

## STAINLESS STEEL MICRO INGREDIENT SYSTEM PARTS AND INSTALLATION MANUAL

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**EAI**

EASY  
AUTOMATION  
INC.



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The purchase and use of Easy Automation products and services are subject to Easy Automation's current Terms and Conditions which can be found at [www.easy-automation.com/terms](http://www.easy-automation.com/terms).

## Section 1: Introduction

Easy Automation, Inc. always strives to be the easy choice by providing top of the line industrial automation and process control. Creating innovative solutions from our customer's challenges allows us to create practical, quality products that are built upon years of experience. With a strong conviction of our values, our service-oriented approach ensures you and your company will always receive the best. With over 3,000 customer sites worldwide, our experienced staff has been using our industrial process automation equipment to automate feed mills and industrial processes since 1986, and we have extensive experience with retrofit projects as well as new ones. The success of our customers is our top priority, and our service after the sale is what sets us apart from the rest. Our industrial automation and process control services will provide the assistance you need.

EAI's automated batching equipment is practical, engineered to last, and customizable to fit your facility's individual needs. Having all of the production and engineering in house makes it easy to order and get exactly what you want. Pairing EAI's equipment with EAI's controls makes for an extremely seamless integration. Each system can be configured differently as well as upgraded for increased capacity as your facility grows.

# CONTACT INFORMATION

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## Section 2: Contact Information

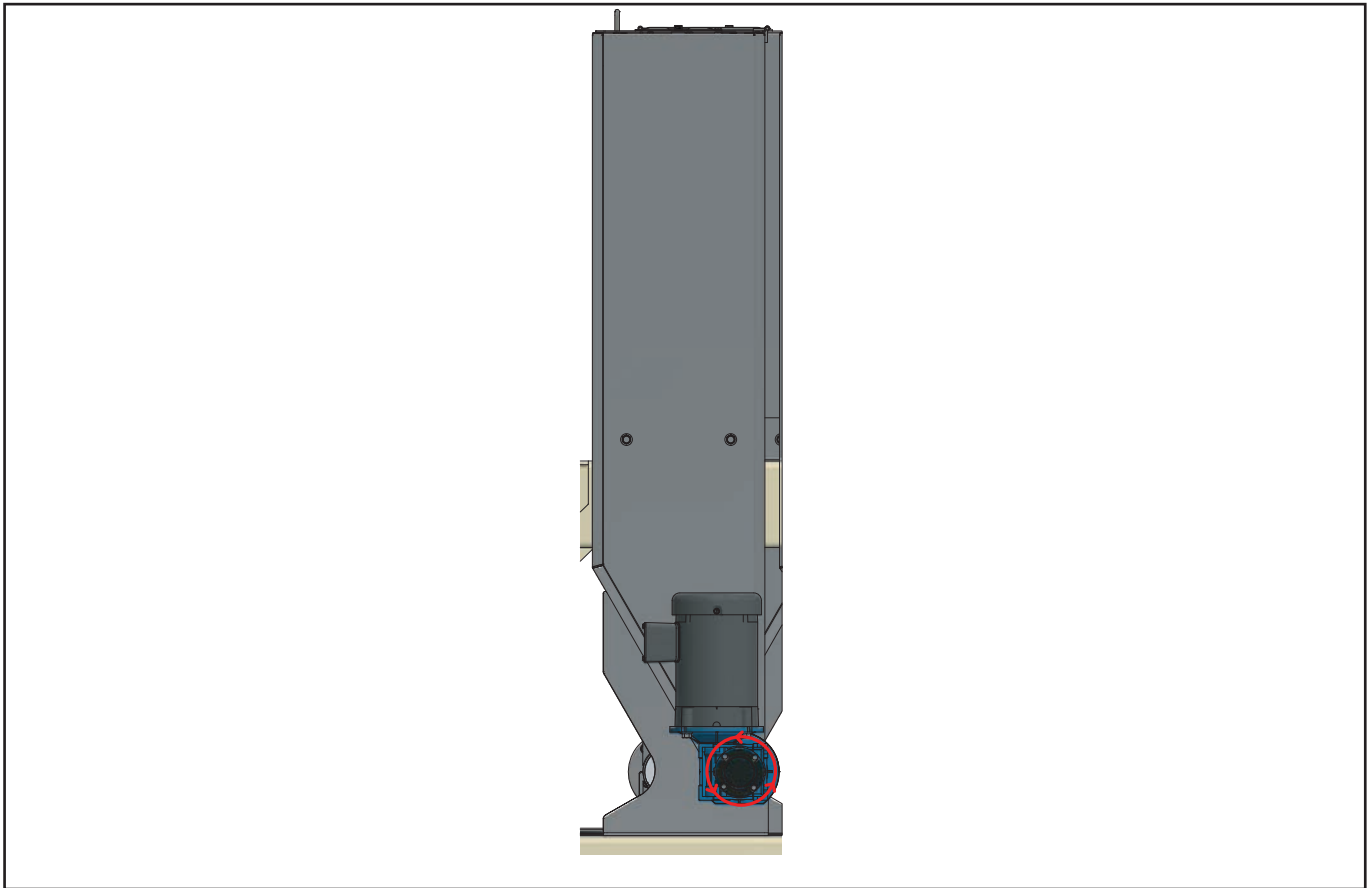
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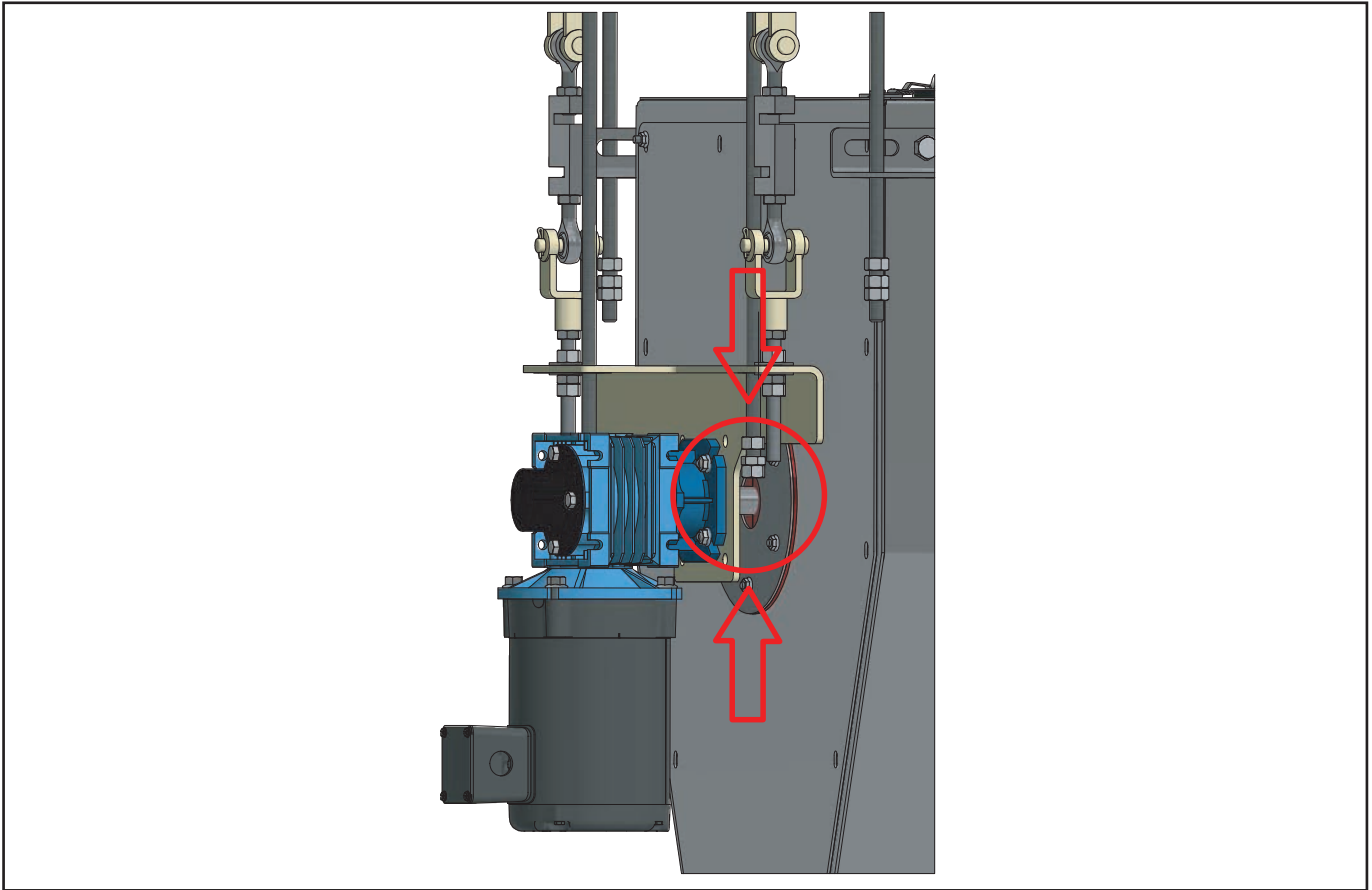
# START UP CHECKLIST

