

**FORI AUTOMATION**Privately held, U.S. Owned  
and Operated Since 1984

# FORI AUTOMATION

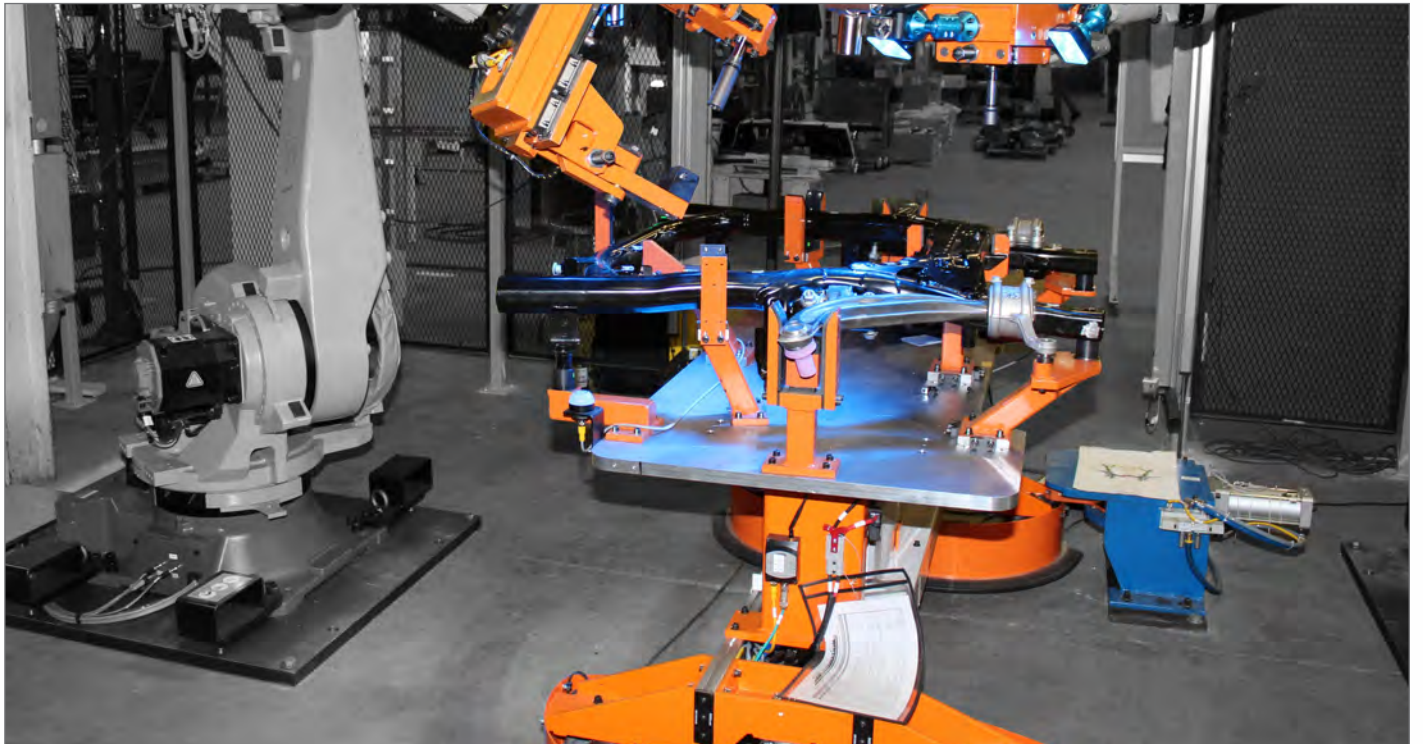
## Rail Guided Carts (RGCs)

