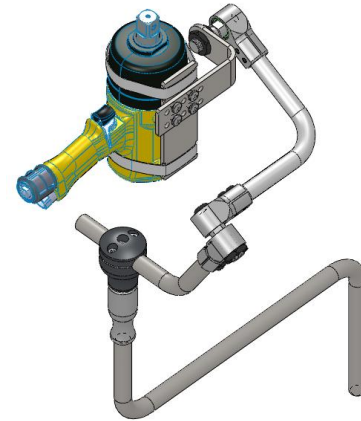


## Case Study – Heavy Equipment Manufacturer



The zeroG® from Equipois is a patented, proven solution for fastening that eliminates the weight of the tool while still allowing users to perform the task effectively. zeroG® systems have provided significant costs savings to many of the largest manufacturing companies in the world. Satisfied users include companies such as Toyota, John Deere, Caterpillar and Case New Holland. As a result of their success, many zeroG® customers have gone on to implement the technology as a best practice.

### Return-on-Investment

- **Injury Costs.** Primary benefits include the reduction of operator fatigue and strain injuries. For a typical shoulder injury, the direct medical costs alone can exceed US\$20,000. After adding the indirect costs associated with lost time, retraining, etc., costs can easily exceed US\$40,000 for a single injury.
- **Productivity.** The reduction in exertion from eliminating the weight of the tool provides much more than an ergonomic benefit. Many users report labor reductions of up to 50% through the use of zeroG®. It also enables users to consider the use of heavier and more powerful tools providing the potential for even greater productivity gain.
- **Quality.** The need to support a heavy tool compromises precision. zeroG® allows workers to utilize their fine motor skills to be more accurate. Accordingly, zeroG® can help improve the quality where it is utilized. A reduction in the number of rejected parts is a common occurrence with zeroG® systems.
- **Employee Satisfaction.** Customers using zeroG® systems have seen immediate improvements in employee satisfaction. In some cases, users have been able to return restricted duty employees to work by using zeroG®.
- **Tool Damage.** It is common to damage tools during usage by dropping them or running over cabling. With zeroG® cables and hoses are festooned along the length of the arm to prevent damage. Also since tools are no longer dropped when not in use, tool repair costs are reduced. Typical cost savings can be US\$500 to US\$1,000 per year or more.

### Project ROI Summary

Injury Cost Savings	\$26,000
Labor Cost Savings	\$ 8,750
Other Cost Savings (i.e. tool repair costs)	\$ 500
<b>Total Cost Savings</b>	<b>\$35,250</b>
Less Depreciation	- \$3,250
Less Annual Maintenance	- \$250
<b>Total Net Savings</b>	<b>\$ 31,750</b>

**Total zeroG Acquisition Cost – (1) zeroG System \$ 13,000**

**ROI 244%**  
**Payback Period 4.9 months**

A major manufacturer of agricultural equipment was using heavy impact tools overhead with multiple injuries. The small space under the chassis prohibited the use of other lift assist devices and required an awkward lifting posture.

zeroG® reduced the injury rate to zero while allowing the operator the full freedom of motion required to perform their job efficiently. The customized stand provides for the zeroG® system to be wheeled into place when needed. There was also an increase in throughput due to fewer work stoppages and less time required for rest and recovery.

