Omni Metalcraft RSL

VectoRoller™

Patent pending

Reduce Strain, Increase Flow

www.vectoroller.com

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THE BACKGROUND

The rapid growth of e-commerce has pushed package delivery networks beyond the capacities traditional systems were built to handle.

Warehouses face higher volumes, limited labor availability, and rising expectations for speed and accuracy. Facilities are being asked to move more packages through aging conveyor infrastructure, often without the space or resources for large-scale equipment upgrades.

These pressures highlight a growing need for solutions that support smoother movement, reduce operator effort, and fit into existing conveyor environments.

THE CHALLENGE

Most traditional conveyor rollers are optimized for longitudinal movement along the conveyor path. However, today's pick, merge, and sortation points often require frequent lateral repositioning, motion these rollers are not specifically engineered to support.

As a result, facilities face:

- High lateral friction when operators pull or guide packages sideways.
- Greater effort at pick and intercept points, especially during repetitive tasks.
- Slower flow as team members reposition cartons to align with scanners, diverts, or downstream equipment.
- Limited upgrade paths, as many alternative solutions are difficult or costly to retrofit into existing conveyor systems.

This creates demand for solutions that can integrate into existing conveyor equipment without significant disruption or cost.

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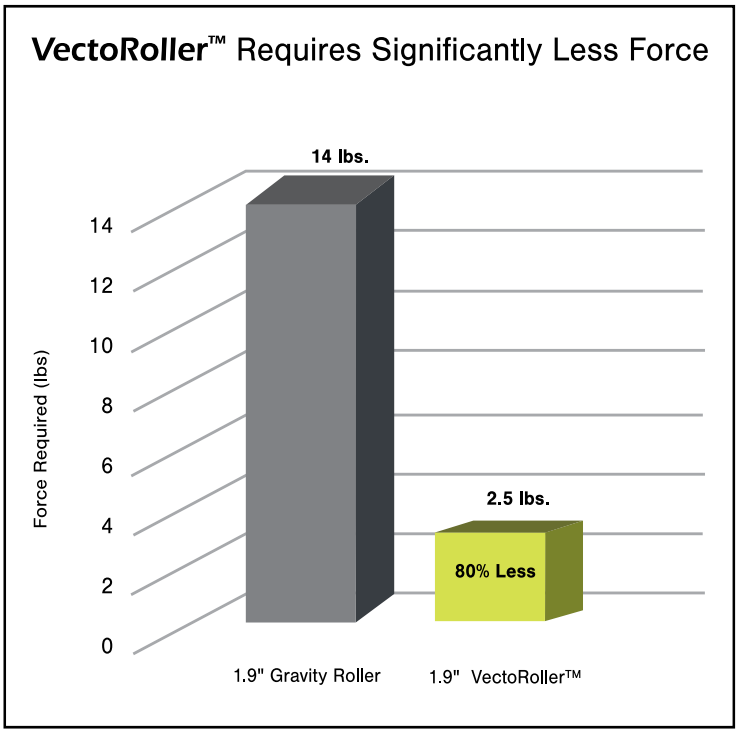
THE VECTOROLLER™ SOLUTION

Omni Metalcraft RSL's VectoRoller™ is a patent-pending design engineered to address the challenges of lateral package movement. The VectoRoller™ provides retrofit functionality allowing facilities to utilize existing conveyor infrastructure to optimize implementation efficiency while minimizing implementation costs. The VectoRoller™ installs as a direct replacement for existing legacy conveyor rollers, both gravity and powered, and utilizes a series of perpendicular wheels to significantly reduce the friction between the roller contact surface and the conveyed package. The unique design of the VectoRoller™ delivers up to an **80% reduction** in the energy required to laterally intercept and pick packages when compared to legacy products.



Example shown represents the force required to move a 50 lb. plastic tote laterally across the surface of each roller type shown.

DESIGN HIGHLIGHTS

- Perpendicular wheel design that rotates in the direction of lateral travel, helping reduce sliding friction during sideways movement.
- Supports smoother lateral movement during picks, merges, and manual intercepts.
- Retrofit-ready installation, no conveyor structural changes required.
- Configurations available for gravity, O-ring, poly-rib, and belt-driven live roller (BDLR) applications.

