

INTRODUCTION OF COMPANY

❖ We are India Flex Engineering pleased to introduce ourselves as one of the leading company for design and manufacturing of Metallic and Nonmetallic Expansion Joint, hoses and pressure vessel equipment in Ahmedabad – India, established in August 2010. India Flex Engineering is Partnership Firm and annual turnover is more than 5 Crore. India Flex Engineering committed to his client for batter service and technical support. We believe that internal & external customer satisfaction is achieved through a better management, quality of products, technical knowledge, experience and services that needs to continuous improvement of the system.

❖ India Flex Engineering has invested heavily in modern infrastructure, latest technology for Bellows Long Seam Welding and Hydro Forming, R & D and quality manpower that result in a product quality that more than meets the existing quality standards of national & international customer's, consultants and government sector.

❖ We are...

- I. We are a passionate people, process driven local business succeeding globally through entrepreneurial business units, that values our internal and external customers and suppliers.
- II. We combine engineering and process of industry knowledge, service, integrity and urgency with efficient systems.
- III. We plan and communicate aggressive but achievable targets and turn them into actions. Our metrics are visible and monitored consistently at all levels with continues improvement.
- IV. We provide our people with clear objectives and support them with the necessary resources, holding individuals accountable and recognizing success whilst also managing poor performance.
- V. We strive for zero harm amongst our people and those around our business, and act responsibly within our communities.

..... this is the way we deliver superior returns to our shareholders.

❖ We can.....

- I. We can do all the uncomplicated and complicates jobs in a field for any time.
- II. We have the solution for each difficulty in the engineering filed.

GENERAL INFORMATION OF ORGANIZATION

- ❖ Name of Company - INDIA FLEX ENGINEERING
- ❖ Nature of Activity - Design and Manufacturing of Metallic & Non-metallic Expansion Joints and General Fabrication Work including Pressure Vessel.
- ❖ Establishment Year - Since August 2010.
- ❖ Work Area - 23,725 Square Foot.
- ❖ Category of Enterprise - Small Scale Industries.
- ❖ SSI Part II No - 24-007-12-39488 Issued Date 19/04/2012.
- ❖ VAT/CST No - VAT No - 24075105965 & CST No - 245751065 Dated 26/05/2010.
- ❖ PAN CARD No - AADFI 0376 A Dated 01/04/2010.
- ❖ Excise No - AADFI 0376 AEM 001 Div III Range V Dated 20/03/2013.
- ❖ IEC No - 0810009269 Issued date 20/07/2010 from Ahmedabad.
- ❖ GST No - 24AADFI0376A1Z0 Dated on 26/06/2017.
- ❖ Location of Company - Plot No – B-4 & B-5, Swagat Industrial Park – 3, Ahmedabad – Indore Highway – Village Kuha - Ahmedabad - 392433 - INDIA.
- ❖ Contact Details - Mr. Kalpesh Patel (+91 9099 809920) (knpatel@indiaflex.com)
Mr. UpendraPatel (+91 9879 729214) (uvpatel@indiaflex.com)

HISTORY OF COMPANY

- ❖ **Year 2009**
 - Think about India Flex and prepare the design software and drawing for manufacturing machinery for Expansion Joint.
- ❖ **Year 2010**
 - Officially register as Partnership Firm with SSI unit in June 2010 at Ahmedabad – INDIA. Started production of Expansion Joint on October 2010.
- ❖ **Year 2011**
 - Up to March 2011 achieve the turn over 10Lacs.
 - Register with NSIC – D&B – SMERA performance & Credit Rating.
- ❖ **Year 2012**
 - Up to March 2012 achieve the turn over **97 Lacs.**
 - Acquired ISO 9001:2008 Through TUV NORD.
- ❖ **Year 2013**
 - Up to March 2013 achieve the turn over **107 Lacs.**
 - Apply Vendor approval for Gujarat Water Supply & Sewerage Board (GWSSB).
- ❖ **Year 2014**
 - Up to March 2014 achieve the turn over **276 Lacs.**
 - Acquired the approval in SABIC.
 - Apply the workshop approval under Indian Boiler Regulation (IBR).
- ❖ **Year 2015**
 - Acquired the work shop approval under Indian Boiler Regulation (IBR).
 - Up to March 2015 achieve the turn over **98 Lacs.**
- ❖ **Year 2016**
 - Up to March 2016 achieve the turn over **300Lacs**
 - Apply Vendor approval for GWSSB.
 - Under updating of EJMA/ASME Bellows design software.
- ❖ **Year 2017**
 - Up to March 2017 achieve the turn over **180Lacs**
 - Renew the IBR Certificate and manufacture under IBR job for Thick Wall Metallic Bellows.
- ❖ **Year 2018**
 - Up to March 2018 achieve the turn over **250Lacs**
 - Approved vendor in BHEL - Bangalore for Metallic Expansion Joints.
 - Approved WPS/PQR/WQR under EN STD for CE PED SEP and Category - 1.
 - Recertification ISO 9001:2015 Through TUV NORD.
- ❖ **Year 2019**
 - Up to March 2018 achieve the turn over **520Lacs.**
 - We shifted our Company to our new location which is 23,735 Square Foot Area with modern facility for manufacturing and office.
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QUALITY ASSUARANCE & OBJECTIVE

