FLEXATHERM

An ISO 9001 : 2015 Certified Company

Metallic Expansion Joints • Rubber Expansion Joints
Fabric Expansion Joints • Metallic Hoses • PTFE Expansion Joints

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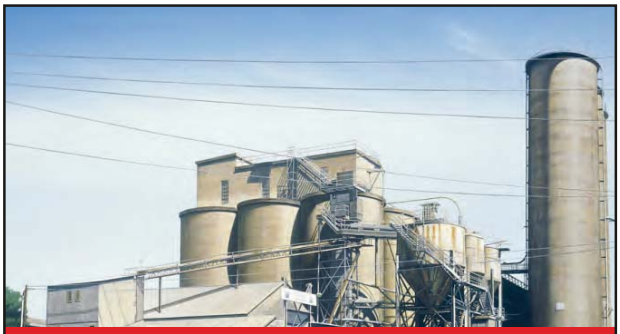
Relieve Your Stresses

APPLICATIONS

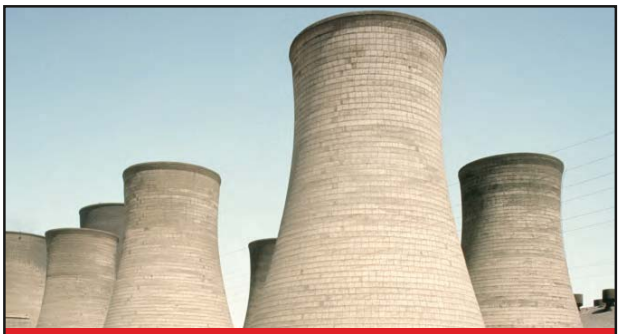
Chemical and Fertilizer Plant

Steel - Plant



Cement-Sector

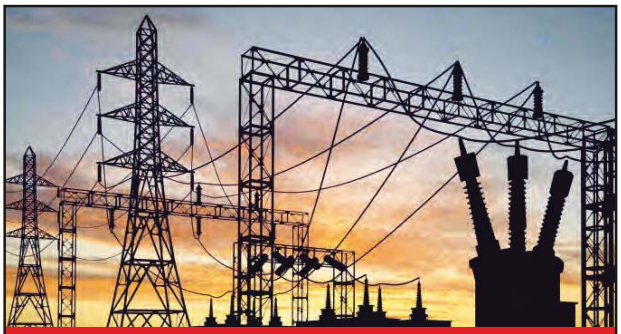
Defence



Thermal Power Plant

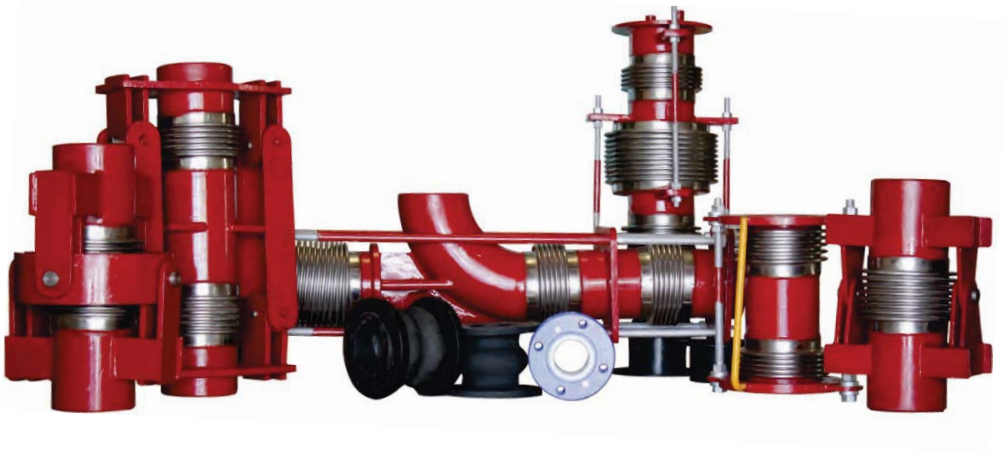
Oil Gas Plant

NUCLEAR Power Plant



CVT - VT Transformers

ABOUT US



- Flexatherm, incorporated in 1992 and serving the industries with its consistent quality, design, manufacturing capability and customer satisfaction.
- Service since two decades has made it a benchmark in industry of expansion joints with Innovative Expertise, visionary leadership, unparalleled services and quality products.
- Bellows are designed on EJMA standard based on in-house developed software.
- State-of-art manufacturing and testing facility of the company provides quality for all sizes of products.
- We are approved by various international and national third-party inspection agencies like Lloyds, Tata projects limited, TUV, BV, PDIL.
- Flexatherm's Quality management is certified with ISO 9001-2015 and CE-PED approval.

