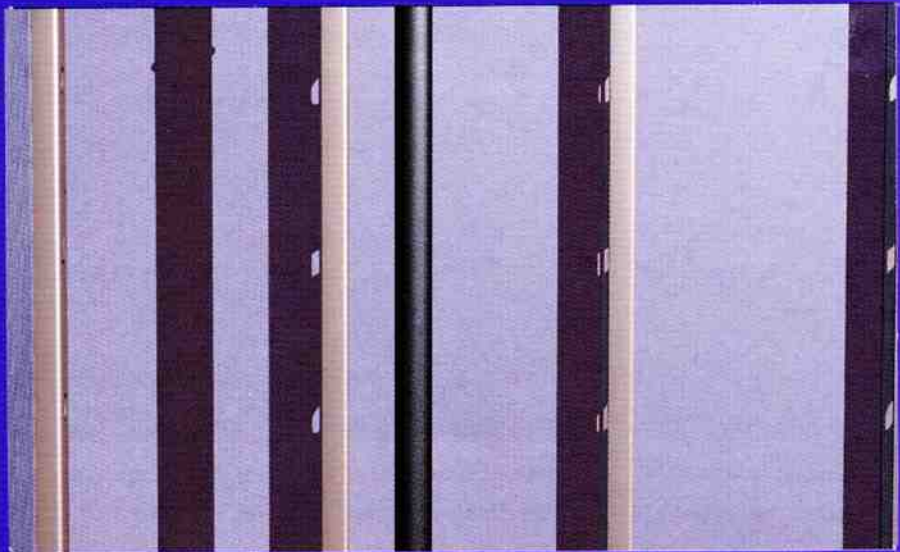


Now
there's a
better way to
Engineer
your high pressure
Riser
when you're stuck
near sheet
Rock
and too far from a
Hard Place...



Metraflex®

You're not near a wall. Or the wall is too weak. And an expansion compensator without guides won't work. The answer is the **Metraflex HiRise system.** Ideal for steam, hot or cold water, the **HiRise expansion compensation system** uses guides that attach to the floor and ceiling. And it works smoothly and quietly compensating for expansion and contraction.



A vertical black pipe is shown in a room. The pipe has a compensator in the middle. The room has a wall on the left and a window on the right. The wall on the left is made of sheet rock, and the window is made of glass. The pipe is supported by guide bolts at the top and bottom. The compensator is a smooth, quiet-glide externally pressurized, laterally stabilized compensator. The wall on the left is too weak, and the solid wall is too far away. The pipe is supported by smooth-gliding "quiet-slide" guide bolts to the floor and ceiling, which isolate pipe noise and vibration.

The sheet rock wall is too weak

Smooth, quiet-glide externally pressurized, laterally stabilized compensator

The solid wall is too far away

Smooth-gliding "quiet-slide" guide bolts to floor and ceiling and isolates pipe noise and vibration

Design high pressure risers with the Metraflex HiRise System for expansion and contraction

No walls needed

You can't always predict a riser's path. And today's light weight steel wall studs and sheet rock don't like pipe guides. You need something solid.

The new HiRise System from Metraflex let's you compensate for expansion and properly guide your high pressure riser regardless of its location.

A rugged, quiet system

The Metraflex HiRise System is comprised of only one floor and only one ceiling pipe guide and an extremely quiet, externally pressurized, laterally stabilized expansion compensator.

This innovative riser system has several benefits:

- Stabilizes pipe beyond

EJMA requirements

- Isolates piping noise and vibration
- Works with steam, hot and cold water
- Eliminates need to locate riser near solid wall
- Simplifies installation and reduces material and labor costs



"Quiet Comp" is designed with magic glide bearings for quite operation*

In addition, the compensator and guides that comprise this system offer several other benefits:

Externally pressurized "no squeak" compensator features:

- Unique design featuring magic glide bearings for smooth, quiet operation*
- Externally pressurized bellows with lower compression force
- Ability to compensate for large movements
- Extremely compact size

