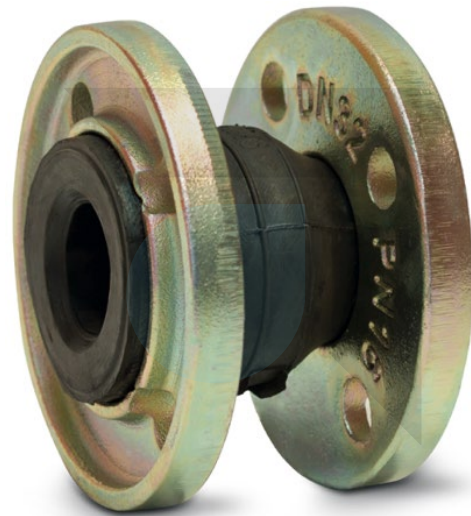




### Product Description

DENZ-E11 Rubber Expansion Joint is a flexible connector that can absorb sounds, shocks, vibrations, physical energy, and thermal energy. Natural or synthetic elastomers are used to make the joints. To increase their strength and resistance to pressure, the rubbers are internally reinforced with fabrics and metal. The use of metal reinforcement can be used externally to control the movement of the system.



### Application Areas

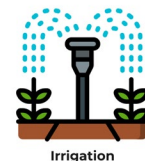
- Hot and Cold Water Systems
- HVAC Applications
- Pumping Stations
- Waste Water Medium

### Versions

- Galvanized Steel Flanged
- Ductile Iron Flanged
- Threaded End
- With Limit Rods

### Production References

Size Range	DN100 - DN1000
Pressure Range	PN10/16
Temperature	EPDM: +80°C NBR: 60°C
Face to Face	DIN30680
Design	DIN30680
Connection	Flanged - EN1092-2
Testing	EN 12266-1
Marking	EN 19



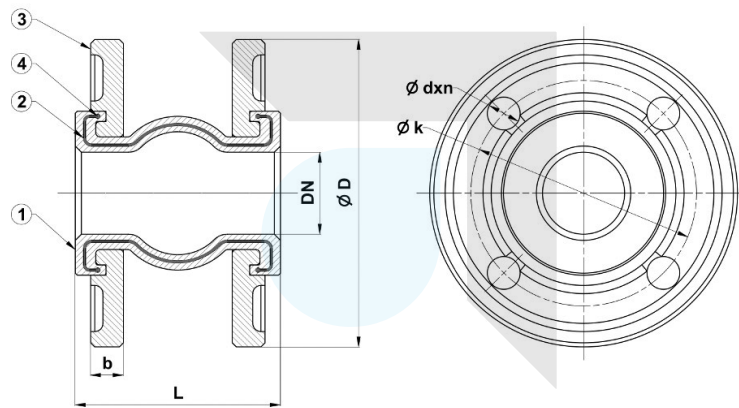


## Product Features



- Flexible Rubber Joints E11 are manufactured with EPDM rubber bodies and galvanized steel flanges. (NBR rubber is optional)
- Limit rods are optional.
- Steel wire and nylon braid fibres make up the synthetic rubber
- The flanges of DENZ Rubber Expansion Joints comply with EN standards. ANSI Class flanges can be ordered according to demand.
- It is one of the main functions of rubber expansion joints to absorb vibrations.
- Pipeline tensions are reduced.
- Maintains pipeline balance by absorbing lateral and angular movements.
- Noises caused by vibration are prevented.
- Temperature-related elongations and contractions are absorbed.
- A reliable way to absorb the effects of water hammer.
- Counter-flange connections do not require additional gaskets.
- It is easy to align flange holes while installing on a line since flanges are rotary type.
- Over the entire service period, no maintenance is required.
- As a result of the lightweight construction, there is no extra force on the pipeline
- Installs easily on pipelines.
- Assists with isolation.
- A vacuum force of 0.07 bar can be withstand.

