

An integral part of a positive customer experience in the kiosk market is the mechanical delivery system inside each machine. The product is picked from its location, transferred from inside the machine and placed in the hands of the customer. Reliability, accuracy, and consistency of the pick-and-place operation are key attributes that PBC Linear products contribute to every kiosk system.

PBC Linear has a long-established track record with providing self-reliant mechanical retrieval & delivery systems for the automated retail and self-service kiosk market. With our range of bearing technologies and expert insight into linear motion design, PBC's motion control products ensure accurate positioning and sustained performance without complex installation or on-site maintenance upkeep.



**PBC Linear**

6402 E. Rockton Road  
Roscoe, IL 61073 USA



# CARTESIAN ROBOTIC DELIVERY SYSTEMS

## MOTION CONTROL SOLUTIONS



Media Retrieval



Automated Retail



Prescription Dispensing



Training Kiosk



For more information visit [pbclinear.com](http://pbclinear.com) or call 1-800-962-8979

# PROVEN DOMAIN EXPERTISE

## Across Multiple Delivery Formats

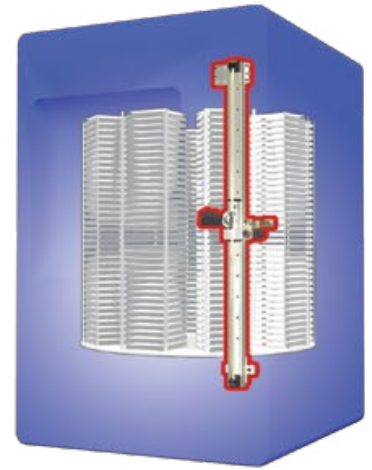
### The Carousel Format

Assembly: Product is inventoried on racks that are oriented in on a circular, rotating table. The vertical or "Y" axis moving components that pick the item and deliver it to the customer are driven along a single rail or guide fixed to the base or one side of the enclosure.

- Size Range: 3'-4' square area
- Load Range: >5 lb.
- Advantages: Easy inventory access, less moving parts

*Typical Applications: Products that are consistent in size, such as DVDs and well plate handling.*

CAROUSEL FORMAT



### The 'H' Format

Assembly: Product is inventoried on shelves or racks in the enclosure. The vertical or "Y" axis guide rails support and provide movement for a single rail that moves back-and-forth along the "X" axis. Installed on the "X" axis are the slide components that provide the in-and-out movement for the "Z" axis and operate the picking mechanism.

- Size Range: 3'-4' wide x 8'-10' high
- Load Range: >15 lb.
- Advantages: Maximizes inventory space within kiosk shell

*Typical Applications: Products that vary in size, such as kiosk and retail systems or prescription dispensing.*

'H' FORMAT



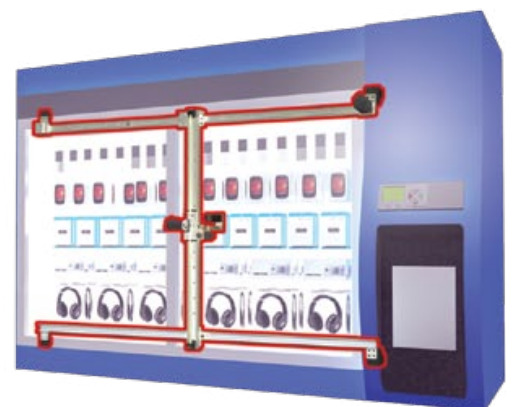
### The 'I' Format

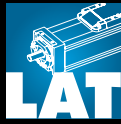
Assembly: The horizontal "X" axis is guided by two rails that support a single vertical "Y" axis rail. This "Y" axis rail supports the slide components that provide the in-and-out "Z" axis movement for retrieving and delivering the end product to the user.

- Size Range: 3'-100' long 4'-10' high
- Load Range: >15 lb.
- Advantages: Guide rails can reach long lengths

*Typical Applications: Large inventory and media retrieval systems.*

'I' FORMAT





# TECHNOLOGY ADVANTAGES

## Plain, Ball, and Cam Roller Products to Fit Your Application



### Cam Roller Technology

#### Commercial Rail



Economical linear guide that performs best in medium load (1,330 N, 298 lb.) and medium accuracy transfer tasks.

