

## Single-Sphere Flexible Rubber Joint with Floating Flanges

# OFLEX

Pursuing the TOZEN spirit, "A joint reliance", TOZEN's rubber joint OFLEX ensures ease of use.



### Feature

#### Achievements

Having been used in more than 20 countries for over 30 years, TOZEN brand products proudly demonstrate their popularity.

#### Reliability

Unparalleled durability is guaranteed by the distinctive and strict design standards of TOZEN.

#### Quality

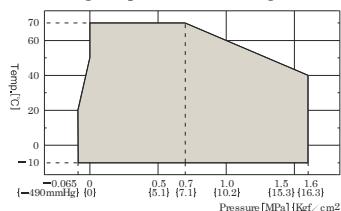
Manufactured in TOZEN's own factory under thorough control with ISO9001 quality management system.

#### Durability

Reciprocating pressure test for 20,000 cycles or above.

### Operating Conditions and Performance

#### Working Temperature vs. Working Pressure



#### Bursting Pressure:

4.8MPa or above at normal temp.

### Applications

- This product is mainly applicable for piping systems in commercial and industrial buildings and plants.
- Applicable fluids are exclusively water including cold water, warm water, cooled water, sea water, etc.
- This product can not be used for, pool water, oil, or boiled water.

### Structure

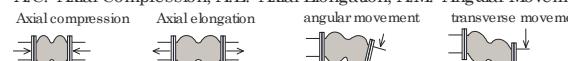
No.	Parts	Material
①	Flange	Mild Steel / Ductile Iron
②	Reinforcing Ring	Carbon Steel
③	Inner Rubber	Synthetic Rubber
④	Outer Rubber	Synthetic Rubber
⑤	Reinforcing Cord	Synthetic Fiber

- Flanges with mild steel and ductile iron in JIS10K, ANSI150, PN16 are standard. For other flanges, please consult us.
- Flange material can be changed to SUS304 and SUS316.
- Flange material for ANSI150 32mm is mild steel only.

### Dimensions and Allowable Movements

Nominal Dia.	Dimension [mm]	Mass [Kg]	Allowable Movement [mm]				Installation Tolerances [mm]					
			TM	A.E.	A.C.	A.M.	TM	A.E.	A.C.	A.M.		
32	1 1/4	125	35	3.1	10	6	10	10°	4	3	6	5°
40	1 1/2	125	35	3.7	10	6	10	10°	4	3	6	5°
50	2	125	45	4.9	10	7	10	10°	4	3	6	5°
65	2 1/2	125	60	5.8	10	7	10	10°	4	3	6	5°
80	3	125	70	7.2	10	7	10	10°	4	3	6	5°
100	4	150	95	8.1	10	10	10	7°	4	3	6	3°
125	5	175	120	11	10	10	10	7°	4	3	6	3°
150	6	200	145	14	10	12	10	5°	4	3	6	2°
200	8	200	195	20	10	12	10	5°	4	3	6	2°
250	10	250	245	28	10	15	10	5°	4	3	6	2°
300	12	250	290	37	10	15	10	5°	4	3	6	2°

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



Mass indicates only the case with PN16(Mild Steel) flanges.

Products should be used within the given allowable movements only.

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.  

$$C.A.E. (C.A.C.) = A.A.E (A.A.C.) \times \{1 - (\frac{TM}{ATM} + \frac{AM}{AAM})\}$$

C.A.E. (C.A.C.): Correct Elongation Movement (Correct Compression Movement)

A.A.E. (A.A.C.): Allowable Elongation Movement (Allowable Compression Movement)

ATM: Allowable Transverse Movement

A.A.M: Allowable Angular Movement

Example: In case of 100mm joint, if 5mm transverse movement is needed, then the correct elongation should be:  $C.A.E = 10 \times \{1 - (\frac{5}{10} + \frac{0}{7})\} = 5\text{mm}$

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



Reciprocating pressure test



Reciprocating pressure test