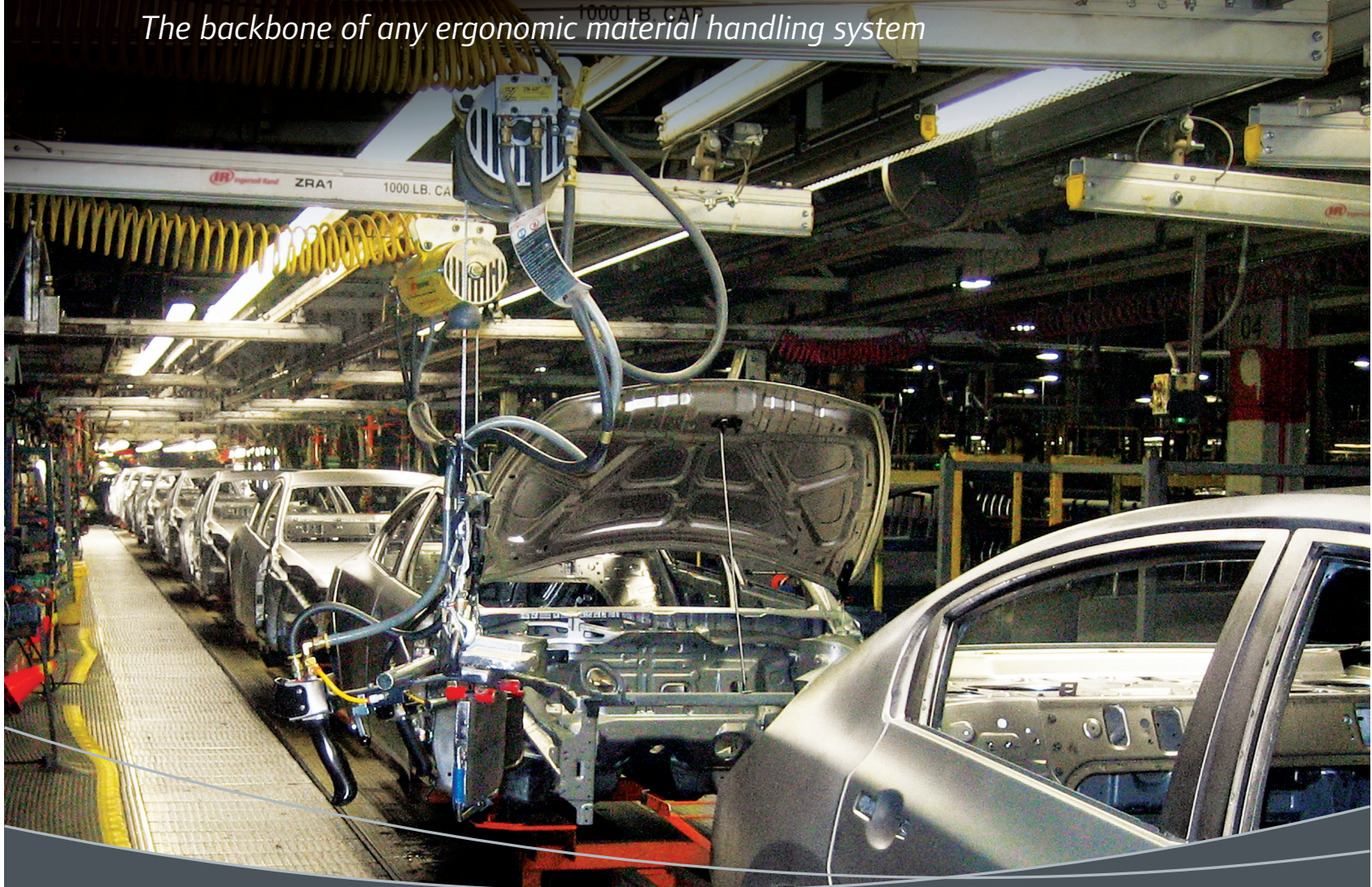


Rail Systems

The backbone of any ergonomic material handling system



Ingersoll Rand offers:

- ▶ Ceiling-supported workstation bridge cranes
- ▶ Freestanding workstation bridge cranes
- ▶ Monorails

