

FLUOROGOLD® SLIDE BEARINGS

Fluorogold slide bearings systems are engineered products of Seismic Energy Products, Athens, TX. They fill the need for simple and economical structural supports by allowing simultaneously for thermal, seismic and mechanical expansions and contractions. These systems operate with the lowest coefficient of friction over a broad range of temperatures.

Fluorogold is comprised of virgin PTFE and special reinforcing agents. This blend yields a structural material that offers significantly higher mechanical properties than PTFE itself. Compressive creep is virtually eliminated, wear is substantially reduced and initial deformation is decreased. However, the low friction and chemical inertness of PTFE are retained.

This structural bearing surface is bonded to a back-up steel plate with a high temperature homogenous epoxy system that is cured under precise heat and pressure in hydraulic presses. All Fluorogold bearings are factory bonded using strictly controlled, semi-automated procedures, developed to eliminate poor quality field-made bonds. Fluorogold bearings can be obtained with elastomeric back-up which will enable the system to accept live-load rotations.

In all cases, a slide bearing system is composed of two elements. The upper element, with its Fluorogold face down, mates with the lower element with its Fluorogold face up. The system is normally designed so that the upper element is larger than the lower element by the dimension of the anticipated motion so that the lower element is under uniform load throughout movement and so that foreign matter will not collect on the lower element.

The maximum design pressure of Fluorogold Slide Bearings, without elastomeric backing is 2000psi (see pressure vs. temperature chart for specific design criteria). For neoprene backed bearings the maximum recommended pressure is 800 psi (5.5 MPa) and for the cotton duck reinforced elastomer it is 1500 psi (10.3 MPa).

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Seismic Energy Products

www.sepbearings.com

Fluorogold® Slide Bearings

WHY FLUOROGOLD® SLIDE BEARINGS?

Function

1. To accommodate movement under load with minimal friction.
2. To provide release or sliding surfaces at bearing ends of structural members, thereby accommodating shrinkage or thermal motion of members.
3. To isolate components or parts of a structure or assembly of parts when their relative movements must be independent of each other.
4. To provide a release bearing system in order to prevent stresses from entering certain parts of a structure.
5. To provide positive seismic separations.

Composition

Fluorogold® is a special formulation of PTFE, reinforced with a strong glass aggregate and other reinforcing agents to provide a structural material that offers significant compressive strength without cold creep, yet retains the low friction and chemical inertness of virgin PTFE.

The Fluorogold® composition, molded, sintered, and skived to the required thicknesses, is factory bonded to specially prepared backing plates, such as carbon steel, stainless steel or elastomeric-backed plates.

Fluorogold® bearing composition is identified by its own characteristic gold color. Pure unfilled PTFE is a cloudy white color and may be processed into nearly any color by use of coloring agents. By always looking for exclusive golden color, you are assured that only the properly engineered structural PTFE composition known as Fluorogold® is being utilized.

Advantages

- Fluorogold® is structural PTFE.
- Lowest friction factor of any solid material.
- Chemically inert.
- Able to absorb dirt and grit without increasing the coefficient of friction.
- Weatherproof – less than 0.01% moisture absorption.
- Able to allow for misalignment
- Provides electrical insulation – no galvanic corrosion.



- No stick – slip action.
- Easy to install – simply bolt or weld.
- Reduced support costs – the low friction factor remains constant.
- Only half as much bearing area is needed compared to virgin TFE.
- Takes compressive loads of 75 psi to 2000 psi
- Temperature range of – 320° F. to 400° F.
- Shear of the epoxy bond exceeds shear of the material.

Applications

Architectural

- Building separations
- Mutual bearing walls
- Seismic Separations
- Precast or post-tensioned structural
- Concrete – between beam and haunch
- Ramps
- Mullion facades
- Roof slabs
- Loading docks
- Beams and joists
- Airport hangar door
- Girder slip joints

Petrochemical

- Pipe Slides
- Heat exchangers
- Pressure vessels
- Cryogenic supports
- Air preheaters
- Boilers
- Distillation towers
- Pipe hangers
- Storage tanks
- Vacuum fractionating towers

Power Plants

- Under steam lines
- Condensers
- Towers

Industrial Equipment

- Conveyors
- Cranes
- Slides
- Material handling
- Dust collectors
- Heavy machinery
- Vibration pads
- Antenna towers

Bridges

- Post-tensioned, prestressed or box girder
- Highway and railway bridges
- Roadway expansion joints
- Pedestrian bridges
- Cast in place

Marine

- Wharfs
- Cargo slides
- Service gates
- Wedge blocks
- Trash racks
- Sonar bearings

SPECIFYING AND SELECTING FLUOROGOLD® SLIDE BEARINGS (Metal-Backed Systems Only)

“Fluorogold” slide bearings are available in a variety of constructions to meet your specific requirements. Varying elements are the back-up plate material and thickness, and the construction for installation.

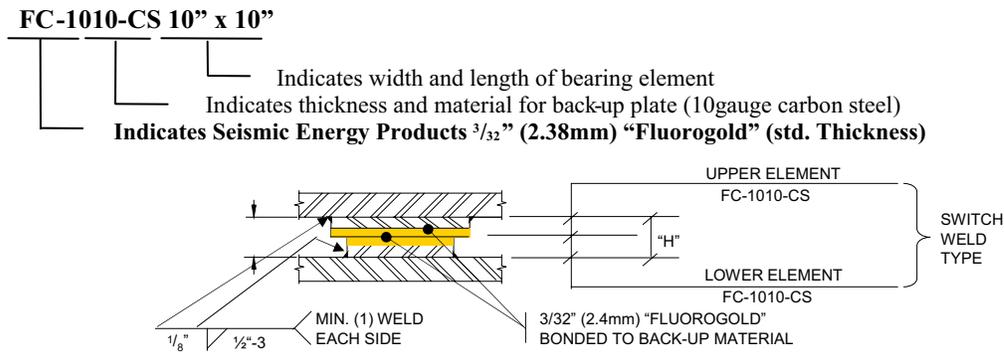
Back-up Material		
Thickness	Material Available	“H” Element Height Complete
10 = 10 Ga (3.4mm)	{ CS, SS, AL, CT, GL CS—Carbon Steel SS—Stainless Steel AL—Aluminum CT—Corten GL—Galvanized These materials available In thicknesses listed and others.	$7/16$ " (11.1mm)
25 = $1/4$ " (6.35mm)		$11/16$ " (17.5mm)
37 = $3/8$ " (9.53mm)		$15/16$ " (23.8mm)
50 = $1/2$ " (12.7mm)		1 $3/16$ " (30.2mm)
75 = $3/4$ " (19.1mm)		1 $11/16$ " (42.9mm)
100 = 1" (25.4mm)		2 $3/16$ " (55.6mm)

If the element is to be continuously welded, the “Fluorogold” must be recessed (or lipped) $1/4$ " (6.35mm) minimum) on each of those sides. This recess is not necessary for stitch welds.

