

Boston Gear®

CFA Worm Gear Speed Reducer

CFA Series Single Reduction Conveyor Flange Adapter

P-3005-BG

Installation and Operation



These instructions must be read thoroughly before installing or operating speed reducers. File instructions for future reference and for ordering of replacement parts.

General Instructions

- Before installing the CFA 700 Series, ensure that the bolts on the conveyor flange bearing opposite the reducer are finger tight and remain finger tight until the reducer installation is complete.
- To begin, rotate the conveyor shaft so that the key slot is in the 12:00 position.
- Insert a drive key into the approximate center of the projecting shaft key slot.
Using either a screwdriver or flat punch and a hammer, stake the key in place. Use only a light force to secure the key, as excessive force could cause a distortion in the shaft that will create problems in seating the reducer bore.
- Insert one of the reducer mounting bolts and a lock washer from the inside face of the conveyor side rail.
To accommodate the various sized bolts that may be used to mount the reducer, Boston Gear provides kits with three different sizes of rubber bushings. Insert the appropriate sized rubber bushings into the CFA flange holes which match the pattern of the pre-punched holes on the conveyor frame rail.
- Next, remove the paper backing from the rubber isolation pad and carefully affix the pad to the reducer flange.
- Rotate the reducer output bore to the 12:00 position by turning the input quill with your hand.
- Apply a liberal coating of anti-seize compound to the projecting shaft.
- While aligning the key with the key slot in the output shaft, slide the reducer onto the projecting shaft. Continue to slide the reducer onto the shaft until the face of the flange rests flush against the conveyor side rail. Make sure that the bolt goes through the flange hole.
- Install the flat washer and nut onto the bolt, then finger tighten to hold the reducer in place. Then install the remaining bolts, washers and nuts. Torque the bolts according to the torque specifications shown below: (these torque values are based on using non-lubricated, coarse thread, grade 8 bolts).

Bolt Size	Torque Specification (dry)
3/8 - 16"	45 ft-lbs
7/16 - 14"	70 ft-lbs
1/2 - 13"	110 ft-lbs

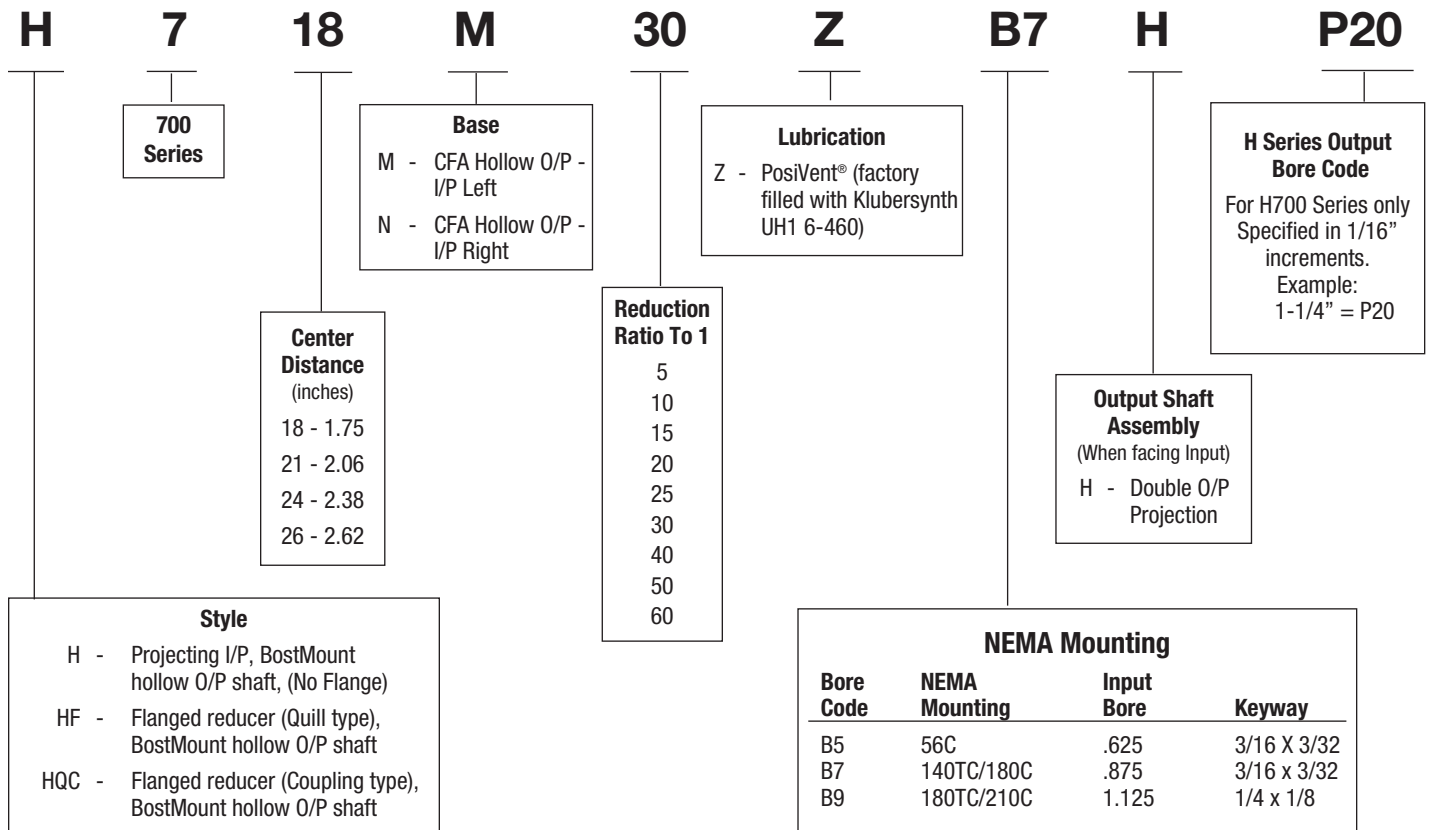
10. Setscrews are located on the outboard side of the output shaft of the speed reducer and are required to secure the conveyor shaft to the reducer bore. Tighten the setscrews to the proper torque setting. Refer to the torque specifications below: (these torque values are based on using commercially available, hardened alloy steel, socket head set screws).

