NATIONAL
PIPE HANGER CORPORATION

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FIG. 955 **Supplemental Data** **FIG. 955**

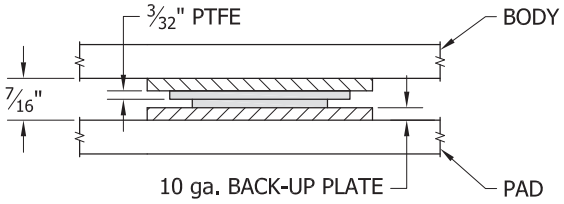
1.0 Slide Bearing Details

Slide bearings by Con-Serv, Inc., Georgetown, South Carolina. Con-Slide Slide Bearing Type CSA product data reproduced with permission.

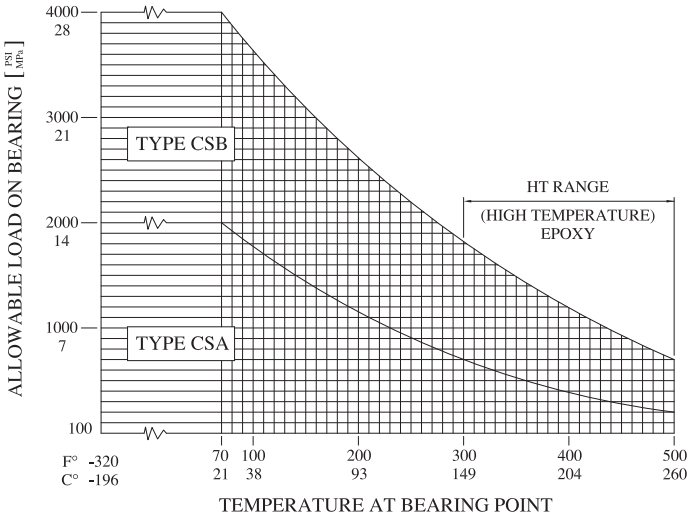
The Type CSA CON-SLIDE™ slide bearing is constructed of filled PTFE bonded to flat rigid back-up steel. The CON-SLIDE material, at thermal expansion and contraction rates, will exhibit little to no wear for the life of the support. The Type CSA blend is formulated for use against itself as a slide material.

The blended CSA material used for this bearing is composed of virgin (uncompressed) PTFE resin tested per ASTM D4894 or ASTM D4895 and reinforcing agents including milled glass fibers. This structural material has the following representative mechanical and physical properties:

TENSILE STRENGTH	2200 psi
ELONGATION	225%
SPECIFIC GRAVITY	2.17 to 2.22



The CSA system consists of an upper and lower element. The PTFE slide surfaces in this system are nominally 3/32" thick and are control-bonded to a 10 ga. carbon steel back-up sheet. See graph for allowable design pressures at various temperatures.



TEMPERATURE	ALLOWABLE LOAD	FACTOR
70°F	2000 psi	1.00
100°F	1700 psi	0.85
200°F	1000 psi	0.50
300°F	700 psi	0.35
400°F	400 psi	0.20
500°F	200 psi	0.10

Apply the load reduction factors for the corresponding temperatures at the Teflon bearing. Multiply the allowable vertical load from the submittal sheet by the factor for the new allowable load at the operating bearing temperature.

February 13, 2020

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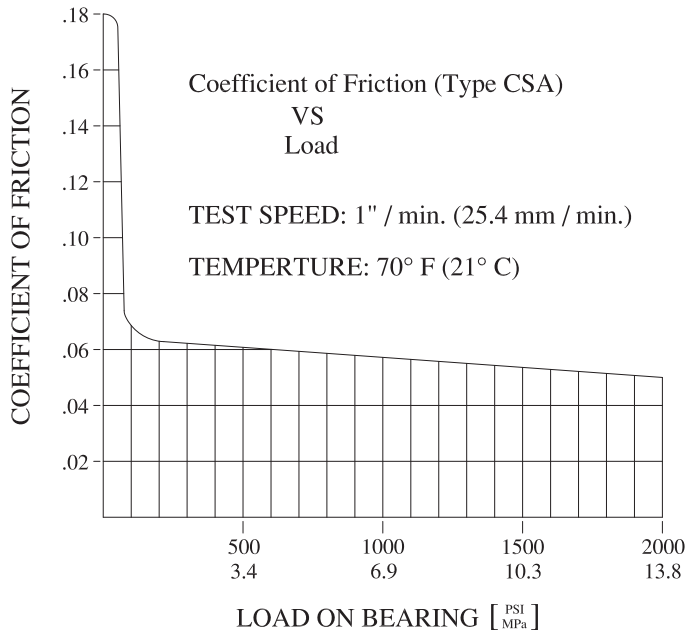
The coefficient of friction plotted in the graph below is a maximum value after first movement breakaway. The friction values do not vary significantly with temperature; however, they will rise with increased speed. The graph values will increase approximately 45% for a speed increase to 10 in./min.



