

| PIONEERS
| RECOGNITION
| PAR EXCELLENCE
| PERFORMANCE
| RELIABLE
| COMPETENT
| COMMITMENT
| WIDE RANGE



Shah Expansion Joints (Bellows) Manufacturers

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Email: shahexpansionjoints@yahoo.com, ejbmfg_2008@yahoo.in **Web:** www.shahexpansionjoints.com, www.shahexpansionjoint.com

Shah Expansion Joints Manufactures
Metallic Expansion Joints / Bellows, Stainless Steel Corrugated hoses, Stainless Steel wire braided, hose-assemblies and M.S. / S.S. Flanges at their state of the art facility in Vadodara-Gujarat in India.

SEJB, accepts responsibility for the complete satisfaction of its customers. We exercise this responsibility through adequate training of our employees, adherence to proven procedures, and total commitment to meeting and exceeding customer requirements, and to maintaining an organizational culture that fosters continuous improvement.

We came in to existence in the year **2004**, with a primal motto to render supreme quality products to the customers. With an extensive experience of over a decade and sharp business acumen of our venerated Owner, we have attained untold heights in the said domain. Our vision is to deliver quality products to appease customer's standards at perfectly reasonable rates.

MANUFACTURING CAPABILITIES

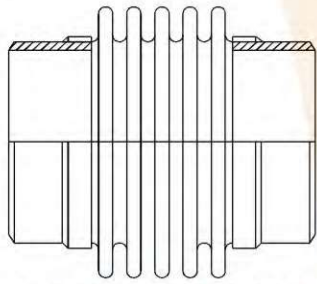
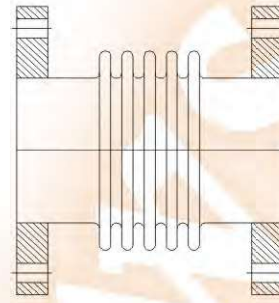
We are manufacturing a wide variety of bellows, expansion joints and piping assemblies from **40NB** to **4000 NB**. Single-ply, Multi-ply, reinforcing ring & equalizer ring bellows designs are also available. As a Minimum, all the expansion joints are designed to the latest **EJMA** standards.

TESTING FACILITIES

We are continuously innovating new methods of design and developing bellows technology. We are capable of performing all types of non-destructive testing such as Radiography, Ultrasound, Mass Spectrometer, Magnetic Particle, Hydrostatic and Liquid Penetrate Inspection. We also include cycle testing, spring rate testing, impact testing, pneumatic testing, helium leak detection and positive material identification (**PMI**) as per the request of clients. The design, quality assurance and manufacturing practices are in compliance with the following codes and standards: **EJMA**, **ASME** Section VIII and IX, **ANSI** B31.1, B31.3

QUALITY ASSURANCE

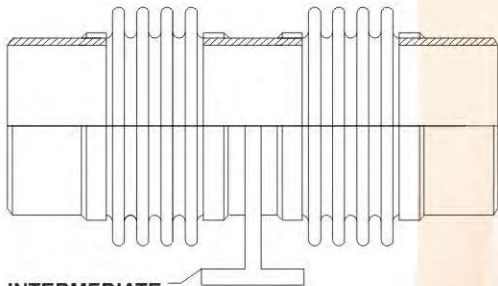
Our top priority lies with quality centric approach. Our commitment to quality starts at the enquiry stage. All Industrial Bellows are designed using software developed by our engineers. We analyze effects on pipe from restraint loading and are involved in developing the most cost-effective and thoroughly tested designs in the industry. We provide industrial bellows, supported by innovation engineering expertise and superior service to ensure total satisfaction.



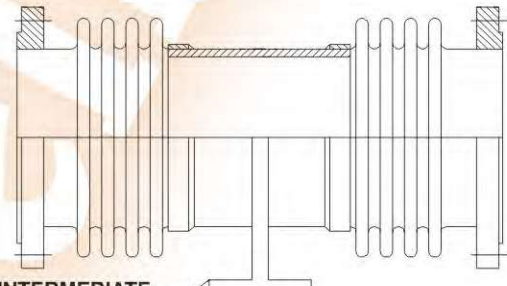
AXIAL BELLOWS WITH PIPE

AXIAL BELLOWS WITH FLANGES

The simplest type of expansion joint consists of a single bellows element welded to end fittings, normally flange or pipe ends. The single bellows can absorb small amount of axial, lateral and angular movement. The addition of tie rods to a Single Bellows assembly adds design flexibility to a pipe system. The tie rods are attached to the pipe or flange with lugs that carry the the pressure thrust of the system, eliminating the need for main anchors.



