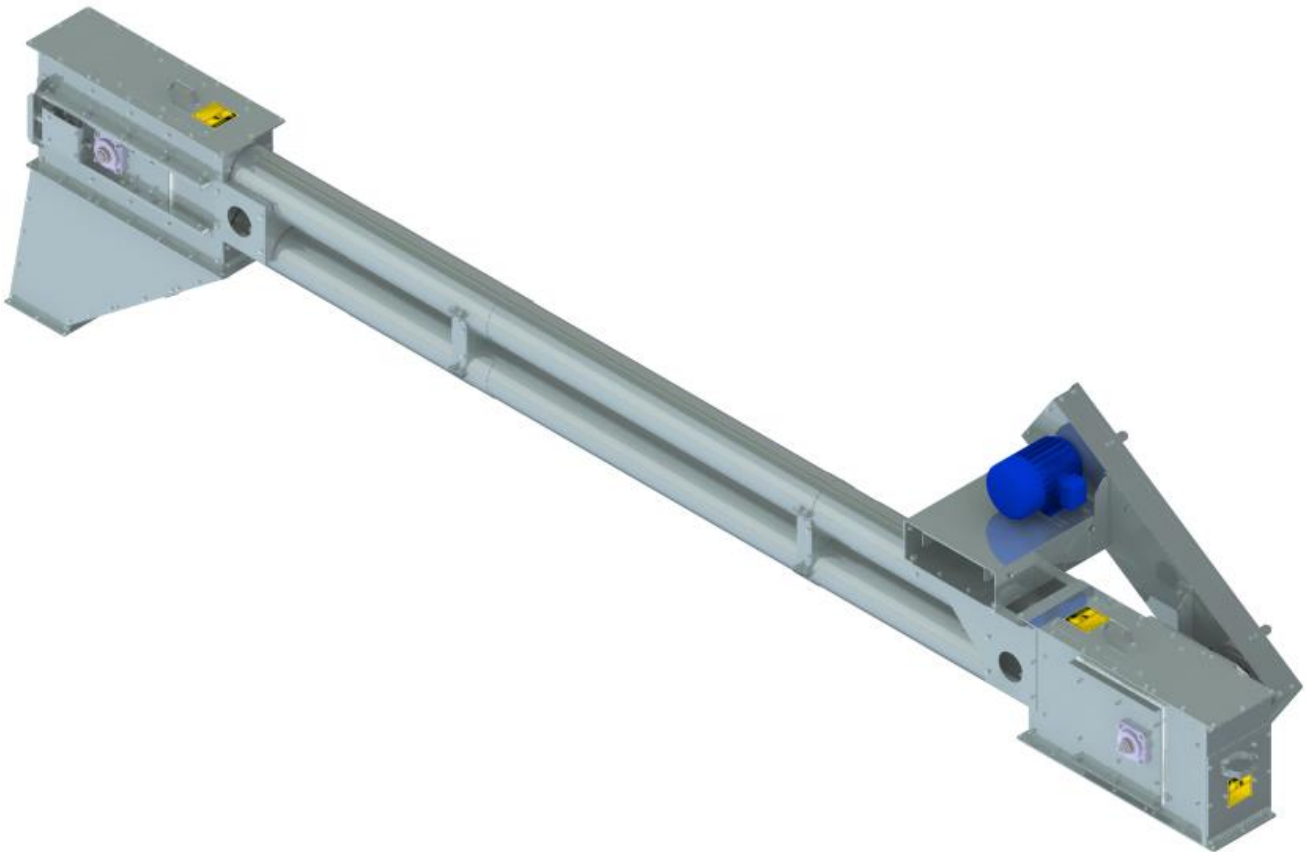


# Grain Cannon

## Installation and Operation Manual



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## **Introduction**

This manual covers general information on the installation, operation and maintenance of a Lambton Conveyor Grain Cannon and is subject to change without notice. It also covers the many safety precautions that should be followed by all operators and personnel working around the equipment.

Due to the various situations, we cannot cover all aspects of installing the Grain Cannon. We have provided a method for installation to be used as a guideline **only**; qualified contractors should be relied on to construct the Grain Cannon. Some conditions and surroundings alter the practices and steps that should be taken during assembly. For these reasons we cannot be responsible for the installation of the Grain Cannon. All personnel installing, operating, or maintaining the Grain Cannon should thoroughly read and understand this manual before working with the equipment. An Employer/Employee Training Sign-Off sheet is included in this manual for your convenience.

It is Lambton Conveyor's concern that all personnel associated with our grain handling equipment are kept safe. It is the buyer's responsibility to ensure that this manual is accessible to all personnel working with the Grain Cannon. Safety labels have been installed at the manufacturing plant and should never be removed, altered, or covered in any way. Guards have been provided and should be in place at all times unless the Grain Cannon has been locked out. Failure to follow these guidelines could produce an extremely dangerous situation and may cause serious injury or death.

The following decal is found on all conveyor inspection panels where caution must be taken to avoid serious injury or death. Replacement decals are available upon request. Contact information is located on the front of this manual.



## **Section 1 - Safety Guidelines**

This manual contains information that is important for the owner/operator to know and understand. The information pertains to safety precautions and preventative maintenance procedures when operating and maintaining this equipment. It is the owner/operator's responsibility to ensure that any personnel working close to this equipment are aware of these safety guidelines. Failure to read and understand this manual is a misuse of the equipment and could result in serious injury or death.

- Conveyors shall not be operated unless all covers and guards for the conveyor are in place. If the conveyor is to be opened for inspection, cleaning, maintenance, or observation, the power to the motor driving the conveyor must be locked out in such a manner that the conveyor cannot be restarted by anyone.
- Do not attempt any maintenance or repairs of the conveyor until power has been locked out.
- Do not place hands, feet, or any part of your body in the conveyor at any time unless the conveyor has been locked out.
- Do not poke or prod material into the conveyor with a bar or stick inserted through the openings.
- Keep area around the conveyor drive and control station free of debris and obstacles.
- Eliminate all sources of stored energy (materials or devices that could cause conveyor components to move without applied power) before opening the conveyor.
- Do not attempt to clear a jammed conveyor until power has been locked out.
- Electrical controls, machinery guards, railings, walkways, and operator training are all necessary to ensure a safe working environment. It is the responsibility of the contractor, installer, owner, and user to supply the materials and services required to cover these areas.

## **Section 2 - Product Information**

### **Grain Cannon Features**

A Grain Cannon is a versatile chain conveyor that utilizes a galvanized tube housing to gently convey a wide range of free flowing material horizontally, or at angles of up to 60 degrees.

The Grain Cannon lets you move grain or grain products with gentle efficiency and at high capacities, requiring less horsepower and causing less damage. The unique U.H.M.W. (Ultra High Molecular Weight) paddle keeps grain flowing gently and evenly from inlet to discharge, taking the place of traditional auger flighting.

Owners have found a reduction in product damage when compared to traditional conveying systems and the durability of the paddles is unbeatable.

#### **Key Characteristics:**

- Gentle grain handling
- 100% UHMW paddles
- High quality roller chain
- Boot drive or head drive configurations
- Galvanized construction to ensure longer service life

Complete line of accessory equipment:

- Discharge Gates
- Transitions
- Catwalks and Support Towers

### **Power Requirements**

Use the System Specifications table to determine the power required to operate the chosen system at the desired operating angle. For calculation purposes, the head and boot together add 10' 8" (3.25m) to the tube section(s) to establish the total conveyor length. Multiply the conveyor length by the horsepower per foot (kilowatt power per meter) to determine the drive power requirement.

#### **Example:**

An 8" Grain Cannon is to be constructed in the horizontal position with five 20' tube sections.