- ❖ We have adopted quality management in our organization and our mission is to deliver products and services to the utmost satisfaction and expectation of our customers. This is achieved by continuous improvement and enhancement of our activities and systems at all level. We also get an **ISO 9001:2015** certificate in India Flex Engineering . We are committed to being a customer's oriented organization where quality is the inspiration and innovation on the way ahead. We also believe this no compromise in quality and therefore accuracy in products, response and service after sales is the essence of our being.
- ❖ Today IFE have experienced and dynamic young quality personnel with a mission to assure best quality product and service after sales to the utmost satisfaction and expectation of customers. Quality Assurance is achieved through continuous improvement & enhancement of our activities and application for modern system at all level.
- ❖ To maintain better position as internal manufacturing and supplier of quality product.
- ❖ To conforming the relevant specifications and to build a high level of customer confidence and satisfaction
- ❖ To continual improvement of the quality system...

DESIGN & SERVICES

- ❖ Design and calculation as per EJMA 10th Edition, ASME 2017 SEC VIII DIV I Appendix 26 for Metallic Expansion Joints.

REINFORCED BELLOWS - EJMA

Prime Data	
Nominal Bore in mm [NB] :	588.00
ID of Bellow in mm [Db] :	588.00
Convolution Height in mm [w] :	49.80
Thickness of the Material in mm [t] :	2.50
Convolution Pitch in mm [a] :	55.00
Number of Plies [n] :	1.00
Number of Convolutions [N] :	3.00
Pressure in Mpa <input checked="" type="radio"/> Internal <input type="radio"/> External [Pd] :	4.44
Axial Movement in mm [Extn] :	12.00
Axial Movement in mm [Comp] :	0.00
Is It Torque Transmitting Bellows :	<input checked="" type="radio"/> Yes <input type="radio"/> No
Lateral deflection in mm [Z] :	0.00
Lateral deflection in mm [Y] :	0.00
Angular Rotation in degree [θ] :	0.00
Material Code [Mc] :	SA 240 GR 316L
Temperature in Celcius [Tm] :	395.00
Is It Dual Bellows :	<input checked="" type="radio"/> Yes <input type="radio"/> No
Distance Between Outermost end of the Convolution in mm [Lu] :	0.00
Is it a Special Bellows :	<input checked="" type="radio"/> Yes <input type="radio"/> No
Reinforce Members :	<input checked="" type="radio"/> Fastener <input type="radio"/> Integral
Reinforce Type :	<input checked="" type="radio"/> Ring <input type="radio"/> Equalizing
	<input type="radio"/> e(call) <input type="radio"/> e(rated) <input type="radio"/> e(max)
Cross Sectional metal area in mm ² [Ar] :	750.00
To Calculate S1, S1', S1''	
Collar Length in mm [Lc] :	25.00
Collar Thickness in mm [Lt] :	22.00
No. of equally spaced gussets [ng] :	8.00
Section Modulus of Axis in mm ³ [Zc] :	42000.00
Vibration For Single Bellows	
Cn for Axial Vibration :	0.00
Cn for Lateral Vibration :	0.00
Value of W(Kg) :	0.00
To calculate S2'' [Fasteners]	
Effec. length of Fastener in mm [Lf] :	100.00
Cross sect. metal area in mm ² [A1] :	560.00

