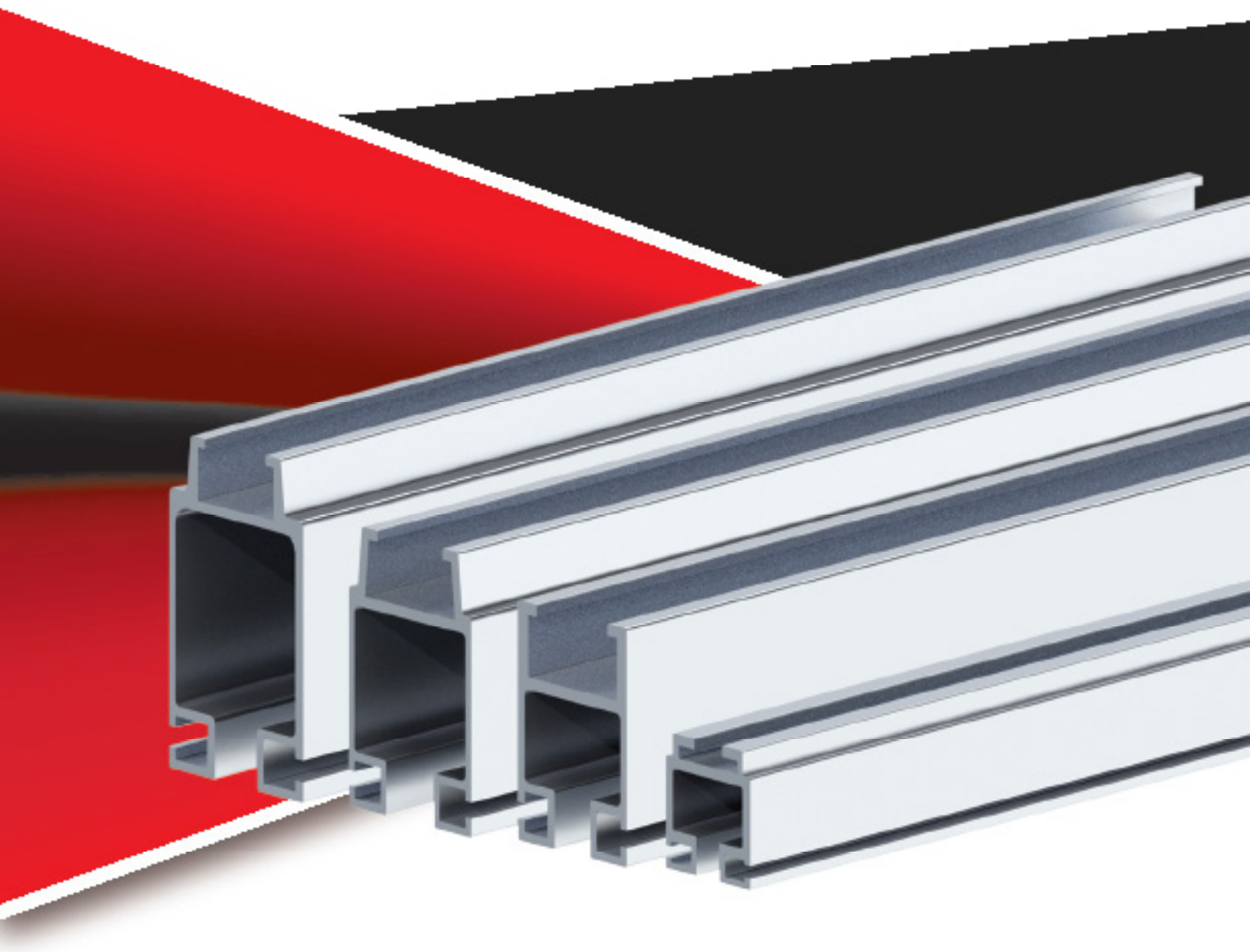
KNIGHT
GLOBAL



Aluminum
Rail Series

rev.20240723

Index

We are committed to
Total Customer Satisfaction
through
QUALITY, RELIABILITY and
EMPLOYEE INVOLVEMENT.

Knight Global | Warranty Information

Knight warrants that its products and parts shall meet all applicable specifications, performance requirements, and be free from defects in material and workmanship for one year, (Servo Systems for two years, Pneumatic Lift Tables for 5 years), from the date of invoice, unless otherwise noted. One exclusion would include any purchased components not manufactured by Knight and their specific individual warranties. Paint defects, scratches and marring from shipping are also excluded.

This warranty shall not cover the failure or defective operation caused by inadequate training provided by customer regarding the operation and / or maintenance of the tool, misuse, negligence, misadjustment, or any alteration not approved by Knight. Knight's obligation is limited to the replacement or repair of Knight's products at a location designated by Knight. Buyer is responsible for all associated internal removal and reinstallation costs as well as freight charges to and from Knight Industries. Knight's maximum liability shall not in any case exceed the contract price for the products claimed to be defective.

Any field modification made to Knight Products or Systems without the written authorization by Knight Global shall void Knight's warranty obligation.

Knight warrants the Servo Hoist, Arms, and Tractors to be free from defects in material or workmanship for a period of two years or 6000 hours use from the date of shipment.

Knight Distributors/ Agents are not authorized to circumvent or change any of these terms and or conditions of this warranty unless prior approval is received in writing by Knight Global Management. Verbal statements made by Knight Distributors/ Agents do not constitute warranties.

On a design and build job, the customer is the owner of the equipment once they authorize shipment. The purchased equipment can not be returned for reimbursement or credit.

DISCLAIMERS: OTHER THAN AS SET FORTH HEREIN, NO OTHER EXPRESSED WARRANTIES, AND NO IMPLIED WARRANTIES, ORAL AND WRITTEN, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE BY KNIGHT GLOBAL WITH RESPECT TO ITS PRODUCTS AND ALL SUCH WARRANTIES ARE HEREBY SPECIFICALLY DISCLAIMED.

KNIGHT GLOBAL SHALL NOT BE LIABLE UNDER ANY CIRCUMSTANCES FOR ANY INCIDENTAL, SPECIAL AND/OR CONSEQUENTIAL DAMAGES WHATSOEVER, WHETHER OR NOT FORESEEABLE, INCLUDING BUT NOT LIMITED TO DAMAGES FOR LOST PROFITS AND ALL SUCH INCIDENTAL, SPECIAL AND/OR CONSEQUENTIAL DAMAGES ARE HEREBY ALSO SPECIFICALLY DISCLAIMED.

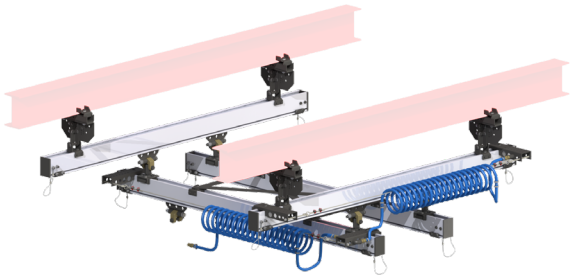
KNIGHT GLOBAL WILL NOT BE LIABLE FOR ANY LOSS, INJURY OR DAMAGE TO PERSONS OR PROPERTY, NOR FOR DAMAGES OF ANY KIND RESULTING FROM FAILURE OR DEFECTIVE OPERATION OF ANY MATERIALS OR EQUIPMENT FURNISHED HEREUNDER.

Overview

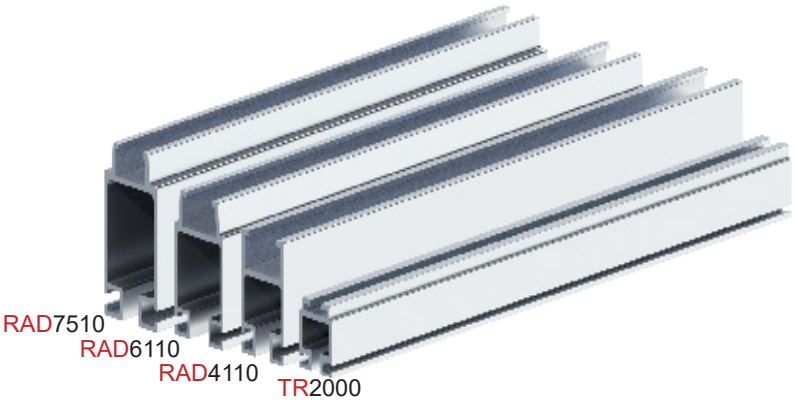
Knight Aluminum Rail Systems

Knight's lightweight aluminum rail series is manufactured from high strength aluminum alloy that is the ideal solution; whether your load is located directly under the system or cantilevered off to the side.

Knight's Rail Systems are designed to provide a safe, efficient solution to your ergonomic challenges. A wide range of options are available to meet all your specific engineering and application requirements.



Overhead Mounted System



Enclosed Track Rail Series

The enclosed track rail series is extruded from high strength aluminum alloy that allows for the trolley to travel inside the rail. The enclosed track series is offered in four (4) sizes:

Model	Height (in.)	Max. Capacity (lbs)
RAD7510	8 in.	Varies by Span
RAD6110	6 in.	Varies by Span
RAD4110	4 in.	Varies by Span
TR2000	2 in.	Varies by Span

* For more detailed information on size, capacities and lengths, refer to Appendix (A) for Rail Capacities or visit www.knight-ind.com.

Features and Benefits:

- No bosses or welding – Weld-free splices.
- Lengths can be cut in-house to any length and be simply bolted together for easy installation.
- Large wheel trolleys to reduce rolling resistance.
- Low ergonomic push / pull forces.
- Top rail channel creates a safety redundancy for the hangers and allows for adjustable brackets to hang monitors, traps, etc.
- No disassembly required when adding new sections to existing systems
- Access Gates – Integrated or Add-on
- Steel backer available to increase capacity
- Aluminum backer available to reinforce inspection gates
- Maximum Capacity: Up to 3000 lbs [1360 kg]**
- Rail Lengths: Up to 30 ft. [9.1m] without splices.

** (Based upon Deflection limitations)
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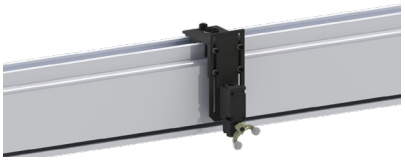
Bolt-On Splice Kit

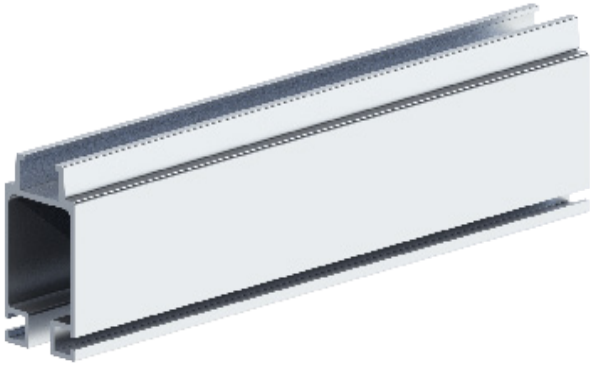
Integrated Access Gate



End of Travel Limit Switch

Knight RAD7510 Series Rail

Knight Global's RAD7510 Series Aluminum Rail has an enclosed track design that is extruded from a lightweight high strength aluminum alloy. The RAD7510 Series Rail is the ideal solution for heavier load applications. Knight's RAD7510 Series Rail combined with nylon reinforced trolley wheels, provides the lowest rolling resistance in the industry.



Features

- Overhead and Floor Mounted Configurations.
- Supports RAD7510 Series Trolleys, End Trucks and Hangers.
- Transfer Loads in the "X" and "Y" Directions.
- Max. Recommended Capacity: Up to 3,000 lbs. [1,360 kg].**

** (Based upon Deflection limitations)
See page 29

Benefits

- Rail Lengths: Up to 30 ft. [9.1m] without Splices.
- Load Trolleys and End Trucks are designed for cantilevered and direct load applications.
- All Hangers and End Trucks are designed to prevent binding of bridges and runways.
- Knight pre-assembles all bridges by mounting the end trucks and hose management to minimize installation time.

RAD7510 HANGERS

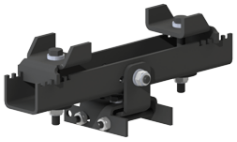
Knight structural hangers are designed to work in conjunction with C-Channel structural supports and I-beam flange widths from 2 in. to 11 in. Knight's unique extended stack hangers allow for a vertical adjustment of up to 1.5 in. [38mm] to assist with the leveling of the rail during installation.

MRHA40351 Tube Style C-Channel Hanger	MRHS4034 C-Channel Rod and Ball Hanger	MRHS40471 I-Beam Extended Stack Rod and Ball Hanger	MRHS40511 I-Beam Extended Stack Rod and Ball Hanger	MRHS40361 I-Beam Rod and Ball Hanger
				
• For Direct or Offset Loads. • Fixed Height Hanger. • Attaches to all C-Channel or Angle Iron. • Hanger is clamped to the top flange of the Knight rail.	• For Direct Loads Only. • Adjustable Height Hanger. • Maximum C-Channel Flange: 2.5 in. [64mm]. • Includes 1 ft. [0.3m] Threaded Rod. (Recommended for Light Duty Use)	• For Direct Loads Only. • Adjustable Height Hanger. • Structural Support Flange Size: 2 in. - 7 in. [51mm - 178mm]. • Includes 1 ft. [0.3m] Threaded Rod. (Recommended for Light Duty Use)	• For Direct Loads Only. • Adjustable Height Hanger. • Structural Support Flange Size: 7 in. - 11 in. [178mm - 279mm]. • Includes 1 ft. [0.3m] Threaded Rod. (Recommended for Light Duty Use)	• For Direct Load Only. • Adjustable Height Hanger. • Structural Support Flange Size: 2 in. - 7 in. [51mm - 178mm]. (Recommended for Light Duty Use)

Continued on next page.

