



Hopper Flow Control

Installation/Parts Manual

Installation/Parts Manual

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1 - Introduction

Document Scope and purpose, and general responsibilities.

Thank you for purchasing your new hopper flow control kit from KSi Conveyors. We are pleased to have you as a customer, and hope you will enjoy many years of productive service from our products and staff.

Please read and understand this manual before operating the equipment. Pay special attention to the safety information to protect yourself from harm. If you need information beyond what can be found in the manual, please give our friendly staff a call at 888 KSI-CONV.

Safety 1st

Replace missing guards and shields FREE OF CHARGE!

KSi equipment is built to provide many years of dependable service to our customers through durable craftsmanship.

One of the most important aspects of KSi engineering is its SAFETY 1st design throughout all product lines. At KSi, safety is NO ACCIDENT!

That is why KSi has implemented its SAFETY 1st program. Should you ever need guards, shields, safety decals or owner/operator manuals, simply contact KSi and we will supply you with them FREE OF CHARGE!

If you need any of the above listed safety items or have safety questions, please contact KSi:

454 N State Route 49
Cissna Park IL 60924
Phone: 815-457-2403
888-574-2668

General Information

- A. KSi reserves the right to improve its product whenever possible and practical to do so. We reserve the right to change, improve, and modify products at any time without obligation to make changes, improvements, and modifications on equipment previously sold.
- B. When receiving merchandise, it is important to check the quantity of parts and their descriptions with the packing list enclosed with each package. All claims for freight damage or shortage must be made with the consignee within ten (10) days from the date of the occurrence of freight damage. The consignee should accept the shipment after noting the damage or loss.
- C. KSi does not make any guarantees on self-cleanout or the cross contamination of seed of any kind for their equipment. Manual cleanout will be required.

2 – Limited Warranty

KSi Conveyors 1 Year Limited Warranty

What Does This Warranty Cover?

KSi will warranty our equipment to be free from defects in material and workmanship under normal usage and conditions.

What Does This Warranty Not Cover?

The warranty does not cover equipment that has been damaged by:

- Normal wear and tear;
- Misuse, abuse, or accident;
- Failure to follow the operating instructions or maintenance protocols that we provided;
- Any improper or unauthorized repairs or modifications to the equipment; or
- Fire, flood, "acts of God," or other contingencies beyond our control.

How Long Does the Coverage Last?

The warranty period for new equipment lasts for 12 months after the delivery date.

What Will We Do to Correct Problems?

KSi will repair or replace the equipment covered by this warranty at no charge.

How Do You Get Service?

- If something goes wrong with your equipment, call your Dealer or KSi Conveyors Parts & Services. Your dealer or KSi will ask for the equipment's serial number and a description of the problem. KSi will determine whether the equipment is covered under warranty.
- If the problem can be resolved by providing a replacement part, your dealer or KSi will ship or deliver the part. Expedited services will incur additional charges. You may be required to return the defective equipment.
- If the problem requires a service call, your dealer or KSi will schedule a service visit at a mutually convenient time. Expedited services will incur additional charges.

- You will be invoiced for any service or parts provided if we determine that the equipment is not covered under this warranty or the problem was due to one of the disqualifying causes in the section entitled “What Does This Warranty Not Cover” on page 3.

What Will KSi Not Do?

KSi will not be liable for any amount that exceeds the amount you paid for the Equipment. However arising, we will not be liable for:

- Expenses incurred without our written authorization;
- Direct, indirect, incidental or consequential damages, such as the loss of anticipated profits or benefits;
- Loss or cross contamination of any seed, treatment fluid, or other materials used with the equipment; or
- Modifications or erection defects that create structural or storage quality problems.

We make no warranty of merchantability or fitness for a particular purpose.

How Does State Law Relate to This Warranty?

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

Who is Covered?

Only the original end user of the product is covered by this Warranty.

3 – Safety Information

Tips for safe operation of KSI equipment



This Safety Alert symbol means
ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED

The Safety Alert symbol identifies important safety messages on KSI equipment and in the manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.

Why is SAFETY important?

The Three Best Reasons

- Accidents Disable and Kill
- Accidents Cost \$\$
- Accidents Can be Avoided

Signal Words

Note the use of signal words Danger, Warning and Caution with the safety messages. The appropriate signal word for each message has been selected using the following guidelines:

DANGER – Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.

