

Carton Flow Product Overview

- More cartons - Low profile shelves
- More surface support - Solid bed or full-width
- Less maintenance - Heavy-duty side channels & axles
- All carton flow products drop-in with no tools required

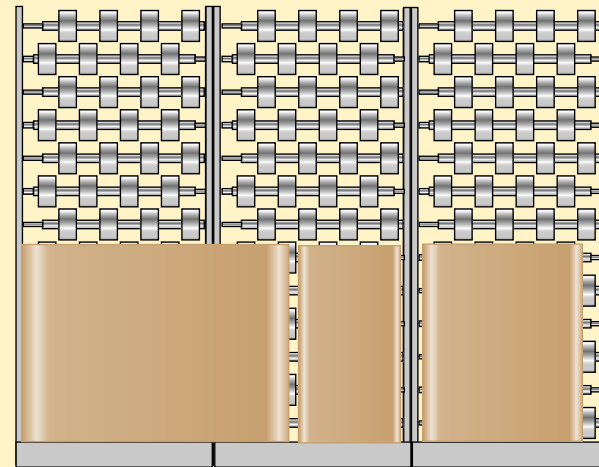


Carton Flow Options Comparison

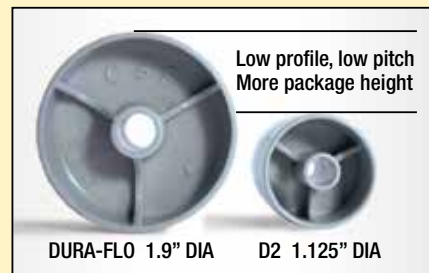
DURA-FLO™

DURA-FLO and D2

- Continuous bed of rollers
- Accommodates any mix of carton sizes
- Available in 12" and 16" wide lanes
- Rollers can be spaced on 2", 3" or 4" centers



Full-bed of rollers provide maximum space utilization with no wasted space even when carton sizes change.



DURA-FLO™

- 1.9" diameter plastic wheels
- 1" wide flow surface
- 2.28 high galvanized steel side channel
- Fits any pallet rack new or retrofit

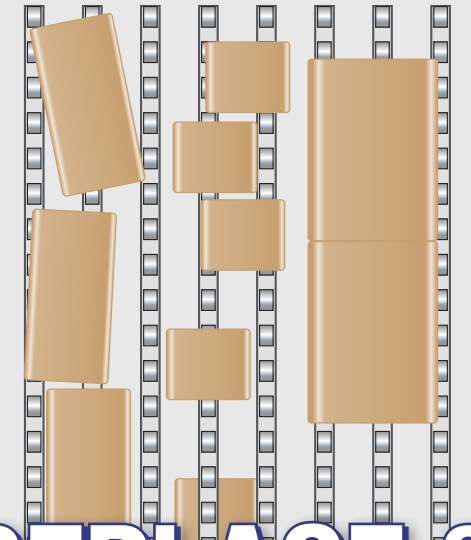


DURA-FLO™ D2

- 1.125" diameter plastic wheels
- 1.4" wide flow surface
- 1.125" high galvanized steel side channel
- Fits any carton flow new or retrofit

COMPATIBLE WITH ALL MAJOR PALLET RACK BRANDS

Traditional carton flow systems utilize individual tracks which are difficult to install and result in maintenance issues and hangups causing picking inefficiencies.



REPLACE & UPGRADE

Convert any existing pallet racking or carton flow shelving unit into a brand new carton flow system by simply dropping in pre-assembled lanes of DURA-FLO or RHINOTRAC

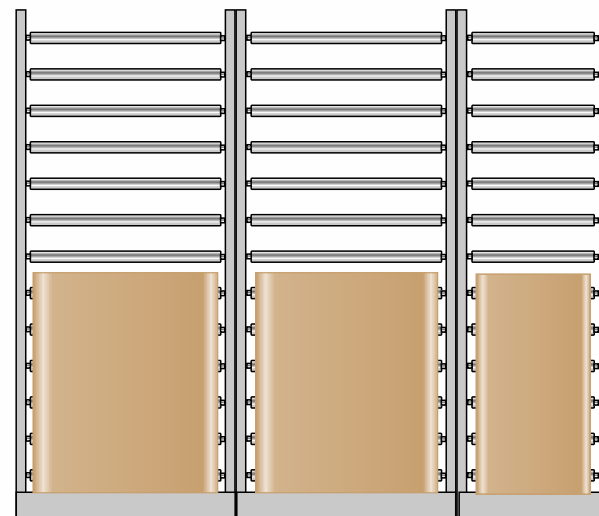
Reduce pick costs with more reliable flow and less hang-ups

Improved inventory control, no product falling between tracks

RHINOTRAC™

RHINOTRAC and RHINODECK

- Separately defined lanes for flow
- Roller widths are available in 6", 9", 12" and 15"
- Rollers can be spaced on 1", 2" or 3" centers



RHINOTRAC™

- 0.75 diameter aluminum rollers
- 6", 9", 12" or 15" wide rollers
- 2.5" high galvanized steel side channels
- Fits any pallet rack new or retrofit



RHINODECK™

- 0.75 diameter aluminum rollers
- 6", 9", 12" or 15" wide rollers
- 1.1" high galvanized steel side channels
- Fits any carton flow new or retrofit

More storage flexibility and less maintenance.



