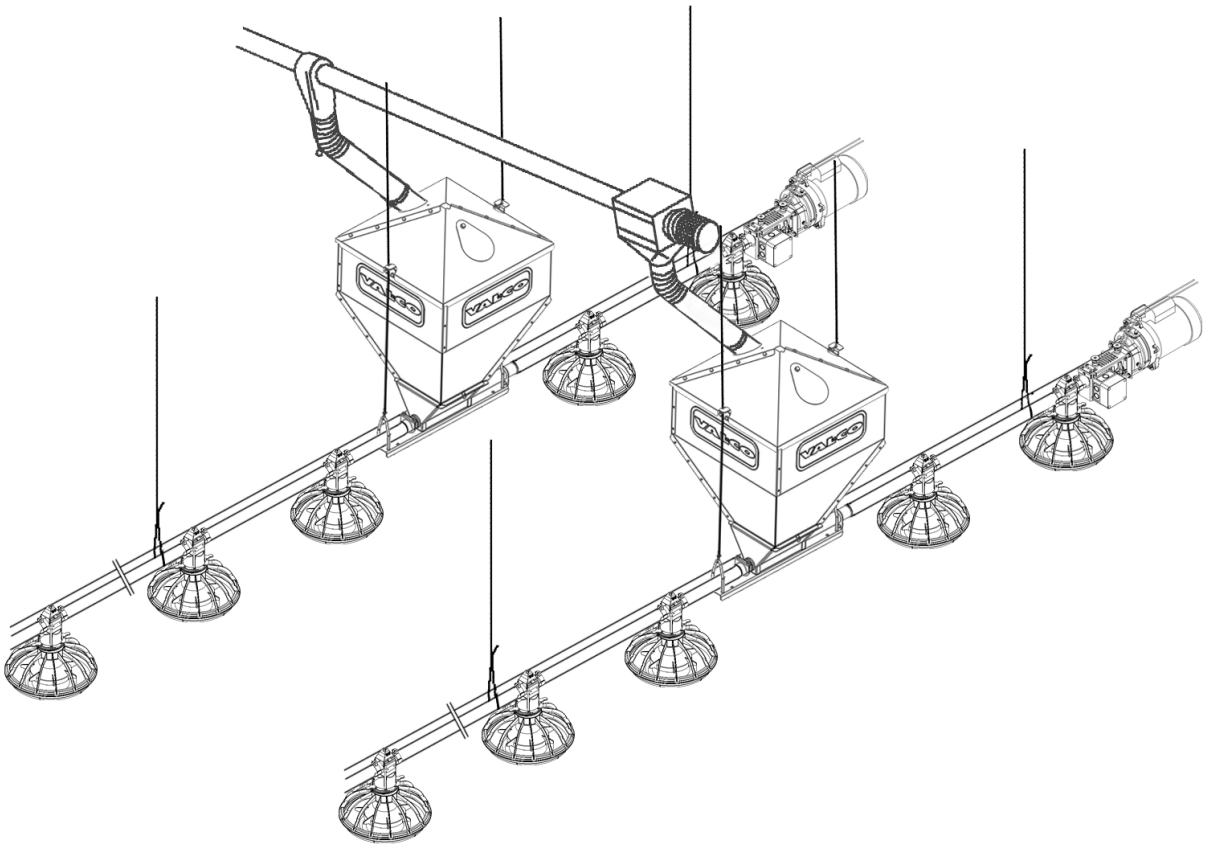
1500, 1600, 1800 FUZE and FUZE PROLINE Feeders End/Intermediate Control Pans and Feed Line Systems

Installation & Operation Manual



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JDS REV (2) – 5-30--2010

Contents

VAL PRODUCTS, INC. WARRANTIES

VAL-C0™ MANUFACTURED PRODUCTS OTHER THAN EXTENDED WARRANTY PRODUCTS

Val Products, Inc. (Val Products) warrants to the original purchaser that Val Products' manufactured products (other than the products subject to an extended warranty set forth below) will be free of defects in material and workmanship for a period of one (1) year from and after the date of original purchase and when used in a usual and customary fashion. If Val Products is notified that such a defect exists within one year of the original purchase date and, upon inspection, agrees that the product is defective, Val Products will, at its option, (a) repair or replace (FOB Val Products' plant) the defective product, or (b) refund to the original purchaser the original purchase price paid for the defective product less any installation, shipping, or other charges associated with the original purchase. All defective products must be returned to a Val Products designated location for evaluation. Val Products' determination as to whether the product is defective is final. See the General Conditions and Limitations set forth below.

NIPPLE DRINKERS EXTENDED WARRANTY

Val Products, Inc. (Val Products) agrees to the following extended warranty with respect to VR Series and VL Series Nipple Drinkers manufactured by Val Products: VR Series and VL Series Nipple Drinkers that prove to be defective in workmanship or material and become unusable within a period of five (5) years from and after the date of original purchase will be repaired or replaced, at Val Products' option, at no charge (excluding labor of removal and installation), FOB Val Products' plant. VR Series and VL Series Nipple Drinkers which prove to be defective in workmanship or material and become unusable after five (5) years but within ten (10) years of the date of original purchase will be repaired or replaced, at Val Products' option, at a pro rated cost basis (excluding labor of removal and installation) to the original purchaser, FOB Val Products' plant, on the following basis: Year six (6), customer pays 50% of the current price, year seven (7), customer pays 60% of the current price, year eight (8), customer pays 70% of the current price, year nine (9), customer pays 80% of the current price, and year ten (10), customer pays 90% of the current price. All defective Nipple Drinkers must be returned to a Val Products' designated location for evaluation. Val Products' determination as to whether the product is defective and unusable is final. See the General Conditions and Limitations set forth below.

FIBERGLASS FAN HOUSINGS EXTENDED WARRANTY

Val Products, Inc. (Val Products) agrees to the following extended warranty with respect to the fiberglass fan housings manufactured by Val Products on VAL-CO™ PMC Power Miser 12", 16", 21", 24", 36", 48", and 50" Fiberglass Fans that prove to be defective in workmanship or material and become unusable over the life of the structure where the VAL-CO ™ Fiberglass Fan was originally installed after original purchase, provided that the fan has remained undisturbed in its original installation location, will be repaired or replaced, at Val Products' option, at no charge (excluding labor of removal and installation and shipping), FOB Val Products' plant. All defective fan housings must be returned to a Val Products' designated location for evaluation. Val Products' determination as to whether the product is defective and unusable is final. See the General Conditions and Limitations set forth below.

FIBERGLASS FAN MOTORS EXTENDED WARRANTY

Val Products, Inc. (Val Products) agrees to the following extended warranty with respect to the fiberglass fan motors included as original equipment on VAL-CO™ PMC Power Miser 12", 16", 21", and 24" Fiberglass Fans manufactured by Val Products that prove to be defective in workmanship or material and become unusable within a period of two (2) years from and after the date of original purchase will be repaired or replaced, at Val Products' option, at no charge (excluding labor of removal and installation and shipping), FOB Val Products' plant. All defective fan motors must be returned to a Val Products' designated location for evaluation. Val Products' determination as to whether the product is defective and unusable is final. See the General Conditions and Limitations set forth below.

General Conditions and Limitations Applicable to All Val Products, Inc. (Val Products) Warranties, Including Extended Warranties

1. The Product must be installed and operated in accordance with instructions published by Val Products or the warranty will be void.

2. Warranty will be void if all components of the product or system are not original equipment supplied by the manufacturer.

3. Products not manufactured by Val Products and supplied by outside manufacturers (such as, but not limited to, certain electrical motors, certain controls, gas valves, etc.) are warranted separately by the respective manufacturer and only to the extent of the manufacturer's warranty.

4. Warranty applies only to products used in applications as originally intended by Val Products – other applications in industry or commerce are not covered by the Warranty. Val Products' products are expressly not designed or authorized for use in any applications where intended to sustain or support human life or any other application where the failure of the product could result in personal injury or death.

5. Malfunctions resulting from misuse, abuse, mismanagement, negligence, alteration, accident, lack of proper maintenance, lightening strikes, electrical power surges, or electrical power interruption shall not be considered defects under the Warranty. Corrosion, material deterioration and/or equipment malfunction caused by or consistent with the excessive additions of chemicals, minerals, sediments or other foreign elements with the product shall not be considered defects under the Warranty.

6. VAL PRODUCTS WILL NOT, UNDER ANY CIRCUMSTANCES, BE LIABLE FOR ANY KIND OF SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR CONTINGENT DAMAGES INCLUDING, BUT NOT LIMITED TO, LOST OR DAMAGED PRODUCT, GOODS OR LIVESTOCK, COSTS OF TRANSPORTATION, LOST SALES, LOST ORDERS, LOST INCOME, INCREASED OVERHEAD, LABOR AND INCIDENTAL COSTS AND OPERATIONAL INEFFICIENCIES. IN NO EVENT SHALL THE WARRANTY LIABILITY EXCEED THE INVOICED PRICE OF THE PRODUCT TO THE ORIGINAL PURCHASER.

7. THE WARRANTIES SET FORTH ABOVE CONSTITUTE VAL PRODUCTS' ENTIRE AND SOLE WARRANTY. VAL PRODUCTS EXPRESSLY DISCLAIMS ANY AND ALL OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY AND ALL OTHER EXPRESS OR IMPLIED WARRANTIES AS TO THE MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR USE, DESCRIPTION OF QUALITY OF THE PRODUCT FURNISHED, AND ANY OTHER WARRANTY ARISING BY OPERATION OF LAW, CUSTOM OR USAGE.

8. Val Products denies any authorization of any distributor, dealer, agent, or employee to modify, extend, or otherwise alter the conditions of any warranty in addition to, or in lieu of, those conditions and terms expressly stated above. Any exceptions not noted in the body of the Warranty must be authorized in writing by an officer of Val Products. Val Products reserves the right to change or delete models, or change specifications at any time without notice or obligation to improve previous products.

Manual Revision-1- U:\MANUALS\990000\990002

JDS REV (2) 5-30-2010

INTRODUCTION:

It is important that you read all instructions and pay particular attention to all SAFETY information.
(Measurements throughout the manual are given in both English then metric units with brackets.)

Symbols

= IMPORTANT INFORMATION – be sure to read!

= NOTE – take notice this may help you!

= CHECK – the details of all requirements, processes or procedures of instructions listed.

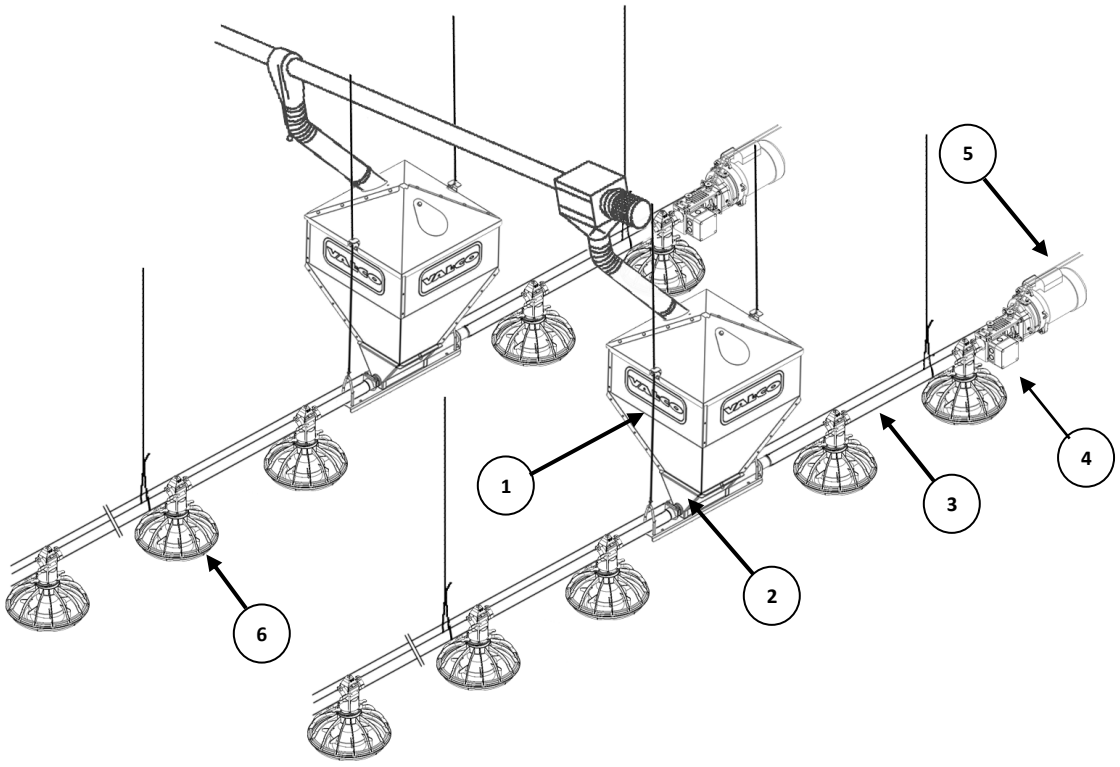
SAFETY ALERTS

= DANGER - imminent hazard, if ignored serious injury or death WILL occur
= WARNING – probable hazard, if ignored serious injury or dearth COULD occur
= CAUTION – potential hazard, if ignored, minor or moderate injury MAY occur

ROTATING AUGER!
Disconnect power before working on system. Auger starts automatically / severe injury could result.

ELECTROCUTION!
Disconnect power before servicing this equipment.

An Overview of Fuze Pan Feeder System



The above drawing is a condensed version of a Twin Boot/Mid House layout of a Pan Feeding

1	Hopper	4	Control Unit
2	Hopper Base	5	Power Drive
3	Tube with Auger	6	Fuze Feeder Assembly

Before you begin the installation of the Fuze /Fuze Pro Feeding system you should have already performed careful planning and ordered the equipment required, based on the number of birds and size of your bird house. For more information regarding the planning of your bird house please talk with your VAL-CO™ representative.

Feed Pan Features

VAL-CO™ Fuze and FuzePro pan feeders are ideal for broilers, turkey pullets, layers, or other poultry.

Designed for:

Saving production costs

- Enlarged feed windows will flood the pans more evenly to provide the best start from day one.
- Deep center feed “V” bottom of the pan promotes feed savings.
- Anti-rake fins on the feed tower will prevent billing of feed to reduce waste.
- Grill and pan form a feed saving lip to promote additional feed savings.
- Pan assembly made of engineered polymers that resist harboring bacteria to promote bird health.

Easy Installation and convenience

- Removable top allows for easy pan assembly and installation
- Easy and positive feed adjustment can be made from the outside.
- Fuze Pro pan offers ergonomically designed multi-spoke grills.
- Easier entrance and exit for the chicks.
- Easy to clean.

Versatile and Interchangeable components

- Fuze Pro pan allows you to “build your own feeder”.
- Fuze Pro pan offer choices in pan depth and diameter.

Durability

- Added material thickness in critical scratch (wear) area.
- All parts are fully UV stabilized to promote longer life.

PART 1 – WINCH SYSTEM INSTALLATION

General Information

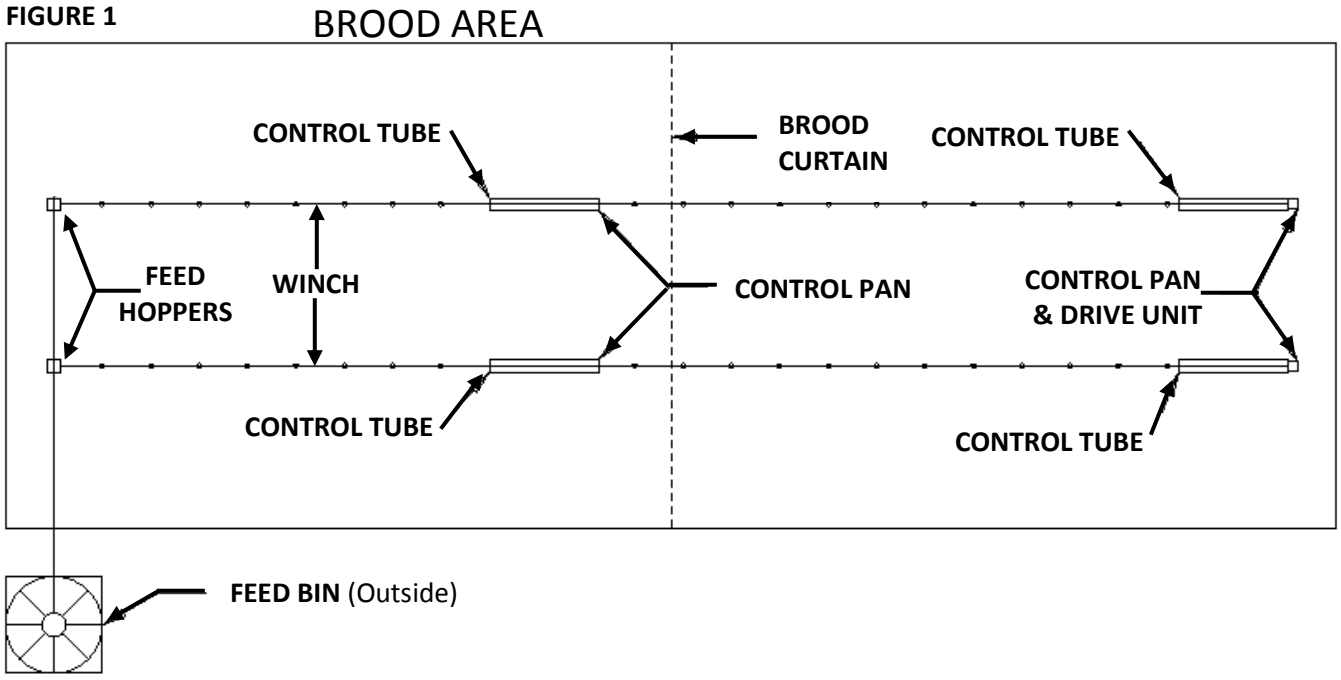
Please read all the instructions before installing the VAL-CO™ Fuze and Fuze Pro System. This manual will provide information on installing the VALCO™ Fuze and Fuze Pro feeders, Winch system, hopper, auger/feed line and the anti-roost system. The system is designed in a straight line using an auger with 9' through 12' ribbed, smooth and/or control tubes to deliver feed to the feed pans and a choice of hand or electric winches. This system can be used to feed broiler and commercial layers on a non-restricted feed schedule.

System Layout – Overviews

1. Select the House Layout of ***less than*** < 350 feet (<107m) or ***greater than*** >350 feet (>107m)

Option 1 - Partial house brooding for systems ***less than*** < 350 feet (<107m).

FIGURE 1

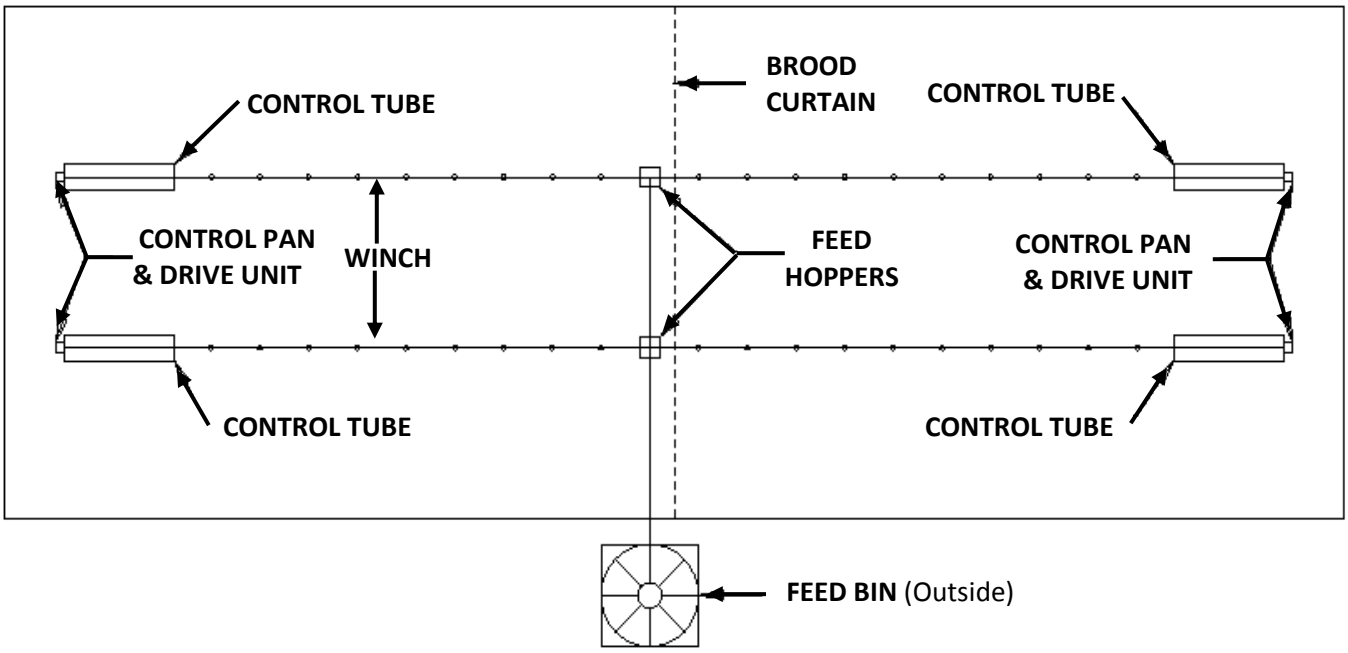


PORT TUBE IS PRE-ASSEMBLED WITH DRIVE HEAD.

- ***Control Pans are optional for the middle of the house when end Control Pan drive units are being used.***
- ***Control Tubes are optional.)***

Option 2 –A system with a line length ***greater than*** >350 feet (>107m) should be split in the center. This will reduce the auger run-time and eliminate the need to use Mid Line Controls in partial house brooding.

FIGURE 2 BROOD AREA

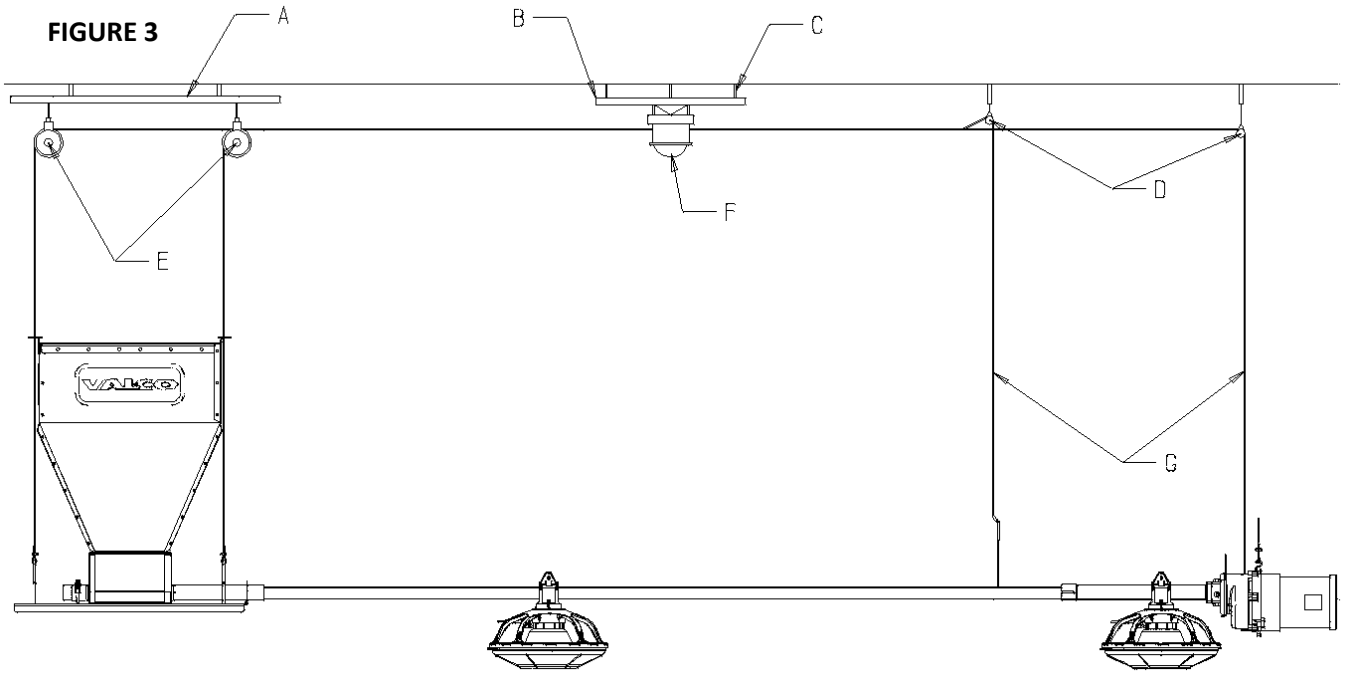


2. Establish the location of the Feed Bin.
3. Pick a spot for the Brood Curtain.
4. Decide the location for the Control Pan Units.
5. Establish a distance to the feeder line from the side walls.
6. Determine the distance from the Feed Hoppers to the end wall for a straight line feeding system.