WARNING – Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

CAUTION – Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

General Safety Statements

1. KSI's principal concern is your safety and the safety of others associated with seed handling equipment. We want to keep you as a customer. This manual is to help you understand safe operating procedures and some problems which may be encountered by the operator and other personnel.
2. As the owner and/or operator, it is your responsibility to know what requirements, hazards, and precautions exist, and to inform all personnel associated with the equipment or that are in the area. Safety precautions may be required from the personnel. Avoid any alteration to the equipment. Such alterations may produce a very dangerous situation, where serious injury or death may occur.
3. This equipment shall be installed in accordance with the current installation codes and applicable regulations which should be carefully followed in all cases. Authorities having jurisdiction should be consulted before installations are made.
4. Untrained operators subject themselves and others to the possibility of serious injury or death. NEVER ALLOW untrained personnel to operate this equipment.
5. Keep children and other unqualified personnel out of the working area at all times.
6. NEVER start equipment until ALL persons are clear of the work area.
7. Be sure ALL operators are adequately rested and prepared to perform all functions of operating this equipment.
8. Keep hair, loose clothing, and shoestrings away from rotating and moving parts. Never wear loose-fitting clothing when working around equipment.
9. NEVER allow any person intoxicated or under the influence of drugs or alcohol to operate the equipment.
10. NEVER allow anyone inside a bin, truck, or wagon which is being loaded or unloaded. Flowing grain can trap and suffocate in seconds.
11. Make sure someone is nearby who is aware of the proper shutdown sequence in the event of an accident or emergency.
12. NEVER work alone.
13. ALWAYS think before acting. NEVER act impulsively around the equipment.

14. Make sure ALL equipment is locked in position before operating.
15. Keep hands and feet away from the hopper gate and other moving parts.
16. NEVER attempt to assist machinery operation or to remove trash from the equipment while in operation.
17. Use ample overhead lighting during periods of low light, such as after sunset, to light the work area.
18. ALWAYS lockout and tagout ALL power sources to the equipment before beginning adjustments or repairs.
19. Keep the area around intake free of obstacles such as electrical cords, blocks, etc. that might trip workers.

Pinch Points



A pinch point is any place on the equipment which can injure the operator.

1. Components of this equipment have sharp edges which can scrape and/or cut an operator.
2. Hopper gates and accessories can crush or sever an operator's limb or even kill.

Shields and Guards

1. Always keep all shields and guards in place during operation.
2. Missing shields for guards can be replaced for free by contacting KSi.

Beware of Electrical Hazards



Electricity can kill! Use extreme caution around electrical components.

Have your electric company check the transformer and lead wires to be sure they are large enough to handle the additional load of the motor.

Electrical wiring should be done by a qualified electrician and all components shall comply with applicable provisions of National Fire Protection Association Standard NFPA No. 70, American National Standard Inst. ANSI-C1 or with the requirements of the authority having local jurisdiction. KSi assumes no responsibility for the electrical wiring used with this machine.

KSi will not be liable for failure of the equipment due to poor or improper electrical power installation.

Wires which are too small deliver insufficient voltage causing the motor to overload or burn out.

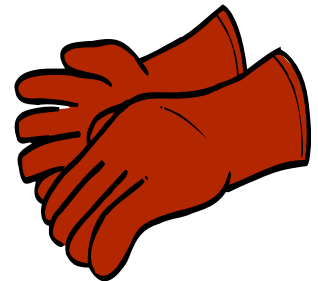
Improper or inadequate wiring can kill or cause fires.

All electrical devices used on this machine shall be arranged to operate in a “fail safe” manner, that is, if power failure or failure of device occurs, a hazardous condition must not result. This means, the machine must not restart by itself after a power failure etc. when power returns.

A means to lock out power must be provided at time of installation to prevent inadvertent starting of the equipment.

Personal Protective Equipment (P.P.E.)