## Materials

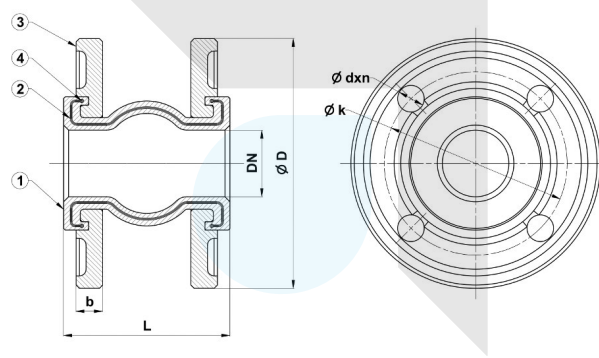


#	Part	Material
1	Body	Rubber EPDM
2	Kord Fabric	Nylon 6.6
3	Flange	Ductile Iron
4	Piston Ring	Carbon Steel





## Dimensions



Size		ØD	Øk	Ødxn	b	L	PN	Unit Weight (kg)
DN	inch							
25	1"	115	85	14x4	16	100	16	1.8
						130		1.8
32	1 1/4"	140	100	18x4	16	100	16	3.3
						130		3.4
40	1 1/2"	150	110	18x4	16	100	16	3.8
						130		3.9
						160		4
50	2"	165	125	18x4	18	100	16	4.5
						130		4.6
						150		4.7
65	2 1/2"	185	145	18x4	18	100	16	5.2
						130		5.3
						150		5.4
80	3"	200	160	18x8	20	100	16	6.7
						130		6.8
						150		6.9
100	4"	220	180	18x8	20	100	16	7.8
						130		7.9
						150		8
125	5"	250	210	18x8	22	120	16	9.6
						130		9.7
						150		9.9
						180		10.1
150	6"	285	240	22x8	22	120	16	11.8
						130		12
						150		12.2
						200		12.5

Units: mm / indicative dimensions & weights

Size		ØD	Øk	Ødxn	b	L	PN	Unit Weight (kg)
DN	inch							
200	8"	340	295	22x12	24	16	120	16.8
							130	17
							140	17.3
							175	17.7
250	10"	405	355	26x12	26	16	210	18
							115	20
							130	21
300	12"	460	410	26x12	28	16	175	22
							250	23.5
							130	28
							190	29.5
350	14"	520	470	26x16	30	16	210	30
							260	31
							275	31.5
							160	42.4
400	16"	565	515	26x16	26	240	10	46
							210	44
450	18"	615	565	26x20	28	250	10	51
							230	44.5
500	20"	670	620	26x20	28	270	10	57
							260	70
600	24"	780	725	30x20	28	300	10	73
							260	70
700	28"	895	840	30x24	30	220	10	110
							260	70
800	32"	1015	950	33x24	32	190	10	125
							250	129
900	36"	1115	1050	33x28	34	250	10	180
							260	70
1000	40"	1230	1160	36x28	34	250	10	245
							260	70

Units: mm / indicative dimensions & weights



## Key Benefits of Rubber Expansion Joints

### Movement Absorption

DENZ Rubber Joints can absorb greater movements when compared to similar length metal expansion joints. Equipment such as pumps, compressors and piping can move out of alignment due to wear and settling of their supporting structures. Rubber expansion joints can routinely manage the resulting lateral, torsional and angular movements whilst strategically located rubber expansion joints can mitigate thermal expansion and contraction movements. Metal joints typically have a lower lateral movement capability and the allowance for movement offered by rubber expansion joints has positive benefits in extending system life and maintenance intervals.

### Vibration Reduction

Reducing vibration is important to prevent unbalanced forces building up to a level where they can damage a fluid system. Rubber pipe and Expansion Joints dampen these disturbances and provide resistance against shock stress from hydraulic surge and water hammer.