MMA-CERTIFIEDSM

MONORAIL Manufacturers[®]
Association

Workstation Cranes & Patented Track Systems

Meets or Exceeds ANSI MH27.1 or MH27.2

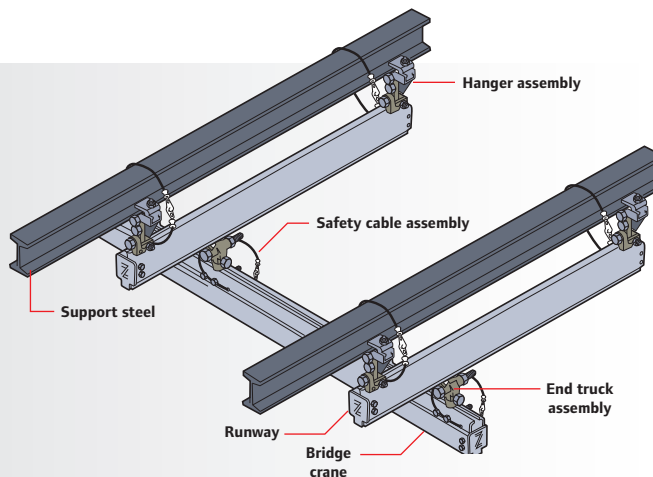
To review compliance requirements and confirm certification, visit www.mmacertified.org

Ingersoll Rand Rail Systems are now MMA-Certified.

Zimmerman Series Rail Systems

Ceiling-supported workstation bridge cranes:

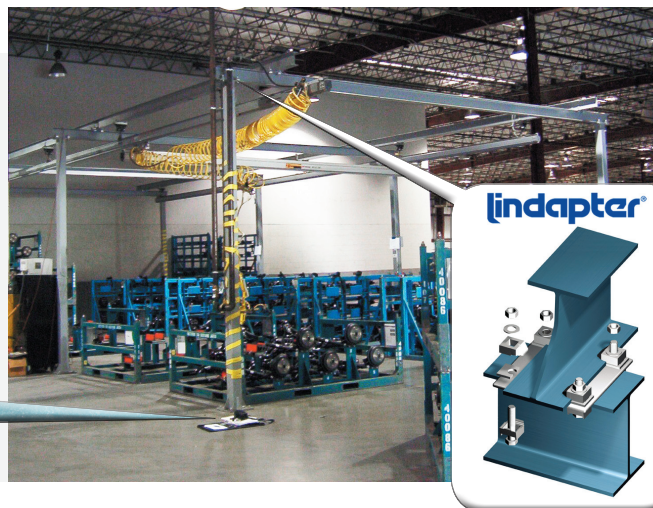
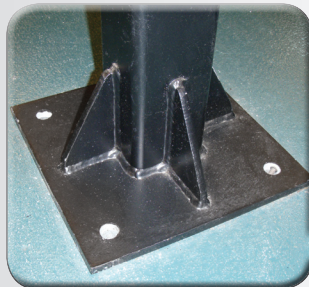
- ▶ Ideal for high-volume production environments with limited floor space
- ▶ Capable of mounting parallel or perpendicular to overhead support steel
- ▶ Provide rectangular coverage for a single workstation, or an entire assembly line with multiple bridge cranes
- ▶ Capacities up to 3,000 lb



Freestanding workstation bridge cranes:

- ▶ Floor supported to eliminate the need for overhead support structure
- ▶ Available in 1/4, 1/2, and 1 ton capacities and 4, 6, 8, 10, and 12 column designs to cover lengths up to 105 ft or more
- ▶ Lindapter® adjustable toe clamps make it simple to align runways for smooth operation
- ▶ Rugged design with gusseted column base plates

- ▶ Custom-designed structures available to meet special applications



Monorails:

- ▶ Provide simple single-axis transfer
- ▶ Curved sections available for navigating obstructions



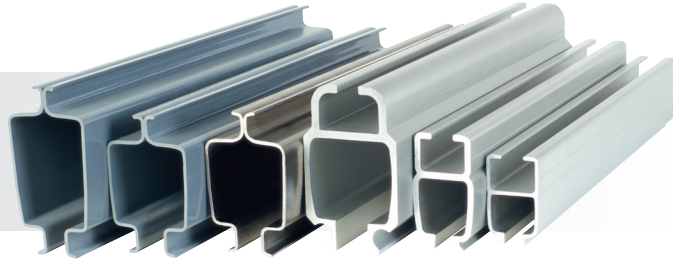
ZRA1		ZRS2	
36"	15°	60"	10°
36"	30°	60"	15°
36"	45°	60"	30°
36"	60°	60"	45°
36"	90°	60"	60°
		60"	90°



Zimmerman Series Rail Systems

Profiles:

Quality steel, aluminum, and stainless steel rail systems
 Ingersoll Rand rails are available in three different materials and five different sizes to meet your specific material handling needs. The enclosed rail systems design reduces the accumulation of dirt and grime on the internal rolling surfaces, thus reducing rolling effort.



