

Installation Instructions

Right-angle Precision Worm Products – EJM Series

Thank you for purchasing the EJM series Worm Gearbox. We recommend you read this installation and instruction sheet before operation to ensure proper performance.

Lubrication

The EJM series products are delivered filled with synthetic lubricant MOBIL SHC634. They are sealed and require no lubrication service throughout the life of the unit. The EJM Gearbox is built for universal mounting and ready to mount in any position.

Mounting the Motor

1. Clean motor shaft and mating surface of the motor and gearbox to ensure they are dust-free.
2. Mount the coupling halves on gearbox shaft and servo motor half following the process described on next page.
3. The tightening torque for the coupling clamping screws is as follows:

EJM02, 03, 05, 06, 09	10 Nm	90 lb-in
EJM11	25 Nm	220 lb-in

Mounting the Reducer

1. The machine base must be flat within 0.05 mm (0.002") over the entire area in contact with the reducer.
2. When bolting the reducer to machine base, tighten foundation bolts to housing observing these torque values:

Gearbox	Bolt	Torque	
		Nm	Lb-ft.
EJM02	M8	24 - 30	12 - 22
EJM03	M8	24 - 30	12 - 22
EJM05	M10	50 - 60	37 - 44
EJM06	M10	50 - 60	37 - 44
EJM09	M12	88 - 105	65 - 77
EJM11	M16	218 - 261	165 - 192

3. If a solid output is used, the output shaft of the gearbox should be coupled to the driven shaft with a flexible coupling and the gearbox aligned with the shaft within $\pm 0.03\text{mm}$. Solid or rigid couplings should be avoided. Failure to properly align shafts and the use of solid couplings can result in excessive coupling and bearing wear, shaft deflection and eventual failure of one or more of the components.

Ancillary Components

1. When mounting couplings, pulleys directly to the gearbox, refrain from hammering the component onto the shaft. If pressing the component onto the shaft, adequately support the gearbox's shaft in such a manner that prevents the gearbox bearings from supporting the press force, as the force to press on components may fail the bearings or individual components.
2. Sprockets and sheaves should be mounted as close to the gearbox as possible. Belts and chains must be adjusted to the proper tension to keep bearing loading and shaft deflection to a minimum. Too much tension and improper location will lead to excessive overhung load, bearing wear and shaft deflection. For specific information on overhung load capacity, shaft stress and bearing life, please contact Nidec DTC.

Start-Up

1. All gearboxes require a "run-in" period under load to achieve optimum efficiency. During this initial run-in, the gearbox will probably run warmer than normal and draw more current than after the run-in period. A gearbox operating at a very low load or speed will take much longer to run-in.
2. IMPORTANT: Gearbox operating temperature measured at the oil sump area of the housing should not exceed 93° C (200° F) maximum. If the gearbox operating temperature exceeds these limits, shut down the unit and contact Nidec DTC. Excessive oil sump temperature may be indicative of overloading, misalignment, or improper lubrication. Continuous operation of the gearbox with the oil sump temperature above 120° C (250° F) for the synthetic lubricant, will result in failure of the gearbox.

Maintenance

1. Worm gearbox require no periodic maintenance. They are not user-serviceable or repairable.
2. If a gearbox is to be returned, contact Nidec DTC for instructions and a Return Material Authorization #.
3. Please have model number information from the unit nameplate recorded.

