

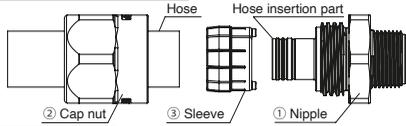
TC2-P type TOYOCONNECTOR® LIGHT Handling Manual

Be sure to read this manual before using the connector.

⚠ Warning : A potentially hazardous situation which could result in death or serious injury.

This is an explanation of the "correct use" of TOYOCONNECTOR. Similar to individually sold hoses, please be aware of the restriction on use and follow the warnings below. Failure to observe these could result in injury or property damage.

Names of parts (materials)

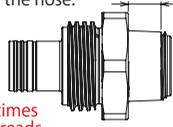


Materials

- ① Nipple: PP (polypropylene)
- ② Cap nut: PP (polypropylene)
- ③ Sleeve: POM (polyacetal)

Before fitting

1. **⚠ Warning** Make sure to install the product at a temperature of 10°C or higher. Installation under 10°C can cause the resin to harden, and a temporary high load can damage the product.
2. A small amount of lubricant is applied to the inner surface of the cap nut to reduce tightening torque.
3. Cut a hose so the end of the hose will be perpendicular.
4. Please secure enough length of the hose so as to avoid bending stress on the hose near the connector.
5. **⚠ Warning** Do not apply oil, etc., to the hose insertion part surface when inserting the hose. Doing so can cause a hose disconnection.
6. Make sure that the hose is inserted completely into the root of the hose insertion part.
7. Do not damage the hose insertion area if using a knife or the like.
8. **⚠ Warning** Only use sealing tape on pipe threads. Refrain from using liquid sealant, as some kinds contain solvents, which can corrode and damage resin. Wind sealing tape about seven times starting at the second thread to prevent leaking and damage to the threads.
9. **⚠ Warning** Tighten the cap nut until there is no gap. Gaps can lead to problems such as fluid leaks and hose disconnections. Also, when tightening, take care to avoid injury due to slipping adjustable wrenches.
10. Use an adjustable wrench or an open-ended wrench for tightening. Do not use a pipe wrench, as doing so can damage the cap nut.
11. **⚠ Caution** Take care not to overtighten resin cap nuts and nipples. Use an adjustable wrench or open-ended wrench to secure the hexagonal part, and ensure there is no gap when it is tightened. Overtightening and tightening when there is a gap between the wrench and hexagonal part can lead to damage.
12. Take care to avoid injury from the sharp edges of the connector during installation and removal.
13. After installation, make sure that fluid does not leak from the connector. Also, refrain from using the product if it is damaged, deformed, etc.



Notes for use

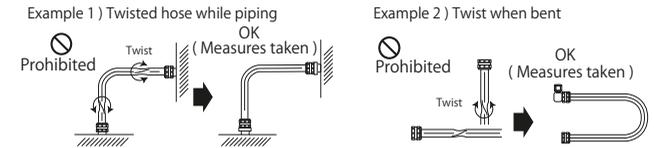
1. This product is a hose connector dedicated for TOYOX hoses. TOYOX is not liable for any damages caused by using TOYOCONNECTOR with any other hose including those produced by TOYOX as well as those by other manufacturers as full performance may not be achieved or maintained.
 - ※ Check the catalog or website for information on compatible hoses.
2. The operating temperature range is 0 to 60°C. Do not use the product outside the specified operating pressure range shown below.
 - ※ Do not use compatible hoses outside the specified operating pressure range shown below or outside of the hose operating pressure range.

Size	Pressure (MPa)	
	23°C	60°C
15a	1.2	0.7
19a	1.0	0.6
25a	0.8	0.5
3. Do not use the product outdoors. Sunlight can cause the resin strength to deteriorate, shortening the service life. Also, avoid using the product in places subject to sunlight or near ultraviolet sterilization equipment even indoors. Avoid using the product near heat sources.
4. Hoses usable under negative pressures may not be applicable depending on applications and conditions (temperature, movement, etc.).
5. Not suitable for sanitary piping, as there is a bump in the thread.
6. Do not fully bend the hose near the connector. Do not bend the hose beyond the minimum bending radius.
7. **⚠ Warning** Do not assemble or disassemble the connector while fluid is passing through the hose. Doing so may cause fluid leakage or hose disconnection.
8. Perform periodic inspections to make sure that the hose does not become detached and the fluid does not leak at the connection during use period of the hose.

