

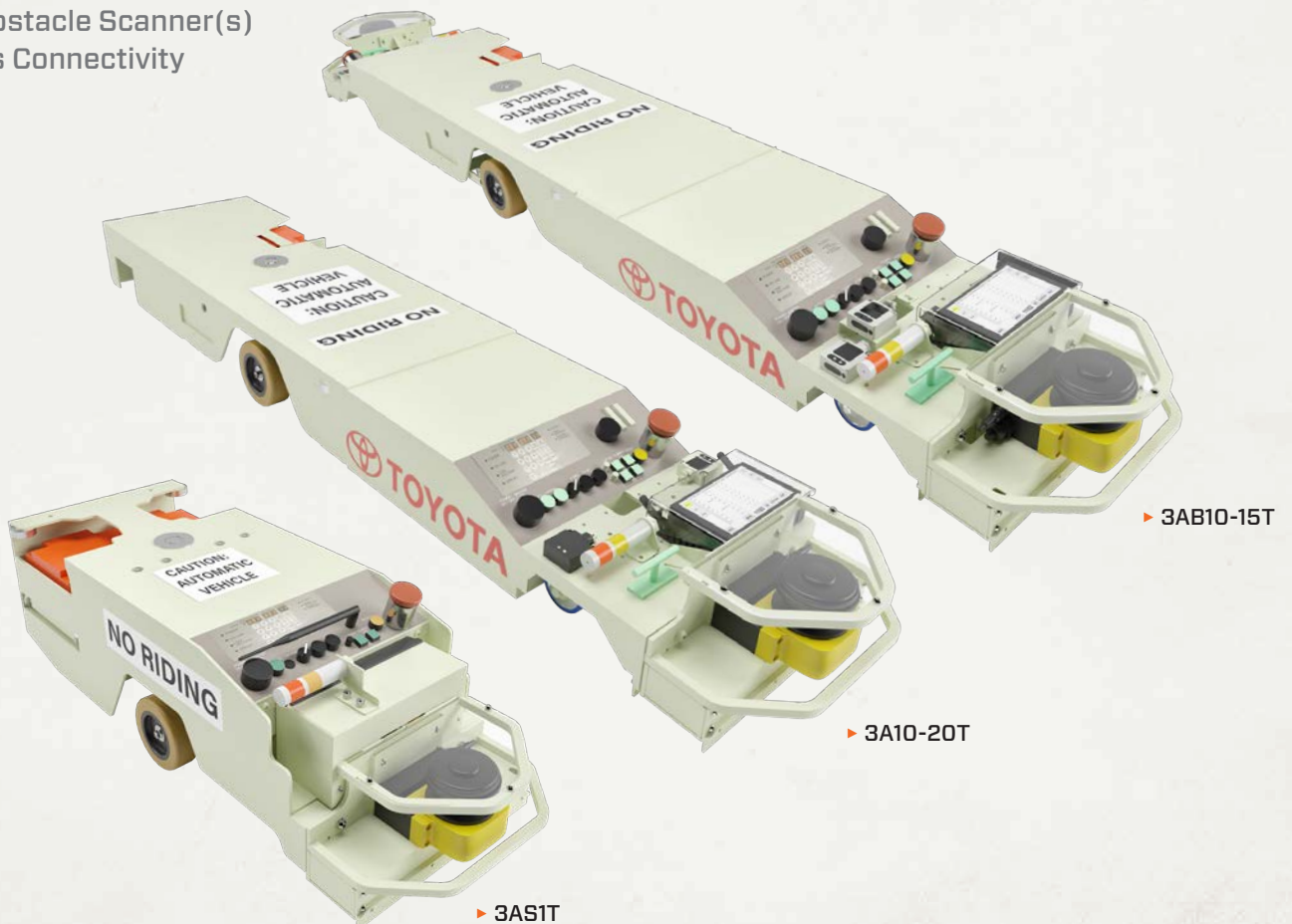
AUTOMATED GUIDED CARTS

# MOUSE AND MOLE



# SIMPLE & RELIABLE AUTOMATION

- ▶ 880 - 4400 lb. Capacity
- ▶ Magnetic Tape Guidance
- ▶ Actuated Tow Pin with Spring
- ▶ No Ongoing Subscription Fees
- ▶ Low-profile Design
- ▶ Laser Obstacle Scanner(s)
- ▶ Wireless Connectivity



# TRUSTED AUTOMATION THAT DELIVERS

Whether you're running an assembly line or a fulfillment center, your success relies on predictable, on-time delivery of materials. When you consistently deliver the right product, in the right quantity, to the right location, you create a process that allows you to generate repeatable and dependable results with minimal disruption and downtime.