Winch System / Suspension

Option 1 – For systems **less than** <350 feet (<107m)

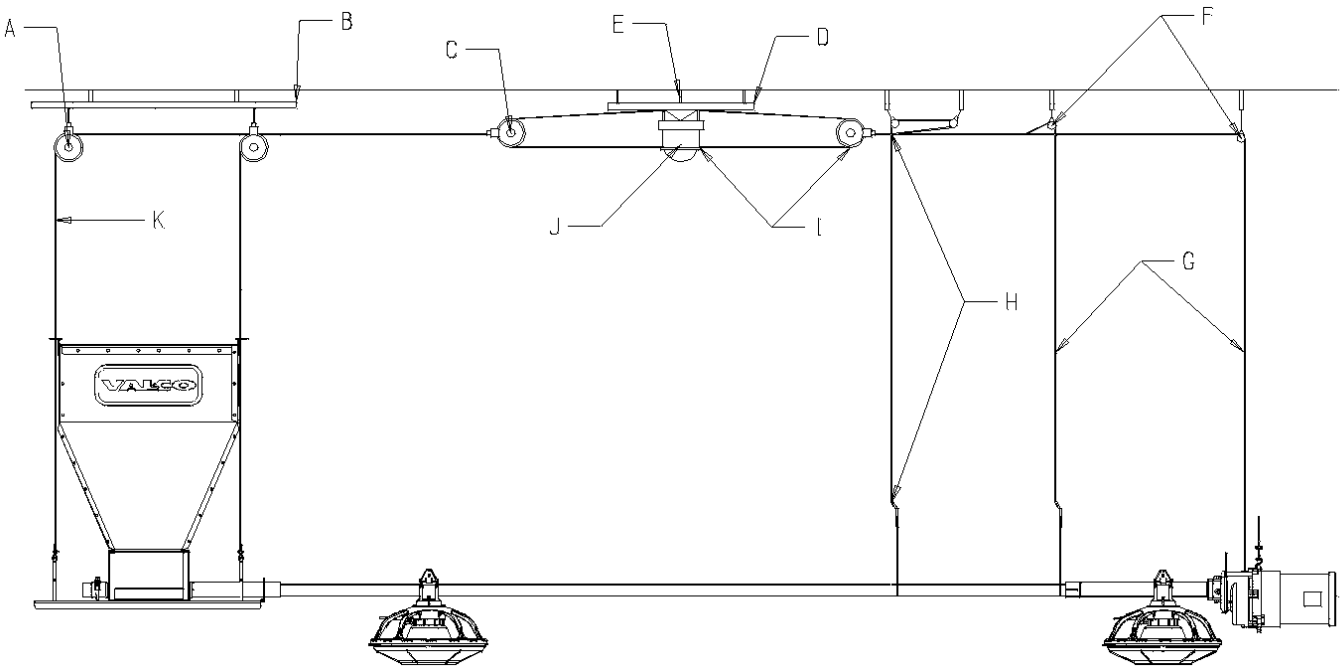
FIGURE 3



KEY	DESCRIPTION
A	Hopper Support
B	Winch Support
C	Roof Trusses
D	Swivel Pulley
E	Full line Suspension Kit
F	Winch
G	3 ft Spacing

Option 2 – For systems ***greater than*** >350 feet (>107m)

FIGURE 4



2. Locate the placement of the Winch. The Winch Requires a support that will span at least 3 rafters In a wood frame house and at least 2 rafters in a steel house.
3. Locate the placement of the Control Pan Units and Feed Hopper. A special support is required to suspend the Drive Heads and Feed Hoppers. Support is also needed at each joint or elbow.
4. Determine the drop location and length. This Suspension system is based on a ceiling height of 14 feet (4.267m) with drop points every 8 ft (2.438m). Special consideration for support must be used with 10 ft spacing.
5. Determine and mark a straight line or use cable to locate placement of the Screw Hooks. Use the offset of Screw Hooks where necessary *as shown on page17.*

KEY	DESCRIPTION
A	Full Line Suspension Kit
B	Hopper Support
C	Large Pulley with Double Clamps
D	Winch Support
E	Roof Trusses
F	Small Pulley and Screw Hook
G	3 ft Spacing
H	Distance
I	Winch Distance + 2 ft
J	Winch
K	Hopper Support Cable

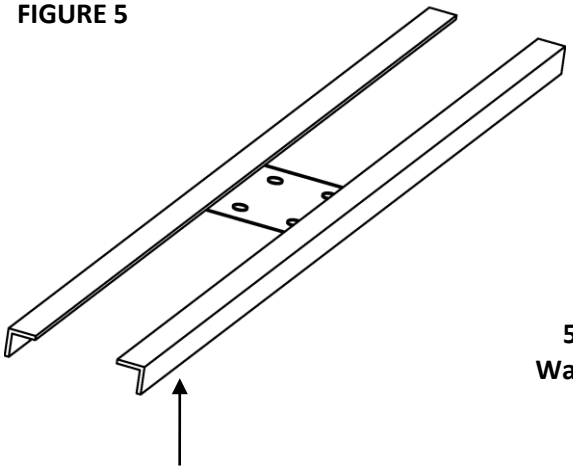
DO NOT EXCEED 10 FEET BETWEEN SUSPENSION DROPS!

Winch Installation

1. Bolt the fully assembled Winch to the Winch support. Use either a 2" x 8" wooden board that will span 3 rafters (required) or a 3/8" thin steel plate welded to 2 pieces of angle iron, *that are each long enough to span 2 rafters.* Use the 5/8-16 hardware supplied in the Hardware Kit.

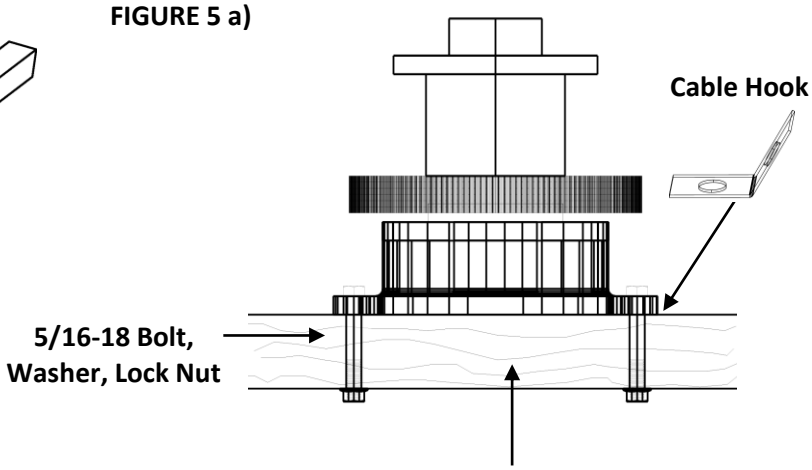
2. Install the Cable Hook, supplied in the Hardware Kit, *between the mounting bolt and Winch frame as shown in Figure 5 a) below.*

FIGURE 5



Angle Iron Winch Support

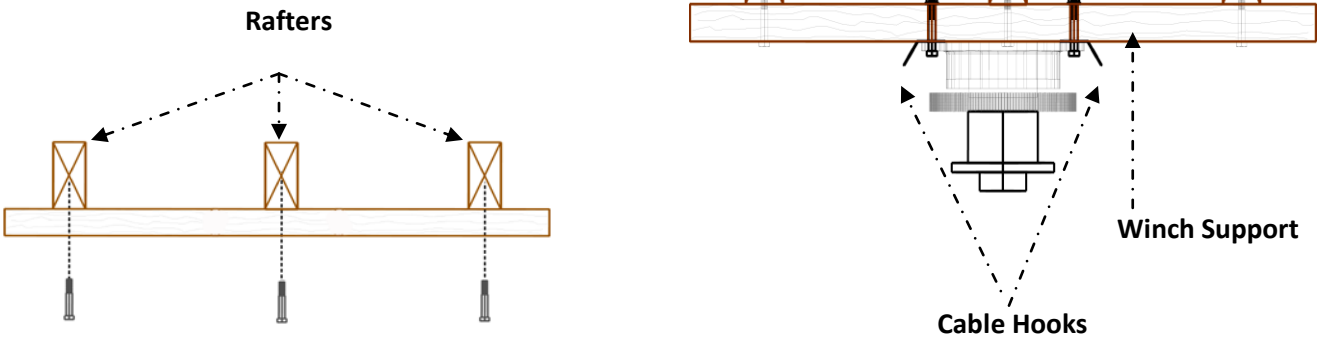
FIGURE 5 a)



3. Make sure that the Winch is secured to the Winch Support (Angle Iron **or** 2" x 8" wood board) and attach the Winch Support to ceiling ***at the center of the feeder line*** *as shown on the next page*. The Winch Support must be parallel to the feeder line **AND MUST SPAN AT LEAST 3 RAFTERS IN A WOOD FRAME HOUSE AND 2 RAFTERS IN A STEEL FRAME HOUSE.** If the hopper is located at the center of the feeder line, place the Winch a few feet **offset** from the center of the feeder line. **MAKE SURE HOWEVER; THAT THE WINCH DRUM *IS* DIRECTLY IN LINE WITH WHERE THE CABLE WILL BE INSTALLED.**

FIGURE 6

MOUNTING THE WINCH
TO THE RAFTERS IN A WOODEN HOUSE



Installing the Winch Cable

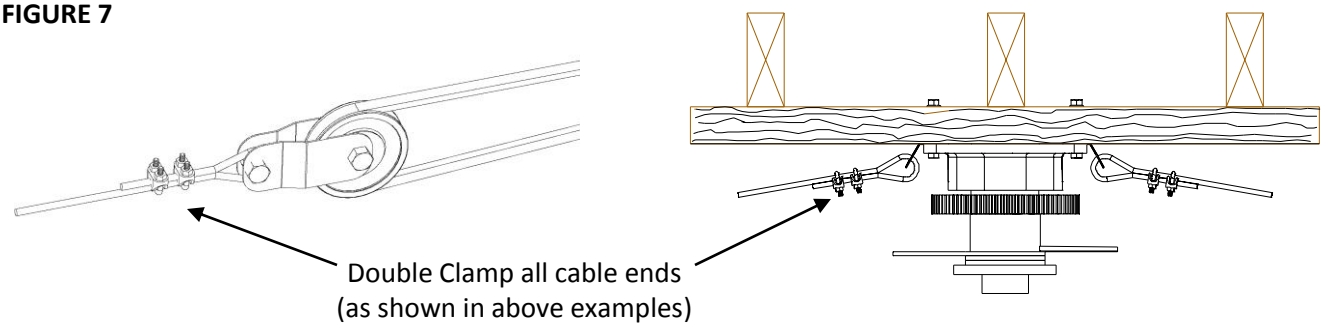
The Suspension Systems are based on ceiling heights of 14’ with Suspension Drop points at every 8’ (2.4m).

DO NOT EXCEED 10 FEET BETWEEN SUSPENSION DROPS!

Adequate overhead structure must be provided to support the weight of the Feeders, Hoppers, Control Pans, Drive units.

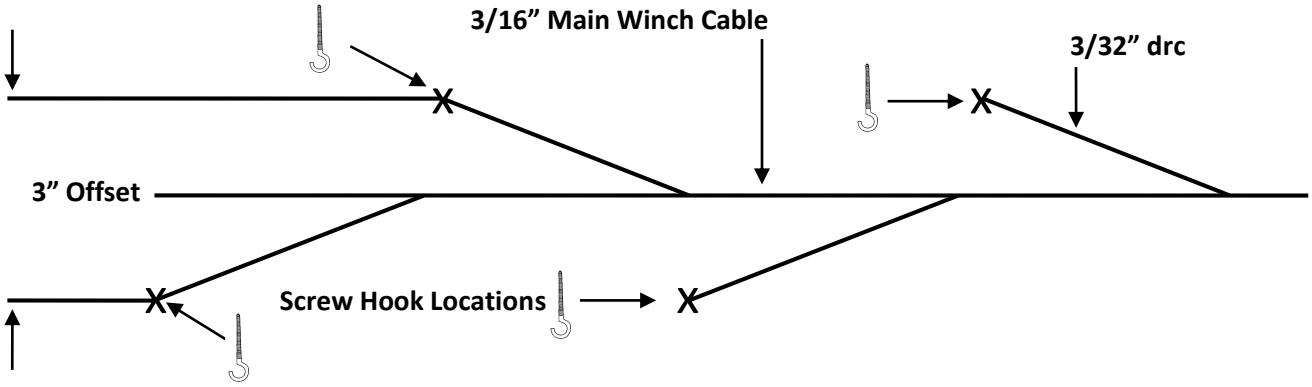
Extend the 3/16’’ Main Winch Cable the full length of the Feeder Line. Attach the cable temporarily to the ceiling with nails, staples, or some type of fasteners. The Figure below shows a double back arrangement for feed lines over 350’.

FIGURE 7



Screw Hook Installation

FIGURE 8 **The recommended distance between each drop is 8 feet on center. Do not exceed 10 feet.**



In order to prevent the cable clamps from catching the pulleys, **offset the hooks 3” to each side of the line if the distance the feeders are raised is greater than the distance between the drop spacing.**

In order to prevent the Screw Hooks from bending, **be sure to screw the hooks into the trusses the full length of the thread.**

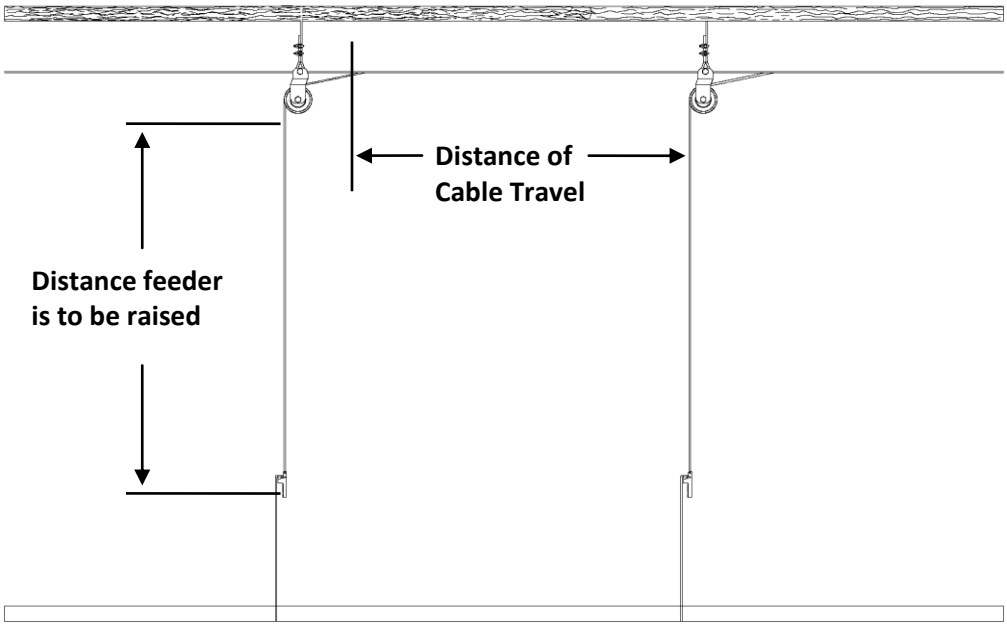
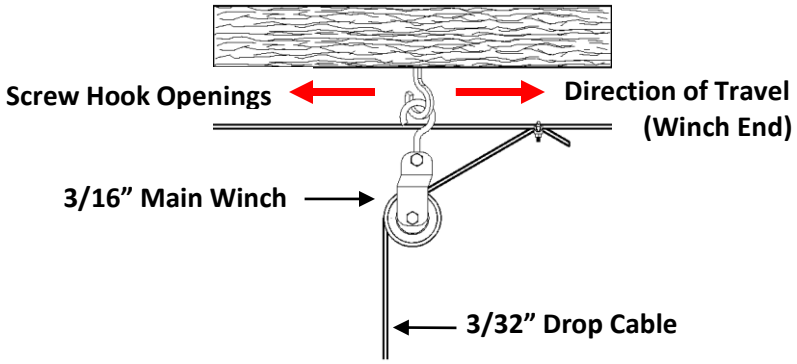


FIGURE 9

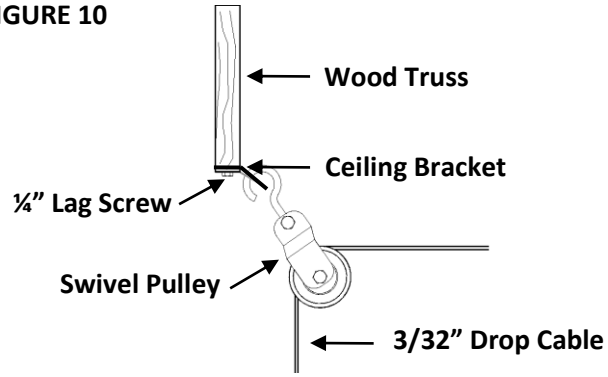


DROP LINE OFFSET DETAIL
USING SCREW HOOKS

The direction of travel is determined when the Winch raises the feeder line.

The Screw Hook openings ***MUST*** *point away from the direction of travel as shown in Figure 9 to the left.*

FIGURE 10



DROP LINE OFFSET DETAIL
USING CEILING HOOKS

Secure the Ceiling Hook to the truss *as shown in Figure 10 on the left* and insert the Swivel Pulley. *Steel trusses will require drilling of holes or using self drilling screws.*

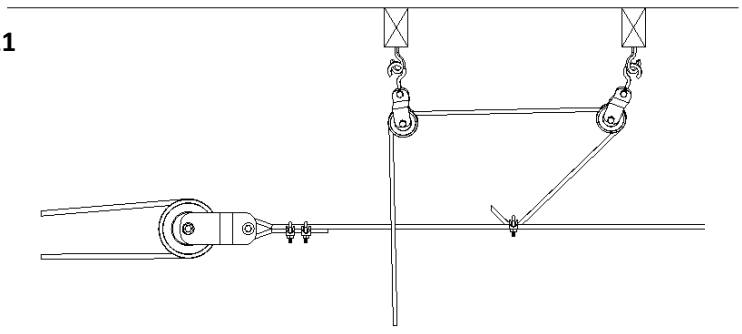
Drop Installation

1. Insert a Swivel Pulley into each Screw or Ceiling Hook.
2. Thread the end of the 3/32" or 1/8" cable through the pulley toward the winch. Clamp this end to the 3/16" winch cable about 6" from the last pulley. Do this using a 3/16" cable clamp.
3. Allow enough cable length for installation of the Adjustment Leveler. Sufficient cable is included to provide *extension* on drops located beneath and near the winch.
4. Begin Installing the suspension drops at the winch and proceed out-ward to the ends of the Feeder line. *Keep the main cable tight between the drops.*

A weight might be useful at the end of the cable to maintain tension in the line.

Extension Cable Arrangement

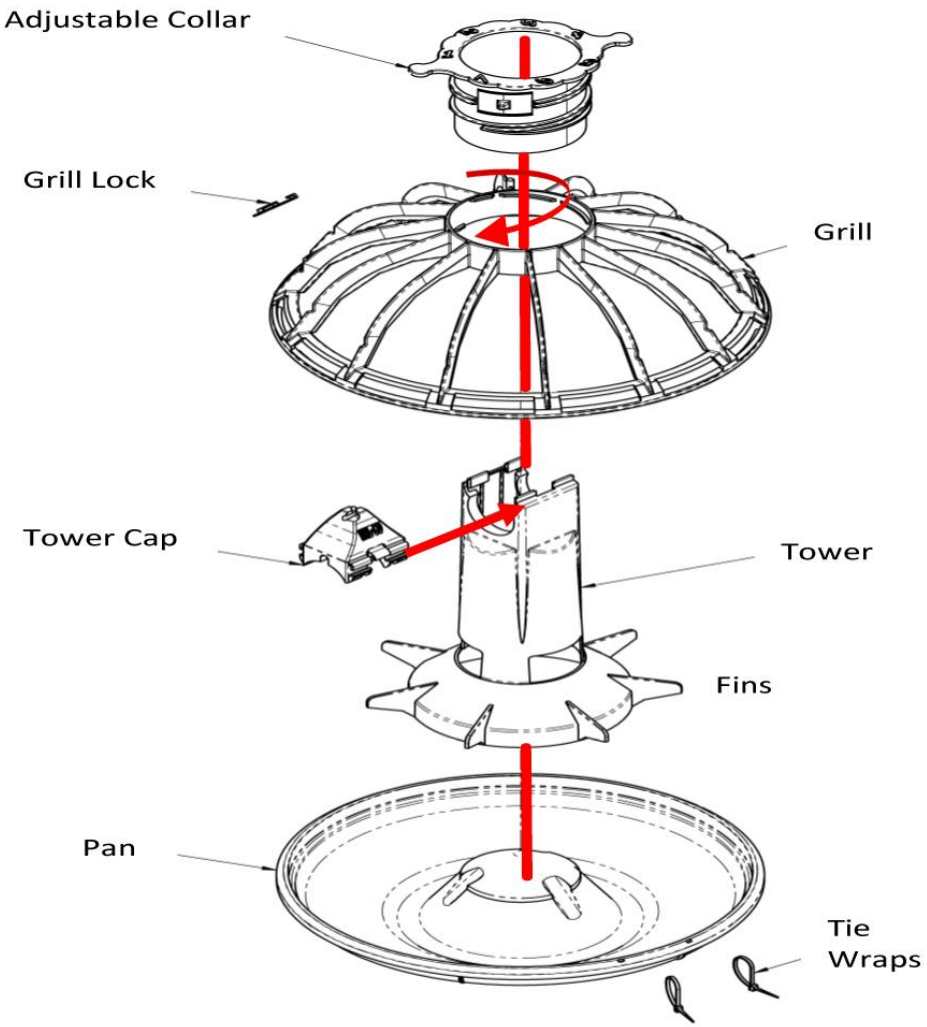
FIGURE 11



PART 2 – FUZE FEEDER

Feeder Assembly Overview - (applicable to all Fuze or Fuze Pro feeder assemblies)

FIGURE 12



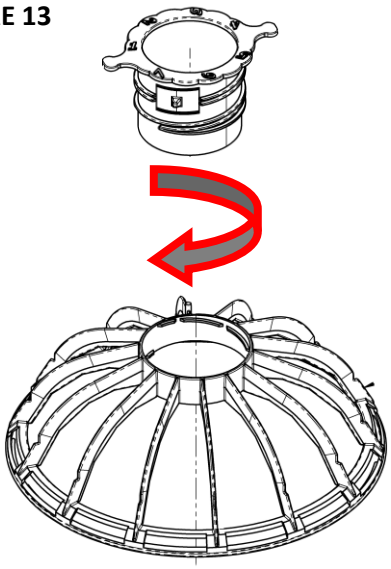
Verify that all the parts you ordered are included in the shipment. There is a parts list to compare with on page 51 – Appendix 1. Assembly KITS are broken down by part on subsequent pages.

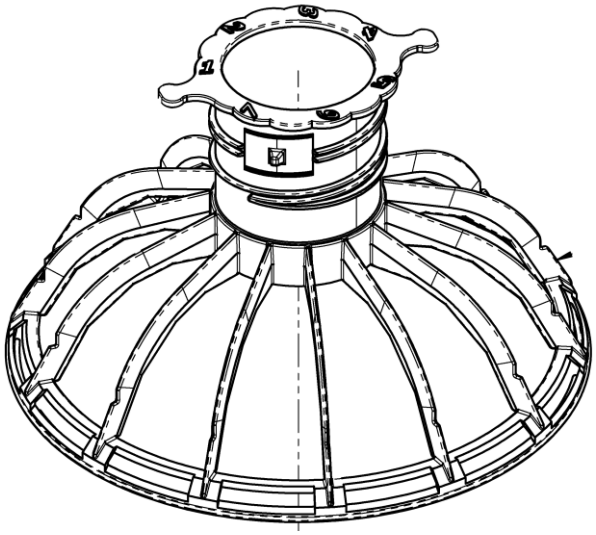
Detailed Feeder Assembly (All VAL-CO™ Fuze feeders)

Tools Required – (Scissors or small cutter for tie wrap only)

1. Turn Adjustment Collar (clockwise) into the top hole of the feeder Grill. This can be done as first or later step, with or without tower in place.

FIGURE 13



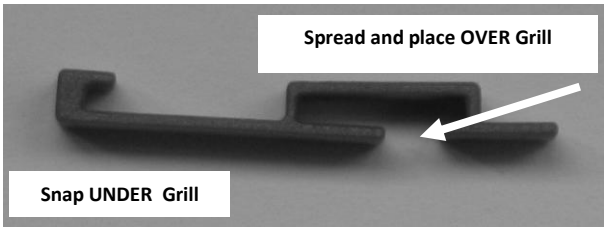


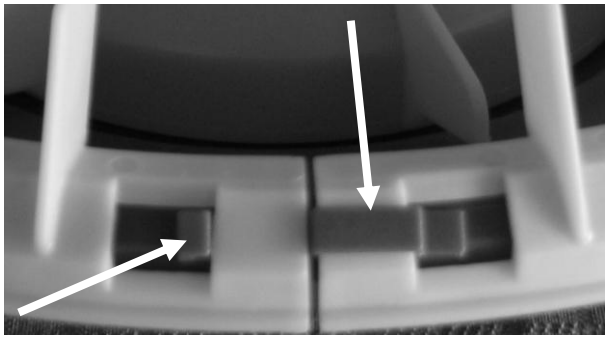
Enlargements

2. Attach the Grill LOCK to the Grill edge where the Grill is split before you attach the Grill to the pan.

   The Grill LOCK will flex and snap on over the short Grill section. (As pictured to the right)

   When you have completed step 3 on next page, pull the Grill section over the extended Grill LOCK piece and snap to lock Grill and Pan together securely. (This will keep Grill from pulling apart with weight of feed.)





Detailed Feeder Assembly (All feeders) - continued

3. Slip the Tower through the Grill with Adjuster Collar. *(Figure 14)*

   Center the Tower base on the feed Pan. *(Figure 15)*

   (Tower should be positioned as you see in drawing below ↓ through the Adjuster Collar hole).

   Now snap the Grill to the Pan edge and secure the Grill LOCK.

Figure 14

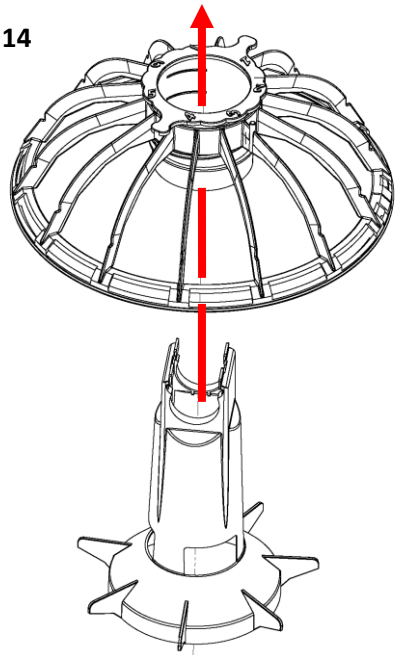
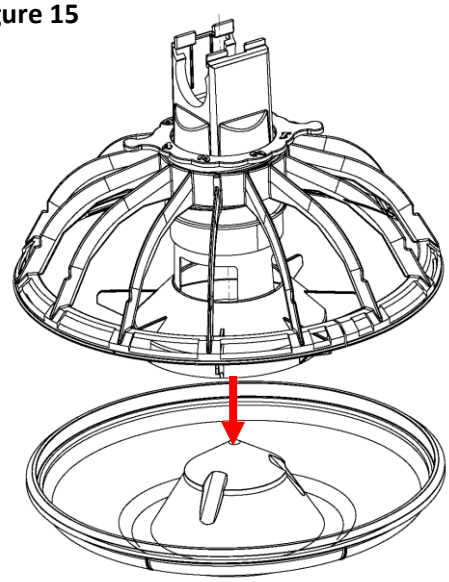
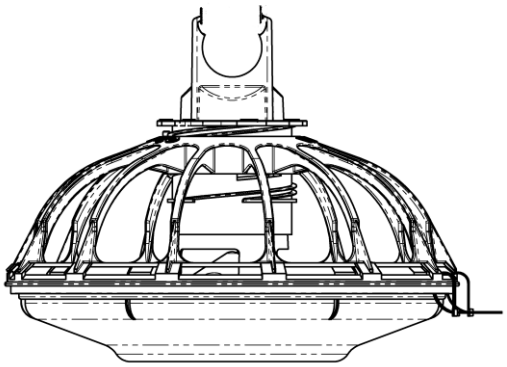


Figure 15

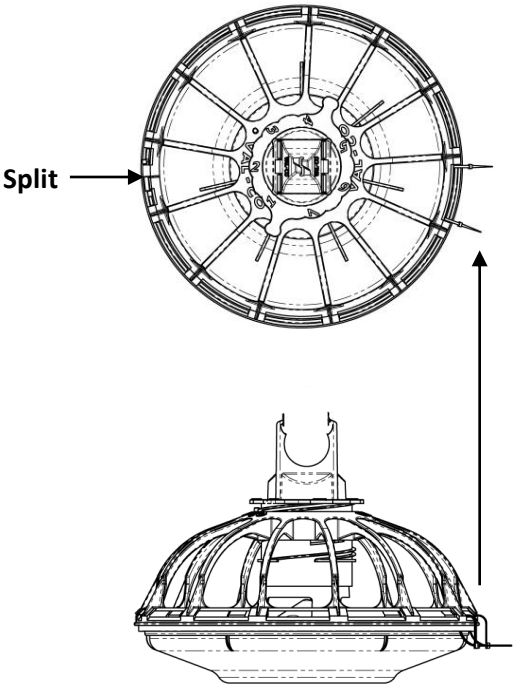




✓ Check to make sure Grill and Pan Assembly are snapped securely.