CARTON FLOW



www.concentricstorage.com

CONCENTRIC STORAGE SYSTEMS, INC.
3438 Briley Park Blvd. N.
Nashville, TN 37207

PHONE 1-800-649-4428

PRODUCT CATALOG

DURA-FLO™

SUPERIOR CARTON FLOW SYSTEMS

- More cartons
- More surface support
- More slotting flexibility

Heaviest carton flow axle on the market - 5/16" diameter for less deflection.

FreeWheeler™ maintenance-free, high-strength wheels can be used in a wash-down environment.

Pre-assembled, drop-in tracks fit most existing pallet racks for simplified installation.

Specially lubricated 5/16" solid steel axles provide better flow.

Superior strength from specially designed channels.

No tools required to replace wheel assemblies. Axles snap into place.

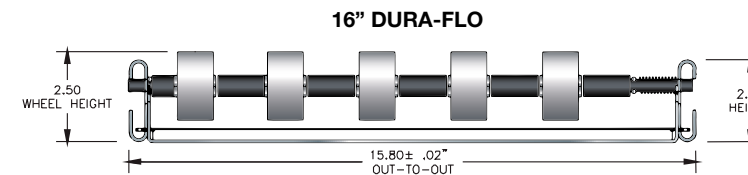
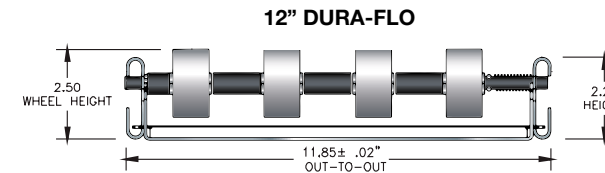
Beam Hooks provide easy and flexible attachment to cross beams on most racks. Extension feet also available for roll-formed beams.



Dura-Flo Lane Indexers are easy to reposition.

Dura-Flo Carton Flow System Options and Accessories

- Lane indexers
- Cantilevered high-mount extension
- Low-mount & high-mount applications
- Forward tilt shelf
- High-mount rear extension
- Splice plates for custom lengths
- Attach to beams with beam hangers



Dura-Flo structural beam mount

Dura-Flo™ Carton Flow SPECIFICATIONS



- ✓ Dura-Flo™ utilizes patented FreeWheeler™ technology for easy flow and durable service.
- ✓ FreeWheeler™ patterns on 2, 3, or 4-inch centered axles accommodate various package configurations for superior carton flow and support.



Contiguous wheel span creates a deck for mixed package width on the same shelf maximizing space and efficiency.

- Dura-Flo Wheel Size**
- 1.9-inch diameter
 - 1-inch wide flow surface

Dura-Flo Wheel Axle Center Options

Axle Center	Minimum Carton Depth
2 inch	6 inch
3 inch	9 inch
4 inch	12 inch

Dura-Flo Carton Flow System Capacities (lbs. per sq. ft.)

Unsupported Span (in.)	Capacity	
	12 inch width	16 inch width
48	137	102
60	87	66
72	61	46
84	45	33
96	32	24
108	23	17
120	16	12
132	12	9

18 Gauge Channel Standard

- 16 gauge available
- 14 gauge available

ROLL-FORMED BEAM MOUNT



DISCHARGE END
Adjustable end bracket rests in step of beam to allow beam to act as box stop.



CHARGE END
Heavy-duty end-bracket rests in step of beam and adjusts incrementally to adjust pitch for proper flow



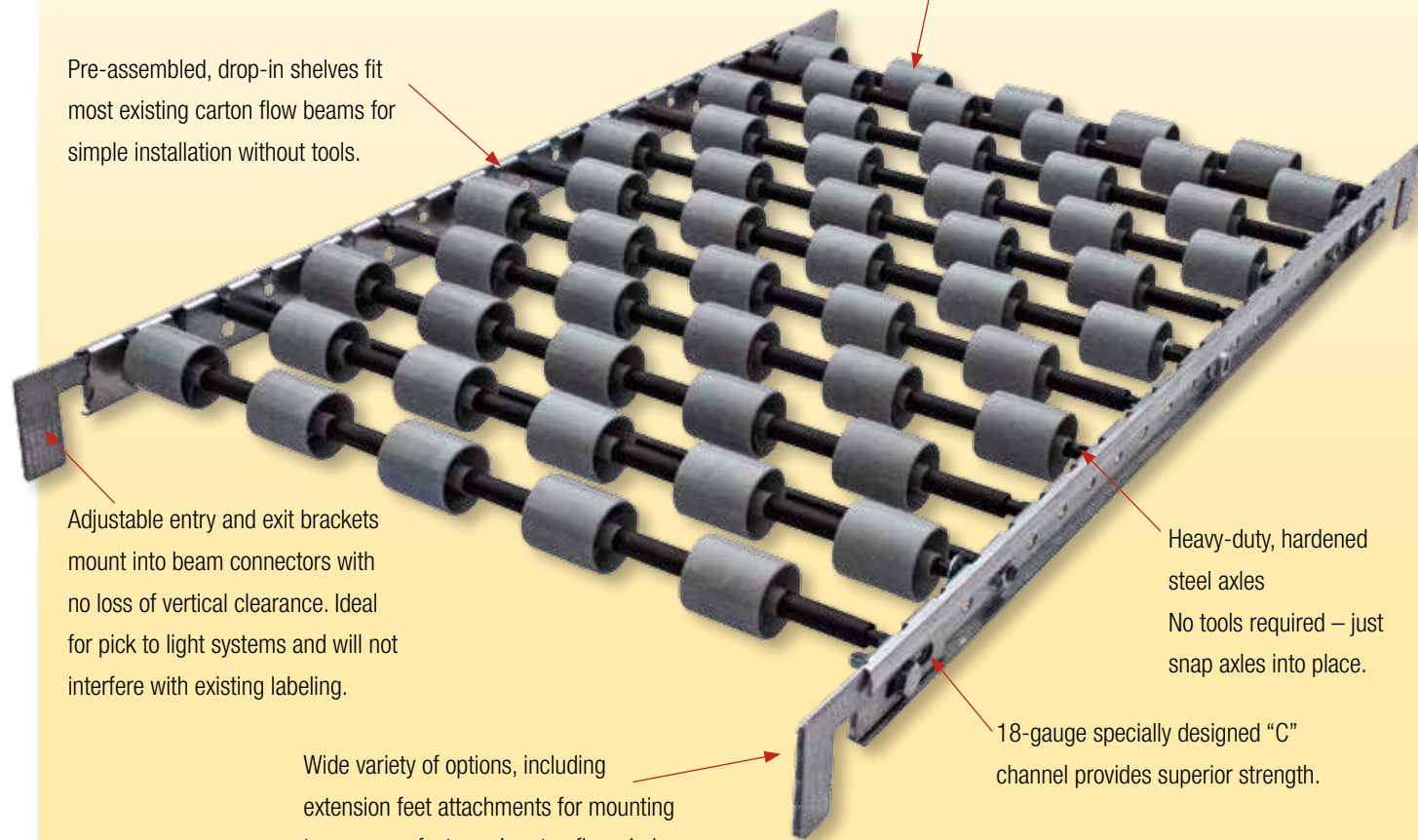
DURA-FLO D2 LOW PROFILE CARTON FLOW SYSTEMS

