REAL HYDROFIT & CO.®

Rubber Expansion Joint

ISO 9001:2008 CERTIFIED COMPANY

REAL HYDROFIT & CO.®

METAL EXPANSION BELLOW LINE

RUBBER EXPANSION BELLOW LINE

TEFLON (PTFE) EXPANSION BELLOW LINE

★★★★★

REAL HYDROFIT & CO.®

RUBBER EXPANSION JOINT

All our products are subjected to all types of stresses , hence proper designing is done to take care of movement, pressure, temperature, service life of materials and corrosion.

Applications:
Expansion joints are utilized in a very wide range of process applications:

- Petrochemical
- Polypropylene / Ethylene
- Power Plants
- Nuclear Plants
- Steel Mills
- Styrene
- Others...

OUR PRODUCT RANGE

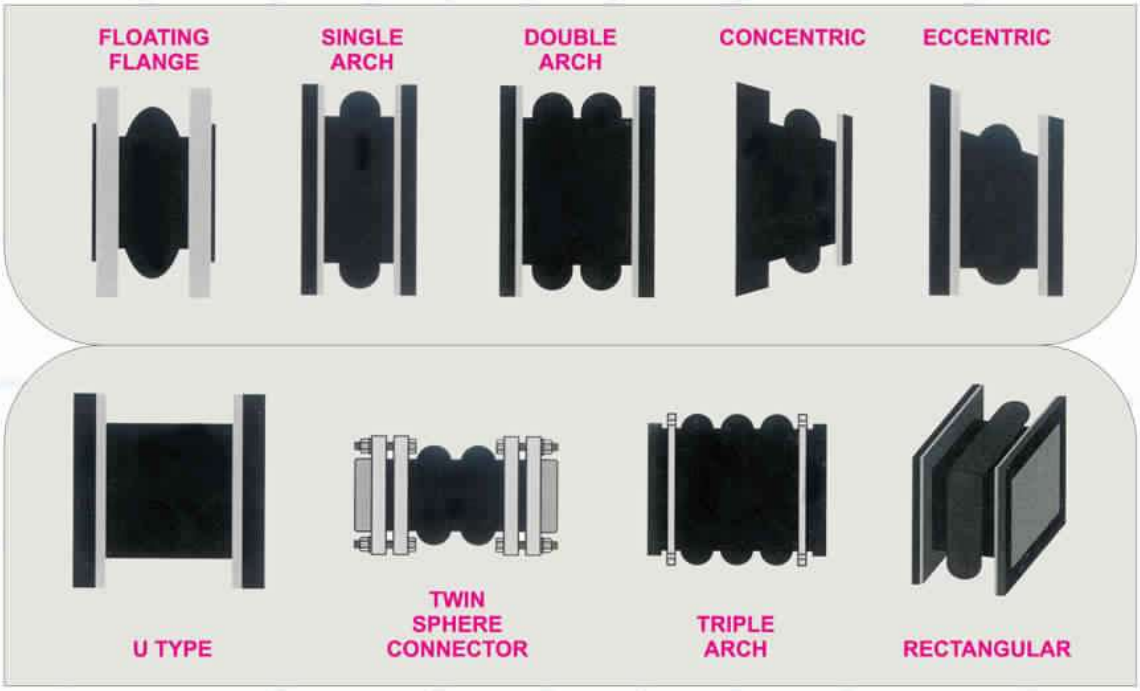
★ Please send your request for detailed technical information on - 66573952 or E-mail: reohydesales@gmail.com
sales@realhydrofit.com

PRODUCT RANGE

Rubber Expansion Joints

Rubber expansion joints are flexible connectors made from elastomers, designed to accommodate the different types of movements encountered on different types of process equipments.

- Noise reduction
- Vibration Isolation
- Stress neutralisation: axial, lateral, angular and torsional
- Misalignment compensation at plant start-ups.



Rubber Expansion Joints are used to transport fluids under a wide range of pressures (positive or vacuum) and temperatures.

Fabric Expansion Joints : Fabric Expansion joints are composite structures, combining different materials and unitising their combined thermal, chemical, mechanical resistance and fatigue properties in order to provide technical solutions for specific applications. They are normally used for -

- Absorbing thermal expansion
- Allowing axial, lateral and angular motion
- Fabric Expansion Joints can be provided in different shapes (round, rectangular or others)

★★★★★

REAL HYDROFIT & CO.®

FLEXIBLE BELLOWS

Flexible Bellows are designed for use in static & dynamic connections and provide the following properties.

