

A N-coupling is a rigid-type coupling that connects one shaft to another shaft. Be aware that it does not permit center deviation or a deflection angle between the 2 shafts. The shaft tolerances, surface roughness, and correct tightening of the nuts are very important factors in order to obtain the designated performance. If you have any questions, please contact a dealer or our company.

### For safe use of the product

Thank you for your purchase of an ISEL product. In order to use the product safely and obtain the designated full performance, please be sure to read the following items.

- ◎Read this instruction manual carefully and understand the contents before using the product, and be sure to observe all instructions in the manual and use the product correctly.
- ◎Be sure that you fully understand the information related to the device and safety before using the product.
- ◎After reading, be sure to store this manual carefully so that it can be referred to at any time when needed during use.

This manual classifies important precautions into two categories: DANGER and WARNING.

⚠ DANGER	⚠ WARNING
Incorrect use or handling will produce dangerous conditions that may result in death or serious injury.	Incorrect use or handling will produce dangerous conditions that may result in injury. There is also the risk of property damage.

### ⚠ DANGER

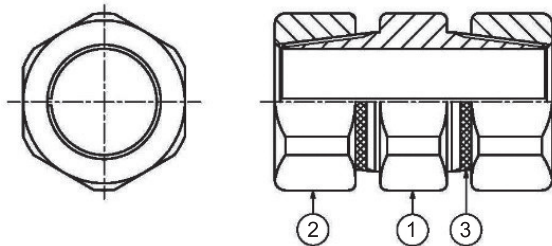
- ◆When using this product, be sure that the necessary mechanisms (covers, enclosures, etc.) for ensuring the safety of life and health are installed on the equipment.
- ◆Wear clothing and protective gear that is suitable for the work.
- ◆Keep the work area clean and orderly, and work safely in order to prevent secondary accidents.
- ◆In the environment where the product operates, install safety mechanisms onto all parts which may be a danger to the operator.
- ◆When performing maintenance or inspections, turn OFF the motor power (power supply) and check that the machine has fully stopped before beginning work.
- ◆Before using lift equipment, install safety measures on the equipment to prevent falling. There is the risk of death or injury, as well as damage to the equipment, if the lift part falls.
- ◆If the product is used for transporting persons, install the necessary equipment for safety.
- ◆Do not touch the product while it is operating. Doing so may result in injury, damage to the product, or other damage.
- ◆Do not use the product for any purpose other than the designated purpose, and do not modify the product. There is the risk that the designated accuracy and performance will not be possible.
- ◆If abnormal noise or vibration occurs during work, immediately discontinue operation and inspect the equipment and this product. If use is continued without inspecting, there is the risk of injury to operators, damage to equipment, and other damage.

### ⚠ WARNING

- ◇Check that the product is the one you ordered and that there is no damage to it. If the product is not the one you ordered or is damaged, there is the risk of injury to operators, damage to equipment, and other damage.
- ◇Never use molybdenum oil or oil which contains an extreme-pressure additive. Doing so may cause a large decrease in allowable torque, resulting in slipping.
- ◇If the shaft includes a key groove, it can be used as long as the groove width is as prescribed in the JIS standard. However the maximum allowable torque is reduced by 15% - 20%. Remove any burrs on the key groove before using.

- ◇If the product is reused, check that there is no deformation, damage, or other problem with the product or any of its components before use. If there is damage, deformation, or other problem, replace with a new product.
- ◇When tightening the nuts, be sure to use a torque wrench that includes a torque adjustment scale, and tighten at the designated tightening torque. Use of a plate-type torque wrench may cause slipping, deformation, and other trouble because it is difficult to check the designated torque.
- ◇In order to ensure the designated performance, an opposite shaft with tolerance grade h7 and surface roughness of Ra1.6 or less is recommended.
- ◇In the case of shafts with different sizes, tighten using the designated tightening torque for each shaft size. If tightened at higher than the designated tightening torque, product deformation may occur.
- ◇In the case of a hollow shaft (pipe), depending on the thickness it may not be possible to obtain sufficient surface pressure. Please contact our company.
- ◇If the product has special specifications, it may differ in parts from the contents of this instruction manual. Please contact a dealer or our company.
- ◇If the bolts are tightened when the coupling is not connected to anything, the coupling may become deformed and be rendered unusable. Therefore check that the shaft is fully inserted into the coupling when tightening the bolts.
- ◇With stainless steel specifications, turn the nuts slowly when tightening them. Be careful because if the nuts are tightened too quickly, the threads may seize.
- ◇K: electroless nickel plating and S: stainless steel can be used without applying oil.

