Resin Hose User's Manual

[Foreword]

This user's manual describes procedures for the proper use of our company's resin hoses.

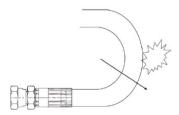
Improper use and installation may result in damage to and reduced service life of hoses and expose the customer to safety risks and damage to property.

Please check the details and scope of hose specifications before use and observe the usage and handling precautions listed below.

Please be advised that the manufacturer will accept no responsibility whatsoever for damage arising from improper use of hoses.

1. Selecting Hoses

- (1) Please be sure to consult the manufacturer if hoses are to be used with medical or food-related equipment, devices and fluids.
- (2) Please use hoses within the scope (pressure, temperature, minimum bending radius) set out in specifications shown in product catalogs.



- (3) Please use the appropriate fluids specified in product catalogs. Please consult the manufacturer if you are unsure.
- (4) Please select joints that match the shape, screws, and size of the connected equipment.
- (5) Our hoses are for use with internal pressure only and cannot be used for negative or external pressure.
- (6) Please consult the manufacturer if hoses are to be exposed to repeated (pulsed) pressurization.
- (7) Please allow some leeway when setting the length of the hoses.

Hoses may expand or contract by $\pm 3\%$ when pressurized.

(8) Hoses cannot be used in systems or places where they will be exposed to excessive vibration or shock.

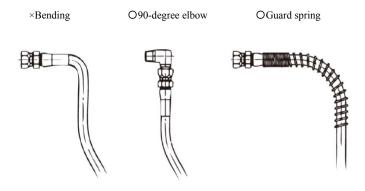
2. Setting Hoses

- (1) Check that there is no grime or damage on joint screw parts or seals.
- •Remove any grime discovered and do not use if damaged.
- (2) Joints must be tightened to the correct torque.

| LINE | 7/16-20 | 1/2-20 | 9/16-18 | 3/4-16 | 7/8-14 |
|---------------------|---------|--------|---------|--------|--------|
| Tightening torque | 30 | 35 | 50 | 60 | 75 |
| $N \cdot m(Kg f/m)$ | -3 | -3.5 | -5 | -6 | -7.5 |
| | | | | | |
| Pipe thread: PF(G) | 1/8 | 1/4 | 3/8 | 1/2 | 3/4 |

- Tightening torque
 20
 30
 60
 70
 135
 155

 N ⋅ m(Kg f/m)
 -2
 -3
 -6
 -7
 -13.5
 -15.5
- (3) Hoses may have a bending tendency. Hoses should be matched to their bending tendency when setting.
- (4) Care must be taken to ensure that hoses are not bent or twisted when setting.
- •Do not use hoses that have been bent (kinked) or twisted.
- (5) Do not bend the ends of hoses (joint connection points).
- •The ends of the hose must be kept straight for at least a distance equivalent to the outer diameter of the hose when setting.
- (6) Do not pull on hoses or expose hoses to trauma or weight.
- •Do not use hoses that have been exposed to trauma, or that have been dented or crushed.



3. During Setting and Use of Hoses

- (1) When moved, care must be taken not expose hoses to external pressure or damage, excessive pulling, bending stress at the hose ends, bending, or twisting. Discontinue use immediately if any of the above phenomena occur.
- (2) Immediately discontinue use of hoses if any unusual noises, odors, or movement are detected during use.
- (3) Do not approach or touch hoses or joints during pressurization. Doing so may cause damage and is extremely dangerous.