## Section 3: Start Up Checklist



**FIGURE 1: Direction of Rotation of the Micro Bin Auger**

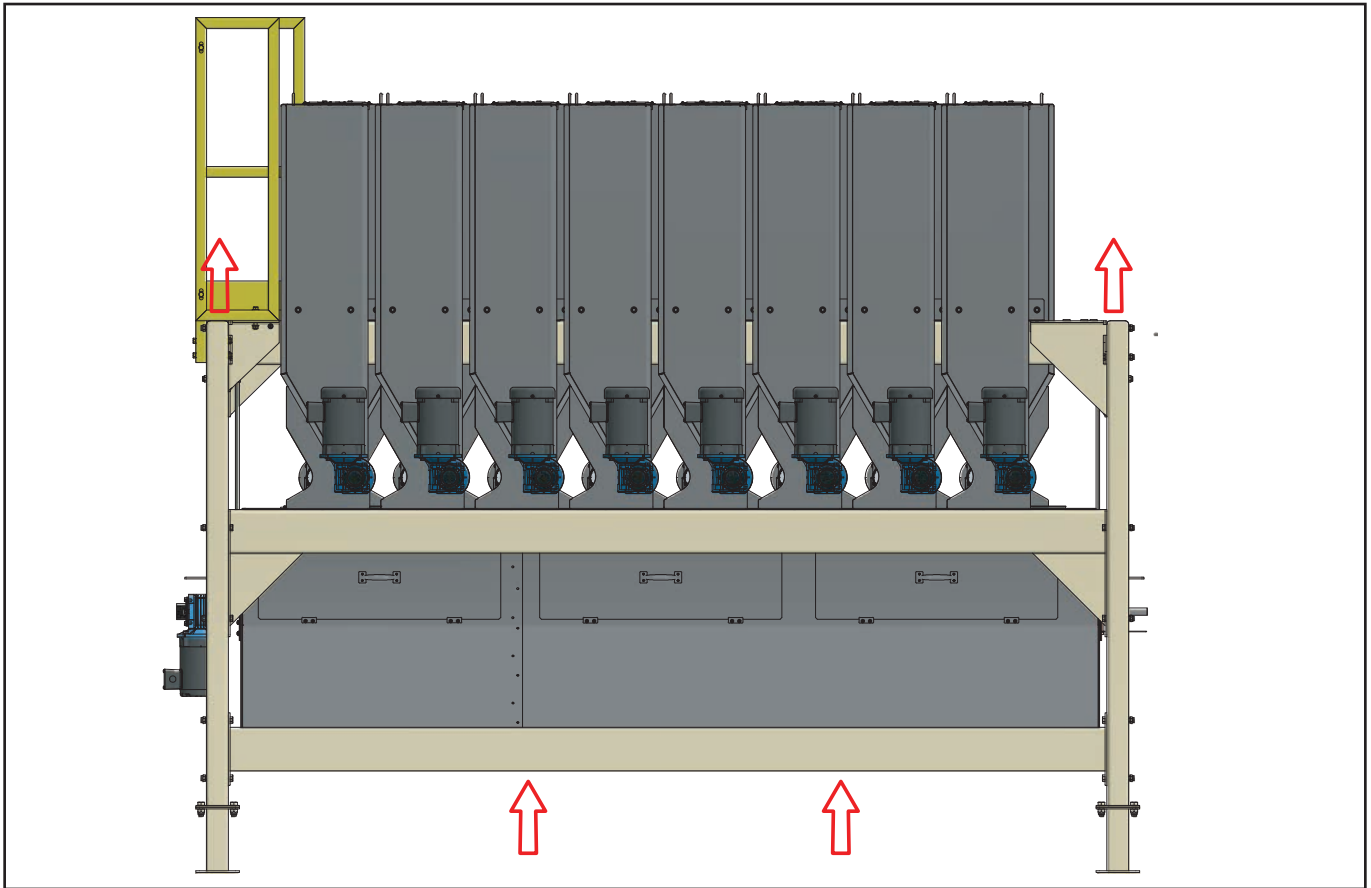
- Are all micro bin augers turning in the counterclockwise (CCW) direction when viewed from the motor/reducer end (Figure 1)?



**FIGURE 2: Rotary Drum Shafts/Shroud Possible Contact Point**

- Has a scale calibration company calibrated the rotary scale?
- Have you run a test batch to ensure everything is working properly?

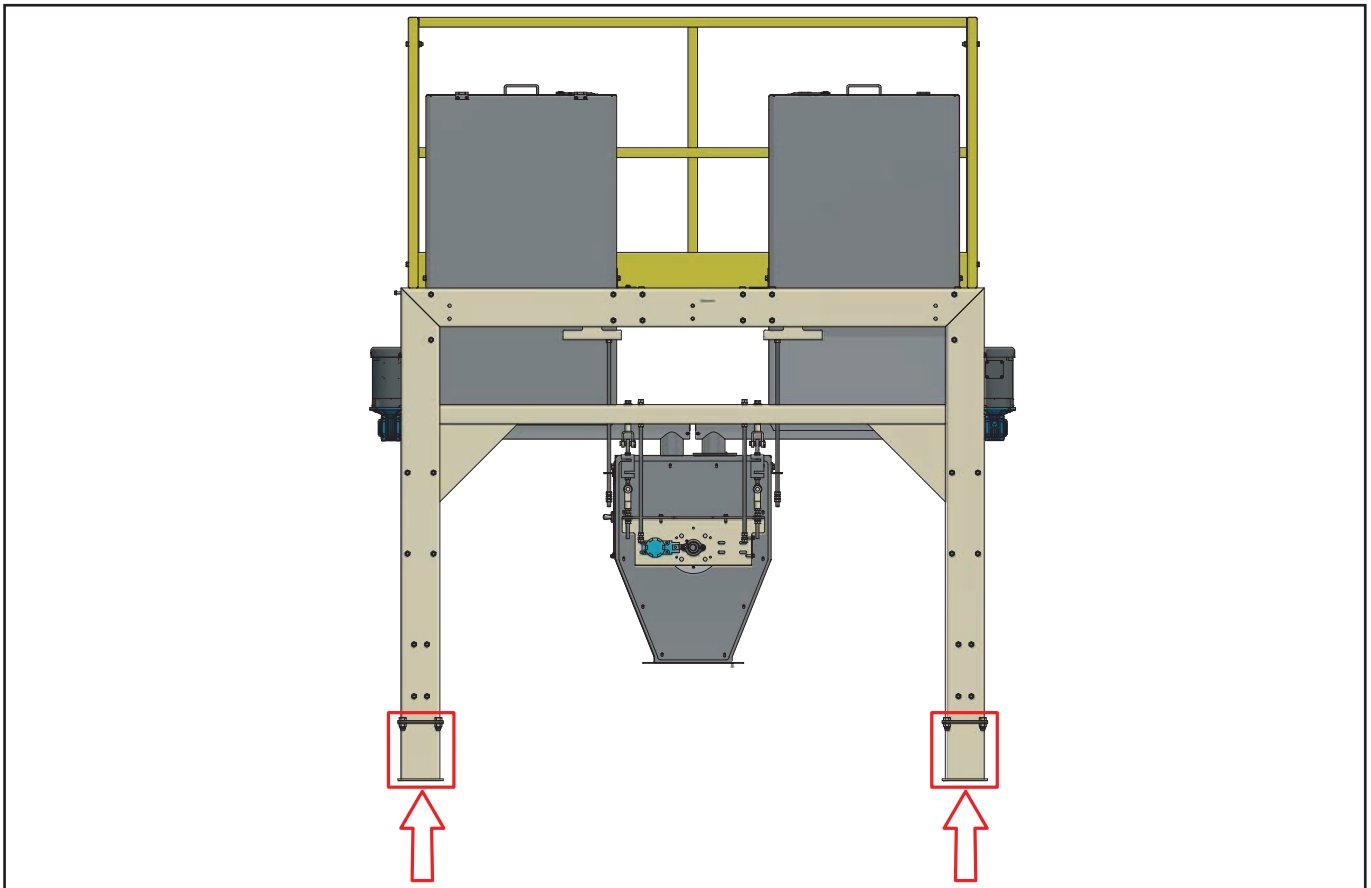
## Section 4: Installation



**FIGURE 3: Example of Appropriate Lifting Locations on the Micro System Frame**

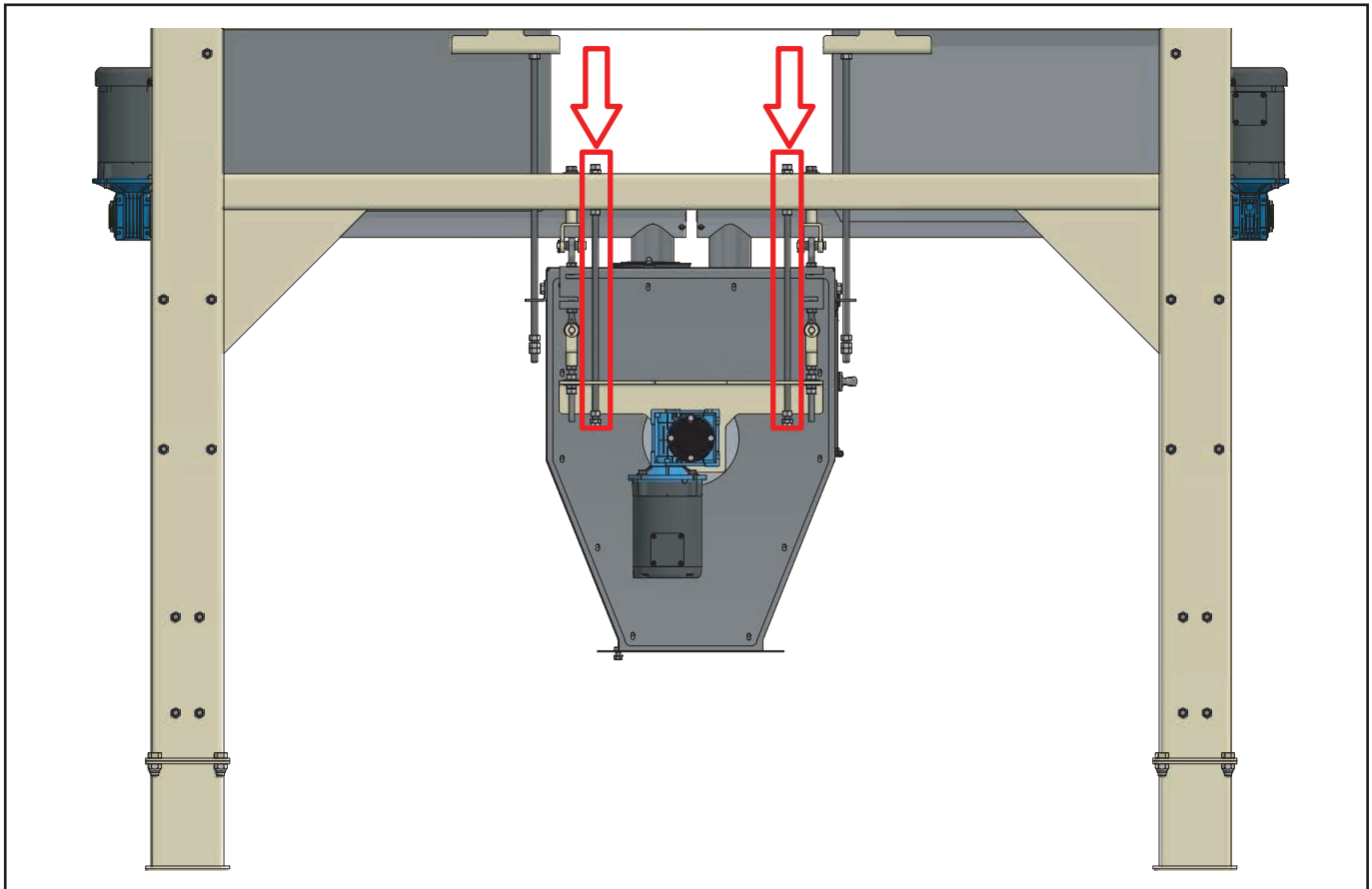
- 1 Inspect the Micro Ingredient System after receiving it for any damage that could have occurred during shipment. Report any damage immediately to EAI and the freight carrier.
- 2 Remove all packaging. This may include but not limited to: plastic wrapping, metal banding, and lumber.
- 3 Use care when unloading and locating the machine in your facility. Lifting on the lower frame stiffeners near the bottom of the micro frame is acceptable, if care is taken to avoid hitting the rotary scale shroud (Figure 3). Lifting from the end frames in combination with spreader bars is also acceptable if a forklift or similar machinery is unavailable. Avoid putting any loads on the micro bins, bar grating, or scale shroud. Avoid sudden jarring or dropping. The approximate dry weight of various size micro systems is listed in the table in Appendix A for reference to assist in determining the appropriate machinery to use when unloading the micro system.





