IDEAL INDUSTRIES has been making conveyors in the agricultural and recycling industries for over 25 years. Our IDEAL conveyor is designed specifically for each application, as material types and inclination varies with each installation, virtually any configuration can be implemented. Our engineering team will analyze each quotation request and determine which series application is the best conveyor for the job at the most economical price.

SPECIFICATIONS:
IDEAL capacities are based on 100% loading of free-flowing bulk materials at an average weight of 48 pounds per cubic foot for a horizontal choke feed application. Selection of conveyors fed by a controlled flow should be based on 95% of listed capacities. 150 through 175 F.P.M. is the most popular chain speed range for the H conveyor series. 50 through 100 F.P.M is the most popular speed for the I, L, and S series conveyors. Special inlets, hoppers, surge bins, etc. can be easily designed and quoted with conveyors.

SUPPORT:
IDEAL maintains a complete file on each conveyor sold. If you ever need a replacement part or drawing copy, we will have it readily available.

QUOTE:
For a quote contact IDEAL INDUSTRIES 1-800-332-0005 or fax 319-472-5115. Visit us at www.idealii.com for more information.

Components are jig fixtured. All conveyors come with a detailed print for installation including a complete parts listing for future maintenance.

Also included is a general installation procedure guide. Each conveyor is specifically designed with recommended head shaft r.p.m., chain speed and steel components gauging, per type of material conveyed. Every part of an IDEAL conveyor is replaceable without removal of the chain.
Drag Chain Conveyor
Installation and Operation Manual

INTRODUCTION
We encourage all personnel operating, installing, or maintaining this equipment to thoroughly read the manual before proceeding. Successful operation is our intention but if you are in need of technical advice or support, we encourage you to contact your local dealer/distributor. You can also contact the factory at any time during regular business hours at 800-332-0005. Our commitment is to you the customer and we encourage your input and suggestions to assist us in improving our product.

This manual covers general information on drag conveyor installation. Due to the varying sizes of equipment it would be very difficult to cover every aspect of installation. We offer one method for installing drag conveyors but many times the contractor’s experience will improve the ease of installation. Occasionally, conditions and surroundings do not allow certain practices during the installation of equipment. We cannot be responsible for the installation of the drag conveyor. Please refer to the installation drawing included for the proper installation sequence.

EQUIPMENT INFORMATION

MODEL NUMBER: ________________________________

SERIAL NUMBER: ________________________________

DATE PURCHASED: ________________________________

DEALER / DISTRIBUTOR: ________________________________
SAFETY INFORMATION

It is the responsibility of the buyer to make this manual available to the person or persons involved with installation, operation or maintenance of this equipment. Guards and safety labels have been installed by the manufacturer. These devices are not to be removed, altered, or defaced. Doing so will void all liability and responsibility of the manufacturer. Power lock out is very important prior to installation, adjustment, and maintenance of the unit.

GENERAL SAFETY PRECAUTIONS

To avoid unsafe or hazardous conditions, the following safeguard provisions must be strictly observed.

1. The housings, covers, and guards are necessary to prevent a person from entering, reaching, or falling into the machinery, which may result in serious injury. DO NOT STEP OR WALK ON CONVEYOR COVERS, GRATING, OR POWER TRANSMISSION GUARDS.

EXPOSED CONVEYORS AND MOVING PARTS CAN CAUSE SEVERE INJURY
LOCK OUT POWER BEFORE REMOVING COVER OR INSPECTION DOOR
2. Our standard conveyor incorporates a complete enclosure. However, if the conveyor must have an open housing as a condition of application, the entire open area must be guarded by railing, fence, and/or rugged safety grating with warning signage posted.

3. It is the responsibility of the installation contractor, owner, and user to install, maintain, and operate the conveyor components and conveyor assemblies manufactured by IDEAL in such a manner as to comply with the occupational safety and health act, state and local laws ordinances, and the American National Standard Institute Safety Codes.

4. It is the responsibility of the owner, and/or user to inspect the conveyor for proper safety stickers. If the factory supplied stickers have been defaced or altered, new safety stickers will be supplied upon request at no charge.