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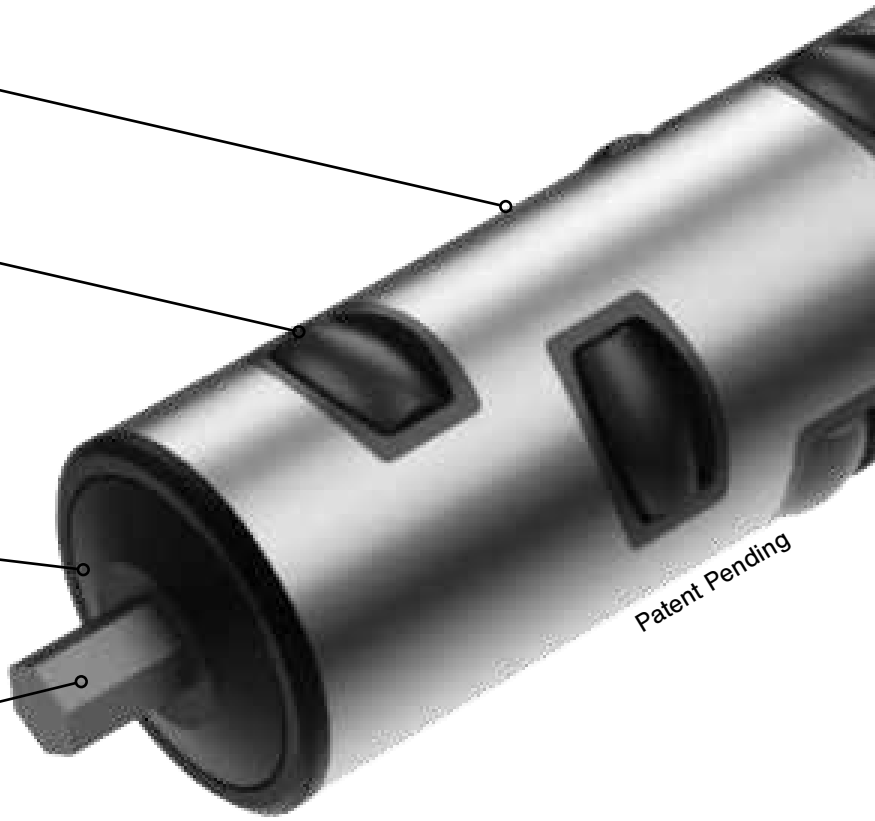
1.9" OD FLO-COAT TUBING
Triple-layer coating delivers corrosion resistance and superior cosmetics while maintaining strength and durability

ENGINEERED VECTOROLLER™ WHEELS
Our proprietary individual VectoRoller™ wheels are mounted perpendicular to the direction of roller rotation to significantly reduce friction during movement along the roller face.

ABEC BEARINGS
Precision bearings for increased load capacity, speed and durability to maximize life in high-performance applications. Multiple alternate bearing and axle options are available upon request.



7/16" SPRING-RETAINED HEX AXLE
Optimizes ease of installation while maintaining durability

DRIVE CONFIGURATION OPTIONS
Fully customizable to include groove profiles for O-rings and poly-ribbed hubs for multi-ribbed belts.

VECTOROLLER™ INNOVATION
Omni Metalcraft RSL's VectoRoller™ patent-pending design features proprietary wheels that can be mounted at rates of up to 2 wheels per inch of effective tube width to optimize the reduction in friction for a specific application.

PROFILE CONFIGURATION OPTIONS

GRAVITY

Not directly driven.
Only rotates when product passes over.

GROOVED

Units driven by round, O-ring transmission belts. May rotate when product is not present.

POLY-RIBBED

Units driven by poly-v style transmission belts. May rotate when product is not present.

BDLR

Units driven by flat transmission belts. May rotate when product is not present.

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VECTOROLLER™ BENEFITS

Reduces Strain and Fatigue - Supports easier lateral picks and repetitive manual tasks.

Maintenance-Friendly - Installs and maintains like a standard conveyor roller.

Cost Effective - Improves movement without requiring new conveyor equipment.

More Controlled Movement - Enables smoother laterial movement at pick points.

Retrofit Functionality - Designed as a direct drop-in replacement for existing rollers.

Simple Installation - Fits standard frames with a 7/16" spring-retained hex axle.

DISCOVER THE VECTOROLLER™ ADVANTAGE

The VectoRoller™ outperforms traditional and alternative solutions in four key categories:

- Ease of Installation
- Maintenance-Friendly Features
- Load Capacity
- Gravity and Powered Applications

Whether you're upgrading existing infrastructure or building new systems, VectoRoller™ offers a smarter, more ergonomic, and scalable solution engineered to reduce strain and increase flow.

	Ease of Installation	Maintenance Friendly Features	Optimized Load Capacity	Gravity and Power Solutions
VectoRoller™	☑	☑	☑	☑
Ball Transfer Tables	☑	◉	☑	☒
Omnidirectional Skatewheel	◉	☒	◉	☒
Omnidirectional Flowrail	◉	☑	◉	☒
Automated Solutions	☒	☑	☒	☑

EXCELLENT	AVERAGE	N/A
☑	◉	☒

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TARGET MARKETS

- LOGISTICS
- WAREHOUSING
- 3PL FACILITIES

TARGET APPLICATIONS

PICK STATIONS

MANUAL DIVERT

MERGE AND ALIGN

CURVE ALTERNATIVES