INFRASTRUCTURE

- Manufacturing facility of 70,000 Sq.Ft. and 5,000 Sq.Ft. of office and storage building. Flexatherm has total area of 4,00,000 Sq.Ft.
- The facility has a capacity to manufacture from 25 NB to any upper range which could be limited only due to shipping constraints, maximum Size manufacture is 7500 NB & 19 mtrs x 7 mtrs till date

METALLIC EXPANSION JOINT

Axial Joint

- Simplest form of flexible joints
- Used for axial movement in straight pipe-run with end connection as flanges or pipe end.
- Absorbs deflection in any direction or plane.
- Used for equipment's or adjacent structure which cannot accommodate pressure thrust.

Universal Joint

- Accommodates deflection in any direction or plane. i.e. Axial, Angular, and Lateral or in any combination.
- Provides very large amount of lateral movement with long center pipe to have a very low lateral spring force.
- Thermal expansion and excessive weight of the long center pipe has to be taken into account.
- Restrained and Unrestrained conditions are same as Axial Joint.

Gimbal Joints

- Advantage of absorbing pressure thrust, supporting the dead weight of the system, transmitting loads through the gimbaled structure, preventing torsion & reduce forces on system.
- Applied to complex piping system were proper anchoring & guiding may not be feasible.
- Capable of absorbing angular motion in all planes.

Hinged Joints (Single / Universal)

- Design to restrain pressure-thrust and other external loads.
- Angular and lateral movements are in one / two plane.
- Very effective with respect to pressure-thrust absorption, limited guiding & intermediate anchors, prevention of torsion, support to dead weight & low forces on the pipping system.
- Capable of absorbing lateral displacement in one plane restraining the pressure-thrust.

Pressure Balanced (Elbow Joint)

- Applied at change of direction and piping.
- Keeps the effective displacement of the Assembly NIL by virtue of constant volume maintained during operation.
- Used for restraining and balancing the pressure thrust were the main anchoring of the pipe is not possible. But, forces and movements required to keep low accepted level to attached load sensitive delicate equipment such as pump, rotating equipment, and turbine.
- This joint is used where at Tied Expansion Joint (Axial, Lateral) is required for axial displacement and to restrain pressure Thrust.

In-line pressure balance expansion joint

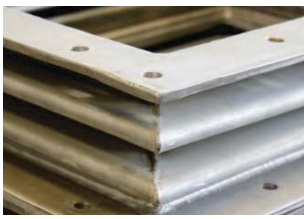
- Used where minimum forces and moments are required between two load sensitive delicate equipment and where main anchor is not possible.
- Balancing bellow having twice the area of the line bellow to create an annular pressure chamber that produces a balancing pressure thrust force.

Rectangular expansion joint (Axial or Universal)

- Similar to circular expansion joint
- Capable to absorb all the three types of movements.
- Customized design is carried out due to wide range of pressure, temperature combination.
- Typical corner configurations manufactured are

1) Rounded corner 2) Single Miter corner 3) Camera corner 4) Double miter corner

Rounded corner

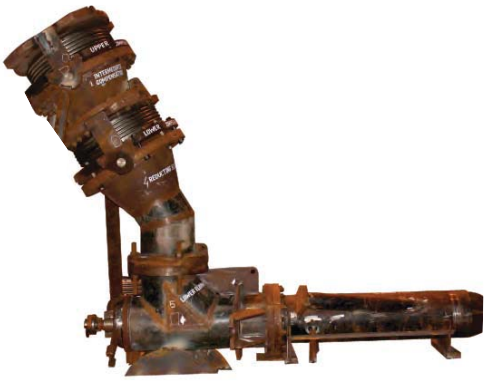


Single Miter corner

Camera corner

Double miter corner

OTHER PRODUCTS



Tuyere Stock Assemblies

Skin Casing

Automobile Bellow

CVT

METALLIC HOSES

- Flexatherm Expanllow Pvt. Ltd. can manufacture and supply metallic hoses from ¼" to 12" size.
- Material of construction depends upon application. We have experience in manufacturing from materials like SA 240 TP 304, 321, 361 and Incoloy 625.
- Flexatherm manufactures metallic hoses and its related accessories for high pressure application with or without braiding
- FEPL have supplied hose assemblies for most critical applications where temperature and pressure are approx. 1000 degree C and 6 Bar respectively
- Our hoses are used in most demanding applications like Blast Furnaces, Refineries, Cement, Power plants, Boiler applications, Defense, Navy, etc.

Advantages of Flexible Metal Hose

- High physical strength combined with light weight.
- Suitable for wide temperature range (-200°C to + 550°C)
- Good corrosion resistance. Resistance to fire, moisture, abrasion and penetration.
- Absorbs vibration and noise from pumps, compressors, engines etc.
- Compensates for intermittent of constant movement.
- Compensates for thermal expansion of contraction of piping.
- Corrects problems of misalignment.
- A flexible and quick alternative for rigid piping in difficult locations.

