



Tru-Balance Sliding Saddles

The *safest*, most *efficient*, and most *effective* way to control movement at hanger locations in a dynamic piping system.



coefficient of friction (μ). The Short-Rib Saddle features two small ribs on the bottom. These ribs maintain the centered position of the bottom saddle in the hanger as the pipe moves.

The traditional method of insulating at hanger locations with a galvanized insulation saddle and a wood block for support creates a common problem. Eventually, the hanger is supported by the insulation as opposed to the installed support. As a result, the vapor barrier is penetrated and no longer serves its intended purpose. The Sliding Saddle eliminates the potential for this outcome through even weight distribution across the rigid insulation.

The Tru-Balance Sliding Saddle is the ideal value engineering solution to costly, roller-style hangers, which have a tendency to rust. A combination of Sliding Saddles and clevis hangers is economical and significantly more efficient. Every Tru-Balance Sliding Saddle is labeled with a Tru-Balance sticker for easy recognition on the job site.

Product Overview

Tru-Balance Sliding Saddles from Buckaroos, Inc. provide a single product solution to three main concerns at hanger locations in an engineered, dynamic piping system.

- The Sliding Saddles are offered with two different insulation types that cover a temperature range of -290°F to 1200°F.
- The pre-jacketed, rigid insulation material creates stability and significantly reduces potential for any penetration to the jacketing.
- The sliding feature allows for a small amount of controlled, linear movement at the hanger location while maintaining the integrity of the insulation.

“Sliding” Feature

The Patented “Sliding” Feature is what makes this product unlike any other in the industry. Each Tru-Balance Sliding Saddle consists of rigid insulation to cover 360° of pipe. The insulation is fully encapsulated by an all-service jacket vapor barrier and a self-sealing lap.

Adhered to the bottom of the vapor barrier is a heavy gauge plain saddle. This composite rests on a Buckaroos Short-Rib Saddle that is topped with a layer of polytetrafluoroethylene (PTFE). The PTFE layer produces saddle-to-saddle contact with a minimal



Safety

As previously noted, in traditional methods of insulating at hanger locations, the hanger may not stay in the installed position over time. In worst-case scenarios, the hanger is far enough toward the edge of the saddle that the saddle falls to the ground. Such an event causes a serious safety concern. Galvanized sheet metal falling from above can be compared to a knife or blade. The even weight distribution and Short-Rib feature make the Tru-Balance Sliding Saddles the safest way to insulate at the hanger location.

Application

The Tru-Balance Sliding Saddles are ideal for any dynamic piping system. Systems such as hot water, chilled water, dual-temperature, ammonia refrigeration, steam, medical gas, etc., demand the Tru-Balance Sliding Saddles. They are designed for any piping system with an operating temperature between -290°F to 1200°F. For systems operating at less than 250°F, the 2550FS Phenolic Foam Insulation should be used. Systems above 250°F require 1200E Calcium Silicate Insulation. See reverse side for further information on application and design data.



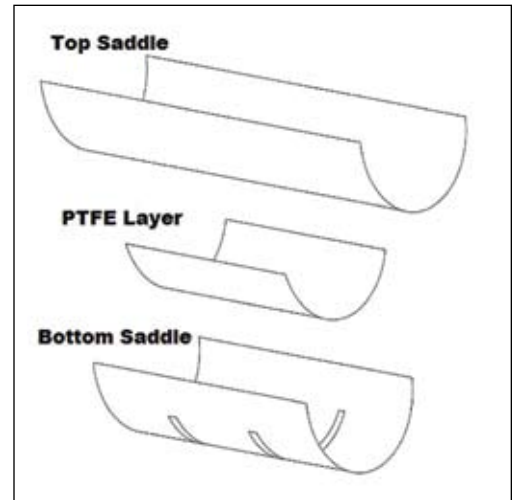
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Tru-Balance Sliding Saddles

Application and Design Data



Product Dimensions				
Insulation O.D.	Insulation Length	Top Saddle Length	Bottom Saddle Length	Gauge
3.5" - 5"	18"	12"	8"	18
6" - 8"	18"	12"	8"	16
9" - 15"	18"	12"	8"	16
16" - 24"	36"	24"	18"	12

Systems operating from -290°F to 250°F			Corresponding Standard
Insulation Material	2550FS (Phenolic Foam)		
Insulation Density	2.5 lbs./ft ³	5 lbs./ft ³	
Recommended Pipe Size (IPS)	3 1/2" - 8" O.D.	9" - 30" O.D.	
Thermal Conductivity BTU·in./hr·ft ² ·F° @ 75°F Mean	0.13	0.21	ASTM C-518
Service Temperature Limits	-290°F to 250°F	-290°F to 250°F	
Compressive Strength Parallel to Rise Perpendicular to Rise	29 PSI 17.5 PSI	90 PSI 70 PSI	ASTM D-1621
Water Absorption By Volume	0.50%	0.50%	ASTM D-209
Water Vapor Permeability	.117 perm inch	Max .02	ASTM E-96
Specific Heat	.45 BTU/lb.°F	.45 BTU/lb.°F	
Closed Cell Content	Min 92%	Min. 95%	ASTM D-2856
Surface Burning Testing Flame Spread/Smoke Developed	<25/50	<25/50	ASTM E-84

Allowable Linear Movement

The Tru-Balance Sliding Saddle allows for up to 4 inches of linear movement. This saddle is not recommended in place of a manufactured pipe guide. The installation of the product shall be defined by the design engineer based on the specific needs of the system. With the theory that the hanger position will remain stable, the insulation insert and plain saddle must rest on the Short-Rib Saddle such that there is room available in the direction that movement is desired. The Short-Rib Saddle shall not move past the end of the plain saddle at any time. If the product is being used on a static system, the product should be installed with the hanger position centered below both saddles. Custom sizes are available upon request.

PLEASE NOTE:

Calcium Silicate is NOT recommended below 250°F. If for any reason, the vapor barrier is broken or not sealed tight upon installation, the product will absorb condensation and mold could form. Calcium Silicate is only recommended for high temperature applications exceeding 250°F. Other insulation materials are available upon request.

Systems operating from 250°F to 1200°F		Corresponding Standard
Insulation Material	1200E (Calcium Silicate)	
Insulation Density	14 lbs./ft ³	ASTM C-303
Recommended Pipe Size (IPS)	3 1/2" - 30" O.D.	
Thermal Conductivity BTU·in./hr·ft ² ·F° @ 200°F BTU·in./hr·ft ² ·F° @ 400°F BTU·in./hr·ft ² ·F° @ 600°F	.45 .55 .66	ASTM C-177
Service Temperature Limits	300°F to 1200°F	
Compressive Strength	160 PSI @ 5% deformation	ASTM C-165
Water Absorption (By Volume)	***	
Maximum Shrinkage	2%	ASTM C-356
Surface Burning Testing Flame Spread/Smoke Developed	<25/50	ASTM E-84



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