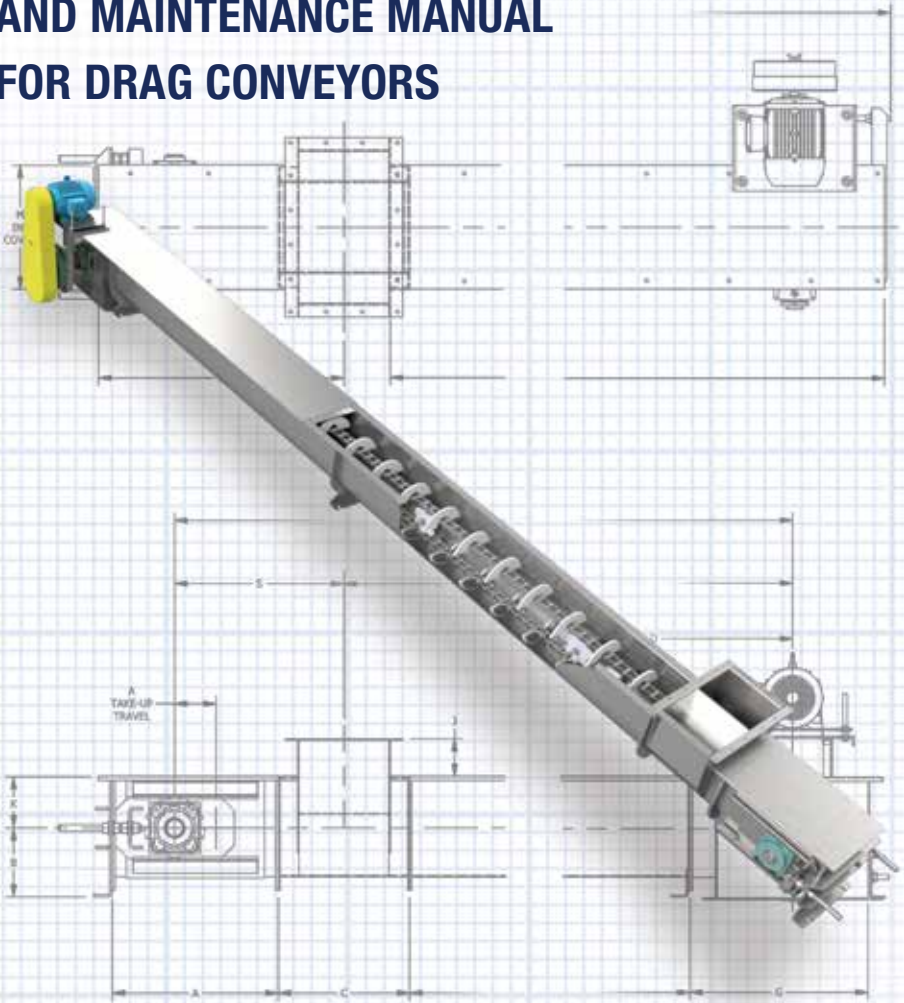




Conveying Solutions

SAFETY MANUAL

SAFETY, INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR DRAG CONVEYORS



ISO 9001
Certified



KWS HISTORY

Founded in 1972, KWS Manufacturing Company, Ltd. designs and manufactures conveying equipment for the bulk material handling industry.

Our vast product line includes -

- Screw Conveyors – Shafted and Shaftless
- Screw Feeders – Shafted and Shaftless
- Vertical Screw Conveyors – Shafted and Shaftless
- Live Bottom Feeders – Multiple Screw Feeders
- Belt Conveyors
- Drag Conveyors
- Bucket Elevators
- Slide Gates
- Hoppers, Bins and Silos
- Structural Supports
- CEMA Standard Stock Components
- Made-to-Order Components

Our corporate office and manufacturing facilities are located in Burleson, Texas (convenient to the Dallas/Fort Worth Metroplex). Our manufacturing facility continues to expand and is currently 125,000 square feet.

As an ISO 9001 certified manufacturer, KWS provides the highest quality equipment and service to our customers. Our large number of repeat customers shows our commitment to customer satisfaction. Our quality system ensures that your equipment is designed and manufactured to rigid specifications and validated by exceeding performance expectations.

MARKETS SERVED

Working closely with our customers, KWS provides cost-effective solutions to the many markets and industries including aggregate, brewing, cement, chemical, food, gypsum, ice handling, minerals processing, power, pulp & paper, rendering and wastewater treatment.

From complete systems to replacement parts, KWS will meet all of your bulk material handling needs.





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SAFETY DEVICES: KWS will supply only such safety devices as are specified in customer furnished purchase orders. Any additional safety measures or devices which may be required by law, or which the customer wishes to add, are to be furnished by the customer or, at the customer's written request, the safety devices will be furnished by KWS at additional cost to the customer. The aforementioned safety devices include, but are not limited to; interlocks, limit switches, overflow relief switches, shear pins, emergency stop switches, emergency stop pull cables and point-of-operation switches.