Detailed Feeder Assembly (All feeders) - continued

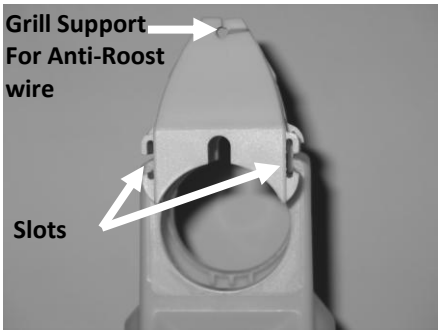
4. Position the grill so that the holes on the grill are aligned with the (2) small rectangular holes on the pan edge. (Aligned and on the opposite side of the Grill split.)



Optional: (recommended for Cleaning) Thread the 4" (wire) tie wraps through the top side of each hole and slip through fastener on tie wrap. Cut the tie wrap off to desired length, or as recommended, as close to the fastener as possible to protect the bird from injury. The tie wraps will serve as a hinge for cleaning purposes. *Just unsnap the pan and let hang while washing as shown in Appendix 12 on page 66.*

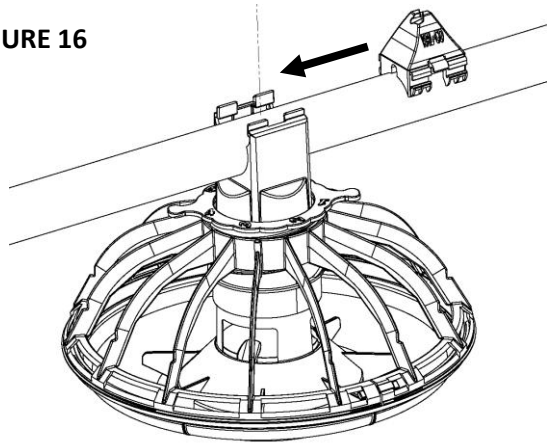
You are now ready to mount the feeder to the feed tube.

5. Slide the Tower Cap into matching slots on the top of feeder Tower *(Example A). Make sure that you have placed the feed tower directly under the drop hole in the feeder tube as shown in Figure 16 below*.

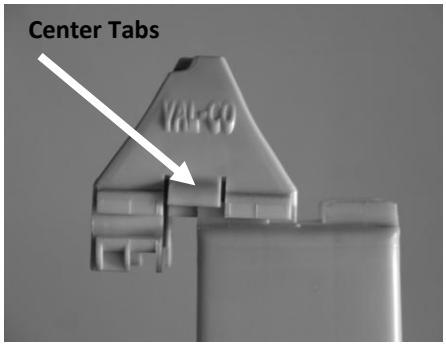


Example A

FIGURE 16



To remove feed assembly from feed tube at any time press center tabs on cap and slide off *as shown in Example B*.)

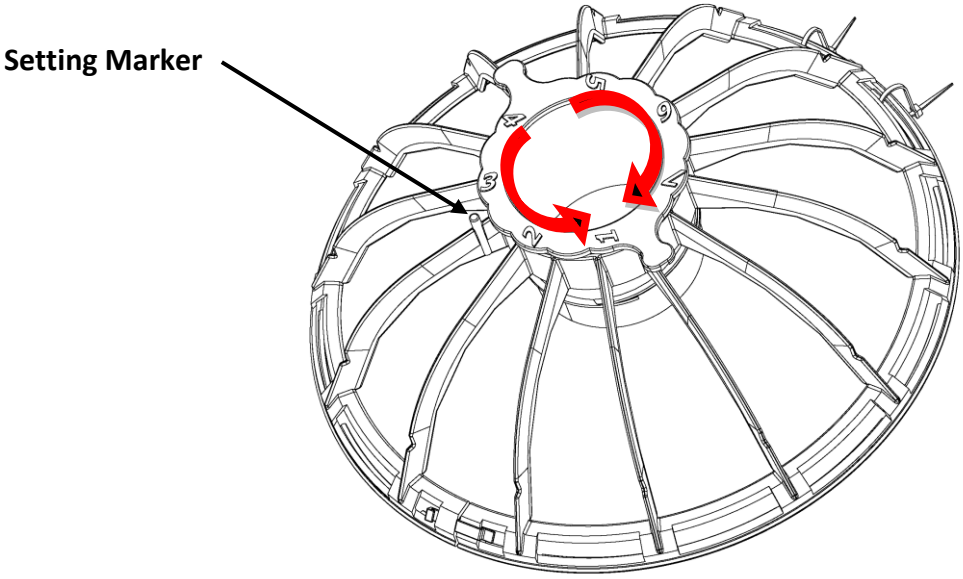


Example B

Adjusting the Feeder Settings

Adjust the Adjuster Collar to the desired position. The position you choose will depend on the kind of feed that you use and the age of the animals. This can be set or changed at any time.

FIGURE 17



How to Program for feeding

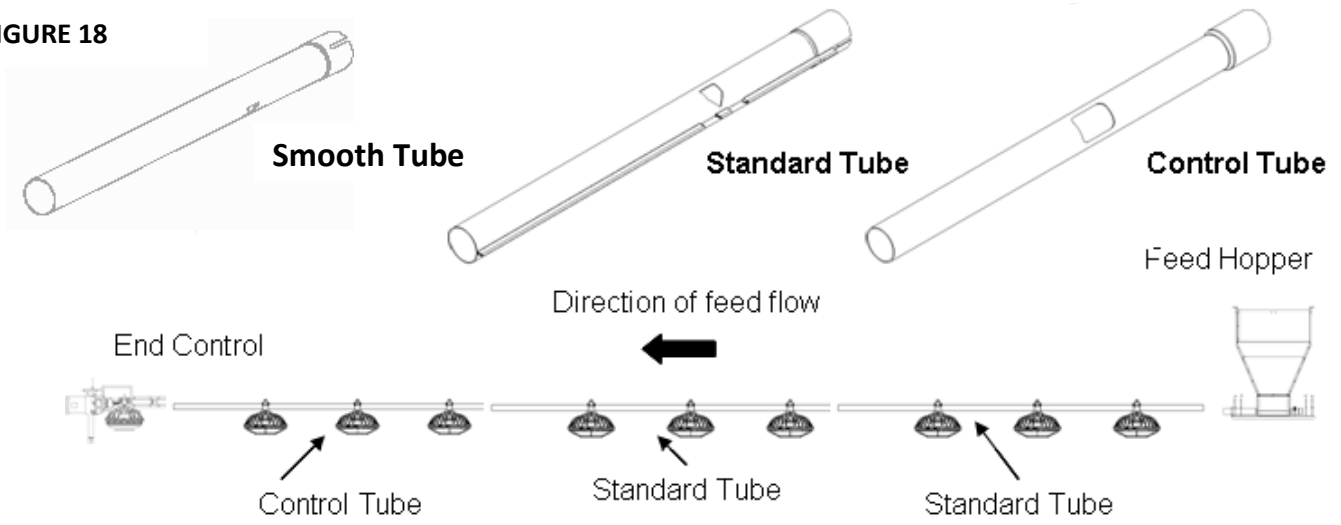
This will be addressed in your Feed control manual.

PART 3 – FEED LINE ASSEMBLY & SUSPENSION

Feed Line Assembly & Suspension

VAL-CO™ offers (3) types of feeder tubes (as shown below)

FIGURE 18

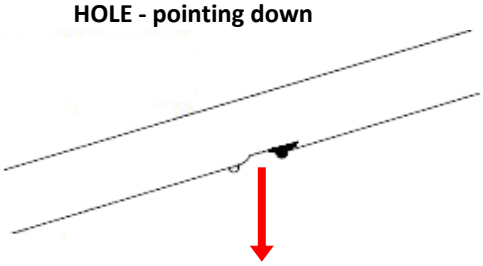


NOTE!

- *Standard and Ribbed Tubes can be used.*
- *Ribbed Tubes are stronger and are galvanized inside as well as outside.*
- *Smooth Tubes require tabs be bent down to prevent pans from sliding.*

1. Feeders should be mounted on the feed tube as the tube is being put together. Put the tubes with the pans on the floor in line with where you want to suspend the feed tubes. Slide one pan assembly per hole onto the auger tube. It is important to install all of the feeders on the tubes in the same orientation or direction.
2. Tube sockets must point toward the hopper.
3. Rotate the auger tubes so that the seam and holes are pointing down. This will lock the assemblies in place on the tube and allow the feed to flow into the feeders.

HOLE - pointing down



1. Place a Standard Tube Clamp Assembly and an Anti-Roost Insulator Bracket *(if using the Anti-Roost system)* at each joint. *Figure 19 below* shows a Standard Tube Clamp with an Anti-Roost Insulator Bracket. *Figure 21 shows the placement of the Standard Tube Clamp.* **A system using 9' or 10' tubes require a Clamp/Insulator Bracket at every fifth joint or maximum of 50 ft (15.24 m). Systems using 12' tubes require brackets at every fourth joint.** All joints in the system must use the standard Tube Clamp Assembly. Anti-Roost installation will be detailed on page 49 & 50.

FIGURE 19

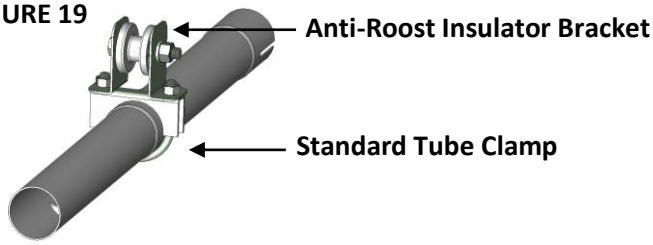
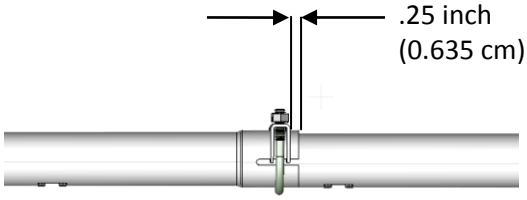


FIGURE 20



2. Connect the tubes *as shown in Figure 21 and* continue the entire length of the feeder line so that every joint is secured with a standard Clamp and/or Anti-Roost Insulator Bracket.

3. To achieve secure and uniform feed drops throughout the system, hangers *as shown in Figure 21 below,* should be installed at each socket and/or will be determined by your suspension drop lines / truss spacing. **DON'T TIGHTEN THE CLAMPS AT THIS TIME.**

FIGURE 21

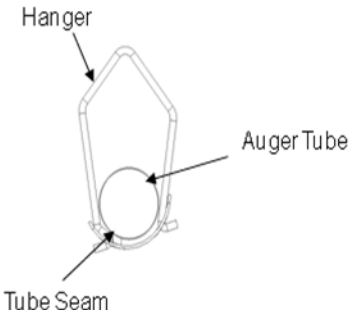
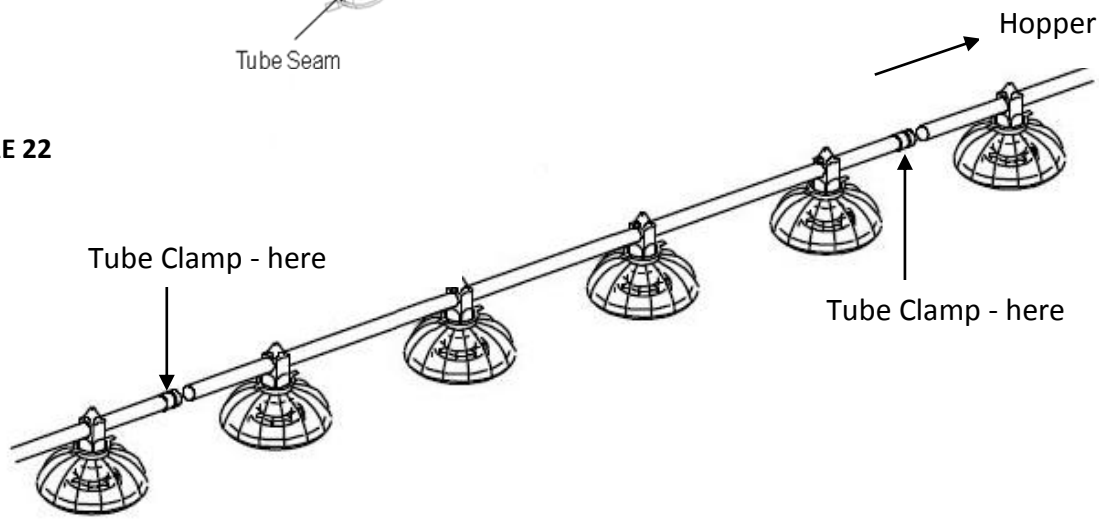


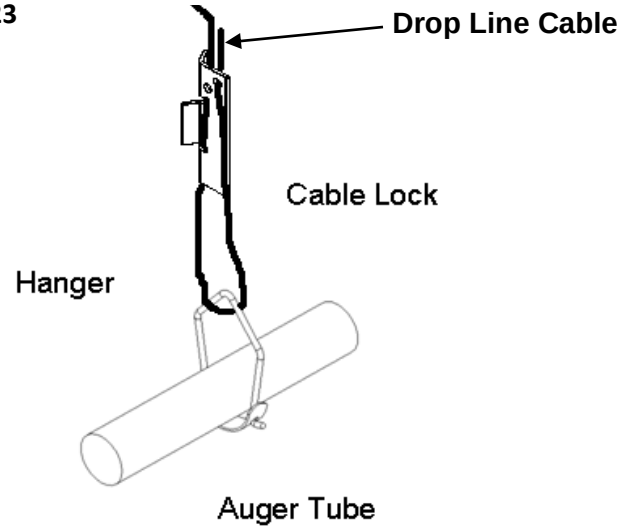
FIGURE 22



- **Push tube into socket of next tube as far as possible!**
- **Make sure all holes are well aligned and pointing downward.**
- **Place hangers every 8 feet minimum to 10 feet maximum.** *(This will generally depend on your truss spacing).*

4. Now that you have installed the Hangers on the feed line tube at the 8' or 10' spacing determined by the suspension drop lines. *Figure 23* below shows the proper installation of the Hanger Assembly to the clamp.
5. Install the Cable Lock within 6" of the feeder line. Figure 5 shows the proper mounting for the Cable Lock.

FIGURE 23



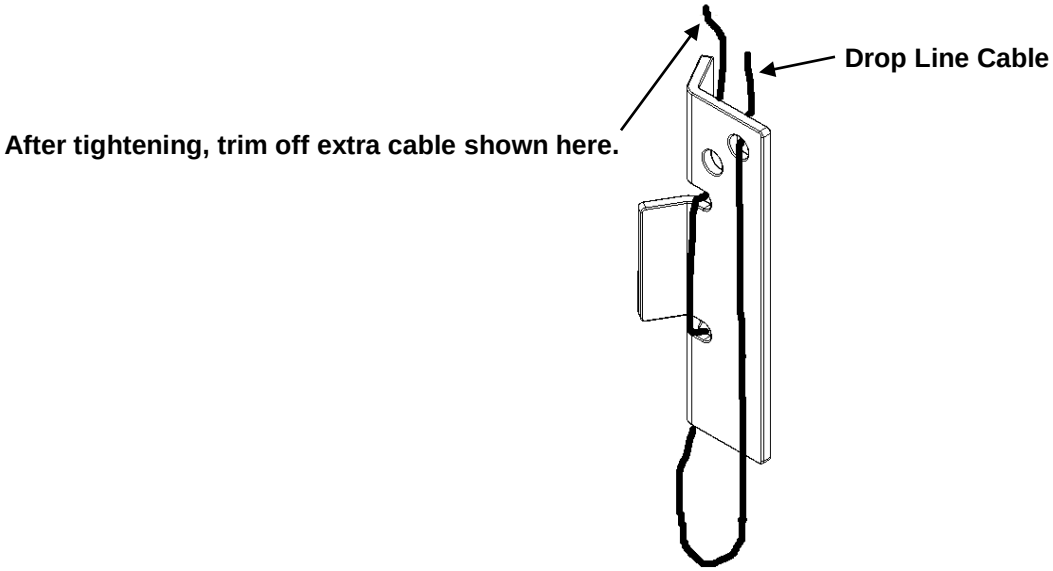
6. Follow the installation for all drops, check drop cables before raising feeder line. The cable must be tracking properly on all pulleys before raising the feeder line.

REMINDER !

Make sure the outlet drop holes are downward when the Hangers are installed, otherwise feed will not be allowed to drop into the feeder pans.

7. Raise the feeder line to a convenient working height.
8. Measure from the floor or ceiling to the auger tubes to level the system. This is to be done while the line is suspended.
9. Before tightening the clamp:
    - Make sure each tube is level
    - Ensure that the end of each tube is fully inserted into the belled end of the next tube.
    - Make sure the clamps are located as shown above.
10. Finally, tighten the Tube Clamps on the feeder tubes. Clamp the joints securely, but do not crush the tubes. Re-adjust all Cable Locks as needed and trim off the excess cable.

FIGURE 24 Enlargement of Cable Lock



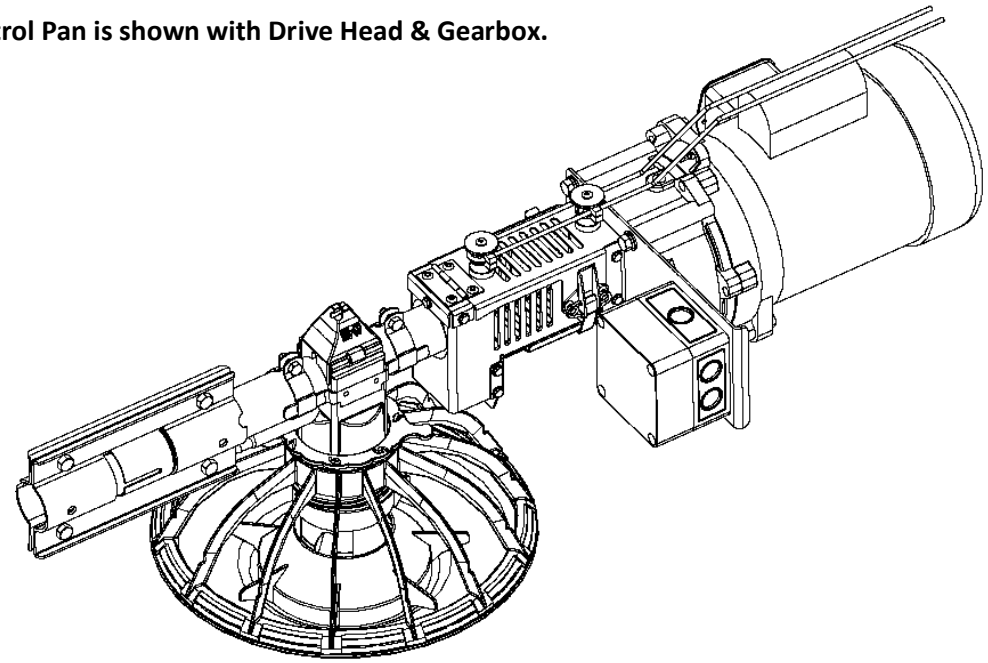
PART 4 – END CONTROL PAN UNIT / DRIVE HEAD INSTALLATION

The End Control Unit

The last feeder pan in the line (the Control Pan) is the most important feeder. It must be emptied first (each feeding) to start the next feed supply.

MAKE SURE THERE ARE ENOUGH BIRDS EATING FROM THIS PAN!

FIGURE 25 Control Pan is shown with Drive Head & Gearbox.

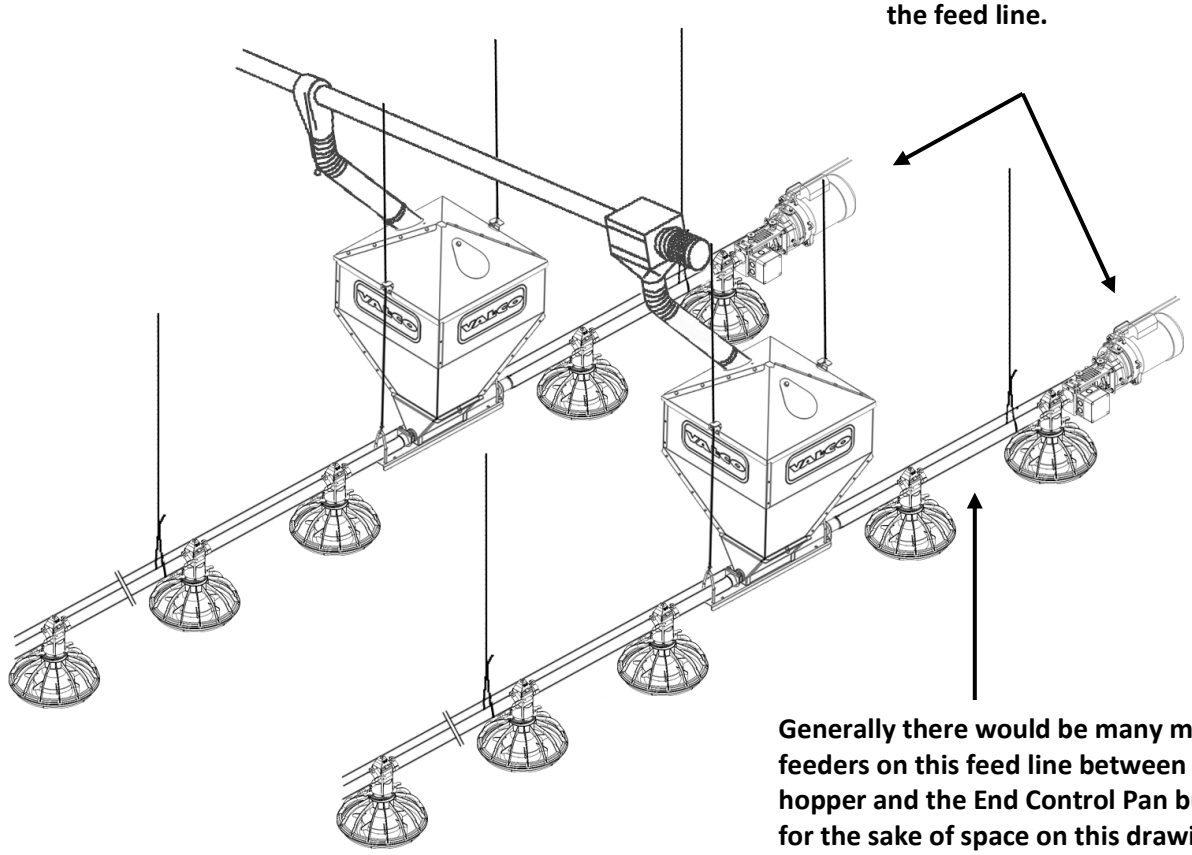


Birds are sensitive to light, temperature, moisture and draught and will avoid places that do not maintain the average environment. Make sure that the control pan area keeps a consistent average temperature, has good ventilation and moisture level. It is advisable to install a small spot light above the control pan and to keep the control pan free of litter and manure to attract birds.

Overview of Control Pan / Drive Head & Gearbox Unit Location

FIGURE 26

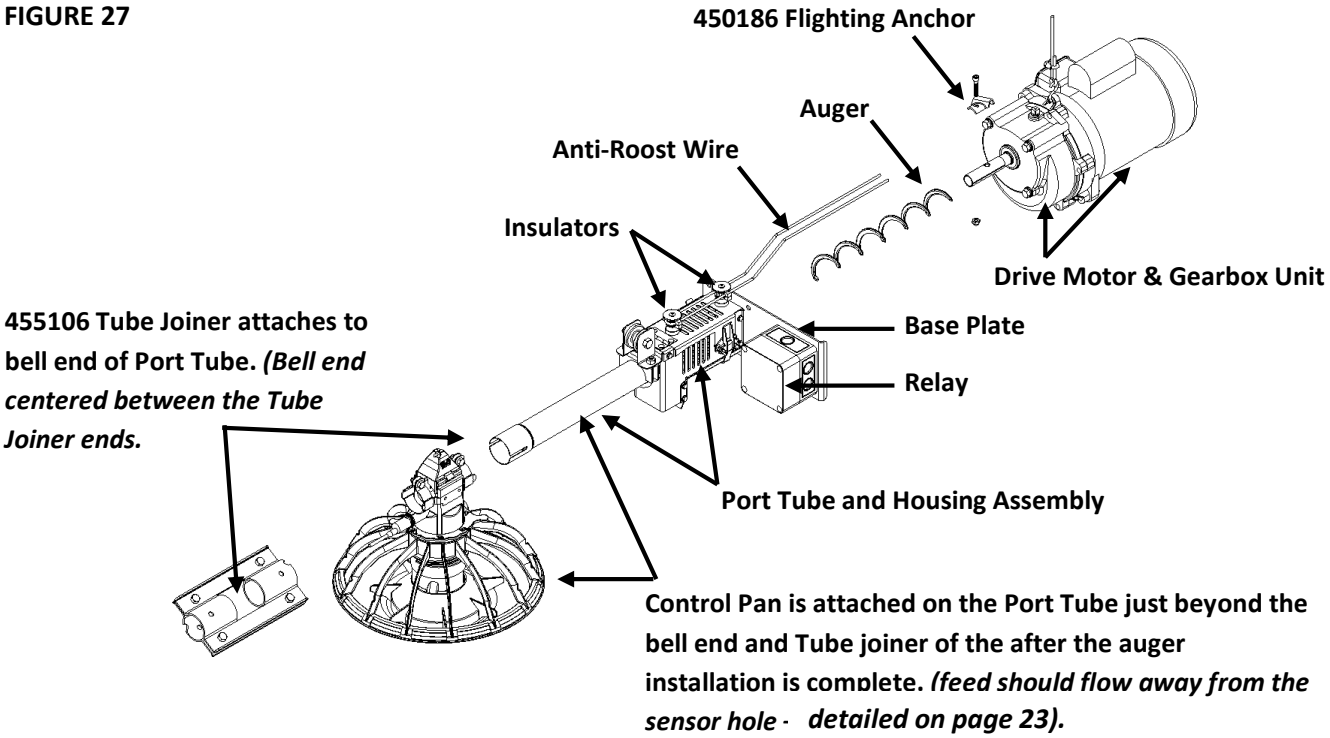
Position Control Pan / Drive Head & Gearbox at the end of the feed line.



Generally there would be many more feeders on this feed line between the hopper and the End Control Pan but for the sake of space on this drawing we show only two.

Exploded Overview of End Control Pan / Drive Head & Gearbox Unit

FIGURE 27



Electrical enclosure contains the relay and a bag with the quick connects and grommets, if it is the 455900 and will not contain the relay or electrical connectors if it is 455915 (Broiler Drive Head – 3Ph/Mech). There are no wires included for wiring to the motor or incoming supply.

