

# G-FORCE® Q AND IQ 660 LB UNITS

NEW DESIGN OFFERS GREATER FLEXIBILITY

## MOVING HEAVIER LOADS WITH UNMATCHED PRECISION

Gorbel, the world leader in the Intelligent Assist Device market, has added two new models to their award-winning G-Force® Intelligent Lifting Device line. The new models are the G-Force® Q and IQ units, now available in a 660 lb. (300 kg) capacity.

## THE SMARTER WAY TO LIFT

Our G-Force® technology gives you the best of both worlds: the responsiveness and the flexibility of a human operator, plus the power of a machine. More precise than hoists, more responsive than air balancers, G-Force® technology improves safety, productivity and quality, resulting in a direct increase to your bottom line:

- Provides unparalleled precision at speeds up to 50 FPM.
- Acts as an extension of the operator's arm.
- Makes your work force more productive by increasing efficiency and enabling them to easily perform complex tasks.

## SMARTER THAN EVER

The IQ and Q model choices offer the right features to fit your application and budget with even more intelligence features and capabilities.

## STANDARD OPTIONS

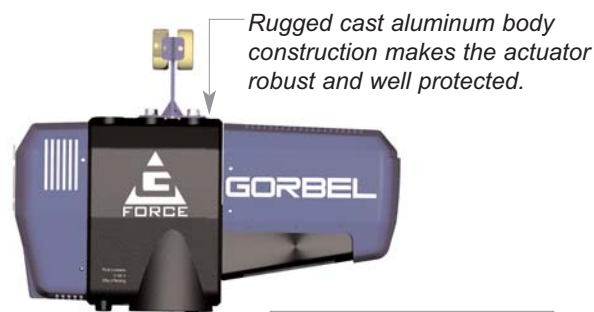
The fully capable Q model offers the same high speed, precision, and smooth motion as the IQ model. Both the Q and IQ models include the following standard options:

- Float Mode to allow maneuvering of the load by simply applying slight upward or downward pressure directly to the load. This makes any load feel weightless and lets the operator have ultimate control over the load.
- Choice of either standard slide handle or infinitely variable up/down control pendant to best fit your application control requirement.
- Add on push button air valves and electric switches for ease of tooling integration.

## APPLICATIONS

The 660 lb. G-Force® is ideal for larger capacity lifting applications, including:

- Lifting fully dressed engines and transmissions
- Changing out expensive machine tooling and dies on production machinery.
- Heavy equipment manufacturing
- Large valve assembly for oil and natural gas industry



Rugged cast aluminum body construction makes the actuator robust and well protected.

The G360™ swivel assembly prevents damage to the coil cord, carries electrical signals from the handle to the actuator, and carries air to end-effector tooling.

Die-cast aluminum slide handle housing stands up to the abuses of industrial environments.



Suspended Pendant Handle also available.

## NEW DESIGN

Our newly designed 660 lb. capacity G-Force® offers a wealth of design elements and software features that improve both its function and its reliability.

## MODULAR DESIGN FOR INCREASED FLEXIBILITY

The new G-Force® is more modular, making it easier to configure in the field to meet your changing needs.

## ON-BOARD DIAGNOSTICS FOR EASY MAINTENANCE

The new G-Force® has on-board diagnostics to help you keep your unit operating at peak performance. It even has Preventative Maintenance Indicators, programmed to alert maintenance people when regular wear items like wire ropes need replacement, or when the unit is due for inspection.

## NEW OPERATOR PRESENT FUNCTION

We replaced the Operator Present Switch (OPS) on the handle with a photo sensor, making the G-Force® more intuitive for operators. This new method senses the presence of the operator's hand without a physical lever to depress. The result is smoother operation because the operator is not tempted to use the OPS safety feature as a start/stop control.



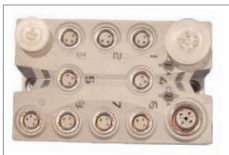
The LCD screens on the new standard handle (left) and pendant handle (right) communicate valuable information to both operators and to maintenance personnel.

### NEW HANDLE DESIGN

The new 660 lb. G-Force® comes with a redesigned handle. This new handle is more ergonomic and features a standard LCD display that better communicates valuable information both to operators and maintenance personnel. Information displayed includes G-Force® operation modes, programming menus, fault codes, diagnostic information, and weight readout.

### G360™ ELECTRIC/AIR SWIVEL

Another new addition to the Q and iQ design is the G360™, an integrated collector and air swivel assembly. The G360™ swivel assembly allows the handle of the G-Force® to rotate without twisting the coil cord in applications where the operator is continuously rotating the handle. The G360™ collector/air swivel accommodates the coil cord cable, the optional input/output module signals, and the air power for end effector tooling. The G360™ attaches to end tooling with an optional kit when the control handle is remote mounted.



Optional I/O block can be added below the G360 to provide additional end effector tooling control.

## INCREASE YOUR LIFTING IQ

The 660 lb. capacity iQ unit comes standard with added intelligence capabilities for more flexibility.

### PROGRAMMABLE FEATURES

The iQ has several programmable features such as Auto-Unclamp and Part-Present detection. Using these features to control your tooling increases productivity and minimizes errors.

### AUTO-HOME

The G-Force® iQ is capable of preprogrammed motion such as return to home or other teachable points within the vertical hook travel to save operators time.

### TEACHABLE VIRTUAL LIMITS

The iQ unit's enhanced control package provides expanded Virtual Limits capabilities. The following virtual limit features are now available as standard functionality on the iQ (or as a software adder on the Q):

- Upper and lower virtual limit stop points
- Speed reduction points in up and down travel
- Program mode lockout which protects virtual limit settings from unwanted changes

### SPEED REDUCTION POINTS

Speed reduction points can be set a few inches above or below a desired location when handling a fragile load. When the operator reaches that point, the unit automatically shifts to a slower programmed speed and then stops in the desired spot for controlled positioning every time.

### EXTERNAL PROGRAMMABLE INPUTS/OUTPUTS

Multiple programmable inputs/outputs (I/O) are available on the new 660 lb. iQ G-Force®. The unit comes standard with eight I/O points in the actuator. Flexible and convenient optional I/O blocks, each containing eight I/O points, can also be added below the G360 swivel point to provide just the right functionality for your application's tooling control requirements. No added expense is required if this option is not needed.

### OTHER FEATURES

The new design allows you to control one G-Force® unit with two handles, which is ideal for applications when tooling requires more than one point of control. You can also control two G-Force® units with one handle. This would allow one operator to lift a very long part using a G-Force® at either end and controlling them from a single point.

## PERFORMANCE CHARACTERISTICS

	Q	iQ
<b>CAPACITY</b>	660 lbs. (300 kg)	
<b>MAXIMUM LIFTING SPEEDS</b>	50 FPM (15.24 MPM), unloaded 42 FPM (12.8 MPM), 660 lb. (300 kg) load	
<b>POWER REQUIREMENTS</b>	220 Volt - Single Phase - 50 Hz or 60 Hz - 10 AMP Max Current Draw	