



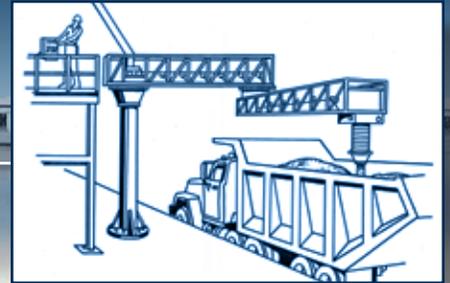
# DYNATEK

ARTICULATED LOADING SYSTEMS

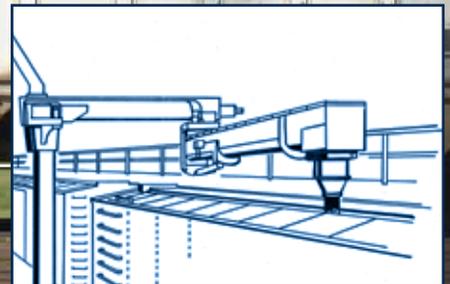
- SCREW CONVEYING
- BELT CONVEYING
- DRAG CONVEYING
- PNEUMATIC CONVEYING



TRUCK



RAIL



BARGE



REDUCES LOAD TIME — FLEXIBLE • RELIABLE • ECONOMICAL

# THE FAST, VERSATILE, ECONOMICAL WAY TO LOAD RAIL CARS, TRUCKS & BARGES

## DYNATEK ARTICULATED LOADING SYSTEMS

Rugged, versatile dry bulk material loaders that will save you time and money!

- Railcar Loading
- Truck Loading
- Barge Loading

Cost effective loading depends on delivering product to very specific hatch locations and loading points in the transport vehicle quickly and easily. That's why DYNATEK's Articulated Loading Conveyors have been selected time and time again by plant owners and engineering companies for rail, truck and barge loading applications in the power generation, chemical, biofuels, plastics, food and grain industries.

### DYNATEK's EconoLoader is built for tough duty.

Built for reliability and ease of operation by a single person, DYNATEK's EconoLoader efficiently and cleanly loads a wide variety of materials in the most demanding environments. Designed for a lifetime of trouble-free duty, our proven equipment is the result of decades of experience and can be custom tailored for your specific needs by our skilled engineers.

### DYNATEK's EconoLoader is versatile.

The EconoLoader will reduce or eliminate the need to move the rail car, truck or barge during the loading process by allowing the loading conveyor and discharge spout to move instead. With nearly 330 degrees of remotely controlled powered rotation and up to a 30 foot reach radius, EconoLoader can be horizontally and vertically positioned quickly and accurately over each loading hatch as needed. Choose from screw, belt, drag, air slide or pneumatic conveying solutions designed to move the products and volumes you require in record time.

### DYNATEK's EconoLoader will save you money!

We challenge other material-handling manufacturers to beat the purchase price, efficient installation, cost of operation, and after sales support associated with every DYNATEK EconoLoader Conveying System. EconoLoader is practically maintenance free and delivers superior, versatile and proven articulated loading day in and day out. Years of application-proven dry bulk material handling expertise assures you that DYNATEK's EconoLoader is optimally designed meet your loading needs while saving you time and money.



Single operator pendant control



Built tough for lifelong service



Installed in as little as two days



Efficient and versatile

### Time proven technology combined with today's advancements.

Applications have evolved over the years, yet the functional design, combining articulated arms with conventional conveying methods, continues to stand the test of time. DYNATEK has taken this timeless concept and applied today's advancements in technology and automation to offer unique solutions for your loading applications. The innovative spirit and standard of excellence inherent in our founder, George Manierre, lives on and is fostered in the culture of our organization and every EconoLoader we design and build today.

### Engineering capabilities.

Each EconoLoader is engineered to meet the optimal needs of your application. Structural design, method of conveying, conveying capacities, wind load, and site parameters are all carefully considered when designing a bulk loading installation.

You can rely on an outstanding level of applications expertise and engineering know-how behind all DYNATEK products. DYNATEK engineers provide fast and efficient designs and layouts using state-of-the-art CAD systems. Finite element analysis is used as required to assure maximum strength at all stress points for sound, strong, trouble-free operation. Stress analysis techniques combined with classical engineering mechanics assure a sound and safe loading system.

### Power-driven arms.

Positioning the conveying arms of the EconoLoader is done using slewing rings which are externally gear-driven using pinion gears and cyclo-drive gearmotors. This configuration provides accurate, positive positioning of the loading conveyor discharge, while virtually assuring no damage is caused to the drive mechanism if inadvertently forced by hand or other manual means. All DYNATEK bulk loaders are fully assembled and factory tested prior to shipment. Additionally, our customers are encouraged to visit our plant to inspect and operate their new loading system prior to delivery.