Dura-Flo D2 Low Profile Carton Flow System modeled after the original Dura-Flo system that creates a “bed of wheels” for fast, flexible carton flow. D2 features a low-profile, low-pitch design requiring no more than a drop of one inch per foot. Heavy-duty construction provides more than twice the load capacity of standard carton flow tracks and D2 easily drops right into your existing shelf structures.

Compact Size With Full Size Performance

Patented maintenance-free, 1.125 inch wheels with self-lubricating axles for smooth flow with virtually no hang ups.

Pre-assembled, drop-in shelves fit most existing carton flow beams for simple installation without tools.



Adjustable entry and exit brackets mount into beam connectors with no loss of vertical clearance. Ideal for pick to light systems and will not interfere with existing labeling.

Heavy-duty, hardened steel axles
No tools required – just snap axles into place.

18-gauge specially designed “C” channel provides superior strength.

Wide variety of options, including extension feet attachments for mounting to any manufacturers’ carton flow shelves.

Full “bed of wheels” for superior carton flow



Twice the wheel coverage of traditional carton flow tracks for virtually no hang-up.



Lane indexers are easy to reposition.

Superior tracking eliminates the need for full-length dividers.



EASY RETROFIT

Use with carton flow shelves and drop in Dura-Flo D2 lanes for improved warehouse space utilization.

Dura-Flo Wheel Axle Center Options

Axle Center	Minimum Carton Depth
2 inch	6 inch
3 inch	9 inch
4 inch	12 inch

Dura-Flo D2 Wheel Size

- 1.125" Diameter Wheel
- 1.4" Wide Surface

Track Profile

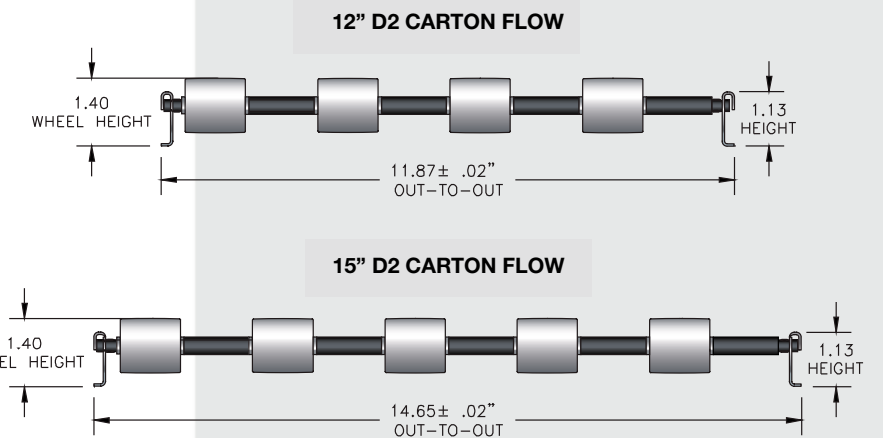
- 1.125" steel side channel
- 1.375" overall track height

Carton Requirements

- Subject to weight and length limits
- Not suitable for cartons with raised “lip” around outer edge

Carton Flow System Capacities (lbs. per sq. ft.)

Load capacity is determined by the capacity of the shelf. Carton flow shelves offering support at a minimum of 24" centers will have in excess of 50 lbs. per square foot capacity. Axles and wheels are rated at a higher capacity than side channels. Dura-Flo D2’s heavy-duty design will hold up to busy picking operations, and eliminate the need for constant plastic wheel track replacement.



UPGRADE EXISTING SYSTEMS TO D2



Entry and exit brackets mount into carton flow shelf members with no loss of clearance and no labeling disruption.