Total Conveyor Length = (5 x 20') + 10' 8" = 110' 8" or 110.7ft

Power Requirement = 0.076 HP/ft. x 110.7ft = 8.4 HP

Electric Motor Size Required = 10 HP (*Power Requirement rounded up to next available motor size*)

## Specification Table

<b>Tube size</b>	<b>6" (15.2cm)</b>	<b>8" (20.3cm)</b>	<b>10" (25.4cm)</b>	<b>12" (30.48cm)</b>
Maximum capacity*	1,500 BPH 38 MTPH	4,000 BPH 102 MTPH	6,000 BPH 152 MTPH	10,000 BPH 254 MTPH
Chain travel speed	328 FPM 100 MPM	333 FPM 101 MPM	358 FPM 109 MPM	403 FPM 123 MPM
Head shaft RPM	124	117	117	109
Tube gauge	12 GA 2.6 mm	10 GA 3.43 mm	10 GA 3.43 mm	10 GA 3.43 mm
UHMW paddle thickness	1/2" 12.7 mm	1/2" 12.7 mm	1/2" 12.7 mm	1/2" 12.7 mm
Conveyor chain	81X	81XHH	81XHH	81XHH
<b>Angle of operation</b>	Horsepower required per foot of conveyor			
	Kilowatt power required per meter of conveyor			
Horizontal	0.042	0.076	0.114	0.18
	0.103	0.185	0.278	0.439
15 deg.	0.062	0.113	0.17	0.268
	0.151	0.275	0.414	0.654
30 deg.	0.085	0.167	0.25	0.397
	0.207	0.407	0.61	0.968
45 deg.	0.12	0.222	0.333	0.524
	0.292	0.541	0.812	1.278
60 deg.	0.14	0.27	0.405	0.629
	0.341	0.658	0.988	1.534
Empty weight /FT (LBS)	24	39	47	54
Full weight /FT (LBS)**	33	55	72	89
Empty weight /m (KG)	16	26	32	36
Full weight /m (KG)**	22	37	48	60

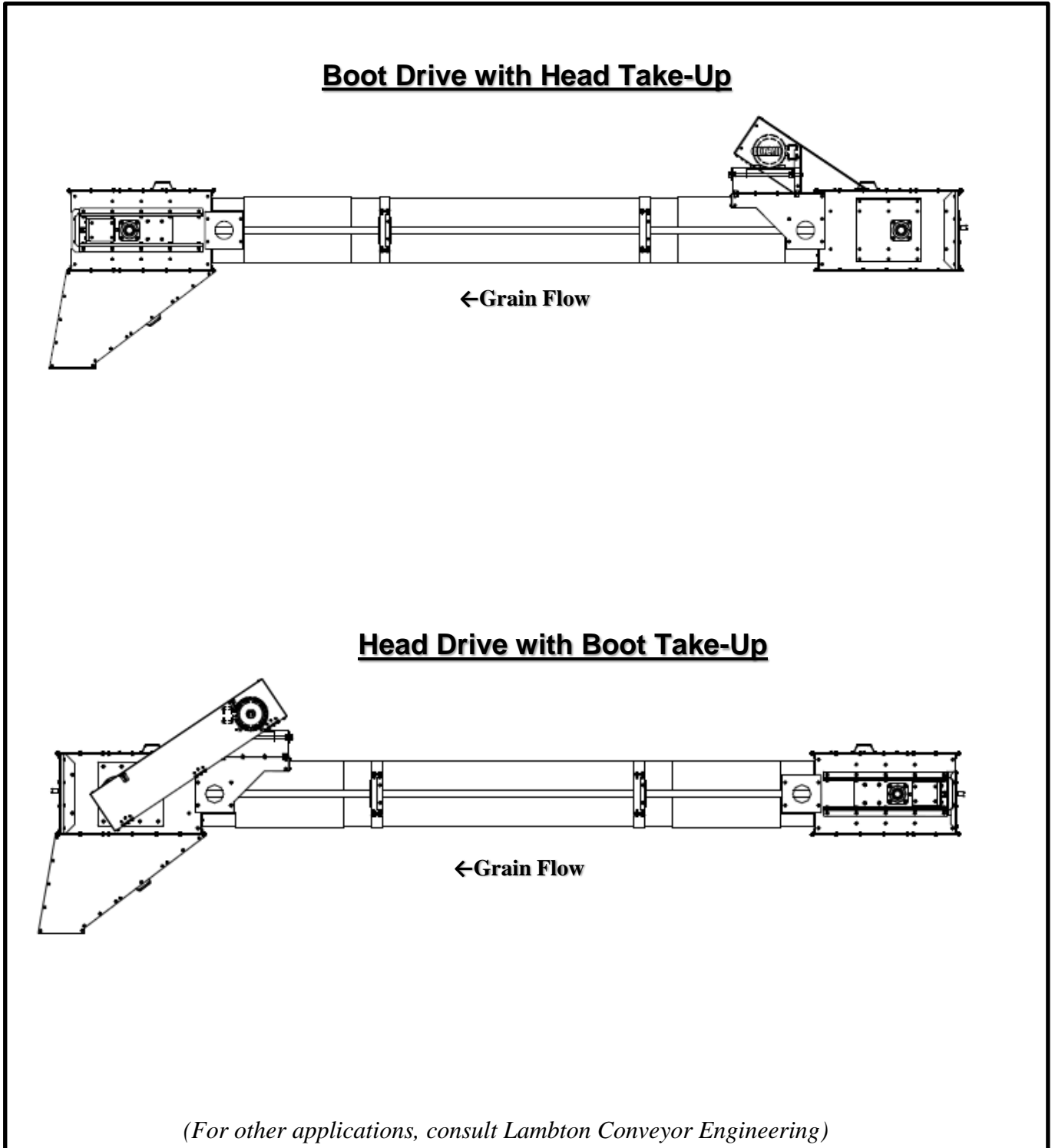
\* Note that capacities are estimates only and that increased angle will reduce capacity. Capacities based on 45 lb/ft<sup>3</sup> (721 KG/M<sup>3</sup>) dry shelled corn.

\*\* Full weight is based on bottom tube full of 45 lb/ft<sup>3</sup> (721 KG/M<sup>3</sup>) material.

## Horsepower Options

<b>HP</b>	<b>6" (15.2cm)</b>	<b>8" (20.3cm)</b>	<b>10" (25.4cm)</b>	<b>12" (30.48cm)</b>
<b>3HP</b>	✓	✓	✓	
<b>5HP</b>	✓	✓	✓	
<b>7.5HP</b>	✓	✓	✓	✓
<b>10HP</b>	✓	✓	✓	✓
<b>15HP</b>	✓	✓	✓	✓
<b>20HP</b>	✓	✓	✓	✓
<b>25HP</b>		✓	✓	✓
<b>30HP</b>		✓	✓	✓
<b>40HP</b>			✓	✓
<b>50HP</b>			✓	✓

**Typical Configurations**



**Figure 1**  
**Typical Configurations**

## **Section 3 - Receiving Inspection & Pre-Installation**

Carefully inspect your shipment as soon as it is received. Verify that the quantity of parts or packages corresponds with the packing slip. Any discrepancies should be taken care of immediately. Report any damage or part shortages to the delivering carrier as soon as possible. Lambton Conveyor's responsibility to damaged equipment ends with your acceptance to delivery. Save all paperwork and documentation with any of the conveyor components.

A layout should be drawn to show the exact location of grain bins, inlets, outlets, the control box, outlet control kits, the power source and any supporting structure. The layout should consider future expansion, the grain direction, the operation of slide gates, and the use of other conveying systems. The Grain Cannon must be adequately supported to keep it rigid and straight. Ideally, supports should be spaced at 20' intervals but can span up to 30' if necessary. Consult the manufacturer of any equipment being used to support the Grain Cannon for loading recommendations. This would include towers, bins, catwalks, etc...

General guidelines to consider are:

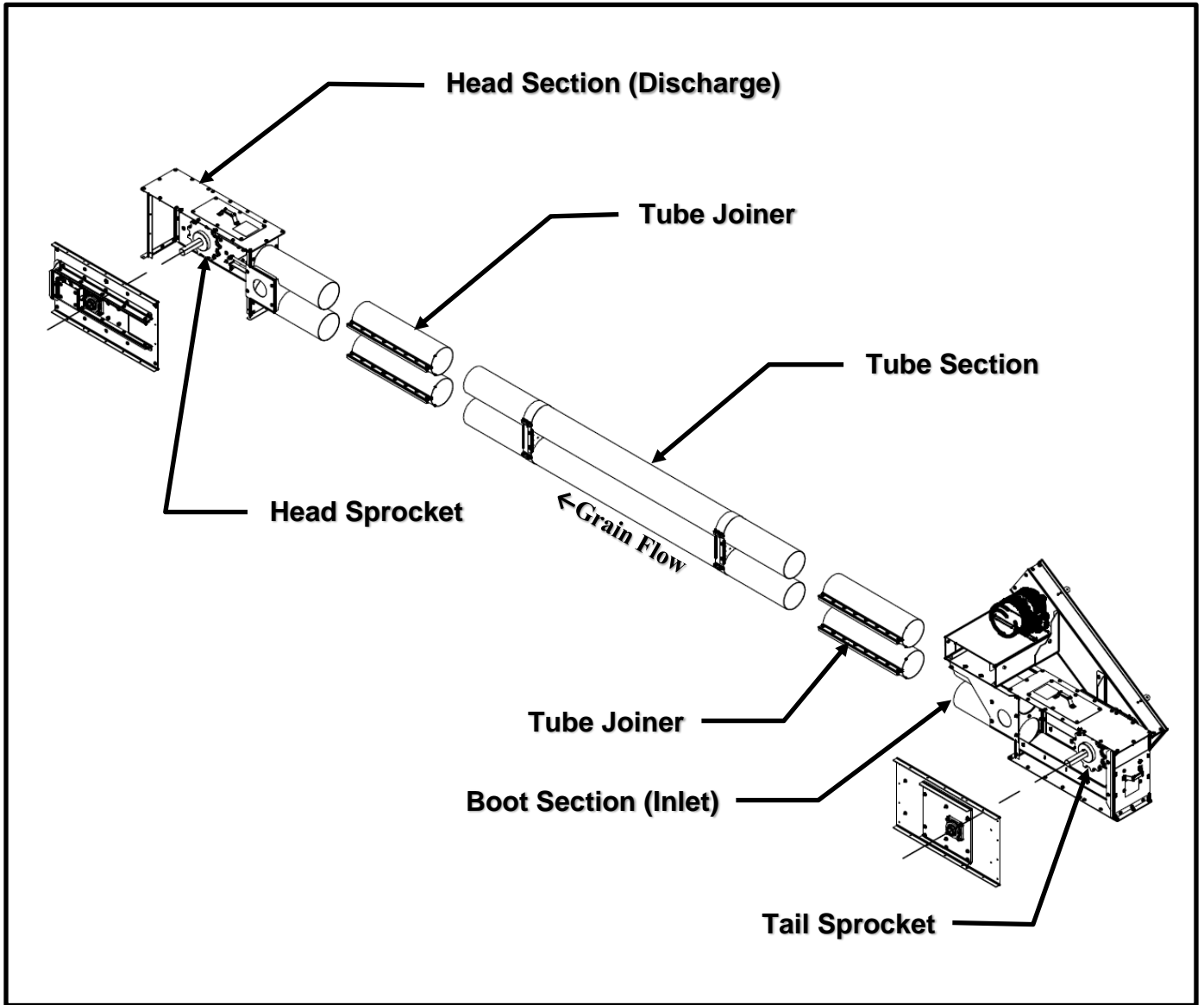
1. The Grain Cannon will move grain in one direction only; it is not reversible.
2. Provide room for service and maintenance at the head and boot.
3. Avoid having any part of the system under grade to eliminate water accumulation problems.
4. Provide adequate footings for solid supporting structures.