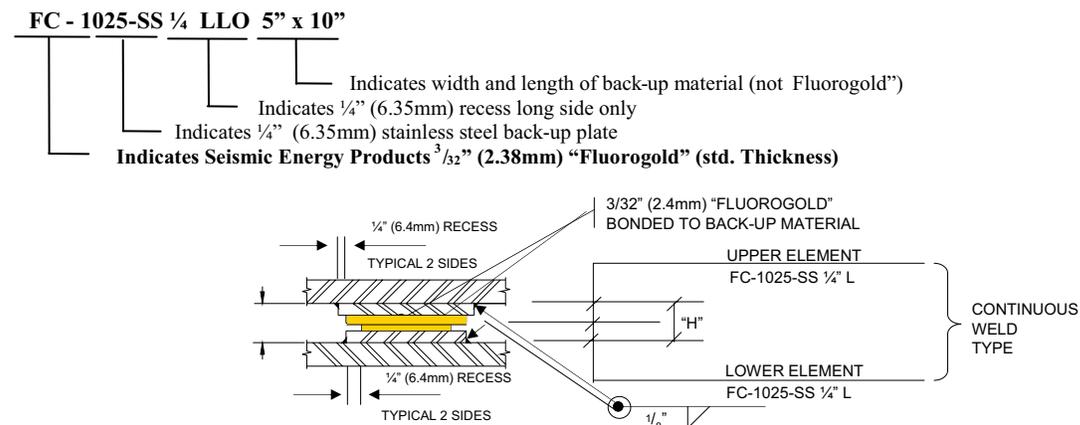
This recess is specified by a letter “L” in the callout and may be restricted to the short sides only or the long sides only by use of the appropriate letters (L-recess all sides, LSO-recess short side only, LLO-recess long side only).

These variable elements must be specified in the callout for each element.

Example: 10" x 10" (254mm x 254mm) “Fluorogold” bearing with 10 gauge carbon steel back-up plate for stitch weld installation.



Example: 5" x 10" (127mm X 254mm) “Fluorogold” bearing with $1/4$ " (6.35mm) stainless steel back-up plate to be continuous welded on long sides.



GENERAL NOTES:

If the elements have slotted or round holes indicate as follows: Upper Element: FC1010-CS W/(2) $13/16$ " X $1/2$ " (21mm x 38mm) slots; 10" x 10" (254mm x 254mm) Lower Element: FC-1010-CS W/(2) $13/16$ " (21mm) holes; $9/4$ " x $9/4$ " (235mm x 235mm).

If anchor studs are required, specify size and quantity after element callout. Use plate thickness of at least $1/4$ " (6mm) and a nominal thickness approximately equal to the stud diameter. Alternate Fluorogold thicknesses available: $1/16$ " and $1/8$ ". Unfilled PTFE is also available in $1/16$ ", $3/32$ ", $1/8$ ".

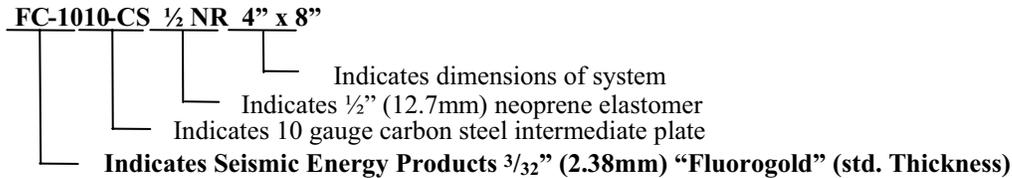
SPECIFYING AND SELECTING FLUOROGOLD® SLIDE BEARINGS (Elastomeric Backed Systems)

Elastomeric backed bearings are used as the lower element of the system only. The mating top element is the standard FC-1010-CS as shown on the Selector Chart.

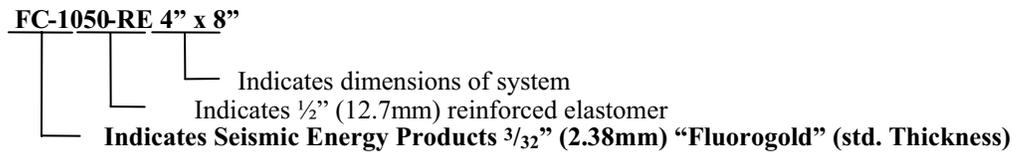
In the case of neoprene backed bearings the elastomer is vulcanized to a carbon steel intermediate plate. If the reinforced Elastomer is specified, the intermediate plate is not required.

When specifying elastomer backed bearings the appropriate symbols designating the elastomer and thickness desired are Added to the standard callouts.

Examples: “Fluorogold” bearing with ½” (12.7mm) neoprene backing and 10 gauge carbon steel intermediate plate.



Example: “Fluorogold” bearing with ½” (12.7mm) reinforced elastomer

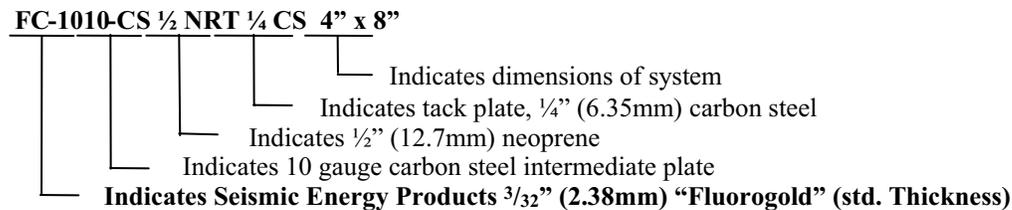


For elastomer backed bearings on concrete no tack plate is required. However, if the minimum pressure is less than 200 psi (1.38Mpa) it is recommended that the elastomer be epoxy bonded to the concrete.

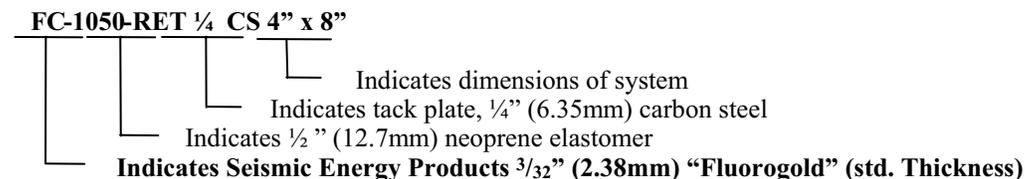
For attachment to steel, a tack plate must be provided below the elastomer. This tack plate must be at least ¼” (6.35mm) thick to prevent damage to the elastomer or its bond.

The appropriate symbols for tack plate, material and thickness must be added to the callout as shown below.

Example: Neoprene backed bearing with ¼” carbon steel tack plate.



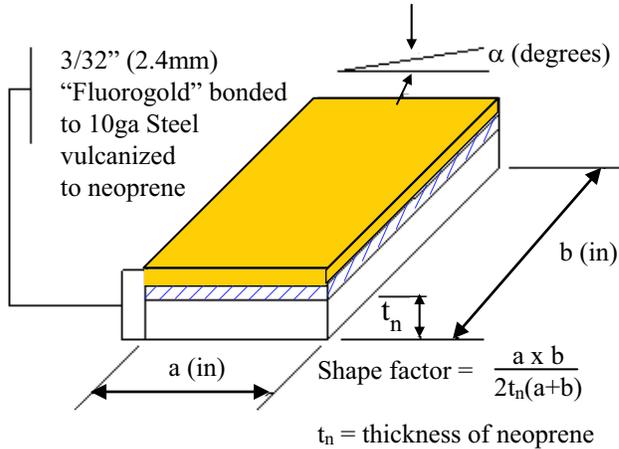
Example: Reinforced elastomer backed bearing with ¼” (6.35mm) carbon steel tack plate.