- Rugged, robust construction

The floor and ceiling mounted guides offer the following advantages:

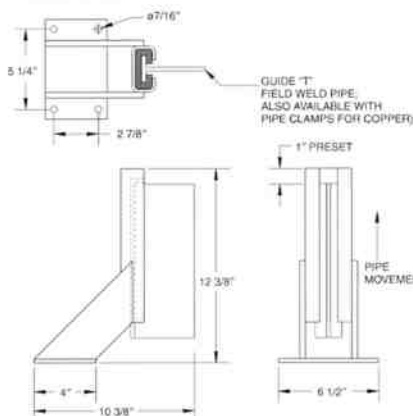
- Eliminate the need for intermediate guiding
- No need for the riser to be near a solid wall for guiding
- Smooth-gliding channel with virtually silent operation
- Rugged construction



Floor and ceiling guides are designed so there is no metal-to-metal contact between T-slide and guide channel. Special non-metallic "quiet-slide" insert eliminates noise. Rugged construction will last the life of your piping system.

*Metallurgically impregnated lubricant

RISER GUIDE INSTALLATION



Floor and ceiling guiding system

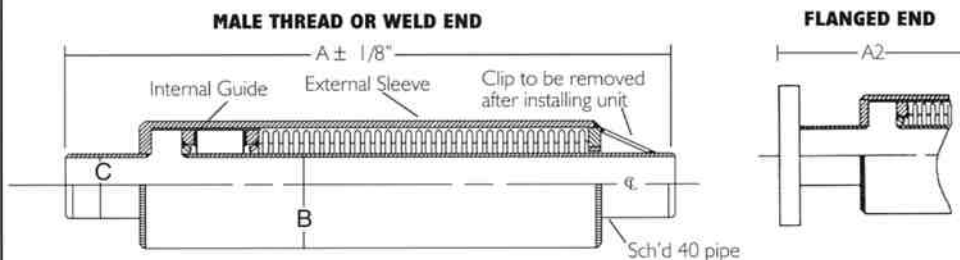
A special "quiet-slide" insert in the sliding "T" guide channel provides virtually silent operation and isolates pipe noise from building.

Guides are to be used in conjunction with riser expansion compensator below. Guides are bolted to ceiling and floor. Sliding "T" guide is inserted into "quiet-slide" lining in channel and welded to pipe.

Maximum Temperature Rating: 250°F

EXPANSION COMPENSATOR FOR RISERS

This expansion joint is specifically designed for building riser systems, and is to be used in conjunction with the Metraflex floor and ceiling guiding system.



Design Data:

Temp: 750° F (399°C) Press: 175 PSI, (1206 K Pa(g)) Test Press: 250 PSI, (1809 K Pa(g))

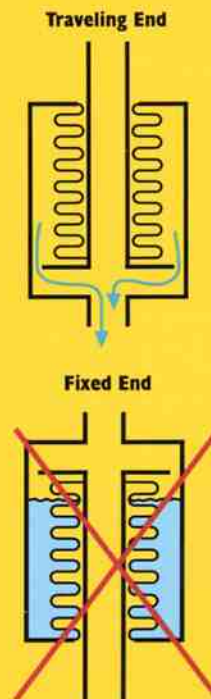
Axial Movement: 1/2" Expansion, (13mm) 3" Compression, (80mm)

Material:

Std. Bellows: Multi-Ply Stainless Steel Other Parts: Carbon Steel Optional: Inconel Bellows

Vertical Installation:

The joint should be installed with the traveling nipple up. This will allow the joint to drain, preventing liquid and sediment from accumulating between the housing and bellows.