5. It is recommended to implement and enforce an in-plant safety program, and provide safety training to all your employees for all IDEAL conveyors.

6. All inlets and discharge areas may have the potential of causing bodily injury due to the product flow and/or installation. The following safety stickers should be posted in these areas.
EQUIPMENT INSTALLATION AND ASSEMBLY

OPERATION - SAFETY

1. IDEAL conveyors shall not be operated unless the conveyor housing is completely enclosed from the moving elements and the power transmission guards are in place.

2. NEVER place hands and/or feet in any of the conveyor openings.

3. NEVER over load or use the conveyor in any manner other than that which it was originally designed.

4. NEVER poke or prod lodged material into the conveyor while it is running.

5. ALWAYS use proper lock out procedures while doing work of any nature on the equipment.

6. ALWAYS keep the area surrounding the conveyor and drive free of debris, obstacles, and product build up.

7. NEVER operate conveyor without covers, guards, grating, or other factory supplied safety devices.

Failure to follow these precautions will void all manufactures warranties and liabilities, which may cause serious personal injury or damage to the conveyor. IDEAL conveyor inlet and discharge openings are designed to connect to other equipment so that the flow of material into and out of that conveyor is completely enclosed. Components supplied or manufactured by other than IDEAL are not the responsibility of IDEAL.

ELECTRICAL SAFETY

1. Electrical controls must conform to the National Electrical Code, the National Electrical Safety Code, all state and local codes and other ordinances that apply. It is the responsibility of the contractor, installer, owner, and user to supplement the materials and services necessary to make the conveyor installation comply with these laws.

AVAILABLE OPTIONAL SAFETY DEVICES

1. ANTI-PLUG DEVICES consisting of a diaphragm sensor usually located at discharge points. This device is designed to shut off the conveyor or conveyor flow if the product flow being taken away from the conveyor becomes altered OR stopped.

2. OVERFLOW DEVICES consisting of a hinged door connected to a limit switch to shut off the conveyor or conveyor flow when the discharge is interrupted, plugged, or full.

3. ZERO SPEED SWITCH consisting of a stop switch usually mounted to the tail shaft to shut power off to the conveyor in the event of power surge, loss of power, or the conveyor becoming overloaded.

4. OVER LOAD PROTECTION consisting of shear pins, torque limiters, etc. are designed to shut off power whenever operation of the conveyor is stopped as a result of excessive material or presence of foreign objects.

5. DISCONNECT SWITCHES are generally located near the drive end of the conveyor with power lock out provisions.

***Applicable manufacture’s manuals for the above optional switches are located at the back of this manual***
EQUIPMENT INSTALLATION AND ASSEMBLY

CHECK, IDENTIFY, AND INSPECT PARTS

Each order should be checked against packing lists and bill of lading to assure completeness of order. Compare part numbers from paperwork to the parts themselves. Any discrepancies should be clarified immediately. Any shortages or damages must be noted on the bill of lading and claims must be filed against the freight company.

When unloading equipment, check all items with the Packing List Bill of Materials and identify large parts along with small packages of nuts, bolts, and washers. Small packages are easily lost in containers or boxes, check all packaging prior to disposal. Keep all packages together for easy identification when required for assembly. If installation is delayed after receiving parts, store together for ease of identification and location. Keep all paperwork together for future reference.

1. Prior to installation, please check all set-screws, keyways, clamps and fasteners that may have been installed by the manufacturer. These items may have worked loose in transit.

2. Check lubricant levels in all bearings, drives, etc. per factory supplied service manuals located at the back of this book.

3. All tubular style take up assemblies are wired together for shipping. Disconnect prior to operation. The take-up assembly should be greased prior to use. It is not filled with grease at the factory.

4. Assemble conveyor sections with flange bolts finger tight only at first. A typical conveyor will be required to be supported at 15' intervals. It is recommended to use caulk between end flanges to achieve the best dust and weather proof seal. Consult the factory for all other support applications.

5. Remove the covers. Check alignment of the tough bottom center line by pulling a string through the conveyor. Tighten the flange bolts making sure the conveyor sections are flush on the sides and bottom and do not move out of alignment.