### ● Structural drawings



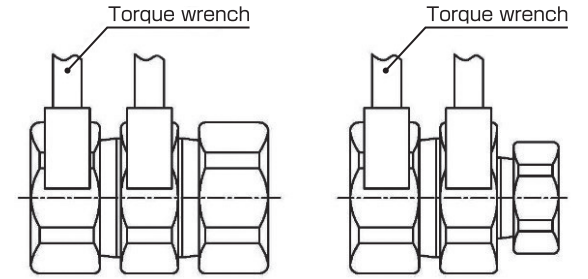
(Figure 1) 1. Body  
2. Nut  
3. Seal tape

### ● Installation

- (1) Use paint thinner or other means to wipe off any corrosion, dirt, or other substance from the surface of the shaft, then apply a light coat of oil.
- (2) Apply a light coat of oil to the N-cup inner diameter parts and thread parts. (If applying after disassembling, first temporarily reassemble in the original conditions, taking care that the seal tape around the body threads is not removed. If the seal tape is out of position, wind it in place again. (If the product will be reused, refer to Table 2.)

### ⚠ WARNING

- ◇Using the product after unpackaging without applying oil to it may cause a decrease in allowable torque.
- (3) Install the N-cup onto the shafts. After positioning (approximate center of both shafts), fasten the hexagonal part of the body and use a torque wrench to gradually tighten the nuts. When tightening the nuts, tighten the nuts on either side alternately. Tighten gently at first (approximately 1/4 of the designated torque) then gradually increase the tightening force (approximately 1/2 of the designated torque), and then fully tighten the nuts at the designated torque. Check that all nuts have been tightened at the designated torque and no rotation occurs. (Figure 2) (Table 1)



(Figure 2)

Model	Tightening torque N·m	Model	Tightening torque N·m
N-6	11.8	N-17	53.9
N-8	13.7	N-18	58.8
N-9	15.7	N-19	63.7
N-10	19.6	N-20	68.6
N-11	24.5	N-22	78.4
N-12	29.4	N-24	83.3
N-14	34.3	N-25	88.2
N-15	39.2	N-30	127.0
N-16	49.0	N-35	167.0

(Table 1\*)

\*Same for both plating and stainless steel specifications.

### ⚠ WARNING

- ◇In the case of shafts with different sizes, tighten beginning from the side with the larger shaft size.
- ◇If tightening is too forceful, the nut may undergo plastic deformation. Be sure to use a torque wrench when tightening.

### ● Removal

- Check for safety before beginning removal work.
- (1) Turn OFF the motor power (power supply) and check that there is no torque or thrust force applied to the N-cup, and that there is no risk of falling or other accident.
  - (2) Fasten the body hexagonal part and gradually loosen the nuts on both sides to disassemble.

### ⚠ WARNING

- ◇In the case of shafts with different sizes, loosen beginning from the side with the smaller shaft size.

### ◀ If the product will be reused ▶

- ◇Disassemble the removed N-cup, and remove the seal tape that is applied to the body thread parts and nut thread parts. Then apply new seal tape to the body thread end, wrapping clockwise by approximately 1.5 wraps, and temporarily install the nut.
- ◇Use piping thread seal material (thickness 0.1 mm) for the seal tape.
- ◇For the seal width, refer below (Table 2) and cut the seal tape before using it.

Shaft size	Seal tape width
ø6 - 8	6.5mm
ø9 - 14	8mm
ø15 - 35	13mm

(Table 2)

\*Specifications may be changed without notice.

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