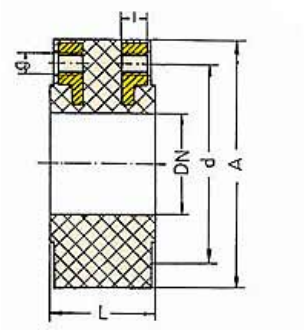
Manguito Antivibration Oria



DIMENSIONS AND CHARACTERISTICS

ϕ Nominal DN mm.	L mm.	d	A	Work pressure kg/cm2	DRILL THREAD		
					Nº	ϕ H	I
20	70	75	105	10	4	M.12	14
25	70	85	110	10	4	M.12	16
32	70	100	140	10	4	M.16	16
40	70	110	150	10	4	M.16	16
50	70	125	165	10	4	M.16	16
65	70	145	185	10	4	M.16	16
80	70	160	200	10	4	M.16	18
100	70	180	220	10	8	M.16	18
125	70	210	250	10	8	M.16	18
150	70	240	285	10	8	M.20	18
200	90	295	340	10	8	M.20	20

FIELD OF APLICATION

The ORIA Antivibration sleeves prevent noises from propagating and absorb the vibration effects of the machines and elements acting in fluid transmission systems.

CONSTRICTION

These sleeves consist of an antivibratory synthetic rubber centre stuck on to metal flanges which permit attachment to the tubing.

WORKING CONDITIONS

The ORIA Antivibration Joints are designed for a maximum pressure of 10 kg/cm2.Withstand temperatures from 20-100ºC. Resistant to cold and hot water, light acidic and basic solutions.

COMMENTS ASSEMBLY

The ORIA ANTIVIBRATION SLEEVE has been designed as an insulant against the propagation of noises and vibrations in tubing. It should not be used for absorbing dilations, tensions or for compensating displacement of the tubing.

Functions and Advantages

REDUCE VIBRATIONS

The Rubber Expansion Joints isolate or reduce the vibrations caused by the unit. Certain units require a more detailed control of their vibrations than others. For example, pumps and compressors with alternating movements give rise to more forces which throw them out of balance than centrifugal ones. Rubber Expansion Joints reduce the transmission of vibrations and protect the unit from their damaging effects.

DIMINISH SOUND TRANSMISSION

As a consequence of the flow of the fluid (normal wear, corrosion, abrasion, etc.) a disequilibrium is produced in the motor of the unit, giving rise to unpleasant noises. Due to the steel-rubber contacts of the joints and counter flanges he Expansion Joints tend to reduce sound transmission. Joints with rubber flanges reduce sound transmission to a considerable extent.

COMPENSATE LATERAL, TORSIONAL AND ANGULAR MOVEMENTS

Pumps, compressors, ventilators, piping and all other equipment related to the installation suffer disalignments due to wear and tensions in the cast iron fastenings. The Rubber Expansion Joints compensate lateral, torsional and angular movements thus providing prevention against breakdowns and standstills during operation.

COMPENSATE AXIAL MOVEMENTS

Expansion and contraction movemen.ts caused by changes of temperature and hydraulic effects are compensated through adequately positioned Joints. These act as helicoidal springs compensating axial movements.

MINIMUM JOINT LENGTH

Compared to expansion elbows and rings the rubber Joints offer considerable economical advantages. Total installation costs are reduced by the saving of space in the plant, quicker assembly of the installation and supports and lesser loss of pressure.

LIGHT WEIGHT

The relatively light weight of the Rubber Expansion Joints and the fact that no special equipment is required for their positioning contribute to a large extent in the saving of man hours during assembly.

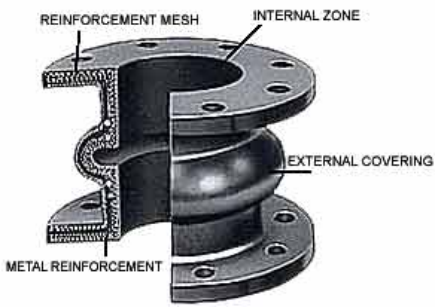
LESSER FORCE REQUIRED TO ACHIEVE FLEXIBILITY

The inherent flexibility of Rubber Expansion Joints allow almost unlimited flexibility for recuperating from the imposed movements thus protecting the unit motor from possible breakdowns.

RESISTENCE TO CORROSION AND EROSION

A large variety of natural and synthetic elastomers and special meshes are available in the industrial market.These materials are treated and combined to offer service under the most diverse working conditions of pressure, temperature, corrosion, abrasion and erosion.

Construction



INTERNAL ZONE

The internal zone consits of a seamless natural synthetic rubber layer extending up to the rubber flange of the Joint. This prevents the fluid being used from coming into contact with the reinforcement mesh. This internal zone may be designed for service in installations using chemical products, petroleum, waste disposal waters and gaseous and abrasive products.