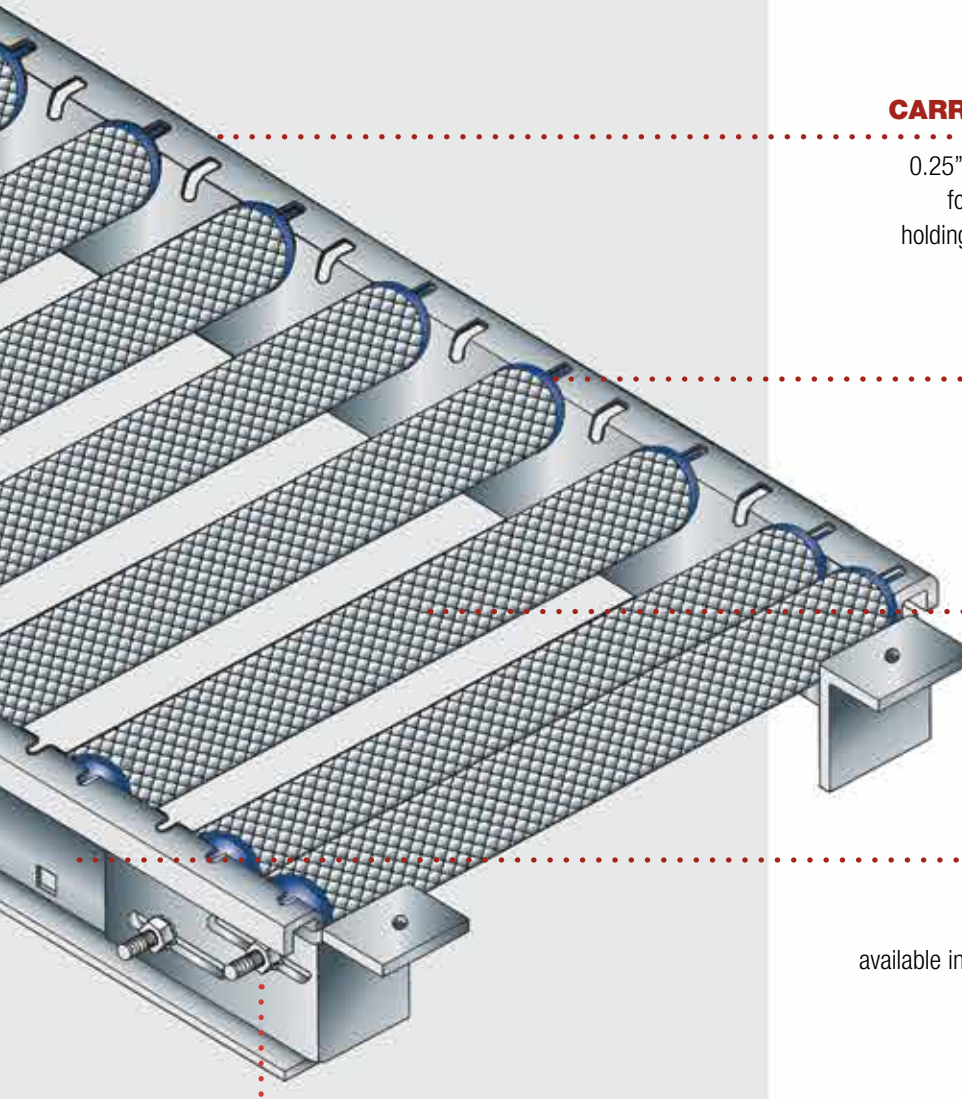
D2 ADVANTAGE

No stop required, no loss of shelf clearance



Easily replace wheel assemblies, just drop in new axle.

FULL WIDTH ROLLER CARTON FLOW TRACK



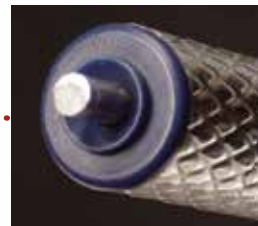
CARRIAGE BOLT TIE RODS

0.25" dia. carriage bolt tie rods allow for rapid roller replacement while holding side channels rigid and sturdy



BUSHING

Superior bushing design



ROLLER

0.75" dia. aluminum diamond embossed damage resistant rollers with heavy-duty steel axles



SIDE CHANNELS

2.5" high galvanized steel side channels for increased capacity available in 16 ga., 14 ga. and 12 ga. steel