RAD7510 Series

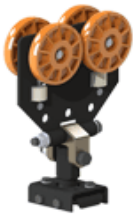
MRHS40431 I-Beam Rod and Ball Hanger	MRHS41571 Tubing Rod and Ball Hanger	MRHS40382 Extended Stack I-Beam Hanger	MRHS42182 Extended Stack I-Beam Hanger	MRHS40771 Short Stack I-Beam Hanger
				
• For Direct Load Only. • Adjustable Height Hanger. • Structural Support Flange Size: 7 in. - 11 in. [178mm - 279mm]. (Recommended for Light Duty Use)	• For Direct Loads Only. • Adjustable Height Hanger. • Wide Tubing or Unistrut Size: 2 in. - 7 in. [51mm - 178mm]. (Recommended for Light Duty Use)	• For Direct or Offset Loads • Adjustable Height Hanger. • Structural Support Flange Size: 2 in. - 7 in. [51mm - 178mm].	• For Direct or Offset Loads • Adjustable Height Hanger. • Structural Support Flange Size: 7 in. - 11 in. [178mm - 279mm].	• Perpendicular to I-Beam • For Direct or Offset Loads • Fixed Height Hanger. • Redundant Structural Support Flange Size: 2 in. - 7 in. [51mm - 178mm].

MRHS40781 Short Stack I-Beam Hanger	MRHS40821 Short Stack I-Beam Hanger	MRHS40861 Short Stack I-Beam Hanger	MRHS4500 Extreme Low Profile Perpendicular Rigid Hanger	MRHS4503 Extreme Low Profile Parallel Rigid Hanger
				
• Perpendicular to I-Beam • For Direct or Offset Loads • Fixed Height Hanger. • Redundant Structural Support Flange Size: 7 in. - 11 in. [178mm - 279mm].	• Parallel to I-Beam • For Direct or Offset Loads • Fixed Height Hanger. • Structural Support Flange Size: 2 in. - 7 in. [51mm - 178mm].	• Parallel to I-Beam • For Direct or Offset Loads • Fixed Height Hanger. • Structural Support Flange Size: 7 in. - 11 in. [178mm - 279mm].	• For use with W-Beam only. • For Direct Loads Only • Hanger Grip Range: .25 in. - 0.5625 in. [7mm - 15mm] • Max Capacity: 3,500 lbs.	• For use with W-Beam only. • For Direct Loads Only • Structural Support Flange: 4 in. - 8 in. [101mm - 203mm] • Max Capacity: 3,500 lbs.

MRWS40161 V-Sway Brace	MRWS41431 V-Sway Brace
	
• Stabilizes RAD7510 Rail • Used when hangers threaded rod length is 2 ft. [0.6m] or greater. • Structural Support Flange Size: 2 in. - 7 in. [51mm - 178mm].	• Stabilizes RAD7510 Rail • Used when hangers threaded rod length is 2 ft. [0.6m] or greater. • Structural Support Flange Size: 7 in. - 11 in. [178mm - 279mm].

RAD7510 END TRUCKS

End Trucks carry the bridge along the runways of a rail system. Single Trolley End Trucks can pivot on the X-Y axis to impart a freedom of movement which prevents binding of the bridge. Dual Trolley End Trucks are rigid and allow for a more precise positioning of the bridge and to prevent the binding of bridges longer than 15ft. [4.5m].
Also available in both a rigid and pivoting style are Same Plane End Trucks, designed to elevate the bridge to the same height as the runway to improve head room clearance.
Rigid End Trucks are typically used on applications that require a precise loading/unloading of product, on tri-runway applications, heavy load applications, bridges over 15 ft. (4.5m) and applications where an operator is working primarily on one end of the bridge.

MRES7728 Single Bridge End Truck	MRES7717 Dual Bridge End Truck	MRES7718 Single or Dual Bridge End Truck	MRES7904 Single Bridge Low Profile End Truck
			
• Yoke design allows pivoting in the "X" and "Y" directions for freedom of movement. • Suspends Knight's RAD7510 Single Bridge. • Max. Capacity: Up to 3,000 lbs. [1,360kg].	• Suspends Knight's RAD7510 Dual Bridge. • Recommended Bridge Length: 15 ft. [4.5m] or Greater. • Max. Capacity: Up to 3,000 lbs. [1,360kg].	• Dual Trolleys improve bridge travel by distributing overall load across a wider stance. • Suspends Knight's RAD7510 Single or Dual Bridge. • Max. Capacity: Up to 3,000 lbs. [1,360kg].	• Yoke design allows pivoting in the "X" and "Y" directions for freedom of movement. • Suspends Knight's RAD7510 Single Bridge. • Max. Capacity: Up to 3,000 lbs. [1,360kg].

MRES7903 Dual Bridge Low Profile End Truck	MRES7777 Adjustable Height End Truck	MRES7735 Single or Dual Bridge Rigid End Truck	MRES7905 Rigid End Truck
			
• Suspends Knight's RAD7510 Dual Bridge. • Max. Capacity: Up to 3,000 lbs. [1,360kg].	• Adjustable on one end of runway to allow load trolley to automatically roll back to home position. • Suspends Knight's RAD7510 Dual Bridge. • Max. Capacity: Up to 3,000 lbs. [1,360kg].	• Eliminates bridge skew for applications that will require added stability. • Suspends Knight's RAD7510 Single or Dual Bridge. • Max. Capacity: Up to 3,000 lbs. [1,360kg].	• Designed to travel inside Knight's RAD7510 Series Tri-Runway Rail system. • Suspends Knight's RAD7510 Single or Dual Bridge. • Max. Capacity: Up to 3,000 lbs. [1,360kg].

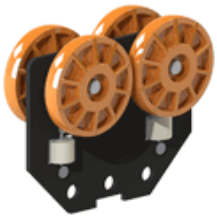
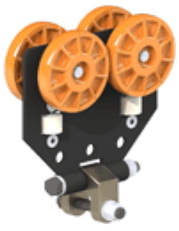
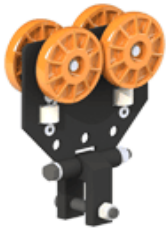
Continued on next page.

MRES7732 Severe Duty High Cycle End Truck	MRES7528 Same Plane End Truck	MRES7575 Pivoting Same Plane End Truck	MREA4018 End Truck Connector
			
• Welded for added stability. • Suspends Knight's RAD7510 Single Bridge. • Max. Capacity: Up to 3,000 lbs. [1,360kg].	• Designed to elevate bridge to the same height as the runway. • Suspends Knight's RAD7510 Single or Dual Bridge. • Max. Capacity: Up to 3,000 lbs. [1,360kg].	• Designed to elevate bridge to the same height as the runway. • Suspends Knight's RAD7510 Single or Dual Bridge. • Max. Capacity: Up to 3,000 lbs. [1,360kg].	• Allows for the pivoting in the "X" and "Y" directions for freedom of movement. • Suspends Knight's RAD7510 Bridge with the use of a Knight Trolley.

RAD7510 LOAD TROLLEYS

The unique design of the Knight trolley wheels impart low effort to load ratios which improves the ergonomics of the overall system. The improved performance can eliminate the need for tractor drives (and their attendant controls) for very heavy loads. The proprietary fiberglass filled high impact nylon wheels eliminates all "flat-spotting".

Long-term accelerated life cycle testing has proven that the trolley wheels can be reasonably expected to have a predicted life in excess of 15,000,000 linear feet of travel (under extreme loading conditions) with no maintenance and no detrimental effect.

MRTA7706 Load Trolley	MRTA7002 Load Trolley with Bosses	MRTA7723 Load Trolley with Yoke	MRTA7724 Hoist Trolley with Yoke	MRTA7765 Low Profile Load Trolley with Bosses
				
• Transfers loads along the horizontal axis. • Primarily used when the customer needs to bolt items to the trolley • Max. Capacity: Up to 3,000 lbs. [1,360kg].	•Transfers loads along the horizontal axis. • Primarily used when the customer needs to attach the trolley to a boss or eye hook. • Max. Capacity: Up to 3,000 lbs. [1,360kg].	•Transfers loads along the horizontal axis. • Primarily used when the customer need to pivot in (2) directions such as an arm carriage. • Max. Capacity: Up to 3,000 lbs. [1,360kg].	•Transfers loads along the horizontal axis. • Primarily used to suspend Knight Air Balancers, hoists and fixtures. • Max. Capacity: Up to 3,000 lbs. [1,360kg].	•Transfers loads along the horizontal axis. • Primarily used when the customer needs to attach the trolley to a boss or eye hook. • Max. Capacity: Up to 3,000 lbs. [1,360kg].

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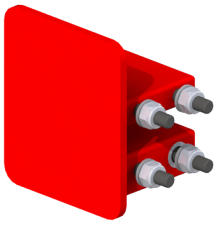
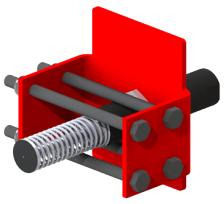
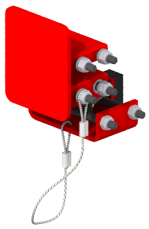
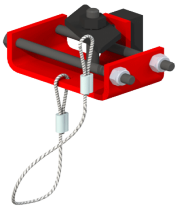
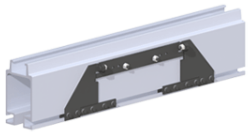
MRTA7786 Low Profile Load Trolley with Yoke	MRTA7787 Low Profile Load Trolley with Eye Hook	MRTA7719 Load Trolley with Eye Hook	MRMA4814 Hose Trolley	MRMA4815 Hose Trolley with Cable Saddle
				
•Transfers loads along the horizontal axis. • Primarily used when the customer need to pivot in (2) directions such as an arm carriage. • Max. Capacity: Up to 3,000 lbs. [1,360kg].	•Transfers loads along the horizontal axis. • Primarily used to attached a Spring Balancer or Hoist • Max. Capacity: Up to 3,000 lbs. [1,360kg].	•Transfers loads along the horizontal axis. • Primarily used to attached a Spring Balancer or Hoist • Max. Capacity: Up to 3,000 lbs. [1,360kg].	• Carries festooned hose used in hose management kits. • Max. Capacity: Up to 50 lbs. [22kg].	• Carries festooned hose used in hose management kits. • Velcro straps secures hose. • Max. Capacity: Up to 50 lbs. [22kg].

RAD7510 RAIL ACCESSORIES

MRAA4804 End Cap	MRAA4805 End Cap with Shock	MRAS7533 Redundant End Cap	MRAA7511 Mid-Rail Stop	MRAA7022 Mid-Rail Stop with Shock
				
• Prevents an end truck or load trolley from exiting the rail. • Primarily used as a dust cover.	• Prevents an end truck or load trolley from exiting the rail. • Dampens the impact force of the load trolley striking the end cap.	• Prevents an end truck or load trolley from exiting the rail. • Inner MRAA7511 Mid-Rail Stop.	• Separates the working area of a bridge or runway and/ or prevents a bridge from overtravel. • Can be used in conjunction with the MRAA4804 End Cap to form the MRAS7533 Redundant End Cap Stop.	• Separates the working area of a bridge or runway and/ or prevents a bridge from overtravel. • Dampens the impact force of the load trolley striking the end cap.

MRAA7560 Integrated Access Gate	MRAA7570 Add-On Access Gate	MRHA7503 Splice Kit	MRHA7585 Splice Kit	MRAA4205-24-30-36 Bridge Brace
				
• Allows for maintenance and/ or inspection of a load trolley. • Allows for the removal or addition of equipment without having to run out the end of the rail.	• Allows for maintenance and/ or inspection of a load trolley. • Bolt-on kit.	• Splice Kit is a bolt-on kit that connects or joins (2) two sections of RAD7510 series Rail without the need to weld bosses.	• Splice Kit is a bolt-on kit that connects or joins a section of the RAD7500 Curved Series Rail to a section of the RAD7510 Series Rail without the need to weld bosses.	• Used to secure parallel rails at specific distances from each other.

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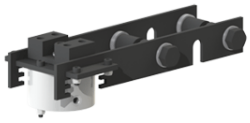
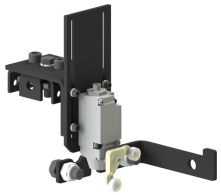
RAD7510 Series

MRAA4359 Rail Brake	MRAA4926 Bridge Bumper	MRAA4228 Limit Switch	MRAA4224 Limit Switch with Spring Bypass	GMA1102 Dual Limit Switch
				
• Pneumatic brake allows operator to park a bridge or arm on a bridge or runway. • Controls Kit varies per application. • Bolt-on Kit.	• Typically used to absorb contact between two bridges on runways that have multiple bridges.	• Allows for pre-defined and pre-determined travel limits to be set. • Bolts on to the top channel of the rail.	• Allows for pre-defined and pre-determined travel limits to be set. • Bolts on to the top channel of the rail.	• Allows for pre-defined and pre-determined travel limits to be set. • Bolts on to the top channel of the rail.

GMA1103 Dual Limit Switch Brackets	GMA1104 Single Limit Switch	GMA1105 Single Limit Switch Brackets	MRES7522 Telescoping Rail	RWA4133 Safety Cable Kit
				
• Allows for the attachment of Dual Omron Limit Switches. • Limit switches are sold separately.	• Allows for pre-defined and pre-determined travel limits to be set. • Bolts on to the top channel of the rail.	• Allows for the attachment of a Single Omron Limit Switch. • Limit switches are separately.	• Typically used to extend a bridge or runway past the existing bridge. • Includes RAD7510 Rail, (2) load trolleys, and a steel backer.	• Carbon Steel “Galvanized Wire Rope” GWC. • Cable Thickness: 0.25 in. [6mm]. • Crosby Saddle Clamps. • Standard lengths: 5 ft. [1.5m].

