A joint reliance TOZEN

Twin-Sphere Rubber Joint with Floating Flanges

# TWINFLEX25

Excellent performance for noise and vibration absorption in high-pressure resistance

## Feature

### Reliability
Unparalleled reliability is guaranteed by the distinctive TOZEN design with more than 40 years experience in rubber flexible joints.

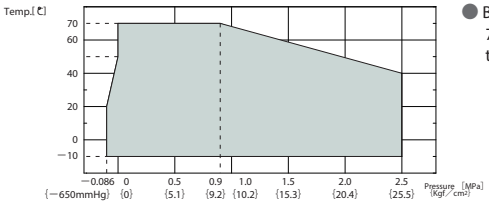
### Quality
Manufactured in TOZEN's own factory under thorough control with ISO9001 quality management system.

### Durability
Reciprocating pressure test for 20,000 cycles or above.

## Applications

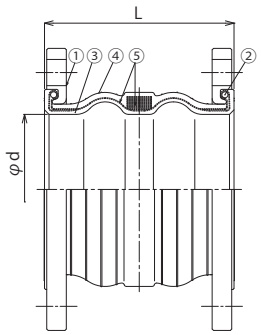
- This product is designed for the application of piping systems in commercial buildings and industrial factories and plants.
- Applicable fluids are exclusively water including cold water, warm water, cooled water, sea water, etc.
- This product is not designed for chlorine water, pool water, oil, or boiled water.

## Operating Conditions and Performance




- Bursting Pressure: 7.5MPa or above at normal temp.

## Structure




| No. | Parts | Material |
|---|---|---|
| ① | Flange | Mild Steel |
| ② | Reinforcing Ring | Carbon Steel |
| ③ | Inner Rubber | Synthetic Rubber |
| ④ | Outer Rubber | Synthetic Rubber |
| ⑤ | Reinforcing Cord | Synthetic Fiber |

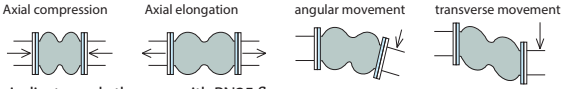
| Flange dimensions fit | please consult us. | | |
|---|---|---|---|
| Material | Standard | Mild Steel | |
| | Can be changed | ○ | SUS304 |
| | | ○ | SUS316 |

- Please contact us for other materials.
- Flanges in JIS20K, ANSI300, PN25 are standard.

## Dimensions and Allowable Movements

| Nominal Dia. | | Dimension [mm] | | Mass [Kg] | Allowable Movement [mm] | | | | Installation Tolerances [mm] | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | inch | L | φd | | T.M. | A.E. | A.C. | A.M. | T.M. | A.E. | A.C. | A.M. |
| 32 | 1 1/4 | 175 | 40 | 3.7 | 20 | 10 | 20 | 20° | 8 | 3 | 3 | 7.5° |
| 40 | 1 1/2 | 175 | 40 | 4.4 | 20 | 10 | 20 | 20° | 8 | 3 | 3 | 7.5° |
| 50 | 2 | 175 | 50 | 5.5 | 20 | 10 | 20 | 20° | 8 | 3 | 3 | 7.5° |
| 65 | 2 1/2 | 175 | 65 | 7.3 | 20 | 10 | 20 | 20° | 8 | 3 | 3 | 7.5° |
| 80 | 3 | 175 | 75 | 8.9 | 20 | 10 | 20 | 20° | 8 | 3 | 3 | 7.5° |
| 100 | 4 | 225 | 100 | 12 | 20 | 15 | 20 | 20° | 8 | 3 | 3 | 7.5° |
| 125 | 5 | 225 | 125 | 16 | 20 | 15 | 20 | 20° | 8 | 3 | 3 | 7.5° |
| 150 | 6 | 225 | 150 | 20 | 20 | 15 | 20 | 20° | 8 | 3 | 3 | 7.5° |
| 200 | 8 | 250 | 200 | 28 | 25 | 15 | 20 | 20° | 10 | 3 | 3 | 7.5° |
| 250 | 10 | 250 | 250 | 39 | 25 | 15 | 20 | 20° | 10 | 3 | 3 | 7.5° |
| 300 | 12 | 250 | 300 | 51 | 25 | 15 | 20 | 20° | 10 | 3 | 3 | 7.5° |

- A.C.: Axial Compression, A.E.: Axial Elongation, A.M.: Angular Movement, T.M.: Transverse Movement




- Mass indicates only the case with PN25 flanges.
- Tolerances for installation are included in the allowable movements (Allowable movements = Tolerances for installation + Operating movements).

- Please note that the information in the above table is for single movement only. In case of complex movements, please do adjustment by using the following formula.
  C.A.E. (C.A.C.) = A.A.E.(A.A.C.) × $\{1-(\frac{T.M.}{A.A.M}+\frac{A.M.}{A.T.M})\}$
  C.A.E. (C.A.C.): Correct Elongation Movement (Correct Compression Movement)
  A.A.E. (A.A.C.): Allowable Elongation Movement (Allowable Compression Movement)
  A.T.M.: Allowable Transverse Movement
  A.A.M.: Allowable Angular Movement
  Example: In case of 100mm joint, if 10mm transverse movement is needed, then the correct elongation should be: C.A.E = 15 × $\{1-(\frac{10}{20}+\frac{0}{20})\}$ = 7.5mm
- There is reaction force from rubber joints due to the load of the internal pressure, so during the installation, please fix the pipe tightly to ensure the joints work efficiently. In case the pipe cannot be fixed tightly, please use the control unit for the joints.

Note: The content of this catalog is subject to change without prior notice.

Agent


TOZEN Corporation
8-4, Asahi, Yoshikawa
Saitama 342-0008 Japan


WE101-1610