E-FLEX Rubber Flexible Joint

E-FLEX

Multi-purpose type with arch structure that absorbs the deflection and eccentricity of pipes that are caused by temperature changes

Feature

- The arch structure of the body produces large deflection.
- The low reactive force in the axial direction enables easy installation on pipes.

Usage

Pipes for general factory facilities | Chemical plants | Pipes of pumps and blowers | Pipes for ships and vessels | Sewage treatment plants

Kind

- Single mound type(Ground & Under-ground)
- Two-mound type(Ground & Under-ground)
- For low pressure / for high pressure

Standard issue

- Max. operating pressure : Please see the maximum operating pressure in the chart on the right.
  Please use a structure designed for underground installation when the operating negative pressure exceeds the chart on the right. The structure designed for underground installation is operable under the pressure up to -90 kPa.
  Please contact us when using this product under the pressure that exceeds the maximum operating pressure for individual examination of the structure.
- Max. operating temperature : −10℃~60℃
- When applying for under-ground use, please install the joint in depth of 1M ~ 3M. Maximum Car weight is 25 Ton.
- Please contact us if gas is flowing through the pipe because the highest operating pressure becomes different.
- Solid type tube with straight inner surface is also avaibable to prevent fluids such as filthy water or powder from settling.
- Please use a model with a control unit (tie rod bolt type) to regulate the thrust in the axial direction that is generated by the internal pressure and to prevent excessive deflection.
  Also, please use a model with a control unit (set bolt type) to adjust the face-to-face dimension during installation. (Please see P25.)

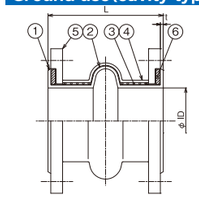
(1) This product cannot be used in areas with repeated and frequent pressure changes, such as the delivery side of pressurizing or pressure boosting water pumps.
(2) This product cannot be used with fluids or areas of installation that might lower the elasticity of rubber.
Please contact us because use of this product in such conditions needs to be examined.

Handling instructions

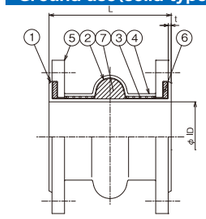
- This product generates reactive force due to the load of the inner pressure. Thus, fixing points or supports are required for installed pipes. (Please see p. 26-28.)
- Please see p. 26-28 for other cautions.

Structure

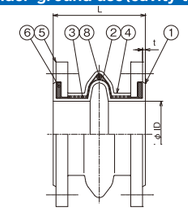
Ground use(cavity type)



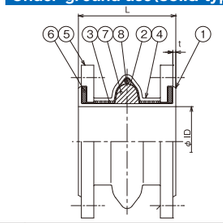
Ground use(solid type)



Under-ground use(cavity type)



Under-ground use(solid type)



No.	Name	Material	No.	Name	Material
1	Inner rubber	Synthetic rubber	5	Flange	SS400、SUS304 etc.
2	Reinforcement layer	Synthetic fiber	6	End-ring	SS400
3	Reinforcement layer	Steel wire or synthetic fiber	7	Fill-up rubber	Synthetic rubber
4	Outer rubber	Synthetic rubber	8	Reinforcing ring	SS400

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

- 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 and S25C.
- Hot-dip galvanization (Zn plating) is the standard for SS400 flange to be used above the ground, and paint consisting of black epoxy resin for underground installation. Painted materials are also available.
- Rounding work is done on the inner diameter of the opening of 25A or smaller.

Size

NB	φID [mm]	t [mm]	Single mound type					Two-mound type					Max. operating pressure		
			L [mm]	expansion [mm]	contraction [mm]	eccentricity [mm]	mass [kg]	L [mm]	expansion [mm]	contraction [mm]	eccentricity [mm]	mass [kg]	inner pressure [Mpa] low pressure	inner pressure [Mpa] high pressure	vacuum pressure [kPa]
20A	19	2	150	6	7	20	1.6	250	12	15	40	1.6	—	1.00	-60
25A	25	2	150	6	7	20	2.5	250	12	15	40	2.5	—	1.00	-60
32A	32	2	150	6	7	20	3.3	250	12	15	40	3.3	—	1.00	-60
40A	38	2	150	6	7	20	3.5	250	12	15	40	3.5	—	1.00	-60
50A	51	3	150	10	15	20	4.2	250	20	30	40	4.7	—	1.00	-60
65A	64	3	150	10	15	20	5.9	250	20	30	40	6.4	—	1.00	-60
80A	76	3	150	10	15	20	6.1	250	20	30	40	6.7	—	1.00	-60
100A	102	3	150	15	20	30	7.3	250	30	40	60	8.2	—	1.00	-60
125A	127	3	150	15	20	30	10.9	250	30	40	60	11.9	—	1.00	-60
150A	152	3	200	20	20	30	14.9	300	40	40	60	16.1	—	1.00	-60
200A	203	3	200	20	20	30	17.8	300	40	40	60	19.5	—	1.00	-60
250A	254	3	200	25	25	30	25.7	300	50	50	60	27.8	—	1.00	-60
300A	305	3	200	25	25	30	29.7	300	50	50	60	32.3	0.50	1.00	-40
350A	350	3	250	25	25	30	39.1	400	50	50	60	43.4	0.50	1.00	-40
400A	400	3	250	25	25	30	54.0	400	50	50	60	59.0	0.50	1.00	-40
450A	450	3	250	25	25	30	67.1	400	50	50	60	72.8	0.50	1.00	-40
500A	500	3	250	25	25	30	76.1	400	50	50	60	82.7	0.50	1.00	-40
550A	550	3	250	25	25	30	96.1	400	50	50	60	103.1	0.25	0.75	-30
600A	600	3	300	25	25	30	104.3	500	50	50	60	114.3	0.25	0.75	-30
650A	650	3	300	25	25	30	118.2	500	50	50	60	129.0	0.25	0.75	-30
700A	700	3	300	25	25	30	140.9	500	50	50	60	152.8	0.25	0.75	-30
750A	750	3	300	25	25	30	171.0	500	50	50	60	184.0	0.25	0.75	-30
800A	800	3	300	25	25	30	190.1	500	50	50	60	204.8	0.25	0.50	-30
850A	850	3	300	25	25	30	197.4	500	50	50	60	213.0	0.25	0.50	-30
900A	900	3	300	25	25	30	202.5	500	50	50	60	219.0	0.25	0.50	-30
1000A	1000	3	300	25	25	30	245.0	500	50	50	60	263.7	0.25	0.50	-30

- Solid type is used for all arch structures with 40A or smaller. (Please see p. 25.)
- The deflection for 50A or larger is the value when the arch structure is the cavity type. Please obtain the deflection for the solid type by multiplying the value in the chart above by 0.5 for compression or 0.6 for extension. (The value of the eccentricity remains the same.)
- Please contact us for details of individual deflection when using diagonal pipes, since they differ from the above values.
- Please make sure that deflections remain within permissible deflections during operation.
- The deflections in the chart indicate individual deflections. Corrections are necessary for combined deflections. Please see p. 26 for the method of correction.