Metal Bellows Expansion Joint With Tile Rods Carbon Steel Stainless Steel

Our Product Introduction

Basic Information

- Place of Origin: CHINA
- Brand Name: DEYE
- Certification: ISO9001:2015 PED
- Model Number: DY-RJ-U05
- Minimum Order Quantity: 10PCS
- Price: USD2-USD25 each
- Packaging Details: carton box+ ply wooden cases or carton+ Pallets
- Delivery Time: 20 days for usual order, 7 days for stocked items
- Payment Terms: T/T, L/C, D/P
- Supply Ability: 1000pcs one month

Product Specification

- Types: Single Sphere Type, Twin Sphere Type, Double Sphere Type, Double Ball Type, Union Fittings Type
- Rubber Material: EPDM, NBR, BUNA, Neoprene, VITON, PTFE, Hypalon
- Flange Type: HDG, Electric. Galvanized, Zinc Coated, Stainless Steel
- Rating: PN10 PN16 PN25 CL150LBS 150#
- Size: 2" (DN50MM)-144"(DN3600MM)
- Highlight: **Metal bellows expansion joint**, **Carbon Steel bellows expansion joint**, **Stainless Steel bellows type expansion joint**

Product Description

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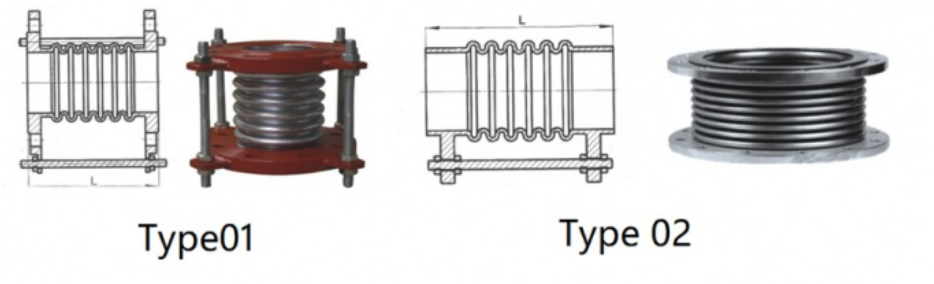
Metallic Expansion Joint /Metal expansion joint (also called compensator) is compensating elements for thermal expansion and relative movement in pipelines, containers and machines. An expansion joint is a complete unit with metal, rubber or fabric bellows and end connections and accessories, as well as optionally, internal linings, outer covers, etc … Other terms used: compensator, flexible.

Size Range:
1”-48”

Project Material Grade:
Carbon Steel: ST37, Q235, A105
Austenitic Stainless Steels: 304 SS, 321 SS, 304L SS, 347 SS, 310 SS, 316 SS, 316L SS, 904L
Nickel Alloys: Inconel 600, Inconel 601, Inconel 625, Incoloy 800, Incoloy 800H, Incoloy 825, Monel 400,

Technical Drawings of meal expansion joint/ Metallic Expansion Joint



Type 01 Dimension

Size	Ripple	Working Pressure(bar)						Effective	Max.	Supplied Length(mm)			
		10	16	25	10	16	25	area	OD				
DN	qty	Axial Compensation(mm)			Force for Compress(N/mm)			(cm^2)	(mm)	Flanged End		Welded End	
32	8	20	18	15	26	63	98	16	225	160	250	264	280
40	8	20	18	15	44	89	106	23	244	164	259	269	289
50	8	20	18	15	70	70	138	37	259	172	276	282	306
65	8	26	22	19	44	55	68	55	270	215	294	300	322
80	8	34	28	25	33	41	54	81	284	240	338	344	366
100	6	40	35	29	75	93	117	121	304	235	317	323	345
125	5	38	34	29	59	74	92	180	334	282	314	316	342
150	5	40	34	29	62	78	97	*257*	364	282	339	338	367
200	4	42	38	34	68	78	111	479	442	280	348	348	372
250	4	59	52	47	42	45	*55*	769	507	315	379	415	379
300	4	59	52	47	59	65	71	1105	562	366	427	466	467

Type 02 Dimension

NPS	Ripple	Working Pressure(bar)						Effective	Max.	Supplied Length(mm)			
		10	16	25	10	16	25	area	OD.				
DN	qty	Axial Compensation(mm)			Force for Compress(N/mm)			(cm^2)	(mm)	Flanged End		Welded End	
32	16	41	36	31	14	32	47	16	225	224	291	316	321
40	16	41	36	31	22	45	*55*	23	244	230	304	319	334
50	16	41	36	31	35	35	70	37	259	240	342	347	372
65	12	38	34	29	32	40	50	55	270	260	334	340	362
80	10	49	43	38	21	26	33	81	284	270	368	374	390
100	10	64	57	*49*	40	50	63	121	304	305	381	387	409
125	9	66	58	50	36	45	56	180	334	382	386	388	414
150	8	64	54	46	51	59	65	257	364	356	399	402	427
200	6	59	53	48	52	58	78	479	442	340	402	402	426
250	6	87	79	71	35	39	47	769	507	393	459	493	399
300	6	87	79	71	37	41	45	1105	562	464	525	564	565

What applications are metal expansion joints commonly used in?

