

# M300-T

## Tugger

### 6,000 Lbs Towing Capacity

## Automatic Guided Vehicles

Daifuku Airport America, formerly Jervis B. Webb Company, continues its 50-year tradition of leading the industry in Automatic Guided Vehicle technology with SmartCart Automatic Guided Cart Model 300T. The Model 300T SmartCart is the top-selling AGC offering ultimate flexibility, reliability and scalability at an affordable price.

### FEATURES

**Safe:** Safety laser scanners provide detection of operators and objects.

**Affordable:** Many applications can demonstrate Return on Investment in three months or less.

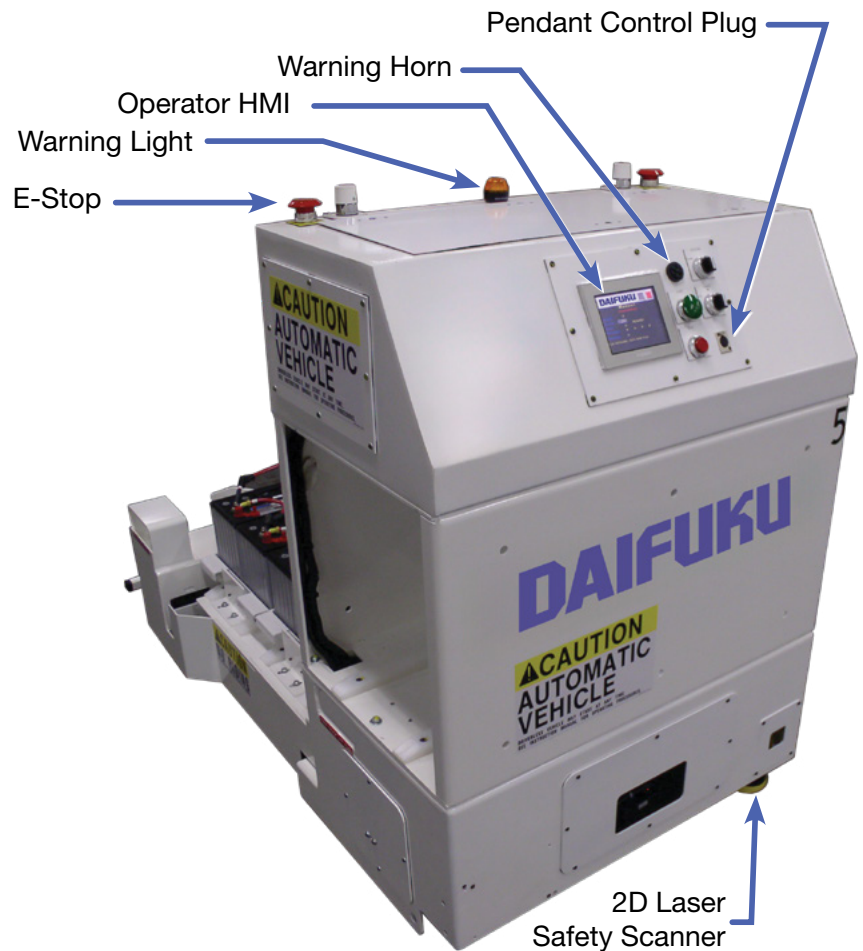
**Simple:** CartTools™ software provides a user friendly interface to implement/make changes. Non-invasive magnetic path and RFID transponder locations simplify deployment.

**Industrial:** Steel construction with powder coat and industrial enamel paint.

**On-Floor:** All equipment that needs to be installed to run your system can be installed on the floor, making the installation non-invasive and configurable. In-floor options are also available for ultimate durability.

**Integration:** If desired, standard radio communication options with our System Automation Manager™ (SAM) Software can provide Traffic Control and Interface with Plant Control System.