NICORWA4133 Safety Cable Kit w/ Copper Oval Sleeves	FDA4133 Eye Bolt Safety Cable Kit
	
• Carbon Steel “Galvanized Wire Rope” GWC. • Cable Thickness: 0.25 in. [6mm]. • Copper Zinc Plated Oval Sleeves. • Standard lengths: 10 ft. [3m].	• Carbon Steel “Galvanized Wire Rope” GWC. • Cable Thickness: 0.25 in. [6mm]. • Crosby Saddle Clamps. • Eye Bolt Connection. • Standard lengths: 6 ft. [1.82m].

Knight RAD6110 Series Rail

Knight Global's RAD6110 Series Aluminum Rail has an enclosed track design that is extruded from a lightweight high strength aluminum alloy. The RAD6110 Series Rail is the ideal solution for heavier load applications. Knight's RAD6110 Series Rail combined with nylon reinforced trolley wheels, provides the lowest rolling resistance in the industry.

Features

- Overhead and Floor Mounted Configurations.
- Supports RAD6110 Series Trolleys, End Trucks and Hangers.
- Transfer Loads in the "X" and "Y" Directions.
- Max. Recommend Capacity: Up to 1,600 lbs. [725 kg].**

** (Based upon Deflection limitations)
See page 27

Benefits

- Rail Lengths: Up to 25 ft. [7.6m] without Splices.
- Load Trolleys and End Trucks are designed for cantilevered and direct load applications.
- All Hangers and End Trucks are designed to prevent binding of bridges and runways.
- Knight pre-assembles all bridges by mounting the end trucks and hose management to minimize installation time.

RAD6110 HANGERS

MRHA40351 Tube Style C-Channel Hanger	MRHS4034 C-Channel Rod and Ball Hanger	MRHS40471 I-Beam Extended Stack Rod and Ball Hanger	MRHS40511 I-Beam Extended Stack Rod and Ball Hanger	MRHS40361 I-Beam Rod and Ball Hanger
				
• For Direct or Offset Loads. • Fixed Height Hanger. • Attaches to all C-Channel or Angle Iron. • Hanger is clamped to the top flange of the Knight rail.	• For Direct Loads Only. • Adjustable Height Hanger. • Maximum C-Channel Flange: 2.5 in. [64mm]. • Includes 1 ft. [0.3m] Threaded Rod. (Recommended for Light Duty Use)	• For Direct Loads Only. • Adjustable Height Hanger. • Structural Support Flange Size: 2 in. - 7 in. [51mm - 178mm]. • Includes 1 ft. [0.3m] Threaded Rod. (Recommended for Light Duty Use)	• For Direct Loads Only. • Adjustable Height Hanger. • Structural Support Flange Size: 7 in. - 11 in. [178mm - 279mm]. • Includes 1 ft. [0.3m] Threaded Rod. (Recommended for Light Duty Use)	• For Direct Load Only. • Adjustable Height Hanger. • Structural Support Flange Size: 2 in. - 7 in. [51mm - 178mm]. (Recommended for Light Duty Use)

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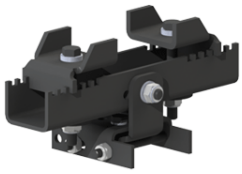
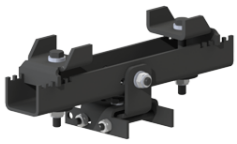
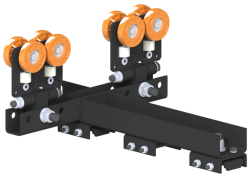
RAD6110 Series

MRHS40431 I-Beam Rod and Ball Hanger	MRHS41571 Tubing Rod and Ball Hanger	MRHS40382 Extended Stack I-Beam Hanger	MRHS42181 Extended Stack I-Beam Hanger	MRHS40771 Short Stack I-Beam Hanger
				
• For Direct Load Only. • Adjustable Height Hanger. • Structural Support Flange Size: 7 in. - 11 in. [178mm - 279mm]. (Recommended for Light Duty Use)	• For Direct Loads Only. • Adjustable Height Hanger. • Wide Tubing or Unistrut Size: 2 in. - 7 in. [51mm - 178mm]. (Recommended for Light Duty Use)	• For Direct or Offset Loads • Adjustable Height Hanger. • Structural Support Flange Size: 2 in. - 7 in. [51mm - 178mm].	• For Direct or Offset Loads • Adjustable Height Hanger. • Structural Support Flange Size: 7 in. - 11 in. [178mm - 279mm].	• Perpendicular to I-Beam • For Direct or Offset Loads • Fixed Height Hanger. • Redundant Structural Support Flange Size: 2 in. - 7 in. [51mm - 178mm].

MRHS40781 Short Stack I-Beam Hanger	MRHS40821 Short Stack I-Beam Hanger	MRHS40861 Short Stack I-Beam Hanger	MRHS4500 Extreme Low Profile Perpendicular Rigid Hanger	MRHS4503 Extreme Low Profile Parallel Rigid Hanger
				
• Perpendicular to I-Beam • For Direct or Offset Loads • Fixed Height Hanger. • Redundant Structural Support Flange Size: 7 in. - 11 in. [178mm - 279mm].	• Parallel to I-Beam • For Direct or Offset Loads • Fixed Height Hanger. • Structural Support Flange Size: 2 in. - 7 in. [51mm - 178mm].	• Parallel to I-Beam • For Direct or Offset Loads • Fixed Height Hanger. • Structural Support Flange Size: 7 in. - 11 in. [178mm - 279mm].	• For use with W-Beam only. • For Direct Loads Only • Hanger Grip Range: .25 in. - 0.5625 in. [7mm - 15mm] • Max Capacity: 3,500 lbs.	• For use with W-Beam only. • For Direct Loads Only • Structural Support Flange: 4 in. - 8 in. [101mm - 203mm] • Max Capacity: 3,500 lbs.

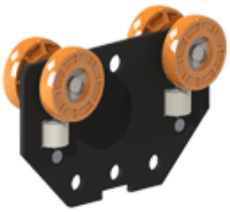
MRWS40161 V-Sway Brace	MRWS41431 V-Sway Brace
	
• Stabilizes RAD6110 Rail • Used when hangers threaded rod length is 2 ft. [0.6m] or greater. • Structural Support Flange Size: 2 in. - 7 in. [51mm - 178mm].	• Stabilizes RAD6110 Rail • Used when hangers threaded rod length is 2 ft. [0.6m] or greater. • Structural Support Flange Size: 7 in. - 11 in. [178mm - 279mm].

RAD6110 END TRUCKS

MRES6128 Single Bridge End Truck	MRES6117 Dual Bridge End Truck	MRES6118 Single or Dual Bridge End Truck	MRES6135 Single or Dual Bridge Rigid End Truck
			
• Yoke design allows pivoting in the “X” and “Y” directions for freedom of movement. • Suspends Knight’s RAD6110 Single Bridge. • Max. Capacity: Up to 1,600 lbs. [725kg].	• Suspends Knight’s RAD6110 Dual Bridge. • Recommended Bridge Length: Up to 15 ft. [4.5m]. • Max. Capacity: Up to 1,600 lbs. [725kg].	• Dual Trolleys improve bridge travel by distributing overall load across a wider stance. • Suspends Knight’s RAD6110 Single or Dual Bridge. • Max. Capacity: Up to 1,600 lbs. [725kg].	• Typically used in applications where the bridge must remain perpendicular to the runway. • Suspends Knight’s RAD6110 Single Bridge. • Max. Capacity: Up to 1,600 lbs. [725kg].

MRES6174 Single Plane End Truck	MREA4018 End Truck Connector
	
• Designed to elevate bridge to the same height as the runway. • Suspends Knight’s RAD6110 Single Bridge. • Max. Capacity: Up to 1,600 lbs. [725kg].	• Allows for the pivoting in the “X” and “Y” directions for freedom of movement. • Suspends Knight’s RAD6110 Bridge with the use of a Knight Trolley.

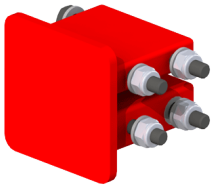
RAD6110 LOAD TROLLEYS

MRTA6106 Load Trolley	MRTA6103 Load Trolley with Bosses	MRTA6124 Load Trolley with Yoke	MRTA6121 Load Trolley with Eye Hook	MRTA6102 Low Profile Load Trolley with Bosses
				
• Transfers loads along the horizontal axis. • Primarily used when the customer needs to bolt items to the trolley • Max. Capacity: Up to 1,600 lbs. [725kg].	•Transfers loads along the horizontal axis. • Primarily used when the customer needs to attach the trolley to a boss or eye hook. • Max. Capacity: Up to 1,600 lbs. [725kg].	•Transfers loads along the horizontal axis. • Primarily used when the customer needs to pivot in (2) directions such as an arm carriage. • Max. Capacity: Up to 1,600 lbs. [725kg].	•Transfers loads along the horizontal axis. • Primarily used to attached a Air Balancer or Hoist. • Max. Capacity: Up to 1,600 lbs. [725kg].	•Transfers loads along the horizontal axis. • Primarily used when the customer needs to attach the trolley to a boss or eye hook. • Max. Capacity: Up to 1,600 lbs. [725kg].

MRTA6123 Low Profile Load Trolley with Yoke	MRTA6119 Low Profile Load Trolley with Eye Hook	MRMA6114 Hose Trolley	MRMA6115 Hose Trolley with Cable Saddle
			
•Transfers loads along the horizontal axis. • Primarily used when the customer needs to pivot in (2) directions such as an arm carriage. • Max. Capacity: Up to 1,600 lbs. [725kg].	•Transfers loads along the horizontal axis. • Primarily used when the customer needs to attach the trolley to a boss or eye hook. • Max. Capacity: Up to 1,600 lbs. [725kg].	• Carries festooned hose used in hose management kits. • Max. Capacity: Up to 50 lbs. [22kg].	• Carries festooned hose used in hose management kits. • Velcro straps secures hose. • Max. Capacity: Up to 50 lbs. [22kg].

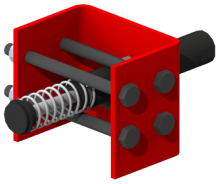
RAD6110 RAIL ACCESSORIES

MRAA6104 End Cap



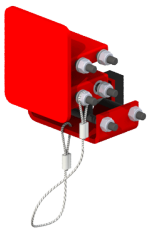
- Prevents an end truck or load trolley from exiting the rail.
- Primarily used as a dust cover.

MRAA6105 End Cap with Shock



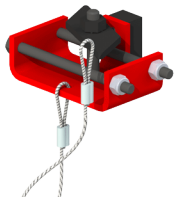
- Prevents an end truck or load trolley from exiting the rail.
- Dampens the impact force of the load trolley striking the end cap.

MRAS6133 Redundant End Cap



- Prevents an end truck or load trolley from exiting the rail.
- Inner MRAA6111 Mid-Rail Stop.

MRAA6111 Mid-Rail Stop



- Separates the working area of a bridge or runway and/ or prevents a bridge from overtravel.
- Can be used in conjunction with the MRAA6104 End Cap to form the MRAS6133 Redundant End Cap Stop.

MRAA6022 Mid-Rail Stop with Shock

- Separates the working area of a bridge or runway and/ or prevents a bridge from overtravel.
- Dampens the impact force of the load trolley striking the mid-rail stop.

MRAA6160 Integrated Access Gate

- Allows for maintenance and/ or inspection of a load trolley.
- Allows for the removal or addition of equipment without having to run out the end of the rail.

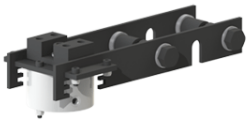
MRHA4445 Splice Kit

- Splice Kit is a bolt-on kit that connects or joins (2) two sections of RAD6110 series Rail without the need to weld bosses.

MRAA4205-24-30-36 Bridge Brace

- Used to secure parallel rails at specific distances from each other.

MRAA4359 Rail Brake



- Pneumatic brake allows operator to park a bridge or arm on a bridge or runway.
- Bolt-on Kit.

MRAA4926 Bridge Bumper

- Typically used to absorb contact between two bridges on runways that have multiple bridges.

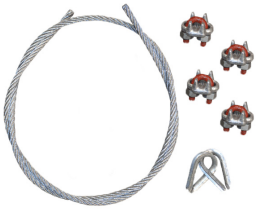
MRAA4228 Limit Switch

- Allows for pre-defined and pre-determined travel limits to be set.
- Bolts on to the top channel of the rail.

MRAA4224 Limit Switch with Spring Bypass

- Allows for pre-defined and pre-determined travel limits to be set.
- Bolts on to the top channel of the rail.

RWA4133 Safety Cable Kit



- Carbon Steel “Galvanized Wire Rope” GWC.
- Cable Thickness: 0.25 in. [6mm].
- Crosby Saddle Clamps.
- Standard lengths: 5 ft. [1.5m].
- Multiple rail systems will receive coiled cable vs pre-cut. (5 ft. Coiled Lengths)

NICORWA4133 Safety Cable Kit w/ Copper Oval Sleeves

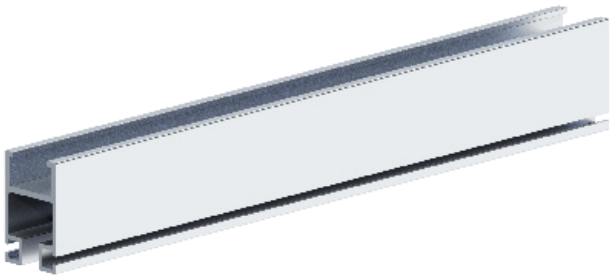
- Carbon Steel “Galvanized Wire Rope” GWC.
- Cable Thickness: 0.25 in. [6mm].
- Copper Zinc Plated Oval Sleeves.
- Standard lengths: 10 ft. [3m].

