J-Series Steam Jet Diffuser – Modulating Steam Control...

Technology - The PSX J-Series Steam Injection heater utilizes the PSX Radial Multi-port Jet Diffuser with variable-area steam Jet Diffuser. Our internally modulated design assures smooth & stable operation.

Internally Modulated Steam Control accurately meters the mass flow of steam, by establishing choked flow (sonic velocity) conditions. Choked flow is the phenomenon of accelerating a vapor to maximum velocity by creating a pressure differential through an engineered opening. By establishing choked flow, the steam mass flow can be metered to precisely control the heating of the liquid. This produces predictable results based on the position of the stem plug. Through a variable-area steam diffuser, steam flow is metered at the point where steam and liquid first contact and mix.

Features:
Economical Design - Designed for installation on a flanged pipe Tee connection for use in inline water or slurry heating.
Simplified Installation – Eliminate costly piping re-configuration to meet inlet & discharge connections. Steam inlet rotates 360 degrees to incoming steam line.
Uniform Heating – The PSX Multi-port Jet Diffuser’s 360 degree injection pattern assures uniform distribution of steam.
Stable Operation: Modulated steam control assures rapid & complete steam condensation, eliminating steam cavitation concerns.
Self Cleaning Design – High velocity steam flow eliminates plugging & fouling issues from mineral and scale build-up.
No Steam Control Valve – The PSX J-Series design eliminates the need for a steam control valve on steam line.
Precise Temperature Control - +/- 1 °F temperature control.

Design Specifications:
- Multi-port Radial Jet Diffuser design
- Fully modulated steam control with variable area Jet Diffuser
- Suitable for steam pressure of 10-300 psig
- Steam turndown 0-100%
- Liquid turndown up to 20:1
- Linear integral Pneumatic Actuator (Fail-safe close)
- Connections 150 lbs NPT or RFF (300 lbs available)
- Carbon steel or 316SS construction, special alloys available.
- Designed in accordance with ASME B31.1
- Optional Certifications: CRN, SEP, & PED

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<th>J-Series Models &amp; Pipe Connections</th>
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Common Applications:
- Water, slurry, or sludge heating
- Continuous inline heating
- Intermittent inline heating
- Tank heating for hi-turnover applications
- Hi-Flow & Lo-Temp heating
- Trim Heating for temperature maintenance
- Seasonal freeze-up prevention
- Boiler Feedwater Heating
- Vent or waste steam recovery

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