

1. Applications and Features

Purpose	Ground subsidence and earthquake countermeasures for piping (For underground piping)
Location	Pipe line for tap water, sewage water, cooling water, pump station and sewage treatment plant
Features	The outer arch structure provides excellent absorption of large lateral movement and expansion/contraction even with short product length. The elastic rubber material used for the main body absorbs vibration from rotating equipment such as pumps. Can also be used for vinyl chloride piping.

2. Structure and Parts

Figure 1 shows the structure, and Table 1 shows the part names and materials.

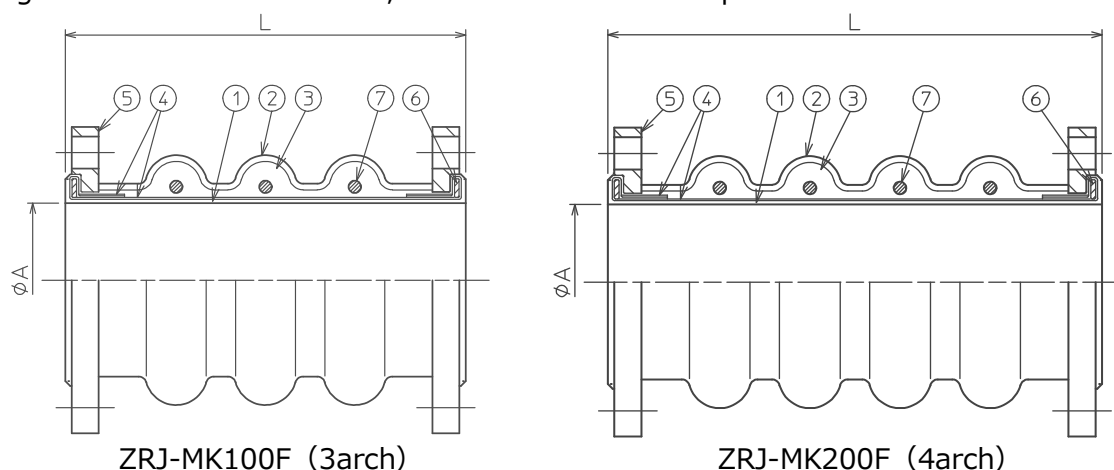


Figure 1 . Structure

Table1. Parts List

No.	Name	Material (Option)
1	Inner layer rubber	Synthetic rubber
2	Outer layer rubber	Synthetic rubber
3	Filling Rubber	Synthetic rubber
4	Reinforcement fiber	Nylon fiber
5	Flange	Carbon steel (Stainless steel)
6	Solid ring	Carbon steel
7	Reinforcement ring	Carbon steel

※Flange rating : JIS 10K (Standard) , 5K, 上水, JPI150lb

※Product size : 20A~300A (Standard)、350A~1000A is also available

※Flat type will be standard on the inside.

※When the flange material is SS400, the surface treatment
is hot dip galvanizing.

	Product Specification for ZRJ-MK100F ZRJ-MK200F	Document No : ZQK-331(P7)
---	--	------------------------------

3. Dimensions and maximum working pressure

Table 2 shows dimensions and maximum working pressure.

Table2. Dimensions and maximum working pressure

・ ZRJ-MK100F (3arch) Unit : mm				・ ZRJ-MK200F (4arch) Unit : mm			
Size	φ A	L	Max. working pressure (MPa)	Size	φ A	L	Max. working pressure (MPa)
20A	20	350	1.0	20A	20	450	1.0
25A	25	350	1.0	25A	25	450	1.0
32A	32	350	1.0	32A	32	450	1.0
40A	40	350	1.0	40A	40	450	1.0
50A	50	350	1.0	50A	50	450	1.0
65A	65	350	1.0	65A	65	450	1.0
80A	75	350	1.0	80A	75	450	1.0
100A	100	350	1.0	100A	100	450	1.0
125A	125	350	1.0	125A	125	450	1.0
150A	150	500	1.0	150A	150	600	1.0
200A	200	500	1.0	200A	200	600	1.0
250A	250	500	1.0	250A	250	600	1.0
300A	300	550	1.0	300A	300	650	1.0

※Maximum working pressure is at normal temperature.

4. Allowable operating movement

Table 3 shows allowable operating movement.

Table3. allowable operating movement

・ ZRJ-MK100F (3arch) Unit : mm				・ ZRJ-MK200F (4arch) Unit : mm			
Size	Allowable operating movement			Size	Allowable operating movement		
	Compression	Elongation	Lateral movement		Compression	Elongation	Lateral movement
20A	22	18	100	20A	22	18	200
25A	22	18	100	25A	22	18	200
32A	22	18	100	32A	22	18	200
40A	22	18	100	40A	22	18	200
50A	22	18	100	50A	22	18	200
65A	22	18	100	65A	22	18	200
80A	22	18	100	80A	22	18	200
100A	30	27	100	100A	30	27	200
125A	30	27	100	125A	30	27	200
150A	30	36	100	150A	30	36	200
200A	30	36	100	200A	30	36	200
250A	37	45	100	250A	37	45	200
300A	37	45	100	300A	37	45	200

※Displacements are individual maximum permissible amounts and are not guaranteed for loads acting simultaneously.

5. Applicable temperature range

-10℃~80℃

6. Mounting bolt length and bolt tightening torque (recommended value)

Table 4 shows the length of the mounting bolt.

Table 5 shows the tightening torque of the bolt.

Table 4. Mounting bolt length (JIS10K)

Size	Mounting bolt length		
	Bolt size	Length (Below Neck)	Quantity
20A	M12	50	8
25A	M16	55	8
32A	M16	55	8
40A	M16	55	8
50A	M16	65	8
65A	M16	65	8
80A	M16	65	16
100A	M16	65	16
125A	M20	75	16
150A	M20	75	16
200A	M20	75	24
250A	M22	90	24
300A	M22	90	32

Table 5. Torque of the bolt

Size	Torque (N·m)
20A	25
25A~100A	30
125A~150A	40
200A~300A	45

※Mounting bolt length does not include the
thickness of flat washers and spring washers.

7. Inspection

Inspection items : Visual inspection, Dimensional inspection (overall length),
pressure resistance inspection

Frequency : Visual inspection and dimensional inspection are all products.

Pressure resistance inspections are sampling inspections.

8. Notes

- Insert mounting bolt from product side.
and tighten bolts evenly in diagonal line order.
- The service life of rubber fittings may be reduced depending on the conditions
of use.
For details, please refer to the precautions in the catalog.
- Please refer to the "Installation Instructions" for installation procedures.