GORBEL®
A CLASS ABOVE

The leader in crane technology and ergonomic lifting

THE SMARTER WAY TO LIFT:

G-FORCE® & EASY ARM®

ELECTRIC SERVO POWERED INTELLIGENT LIFTING DEVICES

ANTI-RECOIL TECHNOLOGY

This prevents the G-Force® and Easy Arm® units from moving or recoiling when there is a sudden change in load, reducing the risk of potentially serious injury.

FLOAT MODE

The G-Force® and Easy Arm® units offer our versatile Float Mode. With as a little as 1/2lb (227 g) of force on the load itself, operators can precisely orient loads throughout the full stroke range by manipulating the load with their hands.

POWER LOSS PROTECTION

A fail safe load braking system locks the unit in place in the event of a power loss.

BLAZING SPEEDS

With G-Force® speeds reaching 200 fpm (61 mpm) and Easy Arm® speeds reaching 180 fpm (55 mpm), these devices travel up to 4 times faster than traditional high-end lifting devices currently on the market, making them the fastest, most precise lifting devices on the planet.

OPERATOR PRESENT DETECTION

Each of our seven handle configurations has Operator Present Detection that doesn't allow the unit to move unless the operator initiates the movement.

CAPACITY OVERLOAD

The units have a factory setting that prevents them from lifting a load if it exceeds their capacity. There's also a setting that users can electronically set within the menu if a smaller capacity overload limit is desired.

THE SAFE ALTERNATIVE

Operators want to use our G-Force® technology because it's easy to learn and easy to use. Our Intelligent Lifting Devices are safer than manual lifting and dramatically reduce worker injury cost.

INFINITE SPEED CONTROL

Gorbel's Intelligent Lifting Devices move with the operator. They move as fast or as slow as the operator chooses to move. They are ideal for applications that require high speed at some points in the cycle and slow, precise movements at other points.

PINPOINT PRECISION

Our Intelligent Lifting Devices deliver unparalleled precision with speeds of less than 1 fpm (0.3 mpm). This gives the operator the control necessary to finesse expensive or fragile parts.

CONTROL

CUTTING EDGE CONTROL TECHNOLOGY

G-Force® now uses the latest processor to offer you the most advanced features in the intelligent lifting market. Our cutting edge units are available in two models – our base model, the Q2, loaded with intelligence features for most applications, and our enhanced model, the iQ2, which offers even more configuration options with electrical control Input/Output (I/O) points at the handle and in the actuator.

- Updated computer based user interface makes configuration a breeze.
- More customizable handle-based I/O options mean the lower priced Q2 model can handle a wider range of simple applications.
- User configurable I/O on the iQ2 model means less need for potentially costly custom programming.
- Built-in wireless connectivity via WiFi, along with wired functionality, so you no longer have to plug in a cable for servicing, troubleshooting, or diagnostics.
- Handle and visualization interfaces are now available in 6 languages — English, French, German, Italian, Mandarin, and Spanish.

INNOVATIVE HANDLE DESIGN

1

G 360™ Swivel Assembly

Our G-Force® Intelligent Lifting Devices have a combined collector/air swivel that allows the handle to continuously rotate without damaging electrical conductors in the coil cord or optional air coil. This is ideal in applications where the operator is continuously rotating the handle.

2

Multi-Language Handle Display

High resolution OLED, multi-language handle display allows for menu style set up of features like Virtual Limits and Speed Reduction Points. It also communicates valuable information like operation modes, weight readout, diagnostic information, and fault codes.

3

Operator Present Function

All G-Force® and Easy Arm® control handles have operator present sensing functionality, making them safe and intuitive. This method senses the presence of the operator's hand without a physical lever to depress. The result is safe, smooth operation because the operator is not tempted to use the Operator Present Sensor safety feature as a start/stop control.

4

Ergonomic Handle Design

Our long lasting handle grips are designed with your operator's comfort in mind. Their shape, size, and material were carefully planned to fit comfortably in your hand, and textured to give you a positive grip.