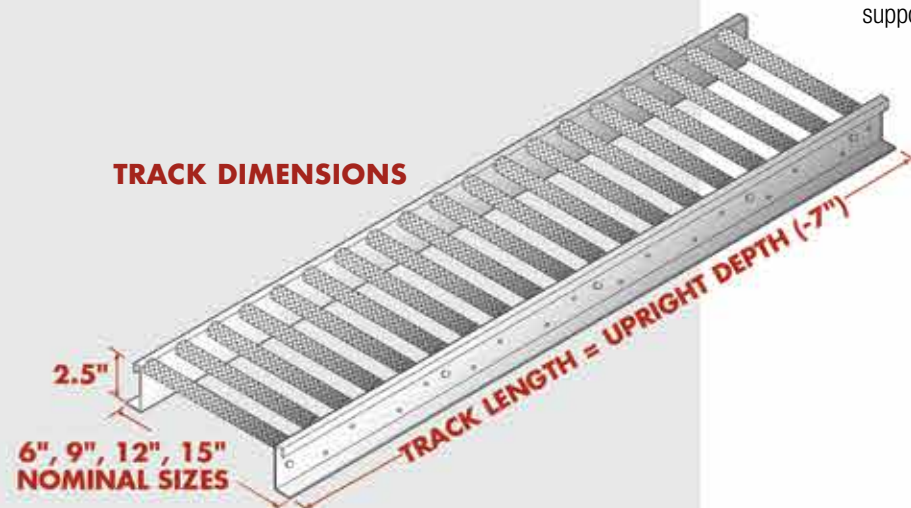


TRACK SUPPORT

High-strength, integrated track supports adjust to assure proper fit

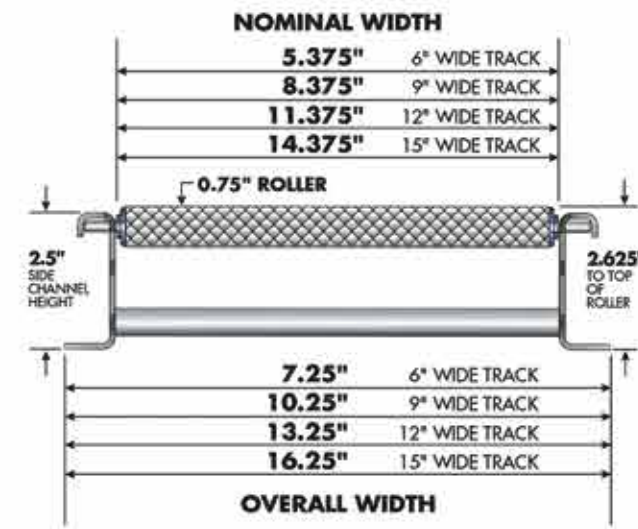


TRACK DIMENSIONS



RhinoTrac pick module application - multi-level

RHINOTrac Roller Dimensions



TRACK SUPPORT



Slotted end supports adjust to vary length and insure proper fit

Track Capacity Chart

TRACK CAPACITY SPAN PER FOOT*

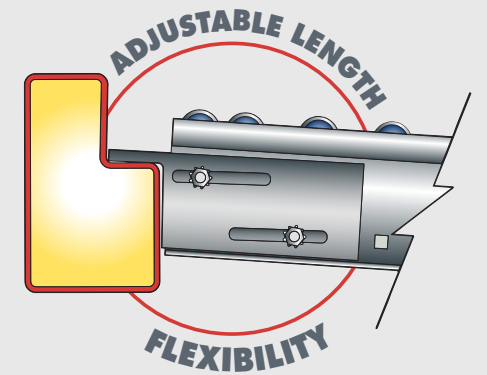
TRACK SPAN	LBS. PER LIN. FT.	TRACK SPAN	LBS. PER LIN. FT.
60"	160.4	91"	45.2
63"	138.5	93"	43.1
66"	120.5	96"	39.2
69"	105.4	99"	35.7
72"	92.8	102"	32.6
75"	82.1	105"	29.9
78"	73.0	108"	27.5
81"	65.2	111"	25.3
84"	58.4	114"	23.4
87"	52.6	117"	21.6
90"	47.5	120"	20.0

Note: Track capacity may be limited by bracket capacity. Contact Springfield engineering office for applications of more than 400 lbs/lane.

*Capacity based on L/240 deflection calculation

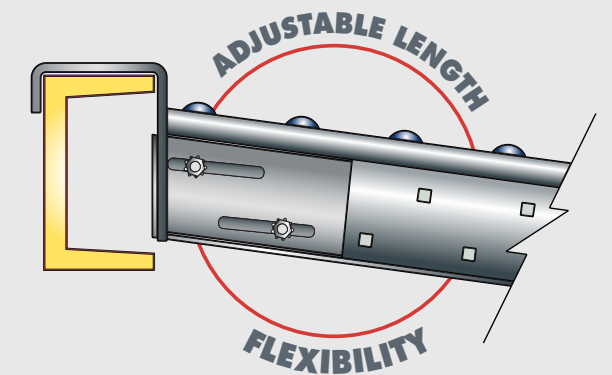
Track capacities shown for 16 gauge side channels. 14 gauge and 12 gauge available for heavier loads.

RHINOTrac END SUPPORTS



Roll-Formed Beam Bracket

EASY INSTALLATION



Structural Beam Bracket

Pre-installed heavy-duty steel end brackets allow for easy drop-in installation

Brackets directly support side channels and allow track to rest below the beam and use beam as end stop

Slotted adjustability of end supports allow the flexibility to vary length for field adjustment



