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# GSI - Sheave Elbow

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## Liquid Seal, Tape Carrier, and Drive Elbow

GSI Sheave Elbows are different from other sheave elbow assemblies found on the market. They are designed by people who have actually installed and maintained sheave elbows on tanks. The following features are incorporated within all GSI Sheave Elbows, Liquid Seals, Tape Carriers, and Drive Elbows:

- **356 Aluminum Sand Cast Body, Not low grade pot Aluminum (Optional Coatings)**
- **All Stainless Steel Fasteners**
- **Captured Fasteners, i.e., No screws, bolts or yokes to drop (GSI-SE90 & GSI-LSA)**
- **Hinged Sheave Elbow Lid (GSI-SE90 & GSI-LSA), allowing the lid to be flipped open when inspecting the Sheave Roller (nothing to drop)**
- **Self lubricating, precision machined UHMW Rollers (No stamped or spot welded rollers) (Optional Aluminum or Stainless Steel Rollers)**
- **Rollers are designed to work with both tape or cable**

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### GSI-SE90 90° Sheave Elbow

The GSI-SE90 Sheave Elbow lid is designed to act as a tape keeper. It does not have enough room for the tape to twist or jump off of the roller when the lid is fastened. The maintenance of the GSI SE90 Sheave Elbow allows the use of only one hand to service the unit, while your other hand can be used for things such as safety. The internal sheave roller is made of UHMW Polyethylene. This is a Self-lubricating, abrasion resistant material, compatible with most corrosive chemicals.

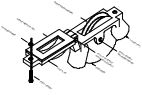


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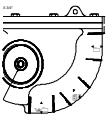


**GSI-SE90  
with hinged lid  
and  
Stainless Steel  
fasteners**

**GSI-USE Universal Sheave Elbow - 45°, 90°, 180° Tape Carrier, and Drive Elbow**

The GSI-USE Universal Sheave Elbow has been designed for use in a number of tank gauge applications. The GSI-USE comes standard for use as a 45° Sheave Elbow, 90° Elbow, or 180° Tape Carrier. The GSI-USE may also be purchased with the Optional Drive Elbow Kit.

The 45° configuration is most commonly used on bullet tanks or tanks with “through the shell” tape carriers. The 90° configuration is used on most side of tank mounted gauge kits. The 180° Tape Carrier is commonly used on tanks using a steel tank dike or tanks with center float wells. The Tape Carriers should be spaced every 10 feet (3 meters) to provide accurate measure. Note: When using a gauge kit with tape carriers it is recommended that an Extra Heavy Negator Motor be used within the gauge head. A Drive Elbow is most commonly used to add a second transmitter or limit switch assembly to a gauge kit. (See GSI 2000 Dual Transmitter).