9. **⚠ Warning** Never use TC2-B, TC2-S for the below applications. Connector damage, hose rupture, and hose detachment may occur.
 - For piping such as electromagnetic valve piping, which would put impact pressure on the piping.
 - Where vibration or impact will be applied to the connector.
 - Where constant tensile stress may be applied to the hoses
 - In a way that may cause static buildup (There is a danger of electrical shocks.)
10. This product is not compatible with all fluid types. For information on compatible fluids, we ask that users check the chemical resistance data of the connector fluid contact surface (PP resin) shown on our website and usability for the actual devices and usage conditions before use. Hazardous chemicals such as solvents and surfactants can significantly corrode and damage resin, so caution is required. Product durability (service life) differs depending on various conditions such as how it is used, temperature, pressure, and chemical concentration.
11. Do not allow anything other than the inner surface of the connectors or hose to come in contact with fluids, because the fluids may permeate the hose reinforcement layer or remain inside the connectors, and bacteria may propagate (attach to the parts) or the hose may deteriorate. Also, dust and hose fragments (reinforcement material) to the outer surface may be mixed in.

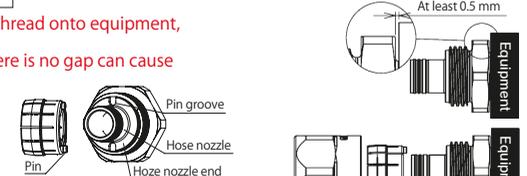
Notes for connector reuse and hose replacement

1. **⚠ Warning** TOYOCONNECTOR TC2-P is a resin product, and cannot be reused.
2. Always use a new hose and connector when replacing either.
3. **⚠ Warning** The material used for the flow path (inner surface) of this product is PP (polypropylene). Phenomena such as deterioration or fluid leaks may occur depending on the type of fluid. Before using the product, check the chemical resistance data or contact our Customer Service Office. Please also check for fluid contact with the outer surface of the connector.
4. 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.

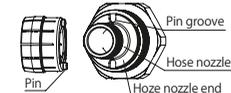


How to fit TOYOCONNECTOR

1. **⚠ Warning** When screwing a nipple pipe thread onto equipment, leave a gap of at least 0.5 mm. Tightening the thread until there is no gap can cause the pipe thread to break.



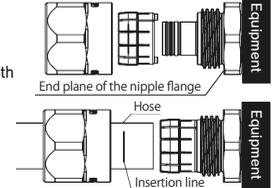
2. After attaching the nipple to the equipment, install the sleeve pin by aligning it with the pin hole in the nipple.



3. Insert the hose into the cap nut. To ensure the hose is inserted properly, mark the hose in advance with a line at the appropriate insertion amount according to the table on the right.

TOYOCONNECTOR Code	mm
TC2-P15	17
TC2-P19	19
TC2-P25	21

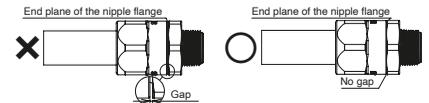
4. Insert the hose to the base of the hose nozzle on the nipple. Verify that the hose has been inserted up to the insertion line when viewed from the side.



5. Use tools to secure the hexagonal part of the nipple as shown in the figure on the right, and ensure there is no gap when the cap nut is tightened.



- ⚠ Warning To prevent hose disconnections and fluid leaks, tighten the cap nut until it contacts the flange end of the nipple. Do not tighten it any further.
- ⚠ Warning Tightening the cap nut without securing the hexagonal part can cause the nipple to turn as well, damaging the pipe thread.



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