- **Excellent flexibility** **Pressure resistance**
- **Corrosion resistance** **Good vibration damping**

Bellows are available in a wide variety of configurations to meet various requirements Application and operation condition

PRODUCT RANGE = 2" DIA TO 14" DIA LENGTH: 3 METERS

Quality Maintenance

Our results have been achieved through the company commitment on quality assurance and technological capability. A continuous effort in improvement implements the quality assurance system, procedures and practices needed to meet the highest standards.

Constructions Details:

Flanges

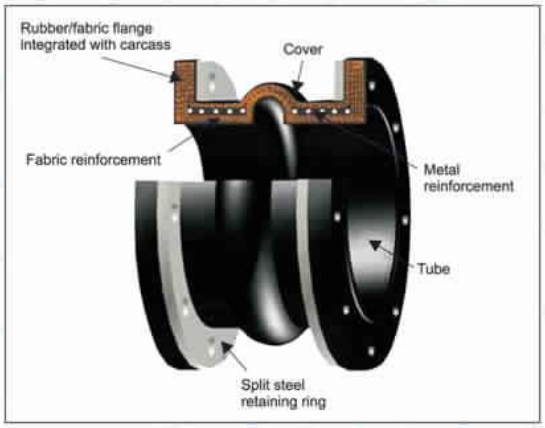
Full faced and made as an integral part of the joint to ensure a tight reliable seal. No gaskets are necessary. Drilled to conform to the bolt pattern of the mating pipe flange.

Tube

A single piece of leakproof lining extending flange-to-flange. Can be furnished in natural rubber, neoprene, chorobutyl, hypalon, Viton(R), nitrile, or other compounds. All rubber is specially formulated to provide maximum sound and heat insulation as well as abrasion resistance.

Carcass

Strong, bias-ply construction, high-strength woven polyester reinforcing fabric between the tube and cover will not rot or mildew and is thoroughly impregnated with a special friction compound to give maximum adhesion under pressure, vacuum and stress.



Steel Reinforcements

Chemically treated, solid-round, endless steel rings or wire embedded in the carcass (with the Geelwflex proprietary method to prevent ring migration) giving maximum strength to the joint. Round and Square or rectangular rings are used so there will be no sharp edges
to cut into the carcass while exing occures, eliminating premature wear.

Steel Retaining Rings

Made of flat-rolled steel, split, beveled and galvanized, painted fluoropolymer coated or electroplated. Rings are required for installation of the joint

Cover

The exterior surface of the joint, compounded of fire retardant neoprene to withstand aging, cracking and corrosion. Other compounds may also be used.

Arch

Arches are built-in as an integral part of the carcass. They function to provide flexibility to the joint in use.

Hand Wrapped Finish

Hand wrapping the finish (although more time consuming in manufacture) insures individual attention so that maximum pressure for curing has been established.

★ Please send your request for detailed technical information on - 66573952 or E-mail: reohydesales@gmail.com
sales@realhydrofit.com

RUBBER EXPANSION JOINTS (WIDE ARCH)

Construction details:

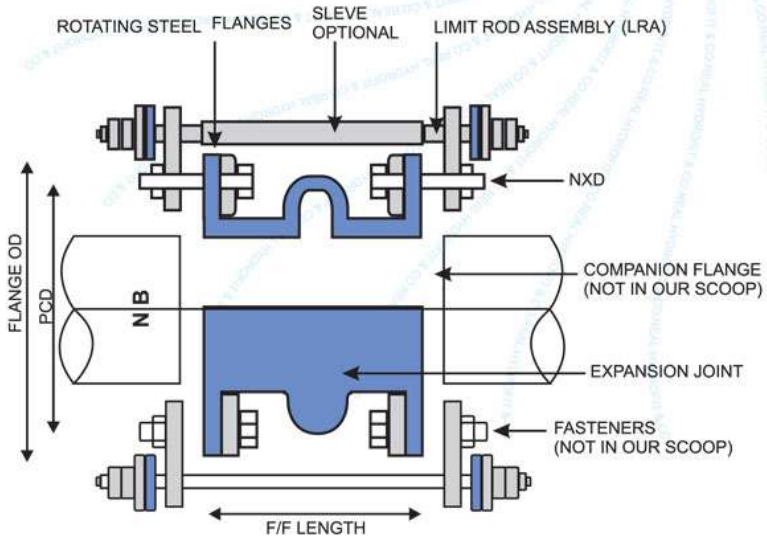
Body:
The body consist of fabric and various rubber compound reinforced with steel rings for better strength. High quality synthetic fabric is used for standard joint for temperatures range upto 80°C for temperature beyond 80°C and upto 120°C subjected to pressure and or vaccum. Butyle rubber with synthetic fabric is used in construction of expansion joints.
Expansion joint cover is formed from Natural or synthetic rubber selected to suit services conditions. A special Hypalon paint is used to coat the cover for protection against occasional contact with oil and to resist weathering, Ozone and corrosive fumes.

