Flite-Veyor®

INCLINE FLAT BOTTOM DRAG CONVEYOR

MODELS 2426 - 3026

INSTALLATION & OPERATING INSTRUCTION MANUAL

Manufactured in the U.S.A. by

SWEET® MANUFACTURING COMPANY

The Leader in Material Handling Equipment Since 1955

P.O. Box 1086, 2000 E. Leffel Lane • Springfield, Ohio 45501
Toll Free: 1-800-334-7254 (in U.S.A. & Canada) • Phone: 937-325-1511 • Fax: 937-322-1963

www.sweetmfg.com

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A minimum charge of Fifty Dollars ($50.00) net, exclusive of transporation charges, will be made on all orders, unless otherwise noted on invoice for the value of such material as less than this amount.

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Sweet Manufacturing Company
P. O Box 1086
2000 E. Leffel Lane
Springfield, OH 45501

Toll Free: 800-334-7254
(U.S.A. & Canada)
Phone: 937-325-1511
Fax: 937-322-1963
E-mail: sales@sweetmfg.com

Flite-Veyor®

INCLINE

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Serial Number_____

INTRODUCTION

The purpose of this Owner's Manual is to advise and instruct owners of the Flite-Veyor® Incline Flat Bottom Drag Conveyors (hereafter referred to as Incline Flite-Veyor®) and accessories in the recommended installation, operation, and maintenance of the equipment.

The instructions and drawings provide a step-by-step method of installation procedures. Even though installation procedures may vary because of different applications, it is suggested that if there are any questions, you refer to the instructions in this manual. To ensure long life and trouble-free operation, it is recommended that you perform regular maintenance as discussed in this manual.

IT IS THE INSTALLER'S RESPONSIBILITY TO BE AWARE OF ALL FEDERAL, STATE AND LOCAL SAFETY AND ELECTRICAL CODES DURING THE INSTALLATION AND USE OF THE INCLINE FLITE-VEYOR®.

CHECK & INSPECT YOUR ORDER

Each order or shipment is double checked before leaving the factory. All parts, pieces and components are listed item by item on our packing list, which accompanies each order. The number and description of each item, package, container, skid, etc. is listed on the bill of lading. **IN SIGNING THE BILL OF LADING, THE CARRIER ASSUMES FULL RESPONSIBILITY FOR SAFE DELIVERY OF ALL GOODS TO DESTINATION IN THE SAME ORDER AS CARRIER WAS TENDERED BY THE SHIPPER.** In the event of damage or shortage, have the transportation company note the same on the freight bill. You should then file a claim against the carrier for such loss and/or damage.

You will find a packing list attached to one of the items in the shipment. Check each item against the list. Check by description, specification, quantity, count, etc. Should there be any discrepancies, notify us immediately. If an order or shipment includes more than one Incline Flite-Veyor®, the parts for each conveyor will be keyed or marked on the packing list for easy identification.

Small parts and items such as bolts, washers, bushings and keys are just as important to an installation as the other components. Make sure these are located and checked before disposing of any containers or packing. We cannot be responsible for loss of items that are listed and included on our packing list.

Should there be some delay between the time an order is received and the ensuing installation, store parts in a protected area so they may be easily located and identified. **RETAIN PACKING LISTS FOR THIS REASON, AS WELL AS FOR FUTURE PARTS REFERENCE.**

INCLINE FLITE-VEYOR® FUNCTION

The Incline Flite-Veyor® function is different from that of the Sweet® Horizontal Flite-Veyor®. They are both drag style chain conveyors; however, the Horizontal Flite-Veyor® is an en masse style conveyor that utilizes the biggest portion of the trough height to carry material. The Incline Flite-Veyor® is not classified as an en masse type conveyor. The incline conveyor utilizes about one half of the trough height to carry the material and uses a center pan to help hold the material on the carrying side and assist the chain on the return side.

Care must be taken when designing a system to utilize an Incline Flite-Veyor®.

TYPICAL INSTALLATIONS

The typical uses of the Incline Flite-Veyor® are shown in Figure A.

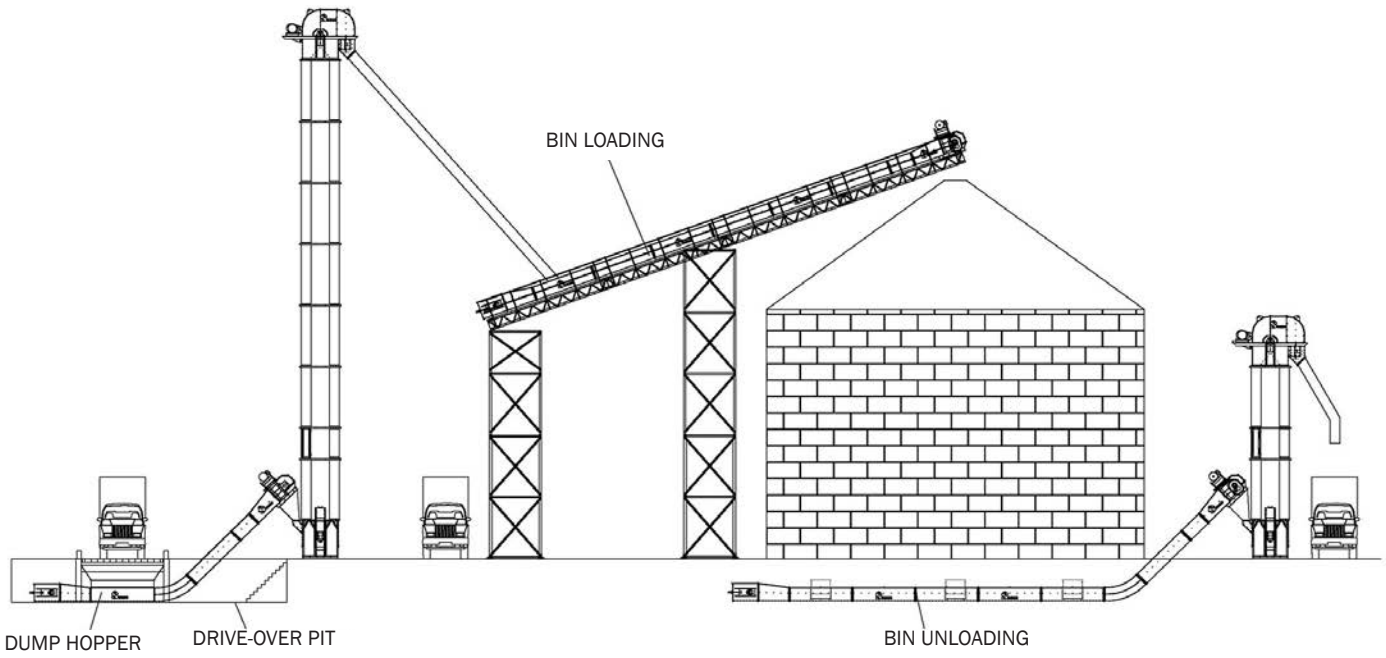
The Incline Flite-Veyor® is typically used to feed a bucket elevator when an elevator boot pit is not desired. The conveyor can be used as a straight incline or can utilize curved sections with either a 15°, 30° or 45° curve. There are other uses for the Incline Flite-Veyor®, including but not limited to the following:

Bin Loading
Where an installation may require different bin heights and it is desired to use a single conveyor, a 'straight' Incline Flite-Veyor® will work. Using the optional intermediate discharge gates, different bins can be loaded. If intermediate discharge gates are used, it is recommended to allow the head to discharge as well. This will allow any carryover material to discharge the conveyor to prevent buildup which can cause the conveyor to plug.

Bin Unloading
Multiple use of openings in the bin floor rather than a single center drop-out will reduce the amount of material left in the bin as it is emptied. **CAUTION!** Always unload bin from the center dropout first to prevent structural failure of the bin.

Drive-over Pit
Material is unloaded into the hopper mounted directly on the Incline Flite-Veyor®. Sweet manufactures bypass dump hoppers for use in these applications.