Set Screw Size	Torque Specification
#10 - 32	36 in-lbs
1/4 - 28	87 in-lbs
5/16 - 24	165 in-lbs

11. Rotate the input shaft of the speed reducer by hand to attain one complete revolution of the output shaft. The number of turns required to achieve one output revolution is equal to the ratio of the reducer. For example, a 20:1 ratio will require 20 complete revolutions of the input to complete one output rotation. This procedure is necessary to align the outboard spherical bearing located opposite the reducer. Once this is complete, tighten the bolts on that bearing to the manufacturer's recommended torque specification.
12. Insert the motor drive key into the motor shaft key slot, and stake it into place using the staking procedure described earlier.
13. Apply a liberal coating of anti-seize compound to the motor shaft, then carefully align the motor shaft key to the keyway in the reducer quill, and assemble the motor to the speed reducer flange.
14. Carefully align the reducer flange holes with the motor mounting holes, install the motor mounting bolts, and torque them to the manufacturer's recommended specification.
15. In order to install the hollow shaft safety cover, remove two carrier bolts 180° apart on the outboard bearing carrier of the reducer.
16. Place one of the two washers supplied in the installation kit on each of the bolts, then loosely re-install one of the bolts and the washer. Make sure to leave a gap large enough for the mounting tab of the cover to slip easily under the washer.
17. Slip the tab of the hollow shaft safety cover under the washer, and tighten the bolt finger tight. Then install the remaining bolt and washer.
18. Center the hollow shaft safety cover on the bearing carrier, then tighten the bolts to 17 ft-lbs.

Conveyor Flange Adapter (CFA)

700 Series Single Reduction Catalog Number Explanation



Warranty

Boston Gear warrants that products manufactured or sold by it shall be free from defects in material and workmanship. Any products which shall within two (2) years of delivery, be proved to the Company's satisfaction to have been defective at the time of delivery in these respects will be replaced or repaired by the Company at its option. Freight is the responsibility of the customer. The Company's liability under this limited warranty is limited to such replacement or repair and it shall not be held liable in any form of action for direct or consequential damages to property or person. The foregoing limited warranty is expressly made in lieu of all other warranties whatsoever, express, implied and statutory and including without limitation the implied warranties of merchantability and fitness.

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