Drive Head & Gearbox Installation

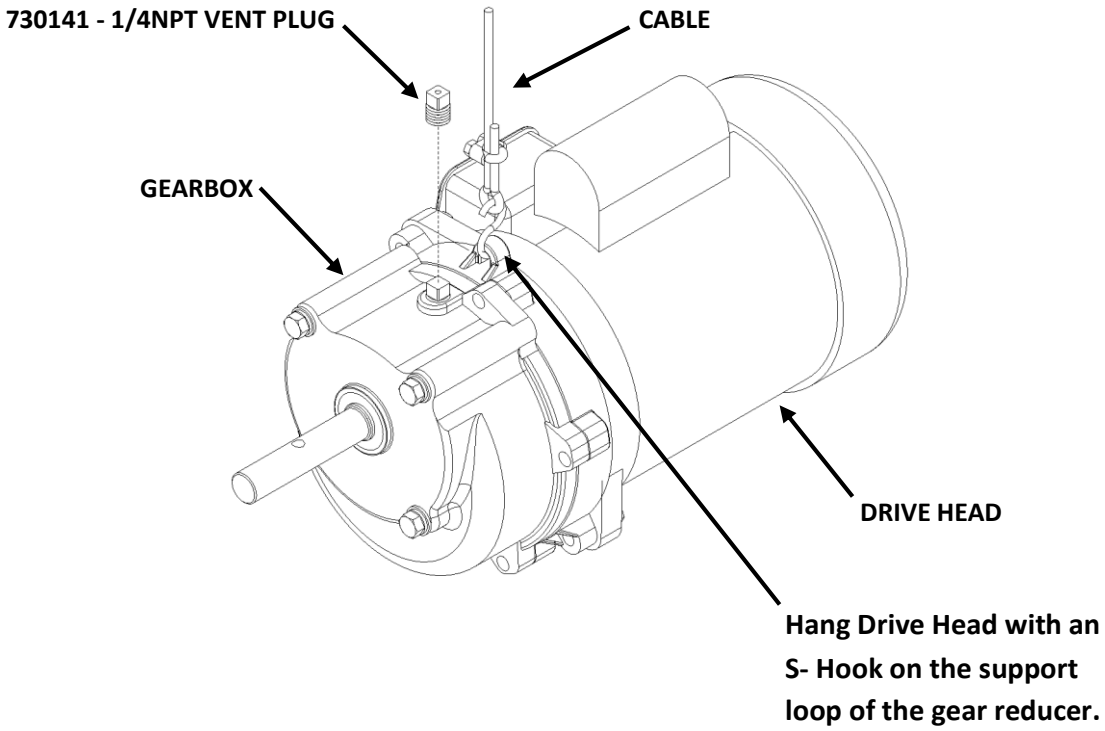
Before you hang the Drive Head & Gearbox it is important to read this page to prepare the motor for proper installation and performance.

IMPORTANT !

Install the vent plug as indicated. Remove the square head pipe plug that is installed and replace with the vent plug. The gearbox must be installed so that the vent plug is to the top of the unit – failure to do so will result in loss of oil and consequent failure of the unit. Operating this unit without a vent plug will cause blown seals, oil loss and consequent unit failure.

- This unit was filled with 90# transmission oil when assembled. The oil should be **changed every 500 hours of use**.
- This unit must be grounded and wired according to your local area's applicable codes.

FIGURE 28



Drive Head & Gearbox installation

1. Locate the proper position for the Drive Head and Control Pan Unit *as shown on page 29 and begin Control Unit installation by starting with the Drive head & Gearbox / Port Tube Assembly.* ***Remember that the birds must have good access around the end of the feed line. It is also important to note that you may choose to reverse the order of these instructions and begin with Boot assembly and auger attachment on the boot end first. It is a matter of personal preference or in the case of a Mid-Line control it is recommended you begin at the Boot with your auger installation instead of the End Control Unit reversing this order.***
2. Slide the (#450696) Auger Shim onto the Gearbox Shaft (if it is not already on shaft*) as shown below in figure 29.* (It may be necessary to rotate the Auger Shim and Gearbox to align the holes.***)***

FIGURE 29

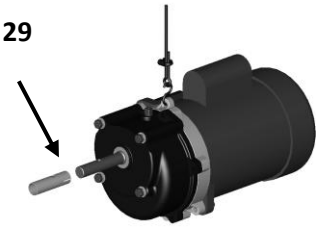


FIGURE 30

3. Remove the #010643 5/16-18 x ¾ Hex Bolts, #010252 5/16 Split Lock Washers & #010426 5/16 x 11/16 Flat Washers *as shown in figure 30 above on right* and use for attaching the Drive Head & Gearbox Unit to the Port Tube Assembly at the Base Plate *as shown in Figure 31 below on left*

FIGURE 31

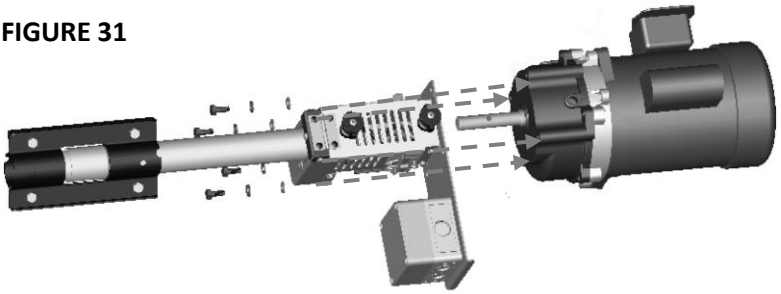
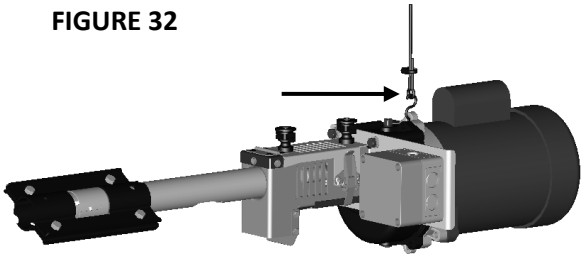


FIGURE 32

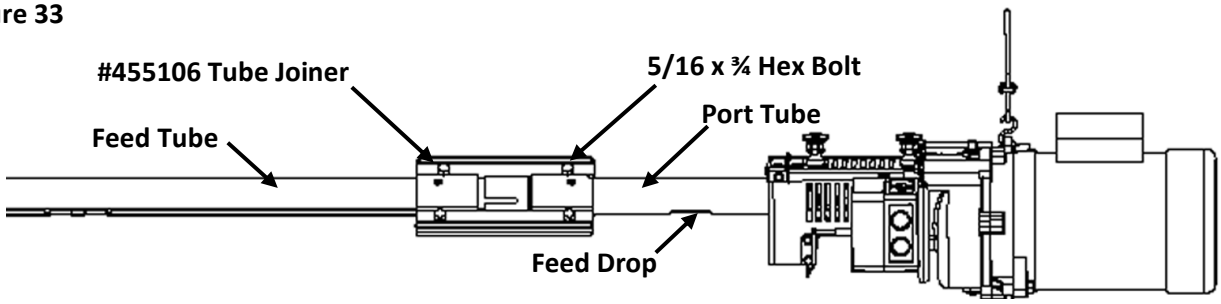


4. Hang Drive Head & Gearbox Unit from the suspension cable using a S-hook at the loop on the gear reducer *as shown in Figure 32 above on right.*

Detailed Assembly of Control Pan Unit

1. Join the belled end of the Port Tube & Housing Assembly to the feed line using the #455106 Tube Joiner with 5/16 x ¾ Bolts to secure the connection *as shown below.*

Figure 33



2. Assemble the Control Pan Unit. The feeder portion; tower, collar, grill and pan, assemble the same as the Fuze feeders *(see pages 19-22)* with the exception that the Control Pan is designed for the proximity sensor to insert into the hole *as shown in figure 34 & 35 below.* **DO NOT INSERT THE PROXIMITY SENSOR UNTIL YOU HAVE THE CONTROL PAN FEEDER ASSEMBLED.**
3. Mount the Control Pan on the Port tube so that the feed will flow away from the sensor hole. *(Control Pan Unit can be attached now or after the auger has been installed.)*

FIGURE 34

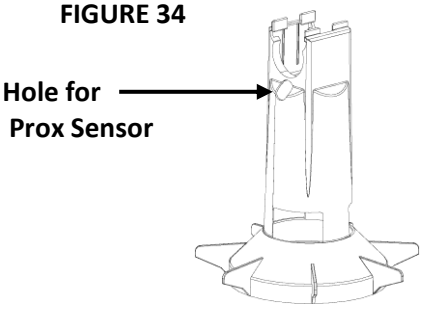
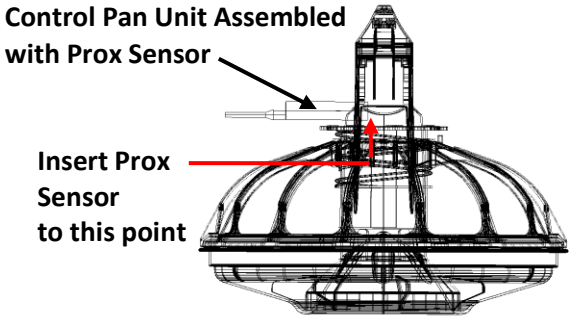


FIGURE 35



4. Attach the Control Pan Unit to the Port Tube with the Feed Drop pointing down into the feed Tower sliding the Tower Cap into position on the feed tower as you did with the Fuze feeders. *(see page 22 for detail*
5. To secure the Control Pan Unit on the Port Tube *(so that it cannot swing or move)* attach both Clamps into position **BUT DO NOT TIGHTEN UNTIL YOU HAVE POSITIONED THE NON-SWING BRACKET INTO PLACE**. The Non-Swing Bracket is designed to fit around the outside of the feed Tower. Slide the (2) Clamps over the Non-Swing bracket ends *(as shown below in Figure 36* and tighten the #450062 Clamp into proper position. **DO NOT TIGHTEN the #455927Clamp W/Tab until you perform step 6 on next page**.
BE SURE TO VERIFY: the Feed Drop is pointing downward into the feed Tower.

FIGURE 36

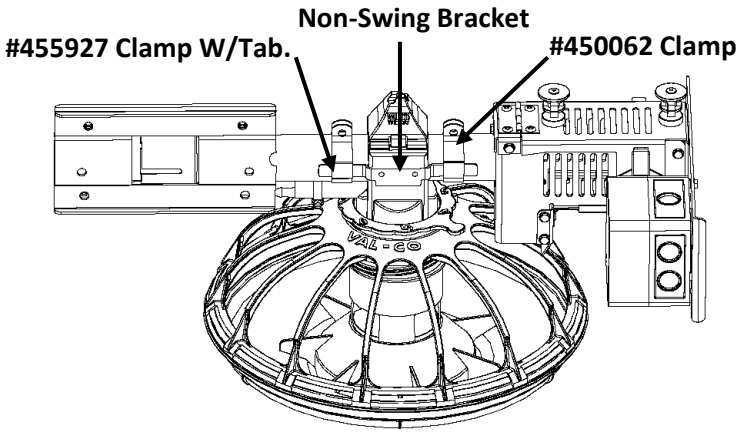
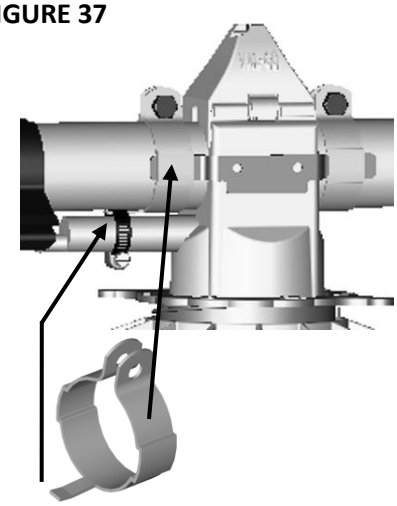


FIGURE 37



6. Once you have completed attaching the Control Pan Unit to the Port Tube you should secure the Proximity Sensor. Slip the Hose Clamp around the Proximity Sensor, between the Port Tube and the Tab located on the #455927 Clamp W/Tab. Now tighten both the #455927 Clamp W/Tab and the Hose clamp. *(How to hook up the sensor wire will be explained on pages 40, 41 & 42.)* You are now ready to install the feed Boot and auger.

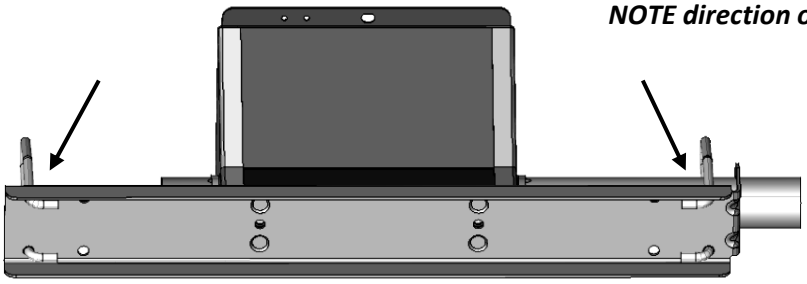
PART 5 - FEED BOOT INSTALLATION

Boot Installation

1. Position the Boot so that the Port Tube on the Boot can be inserted into the "belled end" of the feed line *(see Figure 33 below).*
2. Attach the Boot Hangers to the Boot Base Plate by slipping the hanger ends through the two holes on each end of the Base Plate *(as shown in Figure 33 below).*

FIGURE 38

Bottom view of Base Plate
NOTE direction of the Hangers!



Feed Boot must be level with the feed line!

3. Attach suspension cables to each Boot Hanger as explained in Hanger Assembly instructions on page 25.
4. Slide the Tube Clamp over the "belled" end of the feed tube.
5. Slide the pre-assembled Boot with Port Tube into the "belled end" of the feed tube.
6. Center the Tube Clamp on the "belled end" and tighten *(steps 3-7 shown in Figure 39 below).*
7. Remove the Tube Clamp on the Retainer *(pictured below on left)* so that you can remove the Flighting Anchor shaft to clear the boot and Port Tube for inserting the auger. **The Auger will be inserted after the Drive Unit is assembled to the feed line.**

FIGURE 39

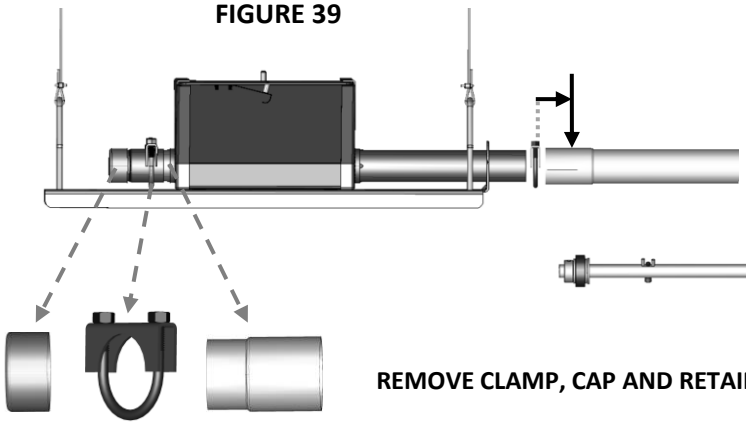
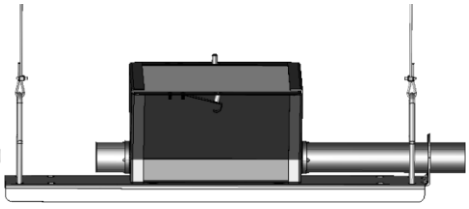


FIGURE 40



REMOVE CLAMP, CAP AND RETAINER TO REMOVE FLIGHTING ANCHOR SHAFT

PART 6 – AUGER INSTALLATION

Auger Instructions – Important for Installing the Auger!

USE EXTREME CAUTION WHEN WORKING WITH THE AUGER!

The auger has tension and may spring which could cause personal injury.

Wear protective clothing,  **gloves,**  **and safety glasses** 

- To avoid possible kinks in the auger, do not drop the roll when handling.
- Inspect the auger carefully as it is installed.
- Smaller kinks may be straightened.
- Larger kinks must be removed and the auger brazed back together.

DANGER

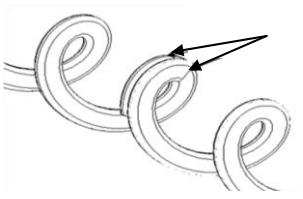
ROTATING AUGER!
Disconnect power before working on system. Auger starts automatically / severe injury could result.

Cut the first 18" and the last 18" off of each roll of auger. Cut out any distorted or large kinked auger sections and reconnect the auger as stated on the next page in the Auger Brazing section.

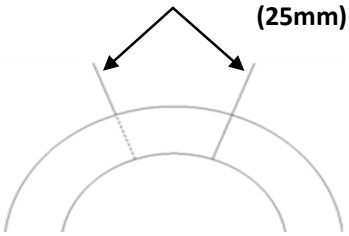
Auger Brazing

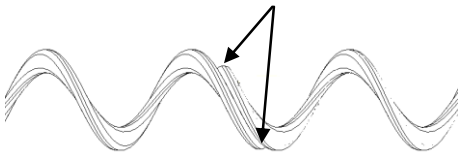
The auger should be brazed if it is necessary to splice or lengthen it. A bronze, flux coated rod is recommended. The ends of the auger should butt against each other, DO NOT THREAD INSIDE EACH OTHER. See Figure below. The joint should be well filled with no sharp edges or rough corners to wear against the tube. To align the auger for brazing, lay it in an angle or channel iron and clamp it firmly in place. Use low heat. Allow the joint to air cool; rapid cooling will cause the auger to become brittle. *(Brazing - done as necessary as you install the auger.)*

FIGURE 41 **1) Braze Here**



2) Overlap the auger ends approximately 1" (25mm) as show in the two examples below

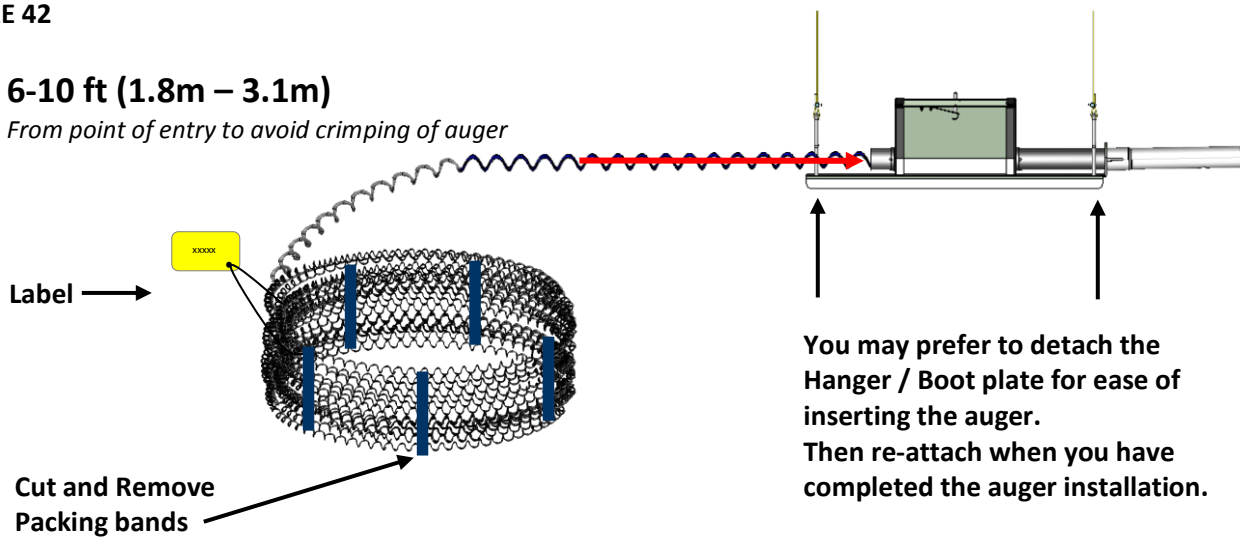




Auger Installation

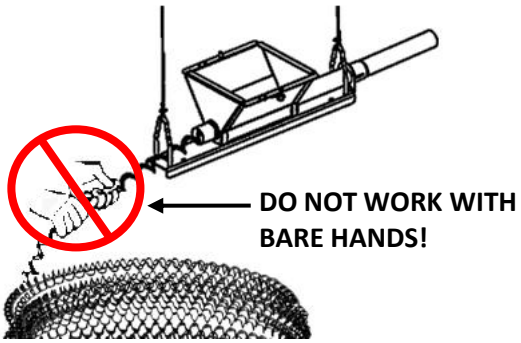
1. Place the coiled Auger approximately 6 -10 feet (1.8m – 3.1m) from the end of the Boot.
2. Remove all wires and labels and uncoil the Auger from the outside of the roll.

FIGURE 42



3. Push the auger into the end of the Boot Assembly, *(opposite the Port Tube)*, and through the feed tubes with short strokes until it reaches through the Port Tube and Housing Assembly and can be attached to the Drive Shaft on the End Control Pan Unit.

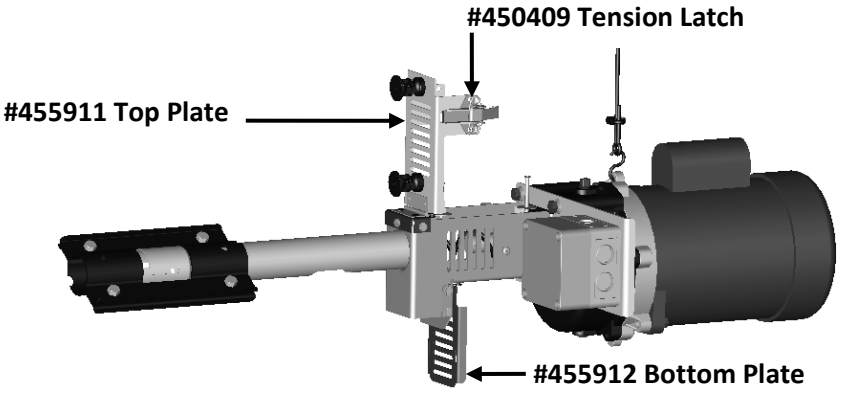
FIGURE 43



If more than one coiled roll of Auger is required to reach the Control Pan Unit sufficiently, you will need to braze the auger ends together at this point. ***(Brazing detailed on the previous page 35.)***

4. Open the Tension Latch to release the Top Plate and Bottom Plate to allow sufficient access to the Drive Shaft. Lift the (hinged) Top Plate and drop the (hinged) Bottom Plate for installing the Auger. *Figure 44 below will show hinged open and Figure 45, a top view with the auger and shaft exposed.*

FIGURE 44



5. Attach the Auger to the Drive Shaft with the Flighting Anchor *as shown below in Figure 45 and 46.*

FIGURE 45

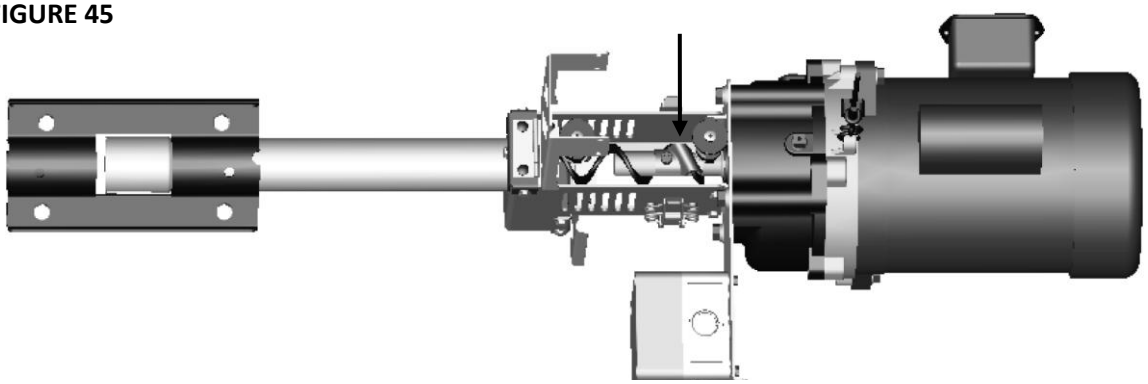
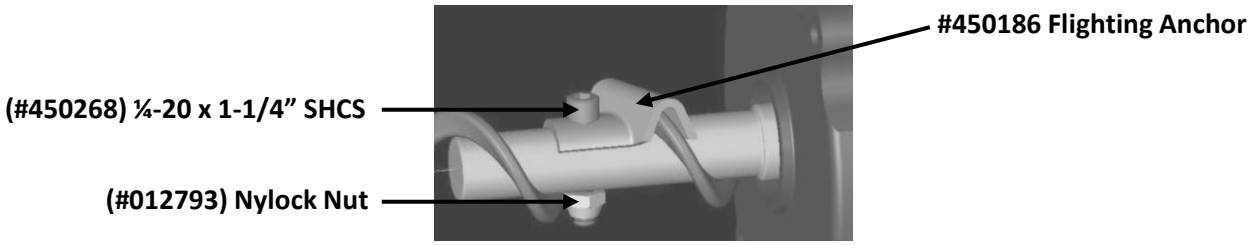


FIGURE 46 DETAILED VIEW



It is recommended that while you are still at the Control Pan / Drive Head Unit end of the barn you might want to hook up the power to save walking back to this end of the barn after the auger is installed.

PART 7 – WIRING END CONTROL / DRIVE HEAD & GEARBOX UNIT

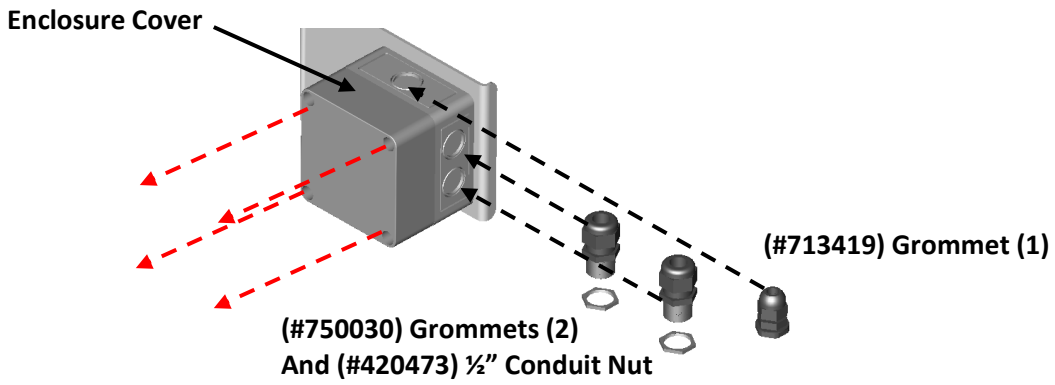
Wiring the Motor and Proximity Sensor

WIRING MUST BE DONE BY A LICENSED ELECTRICIAN!

ALL LOCAL AREA CODES MUST BE FOLLOWED!

1. Remove Cover on Relay Enclosure by loosening the four (4) screws in each corner.
2. Remove **ONLY THE NECESSARY** Knock-out(s) on the Relay enclosure.
3. Install the water tight (#750030) Grommet(s) and (#420473) ½" Conduit Nut(s) for power wires *(as shown in Figure 47 below).*
4. Install (#713419) Grommet for proximity sensor wire *(as shown in Figure 47 below).*

FIGURE 47

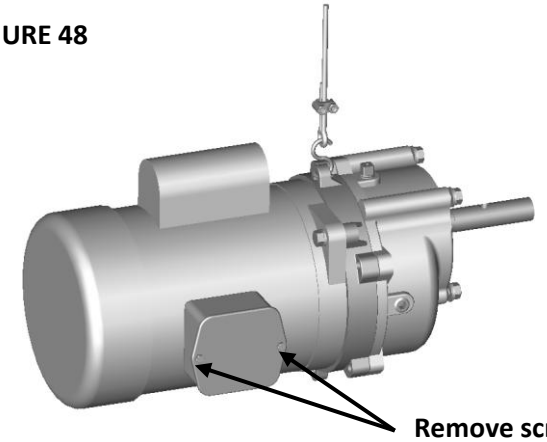


5. Slide the Proximity Sensor wire through the (#713419) Grommet on top of the relay enclosure.
6. Connect the wire from the Proximity Sensor End Control Unit to Relay #730246 and tighten Grommet until wire has a snug fit.