INTERMEDIATE
ANCHOR

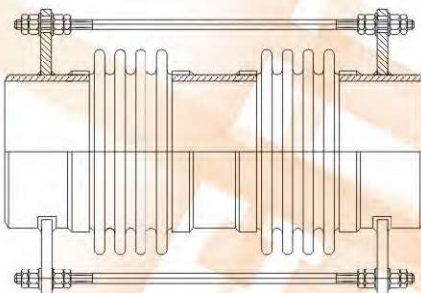
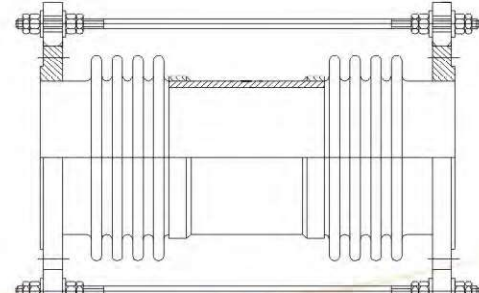


INTERMEDIATE
ANCHOR

DOUBLE BELLOWS WITH PIPE

DOUBLE BELLOWS WITH FLANGES

The double expansion joint extends the magnitude of flexibility and is primarily utilized for straight axial motion. When used in combination with other movements, the predominant motion is straight axial. Each bellows acts as a Single Expansion joint and absorb the movement of the pipe section in which it is installed (independently of the other bellows). Not to be confused with Universal Expansion joints.



UNIVERSAL BELLOWS WITH PIPE

UNIVERSAL BELLOWS WITH FLANGES

The Universal Expansion Joint (articulated double expansion joint-containing two bellows joined by a common connector for the purpose of absorbing any combination of the three basic movements : Axial, Lateral and Angular) usually furnished with control rods to distribute the movement between the two bellows of the expansion joint and to stabilize the common connector.

Overall control rods govern the movement of the centre pipe section and equally divide motion between the bellows elements. This configuration is used primarily for lateral deflection but can accommodate axial movement as well. Another application for this type of expansion joint utilizes overall tie rods which fix the overall length of the expansion joint and contain full pressure thrust (only lateral deflection is accomodated).



SEJB00127



SEJB00126



SEJB00101



SEJB00135



SEJB00123



SEJB00112



SEJB00109



SEJB00137



SEJB00138



SEJB00104



SEJB00142



SEJB00113



SEJB00110



SEJB00111



SEJB00129



SEJB00146



SEJB00125



SEJB00132



SEJB00120



SEJB00119



SEJB00103

HOSE

A range of metallic flexible hoses are manufactured in SS AISI 304, 321, 316 & 316-L conforming to BS 6501 : Part I : 1991 / ISO 10380 : 2004

Stainless steel corrugated flexible hoses are offered from 6mm NB (1/4") to 250mm NB (10"). The annular corrugated hose body provides tight core of the assembly. We also manufacture highly flexible close-pitch and heavy duty hoses for special applications.

BRAID

When pressure is applied, unbraided corrugated hose tends to elongate axially. To restrain this, an external layer of SS wire braid is provided. The braid also makes the assembly pressure resistant.

Sometimes two or even three layers of braiding are provided for higher pressure applications. The braiding is highly flexible and follows the movement of the hose.

The braid is normally manufactured in SS 304 wire. However SS 316 and SS 321 braid can also be manufactured. We also supply wire braid in different configurations as per customer specifications.

ASSEMBLIES

We have in-house designing facility and regularly manufactures hoses for highly critical applications. We also manufacture specials hoses like close pitch hoses / heavy duty hoses, jacketed hose-assemblies, road tanker and ship loading and unloading hoses.

The end connections are TIG Welded / Brazed by our Certified welders. Welding procedures and welders are qualified as per ASME section.