1. The proper personal protective equipment should be worn at all time.
2. Always wear safety glasses when in the work area.
3. Proper footwear should be worn during the installation process, as well as any maintenance functions.
4. It is recommended to wear protective gloves during the installation process, as well as any maintenance functions. It is recommended to wear them also when removing any covers.
5. The use of fall protection is required at all times during the installation process, as well as maintenance functions.
6. The operator should never wear jewelry.
7. Loose-fitting clothes should not be worn around moving parts on conveyors or equipment. Any clothing that becomes loosened should be tucked in tightly.
8. Loose or dangling shoe strings should be tucked in.
9. Long hair should be tied up and/or back.



Operator Qualifications

1. The User/Operator must be competent and experienced to operate the equipment. Anyone who works around this equipment must have good common sense in order to be qualified. These persons must also know and meet all other qualifications, such as:
 - A. Any person who has not read and/or does not understand all operation and safety procedures is not qualified to operate any hopper system.
 - B. Certain regulations apply to personnel operating power machinery. Personnel under the age of 18 years may not operate power machinery, including conveyors. It is your responsibility, as owner and/or supervisor, to know what these regulations are in your area or situation.
 - C. Unqualified or incompetent persons are to remain out of the work area.
 - D. O.S.H.A. (Occupational Safety & Health Administration) regulations state:
 “At the time of initial assignment, and at least annually thereafter, the employer shall instruct every employee in the safe operation and servicing of all equipment with which the employee is, or will be, involved.” (Federal Occupational Safety & Health Standards for Agriculture. Subpart D, Section 1928.57 (a) (6).

2. As a requirement of OSHA, it is necessary for the employer to train the employee in the safe operating and safety procedures for this equipment. We have included this sign-off sheet for your convenience and personal record keeping. All unqualified persons are to stay out of the work area at all times. It is recommended that another qualified person who knows the shutdown procedure is in the area at all times in the event of an emergency. A person who has not read this manual or doesn't understand all operating and safety instructions is not qualified to operate this machine.

Date	Employee's Name (printed)	Employee's Signature
	1.	
	2.	
	3.	
	4.	
	5.	
	6.	
	7.	
	8.	
	9.	
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	11.	
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	13.	
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	16.	
	17.	

4 – Installation

150 Unit Hopper

1. Measure up 1 1/2" from bottom of hopper opening and drill .44" hole in the center of the side. (See Figure 1).
2. The side that you put the hole in must not be a side with three holes in it.
3. Insert bolt through hole on one side with the head of the bolt being on the outside of hopper opening. (See Figure 2).
4. Screw on locknut so that it snugs up the bolt, but still allows it to turn.
5. Hold flow control flap assembly up in the opening with the hinged center pointed up.
6. Slide pivot rod on to one end of flow control flap assembly.
7. Start pivot rod on flow control flap assembly and turn bolt until pivot rod is halfway on the bolt. (See Figure 2).
8. Screw locknut on the end of the bolt so pivot rod cannot come off.
9. Repeat steps 3-8 for the other side. The second pivot rod needs to be flipped the opposite direction on other side in order to hold flow control flap assembly correctly. (See Figure 2).
10. Complete installed flow control. (See Figure 3).

