

The ACS Series are flexible-type couplings that permit a deflection angle between the 2 shafts, while the ACD Series are flexible-type couplings that permit both center deviation and a deflection angle between the 2 shafts. The shaft tolerances, surface roughness, centering accuracy, and correct tightening of the lock bolts are very important factors in order to obtain full performance from each series. 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.

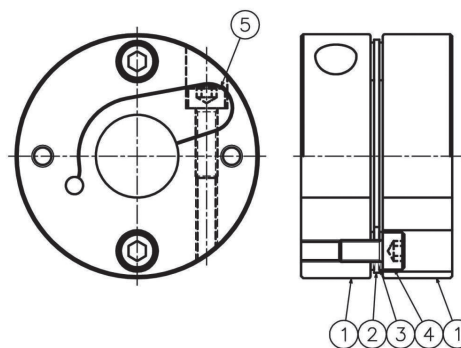
⚠ WARNING

- ◇ 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.
- ◇ 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

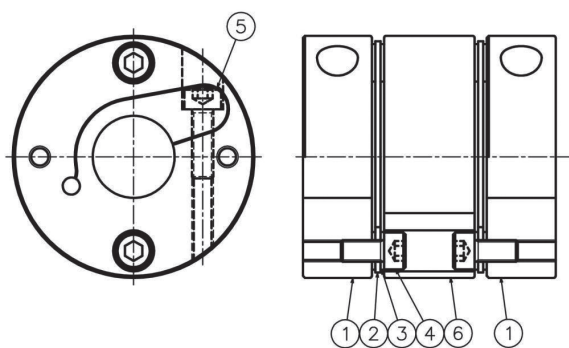
or any of its components before use. If there is damage, deformation, or other problem, replace with a new product.

- ◇ When tightening lock bolts, 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.
- ◇ Never use any bolt other than the designated bolt. There is the risk of damage to the bolt, resulting in an accident.
- ◇ 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 a hollow shaft (pipe), depending on the thickness it may not be possible to obtain sufficient surface pressure. Please contact our company.
- ◇ Install within the tolerance values for center deviation, deflection angle, and end play. There is the risk of damage to the product. In particular, centering accuracy has an effect on vibration and the lifetime of the coupling.
- ◇ It is recommended that the product be used within 1/2 or less of the displacement tolerance values.
- ◇ 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.
- ◇ Due to the coupling structure, there is the risk of injury if the user grasps the corners or disc part. Therefore exercise sufficient caution when handling.
- ◇ The AC Series can be used without applying oil to it.

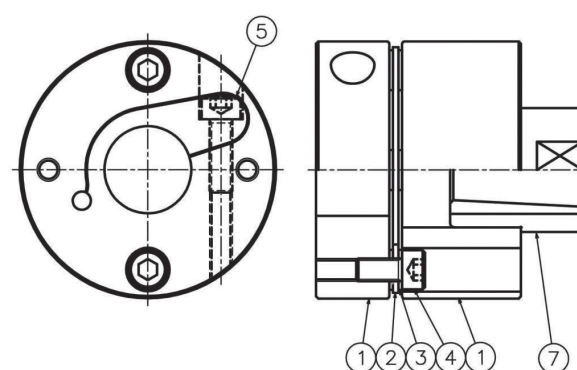
● Structural drawings



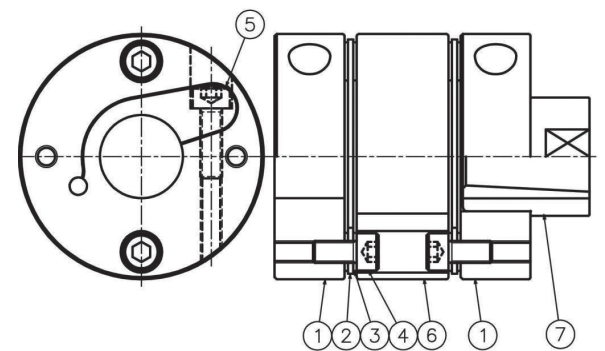
ACS Series



ACD Series



ACS Taper attachment



ACD Taper attachment

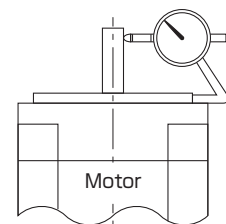
- 1. Body
- 2. Disk
- 3. Washer
- 4. Clamping screw
- 5. Locking screw
- 6. Spacer
- 7. Taper attachment

● Installation

- (1) Use paint thinner or other means to wipe off any corrosion, dirt, or other substance from the surface of the shaft.
- (2) Machine the motor mounting part accurately so that the misalignment between the 2 shafts is at or below the coupling tolerance value.
- ◇ When the ACS and ACD Series are shipped, the concentricity of the left and right flanges has been adjusted using a special jig. Install without loosening the clamp bolt.

● Installation procedure

- (1) Check output motor shaft centering accuracy. Confirm centering accuracy by measuring the output motor shaft before installing the coupling. Set the gauge as shown in order to measure motor shaft off-centering (Figure.1).



