

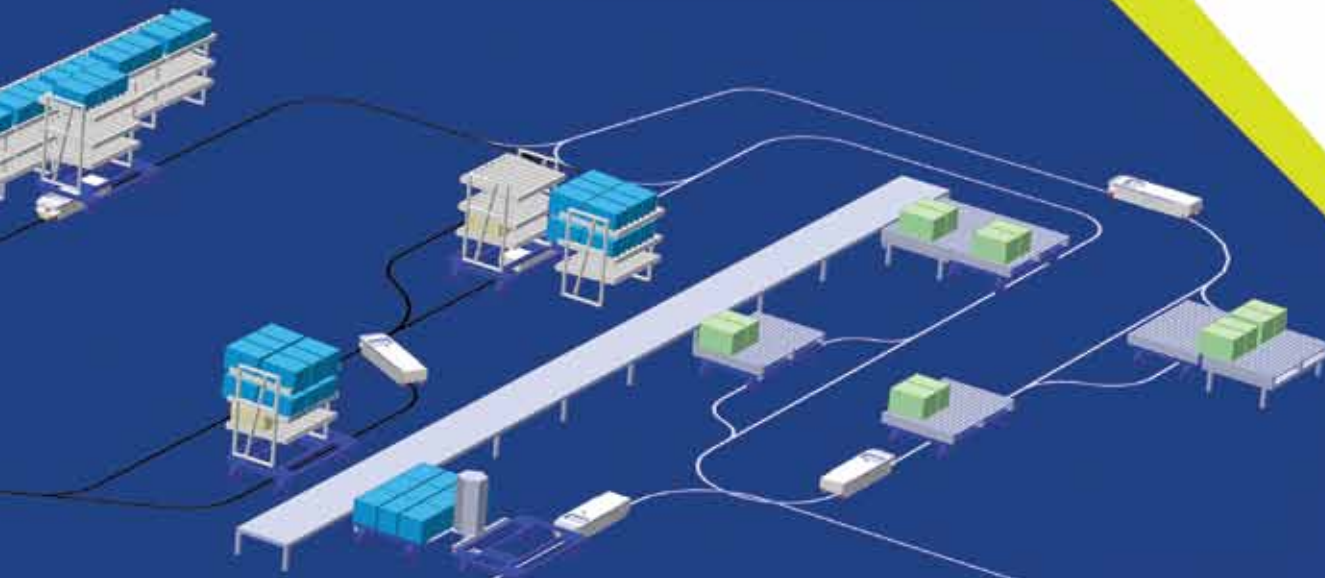
MMPEX SYSTEMS

MOVING
MATERIALS
INTELLIGENTLY™

Guided Vehicle Material Flow Solutions

Lean, Flexible &
Affordable

- Installs in Days
- Payback in Months
- Infinitely Flexible and Scalable
- JIT Manufacturing Capacity
- Turnkey Integrated or Stand-Alone Systems



Automated Material Handling Is Now Within Reach

Recently there's been a perfect convergence for automated material handling:

- Intelligent Automatic Guided Vehicles have become very affordable and reliable, operating 24/7
- Flexible system control software makes installation and vehicle modifications a straightforward, menu-driven routine
- Mobile material handling equipment can be coupled with smart electronics and powerful software to virtually eliminate errors by using optional pick-to-light, pick-to-voice and part identification systems

Still, 80% of your time and cost for material flow systems could be spent on integration issues. MMPEX Systems, LLC eliminates that expense by being a single-source, "soup-to-nuts" manufacturer and integrator of lean, high-performance flow systems.



An Automated Vehicle delivers a SmartDolly cart with a Gravity Flowrack.



A MMPEX SmartDolly cart with installed Conveyor Flow being delivered by an Automated Vehicle.



Small, powerful and smart: Automated Guided Vehicles are mobile robotics that "tunnel" underneath the MMPEX SmartDolly to propel it along its magnetic tape paths.

