



# AGVs

*Automatic Guided Vehicles*



- Featuring Non-Wire Inertial Navigation
- Windows® 2003 Operating System
- Advanced Object Detection Options
- Advanced Onboard Vehicle Controls

**Jervis B. Webb Company**  
MATERIAL HANDLING SYSTEM SPECIALISTS



# Standard & Customized **AGV'S**

**handle a broad range of material handling needs from...**

**50 to 250,000 pounds**

**Jervis B. Webb Company** has a long history of successful AGV installations in a variety of challenging industrial and commercial environments. Webb offers a complete line of standard and custom automatic guided vehicles/carts and system controls. But it takes more than just hardware and controls to put material handling systems to work for you. It requires a thorough understanding of your material handling needs to provide innovative ways to enhance productivity. As one of the largest producers of custom-engineered material handling systems in the world, Webb's broad experience enables them to provide solutions that will meet your needs today and in the future.

## **Automatic Trailer Loading Vehicles**

The ATL system allows loads to be moved from palletizer output, warehouse, rack or floor staging into conventional over-the-road trailers without manual intervention.

## **Assembly Vehicles**

Assembly Vehicles are ideal for on-board assembly operations and product manipulations. By replacing fixed assembly line conveyance, these assembly AGVs provide unequalled flexibility.

## **Heavy Load Handling Vehicles**

Webb is the industry leader in heavy load application AGV systems. These rugged, high tonnage AGVs combine all the benefits of conventional AGV systems with the ability to handle loads weighing up to 250,000 lbs. We have supplied more heavy load application AGV systems and vehicles than all of our competitors combined.



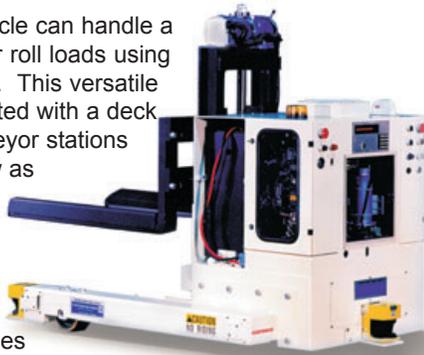
# Here is a review of some of Jervis B. Webb's most innovative **AGV solutions** used in the industry today...

**Modular Design Inside and Out** - Webb utilizes modular design and manufacturing concepts that streamline the vehicle design and manufacturing process. By focusing on five basic vehicle application types, We have built a family of vehicles all sharing

common components. Whether your system calls for wire or non-wire inertial guidance, Webb's onboard vehicle controls are virtually identical. The only basic change in hardware is the use of a set of guide coils for wire guidance vs. a gyro assembly for inertial guidance.

## **Fork Type Vehicles**

The HV fork type vehicle can handle a variety of pallet, bin or roll loads using standard fork designs. This versatile vehicle can also be fitted with a deck to interface with conveyor stations at fixed heights as low as eight inches or at multiple heights by incorporating a lift/lower device. These vehicles have standard load capacities up to 8,000 pounds.



## **Towing Vehicles**

The Prontow® line of towing vehicles can handle load capacities up to 50,000 lbs. A number of trailer options are available including powered conveyor, tilt beds for automatic transfers, and standard load decks.



## **Automatic Trailer Loading (ATL) Vehicles**

The single or dual forked ATL AGV uses technology adapted from guidance systems to deliver palletized loads into any standard trailer. The Webb ATL AGVs have the capability to dynamically adapt to the position and length of the trailer being loaded. Automatically sensing skew angle of the trailer and adjusting to its position.



## **Unit Load Vehicles**

Webb offers a full line of standard AutoTrans® Unit Load AGVs. The AutoTrans is available with numerous load decks and load interface options including conveyor, lift/lower, and robotic arm configurations or a combination of load decks. The AutoTrans is available with a load capacity up to 10,000 pounds.