- **Be absolutely sure all electricity is removed from the motor circuitry before wiring any AC motor. Open the circuit breaker that will supply the power. Tag the breaker to ensure power will not be accidentally restored to the circuit while you are installing or servicing the motor.**
- **Refer to page 40, 41 and 42 for proper wiring diagrams.**

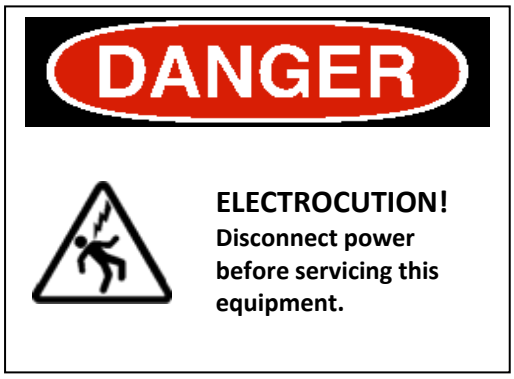
7. Connect the power wire(s) to the relay #2 and #8 *as shown on page 40.*
8. Cut the Flex Conduit to length.
9. Slide the power wires through the Flex Conduit.

FIGURE 48



- **Wire colors may vary according to motor**
- **Refer to tags on motor for wire placement.**
- **MOTOR MANUAL INCLUDED WITH MOTOR WILL GIVE YOU DETAIL ON MOTOR WIRING.**

Remove screws to expose motor wire connections.



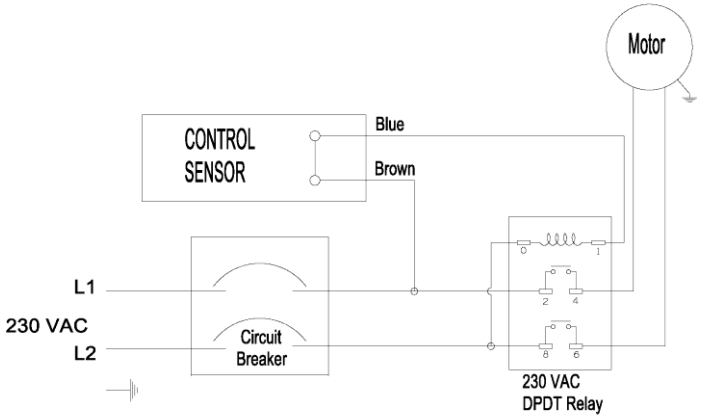
10. Connect the power wires to the motor *(as detailed in the Motor Manual included with the motor)*.
11. Re-attach all covers.

Wiring Diagram

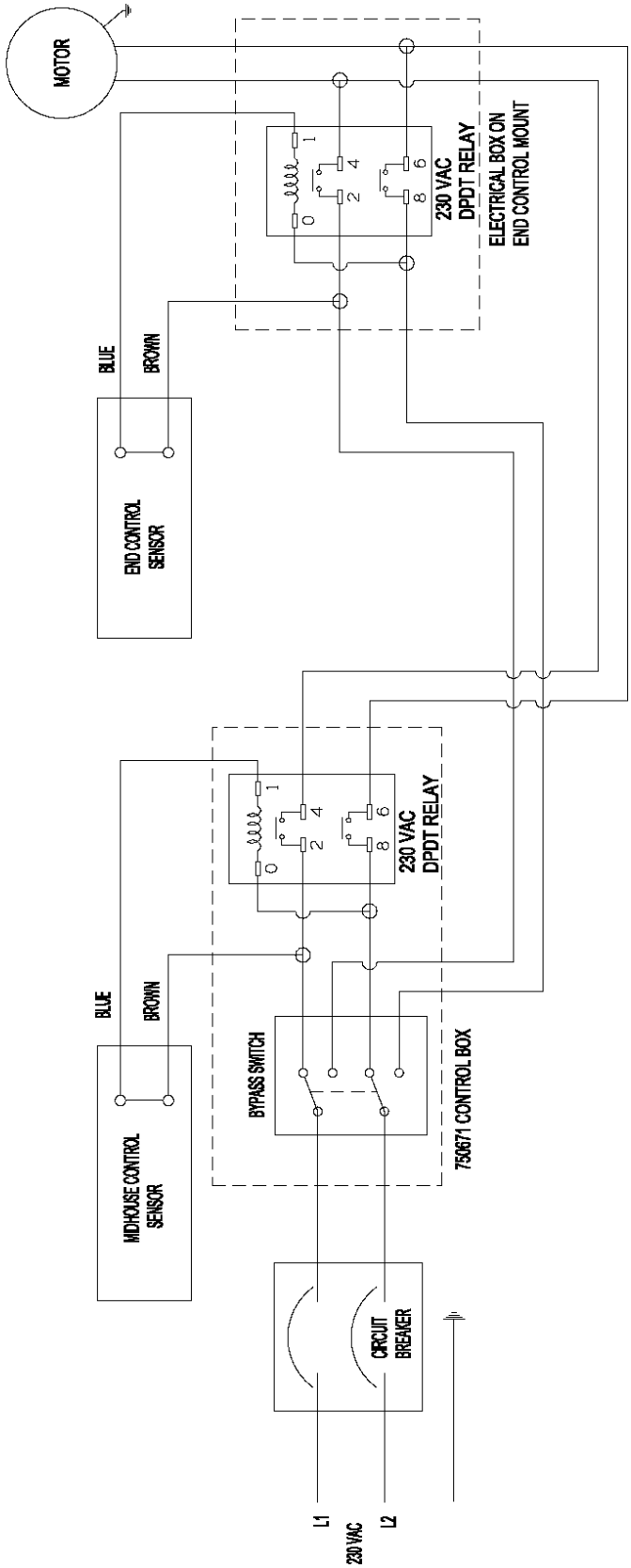
WIRING MUST BE DONE BY A LICENSED ELECTRICIAN!

ALL LOCAL AREA CODES MUST BE FOLLOWED!

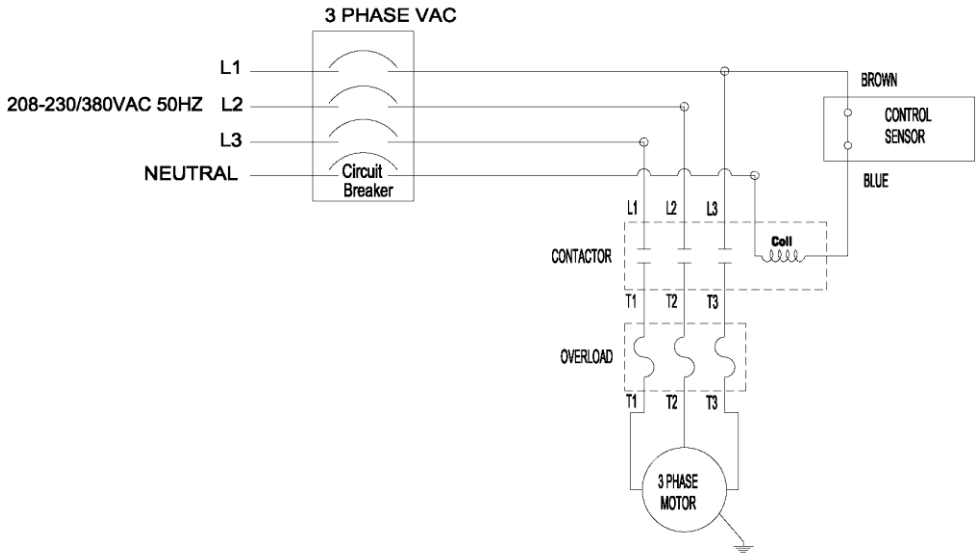
SINGLE PHASE / END CONTROL



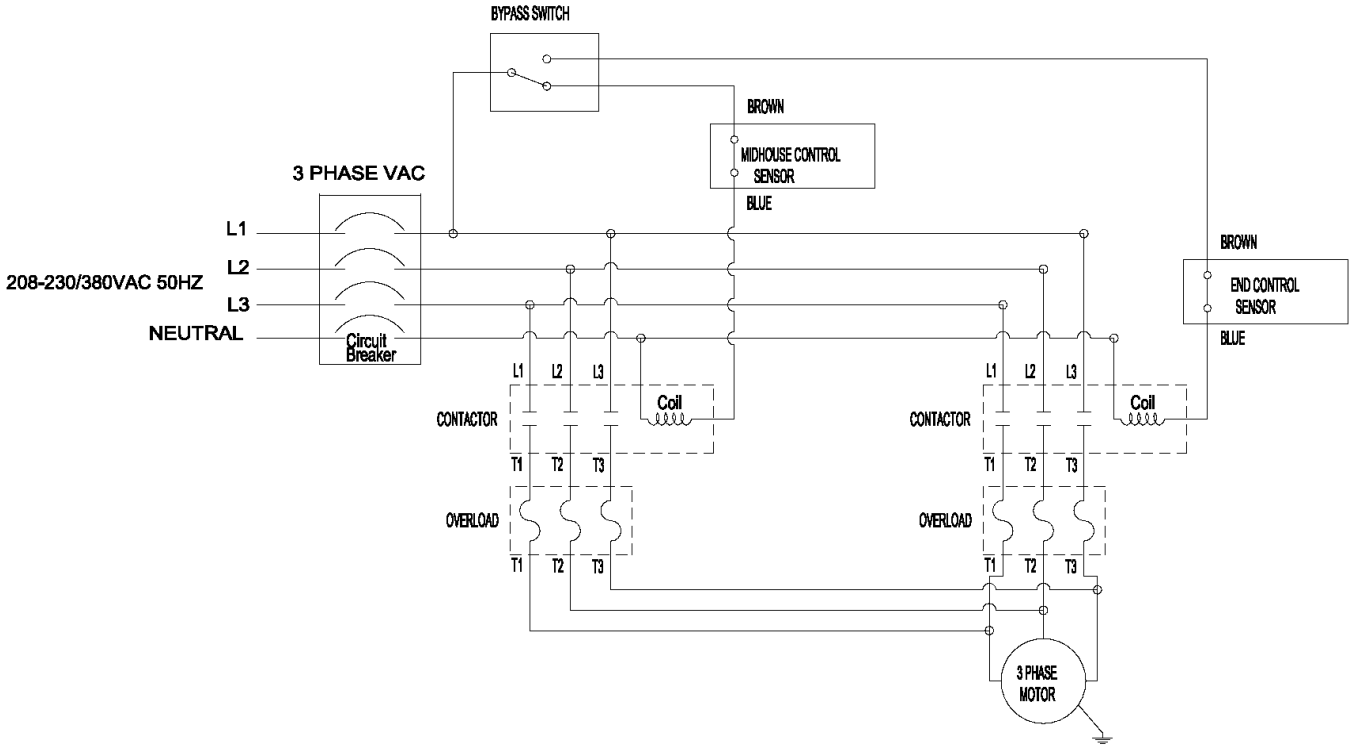
SINGLE PHASE / MID-HOUSE CONTROL



3 PHASE / END CONTROL



3 PHASE / MID-HOUSE CONTROL



PART 8 FEED BOOT – AUGER CONNECTION

Feed Boot - Auger Connection

You are ready to perform the final steps to installing the auger.

1. Pull the Auger from the boot end until it begins stretching.
2. Allow the Auger to relax.
3. Mark the Auger at the end of the Boot *while the auger is relaxed in the tube as shown in Figure 49.*

FIGURE 49

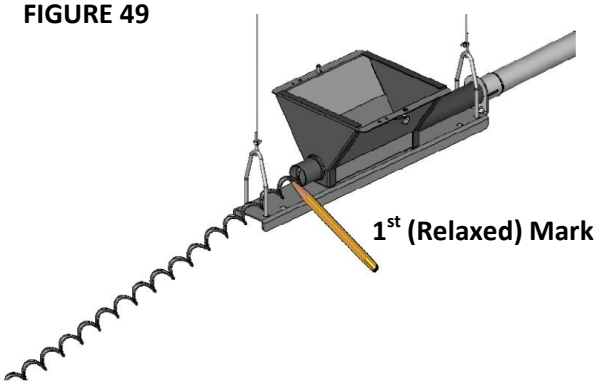
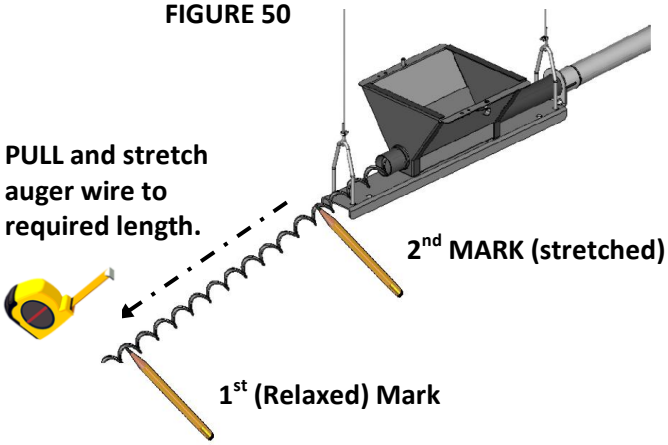


FIGURE 50



4. Stretch the ***Auger 4-7 inches (102.mm – 178.mm) per 100 feet***. Example: A 350 feet (107m) feed line requires approximately 24 inches (609mm) of stretch*).*
5. Beginning at the relaxed mark, measure the required amount of stretch. Mark the Auger at this point *as shown in Figure 50*.
6. Grip the Auger approximately 12" (203mm) ahead of the 2nd (stretched) mark with locking pliers and allow the auger to pull back into the boot so that the pliers rest against the end of the Boot *as shown in figure 51 below*.
7. Cut the Auger at the stretched mark with a bolt cutter *as shown in figure 51 below*.
8. Insert the Flighting Anchor Shaft into the end of the Auger while pliers are still attached *as shown in Fig. 52*.

FIGURE 51

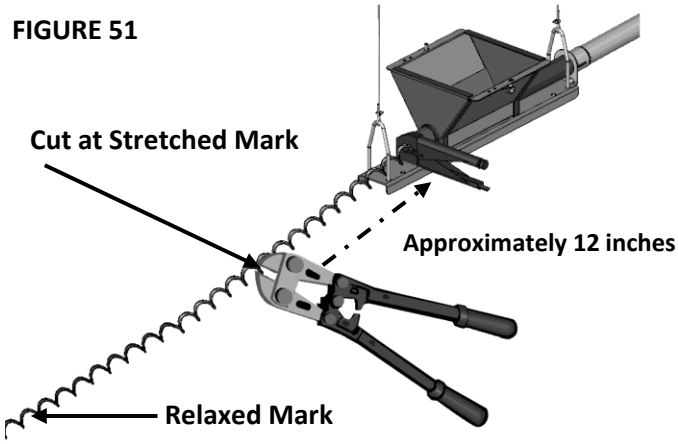
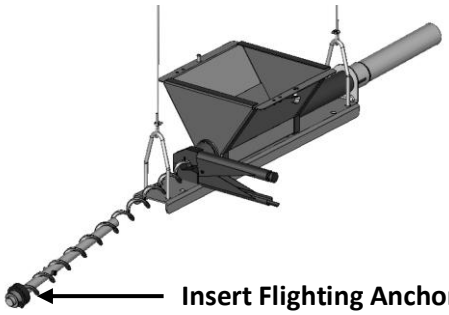
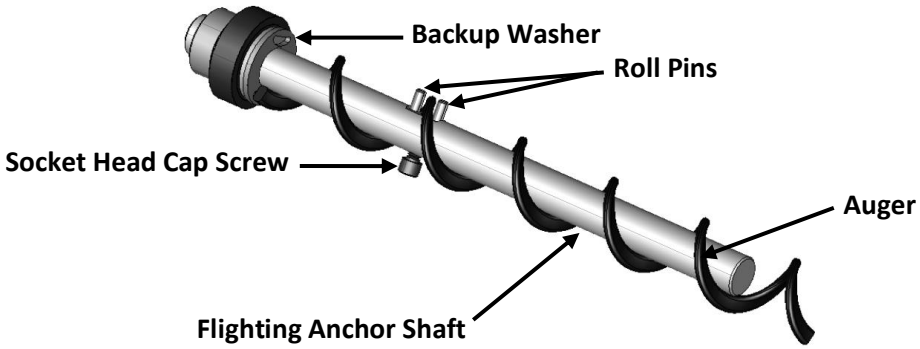


FIGURE 52



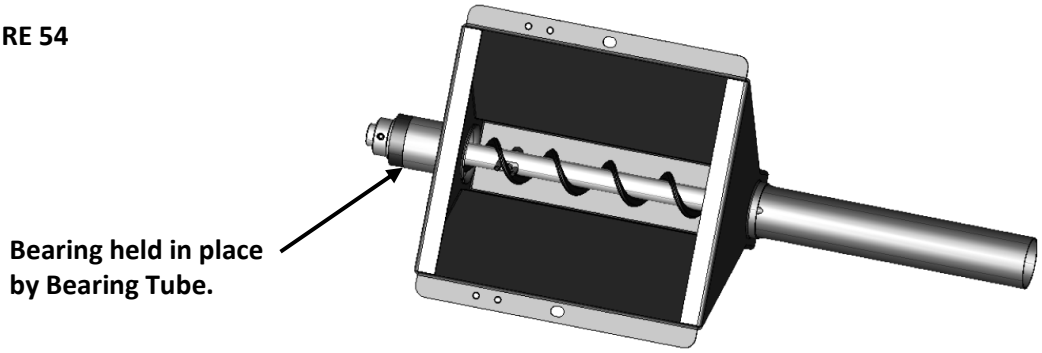
9. Rotate the Flighting Anchor Shaft Assembly so that the auger moves between the 2 Roll Pins and reaches the Backup Washer at the head of the shaft a*s shown in Figure 53 below.* When the auger is in place, the socket head cap screw will need to be tightened to hold the auger securely. It will hold the auger tight to one side of the shaft.

FIGURE 53



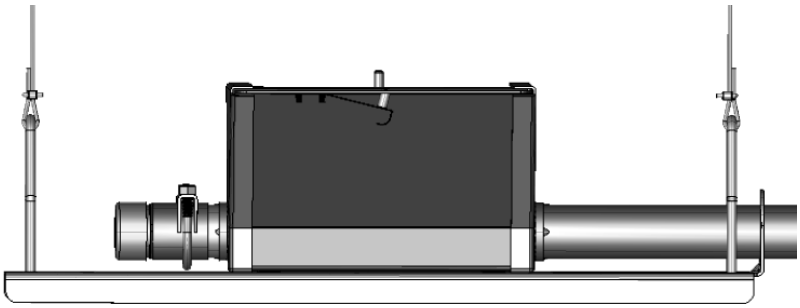
10. Carefully remove the pliers as you hold the Auger in place and gradually allow the shaft with the stretched Auger to pull back into the Boot. *The Flighting Anchor Shaft will be held in place by the pull of the Auger and the Bearing Tube fitting (as shown in Figure 54 below).*

FIGURE 54



11. Replace Bearing Retainer and Bearing Cap onto the end of the Flighting Anchor Shaft., Clamp and Hanger. Auger is now fully installed.

FIGURE 55



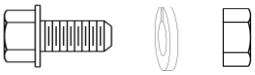
PART 9 – HOPPER AND HOPPER LEVEL SWITCH ASSEMBLY

Hopper Assembly / Installation

Assemble the 4 panels in order *as shown in the following examples; Figures 56, 57, 58, & 59.*

FIGURE 56

1. Wrap top flanged edge on panel #2 around top edge of panel #1 and fasten with # 010615 ¼"-20 x ½" Hex Bolt , 010251 ¼" Lock-washers and #010602 ¼" Finished Hex Nut.



2. Fasten the flanged bottom ends of both panel #1 & #2 together *as shown to the right*.
3. Continue the same until all 4 panels are assembled.

FIGURE 57

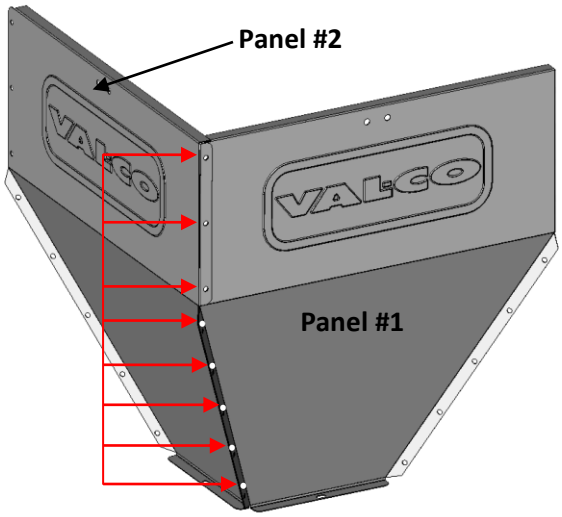


FIGURE 58

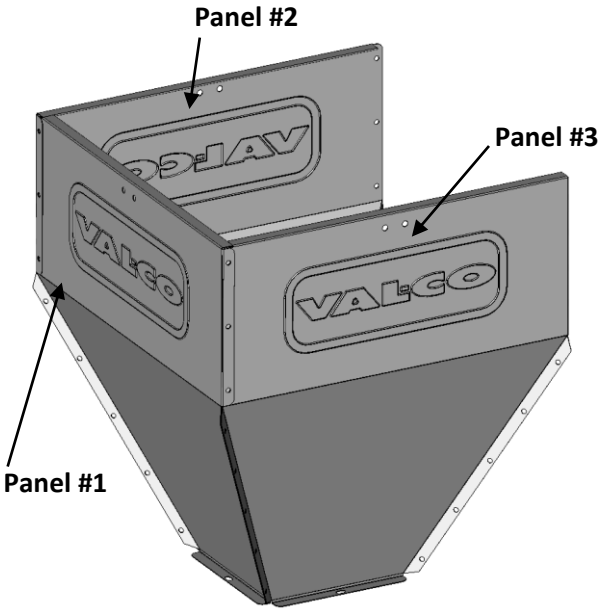
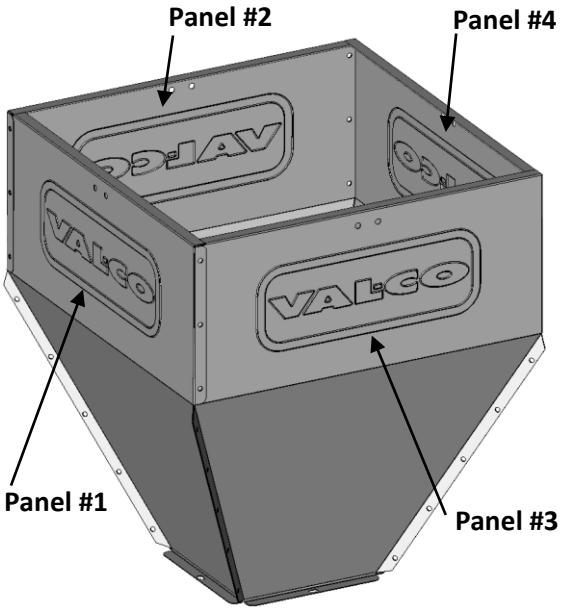


FIGURE 59



4. Assemble the Hanger Brace and Cable Retainer with the #010643 5/16" x ¾" Hex Bolts and #012789 5/16" Nylock Nuts *as shown in Figure 60 and 61 below.*

FIGURE 60

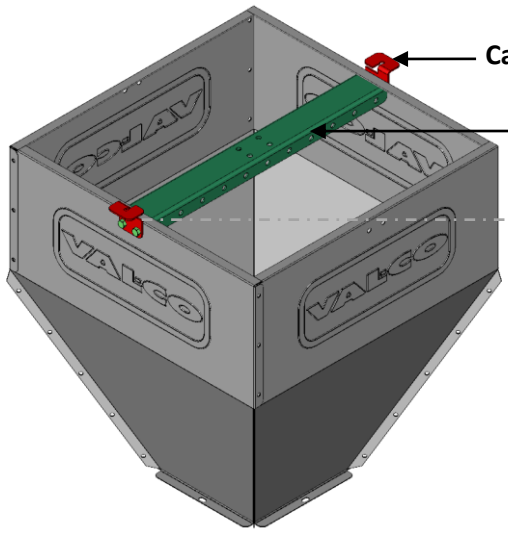
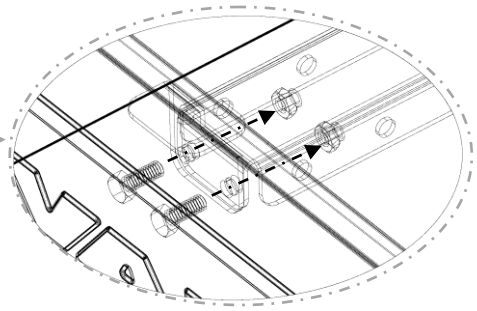


FIGURE 61



It is recommended that you mount the Hopper to the Feed Boot and thread the cables through the cable retainers **after you have installed the Hopper Level Switch for an easier installation**.

(Please refer to the next two pages 49 & 50 for Hopper Level Switch instructions.)