SAFETY

REFERENCE – CEMA DOCUMENT SCOM-001

Read **ALL** instructions in this manual and manufacturer's manuals **BEFORE** installing, operating and maintaining equipment.

Safety begins with a plan that considers every possible danger and potential hazard. Operation and maintenance personnel must be thoroughly trained in safe operating procedures, recognition of possible hazards, and maintenance of a safe area around equipment.

CEMA has a comprehensive safety program that includes:

- Warning and Safety Reminder for Screw Conveyors, Drag Conveyors and Bucket Elevators – (CEMA Document: SC2004-01)
- CEMA Safety Label Brochure – (CEMA Document: 201)
- CEMA Safety Label Placement Guidelines:
 - Screw Conveyor – (CEMA Document: SC-2)
 - Vertical Screw Conveyor – (CEMA Document: SC-3)
- Screw Conveyor Safety Poster – (CEMA Screw Conveyor Safety Poster)
- Screw Conveyor, Drag Conveyor and Bucket Elevator Safety Video – (CEMA Document: AV6) This video describes key safety practices that personnel must follow when operating and maintaining screw conveyors, drag conveyors and bucket elevators.

Accidents can be avoided by implementation and enforcement of an in-plant safety program. Examples of safety precautions are included in this manual. The information provided is for reference and is not exclusionary or exhaustive. Carefully study and follow safety precautions and employ best practices.

**WARNINGS AND SAFETY REMINDERS**

APPROVED FOR DISTRIBUTION BY THE SCREW CONVEYOR SECTION OF THE CONVEYOR EQUIPMENT MANUFACTURERS ASSOCIATION (CEMA)

It is the responsibility of the contractor, installer, owner and user to install, maintain and operate the equipment, components and, assemblies in such a manner as to comply with the Williams-Steiger Occupational Safety and Health Act and with all state and local laws and ordinances and the American National Standards Institute (ANSI) B20.1 Safety Code for Equipment.

In order to avoid unsafe or hazardous conditions, the assemblies or parts must be installed and operated in accordance with the following minimum provisions.

1. Equipment shall not be operated unless all covers and/or guards for the equipment and drive unit are in place. If the equipment is to be opened for inspection, cleaning, maintenance or observation, the energy to the drive unit driving the equipment and all energy must be **LOCKED OUT AND TAGGED OUT** in such a manner that the equipment cannot be restarted by anyone; however remote from the area, until equipment cover or guards and drive guards have been properly replaced. Each individual cover must be securely bolted on each end with at least two tamper-resistant safety bolts that require a special tool for removal. It is the responsibility of the owner to supply the tamper-resistant safety bolts and special tools.
2. If the equipment must have an open housing as a condition of its use and application, the entire equipment is then to be guarded by a railing or fence in accordance with ANSI standard B20.1. (Request current edition and addenda).
3. Feed openings for shovel, front loaders or other manual or mechanical equipment shall be constructed in such a way that the equipment opening is covered by a grating and does not create a hazard. If the nature of the material is such that a grating cannot be used, then the exposed section of the equipment is to be guarded by a railing or fence and there shall be a warning sign posted.



SAFETY**REFERENCE – CEMA DOCUMENT SCOM-001**

4. Do not attempt any maintenance or repairs of the equipment until power has been LOCKED OUT AND TAGGED OUT.
5. Always operate equipment in accordance with these instructions and those contained on the caution labels affixed to the equipment.
6. Do not place hands, feet, or any part of your body, in the equipment.
7. Never walk or step on equipment.
8. Do not use equipment for any purpose other than that for which it was intended.
9. Do not poke or prod material into the equipment with a bar or stick inserted through the openings.
10. Keep area around equipment drive, slide gates and control station free of debris and obstacles.
11. Eliminate all sources of stored energy (materials or devices that could cause equipment components to move without power applied) before opening the equipment.
12. Do not attempt to clear jammed equipment until power has been LOCKED OUT AND TAGGED OUT and all sources of potential energy removed.
13. Do not attempt field modification of equipment or components.
14. Equipment is not normally manufactured or designed to handle materials that are hazardous to personnel. These materials which are hazardous include those that are explosive, flammable, toxic or otherwise dangerous to personnel. Equipment may be designed to handle these materials. Equipment is not manufactured or designed to comply with local, state or federal codes for unfired pressure vessels. If hazardous materials are to be conveyed or if the equipment is to be subjected to internal or external pressure, manufacturer should be consulted prior to any modifications.



SAFETY**REFERENCE – CEMA DOCUMENT SCOM-001**

CEMA insists that disconnecting and locking out power and removing all potential energy to the unit provides the only real protection against injury. Secondary safety devices are available; however, the decision as to their need and the type required must be made by the owner-assembler as KWS Manufacturing has no information regarding plant wiring, plant environment, the interlocking of the screw equipment with other equipment, extent of plant automation, etc. Other devices should not be used as a substitute for locking out the power prior to removing guards or covers. We caution that use of the secondary devices may cause employees to develop a false sense of security and fail to lock out power before removing covers or guards. This could result in a serious injury should the secondary device fail or malfunction.