Q2 AND iQ2 HANDLE CONFIGURATION OPTIONS

The G-Force® and Easy Arm® were designed to provide flexibility in handle configurations. Your Gorbel distributor or your tooling integrator can help you choose the handle configuration best suited for your application.

See tooling examples on pages 15-16.

In-Line Slide Handle

The in-line slide handle allows the operator to get close to the load for more control and precision. With this handle, the load moves with the motion of the operator's hand.

Remote Mount Slide Handle

This configuration offers the same smooth control as the slide handle, but accommodates set-ups where the operators can't be close to the load.

Suspended Pendant Control Handle

This handle is ideal when you have limited headroom, when the operator can't get close to the load or when the operator needs maximum lifting stroke. This handle can also be used when you expect the load to bounce or tip during lifting.

Remote Mount Pendant Control Handle

Choose this design when the handle is mounted more than one foot from where the wire rope attaches to tooling, or when you expect the load to bounce or tip during lifting.

FORCE SENSING HANDLES FOR G-FORCE® AND EASY ARM®

The Force Sensing Handles offer versatility in ergonomic lifting. Compared to standard slide handles, which use displacement of the handle to initiate upward or downward motion, this design senses force applied without any handle motion. This creates a versatile option for tooling, or elongated handles that perfectly serve applications with a wide range of motion.

In-Line (FSI)

When very low or very high pick and place points require hand-over-hand lifting. Eliminates the need to bend over to reach into deep bins or dunnage.

Hub (FSH)

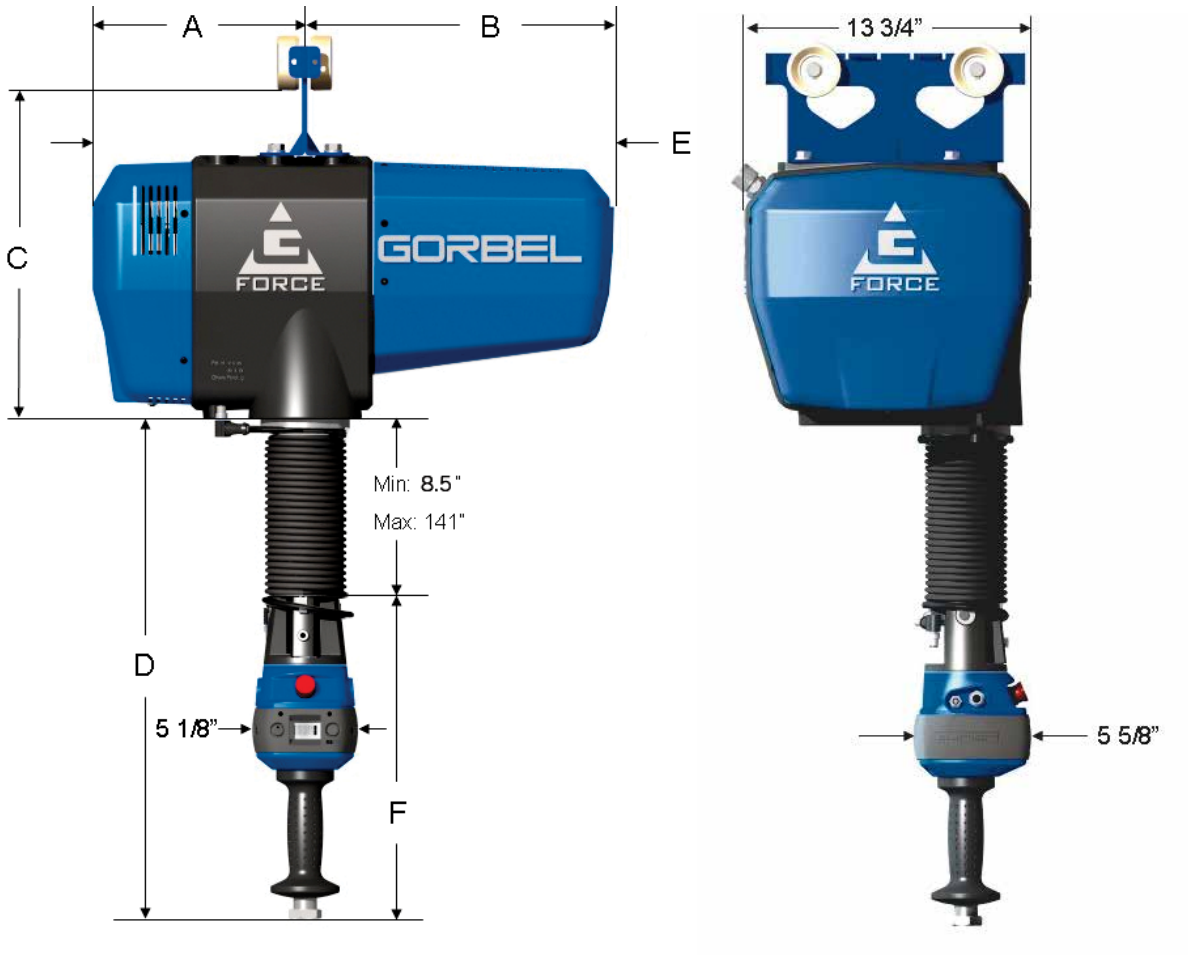
Provides the most flexibility for custom tooling solutions by allowing a wide range of handle bars (by others) to be mounted to the hub. The hub can also be mounted anywhere on the custom tooling frame. When the operator needs to control up/down motion by applying force to any point on the handle bars or other control fixtures attached at the hub.