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GLOBAL HEADQUARTERS

Rail Guided Carts - RGCs

## Versatile RGC with 1,000 lb. / 455 kg. Capacity

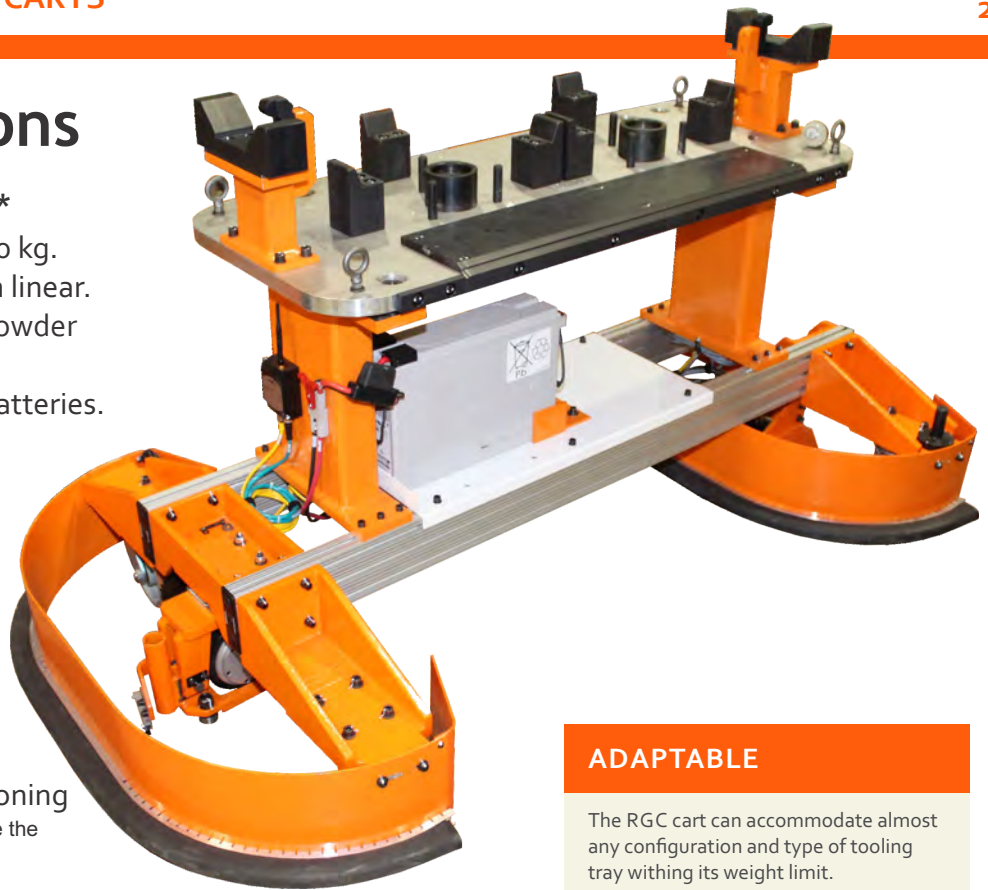


Utilizing a flex rail system and RGCs provides the upmost flexibility for customers who need to be able to accommodate changes easily. The ability to be flexible in the automotive world means less downtime, cost & reduced infrastructure during installation.

The level of flexibility offered by the Fori Flex Rail system is now becoming the norm in majority of our Automotive Assembly Systems. The RGC system can easily be modified, whether it be adding a station or a product impact change.

# RGCs Specifications

- RGC top speed 2 ft / 0.6 meters/second \*
  - Carrying Load: Load up to 1,000 lbs / 680 kg.
  - Encoder positioning feedback +/- 0.5mm linear.
  - Position accuracy: +/- 1mm with Cart Crowder
  - Waypoint Control: RFID Reader
  - Power supply: (2) 12V Sealed lead acid batteries.
  - Wireless WLAN: IEEE 802.11a/b/g.
  - Safety Bumpers or Laser Scanners
  - Integral Station buttons on cart
    - (2) Cycle complete
    - (1) E-Stop
  - PLC Controlled configuration
  - Open controls architecture using standard components
  - Track Switches
  - Cart Positioners - Verify exact cart positioning
- \* Speeds greater than 1ft / 0.3m per second may require the addition of a safety scanner

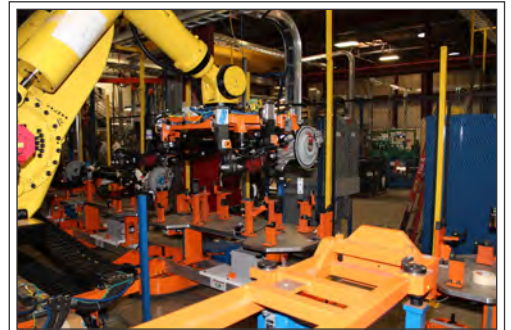


## ADAPTABLE

The RGC cart can accommodate almost any configuration and type of tooling tray withing its weight limit.