**FIGURE 4: Example of the Pedestals that Need to be Attached to the Micro System Frame**

- 4 If shipped with additional leg pedestals, attach the pedestals to the micro frame legs (Figure 4).
- 5 The micro system should be anchored on solid footings. Consult a local licensed professional to determine the requirements if you're not certain.
- 6 Parts may have come loose during shipping. Make sure all parts of the micro system are tightened and in working order.
- 7 If shipped with an additional transition to mount the rotary scale shroud to a conveyor, install this now. Fasteners or clamps are provided to attach the transition to the scale shroud.
- 8 Loosen the nuts on the threaded rod assembly near the load cells so that the load cells carry the weight of the end plates and rotary drum (Figure 5). The threaded rod and nuts should remain in place to catch the end plates and rotary drum in case a load cell or the load cell mounting hardware fails. The threaded rod assemblies also come in handy if a load cell needs to be replaced.



**FIGURE 5: Location of the Threaded Rod Assemblies**

- 9 Wire the micro system.
- All wiring must be performed by a qualified electrician. If problems develop with electrical components please contact the EAI service department.
  - Ensure the appropriate electrical components (wire, contractors, etc.) are being used for the volt and amp ratings of the motors. The motor specifications can be found on the motor nameplate.
  - Ensure the motor wiring is of a heavy enough gauge so that the voltage drop at full load does not exceed 5% of the nameplate voltage.
  - Wire the micro ingredient bin motors and power them before adding product to the bins to ensure the auger screw is rotating in the proper direction counterclockwise (when viewed from the motor/gearbox).
  - Wire the rotary scale motor and limit switch. The rotary scale can rotate in either direction, but the stop/upright position is set at the factory to rotate the drum CCW when viewed from the motor/gearbox end. The stop position of the rotary drum can be adjusted by rotating the lock collar that actuates the limit switch.
  - Wire the four (4) load cells to a summing junction box and use shielded cable to wire the summing junction box to the scale indicator. EAI ships every micro system with shielded cable (6-conductor 20 AWG). A table of the load cell wire color codes for various manufacturers can be found in Appendix B.

# INSTALLATION

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- 10 Run a small amount of inexpensive product (corn for example) through each micro bin to clear any debris left behind from the factory (metal shavings, screws, nuts, silicone, etc.).
- 11 Contact a scale calibration company to calibrate the rotary scale. Test weights can be placed on the brackets hanging from the load cells.
- 12 Run test batches through the system while closely monitoring to ensure it is operating properly.

## Section 5: Operation

- Be aware the rotary scale drum has a limited capacity (approximately 1.0 cu ft per foot of length for the 18” diameter drum, and approximately 1.6 cu ft per foot of length for the 24” diameter drum). It may be necessary to shift ingredients between micro bins for the larger inclusion rate ingredients so that the drum is not overfilled.

## Section 6: Maintenance

- There is a bearing located near the rotary drum position indicator switch (underneath a cover on one end of the micro system) that will need to be greased periodically. EAI recommends greasing this bearing once every three (3) months with the manufacturer's recommended grease. This interval depends on usage and environmental conditions. Please reference the manufacturer's maintenance schedule in Appendix C for further information.
- Periodically inspect for any oil leaks on the gearboxes, and replace or repair as necessary. The oil seal kit for the micro bin gearboxes can be purchased from EAI – contact the EAI service department to assist in determining the correct oil seal kit.
- Periodically walk around the micro system and make note of any odd noises or excessive dust accumulation. Excessive dust accumulation on the rotary scale lid may indicate a worn micro bin auger bearing that needs to be replaced. Product accumulation may occur with sticky materials, during periods of higher humidity, and at other times.
- Periodically inspect the rotary scale drum by removing the inspection panels on the scale shroud. Product may accumulate on the scale drum and shroud and should be removed to prevent excessive buildup.
- The rotary drum scale should be calibrated periodically by a properly licensed or accredited scale company.
- The limit switch on the rotary drum scale should be positioned in a fashion to properly read the orientation of the scale. Ensure the scale is in the correct position when filling and that the limit switch is reading properly.

## Section 7: Safety

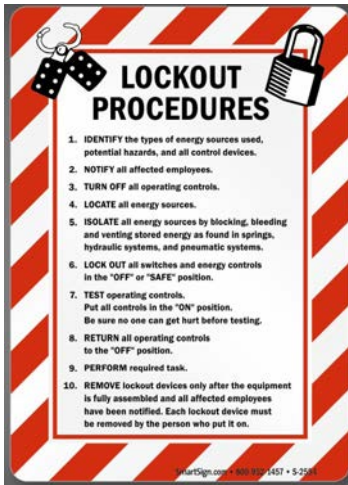
Moving parts of the micro system automatically start/stop. Be sure to always disconnect and lockout the power before inspecting or working on the micro system. Do not place your hands inside the rotary scale shroud before performing the lockout/tagout procedure.

### CAUTION

There is no safety grating inside the micro ingredient bins. Use caution when adding product to the bins, and disconnect and lockout the power to the micro bin before attempting to remove any foreign object that falls in (pieces of packaging, utility knives, etc.).

### WARNING

The micro system should only be operated or serviced by trained personnel.