Familiarize yourself with this manual and all the conveyor parts to aid in the assembly and installation of your Grain Cannon.

Start by unpacking and arranging all the conveyor components in a way that they are all easily accessible. The head, boot, tube sections, and optional equipment all come pre-assembled but are required to be joined. Blocking or sawhorses will be a helpful aid throughout to raise the sections off the ground. Ensure that all supports used will provide adequate strength and sturdiness. Arrange the conveyor components in order from start to finish while referring to the conveyor parts section shown in *Figure 2* of this manual.



# Standard Grain Cannon Parts

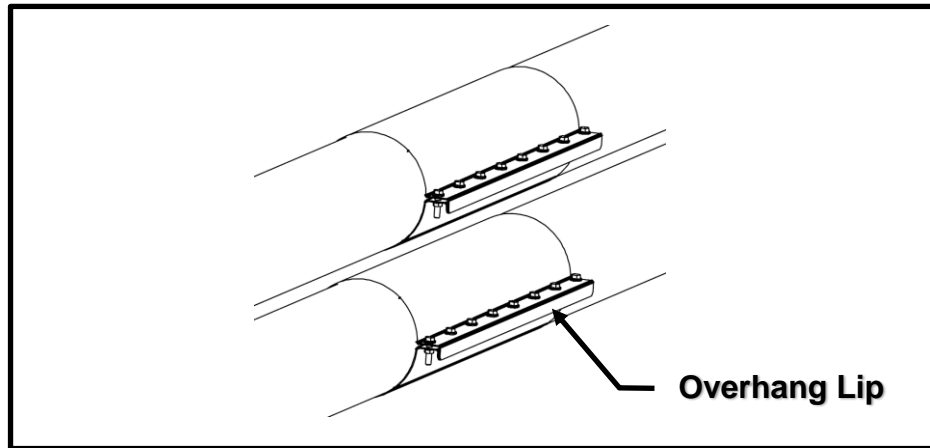


**Figure 2**  
**Standard Parts**

## **Section 4 – System Installation**

### **Tube Sections**

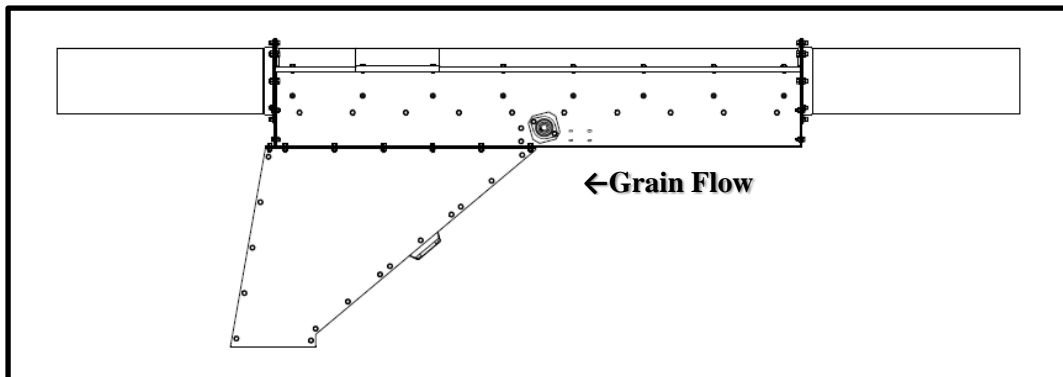
Slide tube sections together tightly and have the tube joiners centered on the joint before tightening the bands. Position the overhang lip in a way that prevents water from entering the joint and into the tube (See *Figure 3*). Any field cuts should be made square and the inside diameter de-burred to ensure that the ends butt together tightly during assembly. Even small gaps left in the tubing system during assembly will gradually close during operation causing the chain to require frequent inspection and tightening.



**Figure 3**  
**Tube Joiner Detail**

### **Intermediate Discharge Gate (Optional)**


Assemble the intermediate discharge gate to the tube sections using tube joiners as outlined above. It may be necessary to cut exact lengths of tube conveyor sections to locate the discharge unit in the desired location. Relocating tube saddle brackets may also be required. The intermediate discharge gate is designed for chain travel in one direction only. Make sure it is oriented properly as shown in *Figure 4*, or referring to the decal on the discharge unit. Operation in the wrong direction can cause paddle damage. The discharge transition and drive option can also be installed at this time.



**Figure 4**  
**Intermediate Discharge Gate Detail**

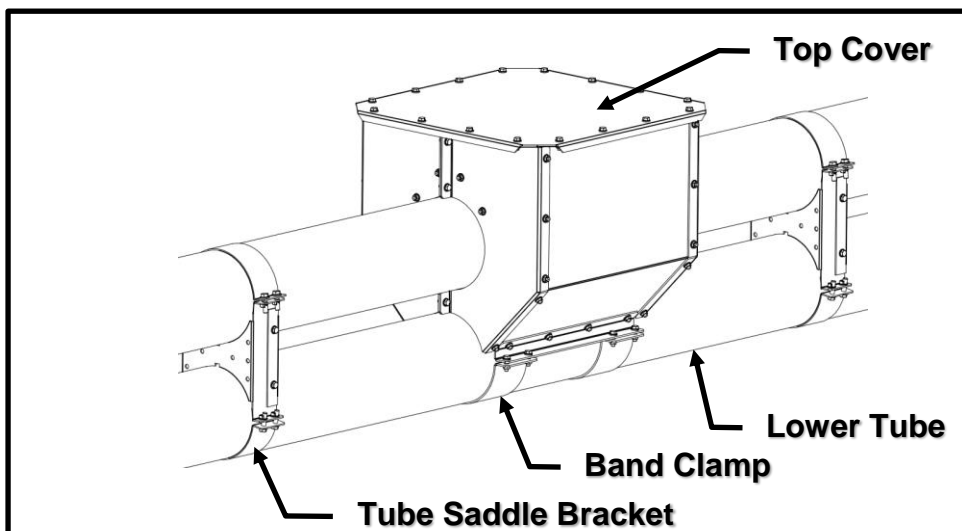
### **By-Pass Inlet (Optional)**

Assemble the by-pass inlet and temporarily position it on the tube section as shown in *Figure 5*. With the top cover removed, use the inside of the by-pass inlet as a template to mark out the required cutout in the lower tube. Field cut the lower tube and grind all edges to ensure smooth operation of the conveyor. Field cutting the top cover can be done at this time to accommodate any spouting being used to feed product into the inlet. Reassemble the by-pass inlet on the tube section and tighten all fasteners and band clamps.

 <b>WARNING</b>	<p><b>Field cutting the lower tube could reduce the structural integrity of the Grain Cannon and reduce the allowable span. Welding the inlet to the tubes and/or adding additional support is required.</b></p>
--	--

Complete the installation by welding and/or caulking the by-pass inlet to the tubes to create a weather tight seal.

**IMPORTANT:** Lambton Conveyor recommends all welding be performed prior to the installation of any electrical components including the drive system. By not following this recommendation the owner assumes all risks associated with this installation.