# Cart Features

- 360° Assembly access
- Simple path configurability / modifications
- Inside & outside line access
- Modular assembly line configuration
- Quick setup times
- RGC Length can be modified to fit the applications need
- On Board expandable I/O Poke Yoke accommodation
- Low maintenance costs
- Efficient maintainability
- Almost unlimited tooling tray configurations
- Flexible line configuration
- Simple quick process change menu drive PLC configuration thru single line traffic controller



# Power / Energy Options

Fori offers a wide variety of different power options depending on the RGC configuration and required throughput. A power source is generally selected once the process has been determined and a few factors are known such as: number of shifts/moves, current throughput, environmental conditions, available charge versus run time and required system voltage.

## Power Options

Lead Acid AGM Battery, Lead Acid TPPL Battery, Lithium Ion Battery, Inductive Power: IPT and Opportunity Charging Stations

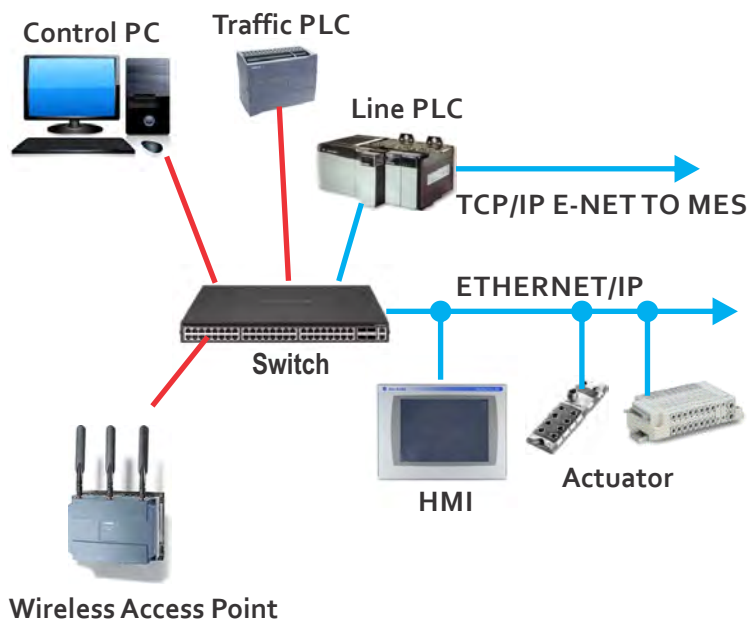


# RGCs vs Conveyor Comparison

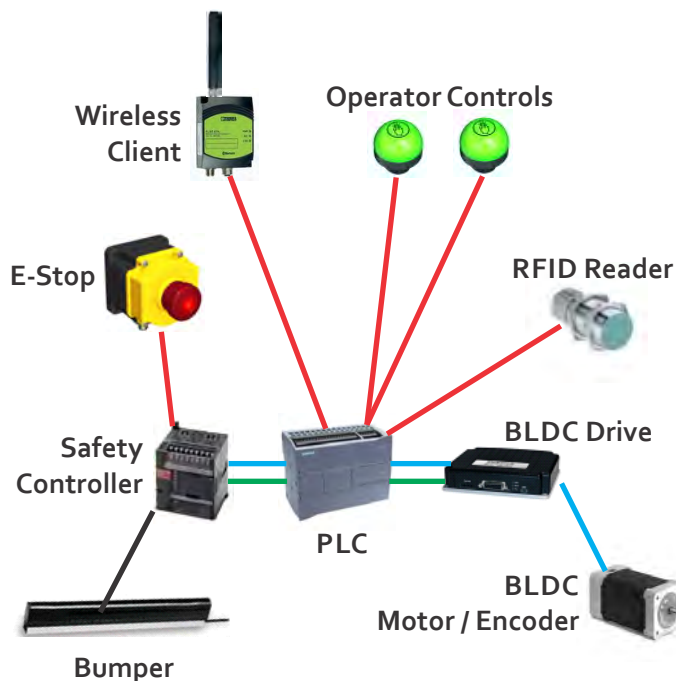
RGCs	Conveyors
360° Assembly access	Accessible on only two sides
Unlimited configurability	Confined by standard sizes
Tracks can be quickly changed when process changes occur, low cost	Cannot be quickly changed and will result in a stoppage of production, expensive
Easily accommodate W.I.P. or product dunnage on inside and outside of the line	Special means necessary to access the center of the loop
Quick setup and tear down times	Long setup and tear down times
Accommodates electronic Poke Yoke or other simple devices with on board I/O, expandable	Other systems are needed to perform Poke Yoke
RGCs can run across isle ways with inexpensive track ramps in place	Elevators and pits are required to cross isle ways
RGC electrical / controls infrastructure is modular and is easier make changes	Conveyor electrical / controls infrastructure is more integrated – changes are difficult
RGCs can be reused on upcoming programs with simple tooling changes and reconfiguration of the assembly line	Conveyors are designed for one system, reclamation is difficult. Many parts - greater wear
RGCs can be added or removed to a production line as volumes increase or decreases at the plant	Conveyors are designed based on maximum volume projection upfront prior to production beginning

