

BH-USA Enclosed Drive Features

General Description

The BH-USA Enclosed Drive is a double reduction worm gear reducer contained in a single housing. It was designed specifically for the boat lift application. The input is a NEMA 56C to allow mounting of a standard electric motor directly onto the reducer. The output is a hollow shaft design that is sized to accommodate a standard 2" pipe. The connection to the pipe utilizes the cross bolt identical to the current flat plate design. This design provides maintenance free service without grease lubrication, waste or belt drive adjustments.

Housing

The housing is made of cast aluminum for corrosion resistance in salt water and humid environments. The housing is designed to provide separate lubrication reservoirs for the high and low speed gear sets to ensure proper lubrication without having to overfill. The housing is non-vented to prevent build up of condensation inside the reducer in humid environments.

Gearing

There are two ratios of high-speed gear sets. The 4:1 and 5:1 provide for high efficiency. They utilize production gear sets from an industrial product line designed to AGMA specifications. The worm is made from heat-treated steel alloy and meshed with a bronze worm gear. There are two ratios of low speed gear sets of 96:1 and 120:1. They are designed to have extremely low helix angle to prevent any possibility of back drifting. The worm and worm gear also mesh a bronze and heat-treated steel configuration. The large center distance of the low speed gear results in lower loads for given output torque.

Bearings

All shaft and gears are supported by deep groove ball bearings to provide precision positioning and high efficiency. The low speed worm gear bearings are pre-lubricated and shielded to ensure proper lubrication and contain the lubrication in the high-speed cavity.

Lubrication

The BH-USA Enclosed Drive is factory filled with high quality semi-fluid grease. The high viscosity grease is capable of handling the high shear stress inherent in worm gear products.

Sealing

The Enclosed Drive utilizes the exclusive BH-USA antileak sealing system. This industry leading design helps protect the sealing lip from outside contaminants and shaft corrosion. BH-USA sealing system is more capable of handling the small internal pressures that may result from the temperature changes that occur throughout the year.

Mounting

The enclosed drive is shaft mounted with a flange to accommodate a torque arm connection to resist rotation of the housing. This allows for a flexible mounting system so the housing can move with the shaft without binding. This eliminates the need for a precise machined mounting surface to secure the housing to the frame. **DO NOT USE A STAINLESS STEEL BOLT** to mount the E-Drive due to the properties of stainless steel.

Drive Bolt

This bolt is 1/2" x 4 grade 5, It is very important the nut NOT BE TIGHTENED against the hub of the pipe sleeve. It can be snug up to the sleeve, over tightening could crack the sleeve. **DO NOT REPLACE THIS BOLT WITH A STAINLESS-STEEL BOLT!**