**Figure 5**  
**By-Pass Inlet Detail**

### **Boot Section (Inlet)**

Assemble the boot section to the tube sections using tube joiners as outlined above. This is a good time to ensure the tail sprocket is centered on the shaft and aligned to the tube sections. A sprocket that is not properly aligned will prevent the chain from tracking correctly and cause excessive wear. Adjust the chain tensioner (take-up) to its loosest position if applicable. Field cutting the top cover can be done at this time to accommodate any spouting being used to feed product into the conveyor (if applicable). Higher angles of operation will require product to be fed through the upper part of the top cover, nearest the tube sections, to ensure proper grain level inside the boot. Rotating the top cover end-for-end may be necessary.

**Note:** Do not install the head section at this time. It will be installed after the chain is installed into the tube sections.

## Conveyor Chain/Paddle Installation

Use electrical fish tape, wire, or rope to pull the chain/paddle assembly through the lower tube from the discharge end. The UHMW paddles should be facing the direction that grain is to flow and orientated so that the opening will pass across the sprockets. (See Figure 6) Route the chain down into the boot section, around the tail sprocket, and back through the upper tube. **IMPORTANT: Ensure chain does not twist inside the tube sections.** All 10' lengths of conveyor chain are to be connected to each other with the supplied connecting links (See Figure 7). Make sure to bend the ends of the cotter pins to prevent them from working loose and causing the chain to break.

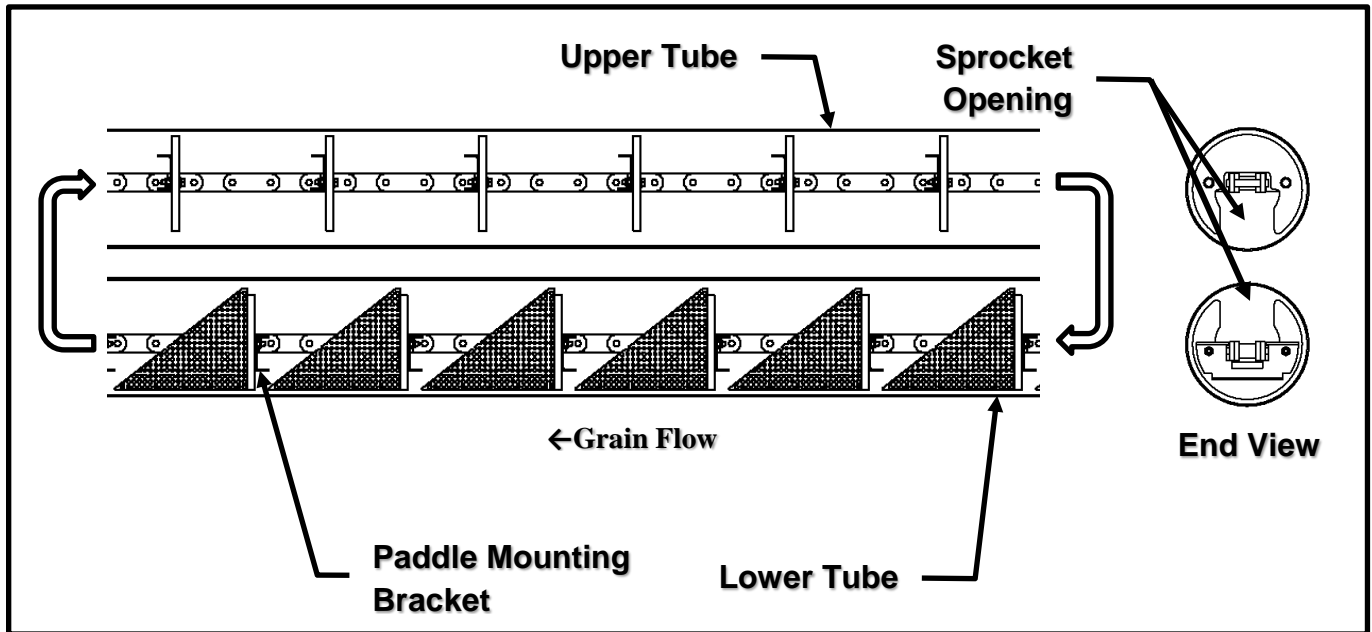


Figure 6  
Grain Flow Detail

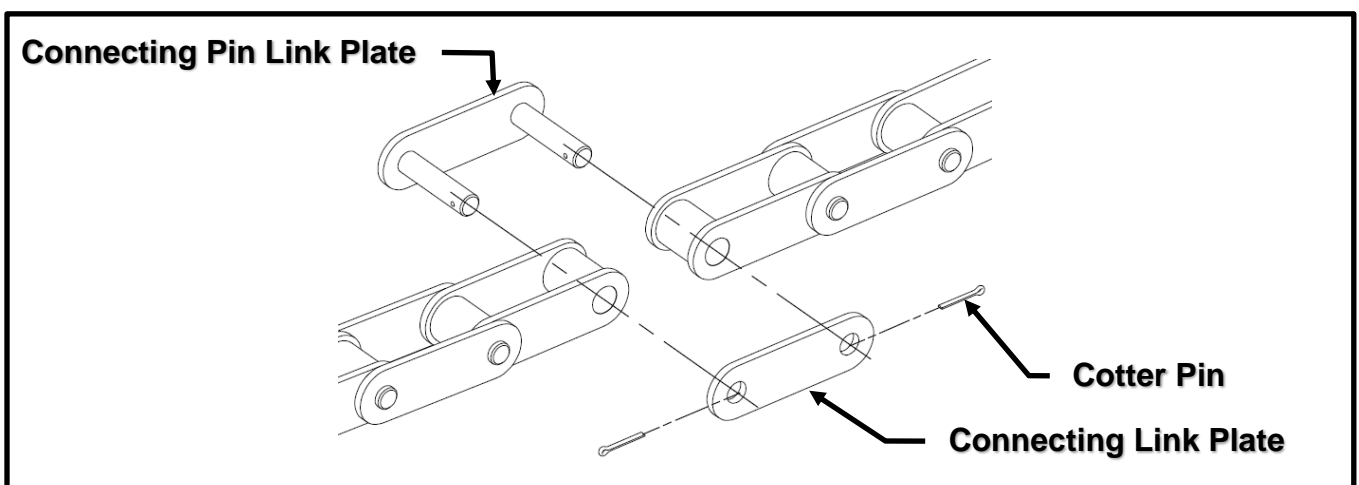


Figure 7  
Connecting Link Detail

## **Head Section (Discharge)**

Assemble the head section to the tube sections using tube joiners as outlined above. This is a good time to ensure the head sprocket is centered on the shaft and aligned to the tube sections. A sprocket that is not properly aligned will prevent the chain from tracking correctly and cause excessive wear. Adjust the chain tensioner (take-up) to its loosest position if applicable. Optional accessories such as discharge gates, drive options, and transitions can also be installed at this time (if applicable).


## **Conveyor Chain Adjustment**

Complete the chain installation by routing it around the head sprocket and attaching the ends together with a connecting link. Tighten the conveyor chain by adjusting the chain tensioner in small increments to ensure the sprocket remains aligned to the tube sections. Remove chain links if there is not enough travel in the adjusting screw to tighten the chain. The chain should be tightened until the paddles are nearly rigid on the chain. The tips of the paddles should only move 3/4" when grabbed and pulled by hand. Once the chain has been tensioned, it should be rotated at least one complete revolution through the conveyor. Check to see that the paddles and chain move freely and make adjustments if necessary.

## **Drive Assembly**

Install motor onto motor mount plate as shown in *Figure 8*.

Note: Electric motor is not provided. Always use a motor with the required HP as determined with the System Specifications chart, operating at 1750 RPM. Too small of a motor will not supply the horsepower required to achieve capacity and damage to the motor may occur. Too large of a motor may cause high stress on components resulting in shorter life. "Soft Start" motors are also recommended to protect the conveyor from high torque shocks against a unit that may have inadvertently been stopped under load or plugged. Electric motors and controls shall be installed by a qualified electrician. Controls should be located so that the operator has a full view of the entire operation. An amp meter for the drive motor should be installed so the operator can easily monitor and avoid overloading the system. A magnetic starter should be used to protect your motor when starting and stopping. It should stop the motor in case of power interruption, conductor fault, low voltage, circuit interruption, or motor overload. The motor must be restarted manually. Some motors have a built-in thermal protection overload protection. If this type of motor is used, use only those with manual reset.

 <b>WARNING</b>	<p><b>Disconnect power before resetting motor overloads. Make certain electric motors are grounded.</b></p>
--	---

Install sheaves and bushings onto the reducer input shaft and motor shaft accordingly. Refer to speed reducer manufacturer's instructions for additional information and torque specifications. Sheaves should be installed as close to the motor and reducer as possible to prevent overhung loads, and aligned using a straight edge to avoid excessive belt wear. Be sure drive keys are properly installed. The belts can now be installed and tensioned using the motor mount adjustment rods. Ensure adjustment rods are turned equally to keep motor sheave parallel to the reducer sheave. Belts must be tightened sufficiently to avoid slipping which will result in excessive wear during normal operation. Over tightening creates high

stress on belts and conveyor components resulting in shorter life. Close belt guard door and secure using supplied hardware.