**TOYOTA'S MOUSE AND MOLE AUTOMATED GUIDED CARTS (AGC)** offer simple and effective automation that handles repeatable tasks with modern innovation to maximize your productivity. The Mouse and Mole AGCs come in six available models with capacities up to 4,400 lbs., and can be custom-designed to fit your needs. Our intelligent line of automated guided carts delivers customized, heavy-towing capabilities that transport everything from raw materials to full assemblies, when and where you need them delivered – on time, every time.

UP TO **4400**<sup>LB.</sup>  
CAPACITY



▶ 3A10-20T



▶ 3AS1T



▶ 3AB10-15T

Products and cart configurations shown are for reference only. Please contact your local, authorized Toyota Dealer to properly configure for your application.

# AUTOMATION MADE EASY

**TOYOTA AUTOMATED GUIDED CARTS** offer quick and easy setup that limits interruption to your business while providing excellent return on investment. Trained experts work with your operations personnel to map out paths, material flow, and load/unload stations tailored to your exact application. High-strength magnetic tape and unique RFID markers are installed on the ground, providing excellent localization and reliable performance.

**LIAISON FLEET MANAGEMENT SOFTWARE** integrates with your existing WMS. You'll also be empowered with comprehensive training for the programming software, putting you in control of modifying routes, adding units, and reprogramming - effectively minimizing your downtime with no service or licensing fees required.





# AUTOMATED GUIDED CART ADVANTAGES

▶ **ACTUATED TOW PIN WITH SPRING**

reduces the likelihood of a fault even when there are minor misalignments.

▶ **ON-BOARD TOUCHSCREEN DISPLAY<sup>1</sup>** allows routes, speeds, and markers to be programmed directly on the AGC - no laptop required.

▶ **LASER OBSTACLE SCANNERS** can be programmed to different zones and allow intuitive operation near pedestrians and within confined spaces.

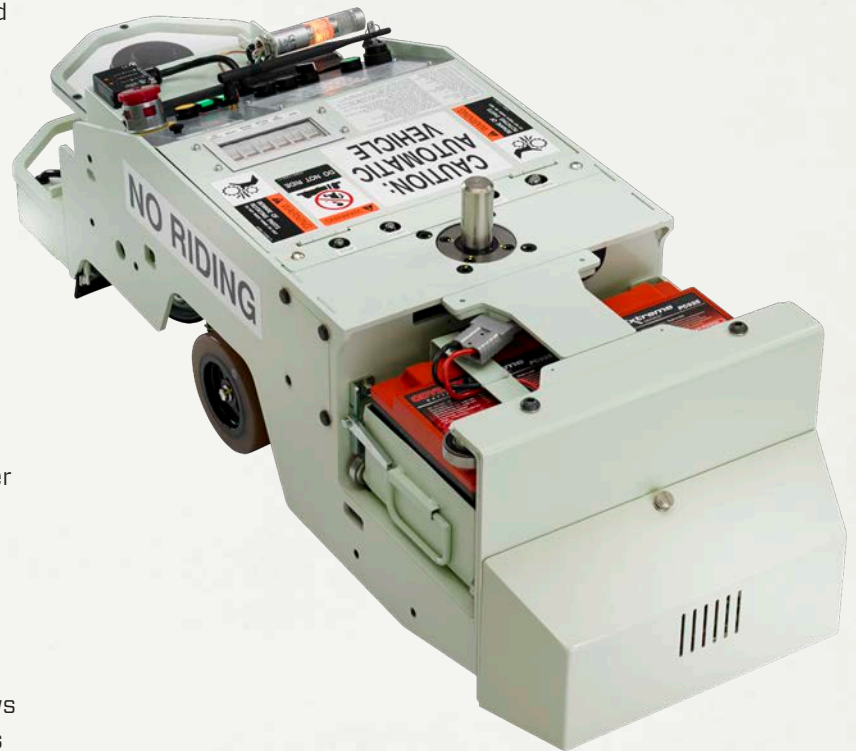
▶ **LOW-PROFILE DESIGN** delivers the lowest overall height in the industry for optimal space utilization and versatility.