Figure A: Typical Installations



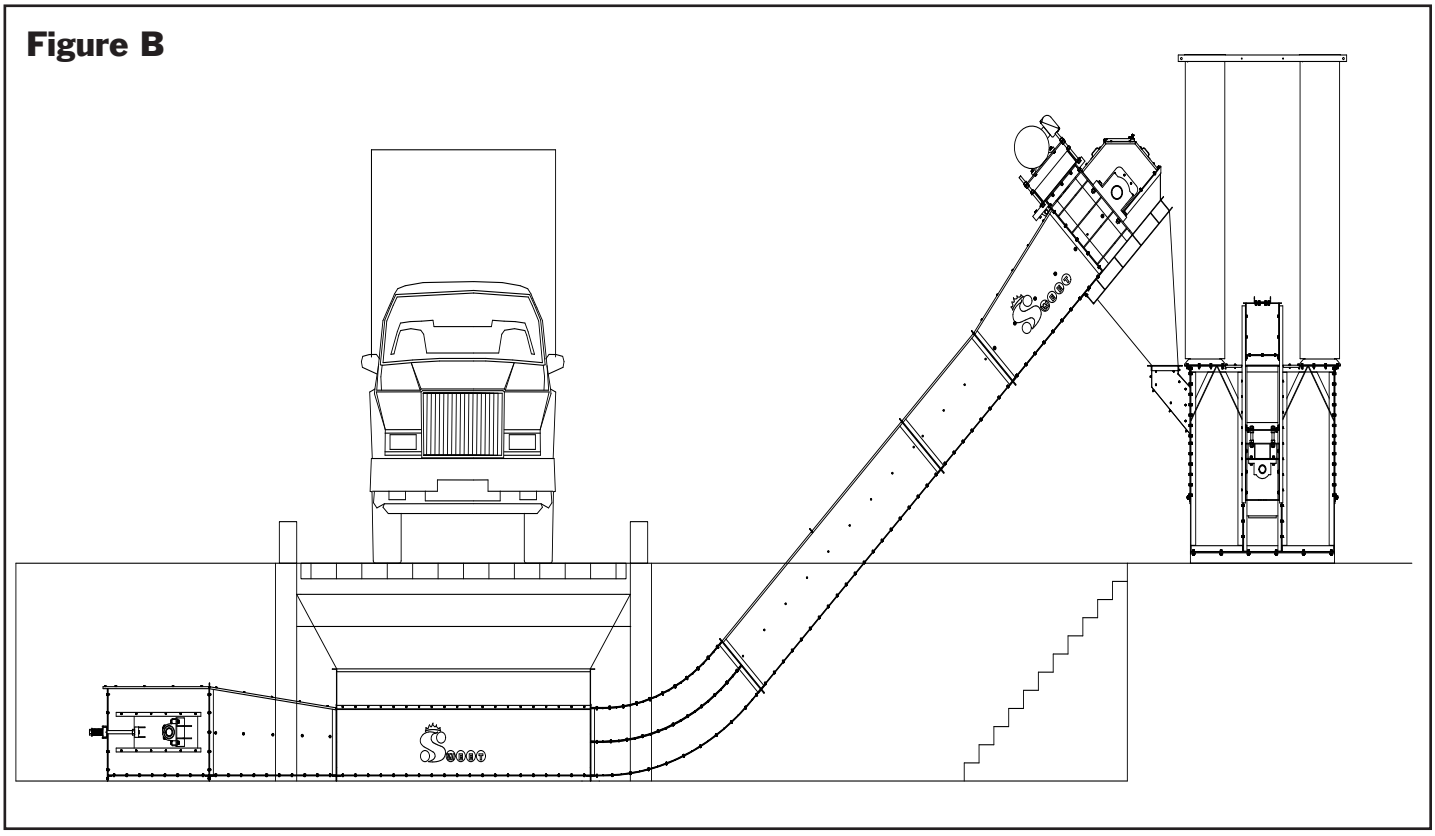
SELECTING THE PROPER CONVEYOR

Consideration must be given to the following items before ordering an Incline Flite-Veyor®:

- Desired capacity of the conveyor: It is smart system design to use a conveyor that has slightly less capacity than the equipment into which it is discharging, if applicable. This will prevent plugging of the conveyor and make for better system design.
- The type of product conveyed: Every product has its own flow characteristics, so it is likely that capacity results will vary by product. This is especially important to consider when using the same conveyor to handle multiple products.
- The number and type of inlets required: When using an Incline Flite-Veyor®, it is preferred to use the bypass inlets or bypass dump hoppers. Extra standard style inlets are available. However, they require that an opening be cut in the center pan, and this can affect the overall performance of the conveyor.
- The slope of the conveyor, if using a straight incline.
- The curve required with the horizontal and incline length.
- The number and type of intermediate discharges desired.

The Incline Flite-Veyor® can be used to feed the boot of a bucket elevator using one of the optional discharge transitions or using one that is fabricated in the field by a millwright (See Figure B).

Figure B



MODEL IDENTIFICATION & CAPACITY

Use Figure C to identify the model of Incline Flite-Veyor® required, as well as capacities and dimensions.

Figure C

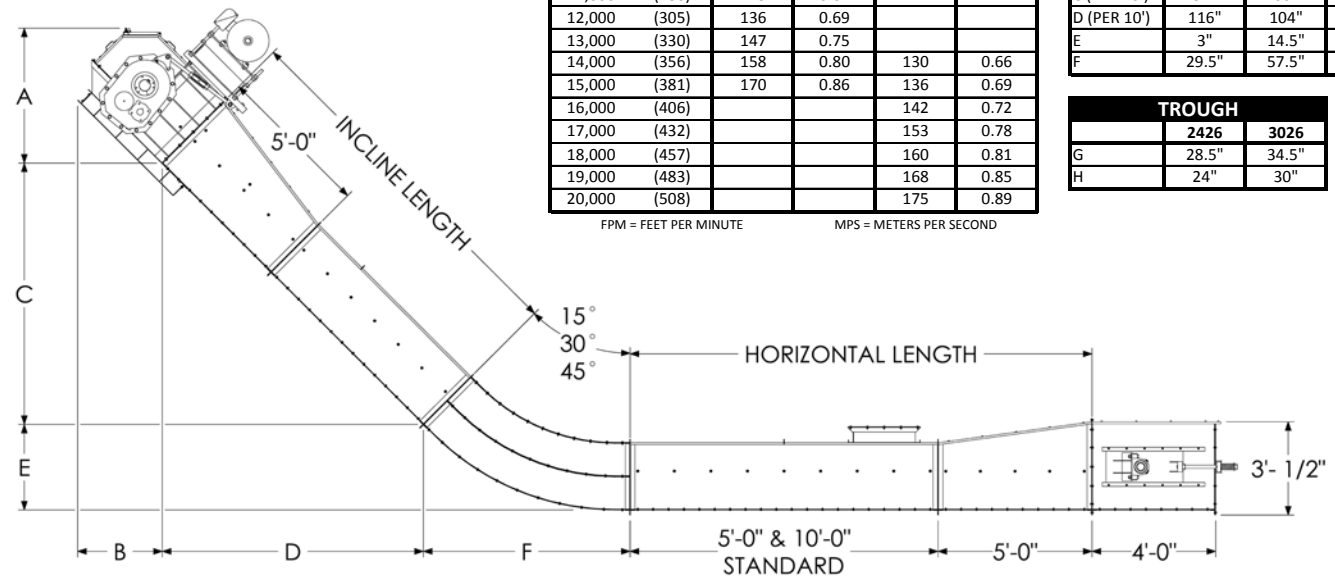
INCLINE FLITE-VEYOR® CAPACITY CHART					
		2426		3026	
BPH (MTPH)		FPM	MPS	FPM	MPS
10,000	(254)	113	0.57		
11,000	(280)	125	0.64		
12,000	(305)	136	0.69		
13,000	(330)	147	0.75		
14,000	(356)	158	0.80	130	0.66
15,000	(381)	170	0.86	136	0.69
16,000	(406)			142	0.72
17,000	(432)			153	0.78
18,000	(457)			160	0.81
19,000	(483)			168	0.85
20,000	(508)			175	0.89

FPM = FEET PER MINUTE MPS = METERS PER SECOND

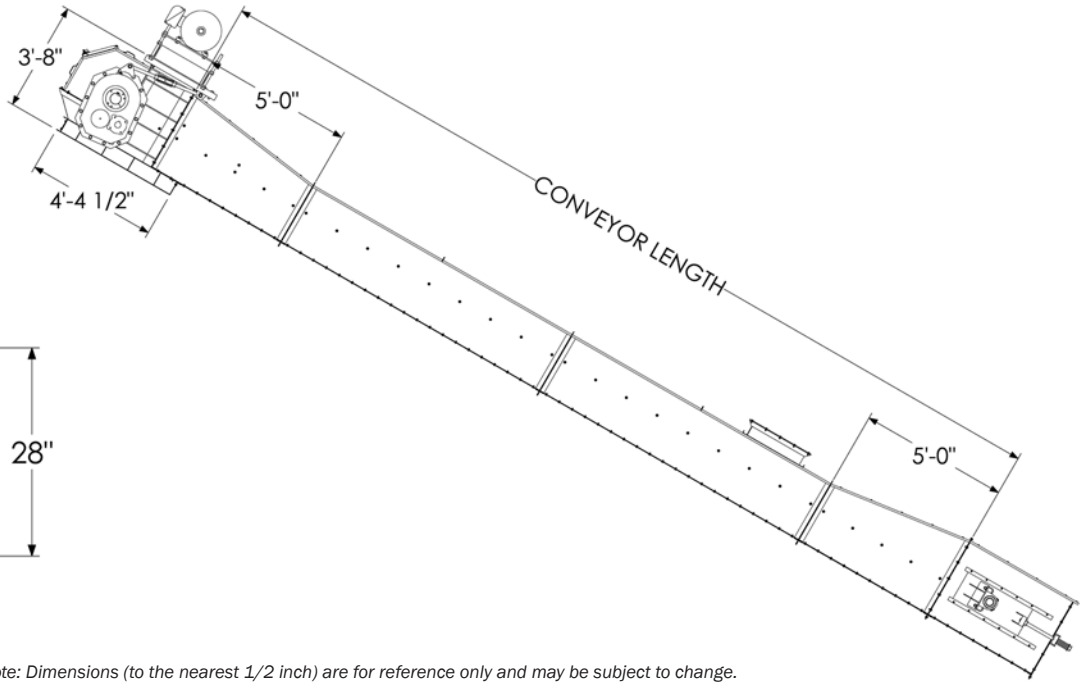
CURVE ANGLE			
	15°	30°	45°
A	43.5"	49"	51"
B	44"	38"	33"
C (PER 10')	31"	60"	85"
D (PER 10')	116"	104"	85"
E	3"	14.5"	33.5"
F	29.5"	57.5"	80.5"

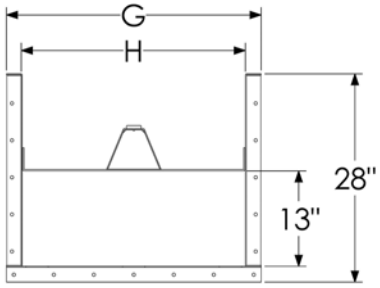
TROUGH		
	2426	3026
G	28.5"	34.5"
H	24"	30"

CURVED INCLINE



STRAIGHT INCLINE





TROUGH CROSS SECTION

Note: Dimensions (to the nearest 1/2 inch) are for reference only and may be subject to change.

GAUGES & SPECIFICATIONS

HEAD WITH 5' TRANSITION	3/16" GALV.	Sides with pillow block, self aligning double row spherical roller bearings
TAIL WITH 5' TRANSITION	3/16" GALV.	Sides with pillow block spherical roller bearings and take-up
TROUGH	10 GA. GALV.	Sides and Bottoms
COVERS	12 GA. GALV.	Bolted flat covers
CHAIN		142NA, 142HA

ABRASION RESISTANT LINERS: Available for trough sides and bottoms. Gauge options include 10 ga., 3/16" and 1/4" and will be quoted upon request.