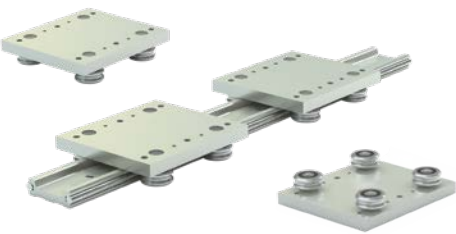
- Precision formed rails available in zinc plated carbon steel
- Transfer speeds up to 1.5 m/s (59 in/s)
- Available in lengths up to 6 m (19 ft)
- Sliders are available with sealed 52100 steel wheels

#### Redi-Rail®



Precision machined linear guide system designed for high speed (8 m/s, 315 in/s) and high accuracy (Parallelism: 0.025 mm, 0.001 in) handling.

- Available in lengths up to 6 m (19 ft)
- Maximum load up to 5,950 N (1,340 lb.)
- Sealed double row bearings provide maintenance free guidance
- Patented side-adjustable pre-load design provided in Metric Series slide
- FDA compliant version available upon request



Compact (System Height: 19 mm, .750 in.) precision machined linear guide for low-profile retrieval and delivery of light to medium loads (498 N, 110 lb.).

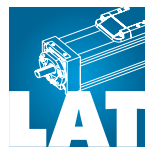
- Precision lightweight aluminum machined rails for high accuracy guidance
- Sealed double row Gothic arch roller bearings
- Available in standard lengths up to 3048 mm (10 ft) which are end-joinable for longer length



### Round Shaft Technology

Plain and Ball-type linear bearing components

- Self-lubricating/maintenance-free
- High reliability and long-term operation
- Wide temperature range: -240° C/ 204° C (-400° F/ 400° F)
- Multiple sizes and components available



### Linear Actuator Technology

Wide assortment of driven actuator platforms supported by full selection of motors, carrier cables, and accessories

- Versatile drive options: lead screw, ball screw, and belt
- Multi-axis mounting
- Cycle speeds up to 5 m/s
- Miniature systems available
- Precision machined via SIMO™ process
- Scalable platform solution



# APPLICATION FOCUS

## Background:

Manchac Technologies provides accurate, reliable and immediate prescription pill and medication dispensing.

## The Problem:

Linear guide rails installed in the Dosis L60 dispensing kiosk were difficult to install and failed pre-maturely due to pill dust accumulation.



## The Solution:

PBC Linear Redi-Rail® Linear Guides

Redi-Rail linear guides use a post-processed aluminum extrusion equipped with steel inserts to facilitate easier installation and alignment.

## The Result:

After installing Redi-Rail, Manchac realized the following benefits:

- 50% reduced installation/alignment time
- 20-30% decrease in motor current required for operation
- High travel velocities without chatter or binding
- NO issues with downtime or preventative maintenance!

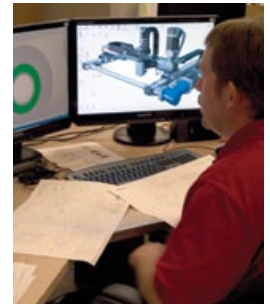
## The PBC Linear Advantage

- Over 35 Years of Proven Expertise
- Expert Design Collaboration
- Full Range of Solutions
- On-Site Manufacturing & Machining

## Expert Consultation and Design Collaboration

PBC Linear specializes in collaborative design engineering. Contact an engineer at PBC Linear to define your motion control solution.

- Streamlined assembly
- Integrated linear motion systems
- Reduced mounting components
- Ease of installation



## Full Selection of Linear Motion Technology

- Components
- Single-axis sub-assemblies
- Multi-axis systems

## On-site Manufacturing and Machining

- Reduce machining vendors
- Set-up for low to high volume production
- Unique machining capabilities (SIMO™, 5 axis milling, routing)



**PBC Linear**

6402 E. Rockton Road  
Roscoe, IL USA

LITTM 001-Robotic

For more information visit [pbclinear.com](http://pbclinear.com) or call 1-800-962-8979