The System's Power Comes from Deep Integration

All MMPEX™ components are modular and 100% compatible with each other, allowing easy expansions and re-arrangements. The patent-pending building blocks for MMPEX systems are our SmartDolly carts, which can quickly receive powered and unpowered attachments such as:

- Gravity Flowracks
- Conveyor Flows
- Material Positioning Equipment — such as scissors lifts, rotating platforms, etc.
- Onboard Electronics — including pick-to-light, error proofing, and ID systems

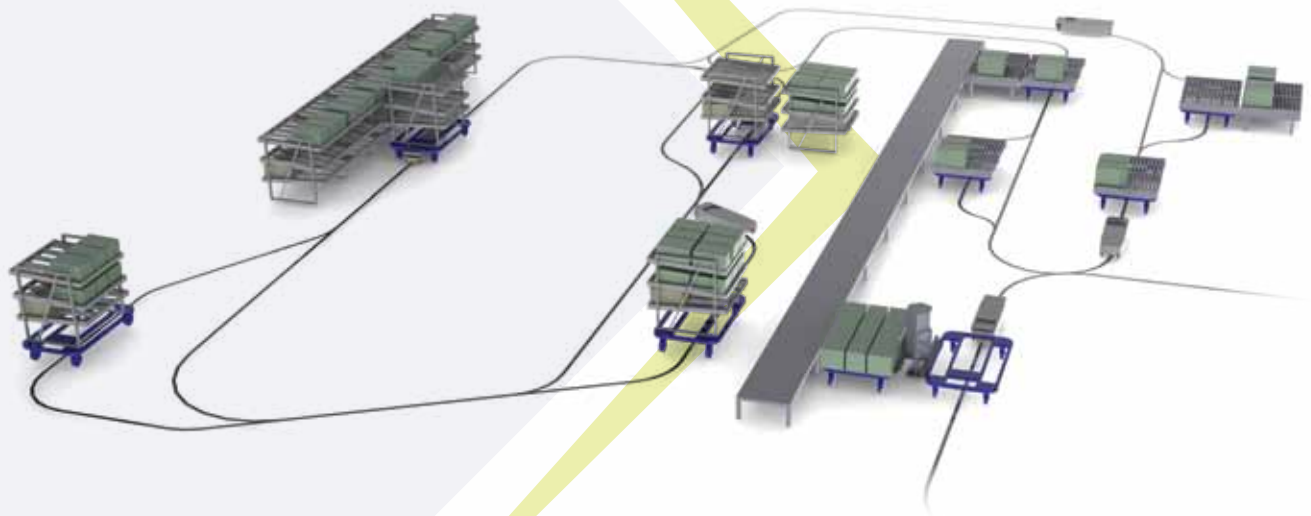
All of the necessary components to support our SmartDolly system are engineered and manufactured by MMPEX Systems:

- The tunneling Automated Guided Vehicles that propel the SmartDolly carts. The Automated Vehicles follow an easy-to-install magnetic tape — no floor or building modifications are needed.
- Positioners to index a line of dollies or align them in angled positions, as well as Rotators to rapidly exchange full/empty carts
- Workstations that are fed by and, in turn, feed the SmartDolly system
- Fixtures, cassette and minomi systems
- All the necessary control systems and software with ERP and WMS integration

Together, MMPEX products form resilient, ergonomically-optimized, space-maximizing flow systems.



A Guided Vehicle delivers SmartDolly carts to a MMPEX Rapid Dolly Exchange Rotator. The Rotator can exchange an empty dolly with a loaded one. Excellent for supplying assembly lines in space-restricted applications.