FDA4133 Eye Bolt Safety Cable Kit

- Carbon Steel “Galvanized Wire Rope” GWC.
- Cable Thickness: 0.25 in. [6mm].
- Crosby Saddle Clamps.
- Eye Bolt Connection.
- Standard lengths: 6 ft. [1.82m].

RAD4110 Series Rail

Knight Global's RAD4110 Series Aluminum Rail has an enclosed track design that is extruded from a lightweight high strength aluminum alloy. The RAD4110 Series Rail is the ideal solution for light load applications. Knight's RAD4110 Series Rail combined with nylon reinforced trolley wheels, provides the lowest rolling resistance in the industry.



Features

- Overhead and Floor Mounted Configurations.
- Supports RAD4110 Series Trolleys, End Trucks and Hangers.
- Transfer Loads in the "X" and "Y" Directions.
- Max. Recommended Capacity: Up to 1,100 lbs. [499 kg].**

** (Based upon Deflection limitations)
See page 27

Benefits

- Rail Lengths: Up to 25 ft. [7.6m] without Splices.
- Load Trolleys and End Trucks are designed for cantilevered and direct load applications.
- All Hangers and End Trucks are designed to prevent binding of bridges and runways.
- Knight pre-assembles all bridges by mounting the end trucks and hose management to minimize installation time.

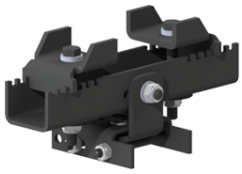
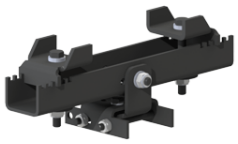
RAD4110 HANGERS

MRHA40351 Tube Style C-Channel Hanger	MRHS4034 C-Channel Rod and Ball Hanger	MRHS40471 I-Beam Extended Stack Rod and Ball Hanger	MRHS40511 I-Beam Extended Stack Rod and Ball Hanger	MRHS40361 I-Beam Rod and Ball Hanger
				
• For Direct or Offset Loads. • Fixed Height Hanger. • Attaches to all C-Channel or Angle Iron. • Hanger is clamped to the top flange of the Knight rail.	• For Direct Loads Only. • Adjustable Height Hanger. • Maximum C-Channel Flange: 2.5 in. [64mm]. • Includes 1 ft. [0.3m] Threaded Rod. (Recommended for Light Duty Use)	• For Direct Loads Only. • Adjustable Height Hanger. • Structural Support Flange Size: 2 in. - 7 in. [51mm - 178mm]. • Includes 1 ft. [0.3m] Threaded Rod. (Recommended for Light Duty Use)	• For Direct Loads Only. • Adjustable Height Hanger. • Structural Support Flange Size: 7 in. - 11 in. [178mm - 279mm]. • Includes 1 ft. [0.3m] Threaded Rod. (Recommended for Light Duty Use)	• For Direct Load Only. • Adjustable Height Hanger. • Structural Support Flange Size: 2 in. - 7 in. [51mm - 178mm]. (Recommended for Light Duty Use)

Continued on next page.

RAD4110 Series

MRHS40431 I-Beam Rod and Ball Hanger	MRHS41571 Tubing Rod and Ball Hanger	MRHS40382 Extended Stack I-Beam Hanger	MRHS42182 Extended Stack I-Beam Hanger	MRHS40771 Short Stack I-Beam Hanger
				
• For Direct Load Only. • Adjustable Height Hanger. • Structural Support Flange Size: 7 in. - 11 in. [178mm - 279mm]. (Recommended for Light Duty Use)	• For Direct Loads Only. • Adjustable Height Hanger. • Wide Tubing or Unistrut Size: 2 in. - 7 in. [51mm - 178mm]. (Recommended for Light Duty Use)	• For Direct or Offset Loads • Adjustable Height Hanger. • Structural Support Flange Size: 2 in. - 7 in. [51mm - 178mm].	• For Direct or Offset Loads • Adjustable Height Hanger. • Structural Support Flange Size: 7 in. - 11 in. [178mm - 279mm].	• Perpendicular to I-Beam • For Direct or Offset Loads • Fixed Height Hanger. • Redundant Structural Support Flange Size: 2 in. - 7 in. [51mm - 178mm].

MRHS40781 Short Stack I-Beam Hanger	MRHS40821 Short Stack I-Beam Hanger	MRHS40861 Short Stack I-Beam Hanger	MRHS4500 Extreme Low Profile Perpendicular Rigid Hanger	MRHS4503 Extreme Low Profile Parallel Rigid Hanger
				
• Perpendicular to I-Beam • For Direct or Offset Loads • Fixed Height Hanger. • Redundant Structural Support Flange Size: 7 in. - 11 in. [178mm - 279mm].	• Parallel to I-Beam • For Direct or Offset Loads • Fixed Height Hanger. • Structural Support Flange Size: 2 in. - 7 in. [51mm - 178mm].	• Parallel to I-Beam • For Direct or Offset Loads • Fixed Height Hanger. • Structural Support Flange Size: 7 in. - 11 in. [178mm - 279mm].	• For use with W-Beam only. • For Direct Loads Only • Hanger Grip Range: .25 in. - 0.5625 in. [7mm - 15mm] • Max Capacity: 3,500 lbs.	• For use with W-Beam only. • For Direct Loads Only • Structural Support Flange: 4 in. - 8 in. [101mm - 203mm] • Max Capacity: 3,500 lbs.

MRWS40161 V-Sway Brace	MRWS41431 V-Sway Brace
	
• Stabilizes RAD4110 Rail • Used when hangers threaded rod length is 2 ft. [0.6m] or greater. • Structural Support Flange Size: 2 in. - 7 in. [51mm - 178mm].	• Stabilizes RAD4110 Rail • Used when hangers threaded rod length is 2 ft. [0.6m] or greater. • Structural Support Flange Size: 7 in. - 11 in. [178mm - 279mm].

RAD4110 END TRUCKS

MRES4025 Single Bridge End Truck

- Yoke design allows pivoting in the “X” and “Y” directions for freedom of movement.
- Suspends Knight’s RAD4110 Single Bridge.
- Max. Capacity: Up to 1,100 lbs. [499kg].

MRES4072 Dual Bridge End Truck

- Suspends Knight’s RAD4110 Dual Bridge.
- Recommended Bridge Length: 15 ft. [4.5m] or Greater.
- Max. Capacity: Up to Up to 1,100 lbs. [499kg].

MRES4073 Single or Dual Bridge End Truck

- Dual Trolleys improve bridge travel by distributing overall load across a wider stance.
- Suspends Knight’s RAD4110 Single or Dual Bridge.
- Max. Capacity: Up to 1,100 lbs. [499kg].

MRES4310 Single Bridge Low Profile End Truck

- Yoke design allows pivoting in the “X” and “Y” directions for freedom of movement.
- Suspends Knight’s RAD4110 Single Bridge.
- Max. Capacity: Up to 1,100 lbs. [499kg].

MRES4311 Dual Bridge Low Profile End Truck

- Yoke design allows pivoting in the “X” and “Y” directions for freedom of movement.
- Suspends Knight’s RAD4110 Dual Bridge.
- Max. Capacity: Up to 1,100 lbs. [499kg].

MRES4432 Adjustable Height End Truck

- Adjustable on one end of runway to allow load trolley to automatically roll back to home position.
- Suspends Knight’s RAD4110 Dual Bridge.
- Max. Capacity: Up to 1,100 lbs. [499kg].

MRES4226 Single or Dual Bridge Rigid End Truck

- Eliminates bridge skew for applications that will require added stability.
- Suspends Knight’s RAD4110 Single or Dual Bridge.
- Max. Capacity: Up to 1,100 lbs. [499kg].

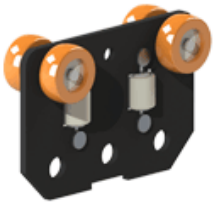
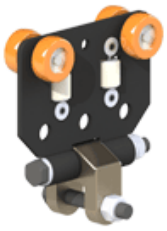
MRES4476 Single Plane End Truck

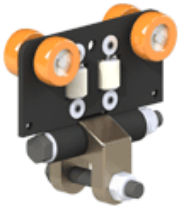
- Designed to elevate bridge to the same height as the runway.
- Suspends Knight’s RAD4110 Single Bridge.
- Max. Capacity: Up to 1,100 lbs. [499kg].

MREA4018 End Truck Connector

- Allows for the pivoting in the “X” and “Y” directions for freedom of movement.
- Suspends Knight’s RAD4110 Bridge with the use of a Knight Trolley.

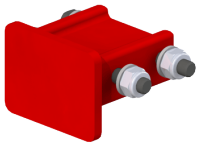
RAD4110 LOAD TROLLEYS

MRTA4442 Load Trolley	MRTA4001 Load Trolley	MRTA4003 Load Trolley with Bosses	MRTA4009 Load Trolley with Yoke	MRTA4029 Load Trolley with Eye Hook
				
• Transfers loads along the horizontal axis. • Primarily used when the customer needs to bolt items to the trolley. • Max. Capacity: Up to 1,100 lbs. [499kg].	• Transfers loads along the horizontal axis. • Primarily used when the customer needs to bolt items to the trolley. • Max. Capacity: Up to 1,100 lbs. [499kg].	•Transfers loads along the horizontal axis. • Primarily used when the customer needs to attach the trolley to a boss or eye hook. • Max. Capacity: Up to 1,100 lbs. [499kg].	•Transfers loads along the horizontal axis. • Primarily used when the customer needs to pivot in (2) directions such as an arm carriage. • Max. Capacity: Up to 1,100 lbs. [499kg].	•Transfers loads along the horizontal axis. • Primarily used to attached a Spring Balancer or Hoist • Max. Capacity: Up to 1,100 lbs. [499kg].

MRTA4312 Low Profile Load Trolley with Bosses	MRTA4392 Low Profile Load Trolley with Yoke	MRTA4393 Low Profile Load Trolley with Eye Hook	MRMA4019 Hose Trolley	MRMA4215 Hose Trolley with Cable Saddle
				
•Transfers loads along the horizontal axis. • Primarily used when the customer needs to attach the trolley to a boss or eye hook. • Max. Capacity: Up to 1,100 lbs. [499kg].	•Transfers loads along the horizontal axis. • Primarily used when the customer needs to pivot in (2) directions such as an arm carriage. • Max. Capacity: Up to 1,100 lbs. [499kg].	•Transfers loads along the horizontal axis. • Primarily used to attached a Air Balancer or Hoist • Max. Capacity: Up to 1,100 lbs. [499kg].	• Carries festooned hose used in hose management kits. • Max. Capacity: Up to 50 lbs. [22kg].	• Carries festooned hose used in hose management kits. • Velcro straps secures hose. • Max. Capacity: Up to 50 lbs. [22kg].

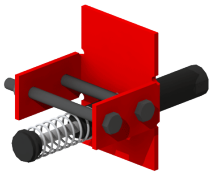
RAD4110 RAIL ACCESSORIES

MRAA4011 End Cap



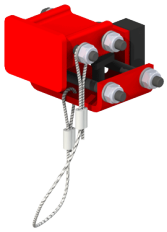
- Prevents an end truck or load trolley from exiting the rail.
- Primarily used as a dust cover.

MRAA4462 End Cap with Shock



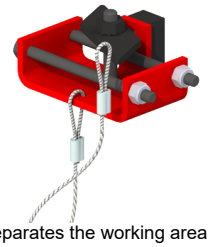
- Prevents an end truck or load trolley from exiting the rail.
- Dampens the impact force of the load trolley striking the end cap.

MRAS4454 Redundant End Cap



- Prevents an end truck or load trolley from exiting the rail.
- Inner MRAA4455 Mid-Rail Stop.

MRAA4455 Mid-Rail Stop

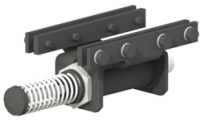


- Separates the working area of a bridge or runway and/ or prevents a bridge from overtravel.
- Can be used in conjunction with the MRAA4011 End Cap to form the MRAS4454 Redundant End Cap Stop.

MRAA4243 Mid-Rail Stop with Shock

- Separates the working area of a bridge or runway and/ or prevents a bridge from overtravel.
- Dampens the impact force of the load trolley striking the mid-rail stop.

MRAA4498 Heavy Duty Mid-Rail Stop with Shock



- Separates the working area of a bridge or runway and/ or prevents a bridge from overtravel.
- Dampens the impact force of the load trolley striking the mid-rail stop.

MRAA4965 Integrated Access Gate

- Allows for maintenance and/ or inspection of a load trolley.
- Allows for the removal or addition of equipment without having to run out the end of the rail.

MRAA4975 Add-On Access Gate

- Allows for maintenance and/ or inspection of a load trolley.
- Bolt-on kit.

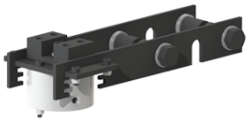
MRHA4445 Splice Kit

- Splice Kit is a bolt-on kit that connects or joins (2) two sections of RAD4110 series Rail without the need to weld bosses.

MRHA4485 Splice Kit

- Splice Kit is a bolt-on kit that connects or joins a section of the RAD4100 Curved Series Rail to a section of RAD4110 series Rail without the need to weld bosses.

MRAA4359 Rail Brake



- Pneumatic brake allows operator to park a bridge or arm on a bridge or runway.
- Bolt-on Kit.

MRAA4926 Bridge Bumper

- Typically used to absorb contact between two bridges on runways that have multiple bridges.