Remote mounted (FSR)

Provides the ability to remote mount a 24" or 36" Force Sensing Handle to a tooling frame (by others). This is beneficial for ergonomically reaching high and low pick/place points.

G-FORCE

G-FORCE® Q2 AND iQ2:
BRIDGE CRANE MOUNTED LIFTING DEVICE



Capacity	165 lb (75 kg)	330 lb (150 kg)	660 lb (300 kg)
A	8.625" (219mm)	10.25" (260mm)	10.25" (260mm)
B	14.375" (365)	15" (381)	15" (381)
C	17" (432)	17" (432)	17" (432)
D	26" (660)	26" (660)	26" (660)
E	23" (584)	25.25" (641)	25.25" (641)
F	16" (406)	16" (406)	16" (406)

C dimension may change according to the track series you're using. Consult factory for actual dimension.
D references unit in full up position.

HANDLE CONFIGURATION OPTIONS

Dim	Remote Mount Slide	Suspended Pendant Control	Remote Mount Pendant Control
D	17.5" (445mm)	8.5" (216mm)	17.5" (445mm)
F	14.25" (362)	14" (356)	14" (356)

FORCE SENSING HANDLES

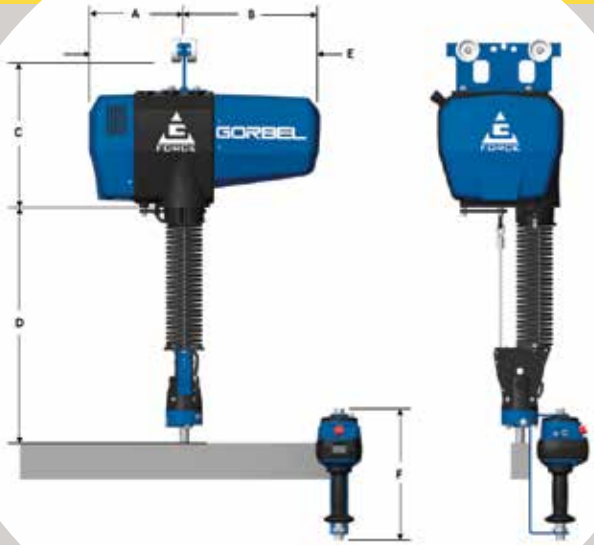
In-Line

Remote Mounted

Hub

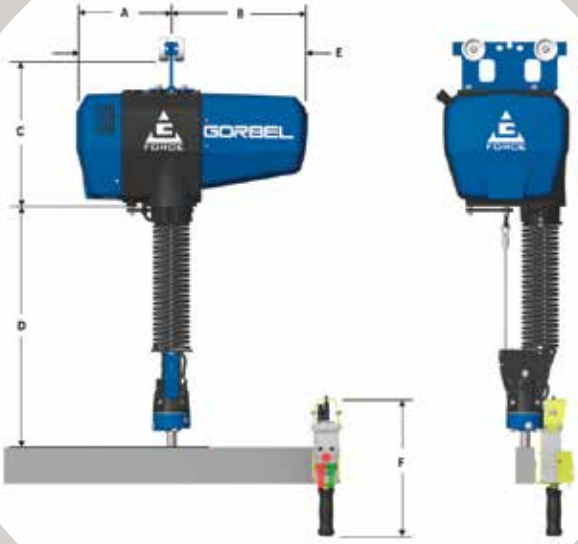
1320 LB. UNIT
HANDLE CONFIGURATIONS

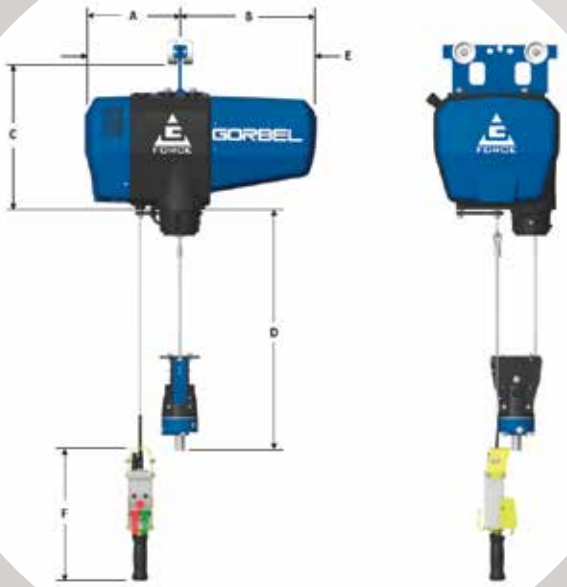
In-Line Slide



Remote Slide

Remote Pendant





Suspended Pendant

Dim	In-Line Slide	Remote Slide	Remote Pendant	Suspended Pendant
A	10.25" (260mm)	10.25" (260mm)	10.25" (260mm)	10.25" (260mm)
B	15" (381)	15" (381)	15" (381)	15" (381)
C	17" (432)	17" (432)	17" (432)	17" (432)
D	30.5" (775)	21.5" (546)	21.5" (546)	17.5" (445)
E	25.25" (641)	25.25" (641)	25.25" (641)	25.25" (641)
