



616.791.8540  
www.agvsystems.com

## Model DL-10 Automatic Guided Vehicle

- **2,000 Pounds Standard Capacity**
- **Virtual Path™ Navigation System**

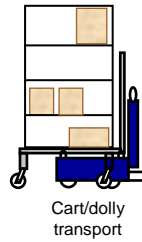
Savant Automation's DL-10 Automatic Guided Vehicle is a compact load transporter. The new generation design incorporates the latest technologies and features that customers have stressed are important for automated material handling systems. The AGV can be provided with various configurations to adapt to most any application.

**Material Transportation:** The DL-10 is suitable for many material transportation applications, including use in manufacturing, distribution, commercial, hospitals, clean rooms, etc. The vehicle can be used for material movement between work cells, from palletizer to stretch wrap, from packaging to shipping, from receiving to storage, and as a cart transfer device. It can transport racks, pallets, roll stock, slip sheets, trays, totes, food, laundry and supply carts, as well as Gaylord containers. This highly maneuverable AGV can safely travel in high traffic areas and in space-restricted areas.

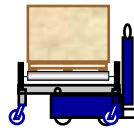
**Assembly Lines:** When used for assembly line production systems, the DL-10 can transport a work piece through a multi-step assembly process. Assembly operations take place directly on the DL-10 which would be equipped with the desired mobile work table platform. The control system can be integrated with a user's production control system to insure the AGV is released for a work station only when the required assembly operations are completed.

The DL-10 is available with the state of the art Savant Automation Virtual Path™ navigation using a solid state inertial sensor to determine AGV heading and positional information. This is ideal for environments where magnetic/optic floor tape or laser targets are not desirable. The onboard vehicle computer controls navigation, communication, drive control, load deck or work piece logic control and safety systems.

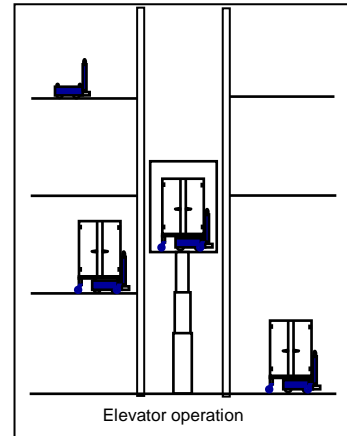
The DL-10 is also available with Savant Automation's revolutionary Q-CAN™ system controls. Q-CAN (Quick ConfigurabAutomatN) utilizes a standard PC program that permits quick, easy system design, and allows users to make changes to their own AGV systems.



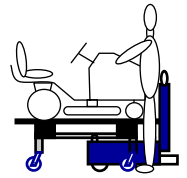
Cart/dolly transport



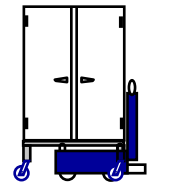
Power roller



Elevator operation



Assembly



Food/Linen/Supply transport Automatic Cart

### Standard Features

- Fully automated operation
- SMART AGV Onboard routing and traffic control logic
- Auto-return to battery charge area when battery is low
- Onboard diagnostic mode for fast, easy troubleshooting
- Controls are mounted to allow easy accessibility
- Remove/Enter on path anywhere without resetting controls
- Pendant control for off-path manual operation.
- Rugged steel frame construction for industrial environments

### Display/Control Panel Features

- Easy to read, 40 characters by 2 line display
- Status, prompts and error messages displayed
- Displays AGV's current status (on path, low battery, etc.)
- Easy to customize for special applications

### Warning and Safety Devices

- Front poly-carbonate plastic bumper
- Emergency stop buttons
- Audio beeper while AGV is in motion
- Flashing warning lights while in motion