Result	
Nc :	11,104.00 Cycles
Psc :	78.65 Mpa
Fir :	41,328.27 N/mm
Fir1 :	13,776.09 N/mm
LSR :	0.00 N/mm
ASR :	0.00 Nm/Deg
ASRL :	0.00 Nm
Ae :	322,000.75 mm ²
TC :	2,160.16 mm
LDC :	165.00 mm
MPc :	131.01 mm
S1 :	86.88 Mpa
S1' :	94.24 Mpa
S1'' :	20.27 Mpa
S2 :	89.79 Mpa
S2' :	78.84 Mpa
S2'' :	99.46 Mpa
S3 :	26.23 Mpa
S4 :	224.88 Mpa
S5 :	36.51 Mpa
S6 :	1,514.21 Mpa
Tot.Stress :	1,726.50 Mpa
Axial Fn :	0.00 hertz
Lateral Fn :	0.00 hertz
Rock Fn :	0.00 hertz
Table Value	
Cp :	0.62
Cd :	1.85
Cf :	1.66
Sy :	101.00 Mpa
Sab :	91.40 Mpa
Eb :	169,300.00 Mpa
Eb1 :	195,000.00 Mpa
Wt :	0.00 Kg
HFp :	4.74 Mpa
Angle of Twist :	0.00 Deg
Ss :	0.00 Mpa
Factors	
q1 :	0.55
q2 :	0.64
Lb/Db :	0.28

Options

- ❖ Design and Selection of Material as per Fluid Sealing Association (FSA) standard for Non-metallic Expansion Joints.
- ❖ Design and calculation as per ASME 2017 SEC VIII DIV I for General Fabrication and Pressure Vessel equipment.
- ❖ Solving and Recommendation of piping Application of Expansion Joints.
- ❖ Emergency Repair, Breakdown, Clam Shell Bellows and Reconditioning of Expansion Joints.
- ❖ Site Visit and Serve report for Expansion Joints.

LIST OF KEY MACHINERY WITH CA PACITY

- ❖ Shearing Machine - 0.3mm to 3mmT X 1500mm Width (Nantong Reliant Co. Ltd - China)
- ❖ Sheet Rolling Machine - 0.3mm to 1.6mmT X 1000mm Width (AKBEND - Germany)
- ❖ Plate Rolling Machine - 1.2mmT to 6mmT X 1500mm Width (Nantong Reliant Co. Ltd - China)
- ❖ Plate Bending Machine - 6mmT to 25mmT X 3000mm Width (By Self - India)
- ❖ Plate Bending Machine - 16mmT to 55mmT X 3000mm Width (By Self - India)
- ❖ Automatic Long Seam Welding Machine - 0.3mmT To 3mmT X 1500mm Width (By Self - India)
- ❖ Hydro Forming Machine - 50NB to 900NB - 200 Ton Capacity (By Self - India)
- ❖ Semi Automatic Punch Forming Machine - 650NB to 7000NB - 200Ton Capacity (By Self - India)
- ❖ Re-rolling Machine - 200NB to 7000NB - (By Self - India)
- ❖ Press Machine - 200Ton Capacity - (By Self - India)
- ❖ Press Machine - 800Ton Capacity - (By Self - India)
- ❖ CNC Oxy-Cut Machine - Up to 150mmT (China)
- ❖ Hydro Testing Pump - Up to 280Bar (Maximator - Germany)
- ❖ TIG/ELECTRIC/MIG Welding Machine - Up to 400Amp (D&H, Warp, Essab and BTH)
- ❖ Welding Electrode Oven - 50 to 400 Deg Cen - 50Kg (Heat & Control System - India)
- ❖ Air Compressor - 10Bar Pressure - (Indo Air Compressor - India)
- ❖ Radial Drilling Machine - Up to 32mm Dia (Rajkot - India)
- ❖ Splicing Iron - Up to 400 Deg Cen (Eewa Engineering - India)
- ❖ Air Plasma Cutting Machine - Up to 25mmT S.S. (Accurate - India)
- ❖ Vacuum Pump - Up to 758.90mmHg (Joyam Engineers & Cons. Pvt. Ltd)
- ❖ EOT Crane – 10Ton – 2nos and 5Ton – 1nos.