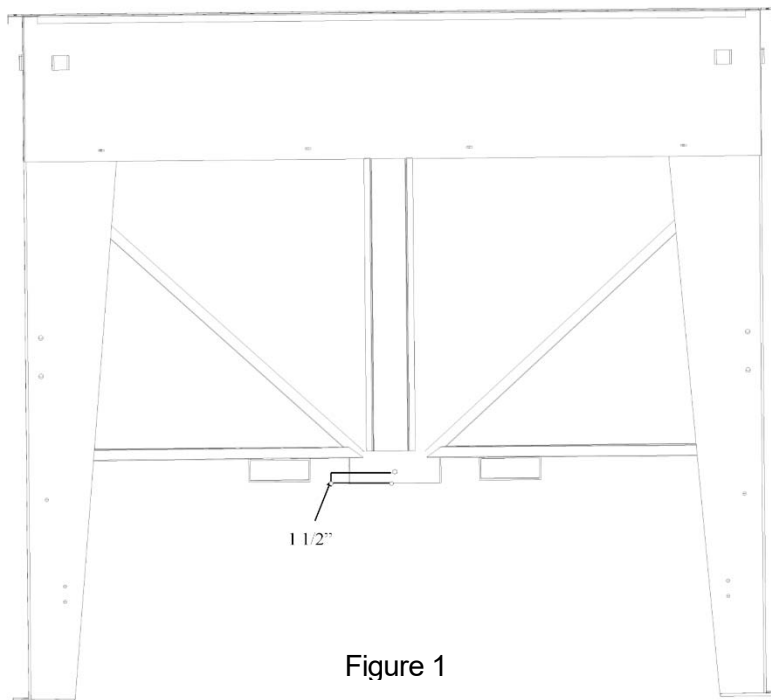


Figure 1

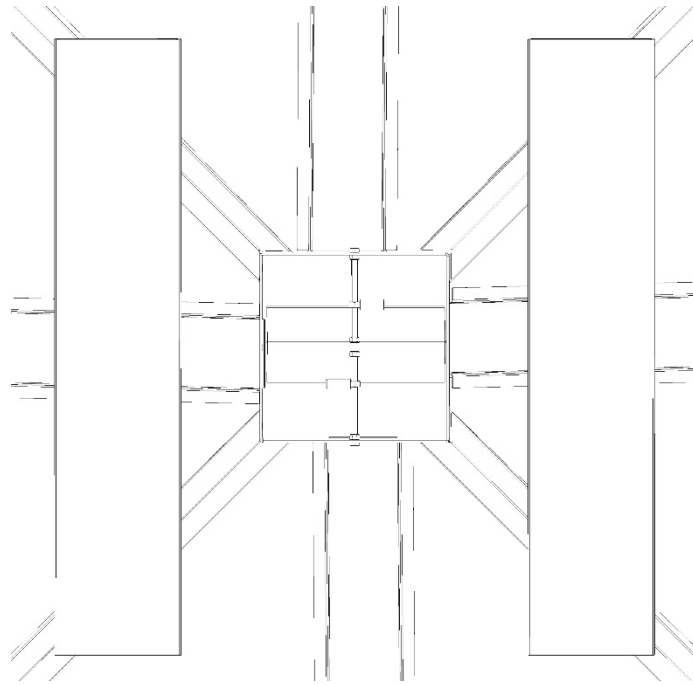


Figure 2

