F-FLEX Spherical Rubber Flexible Joint

F-FLEX

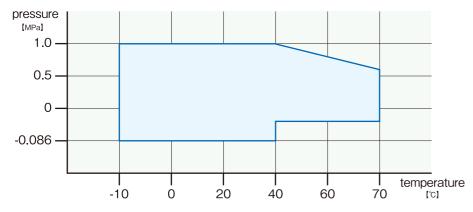
deflection of pipes

Excellent anti-vibration effect
and pressure-resistant
properties

Absorption of elasticity and



Pressure / Temperature

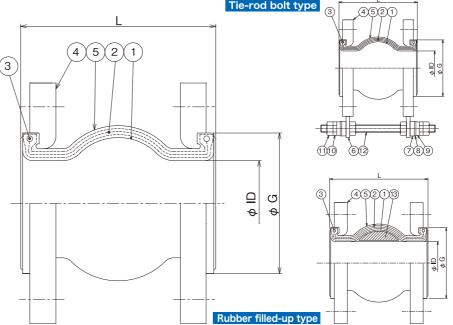


- Please make sure that the highest operating pressure and the highest operating temperature are with in the operating range before use.
- Max. operating pressure: 1.0MPa (Based on the graph of operating range above)
- Max. operating temperature: 70°C (Based on the graph of operating range above)
- Please use embedded rubber type if the operating pressure is negative (minus pressure).
- Please contact us if gas is flowing through the pipe because the highest operating pressure becomes different.
- Embedded rubber type is recommended when contaminated water or powder flow through the pipe because they tend to accumulate on protruding sections.
- (1) This product cannot be used for a hot water pipe. (Please use D-FLEX.)
- (2) This product cannot be used for the water of swimming pools. (Please use D-FLEX for pipes of circulation pumps that are used for water in swimming pools.)
- (3) This product cannot be used in areas with repeated and frequent pressure changes, such as the delivery side of pressurizing or pressure boosting water pumps.
- (4) This product cannot be used with fluids or areas of installation that might lower the elasticity of rubber. Please contact us because use of this product in such conditions needs to be examined.

Handling instructions

- This product generates reactive force due to the load of the inner pressure. Thus, fixing points or supports are required for installed pipes. (Please see p. 26-28.)
- Please see p. 26-28 for other cautions.

Structure



No.	Name	Material				
1	Inner rubber	Synthetic rubber				
2	Reinforcing cord	Synthetic fiber				
3	Reinforcing ring	SWRH				
4	Flange	SS400, SUS304 etc.				
5	Outer rubber	Synthetic rubber				
6	Tie-rod holder	SUS304 etc.				
7	Buffer	Urethane etc.				
8	Washer	SS400, SUS304 etc.				
9	Spherical seat	SS400, SUS304 etc.				
10	Spherical nut	SS400, SUS304 etc.				
11	Nut	SS400, SUS304 etc.				
12	Tie-rod bolt	SS400、SUS304 etc.				
13	Fill-up rubber	Synthetic rubber				

Please see "Rubber selection guide" in p.25 for selecting the material of inner rubber.

02

- The standard product uses the JIS10K flange. Flanges with other specification, such as JIS5K, JIS20K, tap water, JPI, ANSI can also be used.

 Besides the standard products SS400 and SUS304, acceptable materials of the flange include SUS316, SUS316L, S25C, and PVC.
- Unichrome plating, hot-dip galvanized materials (Zn plating), and painted materials are acceptable for the SS400 flange.
- Please see "Handling precautions" for PVC flanges. (Please see p. 26-28.)
- Products with tie rod bolts can be produced. (Tie rod bolts for F-FLEX come with spherical washers, spherical nuts, and shock-absorbing materials as standard attachments.)

Size

	φID [mm]	φG [mm]	L [mm]	Tolerance of displacement			Dimensional tolerance for installation				
NB				expansion [mm]	contraction [mm]	eccentricity [mm]	angular rotation	expansion [mm]	contraction [mm]	eccentricity [mm]	angular rotation
15A	20	50	150	10	15	15	15°	3	5	4	5°
20A	24	57	150	10	15	15	15°	3	5	4	5°
25A	27	65	150	10	15	15	15°	3	5	4	5°
32A	37	71	150	10	20	20	15°	3	5	5	5°
40A	37	71	150	10	20	20	15°	3	5	5	5°
50A	44	87	150	10	20	20	15°	3	5	5	5°
65A	60	106	150	10	20	20	15°	3	5	5	5°
80A	73	115	150	10	20	20	15°	3	5	5	5°
100A	95	149	150	15	20	20	15°	3	5	5	5°
125A	120	174	150	15	20	20	15°	3	5	5	5°
1504	145	210	150	15	20	20	15°	3	5	5	5°
150A			200	15	25	25	15°	3	5	5	5°
0004	187	260	150	15	20	20	15°	3	5	5	5°
200A			200	15	25	25	15°	3	5	5	5°
250A	239	320	200	15	25	25	15°	3	5	5	5°
300A	291	367	200	15	25	25	15°	3	5	5	5°
350A	327	410	200	15	25	25	15°	3	5	5	5°

- Please make sure that deflections remain within permissible range during operation.
- Please note that the permissible deflection includes the size tolerance of installation. (Permissible deflection = tolerance of installation + Operating deflection)

 The deflections in the chart indicate independent deflections. Corrections are required when there are multiple deflections.

Please see p. 26 for the method of correcting deflections.

- For embedded rubber type, please find a correct value by multiplying the permissible deflection and
- the installation tolerance value in the size chart above, by 0.5 for compression, eccentricity, and angle deflection, and by 0.6 for extension.
- The ϕG values in the chart indicate the standard sizes when a JIS10K flange is used.

Besides the sizes in the chart above, F-FLEX can be produced from 400A to 500A. Please contact us for detail.