RUBBER BELLOWS

- Protects equipment's and piping from damage caused by vibration and thermal movements and accommodate equipment misalignments.
- superior flexibility, movement absorption, and cycle life, chemical and abrasion resistant.
- Useful over a wide range of temperatures & pressures, making them the preferred expansion joint for liquid and slurry applications, though gases & solids are also frequently conveyed by rubber expansion joints.

Type of Rubber Expansion Joints

TYPE FEPL SF

These rubber type expansion joints are provided with Split flanges. Flange standard can be selected as per the customer requirements.

We can manfacture and supply as per ANSI, DIN, JIS and AWWA standard. Non-standard flanges can also be supplied as per customer requirement. FEPL can manufacture expansion joints till 3000 NB.

Type FEPL FF

These type of expansion joints are provide with floating flanges. The expansion joints are made from moulding process.

Type Of Rubber

Colour Dots	Material	Main applications	Max. temperature °C(°F)*
Black	Neoprene	Applications involving sea water, water cooling systems	90°C(194°F)
Red	EPDM	Hot water, heating and ventilation systems	100°C(212°F)
Yellow	Nitrile	Oil and gas transportation, refineries	90°C(194°F)
Green	Hypalon®	Chemical plants, transportation of strong acids	100°C(212°F)
		(Except nitric or sulphuric acid)	
Red / Red	Viton®	High temperature applications, transportation of	160°C(320°F)
		products derived from petroleum	
White	Nitrile	Transportation of foodstuffs, potable water distribution	80°C(176°F)
Blue / White	Buthyl HT	High temperature	150°C(302°F)

PTFE BELLOWS & LINING

- PTFE bellows are a very critical product used in highly corrosive atmosphere.
- Flexatherm Expanllow Pvt. Ltd. can manufacture PTFE expansion joints for high pressure applications for any size.
- We also manufacture PTFE lined metal expansion joints for higher pressure capacity. End connections can be Flange type or Clamp type.
- Fulfilling the diverse requirements of clients by offering an optimum quality PTFE Bellow.
- The offered bellow is broadly used as externally mounted seal to provide protection from corrosive chemicals.
- Using premium grade PTFE with the aid of the latest technology, the provided bellow is manufactured under the stern guidance of our talented professionals.

FABRIC BELLOWS & BELT

- Used in low pressure systems and these are a cost-effective substitute for such systems.
- These can be made in large diameters. Moreover, bellows can be made of various shapes viz. polygon, rectangular, etc.
- It is a multi-layer design.
- Temperature and corrosion resistant insulating fabrics for temperature decrease
- Gas impermeable films, foils or composites of materials as Teflon, Silicone, Hypalon, Inconel or aluminum
- UV resistant and water-resistant materials for reasons of weather protection.
- Support layers such as glass or polyester fabric and the like for pressure absorption;
- Mechanically stable layers such as wire mesh and silicone film as abrasion protection.

QUALITY ASSURANCE

- **TESTING FACILITY :**
  Chemical Properties
  Mechanical Properties
  Hardness Test
  IGC Test
  Visual Test
  Dye Penetrant Test
  Magnetic Particle Test
  Ultrasonic Test
  Radiography Test

- **TEST ON EXPANSION JOINT:**
  Movement Test (Axial / Lateral / Angular)
  Axial Spring Rate Test
  Life Cycle Test
  Squirm Test
  Yield Test
  Rupture Test

- **PRESSURE TEST:**
  Pneumatic Test
  Hydro Test
  Air Jet Leak Test
  Vacuum Test
  Kerosene Test

- **PAINTING CHECK TEST:**
  Dry Film Thickness Check
  Pickling Passivation
  Adhesion Test
  Surface preparation

CERTIFICATIONS :

- ISO 9001-2015
- ISO 14001-2015
- Ohsas 18001-2007
- IBR (Indian Boiler Regulations)
- Achilles

OUR CLIENTS


बी एच ई एल
BHEL


एनटीपीसी
NTPC


एनपीसीआईएल
NPCIL


MECON
मेकॉन
ISO 9001 Company


हिन्दुस्तान पेट्रोलियम
HP


Bharat
Petroleum


इंडियनऑयल
IndianOil


ADITYA BIRLA
UltraTech


सेल SAIL


गेल
GAIL


भारतीय रेल • INDIAN RAILWAYS


DRDO
DEFENCE R&D ORGANISATION
MINISTRY OF DEFENCE
CEPTAM
scrutinize actualize recognize human potential
ISO 9001:2008


शं नो वरुणः

An ISO 9001 : 2015 Certified Company

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