There are many kinds of electrical devices for interlocking of equipment systems such that if one mechanism in a system or process is stopped other equipment feeding it or following it can also be automatically stopped.

Electrical controls, machinery guards, railings, walkways, arrangement of installation, training of personnel, etc., are necessary ingredients for a safe working place. It is the responsibility of the contractor, installer, owner and user to supplement the materials and services furnished with these necessary items to make the equipment installation comply with the law and accepted standards.

Equipment inlet and discharge openings are designed to connect to other equipment or machinery so that the flow of material into and out of the equipment is completely enclosed.

One or more warning labels must be visible on equipment. If the labels attached to the equipment become illegible or are dislodged order replacement warning labels from the OEM or CEMA.



SAFETY

REFERENCE – CEMA DOCUMENT SCOM-001

The Conveyor Equipment Manufacturers Association (CEMA) has produced an audio-visual presentation entitled “Safe Operation of Screw Conveyors, Drag Conveyors, and Bucket Elevators.” CEMA encourages acquisition and use of this source of safety information to supplement your safety program.

NOTICE: *This document is provided by KWS as a service to the industry in the interest of promoting safety. It is advisory only and it is not a substitute for a thorough safety program. Users should consult with qualified engineers and other safety professionals. KWS makes no representations or warranties, either expressed or implied, and the users of this document assume full responsibility for the safe design and operation of equipment.*

CONVEYOR EQUIPMENT MANUFACTURERS ASSOCIATION
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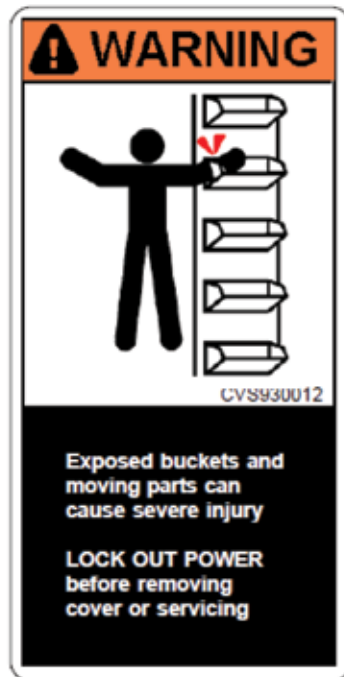
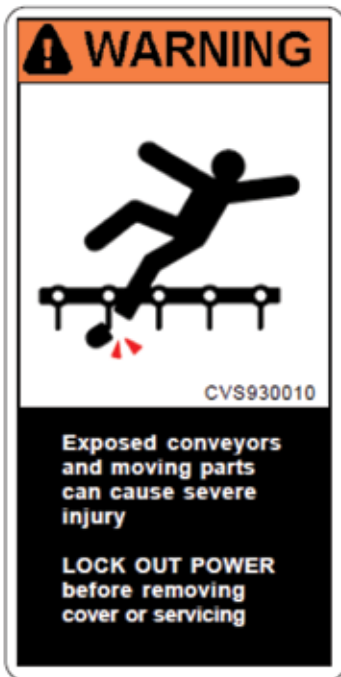
SAFETY

REFERENCE – CEMA DOCUMENT SCOM-001

CEMA Safety Labels

The CEMA safety labels shown below must be used on screw conveyors, drag conveyors, slide gates, and bucket elevators. Safety labels must be placed on inlets, discharges, troughs, covers, inspection doors & drive guards. See CEMA Safety Label Placement Guidelines on CEMA Web Site:

<http://www.cemanet.org/safety/guidelines.html>



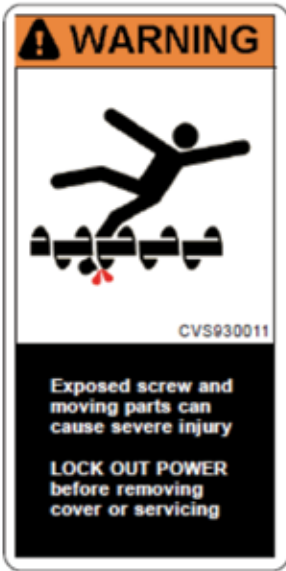
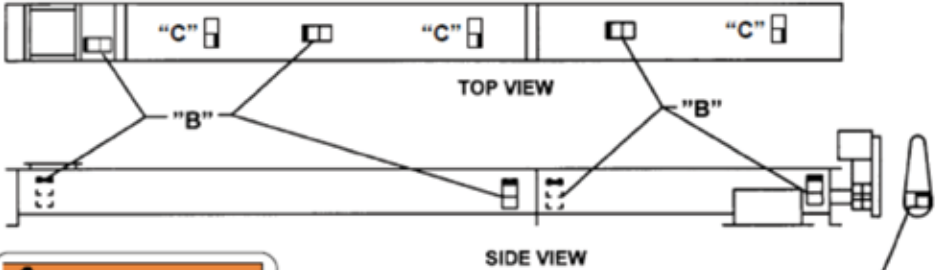
**PROMINENTLY DISPLAY THESE SAFETY LABELS
ON INSTALLED EQUIPMENT**

Note: Labels alone are not a substitute for a thorough in-plant safety training program centered on the hazards associated with operating your installed equipment. Contact CEMA or KWS for Replacement Labels

SAFETY

REFERENCE – CEMA DOCUMENT SCOM-001

Equipment: Drag Conveyor



“B”

To be placed on inlets and discharges, troughs, covers, and inspection doors of screw conveyors to provide warning against exposed moving parts while in operation.



