

**Industrial Ergonomics**

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**GCI**

**Engineered Solutions**

**LEADING THE INDUSTRY IN DESIGN INNOVATION**



# CARBON FIBER TECHNOLOGY

GCI Engineered Solutions is proud to be the first and only in the market, worldwide, to design and build innovative, high capacity carbon fiber arm systems used in assembly for both torque reaction and material handling applications. The result of over 5 years of R&D, these systems provide the most ergonomic and lightweight solution available in the industry. Constructed using the latest advancements in composite technology, they are far lighter than any metal product while providing the same durability as steel.

LEVELING ON ALL JOINTS  
TO ACHIEVE "NO DRIFT"

MINIMAL ARM INERTIA DUE TO  
REDUCED WEIGHT RESULTING IN  
UNPARALLELED PUSH/PULL FORCES  
EXERTED ON THE OPERATOR

- 48, 60 OR 72 INCH VERTICAL TRAVEL
- 8, 10, 12, 14, 16, 18, 20 FOOT REACH
- VERY CONDUCTIVE FOR PORTABLE USE (ARM MOVES WITH MINIMAL EFFORT REGARDLESS IF IT IS LEVEL)
- >10:1 SAFETY FACTOR ON COMPOSITE MATERIAL
- DESIGNED USING THE LATEST IN FEA ENGINEERING ANALYSIS

• ADAPTICS TOOL TRACKING AVAILABLE  
(ENCODER READY)



- 30 - 7,500 NM TORQUE REACTION
- MINIMAL DEFLECTION CRITERIA AT MAXIMUM TORQUE/LOAD
- UP TO 500 LB CAPACITY FOR MATERIAL HANDLING APPLICATIONS

- MODULAR FLOOR, OVERHEAD, LOW-PROFILE AND PORTABLE CONFIGURATIONS
- REDUCED FOOTING REQUIREMENTS (ARMS <10' REACH AND 1000 Nm SHOULD NOT REQUIRE FOUNDATIONS ON TYPICAL INSTALLATIONS)

## CUSTOMIZED TORQUE SYSTEMS



RIGHT ANGLE TORQUE WITH  
BOTH HORIZONTAL AND  
VERTICAL CAPABILITY

MULTI SPINDLE

DRILL STYLE TORQUE  
WITH DISCRETE BRAKE

TWIN SPINDLE

8 SPINDLE

OVERHEAD MOUNT  
TORQUE TUBE

TOOL WITH  
TILT LOCK AND  
DISCRETE BRAKE

360 DEGREE  
ROTATION

# ADAPTICS SMART ARMS

Our specialized AdaptiCS Smart Arms can be used for error proofing almost any application including torque, tensioning and part verification. Smart arms are able to guide the operator in programmable torque or tensioning patterns as well as count fasteners required for correct assembly. They error-proof your assembly process by enabling the torque tool to operate only when it is at the correct location, sequence step (optional) and that the appropriate torque or tensioning program is used at each location.

- CONFIGURABLE SECURITY
- BI-DIRECTIONAL ARM TRACKING
- CONSISTENT, INCONSISTENT AND MOVING PARTS CAPABILITIES
- FLEXIBILITY TO INTEGRATE INTO ANY LINE CONTROL (PLS, MES OR OTHER)
- ADAPTICS ENTERPRISE FOR FULL LINE CONTROL, INTERLOCKS & DATA COLLECTION

Machine	Max Torque Reaction (Nm/Ft-lb)	Max Reach (ft)	Smart Arm (Option)
T40S	40/30	2.5	
T50AS	50/36	3	*
T70S	70/50	3	
<b>T100F</b>	<b>100/70</b>	<b>2.5</b>	<b>*</b>
T135S	135/100	5	
T150A	150/110	4	*
T150S	150/110	5	*
T275S	275/200	5	
<b>T375F</b>	<b>375/275</b>	<b>6</b>	<b>*</b>
T375S	375/275	6	*
T400S	400/300	6	
T550S	550/400	8	*
<b>T600F</b>	<b>600/445</b>	<b>20</b>	<b>*</b>
T1000SLt	1000/750	10	*
T1000S	1000/750	12	*
<b>T1500F</b>	<b>1500/1110</b>	<b>20</b>	<b>*</b>
<b>T3000F</b>	<b>3000/2210</b>	<b>20</b>	<b>*</b>
T3000S	3000/2210	12	*
T4000S	4000/2950	12	*
<b>T7500F</b>	<b>7500/5530</b>	<b>12</b>	<b>*</b>

\* Available with AdaptiCS Smart Arm integration  
**F** - Carbon Fiber    **S** - Steel  
**A** - Aluminum    **AS** - Aluminum Slide



- OPEN FOR CUSTOM PROGRAMMING BY END-USER VIA ADAPTICS AND OUR PROPRIETARY WINDOWS BASED SOFTWARE
- PROCESS LINKING TO SUPPORT & FORCE PROCESS WORK-FLOW
- MULTIPLE REWORK STRATEGIES TO FIT CUSTOMER REQUIREMENTS

- ENCODED TORQUE TOOL TIP POSITIONING
  - TOOL MANUFACTURER INDEPENDENT
- (ETHERNET OPEN PROTOCOL, OTHER OFFERINGS AVAILABLE UPON REQUEST)  
 -AIMCO -APEX/CLECO -ATLAS COPCO -DESOUTTER -INGERSOLL RAND -STANLEY  
 -STURTEVANT RICHMONT -HTI -KEYENCE CAMERAS

## THE GCI DIFFERENCE



GCI saves money for numerous Fortune 500 companies on a daily basis. Our commitment to pushing the envelope in creating a more efficient and safe work environment has earned us a reputation as the leading single source provider of torque reaction and custom material handling systems across the globe.

We achieve this reputation through our 28 years of experience in the material handling and torque market utilizing a team consisting of expert mechanical and software engineers and highly skilled mechanical and electrical designers. This allows us to design, fabricate, assemble, test (including FEA) and ship all directly from our Minnesota, USA location benefitting our clients in turnaround and costs.

TO SEE OUR ARMS IN ACTION, VISIT [GCILIFT.COM](http://GCILIFT.COM) OR [YOUTUBE.COM/GCILIFT](https://www.youtube.com/GCILIFT)



# MANIPULATORS

From small to large, our steel or carbon fiber manipulators are available with a multitude of options including, but not limited to, arm, end of hook, floor or overhead mountings, articulating or non-articulating and can be built to be compatible with overhead and freestanding bridge systems. They have up to a 20 Ft reach, one-off tooling and upwards of a 10,000 Lb capacity. Manipulators can also include variable speed pendant lift control and can be designed for air or electric power sure to suit any of your unique needs.

