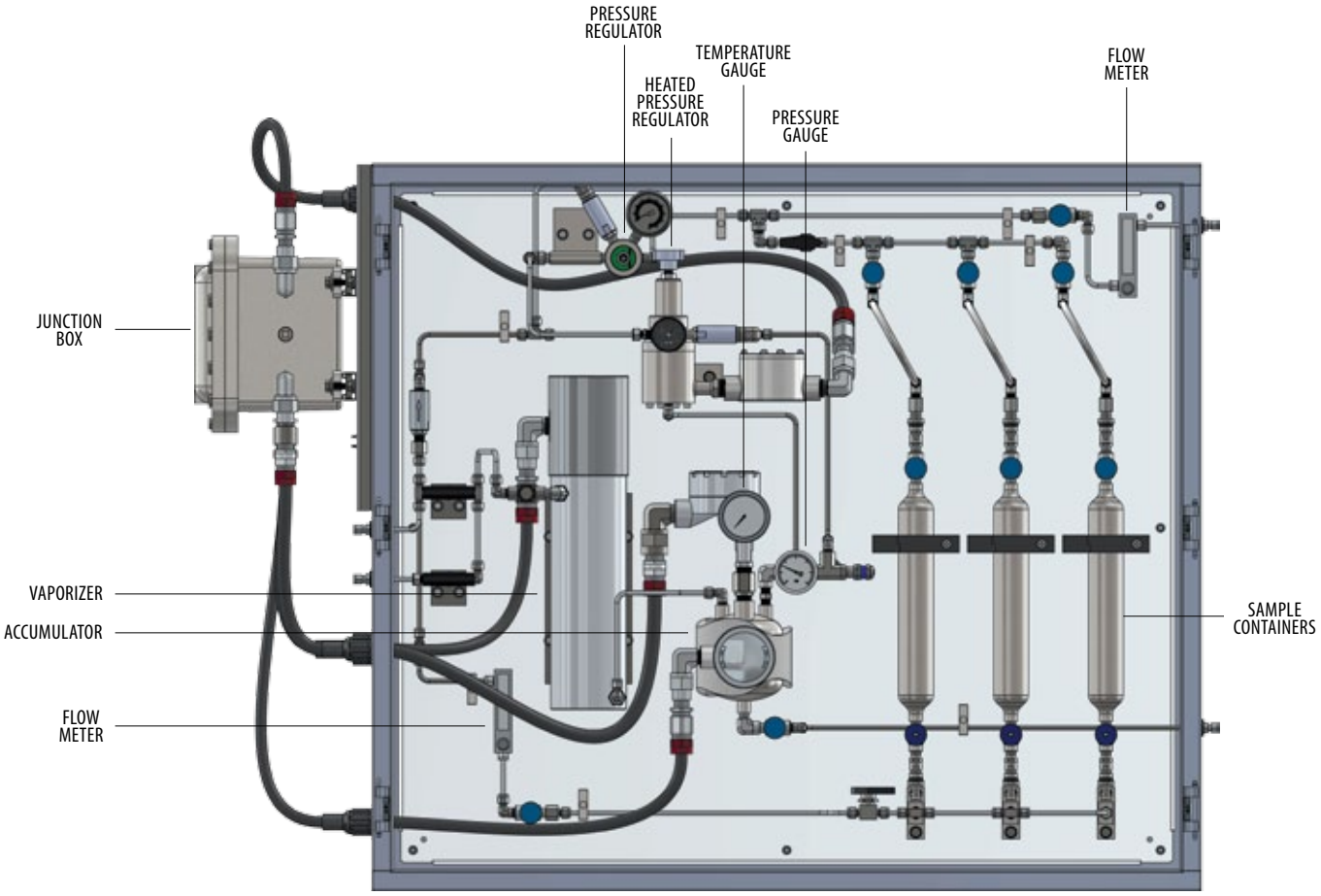
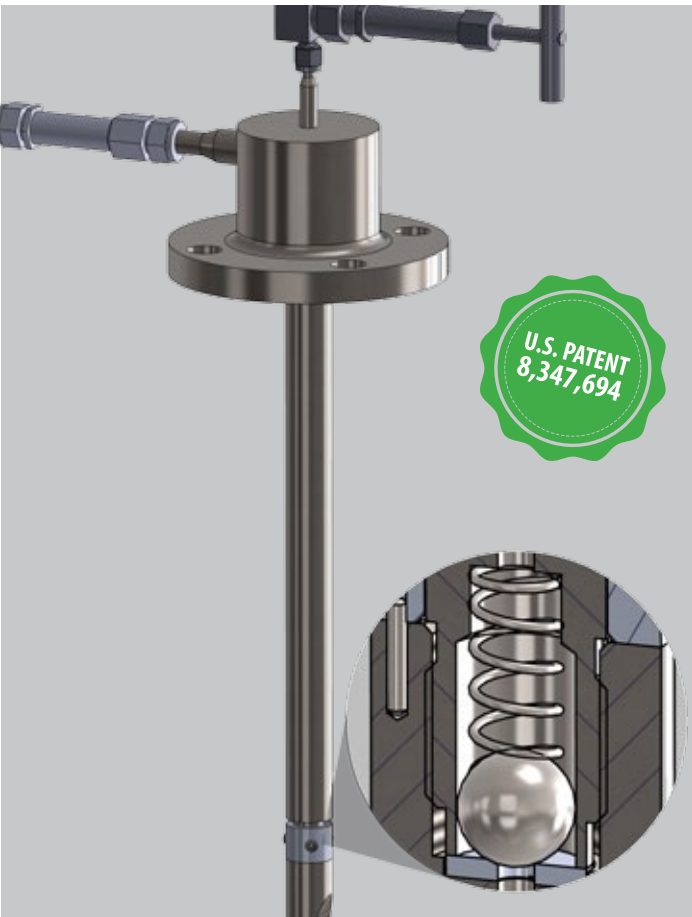
SYSTEM COMPONENTS



