



**Sure Flow**  
Equipment Inc.

## EXPANSION JOINTS AND FLEXIBLE CONNECTORS

[www.sureflowequipment.com](http://www.sureflowequipment.com)



2010





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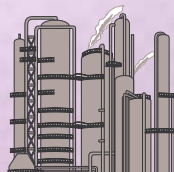
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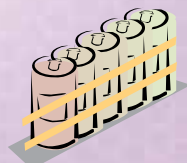
## Service Applications



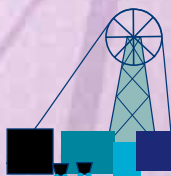
Sewage Treatment Industry



Chemical Plants



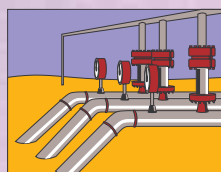
Food Processing Facilities



Mining Operations



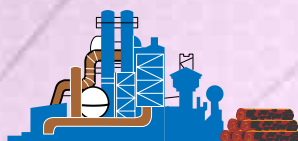
Cement Manufacturing



Petrochemical



Steel Mills



Pulp and Paper

## Commitment to Quality

Sure Flow Equipment Inc. features complete custom engineered design and fabrication expertise within a quality focused state-of-the-art manufacturing facility. Commitment to quality, customer satisfaction and continual improvement is integral to our manufacturing processes and ensures custom engineered strainers meet your design specifications and stringent quality requirements. We've made it easy for you to place your order with confidence.

Sure Flow Equipment Inc. provides industry with Custom Engineered Fabricated Strainers to many design codes. Custom products are designed and manufactured to ASME SECTION VIII, DIV 1, Current Edition. ASME "U" Code Stamp and ASME "UM" Code Stamp are available on certain products as specified in this brochure.

The Sure Flow Equipment Inc. list of Certifications includes:

ISO 9001:2008 Certificate of Registration

ASME "U" Code Stamp Certificate of Authorization and  
ASME "UM" Code Stamp Certificate of Authorization  
(ASME Boiler and Pressure Vessel Code; ASME Section VIII, Div 1, Current Edition);

National Board Certified and authorized to apply the "NB" Mark for pressure vessels and/or pressure retaining items manufactured in accordance with ASME "U" Code Stamp and ASME "UM" Code Stamp;

TSSA Certificate of Authorization (Technical Standards & Safety Authority) for the manufacture of pressure vessels in accordance with ASME Boiler and Pressure Vessel Code, Section VIII, Division 1 and CSA Standard B51, Boiler, Pressure Vessel and Pressure Piping Code.

CE Mark is available

C-TPAT Certified (Customs-Trade Partnership Against Terrorism)

Recognized by PIP (Partners In Protection) for our C-TPAT status

Member of FCI (Fluid Controls Institute) and Vice Chairman of Pipeline Strainer Section



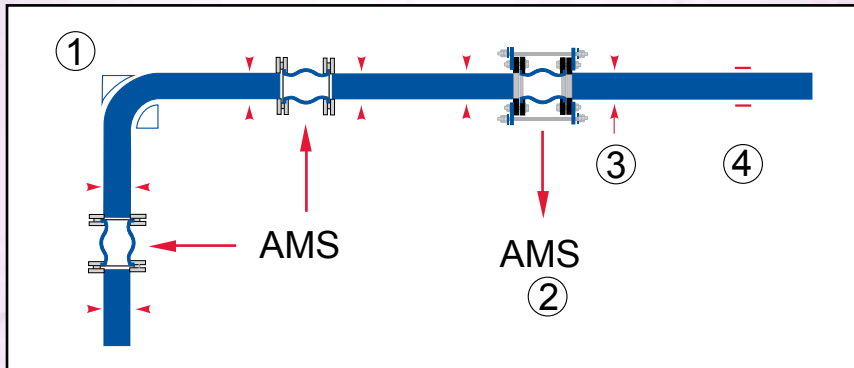
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# FLEXIBLE EXPANSION JOINTS

## Control Rods - Control of Extension



Installment Scheme				
Item	1	2	3	4
Description	Anchor	With Control Rods	Fixation Points	Guiding Points

## Applications

Control Rods are used to prevent an excessive extension or compression of the expansion joint which could damage the expansion joint. In general when there are high pressure risks (starting a pump...) or when wide temperature fluctuations occur, control rods should be used.

**Control rod unit must be installed when pressure (test, surge, operating) exceeds rating shown below.**

Pressure Ratings		
Joint Size	AMS (psig)	AMT (psig)
1" - 4"	150	150
5" - 10"	135	135
12" - 14"	90	90
16" - 24"	45	45

\*Contact Factory for information on our Control Rods.