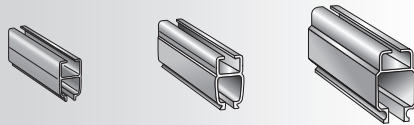
The Ingersoll Rand Rail Systems **ADVANTAGE**

- ▶ **Lightweight and ergonomic** — Less than 1 percent rolling resistance
- ▶ **Precision running surface** — Aluminum, steel, and stainless steel available
- ▶ **Modular and flexible** — Bolted together; no welding required
- ▶ **Clean, maintenance-free operation** — No lubrication required
- ▶ **Safety** — Designed to meet or exceed all national and international standards
- ▶ **Now MMA Certified** — Certified by the Monorail Manufacturers Association to meet or exceed ANSI MH27.2 monorails and underhung cranes



Lightweight aluminum profiles

- ▶ Lightweight and available for long spans
- ▶ Extruded from aluminum alloy 6063-T6
- ▶ Clear anodized for a smooth, clean, corrosive-free surface



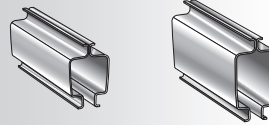
ZRAT

ZRA1

ZRA2

Rugged steel profiles

- ▶ Roll formed from 9 gauge, A569 hot-rolled steel
- ▶ Spot welded with automated welder for maximum strength
- ▶ Powder-coat painted for durability and smoothness

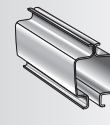


ZRS2

ZRS3

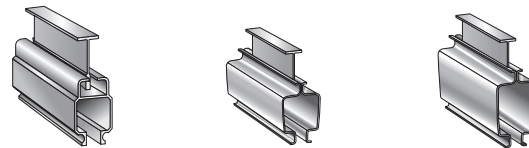
Clean stainless steel

- ▶ Engineered for clean room applications
- ▶ Ideal for the food and pharmaceutical industries
- ▶ Roll formed from 10 gauge, 316 L stainless steel



ZRSS

Part No.	31000		30200		30000		30500		30550		30500S	
	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg
Weight per Foot	lb	2.15	4.10	7.60	8.00	8.90	8.86					
	kg	0.97	1.86	3.45	3.60	4.00	4.01					
Vertical Height	in	3.83	4.90	7.00	5.91	7.13	5.91					
	mm	97	124	177	150	181	150					
Maximum Length	ft	24	30	30	24	24	16					
	m	7	9	9	7	7	5					



ZRA2T

ZRS2T

ZRS3T

Strongback profiles

- ▶ Reinforced profiles for added strength
- ▶ Uses the same hardware as standard profiles
- ▶ Increases span capacity

Part No.	30000T		30500T		30550T	
	lb	kg	lb	kg	lb	kg
Weight per Foot	lb	14.96	11.62	12.52		
	kg	6.78	5.27	5.68		
Vertical Height	in	13.0	7.83	9.20		
	mm	330.0	198.8	233.6		
Maximum Length	ft	30	24	24		
	m	9	7	7		

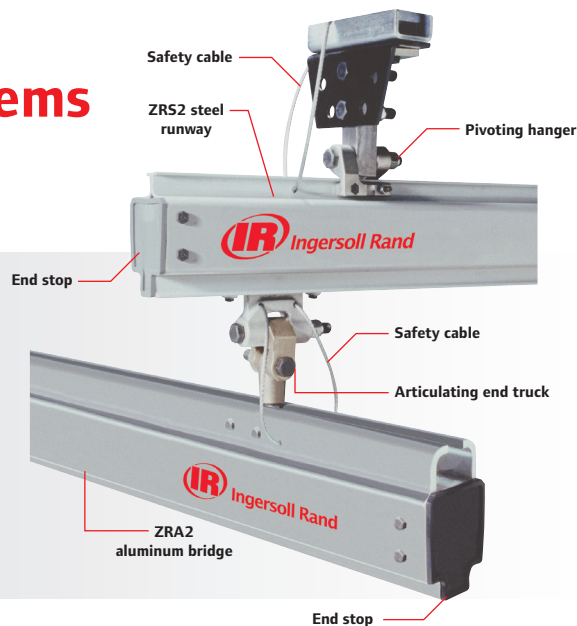
Zimmerman Series Rail Systems

Components:

Safety first

The primary and vital concern of Ingersoll Rand is *safety*.