EZ215651



EZ100777

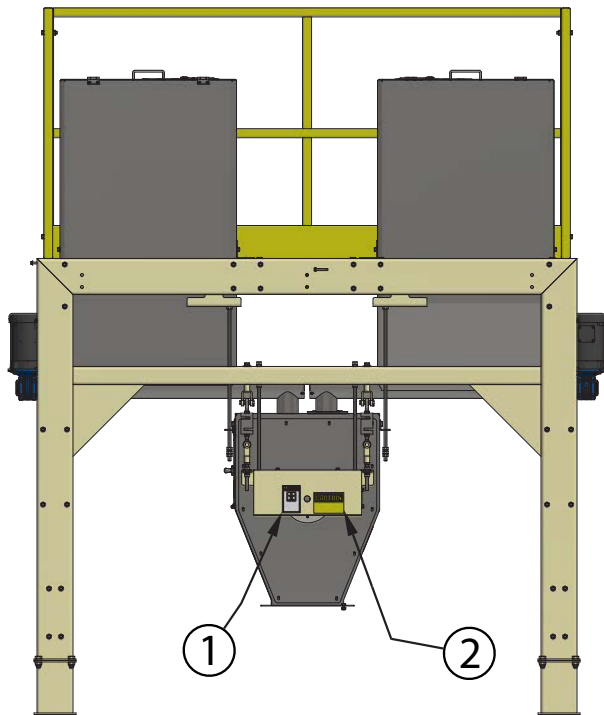


EZ200087B

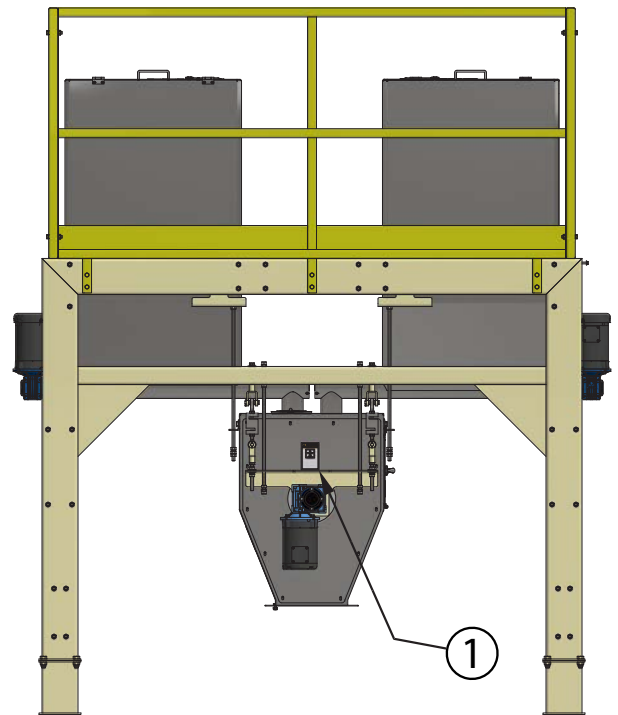


EZ100391

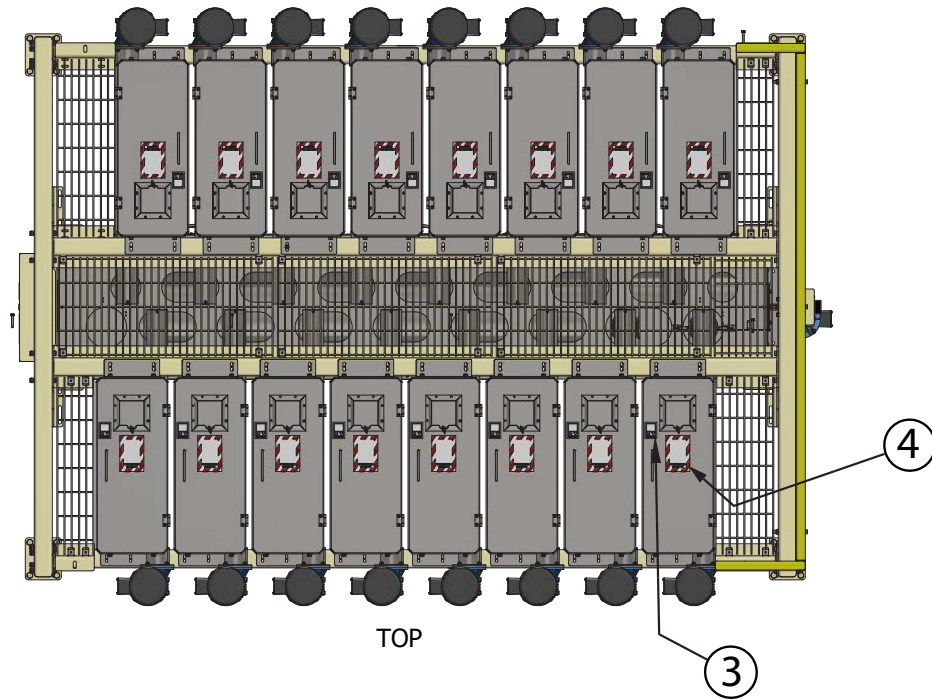
# SAFETY



FRONT

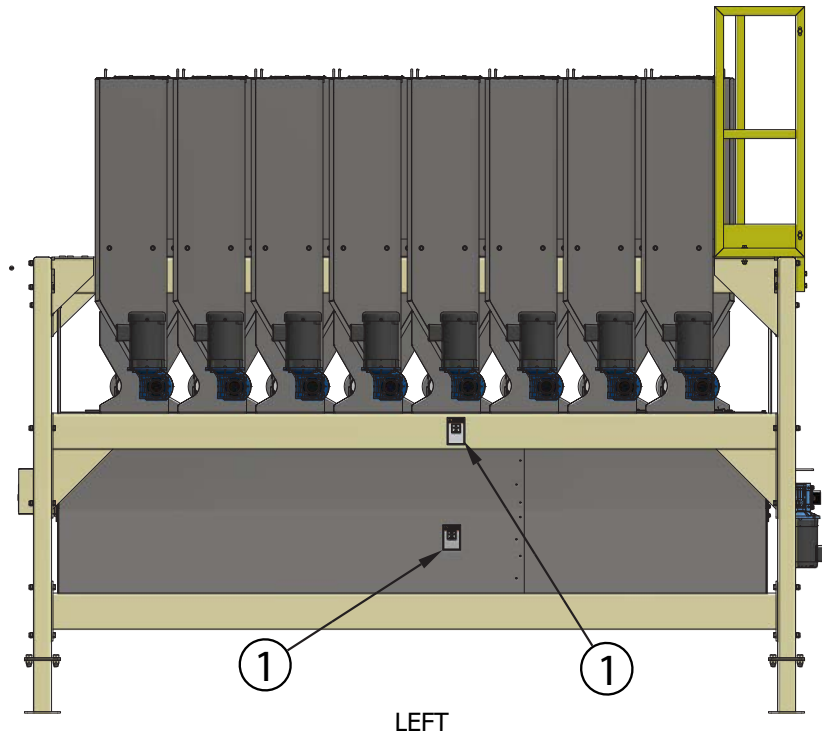
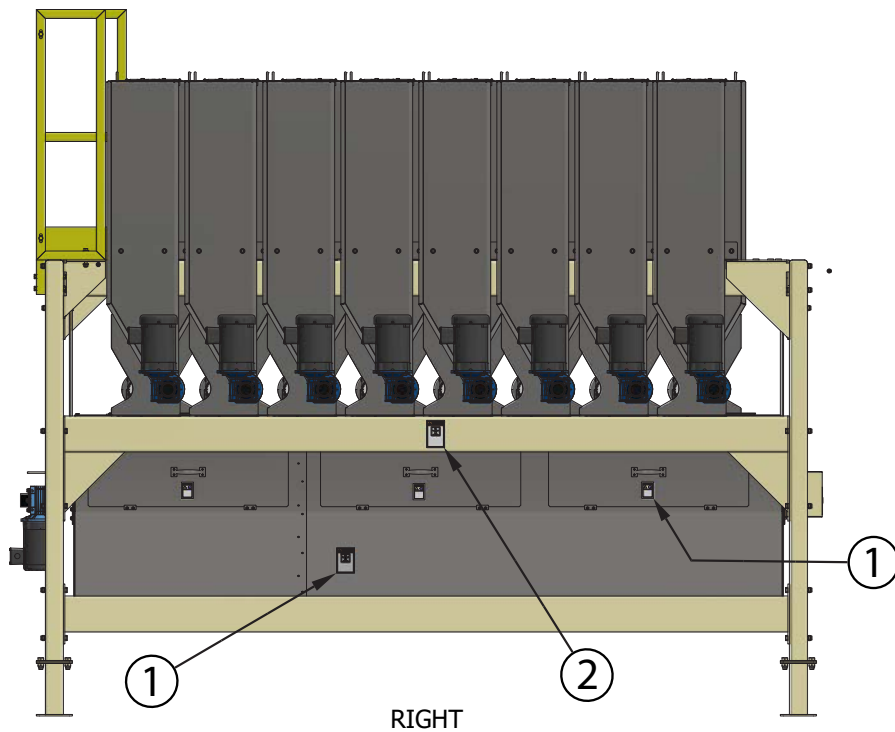


BACK



TOP

ITEM	PART NUMBER	DESCRIPTION	QTY
1	EZ100391	WARNING, CONFINED SPACE	2
2	EZ100777	CAUTION, KEEP GUARD IN PLACE	1
3	EZ215651	DECAL, LOCKOUT PROCEDURE, 3.5X5	16
4	EZ200087B	WARNING, EXPOSED SCREW CAN CUT AND CRUSH	16



ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	EZ100391	WARNING, CONFINED SPACE	3
2	EZ200087B	WARNING, EXPOSED SCREW CAN CUT AND CRUSH	3



## Section 8: Troubleshooting

- 1 Product can be seen flowing through the discharge end of the micro bin when the auger screw is not turning.
  - Certain extremely free-flowing products have been reported to flow through the micro in discharge tube when not in operation. This issue can be mitigated by installing a different variation of the auger screw. Contact sales/service to determine the appropriate type that will fit your application best.
- 2 A screeching or grinding noise is coming from the micro bin.
  - This is usually caused by a foreign object coming into contact with the micro bin auger screw (bolt, utility knife, hand tools, etc.) and may have caused damage. It will be necessary to empty the micro bin of it's contents and remove the motor, gearbox, and auger screw to assess the damage.
- 3 The micro bin is not feeding the scale.
  - This could be caused by a variety of problems. The first thing to check is if product is bridging in the bin. A damaged auger screw, worn motor, or worn gearbox could also be the culprit. Also, the wiring circuit to the motor may have been compromised, so it's best to check the voltage coming to the motor to be sure it's receiving power before removing parts from the micro bin.
- 4 The microsystem scale is not reading accurately or inventories are incorrect:
  - The scale should be calibrated or checked by a properly accredited scale company periodically. This is recommended at least on a yearly basis.
  - Check the entire rotary drum scale as well as the load cells to be sure no components are binding or touching.
  - Check to ensure that the shaft of the rotary drum is not binding where it goes through the shroud.
  - Check to ensure that all airlines and conduit are loose and not rigid enough to restrict the free motion of any components of the scale.
  - A scale company should check the tightness of scale wires in the junction box.
  - Load cells should be properly trimmed and the entire scale calibrated.
  - Load cell yokes should be positioned correctly as indicated in this manual.
  - Air may be flowing up the discharge drag and creating pressure within the scale that can cause improper readings.
  - If a scale is ever physically damaged by a forklift, electrical surge, or other external force, it should be immediately examined by a scale company for accuracy.

# WARRANTY

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## Section 9: Warranty

### EAI One-Year Limited Warranty

Easy Automation warrants that this microsystem and all its mechanical and electrical components will be free from defects in materials and workmanship for a period of one (1) year from the date of shipment. If the product proves defective during the warranty period, Easy Automation Inc., at its option, will:

- Replace the damaged or broken component with a comparable new component or,
- Repair the component.

Easy Automation must be notified prior to the expiration of the warranty period regarding the broken component. The component will only be replaced or repaired if it is determined that the product was not broken due to misuse, improper use, or inadequate maintenance and care.

