FOCUS ON AGVs, mobile robots

AGV/forklift combo loads over-the-road trailers
Combining a standard, off-the-shelf forklift with automatic operation, the hybrid AGV provides trailer loading for manufacturing and distribution centers. The system uses advanced control and a sensor package that enables the vehicle to see and navigate in over-the-road trailers and deep floor stacks. The AGVs efficiently move pallet loads of 3,500 and 5,500 pounds to heights up to 30 feet. They interface with deep-lane floor stacking, push-back rack, drive-in rack and standard racking. Standard features include industrial lead-acid batteries, laser navigation, advanced laser safety systems, graphical touchscreen and wireless communications. For additional customization, optional components and functions—such as RFID readers, bar code scanners, 3D camera technology, robotic battery exchange system, automatic battery charging, side-shift and tilt—may be specified. Egemin Automation, 616-393-0101, www.egeminusa.com.

Adapt very narrow aisle forklifts into AGVs
For very narrow aisle warehouses, the second generation of FlexVNA automatic guided vehicles retrofits into existing rack systems or new automated storage systems. The system may be applied to existing manual forklift equipment or to an automated VNA solution. Enhancements include a slimmer profile, 360-degree scanner detection, multiple turret options for improved accuracy and reliability, and a standard, off-the-shelf WMS interface. To manage AGV traffic, the system’s management configurator requires no custom software, while maintenance and system monitoring tools are included in the single, scalable software. The software also incorporates a rack map configurator to determine the exact location in a rack structure for an AGV to deliver and pick a pallet. Dematic, 877-725-7500, www.dematic.com.

Automate trailer unloading with AGV
A line of automatic guided vehicles removes pallets of goods from standard, unmodified over-the-road trailers and delivers the pallets to storage locations for future retrieval and use. Using laser navigation, the vehicles provide precise load pick up and placement of pallets weighing 2,500 pounds. Up to two pallets can be removed from the trailer simultaneously using a single-double forklift attachment. For safe operation around manual fork trucks and pedestrians, the AGVs are equipped with 360-degree obstacle detection. The vehicle’s operation is integrated with the dock plate, door and lock so that the vehicle does not attempt to remove loads until all interlocks are in place. All vehicle and pallet movement is coordinated and tracked by a controller that interfaces with both production support and warehouse control software. JBT, 215-822-4600, www.jbtc-agv.com.

Small AGV/AGC vehicles can be configured in multiple ways
A family of small, low-profile automatic guided vehicles and carts uses virtual path navigation without following a magnetic or optical tape mounted on the floor. As tape-free vehicles, the units follow a CAD map in their memory, eliminating path maintenance. The virtual path is created from a simple PC program and can be easily rerouted or altered in unlimited lengths, complexities and levels of control to accommodate changing business needs. Compact, the units can be used to transport load platform or can be equipped with powered load decks to support both materials handling and assembly line applications. Savant Automation, 616-791-8540, www.agvsystems.com.