

## Twin-Sphere Screwed Type Flexible Rubber Joint

# TWINFLEX Screwed Type

Excellent performance for vibration absorption, displacement absorption, and high-pressure resistance.



### Feature

#### High Efficiency for Vibration and Noise Isolation

The twin sphere makes the spring constant small, decreases the body natural frequency and increases the efficiency of vibration absorption.

#### Withstandability

It can withstand a bursting pressure of over 5.0MPa and a maximum working pressure of 1.6MPa and with the combination of excellent formative technique and strong chemical fibre.

#### Large Displacement Absorption for Eccentricity, Axial Movement and Angular Movement

Since it can absorb large displacement, TWINFLEX screwed type flexible rubber joint is most appropriate for the protection of pipe line system. For example, it can prevent the destruction of connecting pipe due to earthquake and subsidence of ground.

#### Applicable for both Suction and Delivery

The joint fits for both suction and delivery.

#### Highly Reliable

The packing parts are strengthened with steel reinforcing rings to prevent the rubber body from slipping out of the fitting sides of flanges.

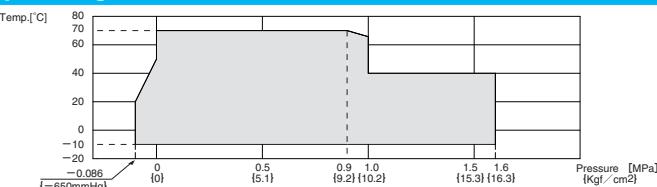
#### Convenient to install

When limited space is allowed for installation, the free type sockets can be screwed separately to pipe before fitting in the joint.

#### Durability

Reciprocating pressure test for 20,000 cycles or above.

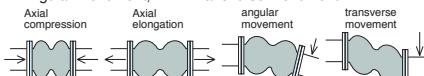
### Operating Conditions and Performance



### Dimensions and Allowable Movements

Nominal Dia.		Dimension [mm]			Mass [Kg]	Union Edge [mm]		Flange [mm]				Allowable Movement [mm]				Installation Tolerances [mm]			
mm	inch	L	φd	ℓ		Rc	H	φD	PCD	φh	φOD	T.M.	A.E.	A.C.	A.M.	T.M.	A.E.	A.C.	A.M.
15	1/2	120	25	30	1.7	1/2	41	68	70	11.0	93	15	10	15	15°	6	3	6	7.5°
20	3/4	120	25	30	1.8	3/4	41	68	70	11.0	93	15	10	15	15°	6	3	6	7.5°
25	1	120	25	30	1.9	1	41	68	70	11.0	93	15	10	15	15°	6	3	6	7.5°
32	1 1/4	175	35	35	3.1	1 1/4	50	90	95	13.5	121	20	10	20	20°	8	3	6	7.5°
40	1 1/2	175	35	35	3.3	1 1/2	56	90	95	13.5	121	20	10	20	20°	8	3	6	7.5°
50	2	175	45	40	5.4	2	69	106	110	13.5	135	20	10	20	20°	8	3	6	7.5°

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



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.

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

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

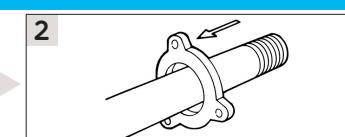
Example: In case of 50mm joint, if 10mm transverse movement is needed, then the correct elongation should be: C.A.E. =  $10 \times \left(1 - \left(\frac{10}{20} + \frac{10}{20}\right)\right) = 5\text{mm}$

There is reaction force from rubber joints due to the load of the internal pressure, so during the installation, please use the metal fittings to 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.

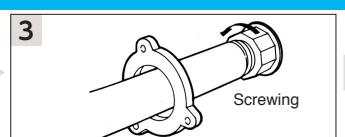
### Connection Procedure



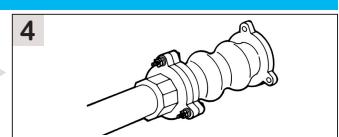
Remove the bolt and disassemble flange A and socket from the main body.



Put flange A through the counterpart pipe.



Screw the socket to the counterpart pipe.



Use bolts to connect flange A and B.

**Note:** The content of this catalog is subject to change without prior notice.

### AGENT

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