GENERAL

Only proper installation can offer the performance intended by the manufacturer. Therefore, a good installation should be of prime concern to the customer and to the construction firm. **THE MANUFACTURER CANNOT BE RESPONSIBLE FOR THE INSTALLATION OF A CONVEYOR.** The suggestions and information contained herein are offered solely as a convenience. Sweet Manufacturing Company assumes no liability for installation, either expressed or implied.

Unless the location of the equipment has been pre-determined by a layout drawing or print, careful consideration should be given as to the depth of the pits, location of inlets, possible obstructions, etc. Plan ahead for the location of supports and bracing.

When the Incline Flite-Veyor® is used to feed a bucket elevator or another conveyor, provision must be made for proper clearances to allow for drives, discharges, valves, etc., on all equipment after it has been installed. Thought given to such matters prior to installation can prevent later problems in the flow plan and avoid possible"bottlenecks."

Supporting the conveyor on a catwalk requires bolting the unit down to the catwalk every 10 feet. Attachment brackets are available from Sweet Manufacturing Company.

INSTALLATION & ASSEMBLY OF INCLINE 26 SERIES FLITE-VEYORS®

The desired length and height of the conveyor is achieved through a combination of head, tail, and trough sections. Lay out the unit as it will be used, including the head and tail sections which arrive fully assembled from the factory. Incline Flite-Veyor® troughs are available in up to 10' sections. Do not lift trough lengths greater than 40' with a maximum of 20' between lift points. The installed conveyor should be supported every 10', or one place per conveyor section when installed. Ensure proper support for drive side of head due to the added weight from drive components.

The trough sections are assembled in the factory. However, care must be taken when bolting the troughs together to ensure the center pans and bottoms are aligned properly. The sides have slots to allow for pan height adjustment. **NOTE: Be sure to align return pans as well as bottoms/liners for a smooth transition of chain and paddles from trough section to trough section.**

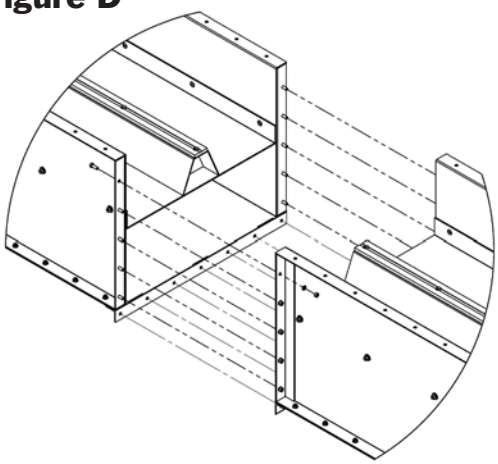
WARNING: If height mismatches occur in the pans or bottoms/liners, it will create a catch point for the flights and cause premature wear of the flights, a decrease in conveyor performance and excessive noise.

The conveyor is assembled by bolting adjacent side and bottom end flanges together using 3/8" x 1" bolts and nuts (See Figure D). Apply silicone caulk to all flanges prior to assembly of the trough sections. Loosely install the connecting hardware. It is recommended that a taught line be used to ensure that conveyor sections are straight horizontally. As stated earlier, exercise care to ensure that the inside trough bottom and the center pans are aligned. Adjust as necessary. Shims may be used as required to achieve proper horizontal and vertical alignment. Once the conveyor is aligned, tighten connecting hardware.

Trough covers are available in up to 5' sections. Assemble covers using 3/8" x 1" bolts and nuts. Apply silicone caulk to all flanges prior to assembly.

Recheck all hardware for proper tightness, including bearing bolts, bearing set screws, tapered bushings, etc. These are tightened when they leave the factory; however, during shipment some hardware may have become loose.

Figure D



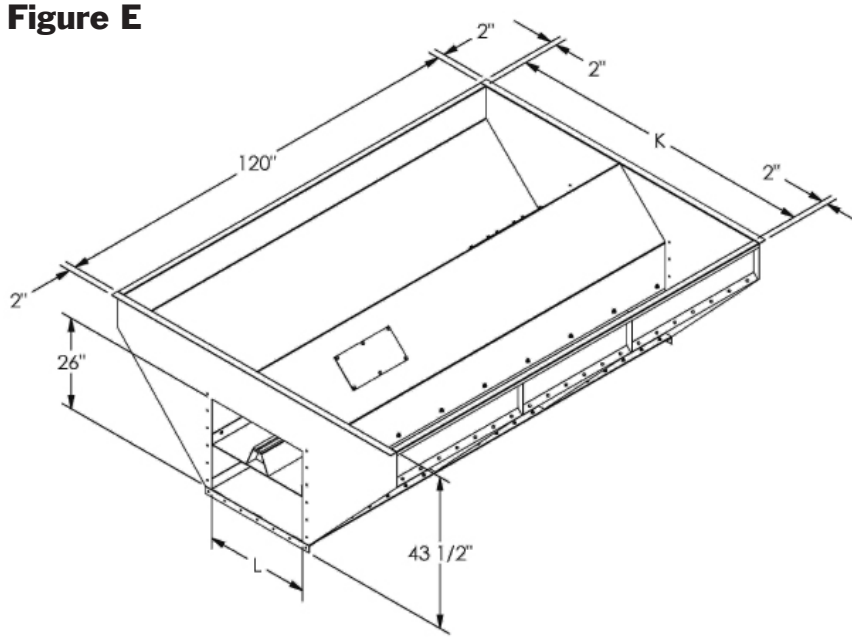
INLET ASSEMBLIES

Bypass Dump Hopper

The bypass dump hopper (See Figure E) also known as a pit hopper, provides a regulated flow of material onto the carrying chain paddles. This reduces material damage, chain shock and horsepower requirements. The grain enters through openings in both sides of the trough. This eliminates the drag caused by the top chain moving through the material, greatly reducing the horsepower required for pit applications. The bypass dump hopper replaces a piece of trough, so no additional modifications to the conveyor are necessary. Install the bypass dump hopper as you would a trough section.

The standard length of a bypass dump hopper is 10'. Additional lengths are available upon request. To determine the additional horsepower required to drive the Incline Flite-Veyor® with a dump hopper, add 20' to the length of the conveyor. For additional information, consult Sweet Manufacturing Company's Sales Department.

Figure E



BYPASS DUMP HOPPER		
	2426	3026
K	82.5"	88.5"
L	24"	30"

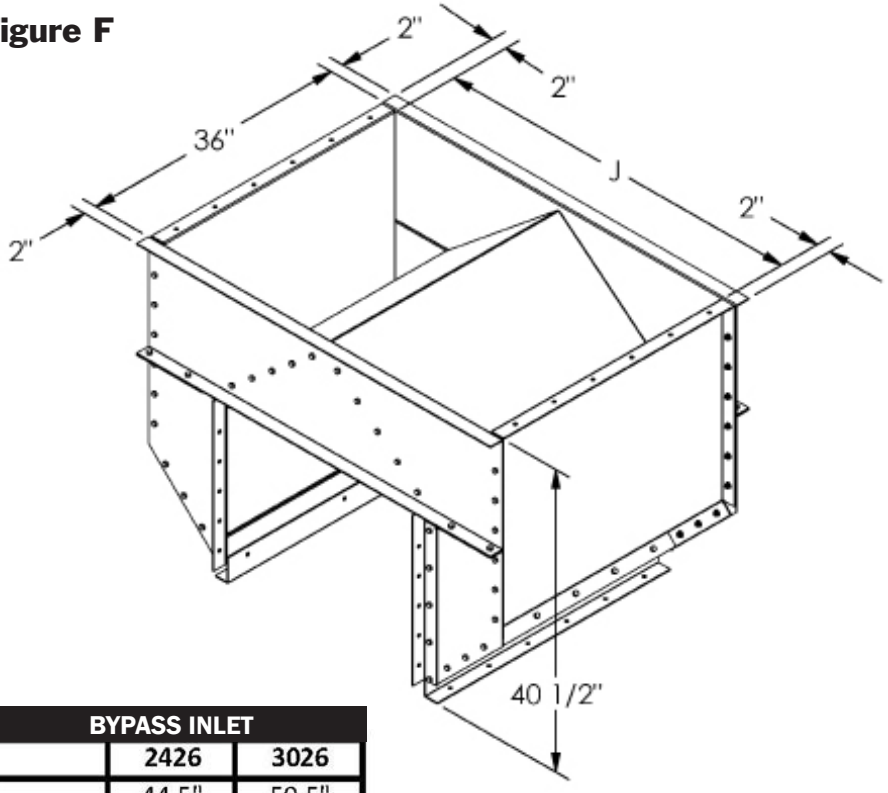
Note: Dimensions (to the nearest 1/2 inch) are for reference only and may be subject to change.

Bypass Inlet

The bypass inlet (See Figure F) provides a regulated flow of material onto the carrying chain paddles for intermediate loading. This reduces material damage, chain shock and horsepower requirements. The grain enters through openings field cut into both sides of the trough. This eliminates the drag caused by the top chain moving through the material, greatly reducing the horsepower required for pit applications.

The bypass inlet fits over a trough section and requires field cutting the trough and cover for installation. It is recommended to install the bypass inlet before the chain is completely installed to prevent damaging the UHMW flights of the chain during trough modifications.

Figure F



BYPASS INLET		
	2426	3026
J	44.5"	50.5"

Note: Dimensions (to the nearest 1/2 inch) are for reference only and may be subject to change.

INLET ASSEMBLIES (CONTINUED)

Install as follows:

1.) Cut and remove the top flanges of the trough on both sides, per dimensions in Figure G.

2.) Cut and remove section from trough side and liner, if applicable, per dimensions in Figure G. Do not cut through the middle pan.

3.) Remove the bottom hardware at the location of the bypass inlet installation.