▶ **AUTOMATIC BATTERY CHARGING OPTION** further reduces labor costs by allowing the AGC to dock and charge automatically.

▶ **LICENSE-FREE PROGRAMMING SOFTWARE** allows your support teams to install on unlimited computers to keep your fleet optimized for productivity.

▶ **24/7/365 TECHNICAL SUPPORT** available to help diagnose and pinpoint issues remotely.

▶ **RFID SCANNER<sup>1</sup>** recognizes markers with unique identifiers for superior localization to keep units on task.



▶ 3AS1T

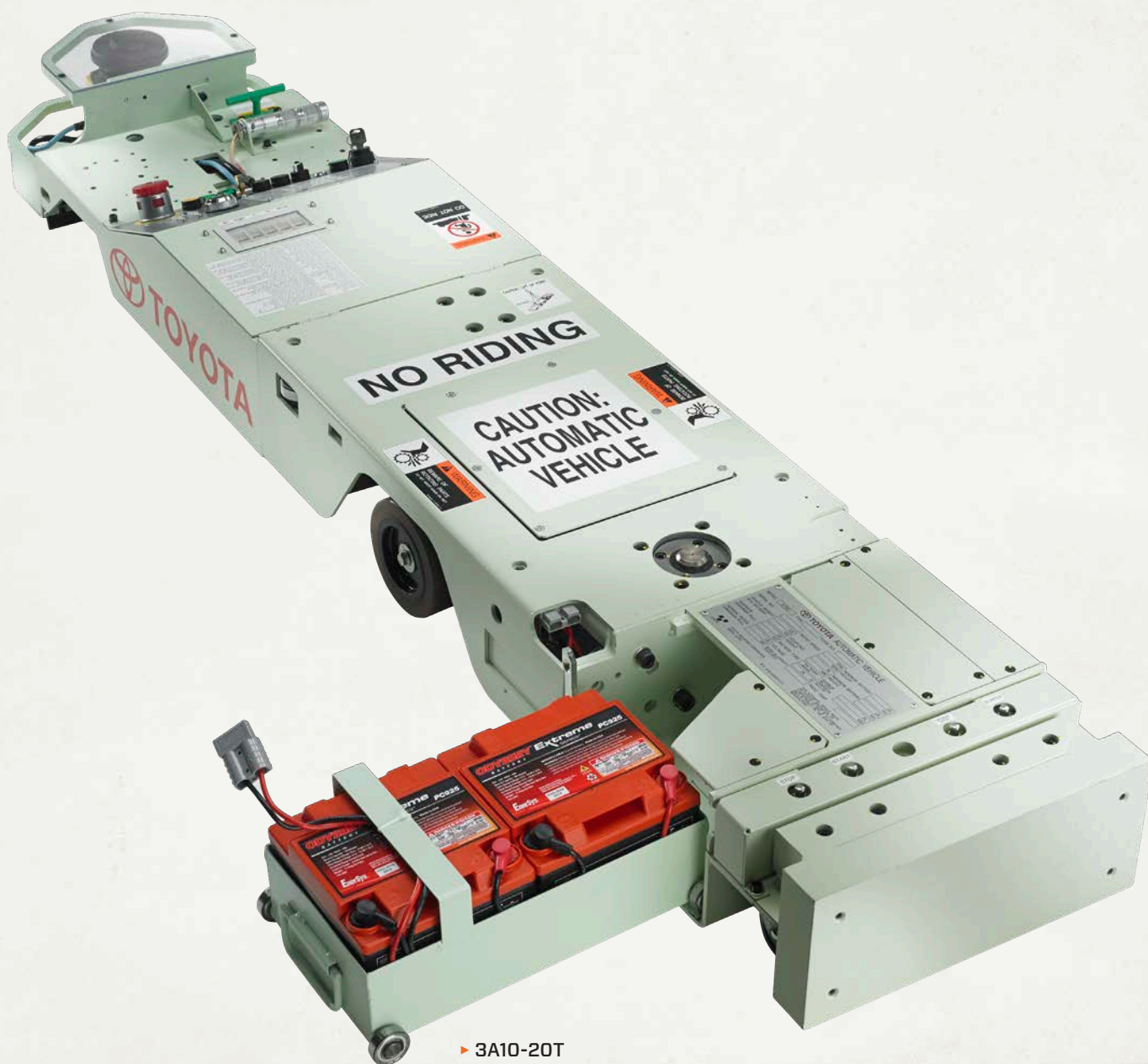
<sup>1</sup> Applicable on 3A10T, 3A15T, 3A20T, 3AB10T, 3AB20T models only

