



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.



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

TOYOCONNECTOR TC3-FS TC3-FSG Stainless Steel (TOYOX Hose Dedicated Coupling)



① Notes for installation

1. When cutting a hose, make sure that the edge face of the hose is cut perpendicularly.
2. Be sure to have a sufficient hose length so as not to apply hose bending stress around a coupling.
3.  **Warning** When inserting hoses, never apply oil, etc., to the surface of the nipples. It may cause the hose to become disconnected.
NSF "H1" lubricant (extreme-pressure grease), registered as "permitted for use in locations where there is a possibility of incidental contact with food," is applied to the screw parts of TC3-FSG. Make sure that lubricant does not come into contact with hose or nipple.
4. Make sure that the hose is inserted completely into the root of the nozzle.
5. After the orientation of the sleeve is checked, tighten the cap nut.
6.  **Warning** Fasten the cap nut until there are no gaps.
When used in a state where there are gaps, trouble due to fluid leakage or hose disconnection will occur.
As well, be careful to avoid injury due to tool slips when fastening.
7. Use a monkey wrench for tightening. Do not use a pipe wrench. It will damage the cap nut.
8. When tightening, always fix the nipple's flat section with another monkey wrench.
9.  **Caution** When fastening cap nuts, very occasionally resin chip dust (or threads) may transpire. Remove completely before use.
10. Do not use a blade to cut the hose nozzle or sleeve.
11. After installation, confirm that before use that there is no fluid leakage or hose disconnection from the coupling area.
12. During installation, take care to avoid injury from the sharp edges of the coupling.

② Notes for safe usage

1. TOYOCONNECTOR TC3-FS type and TC3-FSG 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. The maximum operating temperature of the coupling is 140°C.
Be sure to confirm with the applicable hose instruction manual "Hose usage cautions" (operating temperature range) and prevent the temperature during use from exceeding the maximum operating temperature of 140°C or the 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. Do not use a hose that is extremely bent near a coupling. The bending radius of a hose should be larger than its ※3 minimum bending radius.
5.  **Warning** Do not attempt assembly or disassembly of couplings while fluid is running through the hose. This may cause fluid leakage or hose disconnection.
6. Perform periodic inspections during and before use to make sure that hose disconnection from the coupling and fluid leakage do not take place.
7.  **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 140°C
 - Where vibration or impact will be applied to the coupling
 - Where constant tensile stress may be applied to the hoses
 - In a way that may cause static buildup (electric shock hazard)
8. Before use, be sure to disinfect and sterilize the interior of the hose. (Sterilization is not carried out at shipping)
9. 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.
10. Do not rub the surface with a hard brush, etc., when washing it. This may damage the surface, causing germs to accumulate.
11. Store in a cool, dry place not subject to direct sunlight. Store keeping the inside of the coupling free from foreign matter and dust.
12. The hose should be disposed of in accordance with the requirements of the local region.

③ Notes for the reuse of couplings and replacement of hoses

-  **Caution** This coupling is not for routine disassembly cleaning.
 -  **Warning** Hose replacement and coupling disassembly must be performed after the coupling is cooled to room temperature. There is a risk of burns or damage to the couplings.
1. When reusing a TOYOCONNECTOR product, make sure that each of its components is not damaged prior to use. Be sure to replace the sleeve.
 2. When reusing the TC3-FSG type, be sure to apply commercially available lubricant (extreme-pressure grease) to the screw parts and the clamp before fastening the cap nut. We recommend the use of NSF "H1" lubricant (extreme-pressure grease), registered as "permitted for use in locations where there is a possibility of incidental contact with food."
 3. Before replacing a hose, always make sure to remove the fluid and dirt on the coupling surface. This may cause fluid leakage or hose disconnection.
 4. When reusing TOYOCONNECTOR, be sure to use a new hose.
 5. Do not damage the nipple surface with a knife or similar tool while replacing the hose or it may cause liquid to leak.
 6. Use a soft brush to wipe foreign matter such as dust and debris off cap nuts and screws.
 7. If the sleeve develops a crack, damage, deformation or discoloration, immediately replace the sleeve with a new one or full performance may not be achieved.
 8. While it may vary according to conditions of use, consider five disassemblies a rough guideline for replacing with a new coupling.
 9. Do not hit the coupling with a hammer.

④ Warning

1. The fluid path (interior) of TOYOCONNECTOR uses SCS 16 (SUS 316L equivalent) material. 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 website) or make inquiries to the toll-free number. As well, make similar checks for fluid contact with the outer surface of couplings.
2. Do not install or use twisted hoses. Twisted hoses are dangerous because they deform their interior structures and cause hose ruptures. Fix twisted hoses appropriately as shown in the examples at right.