MANUFACTURING & TESTING CAPACITY

- ❖ **Pressure Range** - Full Vacuum up to positive pressure at 300Bar.
- ❖ **Temperature Range** - Minus 165Deg Cen to 1400Deg Cen.
- ❖ **Movement Range** - Any of movement subject to service condition and overall length(OAL).
- ❖ **Vibration** - Low to high frequency and low amplitude.
- ❖ **Hydro Forming** - Hydro Forming 50NB to 900NB (Unreinforced, Reinforced & Toroidal)
- ❖ **Semi Automatic Punch Forming** – 650NB to 7000NB. (Unreinforced and Reinforced)
- ❖ **Square and Rectangular Forming** - Up to 6mmT any Shape and Size for square and rectangular.
- ❖ **Non-metallic** - Fabric and Rubber Bellows for any size and shape.
- ❖ **Pressure Vessel & General Fabrication** - Up to 38mmt any shape and size.
- ❖ **Material** -
 - I. Austenitic Grade (SA 240 GR 304,304L,304H,310S,310H316,316L,316H,316Ti,321,904L & 309S).
 - II. Duplex (SAF 2205 UNS S31803, 253MA UNS S30815 ect..)
 - III. Nickel Alloy (Inconel/Incolloy-600,601,625(UNS N06600,6601,6625) 800,800HT,825, N0880,8810.8811,8825).
 - IV. Nickel-Copper Alloy (Monel) – UNS N04400.
 - V. Titanium GR 1.
 - VI. Carbon Steel / Mild Steel.
- ❖ **Testing** -
 1. Non Destructive Testing
 - 1) Radiography Test Examination
 - 2) Liquid Penetrant Test Examination
 - 3) Magnetic Particle Test Examination
 - 4) Ultrasonic Test Examination
 - 5) Air Jet Leak Test Examination
 - 6) Pressure Test Examination (Hydro or Pneumatic Test)
 2. Destructive Testing
 - a) Fatigue Cyclic Life Test
 - b) Squirm Test
 - c) Meridional Yield Rupture Test

OUR GROUP OF COMPANY

- ❖ ROLEX INDUSTRIES (Heavy Machine Shop)

www.rolexind.com

- ❖ AMRUTA ENGINEERS

(Concrete Batching Plant & Canal Paver /Road Paver)

www.amrutaengineers.net

- ❖ ANKUR ENGINEERS (Construction Machinery Spares)

www.ankurengineers.com

- ❖ AAKASH METAL INDUSTRIES (Non-ferrous Foundry)

www.aakashmetal.com

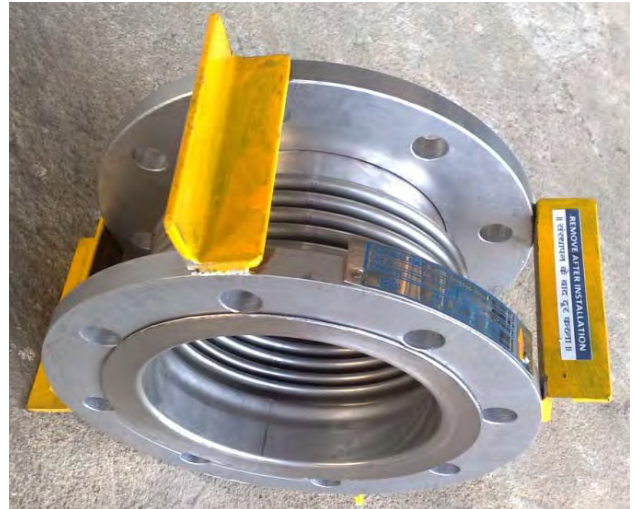
- ❖ ROYAL STEEL INDIA (Heavy Fabrication Shop)