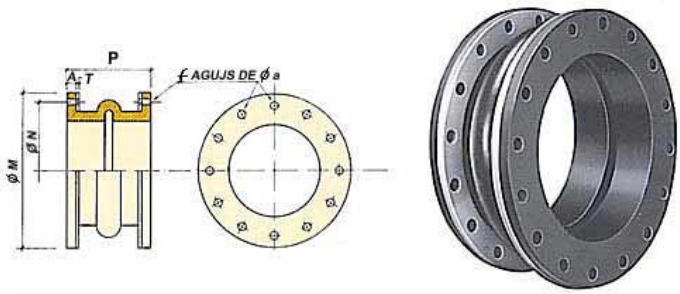
REINFORCEMENT MESH

A high-quality mesh of synthetic material, incorporated between the outer covering and the internal zone, permits the Joint to function at the pressures for which it is designed.

METAL REINFORCEMENTS

Metal rings or wire, embedded in the outer covering to reinforce the Joint, allow it to support the required working pressure and provide it with the rigidity necessary for operating in vacuum.

Junta Flex



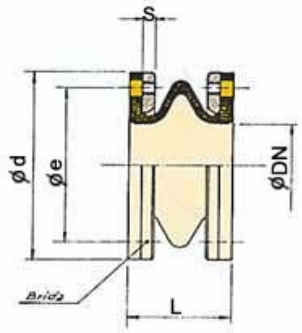
GENERAL DIMENSIONS								TECHNICAL CHARACTERISTICS					
ϕ Nominal mm.	Length P mm.	A	T	M	N	Boring f	Boring ϕ d	Escuare inch effec. sect.	Work presure Kg/cm²	Size mm. 	Compression mm. 	Shaft offser mm. 	Weight witch flanges Kgs.
20	150	10	8	105	75	4	14	12	10	7	7	3,5	1,5
25	150	10	8	115	85	4	14	14	10	7	7	3,5	1,7
32	150	10	8	140	100	4	18	17	10	7	7	3,5	1,9
40	150	14	8	150	110	4	18	19	10	10	10	10	2,4
50	150	14	10	165	125	4	18	33	10	10	10	10	3
65	150	14	10	185	145	4	18	74	10	10	10	10	4,5
80	150	14	10	200	160	8	18	87	10	10	10	10	5
100	150	15	10	220	180	8	18	95	10	10	10	10	6,1
125	150	15	10	250	210	8	18	145	10	10	10	10	7,1
150	150	18	10	285	240	8	23	178	10	10	10	10	8,7
200	200	22	10	340	295	12	23	376	8	10	10	10	14
250	200	22	15	405	355	12	27	565	8	10	10	10	21
300	200	24	15	460	410	12	27	764	6	10	10	10	25
350	200	24	15	520	470	16	27	1.055	6	10	10	10	29
400	200	26	15	580	525	16	30	1.310	6	10	10	10	39
450	200	26	15	640	585	20	30	-	6	10	10	10	-
500	200	26	15	715	650	20	33	-	6	10	10	10	-
500	250	12	12	670	620	20	25		10	10	40	30	
600	250	12	12	780	725	20	30		10	10	40	30	
700	250	12	12	895	840	24	30		10	10	40	30	
800	300	15	15	1.015	950	24	33		10	10	40	30	
900	300	15	15	1.115	1.050	28	36		10	10	40	30	
1000	300	15	15	1.230	1.160	28	36		8	10	35	30	
1.100	350	15	20	-	-	-	-		8	10	35	25	
1.200	350	15	20	1.455	1.380	32	40		8	10	35	25	
1.300	350	15	20	-	-	-	-		8	10	35	25	
1.400	350	15	20	1.675	1.590	36	43		8	10	35	25	
1.500	350	20	20	-	-	-	-		8	10	35	25	
1.600	350	20	20	1.915	1.820	40	50		8	10	35	25	
1.800	350	20	20	2.115	2.020	44	50		6	10	35	25	
2.000	350	20	20	2.325	2.230	48	50		6	10	35	25	
2.200	350	25	25	2.550	2.440	52	58		6	10	30	25	
2.400	350	25	25	2.760	2.650	56	58		4	10	30	25	
2.500	350	25	25	-	-	-	-		4	10	30	25	
Flanges acc. to DIN 2.502 -PN 16 Standards. ST-35								Test pressure to be 1,5 time work P					

DEPRESSIONS

Junta-Flex can keep going without giving way in tubing in depression seeing to it that the tubing suffers no extension and anticipating the moment when metal rings are needed inside the inner diameter.

Nominal ϕ	Temperature	Value of deprssion in the tubing in mm. Hg.									
		0	100	200	300	380	400	500	600	700	760
20-65	100ºC	Without rings									
80-200	100ºC	Without rings						With rings			
250-400	100ºC	Without rings		With rings							

Junta Super-Flex



SUPER-FLEX COMPENSATIONS JOINTS - Type S. F.