MRAA4205-24-30-36 Bridge Brace

- Used to secure parallel rails at specific distances from each other.

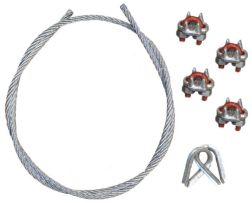
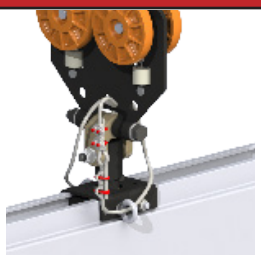
MRAA4228 Limit Switch

- Allows for pre-defined and pre-determined travel limits to be set.
- Bolts on to the top channel of the rail.

MRAA4224 Limit Switch with Spring Bypass

- Allows for pre-defined and pre-determined travel limits to be set.
- Bolts on to the top channel of the rail.

Continued on next page.

RWA4133 Safety Cable Kit	NICORWA413 Safety Cable Kit w/ Copper Oval Sleeves	FDA4133 Eye Bolt Safety Cable Kit
		
• Carbon Steel “Galvanized Wire Rope” GWC. • Cable Thickness: 0.25 in. [6mm]. • Crosby Saddle Clamps. • Standard lengths: 5 ft. [1.5m]. • Multiple rail systems will receive coiled cable vs pre-cut. (5 ft. Coiled Lengths)	• Carbon Steel “Galvanized Wire Rope” GWC. • Cable Thickness: 0.25 in. [6mm]. • Copper Zinc Plated Oval Sleeves. • Standard lengths: 10 ft. [3m].	• Carbon Steel “Galvanized Wire Rope” GWC. • Cable Thickness: 0.25 in. [6mm]. • Crosby Saddle Clamps. • Eye Bolt Connection. • Standard lengths: 6 ft. [1.82m].

TR2000 Series Rail

Knight Global's TR2000 Series Aluminum Rail is a streamlined design. The customer no longer needs to utilize oversize rail for lighter duty applications. This Innovative system allows for festooning trolleys and plant utilities to be attached to the main line rail system. This provides for more travel on your main line rail system. Application types can include: Light duty weld guns, work benches and stations, filter/regulator/lubrication (FRL), festooning, light fixtures, weld curtains, etc. The TR2000 Series can also be used for small bench type applications.

Features

- Overhead and Floor Mounted Configurations.
- Supports TR2000 Series Trolleys, End Trucks and Hangers.
- Transfer Loads in the "X" and "Y" Directions.
- Max. Recommended Capacity: Up to 550 lbs. [250 kg].**

** (Based upon Deflection limitations)
See page 27

Benefits

- Load Trolleys and End Trucks are designed for cantilevered and direct load applications.
- All Hangers and End Trucks are designed to prevent binding of bridges and runways.
- Knight pre-assembles all bridges by mounting the end trucks and hose management to minimize installation time.

TR2000 HANGERS

Knight structural hangers are designed to work in conjunction with C-Channel structural supports and I-beam flange widths from 2 in. to 11 in. Knight's unique extended stack hangers allow for a vertical adjustment of up to 1.5 in. [38mm] to assist with the leveling of the rail during installation.

TRH20351 Tube Style C-Channel Hanger	TRH2034 C-Channel Rod and Ball Hanger	TRH20361 Short I-Beam Stack Rod and Ball Hanger	TRH20431 Short I-Beam Stack Rod and Ball Hanger
			
• For Direct Loads. • Fixed Height Hanger. • Attaches to all C-Channel or Angle Iron.	• For Direct Loads. • Fixed Height Hanger. • Attaches to all C-Channel or Angle Iron. • Hanger is clamped to the top flange of the Knight rail.	• For Direct Loads. • Adjustable Height Hanger. • Structural Support Flange Size: 2 in. - 7 in. [51mm - 178mm]. • Includes 1 ft. [0.3m] Threaded Rod.	• For Direct Loads. • Adjustable Height Hanger. • Structural Support Flange Size: 7 in. - 11 in. [178mm - 279mm]. • Includes 1 ft. [0.3m] Threaded Rod.

Continued on next page.

TRH20471 I-Beam Extended Stack Rod and Ball Hanger

- For Direct Loads.
- Adjustable Height Hanger.
- Structural Support Flange Size: 2 in. - in. [51mm - 178mm].
- Includes 1 ft. [0.3m] Threaded Rod.

TRH20511 I-Beam Extended Rod and Ball Hanger

- For Direct Loads.
- Adjustable Height Hanger.
- Structural Support Flange Size: 7 in. - 11 in. [178mm - 279mm].
- Includes 1 ft. [0.3m] Threaded Rod.

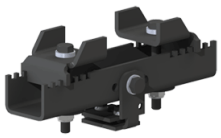
TRH20382 I-Beam Hanger

- For Direct Loads.
- Adjustable Height Hanger.
- Structural Support Flange Size: 2 in. - in. [51mm - 178mm].

TRH22182-Beam Hanger

- For Direct Loads.
- Adjustable Height Hanger.
- Structural Support Flange Size: 7 in. - 11 in. [178mm - 279mm].

TRH20821 Low Profile I-Beam Hanger for Parallel Loads



- For Direct Loads.
- Fixed Height Hanger.
- Structural Support Flange Size: 2 in. - 7 in. [51mm - 178mm].

TRH2005 Hanger Bracket

- For Direct Loads.
- Adjustable Height Hanger.
- Bracket Fits all Structural Support Flange Sizes.

TRH2020 Side by Side Hanger

- Suspends TR2000 Series Rail.
- Mounts to (All) RAD Series Rail.
- Allows TR2000 rail to run parallel to existing Knight rail system.

TR2000 END TRUCKS

End Trucks carry the bridge along the runways of a rail system. Single Trolley End Trucks can pivot on the X-Y axis to impart a freedom of movement which prevents binding of the bridge. Dual Trolley End Trucks are rigid and allow for a more precise positioning of the bridge and to prevent the binding of bridges longer than 15ft. [4.5m].

Also available in both a rigid and pivoting style are Same Plane End Trucks, designed to elevate the bridge to the same height as the runway to improve head room clearance.

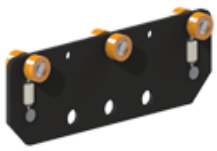
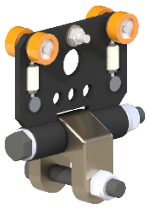
TRE2025 Single Bridge End Truck

- Yoke design allows pivoting in the “X” and “Y” directions for freedom of movement.
- Suspends Knight’s TR2000 Single Bridge.
- Max. Capacity: Up to 500 lbs. [226kg].

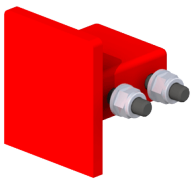
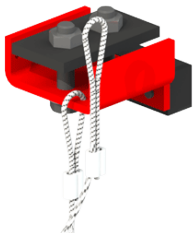
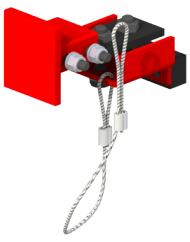
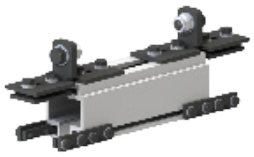
TR2000 LOAD TROLLEYS

The unique design of the Knight trolley wheels impart low effort to load ratios which improves the ergonomics of the overall system. The improved performance can eliminate the need for tractor drives (and their attendant controls) for very heavy loads. The proprietary fiberglass filled high impact nylon wheels eliminates all “flat-spotting”.

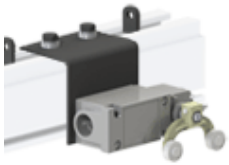
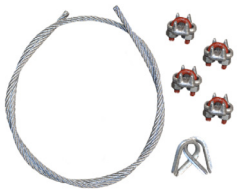
Long-term accelerated life cycle testing has proven that the trolley wheels can be reasonably expected to have a predicted life in excess of 15,000,000 linear feet of travel (under extreme loading conditions) with no maintenance and no detrimental effect.

TRT2001 Load Trolley	TRT2002 Load Trolley with Bosses	TRT2003 Load Trolley with Eye Hook	TRT2004 Load Trolley	TRT2009 Load Trolley
				
• Transfers loads along the horizontal axis. • Primarily used when the customer needs to bolt items to the trolley. • Max. Capacity: Up to 550 lbs. [250kg].	•Transfers loads along the horizontal axis. • Primarily used when the customer needs to attach the trolley to a boss or eye hook. • Max. Capacity: Up to 550 lbs. [250kg].	•Transfers loads along the horizontal axis. • Primarily used to attached a Spring Balancer or Hoist • Max. Capacity: Up to 550 lbs. [250kg].	• Transfers loads along the horizontal axis. • Primarily used when the customer needs to bolt items to the trolley. • Max. Capacity: Up to 100 lbs. [45kg].	• Transfers loads along the horizontal axis. • Primarily used when a customer needs to pivot in (2) directions. • Max. Capacity: Up to 550 lbs. [250kg].

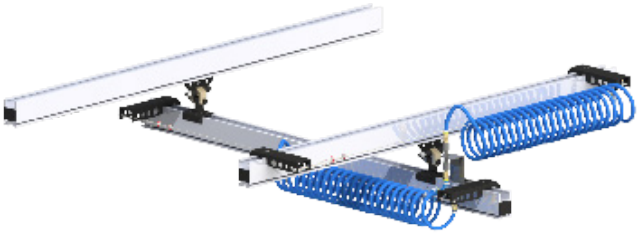
TR2000 RAIL ACCESSORIES

TRN2016 End Cap	MRSA5070 Mid-Rail Stop	TRN2114 Redundant End Cap	TRA2449 Add-On Access Gate	TRS2067 Splice Kit
				
• Prevents an end truck or load trolley from exiting a rail. • Primarily used as a dust cover.	• Prevents an end truck or load trolley from exiting a rail. • Dampens the impact force of the load trolley striking the end cap.	• Prevents an end truck or load trolley from exiting a rail. • Inner TRA2070 Mid-Rail Stop.	• Allows for maintenance and/ or inspection of a load trolley. • Bolt-on kit.	• Splice Kit is a bolt-on kit that connects or joins (2) two sections of TR2000 series Rail without the need to weld bosses.

Continued on next page.

TRA2224 Limit Switch	RWA2133 Safety Cable Kit	NICORWA4133 Safety Cable Kit w/ Copper Oval Sleeves	FDA4133 Eye Bolt Safety Cable Kit
			
• Allows for pre-defined and pre-determined travel limits to be set. • Bolts on to the top channel of the rail.	• Carbon Steel “Galvanized Wire Rope” GWC. • Cable Thickness: 0.125 in. [3mm]. • Crosby Saddle Clamps. • Standard lengths: 5 ft. [1.5m].	• Carbon Steel “Galvanized Wire Rope” GWC. • Cable Thickness: 0.25 in. [6mm]. • Copper Zinc Plated Oval Sleeves. • Standard lengths: 10 ft. [3m].	• Carbon Steel “Galvanized Wire Rope” GWC. • Cable Thickness: 0.25 in. [6mm]. • Crosby Saddle Clamps. • Eye Bolt Connection. • Standard lengths: 6 ft. [1.82m].

Hose Management

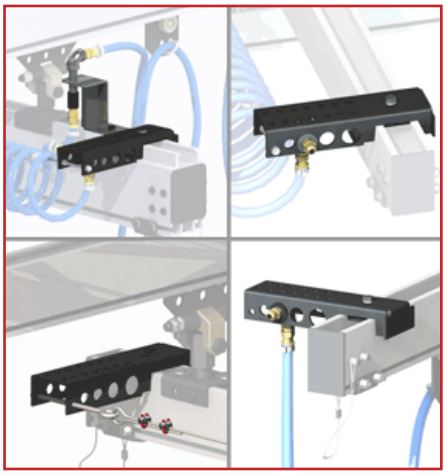


Knight Global's Hose Management provides everything you will need to quickly and efficiently run your pneumatic supply system. Knight offers kits for straight or coiled hose system requirements, as well as kits for runways or bridges.

For more information on Knight Hose Management or if you need help in selecting the proper kit for your system; contact a Knight representative.

Features

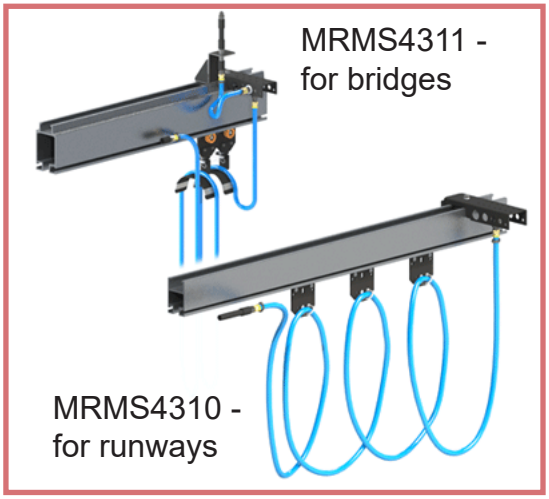
- Attaches to RAD4110, RAD6110 & RAD7510 Series Rail.
- Supplys Air to Tooling.
- Festoon Kit includes:
  - Brackets, Fittings and Messenger Cable for (1) one Runway OR (1) Bridge.
- Hose Fitting Diameters: 1/2 in. [12.7mm].
- Hose and regulator can be purchased separately.
- Hose Trolleys Sold Seperately.