SPECIFICATIONS

LNG SAMPLE PROBE	
Materials of Construction	316/316L Stainless Steel
Maximum Allowable Operating Pressure	275 psig @ -20 °F to 100 °F (18 barg @ -28 °C to 48 °C)
Minimum Design Inlet Temperature	-265 °F (-165 °C)
Patent	U.S. Patent 8,347,694

LNG SAMPLING SYSTEM	
Maximum Allowable Operating Pressure	275 psig @ -20 °F to 120 °F (18 barg @ -28 °C to 48 °C)
Maximum Vaporizer Temperature	250 °F (121 °C)
Energy Output	2,000 W
	113 BTU/min
Minimum Design Inlet Temperature	-265 °F (-165 °C)
Enclosure Dimensions	48" x 17" x 42" (Width x Depth x Height)
Industry Standards	API 14.1
	API 17.10.2
	GPA 2166
	ISO 8943
Electrical Area Classification	NEC Class I, Div. 1, Groups C & D, T3



PATENTED CHECK VALVE DESIGN

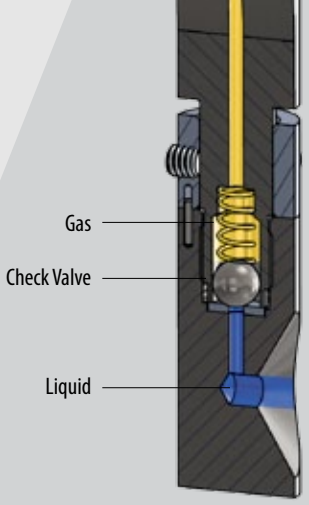
Welker's patented check valve design allows the vaporization process to begin within seconds of entering the tip of the probe. This strategic placement allows for an accurate sample with a more efficient process.