ϕ DN	L	ϕ d	DIN-PN-16 Flanges Others DIN or ASA on demand						Movements			
			ϕe	s	Nº of drill holles	Thread	Weight Kgs.	Effective area	Axial	Compression	Lateral	Angular
50	120	165	125	15	4	M-16	4	125	20	20	25	5º
65	120	185	145	15	4	M-16	5	179	20	20	25	5º
80	120	200	160	15	8	M-16	6	193	20	20	25	5º
100	120	220	180	15	8	M-16	7	379	20	20	25	5º
125	120	250	210	15	8	M-16	9	438	20	20	25	5º
150	120	285	240	15	8	M-20	11	482	20	20	25	5º
200	120	340	295	18	12	M-20	14	759	20	20	25	5º
250	120	405	355	18	12	M-22	18	1045	20	20	25	5º
300	120	460	410	18	12	M-24	22	1463	20	20	25	5º
350	120	520	470	18	12	M-24	27	1760	20	20	25	5º
400	120	580	525	18	16	M-26	35	2145	20	20	25	5º

Temperature: up to 100º

Work pressure: 15 kgs.

Test pressure: 22 kgs.

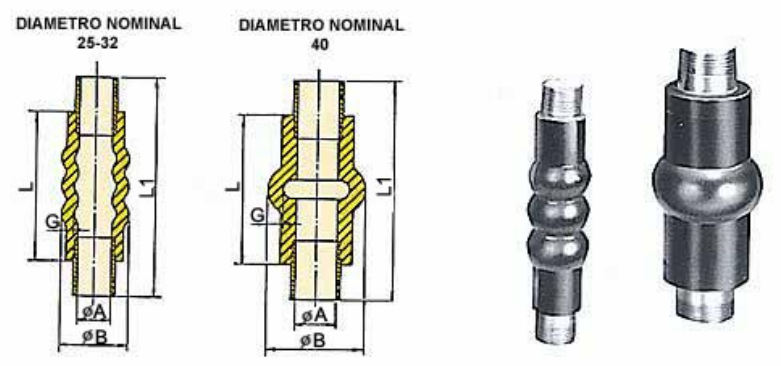
This type of Super-Flex Compensator. Besides demonstrating the properties pointed out under the general characteristics such as compensation of disalignment, vibrations, dilations and contractions, distinguishes itself for its high flexibility in all directions which adds to its technical characteristics, needs less space and absorbs more vibrations.

These joints are specially recommended for applications such as:

- Air conditioning and heating systems.
- PVC tubings and installations.

The Super-Flex Joint is not designed for operation in vacuum.

Mangon Flex



Dimensions mm.					Technical characteristics			
ϕ Nom. A	ϕ Ext.B	L	L1	G	Maximum axial deflections mm.			Pressure atm
					Comp	Trac.	Lateral	
25	55	150	218	10	7,5	7,5	3,5	10
32	66	150	226	12	7,5	7,5	3,5	10
40		150	226	15	10,5	10,5	6	10

Besides enjoying all the advantages of other Compensators of simultaneously absorbing dilations or contractions as well as vibrations and other resonance phenomena, this type of M.F. has dimensions which, due to the absence of flanges, have been reduced to a minimum thereby increase its possibilities of application.
Assembly is simplified as it is carried out at the extremes which are threaded in order to attach them easily to the tubing by means of sleeves, as shown in the table.

CONSTRUCTION

The M.F. sleeve is made up of a rubber body with one or more undulations for increasing its flexibility.
The extremes of the rubber body are fitted with metal bushings integrated through vulcanization.
M.F. sleeves are manufactured to withstand a working pressure of 7 to 9 kgs at a temperature of 80 to 90º. For clean water installations or air please consult us for a detailed study and our recommendation of the ideal elastomer.

Instruction For Assembly

ALIGNMENT

The tubings to be fitted with standard Expansion Joints should be aligned with precision before mounting the Joints. If the Joints are going to be installed with an appreciable disalignment, compression or elongation, these variations should be reduced to fall within the limits of the joint's movements.

EXCESIVE PRESSURES AND TEMPERATURES

The Joints should in no case be submitted to operation conditions which surpass the limits recommended in the technical characteristics tables.

LUBRICANT FOR THE RUBBER FLANGES OF THE JOINT

Apply a thin film of graphite, glycerene or water on the surface of the rubber flanges before mounting the joint. This facilitates the mounting of the joint and permits easy extraction of the same.

FASTENING OF THE JOINT

Insert the screws around the flange and tighten them evenly. The screws are perfectly thightened when the rubber flange border bulges slightly. Examine the screws for tightness, at the latest, one week after the fluid has started circulating. After that, check the tightness periodically.