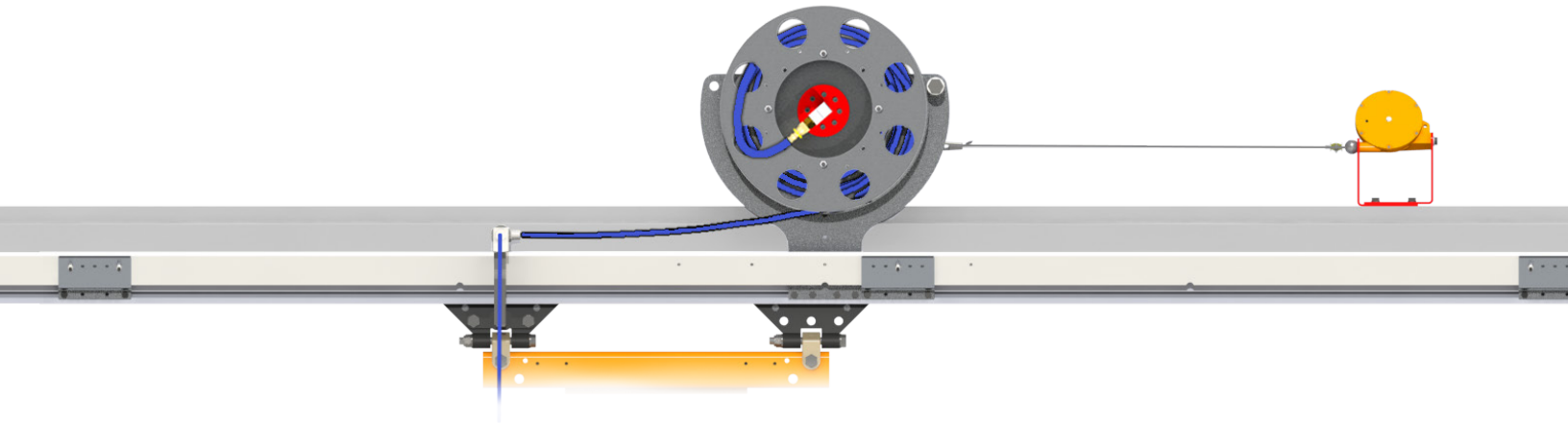
Included in kit: Brackets, fittings, and messenger cable.

MRMS4308 / MRMS4309
Coiled Hose Management Kits

MRMS4310 / MRMS4311
Straight Hose Management Kits



Air Glide Hose Management



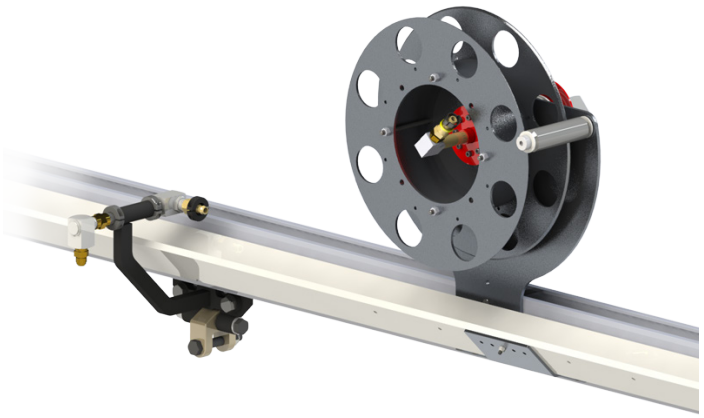
MRMSC/MRMSE Air Glide Hose Management

This new patent pending hose management system is a revolutionary solution to containing air hoses on the rail itself instead of hanging below. Using a reel and a channel that mounts alongside the rail, air hoses can be kept out of the way and are prevented from interfering with production in a plant setting. This exciting new product can also be integrated into existing systems.

AIR-GLIDE
HOSE MANAGEMENT SYSTEM

Features

- Designed to eliminate the need for hanging air hoses / festooning.
- Supplys Air to Tooling.
- Attaches to RAD4110, RAD6110 and RAD7510 series rail.
- Reel can be mounted in the center or end or rail.
- Can be attached to any bridge and/or runway.
- Max rail length: 100 ft. [30.48m].
- Rail not included.

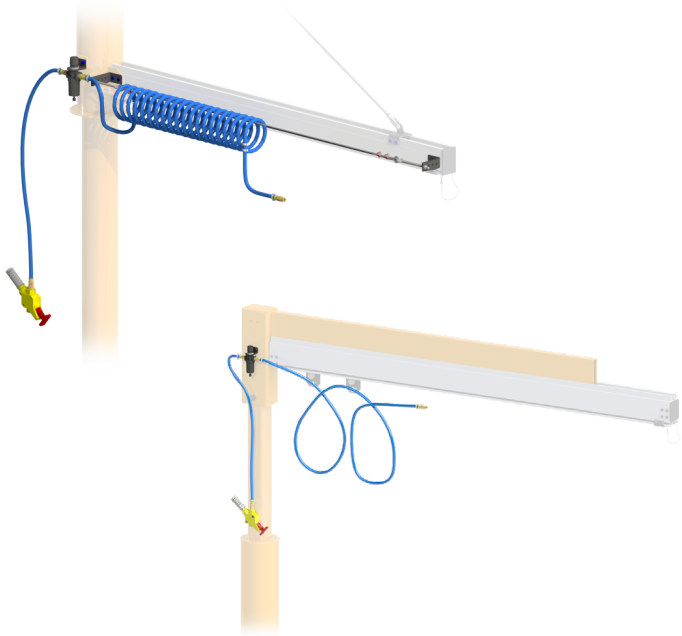


Benefits

- Can be used with zone limits, end-of-travel switches, and rail brakes.
- Has a significant advantage over coiled hose because it minimizes pullback force.
- Custom mounting options are available for low profile trolleys and other manufacturers' rail.

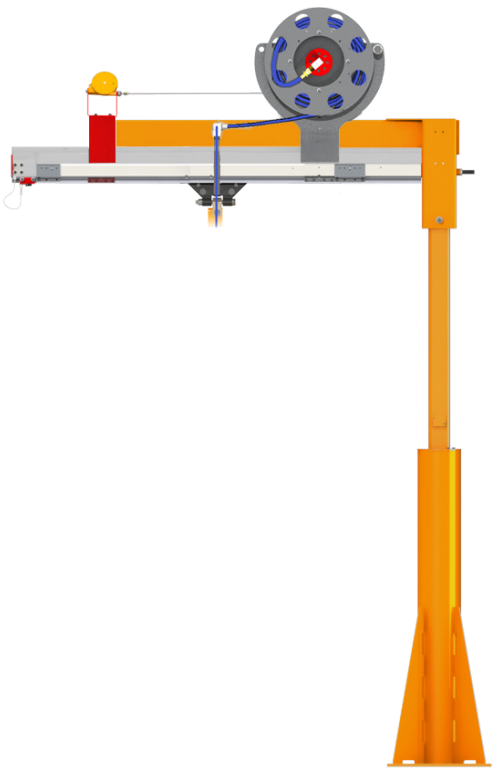
JSA9135 Coiled / Straight Hose Kit

Knight Global's JSA9135 Jib Crane Hose Management will attach coiled hose to Knight's MJBA2100, MJBA2200, MJBA2300 and MJBA2600 Series Jib Cranes. The JSA9135 kit supplies air to Tooling and End Effectors. The JSA9135 Hose Management Kit includes: all brackets, fittings, regulator, air lock-out and messenger cable for (1) one Jib Crane.



Features

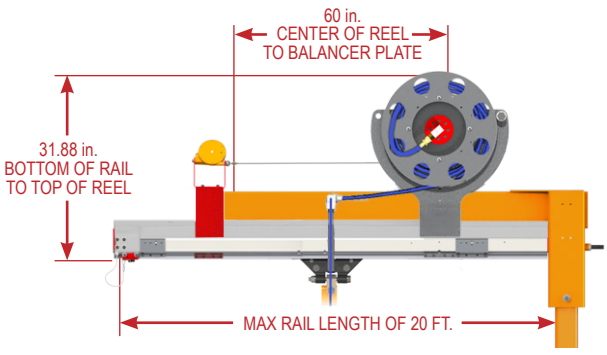
- Attaches to Knight MJBA2100, MJBA2200, MJBA2300 and MJBA2600 Jib Cranes.
- Supplys Air to Tooling.
- Festoon Kit includes:
  - Brackets, Fittings, Regulator, Air Lock-out and Messenger Cable for (1) one Jib Crane.
- Hose Fitting Diameters: 1/2 in. [12.7mm].



MJSAE2200 / MJSAE2300
Air Glide Hose Management

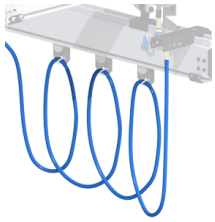
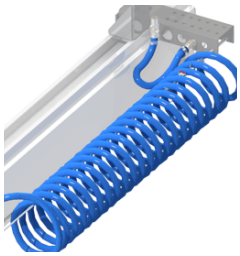
Features

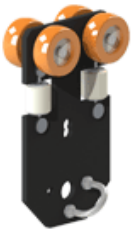
- MJSAE2200 Attaches to Knight MJBA2200 Jib Cranes.
- MJSAE2300 attaches to Knight MJBA2300, 2600 and 2700 Jib Cranes.
- Max rail length of 20 ft.
- Supplys Air to Tooling.
- Hose Fitting Diameters: 1/2 in. [12.7mm].



For more information on Knight's Jib Crane Hose Management Kit and Accessories, or if you need help in selecting the proper accessory for your system; contact a Knight representative or please visit www.knightglobal.com

Hose Mgmt. Accessories

RMD4113 1/2 in. Diameter Straight Hose	RMD4115 1/2 in. Diameter Coiled Hose	JSA9137 360° Rotate Air Fitting Assembly	MRMA4488 Filter/Regulator Bracket Assembly	TRM2088 Filter/Regulator Bracket Assembly
				
1/2 in. I.D. Polyurethane Straight Hose is used in conjunction with the rail system hose management kits to create the systems festooning.	1/2 in. I.D. Polyurethane Coiled Hose is used in conjunction with the rail system hose management kits to create the systems festooning.	Rotating Air Fitting will attach festooning to Knight's Jib Cranes Series. Air Fitting kit supplies air to Tooling and End Effectors.	• Controls air flow to the work station crane. • NPT Filter and Regulator: 1/2 in. [12.7mm]. • (FOR RAD series Rail)	• Attaches to TR2000 Series Rail. • Controls air flow to the workstation crane. • Primarily used in Knight's Hose Management Kits.

MRMA6115 Hose Trolley with Cable Saddle	MRMA6114 Straight Hose Trolley	MRMA4215 Hose Trolley with Cable Saddle	MRMA4019 Hose Trolley	MRMA4814 Hose Trolley
				
• Carries festooned hose used in hose management kits. • Velcro straps secures hose. • Max. Capacity: Up to 50 lbs. [22kg]. • (For RAD6110)	• Carries festooned hose used in hose management kits. • Max. Capacity: Up to 50 lbs. [22kg]. • (For RAD6110)	• Carries festooned hose used in hose management kits. • Velcro straps secures hose. • Max. Capacity: Up to 50 lbs. [22kg]. • (For RAD4110)	• Carries festooned hose used in hose management kits. • Max. Capacity: Up to 50 lbs. [22kg]. • (For RAD4110)	• Carries festooned hose used in hose management kits. • Max. Capacity: Up to 50 lbs. [22kg]. • (For RAD7510)

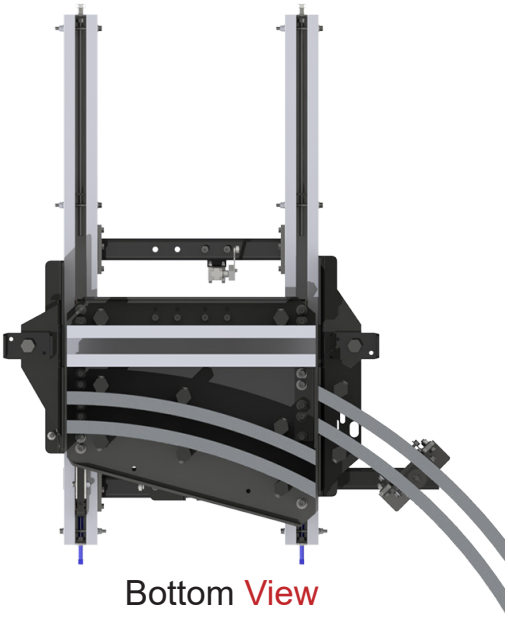
MRMA4815 Hose Trolley with Cable Saddle	TRM2021 Hose Trolley with Cable Saddle	MRMA4494 Messenger Cable Hose Trolley	MRMA4301 Cable Saddle with Velcro Straps
			
• Carries festooned hose used in hose management kits. • Velcro straps secures hose. • Max. Capacity: Up to 50 lbs. [22kg]. • (For RAD7510)	• Carries festooned hose used in hose management kits. • Velcro straps secures hose. • Max. Capacity: Up to 50 lbs. [22kg]. • (For TR2000)	• Carries festooned hose or cable used in hose management kits. • Travels on a tag line on the side of the rail system and uses the complete length of the rail. • Zero stack-up lengths.	• Attaches to Load Trolleys. • Steel Construction. • Pivoting Joint. • Supports up to: 2 in. [51mm] Electric Cable or Pneumatic Hose.

Switch Track Rail

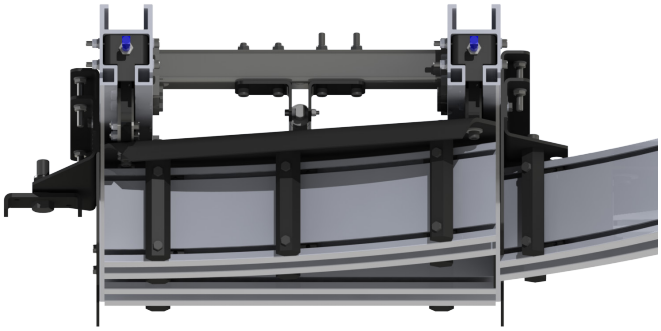
Knight Global's RAD Series Rail Switch Track allows for fixtures to be transferred between work zones without cranes, fork trucks, or disassembling the system. Knight's Switch Track is available in RAD6110 series rail. The RAD Series Switch Track is an pneumatically operated track system that can be controlled from a fixture control handle or from a pendant switch which hangs below the switch track.

