



Rubber flexible joint Spherical type

# TOZENFLEX

Spherical shape is most popular type of rubber flexible joint for vibration isolation



## Feature

### Low reaction force

Superb vibration absorption effect with reduce load and stress on equipment and piping.

### Unique spherical shaped form

Slim arch shape avoids the contact of rubber body with bolt head.

### Excellent pressure resistance

Spherical type rubber flexible joint has outstanding performance in pressure resistance.

### Available for slurry

Smooth interior surface (buried rubber type) is available upon request for sewage or fluid with particles tend to precipitate or accumulated.

### Face-to-face dimension is standardized

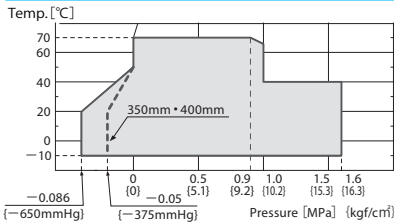
Face-to-face dimension is identical for 32A-200A.

It is convenient for design when compared with others different face-to-face dimension by size.

## Applications

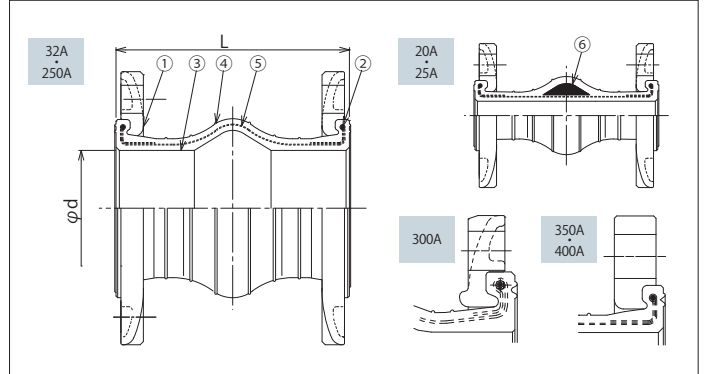
- This product is mainly used in pipe systems for industrial and commercial buildings.
- The product is applicable to water, such as cold water, warm water, cooling water, sea water, etc.
- This product can not be used in swimming pool water oil and hot water.

## Operating Conditions and Performance



- Use after confirmation that the maximum operation pressure and maximum service temperature are within the operation range.
- The range of operating conditions depends on the flange standard.

## Structure



No.	Parts	Material	No.	Parts	Material
①	Flange	FCD	④	Outer Rubber	EPDM (SK10)
②	Reinforcing Ring	SWRH	⑤	Reinforcing cord	Synthesized fiber
③	Inner Rubber	EPDM (SK10)	⑥	Infill material	Special polymer rubber

- 20mm and 25mm are rubber embed types with a flat inner face shown in the left Fig.
- Joints larger than 32mm are able to be supplied with rubber embed type except for 350mm and 400mm.

Flange compatible dimension	Standard	JIS10K	
	Flange standard can be changed to lower, depending on service conditions	○ JIS5K	20mm-25mm-350mm-400mm can't be manufactured
	○ PN16		
	○ JIS20K		
	○ ANSI	20mm-32mm can't be manufactured	
Material	Standard	FCD	350mm-400mm is SS400 (Change to FCD is not allowed)
	Flange material can be changed to	○ SS400	
	○ SUS304		
	○ SUS316		
	○ PVC	5K flange and 350mm-400mm is not possible to manufacture	

※When a polyvinyl chloride flange is used for mounting, its use is recommended under the following conditions.

Bore diameter	Maximum allowable working pressure	Maximum operating temperature
20mm ~ 100mm	0.5MPa {5.1kgf/cm <sup>2</sup> } and below	5 °C and below
125mm ~ 150mm	0.25MPa{2.6kgf/cm <sup>2</sup> } and below	
200mm ~ 300mm	0.2MPa {2.0kgf/cm <sup>2</sup> } and below	

## Dimensions and Allowable Movements

Nominal Dia.		Dimension [mm]		Mass [Kg]	Allowable Movement [mm]				Installation Tolerances [mm]			
mm	inch	L	φd		Eccentricity	Elongation	Compression	Deflection angle	Eccentricity	Elongation	Compression	Deflection angle
20	3/4	140	25	1.1	10	5	10	15°	4	3	6	7.5°
25	1	140	25	1.6	10	5	10	15°	4	3	6	7.5°
32	1 1/4	150	40	2.0	20	10	20	15°	8	3	6	7.5°
40	1 1/2	150	40	2.1	20	10	20	15°	8	3	6	7.5°
50	2	150	50	2.7	20	10	20	15°	8	3	6	7.5°
65	2 1/2	150	65	3.7	20	10	20	15°	8	3	6	7.5°
80	3	150	75	3.8	20	10	20	15°	8	3	6	7.5°
100	4	150	100	4.6	20	15	20	15°	8	3	6	7.5°
125	5	150	125	6.6	20	15	20	15°	8	3	6	7.5°
150	6	150	150	9.1	20	8	15	15°	8	3	6	7.5°
200	8	150	200	12.0	20	8	15	15°	10	3	6	7.5°
250	10	200	250	20.0	25	15	20	15°	10	3	6	7.5°
300	12	200	300	22.0	25	15	20	15°	10	3	6	7.5°
350	14	200	350	30.0	25	15	20	15°	10	3	6	7.5°
400	16	200	400	42.0	25	15	20	15°	10	3	6	7.5°

- Mass is the data when material is FCD450, and flange is JIS10K flange.(350mm-400mm is SS400 JIS10K flange)
- Use a joint within the allowable displacement range.
- The allowable fixing dimension is included in the allowable displacement amount (allowable displacement amount = fixing time displacement + operation displacement)
- Each displacement in the chart are data of a single displacement, so for multiple displacements, correction is necessary. For correction method, refer to "Attention for handling or "TOZEN HP"

### Precaution for fixing of pump suction side

When water is pumped up from a water tank which is placed on a level lower than the pump, and for pipelines in which there is always negative pressure developed, trouble can occur. For the above situation, it is recommended to use Tough-Boy or LS connectors (for suction).

Note: This brochure may be revised without prior notice. We apologize in advance for any inconvenience this may cause.

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