



Liquid Thermal Expansion PRV Sizing Information Sheet

MERCER VALVE CO., INC.®
AUTO SEAT TECHNOLOGY®

Contact Name: _____
Company: _____
Location: _____
Tag/PSV No.: _____

Phone: _____
Fax: _____
Email: _____
Quantity: _____

Per ASME and API codes, in most thermal relief applications, an NPS 3/4" x NPS 1" valve is acceptable. This is because every hydraulic expansion application is for a relieving liquid and the required relieving rate is small, therefore specifying an oversized device is reasonable. Fill out this form if there is a reason to believe that this size is not adequate.

Please indicate the units used for each field.

1. Requested Connection Size and Type

The requested may not be available since it depends on orifice/valve sizing result.

- Threaded: _____
 - MNPT x FNPT
 - FNPT x FNPT
- Lift Lever? None Open Lever Closed Lever

- Flanged: _____
 - RF x RF
 - RTJ x RF
 - RTJ x RTJ

2. Operating Data

- Operating Pressure: _____
- Set Pressure: _____
- Atmospheric Pressure: _____
- Allowable Overpressure : _____
- Known Inlet Pressure Drop: _____
- Operating Temperature: _____
- Total Heat Transfer Rate: _____ watts *or* Btu/h
- Back Pressures:
 - Constant Superimposed: _____
 - Variable Superimposed: _____
 - Built-up: _____

3. Fluid Data

- Liquid Name: _____
- Does This Require Sour Service Trim?
 - Yes No NACE MR0175
- Density: _____ kg/m³ *or* lb/ft³
- or* Specific Gravity: _____ (referred to water at 15.6 °C/60 °F)
- Viscosity: _____
- Cubical Expansion Coefficient: _____ 1/°C *or* 1/°F
- Specific Heat: _____ J/kg-K *or* Btu/lb-F



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