ELASTOMERIC BACKED FLUOROGOLD® SLIDE BEARINGS DESIGN RECOMMENDATIONS

(Maximum temperature at bearings = 200°F (93°C) for elastomeric backed slide bearings)

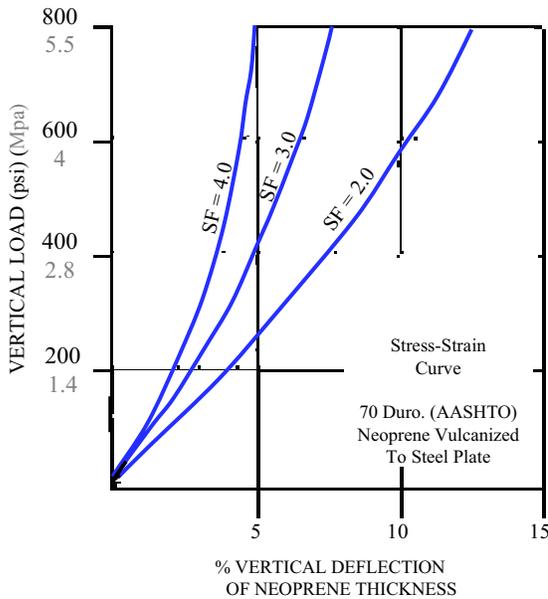
FOR NEOPRENE BACKED BEARINGS: (Preferably smaller lower element)



DESIGN CRITERIA:

1. Maximum compressive load = 800 psi (5.5 Mpa)
 2. Maximum dead load = 500 psi (3.5 Mpa)
 3. Minimum Dimension (a) $\approx 5 t_n$
 4. Shape factor ≈ 3 but ≥ 2
 5. Vertical compressive strain $\Delta c^* \geq$
rotation movement $\Delta R = a \tan \alpha$
 6. $t_n \leq 1"$ (25.4 mm) (If greater use shims)
- * Δc from chart below

Note: Rotation is enhanced by making the the dimension "a" smaller



Use trial & error procedure to satisfy criteria 1 to 6 above.

If rotation capability cannot be satisfied in a plain pad, design a laminated pad using 12ga. steel shims.



$$\Delta c = \Delta c_{t_{n1}} + \Delta c_{t_{n2}} + \Delta c_{t_{n3}}$$

total

FOR REINFORCED ELASTOMER BACKED BEARING:

(Preferably smaller lower element) (See pad layout above)

DESIGN CRITERIA:

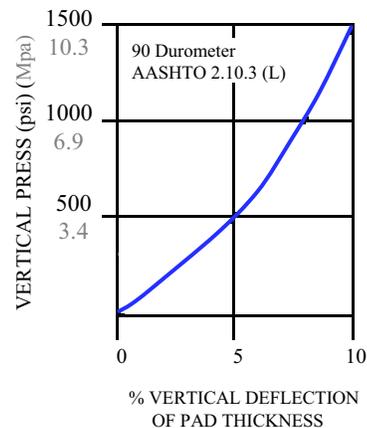
1. Max. compressive load = 1500 psi (10.3 MPa)
(unless concrete design limits to 1000 psi) (6.9 Mpa)
2. t_f = thickness of reinforced elastomer =

$$\frac{\tan \alpha \times (a)}{.10}$$

at 1500 psi (see chart)

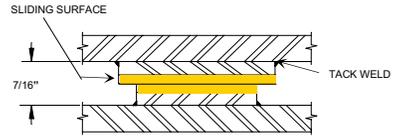
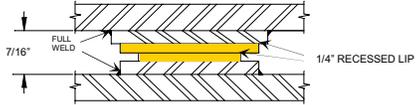
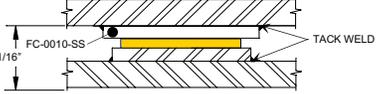
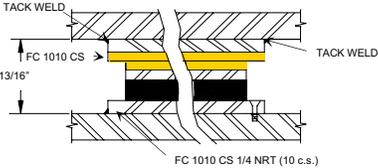
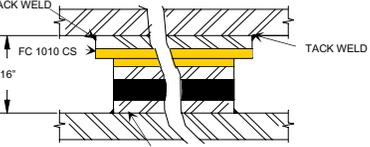
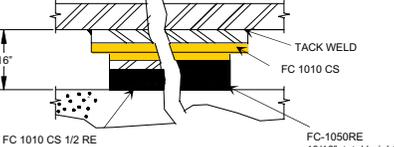
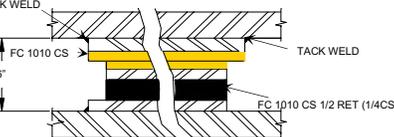
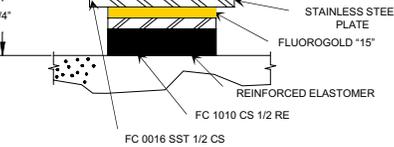
a = pad rotation width (in.)

α = rotation required (degrees)



Shape factor is not a determinate in this type bearing.