Features

- Transfers fixtures between workstations.
- Pneumatically Operated.
- RAD6110 Applications Available.
- Fixture Control Handle or Pendant Switch Operated.
- No Special End Trucks Required.
- All RAD4110 Knight Trolleys are capable of traveling inside Switch Track.
- Max. Capacity: Contact for Capacities.

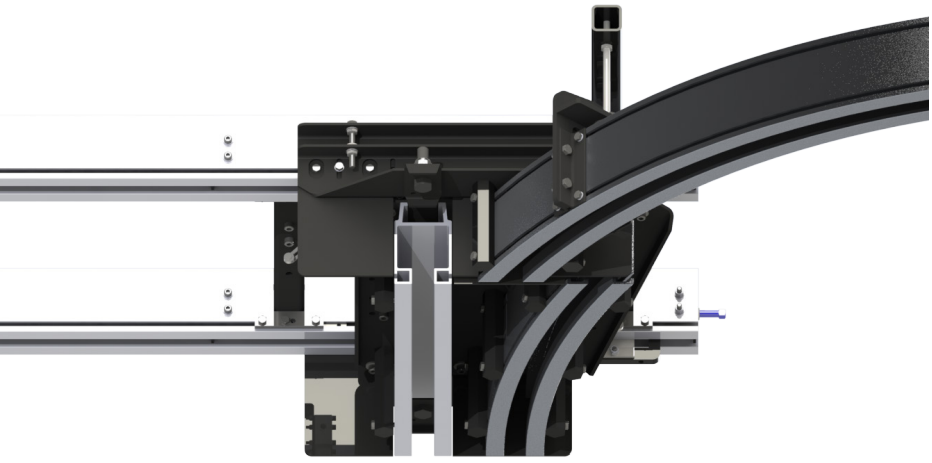


Bottom View

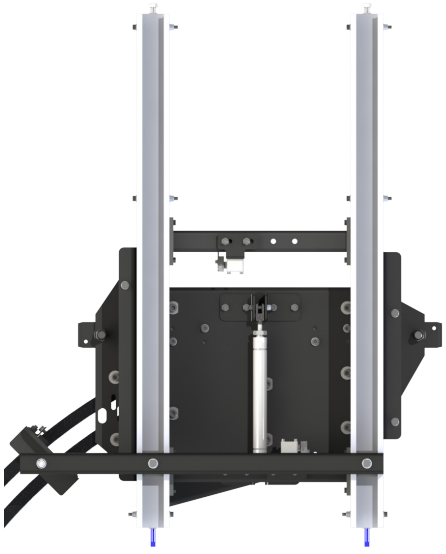


Side View

Note: RAD4110 series rail hangers are used (I-beam style only). Rod-and-Ball style hangers are used for the curved rail.



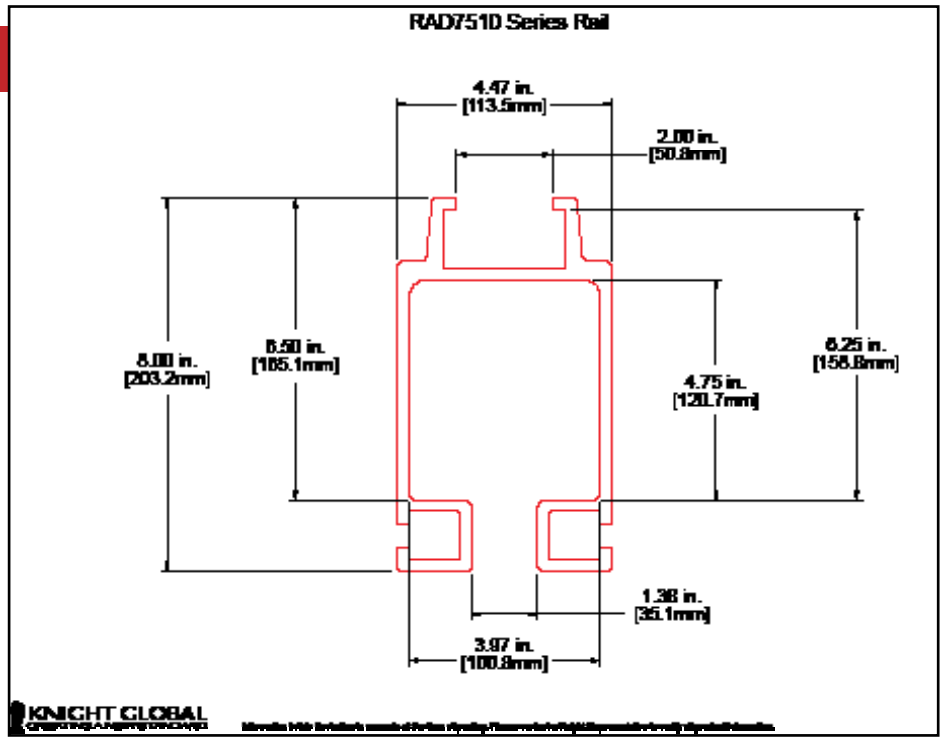
Front View



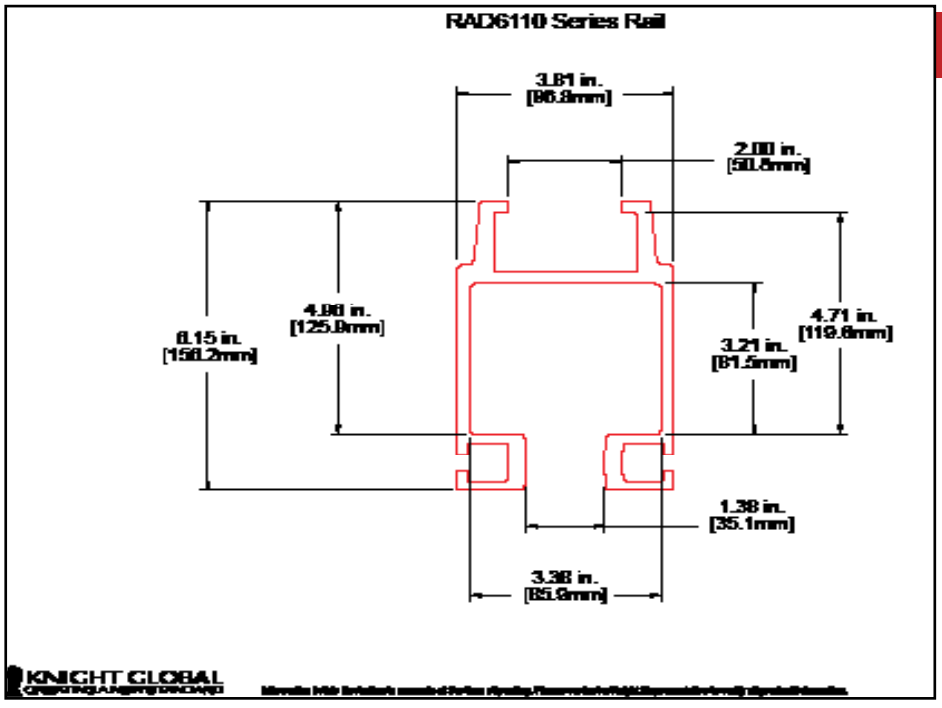
Top View

Rail Specifications

RAD7510 RAIL

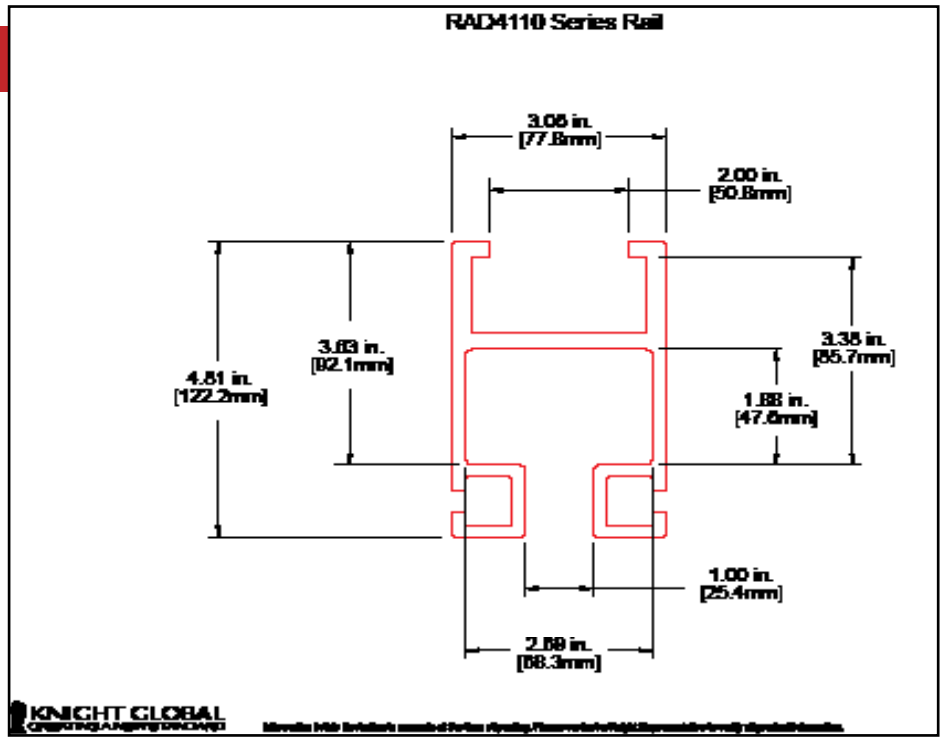


RAD6110 RAIL

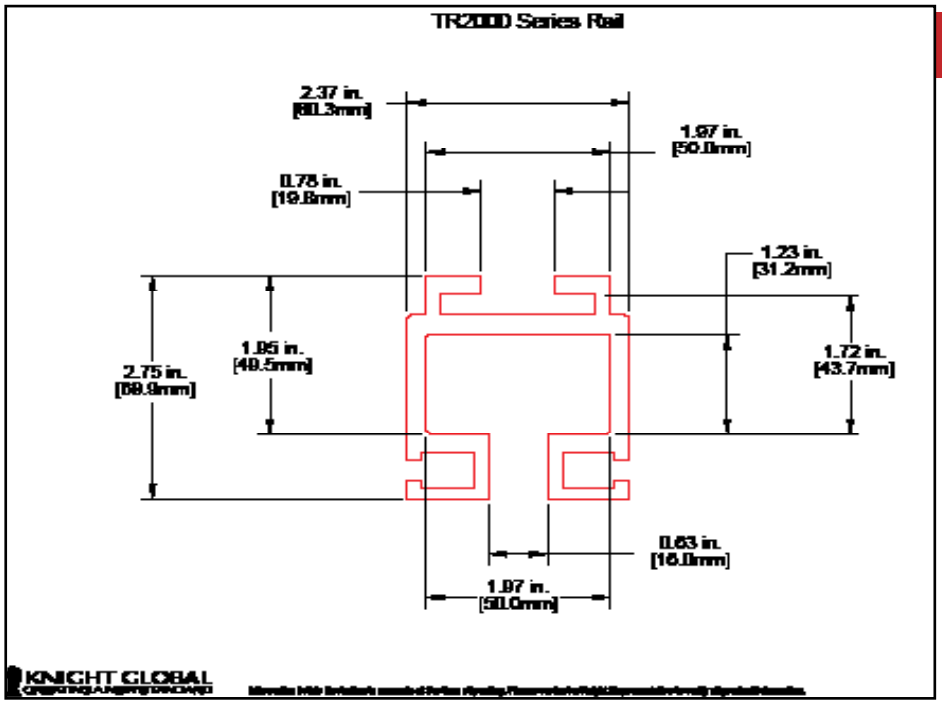


Rail Specifications

RAD4110 RAIL



TR2000 RAIL



RECOMMENDED RAIL CAPACITIES

RAD 7510 8″ Aluminum Rail

SPAN		L/350*		L/450*		L/550*	
FT	M	LB.	KG.	LB.	KG.	LB.	KG.
5	1.524	3000	1360	2700	1225	1700	771
6	1.829	3000	1360	2700	1225	1700	771
7	2.133	3000	1360	2700	1225	1700	771
8	2.438	3000	1360	2700	1225	1700	771
9	2.743	2700	1225	2400	1088	1700	771
10	3.048	2500	1134	2000	907	1700	771
11	3.353	2500	1134	1900	862	1500	680
12	3.658	2500	1134	1800	816	1500	680
13	3.962	2000	907	1800	816	1500	680
14	4.267	2000	907	1500	680	1300	590
15	4.572	1900	861	1500	680	1300	590
16	4.877	1800	816	1200	544	1000	454
17	5.181	1700	771	1200	544	1000	454
18	5.486	1600	726	1000	453	900	408
19	5.791	1450	658	1000	453	900	408
20	6.096	1300	590	900	408	800	363
21	6.401	1100	499	900	408	800	363
22	6.706	900	408	800	363	600	272
23	7.010	900	408	700	317	600	272
24	7.315	885	408	700	317	600	272
25	7.620	850	408	700	317	575	261
26	7.925	725	329	700	317	550	250
27	8.230	725	329	675	306	500	227
28	8.534	600	272	550	250	485	227