**Hands-Off:** Automatic charging to allow 24/7 hands-off operation or manual charging that can run 6-16+ hours.



### OPTIONAL FEATURES:

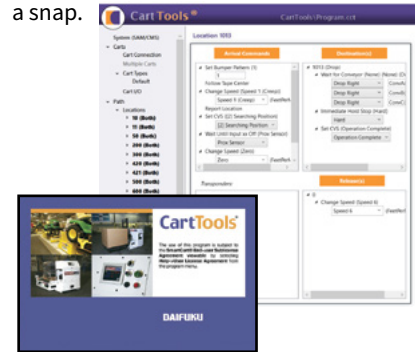
- Fast, maintenance-free charging
- Automatic Charging
- Radio Communication
- Wheel Brushes
- Cover for Battery Pack
- Manual Ring Hitch
- Automatic Ring Hitch
- HMI Protector
- Sleep/AutoWake
- Reverse Paddle Bumper for SmartSteer™
- Cab Side Covers
- Music Generator

Smart Handling  
**AGV Solutions**

General Specifications	
Weight / with batteries	1120 lbs (510 kg) / 1600 lbs (725 kg)
Dimensions	W: 36" (920 mm) L: 61" (1540mm) H: 51" (1280 mm)
Traction Power	120 lbs constant, 180+ lbs starting
Safety – Front	ANSI B56.5 compliant bumper
Speed – Laser Bumper	15 to 160 FPM, 6 speeds, 1 FPM increments
	Rear paddle bumper 30 FPM (if equipped)
Battery Options	8 – AGM 105AH 12 VDC each, 410AH 24 VDC battery pack
	8 – AGM/TPPL 102AH 12VDC each, 408AH 24 VDC battery pack
Automatic Charge	80 amp charge rate (if equipped)
Fast Automatic Charge	140 amp charge rate (if equipped)
Manual Charge	Up to 25 amp charge rate
Environment	
Environment – Atmosphere	0 to 40° C, 25% to 95% non-condensing humidity
Dust/Water-proof	No
Floor Specs – Edges/Debris	¼" abrupt elevation change maximum, smoothed
Expansion Joints	¼" maximum
Grade Rating	0%
Flatness	1% and ¼" variation in 5' or less
Friction	.6 coefficient of friction between wheels and floor, minimum
Floor Conductivity	Static dissipative, less than $3.5 \times 10^7 \Omega$
Radio Communication	IEEE 802.11a/b/g/n/ac, plus security encryption (if equipped)
Detailed Specifications	
Drive Direction – Automatic	Forward and Reverse (if equipped)
Duty Cycle	88% @ Maximum Load Rating
Drive Unit – Wheel	Vulkolan 210 mm diameter x 70 mm wide
Drive Type	Gear driven steerable turntable
Motor	1000 watts 24VAC
Steering	24 VDC motor
Brake	10Nm, spring actuated (fail-safe)
Caster Wheels	Polyurethane on cast iron 6" diameter x 3" wide
Guidance – Magnetic Tape	Magnetic or SmartSteer navigation
Steer Angle Sensor	Analog 10 turn potentiometer
Steering Accuracy	± 1" from physical path
Guide Loss Error	Error generated within 6" of path loss
Hunt for Path	Not offered, violates ANSI B56.5
Sensor	16 millisecond data rate, 50 updates per second
SmartSteer Accuracy	± 3" @ 10'
Stopping Accuracy	½" proximity sensor, 1-½" transponder reader @ 30 fpm
Location Method	Transponder tags, 5 data bytes including checksum
	Virtual Locations via distance initiated functions
Program Capacity	5000 program steps
HMI Display	5.7" color touch screen – errors & destinations
Manual Movement	Pendant – via pendant plug receptacle, Fork Pockets
Minimum Path Radius	24" – 90° turn, 48" – 180° turn
Drive Stalled Detection	Yes
Distance Initiated Functions	Yes – in 1" increments
Obstacle Detection	Front
Emergency Stop	3 – front, top left/right
Wiring	Per NEC ampacity guidelines
Side Swipe Switches	Both sides of vehicle (if equipped)

## CARTTOOLS SOFTWARE

Simple, standardized toolbox of commands that make configuration a snap.



Pendant Control – When manual movement is required, it's as simple as driving the AGC where it needs to go.



Automatic Ring Hitch – Allows the M300-T to automatically couple/uncouple from trailers.



SmartSteer – CartTools commanding of the AGC to intentionally leave the magnetic path. Allowing maneuvers like pivot turns and ignoring floor problems when in full automatic operation.