UP TO **9999**

UNIQUE MARKER  
ADDRESSES

**15**

PROGRAMMABLE  
SPEED SETTINGS



▶ 3A10-20T

# PRODUCTIVITY MEETS PEACE OF MIND

## TOYOTA'S MOUSE AND MOLE AUTOMATED GUIDED CARTS

incorporate intelligent design and trusted technology to maximize productivity and give you peace of mind. The actuated tow pin with spring allows manual lowering of the pin in the event of a fault to keep you on the go.

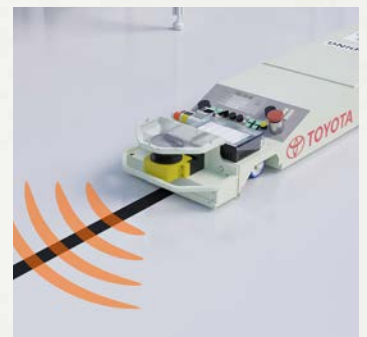
High-strength magnetic tape keeps AGCs on task and reduces the possibility of outside magnetic interference. And since the name of the game is regular and reliable delivery, laser obstacle scanners with 15 programmable views provide predictable operation that lowers operating costs.



Tow Pin Extended



High-Strength Magnetic Tape



Laser Obstacle Scanner





NO RIDING



# MOUSE AND MOLE AUTOMATED GUIDED CARTS

CAPACITY  
**880 - 4400 LBS.**

OVERALL HEIGHT  
**7-11.8 in.**

VOLTAGE  
**24V**

## INDUSTRIES



General  
Manufacturing



General  
Warehousing



Factory



Distribution



Beverage



Food  
Processing

## STANDARD FEATURES

### AUTOMATION

- 900Mhz wireless communication
- License free programming software
- Up to 999 program banks<sup>1</sup>
- IR optical receiver to lower pin<sup>2</sup>
- IR 8-bit sensors wireless communication (vertical & horizontal)
- Control panel display with programming interface with error codes
- Automatic addresses from reading RFID tag data (up to 9999 unique addresses)<sup>2</sup>
- Scanner fault auto recovery<sup>2</sup>
- User definable addresses for each marker tag location (up to 999 unique addresses)<sup>3</sup>
- Relative address travel instruction method with multiple routes on demand

### PERFORMANCE

- Slide out battery tray
- 15 programmable speed settings
- DC brushless motors with direct drive gearbox
- Differential steering method with 2 driving wheels
- Electromagnetic braking
- 1.18in. (30) diameter retractable pin
- Actuated tow pin with spring
- Electric lift drive unit method (push button)
- (2) 28AH AGM batteries

### SUPPORT

- Category 3 rated laser scanner with 15 programmable views<sup>3</sup>
- 2 color stack light: running & warning
- Multi-tune music box; running & fault chime
- Backlit button on e-stop & limit switch for external use
- Automatic laser scanner e-stop recovery once the obstacle is clear<sup>2</sup>
- Circuit protection with breakers
  - Main control
  - Drive motors
  - Pin & lift drive
- 7" touchscreen industrial PC<sup>2</sup>
- External start, stop, urgent stop, & bumper limit switches
- RFID antenna to read tags along the route for absolute localization<sup>2</sup>
- Read & write RFID tags manually right from the touchscreen IPC (no handheld device needed)<sup>2</sup>

## OPTIONAL FEATURES

### SUPPORT

- Auto power off
- Breakaway pigtail connection
- Additional battery tray
- RF comm module base radio
- RFID tag - 22mm x 3mm
- RFID tag - "credit card" type
- Automatic charging system (ground side)

### ACCESSORIES (AVAILABLE THROUGH PARTS)

- Battery wire harness w/SB50 connector (as spare)
- AGM battery - 12V/28amp/hr (thin plate virgin lead)
- AGM battery set (two batteries wired w/SB50 connector & battery tray) 12V/28amp/hr (thin plate virgin lead)
- NOCO™ battery charger - GX2440
- Magnetic guide tape - 2" wide x 100ft. roll (north pole up)
- Magnetic guide bar - 1/4" wide x 3/8" tall 20ft roll (north pole up)
- Magnetic marker - 2" wide x 4" long (south pole up)
- Magnetic marker - 4" wide x 4" long (south pole up)
- Safety laser scanner programming cable
- Cable - 6' DB9 male/female
- Cable - 3' USB to DB9