www.royalsteelindia.net

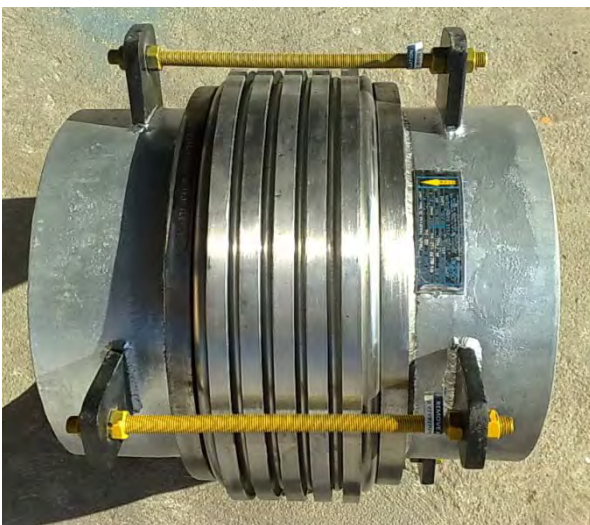
PHOTOS FOR FINISH PRODUCTS

❖ Unreinforced Metallic Expansion Joints :-



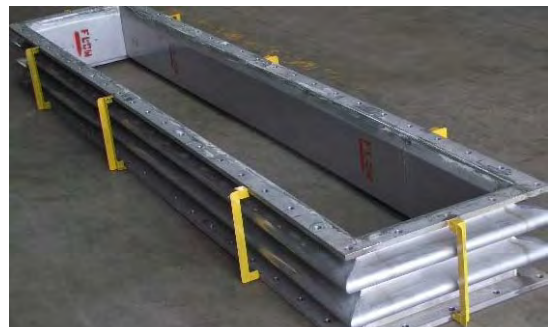


❖ Reinforced and Toroidal Expansion Joints :-





❖ Square and Rectangular Expansion Joints :-



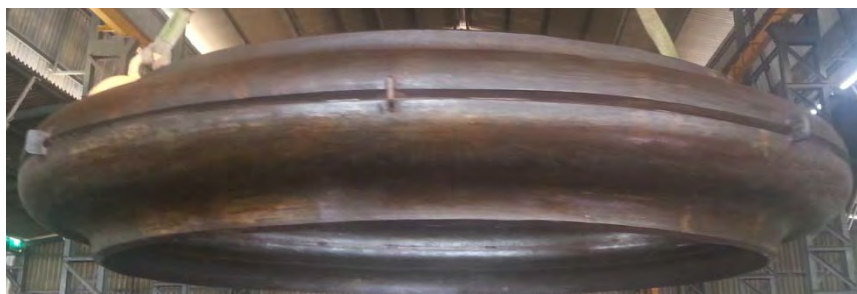


❖ Non-metallic Expansion Joints :- (Rubber and Fabric)





❖ Thick Wall Expansion Joints :-



❖ Pressure Vessel Equipments :-



OUR CLIENTS



INDIA FLEX ENGINEERING

MANUFACTURER OF EXPANSION JOINT & PRESSURE VESSEL

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Gujarat Heavy Chemicals Ltd.



Institute For Plasma Research

પ્લાઝ્મા અનુસંધાન સંસ્થાન



કૃષ્ણકો શ્યામ ફર્ટિલાઇઝર્સ લિમિટેડ
KRIBHCO SHYAM FERTILIZERS LIMITED



Rexroth
Bosch Group



GAETEC



ESSAR STEEL LTD.