- ▶ **Deflection** — Ingersoll Rand rail is designed to not exceed 1/450 of span, in accordance with ANSI B30.11 monorail and underhung cranes
- ▶ **Safety cables** — We require the use of safety cables at all moving (hanger and end-truck) suspension points
- ▶ **Redundant end stops** — Available for extra safety
- ▶ **Load ratings** — Clearly marked on both sides of bridge cranes
- ▶ **Safety factor** — All hardware components are rated at a 5 to 1 safety factor based on meticulous tests performed at independent testing laboratories

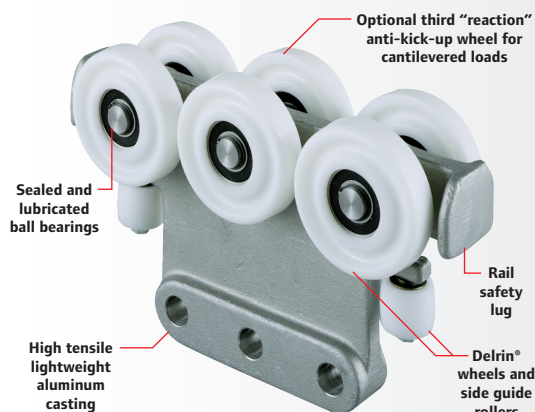


Hangers

- ▶ Attach to I-beam, angle iron, C-channel, and other overhead steel shapes
- ▶ Close and rigid style hangers available for low headroom
- ▶ Adjustable-height hangers provide easy leveling
- ▶ Sway bracing for hanger drops >24" for added safety and stability

Articulating end trucks

- ▶ Maximize the ability of the operator to precisely position the load
- ▶ Reduce fatigue by allowing the operator to move only the portion of the bridge crane near the load
- ▶ Dramatic improvements over typical rigid end-truck systems, which require the user to move the entire mass of the bridge crane for each operation



Advanced trolley design

Ingersoll Rand trolleys are designed to work in conjunction with the enclosed track rail to reduce the rolling effort required to move a load. In fact, only a force equal to 1 percent of the total rolling weight is needed when moving loads.

- ▶ **Lightweight** — Trolleys are made from high-strength, lightweight aluminum castings
- ▶ **Injection molded wheels** — Provide for clean, wear-free operation that resists flattening
- ▶ **Sealed precision bearings** — In wheels and side guide rollers, they provide long life and reduced maintenance
- ▶ **Rail safety lug** — Prevents the body of the trolley from being pulled through the enclosed track rail
- ▶ **Versatile** — Ingersoll Rand-built trolleys are available for use in virtually every manufacturer's enclosed track rail system

Zimmerman Series Rail Systems

Accessories:

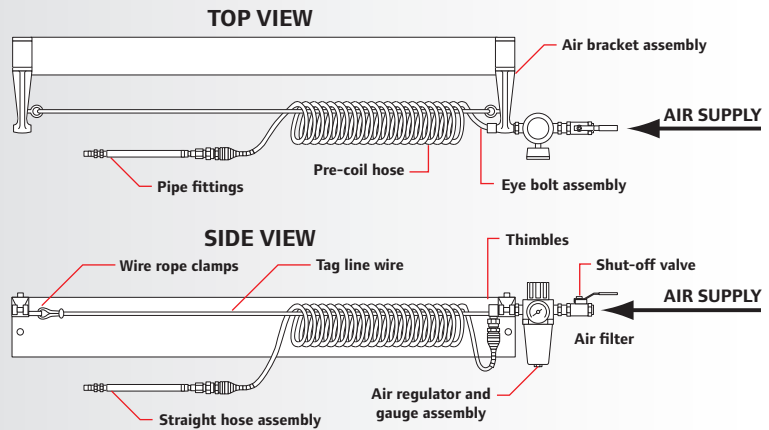
Power supply

Air supply kits:

- ▶ Available in both 3/8" and 1/2" to fit application needs
- ▶ Includes filter regulator to ensure clean regulated air supply
- ▶ Provides complete utilization of the bridge and runway system

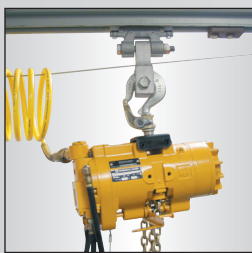
Electrical supply kits:

- ▶ Available with or without flat conductor cable
- ▶ Secured to rail system eliminating interference with operator



Additional accessories:

Assorted load trolleys

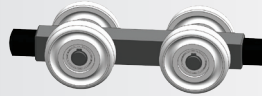


Hoist trolley



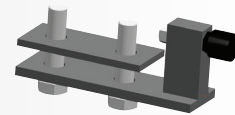
Balancer suspension

Bumper trolley



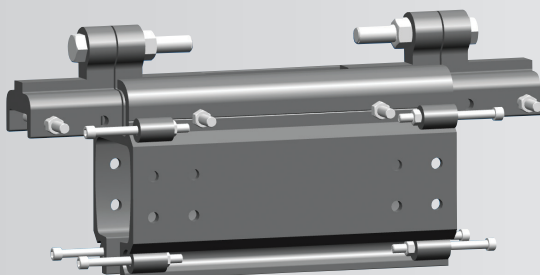
- ▶ Safely separate multiple bridge cranes

