



GRAVITY FLOW RACK SYSTEMS

THE SINGLE SOURCE SOLUTION



Kingway has been leading the material handling industry in technology, support, and customer satisfaction since 1962.

Since our beginnings, the Kingway gravity flow rack has set the standard of excellence for the order selection segment of the industry – and continues to be the industry benchmark even today.

The concept uses inclined shelves equipped with roll track to move cartons by gravity from the restocking to the picking side of the system. Picking and restocking are far more accurate and efficient – in fact, one person can do the work of three or four. Additional savings are realized by the effective use of floor space – a gravity flow system requires only half of the floor required by static shelving to handle the same SKUs.

Our systems approach provides a full range of components to customize the system to each customer's needs with unsurpassed quality and engineering. All Kingway components are fully compatible, allowing easy customization and rearrangement. Assembly is logical, done without special tools, and can easily be constructed by your in-house maintenance staff.

The Kingway gravity flow picking system offers the best ROI with a substantial cost savings over automated systems, a more efficient approach compared to static shelving, a virtually maintenance-free system, and the ability to rotate merchandise on a first-in, first-out basis.



The Kingway gravity flow rack is designed and manufactured to the most rigorous engineering standards. Our roll-formed structural components are the strongest and most rigid of their type in the industry. Engineered to withstand heavy use and abuse, components are made of ASTM high-strength, low-alloy, certified structural steel.

Their modular design, numbered scales, and precision slots allow rapid assembly and rearrangement without tools or measuring.



Numbered Scales

With clearly numbered scales and high-quality components that easily clip in place, the system can be assembled or rearranged in a snap, without tools, by your own maintenance people.



Shelf Hanger Clip

This unique clip fits into a single slot in the vertical frame. The shelf frame is then placed securely on the clip. There are no threaded or moving parts to work with, and no tools or measuring are required for installation.



Roll Track

Kingway's heavy-duty roll track permits the movement of heavy cases at the lowest slope angle in the industry to maximize space utilization. Tracks and guides are independently mounted, and snap into retainer tabs easily. The roll track operates in any warehouse environment, including coolers and freezers, and requires no lubrication.



High Tech Manufacturing

Computer-controlled rolling mills produce consistent column cross-sections for pallet rack, carton flow, and accessory products.

THE GRAVITY FLOW CONCEPT

THE CONCEPT

The gravity flow order selection system offers a far greater ROI than any other picking system. This simple, effective concept uses inclined shelves equipped with roll track to move by gravity from the restocking to the picking side of the system. No power source is required. And because frontage per item is greatly reduced, restocking and picking can be done much faster. In fact, one person can do the work of three or four.

THE ALTERNATIVES

Conventional static shelving is relatively inexpensive and basically maintenance free. But it is the best choice only for very slow moving merchandise.

Automated systems work well if you're storing extremely fast-moving goods in full case quantities. However, these systems are very expensive to purchase and maintain, and are subject to frequent breakdowns.

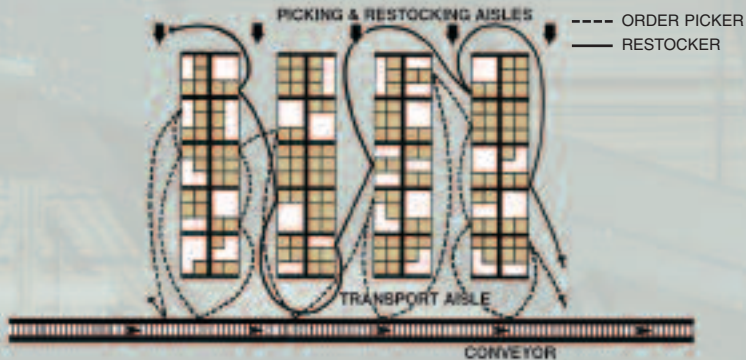
THE KINGWAY SOLUTION

Gravity flow picking systems offer many of the best features of both these other methods. They are far less costly than automated systems, and much more efficient than static shelving. They are virtually maintenance free and allow you to rotate merchandise on a first-in, first-out basis.

In most instances, gravity flow is the most cost-effective order selection system.