SELECTOR CHART FOR FLUOROGOLD® SLIDE BEARING ELEMENTS

STANDARD ELEMENTS	ALTERNATE ELEMENTS	DESCRIPTION	DETAILS
<p>FC 1010-CS</p> <p>tack weld element</p>	<p>FC 1025-CS FC 1037-CS FC 1050-CS FC 1075-CS FC 10100-CS Note: 25-$\frac{1}{4}$"PL 36-$\frac{3}{8}$"PL 50-$\frac{1}{2}$"PL 75-$\frac{3}{4}$"PL 100-1"PL</p>	<p>3/32" Fluorogold bonded to 10gauge carbon steel (CS) for tack welding. Loads: 75 psi to 2000 psi Temperature: -320°F to +400°F Note: Alternate backing materials SS – stainless steel CT – Corten Al – aluminum GL galvanized (hot dipped or electroplated)</p>	
<p>FC 1010-CS $\frac{1}{4}$ L</p> <p>full weld element LSO – recess short side only LLO – recess long side only</p>	<p>FC 1010-CS$\frac{1}{4}$"L FC 1025-CS$\frac{1}{4}$"L FC 1037-CS$\frac{1}{4}$"L FC 1050-CS$\frac{1}{4}$"L FC 1075-CS$\frac{1}{4}$"L FC 10100-CS$\frac{1}{4}$"L Note: $\frac{1}{2}$" lip also available</p>	<p>3/32" Fluorogold bonded to 10 gauge carbon steel (CS) with a $\frac{1}{4}$" lip of steel for full welding. Loads: 75 psi to 2000 psi Temperature: -320°F to +400°F Note: Alternate backing materials are available.</p>	
<p>FC 1010-CS $\frac{1}{4}$ L Full weld element</p> <p>Alternate application With SS upper element.</p>	<p>Note: Top element call out is FC-0010-SS (2B finish Type 304 SS is standard)</p>	<p>Upper Element: 10ga Type 304 SS-2b finish. Lower Element: 3/32" Fluorogold bonded to 10 gauge carbon steel (CS) with $\frac{1}{4}$" lip all around. Loads: 75 psi to 3500 psi Temperature: -320°F to +400°F Note: Alternate backer thicknesses and materials are available.</p>	 <p style="text-align: right; font-size: small;">NOTE: TOP ELEMENT LARGER THAN BOTTOM ELEMENT BY ANTICIPATED MOVEMENT</p>
<p>FC 1010-CS $\frac{1}{4}$ NRT 10CS 1/4L</p> <p>tack weld element for rotation deflection expansion Note: $\frac{1}{4}$" Lip on tack plate (10ga)</p>	<p>Note: top element call out is FC 1010-CS (2B finish SS is available)</p>	<p>3/32" Fluorogold bonded to 10 gauge carbon steel (CS) then vulcanized to $\frac{1}{4}$" neoprene which is vulcanized to 10 gauge steel for tack weld Loads: 75 psi to 800 psi Temperature: -50°F to +200°F Note: Alternate neoprene thicknesses are available.</p>	
<p>FC 1010-CS $\frac{1}{4}$ NRT $\frac{1}{4}$CS</p> <p>tack weld element for rotation deflection expansion</p>	<p>Note: with flush design for tack plate use $\frac{1}{4}$" PL min. (2B finish SS is available)</p>	<p>3/32" Fluorogold bonded to 10 gauge carbon steel (CS) then vulcanized to $\frac{1}{4}$" carbon steel for tack weld Loads: 75 psi to 800 psi Temperature: -50°F to +200°F Note: Alternate neoprene thicknesses are available.</p>	
<p>FC 1010-CS $\frac{1}{2}$ RE</p> <p>element for deflection expansion at higher loads</p>	<p>FC 1050-RE Note: top element call out is FC 1010-CS</p>	<p>3/32" Fluorogold bonded to 10 gauge carbon steel (CS) then vulcanized to $\frac{1}{2}$" reinforced elastomer (AASHTO 18.4. 10.1) Loads: 75 psi to 1500 psi Temperature: -50°F to +200°F Note: Alternate neoprene thicknesses of reinforced elastomer available.</p>	
<p>FC 1010-CS $\frac{1}{2}$ RET</p> <p>tack weld element</p>	<p>Note: with flush design for tack plate use $\frac{1}{4}$" PL min.</p>	<p>3/32" Fluorogold bonded to 10 gauge carbon steel (CS) then vulcanized to $\frac{1}{2}$" reinforced elastomer (AASHTO 18.4. 10.1) Loads: 75 psi to 1500 psi Temperature: -50°F to +200°F Note: Alternate neoprene thicknesses of reinforced elastomer available.</p>	
<p>FC 0016-SST$\frac{1}{2}$CS $\frac{1}{4}$ L</p> <p>top element</p>	<p>Note: 25 – $\frac{1}{4}$"PL 50 – $\frac{1}{2}$"PL etc.</p>	<p>16gauge 304 Mirror finish stainless heliarc welded to $\frac{1}{2}$" sole PL Note: Alternate thicknesses of stainless steel and sole PL available.</p>	
<p>FC 1010-CS $\frac{1}{2}$ RE (15)</p> <p>(15% glass Filled Fluorogold) Bottom element</p>	<p>VFC 1010-CS $\frac{1}{2}$RE (Virgin – unfilled TFE)</p>	<p>3/32" 15% glass filled Fluorogold bonded to 10 gauge carbon steel (CS) then bonded to $\frac{1}{2}$" reinforced elastomer. Loads: 75 psi to 1500 psi Temperature: -50°F to +200°F Note: Alternate thicknesses of reinforced elastomer available.</p>	

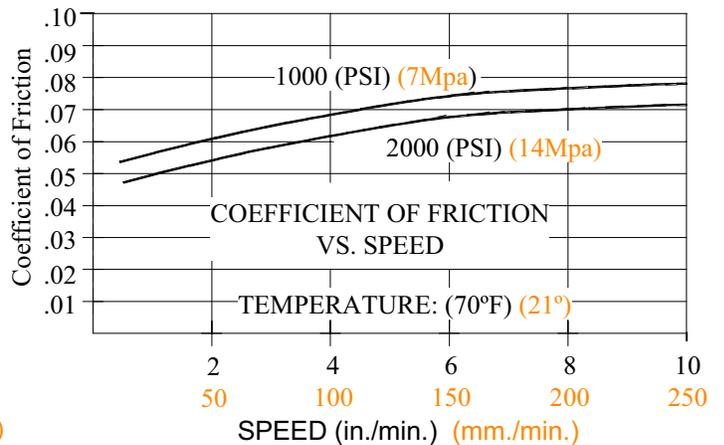
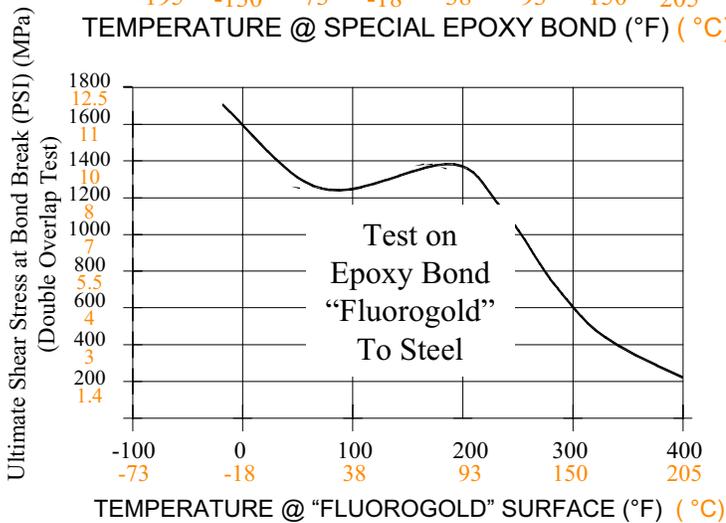
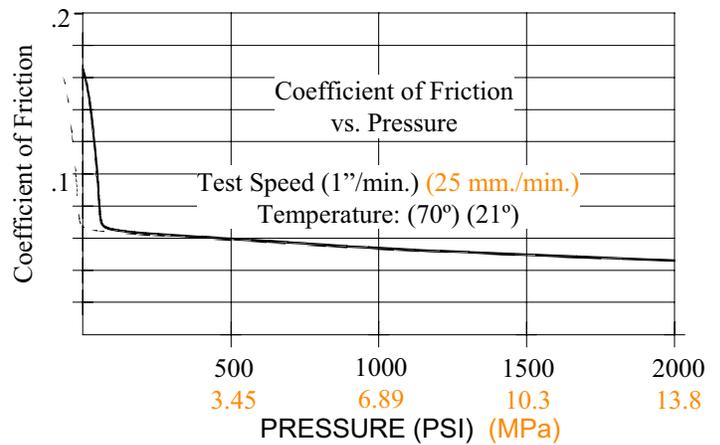
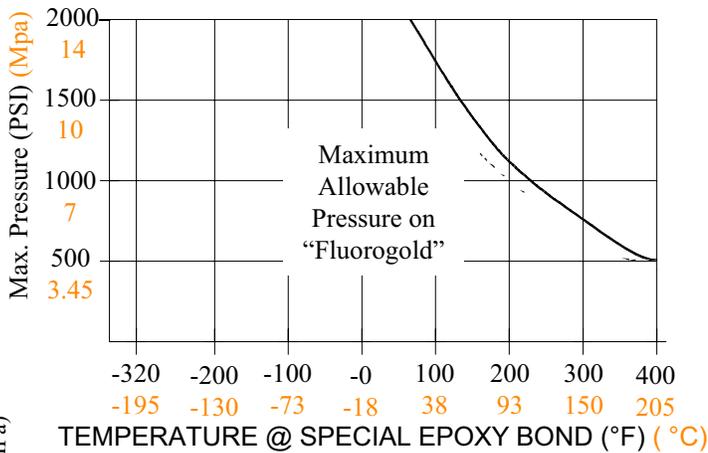
DESIGN CHARTS