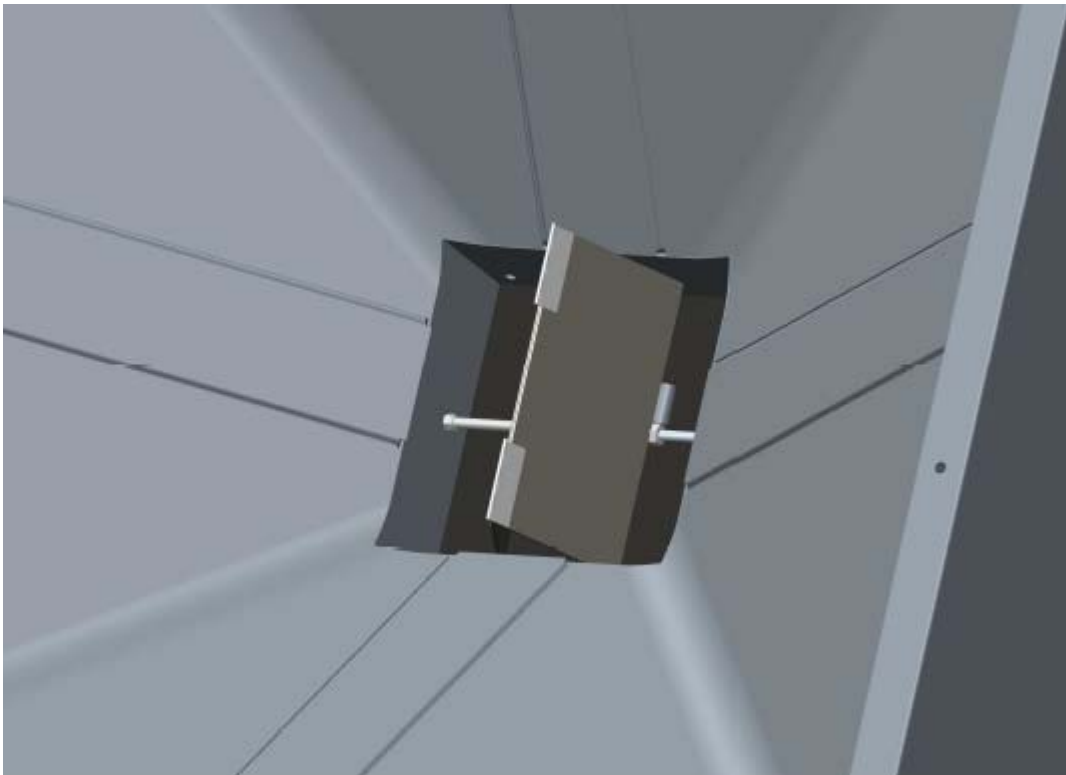
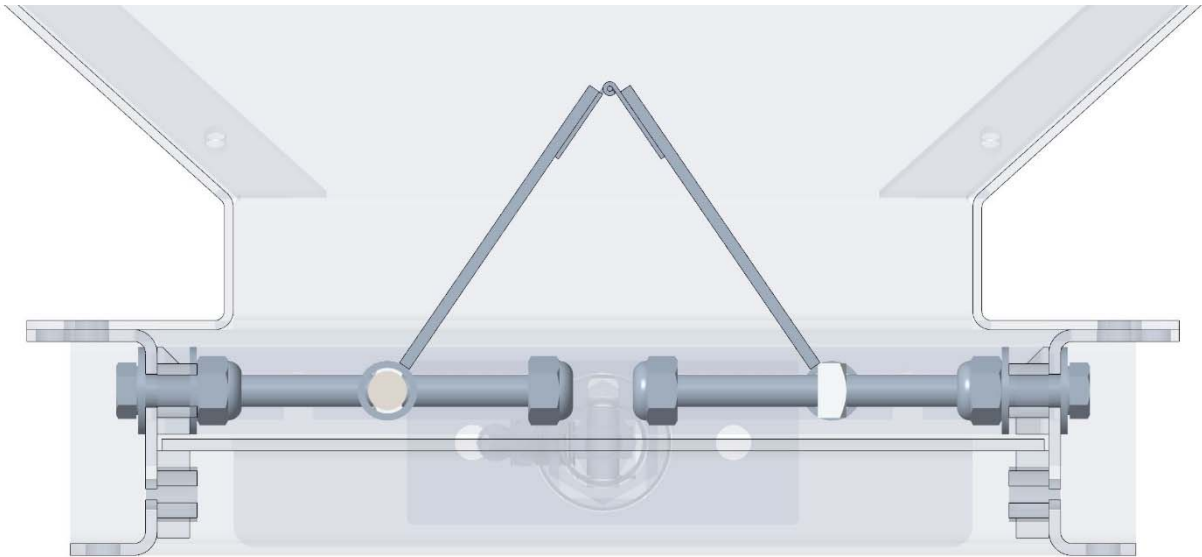
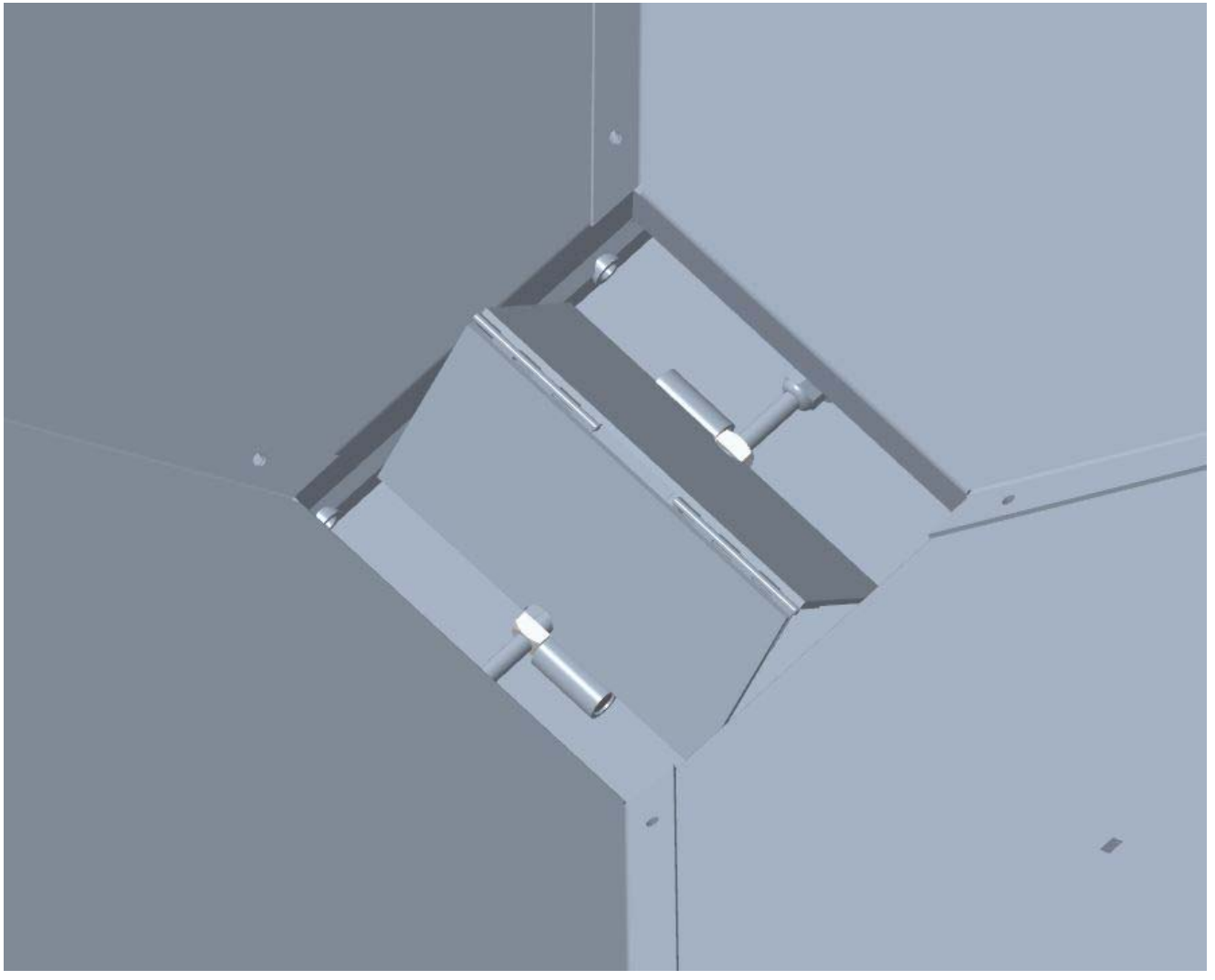