Metal bellows and expansion joints are commonly used in a variety of applications to compensate for thermal expansion, vibration, misalignment, and other types of movement in pipelines and equipment. Here are some common applications for metal bellows and expansion joints:

•HVAC systems: Metal bellows and expansion joints are used in heating, ventilation, and air conditioning (HVAC) systems to

absorb thermal expansion and contraction caused by changes in temperature and pressure.
•Aerospace industry
•Petrochemical industry
•Power generation
•Medical equipment
•Automotive industry
•Semiconductor industry: Metal bellows and expansion joints are used in the semiconductor industry to compensate for movement and vibration in vacuum chambers and other equipment.

How to select the right metal expansion joint for my specific application?

Selecting the right material for metal bellows and expansion joints is important to ensure they are durable and reliable in specific industry applications. Here are some factors to consider when selecting the material:

Temperature: The material should be able to withstand the temperature range of the application. Different materials have different temperature limits, so it's important to choose a material that can handle the expected temperature range.

Corrosion resistance: In industries where corrosive substances are present, it's important to choose a material that is resistant to corrosion. Materials such as stainless steel and Inconel are often used for their corrosion-resistant properties.

Pressure: The material should be able to withstand the pressure of the application. Different materials have different pressure ratings, so it's important to choose a material that can handle the expected pressure range.

Flexibility: The material should be flexible enough to accommodate movement and vibration in the application. Materials such as Inconel and titanium are often used for their high flexibility.

Cost: The cost of the material should be considered in relation to the specific industry application. Some materials are more expensive than others, so it's important to choose a material that is cost-effective for the application.

It's important to consult with a manufacturer or supplier of metal bellows and expansion joints to determine the best material for a specific industry application. They can provide guidance and recommendations based on their expertise and experience in the field.

Bellows Systems engineering and technical sales staff can assist you in making right material selection based on your application.

FEATURES

Absorb Axial movements (extension and compression)
Axial movement is the change in dimensional length of the bellows from its free length in a
direction parallel to its longitudinal axis.

Absorb Lateral movements
Lateral movement is the relative displacement of one end of the bellows to the other end in a direction perpendicular to its longitudinal axis.

Absorb Angular and Torsional Movements
Angular movement is the rotational displacement of the longitudinal axis of the bellows toward a point of rotation. Torsion refers to twisting one
end of the bellows with respect to the other end, about the bellows centerline.

Reduce Vibration
Rubber expansion joints isolate or reduce vibration caused by equipment. The transmission
of vibration is reduced and they protect equipment from these adverse effects

Dampen Sound Transmission
Rubber expansion joints tend to dampen transmission of sound because of the steel rubber interface of joints and mating flanges.

Manual and Install Notes of the Rubber Joint

1, The installation of expansion joints shall be in accordance with the expansion of piping construction drawings and installation instructions requested
2, Install expansion joint of the pipeline must be approx. to increase fixed by the orientation
and expansion joints can be made to play a role, so orientation and fixation of the settings must be in strict accordance with the design departments of the technical information. For orientation, the principle of setting a fixed support, please see "Bellows Expansion joints Installation Guide."
3, With a bellows expansion joint is formed with a thin stainless steel plate, so lost in moving, hoisting and welding should be careful not to hit the period, scratch, arc,weld spatter and other reasons to bellows damage
4, Should be removed before installation and piping bellows foreign body to ensure normal movement bellows
5, On a flow of media requests for expansion joint should be required to install the flow arrows
6, In order to make bellows in good working condition,can not install expansion joints in the deformation, including axial, lateral, turn transfer pipe installation error
7, Expansion joints installed, running in the system before moving to remove all painted yellow lose a fixed screw
8, Fabric fiber expansion joint is not subject to the tensile displacement due to the installation to the proper conduct of the pre-compression, the pipeline can not deflection, displacement and axial extension, should be noted that flexible ring of protection against scratches, installed as soon as possible to dismantle support board, so that in normal working condition

Application:

Oil & gas, Desalination, Cooling systems, Pumps, Chemical plants, Heating, ventilating
and air conditioning, Shipbuilding, Off-shore applications, Water treatment plants
Sewage, Sanitary piping systems, Pulp and paper plants, Piping systems for chilled or hot water, Cooling systems power generation, Phosphate plants, Potable water, Food process

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