The conveyor should never operate without guards in place. Failure to follow these precautions could result in serious injury or death.



Speed reducers are shipped without oil. See the Lubrication section in this manual for further information.

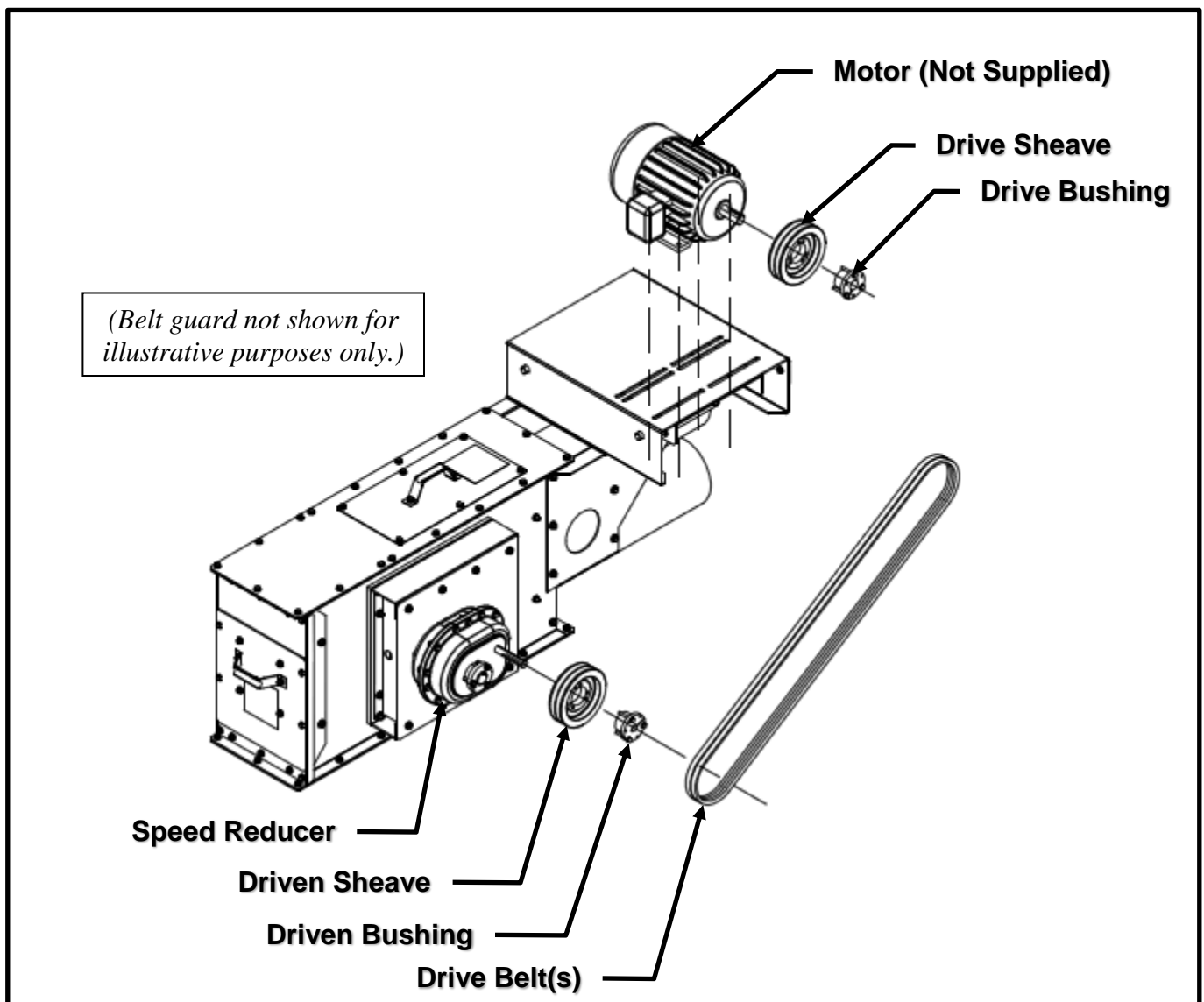


Figure 8  
Drive Assembly

## **Lubrication**

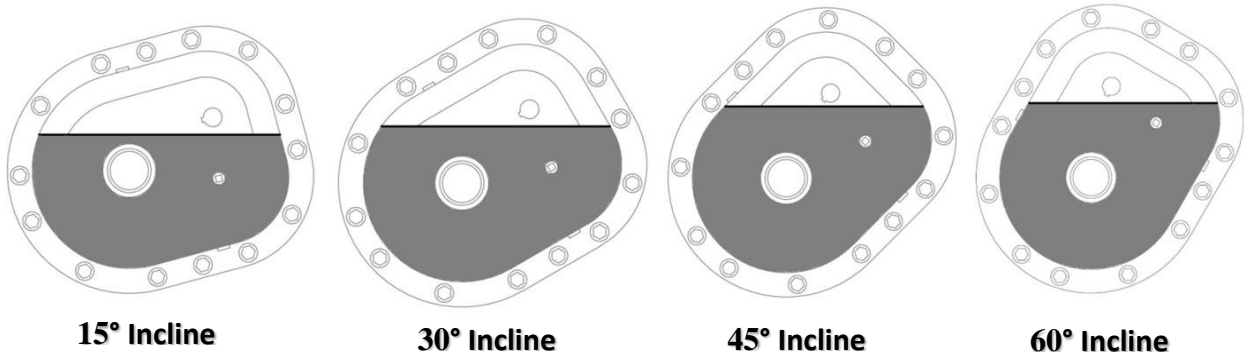
Speed reducers are shipped without oil; refer to the manufacturer's owner's manual to determine the proper type and quantity for your application. For reducers operating more than 10 degrees from the standard positions shown in the manufacturer's owner's manual, refer to *Figure 9* and *Figure 10* for approximate oil levels. Position the breather in the highest possible hole to minimize oil splash. Due to the many possible positions of the reducer, it may be necessary to make special adaptations using standard pipe fittings, stand pipes and oil level gauges as required. Refer to the manufacturer's owner's manual for further information.

All bearings should be lightly lubricated before initial start-up, but fully lubricated during. Some bearings are equipped with auto greasers (optional) to prevent over-lubricating. It has been our experience that most bearings are damaged from over-lubricating rather than lack of it. Pressure guns tend to break the seals in which they are unable to retain lubricant. Ensure that all employees are aware of this fact.

<b>Cannon Size</b>	<b>Gearbox Size</b>	<b>Min HP</b>	<b>Max HP</b>	<b>Oil Level</b>
6	107	3	5	B
	115	7.5	10	B
	203	15	20	B
8	107	3	5	A
	115	7.5	10	A
	203	15	20	B
	207	25	30	B
10	107	3	5	A
	115	7.5	10	A
	203	15	20	B
	207	25	30	B
	215	40	50	B
12	115	7.5	10	A
	203	15	20	A
	207	25	30	B
	215	40	50	B

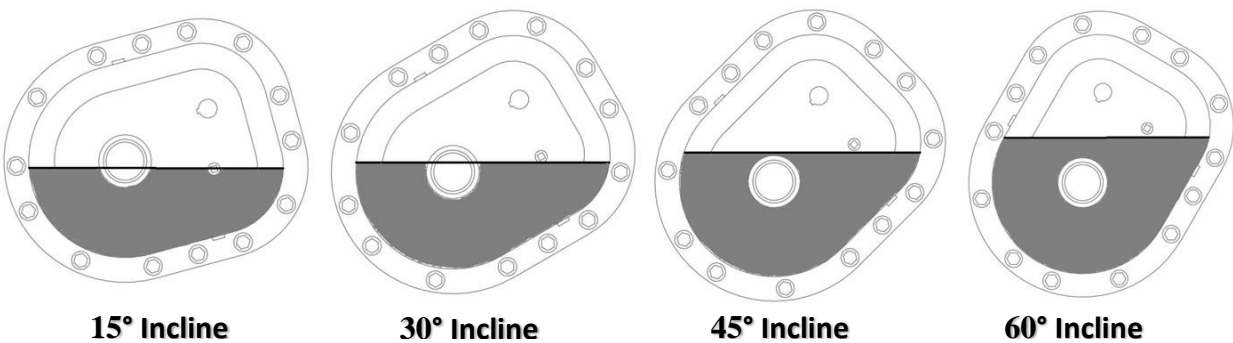
### **Oil Level 'A' – Low Speed Applications**