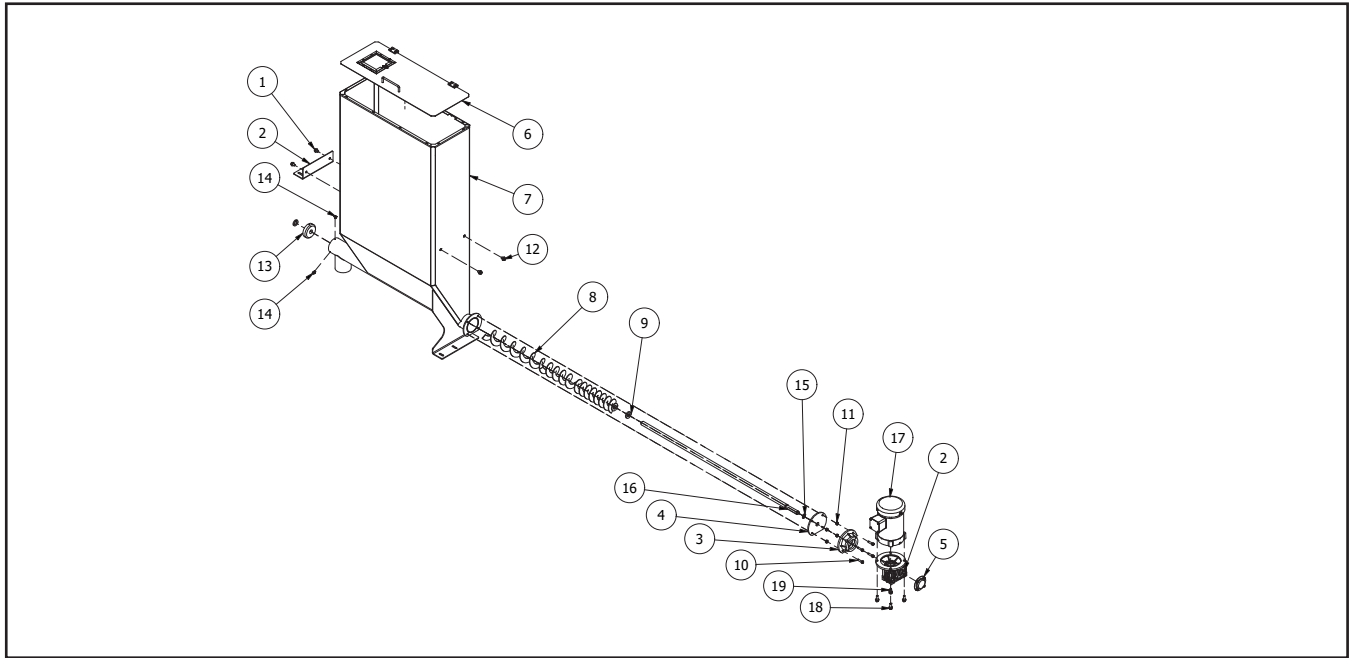
This warranty covers the component(s) only. Easy Automation is not responsible for any costs associated with replacement of the component(s). Easy Automation may require that the damaged or broken components be returned to Easy Automation.

Easy Automation will cover any shipping and handling costs of the replacement component(s) as well as any return shipping costs for items that need to be sent back to Easy Automation.

Easy Automation will not reimburse any on site repair costs without prior approval in writing by the Easy Automation Service Department.

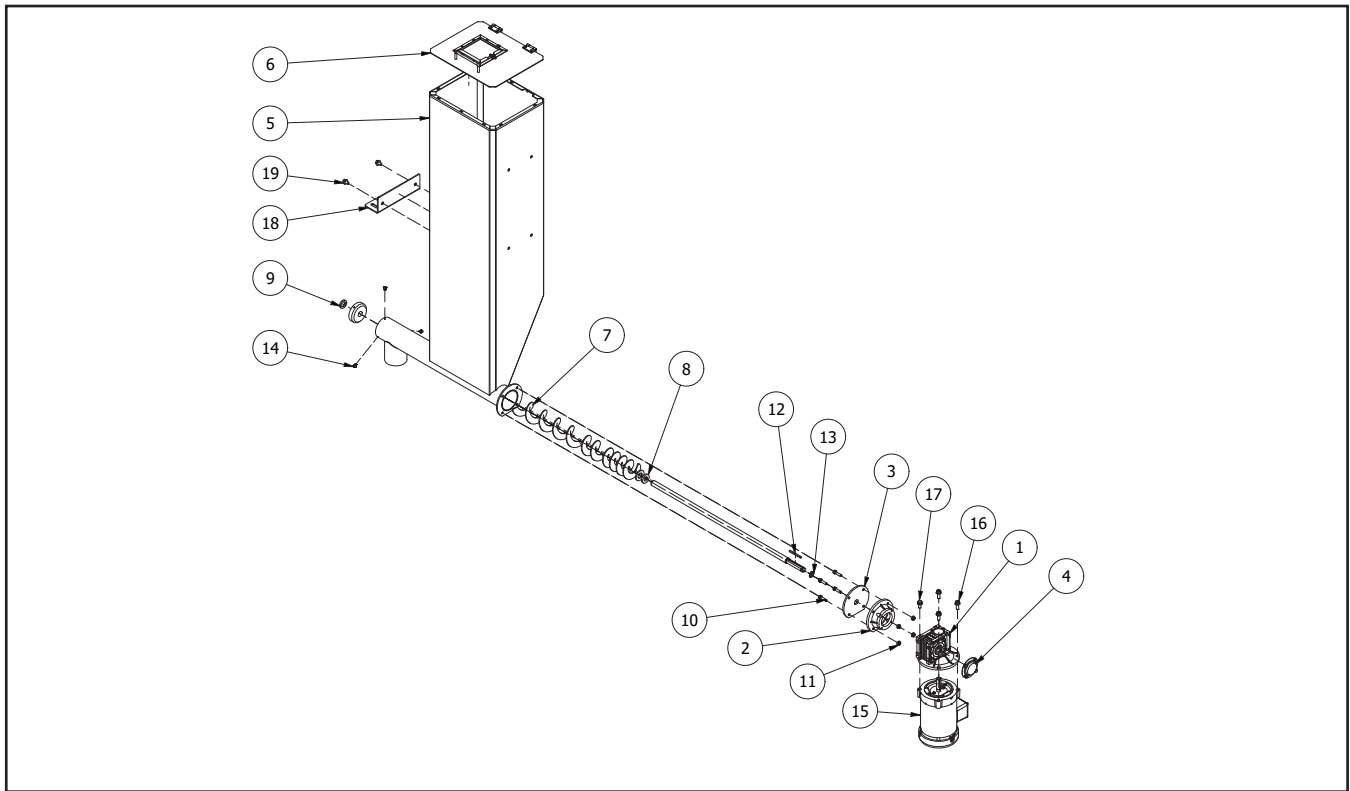
To the extent allowed by local law, except for the obligations specifically set forth in this warranty, in no event shall Easy Automation Inc. be liable for any indirect, special, incidental, or consequential damages (including loss of revenue or profits).

## Section 10: Spare Parts



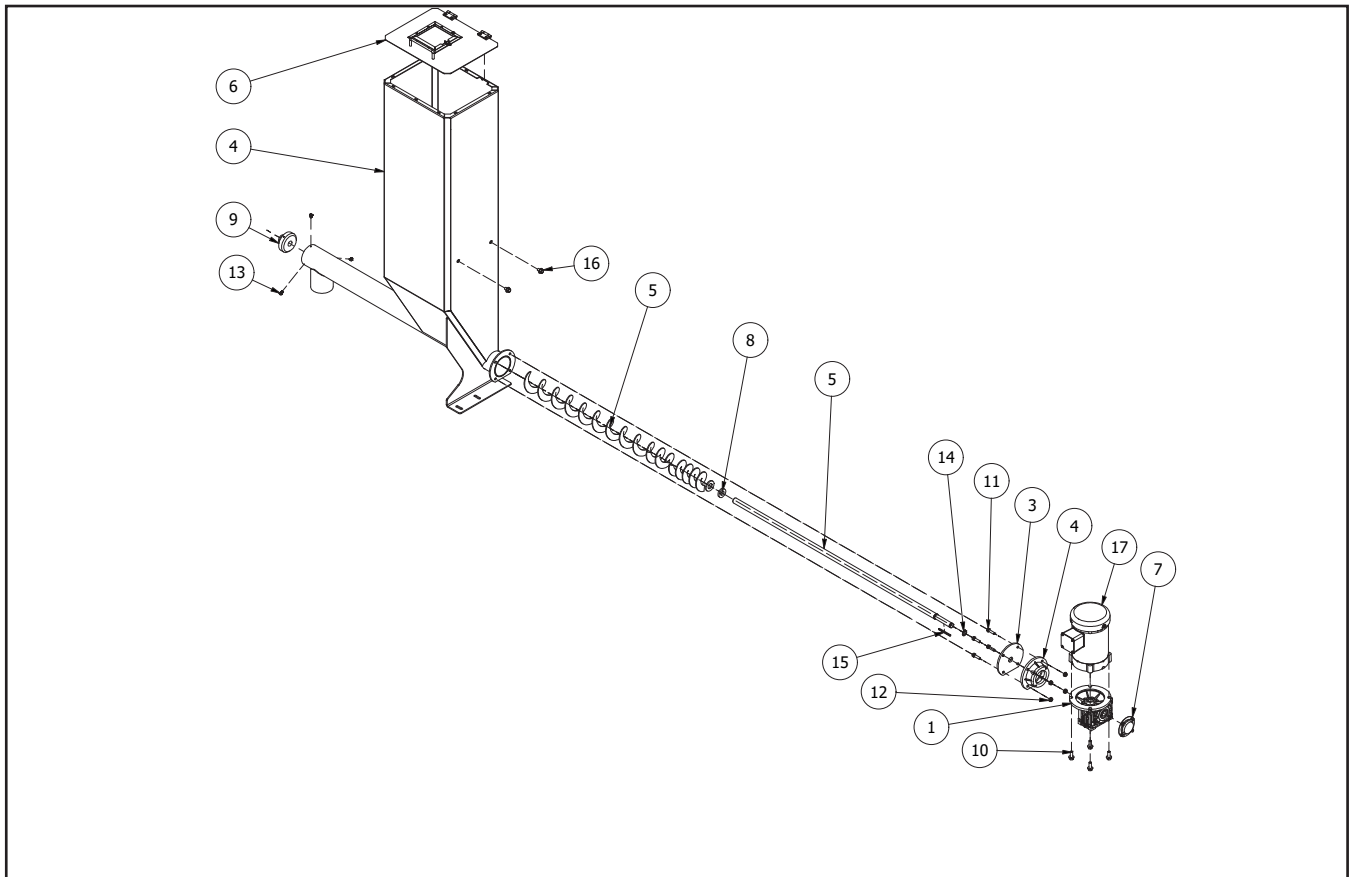
**FIGURE 6: 9.2 Cubic Foot Micro Ingredient Bin (EZ213718)**