The following information applies to “Fluorogold” as an unbonded reinforced PTFE:

Properties of “Fluorogold”:

MECHANICAL		
Property	ASTM Method	Result
Tensile strength (min)	D-1457	2000 psi (13.8 MPa)
Tensile elongation (min)	D-1457	200%
Hardness, Durometer (Shore D)	D-2240	60 – 70
PHYSICAL		
Specific gravity	D-792	2.10
Melting point	D-1457	327°C ± 10°

The following information applies to “Fluorogold” epoxy bonded to a metal back-up plate:



GUIDE SPECIFICATIONS

The following specification for Fluorogold slide bearings insures the designer that a proven, failure-free product will be installed.

“Self-lubricating bearing elements shall be Fluorogold (FC-1010-CS) as manufactured by Seismic Energy Products in Athens, Texas which is a composition of 100% virgin polytetrafluoroethylene polymer and reinforcing aggregates and prebonded to appropriate backing materials. The principal constituent of the aggregate shall be ground glass fibers. The coefficient of static friction of the material to itself shall be .06 from initial installation and shall not deform more than .002” (0.05mm) under allowable static load. The bond between the material and the steel shall be heat cured, high temperature epoxy capable of temperatures of -320°F to 400°F (-195 to 205°C).”

“Fluorogold slide bearing elements shall be suitable for the operating conditions as follows: (list or describe speed, load, temperature, deflection, atmosphere, mounting surface, attachment and any other factor which may govern the service involved).”

The Fluorogold material shall be 3/32” (2.4mm) thick, suitably bonded to appropriate substrate (insert bearing element number and size). Attachment in the field will be (state: bolting or tack welding).

APPLICABLE STANDARDS

Please see the ASTM Test Properties on the previous page.

COST

Because of custom requirements necessitating a need for custom fabrications, contact Seismic Energy Products, Estimating Department, for budget figures applicable to specific projects, or submit drawings of bearing details.

ASSEMBLY, INSTALLATION

No special knowledge, technique or equipment is required to install most Fluorogold bearing applications. The plates are fabricated and installed in a manner similar to conventional steel bearing plates, shims, washers or anchor assemblies.

Care should be taken to assure that the plates in the assembly are installed in their proper positions, with the larger plate usually being the upper half of the assembly. The Fluorogold surfaces should be protected from mechanical damage and contamination as well as from ultraviolet rays prior to installation.

Fluorogold plates may be drilled with slotted or oversized holes and installed with bolting through the entire assembly; they may be made with anchor bolts or bars attached for embedment into concrete members; they may be tack-welded to the steel assemblies to which they are to be connected. Heat from small tack welds will not harm the standard Fluorogold assembly. If full welding of bearings to supporting structure is required bearings are available with Fluorogold recessed from the edges of the backing plates (lipped). Bearing plates may be installed into framework to form low-friction bearing pockets for cast-in-place concrete members. Frequently, special anchorage or connections are not necessary at all because the friction between the bearings and their supporting materials is much greater than that at the Fluorogold interface.

Fluorogold bearing surfaces should operate against opposing Fluorogold surfaces wherever possible for best performance. Rough, corrodible, uneven or improperly mated surfaces should not operate against a Fluorogold bearing surface. Greater friction and excessive bearing wear are the results. Normally, the upper Fluorogold element should be larger than the lower one by the amount of the anticipated movement so that the unit load is constant and the lower surface is not exposed to accumulate dirt, grit and contaminants.

OPERATION, MAINTENANCE

Fluorogold requires no maintenance when utilized as recommended.

Backing plates and accessory hardware exposed to certain environments may require protection from corrosion. In this situation the assembly should be fabricated from corrosion resisting materials such as stainless steel, or protected by suitable coating systems. High performance prime coatings are provided by the

Manufacturer when specified or required. Under nominal protected conditions, carbon steel backing plates will require little or no maintenance.

AVAILABILITY

SEP maintains stock of prebonded 24” x 48” Fluorogold sheets with 10 gauge stainless, carbon or galvanized steel backing. 24” x 30” x ¼” carbon steel backing is also kept in stock and is available for immediate delivery. Size of stocked sheets does not limit fabrication ability. Contact Seismic Energy Products for price and delivery of custom manufactured bearing assemblies or custom sized applications.

TESTING

Seismic Energy Products has the ability to test bearings from small scale models to full size bearings capable of supporting 6,000 kips while accommodating ±24” of lateral movement in shear or sliding motion. Our computer operated systems have automatic data acquisition to provide the precise performance characteristics of your bearings. These independently calibrated test fixtures are just part of Seismic Energy Products’ commitment to you to insure quality and long term dependability.

GUARANTEE

Fluorogold bearing systems will, when properly designed and installed, perform according to the data furnished by Seismic Energy Products. The bond of Fluorogold composition to the supporting materials is guaranteed only when bonding is done by Seismic Energy Products. There are no guarantees or warranties which extend beyond the actual materials and assemblies furnished by Seismic Energy Products, and no responsibility is assumed for installation or other operations beyond the control of Seismic Energy Products.