## Mounting Instructions

- The alignment of the piping system should be adjusted and secured with fixation points as close as possible on each side of the expansion joint at a distance less than 3 times the pipe's nominal diameter.
- These fixation points must be installed when mounting an expansion joint with control rods or in a case of an elbow pipe. If there is considerable distance between 2 fixation points, guiding points can be installed in order to support and guide the pipe (cf. installation scheme)
- (a) When installing, take care the rubber expansion joints don't support compression or extension due to the weight of the upstream or downstream pipe.
 

**Mounting Order:**

  - Upstream pipe; anchor
  - Downstream pipe; anchor
  - Expansion joint.
- Verify that the upstream and downstream pipe alignment does not deviate more than 1/8" (3 mm) and that the expansion joint does not support heavy weight.
- Verify that the surfaces coming in contact with the joint are perfectly clean and without cutting edges (pipe) thus avoiding damage to the joint surface.
- Insert the bolts on the arch side of the joint, thus avoiding direct contact with the rubber.
- If welding is carried out within close range, cover or dismantle the expansion joint.
- Do not paint or coat the joint with insulation.
- During installation, the precompression should not exceed 5 mm.
- Store the joint in a flat position avoiding humidity and extreme temperatures.

### Notes:

Bolt tightness should be checked daily within the first month after services and checked periodically thereafter.



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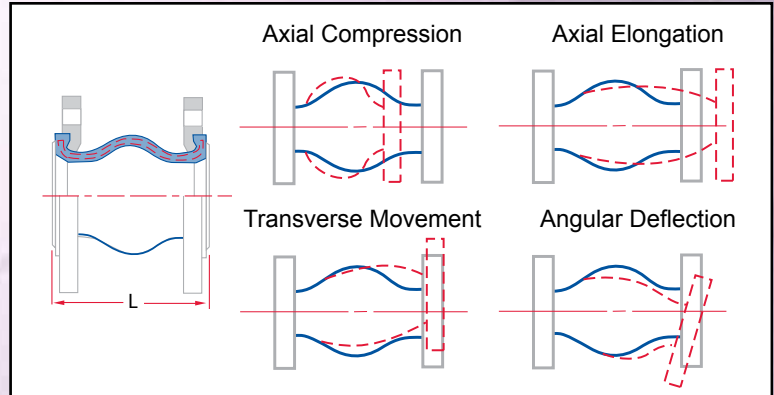
# AMS SERIES

## Single-Sphere Connectors

**With Class 150 Floating Flanges**



### Allowable Movements



#### Notes:

Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.

Construction	
Name	Material
Flanges	CS Zinc Plated
Wire	Carbon Steel Wire Strand
Elastomer	Special Synthetic Rubber
Reinforcing Fabric	Synthetic Fibre (Neoprene)

Dimensions (Inches)							
Size		L	Axial Compression	Axial Elongation	Transverse Movement	Angular Deflection	Shipping Weight (LBS)
Inches	Prefix						
2	0200	6	1/2	3/8	± 1/2	15 °	10
2 1/2	0250	6	1/2	3/8	± 1/2	15 °	16
3	0300	6	1/2	3/8	± 1/2	15 °	20
4	0400	6	5/8	3/8	± 1/2	15 °	24
5	0500	6	5/8	3/8	± 1/2	15 °	30
6	0600	6	5/8	3/8	± 1/2	15 °	36
8	0800	6	5/8	3/8	± 1/2	15 °	50
10	1000	8	3/4	1/2	± 3/4	15 °	70
12	1200	8	3/4	1/2	± 3/4	15 °	96
14	1400	8	3/4	1/2	± 3/4	15 °	120
16	1600	8	3/4	1/2	± 3/4	15 °	140
18	1800	8	3/4	1/2	± 3/4	15 °	145
20	2000	8	3/4	1/2	± 3/4	15 °	170
24	2400	8	3/4	1/2	± 3/4	15 °	220

### Ordering Information

Example: Include full description

Size                      Model  
(Prefix)                  Number  
**0200                      AMS**

2" Pump Connector, Class 150, Single Sphere

### Operating Pressures and Temperatures

Operating Conditions	Size			
	2" - 4"	5" - 10"	12" - 14"	16" - 24"
Operating Pressure	150 psig	135 psig	90 psig	45 psig
Vacuum Rating	26" Hg			
Temperature	14 °F to 240 °F (-10 °C to 115 °C)			