COMPARE THE TWO SYSTEMS

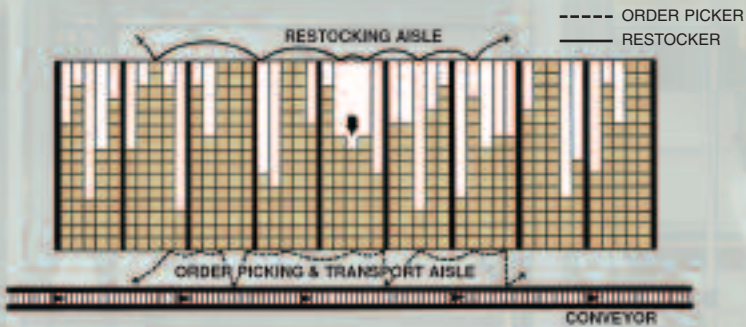
	Gravity Flow	Static Shelving	Gain with Gravity Flow
If total floor space is	equal	equal	—
Then items stored (each case, 1 cubic foot)	155	120	29%
Shelves high	5	3	2
Cases per opening	15	12	3
Total cases	2325	1440	61%



Static Shelving

Pickers spend 15% of their time doing productive work. Static shelving systems are relatively inexpensive. The big hidden cost factor is labor - the amount of time workers spend restocking and picking.

In the drawing above, notice how many wasted steps are taken between the items being picked. In the typical static system, pickers actually waste about 85% of their time walking and searching. That means only 15% of the time is left for productive work – picking and marking order forms.



Gravity Flow

Pickers spend about 85% of their time doing productive work.

A gravity flow system may cost a little more than conventional shelving, but it cuts labor costs dramatically. How? By decreasing the walking distance between items being picked and the time spent looking for them. In fact, about 85% of the picker's time is spent actively picking and only 15% walking.

Restocking speed is doubled or tripled. Instead of having to remove the contents of each case and stack them on static shelves, gravity flow restockers need only slice off the top of the case and slide it onto the rack. This efficiency often makes it possible to eliminate three out of four workers.

Gravity flow uses floor space much more efficiently. Fewer aisles are required – at least 50% more goods can be stocked in the same amount of floor space.

Since restocking and picking take place on opposite sides of the rack, neither function interferes with the other.

Deep reaching is eliminated. Frontage per item is usually reduced to a single case except for a few of the fastest movers. When the empty carton is removed from the lane, the next carton automatically rolls to the front of the shelf. FIFO rotation is assured without doubling handling of goods. And the long straight aisles make inventory control and worker supervision much easier.

THE KINGWAY SYSTEMS APPROACH



A Kingway system can accommodate everything from the fastest-moving items to slow movers to odd-shaped merchandise.

As importantly, you can store the same amount of merchandise in half the space required by static shelving.

A typical Kingway system integrates components into a series of bays, so you can arrange all your goods in family groupings in their natural picking sequence.

HERE'S WHAT COULD BE IN A KINGWAY SYSTEM:



1. Gravity Flow Shelves handle the medium to fast moving items – typically about 90% of the goods in most systems.



2. Static Shelves accommodate very slow movers and odd shapes, usually about 5% of the total. These shelves can fit within Kingway bays or attach to the outside at the ends of each row to keep goods close to their normal picking sequence. Static and gravity flow shelves are interchangeable for easy rearrangement at any time.



3. Pallet Flow Shelves are for the fastest moving items, usually 5%. They normally hold two pallets in a single bay. As with carton flow, the pallets move by gravity from the restock side to the picking position. Empty pallets are returned to the restocking aisle through the return shelf.















4. Overhead Storage Rack in one, two, or three levels enables utilization of all available storage space. It allows for immediate replenishment of your fastest movers – no time is lost waiting for reserves to be brought from other storage areas. Single- and double-width pallet bays make it possible to handle the full range of pallet sizes.

THE KINGWAY SYSTEMS APPROACH

MULTI-LEVEL SYSTEMS

With a Kingway multi-level system, you can operate a gravity flow system on two, three, or more levels instead of just one. The result will be a substantial savings in costly floor space and often the elimination of additional buildings for storage. The Kingway multi-level system is a freestanding unit that does not have to be braced to the building. The exceptionally strong, structural system is a combination of standard Kingway components and component' designed specifically for multi-level applications. All Kingway components are compatible.

	60-Inch Deep Bays	90-Inch Deep Bays	120-Inch Deep Bays
Standard Bay			
With Pallet Bars			
With Overhead Storage Rack			
Mezzanine			

180-Inch and 240-Inch Depths are Also Available

Typical Kingway Configurations.

Kingway components are designed to be assembled in a variety of configurations to provide the optimum solution to your order selection needs.

Standard vertical frame and shelf combinations

Squarefront vertical frame with straight shelves. Used when picking full cases. Examples: canned goods, wine.