## **Low Profile Vehicles (LPV)**

LPV vehicles are typically applied in the hospital and service industries where low deck clearance is required. Load decks and load interface options include powered conveyor and lift/lower decks.



## Inertial Guidance

Webb's inertial guidance technology utilizes the VCC-3 vehicle microcomputer which continuously calculates speed and steering corrections required to maintain the intended path based on input from all guidance system components. On-board solid state gyro measures vehicle heading, while an independent track wheel accurately monitors distance traveled. Our patented SmartMark®, utilizing reference landmark codes and a vehicle mounted SmartMark reader, cross checks vehicle navigation by supplying absolute location confirmation during vehicle travel. The VCC-3 memory resident "map" of the system is used to command vehicle motion and performs various functions based on destination.



## Wire Guidance

Wire guidance vehicles follow a low voltage, low frequency signal sent over in-floor wires. This simple guidance system has a proven track record in hundreds of applications in the most demanding environments.

Recent improvements to our wire guidance package include an all digital guidepath oscillator and all digital on board vehicle guidance circuitry, including our new patented "x-coil" steering coil. The all-digital wire guidance system offers improved guidewire signal stability, increased diagnostic information, enhanced reliability, low maintenance (self tuning) and reduced installation time.

# Vehicle Routing and Navigation

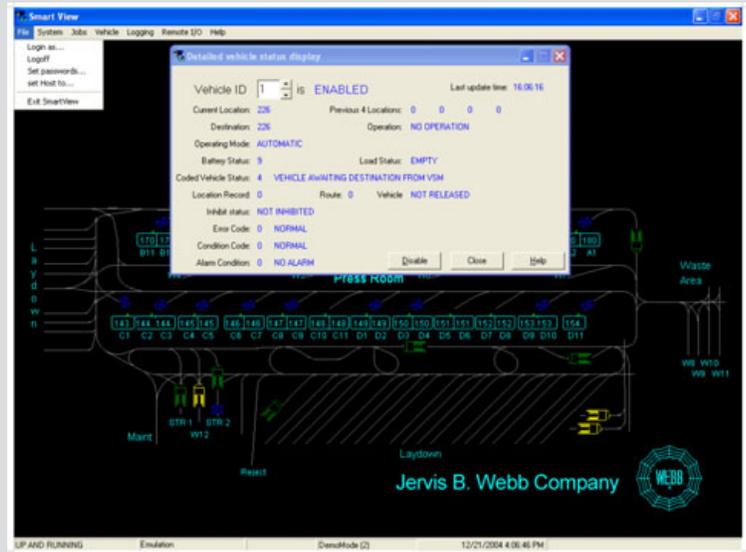
## System Controls

In a small system, AGVs operate on a "stand-alone" basis, utilizing an on-board Vehicle Control Computer VCC-3 expressly for AGV applications.

For multi-vehicle systems, a Vehicle System Manager (VSM™) is used to provide a highly cost-effective, and proven means to direct the system. The VSM performs real time control and monitoring of vehicles in the system. It routes vehicles from various locations in the system to programmed destinations, controls vehicle intersection blocking, provides system status, monitors vehicle status, and provides system debugging tools.

**AGVTools software package** is used to configure an AGV system from data located in an AutoCAD drawing file. The toolbox allows users to define and modify the guide path and provide icons used to automatically perform repetitive tasks.

**SmartView™ Client application** is a software application that may be installed on one or more personal computers running Windows XP Pro, Windows 2000 Pro, Windows NT® 4.x or greater, and Windows 9x to provide users a



means of accessing the AGV system data and parameters maintained by the VSM in real-time. The SmartView will "talk" to the VSM server, exchanging data, modifying parameters and reporting system status variables as needed.

# Put an AGV System to work for you.

Webb's innovative solutions and commitment to quality has resulted in a long history of successful installations involving thousands of AGV Vehicles. Let us share our extensive experience and show you the best material handling solution for your product.

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