Figure 3

65 Unit Hopper

1. Remove upper center bolt on sides of gate frame. Ensure that the steel bushings that were contained by the bolts that were removed stay in the plastic guides inside the gate frame.
2. Insert a bolt with washer through the hole on one side with the head of the bolt being on the outside of hopper opening.
3. Thread on washer and locknut so that it snugs up the bolt, but still allows it to turn.
4. Hold flow control flap assembly up in the opening with the hinged center pointed up and hinge side in.
5. Slide pivot rod into to one of the tubes welded onto the flow control flap assembly.
6. Start pivot rod on flow control flap assembly and turn bolt until pivot rod is halfway on the bolt.
7. Thread locknut onto the end of the bolt so pivot rod cannot come off.
8. Repeat steps 2-7 for the other side. The second pivot rod needs to be flipped the opposite direction on other side in order to hold flow control flap assembly correctly.
9. Installation of flow control assembly complete as shown in cross-section below.





5 – Parts

How to Order Parts

1. Refer to the proper layout view for the area of the machine.
2. Find illustration of the part to be ordered.
3. Note the ITEM number in the balloon point to the part.
4. On the parts list, find the ITEM number listed in the table.
5. Find the Quantity, Part Number, and Description associated with the ITEM number for use when placing your order.

Paint

For matching red paint, use Diamond Vogel IB5588, or equivalent paint.

