



**PISA FLEX**



## PRODUCT CATALOGUE

*PisaFlex is Mexico's premier manufacturer of metallic expansion joints and braided hose assemblies.*

*PisaFlex is qualified to Manufacture product to ASME "U" Stamp.*



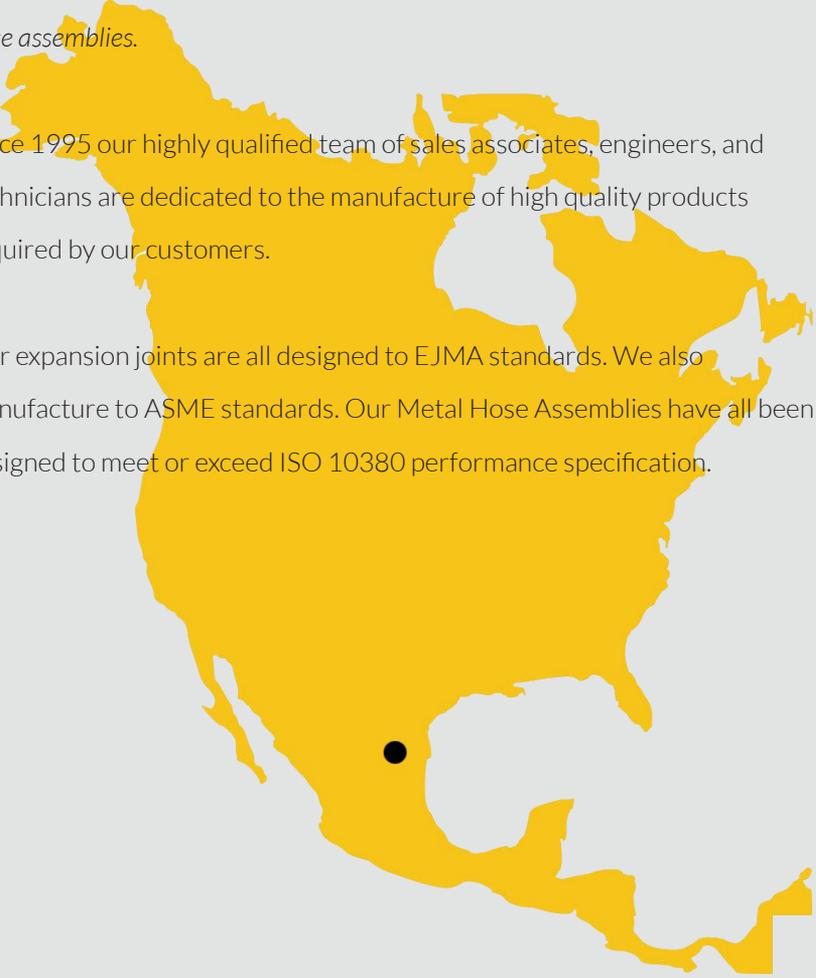
# PISAFLEX / PRODUCT CATALOGUE

## INTRO

*PisaFlex is Mexico's premier manufacturer of metallic expansion joints and braided hose assemblies.*

Since 1995 our highly qualified team of sales associates, engineers, and technicians are dedicated to the manufacture of high quality products required by our customers.

Our expansion joints are all designed to EJMA standards. We also manufacture to ASME standards. Our Metal Hose Assemblies have all been designed to meet or exceed ISO 10380 performance specification.



# PISAFLEX SERVICES

## **Manufacturing and Engineering**

Pisaflex will manufacture any expansion joint or braided hose assembly to our customers specifications. If you don't have a current design our Auto CAD experts in our engineering department will guide you and assist you in every step to design the best solution for you.

## **Repair And Field Service**

For expansion joint repairs, you can rely on the experience and skills of Pisaflex's personnel to do a professional job. For details please contact us.

## **Logistics**

Our products all ship FOB Laredo, TX; so you do not have to worry about customs or duty paperwork, PisaFlex will take care of all those issues, which make product delivery easier for you.

