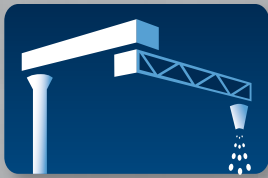


EconoLoader™ - Screw Conveyor Design



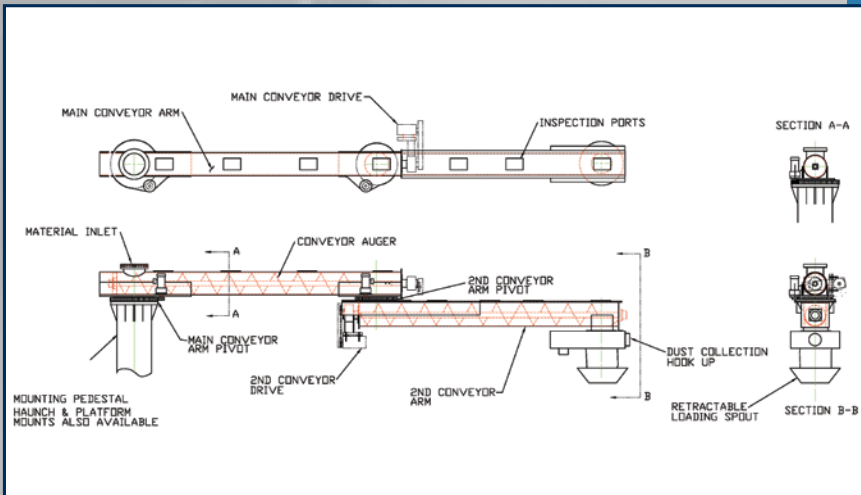
DYNATEK
ARTICULATED LOADING SYSTEMS

Screw Conveyor-based Loading Systems

DYNATEK's screw conveyor-based EconoLoader™ features the design versatility required to accommodate the broad range of dry bulk solids loading applications found in almost every industry; carbon or stainless steel construction - special trough designs - special flighting and pitch designs - hardened augers - augers with UHMW plastic or wire brush edge treatments. It's this design versatility which enables DYNATEK to engineer an articulated screw conveyor-based loading system for almost any powder or uniformly-sized bulk material. And it's what we've been doing for years.



DYNATEK EconoLoader™ Screw Conveyor loading systems are designed for maximum reliability. Materials of construction, slewing bearing ratings, pinion gears and drives are all carefully selected and the overall design is kept as simple as possible. The result - a service life of 25 years or more.



EconoLoader™ Specifications

Loader Type	Articulated screw conveyor
Construction	Main Conveyor Arm = Carbon steel structural conveying tube and screw 2nd Conveyor Arm = Carbon steel structural truss frame, trough and conveying screw
Loader Reach	22 feet from inlet CL to discharge CL for truck loading. 27 feet from inlet CL to discharge CL for railcar loading. (longer lengths are optionally available)
Loading Rate	Conveying screw diameters up to 16 inches can deliver material at rates up to 2500 cubic feet / hour (Actual rates are material dependent)
Arm Positioning	Hydraulic or electromechanically-driven slewing bearings with capacities between 80,000 and 443,000 ft-lbs, rotate each arm up to 330 degrees horizontally at ½ - 1 RPM to provide articulated motion.
Load-out	Retractable Loading spouts with 3 to 60 feet of vertical travel and dust recovery
Control	Fully wired NEMA 4 control panel with hand-held control pendant allows a single operator to rotate both conveyor arms, raise/lower the loading spout and start/stop conveyor operation. Control voltage = 120 VAC, 60 HZ, 1 PH Motor voltage = 230 / 460 VAC, 60 HZ, 3 PH (other NEMA-rated enclosures and voltages are available)
Finish	White metal sand blast with gray epoxy primer and polyurethane final coat.

EconoLoader™ - Screw Conveyor Design

Loader Moves – Not the Transport Vehicle

Slewing bearings allow both conveyor sections to rotate up to 330 degrees and reach up to 30 ft. This “articulated motion” lets you precisely position the discharge point without having to move the truck, railcar or barge.



Load Point Control & Dust Recovery



Retractable loading spouts with or without dust collection, insure precise, clean loading.



Easy Pendant – based Operation

Operation of the EconoLoader couldn't be easier. A NEMA 4, hand-held pendant lets the operator drive the loader to the loading point, lower the loading spout into the hatch and start the screw conveyors.

Design Flexibility

Every DYNATEK EconoLoader is custom-engineered for the application so filling special customer requests is the norm. Here are some examples:

- Stainless steel frame, trough and auger construction
- Special flighting designs, pitch and edge finishes
- Loader reach radii > 27 ft
- Post, haunch or platform mounting
- Abrasion-resistant in-feed and discharge transitions
- In-feed control gates
- Special control features and DCS interfaces
- NEMA 7 or 9 control housings

SCREW DIAMETER (INCHES)	DEGREE OF TROUGH LOADING	MAXIMUM RPM	CONVEYING RATE (CU. FT. / HR. / RPM)
9	15	55	2.7
9	30	60-100*	5.5
9	45	155	8.2
12	15	50	6.5
12	30	50-90*	12.9
12	45	145	19.4
14	15	50	10.4
14	30	50-85*	20.8
14	45	140	31.2
16	15	45	15.6
16	30	45-80*	31.2
16	45	130	46.7

*Slower speeds recommended for abrasive materials

How to use the table:

The following example shows the conveying rate for a screw conveyor with a 12" diameter screw and 30% trough loading, rotating at 70 RPM.

70 RPM X 12.9 cu.ft. = 903 cu.ft. per hour

Experienced and Tested

Over the years, DYNATEK has supplied a wide assortment of unique articulated loading solutions to customers like BASF, General Mills, Valero and Nucor Steel. Using screw, belt, drag and air slide conveyor based designs, DYNATEK Loaders are being used throughout the country to load materials like DDGS, calcium carbonate, silica, salt, soy meal, coffee and a host of other materials. So challenge us with your loading requirements, no matter how difficult and find out why so many companies prefer DYNATEK Articulated Loading Systems.



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