5. Figure 62 & 63 detail how to mount the Hopper to the Feed Boot and thread the Suspension Cables through the Cable Retainers. Begin by sliding the flanges on the bottom of the Hopper under Boot End flanges and snap the Snap Button into hole on Boot Housing flanges on both sides of the Boot Housing to secure. *(All 4 flanges of the Hopper panels are pre-drilled for the Snap Button. This will allow you to rotate the Hopper in the direction of choice.)*

FIGURE 62

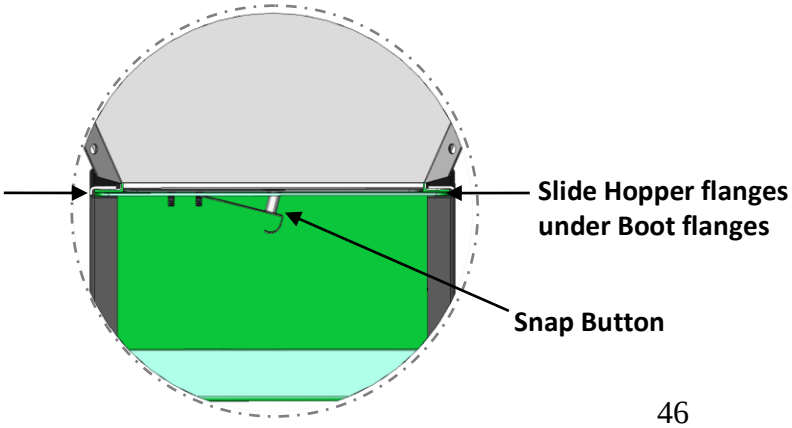
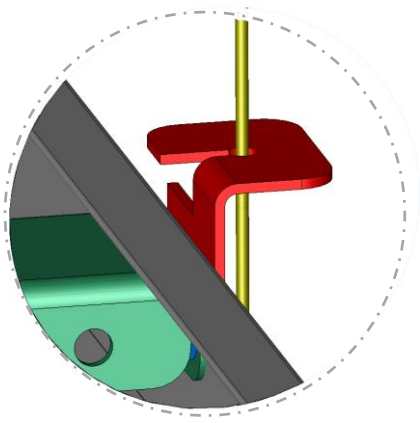


FIGURE 63



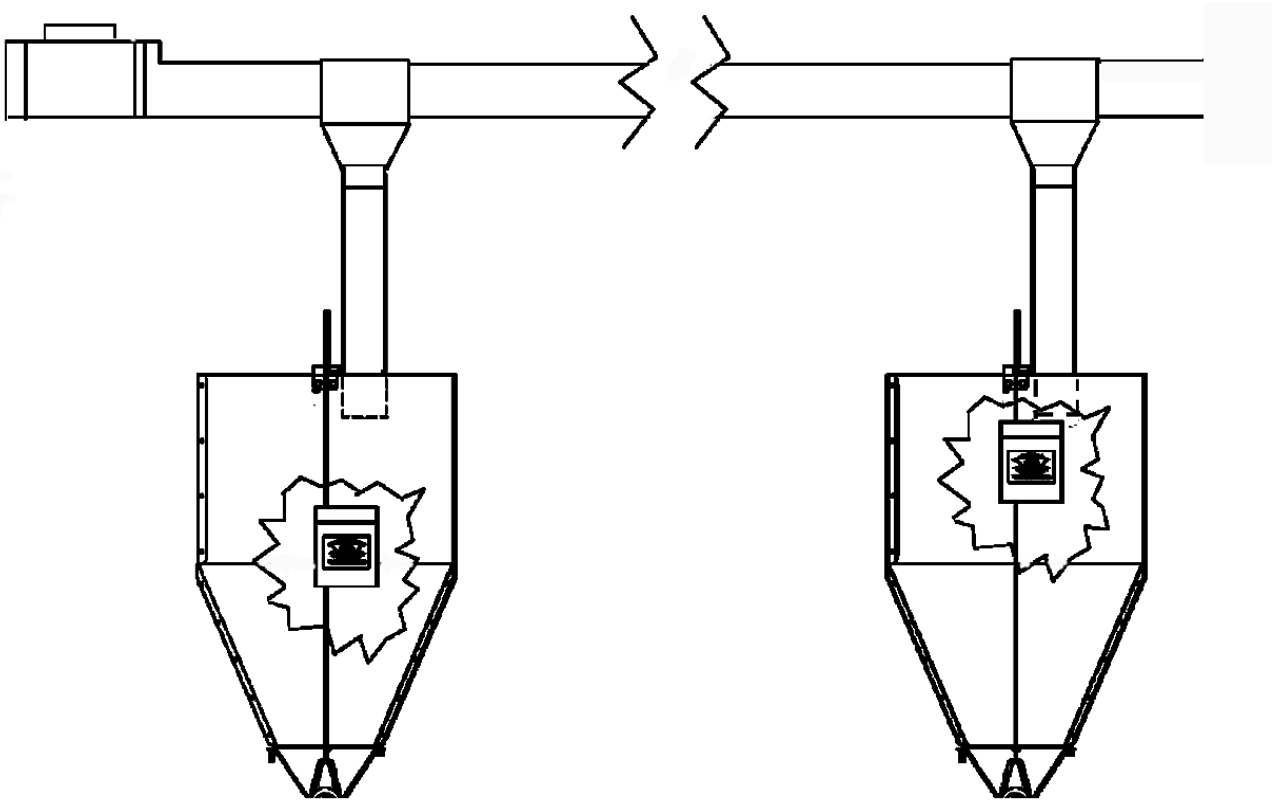
Hopper Level Switch

The Hopper Level Switch control is designed for use with any free flowing, conveying feed system. The switch automatically starts and stops the fill system, accordingly, as the feed **is or is not** against the sensor.

To assure that no hoppers empty before the Control Unit hopper requires feed, the level switches (controls) may be placed in more than one hopper.

Wire all switches in parallel so any one switch can start the system.

FIGURE 64



Install the Hopper Level Switch closest to the Fill system motor **lower than the other hoppers, if you are using multiple Hopper Level Switches, so the feed level will be lower in that hopper than in the others.**
The lower feed level will cause the system to start in order to maintain the feed level in every hopper and provide a reservoir of feed in the fill system in the case that another hopper calls for feed.
The feed drop tube should be positioned to deliver feed to the center and near the top of the hopper and in front of the Hopper Level Switch. The drop tubes and switches should be positioned high in the other hoppers so they fill but do not overflow *as shown in Figure 64 above and in more detail on page 48, Figure 66*

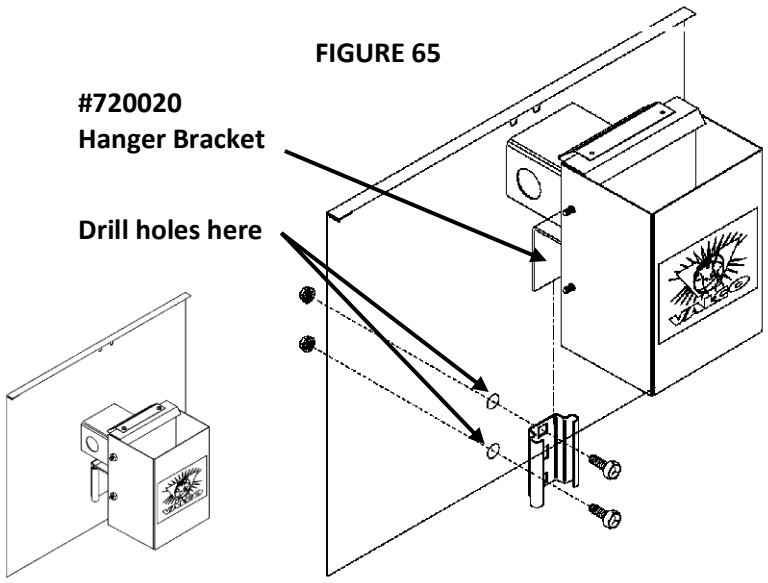
Hopper Level Switch Installation

1. Locate the best position for the level switch *as shown in Figure 66 below* and use a center punch and drill (2) 11/32" diameter holes through the panel of the hopper for the mounting bracket *as shown in Figure 65*. **Use the bracket as a guide to determine the hole spacing.** Secure using the included 5/16"-18 ¾" Hex Bolts and 5/16"-18 Locknuts.

2. Slide the #720020 Hanger Bracket on the back side of the Level Switch Control Sensor onto the #720023 Mounting Bracket which you just secured to the side panel of the hopper.

The Hopper Level Switch control may be removed for cleaning.

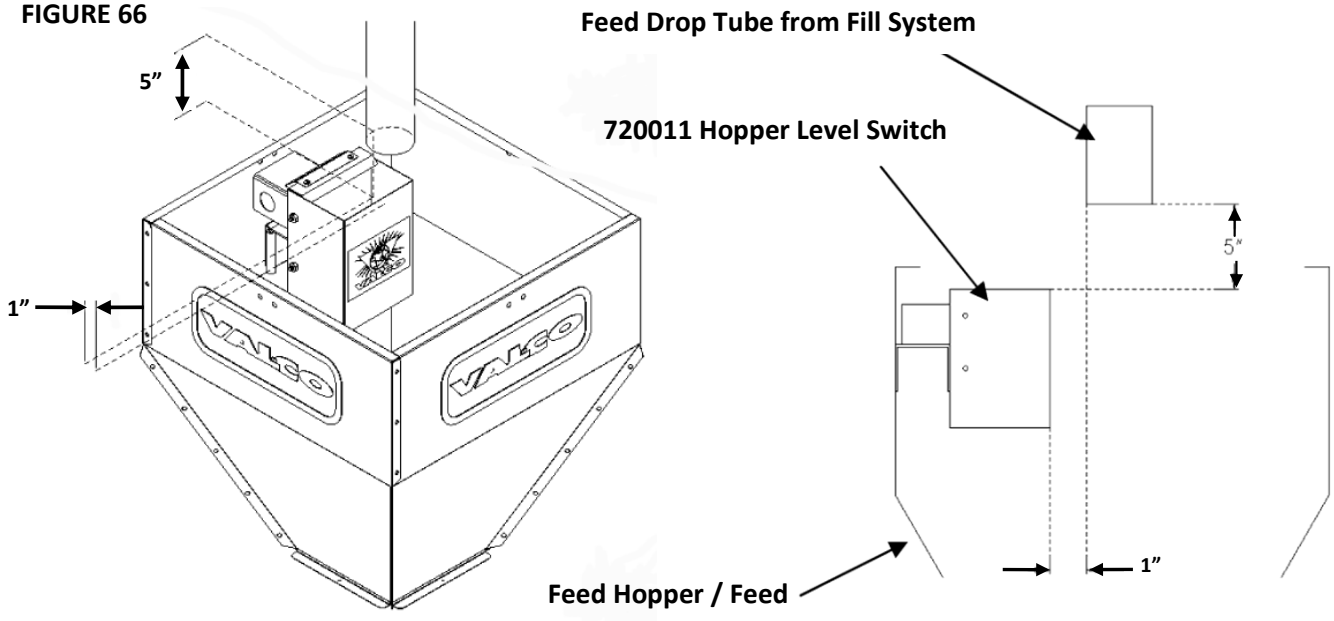
FIGURE 65



For optimum performance, the feed drop tube should be placed five (5) inches higher than the top edge of the switch shield and at least one (1) inch above the switch shield. This will allow the feed to fill the hopper, overflow the sensor and activate the level switch.

THIS UNIT SHOULD ONLY BE WIRED TO A VAL-CO™ DISCHARD HEAD

FIGURE 66



PART 10 – ANTI-ROOST INSTALLATION

Anti-Roost Detailed

NOTE: The Anti-Roost wire will not be installed on the Control Head when shipped. The insulator with bracket #450042 will be Included.

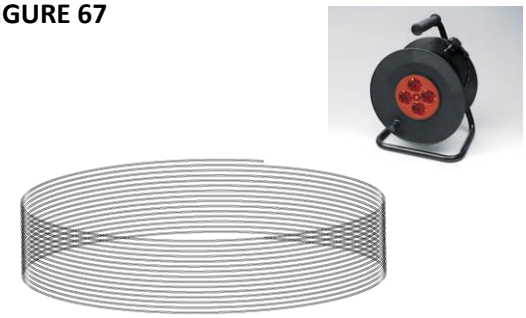
The Anti-Roost wire must have an insulator at *least* every 50 feet.

(Length ÷ 50 feet = number of insulators required)

1. Cut bands or wires on the Anti-Roost Wire coil as you did with the Auger coil. Unroll the anti-roost cable by taking 5 loops of the cable with one hand *unroll. R*emove 5 additional loops and unroll.

   (It will lay flat as you unroll during installation or for ease use any cable reel as pictured.)

FIGURE 67

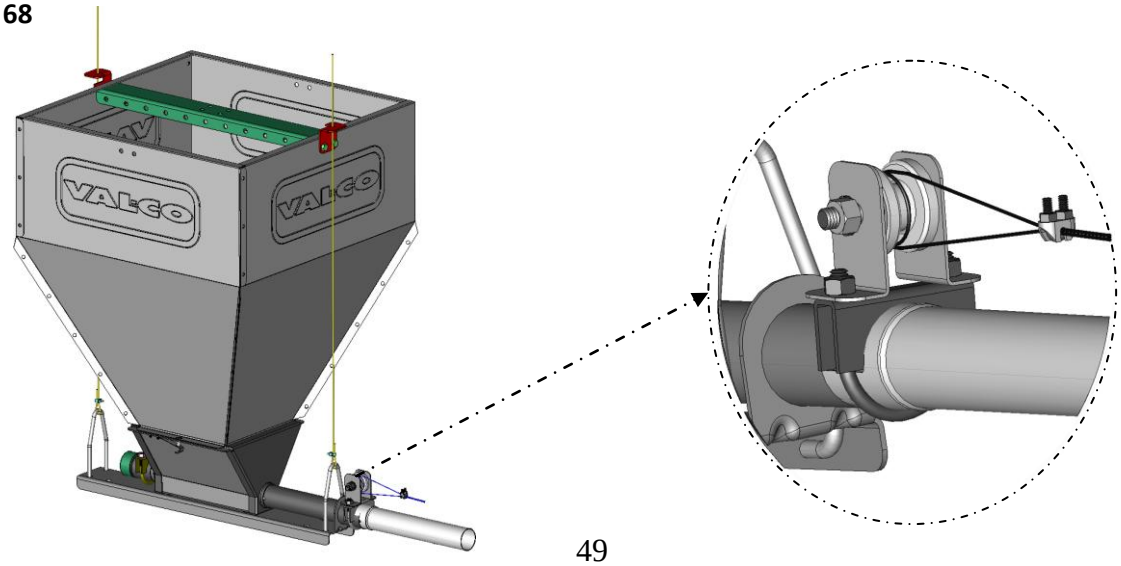


CAUTION !

Handle wire with caution. Wear safety glasses and gloves to protect your eyes and hands from injury.

2. Start at the hopper end of the line and form *a loop or double loop* around the anti-roost bracket and fasten with a 1/16” cable clamp *as shown in Figure 57 below*.

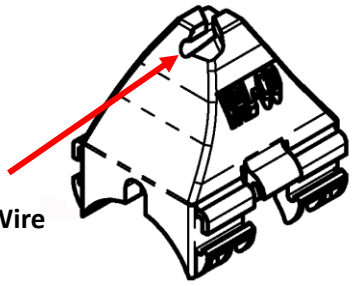
FIGURE 68



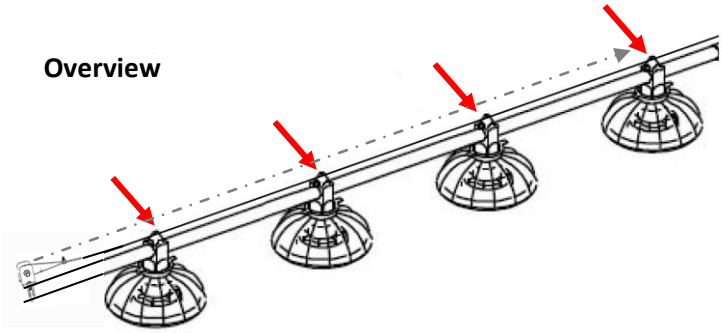
3. As you pull the Anti-Roost wire to the next Anti-Roost Bracket, insert the wire from the insulator into the top of each Grill Support *as shown in Figure 58*.

FIGURE 69

Grill Support for Anti-Roost Wire

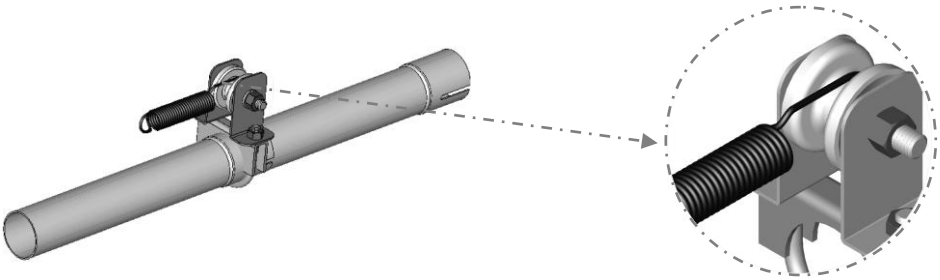


Overview



4. Attach the spring onto the center groove at the second (or next) Anti-Roost Bracket, *which will be at the 50 ft length from the Anti-Roost Clamp on the hopper end, as shown in Figure 59 below.*

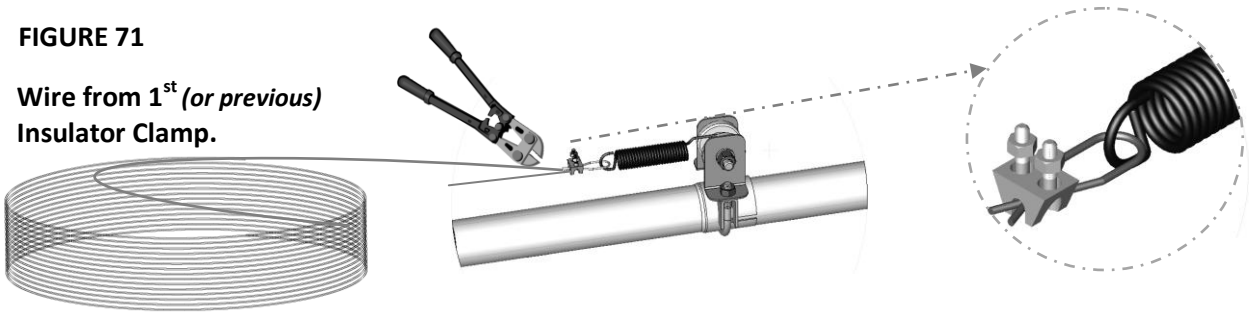
FIGURE 70



5. Thread the end of the wire through the end of the spring. Pull the wire tight so that there is ¾" [20 to 25mm] of stretch in the spring. Clamp the Anti-Roost wire to form a loop and cut off any excess.

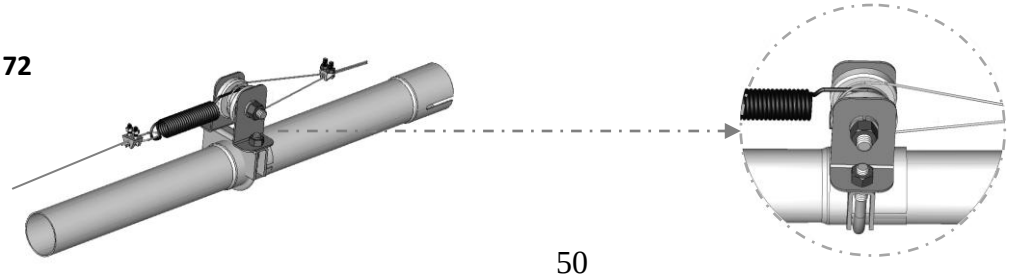
FIGURE 71

Wire from 1st *(or previous)* Insulator Clamp.



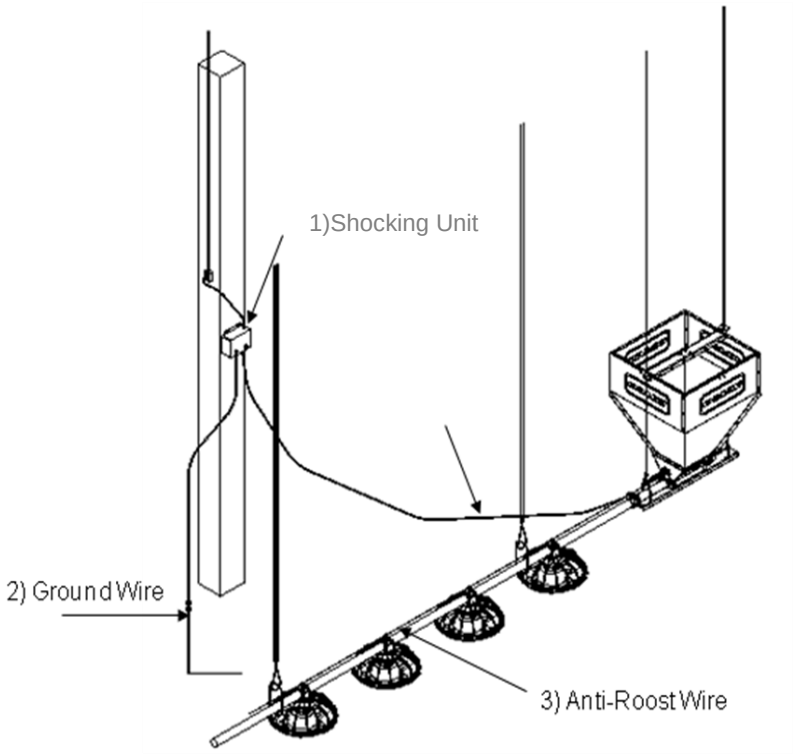
6. Now you need to start the next (50ft) run of Anti-Roost Wire by attaching the wire to the same insulator that you just attached the spring to. For best results, make a double loop around the Anti-Roost Insulator in the center groove of the insulator and fasten with a 1/16" cable clamp *just as you did at the hopper end*.

FIGURE 72



7. Run the Anti-Roost Wire to the next Anti-Roost Insulator *as you did in step 4 on the previous page.*
8. Repeat this installation until the Anti-Roost Wire is installed along the entire feeder line.
9. Install the Shocking Unit. The Shocking Unit is used to power all Anti-Roost lines in a house. Route the Shocking Unit wire from the Shocking Unit to the Anti-Roost system. Secure the Shocking Unit Wire to the Anti-Roost Wire using a cable clamp.

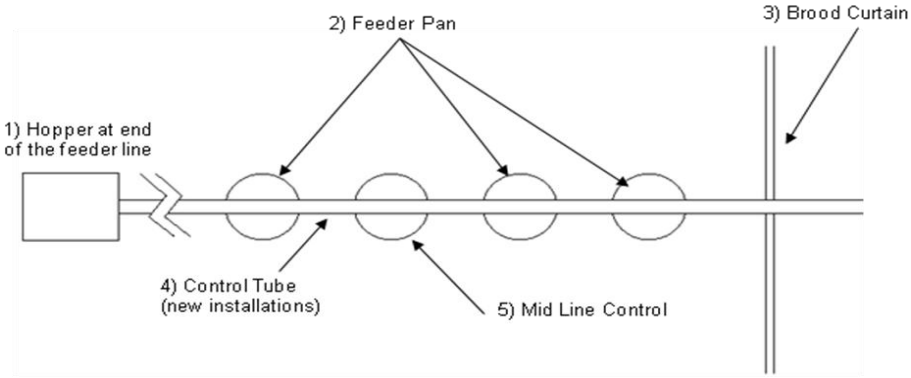
FIGURE 73



PART 11 – MID-HOUSE CONTROL INSTALLATION

The Mid-House Control makes it possible to operate the feeding system when birds are confined away from the Control Unit on the end. VAL-CO™ recommends placing the Mid-House Control Feeder at least 2 pans away from the curtain of partition.

FIGURE 74



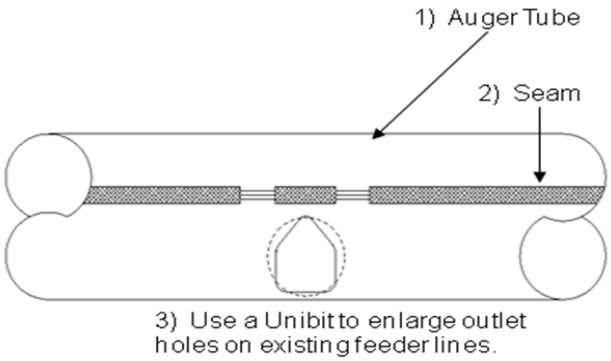
1. **New Feeder Lines:** Leave one feeder pan assembly off the feeder control tube at the point where the Mid-Line Control needs to be placed. The feeder line can be assembled and suspended before attaching the Mid-House Control; or the Mid-House Control may be attached to the feeder tube when the other pans are installed.

Existing Feeder Lines: Remove the feeder pan at the location where the Mid-House Control will be installed.

2. **New Feeder Lines**:

Existing Feeder Lines: Enlarge the outlet hole to approximately 1” diameter for the Mid-House Control, plus enlarge (2) outlet holes in front (to the hopper end) of the Mid-House Control. Use a (hole) cutter drill bit to enlarge hole size. Be sure there are no burrs inside the tube to catch the auger.

FIGURE 75



PART 12 - Operation Guidelines (Valco Broiler Feeding System)

Brood Stage, First (7-14) days:

1. Lower Feeder to the floor until the pans are resting on the floor and causing the feed flood windows to open and still allow the winch cable lines to remain taught. Do not rest complete system weight on the pan assemblies. It is best to warm up the house and litter at least 24 hours before bird placement.
2. **Do not operate the feeder on full automatic when the windows are open. Once pans are flooded, remove power from system until next flooding is required at controller or breaker panel. Running the feeder on automatic with windows open will lead to excess feed waste.**

3. Operate the feeders manually 1-3 times per day for the first 7 to 14 days as necessary to keep the pans full of feed, but not so full as to have excessive feed levels that allow the birds to waste feed. If it is not possible to operate the feeding system manually then a time clock should be employed to operate the feeder at predetermined times and to limit the run time of the feeding system.
4. If it is necessary to flood again, re-flooding the system should be scheduled while the lights are off and the birds are bedded down. This will minimize bird activity in the pan while the feeder is running resulting in minimized feed waste.

Grow-out Stage (7-14) days to Finish:

1. As the birds grow and become familiar with eating from the feeder pans it will become time to begin raising the feeder to the grow-out position.
2. As a starting point, set the feeder on the #4 adjustment position by rotating the grill on the collar to the desired position. Feed levels can be “fine tuned” from this setting as breed, and type of feed might dictate.
3. Allow the birds to eat the feed down below the feed windows. This will facilitate the closing of the feed windows as the feeder is raised.
4. Use the winch to raise the feeding system to a height where the lip of the pan is level with the “full portion” of the chicken’s breast. Again make adjustments to accommodate differences in breeds. It is important to initially raise the pans to just the point where they are no longer touching the floor. It may be noticed that some pans may appear “higher” or “lower”. This is not a condition for concern as the birds will level the litter.
5. Continue to raise the feeder as necessary to maintain the same relative position of the feeder pan lip to the bird’s breast until grow-out is completed.

*These are to be used as **general guidelines**. Differences in breed, feed consistency, lighting, climate, and other external factors will dictate changes in these guidelines to individualize a broiler growing program to optimize feeding system performance.*

Appendix 1 – FUZE and FUZE PROLINE PARTS LIST

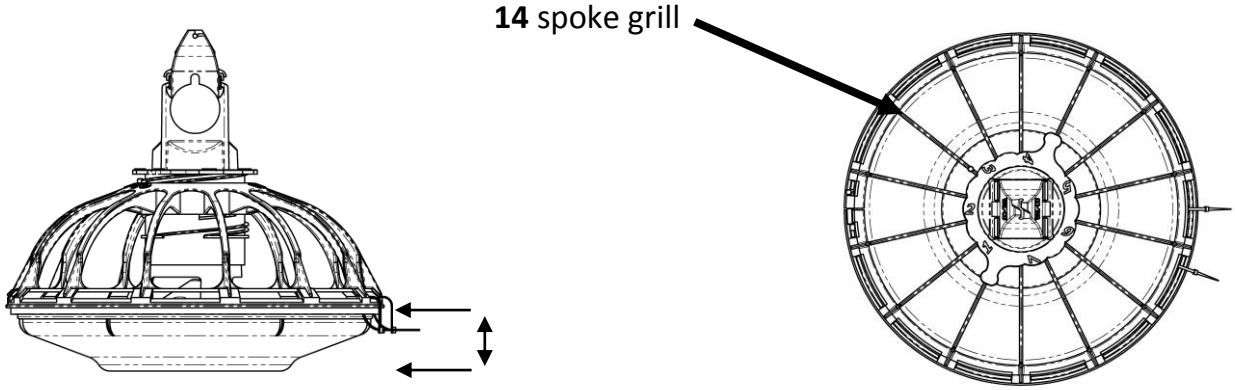
All 13” or 14” components are interchangeable. Tower and Tower Cap are the same for all pans and grills. The Adjustable Collars are the same for all Grills but not the same for all pans. The Standard Pans require the (FE1540 FUZE Adjuster Collar) and the Shallow Pans require the (FE1540S FUZE Adjuster Collar).
Assembly Kits are listed on the following pages.