STORAGE

Spare Expansion Joints should be stored in a cool, dark place, in a horizontal position (not on the borders of the rubber flanges), without any weights on top.

CAUTION WHEN WELDING

Welding operations should not be carried out in the proximity of Expansion Joints to avoid possible damage.
Under the effects of internal pressure and temperature the axial compensators tend to displace themselves laterally and elongate. As a consequence particular attention must be paid to the setting up of the guides and to the fastening points.

GUIDES

Straight ducts should be correctly aligned and the distances between the guides and fastening points, indicated in the figure below, should be maintained.

FIXED POINTS

Each part of the tubing to be compensated should be limited by two points and only one compensator should be mounted between two fixed points. **The fixed points should be equally located in the changes of direction.**
The Fixed points should absorb the axial attraction forces of the compensators as well as the frictional forces of the guide supports. In the following example we observe the effect of the reaction forces which are caused by the internal pressure of the conduction pipe.
Example: If N.D.= 125 and P= 15 kg/cm 2, we have:

F PxS = 15x3,14x6,25= 1.839,8 kg/cm.2

In case vibration absorbers are used the fixed point should avoid the transmission of the vibrations to the tubing, as these could vibrate in resonance

COMPENSATION OF VIBRATIONS

The Rubber compensator should be mounted as close as possible to the vibrating connection. A point of support should have a compensator behind it in order to absorb the effects of the reaction and avoid the transmission of the vibrations.

CONTRACTION

In order to take full rational advantage of de the compensator it is conveniernt to submit it to an initial dilation of about 50% of the maximum for seen contraction .

Example:
If a maximum contraction of more than 10 mm. is forseen for each compensator, it will be necessary to dilait to 5 mm.
Thus a Flex-Joint of ND 150 whose length (L) according to the catalogue is L = 150 should be mounted at 155 mm. between the counter flanges.

The compensator should not support the weight of the conduction pipe. Lateral axial expansion and angular deviation values given in the tables should be respected at all times. In the case of welding operations the compensators should be protected against the heat and welding sparks.

GIDE SUPPORTS

The conduction pipes should be provided with guide supports to prevent them from sagging. **Suspension or pendular supports are not permitted.**

TESTS OF THE INSTALLATION

The fixed points and the conduction guides should be conpletely assembled before carrying out the test. The pressure test should be carried out slowly.
In order to minimize the possible deterioration of the joint, caused by excessive movement of the tubing due to a fault in the anchoring or other elements of the system, or in the case that an adequate anchoring in the appropriate points is not possible for a given structure, it will be necessary to install a control element. This consists of one or two rods with their elastic supports fixed right through the joint, from flange to flange.

Selection

In order to select the ideal Rubber Joint for a particular installatic the following points must be borne in mind:

SELECTION OF THE MODEL ACCORDING TO DIMENSIONAL VARIATIONS

In order to select the Joint model with respect to the dimensional variations, bear in mind that the movements to be compensated are compatible with the displacements admitted by the Joint.

DETERMINATION OF THE DISPLACEMENTS TO BE COMPENSATED

Only the displacements produced by differences of temperature can be calculated, bearing in mind the following coeficients of expansion.

LINEAL EXPANSION IN MILLIMETRES PER METRE AND PER INTERVAL OF 100°C.

Normal steel 1,2

Stainless steel..... 1,6

Aluminium 2,2

Plastics and other materials: Please consult the manufacturer.

The number of Joints to be installed is determined by the quotient of the total expansion of the tubing and the displacement of the Joint.

The maximum ambient and fluid temperatures should always be taken into account.

The tolerances for assembly and movements of the structure, should be specified for each installation.

DETERMINATION OF THE DISPLACEMENTS ALLOWED

In the case of the existence of combined displacements the geometric resultant of the deflections must be borne in mind. This resultant defines a triangle whose area indicates the field of action of the joint and also permits determining the length of the assembly.

SELECTION OF ELASTOMER

The Joint, according to the fluid to be conveyed, must be manufactured in the appropiate elastomer.

- Effective area.
- Compression lenght.
- Expansion lenght.

DISTINGUIS-HING COLOURS	FLUID	ELASTOMER
Red	Acids and liquids of a medium concentration, Temperature L 110º	Butil
Green	Abrasive products, Temperature L 110º	Natural
White	Oils, hydrocarbons, Temperature L 110º	Nitrilic
Yellow	Clean water 110º	Neoprene

PRESSURE

The resistances to pressure are indicated in the tables corresponding to each type of Joint and vary with temperature.

The test pressure has been established at 11/2 times the maximum working pressure.

TEMPERATURE

The selection of the ideal type of elastomer depends working temperature and should be carried out after consulting the table on pages 1 2 -1 3.

FLANGE NORMS

Flanges are supplied with drilled holes according to DIN 2.502 P.N. 16. Please consult for other bores.