

# 10-FLEX

## FLEXIBLE RUBBER JOINT



### FEATURES

- **Applicable to both suction and delivery (discharge) with its excellent stability and pressure withstandability.**

With the combination of excellent moulding technique and tough chemical fiber, 10-FLEX can be used at a bursting pressure of over 570p. s. i. (40kgf/CM<sup>2</sup>) and within a normal internal pressure of 150p.s.i. (10kgf/cm<sup>2</sup>). In addition, since it can satisfactorily withstand the force for creating a vacuum of 500mmHg, it can be used on both the delivery and suction sides. Also, since its carcass is of a special spherical type, it will not come in contact with the connecting bolt heads even if it expands. This connector can be used with a sense of security even when subjected to high pressures.

- **Excellent heat and water withstandability**

Since this connector is made of heat resisting synthetic rubber of special composition, which is superior to natural or chloroprene rubber, its deterioration due to hot water is quite limited and it exhibits a stable pressure withstandability persistently.

- **Excellent ability to isolate sound and vibration**

The highly soft carcass effectively isolates vibration and solid sound in all directions.

- **Other advantages and effects**

- 1) Needs neither gasket nor packing.
- 2) Since flanges used are of loose fit type, they can be installed on pipes easily.
- 3) Its ability to absorb elongation and contraction of pipes caused by variation in temperature prevents the piping system and equipment from breaking down.
- 4) It absorbs the pulsation of water and prevents water hammering to some extent.

### TYPICAL APPLICATIONS

This joint is applied to the piping system for construction equipment and industrial plants where noise and vibration isolations as well as alignment between pipes are necessary.

Examples:

- 1) Air-conditioning and sanitary equipment: pumps, etc.
- 2) Industrial plant equipment: pumps, refrigerators, roots, etc.
- 3) Marine piping systems: Feed-water and drainage equipment, etc.
- 4) Various plant piping systems: power generation plants, chemical plants, etc.

### DIMENSIONS AND ALLOWABLE MOVEMENTS IN OPERATION

Nominal Bore	Size (mm)		Allowable Movement				Installing Allowance			
	A	L	T.M. (mm)	A.E (mm)	A.C (mm)	A.M (°)	T.M. (mm)	A.E (mm)	A.C (mm)	A.M (°)
32mm (1¼ inches)	32	100	10	10	10	10	4	3	3	5
40mm (1½ inches)	40	100	10	10	10	10	4	3	3	5
50mm (2 inches)	50	100	10	10	10	10	4	3	3	5
65mm (2½ inches)	65	100	10	10	10	10	4	3	3	5
80mm (3 inches)	75	100	10	10	10	10	4	3	3	5
100mm (4 inches)	100	100	10	10	10	10	4	3	3	5
125mm (5 inches)	125	120	10	10	10	10	4	3	3	5
150mm (6 inches)	110	120	10	10	10	10	4	3	3	5
200mm (8 inches)	200	120	10	10	10	10	4	3	3	5
250mm (10 inches)	250	120	10	10	10	10	4	3	3	5
300mm (12 inches)	300	120	10	10	10	10	4	3	3	5

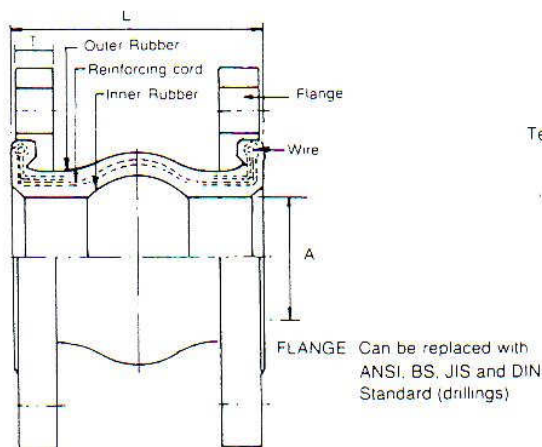
- 1) T. T. = Transverse Movement
- A. E. = Axial Elongation

- A. C. = Axial Compression
- A. M. = Angular Movement

- 2) Although allowable movements are given, do not allow them for axial elongations when installing joints for suction purpose.



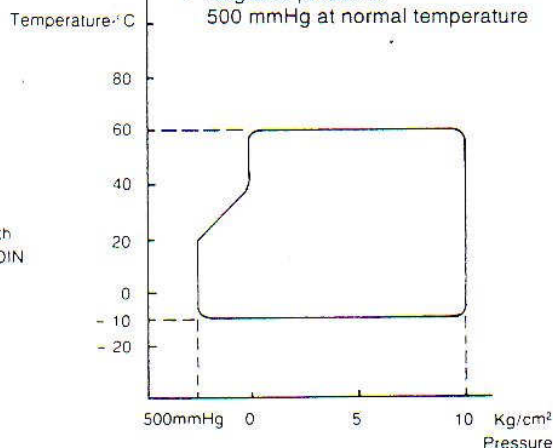
## STRUCTURES



## OPERATING CONDITIONS

Use 10-FLEX under conditions specified in the below graph.

- Working Pressure :  
Max. 10kgf/cm<sup>2</sup> at normal temperature
- Negative pressure:  
500 mmHg at normal temperature



## NOTES

- 1) Information in the above table is for single displacement only. In case of complex displacement, follow the below expression.

$$C. EL(C) = A. EL(C) \times \frac{A. E. - E}{A. E.} \times \frac{A. A. M. - A. M.}{A. A. E.}$$

- C.E. (C) = Correct Elongation (Compression)  
 C. EL (C) = Allowable Elongation (Compression)  
 A. E. = Allowable Eccentricity  
 E = Eccentricity  
 A. A. M. = Allowable Angular Movement  
 A. M. = Angular Movement

2. Install the joint according to the above given allowable dimensions.

## INSTALLATION MANUAL

- 1) Install 10-FLEX according to the above allowable movements. (refer to specifications.)
- 2) In order to effect a goods vibration absorption, pipes should be fixed with pipe hangers or vibrationproof hangers.
- 3) Keep away from fire.
- 4) Standard 10-FLEX applications: water, warm-water, sea-water, weak-acid and weak alkalies. For other applications, please consult us.

\* The contents of this literature are subject to change without notice.

**TOZEN SANGYO CO., LTD**

8-4, Asahi, Yoshikawa-shi Tel : 048-993-1030  
Saitama-ken 342, Japan Fax : 048-993-1038