<sup>1</sup> 3ASIT model can have up to 200 simultaneous programs

<sup>2</sup> Applicable on 3A10T, 3A15T, 3A20T, 3AB10T, 3AB20T models only

<sup>3</sup> Applicable on 3ASIT model only

Please contact your local, authorized Toyota Dealer for a complete list of available options.

## TRUCK SPECIFICATIONS

GENERAL			MODEL NUMBERS		
			3AS1T	3A10T	3A15T
Battery	AH		28	28	28
	V		24	24	24
Guidance Method			Magnetic Induction	Magnetic Induction	Magnetic Induction
Travel Direction			Forward Only	Forward Only	Forward Only
Maximum Travel Speed	m / min.		45	45	33
Maximum Weight Capacity	lb (kg)		881 (400)	2204 (1000)	3306 (1500)
Maximum Drawbar	lb (kg)		42 (19)	116 (53)	152 (69)
Minimum Turning Radius	in (mm)		24 (600)	24 (600)	24 (600)
EXTERIOR DIMENSIONS			3AS1T	3A10T	3A15T
<b>A</b>	Overall Height	in (mm)	11.8 (300.72)	7 (177.26)	7 (177.26)
<b>B</b>	Lidar Plane	in (mm)	6.1 (154.76)	5.3 (134.13)	5.3 (134.13)
<b>C</b>	Overall Length	in (mm)	40.2 (1022.1)	71.7 (1820.35)	71.7 (1820.35)
<b>D</b>	Swivel to Drive	in (mm)	8.7 (220)	30 (759.45)	30 (759.45)
<b>E</b>	Charge Contacts to Drive	in (mm)	20.6 (522.83)	10.4 (263.59)	10.4 (263.59)
<b>F</b>	Drive to RFID Reader <sup>1</sup>	in (mm)	N/A	11 (278.75)	11 (278.75)
<b>G</b>	Drive to Pivot Point	in (mm)	16.3 (415)	24 (610)	24 (610)
<b>H</b>	Pivot Point to End <sup>1</sup>	in (mm)	N/A	3.7 (93.55)	3.7 (93.55)
<b>I</b>	Main Frame Height	in (mm)	11.2 (285.02)	6.7 (169.5)	6.7 (169.5)
<b>J</b>	Tow Pin Height	in (mm)	13.6 (345.02)	9 (229.5)	9 (229.5)
<b>K</b>	CAM Follower Width	in (mm)	15 (382)	14.6 (370)	14.6 (370)
<b>L</b>	Main Frame Width	in (mm)	14.2 (360)	14.2 (360)	14.2 (360)
<b>M</b>	Nose to Tow Pin	in (mm)	29 (737.1)	54 (1369.85)	54 (1369.85)
<b>N</b>	RFID Reader Centerline <sup>1</sup>	in (mm)	N/A	4.9 (123.9)	4.9 (123.9)
<b>O</b>	Overall Length with Option <sup>2,3</sup>	in (mm)	44 (1116.92)	N/A	N/A
<b>P</b>	Rear Caster/Pivot Point with Automatic Charging Option <sup>1,2,3</sup>	in (mm)	6.3 (159.82)	N/A	N/A
PERFORMANCE DATA			3AS1T	3A10T	3A15T
Floor Conditions	Slope	%	1 or Less	1 or Less	1 or Less
	Step (ridge)	mm	5 or Less	5 or Less	5 or Less
	Gap (crack)	mm	20 or Less	20 or Less	20 or Less
	Waviness	mm	10 or Less Over the Length of AGV	10 or Less Over the Length of AGV	10 or Less Over the Length of AGV
Working Environments	Temperature	F° (C°)	32 - 104 (0 - 40)	32 - 104 (0 - 40)	32 - 104 (0 - 40)
	Humidity	%	35 - 85 RH (No Condensation)	35 - 85 RH (No Condensation)	35 - 85 RH (No Condensation)
	Outdoor Use		Prohibited	Prohibited	Prohibited