PATENTED DESIGN

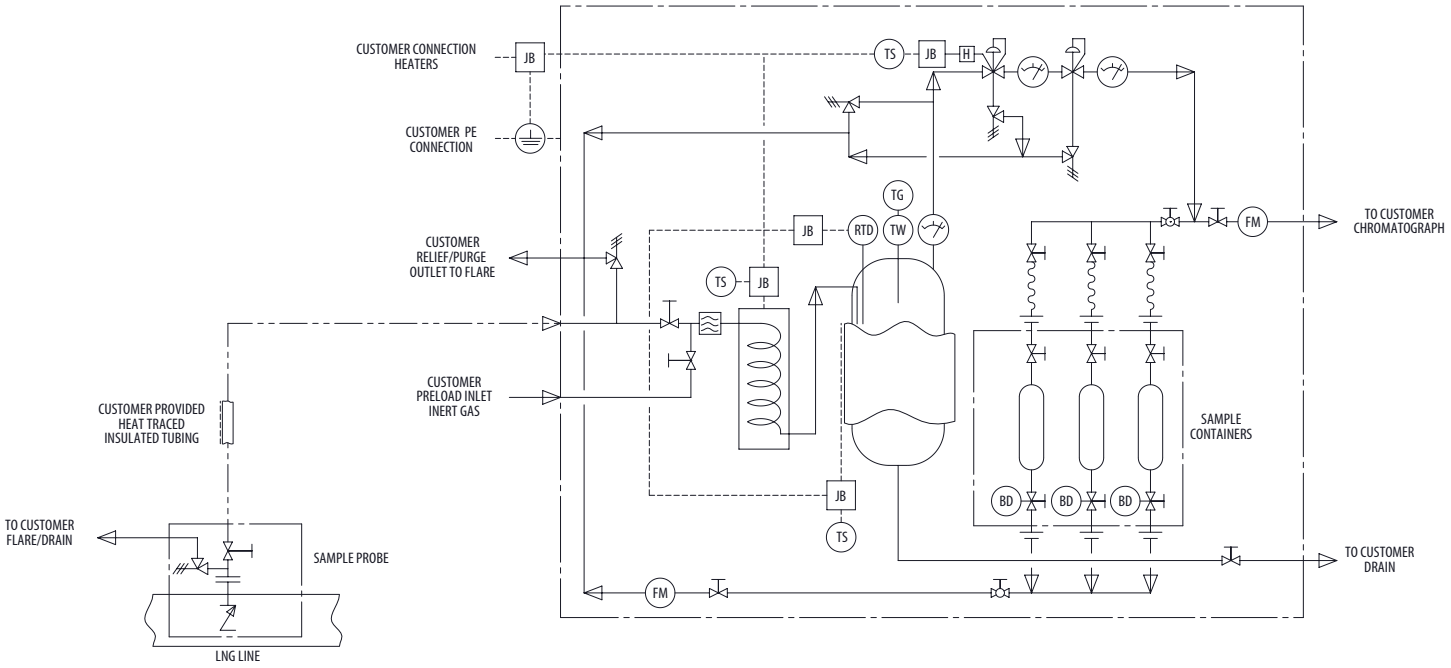
Welker's revolutionary LNG system design is in a class of its own. A superior system in efficiency, design, and accuracy, Welker's raising the bar of possibilities.

NO LINE PACK. NO PROBLEM.

The patented check valve design lends itself to making the system more efficient altogether. Because the placement of the check valve, the vaporization process begins immediately, removing the possibility of line pack throughout the system.



SYSTEM DIAGRAM



- Process
- Electrical
- Flexline
- Flow direction

- BD — Burst Disc Relief
- FM — Flowmeter Gauge
- TG — Temperature Gauge
- TS — Temperature Switch
- RTD — Resistance Temperature Detector (RTD)
- TW — Thermowell

- Needle Valve 2-way
- Cryogenic Valve 2-way
- Ball Valve 2-way
- Quick Connect
- Flanged Connection
- Check Valve

- Ground Lug
- Pressure Gauge
- Pressure Relief Valve
- JB — Junction Box
- H — Heated Pressure Regulator
- Pressure Regulator

- Single Cavity Sample Container
- Circulation Heater (Vaporizer)
- Accumulator
- Heat Traced & Insulated
- Filter

Weight and/or dimensions are approximate.
Specifications subject to change without notice.

13839 WEST BELLFORT STREET SUGAR LAND, TEXAS 77498 | 281.491.2331 | sales@welker.com | WELKER.COM