HiRise QUIET SLIDE

Model No. PGQW - HiRise Quiet Slide "Welded" Model No. PGQC - HiRise Quiet Slide "Clamped" for Copper (Specify Size)

HiRise COMPENSATOR

| MODEL NO. | PIPE SIZE | | THREAD OR WELD END A | FLANGED A2 | B | C | EFFECTIVE AREA |
|-----------|-----------|-----|-------------------------|---------------|--------|-------|----------------|
| | INCH | MM | | | | | |
| HPQ30075 | 3/4" | 20 | 22" | 22-5/8" | 2-3/8" | 1.05" | 1.5" |
| HPQ30100 | 1" | 25 | 22" | 22-5/8" | 2-1/2" | 1.31" | 2.0" |
| HPQ30125 | 1-1/4" | 32 | 22" | 22-5/8" | 3" | 1.66" | 3.3" |
| HPQ30150 | 1-1/2" | 38 | 23" | 23-5/8" | 3-1/2" | 1.90" | 4.0" |
| HPQ30200 | 2" | 50 | 23" | 23-5/8" | 4" | 2.37" | 6.5" |
| HPQ30250 | 2-1/2" | 65 | 24-1/2" | 25-1/8" | 5" | 2.87" | 8.8" |
| HPQ30300 | 3" | 80 | 25-3/8" | 26" | 5-1/2" | 2.87" | 13.2" |
| HPQ30400 | 4" | 100 | 25-3/8" | 26" | 6-5/8" | 4.50" | 20.8" |



Building Riser Expansion Compensation System:

Expansion Compensation System shall incorporate a laterally stabilized expansion compensator capable of being located between a floor and ceiling and requiring only two pipe guides, one located at the ceiling above the compensator and one at the floor below. Maximum distance of 12 feet between floor and ceiling. Compensators shall be the "HPQ3" series and the riser guides shall be the "PGQ" series. Installation shall be in accordance with the "HiRise System" as manufactured by The Metraflex Company®, Chicago, IL.

Model HPQ3 "Quiet Comp" – Building Riser Expansion Compensator:

Building riser expansion compensators to be laterally stabilized, packless, and externally pressurized. Pressure rating of 175psi @ 750°F. Axial movements to be rated for 3" compression and " " extension. Compensators to be all welded construction, multiple-ply stainless steel bellows, carbon steel shroud, integral heavy-duty guide rings, and internal liner (threaded compensators to have anti-torque device). To reduce friction and system noise, construction shall include internal glide bearing, contact surfaces. System line pressure to be external to the bellows to minimize squirm. End connections to be male pipe thread (HPQT3), weld end (HPQW3), grooved end (HPQG3), or flanged (HPQF3). All materials of construction, pressure ratings, and end fittings shall be appropriate for the application. Guiding and anchoring per manufacturers recommendations and guidelines. When used in conjunction with the Metraflex Glide "PGQ" series floor and ceiling pipe guides, Metraflex HiRise system, no additional intermediate guides are required. Expansion compensators shall be model "HPQ3" as manufactured by The Metraflex Company®, Chicago, IL

Style PGQ – Riser Pipe Alignment Guide (Glide Type):

Primary guides shall be of the vertical sliding type. Guides to be used in all building riser, piping systems in conjunction with the Metraflex HPQ3 series compensators. PGQ series floor and ceiling pipe guides to be installed in pairs, at the floor and ceiling penetrations, and require no additional intermediate guides. Maximum distance of 12 feet between floor and ceiling. Two piece construction employing a sliding member to be welded or clamped to the carrier pipe and a bolt down anchor base. Sliding member shall be of sufficient height to clear pipe insulation and long enough to prevent over travel of the slide. Stationary member shall consist of a steel mounting bracket, containing an isolating slide bearing to minimize the transmission of vibration and mechanically transmitted sound to the building structure. Riser pipe alignment guides shall be style "PGQ" as manufactured by The Metraflex Company®, Chicago, IL.

Other Piping Specialty Products From Metraflex

Contact your local representative for information on all these innovative piping specialty products from Metraflex.

Metal Bellows Expansion Joints

Flexible Metal Hose

Cast Iron Strainers

Expansion Loops

Silent Check Valves

Pump Connectors

Guides, Slides and Anchors

Rubber Expansion Joints

Seismic Expansion Joints

the **Metraflex**® company

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