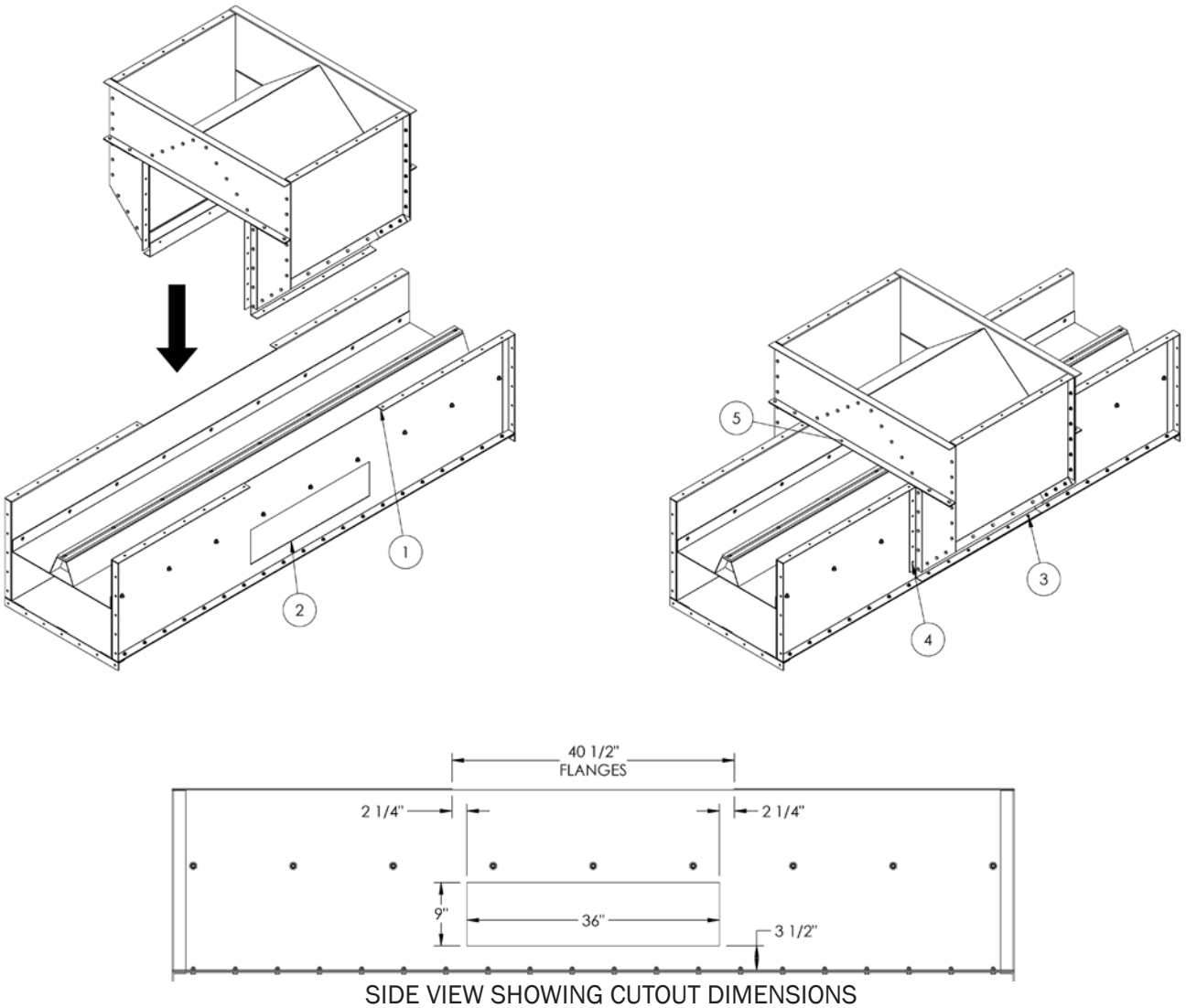
4.) Do one of the following:

   a. Place the bypass inlet and mark the holes in the bypass inlet side flanges. Remove bypass inlet and drill the marked locations with a 17/32" bit through the pan, side and liners, if applicable. Apply silicone caulk to bypass inlet side flanges and use 3/8" carriage bolts to secure bypass inlet to trough section. Replace the bottom hardware with the appropriate length 3/8" bolts and nuts.

   b. Place the bypass inlet and solid weld around side flanges. Replace the bottom hardware with the appropriate length 3/8" bolts and nuts. Finish the welds with a zinc rich primer.

5.) Modify covers to fit with bypass inlet. Apply silicone caulk to cover prior to installation.

Figure G



SIDE VIEW SHOWING CUTOUT DIMENSIONS

Other lengths available upon request. Contact Sales for price and availability.

Note: Dimensions (to the nearest 1/2 inch) are for reference only and may be subject to change.

INLET ASSEMBLIES (CONTINUED)

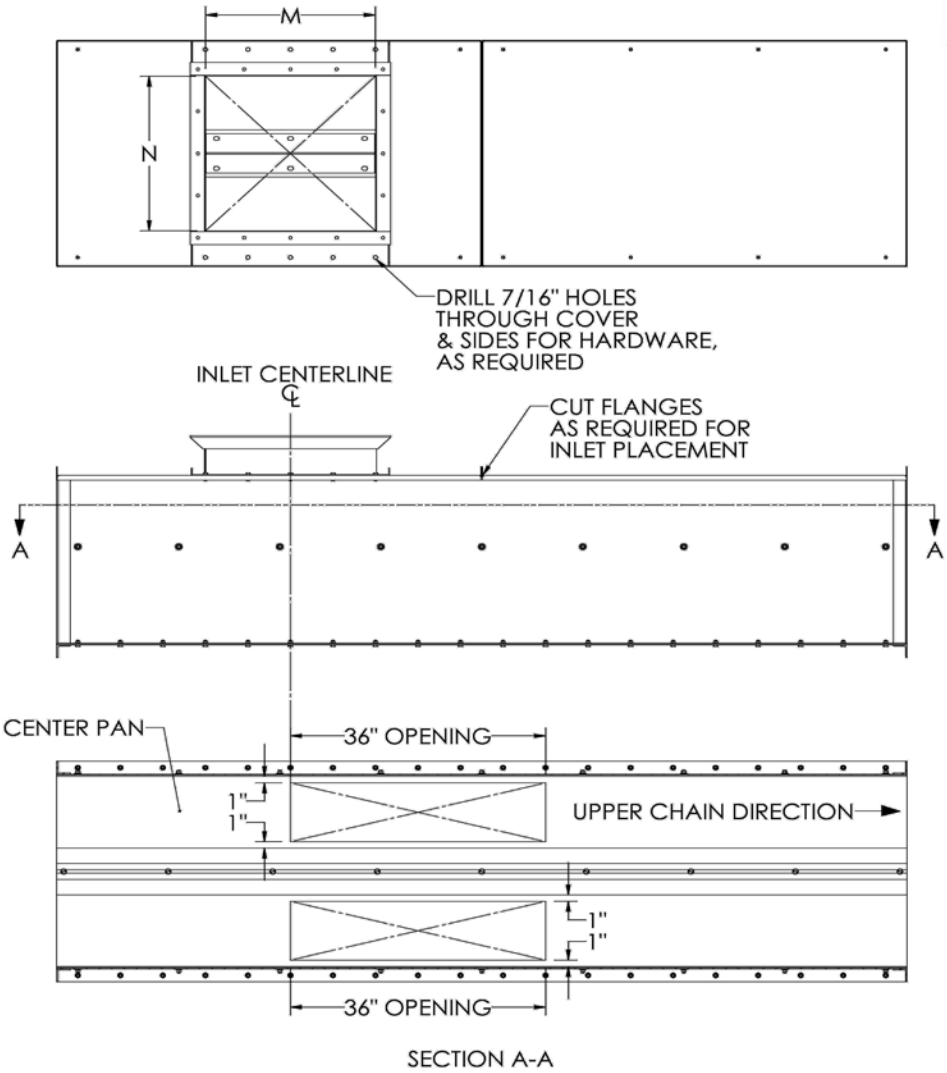
Standard Square Frame Inlet

The standard square frame inlet (See Figure H) is mounted directly on top of the conveyor trough covers. This should only be used when some other means of controlling the flow is above the inlet (e.g., rack and pinion valve). **Standard inlets are not recommended for use as intermediate inlets on an Incline Flite-Veyor®.** Use bypass inlets for this application instead.

Installation of the standard inlet requires that the cover and middle pan be cut out, as shown in Figure H. Do not cut within 1" of the pan chain support rail on either side. Apply silicone caulk between the trough cover and standard square frame inlet prior to installation. The standard square frame inlet must be installed on the trough sections, not on the tail transition.

Figure H

STANDARD SQ. FRAME INLET		
	2426	3026
M	20"	24"
N	20"	24"



Note: Dimensions (to the nearest 1/2 inch) are for reference only and may be subject to change.