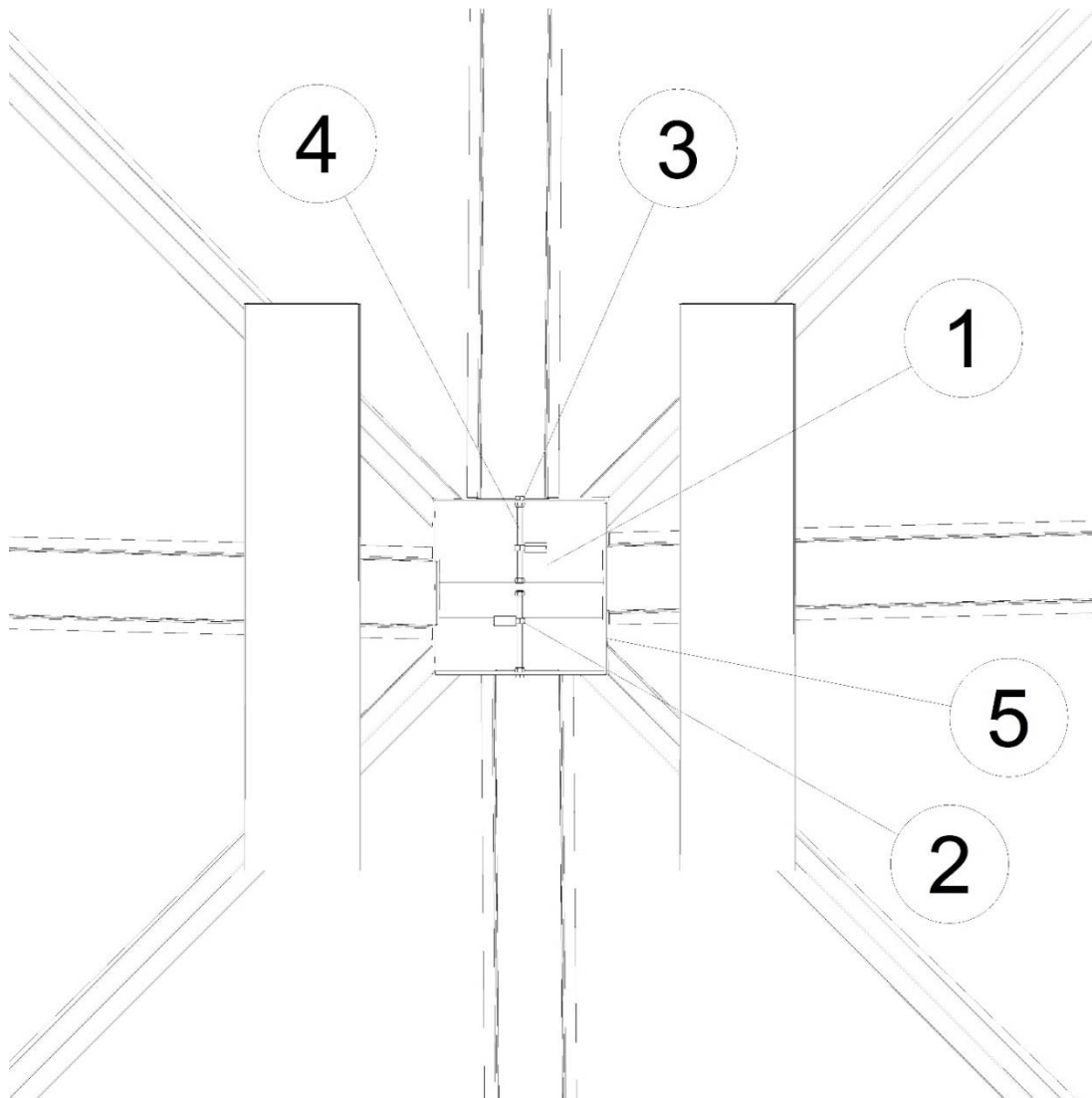
Order supplies from

KSi Conveyors, Inc.
454 N State Route 49
Cissna Park, IL 60924
Phone: 815.457.2403
888.574.2668