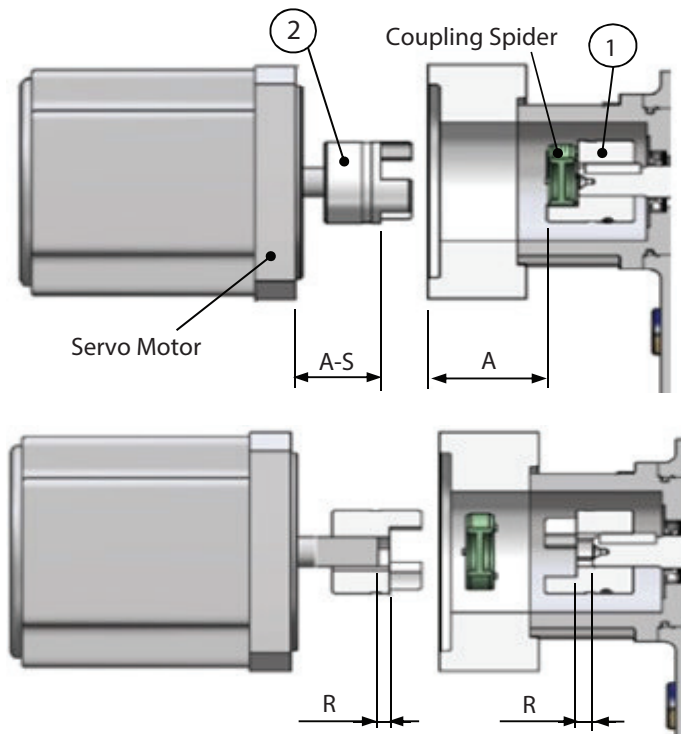


NIDEC DRIVE TECHNOLOGY CORPORATION

175 Wall Street, Glendale Heights, IL 60139, USA • P: (800) 842-1479 • info@nidec-dtc.com • www.nidec-dtc.com

Assembly of Coupling to Reducer and Gearhead

The coupling's three-piece design allows the hubs to be installed on each individual shaft and then joined axially.



1. The coupling hub #1 will be installed on the gearbox from the factory.
2. Measure "A" dimension from end of coupling to mating face of flange
3. Subtract "S" (see table below) from "A".
4. Locate coupling hub #2 on motor shaft so that the inside face of the coupling is located "A-S" from the mating motor face, as shown.
5. Tighten the clamp screw to the torque specified below.
6. Measure dimension "R" on the motor shaft. This is the distance that the shaft does not extend through the full-length of the coupling bore. If R is greater than the value shown in table below, reposition the coupling hub #1 on the gearbox outward about half the measured distance. Be sure to tighten the coupling clamp screw to the proper torque.
7. Subtract "S" (see table below) from "A". Repeat steps 2 through 5.
8. After positioning, dimension "R" shouldn't exceed the value in the table for either coupling half.
9. Lightly oil the coupling spider and position it on coupling hub #1.
10. Assemble the motor to the gearbox. If required, rotate the shafts through the access slots to aid in alignment.

Unit Size	Dimension "S"	Dimension "R"	Clamp Screw Torque
EJM02, EJM03, EJM05	2.0 mm (0.08")	08.0 mm (0.31")	10 Nm (093 in-lb)
EJM06, EJM09	2.0 mm (0.08")	14.5 mm (0.57")	10 Nm (093 in-lb)
EJM11	2.5 mm (0.10")	18.5 mm (0.73")	25 Nm (220 in-lb)

WARRANTY. With the exception of shaft seals, which is a normal wear item, seller warrants products manufactured by Seller to be free from defects in materials and workmanship under normal use and proper maintenance for: **EJM Series, 2 Year**

If within such period any product shall be proved to Seller's reasonable satisfaction to be defective, such product shall be repaired or replaced at our option. Seller's obligation and Buyer's exclusive remedy will be limited to such repair or replacement and shall be conditioned upon Seller receiving written notice of any alleged defect no later than ten (10) days after its discovery within the warranty period. Shipping terms for any repaired or replaced product will be FOB shipping point. If necessary, we reserve the right to inspect the product claimed to be defective at Buyer's location or place of installation. Travel time and expenses for any Seller service personnel provided to Buyer's premises to affect such repair or replacement will be at Buyer's expense. Seller reserves the right to satisfy our warranty obligation in full by reimbursing the Buyer for all payments made to Seller and Buyer shall thereupon return the product to Seller. **THE FOREGOING WARRANTIES ARE THE ONLY WARRANTIES MADE BY SELLER WITH REGARD TO THE PRODUCTS, AND SELLER HEREBY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS, STATUTORY, AND IMPLIED, APPLICABLE TO THE PRODUCTS, INCLUDING, BUT NOT LIMITED TO, ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS, AND ALL EXPRESS, STATUTORY, AND IMPLIED WARRANTIES APPLICABLE TO THE PARTS WHICH ARE NOT MANUFACTURED BY SELLER.** These warranties shall not be effective if the product has been subject to overload, misuse, negligence, or accident, or if the product has been repaired or altered outside of Seller's factory or authorized control in any respect which, in our judgment, adversely affects its condition or operation. Buyer shall establish, to our satisfaction, that the product has at all times, been properly assembled, installed, serviced, maintained, tested, operated and used in accordance with the current maintenance and operating instructions of Seller and has not been altered or modified in any manner without our prior written consent



NIDEC DRIVE TECHNOLOGY CORPORATION

175 Wall Street, Glendale Heights, IL 60139, USA • P: (800) 842-1479 • info@nidec-dtc.com • www.nidec-dtc.com