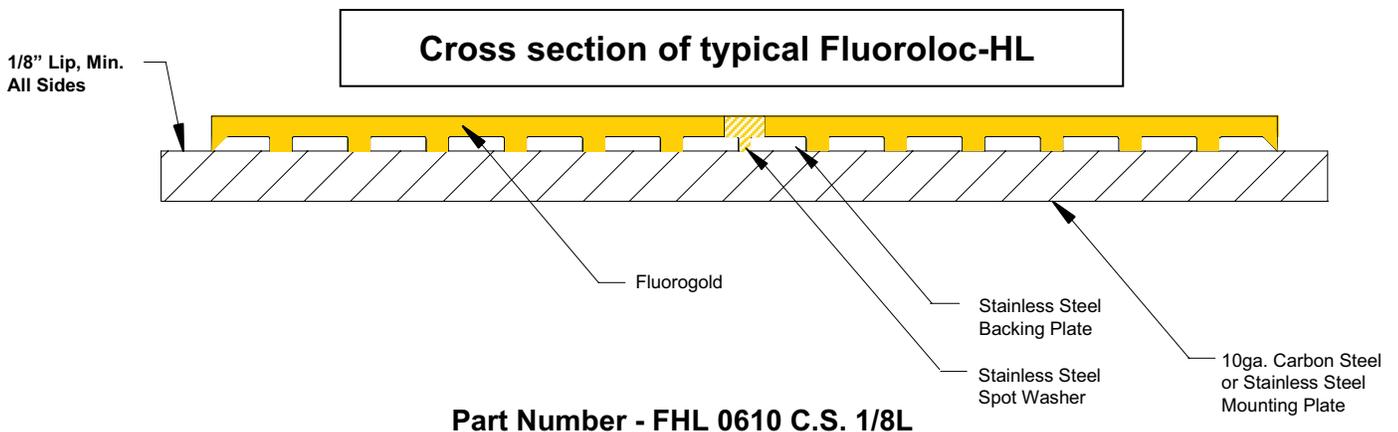
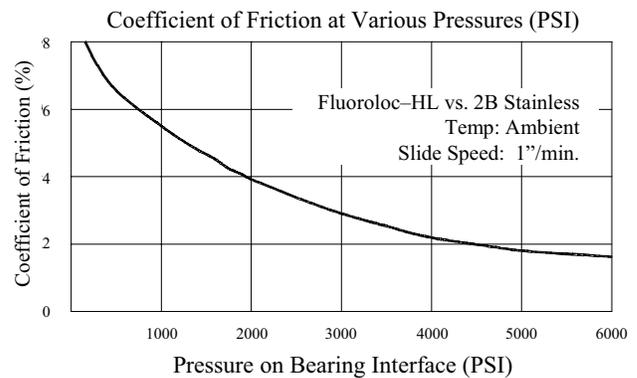
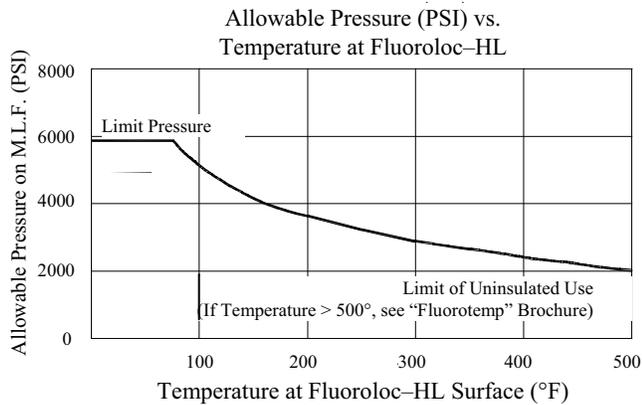
TECHNICAL SUPPORT

Seismic Energy Products has an experienced staff of trained technical representatives available for assistance. To arrange a consultation, call Seismic Energy Products at 903-675-8571 or contact us through our web site at www.sepbearings.com.

Seismic Energy Products Tames Movement Problems with Fluoroloc-HL

Structures and pipes are subjected to movement from thermal, seismic, and mechanical expansion and contraction. The important factor is not to stop the movement, but to accommodate it and, thereby, prevent any structural damage or poor operation. The answer is supplied with Seismic Energy Products' Fluoroloc-HL, a mechanically-locked Fluorogold slide bearing. Designed to withstand 6000 psi, the Fluoroloc-HL is spot welded to a 10-gauge mounting plate as part of the standard system. The mounting plate can be welded to

any thickness base plate to accommodate for elevation variations. The PTFE-based bearing system incorporates stainless steel backing which is perforated and serrated, locking the Fluorogold securely in place. The Fluorogold is chemically inert, absorbs dirt without increasing friction, is weather proof, and possesses a high dielectric constant. The bearings are used in petrochemical plants, pipeline supports, power plants, freeway structures, bridges, buildings, offshore docking facilities and submerged piping. Just the slide bearing you've been looking for!



Fluoroloc-HL bearing system interfaces with specially prepared stainless steel upper element.

Eliminates high temperature epoxy bond failures and offers solutions for corrosive atmospheres.

For specifications about Fluoroloc-HL and specific job applications, contact your Seismic Energy Products representative.

FLUOROTEMP® SLIDE BEARINGS FOR ELEVATED TEMPERATURES

Fluorotemp slide bearings incorporate the proven performance characteristics of Fluorogold bearings with the ability to operate satisfactorily at temperatures up to 1000°F (538°C).

Fluorogold is a special formulation of PTFE reinforced with a strong glass aggregate and other reinforcing agents. This provides a structural material that offers significant compressive strength without cold creep, yet retains the low friction properties and chemical inertness of virgin "PTFE".

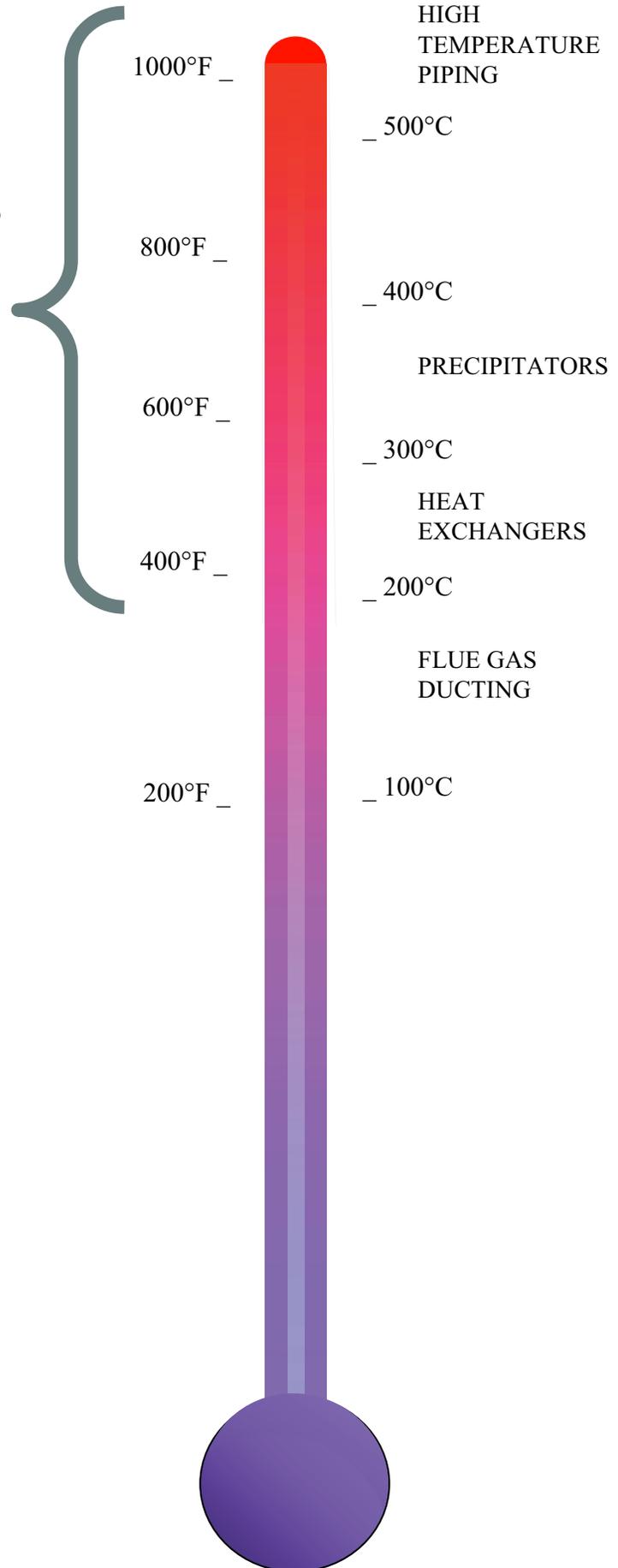
For more than forty years Fluorogold bearings have been used in bridges, buildings, transit systems and pipe lines. Their economy and maintenance-free dependability continue to please architects and engineers. They are as permanent as the structures they support.