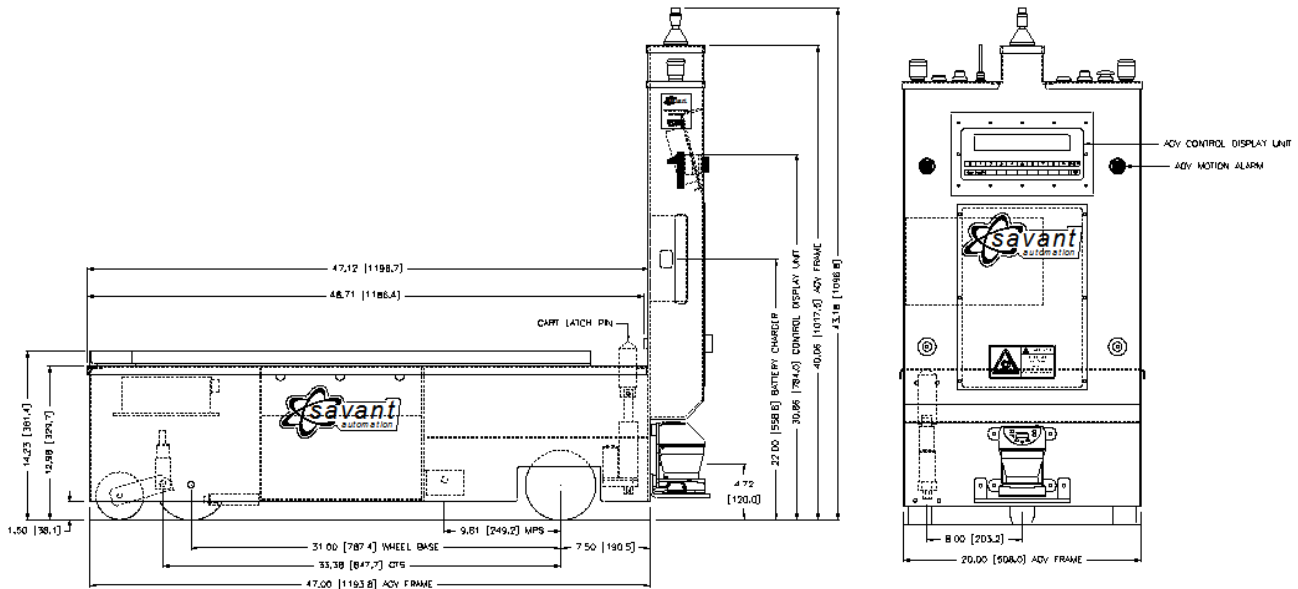
### Options

- Automatic cart/dolly capture, transport and release
- Elevator interface
- Automatic reversing
- Q-CAN™ System Controls
- Remote vehicle management and dispatching
- Automatic charging
- Turn signals
- Programmable laser scanning safety bumper
- Custom load handling configurations
- Dual range object detection
- Stainless steel finish.



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## Model DL-10 Automatic Guided Vehicle



### Mechanical Specifications

**Towing Capacity:** 2,000 lbs.

**Load Type:** Application specific – Cart Towing, Conveyor - Chain, Roller, or Lift Deck

**Drive Configuration:** Single Wheel Drive with two rear casters

**Steering Configuration:** steered-wheel with fixed load wheels.

**Drive Motor:** .13KW permanent magnet motor

**Drive Wheel:** 5.9" (159mm) diameter x 2" (50mm) wide Vulcolan

**Caster Wheels:** 6" (152mm) diameter x 2" (50mm) wide

**Frame:** Unitized structural steel

**Brake:** Electric, fail-safe

**Manual Operation:** On board joystick

**Approx. Weight:** 430 lbs.empty

**Speed in Automatic:** 200 fpm max. (61mpm, 2.3 MPH);16 speed ranges, reduced speeds in required areas

**Turning Radius:** 3' minimum

### Controls Specifications

**Controls:** Microprocessor, CAN bus

**Electrical System:** 24-volt power

**Navigation System:** "Virtual" wireless navigation (inertial guidance)

**Communications:** Via Radio Frequency (RF)

**Routing and Traffic:** Onboard "smart" vehicle control logic

**Battery System:** Heavy-duty Marine Type AGM battery with discharge sensor

**Positioning Accuracy:**  $\pm 1"$  (25.4mm) longitudinal,  $\pm 1"$  (25.4mm) latitudinal in stands

### Battery Information

**Battery AH:** Two (2) 12V, 105 amp-hour sealed (maintenance free)

**Battery Cycle:** 8 hours minimum, based on standard duty cycle of 20% idle, 40% in motion full speed loaded, 40% in motion full speed unloaded.

**Charging Method:** Off board or Built-in charger (or optional automatic charging).

**NOTE** Specifications are subject to change without notice based on product improvements or technical requirements.