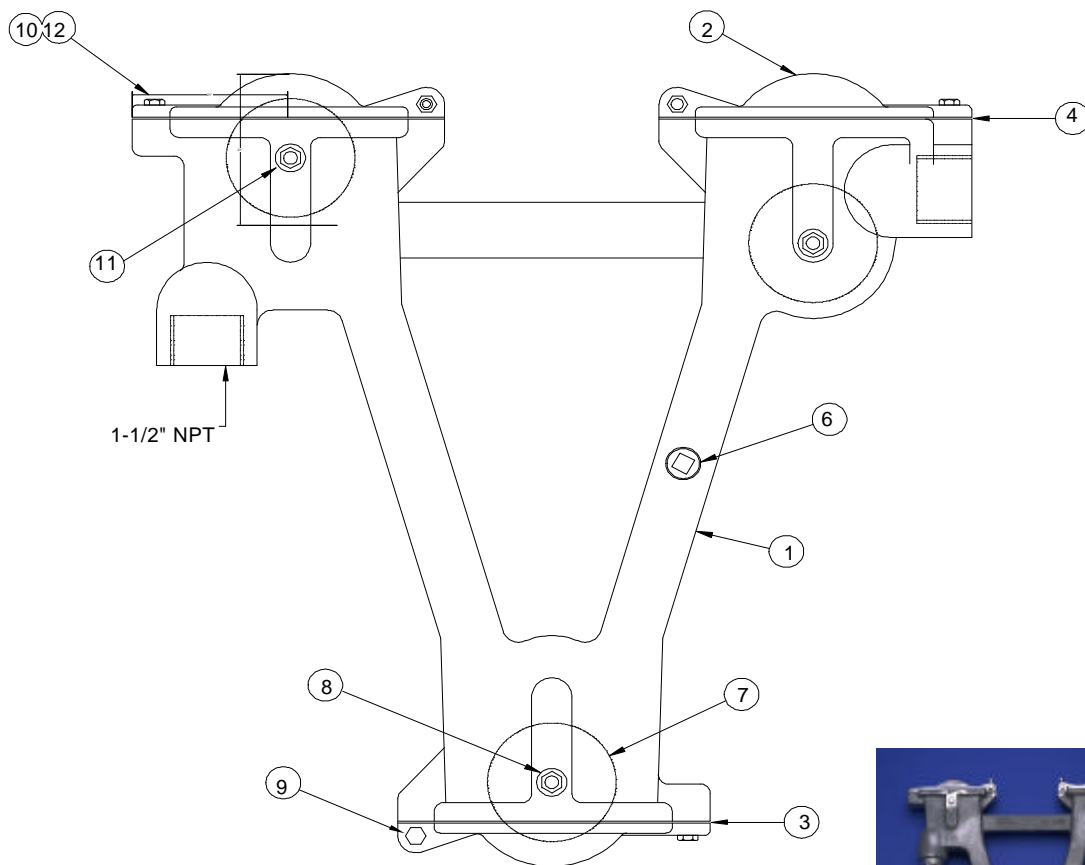
### **GSI-LSA Liquid Seal Assembly**

The GSI-LSA incorporates all of the features found in the GSI-SE90 Sheave Elbow into a Liquid Seal Assembly. The one piece Aluminum construction lends itself to a variety of applications. These would include:

Prevention of hazardous fumes (such as H<sub>2</sub>S) from entering the gauge pipe and mechanical gauge when filled with silicone oil or other liquid media. Fumes from gasoline tanks cause premature gauge pipe corrosion and mechanical gauge head problems from flaking and scale.

Cleaning of the tape or tape/cable combination in Asphalt or Heavy Oil service by putting a cutting agent such as kerosene in the liquid seal. Preventing acid (service) vapors from getting into the tape carrier pipe or gauge head by using a compatible liquid medium within the liquid seal.

Prevention of condensation from settling in the gauge on heated tanks or light end products, thus causing mechanical gauge problems due to water buildup or corrosion.



### SPECIFICATIONS

<b>Housing Type:</b>	Cast Aluminum
<b>Material:</b>	316 Stainless Steel Fasteners and UHMWPE Rollers (Standard) Aluminum or Stainless Steel Rollers (Optional)
<b>Operating Temperature:</b>	UHMWPE Rollers - 175° F Maximum Aluminum Rollers - 500° F Maximum Stainless Steel Rollers - 500° F Maximum
<b>Operating Pressure:</b>	0 - 5 psi (Standard) GSI-LSA Only - Maximum of 13" Inches of Water Column
<b>Mounting:</b>	1-1/2" NPT Pipe Entries (Standard)
<b>Roller Width:</b>	Accommodates Standard 1/2" wide tape and 1/16" or 1/8" cable
<b>Drive Elbow Sprocket: (Optional)</b>	1" Tooth Sprocket, 2" Tooth Sprocket, or Metric Tooth Sprocket

### Sheave Elbow Ordering Information

**Model Number: GSI-AAAA-B-C-D-E**

**A = Sheave Configuration**

- SE90 = 90° Sheave Elbow
- SE45 = 45° Sheave Elbow (Universal Sheave Elbow)
- SETC = Tape Carrier (Universal Sheave Elbow)
- SEUN = Universal, Sheave Elbow (Spare part not configured)
- SEDR = Drive, Sheave Elbow ( 45° or 90° configuration only)
- SELS = Liquid Seal, Sheave Elbow

**B = Roller Material Option**

- 1 = UHMWPE (Standard)
- 2 = Aluminum (High Temperature Applications)
- 3 = Stainless Steel (Product Compatibility Applications)

**C = Drive Elbow Sprocket (On Drive Elbows Only)**

- V = 1" Tooth Sprocket
- G = 2" Tooth Sprocket
- M = Metric Tooth Sprocket

**D = Transmitter Mounting**

(On Drive Elbows Only)

- 4 = GSI or Varec Standard Mounting
- 5 = L & J Engineering or GPE Standard Mounting
- 6 = Other

**E = Coatings (Optional)**

C/F = Consult GSI on the Application

**Example:**

**Model Number: GSI-SE90-1**

(SE90) 90° Sheave Elbow  
(1) UHMWPE (Standard)

No other options selected