6. Install the chain and paddle assemblies into the conveyor by connecting the chain with the master links. Pull the chain ends as tight as possible to minimize the take up adjustment amount.

7. Chain tension can be checked by removing the top cover section near the tail. Electric lock out is required before removal of the covers. Adjust the manual take-ups evenly to prevent excessive wear on one side of the sprocket. Typically the proper tension is checked by twisting the chain with a wrench under 10 degrees. If the chain can be twisted beyond 10 degrees, chain adjustment is required.

8. Install the conveyor covers in proper sequence with the factory supplied hardware.

9. Check the conveyor discharge area is clear from obstructions.

10. Operate the conveyor empty for a short timeframe (up to 5-6 hours) prior to running loaded. Observe for abnormal vibration, noise, bearing temperature and drive alignment during this break in period. Re-check all set-screws, chain tension, and alignment prior to introducing product to the conveyor.

11. Start and stop the conveyor several times checking same items from the previous step.

12. After handling product for the first few days it is recommended to inspect the conveyor paying particular attention to the items listed in number 10 above.
DRIVES AND LUBRICATION

IMPORTANT! Check all drive components for proper lubrication. Refer to the instructions included with the drive unit for proper oil requirements.

Bearings are lubricated at the factory and do not need to be greased until after initial running of elevator. When greasing the bearings DO NOT over lubricate. Seals can be damaged and significantly reduce the life of bearings.

MAINTENANCE

It is normal for the chain to stretch after initial installation. Also, drive belts may stretch and need further adjustment. This stretching can be expected during the first few weeks of operation. Over tightening may cause premature stretch or the chain may have a strobe effect. V belt tensioning can be adjusted simply by adjusting the motor that is attached to the adjustable motor mount.

Proper maintenance will insure long life and safe operation of the unit. Regular inspection of fluid levels, grease, belt and chain tension general alignment, and other moveable components is recommended. Other routine maintenance checks may include loose nuts and bolts, electrical wiring, contacts, switched, misalignment, support inspection, and oil content for gearboxes and backstops if equipped.

CONCLUSION

We appreciate your business. Feel free to call, fax, or write us regarding your response to the equipment that we have supplied. We look forward to hearing from you on how we might make any improvements or modifications for the betterment of our quality product.

IDEAL

CONVEYANCE

1705 E STREET WEST • VINTON, IOWA 52349

T: 800-332-0005 • T: 319-472-5224 • F: 319-472-5115

www.idealii.com
PRICE AND ACCEPTANCE. All quotations are valid only for thirty days from the date stated on the quotation unless otherwise agreed to in writing. The sale of goods is completed when the order is accepted at IDEAL facilities.

TERMS OF PAYMENT. To customers having established credit, our terms are Net 30. In most instances, we require a down payment with the purchase order which is stated on the quotation. Orders will not be processed until receipt of the down payment. Accounts past due will be billed a service charge of 1 1/2% per month.

INDEMNIFICATION. Purchaser agrees to indemnify and hold IDEAL harmless for the customer’s failure to follow all assembly and safety instructions set forth by IDEAL and the Conveyor Equipment Manufacturing Association (CEMA) regulations as they relate to assembly, safety stickers, safety shields, door and latch openings, etc.

WARRANTY. IDEAL WARRANTS ALL PRODUCTS MANUFACTURED BY IDEAL TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP UNDER NORMAL USAGE AND CONDITIONS FOR A PERIOD OF TWELVE MONTHS AFTER RETAIL SALE OF THE ORIGINAL ENDUSER OF SUCH PRODUCTS. IDEAL’S ONLY OBLIGATION IS, AND PURCHASER’S SOLE REMEDY SHALL BE, FOR IDEAL TO REPAIR OR REPLACE, AT IDEAL’S SOLE JUDGMENT, DEFECT DUE TO MATERIALS OR WORKMANSHIP.

ALL DELIVERY AND SHIPMENT CHARGES TO AND FROM IDEAL’S FACTORY WILL BE THE PURCHASER'S RESPONSIBILITY, EXPENSES INCURRED BY, OR ON BEHALF OF THE PURCHASER, WITHOUT PRIOR WRITTEN AUTHORIZATION FROM AN AUTHORIZED EMPLOYEE OF IDEAL, SHALL BE THE SOLE RESPONSIBILITY OF THE PURCHASER.