1 Not applicable for 3AS1T  
 2 Not applicable for 3A10T  
 3 Not applicable for 3A15T

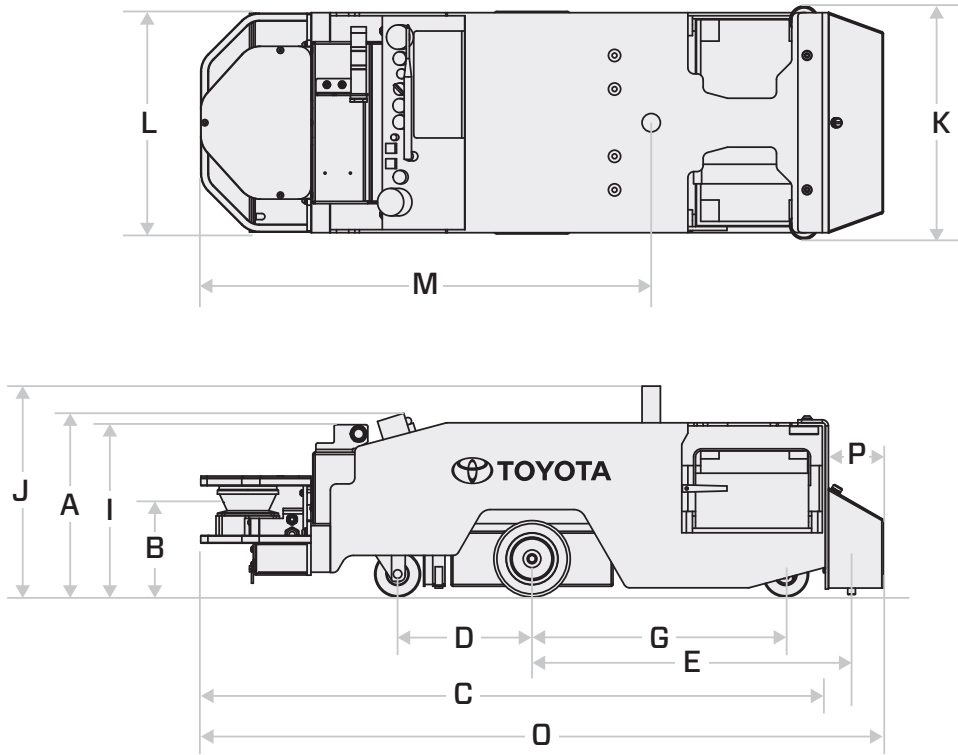
MODEL NUMBERS

GENERAL			3A20T	3AB10T	3AB15T
Battery	AH		28	28	28
	V		24	24	24
Guidance Method			Magnetic Induction	Magnetic Induction	Magnetic Induction
Travel Direction			Forward Only	Forward / Reverse	Forward / Reverse
Maximum Travel Speed	m / min.		20	45	33
Maximum Weight Capacity	lb (kg)		4409 (2000)	2204 (1000)	3306 (1500)
Maximum Drawbar	lb (kg)		185 (84)	112 (51)	152 (69)
Minimum Turning Radius	in (mm)		24 (600)	24 (600)	24 (600)
EXTERIOR DIMENSIONS			3A20T	3AB10T	3AB15T
<b>A</b> Overall Height	in (mm)		7 (177.26)	7 (177.26)	7 (177.26)
<b>B</b> Lidar Plane	in (mm)		5.3 (134.13)	5.3 (134.13)	5.3 (134.13)
<b>C</b> Overall Length	in (mm)		71.7 (1820.35)	91.3 (2319.7)	91.3 (2319.7)
<b>D</b> Swivel to Drive	in (mm)		30 (759.45)	34.8 (884.95)	34.8 (884.95)
<b>E</b> Charge Contacts to Drive	in (mm)		10.4 (263.59)	10.4 (265.1)	10.4 (265.1)
<b>F</b> Drive to RFID Reader <sup>1</sup>	in (mm)		11 (278.75)	11 (278.6)	11 (278.6)
<b>G</b> Drive to Pivot Point	in (mm)		24 (610)	27.8 (705.05)	27.8 (705.05)
<b>H</b> Pivot Point to End <sup>1</sup>	in (mm)		3.7 (93.55)	N/A	N/A
<b>I</b> Main Frame Height	in (mm)		6.7 (169.5)	6.7 (169.5)	6.7 (169.5)
<b>J</b> Tow Pin Height	in (mm)		9 (229.5)	9 (229.5)	9 (229.5)
<b>K</b> CAM Follower Width	in (mm)		14.6 (370)	14.6 (370)	14.6 (370)
<b>L</b> Main Frame Width	in (mm)		14.2 (360)	14.2 (360)	14.2 (360)
<b>M</b> Nose to Tow Pin	in (mm)		54 (1369.85)	58.9 (1495.35)	58.9 (1495.35)
<b>N</b> RFID Reader Centerline	in (mm)		4.9 (123.9)	4.9 (123.9)	4.9 (123.9)
<b>O</b> Overall Length with Option <sup>2,3</sup>	in (mm)		N/A	N/A	N/A
<b>P</b> Rear Caster/Pivot Point with Automatic Charging Option <sup>1,2,3</sup>	in (mm)		N/A	N/A	N/A
PERFORMANCE DATA			3A20T	3AB10T	3AB15T
Floor Conditions	Slope	%	1 or Less	1 or Less	1 or Less
	Step (ridge)	mm	5 or Less	5 or Less	5 or Less
	Gap (crack)	mm	20 or Less	20 or Less	20 or Less
	Waviness	mm	10 or Less Over the Length of AGV	10 or Less Over the Length of AGV	10 or Less Over the Length of AGV
Working Environments	Temperature	F° (C°)	32 - 104 (0 - 40)	32 - 104 (0 - 40)	32 - 104 (0 - 40)
	Humidity	%	35 - 85 RH (No Condensation)	35 - 85 RH (No Condensation)	35 - 85 RH (No Condensation)
	Outdoor Use		Prohibited	Prohibited	Prohibited