## **Expedited Service**

We can manufacture in short lead times and emergency situations. We have on stock most of the stainless steel types and gauge, as well as special materials like inconel, hastelloy and monel.

# EXPANSION JOINTS

Metal expansion joints are compensating elements for thermal expansion, relative movement in pipelines, containers and machines. They consist of one or more metal bellows, connectors at both ends and accessories that depend on the application. They are differentiated according to three basic types of movement: axial, angular and lateral expansion joints.

## CAPABILITIES

Round Metal Expansion Joints – 3” Through 144” in Diameter with wall thickness from 11 Gauge down to as thin as 32 Gauge. We also make multi-ply bellow capsule for the severe vibration applications or pressure redundancy. For larger than standard diameter contact us.

Rectangular/Square Metal Expansion Joints – Any Length x Width dimensions as needed with wall thickness as thin as 20 Gauge.

Metal Hose Assemblies - We manufacture 1/4” through 8” diameter hose and braid in house any larger sizes are made to order.

Rubber and Fabric Expansion Joints. Designed to your specifications and application requirements.

# SINGLE EXPANSION JOINTS



Single Expansion Joints has one bellow. Extension lateral and angular movement can be accommodated. These expansion joints do not restrain the internal pressure thrust. Where small thermal movements are involved and proper anchoring and guiding is feasible, a single expansion joint is the most economical installation.

# DUAL OR UNIVERSAL EXPANSION JOINTS



Dual or Universal Expansion Joints consists of two bellows separated by a pipe spool. This configuration can accommodate large lateral movements. In addition it can also handle axial compression and extension and angular deflection.

# EXTERNALLY PRESSURE



The Externally Pressurized Bellow absorbs a very long stroke that minimizes the number of expansion joints required for a typical installation. Inherent in the design are internal guide rings, a full thickness cover, self-draining convolutions, and an integral liner that is insensitive to the flow direction.

# HINGED EXPANSION JOINTS



Hinged Expansion Joints have a single bellow with overall length restrained by hinge hardware designed to accommodate pressure thrust.

# GIMBAL EXPANSION JOINTS



Gimbal Expansion Joints have a single bellow and gimbal hardware designed to resist pressure thrust. The gimbal expansion joint hardware operates like the universal joint on a drive shaft to accommodate angular movements in any plane.

# PRESSURE BALANCED EXPANSION JOINTS



Pressure Balanced Expansion Joints are devices which produce no pressure thrust forces in the piping system on the main anchors. In addition to eliminating the pressure thrust, the expansion joint can accept axial compression, axial extension, lateral and angular movements. The balancing thrust is created by using a balancing bellows.

# IN-LINE PRESSURE BALANCED E.J.



In-Line Pressure Balanced Expansion Joint consists of single or double (universal) bellows to accept the piping induced axial compression, extension and lateral movements. An oversize bellows with approximately two times the area of the flow bellows is used to create an annular pressure chamber that produces a balancing pressure thrust force.

# RECTANGULAR METAL EXPANSION JOINTS



Rectangular Metal Expansion Joints have a variety of applications in the power, petrochemical, refining, chemical, and steel industries. PisaFlex is fully prepared to service our customer's needs on these applications.

# BELLOWS TYPE PUMP CONNECTORS



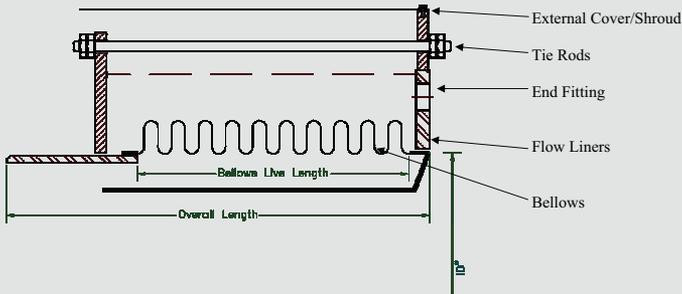
PisaFlex pump connectors are a perfect match of style, wall thickness and are designed to minimize the forces and stress within piping systems. These connectors are factory engineered, manufactured and tested to effectively minimize the stress on a pump and compressor housings and to isolate vibrations transmitted by mechanical equipment.