F	19.5" (495)	14.25" (362)	14" (356)	14" (356)

D references unit in full up position.

SOFT TOUCH CONTROL HANDLES

Use our Soft Touch Control Handles to control any air or electric powered equipment, such as end-effector tooling for the G-Force® or Easy Arm®. A common handle base for air or electric applications gives you design commonality and flexibility, whether your application requires air valves for direct control of end tooling, or electric switches to activate your G-Force® or Easy Arm® inputs.

MAKE TOOLING INTEGRATION EASIER

- Flexible design easily integrates into new equipment layouts
- Easy replacement of any standard pneumatic or electric handles
- Engineered for easy use to reduce potential for fatigue and repetitive stress injuries
- Offers more flexibility in tooling choices and the ability to customize tooling for applications
- Costs less than most comparable handles

CASE STUDIES

G-FORCE® IN ACTION: PAPER PLANT

This manufacturer of paper products replaced their air balancers with a Gorbel® Easy Arm® to change out roll cores in their plant. The switch has enabled the production process to run smoother and they've increased productivity.

URL: https://www.gorbel.com/solutions-center/ergonomic-lifting/paper-manufacturer-benefits-from-intelligent-lifting-solution

G-FORCE® IN ACTION: POWDER COATING OPERATION

This powder coating company turned their two person operation into a one person job by replacing a forklift with a G-Force® Intelligent Lifting Device.