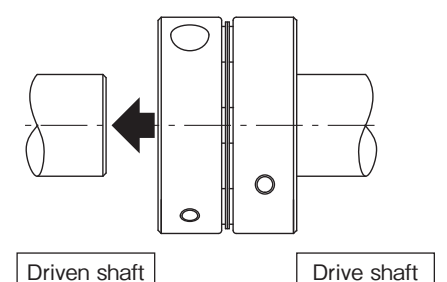
(Figure 1)

Precautions: The motor shaft off-centering amount is established by each manufacturer but may already have occurred at this stage.

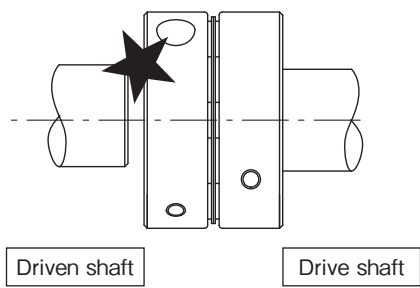
- (2) When the AC Series are shipped, the concentricity of the left and right flanges has been adjusted using a special jig. Therefore perform a simple check of center deviation and deflection angle using the coupling as the reference.
- (3) Install the AC onto the drive-side shaft first, and then install onto the driven-side shaft. If a tapered shaft is used, install the provided taper attachment before installing onto the shaft.

⚠ WARNING

- ◇ When installing onto the driven-side shaft, do not apply a load to the coupling in the thrust direction. There is the risk that the disc may become displaced, causing centering deviation of the coupling. (Figure 2, 3)

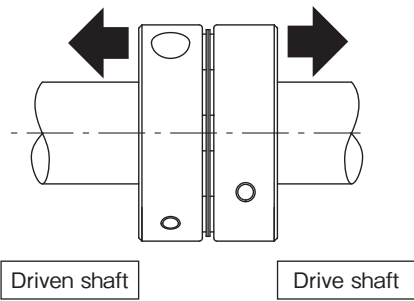


(Figure 2)



(Figure 3)

- (4) Slide the AC in the axial direction and check that it moves smoothly.
Then position the AC, and tighten the drive-side shaft lock bolts at the designated torque using a torque wrench. (The driven side is not fastened.) (Figure 4) (Table 1)



(Figure 4)

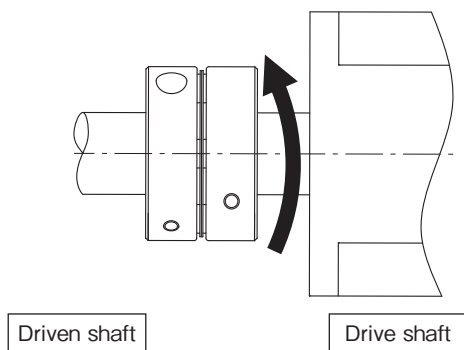
Lock bolt tightening torque

Strength category 12.9

Model	Bolt	Tightening torque N · m
AC-19A	M2	0.4
AC-27A	M2.6	1.0
AC-34A	M3	1.5
AC-39A	M4	3.5
AC-44A	M4	3.5
AC-56A	M5	7.0

(Table 1)

- (5) Rotate the AC installed onto the drive shaft, and check that the coupling rotates smoothly without any stress. (Figure 5)



(Figure 5)

- ◇ If it does not rotate smoothly, review the motor housing machining accuracy and assembly accuracy, and perform centering of the 2 shafts again.
(6) After checking that the coupling slides and rotates smoothly, tighten the motor bolts at the designated torque.
(7) Tighten the driven-side shaft lock bolts at the designated torque using a torque wrench.

- ◇ If the misalignment of the 2 shafts is large, vibration and noise may occur, and there may be an effect on the product lifetime. Therefore perform alignment accurately.

● Checking installation

Viewing from the side, check that there is no distortion of the disc.

Measure the total coupling length as a guide for checking that an excessive deflection angle is not applied to the coupling. (Table 2)

Model	Total length (mm)	
	ACS	ACD
AC-19A	16.9	25.7
AC-27A	19.3	31.6
AC-34A	21.8	37.0
AC-39A	26.5	45.0
AC-44A	28.5	48.0
AC-56A	34.8	58.6

(Table 2)

● Countermeasure to initial bolt loosening

As a countermeasure to initial loosening of the lock bolts after they are tightened, operate for approximately 30 minutes then again check the tightening torque.

● 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 coupling, and that there is no risk of falling or other accident.
- (2) To disassemble, gradually loosen each of the lock bolts in sequence.

*Specifications may be changed without notice.

ISEL CO., LTD.

Osaka Headquarters

Midosuji Grand Tower 15F, 3-5-1, Bakuro-machi, Chuo-ku
Osaka City, Osaka Prefecture, 541-0059, Japan
TEL: 06-7669-0570 FAX: 06-7669-0571

WEBSITE >>>

isel.jp