ITEM	PART NUMBER	DESCRIPTION	QTY
1	EZ210018	BRACKET, SS HOPPER	1
2	EZ207433	GEARBOX, 15:1	1
3	EZ209985	FLANGE, FC STYLE	1
4	EZ210361	DUST SEAL 1/4" THK, UHMW PE	1
5	EZ207745	GEARBOX, PROTECTIVE COVER,	1
6	EZ213719	MECH ASSY, SS HOPPER LID, 5.6/9.2 CU FT	1
7	EZ213721	HOPPER WELDMENT, 9.2 CU FT, SS MICRO	1
8	EZ211015	WELDMENT, 3.5" AUGER (5.6/9.2 CU FT SS MICRO), 304 SS, 48" LONG, VARIABLE PITCH FLIGHTING	1
9	EZ101143	WASHER, FELT 1-1/4" OD X 3/4" ID	1
10	EZ211445	BOLT, HEX HEAD, 5/16-18 X 1 1/4, 18-8 SS	4
11	EZ211446	NUT, FLANGE, SERRATED EDGE, 5/16-18 UNC 18-8 SS	4
12	EZ212943	BOLT, HEX HEAD SERRATED FLANGE, 3/8-16 UNC X 1/2, 18-8 SS	4
13	EZ212944	BEARING/SEAL ASSM, 3.25 OD, STAINLESS MICRO HOPPER	1
14	EZ211448	SCREW, PAN HEAD PHILLIPS WITH SPRING LOCK WASHER, #10-32 X 1/2, 18-8 SS	3
15	EZ206758	RING, RETAINING, EXTERNAL 3/4"	1
16	EZ210462	KEYSTOCK, 3/16 X 3/16 X 2-1/2" LONG	1
17	EZ211929	MOTOR, 3/4 HP, 3 PHASE, 56C, 1725 RPM, 208-230/460V, 60 HZ, TEFC	1
18	EZ200644	BOLT, HEX FLANGE, 3/8-16X1 GR5	3
19	EZ202416	BOLT, HEX HEAD FLANGE GR 5 ZINC PLATED 3/8-16 UNC X 3/4	1



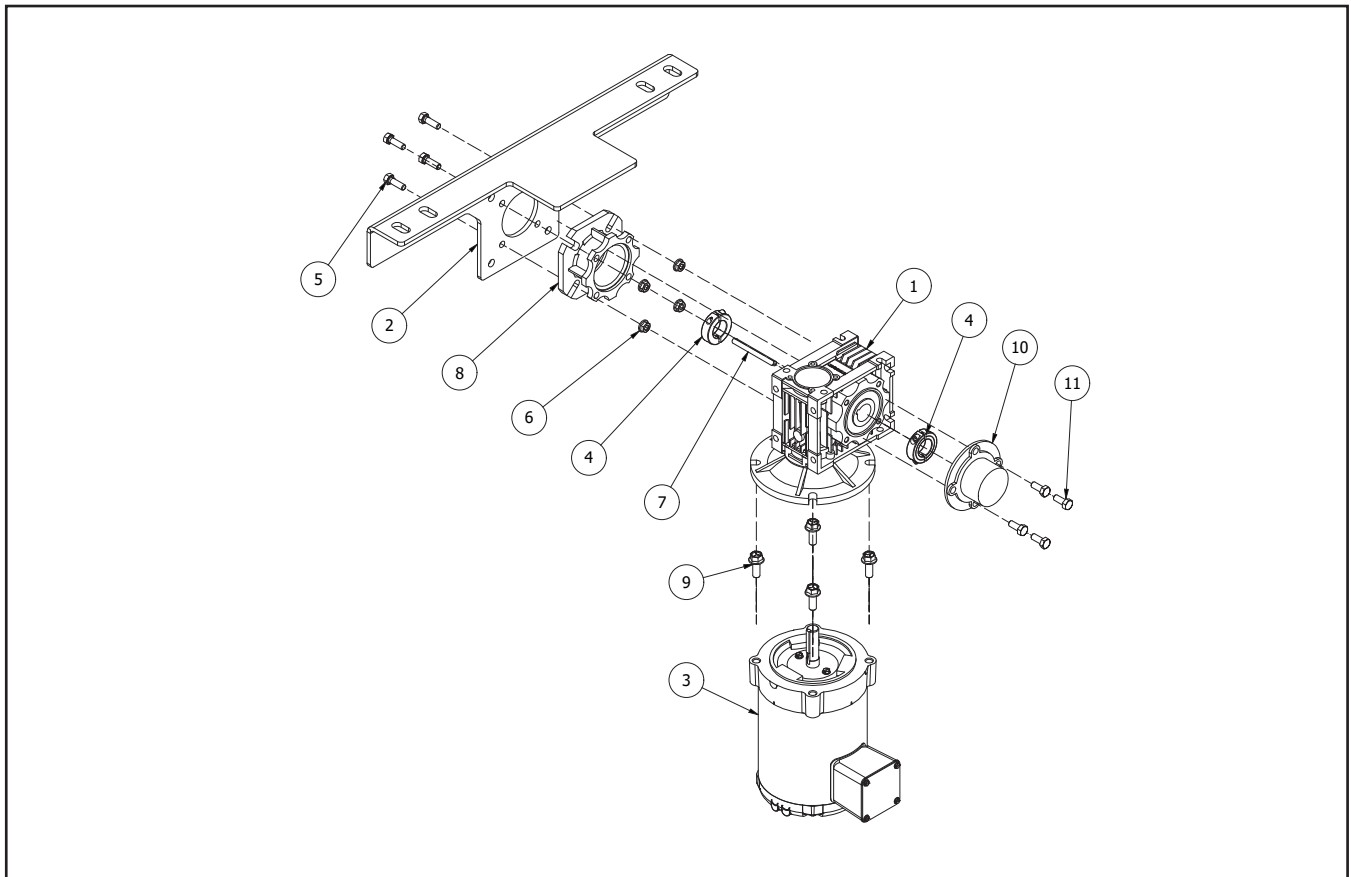
**FIGURE 7: 4.6 Cubic Foot Short Tube Micro Ingredient Bin (EZ213725)**

ITEM	PART NUMBER	DESCRIPTION	QTY
1	EZ207433	GEARBOX, 15:1	1
2	EZ209985	FLANGE, FC STYLE	1
3	EZ210361	DUST SEAL 1/4" THK, UHMW PE	1
4	EZ213727	WELDMENT, SS MICRO SINGLE HOPPER, 4.6 CU FT, LH-SHORT, GEARBOX	1
5	EZ207745	GEARBOX, PROTECTIVE COVER,	1
6	EZ213728	SS HOPPER LID, 2.8/4.6 CU FT	1
7	EZ211023	WELDMENT, 3.5" AUGER (SS MICRO), 304 SS, 33.25" LONG, VARIABLE PITCH FLIGHTING	1
8	EZ101143	WASHER, FELT 1-1/4" OD X 3/4" ID	1
9	EZ212944	BEARING/SEAL ASSM, 3.25 OD, STAINLESS MICRO HOPPER	1
10	EZ211445	BOLT, HEX HEAD, 5/16-18 X 1 1/4, 18-8 SS	4
11	EZ211446	NUT, FLANGE, SERRATED EDGE, 5/16-18 UNC 18-8 SS	4
12	EZ210462	KEYSTOCK, 3/16 X 3/16 X 2-1/2" LONG	1
13	EZ206758	RING, RETAINING, EXTERNAL 3/4"	1
14	EZ211448	SCREW, PAN HEAD PHILLIPS WITH SPRING LOCK WASHER, #10-32 X 1/2, 18-8 SS	3
15	EZ211929	MOTOR, 3/4 HP, 3 PHASE, 56C, 1725 RPM, 208-230/460V, 60 HZ, TEFC	1
16	EZ200644	BOLT, HEX FLANGE, 3/8-16X1 GR5	3
17	EZ202416	BOLT, HEX HEAD FLANGE GR 5 ZINC PLATED 3/8-16 UNC X 3/4	1
18	EZ210018	BRACKET, SS HOPPER	1
19	EZ212943	BOLT, HEX HEAD SERRATED FLANGE, 3/8-16 UNC X 1/2, 18-8 SS	2



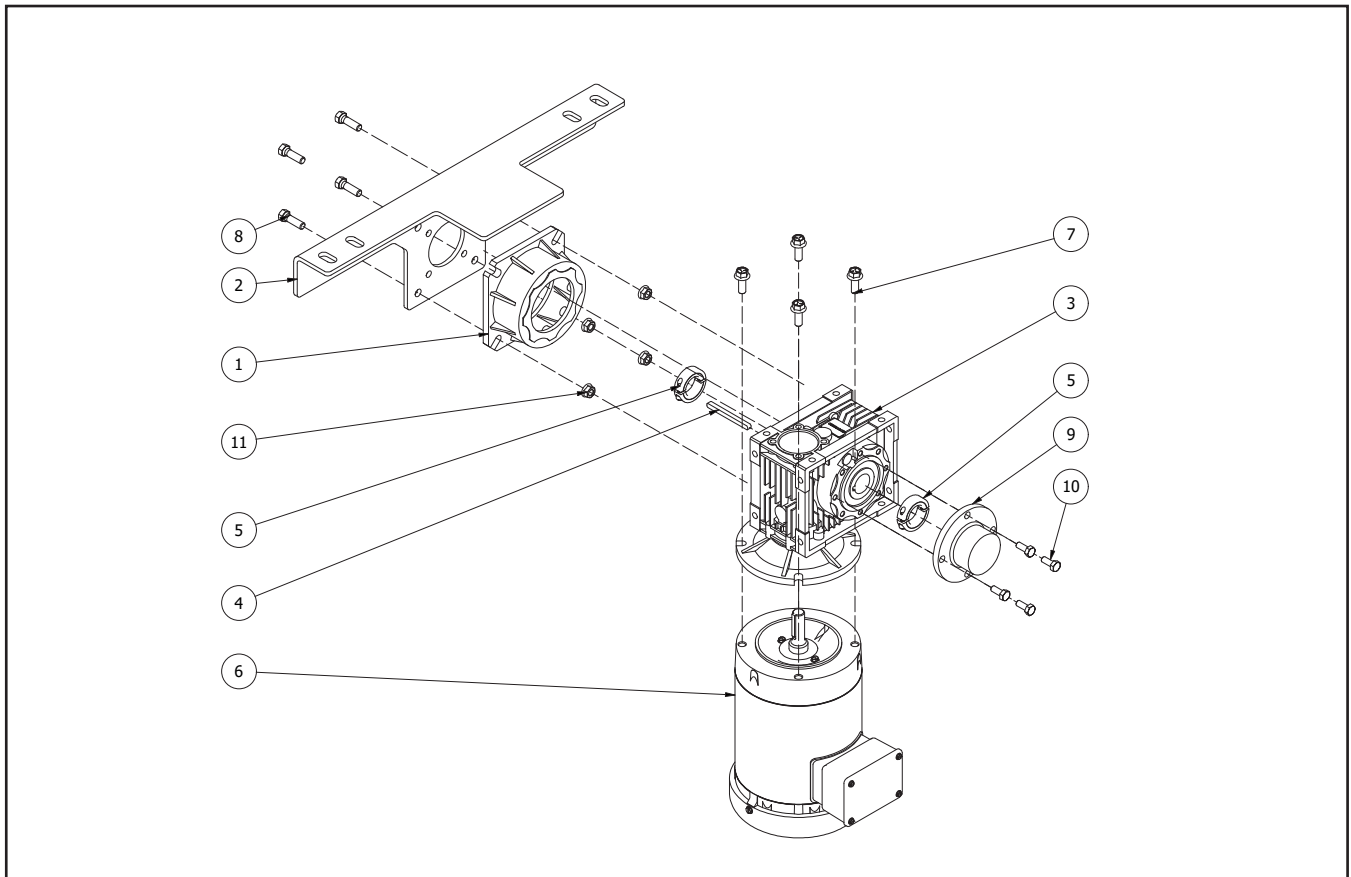
**FIGURE 8: 4.6 Cubic Foot Long Tube Micro Ingredient Bin (EZ213734)**