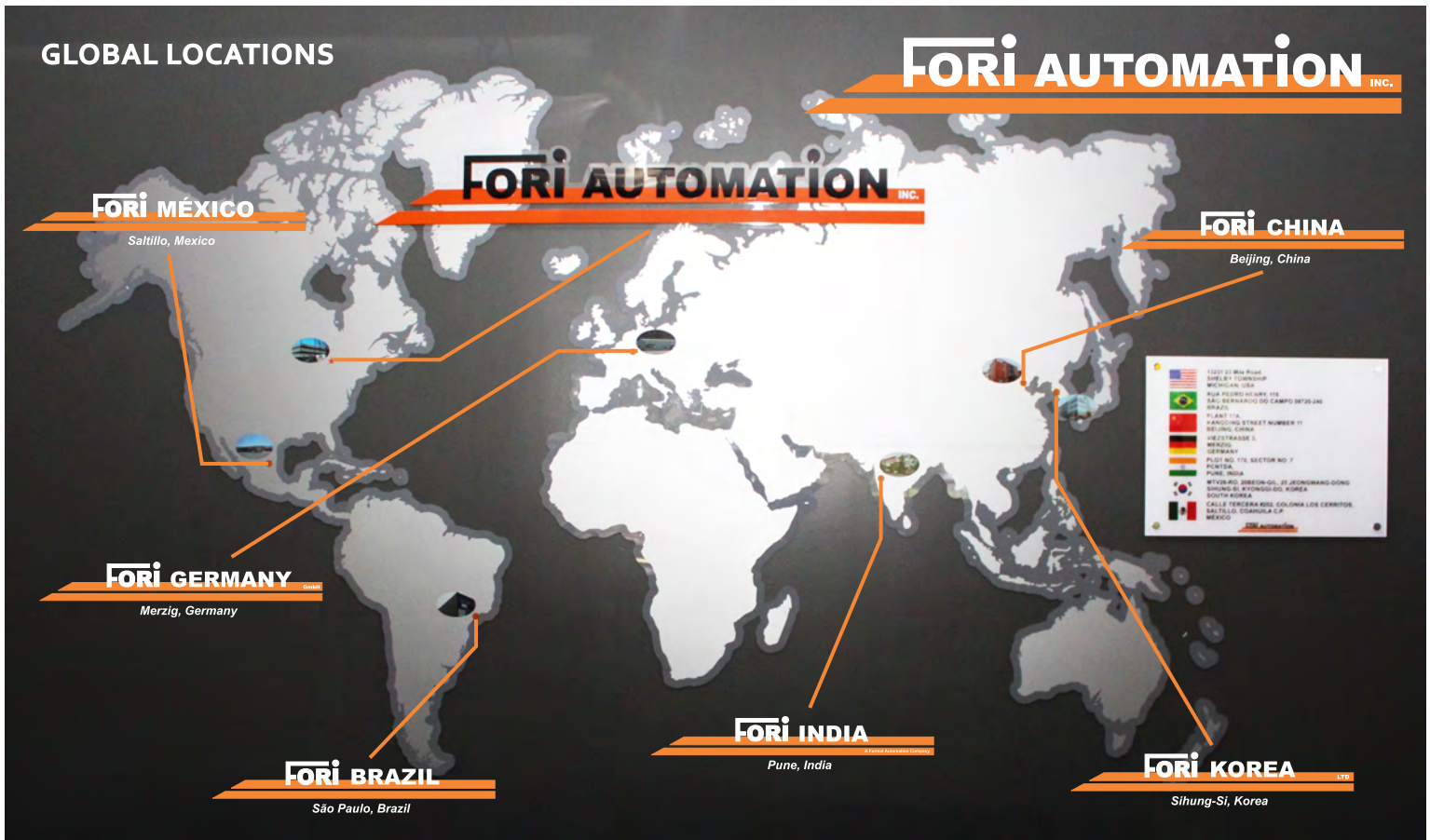
## RGC Controls Configuration

### Main Control Enclosure



### Cart Enclosure





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