# EXHAUST FLEXIBLE CONNECTORS



Exhaust Flexible Connectors are specifically designated for low pressure (up to 15 psi) applications that require a high degree of flexibility.

# EXPANSION JOINT ACCESSORIES



## END FITTINGS

Expansion joints will include appropriate end fittings such as flanges or butt-weld ends that should match the dimensional requirements and materials of the adjoining pipe, or equipment.

## LINERS

Internal liners can be used to either protect the metallic bellows from erosion or reduce turbulence across the bellows.

## COVERS

External Covers providing a protective shield that spans the length of the bellows. Covers prevent direct contact with the bellows, offering personnel protection, as well as protection to the bellows from physical damage such as falling objects, weld splatter or arc strikes.

## LIMIT RODS

Tie Rods or Limit Rods are designed to contain pressure thrust. The rods will have nuts or stops on the ends of the assembly to limit the overall length. When an expansion joint is designed for pure lateral offset the rods are defined as Tie Rods.

## PARTICULATE BARRIERS/PURGE CONNECTORS

Are used in systems that have a media with significant particulate content, a barrier of ceramic fiber can be utilized to prevent corrosion and restricted bellows flexibility resulting from the accumulation of the particulate. Purge connectors may also be utilized to perform this same function. Internal liners must also be included in the design if the expansion joint includes purge connectors or particulate barriers.



## METAL HOSES

Pisaflex designs and manufactures high quality flexible metal hose products. Metal Hoses are made from thin walled flexible tubing. The Hose is used to convey media in piping systems where alignment, motion and/or vibrations absorption are the primary requirement. Standard and custom products are available in a variety of materials and end configurations. Quality assurance at Pisaflex is of vital importance. All stages of manufacturing are monitored by qualified QC personnel.

## CAPABILITIES

Metallic flexible hose sizes from 1/4" to 8"  
Braided braid 4" to 8"  
Sizes from 10" and upward are made to order.  
Hose material: 304,316 and 321  
Braid material: 304  
Our hose assemblies are made to customer specifications or we can design an assembly to meet your needs.

# CORRUGATED METAL HOSE



Corrugated Metal Hose is a pressure tight metal hose with formed corrugations to provide flexibility.

## Specifications

Material:

Hose: 304, 321 and 316L stainless steel

Braid: 304 Stainless Steel

# FITTINGS



Fittings are couplings attached to the end of the hose to facilitate connection to the piping system.

Other Fittings with thread or weld end:

Cam lock, quick disconnect, socket weld, elbows, tees, flanged unions, hydraulic.

# BRAID



Braid is a sleeve of woven wires that covers the exterior of the corrugated hose. Braid allows the corrugated hose to withstand pressure while providing protection against abrasion and contamination.

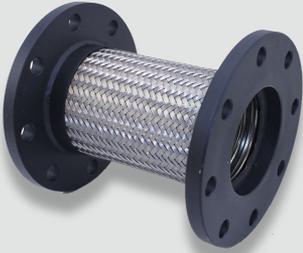
## Specifications:

Material:

Hose: 321 and 316L Stainless steel

Braid: 304 Stainless Steel

# PUMP CONNECTORS



Pump Connectors are metallic hose assemblies used to eliminate transferring vibration to the piping system.

# HOSE ASSEMBLIES



Hose Assemblies are hose and braid with attached fittings.

Components typically found in metal hose assemblies are:

- Corrugated flexible hose
- One or more layers of wire braid
- Braid sleeves
- Fittings
- Flexible guard/liner

# SPECIAL HOSE ASSEMBLIES



Special Hose Assemblies are highly sophisticated assemblies to satisfy the needs of our costumers.

A sampling of these quality assured assemblies are:

- Jacketed Assembly
- Traced Assembly
- Lined Assembly
- Guarded Assembly
- Ball-Joint armored hose