### Sound Reduction

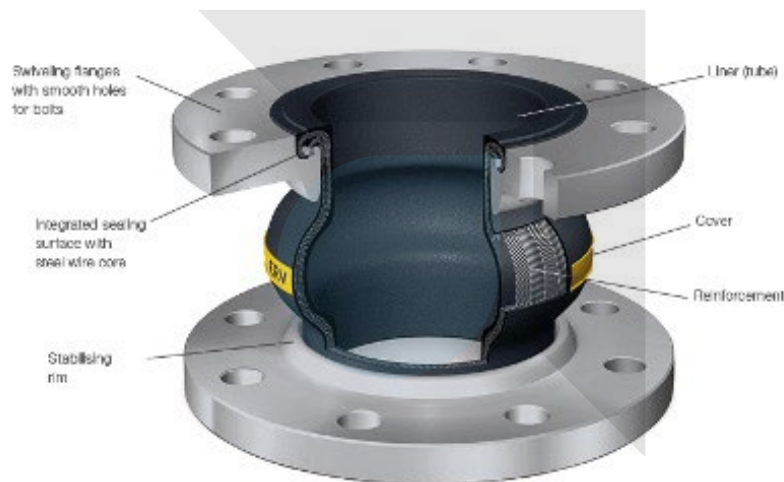
As systems age and wear, imbalances occur which cause unwanted noise. Rubber expansion joints dampen sound transmission with their rubber to steel interface. When compared to full metal joints, thick-walled rubber expansion joints offer a much higher reduction of sound transmission.

## 4 Corrosion, Abrasion and Erosion Resistance

Metal joints are typically thin wall elements, having a wall thickness anywhere between 0.15mm to 2mm. Rubber joints are thicker, from 12mm to over 25mm. Metal expansion joints are susceptible to chemical erosion and abrasion whereas rubber joints are resistant to abrasion and erosion.

A wide variety of natural, synthetic, and special purpose elastomers and fabrics are available to create high performance rubber expansion joints to meet challenging operating conditions. Special polymers resist chemicals, oil, sunlight, acid fumes, ozone and external coatings can be added for further protection.

DENZ Expansion Joints may use PTFE (polytetrafluoroethylene) and FEP (fluoroethylene propylene) liners within the joint body. When fluoroplastics are used in rubber expansion joints this results in better thermal stability, low friction and resistance to corrosive fluids, chemicals, abrasion and erosion.





## Key Benefits of Rubber Expansion Joints

### Fatigue Resistance

The ability to flex and absorb gives rubber expansion joints a distinct advantage over DENZ Metal Joints since natural and synthetic elastomers are not subject to fatigue breakdown, loss of ductility or electrolytic reaction. This results in a long-lasting expansion joint.

### Ease of Installation

Rubber expansion joints are light in weight compared to metal expansion joints, making them easy to handle and install. The vulcanized rubber and fabric flanges of elastomeric expansion joints are integrated and therefore do not require additional gaskets which also eliminates the need for ongoing gasket maintenance checking. Additionally, elastomeric expansion joints can equalize the uneven surfaces of the pipe flange to provide a gas tight seal.

### Industry Applications

Denz Rubber Expansion Joints appear in all fluid systems. Rubber expansion joints relieve stress from movement, isolate vibration, reduce noise and compensate for misalignment in piping systems. Rubber expansion joints do not replace metal expansion joints in all applications but are recognized as the best choice for many applications involving high vibration and sound dampening.

## 5 Construction

**Carcass:** The body of DENZ Expansion Joint consisting of fabric and / or interior metal reinforcement.

**Cover:** The natural or synthetic rubber exterior of the joint which protects the carcass from damage.

**Fabric Reinforcement:** A synthetic or natural fabric between the tube and cover that flexibly supports the expansion joint for movement or pressure.

**Metal Reinforcement:** Solid rings or wire embedded in the carcass which strengthen the expansion joint to withstand high pressure or vacuum.

**Tube:** A protective, leak-proof lining tube that extends through the bore to the outside edges of the flanges to eliminate the possibility of the fluids penetrating the carcass and weakening the fabric.