*(See Manufacturer's Owner's Manual)*



### **Oil Level 'B' – High Speed Applications**

*(See Manufacturer's Owner's Manual)*

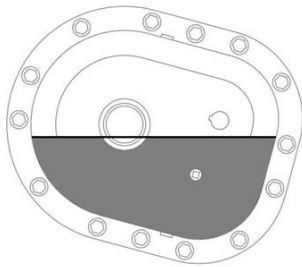


**Figure 9**  
**Boot Drive Reducer Oil Levels – Non-Standard Positions**

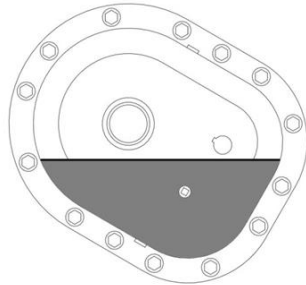


### **Oil Level 'A' – Low Speed Applications**

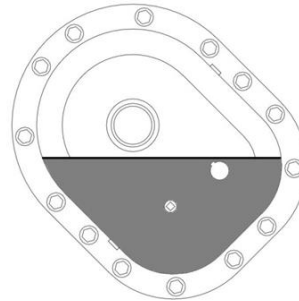
*(See Manufacturer's Owner's Manual)*



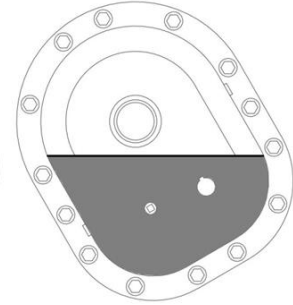
**15° Incline**



**30° Incline**



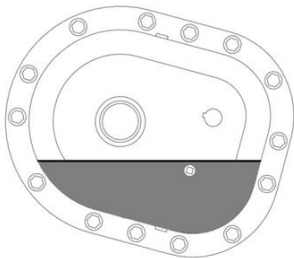
**45° Incline**



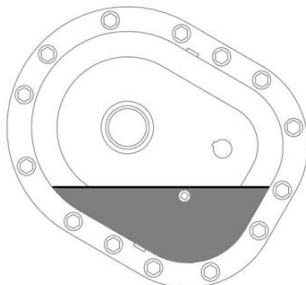
**60° Incline**

### **Oil Level 'B' – High Speed Applications**

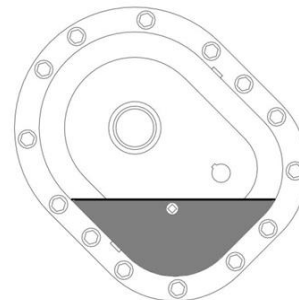
*(See Manufacturer's Owner's Manual)*



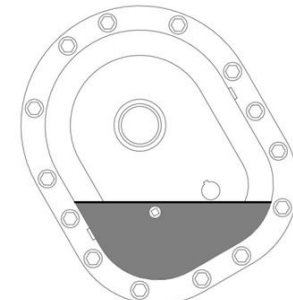
**15° Incline**



**30° Incline**



**45° Incline**



**60° Incline**

**Figure 10**  
**Head Drive Reducer Oil Levels – Non-Standard Positions**

## **Section 5 - Operation**

### **Inspection Check List**

The Grain Cannon requires an inspection before start-up after the assembly is complete and before each use. The following are critical areas to be inspected.

1. Make sure that the main power isolator is locked in the “OFF” position and that the only key is in your possession before removing any shields and inspection covers.
2. Check all safety decals and replace any that are worn, missing or illegible. See Introduction section for further information.
3. Check for proper chain tension and adjust if necessary. See Conveyor Chain Adjustment section for full instructions.
4. Check that the discharge gates open and close completely. Remove the inspection cover from the top of the discharge gate and make sure that the gate is clean inside. See Intermediate Discharge Gate section.
5. Check the lubricant level in the speed reducer. See the Lubrication section. NOTE: The speed reducer is shipped dry and needs to be filled to the proper level before use.
6. Check the condition of the drive belts and make sure that they are aligned and tensioned properly. See Drive Assembly section for full instructions.
7. Check that the drive sprockets are centered in the tube housings. Realign the sprockets and tighten the set screws if necessary.
8. Check overall structural integrity of the Grain Cannon and make sure that all supports and components are secure.
9. Check to make sure that the chain moves freely (this is particularly important if the temperature is below freezing).
10. Make sure all shields and safety guards are in place before restoring power.

### **Start-Up**

A final check of all parts to ensure that no foreign objects or tools have been left in the conveyor is a good idea. All guards, inspection panels, and removable sections should be checked for proper placement. The drive should be turned by hand to check for proper tracking, and to ensure there are no obstructions. Finally, check all setscrews to ensure they are tight.

After a check of all mentioned components carefully, run the Grain Cannon **without** load and check for any problems or necessary adjustments. Make certain that the chain is running in proper alignment throughout the Grain Cannon. If adjustments are required, refer to the Troubleshooting section of this manual.

Once all sections of the conveyor have been thoroughly checked, all adjustments have been made, and proper lubrication is done, the Grain Cannon can be run **without** load for several hours for an initial break in. Look and listen carefully for any irregularities before running any material through the system.

Once you are satisfied with the operation of your Grain Cannon, it can be put into use. At this point it may be a good idea to check the rest of your flow system. Be sure any outlets, inlets, etc. are functioning properly.

The Grain Cannon operating efficiency can vary greatly under certain conditions. Different materials, moisture content, angle of operation, methods of feeding, and speed all play a role in the performance of the conveyor. A conveyor in the higher angles of operation could see capacity reductions from 30% to 50% over at conveyor operating horizontally. 25% moisture content could cut capacity back by as much as 40% under some conditions. Over-feeding the conveyor would result in an increased power requirement, extra strain on the system, and possibly a complete stalling out. A control limiting the amount of grain being fed into the conveyor is recommended.

Make certain the Grain Cannon is completely empty before shutting down the system. Stopping and restarting the conveyor under full load could damage the Grain Cannon. In the event of an emergency and the conveyor is shut down under full load, lock out the power source and remove as much product from the system as possible. Replace all covers and/or guards, reconnect the power source and clear the conveyor gradually.

The Troubleshooting section will assist you in recognizing and repairing any problems you may have with your Grain Cannon during start-up or in the future. We at Lambton Conveyor stand ready to assist you with any problems or concerns regarding the installation, operation and maintenance of our equipment. Feel free to call upon us at any time for information or assistance.

## **Section 6 - Troubleshooting**

### **1. Noisy Operation**

- a) Conveyor chain is too loose. Check chain tension and adjust if necessary.
- b) Improper assembly or misalignment of tube housing. Loosen tube joiners and check tube ends for any gaps or burrs and correct as necessary.
- c) Head and/or tail sprockets may be off center. Align sprockets to tube housing and ensure all setscrews are tight.

### **2. Belt Slippage on Drive**

- a) Check the drive motor amperage and make sure that the motor is not overloaded.
- b) Correct belt tension

### **3. Grain Recycling Back in Upper Tube**

- a) Partially blocked discharge. Remove obstruction.
- b) Discharge gates not fully open. Make sure grain is not over running the gate.
- c) Chain speed may be too fast. Check for proper shaft RPM as per system specifications chart.

### **4. System is not Delivering Full Capacity**

- a) Chain speed may be too slow. Check for proper shaft RPM as per system specifications chart.
- b) High moisture grain will move at a lower capacity than dry grain.
- c) Check for obstructions at intake.
- d) Check to make sure that the chain has not been installed with a twist.
- e) Loose chain. Correct tension and check for worn sprockets.
- f) Loose sprockets. Ensure all set screws are tight.

### **5. Paddles Breaking or Bending**

- a) Check to make sure that the paddles are fastened securely to the chain brackets.
- b) Improper assembly or misalignment of tube housing. Loosen tube joiners and check tube ends for any gaps or burrs and correct as necessary.
- c) Head and/or tail sprockets may be off center. Align sprockets to tube housing and ensure all setscrews are tight.
- d) Frequent starts under load. Allow machine to clean out before shutting down.
- e) Overfeeding. Adjust the feeding of the unit to allow less product to enter while maintaining full speed.

### **6. Chain Failure**

- a) Check to make sure that the master connecting links have been installed correctly.
- b) Check for obstructions in the system.
- c) Frequent starts under load. Allow machine to clean out before shutting down.

## **Section 7 – Maintenance**



**Power must be locked out prior to any maintenance or repairs being performed on the equipment to prevent accidental start-up. Failure to follow this precaution may result in serious injury or death.**

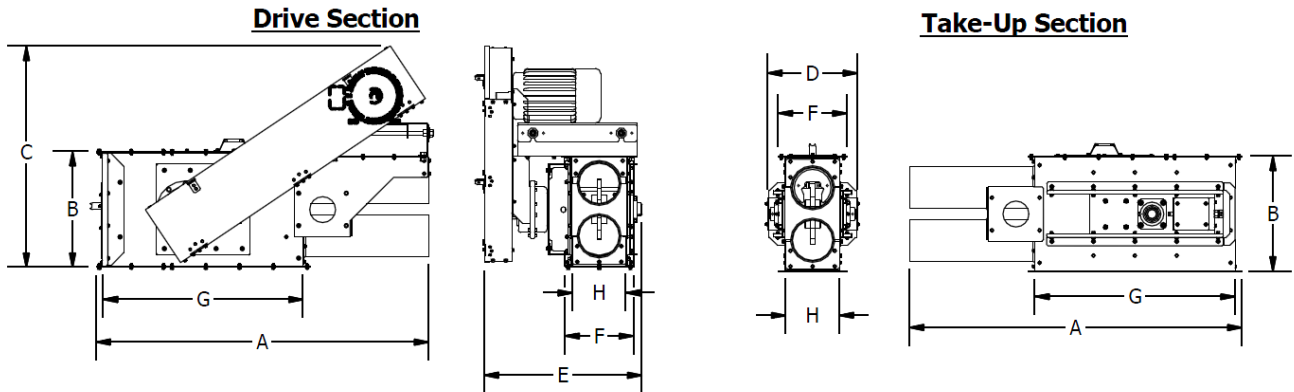
To extend the life of your conveyor perform the tasks listed frequently. Like all equipment the overall life of your conveyor can be greatly reduced if it is abused and poorly maintained.