ITEM	PART NUMBER	DESCRIPTION	QTY
1	EZ207433	GEARBOX, 15:1	1
2	EZ209985	FLANGE, FC STYLE	1
3	EZ210361	DUST SEAL 1/4" THK, UHMW PE	1
4	EZ213735	HOPPER WELDMENT, 4.6 CU FT SINGLE, RH-LONG, SS MICRO	1
5	EZ211030	WELDMENT, 3.5" AUGER (2.8/4.6 CU FT SS MICRO), 48" LONG, VARIABLE PITCH FLIGHTING	1
6	EZ213728	SS HOPPER LID, 2.8/4.6 CU FT	1
7	EZ207745	GEARBOX, PROTECTIVE COVER,	1
8	EZ101143	WASHER, FELT 1-1/4" OD X 3/4" ID	1
9	EZ212944	BEARING/SEAL ASSM, 3.25 OD, STAINLESS MICRO HOPPER	1
10	EZ211447	BOLT, HEX HEAD SERRATED FLANGE, 3/8-16 UNC X 1, 18-8 SS	4
11	EZ211445	BOLT, HEX HEAD, 5/16-18 X 1 1/4, 18-8 SS	4
12	EZ211446	NUT, FLANGE, SERRATED EDGE, 5/16-18 UNC 18-8 SS	4
13	EZ211448	SCREW, PAN HEAD PHILLIPS WITH SPRING LOCK WASHER, #10-32 X 1/2, 18-8 SS	3
14	EZ206758	RING, RETAINING, EXTERNAL 3/4"	1
15	EZ210462	KEYSTOCK, 3/16 X 3/16 X 2-1/2" LONG	1
16	EZ212943	BOLT, HEX HEAD SERRATED FLANGE, 3/8-16 UNC X 1/2, 18-8 SS	2
17	EZ211929	MOTOR, 3/4 HP, 3 PHASE, 56C, 1725 RPM, 208-230/460V, 60 HZ, TEFC	1



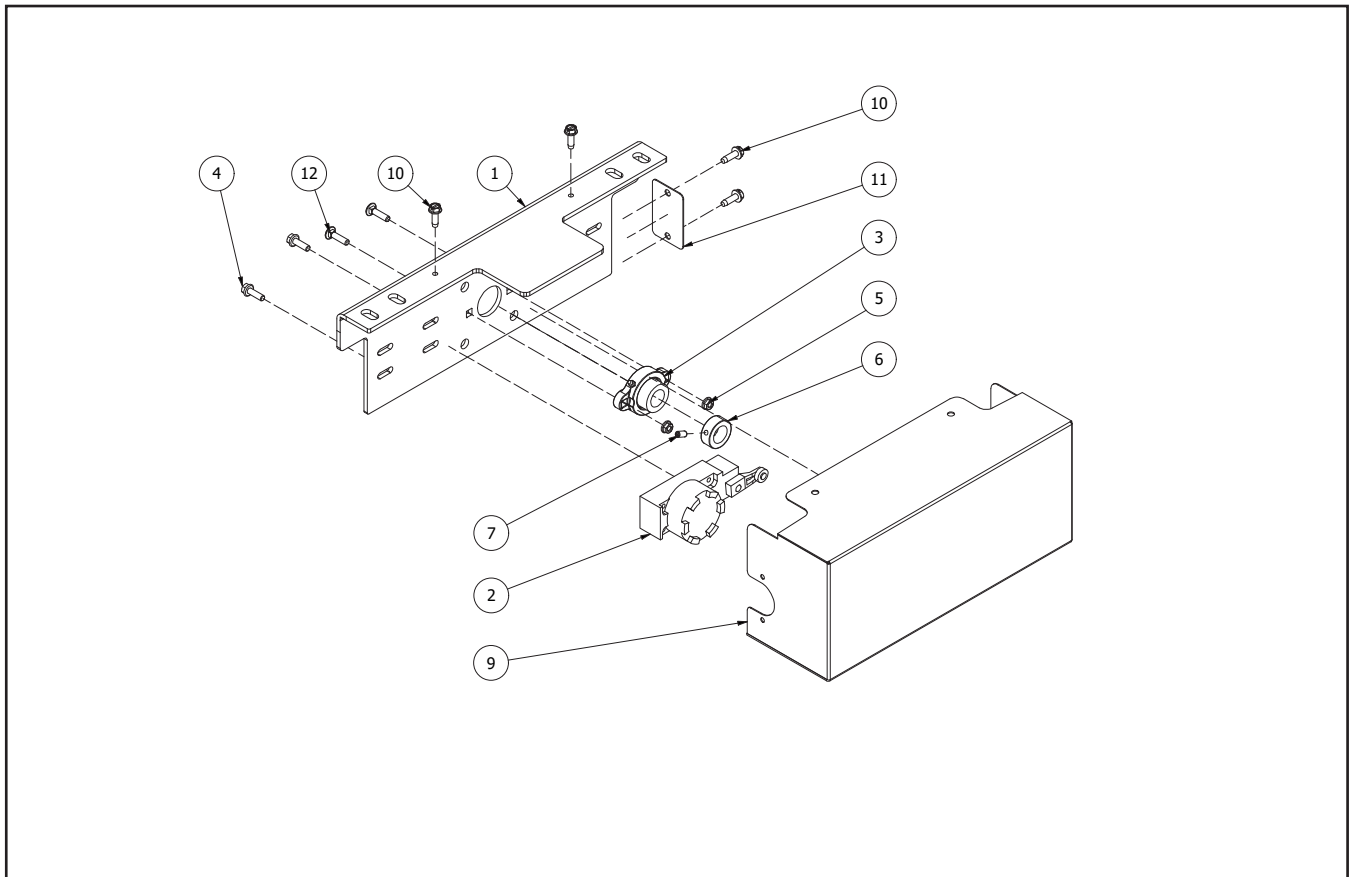
**FIGURE 9: Rotary Scale Drive Assembly – 18” Drum (EZ209325)**

ITEM	PART NUMBER	DESCRIPTION	QTY
1	EZ209203	GEARBOX, 100:1 RATIO, 56C NEMA FLANGE, 1" BORE	1
2	EZ211822	PLATE, MOTOR MOUNT, ROTARY DUMP, 24 IN DRUM	1
3	EZ209194	MOTOR, 1/4 HP 1725 RPM 3 PH 60 HZ 56C 208-230/460 TENV	1
4	EZ203466	SHAFT COLLAR, 1", TWO-PIECE	2
5	EZ101385	BOLT, HEX HEAD GR 5 ZINC PLATED 5/16-18 UNC X 1	4
6	EZ102526	NUT, FLANGE, SERRATED EDGE 5/16-18 UNC ZINC	4
7	EZ209325-0001	KEYSTOCK, 1/4" X 3.5"	1
8	EZ202289	FLANGE, FA STYLE	1
9	EZ200644	BOLT, HEX FLANGE, 3/8-16X1 GR5	4
10	EZ212754	SHAFT GUARD, REDUCER	1
11	EZ207663	BOLT, HEX HEAD M8 X 1.25 X 20MM ZINC PLATED	4