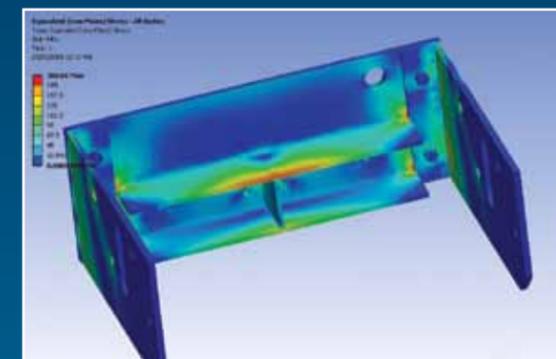
### Mounting.

The EconoLoader can be mounted on a post, platform or haunch. We can work with your existing structure, propose a standard solution or adapt the mounting to your individual specifications.

Best of all, DYNATEK will have your EconoLoader up and running in as little as two days! Our material handling design experience, coupled with modern facilities and manufacturing techniques, plus in-stock materials and components, allows for rapid fabrication and delivery. Once on-site, DYNATEK's installation experts will support your personnel to ensure fast and easy installation - two days or less.



Tilting arm



Finite element analysis



Slewing bearing, pinion gear and cyclo-drive gearmotor



Post, platform or haunch mount (haunch mount shown)

# EQUIPMENT FEATURES & OPTIONS

## Choose from these conveying methods:

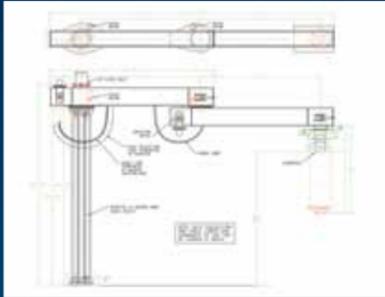
- Screw
- Belt
- Airslide
- Drag
- Pneumatic



Screw conveying



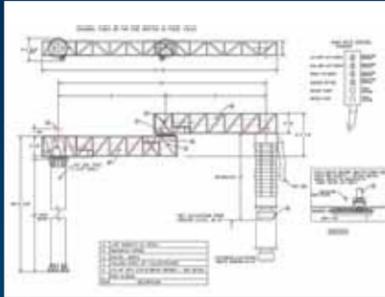
Belt conveying



Airslide conveying



Drag conveying



Pneumatic conveying

## Articulated Conveyor Motion:

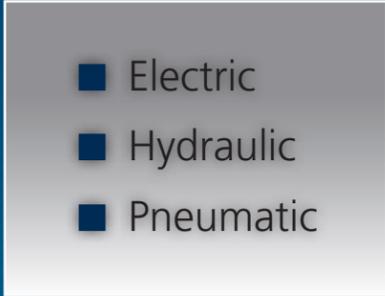
- Primary arm - 330 degrees of left / right rotation
- Loading arm - 330 degrees of left / right rotation
- Drive power versatility



Primary arm pivot



Loading arm pivot



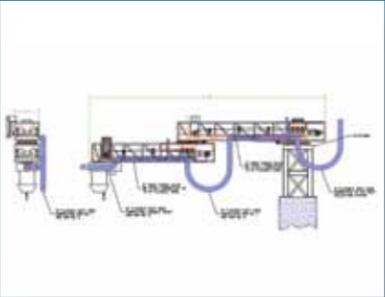
Drive choices

## Mounting Options:

- Post
- Platform
- Haunch



Post mount



Platform mount



Haunch mount

## Options include:

- Retractable loading spout with dust recovery
- Vertical positioning of discharge arm
- Service mezzanines
- Special control & control enclosure configurations
- Special purpose loader designs



Retractable loading spout with dust collection



Vertical positioning of discharge arm



Trolley-powered truck loader



Post-mounted drag conveyor loader for DDGS

# STANDARD FEATURES

## Controls.

DYNATEK is equipped to provide the motor control panel as well. The panel provides complete control of your bulk loader operations and can be interfaced with existing in-feed conveyors. The panel can be located wherever desired at time of installation. All panels house motor starters, control voltage transformers, fused motor controls and disconnects, and wiring terminal blocks. A programmable logic controller (PLC) and custom programming can be added to provide more comprehensive control of the material supply system and the bulk loading process.

Your DYNATEK bulk loader is operated using a NEMA 4 hand-held pendant control. The operator drives the bulk loader to the loading point, lowers the loading spout down to the vehicle, and starts the bulk loader and infeed conveyors. Optionally, control can be provided from either the hand-held pendant or from controls on the control panel door.

## Dust recovery load-out.

Dust-free bulk products can be discharged straight from the EconoLoader outlet into the transport vehicle being loaded. For dusty materials, DYNATEK EconoLoaders are compatible with all types of retractable and dust recovery load-out spouts. When equipped with optional raise/lower drives, loading spouts can be provided that give you 3 to 60 feet of vertical travel.