- Check all bearings and moving parts daily during operation for any problems.
- Lubricate all bearings, and drive components as needed according to the manufacturer's recommendations.
- Inspect the drive belts frequently for proper tension and wear. Replace when necessary.
- Check drag chain, and sprockets periodically for wear, damage and proper adjustment. Any worn or broken paddles should be replaced or straightened.
- Tighten bolts, electrical connections and switches.

Routine maintenance may include but is not limited to the above.

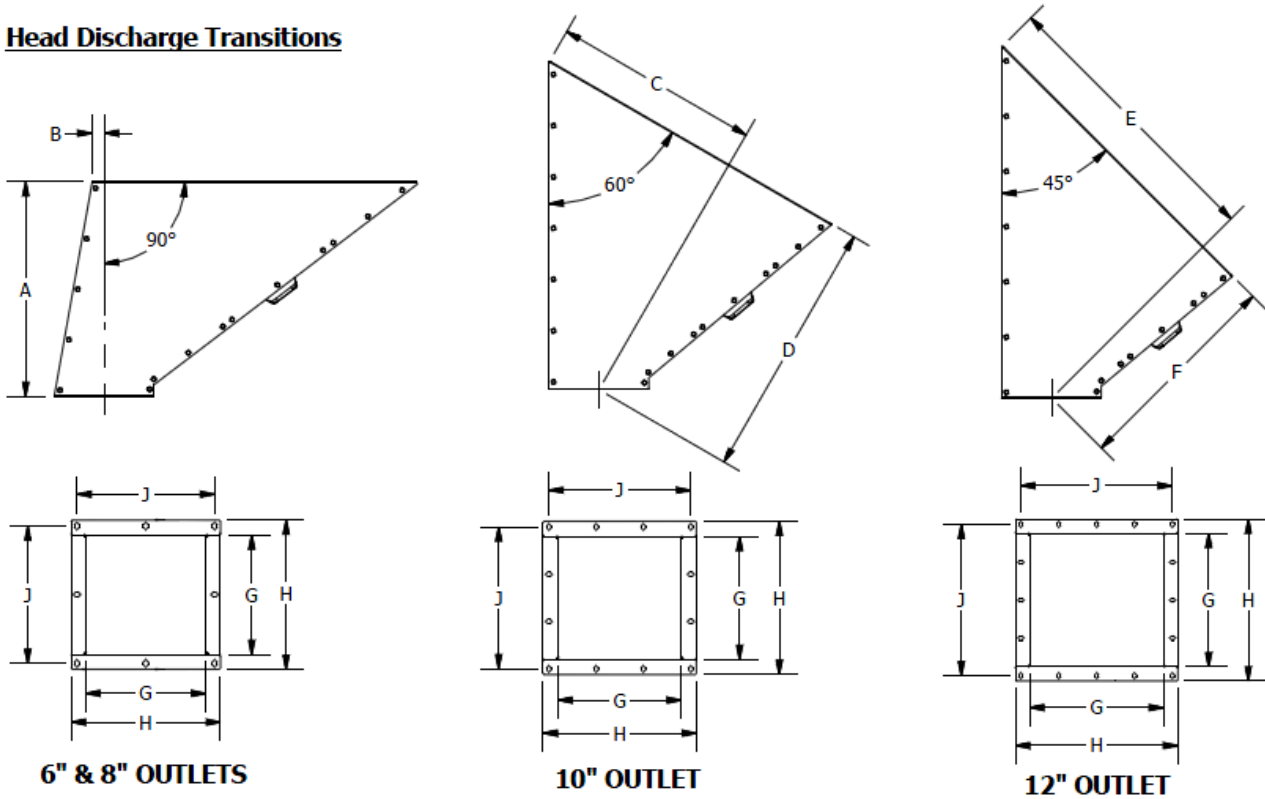
Lambton Conveyor stands ready to serve your replacement part needs. Please contact our Customer Service representatives for assistance.

# Section 8 – Component Dimensions



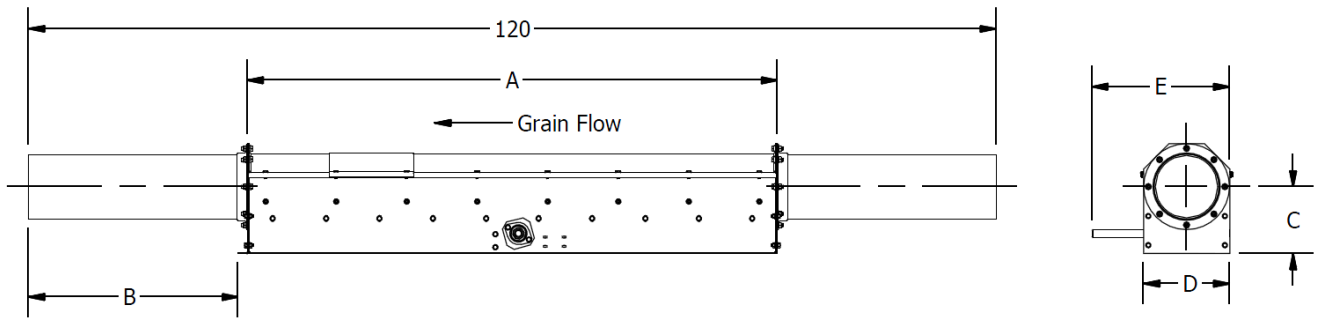
Drive/Take-Up Section Dimensions - Inch (cm)									
Size	A	B	C	D	E	F	G	H	
6	64 (162.6)	19 1/8 (48.6)	40 (101.6)	15 (38.1)	27 3/4 (70.5)	11 1/4 (28.6)	38 (96.5)	8 1/4 (21)	
8	64 (162.6)	22 1/8 (56.2)	42 3/8 (107.6)	17 (43.2)	30 3/8 (77.2)	13 1/4 (33.7)	38 (96.5)	10 1/4 (26)	
10	64 (162.6)	26 1/8 (66.4)	49 3/8 (125.4)	19 (48.3)	34 3/8 (87.3)	15 1/4 (38.7)	38 (96.5)	12 1/4 (31.1)	
12	64 (162.6)	30 1/8 (76.5)	53 1/2 (135.9)	21 (53.3)	38 (96.5)	17 1/4 (43.8)	38 (96.5)	14 1/4 (36.2)	

## Head Discharge Transitions



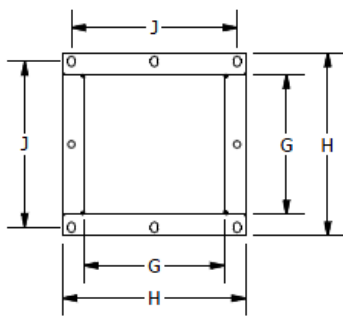
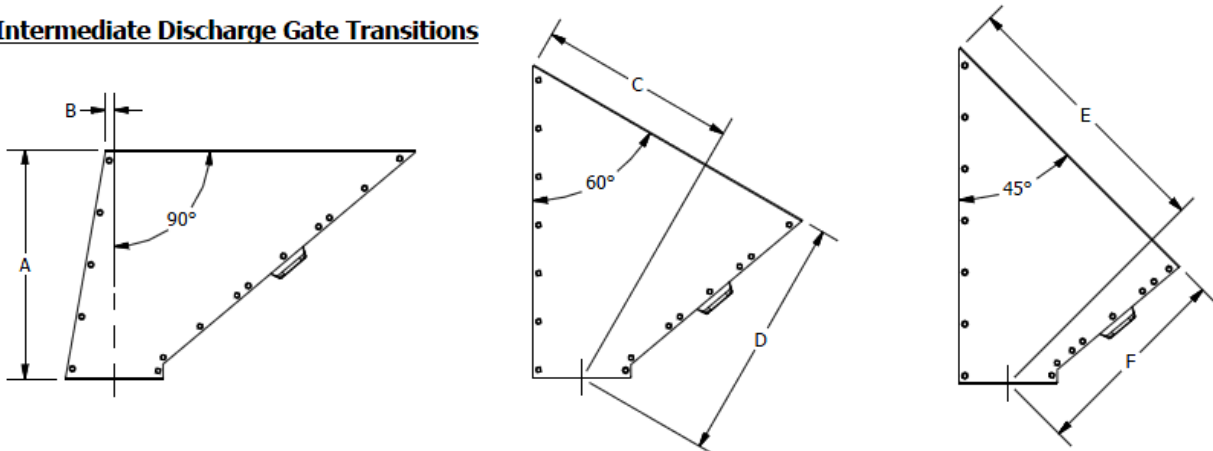
Head Discharge Transition Dimensions - Inch (cm)										
Size	A	B	C	D	E	F	G	H	J	
6	28 (71.1)	1/2 (1.3)	26 1/8 (66.4)	34 7/8 (88.6)	4 3/4 (12.1)	29 (73.7)	8 1/8 (20.6)	10 5/8 (27)	9 5/8 (24.4)	
8	27 1/4 (69.2)	1 5/8 (4.1)	26 1/4 (66.7)	33 (83.8)	5 1/4 (13.3)	27 1/8 (68.9)	10 1/8 (25.7)	12 5/8 (32.1)	11 5/8 (29.5)	
10	35 1/4 (89.5)	1 3/8 (3.5)	26 1/4 (66.7)	30 1/2 (77.5)	5 7/8 (14.9)	24 3/4 (62.9)	12 1/8 (30.8)	15 1/8 (38.4)	14 (35.6)	
12	36 3/8 (92.4)	2 1/8 (5.4)	26 1/4 (66.7)	28 1/2 (72.4)	6 3/8 (16.2)	23 (58.4)	14 1/8 (35.9)	17 1/8 (43.5)	16 (40.6)	