STRUCTURAL

Integrated brackets with adjustability for structural beams

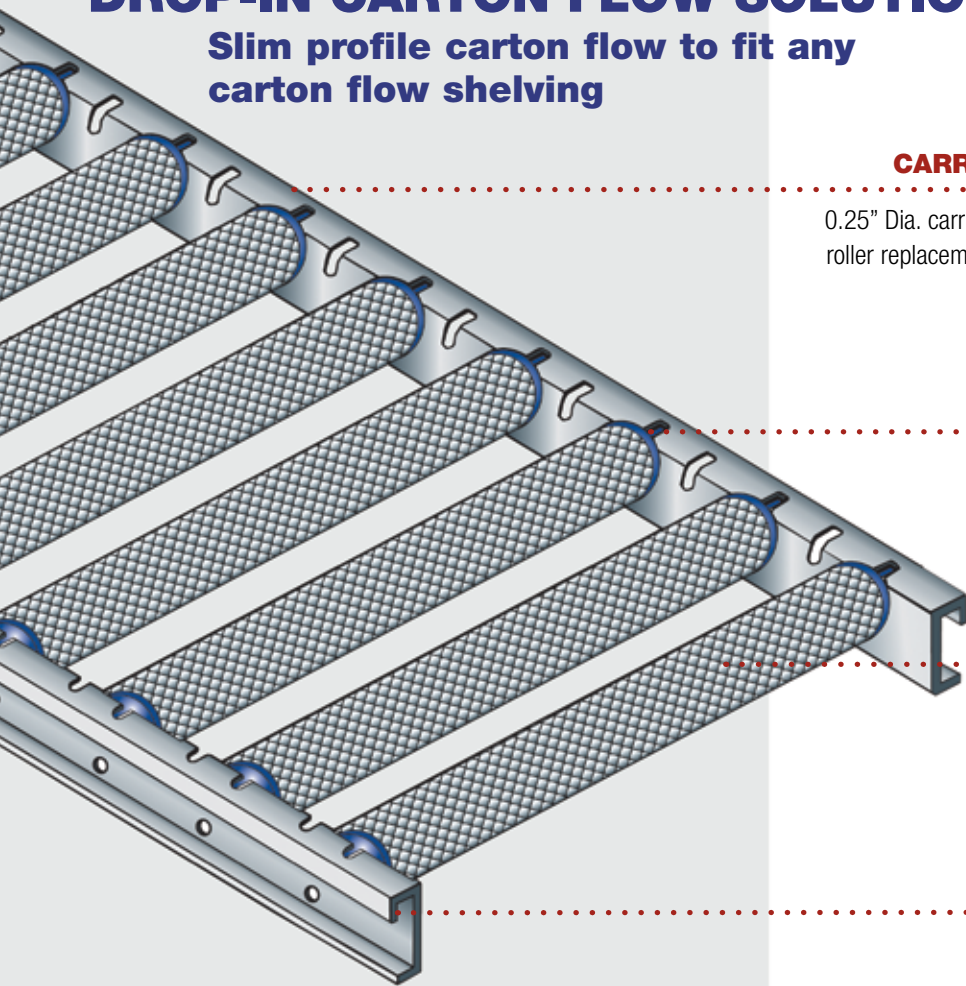


ROLL-FORMED

RhinoTrac brackets rest on beam ledge

DROP-IN CARTON FLOW SOLUTION

Slim profile carton flow to fit any carton flow shelving



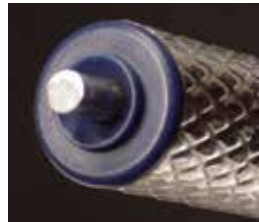
CARRIAGE BOLT TIE RODS

0.25" Dia. carriage bolt tie rods allow for rapid roller replacement while holding side channels rigid and sturdy



BUSHING

Superior bushing design



ROLLER

0.75" Dia. aluminum diamond embossed damage resistant rollers with heavy-duty steel axles