Adjustable stop



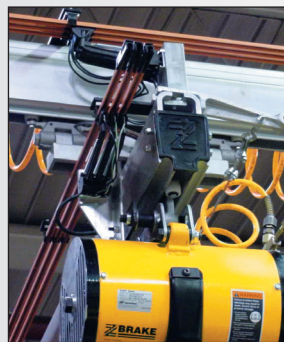
- ▶ Easily adjust travel limit of bridge crane or load trolley

Inspection gates



- ▶ Provide simple inspection of trolleys and end trucks

Insul-8™ electrification



- ▶ Clean electrification for long runs

Festooning trolleys



- ▶ Strap style
- ▶ Stamped
- ▶ Flat cable slider

Also available:

- ▶ Dual bridge kits for carriage applications
- ▶ Bridge extensions for reaching inside machines

Ingersoll Rand offers a full line of accessories to configure rail systems to your specific application

Zimmerman Series Rail Systems

Additional resources:

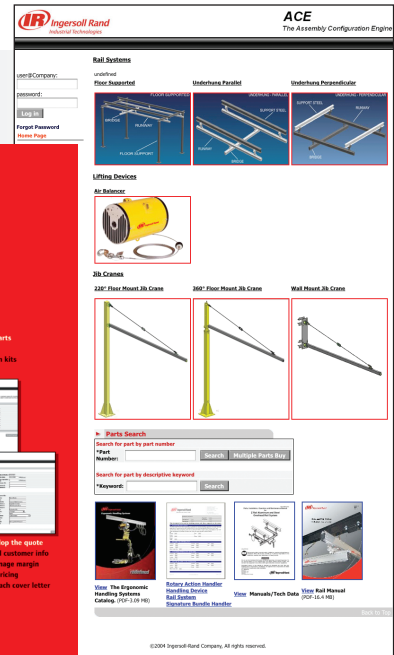
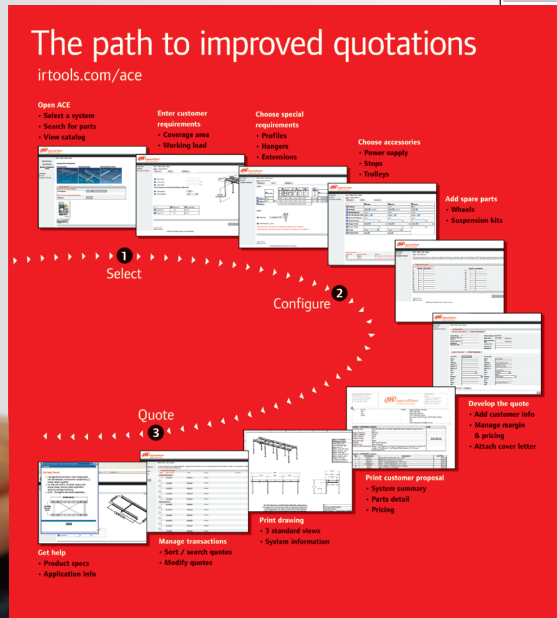
The Assembly Configuration Engine (ACE)

ACE is extremely flexible, enabling you to quote projects in a variety of ways. You can use ACE as a simple, guided selling tool to automatically configure systems based on relatively few inputs, or you can put it to use as a fully customized system with multiple options that you pick and choose.

Quoting with the tool is simply a matter of selecting the type of rail system(s) needed, entering customer requirements, choosing accessories and parts, then inputting customer information for the proposal.

It's as easy as:

- 1 Select
- 2 Configure
- 3 Quote



Available to authorized Ingersoll Rand distributors at: irtools.com/ACE

Rail Systems technical reference

Item No.	Part No.	Description	Qty
1	29587	Lock Nut, S.B. 11	2
2	2952446	S/B - 11 x 2.57 1/8" Guide S	2
3	29597-02	Spring Cable Assembly (Close to line shavers)	1
4	30285	Hanger Kit, 25K, Block, Perpendicular	1
5	30187	Hanger Kit, Wide Flange Beam	1

- ▶ Detailed specifications
- ▶ Load charts
- ▶ Dimensional info

Available at: irtechpubs.com
(Doc. #16598542)

Drawings and CAD files available on the Web

- ▶ 2D drawings
- ▶ 3D solid models
- ▶ Great for plant layouts

Available at: irtools.com/lifting