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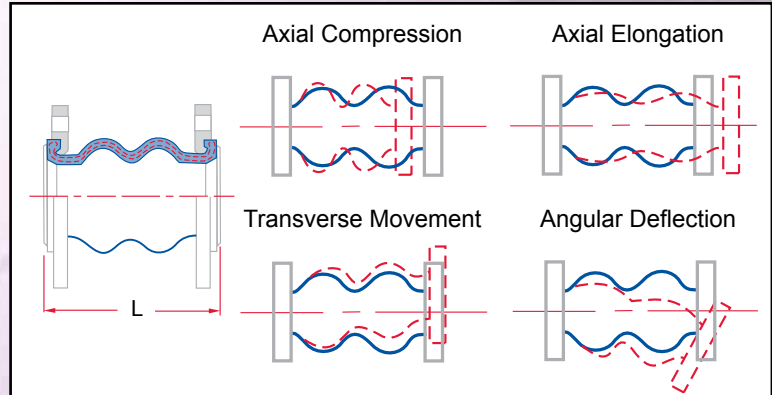


# AMT SERIES

## Twin-Sphere Connectors With Class 150 Floating Flanges



### Allowable Movements



### Notes:

Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.

Construction	
Name	Material
Flanges	CS Zinc Plated
Wire	Carbon Steel Wire Strand
Elastomer	Special Synthetic Rubber
Reinforcing Fabric	Synthetic Fibre (Neoprene)

Dimensions (Inches)							
Size		L	Axial Compression	Axial Elongation	Transverse Movement	Angular Deflection	Shipping Weight (LBS)
Inches	Prefix						
2	0200	7	1	3/4	± 1	40 °	12
2 1/2	0250	7	1	3/4	± 1	40 °	15
3	0300	7	1	3/4	± 1	40 °	17
4	0400	9	1 1/4	1	± 1 1/4	35 °	19
5	0500	9	1 1/4	1	± 1 1/4	30 °	35
6	0600	9	1 1/4	1	± 1 1/4	30 °	40
8	0800	13	1 1/2	1	± 1 3/8	30 °	56
10	1000	13	1 1/2	1	± 1 3/8	30 °	77
12	1200	13	1 1/2	1	± 1 3/8	20 °	129

### Ordering Information

Example: Include full description

Size	Model
(Prefix)	Number
<b>1200</b>	<b>AMT</b>

12" Pump Connector, Class 150, Twin Sphere

### Operating Pressures and Temperatures

Operating Conditions	Size		
	2" - 4"	5" - 10"	12"
Operating Pressure	150 psig	135 psig	90 psig
Vacuum Rating	26" Hg		
Temperature	14 °F to 240 °F (-10 °C to 115 °C)		



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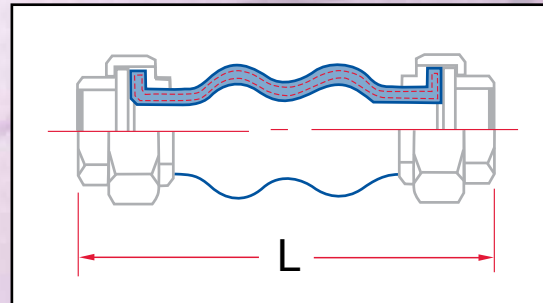
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# AMU SERIES

## Twin-Sphere Connectors

### With NPT Threads



#### Notes:

Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.

Construction	
Name	Material
Union	CS Zinc Plated
Elastomer	Special Synthetic Rubber
Reinforcing Fabric	Synthetic Fibre (Neoprene)

Dimensions (Inches)							
Size		L	Axial Compression	Axial Elongation	Transverse Movement	Angular Deflection	Shipping Weight (LBS)
Inches	Prefix						
3/4"	0075	8	7/8	1/4	± 7/8	30 °	4
1"	0100	8	7/8	1/4	± 7/8	25 °	5
1 1/4"	0125	8	7/8	1/4	± 7/8	25 °	7
1 1/2"	0150	8	7/8	1/4	± 7/8	20 °	9
2"	0200	8	7/8	1/4	± 7/8	15 °	10

#### Ordering Information

Example: Include full description

Size	Model
(Prefix)	Number
<b>0150</b>	<b>AMU</b>

1/2" NPT Threaded Twin Sphere Connector

Operating Pressures and Temperatures	
Operating Conditions	3/4" - 2"
Operating Pressure	150 psig
Vacuum Rating	16" Hg
Temperature	14 °F to 221 °F (-10 °C to 105 °C)



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# FLEXIBLE EXPANSION JOINTS

## Advantageous Features of Using Flexible Rubber Expansion Joints

### Absorbs Vibration, Noise and Shock

Sound travelling axially through Expansion Joints is stopped at once. Water hammer, pumping impulses and waterborne noises are absorbed by the molded, light-weight, thin-wall structure.