Control panel



Dust recovery



Accurate positioning

## Standard features for DYNATEK EconoLoaders include:

- Single person, pendant-based loading control
- Heavy duty structural frame construction
- Screw, belt, drag, air slide or pneumatic conveying solutions
- Loading rates of up to 25,000 cubic feet per hour
- Up to 30 ft. of reach radius
- Powered articulation at both pivot points
- Cyclo-drive type gear motors and pinion gear drives
- Slewing bearings with capacities between 80,000 and 443,000 ft-lbs (application dependent)
- Conveyor rotation speeds from 1/2 to 1 RPM
- NEMA 4 junction boxes, control enclosures and control pendants
- White metal sand blast with epoxy gray primer and polyurethane final coat

## Experienced and Tested

Over the years, DYNATEK has provided a myriad of unique loading solutions to customers like BASF, Amoco Chemicals, Akzo Nobel, Dupont, General Mills, Valero and Nucor Steel. So challenge us with your unique or difficult bulk loading requirements and find out why DYNATEK is your best choice for articulated loading conveyors.

### Remote control option

Safe, accurate vertical arm adjustment allows desired feed rates to a variety of loadout points.

### Powered arm articulation

Nearly 330 degrees of arm rotation for easy pinpoint loading.

### Available in screw, drag, belt or airslide conveying

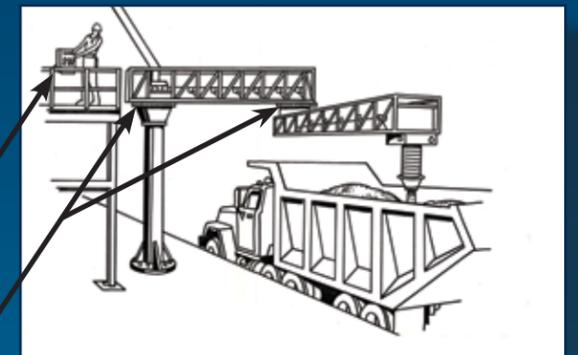
to best load your particular product at the volume you require.

### Vertical positioning available

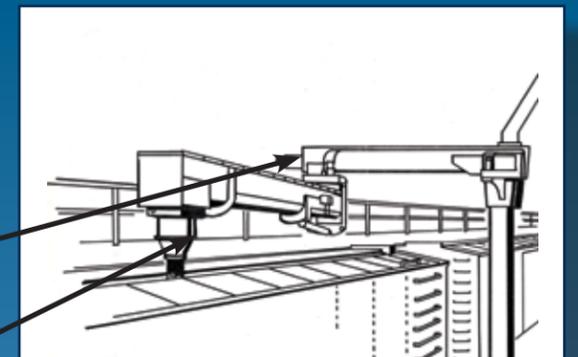
For accurate location of finished load-out point.

### Dust collection/load-out spout option

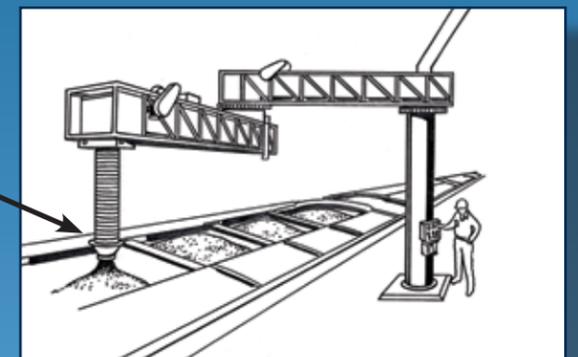
Easily mounted to the loader.



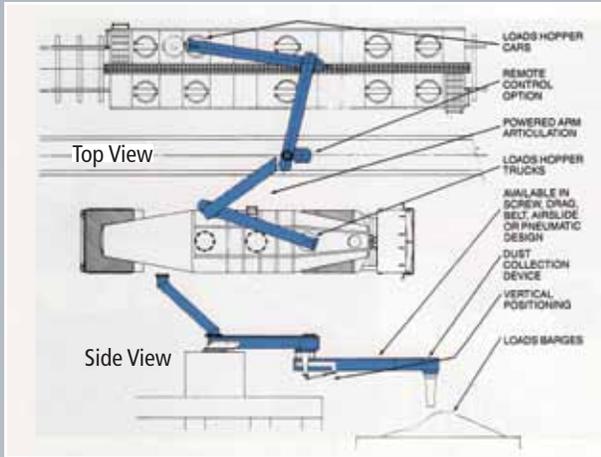
Truck



Rail



Barge



Load rail cars and trucks with the same loader



Dual bay rail car and truck loading terminal



DYNATEK headquarters & manufacturing facility, North Prairie, WI USA



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ARTICULATED LOADING SYSTEMS

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