RAD 4110 4″ Aluminum Rail

SPAN		L/350*		L/450*		L/550*	
FT	M	LB.	KG.	LB.	KG.	LB.	KG.
5	1.524	1100	499	950	431	700	317
6	1.829	1100	499	950	431	700	317
7	2.133	1050	476	875	397	500	227
8	2.438	1050	476	775	351	500	227
9	2.743	950	431	675	306	425	193
10	3.048	850	385	650	295	425	193
11	3.353	700	317	550	250	350	159
12	3.658	550	240	450	204	300	136
13	3.962	500	227	385	175	250	113
14	4.267	435	197	300	136	250	250
15	4.572	350	159	250	113	200	90
16	4.877	335	152	250	113	200	90
17	5.181	280	127	175	79	150	68
18	5.486	265	120	175	79	150	68
19	5.791	230	104	150	68	125	56
20	6.096	210	95	150	68	125	56
21	6.401	195	88	125	57	125	56
22	6.706	175	79	125	57	100	45
23	7.010	160	73	125	57	100	45
24	7.315	145	66	100	57	75	34

RAD 6110 6″ Aluminum Rail

SPAN		L/350*		L/450*		L/550*	
FT	M	LB.	KG.	LB.	KG.	LB.	KG.
5	1.524	1600	725	1300	590	1100	499
6	1.829	1600	725	1300	590	1100	499
7	2.133	1500	680	1175	533	995	451
8	2.438	1475	669	1075	488	900	449
9	2.743	1400	635	1025	465	870	395
10	3.048	1325	601	925	453	785	356
11	3.353	1100	499	875	397	740	336
12	3.658	950	431	750	340	640	290
13	3.962	825	374	650	295	550	250
14	4.267	750	340	575	261	490	222
15	4.572	675	306	515	233	435	197
16	4.877	600	272	470	213	400	181
17	5.181	525	238	405	184	345	157
18	5.486	450	204	350	159	295	134
19	5.791	425	193	325	147	275	125
20	6.096	400	181	300	136	255	116
21	6.401	360	163	275	125	230	104
22	6.706	320	145	250	113	210	95
23	7.010	285	129	210	95	180	82
24	7.315	245	111	185	84	160	73

TR 2000 2″ Aluminum Rail

SPAN		L/350*		L/450*		L/550*	
FT	M	LB.	KG.	LB.	KG.	LB.	KG.
5	1.524	550	250	470	213	400	181
6	1.829	400	181	340	154	285	129
7	2.133	350	159	295	134	250	113
8	2.438	250	113	210	95	180	82
9	2.743	200	90	170	77	145	66
10	3.048	175	80	150	68	125	56
11	3.353	160	72	135	61	115	52
12	3.658	135	61	115	52	100	45
13	3.962	125	57	105	47	90	40
14	4.267	115	52	95	43	80	36
15	4.572	90	40	75	34	65	30
16	4.877	75	34	65	30	55	25
17	5.181	65	30	55	25	45	20

* Due to Ergonomic considerations, each rail span distance is tested to determine the maximum single point load required to achieve a predetermined deflection based on a ratio of L/350 (1” of deflection for each 350” of length), L/450 (1” of deflection in 450” of length)or L/550 (1” of deflection for each 550” of length).

For purposes of estimating approximate ergonomic force requirements, the following formula may be used:

F_s = frictional force = 0.009 x total mass. This indicates the maximum effort (in lbf) required to overcome inertia. Effort required to sustain movement, F_k (dynamic friction force) is generally 0.35 times the frictional force.

E.g.;
F_s = 0.009 x 250 lbs. (113.4 kg) mass = 2.25 lbf (0.9 kg) required to overcome inertia.
F_k = 0.009 x 250 lbs. (113.4 kg) mass x .35 = .79 lbf (0.36 kg) required to sustain movement.

RECOMMENDED CANTILEVERED RAIL CAPACITIES

Note: Recommended cantilevered capacities are based upon an optimum 8 ft hanger span.

RAD 7510 8" Aluminum Rail

Cantilevered		L/350*		L/450*	
FT	M	LB.	KG.	LB.	KG.
1	0.30	3000	1361	2700	1225
2	0.61	2200	998	2000	907
3	0.91	900	408	775	352
4	1.20	375	170	325	147

RAD 6110 6" Aluminum Rail

Cantilevered		L/350*		L/450*	
FT	M	LB.	KG.	LB.	KG.
1	0.30	2200	998	1700	771
2	0.61	1000	454	775	351
3	0.91	600	272	475	215
4	1.20	250	113	125	57

RAD 4110 4" Aluminum Rail

Cantilevered		L/350*		L/450*	
FT	M	LB.	KG.	LB.	KG.
1	0.30	900	408	750	340
2	0.61	325	147	300	136
3	0.91	125	57	100	45
4	1.20	35	16	30	14

TR 2000 2" Aluminum Rail

Cantilevered		L/350*		L/450*		L/550*	
FT	M	LB.	KG.	LB.	KG.	LB.	KG.
1	0.30	100	45	75	34	50	23
2	0.61	50	23	35	16	25	11

Elastic deformation: This type of deformation is reversible. Once the forces are removed, the object returns to its original shape. The elastic range ends when the material reaches its yield strength. At this point plastic deformation begins.

Plastic deformation: This type of deformation is not reversible. Once an object reaches this point, it will not return to its original shape. Plastic deformation ends with the fracture of the material.

Destructive Test Data

TROLLEY WHEEL DESTRUCTIVE TEST DATA

- TR2000 2” rail trolleys (TRT2001-05) can withstand a load of 5,000 lbs (2,268 kg) before wheel failure.
- RAD4110 4” rail trolleys (RTD4127) can withstand a load of 10,000 lbs (4,536 kg) before wheel failure.
- RAD7510 8” rail trolleys (RTD7037) can withstand a load of 18,500 lbs (8,391 kg) before wheel failure.

Our testing has shown that these loads are consistent with the shear strengths of the support hangers which typically withstand test loads in excess of 14,000 – 17,000 lbs (6,350 – 7711 kg).

HANGER DESTRUCTIVE TEST DATA

Hanger	***Failure Load***	***Safety Factor @ Max Capacity***
MRHS 4036 Rod and Ball (Concave Coin)	7,128 lbs (3,233 kg)	2.4:1
MRHS 40631 Rod and Ball (Convex Coin)	15,818 lbs (7,175 kg)	5.3:1
MRHS 40821 I-Beam Parallel Short Stack	15,623 (7,086 kg)	5.2:1
MRHS 40761 I-Beam Perpendicular Short Stack	8,910 lbs (4,041 kg)	2.97:1
MRHS 40381 I-Beam Adjustable	16,789 lbs (7,615 kg)	5.6:1
MRHA 4135 C-Channel Bolt On (Unified Style)	17,165 lbs (7,786 kg)	5.7:1
MRHA 4035 C–Channel Clamp (Ford Style)	16,933 lbs (7,681 kg)	5.6:1
TYMRHS 1101 I-Beam (Toyota Style)	12,375 lbs (5,316 kg)	4.15:1
TYMRHS 1103 I-Beam Pivoting (Toyota Style)	17,312 lbs (7,853 kg)	5.8:1

Note: Safety factor is calculated using max capacity of 3,000 lbs (1,360 kg)

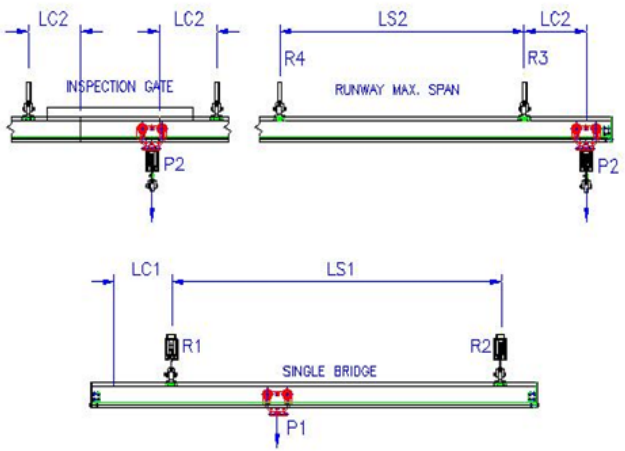
Knight Rail Algorithm Program

To insure a proper and safe design, Knight contracted with our Professional Engineering source to create a series of rail algorithms on different design criteria. These algorithms are available to our Estimating and Design departments to confirm that any out-of-the-ordinary configurations will meet industry standard safety and engineering requirements.

DESIGN OF SINGLE BRIDGE 7500 SERIES RAIL			
KNIGHT W.O. #		DATE: 4-Apr-13 TIME : 2:41 PM	
General Parameters			
Lc1	Cantilever span	2.0	ft
Ls1	Simple Span	10.0	ft
def	Design simple span-to-deflection ratio	450	
Principal Loads			
Wd	Weight of bridge rail	9.31	lbs/ft
Ph	Weight of lifting hoist,arm, balancer	100.00	lbs
Pb	Fixture Weight	100.00	lbs
Pl	Part Weight	200.00	lbs
P1	Rated Load Capacity	400.00	lbs
If	Impact Factor	0.25	
Section Properties			
	Knight Standard Rail Section	7500	series
Es	Modulus of Elasticity of Section	10,000	ksi
Fy	Material Yield Strength	35,000	psi
Fu	Ultimate Tensile Strength	38,000	psi
A	Sectional Area	8.21	sq.in.
Ix	Moment of Inertia, major axis	55.11	in^4
Iy	Moment of Inertia, minor axis	22.56	in^4
Sx	Elastic Modulus, major axis	12.00	in^3
rx	Radius of gyration, major axis	2.59	in
Sy	Elastic Modulus, minor axis	10.02	in^3
ry	Radius of gyration, minor axis	1.66	in
Program Output			
Mc	Maximum Bending moment at Lc1 Span	1,019	ft-lbs
Ms	Maximum Bending moment at Ls2 Span	1,366	ft-lbs
R1	Maximum reaction at hanger support R1	667.0	lbs
R2	Minimum reaction at hanger support R2	- 55.3	lbs
Mc_r	Bending Capacity @ cantilever span	12,325	ft lbs
Ms_r	Bending Capacity @ simple span	21,000	ft lbs
dc	Live load deflection at cantilever, in	0.02	OK
ds	Live load deflection at simple span, in	0.03	OK
SF	Working Stress Design, factor of safety	12.10	OK
fb	Maximum Working Stress	1,736	psi
ULL	Ultimate Live Load to yielding of material	10,282	lbs
REFERENCE FACTOR OF SAFETY			
FORD	Allowable Stress	7,000	psi
	Safety Factor	4.03	OKAY
GM	Allowable Stress	7,600	psi
	Safety Factor	438%	OKAY
MMA	Allowable Stress	9,500	psi
	Safety Factor	5.47	OKAY

DESIGN OF RUNWAY 7500 SERIES RAIL			
KNIGHT W.O. #		DATE: 4-Apr-13 TIME : 2:41 PM	
General Parameters			
Lc2	Cantilever span	1.0	ft
Ls2	Simple Span	11.5	ft
def	Design simple span-to-deflection ratio	450	
Principal Loads			
Wd	Weight of runway rail	9.31	lbs/ft
W1	Maximum wheel reaction with no impact	547.0	lbs
W2	Minimum wheel reaction with no impact	- 35.3	lbs
R	User Input Rated Load Capacity	547.0	lbs
P2	Design Load for Runway	547.0	lbs
If	Impact Factor	0.25	
Section Properties			
	Knight Standard Rail Section	7500	series
Es	Modulus of Elasticity of Section	10,000	ksi
Fy	Material Yield Strength	35,000	psi
Fu	Ultimate Tensile Strength	38,000	psi
A	Sectional Area	8.21	sq.in.
Ix	Moment of Inertia, major axis	55.11	in^4
Iy	Moment of Inertia, minor axis	22.56	in^4
Sx	Elastic Modulus, major axis	12.00	in^3
rx	Radius of gyration, major axis	2.59	in
Sy	Elastic Modulus, minor axis	10.02	in^3
ry	Radius of gyration, minor axis	1.66	in
Program Output			
Mc	Maximum Bending moment at Lc2 Span	688	ft-lbs
Ms	Maximum Bending moment at Ls2 Span	2,120	ft-lbs
R3	Maximum reaction at hanger support R3	807	lbs
R4	Minimum reaction at hanger support R4	- 6	lbs
Mc_r	Bending Capacity @ cantilever span	19,885	ft lbs
Ms_r	Bending Capacity @ simple span	21,000	ft lbs
dc	Live load deflection at cantilever, in	0.01	OK
ds	Live load deflection at simple span, in	0.05	OK
SF	Working Stress Design, factor of safety	9.91	OK
fb	Maximum Working Stress	2,120	psi
ULL	Ultimate Live Load to yielding of material	12,145	lbs
REFERENCE FACTOR OF SAFETY			
FORD	Allowable Stress	7,000	psi
	Safety Factor	3.30	OKAY
GM	Allowable Stress	7,600	psi
	Safety Factor	359%	OKAY
MMA	Allowable Stress	9,500	psi
	Safety Factor	4.48	OKAY

KNIGHT W.O. #



KNIGHT 7500 RAIL SERIES SINGLE BRIDGE STATUS:

		OKAY for FORD
LC1 =	2.0 ft	OKAY for GM
LS1 =	10.0 ft	OKAY for MMA

RATED LIFTING LOAD = 400 LBS

LC2 =	1.00 ft	OKAY for GM
LS2 =	11.5 ft	OKAY for MMA

RATED LIFTING LOAD = 547 LBS

Rail Algorithm Programs

- Runway / Single Bridge
- Runway / Dual Bridge
- Runway / Cantilever Rail
- Telescopic Rail
- Tri-Runway
- Floor Mounted Frames