Flexible Rubber Joint
10-FLEX

Feature

Compact type becomes available with 1.6MPa specification.

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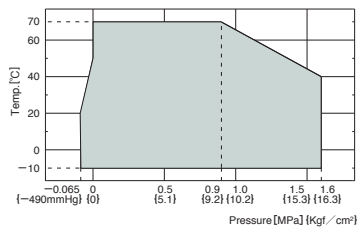Reciprocating pressure test for 20,000 cycles or above.

Good ability to isolate sound and vibration.

Easy installation on pipes and no need packing.

Ease water pulsation and hammer.

Operating Conditions and Performance

● Working Temperature vs. Working Pressure

Temp. [°C]

70
60
40
20
0
−10

−0.065　0　　0.5　　0.9　1.0　　1.5　1.6
{−490mmHg} {0}　　{5.1}　{9.2} {10.2}　{15.3} {16.3}

Pressure [MPa] {Kgf／cm²}

● 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 drinking water, 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.

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.
40	1 1/2	100	40	3.7	10	10	10	5°	4	3	3	2°
50	2	100	50	4.7	10	10	10	5°	4	3	3	2°
65	2 1/2	100	65	5.7	10	10	10	5°	4	3	3	2°
80	3	100	75	7.0	10	10	10	5°	4	3	3	2°
100	4	100	100	7.7	10	10	10	5°	4	3	3	2°
125	5	120	125	10	10	10	10	5°	4	3	3	2°
150	6	120	150	13	10	10	10	5°	4	3	3	2°
200	8	120	200	18	10	10	10	5°	4	3	3	2°
250	10	130	250	25	10	10	10	5°	4	3	3	2°
300	12	130	300	34	10	10	10	5°	4	3	3	2°

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

Axial compression　Axial elongation　angular movement　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.

$$C.A.E. (C.A.C.) = A.A.E.(A.A.C.) \times \{1 - (\frac{T.M.}{A.T.M} + \frac{A.M.}{A.A.M})\}$$

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 5mm transverse movement is needed, then the correct elongation should be: $C.A.E = 10 \times \{1 - (\frac{5}{10} + \frac{0}{5})\} = 5mm$

·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.

Agent