Metal Flange: REAL RUBBER EXPANSION Flanges are normally full face with drilling standards BS 10-2009, ANSI B 16.5.1998 BS 4504.3.1-1989, IS 6392-1971, ISO-7005-1:19929E EN 1092-2-1997 Table D, Table E & PN Standards.

Material: Real joints are available in natural rubber chloroprene, Hypalon & Nitrile for temperatures upto 80°C. also availabe in Butyle for temperatures upto 120°C. Rubber Expansion joints are manufactured with cotton/Nylon fabrics and GI/S.S wire Galvanized split steel retaining rings should be installed on all.
These are placed directly against the inside of the flange to prevent damage to the rubber surface when bolts are tightened and also to provide equal distribution of bolting stresses. They are split into 2 or 4 section. Depending on joint size and are drilled to match rubber flange holes.

Control Units: Real control units consist of two or more control rod assemblies extending from flange to flange of expansion joint to minimize possible damage to the expansion joint caused by excessive movement of the pipe line. The control units are set at the maximum allowable expansion of the joint and will absorb the static pressure thrust developed at the expansion joint over compression of the expansion joints can be controlled by installing rubber pipe sleeves over the tie rod. The length of the pipe sleeves is such that the expansion joint cannot be compressed beyond maxmimum allowable compression stated in the chart.

Quality Control Testing:
1. Endurance Testing
2. Low Temperature Flexibility
3. High Temperature Vacuum
4. Axials Transverse Stiffness
5. Proof Pressure



Applications:
1. Fluid, gas chemicals, petroleum and its by products handling system in chemical
2. Cooling and pumping system in power and energy generation plant
3. Central heating and air conditioning, water distribution system in building and construction industry.
4. Machine cooling, fire extinguishing and fluid handling system in naval constructions and ship-building
5. Industrial water and compressed air and blast furnace gas systems in iron & steel industry

* Please send your request for detailed technical information on - 66573952 or E-mail: reohydesales@gmail.com
sales@realhydrofit.com

★★★★★

REAL HYDROFIT & CO.®

REOHYDE

RUBBER EXPANSION JOINTS (WIDE ARCH)

CODE	NOMINAL BORE	NATURAL LENGTH	MAXIMUM ALLOWABLE MOVEMENT (NOT SIMULTANEOUS)			
	NB	NL	COMPRESSION	ELONGATION	TRANSVERSE	TORSIONAL
	(mm)	(mm)	(mm)	(mm)	(mm)	(Deg)
NB – 25	25	150	25	25	10	3
NB – 32	32	150	25	25	10	3
NB – 40	40	150	34	34	12	3
NB – 50	50	150	34	34	12	3
NB – 65	65	150	34	34	12	3
NB – 76	76	150	34	34	12	3
NB – 100	100	150	34	34	12	3
NB – 125	125	150	34	34	12	3
NB – 150	150	150	34	34	12	3
NB – 200	200	150	34	34	12	3
NB – 250	250	200	34	34	12	3
NB – 300	300	200	34	34	12	3
NB – 350	350	200	48	48	22	3
NB – 400	400	200	48	48	22	2
NB – 450	450	200	48	48	22	2
NB – 500	500	200	48	48	22	1

PRESSURE NORMS AND FLANGE DRILLING STANDARDS

Standard RUBBER EXPANSION JOINT (SINGLE ARCH)		Class	Maxm. Working Pressure at 20°C	Maxm. Vacuum Mm of Hg
IMPERIAL	BS 10 - 2009	Table D	100 psi	700
		Table E	200 psi	
	ASME B 16.5 – 1996 Formerly ANSI B 16.5 - 1998	150 Class	150 psi	
		300 Class	300 psi	
METRIC	BS 4504 – 3.1 – 1989 IS 6392 – 1971 ISO 7005 – 1 : 1992 (E) EN 1092 – 2 – 1997 (Formerly DIN 2533)	PN 2.5	2.5 bar	700
		PH 6	6.0 bar	
		PN 10	10.0 bar	
		PN 16	16.0 bar	
		PN 25	25.0 bar	