**FIGURE 10: Rotary Scale Drive Assembly – 24” Drum (EZ211821)**

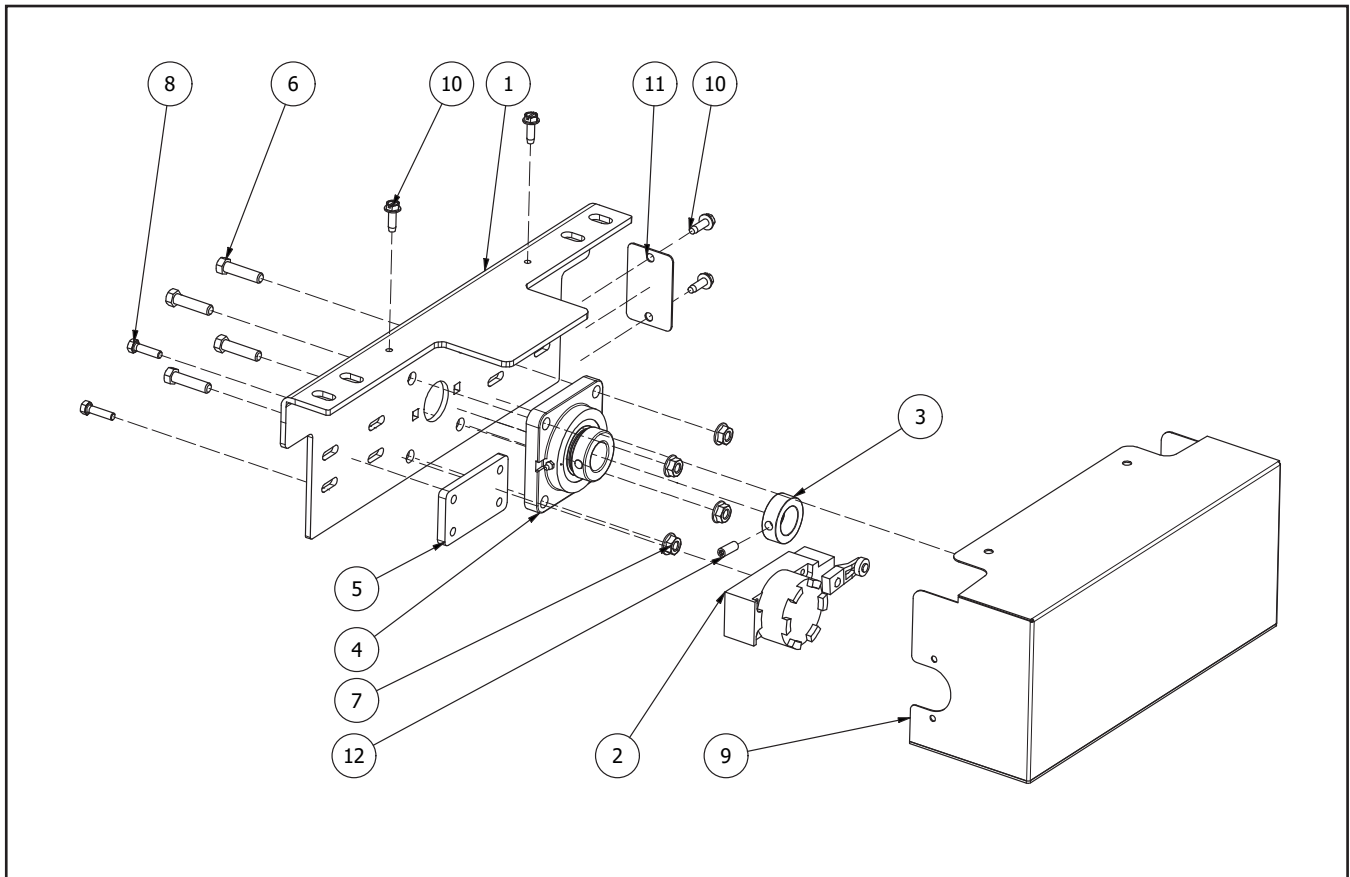
ITEM	PART NUMBER	DESCRIPTION	QTY
1	EZ202162	FLANGE, FB STYLE [DEEP]	1
2	EZ211822	PLATE, MOTOR MOUNT, ROTARY DUMP, 24 IN DRUM	1
3	EZ211061	GEARBOX, 100:1 RATIO, 56C NEMA FLANGE, 1-1/8" BORE	1
4	EZ211821-0001	KEYSTOCK, 1/4X1/4 - 3.5 IN	1
5	EZ204151	COLLAR, SPLIT LOCKING, 1 1/8	2
6	EZ211823	MOTOR, 1/2 HP 3 PHASE 56C 1725 RPM 230/460V	1
7	EZ200644	BOLT, HEX FLANGE, 3/8-16X1 GR5	4
8	EZ102963	BOLT, HEX HEAD GR 5 ZINC PLATED 3/8-16 UNC X 1 1/4	4
9	EZ212753	SHAFT GUARD, REDUCER	1
10	EZ207663	BOLT, HEX HEAD M8 X 1.25 X 20MM ZINC PLATED	4
11	EZ102328	NUT, FLANGE, SERRATED EDGE 3/8-16 UNC ZINC	4



**FIGURE 11: Rotary Scale Bearing/Switch Assembly – 18” Drum (EZ210676)**

ITEM	PART NUMBER	DESCRIPTION	QTY
1	EZ211801	BRACKET, BEARING CARRIER - [1.25" SHAFT, EZ206031 BEARING]	1
2	EZ208064	SWITCH, LIMIT, EXPLOSION PROOF, NEMA 9	1
3	EZ205538	BEARING, FLANGE, 2 BOLT, SET SCREW LOCKING 1" SHAFT DIA	1
4	EZ208722	BOLT, HEX HEAD FLANGE GR 5 ZINC PLATED 5/16-18 UNC X 1	2
5	EZ102526	NUT, FLANGE, SERRATED EDGE 5/16-18 UNC ZINC	2
6	EZ210674	COLLAR, LOCK, 1" ID, WITH SET SCREW	1
7	EZ210675	SCREW, SET, 5/16-24X5/8	1
9	EZ211979	COVER, SS MICRO ROTARY DUMP, LIMIT SWITCH COVER	1
10	EZ200777	BOLT, HEX HEAD FLANGE THREAD CUTTING TYPE 23 ZINC PLATED 5/16-18 UNC X 1	4
11	EZ211979-0003	COVER PLATE, SWITCH GUARD, SS MICRO (A1011 CS, 16 GA)	1
12	EZ212203	BOLT, CARRIAGE, 5/16-18 UNC X 1-1/4	2





**FIGURE 12: Rotary Scale Bearing/Switch Assembly – 24” Drum (EZ211796)**

ITEM	PART NUMBER	DESCRIPTION	QTY
1	EZ211801	BRACKET, BEARING CARRIER - [1.25" SHAFT, EZ206031 BEARING]	1
2	EZ208064	SWITCH, LIMIT, EXPLOSION PROOF, NEMA 9	1
3	EZ211799	SET SCREW SHAFT COLLAR, 1.25" DIAMETER, ZINC PLATED STEEL	1
4	EZ203061	BEARING, FLANGE, 4 BOLT, ECCENTRIC LOCK 1-1/4" SHAFT DIA, CAST IRON	1
5	EZ211802	PLATE, SPACER, ROTARY DUMP LIMIT SWITCH (A36 MS, 3/8")	1
6	EZ102964	BOLT, HEX HEAD GR 5 ZINC PLATED 7/16-14 UNC X 1 3/4	4
7	EZ201361	NUT, FLANGE, SERRATED EDGE 7/16-14 UNC ZINC	4
8	EZ207866	BOLT, HEX, 5/16-18 X 1-1/4 GR 5 ZINC PLATED	2
9	EZ211979	COVER, SS MICRO ROTARY DUMP, LIMIT SWITCH COVER	1
10	EZ200777	BOLT, HEX HEAD FLANGE THREAD CUTTING TYPE 23 ZINC PLATED 5/16-18 UNC X 1	4
11	EZ211979-0003	COVER PLATE, SWITCH GUARD, SS MICRO (A1011 CS, 16 GA)	1
12	EZ214330	SCREW, SET, 3/8-16 X 1, CUP POINT, BLACK OXIDE STEEL	1

## SPARE PARTS

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Replacement Load Cells (500-lb s-type) – EZ100823

Replacement Summing Junction Box – WT41428-0016

Replacement Summing Junction Box (Intrinsically Safe) – EZ214060

Shielded Scale Cable (6 conductor, 20 AWG) – EZ200593

Paint, Spray Can, Off-White – EZ100889

# APPENDIX A - APPROXIMATE DRY WEIGHT OF MICRO SYSTEMS

## Section 11: Appendix A

Micro System Frame Length	Estimated Dry Weight (lbs)
2 Slot – 49"	2,500
3 Slot – 62"	2,900
4 Slot – 75"	3,300
5 Slot – 88"	3,700
6 Slot – 101"	4,100
7 Slot – 114"	4,500
8 Slot – 127"	4,900
9 Slot – 140"	5,300
10 Slot – 153"	7,200
11 Slot – 166"	7,600
12 Slot – 179"	8,000

# APPENDIX B

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## Section 12: Appendix B

Load Cell	Wire Color
Excitation +	● Red
Excitation -	● Black
Signal +	● Green
Signal -	○ White
Shield	● Bare

# APPENDIX C

## Section 13: Appendix C

Source: Browning Engineering

### Lubrication

### Ball Bearings



**Table 42 Ball Bearing Grease**

Thickener	Lithium Complex
Oil	Petroleum
Thickness	NLGI 2
Operating Temperature	-20 F to 200 F Intermittent to 250 F

**Table 43 Ball Bearings**

Speed	Temperature	Cleanliness	Greasing Interval
100 RPM	-20 F to 125 F	Clean	4-10 months
100 RPM	-20 F to 150 F	Clean	1-4 months
100 RPM	-20 F to 200 F	Clean	1 week to 1 month
100 RPM	-20 F to 200 F	Clean	Biweekly
1500 to Maximum Catalog Rating	Up to 125 F	Dirty	Daily to 1 week
	150 F to 200 F	Dirty	Daily to 1 week
	-20 F to 200 F	Very Dirty	Daily to 1 week
	-20 F to 200 F	Extreme Conditions	Daily to 1 week

Consult EPT Mounted Bearing Tech Support for current grease specification.

Grease compatibility is critical. Relubricate with a grease that is compatible with grease supplied from the factory. Consult your grease supplier for compatibility.

### Frequency of Lubrication

Frequency of lubrication depends upon operating conditions. The following chart gives the frequency of relubrication based on continuous operation for various operating conditions and can be used as a guide for determining when Browning ball bearings should be relubricated.

## Recommended Relubrication Schedule

Table 44 Ball Bearings

Ball Bearings	
Shaft Size (Inches)	Grease Charge (Ounces)
1/2 to 3/4	0.03
7/8 to 1 3/16	0.10
1 1/4 to 1 1/2	.015
1 11/16 to 1 15/16	0.20
2 to 2 7/16	0.30
2 1/2 to 2 15/16	0.50
3 to 3 7/16	0.85
3 1/2 to 4	1.50