SIDE CHANNELS

1.1" High galvanized steel side channels

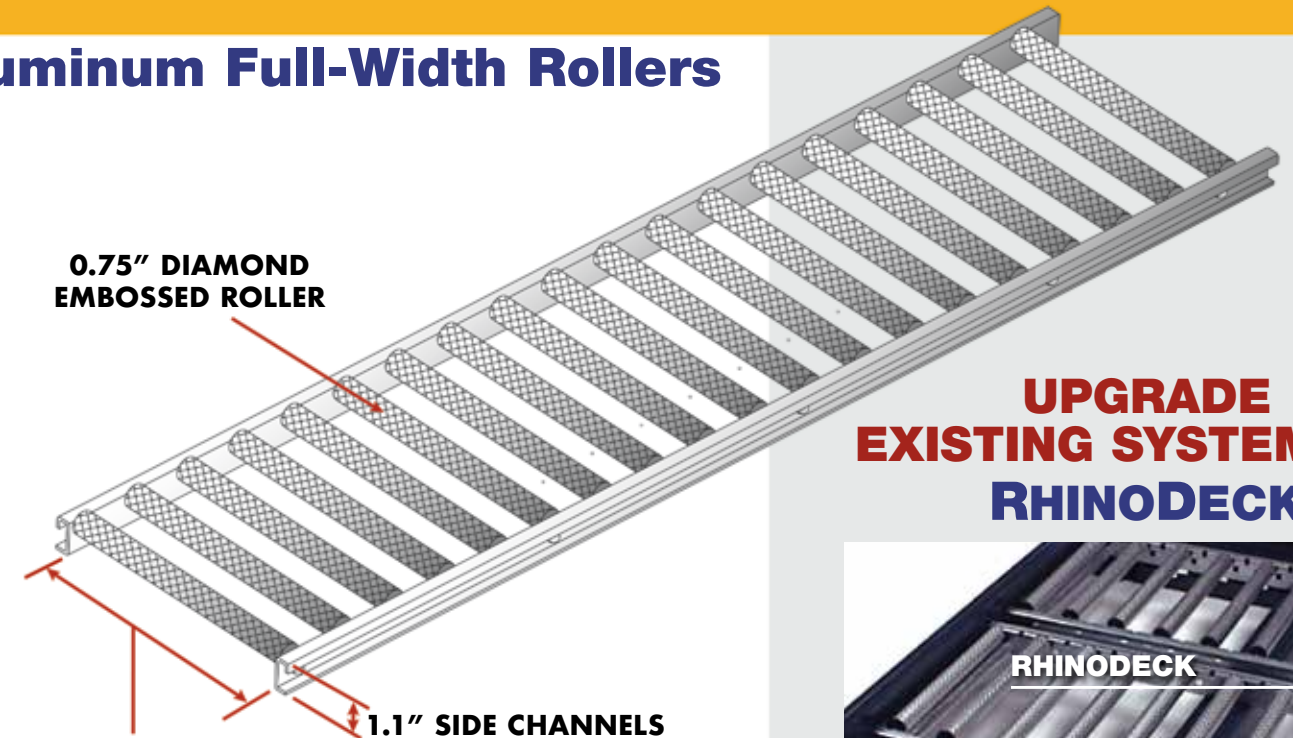


Sturdy Aluminum Full-Width Rollers

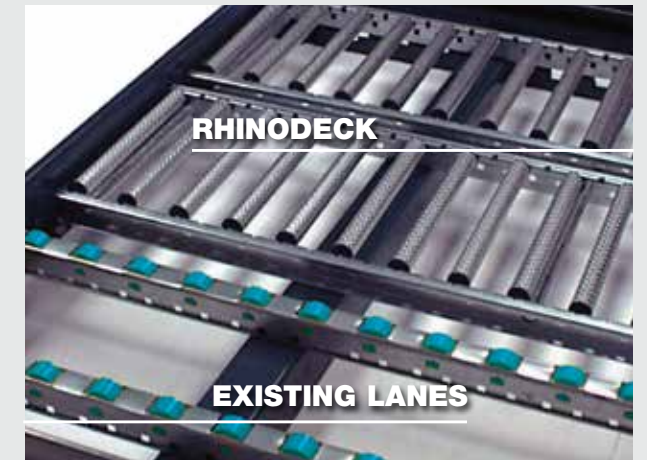
0.75" DIAMOND EMBOSSED ROLLER

6", 9", 12", 15" NOMINAL ROLLER SIZES

1.1" SIDE CHANNELS



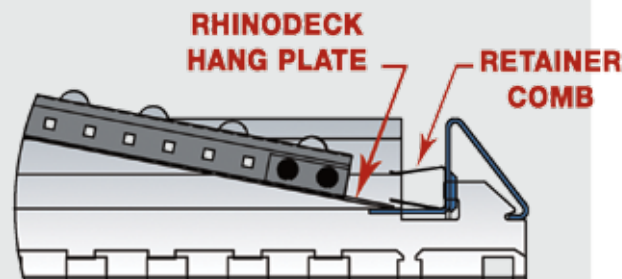
UPGRADE EXISTING SYSTEMS TO RHINODECK



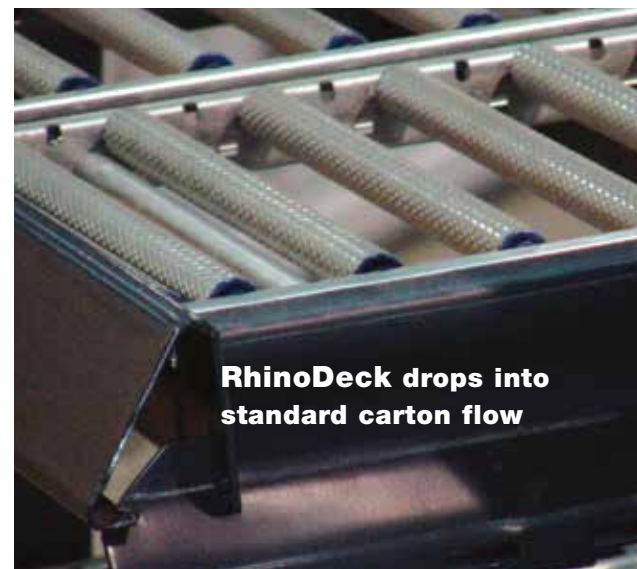
Replace existing damaged or poorly functioning carton flow lanes with RhinoDeck

FLEXIBILITY & NO MAINTENANCE

- Low 1.1" profile
- Easily drops into existing carton flow systems
- Relocate tracks easily as SKU sizes change or your system grows

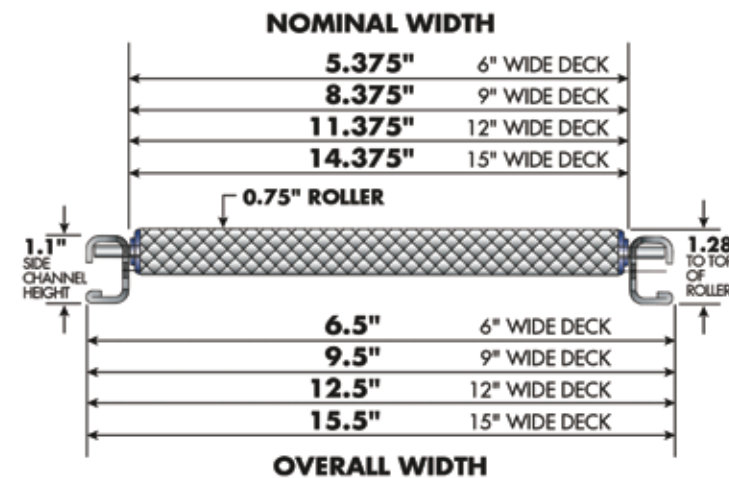


RhinoDeck installation for UPICK & KPICK carton flow



RhinoDeck drops into standard carton flow

RHINODECK Roller Dimensions



NOTE: RhinoDeck lane capacity is generally limited by track support spacing. Track capacities exceed current carton flow tracks.

Impact Decks



RhinoDeck impact deck helps protect your carton flow rollers at high-impact drop areas.