URL: https://www.gorbel.com/solutions-center/ergonomic-lifting/powder-coating-g-force-intelligent-lifting-device-reduces-labor-costs-and-provides-safe-solution

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GORBEL'S Q2 AND iQ2 TECHNOLOGY: TECHNICAL SPECIFICATIONS

BRIDGE MOUNTED G-FORCE® Q2 AND iQ2 QUICK FACTS

G-Force®	Q2	iQ2	Q2	iQ2	Q2	iQ2	Q2	iQ2
Maximum Capacity	165 lb 75 kg		330 lb 150 kg		660 lb 300 kg		1320 lb 600 kg	
Maximum Lifting Speed Unloaded	200 ft/min 61 m/min		100 ft/min 30 m/min		50 ft/min 14.94 m/min		25 fpm 7.47 m/min	
Maximum Lifting Speed Fully Loaded	125 ft/min 38 m/min		75 ft/min 23 m/min		42 ft/min 12.80 m/min		21 fpm 6.4 m/min	
Maximum Float Mode Lift Speed	103 ft/min 31 m/min		65 ft/min 20 m/min		38 ft/min 11.58 m/min		19 fpm 5.79 m/min	
Duty Cycle	H5		H5		H4		H3	

FREE STANDING EASY ARM® Q2 AND iQ2 QUICK FACTS

Easy Arm®	Q2	iQ2	Q2	iQ2	Q2	iQ2
Maximum Capacity (Load & Tool)	165 lb 75 kg		330 lb 150 kg		660 lb 300 kg	
Maximum Lifting Speed Unloaded	180 fpm 55 mpm		90 fpm 27 mpm		50 fpm 14.9 mpm	
Maximum Lifting Speed Fully Loaded	125 fpm 38 mpm		75 fpm 23 mpm		42 fpm 12.8 mpm	
Maximum Float Mode Lifting Speed	103 fpm 31 mpm		65 fpm 20 mpm		38 fpm 11.58 mpm	
Maximum Lift Range	11 ft 3.35 m		11 ft 3.35 m		11 ft 3.35 m	

Q2 AND iQ2 TECHNICAL SPECS

G-Force® and Easy Arm®	Q2 iQ2
Primary Lift Voltage (VAC)	220 +/- 10%, single phase
Maximum Current (Amps)	6
Duty Cycle	H3 - H5
Operating Temperature Range	41 - 122° F 5 - 50° C
Operating Humidity Range (Non-Condensing)	35 - 90%
User Accessible Power	24VDC @ 0.5A
Virtual Limits (Upper Limit, Power Limit, Speed Reduction)	Standard

iQ2 SPECIFIC INFORMATION

I/O Actuator (iQ2 only)	
Inputs, Type	8, Sinking
Input Current @24VDC	6mA
Outputs, Type	4
Continuous Current/Channel	0.5A
Module Max Current	0.5A
X67 I/O Module (iQ2 Only)	
8 Channel	Input or Output
Nominal Voltage	24VDC
Input Current @24VDC	4mA
Input Type	Sinking
Outputs Type	FET
Continuous Current/Channel	0.5A
Total Nominal Current	0.5A
Handle I/O (Q2 Only)	
Inputs, Type	2, Sourcing
Input Current (max) @24VDC	60mA
Outputs, Type	2, Relay
Max Switch Current	0.5A
Max Available Current	0.5A

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www.gorbel.com

FOR MORE INFORMATION

Your authorized Gorbel dealer can give you more information on what makes Gorbel's Ergonomic Work Station Cranes and other material handling products "A Class Above."

PROUDLY MANUFACTURED IN THE USA SINCE 1977

OVERVIEW

BRIDGE CRANES


Work Station Cranes


Cleveland Tramrail


Ergonomic Study

ERGONOMIC LIFTING


G-Force® & Easy Arm®


Ergonomic Study

JIB CRANES


Jib Cranes

FALL PROTECTION


Fall Arrest