“A”



“C”

To be placed on removable guards to warn that operation of the machinery with guards removed would expose chains, belts, gears, shafts, pulleys, couplings, etc. which create hazards.

- NEAR SIDE
- FAR SIDE

USE LABEL “A” ON BELT GUARD
 USE LABEL “B” ON ENDS OF TROUGH, MIDDLE OF COVERS, AND AT INLET OPENINGS
 USE LABEL “C” ON TOP OF COVERS

SAFETY

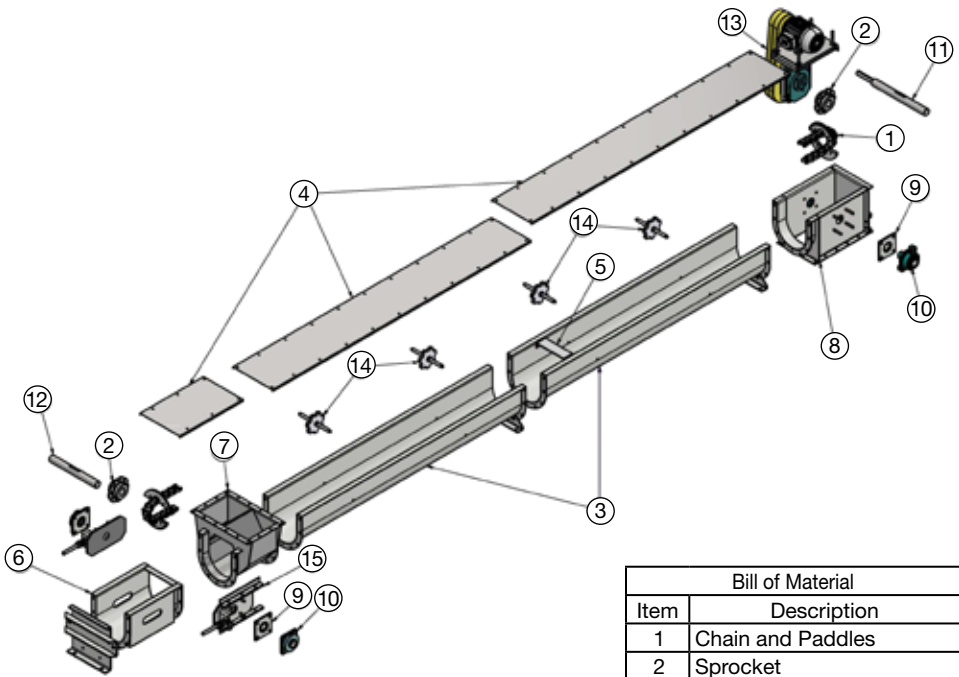
REFERENCE – CEMA DOCUMENT SCOM-001

Drag Conveyor Safety

 <p>Do Not Climb, Sit, Stand, or Walk on Conveyor at Any Time.</p>	 <p>Do Not Perform Maintenance on Conveyor Until Electrical, Air, Hydraulic, And Gravity Energy Sources Have Been Locked Out and Blocked</p>	 <p>Operate Equipment Only With all Approved Covers and Guards in Place.</p>
 <p>LOCK OUT ALL Power and Block Gravity Loads Before Servicing.</p>	 <p>Ensure That All Personnel Are Clear Of Equipment Before Starting.</p>	 <p>Allow Only Authorized And Trained Personnel to Operate Conveyors and Accessories.</p>
 <p>Keep Clothing, Body Parts, and Hair Away from Conveyors.</p>	 <p>Clean Up Spillage Near Moving Parts ONLY When Power is Locked Out AND Guards Are In Place.</p>	 <p>Do Not Modify Conveyor Or Controls.</p>
 <p>Ensure That All Controls are Visible and Accessible.</p>	 <p>Operate Equipment Only With All Approved Covers, Guards, and Safety Labels in Place.</p>	 <p>Report All Unsafe Conditions.</p>

POST IN PROMINENT AREA

COMPONENTS



Bill of Material	
Item	Description
1	Chain and Paddles
2	Sprocket
3	Trough
4	Covers
5	Battenbar
6	Tail Section
7	Inlet Section
8	Discharge Section
9	Seal
10	Bearing
11	Head Shaft
12	Tail Shaft
13	Drive
14	Idler Sprocket
15	Take-up

NOTE: THE ABOVE DIAGRAM IS REPRESENTATIVE ONLY. CONSULT CONTRACT DRAWINGS FOR SPECIFIC ITEMS ON EACH CONVEYOR.



