

### NARROW AISLE AGV TYPE: SLA10

#### SLA10 Narrow Aisle Automatic Guided Vehicle

- Rugged design for tough conditions
- Onboard microprocessor with user friendly software, laser magnet or wire guidance
- Automatic pickup & drop of loads at programmable levels on both sides
- Multiple choice of guidance techniques
- Compact dimensions make it workable on an existing floor space
- Variable dimensions with respect to length & width of the load
- Reliability & ease of maintenance.
- Customized telescopic fork design for pallets and loads in different sizes



#### **MECHANICAL**

The vehicle chassis is based on a welded steel frame. The machine is very sturdy since the design utilizes a low point of gravity. The frame and the upright is a one piece assembly, with few integrated parts which are welded together. The design makes it easy to modify the dimensions of the overall width and length.

#### **DRIVE AND LIFT**

The drive and steer wheel is located under the battery and control cabinet. It is an integrated unit with a drive motor, a steering motor and a fail-safe brake. The lift units are built with ball screws driven by an electric motor with a parking brake. Encoders measure the movements of the lift and the travel very accurately. On the outer lift carriage is a telescopic fork mounted for handling of loads at both sides. The vehicle has seven long-wearing wheels. The drive unit is mounted with spring action to handle uneven floors. Support stands lowered during load handling provides the AGV with additional stability.

#### **CONTROLS**

The AGV onboard microprocessor controls are reliable, easy to program and to be integrated in simple or complex AGV systems. Standard guidance technique is wire guidance, but laser or magnet-gyro navigation is also available. Each AGV is equipped with a 2X16 character control terminal with keypad for easy troubleshooting and a hand held control set for manual operation of the AGV.

#### **SAFETY**

For personnel protection the AGV has front and rear bumpers. The vehicle may be equipped with a laser scanner in each in for safety. The AGV also has four emergency stop buttons, and four warning light and an electronic beeper.

#### **ELECTRICAL SYSTEM**

The vehicle is powered by a 48-volt battery with a capacity up to 420-ampere hours. Usually the AGV can operate over 24 hours before the

battery has to be exchanged or recharged. The battery can be transferred sideways to be taken off the vehicle. The AGV can also be equipped with opportunity charging connectors located overhead, on the side, or underneath the vehicle. All the AGV control components are located in a NEMA 12, fan/filter ventilated electrical cabinet.

#### **SYSTEM SOFTWARE**

The vehicle offboard control system used for multi vehicle and advanced systems operation is De'Carte™, which is based on Windows 2000 or XP and MS Visual Studio.net object oriented software development techniques. It utilizes ODBC (OpenDataBase Connectivity) for easy integration and compatibility and supports virtually any database including MS Access, SQL server, and Oracle. A system can be run from a stand alone PC or be interfaced with a host computer system with ERP or WMS.