

**Rubber Expansion Joint** (Hand Built – Custom Sizes)



# FEATURES

- Versatile hand-built construction. Made in the INDIA.
- Single or Multiple Arch Type Design. Open Arch or Filled Arch.
- Exceptional all directional movement capability. •
- Excellent chemical and abrasion resistance. •
- Full vacuum rating (700 mmHG) in all sizes.
- Galvanized retaining rings offered as standard.
- Compensates for minor misalignment and offset. •
- Integrally flanged design, no gaskets required.
- Simple to install and high strength.



#### **HIGHLIGHTS**

- Any drilling standard available (Custom Sizes Available)
- Diameter from 1" up to 120" (25 mm to 300 mm)
- Drilling Standards 150#, PN10, PN16, Table-E and Table-D Etc.
- Pressure Range from Vacuum 700 mmHG up to 35 Kg/Cm<sup>2</sup>

### **CROSS-SECTION**

Item	Part	Material (As per customer requirements)
1	Outer Layer	EPDM/Nitrile/Neoprene/Natural
2	Backup Flanges	Carbon Steel/SS304/SS316
3	Carcass	High Tensile Rubberized Nylon Threads
		+ SS Wire embedded between the bellow
4	Inner Layer	EPDM/Nitrile/Neoprene/Natural
5	Rubber Flange	EPDM/Nitrile/Neoprene/Natural



Notes

 All sizes can be supplied with a filled arch reducing their movements by 50% and increasing the spring rates fourfold.
WARNING: Control units (sold separately) must be used when piping is not properly anchored. Number of rods are dependent upon maximum field test pressures. Expansion joints may operate in pipelines carrying fluids at elevated temperatures and pressures, so precaution should be taken to ensure proper installation and regular inspection. Care is required to protect personnel in the event of leakage or splash. Adequate floor drains are always recommended. 6.) Movements are non-concurrent. Contact KIRAN RUBBER INDUSTRIES for concurrent movements.

<sup>1)</sup> All Type-B parts listed are designed for 700 mmHG (full vacuum) 2.) Maximum operating temperature of 140 deg C for EPDM, 120 Deg C for Neoprene & 95 Deg C for Nitrile & 65 Deg C for Natural Rubber

# FILL IN YOUR DIMENSIONS





Quarter Section View

Half Section View

No.	ID	OD	PCD	No. of Holes	Hole Dia	Length	Rubber FIng Thk	Metal FIng Thk	QTY. (Nos)	Design Pressure	Test Pressure
1											
2											
3											
4											





**Optional Filled Arch** Construction Also Typical for Other Styles

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### **ACCESSORIES**

## METAL RETAINING RINGS

Required for use in all applications, metal retaining rings provide a metal surface to distribute bolting pressure equally, preventing flange damage during bolt tightening.

- Standard material: carbon steel with corrosion-resistant coating.
- Galvanized or Stainless Steel also available.
- Usually made in 10 mm Thickness.





# **CONTROL UNITS AND TIE RODS**

Control units are recommended on most applications to prevent damage due to excessive pipe movements. Control units consist of two or more tie rods connected Between flanges with Triangular end plates called Gussets.

- Triangular end plates (gussets) have two holes for bolting securely to flange and one hole to accommodate the connecting tie rod.
- Each rod incorporates double nuts on each end to keep the expansion joint from over-elongating due to pressure thrust forces.

# METAL FLOW LINERS (INNER SLEEVE)

Designed to extend service life by providing the tube protection from abrasive materials or solids, especially in high-velocity applications. The flow liners are flanged at one end, installed at the head of the flow, and tapered to a 5° angle to allow lateral deflection.

- Available in MS and SS 304 and 316.
- Usually manufactured in 3 or 5 mm thickness.





### NUT, BOLTS & WASHER (FASTENERS)

Hex Head Bolt Fasteners made of MS or SS used for bolting the expansion joints in place. Usually galvanised and SIZES are made available as per your requirement.

- Available in MS, SS and Galvanised form.
- Most common one is Hex Head Bolts with standard BSP threading