INSTALLATION

Handling and Installing Products

Receiving

1. Equipment may be ordered as individual components with all assembly operations performed in the field, or assembled completely, with drawings and bill of materials.
2. Immediately upon receipt all items in the shipment should be checked against shipping papers for shortages and inspected for damage.
3. All components and assemblies are to be inspected for damage upon receipt.
4. **DO NOT ATTEMPT TO INSTALL DAMAGED COMPONENTS OR ASSEMBLIES.**

Lifting and Moving

1. Extreme care must be taken to prevent damage when moving assembled equipment or components.
2. Spreader bars with slings are the recommended support method for lifting conveyors.
3. Unsupported spans should be no greater than 12 feet.
4. **NEVER LIFT A CONVEYOR WITH ONLY ONE SUPPORT POINT.**
5. Unusually heavy items such as drives shall be considered when choosing support points because of load balance and their bending effect.
6. Shop assembled conveyors are typically match marked and shipped in the longest sections for practical shipment.

Assembly

1. Mounting surface supporting conveyors must be level and true.
2. Troughs must be assembled straight and true with no distortion.
3. Place troughs in proper sequence with discharge properly located.
4. Connect trough joints loosely. **DO NOT TIGHTEN BOLTS.**



INSTALLATION

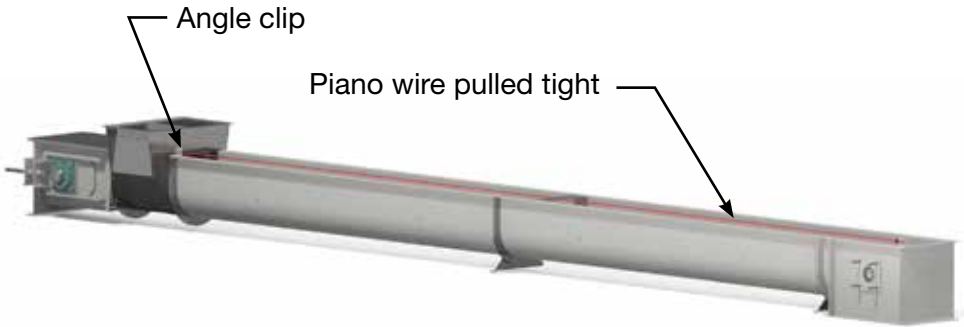
5. Assemble head and tail sections to proper ends of conveyor.
6. Attach piano wire full length of conveyor at centerline. Make sure piano wire is pulled tight. Refer to images at the end of this section.
7. Tighten trough flange bolts keeping trough assembly true to piano wire. Alignment must be checked in both horizontal and vertical directions. Maximum deviation in either direction at any point along the length of the conveyor is 1/8-inch. Torque bolts to proper torque rating per Bolt Torque Guide.
8. Anchor trough assembly to mounting surface. Make sure entire length of trough is straight and true. CEMA recommends supporting trough assemblies every 10 to 12 feet. Saddles and feet may be required.
9. Mount head section on correct end. Drive unit is located at discharge end of conveyor. Make sure drive unit is centered in seal and housing openings. Torque bolts to proper torque rating per Bolt Torque Guide.
10. Fit plastic idler sprockets loosely between set collars. Allow a gap of approximately 1/16-inch on both sides of sprocket to minimize heat buildup. DO NOT tighten set collars tightly against idler sprockets.
11. Check all sprockets and bearings to make certain set screws are tight on shaft. Verify head and tail sprockets are centered in trough.
12. Install chain in proper orientation and direction. Chain attachments are located on back side of flights. UHMW paddles are located on front side of flights and bolted to attachments.
13. Assemble chain sections using connecting pins. Connecting pins are sized for interference fit with chain link sidebars. Lubricate pins before installing with SAE 30 oil. Place heavy backup plates against both sidebars at link when driving connecting pins in or out of chain links.
14. Insert cotter pins into holes in ends of connecting pins and drive firmly into place. Bend over ends of cotter pins.