The epoxy compound used has been tested and formulated for bonding CSA to backing materials. The bond strength developed has a safety factor of from 5 to 6 on a sliding shear, assuming no friction between the special PTFE and back-up plate. These strengths are ensured at temperatures between 300F and 500F with a special epoxy for high temperature bearings.

Wear of bearings utilized in thermal expansion applications designed in accordance with CSA guidelines is negligible. Ultraviolet testing indicates that CSA materials show no ill effects from a time-accelerated test.

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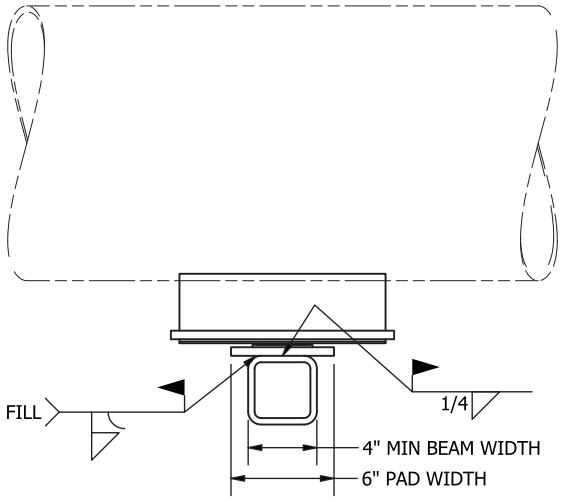
2.0 Alternate Beam Attachment Methods

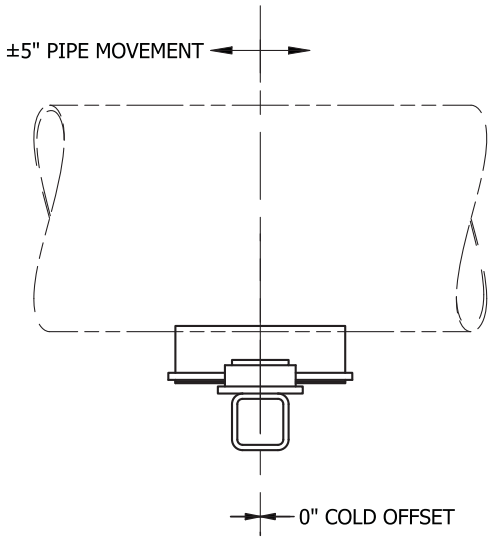
The minimum recommended beam width for supporting H-Slides and H-Guides is 4". The minimum beam width is to protect PTFE slide bearing and adhesive from excessive temperature during welding. The maximum allowable temperature at PTFE and adhesive is 300°F for standard adhesive and 500°F for high temperature adhesive. The figure below shows the attachment to a 4" wide tube with a flared-bevel-groove weld. Intermittent and continuous welds permissible.



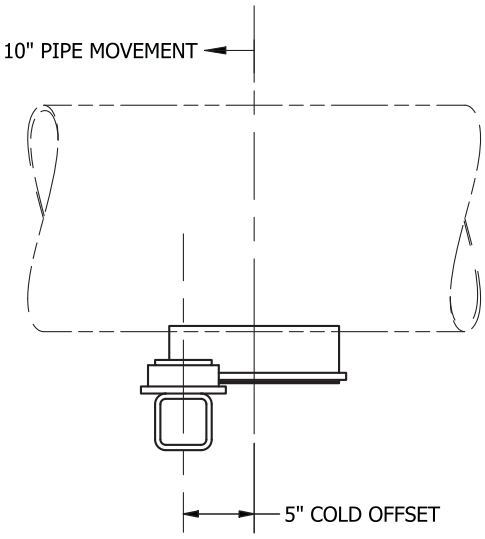
NOTES:
1. WELD LENGTH, SPACING, AND LOCATION PER SUBMITTAL SHEET.

3.0 Cold Offset

When the support body is centered on the slide or guide pad during installation (cold), the support may offer ±5" axial movement during operating (hot) conditions. If more travel is desired and the direction of the movement known, the support body may be cold offset from the slide or guide pad allowing up to 10" travel in one direction.



CENTERED INSTALLATION POSITION FOR ±5" MOVEMENT



COLD OFFSET POSITION FOR +10" / -0" MOVEMENT

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4.0 Insulation

Maximum insulation thickness is dependent on the bottom of pipe elevation and the presence of guide and holddown blocks. Insulation shall avoid the guide and holddown blocks to prevent damage from pipe movement. One or both H-Body voids may be filled with insulation as necessary to match the desired thickness.