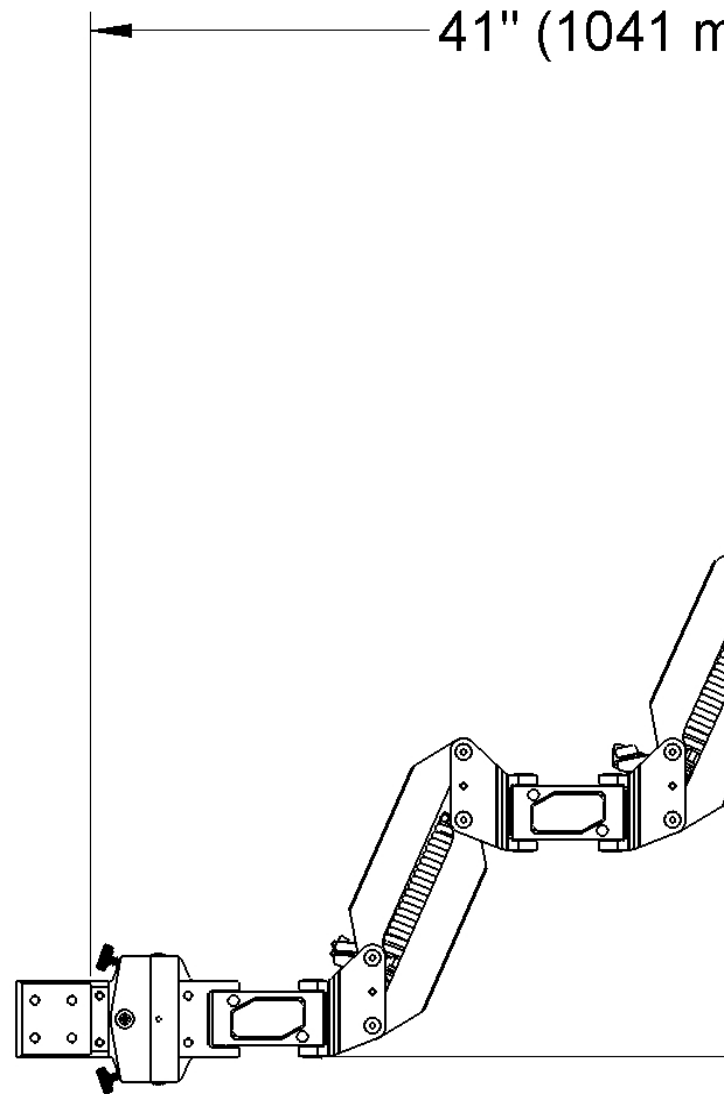
The use of heavy or even lighter weight pistol grip tools in a repetitive manner is typical in a number of industries including automotive and heavy equipment manufacturing. Due to the nature of the task, traditional lift assists which require an overhead mounting location are not effective. As a result, areas where this task is performed often have high injury rates, lower than desired productivity and higher error rates.

## zeroG® Standard Solution

- **zeroG Arm:** zeroG4 Double Link Arm suitable for payloads 8 lbs to 36 lbs (2.72 kg to 16.33 kg) - Part Number 101-5000-21 (RH Centering), -22 (LH Centering) or -20 (No Centering)
  - Standard Disposable Polyco Double Link Arm Cover – Part Number 300-2100
  - Secure docking kit for securing the tool and arm when not in use – Part Number 400-6200-02
- **Gimbal and Post System:** Multi-Axis Gimbal with Post Kit for approved tool – Multi-Axis Gimbal and Post Kit – Part Number QB60680. Both Top Mount and Underslung orientations available
- **Mounting Solutions:** Both fixed and portable mounting solution options are available (see Mounting Solutions data sheets):
  - Fixed Mount 2-Axis Pre-Set Interface Mounting Block – Part Number 500-4200 (shown in this document)
  - Fixed mount Linear Rail System with 80/20 post to mount zeroG system to wall or fixture –Part Numbers 500-5710-72, -96 or -144 (72, 96 or 144 inch rail)
  - Portable Gantry System with top mounted linear rail –Part Numbers 500-5420-72, -96 or -144 (72, 96 or 144 inch rail)
  - Portable zeroG4 Quad Stand – Part Number 500-5520
  - Light Duty Jib (24 to 72 inch length) – Part Number 500-5620-xx (specify length in model number, i.e. 500-5620-72)



## Standard Reach Drawings



zeroG4 shown with Top Mount Gimbal and Post

## Approved Tools List

Pistol Grip Pulse and Impact tools from the following manufacturers:

- Atlas Copco
- AIMCO
- Bosch and Bosch Rexroth
- Cooper Tools
- Ingersoll-Rand
- NPK
- Six Sigma
- Stanley Tools
- URYU