FUZE Part Number	Description
FE1500LS	13” Fuze Slotted Shallow Pan Assembly Kit – 14 Spoke Grill
FE1510LS	13" Fuze Slotted SHALLOW Pan
FE1510S	13" Fuze Slotted STANDARD Pan
FE1520	13" Fuze Grill - 14 Spokes
FE1530	Fuze Feeder Tower
FE1540	Fuze Adjustable Collar, STANDARD Pan
FE1540S	Fuze Adjustable Collar, SHALLOW Pan
FE1550	Fuze Feeder Tower Cap
FE1560	Fuze Feeder Grill Lock
FE1610LS	14" Fuze Slotted SHALLOW Pan
FE1610S	14" Fuze Slotted STANDARD Pan
FUZE PROLINE Part Number	**Description**
FE1500RS	13" Fuze PROLINE STANDARD Slotted – Pan Assembly Kit – 13 Spoke Grill
FE1500RLS	13" Fuze PROLINE SHALLOW Slotted – Pan Assembly Kit – 13 Spoke Grill
FE1520R	13" Fuze PROLINE Grill - 13 Spokes
FE1600RS	14" Fuze PROLINE STANDARD Slotted – Pan Assembly Kit – 14 Spoke Grill
FE1600RLS	14" Fuze PROLINE SHALLOW Slotted – Pan Assembly Kit – 14 spoke Grill
FE1620R	14” Fuze PRO Grill – 14 Spokes
FE1800RS	14" Fuze PROLINE STANDARD Slotted – Pan Assembly Kit – 5 Spoke Grill
FE1800RLS	14" Fuze PROLINE SHALLOW Slotted – Pan Assembly Kit – 5 Spoke Grill
FE1820R	14” Fuze PROLINE Grill – 5 Spokes

Appendix 2 – 1500LS FUZE Feeder Parts List

1500LS 13” FUZE Slotted **Shallow** Pan Feeder

14 spoke grill



2.39 inches (60.706mm)

ASSEMBLY KIT INCLUDES:

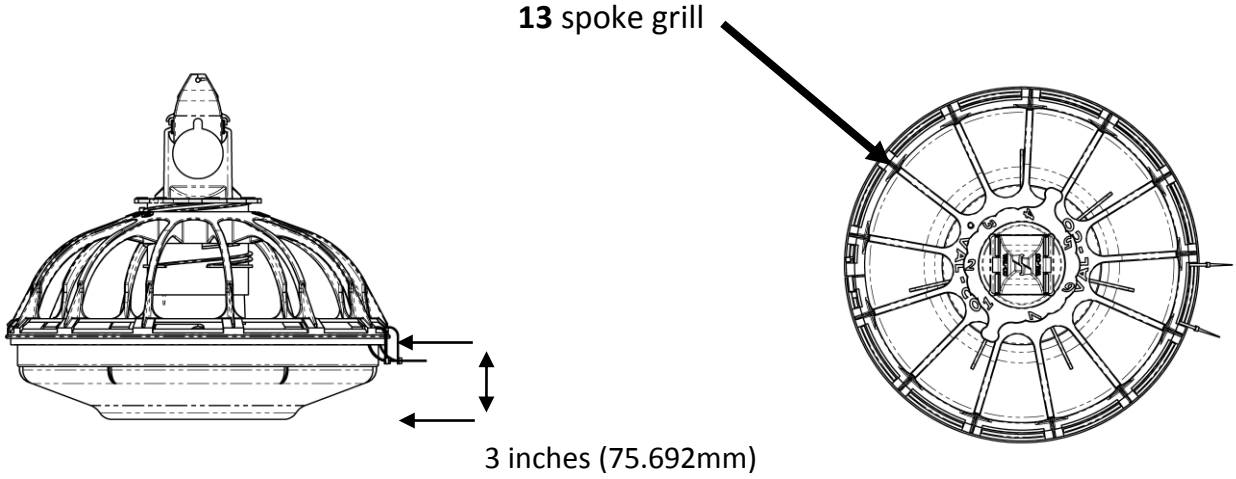
Part Number	Description	Quantity
FE1355	Feeder Strap (tie wrap) Natural 4”	2
FE1510LS	13” FUZE Slotted SHALLOW Pan	1
FE1520	13” FUZE Grill – 14 Spokes	1
FE1530	FUZE Feeder Tower	1
FE1540S	FUZE Adjuster Collar, SHALLOW Pan	1
FE1550	FUZE Feeder Tower Cap	1
FE1560	FUZE Feeder Grill LOCK	1

This is the only Assembly Kit for the FUZE pan feeder.

Appendix 3 – 1500RS FUZE PROLINE Feeder Parts List

1500RS 13" FUZE **PROLINE** Slotted **Standard** Pan Feeder

13 spoke grill



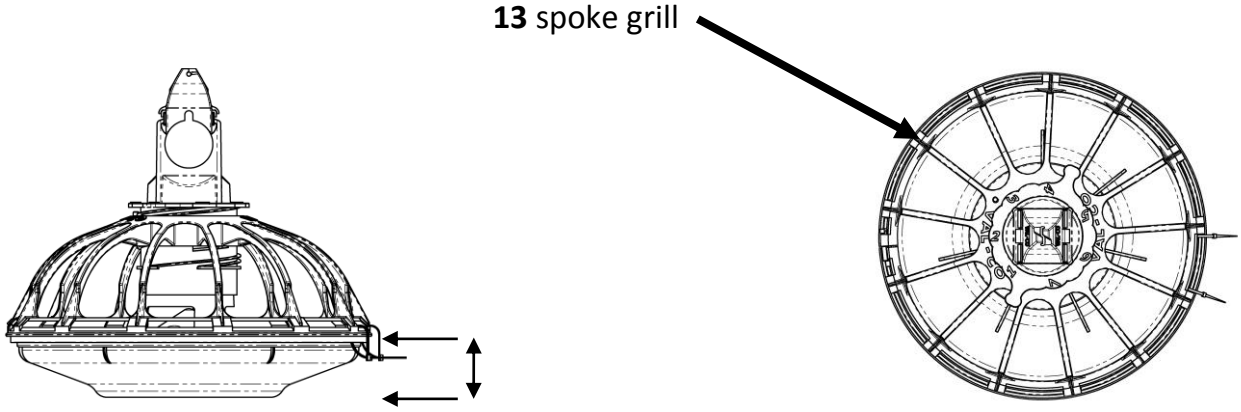
3 inches (75.692mm)

ASSEMBLY KIT INCLUDES:

Part Number	Description	Quantity
FE1355	Feeder Strap (tie wrap) Natural 4"	2
FE1510S	13" FUZE Slotted STANDARD Pan	1
FE1520R	13" FUZE PROLINE Grill – 13 Spokes	1
FE1530	FUZE Feeder Tower	1
FE1540	FUZE Adjuster Collar, STANDARD Pan	1
FE1550	FUZE Feeder Tower Cap	1
FE1560	FUZE Feeder Grill LOCK	1

Appendix 4 – 1500RLS FUZE PROLINE Feeder Parts List

1500RLS 13" FUZE **PROLINE** Slotted **Shallow** Pan Feeder
13 spoke grill



2.39 inches (60.706mm)

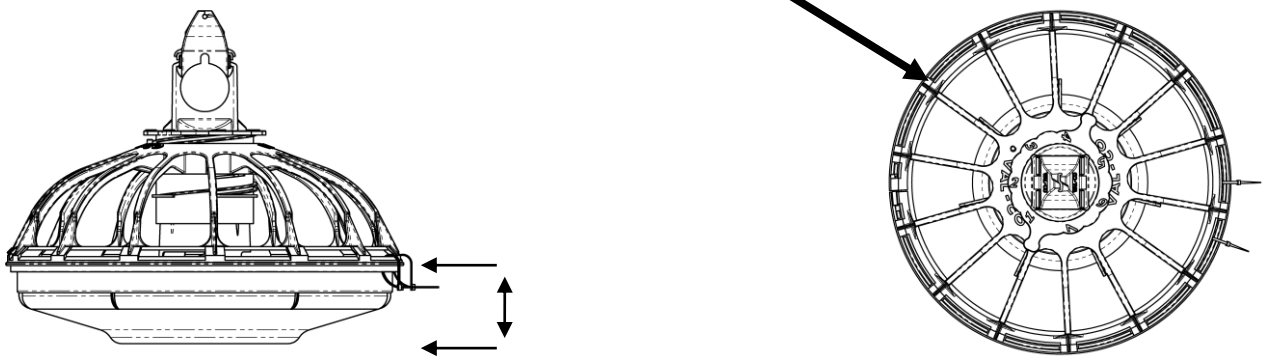
ASSEMBLY KIT INCLUDES:

Part Number	Description	Quantity
FE1355	Feeder Strap (tie wrap) Natural 4"	2
FE1510LS	13" FUZE Slotted SHALLOW Pan	1
FE1520R	13" FUZE PROLINE Grill – 13 Spokes	1
FE1530	FUZE Feeder Tower	1
FE1540S	FUZE Adjuster Collar, SHALLOW Pan	1
FE1550	FUZE Feeder Tower Cap	1
FE1560	FUZE Feeder Grill LOCK	1

Appendix 5 – 1600RS FUZE PROLINE Feeder Parts List

1600RS 14" FUZE **PROLINE** Slotted **Standard** Pan Feeder

14 spoke grill



3 inches (75.692mm)

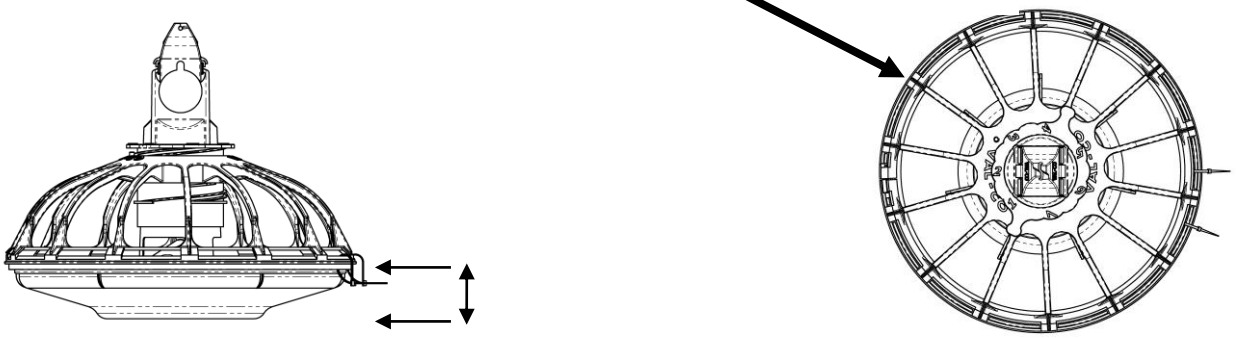
ASSEMBLY KIT INCLUDES:

Part Number	Description	Quantity
FE1355	Feeder Strap (tie wrap) Natural 4"	2
FE1610S	14" FUZE Slotted STANDARD Pan	1
FE1620R	14" FUZE PROLINE Grill – 14 Spoke	1
FE1530	FUZE Feeder Tower	1
FE1540	FUZE Adjuster Collar, STANDARD Pan	1
FE1550	FUZE Feeder Tower Cap	1
FE1560	FUZE Feeder Grill LOCK	1

Appendix 6 – 1600RLS FUZE PROLINE Feeder Parts List

1600RLS 14” FUZE **PROLINE** Slotted **Shallow** Pan Feeder

14 spoke grill



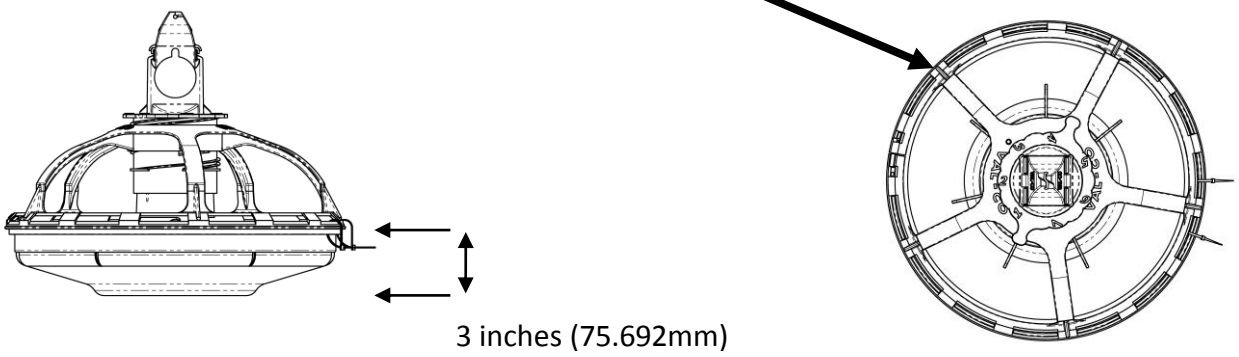
2.39 inches (60.706mm)

ASSEMBLY KIT INCLUDES:

Part Number	Description	Quantity
FE1355	Feeder Strap (tie wrap) Natural 4”	2
FE1610LS	14” FUZE Slotted SHALLOW Pan	1
FE1620R	14” FUZE PROLINE Grill – 14 Spoke	1
FE1530	FUZE Feeder Tower	1
FE1540S	FUZE Adjuster Collar, SHALLOW Pan	1
FE1550	FUZE Feeder Tower Cap	1
FE1560	FUZE Feeder Grill LOCK	1

Appendix 7 – 1800RS FUZE PROLINE Feeder Parts List

1800RS 14” FUZE **PROLINE** Slotted **Standard** Pan Feeder
5 spoke grill



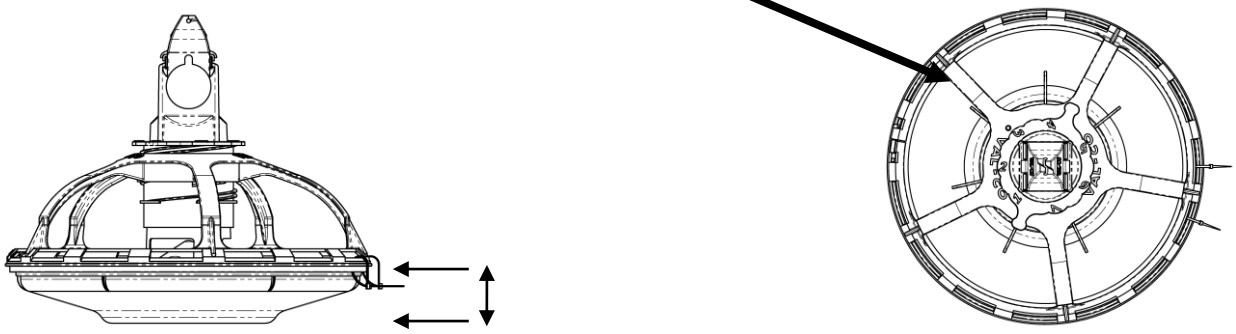
ASSEMBLY KIT INCLUDES:

Part Number	Description	Quantity
FE1355	Feeder Strap (tie wrap) Natural 4”	2
FE1610S	14” FUZE Slotted STANDARD Pan	1
FE1820R	14” FUZE PROLINE Grill – 5 Spoke	1
FE1530	FUZE Feeder Tower	1
FE1540	FUZE Adjuster Collar, STANDARD Pan	1
FE1550	FUZE Feeder Tower Cap	1
FE1560	FUZE Feeder Grill LOCK	1

Appendix 8 – 1800RLS FUZE PROLINE Feeder Parts List

1800RLS 14" FUZE **PROLINE** Slotted **Shallow** Pan Feeder

5 spoke grill



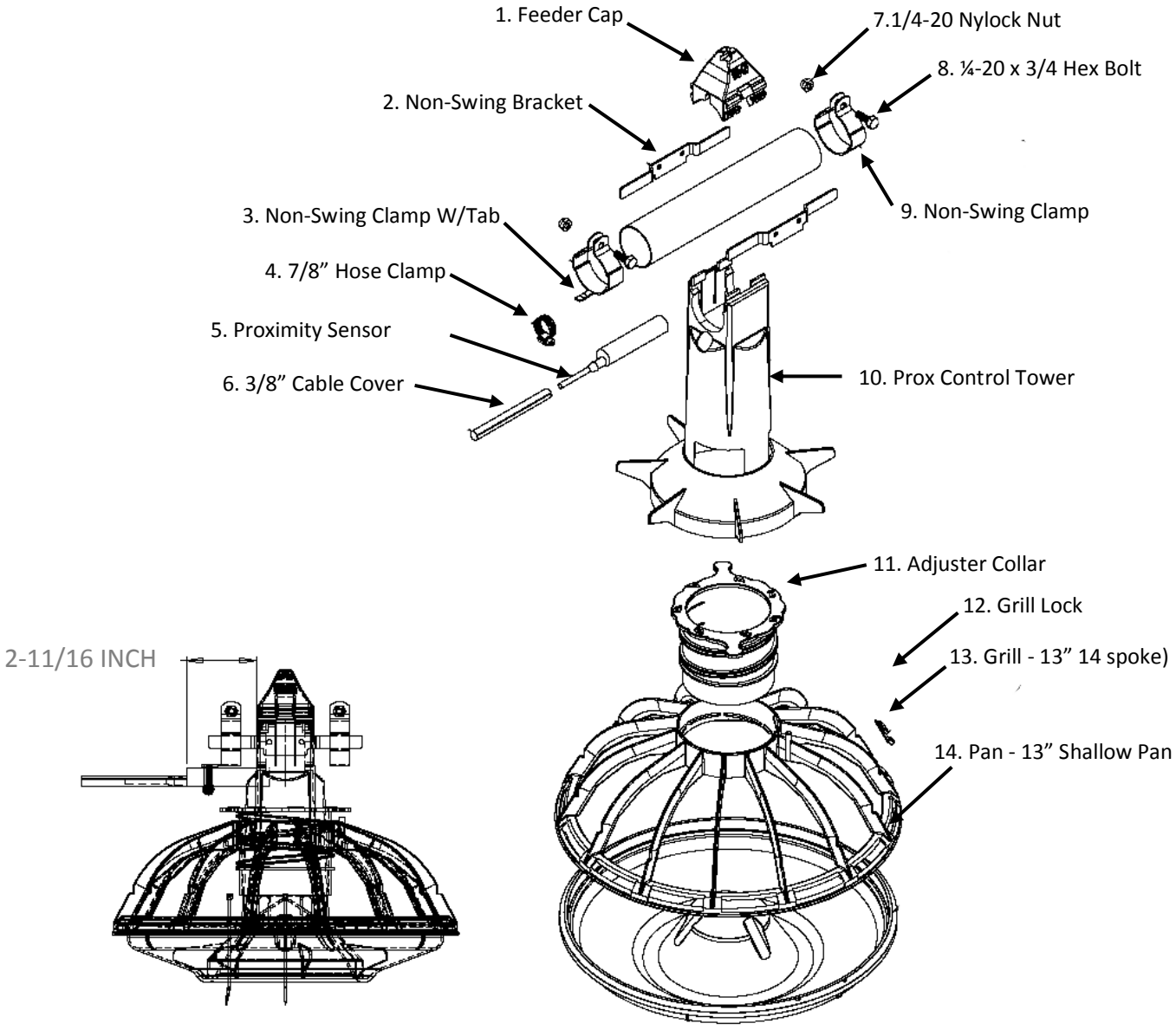
2.39 inches (60.706mm)

ASSEMBLY KIT INCLUDES:

Part Number	Description	Quantity
FE1355	Feeder Strap (tie wrap) Natural 4"	2
FE1610LS	14" FUZE Slotted SHALLOW Pan	1
FE1820R	14" FUZE PROLINE Grill – 5 Spoke	1
FE1530	FUZE Feeder Tower	1
FE1540S	FUZE Adjuster Collar, SHALLOW Pan	1
FE1550	FUZE Feeder Tower Cap	1
FE1560	FUZE Feeder Grill LOCK	1

Appendix 9 - Exploded Control Pan

Control Pan shown: #455925. Control Pans #455935, #455937, #455939, #455941, #455943, and #455945 (are not shown). Control Pans have universal parts numbers 1-10 and 12. Numbers 11, 13, 14, (Adjuster Collar, Grill and Pan parts) have specific parts to each Control Pan Unit and are listed on the next page in the parts list.

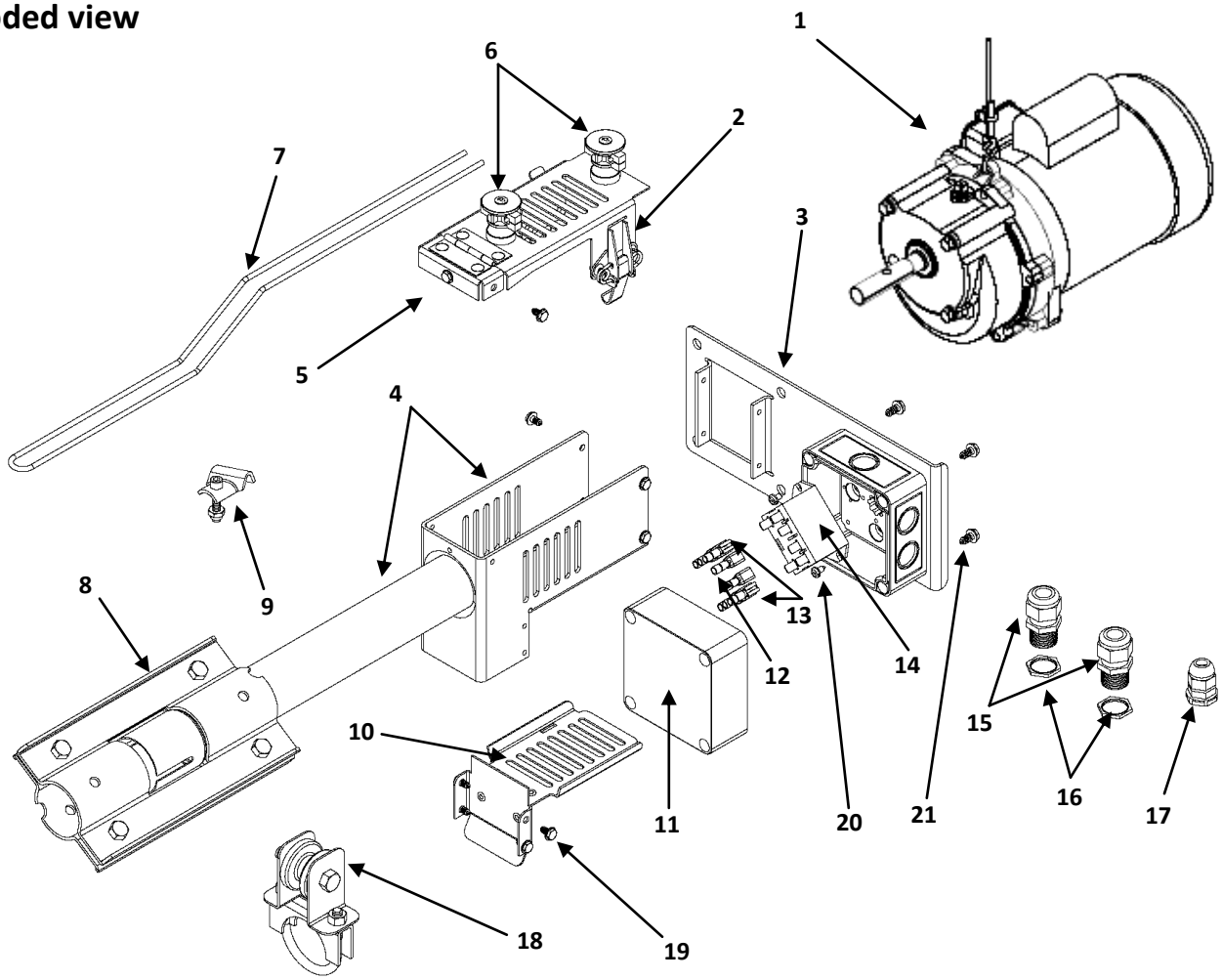


Control Pan Parts List

KEY	PART #	DESCRIPTION	QTY
Universal Components used by all Units – Each Unit has a specific Grill, Pan and Adj. Sleeve. These parts are in addition to components listed under each Control Pan Unit.			
1	FE1550	Feeder Cap	1
2	451009	FE1500 Non-Swing Bracket	1
3	455927	Non-Swing Clamp W/Tab	1
4	455928	7/8” Hose Clamp	1
5	750436	Proximity Sensor	1
6	450965	3/8” Cable Cover	1
7	012793	¼”-20 Nylock Nut	1
8	010617	¼”-20 x ¾” Hex Bolt	1
9	450062	Non-Swing Clamp	1
10	455926	Prox Control Tower	1
12	FE1560	Grill LocK	1
Only (1) Control Pan Number will be shipped in each carton (Please verify your shipment for correct Control Pan Number)			
	455925	FE1500LS Prox Control Pan (13" Shallow Pan, 14spoke grill)-	1
11	FE1540S	Adjuster Collar	1
13	FE1520	Grill – (13”, 14 spoke)	1
14	FE1510LS	Pan - 13” Shallow	1
	455935	FE1600RS Prox Control Pan (14" Standard Pan, 14spoke grill)	1
	FE1540	Adjuster Collar	1
	FE1620R	Grill – (14”, 14 spoke)	1
	FE1610S	Pan – 14” Slotted / Standard	1
	455937	FE1500RS Prox Control Pan (13" Standard Pan, 13spoke grill)	1
	FE1540	Adjuster Collar	1
	FE1520R	Grill – (13”, 13 spoke)	1
	FE1510S	Pan – 13” Slotted / Standard	1
	455939	FE1500RLS Prox Control Pan (13" Shallow Pan, 13spoke grill)	1
	FE1540S	Adjuster Collar	1
	FE1520R	Grill – (13”, 13spoke)	1
	FE1510LS	Pan – 13” Slotted / Shallow	1
	455941	FE1600RLS Prox Control Pan (14" Shallow Pan, 14spoke grill)	1
	FE1540S	Adjuster Collar	1
	FE1620R	Grill – (14”, 14 spoke)	1
	FE1610LS	Pan – 14” Slotted/ Shallow	1
	455943	FE1800RS Prox Control Pan (14" Standard Pan, 5spoke grill)	1
	FE1540	Adjuster Collar	1
	FE1820R	Grill – (14”, 5 spoke)	1
	FE1610S	Pan – 14” Slotted /Standard	1
	455945	FE1800RLS Prox Control Pan (14" Shallow Pan, 5spoke grill)	1
	FE1540S	Adjuster Collar	1
	FE1820R	Grill – (14”, 5 spoke)	1
	FE1610LS	Pan – 14” Slotted / Shallow	1

Appendix 10 – Drive Head & Gearbox Unit Parts List

Exploded view



Drive Head & Gearbox Parts List

*choose only one motor, ** not shown

KEY	PART #	DESCRIPTION	QTY
DIRECT DRIVE MOTOR & GERABOX UNITS – SINGLE PHASE 60HZ – 115/230V			
1	450080	1/3 HP Direct Drive Motor & Gearbox – 358 RPM	*
1	460025	1/2 HP Direct Drive Motor & Gearbox – 358 RPM	*
1	450396	1/3 HP Direct Drive Motor & Gearbox – 226 RPM	*
1	450397	1/2 HP Direct Drive Motor & Gearbox - 226 RPM	*
1	450286	1/3 HP Direct Drive Motor & Gearbox - 657 RPM	*
1	450287	1/2 HP Direct Drive Motor & Gearbox - 657 RPM	*
DIRECT DRIVE MOTOR & GEARBOX UNITS – 3 PHASE 60HZ – 208-230/460V			
1	450390	1/3 HP Direct Drive Motor & Gearbox – 358 RPM	*
1	450391	1/2 HP Direct Drive Motor & Gearbox – 358 RPM	*
DIRECT DRIVE MOTOR & GEARBOX UNITS – SINGLE PHASE – 50HZ 115/230V			
1	450392	1/3 HP Direct Drive Motor & Gearbox – 368 RPM	*
1	450393	1/2 HP Direct Drive Motor & Gearbox – 368 RPM	*
DIRECT DRIVE MOTOR & GEARBOX UNITS 3 PHASE – 50HZ – 208-230/460 OR 190/380V			
1	450394	1/3 HP Direct Drive Motor & Gearbox – 368 RPM	*
1	450395	1/2 HP Direct Drive Motor & Gearbox – 368 RPM	*
NON-MOTOR PARTS			
2	450409	Tension Latch	1
3	455901	Base Plate	1
4	455907	Housing & Port Tube Assembly	1
5	455911	Top Plate Assembly	1
6	450426	Anti-Roost Insulator	2
7	450057	Anti-Roost Wire	1
8	455106	Tube Joiner	2
9	450186	Flighting Anchor	1
10	455912	Bottom Plate Assembly	1
11	450779	Enclosure	1
12	730244	#16-14 Female Connector	6
13	430248	Piggyback	2
14	430246	Relay	1
15	750030	Grommet	2
16	420473	½” Conduit Nut	2
17	713419	Grommet	1
18	450042	Insulator Bracket W/Hardware	1
**	012752	#10 x 3/8 AB Sheet Metal Screw	11
**	450425	.197 x 1.58 Pop Rivet	2
**	450157	,197 x .937 Washer	2
19	010643	5/16 x ¾ Hex Bolt	4
20	011380	#8-32 x 3/8 Tapping Screw	2
21	012725	#12 x ½ Screw	4
**	012793	¼ - 20 Nylock Nut	1
**	450268	¼ - 20 x 1-1/4 SHCS	1
**	012789	5/16 Nylock Nut	4
**	010669	3/8 x 2 Hex Bolt	1

Appendix 11 – Feeder Cleaning and Maintenance

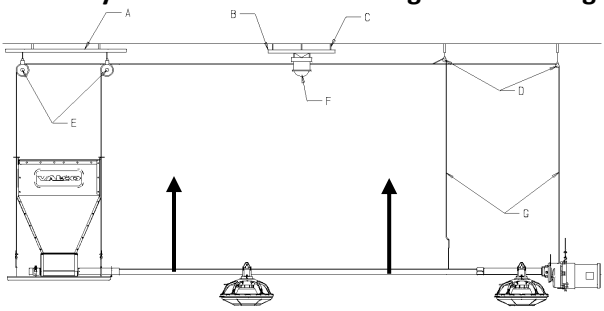
End of Grow-Out

- Empty all pans at the end of grow-out.
- Auger all feed out of the tubes.
- Winch up the complete feed system to remove the birds and manure.