**Intermediate Discharge Gate**

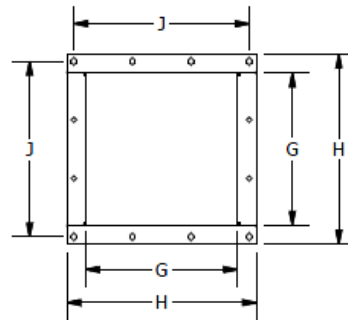


Intermediate Discharge Gate Dimensions - Inch (cm)					
Size	A	B	C	D	E
6	61 3/4 (156.8)	28 (71.1)	7 1/4 (18.4)	8 5/8 (21.9)	15 1/8 (38.4)
8	65 3/4 (167)	26 (66)	8 1/4 (21)	10 5/8 (27)	17 1/8 (43.5)
10	85 3/4 (217.8)	16 (40.6)	9 1/4 (23.5)	12 5/8 (32.1)	19 (48.3)
12	91 3/4 (233)	12 3/4 (32.4)	10 1/4 (26)	15 1/8 (38.4)	21 1/4 (54)

**Intermediate Discharge Gate Transitions**



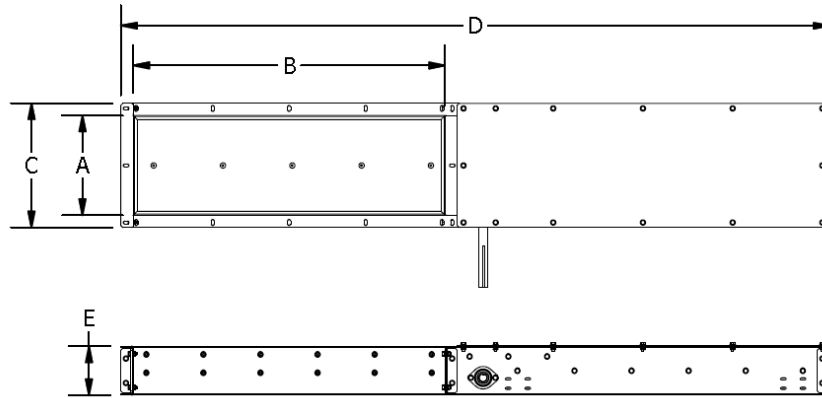
**6", 8" & 10" OUTLETS**



**12" OUTLET**

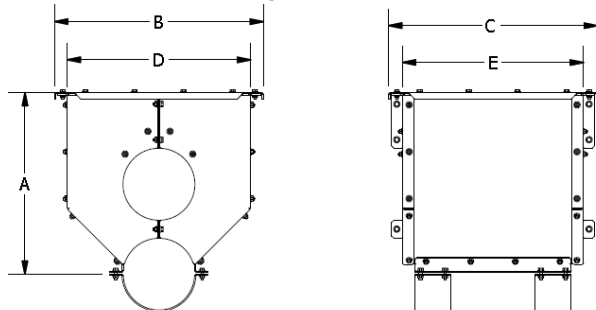
Intermediate Discharge Gate Transition Dimensions - Inch (cm)									
Size	A	B	C	D	E	F	G	H	J
6	25 1/4 (64.1)	0 (0)	20 3/8 (51.8)	26 3/4 (67.9)	28 1/8 (71.4)	22 1/4 (56.5)	6 1/8 (15.6)	8 5/8 (21.9)	7 5/8 (19.4)
8	25 (63.5)	1 (2.5)	21 5/8 (54.9)	26 7/8 (68.3)	29 1/2 (74.9)	22 1/8 (56.2)	8 1/8 (20.6)	10 5/8 (27)	9 5/8 (24.4)
10	33 1/8 (84.1)	1/2 (1.3)	27 3/4 (70.5)	35 1/2 (90.2)	38 1/4 (97.2)	29 1/2 (74.9)	10 1/8 (25.7)	12 5/8 (32.1)	11 5/8 (29.5)
12	34 1/8 (86.7)	1 5/8 (4.1)	29 3/4 (75.6)	36 5/8 (93)	40 5/8 (103.2)	30 1/8 (76.5)	12 1/8 (30.8)	15 1/8 (38.4)	14 (35.6)

**HEAD DISCHARGE GATE**



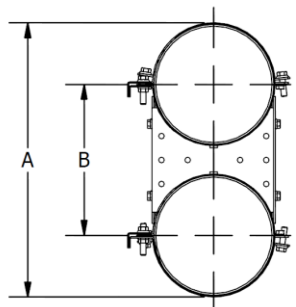
Head Discharge Gate Dimensions - Inch (cm)					
Size	A	B	C	D	E
6	8 1/4 (21)	38 1/4 (97.2)	11 1/4 (28.6)	86 7/8 (220.7)	6 (15.2)
8	10 1/4 (26)	38 1/4 (97.2)	13 1/4 (33.7)	86 7/8 (220.7)	6 (15.2)
10	12 1/4 (31.1)	38 1/4 (97.2)	15 1/4 (38.7)	86 7/8 (220.7)	6 (15.2)
12	14 1/4 (36.2)	38 1/4 (97.2)	17 1/4 (43.8)	86 7/8 (220.7)	6 (15.2)

**By-Pass Inlet**



By-Pass Inlet Dimensions - Inch (cm)					
Size	A	B	C	D	E
6	18 7/8 (47.9)	20 3/8 (51.8)	20 3/8 (51.8)	17 (43.2)	17 (43.2)
8	20 3/8 (51.8)	23 3/8 (59.4)	23 3/8 (59.4)	20 (50.8)	20 (50.8)
10	24 3/8 (61.9)	27 3/8 (69.5)	27 3/8 (69.5)	24 (61)	24 (61)
12	28 3/8 (72.1)	31 3/8 (79.7)	31 3/8 (79.7)	28 (71.1)	28 (71.1)

**Tube Section**



Tube Section Dimensions - Inch (cm)		
Size	A	B
6	16 (40.6)	9 3/4 (24.8)
8	18 1/4 (46.4)	10 1/8 (25.7)
10	22 (55.9)	11 3/4 (29.8)
12	26 1/2 (67.3)	14 1/4 (36.2)



## **Section 9 – Parts List**

***Coming Soon***

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## Quality Analysis Report

RA#: \_\_\_\_\_ Date: \_\_\_\_\_ Originator: \_\_\_\_\_

Distributor: Lambton Conveyor Phone #: 519-627-8228 Fax #: 519-627-0250

Account #: \_\_\_\_\_ Contact: \_\_\_\_\_ Salesman: \_\_\_\_\_

Sales Order #: \_\_\_\_\_ Invoice #: \_\_\_\_\_ Purchase Order #: \_\_\_\_\_

Qty.	Part #	Reason for Return

FOR WARRANTY EVALUATION, THE FOLLOWING APPLICATION INFORMATION MUST BE COMPLETED

**Application Information:**

Type of Application: \_\_\_\_\_ Input RPM: \_\_\_\_\_ Output RPM: \_\_\_\_\_

HP: \_\_\_\_\_ Ratio: \_\_\_\_\_ Environment (wet, dusty, etc.): \_\_\_\_\_

Lubrication Type: \_\_\_\_\_ Type of Loading (shock, constant, etc.): \_\_\_\_\_

Type of Drive: \_\_\_\_\_ Operating Temperature: \_\_\_\_\_ Length of Service: \_\_\_\_\_

Probable Cause or Comments: \_\_\_\_\_

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