INSTALLATION

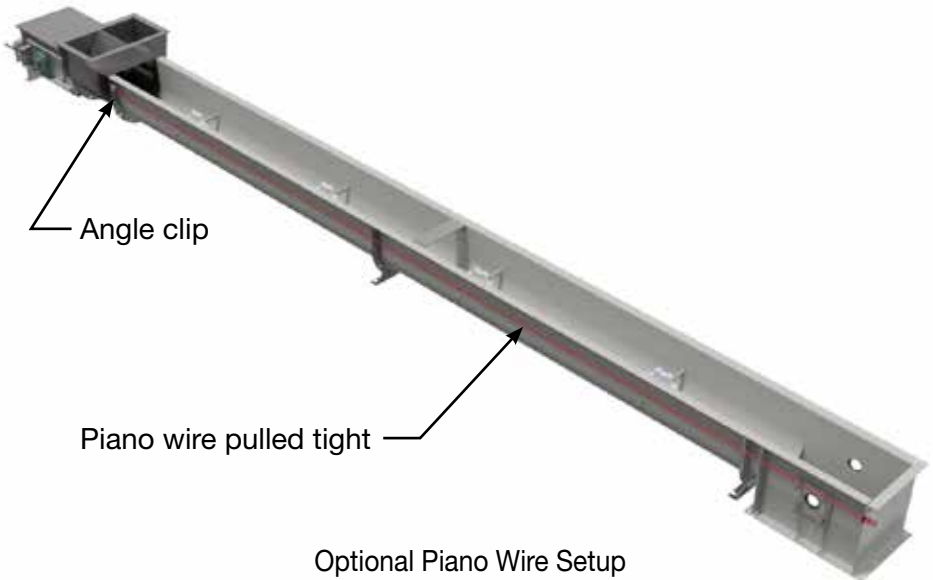
15. Adjust screw take-ups to farthest position toward opposite end of conveyor. Tail shaft must be perpendicular to conveyor centerline. Check tail shaft perpendicularity by measuring from shaft to trough flange on each side of conveyor. Adjust screw take-ups until both sides are equal.
16. Adjust screw take-ups using an equal number of turns for each adjustment bolt to remove slack from chain. Continue to check tail shaft perpendicularity as take-ups are adjusted and chain is tightened. If take-ups do not have enough travel to remove slack, return take-ups to farthest position and remove chain links for proper chain tension. It is normal for the return side of the chain to sag ½ to 1-inch between idler sprockets when bottom chain is stretched tight. DO NOT tighten chain too taut, as this will result in excessive wear and vibration.
17. Check head shaft alignment for perpendicularity to conveyor centerline. Measure from head shaft to trough flange. Shim head shaft bearings as required.
18. Remove all debris from conveyor.
19. Install covers in proper sequence starting at inlet end and attach with provided fasteners.
20. Lubricate drive and all bearings in accordance with manufacturer's instructions. DRIVES GENERALLY SHIPPED WITHOUT OIL.
21. MAKE SURE ALL CEMA SAFETY LABELS ARE IN PROPER LOCATIONS.

INSTALLATION



CEMA Commonly Used Wire Setup

Piano wire attached to the top of the conveyor on side



Optional Piano Wire Setup

Piano wire attached to the centerline of the conveyor on side



OPERATION

Before Initial Start-Up:

1. LOCKOUT/TAGOUT ALL POWER AND ENERGY.
2. Lubricate all bearings in accordance with manufacturer's instructions.
3. Lubricate all gear reducers in accordance with manufacturer's instructions.
Gear reducers are normally shipped without lubrication.
4. Check conveyor to ensure all tools and foreign materials have been removed.
5. Turn drive unit by hand to check for alignment and obstructions.
6. Check conveyor to ensure all covers, guards and safety devices are installed and operating properly.
7. Attach gates to inlet and discharge chutes, where applicable. Ensure personnel are protected from hazards in compliance with local, state and federal requirements.

Initial Start-Up (Without Material):

1. Re-energize power to conveyor and ancillary equipment as required.
2. Start conveyor momentarily to check for proper conveyor rotation. If conveyor rotation is NOT correct, quickly shutdown and have qualified electrician change wiring.
3. Actuate slide gate to check for proper direction of movement. If direction of movement is NOT correct, quickly shutdown and have qualified technician correct.
4. Operate conveyor without material for several hours as a break in period. Observe for excessive bearing temperature, unusual noise or drive misalignment. If these conditions occur refer to Troubleshooting Section of this document.
5. Stop conveyor and LOCKOUT/TAGOUT ALL POWER AND ENERGY.
6. Remove covers and check tightness of bolts. Torque bolts to proper torque rating. Replace covers.
7. Check all assembly and mounting bolts. Torque bolts to proper torque rating.



OPERATION

8. Check conveyor discharge. Discharge must be clear to ensure that material flow out of conveyor will not be impeded.
9. If slide gates are installed check operation to ensure controls are working and correct.

Initial Start-Up (With Material):

1. Re-energize power to conveyor.
2. Start conveyor and operate without material for several minutes.
3. Feed material gradually until design capacity is reached.
4. DO NOT EXCEED CONVEYOR SPEED, CAPACITY AND MATERIAL DENSITY.
5. Start and stop conveyor several times. Operate conveyor for several hours with material.
6. Check motor amperage when conveying at design capacity and compare to full load amperage of motor. Problems may exist if amperage is excessive. Check voltage to ensure that it is within normal operating limits.
7. Stop the conveyor and LOCKOUT/TAGOUT ALL POWER AND ENERGY.
8. Remove covers and check tightness of coupling bolts.
9. Check idler sprocket and realign if necessary.
10. Replace covers.
11. Check all assembly and mounting bolts. Torque bolts to proper torque rating per Bolt Torque Guide.