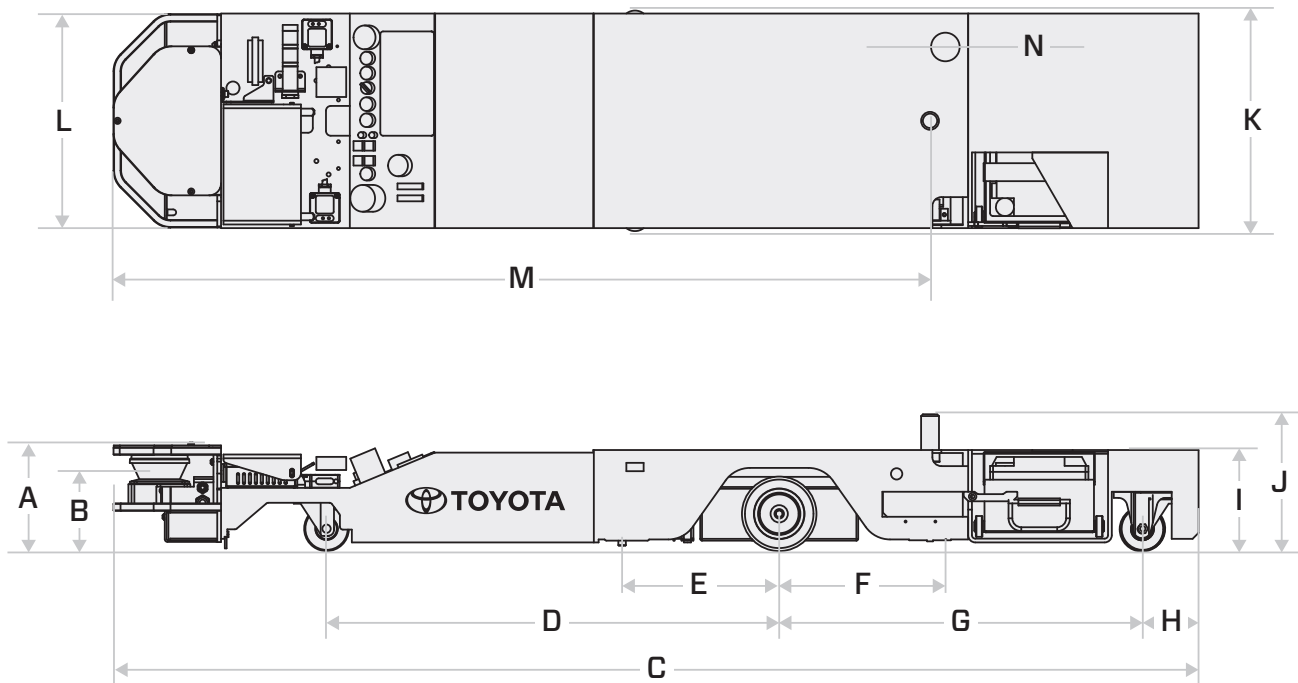
1 Not applicable for 3A20T  
2 Not applicable for 3AB10T  
3 Not applicable for 3AB15T

