

Precautions to ensure safe usage

The precautions given below are intended to ensure safe and correct use of the products.
Note that certain restrictions apply to use of these products. Failure to observe these could result in injury or property damage.

 Warning	A potentially hazardous situation which could result in death or serious injury.
 Caution	A dangerous situation which could result in minor or medium injury and/or in which only property damage is foreseen.

 **Warning** TOYOX products have been developed and manufactured for general industrial applications.

For applications that require safety, confirm in advance.

Never use for implant or injection application or other applications where there is a possibility of the product partially remaining in the body.

ToyoX makes no guarantee of the adaptability or safeness related to such applications.

Please read the Handling Precautions carefully before use.

Note: See the terminology glosses on our website for words marked with a ※.

TOYOCONNECTOR TC3-FST Stainless Steel (Dedicated Coupling for FUSSOTHERMO-S100°C Hose)

① Before fitting

1. Cut a hose so the end of the hose will be perpendicular.
2.  **Warning** Please secure enough length of the hose so as to avoid bending stress on the hose near the connector.
3.  **Warning** When inserting TOYOCONNECTOR TC3-FST into hoses, never put grease on the surface of the hose insertion part. It would be a cause of hose being pulled out.
4. Make sure that the hose is inserted completely into the root of the hose insertion part.
5. After checking the direction of the sleeve, tighten the nut.
6.  **Warning** Tighten the hexagonal cap nut completely. If the nut becomes loose, the hose may become detached and liquid may leak. In addition, be careful of injuries caused by tools slipping during the fastening process.
7. Use an “Adjustable (Power) Wrench” for tightening the nuts. Do not use a “Pipe Wrench.” It may damage hexagonal cap nuts. In addition, be careful of injuries caused by tools slipping during the fastening process.
8. When tightening, use another monkey (motor) wrench to hold the flat part of the nipple in place as pictured in the diagram to the right.
9.  **Warning** When tightening the cap nut, resin shavings (or stringy substance) may occur on rare occasions. Be sure to remove such prior to use.
10. Do not cut the hose insertion part or the sleeve with a knife or the like, and be careful not to damage them by dropping, contact with tools, etc. There is a risk of fluid leakage or hose disconnection.
11. After attaching the hose, make sure that the hose has not become detached and fluid does not leak at the connector.
12. Take care to avoid injury from the sharp edges of the connector.

② Notes for use

1. TOYOCONNECTOR TC3-FST type are couplings dedicated for TOYOX HOSE.
TOYOX is not liable for any damages caused by use with any other hose including those produced by TOYOX as well as those by other manufacturers, as performance may not be achieved or maintained.
* Applicable hoses vary according to the coupling. Please check the catalog or the website.
2. Be sure to confirm with the applicable hose instruction manual “Hose usage cautions” (operating temperature range) and prevent the temperature during use applicable hose maximum temperature. Also, use within the operating pressure range of the applicable hose.
3. In the case of use under negative pressure, negative-pressure usable hoses may not be applicable depending on applications or conditions (temperature, movements, etc.).
4.  **Warning** Before using the hose, check for any abnormalities in the appearance of the hose (external scratches, dust on the surface, dirt, etc.) or on the inner surface (swelling, peeling, etc.).
5.  **Warning** Do not use a hose that is extremely bent near a coupling. The bending radius of a hose should be larger than its minimum bending radius.
6.  **Warning** Do not attempt assembly or disassembly of couplings while fluid is running through the hose. This may cause fluid leakage or hose disconnection.
7. Perform periodic inspections during and before use to make sure that hose disconnection from the coupling and fluid leakage do not take place.
8.  **Warning** Do not use this connector for piping other than the application below. This may cause coupling damage, hose rupture, or hose disconnection.
 - For piping such as solenoid valve piping, which would put impact pressure on the piping
 - Where the maximum operating temperature exceeds 100°C
 - Where constant tensile stress may be applied to the hoses
 - Where vibration or impact will be applied to the coupling
 - In a way that may cause static buildup (electric shock hazard)
9. Before use, be sure to disinfect and sterilize the interior of the hose. (Sterilization is not carried out at shipping)
10.  **Warning** Do not allow anything other than the inner surface of the couplings or hose to come in contact with fluids, because the fluids may permeate the hose reinforcement layer or remain inside the couplings, and bacteria may propagate (attach to the parts) or the hose may deteriorate.
Also, dust, hose fragments (reinforcement material) adhering to the outer surface may be mixed in.
11. Do not rub the surface with a hard brush, etc., when washing it. This may damage the surface, causing germs to accumulate.
12. Store in a cool, dry place not subject to direct sunlight. Store keeping the inside of the coupling free from foreign matter and dust.
13. The hose should be disposed of in accordance with the requirements of the local region.

③ Notes for Connector Reuse and Hose Replacement

-  **Warning** This coupling is not for routine disassembly cleaning.
 -  **Warning** When replacing a hose or disassembling a joint, wait until the joint is cooled down to the room temperature. If not, you may get burned or the joint may get damaged.
1. When re-using TOYOCONNECTOR, please confirm that each part is intact before use. Please make sure to replace the sleeve.
 2. Before replacing a hose, always make sure to remove the fluid and dirt on the connector surface. Fluid and dirt remaining on connector may possibly cause fluid leakage and hose loosening.
 3. When reusing a TOYOCONNECTOR, please be sure to use a new hose.

4. When replacing hoses, do not damage nipples with a cutter or other items because doing so will be a cause of fluid leakage.
5. Use a soft brush to wipe foreign matter such as dust and debris off cap nuts and screws.
6. If the sleeve causes a crack, damage, deformation or discoloration, immediately replace the sleeve with a new one or full performance such as working pressure may not be achieved.
7. The duration of using a TC3-FST type TOYOCONNECTOR varies with the use condition and so forth. However, after it is removed five times or so, you should replace it with a new one.
8. Do not hit the TC3-FST with a hammer.

④ Warning

1. The material used for the TOYOCONNECTOR flow pass (inner surface) is SUS316L. Phenomena such as corrosion or fluid leaks may occur depending on the type of fluid. Before use, be sure to check data (refer to data on chemical resistance in the catalog or on the homepage) or make inquiries to the toll-free number. Please also make similar checks for fluid contact with the outer surface of joints.
2. Do not use hoses when they are twisted. Partially twisted hoses are also a danger as they may cause internal structural damage leading to a "Burst." Follow the examples below to take preventative measures.