Fluorotemp bearings offer these same benefits for high temperature service in applications such as precipitators, heat exchangers, flue gas ducts and high temperature piping.

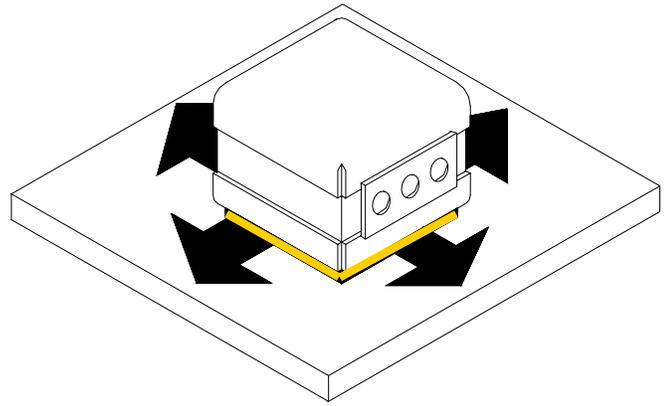
Fluorotemp bearings consist of an insulated upper element with a Fluorogold slide surface which rides on a 2B finish, stainless steel lower element. The Fluorogold material is mechanically locked to the upper element without the use of adhesives.

Fluorotemp bearings are supplied in two styles. The High Load type is for use with precipitators and heat exchangers, and the Low Load type is for use with ducts and piping.

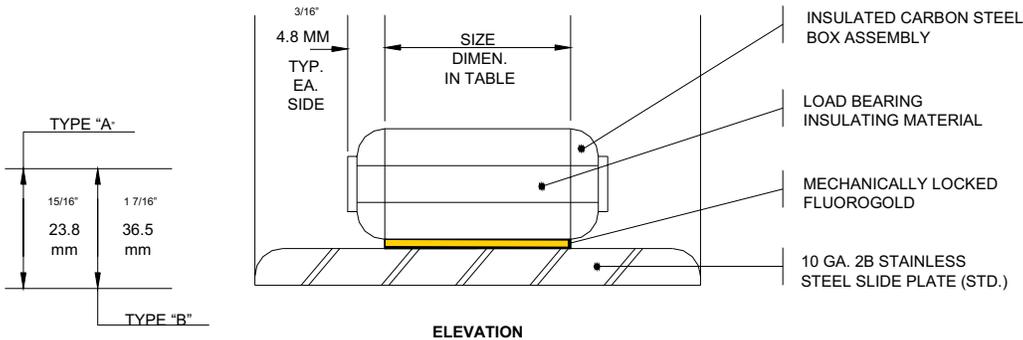
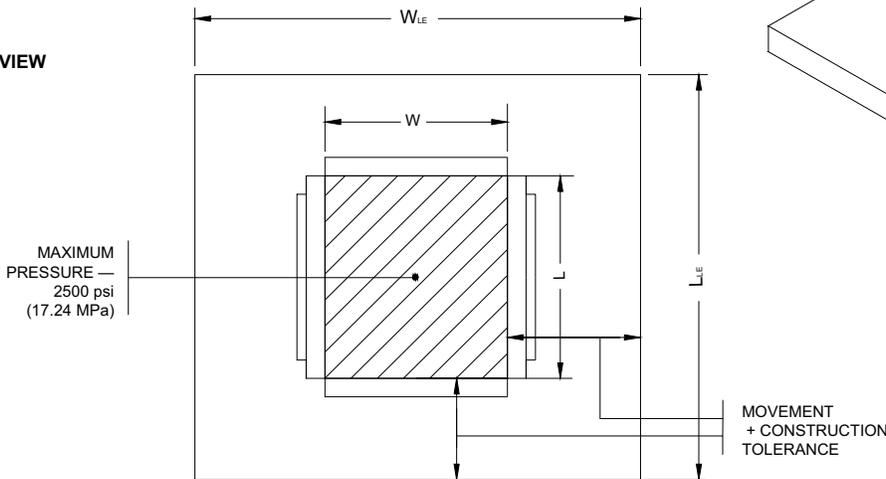
Whenever you need reliable, maintenance-free performance year after year, consider bearings by Seismic Energy Products. Fluorogold slide bearings for applications up to 400°F (204°C), Fluorotemp slide bearings up to 1000°F (538°C).



HIGH LOAD BEARINGS



PLAIN VIEW



$$W_{LE} = W + \text{total movement} + \text{construction tolerance}$$

$$L_{LE} = L + \text{total movement} + \text{construction tolerance}$$

TYPE "A"

For Use to 800°F (427°C)
1/2" (12.7 mm) Insulator

Part No.	Size W X L	Max. Load
FT-A-1	4" X 4" 101.6mm X 101.6mm	40,000 lbs. 178 kN
FT-A-2	4" X 6" 101.6 mm X 152.4 mm	60,000 lbs. 267 kN
FT-A-3	4" X 8" 101.6 mm X 203.2 mm	80,000 lbs. 356 kN
FT-A-4	6" X 6" 152.4 mm X 152.4 mm	90,000 lbs. 400 kN
FT-A-5	6" X 8" 152.4 mm X 203.2 mm	120,000 lbs. 534 kN
FT-A-6	8" X 8" 203.2 mm X 203.2 mm	160,000 lbs. 712 kN
FT-A-7	8" X 10" 203.2 mm X 254 mm	200,000 lbs. 890 kN

TYPE "B"

For Use to 1000°F (538°C)
1" (25.4 mm) Insulator

Part No.	Size W X L	Max. Load
FT-B-1	4" X 4" 101.6mm X 101.6mm	40,000 lbs. 178 kN
FT-B-2	4" X 6" 101.6 mm X 152.4 mm	60,000 lbs. 267 kN
FT-B-3	4" X 8" 101.6 mm X 203.2 mm	80,000 lbs. 356 kN
FT-B-4	6" X 6" 152.4 mm X 152.4 mm	90,000 lbs. 400 kN
FT-B-5	6" X 8" 152.4 mm X 203.2 mm	120,000 lbs. 534 kN
FT-B-6	8" X 8" 203.2 mm X 203.2 mm	160,000 lbs. 712 kN
FT-B-7	8" X 10" 203.2 mm X 254 mm	200,000 lbs. 890 kN

The lower stainless element shall be sized by the engineer for the movement as shown in the plan view plus a construction tolerance of 1" total ($\pm 1/2"$)

Typical call-out:

Fluorotemp Bearing System consisting of:

FT-A-1 Upper Element: 4" X 4" (101.6 mm X 101.6 mm)