Abbreviations used in Parts List

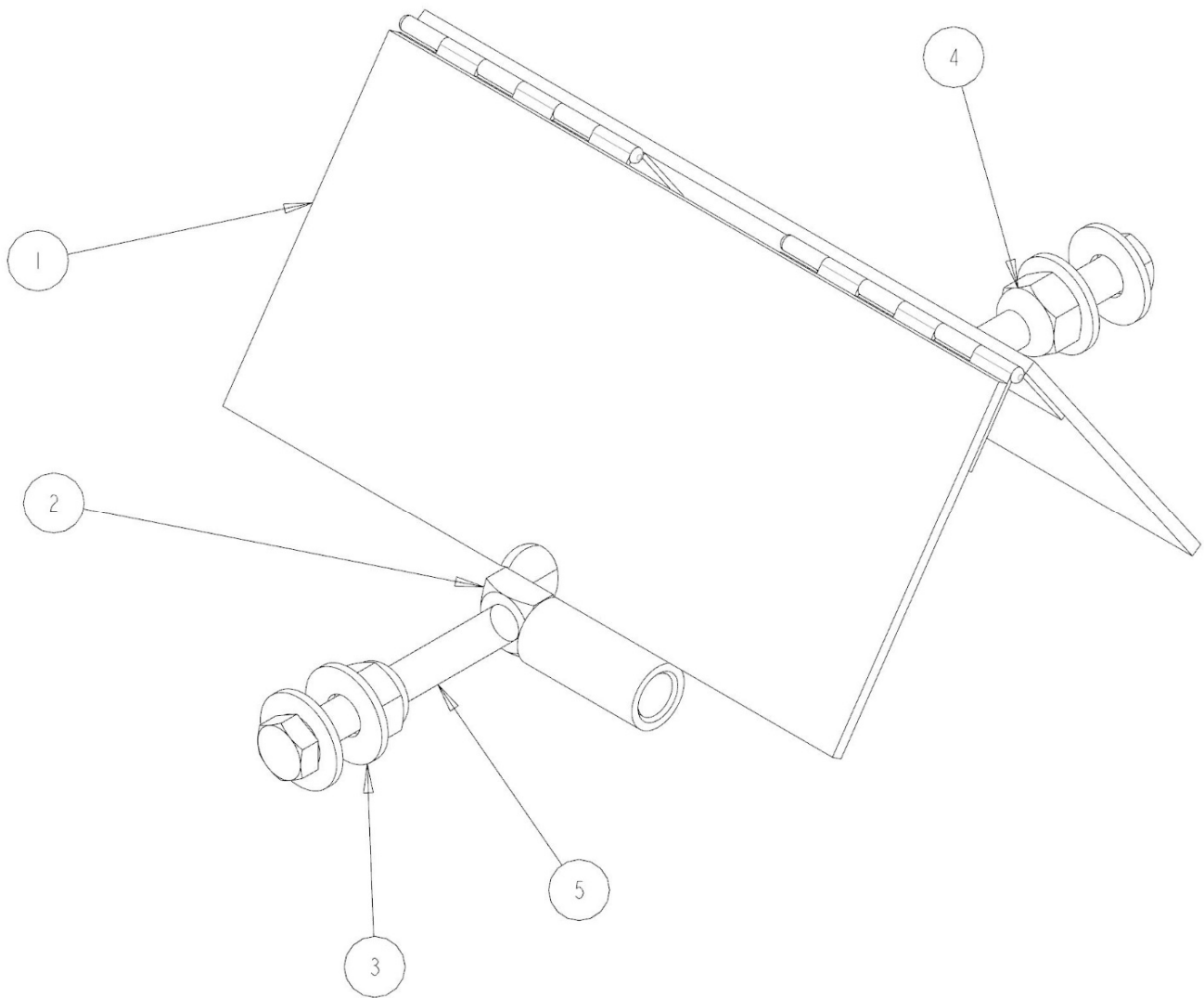
AS—Assembly
BKT—Bracket
ITM—Item
LH—Left hand side
NO— Number
OPT—Optional component
QTY—Quantity
RH—Right hand side
AR—As required (e.g. ft. of belt)

150 Unit Hopper



ITM	QTY	PART NO.	NAME
1	1	21677-00	FLOW CONTROL WELDMENT-150 HOPPER
2	2	21679-00	PIVOT ROD WELDMENT
3	4	HN375N-C-2Z	3/8" LOCK NUT
4	2	24209-01	TAP BOLT-3/8 X 6"
5	1	72002-00	SCALE HOPPER WELDMENT

65 Unit Hopper



ITM	QTY	PART NO.	NAME
1	1	21677-10	FLOW CONTROLWELDMENT-65 UNIT
2	2	21679-02	PIVOT ROD WELDMENT
3	4	24134-01	3/8" FLAT WASHER
4	4	24149-01	3/8" LOCK NUT
5	2	24208-01	TAP BOLT-3/8 X 5"

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