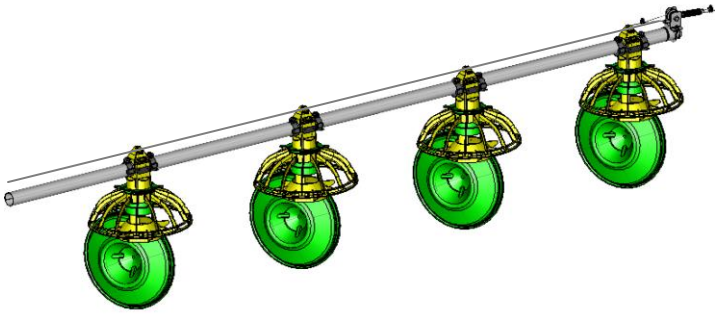
Maintenance

- To clean the installation winch up the feeder lines to a working height.
- Remove feed residue by turning pans on the tubes 180 degrees or by opening the Grill LOCK *as feeder parts are shown on page 20* and dropping the pan to hang by hinge (tie wraps) or removing the pans altogether.

Raise system to comfortable height for cleaning



Pans are hanging by tie wraps for cleaning.



- Clean with a high pressure cleaner.
- After cleaning if you have not removed the pans and they are hanging by hinges make sure that all the water is tipped out of pan for proper drying.
- To protect the hopper base from corrosion loosen the tube clamp and turn with the opening downwards before you use the high pressure cleaner.

DON'T FORGET TO COVER THE CONTROL PAN AND DRIVE UNIT WITH PLASTIC!

Make sure no water remains in the hopper base or it will CORRODE!

Gaseous formaldehyde (formalin) liquid caustic soda or solution of caustic soda, hypochlorite or chlorine water cresols are very corrosive and they will quickly affect the equipment.

Appendix 12 – Replacement of Feed Boot Flighting Anchor & Parts

Remove the 1-3/4" Tube Clamp, Bearing Cap and Retainer - Bearing Tube to expose and allow you access to the Flighting Anchor Assembly *(as shown in Figure 76 below)*. **USE CAUTION WHEN WORKING WITH THE AUGER.**

FIGURE 76

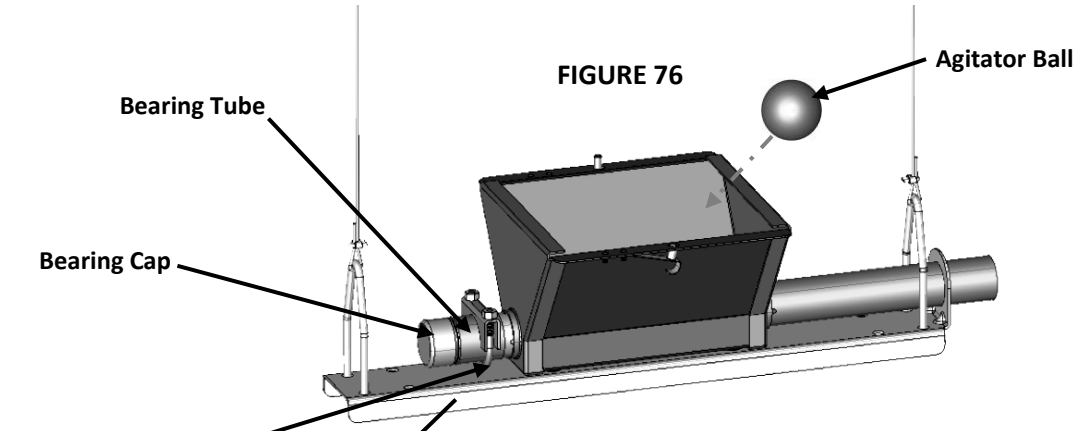
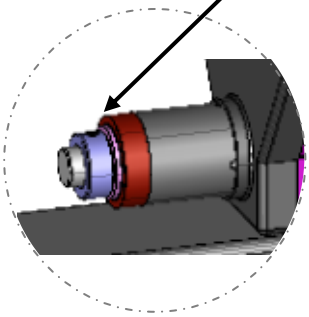
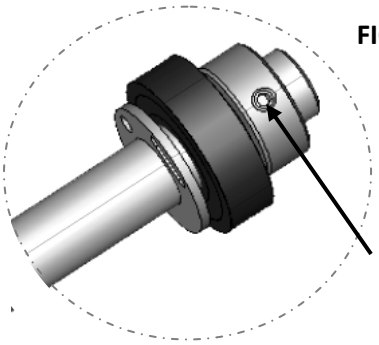


FIGURE 77



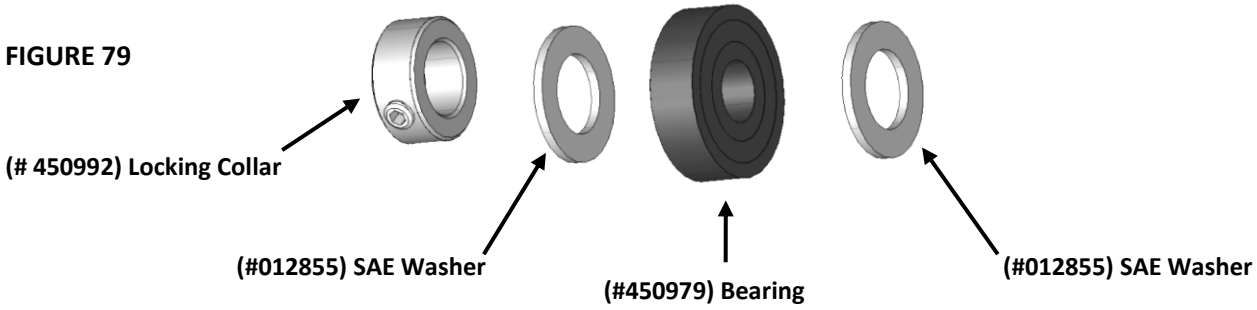
Exposed End of Flighting Anchor Assembly

FIGURE 78

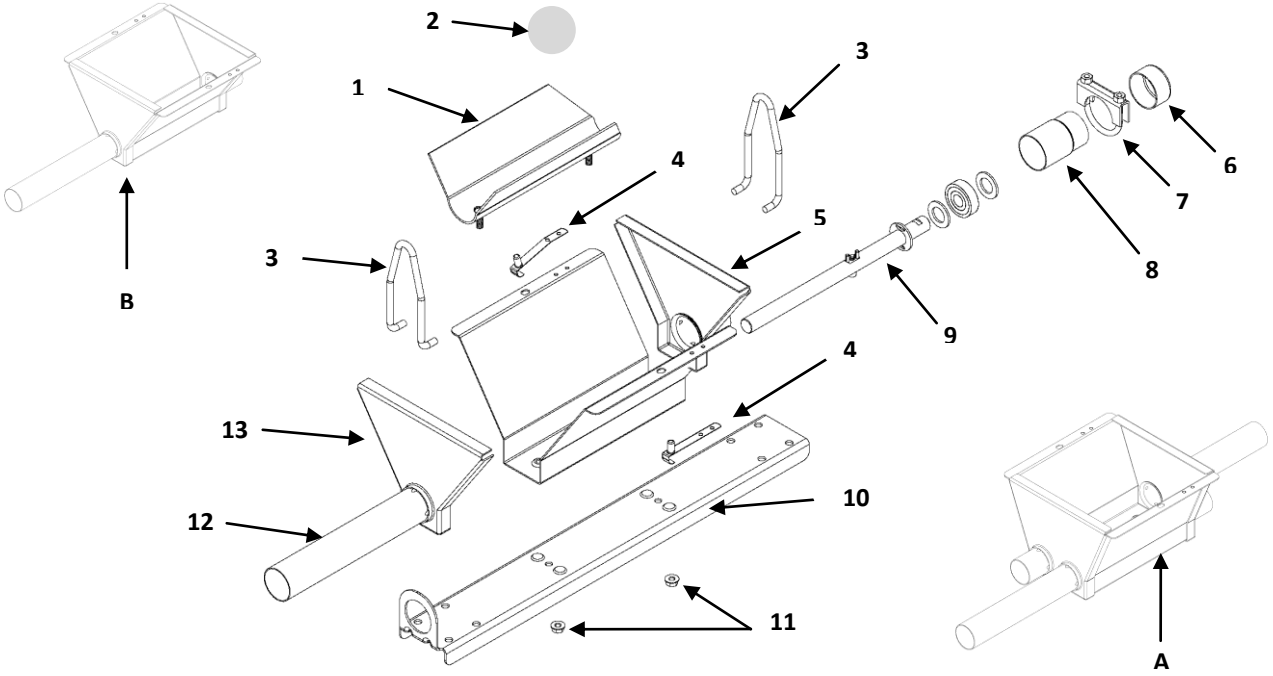


1. Loosen the set screw with an Allen wrench located in the (#012855) ¾" Locking Collar on the end of the Flighting Anchor Assembly. *(as shown in Figure **76** above.)*
2. Pull the ¾" Locking Collar, SAE Washer, Bearing and other SAE Washer off the Flighting Anchor.

FIGURE 79

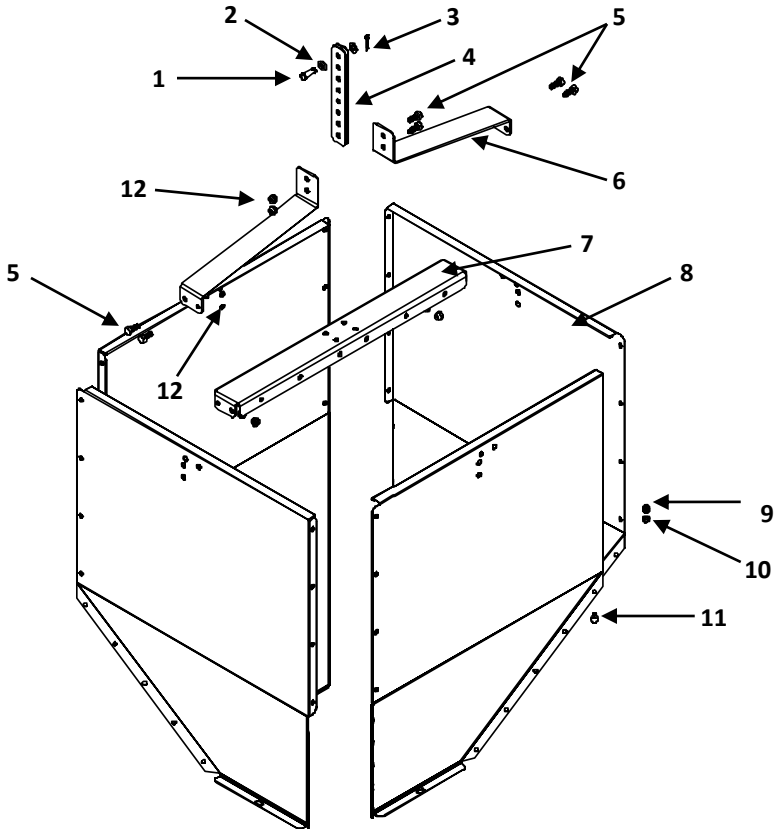


Appendix 13 - Feed Boot Parts List and Exploded Drawing



KEY	PART #	DESCRIPTION	QTY
(Universal Single and Double Boot Assembly Kit components in addition to components listed in each assembly below)			
-	010252	5/16” Med. Split Lockwasher	4
-	010640	5/16” x ½” Hex Bolt	4
-	011114	5/16” – 18 Heavy Hex Nut	4
-	012408	#10 – 24 Hex Kep Locknut	4
2	450413	Agitator Ball	1
8	450822	Bearing Retainer Tube	1
6	450991	1-3/4” Bearing Cap	1
7	450420	(1.75)Tube Clamp Assy	1
-	450780	Cable Retainer	2
9	450993	(1.75)Flight BRG Assembly W/Locking Collar/washers and Bearing	1
4	450996	Snap Button (F155G)	2
-	501441	5/16” Flange Nut	4
450800 - Double Outlet Boot Assembly (uses 200 or 300 lb. hopper only)			
10	450801	(1.75)Twin Boot Support Rail	1
1	450998	(1.75)Twin Boot Liner	1
3	455803	Twin Boot Hanger	2
A	455801	(1.75)Twin Boot Housing Assy	1
450810 - Single Outlet Boot Assembly (uses 200 or 300 lb. hopper only_			
10	450814	(1.75)Single Boot Support Rail	1
1	450813	(1.75)Single Boot Liner	1
3	450819	Single Boot Hanger	2
B	450823	(1.75)Single Boot Housing Assy	1

Appendix 14 - Hopper Parts List and Exploded Drawing

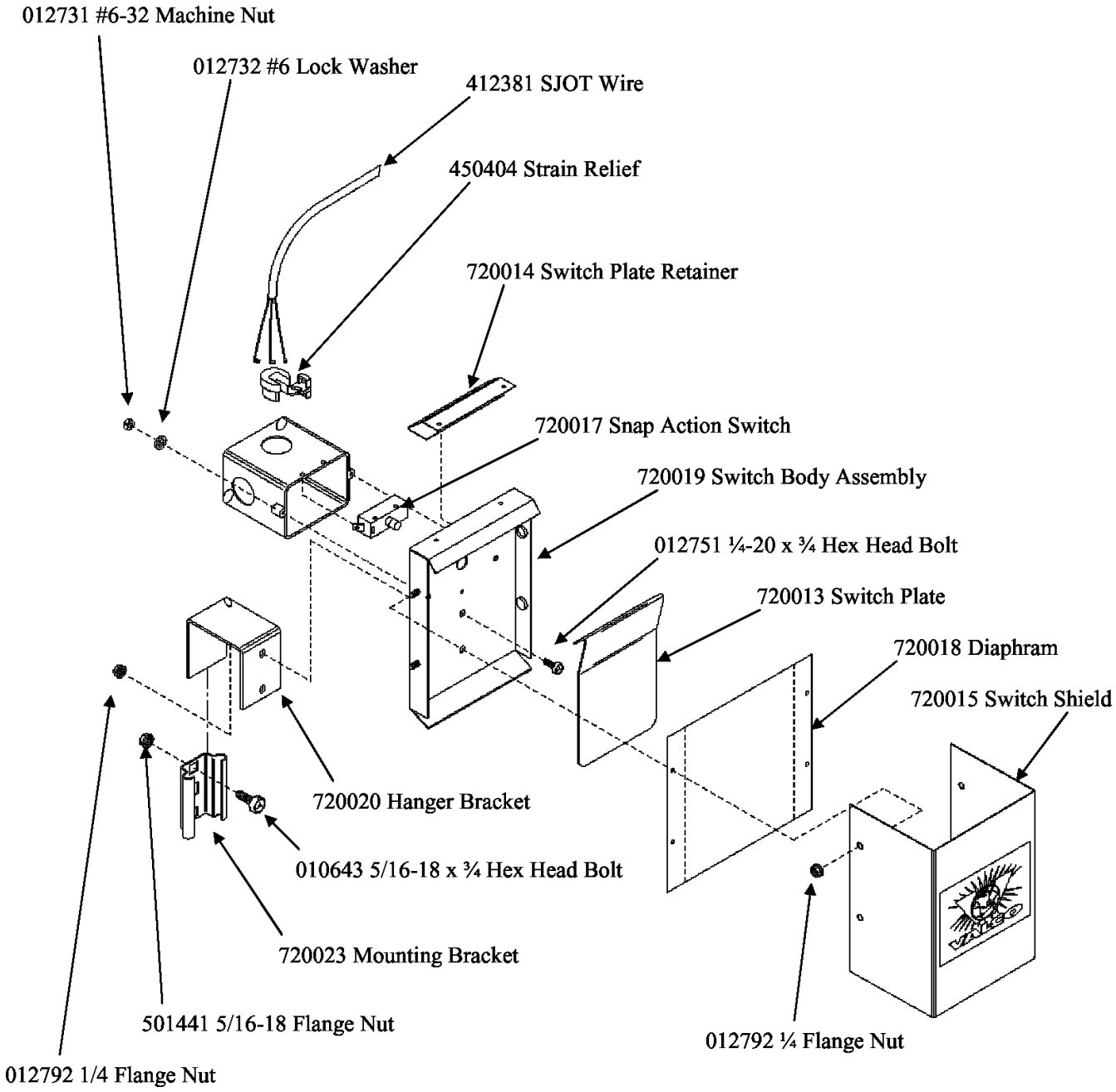


KEY	PART #	DESCRIPTION	QTY
1	460062	5/16 X 1 Clevis Pin	1
2	010426	5/16 x 11/16 Flat Washer	2
3	012660	7/64 x ¾ Cotter Pin	1
4	460061	Hanger Adj Bracket	2
5	010643	5/16-18 x ¾ Hex Bolt	6
6	450955	Hopper Hanger Brckt	2
7	450956	Hopper Cross Bar	1
8	450954	200# Hopper Panel	4
9	010251	¼ Lockwasher	32
10	010602	¼-20 Hex Nut	32
11	010615	¼-20 x ½ Hex Bolt	32
12	012789	5/16-18 Nylock Nut	6
*	450804	Cover for 200 lb. or	*
450769 - 200 lb. Hopper			
460031 - 300 lb. Hopper			
*	450202	Extension for 300 lb Feed Hopper	*

*Not shown

Appendix 15 - Hopper Level Switch Control

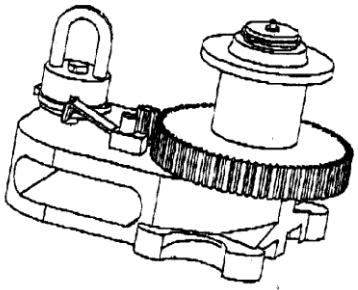
Refer to the Fill system manual for instruction to hook up the wiring of the Hopper Level Switch Control. Replacement parts are selective and special order only.



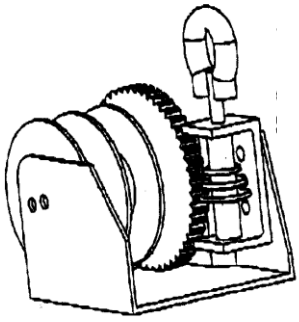
APPENDIX 16 - Winch System Replacement Parts

Replacement parts are selective and special order only.

OVERHEAD WINCHES

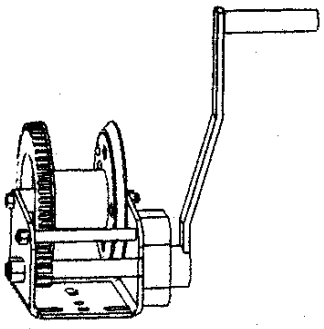


VB321
3500 lb. Overhead Winch

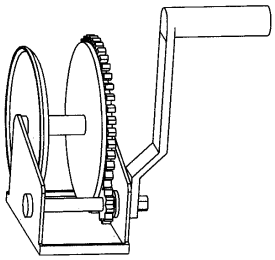


VB312
1500 lb. Overhead Winch

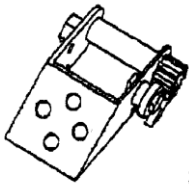
HAND WINCHES



750609
1500 lb. Hand Winch
With Brake

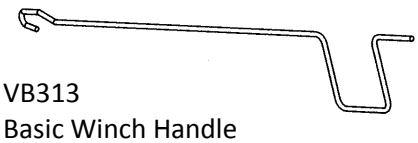


Ratchet Winches
VB317 - 1500 lb.
VB315 - 1200 lb.



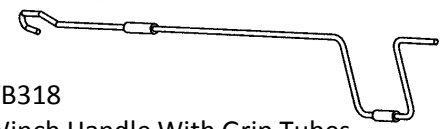
VW106
600 lb. Ratchet Winch

WINCH ACCESSORIES

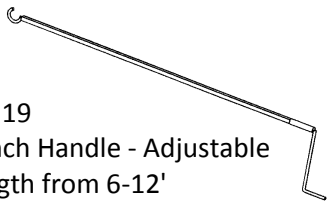


VB313
Basic Winch Handle

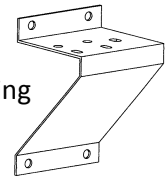
VEN91505
3/8" x 3" Lag Screw
For Winch Mounting



VB318
Winch Handle With Grip Tubes



VB319
Winch Handle - Adjustable
Length from 6-12'



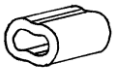
Ratchet Winch Mounting
Brackets
VB316 - 1200 lb. Only
VB320 - 1200 or 1500 lb.

MISCELLANEOUS WINCHING COMPONENTS

VC353
1/16" Cable Clamp

VC354
1/8" Cable Clamp

VC355
3/16" Cable Clamp



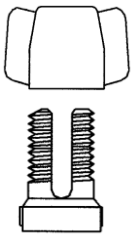
VS343
3/16" x 3/16" Sleeve

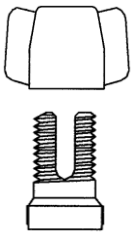
VS344
1/8" x 3/16" Sleeve

450386
1/8" x 1/8" Sleeve

450559
1/16" x 1/16" Sleeve

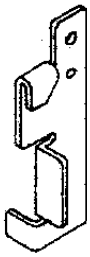
VS345
1/8" Cable Stop





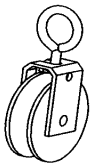
VCLAMP - 7/16" Clamp with Long Slot
HCLAMP - 7/16" Clamp with Short Slot
VCLAMPL - 1/2" Clamp with Long Slot
HCLAMPL - 1/2" Clamp with Short Slot

VE345
1/8" Drop Cord

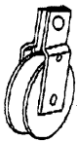


VS342
1/8" Cable Adjuster

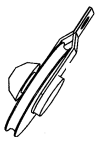
PULLEYS



SWIVEL PULLEYS
VEN91102 1-7/8"
VEN91104 7/8"



VEN91103
1-7/8" Split
Bracket



SPLIT BRACKET
STEEL PULLEYS
VEN91201 1-1/2"
VEN91202 2-1/2"

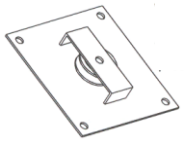
3-1/2" CAST IRON PULLEYS
VEN91003
With Eyebolt
VEN91003A
Without Eyebolt

VEN91001
3-1/2” Cast Iron Pulley
With Needle Bearing

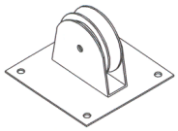
VEN91004
3-1/2" Nylon Pulley

VEN91111
Double Cast Iron
With Bronze
Bushings

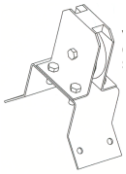
MOUNTED PULLEYS



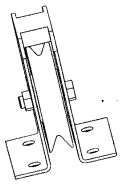
VEN91108
2" Nylon
Horizontal



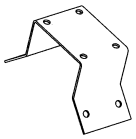
VEN91109
2" Nylon Vertical



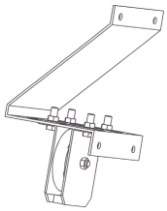
VEN91018
Corner Pulley Kit



VEN91002
3-1/2" Cast Iron
With Needle Bearing



VEN91002B
Pulley Corner Bracket



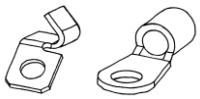
VEN91015
Adjustable Wall
Pulley Kit

OTHER ATTACHMENT ITEMS

VS341
1/8" Cord
Adjuster

S HOOKS
VEN91507B .177" X 1.5"
VEN91507C 1/4" X 2.25"

SCREW HOOKS
VEN91504C 5/16" x 3 1/2"
713441 5/16" x 5"



STAKONS
VC360 1/8" Open Stakon
VC361 3/16" Open Stakon

Appendix 17 - CUSTOMER SERVICE

My dealer's name: _____

How to contact my dealer:

Customer Service
210 E. Main Street
P.O. Box 117
Coldwater, OH 45828
800-998-2526

Street/PO Box _____
City _____
State/Province _____
Zip/Postal _____

Phone _____
Fax _____
E-mail _____
Web site _____

North America:
Phone: 800.99VALCO (800.998.2526)
Fax: 419.678.2200
Email: sales@valcompanies.com

International:
Phone: 717.392.3978
Fax: 717.735.1800
Email: intl.sales@valcompanies.com