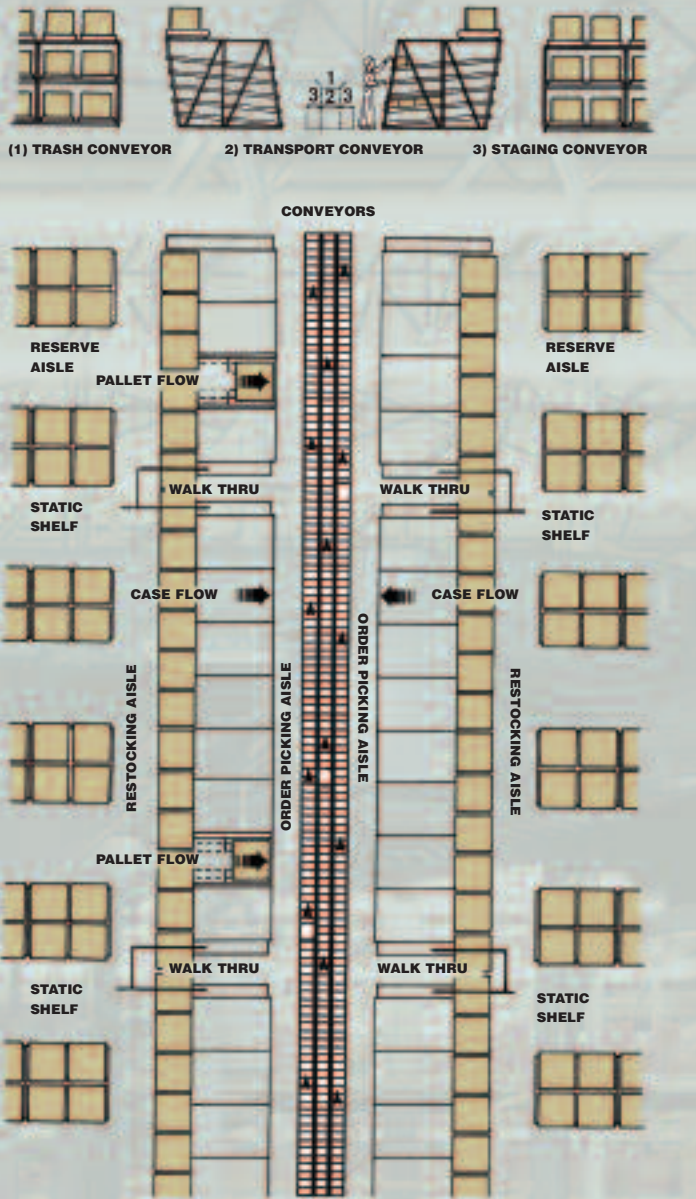
10° layback vertical frame with straight shelves. Used when picking from open cases, when cases vary in size. Examples: health and beauty aids.

10° layback vertical frame with carton tilt shelves. Used when picking from open cases, when cases are similar in size. Examples: liquor, paperback books.



Application Guide

1. Use Kingway flow rack when the average order consists of multiple items, but only a few pieces per item.
2. The rack system should be deep enough to hold a 3-5 day supply of the average item.
3. For faster moving items, assign more than one lane or restock more often.
4. Pick items which are ordered in large quantities from a pallet flow lane (usually 5% of the line).
5. Place extremely slow movers (usually 5% of the total line) on Kingway static shelves.
6. Use Kingway gravity flow shelves for split case or full case picking.
7. Use carton-tilt shelves with 10° layback vertical frame, when picking from open cases of similar size or totes.
8. Use standard straight shelves and standard squarefront vertical shelves when picking full cases.
9. Use Kingway systems to handle any weight package you can comfortably lift.



A Typical Installation: How It Works

Kingway gravity flow shelves are used for the majority of items. Kingway static shelves are used for slow movers and goods which, because of size or shape, do not easily lend themselves to use in gravity flow shelves. A few of the fastest-moving items are kept on pallets for full-case picking.

Reserve pallet storage for the fastest-moving items is kept on top of the gravity flow rack for fast, efficient restocking. Reserve stock for the remaining items is stored in pallet rack to the rear of the system. For the greatest efficiency, the reserve aisles should be perpendicular to the Kingway restocking aisles.