Test Pressure = 1.5 Maxm. WP | **1 bar = 1 Kg/cm2 = 14.5 psi** | **Drilling detail available on request**

TEMPERATURE RATINGS

CLASS I	Standard	-10° to 70°C
CLASS II	Optional	-10° to 105°C
CLASS III	Optional	-10° to 120°C

* Please send your request for detailed technical information on - 66573952 or E-mail: reohydesales@gmail.com
sales@realhydrofit.com

★★★★★

REAL HYDROFIT & CO.®

RUBBER EXPANSION JOINTS (WIDE ARCH)

Maxm. WP Drilling Standards			PN 10 BS 10 Table D			PN 16 BS 10 Table E		
NB	LENGTH	FLANGE OD d	PCD	nx d	LRA	PCD	nx d	LRA
mm	mm	mm	mm	mm	nos	mm	mm	nos
020	125	102	073	4 x 14	2	073	4 x 14	2
025	125	114	083	4 x 14	2	083	4 x 14	2
032	150	121	087	4 x 14	2	087	4 x 14	2
040	150	133	098	4 x 14	2	098	4 x 14	2
050	150	152	114	4 x 18	2	114	4 x 18	2
065	150	165	127	4 x 18	2	127	4 x 18	2
080	150	184	146	4 x 18	2	146	4 x 18	2
100	150	216	178	4 x 18	2	184	8 x 18	2
125	150	254	210	8 x 18	2	210	8 x 18	4
150	150	279	235	8 x 18	2	235	8 x 22	4
200	150	337	292	8 x 18	2	292	8 x 22	4
250	200	406	356	8 x 22	2	356	12 x 22	4
300	200	457	406	12 x 22	2	406	12 x 26	4
350	200	527	470	12 x 26	3	470	12 x 26	4
400	200	578	521	12 x 26	3	521	12 x 26	4
450	200	641	584	12 x 26	3	584	16 x 26	4
500	200	705	641	16 x 26	4	641	16 x 26	4
550	250	762	699	16 x 29	4	699	16 x 29	4
600	250	826	756	16 x 29	4	756	16 x 32	4

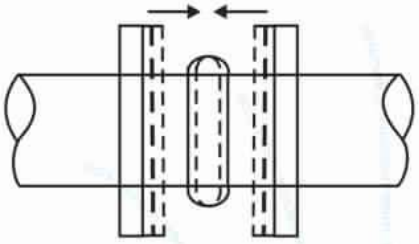
NOMENCLATURE:

NB	Nominal Bore		
PCD	Pitch Circle Diameter	RT	Room Temperature
NP	Nominal Pressure = Maxm WP	n	No of Holes
Maxm WP	Maximum Allowable Working Pressure at RT	d	Diameter of hole
Test Pressure	1.5 X Maxm WP	LRA	Limit rod assembly

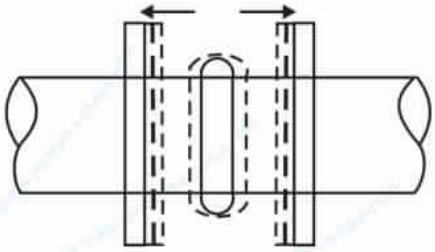
OUR PRODUCT RANGE

* Please send your request for detailed technical information on - 66573952 or E-mail: reohydesales@gmail.com
sales@realhydrofit.com

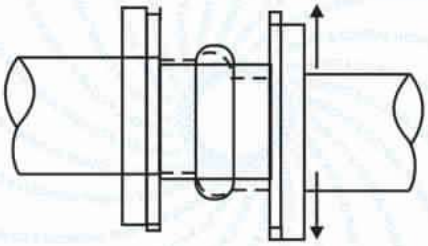
DEFINITION OF MOVEMENT



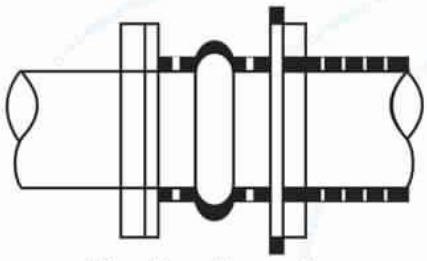
Axial Compression
Reduction of face-to-face dimension measured along the axis.



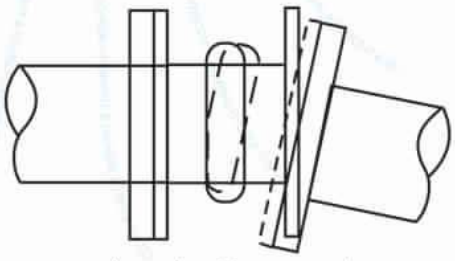
Axial Elongation
Increase of face-to-face dimension measured along the axis.