TECHNICAL DATA FOR BRAIDED HOSES ASSEMBLIES

SIZE		SINGLE BRAID					DOUBLE BRAID				
Nominal Size		Static bend radius	Dynamic bend radius	Max. Working Pressure	Test Pressure	Burst Pressure	Static bend radius	Dynamic bend radius	Max. Working Pressure	Test Pressure	Burst Pressure
Inch	mm	mm	mm	bar	bar	bar	mm	mm	bar	bar	bar
1/4	6	25	100	154	230	616	25	100	246	369	984
3/8	10	40	150	105	157	420	40	150	168	252	672
1/2	12	50	200	88	132	352	50	200	140	210	560
5/8	16	50	200	73	109	292	50	200	116	174	464
3/4	20	70	200	64	96	256	70	200	102	153	408
1	25	90	200	50	75	200	90	200	80	120	320
1 1/4	32	110	250	42	63	168	110	250	67	100	268
1 1/2	40	130	250	32	48	128	130	250	51	76	204
2	50	175	350	31	46	124	175	350	49	73	196
2 1/2	65	200	410	26	39	104	200	410	41	61	164
3	80	205	450	18	27	72	205	450	28	42	112
4	100	230	560	16	24	64	230	560	26	39	104
5	125	280	660	16	24	64	280	660	25	37	100
6	150	320	815	12	18	48	320	815	20	30	80
8	200	435	1015	10	16	40	435	1015	16	24	64
10	250	560	1220	6.5	10	26	560	1220	10.5	16	42

Note : 1. The above technical details are subject to change without notice.
 2. We can also supply the above hoses for higher pressures.
 3. The above values apply only to SEJB Braided Hoses and Assemblies at ambient temperature.

Environmental Applications



Aerospace Industries

Thermal Power Station

Petrochemical



Textile Industries

Atomic Energy

Engineering Consultants

Power Generation



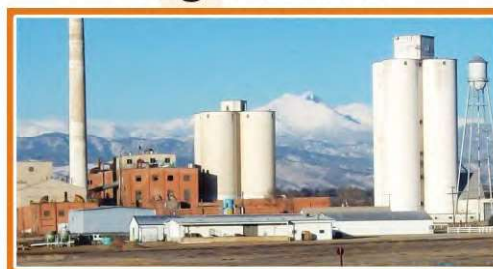
Chemical Industries

Fertiliser Industries

Lubrication Systems

Construction & Engineering

Sugar Plants



Boilers

CT PT MFRS.

Oil, Natural Gas & Refineries

Heavy Industrial



Sugar Plant

Shipping

Others

Nuclear Power Plant

Steel Industries

Pharmaceutical Industries

Pulp & Paper Plant

Petrochemical Industries



ENQUIRY SHEET

Mail to : shahexpansionjoints@yahoo.com Fax to : +91-265-2357931

web : www.shahexpansionjoints.com / www.shahexpansionjoint.com

Date _____ Enquiry / Ref. # _____

Customer Name _____

Address _____

City, State, Zip _____

Phone / Fax _____

E-mail : _____

Design Information		Item#1	Item#2	Item#3
1	Quantity			
2	Nominal Diameter (NB)			
3	Type of Bellows (Single, Universal etc.)			
4	End Fitting (Flange/Weldeble End)			
5	Pressure (Kg/Cm ²)			
6	Temperature (Deg. C°)			
7	Overall Length (Limitation)			
8	Media / Application			
Design Movements				
9	Axial Expansion (+mm)			
10	Axial Compression (-mm)			
11	Lateral Movement (mm)			
12	Angular Rotation (Degrees)			
13	Fatigue Life (Cycles)			
Material Of Construction				
14	Bellows (Grade)			
15	Flange			
16	Flange (Standard X Thickness)			
17	Weld Ends			
18	Weld Ends (OD X Thickness)			
19	Inner Sleeve			
20	Inner Sleeve (OD X Thickness)			
21	External Cover			
22	External Cover (Thickness)			
23	Spherical Washer			
24	Spherical Washer (OD X Thickness)			
25	Stubring			
26	Stubring (OD X Thickness)			
27	Tie / Limit Rod			
28	Tie / Limit Rod (Ø)			
29	Tie Rod's Lug			
30	Tie Rod's Lug (L x W x H x Thk.)			