MAINTENANCE

Maintenance Check List

Objective:

The purpose of the maintenance checklist is to prolong the life of the equipment by providing the owner or end user a list of common components requiring maintenance. Additional component maintenance may be required based on individual equipment designs. Regular inspections are recommended to help prolong equipment life. The owner or end user is responsible for determining the frequency of inspections, and for using a qualified person for performing inspections.

Lockout /TagOut all power before inspection of equipment.

- Bearings:** Check for proper lubrication. Lubricate all bearings in accordance with manufacturer's instructions. For more information regarding the bearings, please contact KWS Engineering.
- Gear Reducers:** Check for proper lubrication. Lubricate all gear reducers in accordance with manufacturer's instructions. For more information regarding the gear reducer, please contact KWS Engineering.
- Drive:** Check for wear on belts and proper tension. Check for lubrication on chains and proper tension. Replace belts or chains as necessary. For more information regarding the drive, please contact KWS Engineering.
- Troughs:** Check for damage, excessive wear and material buildup. Check trough alignment using piano wire as described in Assembly Section of this document. Replace trough sections as necessary.
- Liners:** Check for excessive wear. Replace liners when wear exceeds 1/8 inch. For more information regarding replacing liners, please contact KWS Engineering.
- Seals:** Check for leakage. Adjust seal or replace worn parts as necessary. For more information regarding seals, please contact KWS Engineering.



MAINTENANCE

- Assembly Bolts:** Check for tightness. Torque ALL assembly bolts to proper torque rating per Bolt Torque Guide.
- Guards:** Check for clearance and bolt tightness. Check oil level on oil-tight guards.
- Slide Gates:** Check fittings for leaks, connections secure.
- GUARDS:** Check for clearance and bolt tightness. Check oil level on oil-tight guards.
- Take-up:** If take-ups do not have enough travel to remove slack, return take-ups to farthest position and remove chain links for proper chain tension.
- Sprockets:** Check for teeth wear and sprocket alignment.
- Chains:** Check for worn pins and damaged side bars. Lubricate as required.
- Flights:** Check for wear on flights. Check to ensure all bolts are properly torqued.



SHUTDOWN AND STORAGE

Emergency Shutdown

An emergency shutdown may be necessary to clear obstructions or to replace damaged or worn components.

1. LOCKOUT/TAGOUT ALL POWER AND ENERGY.
2. Remove all covers.
3. Remove all obstructions and product from conveyor.
4. Inspect all components for damage or wear. Check conveyor components in accordance with Maintenance Section of this document.
5. Replace all damaged or worn components. Replace conveyor components in accordance with Assembly Section of this document.
6. Turn drive unit by hand to check for alignment and obstructions.
7. Replace all covers and guards.
8. Restart conveyor in accordance with Operation Section of this document.

Extended Shutdown

An extended shutdown may be necessary if conveyor is not in operation for a long period of time.

1. Operate conveyor until all product is removed.
2. LOCKOUT/TAGOUT ALL POWER AND ENERGY.
3. Remove all covers.
4. Remove all obstructions and product from conveyor.
5. Inspect all components for damage or wear. Check conveyor components in accordance with Maintenance Section of this document.
6. Replace all damaged or worn components. Replace conveyor components in accordance with Assembly Section of this document.
7. Lubricate drive and all bearings in accordance with manufacturer's instructions.



SHUTDOWN AND STORAGE

8. Coat all exposed metal surfaces with rust preventative.

NOTE: *When operation is to resume, restart conveyor in accordance with Operation Section of this document.*

Storage

1. Protect conveyor from weather, moisture and extreme temperatures. DO NOT use coverings that promote condensation.
2. Coat all exposed metal surfaces with rust preventative.

NOTE: *When operation is to resume, restart conveyor in accordance with Operation Section of this document.*



TROUBLESHOOTING GUIDE

Problem	Cause	Remedy
1. Premature Trough Failure	Trough Thickness Too Light	Increase Trough Thickness. Use Abrasion Resistant Material.
2. Drive Shaft Breakage	Excessive Torque	Consult Drawings at End of Manual to Determine Proper Torque Rating or Contact KWS.
Problem	Cause	Remedy
3. Motor Overload	Motor Undersized	Consult Drawings at End of Manual to Determine Proper Horsepower Requirements of Contact KWS.
	Upset Loading Condition	Empty Trough, Control Feed And Operate Under Design Specifications.
4. Bearing Failure	Bearing Contamination	Upgrade Or Replace Seal. Change To Outboard Bearing.
	Insufficient Lubrication	Lubricate In Accordance With Maintenance Section Of This Document.
5. Chain Wear	Abrasive Products	Consult KWS Engineering.
	Misalignment	Check Sprocket Alignment and Adjust as Required.
5. Chain Clinging or Climbing Sprocket Teeth	Excessive Sprocket Wear	Replace Sprockets.
	Sprocket Misaligned	Re-align Sprockets and Shafts.
	Excessive Chain Slack or Wear	Re-tension Chain and Replace if Necessary.