EXCEPT FOR THE ABOVE STATED EXPRESS LIMITED WARRANTIES, IDEAL MAKES NO WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE IN CONNECTION WITH (1) PRODUCT MANUFACTURED OR SOLD BY IDEAL OR (2) ANYADVICE, INSTRUCTION, RECOMMENDATION, OR SUGGESTION PROVIDED BY AN AGENT, REPRESENTATIVE OR EMPLOYEE OF IDEAL REGARDING OR RELATED TO THE CONFIGURATION, INSTALLATION, LAYOUT, SUITABILITY FOR A PARTICULAR PURPOSE, OR DESIGN OF SUCH PRODUCT OR PRODUCTS.

IN NO EVENT SHALL IDEAL BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOSS OF ANTICIPATED PROFITS OR BENEFITS.

PURCHASER’S SOLE AND EXCLUSIVE REMEDY SHALL BE LIMITED TO THAT STATED ABOVE. WHICH SHALL NOT EXCEED THE AMOUNT PAID FOR THE PRODUCT PURCHASED. THIS WARRANTY IS NOT TRANSFERABLE AND APPLIES ONLY TO THE ORIGINAL PURCHASER. IDEAL SHALL HAVE NO OBLIGATION OR RESPONSIBILITY FOR ANY REPRESENTATIVE OR WARRANTIES MADE BY OR ON BEHALF OF ANY DEALER, AGENT OR DISTRIBUTOR OF IDEAL.

IDEAL ASSUMES NO RESPONSIBILITY FOR FIELD MODIFICATIONS OR ERECTION DEFECTS, WHICH CREATE STRUCTURAL PROBLEMS. MODIFICATIONS TO THE PRODUCT NOT SPECIFICALLY COVERED BY THIS MANUAL WILL NULLIFY ANY PRODUCT WARRANTY THAT MIGHT HAVE BEEN OTHERWISE AVAILABLE.

THE FOREGOING WARRANTY SHALL NOT COVER PRODUCTS OR PARTS, WHICH HAVE BEEN DAMAGED BY NEGLECTIVE USE, MISUSE, ALTERATION OR ACCIDENT. THIS WARRANTY COVERS ONLY THE PRODUCTS MANUFACTURED BY IDEAL. THIS WARRANTY IS EXCLUSIVE AND INLIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED. IDEAL RESERVES THE RIGHT TO MAKE DESIGN OR SPECIFICATION CHANGES AT ANYTIME.

PRIOR TO INSTALLATION, PURCHASER HAS THE RESPONSIBILITY TO RESEARCH AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL CODES, WHICH MAY APPLY TO THE LOCATION AND INSTALLATION.

TITLE AND RISK OF LOSS. Possession may be given before the final payment is due but, in order to protect IDEAL against payment default it is here by agreed: 1) Purchaser gives IDEAL a security interest in the equipment. And the proceeds of the equipment (if the equipment is sold to a third party). Purchaser shall allow IDEAL to enter the premises of the Purchaser peacefully to take back the equipment or to receive the proceeds of the sale of the equipment. This Agreement shall act as a first lien or any such proceeds and the Purchaser agrees to allow IDEAL to file this Agreement in the Secretary of State’s office of the State in which the Purchaser is located to perfect IDEAL’s lien, and to secure payment for the sale of the equipment; 2) No part of this equipment shall be considered a fixture or incorporated into the realty by virtue of its attachment to the realty; 3) IDEAL shall have the right to elect a claim of merchant’s lien against the property upon which this material is situated and waive IDEAL’s rights to repossess under paragraphs 1 and 2 above any time, before expiration of terms fixed by law for filing the mechanic lien.

The title and right to possess this material and equipment shall remain with IDEAL until full and final payment is made. Even though title remains in the Seller, risk of loss or damage is the responsibility of the Purchaser once the equipment is delivered to the shipping site.
CONTRACTS. All prices are F.O.B. Vinton, IA, unless otherwise agreed upon. IDEAL’s responsibility and liability ends when delivery is made to the shipping agency. Claims for shortages or damages to shipments while in transit shall be made against the carrier.