OPTIONAL INTERMEDIATE DISCHARGE INSTALLATION

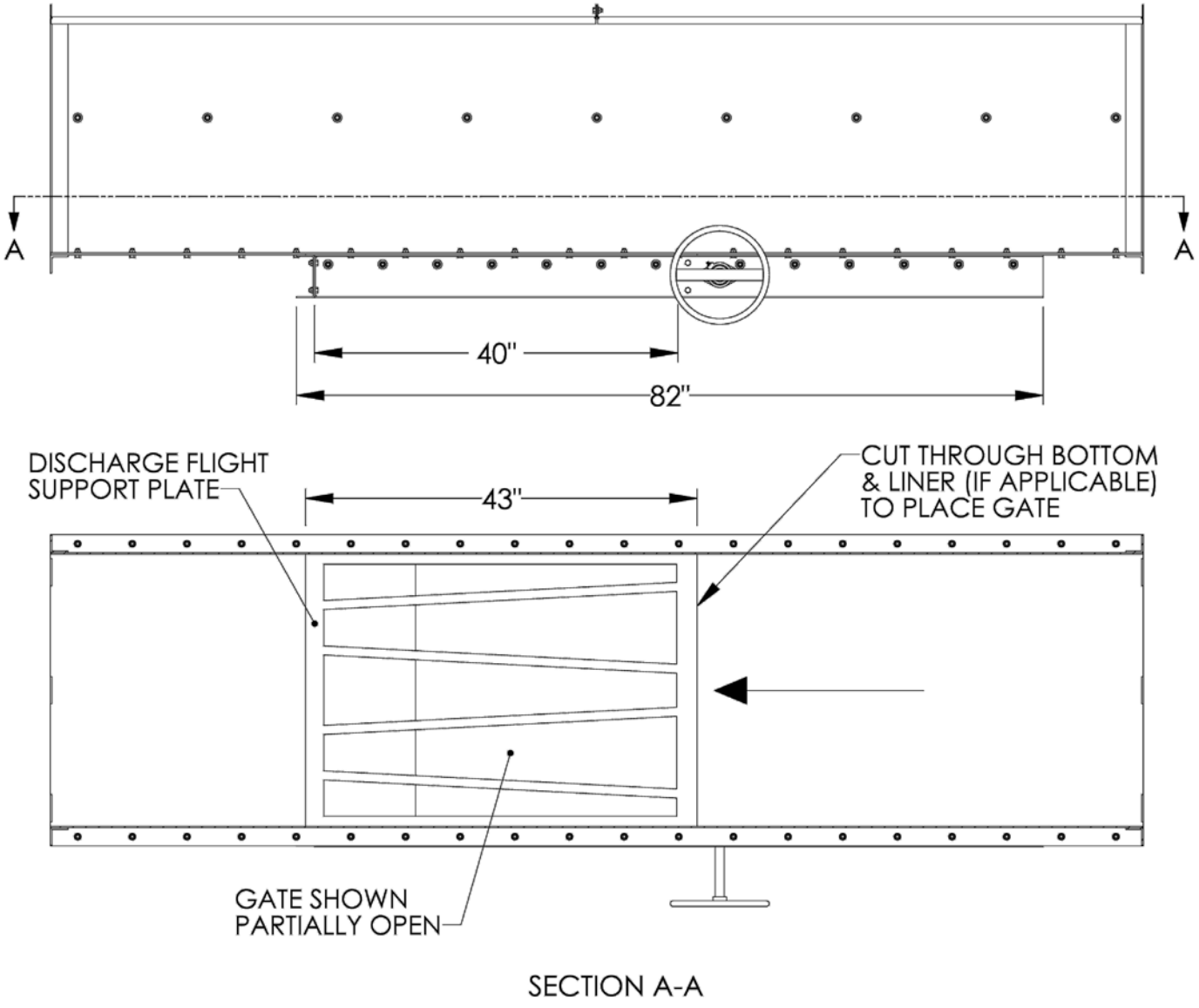
Even though the use of an intermediate discharge is not likely in the installation of an Incline Flite-Veyor®, the following procedure should be used:

1) Determine the location of the center of the intermediate discharge from the tail or head section. Typical intermediate discharge gates are shown in Figure I.

2) Locate the discharge flight support plate in the center of the discharge and make a mark at each end of the support plate onto the trough bottom. The standard bottom can then be removed from the trough assembly and cut so the discharge flight support can be installed where the piece was removed. If the existing holes in the trough sides cannot be used, new ones must be drilled to fit the discharge flight support plate and the top flange of the intermediate discharge. The internal cut edge of the trough bottom should be ground smooth to prevent interference with the chain flighting as it passes over the opening.

3) Bolt the intermediate discharge and the discharge flight support plate to the trough. The rack and pinion side may extend either to the left or the right side of the conveyor.

Figure I



GATE SHOWN WITH STANDARD MANUAL HAND WHEEL OPERATION.
ELECTRIC DRIVE OR PNEUMATIC OPERATION OPTIONS AVAILABLE.

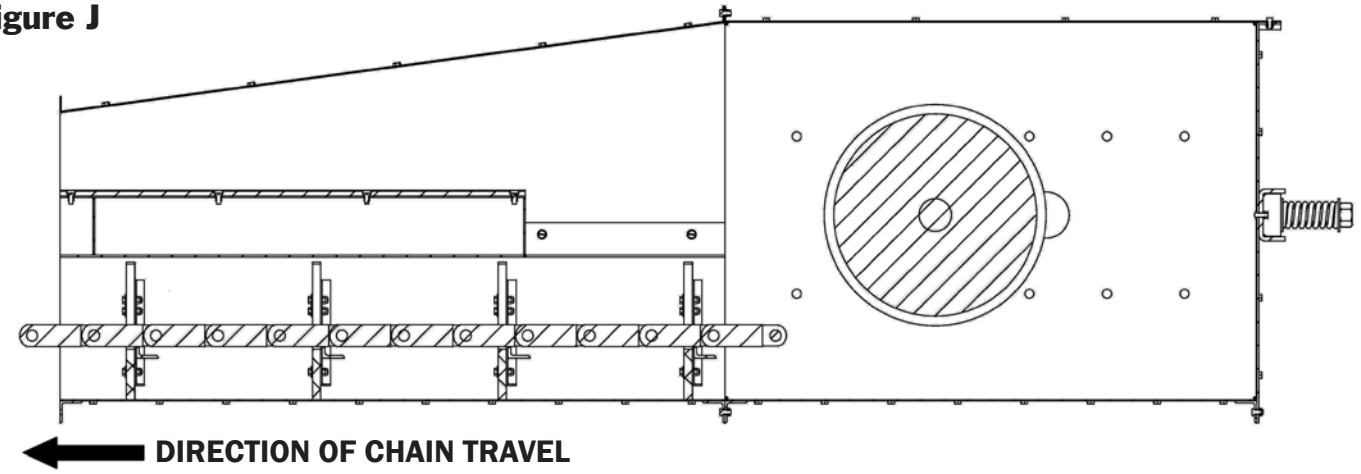
Note: Dimensions (to the nearest 1/2 inch) are for reference only and may be subject to change.

INSTALLATION OF CHAIN

Proper installation of the chain assemblies is critical for long life and performance of the 26 Series Incline Flite-Veyor®. Use the following procedure for setting the chain tension:

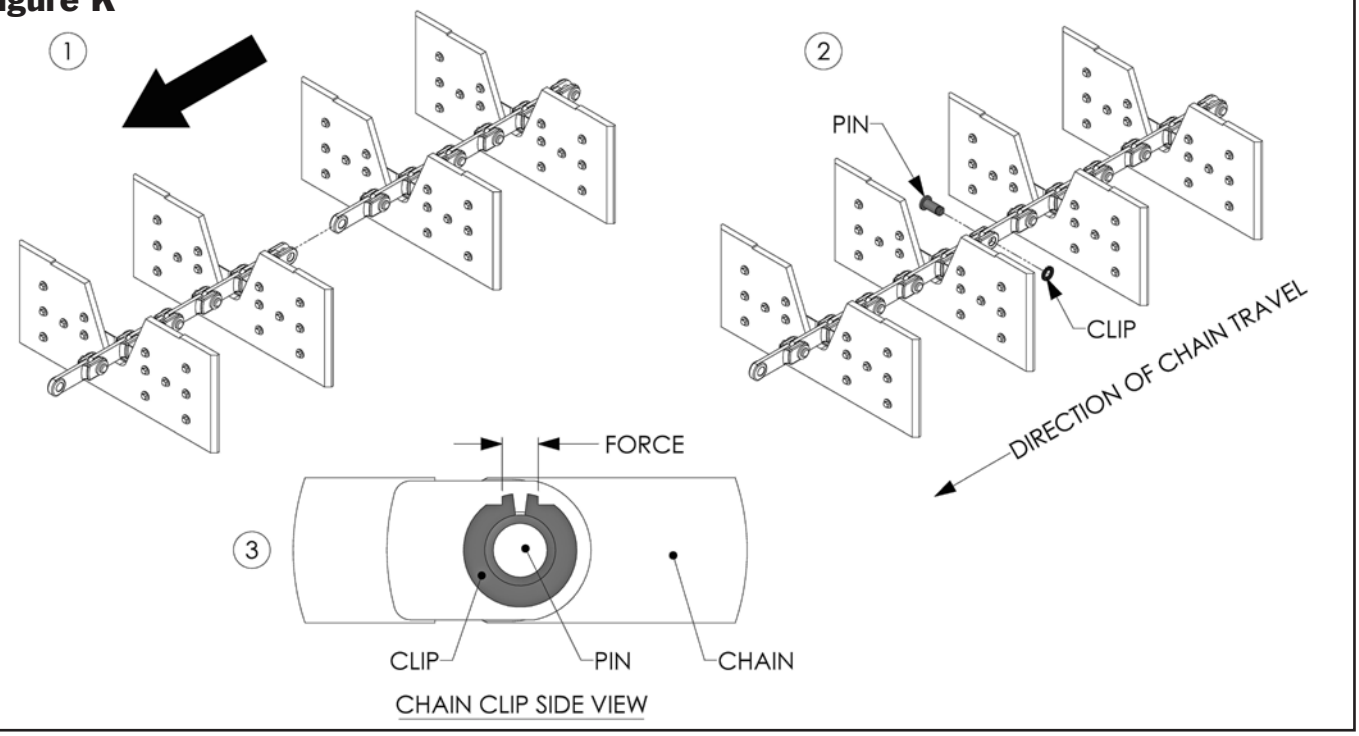
Remove the covers from the trough, tail, head, transitions and curves to allow for ease of installation of the chain. Adjust the take-up on the tail so that it is in the minimum position. Begin placing the chain in the conveyor with the UHMW flights facing the direction of travel. For example, on the carrying side of the conveyor, the UHMW flights face the head; on the return side, they face the tail (See Figure J).

Figure J



Before connecting lengths of chain, ensure that the flights are facing the correct direction. To connect lengths of chain, bring two ends of chain together and place a connecting pin through the links. Install a chain clip on the pin and collapse the chain clip onto the pin by applying force as shown in Figure K. **Do not reuse clips after they have been collapsed and removed.**

Figure K



On the return side, ensure that the chain sits properly in the grooved UHMW wear strip. The groove helps to ensure that the chain remains centered, which reduces noise from the flights hitting the conveyor pan and sides. Adjust the tension and check by lifting the chain away from the support rail at the midpoint of each chain strand. The proper amount of lift would be 1% of the chain strand center distance (i.e. on a 100 foot chain strand the lift would be approximately 1 foot). At this point, check the flights on the bottom and make sure the flights are standing upright. Adjust the tension as necessary. Using caution due to moving chain and flights, turn the head sprocket in the direction of travel so that the chain makes one complete pass through the conveyor. The chain should be tight enough to keep the flights erect and prevent the chain from wrapping the sprocket, but loose enough to move smoothly through the transitions and curve, if applicable. After making any necessary adjustments, reinstall the covers and sealants and tighten all hardware. After reinstalling all covers, run the conveyor empty and verify that the chain has proper tension.

