

from Bodine Electric Company

## ■ Bodine CG Gearmotors Lift up to 10,000 Pounds



Boat Lift / Outdoor Marine Equipment

### High Torque 24 VDC gearmotors drive vertical boat lift.

A boat lift manufacturer contacted Bodine to assist in the development of a new line of high load capacity vertical boat lifts. The application demanded that the gearmotor be suitable for long-term use in a harsh waterfront environment, deliver high starting and running torque, positive locking capability when not running, and it needed to be powered by the 24 volt DC battery/solar cell systems included on the lifts. The gearmotor efficiency had to be high to permit many lift cycles from the charged batteries.

We developed a robust solution based on our stock [42A-CG Series](#) parallel shaft DC gearmotor family to address these application requirements.

### The custom gearmotor design included:

- A totally enclosed motor with permanently lubricated gearbox to withstand years of exposure to outdoor waterfront conditions
- 1,100 lb-in of starting and running torque, permitting lift capacity of up to a 10,000 lb watercraft.
- Positive locking fail-safe brake to reliably hold the lift in position when not powered.
- 24 volt permanent magnet DC motor
- High efficiency hardened helical gearing

**Bodine brings over 110 years of problem solving experience to a wide range of applications in industries as diverse as energy production, medical, packaging, industrial automation, and solar powered outdoors equipment. We look forward to working with you on your next fractional-horsepower gearmotor design challenge.**

### application insights

#### The Design Requirement

A lift designed to raise watercraft that weigh up to 10,000 lbs required a high-torque, self-locking gearmotor that could be operated for years outdoors.

#### The Solution

- PMDC motor with high starting torque
- 24 Volt winding powered by DC battery/solar cells system
- Rugged parallel shaft gearhead with positive locking fail safe brake



Standard Bodine type 42A-CG permanent magnet DC parallel shaft gearmotor ([click here](#) for more information)