EXTERIOR DIMENSIONS

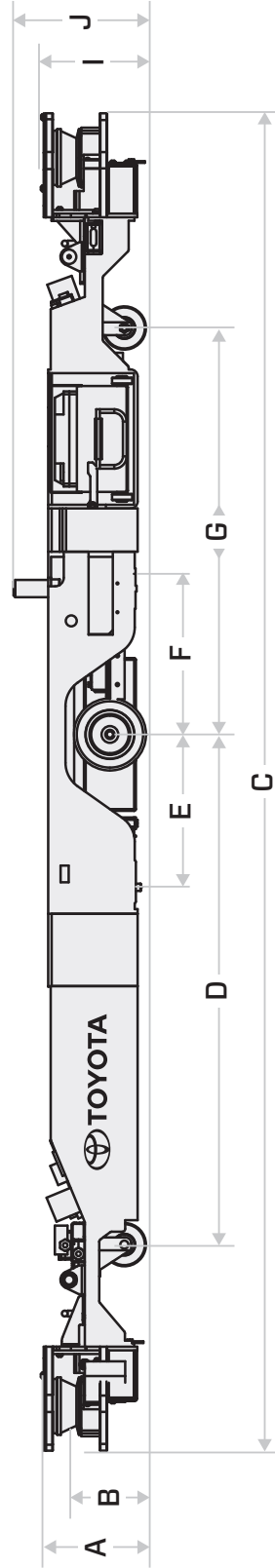
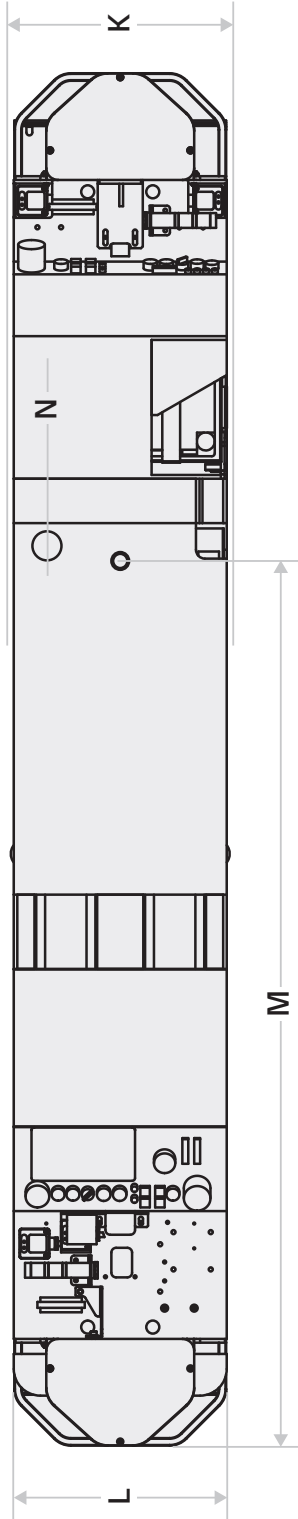
MOLE (3AS1T)



MOUSE (3A10-20T)



MOUSE (3AB10-15T)





# YOUR TRUSTED AUTOMATION PARTNER

3,502

Toyota  
Certified Technicians

3,371

Service Vans

64+

Toyota Forklift Dealers  
Across North America

225+

Locations

From optimizing processes to implementing fully automated systems, Toyota dealers leverage the industry's largest full-line solutions offering to provide you with a uniquely designed solution for your operation. Our partnership with Bastian Solutions, a Toyota Advanced Logistics company, allows us to provide expert knowledge and to deliver the service and support you need for sustained success.

Toyota Lean Management principles allow Toyota authorized dealers to pinpoint and eliminate inefficiencies in processes prior to automating them for maximum return on investment. Each AGC is also backed by Toyota 360 Support coverage, providing 4-hour emergency response times and an industry-leading 2-year parts warranty - all delivered by material handling experts at more than 225 dealer locations in North America.