PROMISE OF DELIVERY. Promise of delivery represents IDEAL’s estimate of time necessary to complete the work. Failure to complete within the time estimated will not warrant cancellation of the order unless upon terms mutually agreed which will indemnify IDEAL against all economic loss.

CANCELLATION. All orders are considered binding contracts and are not subject to cancellation.

FREIGHT ALLOWANCE. All sales are exfactory. Proposals or quotations that are based upon freight allowance to first destination will have freight prepaid to freight terminal or nearest railroad siding at destination. Any extra transportation costs incurred by the Purchaser shall be at Purchaser’s own specific routing instructions and must be done by Purchaser.

RETURN GOODS. No material shall be returned to IDEAL for credit without IDEAL’s written pre-authorization.

SPECIAL TAXES. Any imposed duty, federal, city, or state tax, if and when assessed is to be paid by the Purchaser.

SAFETY DEVICES. Seller shall not be required to furnish any safety devices except those specified there in except that in the event further safety devices are required by Purchaser; Seller will, at Purchaser’s written request and at Purchaser’s expense furnish the items; upon receipt of proper specifications therefore. The Seller, in no way, shall be liable or responsible for injuries or death to persons or damages to property rising out of the use of operation of equipment sold and the Purchaser assumes all such responsibility and liability.

INTERPRETATION OF CONTRACTS AND JURISDICTION. All contracts and purchase orders are interpreted under the law of the State of Iowa and each Purchase agrees to be subject to services of process in the State of Iowa for all causes of action. In the event that either party incurs costs such as court costs or legal fees for the enforcement of this contract, the Parties agree that the prevailing party in litigation shall be able to collect all costs, including but not limited to attorney’s fees associated with the enforcement of the terms and conditions in this Agreement.

IDEAL

By: _______________________________  For: _______________________________  (Print)

Date: _______________________________

By: _______________________________  (Sign)

Date: _______________________________
I, L, & S Conveyor Series

CHAIN OPERATING SPEED IN FEET PER MINUTE

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STANDARD FEATURES
- I0GA.AR Bolted bottom
- I0GA.AR Bolted sides
- I4GA. Bolted & gasketed weather covers
- Return rollers 2ft. c-c
- Castiron straight bore sprockets
- Remotely located pillow block bearings
- 2 piece replacement dust seals
- Prepped, primed and painted
- Pre-assembled chain and flights in 10 ft. coils
- Double bar chain attachments
- Heavy duty torque arm assembly
- Pre-assembly of purchased drive components

OPTIONAL FEATURES
- 7GA.AR Bolted bottom
- Any gauging combination
- Abrasion resistant construction
- Return rail system
- Inspection ports
- Matching flanges
- Standard inlets
- Bypass inlets
- Special inlets
- Discharges to sq. or rd.
- Harden sprockets
- Split hardened sprockets
- Flight double spacing
- Intermediate discharge manual operation pneumatic operation electric operation
- Anti-plug shut off
- Chain slack shut off
- Wiper & hanging flights

Maximum capacities based on “flood fed” inlet. Controlled feed will decrease capacities by 5%. Capacity is based on product that is free flowing-dry-density of 48 p.c.f horizontal to 4 degree Incline. 4-8 degree incline for soybeans and 4-10 degree incline for whole corn will each require double spaced flights. *200 f.p.m.rs not recommended for gentle product handling.

Product sold here under is of merchantable quality and conforms to seller's standards and specifications. Seller's sole liability for claim shall be limited to replacement of defective or nonconforming product. In no event shall seller be liable for any special, incidental, consequential, or exemplary damages. IDEAL recommends that each user determine the suitability of the product(s) for their own particular application.

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www.idealii.com
PLEASE CONTACT OUR SERVICE SPECIALISTS FOR HELP WITH ANY QUESTIONS OR CONCERNS ABOUT YOUR IDEAL DRAG CHAIN CONVEYOR

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