It is normal for a conveyor with a curve, like the 26 Series Incline Flite-Veyor®, to create a noise level that is above average when compared to a straight conveyor. The most common cause of the excessive noise and wear in an incline conveyor stems from the chain being too tight. The noises can be from the flights hitting the covers and cover joints. Also, there may be a scraping noise from the curved section when the chain is too tight. The chain on the Incline Flite-Veyor® should never be so tight that it fully collapses the springs on the take-up rods or pushes up the conveyor covers. The conveyor should quiet down when material is being conveyed. If the conveyor becomes noisier with material, check the tension of the chain and make sure that none of the flights are damaged. Adjust and replace as required.

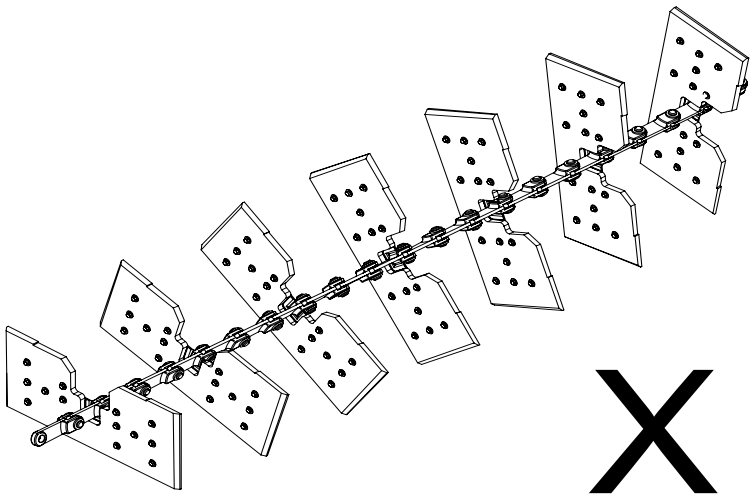
DANGER

Exposed conveyor and moving parts will cause severe injury or death. De-energize the conveyor and follow proper lockout/tagout procedures before removing the cover or inspection door. Make sure to add oil to gear reducer before operating, as it is shipped without oil. Follow the instructions with the reducer, making sure not to overfill.

PREVENTING PERMANENT CHAIN TWIST

The chain can become twisted if improperly handled. **DO NOT** turn over a length of chain by twisting one end, as shown in Figure L. This may cause a permanent twist to the chain.

Figure L



DRIVE ASSEMBLY

The typical drive assembly includes a shaft-mounted gear reducer, a torque arm, reducer bushings, motor mount, sheaves and sheave bushings, V-belts and drive guards. The standard mounting side for the drives is the left hand side of the conveyor when looking at the head from the tail. Drives that mount on the right hand side of the conveyor can be supplied. Please specify this at time of order. **It is important to note that the gear reducers are shipped without oil.** After proper placement of the reducer, make sure the oil level is at the manufacturer's recommended level before running the conveyor.

A torque arm channel is supplied for drives using Dodge TA8 reducers and smaller. For Dodge TA9 reducers and larger, the forces are too large to be supported by the conveyor and an external torque arm support must be supplied by the customer.

CAUTION: Ensure proper support for drive side of head to prevent conveyor twisting or failure due to the added weight of the drive components.

CAUTION: For safe handling of the drive components, use only proper lifting equipment with enough rated capacity to lift the drive components. Lifting the motor mount, motor or reducer by hand may be dangerous and is not the preferred way to install the drive assembly.

Proper installation of the shaft mounted gear reducer drive is essential to efficient and economical operation. Install the drive assembly in the following manner:

1) The drive shaft on the conveyor must be clean and free from burrs. Remove any protective coatings on the shaft using a nonflammable solvent.

2) Locate and inspect the key for the drive shaft.

3) Attach the motor mount assembly to the conveyor head as shown in Figure M. Be sure to use the supplied washer plates as shown.

4) Once the tapered bushings and reducer bracket are placed on the reducer (See Figure N), it is ready to install on the shaft. Pick up the reducer assembly and slide it onto the shaft. Do not slide the reducer all the way to the bearing, as the force may damage the bearing, and the bushing must be far enough from the bearing to allow installation and removal of the bushings.

5) Once the reducer assembly is placed on the shaft in the proper position and the key is in the proper location in the key seat, tighten the bolts on the tapered bushings per the manufacturer's specifications. Refer to the drive manufacturer's assembly manual as required.

6) Install the torque arm channel on the motor mount. Attach the torque arm to the torque arm channel and reducer using the supplied hardware. Be sure to use the supplied washer plate. The angle between the torque arm rod and the line created between the conveyor shaft and the torque arm fulcrum must be 90° ± 20°, as shown in Figure O.

7) Mount the motor bracket and motor to the motor mount, as shown in Figure P.

8) Mount the drive guard back, sheaves and bushings as shown in Figure Q. When installing sheaves, make sure that they are in the proper locations. The larger sheave goes on the gear reducer, unless otherwise specified. Mount the sheaves as close to the reducer and motor as possible, making sure they are in line and proper clearance is given behind the sheaves/bushings for the bolts that attach the drive guard. Use a straight edge to verify sheaves are in line before proceeding with V-belt installation.

9) Install the V-belts and tighten them using the adjustments on the motor mount. The bolts on the drive cover bracket should be loose at this point. Refer to the supplied drive instruction sheet for properly tensioned V-belt applied force and corresponding belt deflection. After the proper tension is achieved, tighten all hardware and nuts as required and install the cover of the drive guard before operation of equipment.

10) Verify that the reducer has the proper amount of lubricant before running the conveyor. **The reducer is shipped without oil.** Refer to the manufacturer's assembly manual for the proper oil level and viscosity.