### Easy to Install, Easy to Remove

Loose flanges, no need of gasket or packing, and elastic spherical body make Expansion Joints easy to install or remove.

### Higher Burst Strength

Spherical shape is stronger than cylindrical shape or other configuration. Thus under pressure, Sure Flow Expansion Joints are 4 times as strong as cylindrical joints. Additionally, our products are made of the best suitable material, and hence their burst pressure is much higher than those of other makes.

### Wide Service Range

Made with chemical elastomers such as Neoprene.

### Greater Movements are Available

Axial compression and elongation, deflection and angular movements will be greater.

### Suitable for Suction and Delivery

Owing to its excellent molding technique with its tough chemical fiber, Expansion Joints can satisfactorily withstand the suction and discharge.

### High Efficiency

Expansion Joints have a streamlined, flowing arch to reduce turbulence, sediment build-up, thrust area and the effects of thrust on the piping system equipment.

### Low Deformation Under Pressure

Internal pressure is exerted in all directions distributing forces evenly over a large area. Hence, the deformation of Sure Flow Expansion Joints due to pressure is much lower than that of other makes.

### Light and Compact

The space required for the installation of an Expansion Joint is about half of the requirement of a cylindrical joint. Weight is about one third.

### Use In:

- Air conditioning systems
- Air ducts
- Chemical lines
- Circulating water lines
- Compressor lines
- Paper stock lines
- Pump-suction and discharge
- Refrigeration lines
- Turbine to condenser

### Marine Installations

- Air intake on diesel engines
- Ballast
- Between scoop and condenser
- Circulating lines to condenser
- Fog foam lines
- Fire and bilge pump lines
- Forced draft
- Overboard discharge
- Sanitary system
- Ventilation lines

**Applicable Fluids:** Water, warm water, seawater, weak acids, alkalies, compressed air, etc.



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## Sure Flow Equipment Inc. – Limited Warranty

All products are warranted to be free of defects in material and workmanship for a period of one year from the date of shipment, subject to below. **All custom products are not subject to return, credit or refund.**

If the purchaser believes a product to be defective, the purchaser shall:

(a) Notify the manufacturer **within ten (10) days after receipt of merchandise**, state the alleged defect and request permission to return the product. Merchandise will not be accepted for return without a "Return Code" clearly marked on the outside of the package. Contact the office to obtain a return code. **Merchandise will not be accepted for return or credit later than six (6) months after invoicing.**

(b) If permission is given, return the product with the transportation prepaid. Collect shipments will not be accepted. Goods must be returned **prepaid**.

If a shipment is received in a damaged or deficient condition, a claim must be filed with the delivering carrier and noted on the freight bill before you accept the merchandise. All other claims must be made in writing and received by Sure Flow Equipment Inc. within ten (10) days after receipt of merchandise.

If the product is accepted for return and found to be defective, the manufacturer will, at its discretion, either repair or replace the product, F.O.B. factory, within 60 days of receipt, or issue credit for the purchase price.

Sure Flow Equipment Inc. shall not be liable for failure to deliver or delays in delivering occasioned by acts of God, war, labor difficulties, inability to obtain materials or any other causes whatsoever beyond our control.

Other than to repair, replace or credit as described above, purchaser agrees that manufacturer shall not be liable for any loss, costs, expenses, or damages of any kind arising out of the product, its use, installation or replacements, labeling, instructions, information or technical data of any kind, description of product use, sample or model, warnings or lack of any of the foregoing.

NO OTHER WARRANTIES, WRITTEN OR ORAL, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY, ARE MADE OR AUTHORIZED. NO AFFIRMATION OF ACT, PROMISE, DESCRIPTION OF PRODUCT OR USE OR SAMPLE OR MODEL SHALL CREATE ANY WARRANTY FROM MANUFACTURER, UNLESS SIGNED BY THE PRESIDENT OF MANUFACTURER.

### CANCELLATIONS:

Cancelled orders will be subject to a charge of at least 35%.

Cancelled custom orders will be subject to a charge of 100% of quoted price.

**SPECIAL DOCUMENTATION:** A charge will apply for non-standard, special documentation requests such as Material Test Reports (MTR's) and Certificates of Conformance (COC's).

**MINIMUM BILLING: \$100.00 NET**

Product shipping weights are approximate and subject to variances depending on packaging methods/requirements.



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