SUMMARY OF ADVANTAGES

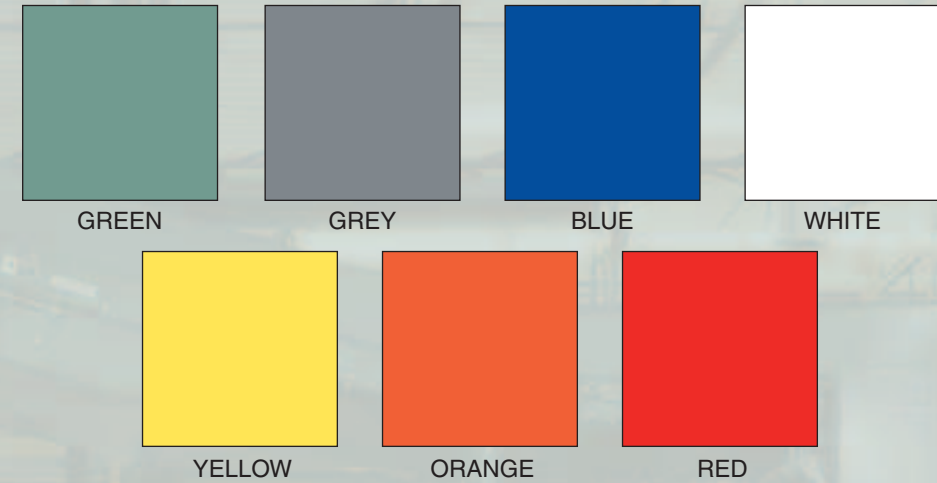
1. The only total system – only Kingway has a complete range of components to handle all of your order selection requirements. Gravity flow shelves for 90% of your SKUs... static shelves for the slowest movers... pallet flow shelves for the fastest movers.
2. Picking sequence – with the three types of Kingway shelves, your goods can be organized in family groupings for the most efficient picking sequence.
3. Interchangeable bays – as your needs change, your Kingway system can be easily changed. Kingway shelves are easily interchangeable and adjustable.
4. Pallets by gravity – with pallet flow shelves and roll track, you eliminate waiting for stock replenishment.
5. Local reserves – keep fast moving goods on ready reserve in Kingway overhead storage bays. They accommodate all pallet sizes.
6. Minimal floor space – Kingway gravity flow and multi-level systems enable you to achieve maximum utilization of expensive floor space.
7. Future compatibility – all Kingway components are compatible - and will always be. As new components and systems are introduced, you can count on them to be compatible with all Kingway installations, past and present.



TOP QUALITY POWDER COATING

PAINT COLORS

ROLL FORMED RACK AVAILABLE IN 7 COLORS



*Actual paint finish may vary slightly from above.

Our electrostatically applied powder coating provides a smoother, more evenly distributed paint than the traditional “wet” paint coatings. And our curing process, known as THERMO-SET, develops an extremely tight, chip-resistant bonding of the hybrid resins to the steel surface. Our total process results in a beautiful, high gloss finish that has greater toughness, impact resistance, temperature stability, flexibility, and resistance to corrosion than traditional painting processes.



Kingway's 80,000 Sq. Ft.
Dallas, TX Finished Goods - Quick-Ship Facility

CUSTOMER SERVICE

DALLAS: (800) 283-4622
ATLANTA: (800) 554-6632



LOCATIONS



Strategically located in the center of the country, Kingway's Dallas facility is 300,000 sq. ft. of flexible manufacturing capability for storage rack and shelving.

501 East Purnell
Lewisville, TX 75057
Tel: (800) 283-4622
Fax: (972) 436-7901



Kingway's headquarters is a 250,000 sq. ft. facility near Atlanta, Georgia combining comprehensive manufacturing and engineering capabilities.

240 Northpoint Pkwy
Acworth, GA 30102
Tel: (800) 554-6632
Fax: (770) 917-8205



The Kingway manufacturing facility is 150,000 sq. ft., located near the I-75 corridor in Northwest Ohio.

407 East Washington
Pandora, OH 45877
Tel: (800) 448-0784
Fax: (419) 384-7239

INTEGRITY IN STRUCTURE, INTEGRITY IN SUPPORT

Once you work with Kingway, you won't settle for anything less. An impressive heritage of repeat business attests to the integrity of the company as well as the integrity of the systems.