Figure M

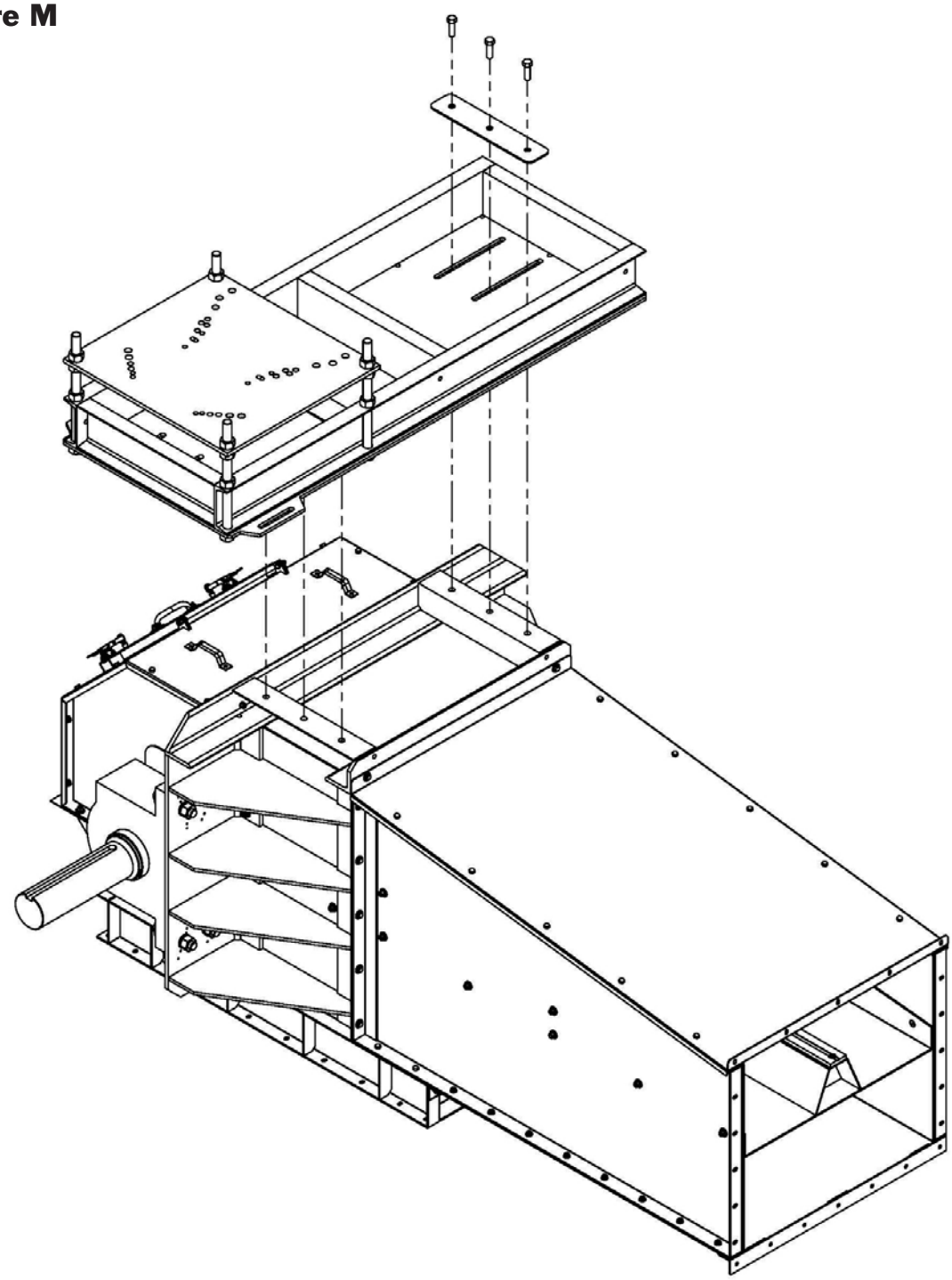


Figure N

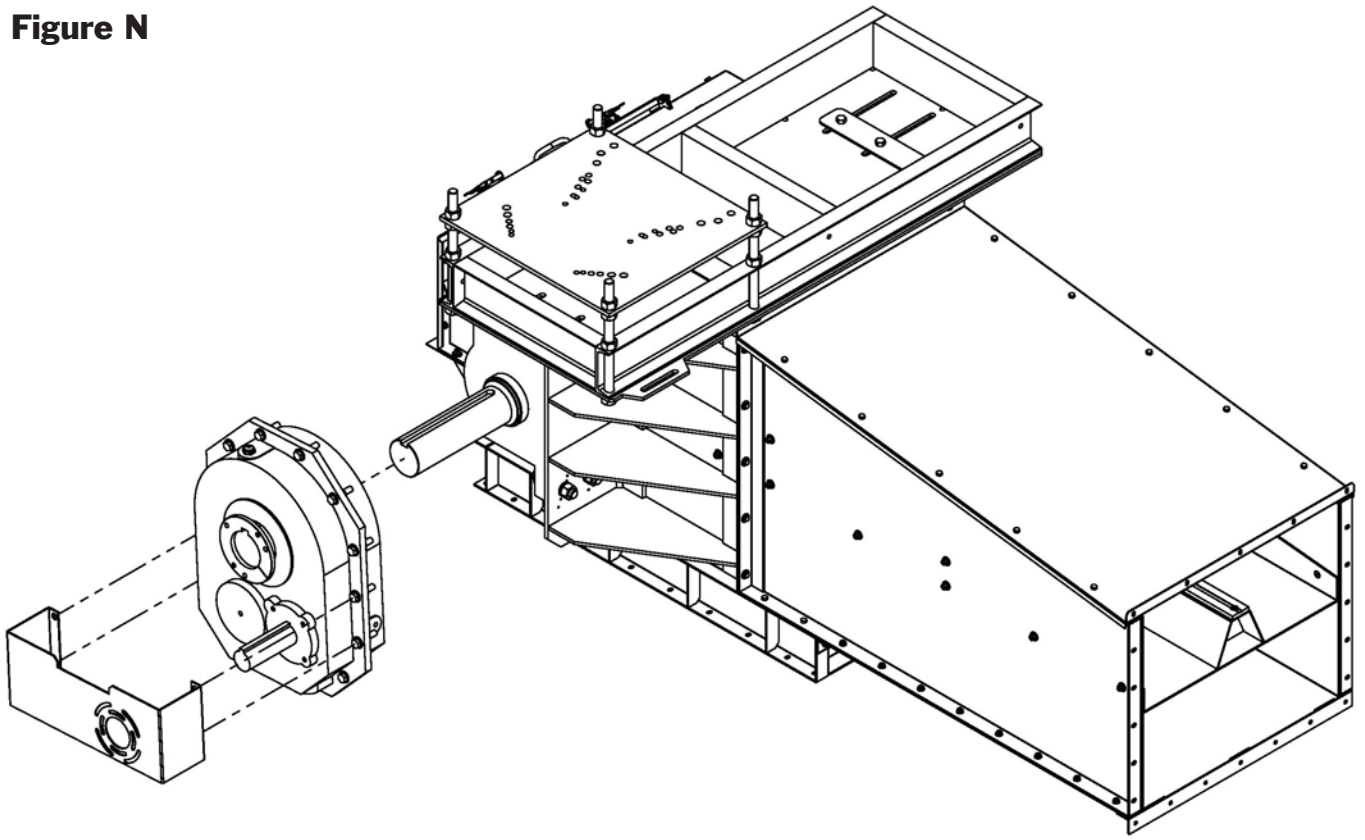


Figure O

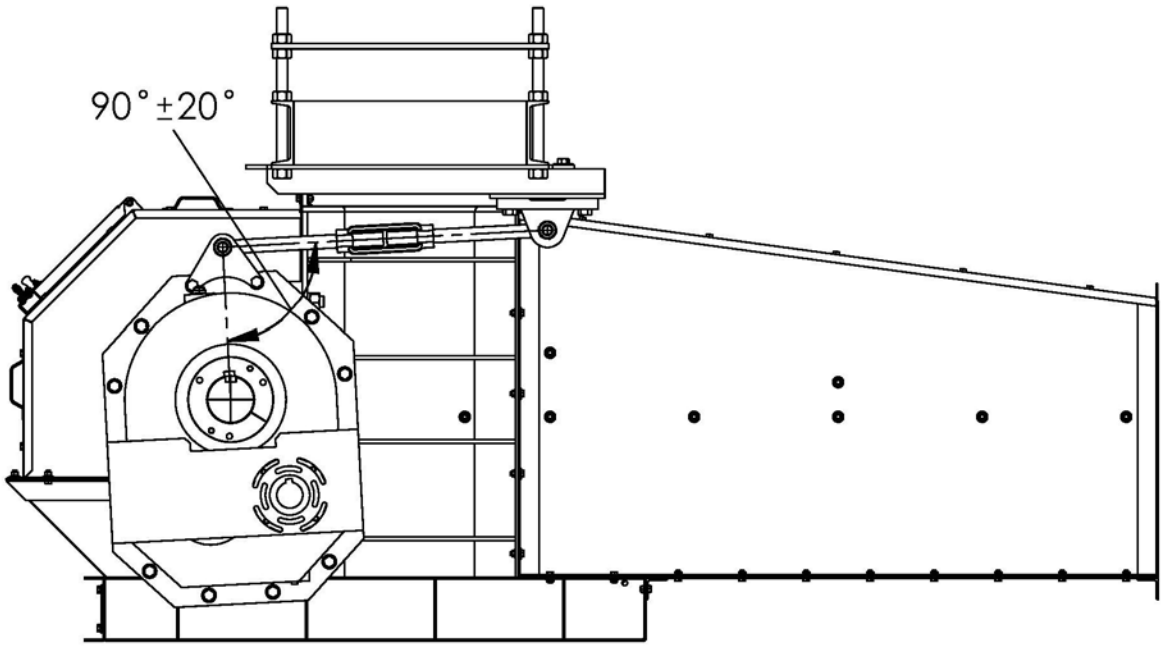


Figure P

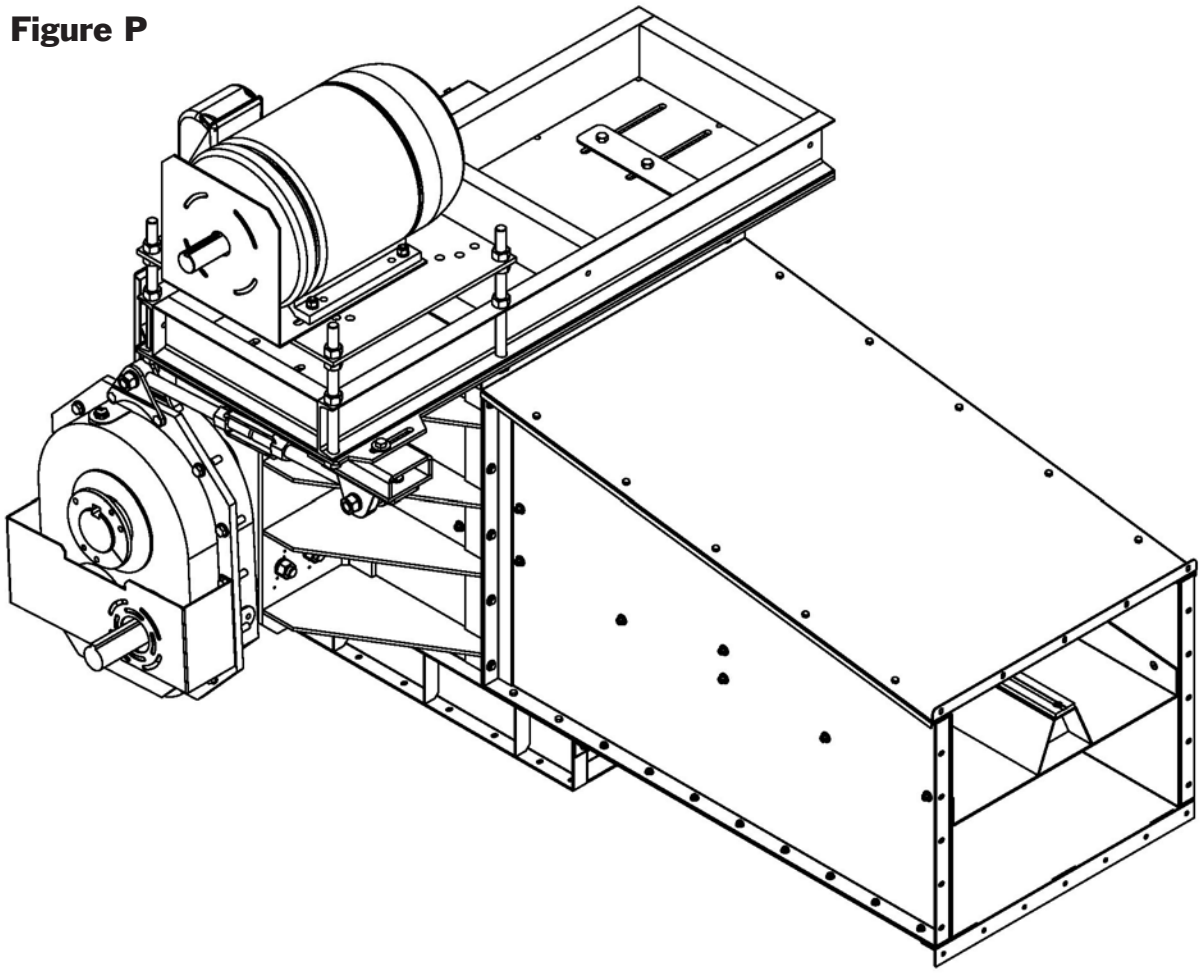
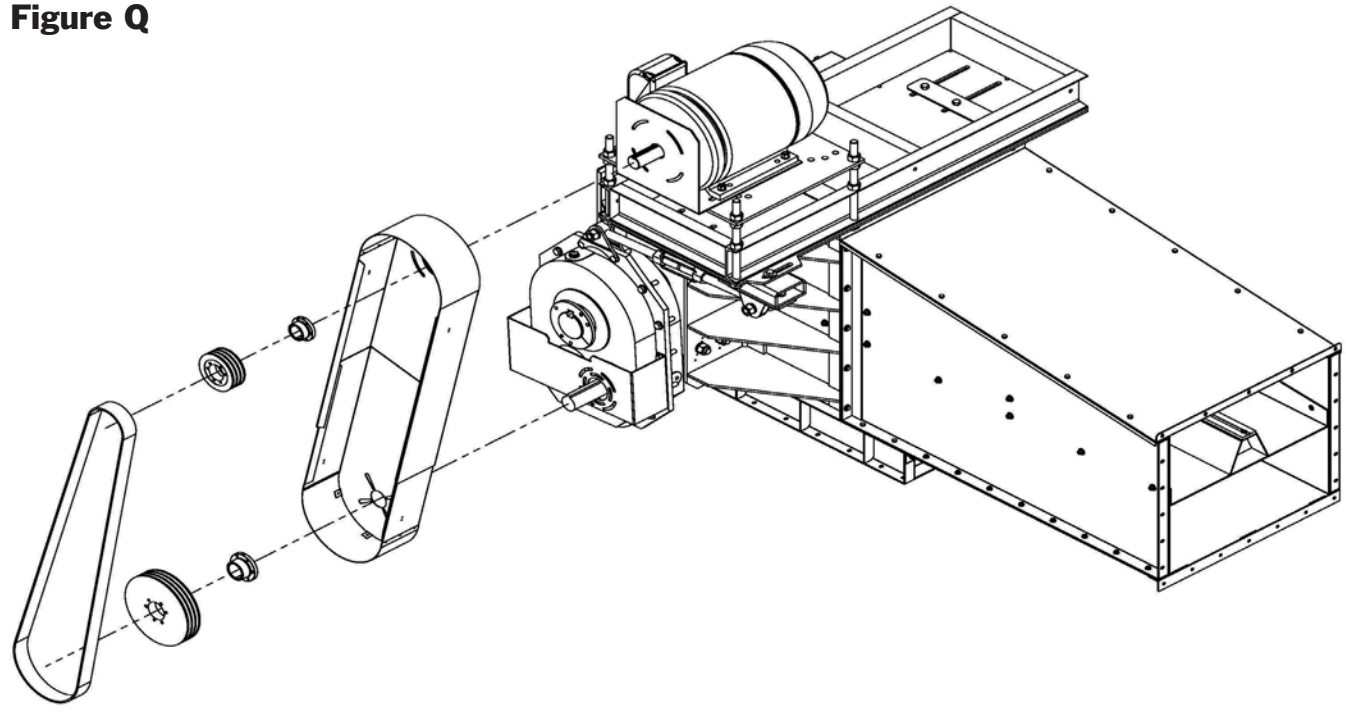


