



## G-Force® Powered Rigid Telescoping Vertical Column Allows Precise Positioning

**Industry:**  
Aerospace

**Product:**  
Castings and special blocks of alloys

**The Problem:**  
Controlling valuable parts in a machining center

**The Solution:**  
Gorbel G-Force



### The total solution of the G-Force®, rigid column, and tooling give the operator ultimate control

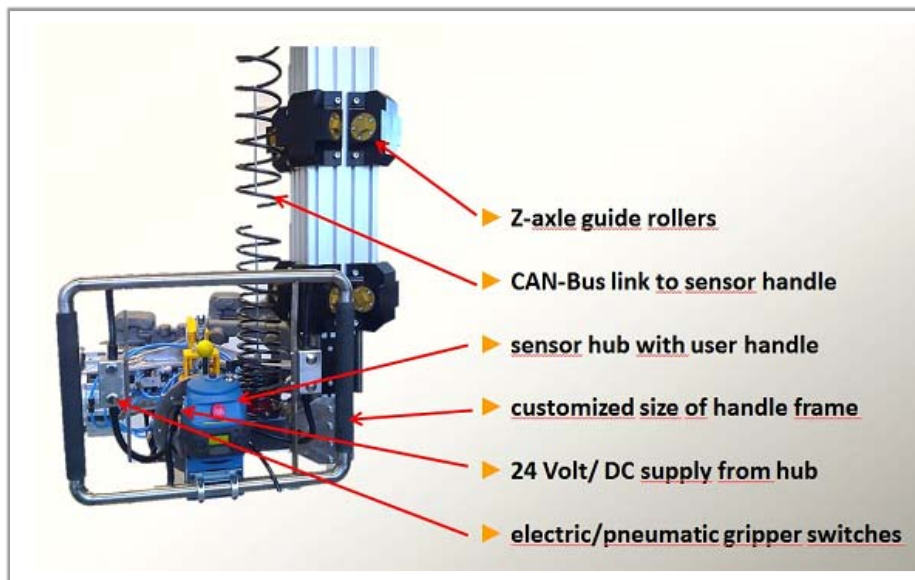
The aerospace industry has applications moving very valuable, complex castings and blocks of special alloys, in and out of machining centers. These applications require precision and finesse that can only be achieved by a precision lifting device such as Gorbel®'s Servo powered G-Force® Intelligent Lifting



Device. These applications also typically require some degree of reaching beyond the attachment point of the wire rope into the machine requiring a rigid column to handle that cantilevered load. The rigid column allows the lifting solution to reach into the machine where the lifting device is not able to be centered directly over the pick/place point due to the obstruction of the top of the machine.

Special end tooling attached to the bottom of the rigid column allow the part to be engaged and positioned either in a vertical or

horizontal orientation. The total solution of the G-Force®, the rigid column, and the tooling give the operator ultimate control when loading or unloading highly valuable parts from machining centers. The float mode and virtual limit features of the G-Force® make even the heaviest part seem weightless to the operator and allow precision handling and placement of the load while practically eliminating the potential for damage to the part or the machine.



Other similar rigid column systems powered by a traditional chain hoist or pneumatic cylinder lack the speed, precision, intelligence features and enhanced safety features the G-Force® can provide. This particular solution takes advantage of the iQ model G-Force® which

also allows inputs and outputs to and from external systems or components. Sensors are used as inputs to the G-Force® and change vertical limits and speeds of the G-Force® based on what part is being lifted, and whether the part is machined or unmachined. As a result, the G-Force® can automatically go into float mode at the precise weight of a machined part before it is released from the machine. The G-Force® can also automatically set the proper limits based on knowing the exact part being lifted and the position relative to the machine to ensure the machine, nor the part are damaged by accidental impact, eliminating potential operator error.