STRUCTURAL RACK

Selective
Deep-Reach Selective
Drive-in / Drive-thru
Push Back
Pallet Flow

SHELVING

Industrial Grade Shelving
Rivet Rack Shelving (Inca-Span)

ROLL FORM RACK

Selective
Deep-Reach Selective
Drive-in / Drive-thru
Push Back Pallet Flow

CONNECTION TYPE

Tear Drop (Ter-Lok)
MI-Rack
Key Stone (Key-Lok)

Quickship available at all locations

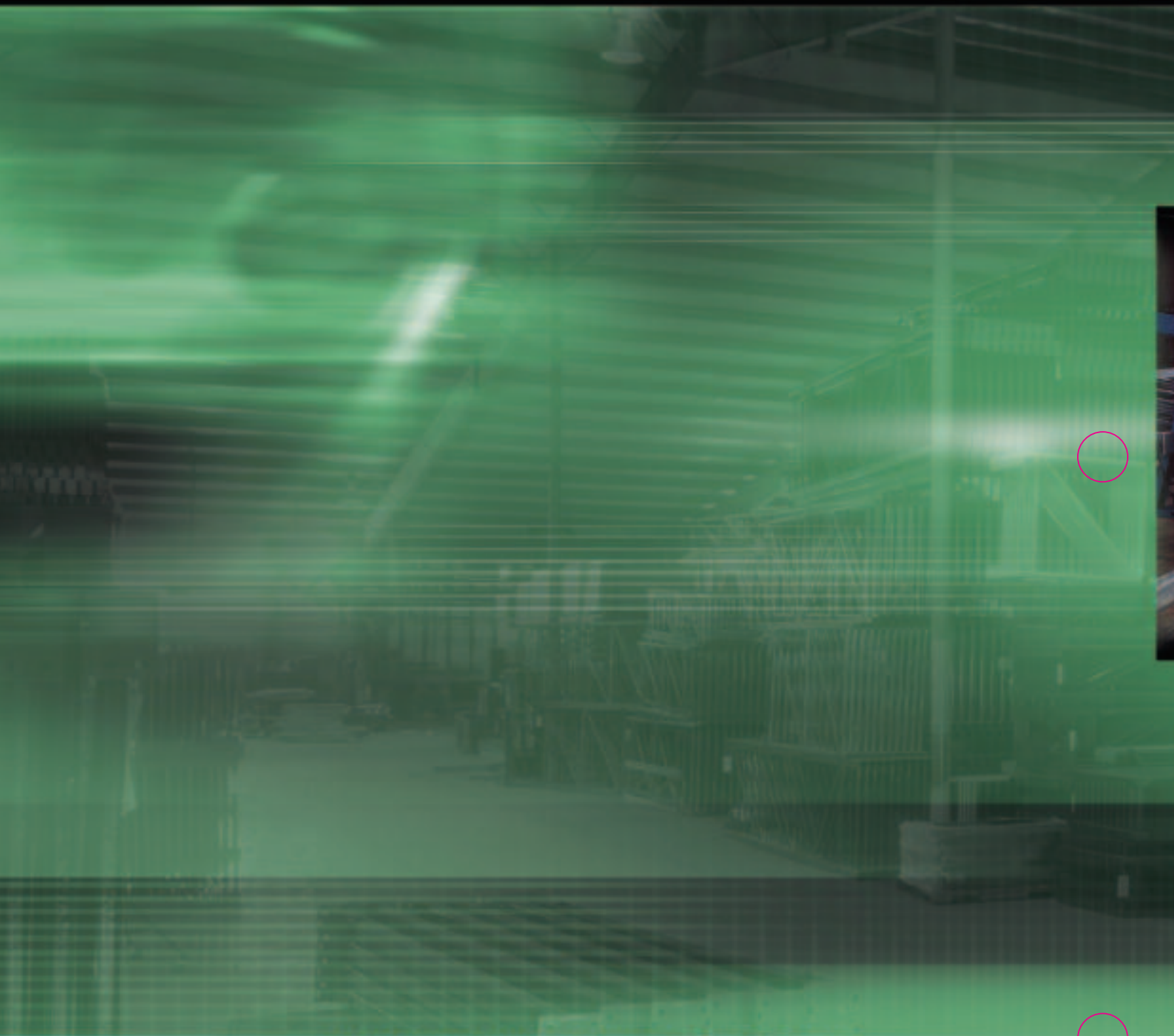
TURNKEY SYSTEMS

CANTILEVER RACK

Premium Cantilever Rack

MULTI-LEVEL PICK MEZZANINES

CARTON FLOW



To find the dealer nearest you, visit our website: www.kingwayinc.com



Kingway is a member of both major handling industry professional associations, The Material Handling Institute and The Rack Manufacturers Institute, and adheres to the policies and standards of excellence set forth by those organizations. Design and capacities conform to the current 1007 RMI specifications.