Figure Q



ELECTRICAL EQUIPMENT

All electrical connections should be performed by a qualified electrician. Check local codes before installation of the conveyor. Optional components such as emergency stop switches, shutoff switches, and overflow and overload devices may be required in your municipality. Controls and switches can be provided by Sweet Manufacturing Company for use on our equipment. Consult our Sales Department for items available for your conveyor.

MAINTENANCE

After approximately ten (10) hours of use, retighten all set screws on the bearings for the head and tail shafts, as well as the bushings on the sprockets and reducer. Check the chain slack in the conveyor and the V-belt tension in the drive. This should be repeated after every fifty (50) hours of operation.

CAUTION: CORRECT LUBRICATION
DO NOT START UNIT WITHOUT FIRST FILLING REDUCER WITH OIL!

SPEED REDUCER

The shaft-mounted speed reducer is lubricated by an oil reservoir in the housing. The correct amount of oil is important for the proper operation of the reducer. Too much oil may cause leakage or overheating. Too little oil may cause overheating or damage to internal parts. The "Speed Reducer Service Instruction Manual" gives a list of recommended lubricants and oil change periods.

WARNING!!

DO NOT USE lubricants of the EP (extreme pressure) type, those containing slippery additives or heavy weight (90-140 wt.) gear lube. It is recommended that oil be drained and housing flushed after the first 150 hours of operation and that the oil be changed every 2,500 hours thereafter. Check the oil level occasionally when the unit is not operating and add as required.

CAUTION!!

Keep breather holes clear at all times to prevent pressure buildup in the reducer.

WARNING!!

NEVER remove breather plug or oil level plug while the drive is in operation, or personal injury may result! Check these only when drive is not operating.

INSPECTION

An inspection schedule should be established in order to ensure that the equipment is in good operating condition at all times. Regular inspections will help to reveal little things such as loose bolts, damaged paddles, etc., before they become serious and damaging problems. Here are some of the things that should be inspected and maintained regularly:

1) Inspect chain and paddles for loose bolts, damaged flights, and chain condition.
2) Check chain tension; remove necessary links if it cannot be adjusted further.
3) Inspect V-belts for tension and condition. V-belts should be replaced with a **MATCHED SET.**
4) Check speed reducers regularly for sufficient oil and signs of leakage. **KEEP BREATHERS CLEAN.**
5) Check bearings for sufficient lubrication and evidence of overheating.
6) Check all sheave and drive attaching parts for sufficient tightness.
7) Check all hardware and tighten as required.
8) Check all safety labels regularly. When they become illegible, contact Sweet Manufacturing Company's Sales Department at 800-334-7254 or sales@sweetmfg.com to reorder.

SAFETY

WARNING!

Make inspections when all operations are stopped and lockout and tagout procedures are completed. The importance of exercising **EXTREME CARE** when erecting and maintaining an Incline Flite-Veyor® cannot be overemphasized. Working at heights reached by even the smallest installations can be hazardous, unless safety precautions are taken. In any case, **BE CAREFUL - DO NOT HURRY - AND REMEMBER WHERE YOU ARE AT ALL TIMES.**

Your conveyor has been designed to comply with CEMA safety standards. These safety standards can be obtained through the American Society of Mechanical Engineers as ASME B20 (1993).

Operating and maintenance personnel should be thoroughly trained in safe operating procedures, recognition of possible hazards, and maintenance of a safe area around the conveyor.

Shown at right is an example of the warning sign attached to conveyor covers. (Refer to #8 under Inspection on Page 14 for instructions to reorder safety labels.)

The following safety guidelines should be followed:

THESE ARE GUIDELINES ONLY, AND COMPLIANCE WITH SAFETY STANDARDS - FEDERAL, STATE, AND LOCAL, INCLUDING OSHA - IS THE RESPONSIBILITY OF THE USER.

1) Maintain a safety program for all operating personnel.
2) All operating personnel should be advised of the location of all emergency controls and devices.
3) Good lighting, housekeeping, and maintenance contribute to a safe work area.
4) Frequent inspections should be made of all conveyor equipment, and all safety devices should be in position and in proper working order.
5) Conduct a pre-startup safety check of all conveyor equipment to determine that the machinery and area are safe for operation and that guards and warning devices are in place.
6) There should be absolutely **NO** reckless actions or horseplay in the vicinity of conveyors. Most accidents are caused by lack of proper safety training, carelessness, horseplay, and lack of awareness of possible hazards.
7) Conveyors should not be operated unless the conveyor housing completely encloses the moving elements and power transmission guards are in place. If the conveyor cover or housing is to be opened, the motor must be locked out/tagged out electrically in such a way that it cannot be restarted by anyone in the vicinity or remotely from the conveyor. Overflow cover sections or doors should not be opened while the conveyor is operating.
8) If, because of its application, the conveyor must have open housing, then the entire conveyor must be separated from personnel areas by a fence, and warning signs must be posted.
9) Open feed hoppers or spouts for shovel, front end loaders or their manual or mechanical loading must incorporate a grating. If the characteristics of the material being handled are such that a grating cannot be used, then the exposed portion of the conveyor must be guarded by a fence and warning signs must be posted.
10) **DO NOT** walk or stand on the conveyor cover, grating or power transmission guards.

TROUBLESHOOTING

Problem	Cause	Remedy
Incorrect capacity	Conveyor not running full	Verify that inlet is not backed up or that the equipment feeding conveyor is not plugged.
	Incorrect chain speed	Verify that the head shaft speed is what was ordered. If within one to two RPM of what was sold, this is not the problem. If the head shaft RPM is drastically different, the causes could be improper sheaves, V-belts slipping, improper gear reduction on reducer or an electrical problem. Correct situations as required.
	Improper inlet installation	If the standard inlet is used, the return pan must be cut to prevent the material from making its way to the tail. Verify that the standard inlet is installed as shown in this manual. Too much material being carried to the tail affects the overall HP requirements and efficiency of the conveyor. If using a standard bypass or pit hopper, verify that the material is feeding into the conveyor areas.
	Bent or missing flights	Replace and/or straighten as needed.
	Conveyor plugged with product	Verify that the discharge is not clogged or backing up. Conveyor may be running too fast to discharge, allowing material to return on the return side. Slow conveyor down as required to prevent plugging. Also, you may need to regulate feed into conveyor.
Noisy conveyor	Flights banging on bottoms or return pans	Improper alignment of conveyor sections.
	Flights hitting trough covers	Chain too tight. Chain should not be rubbing covers over entire length of conveyor. Ideally, the chain should ride just below the covers on the trough.
	Conveyor making squeeling noise	Some noise is acceptable. The sound of the flights rubbing the pans and bottoms makes this type of noise. However, if the noise doesn't quiet down when running the conveyor with product, there may be other issues. If the noise is concentrated to the curved section, the chain may be too tight to allow the flights to move and curve. Readjust tension on the chain and run the conveyor again.
	Damaged flights	Replace damaged flights as required.
	Loose flights	Tighten as required.
	Chain and/or sprockets worn	Replace as required.

TROUBLESHOOTING (CONTINUED)

Problem	Cause	Remedy
Excessive UHMW flight wear	Conveyor sections misaligned	Align conveyor sections and return pans as required to realign sections.
	Sprockets not aligned and/or centered	Center sprockets and realign as necessary. Check the locking screws on the keyless locking assembly. Refer to the keyless locking assembly manufacturer's instructions.
Sprockets showing uneven wear	Worn chain	Replace chain as required.
	Improper sprocket alignment	Center sprockets and realign as necessary. Check the locking screws on the keyless locking assembly. Refer to the keyless locking assembly manufacturer's instructions.

CAUTION: As chain and/or sprockets wear and need replacement, the chain manufacturer recommends replacing both for longer life of the replacement parts.

Our Mission

To provide innovative quality solutions that create an extraordinary customer experience.