

## Instruction Manual

### DODGE® TIGEAR-2® Helical Attachment

These instructions must be read thoroughly before installation or operation. This instruction manual was accurate at the time of printing. Please see [baldor.com](http://baldor.com) for updated instruction manuals.

**Note!** The manufacturer of these products, Baldor Electric Company, became ABB Motors and Mechanical Inc. on March 1, 2018. Nameplates, Declaration of Conformity and other collateral material may contain the company name of Baldor Electric Company and the brand names of Baldor-Dodge and Baldor-Reliance until such time as all materials have been updated to reflect our new corporate identity.

#### SAFETY NOTICE:

**WARNING** statements describe conditions that may lead to personnel injury including potentially fatal injuries if the machine is improperly used and warnings are not followed.

**CAUTION** statements describe conditions that may lead to equipment damage.

**WARNING:** To ensure the drive is not unexpectedly started, turn off and lock-out or tag power source before proceeding. Failure to observe these precautions could result in bodily injury.

**WARNING:** Be sure to read and follow all Instruction, Warning and Caution statements in the appropriate motor manual. Failure to do so may result in serious or fatal injury.

**WARNING:** For safe operation of any gear drive, all rotating shafts and auxiliary components must be shielded to conform to applicable safety standards. You must consider overall operational system safety at all times.

**WARNING:** Do not manually release brake before blocking overhauling loads to prevent unexpected machine movement. Failure to observe this precaution could result in bodily injury.

**WARNING:** When using a speed reducer to raise or lower a load, such as in hoisting applications, provision must be made for external braking. Under no conditions should a speed reducer be considered self-locking.

**WARNING:** Mounting of speed reducers in overhead positions may be hazardous. Use of external guides or supports is strongly recommended for overhead mounting.

**WARNING:** To ensure the drive is not unexpectedly started, turn off and lock-out or tag power source before proceeding. Failure to observe these precautions could result in bodily injury.

**WARNING:** All products over 25 kg (55 lbs) are noted on the shipping package. Proper lifting practices are required for these products.

**WARNING:** Because of the possible danger to person(s) or property from accidents which may result from the improper use of products, it is important that correct procedures be followed. Products must be used in accordance with the engineering information specified in the catalog. Proper installation, maintenance and operation procedures must be observed. The instructions in the instruction manuals must be followed. Inspections should be made as necessary to assure safe operation under prevailing conditions. Proper guards and other suitable safety devices or procedures as may be desirable or as may be specified in safety codes should be provided, and are neither provided by ABB nor are the responsibility of ABB. This unit and its associated equipment must be installed, adjusted and maintained by qualified personnel who are familiar with the construction and operation of all equipment in the system and the potential hazards involved. When risk to persons or property may be involved, a holding device must be an integral part of the driven equipment beyond the speed reducer output shaft.

#### Receiving & Inspection

When you receive your Helical Attachment, there are several things you should do immediately.

1. Observe the condition of the shipping container and report any damage immediately to the commercial carrier that delivered your Helical Attachment.
2. Remove the Helical Attachment from the shipping container and remove all packing materials from the Helical Attachment. The container and packing materials may be retained for future shipment.
3. Verify that the part number of the Helical Attachment you received is the same as the part number listed on your purchase order.
4. Inspect the Helical Attachment for external physical damage that may have been sustained during shipment and report any damage immediately to the commercial carrier that delivered your Helical Attachment.

#### Mounting

For maximum seal life, the Helical Attachment should be mounted with the input shaft above the output shaft. Mounting the Helical Attachment with the input shaft below the output shaft is not recommended.

Helical Attachment reducers are designed to operate in ambient temperatures of -10°F to 100°F. The oil pump temperatures of the Helical Attachment must not exceed 200°F.

Align all shafts accurately. Improper alignment can result in failure. Use of flexible coupling on the output shaft is recommended to compensate for slight misalignment when the Helical Attachment is not being directly coupled to a worm reducer.

Auxiliary drive components (such as sprockets, gears and pulleys) should be mounted on the shafts as close as possible to the housing to minimize effects of overhung loads. Avoid force fits that might damage bearings or gears.

The Helical Attachment reducers are rated for 1750 RPM Input Speed and Class 1 Service. Each Helical Attachment reducer is filled with Klubersynth UH1 6-460 synthetic lubricant. The oil quantity is sufficient for all approved mounting positions. Oil changes are not required. Oil should only be replaced when maintenance is performed that requires disassembly. If the oil is replaced, use Klubersynth UH1 6-460 rated for USDA Class H1 environments. (Oil capacity in fluid ounces: Size 1= 6.2 oz; Size 2= 11 oz.)

#### Mounting for Dodge Tigear-2 Quill Style Reducer

1. Insert the 4 supplied attachment bolts and lock washers into the motor flange on the Tigear-2 reducer.
2. Attach the supplied gasket onto the 4 bolts.
3. Remove the key that is taped to the Helical Attachment output shaft and discard it. The Tigear-2 reducer has a pre-installed key in the quill bore.
4. Align the keyway in the Helical Attachment output shaft with the key in the quill bore on the Tigear-2 reducer.
5. Attach the DODGE Helical Attachment to the Tigear-2 reducer.
6. Tighten the bolts to 25 lb-ft.

#### Mounting for Dodge Tigear-2 3-Piece Coupled Input Reducer

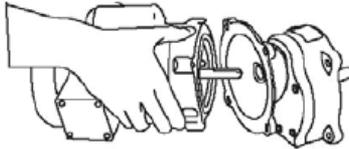
1. Position the Tigear-2 reducer so that the input flange is facing up.
2. Place the elastomeric element into the coupling half mounted on the Tigear-2 input shaft.
3. Place the Helical Attachment coupling half without the key onto the elastomeric element.
4. Stake the key in place on the output shaft of the Helical Attachment.
5. Place the gasket onto the flange on the Tigear-2 reducer with the holes in the gasket aligned with the holes in the flange.
6. Align the coupling keyway and Helical Attachment output shaft key and slide the Helical Attachment into place.
7. Insert and finger tighten the 4 supplied bolts.
8. Look through the access hole in the Tigear-2 motor adapter and verify the coupling faces are in full contact with the coupling elastomeric element.
9. Insert a 0.010" to 0.030" shim between the elastomeric element and coupling half and tighten the setscrew on the Helical Attachment coupling half.
10. Tighten the bolts to 25 lb-ft.

**NOTE: Failure to provide the required 0.010" to 0.030" clearance in the coupling may lead to premature product failure.**

#### Mounting A Motor To The Helical Attachment

Helical Attachment reducers are ready for installation as removed from the carton. The motor shaft quill coupling has been pre-lubricated with Kluber Q NB 50 anti seize.

1. Place the supplied input key in the Helical Attachment input bore.
2. Line up the key with the keyway in the motor shaft.
3. Slide the motor into position and insert the 4 attachment bolts with lockwashers.
4. Tighten the bolts to 25 lb-ft.



**Figure 1 - Mounting Motor to Helical Attachment**

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MN1607



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