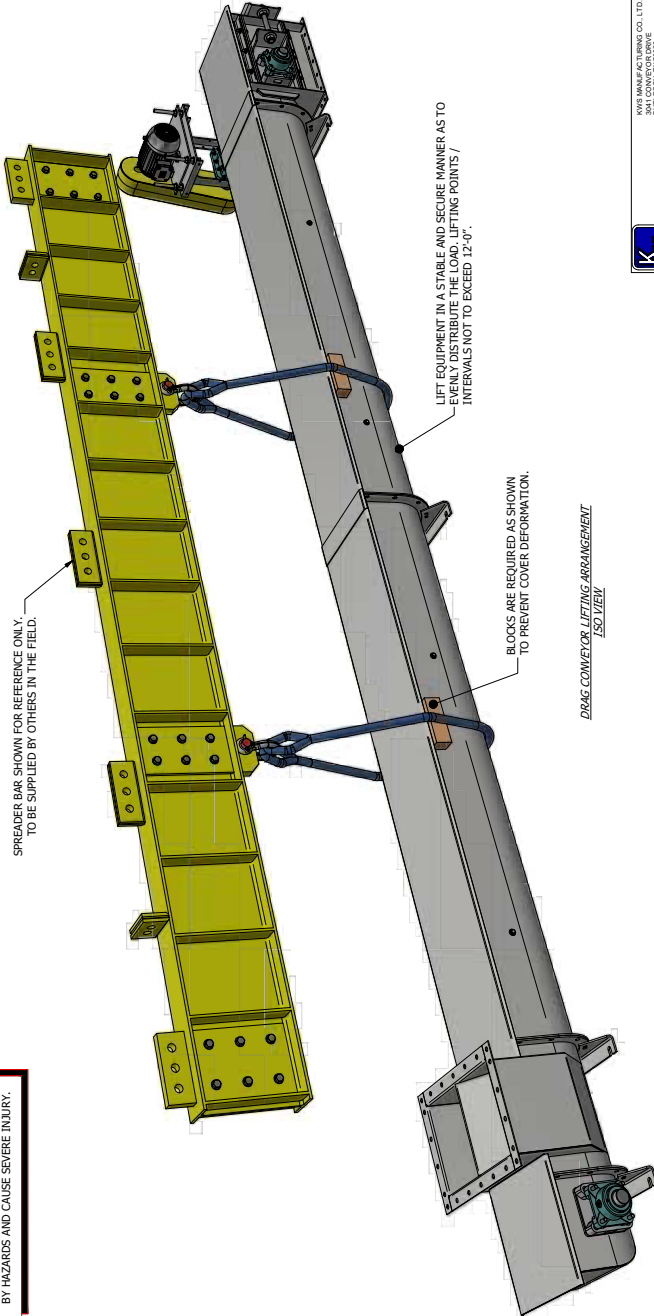
BOLT TORQUE GUIDE

GENERAL BOLT TIGHTENING TORQUE (Ft. Lbs.)					
Bolt Dia. (inches)	Threads Per Inch (UNC)	SAE 2	SAE 5	SAE 8	18-8 & 316 Stainless Steel
1/4	20	5	9	12	6
5/16	18	11	18	25	11
3/8	16	18	31	44	20
7/16	14	28	49	69	29
1/2	13	44	73	105	40
9/16	12	63	108	149	52
5/8	11	96	147	212	86
3/4	10	158	252	351	115
7/8	9	219	389	552	180
1	8	316	589	784	240

CONVEYOR LIFT STANDARD

EQUIPMENT MUST BE PROPERLY LOADED, UNLOADED AND ERECTED BY TRAINED AND CERTIFIED PERSONNEL. IMPROPER USE OR FAILURE TO PROPERLY LOAD, UNLOAD AND ERECT MAY EXPOSE PERSONNEL TO STRUCK BY HAZARDS AND CAUSE SEVERE INJURY.

SPREADER BAR SHOWN FOR REFERENCE ONLY. TO BE SUPPLIED BY OTHERS IN THE FIELD.



BLOCKS ARE REQUIRED AS SHOWN TO PREVENT COVER DEFORMATION.

*DRAG CONVEYOR LIFTING ARRANGEMENT
ISO 15261*

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	ISO 15261 DRAG CONVEYOR LIFTING STANDARD STANDARD LIFTING ARRANGEMENT FOR DRAG CONVEYORS		BMAC CONVEYOR LIFT STD
NR	IPR	NR	NR

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What makes KWS different from other manufacturers?

At KWS we understand the needs and exceed the expectations of our Customers. As an ISO-9001 certified company, quality is integrated into every aspect of our processes. Quality is defined by the Customer, and derived from the total KWS Customer experience. It's not just product quality, but quality throughout every step of the Sales, Engineering and Manufacturing processes. Quality starts with our first Customer contact and never ends.

Conveying Solutions



Part No. 091420M

Release Date 10.1.20



ISO 9001
Certified



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