



# Sample Spa™ Gas Conditioner Model HR4SSN

## What's In It For You?

- Easy to install and simple to operate
- Precise, reliable temperature control utilizing direct power connection
- Adjustable sample gas temperature range
- No unpredictable sequential shutdowns or power drop due to overlapping thermostats
- Peace of mind that the gas will remain above the hydrocarbon dew point
- Calibration gas can flow through the same system as the sample gas

## Fast Facts

- Has a visual temperature indicator for the enclosure
- Eliminates high-pressure line pack and reduces retention time
- Adding an Analyzer Liquid Shut-off provides extra protection for your analyzer
- Simply overwhelms the Joule-Thomson effect

## Where To Use It

- Any analyzer system that is designed for gas and requires pressure regulation



Model HR4SSN

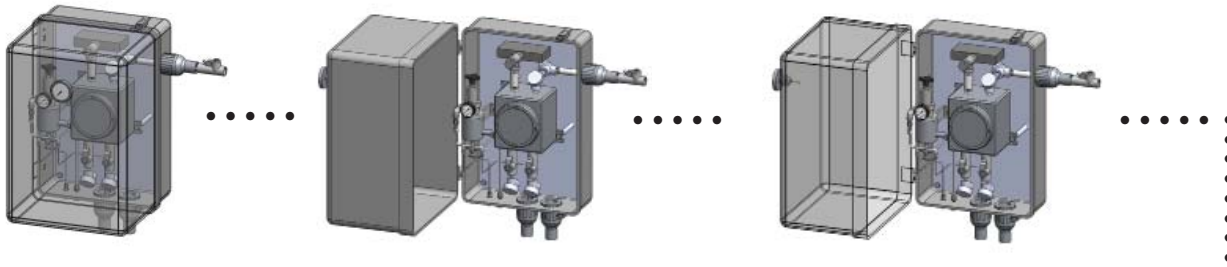
## What It Is

The Welker Sample Spa™ Gas Conditioner is designed to provide a regulated, properly conditioned gas sample to your on-line analyzer in accordance with the recommended guidelines of API 14.1, GPA-2166 and related gas sampling standards. The simple, clean design is enclosed in an insulated NEMA 4X enclosure. It combines the features and benefits of unique Welker products into a single, easy-to-install, heated unit.

## How It Works

Natural gas taken from the pipeline through an insulated sample probe is directed to the Welker Sample Spa by means of a heat-trace tubing bundle or by direct mount to the pipeline. When the gas enters the Sample Spa, the patented Welker Heated Regulator reduces it to the pressure set by the operator. Inside the Heated Regulator, the temperature loss associated with the pressure drop is offset by the heat generated from the regulator, which works to keep the gas above the hydrocarbon dew point.

Welker's patented Analyzer Liquid Shut-off is an effective option that gives final assurance that no liquids will enter the analyzer. The gas then exits the Sample Spa in a heat-trace tubing bundle and enters the analyzer.



## Build Your Own

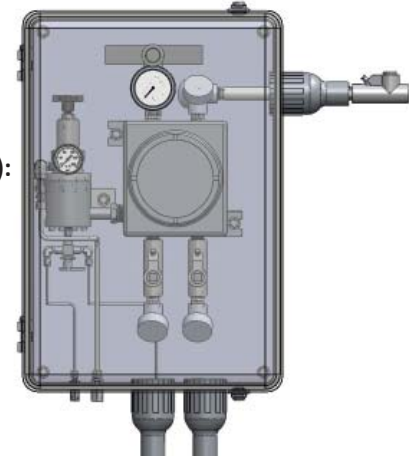
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Regulator Operating Range:

- 0 to 25 psig (0 to 1.72 bar): A
- 0 to 50 psig (0 to 3.45 bar): B
- 20 to 100 psig (1.38 to 6.90 bar): C
- 75 to 200 psig (5.17 to 13.79 bar): D

Analyzer Liquid Shut-off (ALS-1):  
001

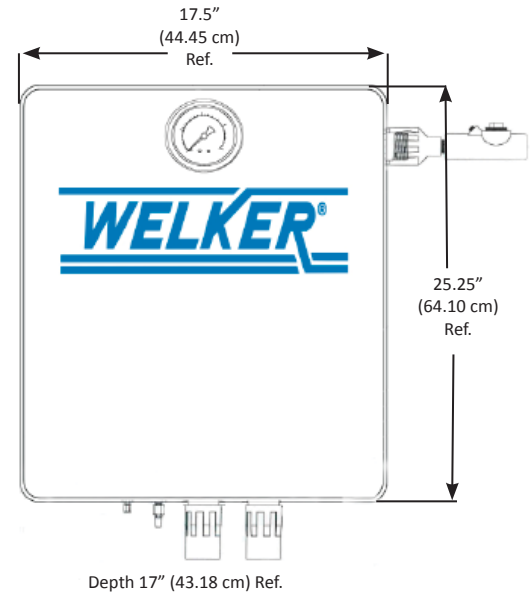


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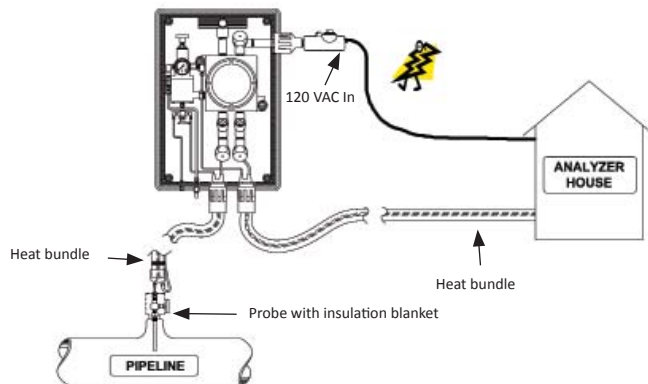
## Technically Speaking

- **Pressure rating:**  
2,160 psi (149 bar) maximum working pressure at -20°F (-7°C) to 100°F (38°C)
- **Standard Output Range:**  
0 to 200 psig (0 to 13.79 bar)
- **Standard Temperature Range:**  
-20°F (-7°C) to 200°F (93°C)
- **Electrical Requirements:**  
120 or 240 VAC (Class 1, Div. 1 Group C & D)
- **Thermostat:**  
68°F (20°C) to 212°F (100°C)
- **Electrical Components:**  
150-watt heating element  
120-volt unit, 144 Ohms, draws 1.53 Amps (RMS) during normal operations, draws 2.16 Amps to start up
- **Options:**  
Analyzer Liquid Shut-Off  
Liquid Eliminator Knock-out  
Probe Blanket  
Heat-trace tubing  
Panel, pipe or pipeline mount

## Dimensions



## Typical Set-up For Welker Sample Spa



## Functional Verification Test Data

In testing done by Welker, nitrogen was passed through the Sample Spa at a rate of 100cc per minute at -23°F to verify its effectiveness. An inlet pressure of 1,000 psig was dropped to 15 psig outlet. The outlet temperature was maintained consistently at 104°F.

	<b>Inlet</b>		<b>Outlet</b>
<b>Pressure:</b>	1,000 psig	→	15 psig
<b>Temperature:</b>	-23°F	→	104°F



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