CHIRIPAL



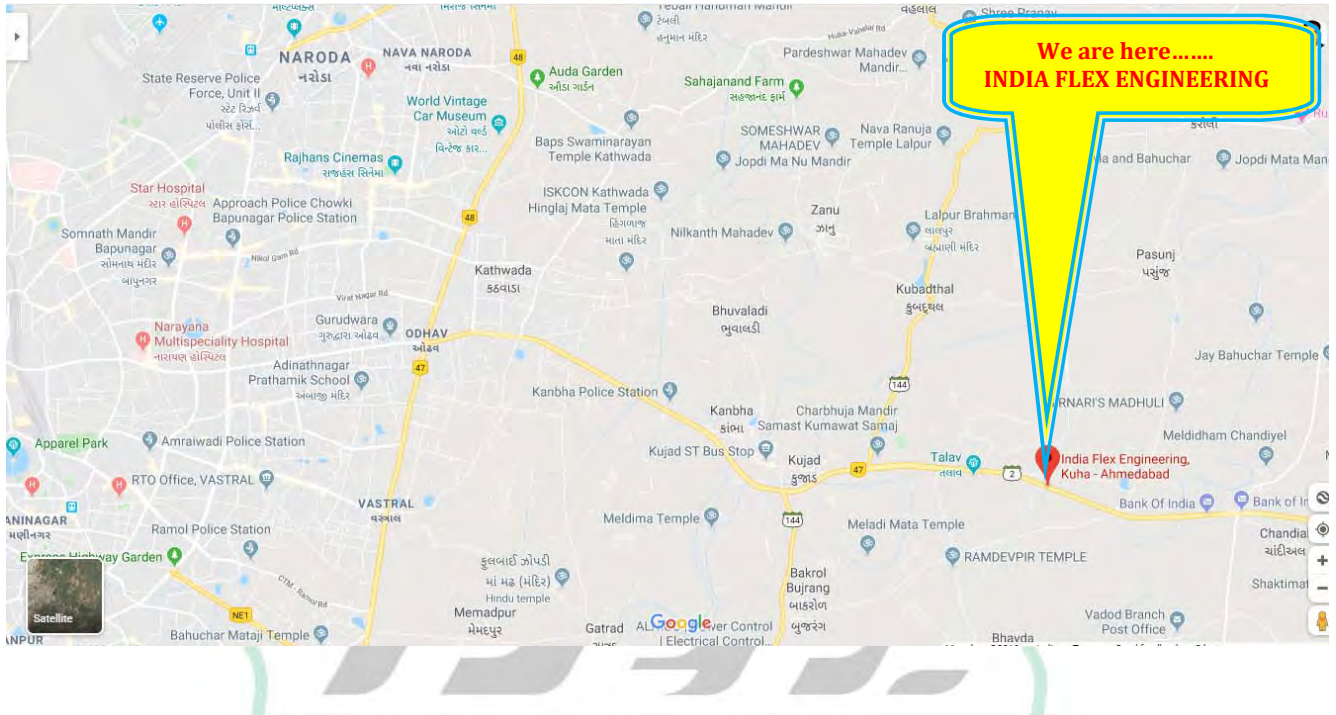
HINDUSTAN DORR-OLIVER LIMITED

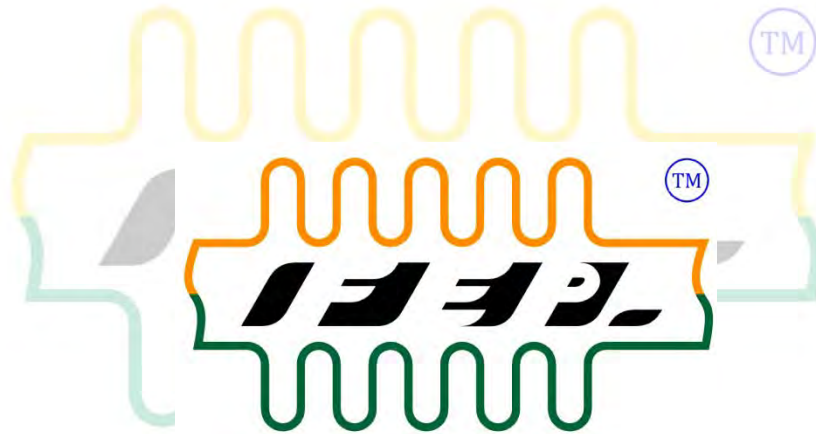


Plot No – B-4 & B-5, Swagat Industrial Park – 3, Ahmedabad – Indore Highway, Kuha - Ahmedabad - INDIA - 382433.

Mobile No - +91 9099809920 Email:- knpatel@indiaflex.com Web:- www.indiaflex.com

WE ARE HERE





Kalpesh Patel

(Mobile No: +91 9099809920)

(Skype ID: - knpatel29)

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Plot No – B-4 & B-5, Swagat Industrial Park - 3, Ahmedabad – Indore Highway,
Village – KUHA - AHMEDABAD – INDIA – 382433.

Email:- knpatel@indiaflex.com Web:- www.indiaflex.com & www.indiaflex.net