Transverse or Lateral Movement
The movement of the joint perpendicular to the axis.



Vibration Absorption
The movement of the joint due to vibrations which are effectively intercepted and insulated against transmission to remainder of system.



Angular Movement
The displacement of the longitudinal axis of the joint from its initial straight line position (a combination of axial elongation and axial compression).

Installation Flange Expansion Joints

Key Factors for Installation

REAL rubber expansion joints are supplied ready for installation. Following advises are however to be taken into consideration in order to obtain a good performance and prolonged service life of the expansion joint.

Fixed points

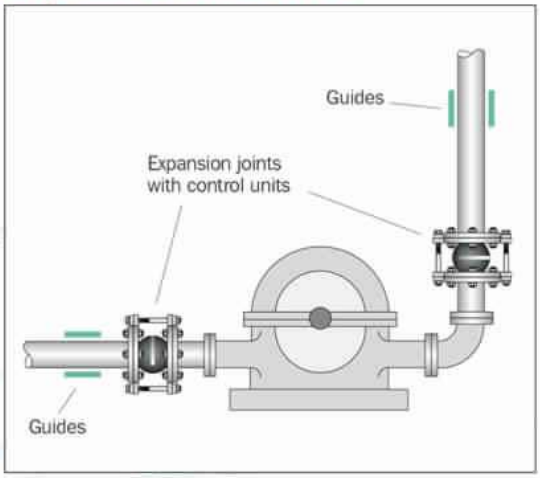
An expansion joint acts as a piston by the forces arising from the internal pressure. To prevent the pipes from damage they are to be properly anchored in order to take care of these reaction forces (Fr). The reaction force of an expansion joint is calculated by the following formula:

Fr = Q x P x 0.01

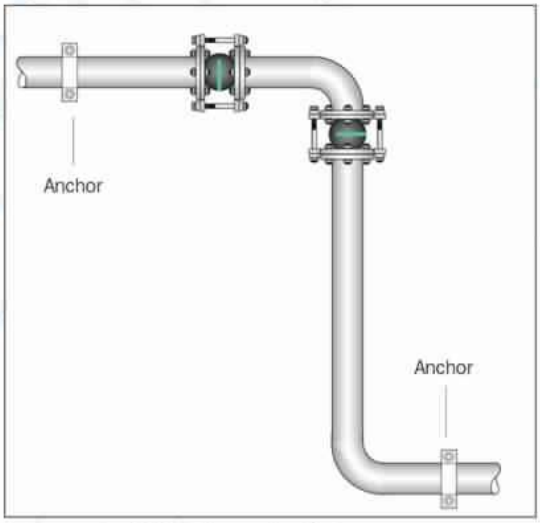
Fr = reaction force in kN.
Q = effective cross sectional area in cm2.
P = actual pressure in bar or kp/cm2

Installation

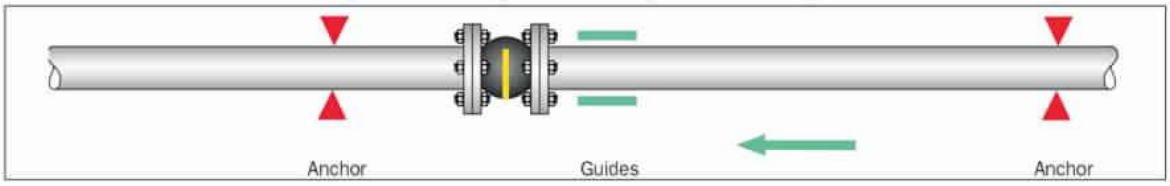
The turnable metal flanges make installation easier and eliminate twist.
The low inherent rigidity of REAL TF expansion joints make for easier accommodation of installation dimensions.
The expansion joints shall be easily accessible and open to regular supervision. It is recommended to let the expansion joints work in compression rather than stretching.
Torsion is not permitted.
Check the permissible movements, temperature, pressure and proper rubber quality before installation.



Pressure-restrained expansion joint on pump (with tie bar). Absorb vibrations and thus relieve pressure on the machine housing.



Arrangement with lateral expansion joints.



★ Please send your request for detailed technical information on - 66573952 or E-mail: reohydesales@gmail.com
sales@realhydrofit.com

★★★★★

REAL HYDROFIT & CO.®