Intelligent Uses for MMPEX Systems

MMPEX Systems are for high-volume, discrete manufacturing facilities using repetitive assembly and warehousing processes. Industries include automotive, agricultural equipment, appliance, durable goods, electronics, furniture, sports equipment, toys, etc. requiring:

- **Mobile Delivery/Transportation:** of pallets, parts, or sub-assemblies
- **Kitting:** collecting parts for assembly
- **Assembly/Staging:** workstation transfer and presentation
- **Warehousing:** maximum product densities (e.g., minimal factory footprint) with JIT parts delivery
- **Order Picking:** with optional pick-to-light, pick-to-voice, and parts identification systems
- **Transfer/Shuttle:** move loads across high traffic aisles

An Unbeatable ROI

Reduce labor costs and vulnerabilities: with opportunity battery charging, Automated Vehicles can go 24/7. Human-operated forklifts can be reduced or eliminated, increasing safety.

Increased accuracy: pick-to-light, error proofing, and ID systems can all be integrated into intelligent, highly-reliable, automated material handling.

JIT manufacturing capacity: the ultimate in scalability. Just add or subtract MMPEX components.

Stand-alone or integrated: MMPEX systems can be stand-alone or integrated into your existing controls architecture and/or existing material handling systems.

The upshot is that low-risk, labor-saving, automated material handling is now — for the first time — within reach for thousands of high-volume manufacturers.

Installs In Days — Not Weeks Or Months

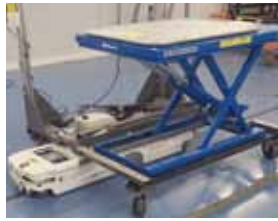
We make the entire engineering, specifying, and installing process as pain-free as possible. It typically begins with an on-site evaluation of your facilities to identify the *lowest hanging fruit* — your material handling process that will create the fastest payback with the least disruption.

With our flexible, modular system, pilot projects can go from evaluation to design to implementation in a matter of weeks.

Installation can happen over a weekend or holiday. With your pilot project in place and productive, we can modify, scale up, or expand to new production lines at any time. Risks (capital outlays, downtime) are low, and rewards are high — with paybacks possible in months.



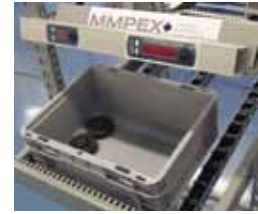
Storage Flow Systems — comprised of bins, totes and containers — can be serviced either robotically or manually.



Lift, tilt, and rotate parts or subassemblies into ergonomic orientations using MMPEX material positioning equipment mounted onto SmartDolly carts. Positioning apparatus can be unpowered or powered, as well as externally controlled.



Control Systems with optional centralized SmartDolly and Automated Guided Vehicle routing capabilities, IT integration, and UL 508 panel build.



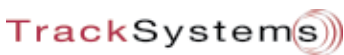
Electronics for Zero-Defect Quality: optional Pick-to-Light, Error-Proofing, and ID Systems.

Veterans In Material Handling

MMPEX Systems, LLC combines the strength of two veteran material handling companies:



MMP Company is a 60-year-old firm that provides quality products to the world's largest and most demanding customers in the automotive, earthmoving, industrial equipment and retail fixture industries. With comprehensive engineering and manufacturing capabilities, products include a proprietary line of ergonomic industrial flow control racks, part transporters, dollies and carts, workstations, and dolly positioning systems.



Track Systems, Inc. is a 25-year-old integrator of ergonomic material flow equipment and electronic systems for order filling, error proofing, and ID systems for zero-defect quality. TSI regularly works with Fortune 100 companies to design systems that reduce parts handling, minimize employee movement/motion, eliminate errors, minimize distance traveled, reduce training time, simplify product adjustments, minimize product footprint, and reduce potential for injury.

Innovation and Manufacturing Excellence

MMPEX™ products are made in the USA at our ISO registered, 120,000 sq. ft. plant. With American ownership, engineering, and manufacturing, MMPEX Systems has complete in-house control of design, manufacturing flexibility, Total Quality Management, delivery, and technical support.

The Next Step: Your Pilot Project

- 1) Watch MMPEX products in action at mmpexsystems.com.
- 2) Call us at **800-789-3341** to describe your potential applications.
- 3) Schedule an on-site evaluation to determine your most promising MMPEX pilot project.



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