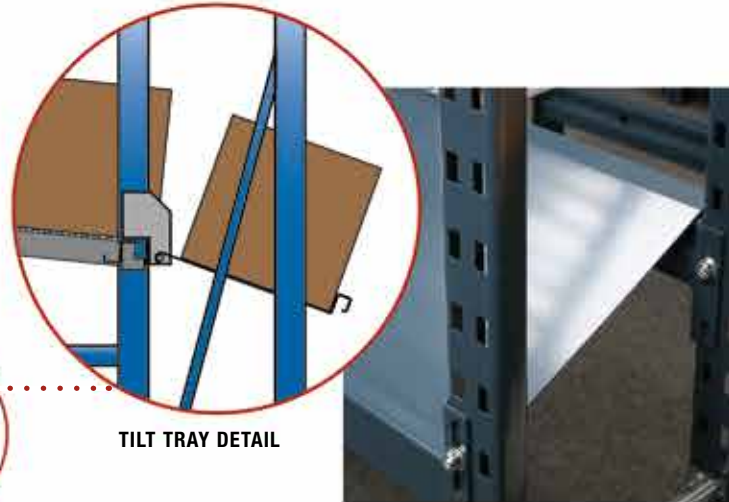
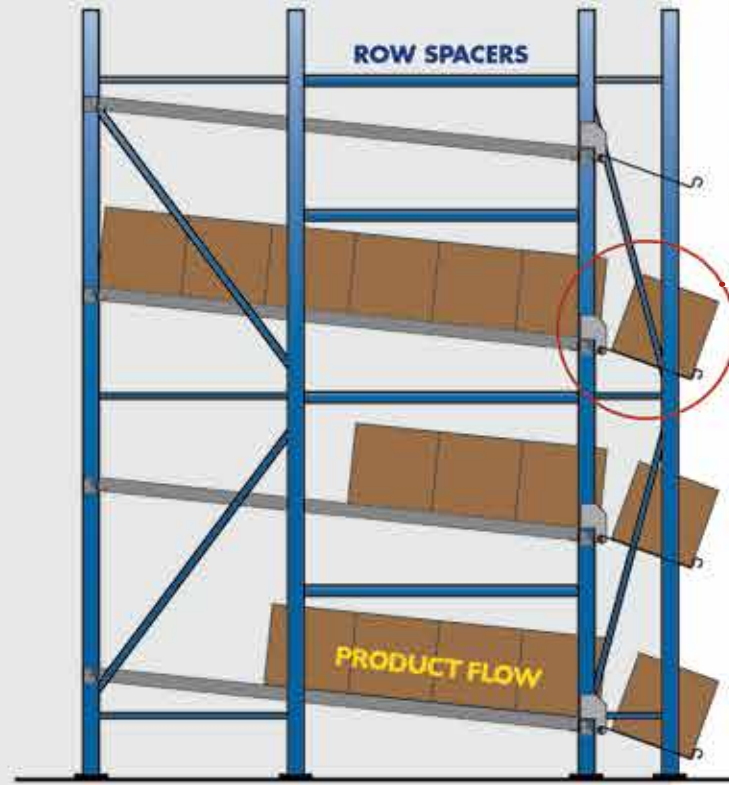
CONCENTRIC Carton Flow

Carton Flow OPTIONS

FULL WIDTH ROLLER CARTON FLOW TRACK

Tilt Trays

Angle your product at pick point - Available for Dura-Flo or RhinoTrac



TILT TRAY BENEFITS

- **Product visibility**
Helps order picking accuracy
- **Layback version**
Every level is recessed from one below
- **Pick multiple levels with ease**
Never have to reach under shelf
- **More ergonomic for employees**
Less bending & reaching

RhinoTrac Knuckle Shelves

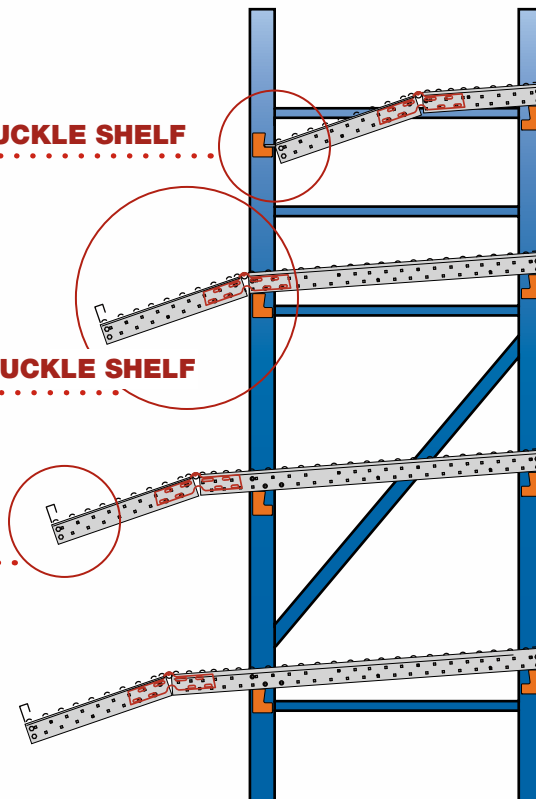
Angle rollers over beam to place product in proper picking position



INTERNAL KNUCKLE SHELF

EXTERNAL KNUCKLE SHELF

BOX STOP



Cantilevered Shelf



RhinoTrac rear cantilevered shelf

Full Length Indexer



RhinoTrac Deep Lane Splice Plates



LONGER LENGTHS

- **Track to track splicing for extra deep lanes**
- **Splice plate attaches in field or factory**

Pick Modules



Multi-level RhinoTrac application

Total Box Support



Full-width box support helps provide flow for damaged boxes.

Deep Flow Lane



96" deep RhinoTrac lanes