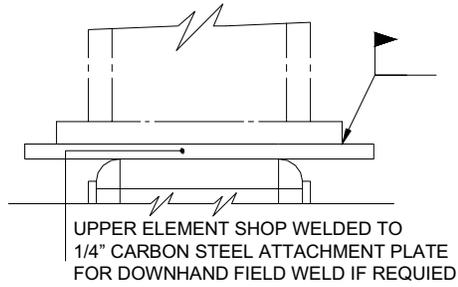
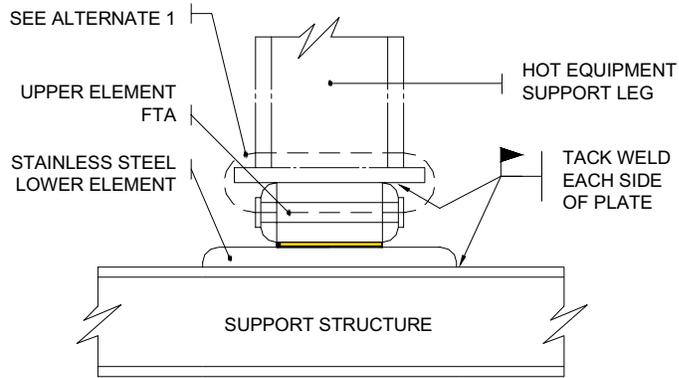
FC0010SS Lower Element: 6" X 6" (152.4 mm X 152.4 mm)

Bearings listed are standard items. Custom bearings can be designed to meet your special requirements by our engineering staff.

TYPICAL INSTALLATION DETAILS

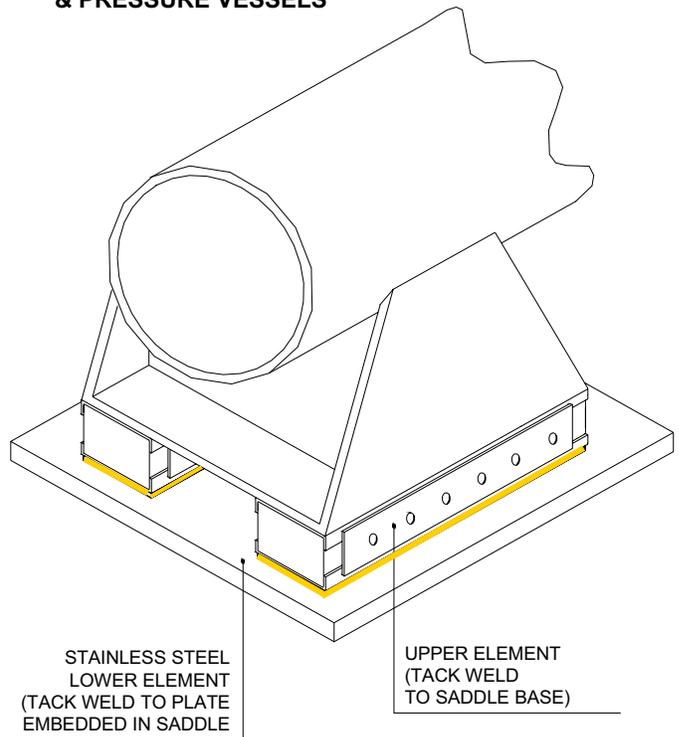
HIGH LOAD TYPE

PRECIPITATORS

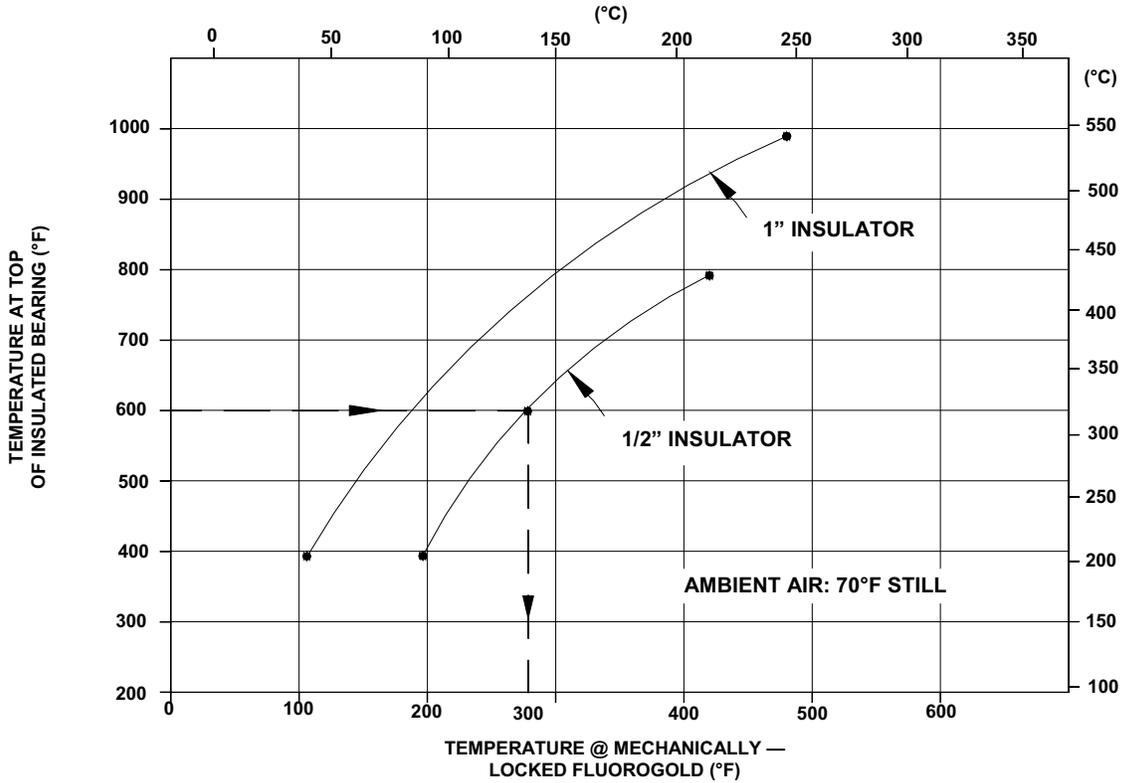


ALTERNATE 1

HEAT EXCHANGERS & PRESSURE VESSELS



TEMPERATURE DROP ACROSS FLUOROTEMP® BEARING



FLUOROTEMP® BEARING SPECIFICATION

A. GENERAL

Furnish and install Fluorotemp® bearings as complete factory produced assemblies manufactured by Seismic Energy Products, 518 Progress Way, Athens, TX 75751. Phone (903) 675-8571. These bearing assemblies shall be Type FT-A-1. Upper element: 4" x 4", lower element: 6" x 6", Max. reaction 40 kips. Operating temperature: 800°F. Coefficient of friction to be 0.02 at maximum load.

B. INSTALLATION

Fluorotemp® bearings shall be placed in accordance with the recommendations of the manufacturer, contract

drawings, or as directed by the engineer. Contract surfaces shall be parallel to with in $\frac{1}{32}$ " / 12" (2.6mm/m). Load must be distributed over full surface of upper element, not concentrated on a small section. Concentrated loads may require the addition of a heavy steel plate over the bearings to effectively distribute the load.

C. SHOP DRAWINGS

The contractor shall furnish shop drawings detailing the structural features of each bearing to be approved by the engineer prior to fabrication.

Our experienced staff of technical representatives is available to offer prompt assistance at any location in the continental United States.