



# BETTCHER Industries, Inc.

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## DuraSift<sup>®</sup> BREADER / SIFTER TABLE 115V, 115V Canadian, 230V



**Manual Number: 100307**

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Original Instructions

# DuraSift® Breeder / Sifter Table

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## SIGNAL WORD PANELS



Indicates a hazardous situation that, if not avoided, will result in death or serious injury.  
(The signal word **DANGER** is in white letters on a safety red background)



Indicates a hazardous situation that, if not avoided, could result in death or serious injury.  
(The signal word **WARNING** is in black letters on a safety orange background)



Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.  
(The signal word **CAUTION** is in black letters on a safety yellow background)



Indicates information considered important, but not hazard-related (e.g. messages relating to property damage).  
(The signal word **NOTICE** is in italicized, white letters on a safety blue background)

The signal word definitions provided, comply with the American National Standard for Product Safety Information in Product Manuals, Instructions, and Other Collateral Materials (ANSI Z535.6-2011).

This technical manual is printed in black and white.



## SAFETY SYMBOLS



The safety alert symbol indicates a potential personal injury hazard. It is not used for messages related to property damage. The safety alert symbol may be used alone or in conjunction with a signal word in a signal word panel



Danger of electrical shock



Read operator's manual

Symbols are harmonized with ANSI Z535.4 and ISO 3864-2 standards. Warning symbols are presented on a safety yellow background. Mandatory action symbols are presented on a safety blue background.

This technical manual is printed in black and white.



## SAFETY RECOMMENDATIONS AND WARNINGS

### **WARNING**

The information provided in these operating instructions is important to your health, comfort and safety. For safe and proper operation, read this entire manual before using this equipment.



Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain this product. Protect yourself, others and equipment by observing all safety information. Failure to comply with instructions could result in personal injury and/or damage to the equipment. Any use in applications other than those for which the equipment was designed and built may result in equipment damage and/or serious injuries.

Retain this manual for future reference. Be thoroughly familiar with the controls and proper use of this equipment.

### **WARNING**

Labels must be in place and readable at all times. Bettcher Industries will replace any label that becomes unreadable, free of charge.

The manufacturer assumes no liability for any unauthorized changes in operating procedures or for unauthorized changes or modifications made to the design of the machine or any factory-installed safety equipment, whether these changes are made by the owner of this equipment, by his employees, or by service providers not previously approved by Bettcher Industries, Inc.

Use only replacement parts manufactured by Bettcher Industries, Inc. Use of substitute parts will void the warranty and may cause injury to operators and damage to equipment.

All maintenance procedures should be performed by qualified personnel.

Electrical components must be serviced by a qualified electrician.

## SAFETY RECOMMENDATIONS AND WARNINGS (CONTINUED)

 **WARNING**



Electrical components must be serviced by a qualified electrician.

This product must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric shock. This product is equipped with a cord having an equipment grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Improper connection of the equipment grounding conductor can result in a risk of electric shock. Check with a qualified electrician if you are in doubt as to whether the product is properly grounded. Do not modify the plug provided. Have a proper outlet installed by a qualified electrician.

Do not use an adapter with this product.

 **WARNING**



To avoid personal injury, always disconnect the power cord before performing any adjustments, disassembly / assembly, trouble shooting or cleaning.

 **WARNING**

To avoid personal injury, do not attempt to open the crank housing cover while machine is in operation.

 **WARNING**

It is recommended that you clean and sanitize all parts of the DuraSift® sifter assembly at the end of each eight hour shift. Thoroughly dry ALL of the sifter mechanism parts before reassembling for use.

 **WARNING**

To avoid personal injury, do not attempt to open the crank housing cover while machine is in operation.



## SAFETY RECOMMENDATIONS AND WARNINGS (CONTINUED)

### NOTICE

As you assemble the sifter assembly, apply a light coating of Triple B lubricant on all parts which are subject to friction. You may also use petroleum jelly or cold shortening on all parts that are subject to friction.

Do not rotate sifter basket while connected to the operating rod. Such movement may loosen the counter balance weight (under cover).

### NOTICE

The recommended cleaning solution for the DuraSift® is eXtra® Heavy Duty Cleaner.



eXtra® Heavy Duty Cleaner, (PN: 184332), is a concentrated cleaner and degreaser for food processing equipment. Contact Bettcher Industries, Inc. for details.

### NOTICE

Do not submerge or directly spray frame and motor assembly. Damage could occur and may void the warranty. Clean with damp cloth or sponge only. Dry after cleaning.





## **RECOMMENDED OPERATION**

The DuraSift® breader / sifter table is designed to blend and sift flour quickly, effortlessly and efficiently. More than 25 pounds of flour can be blended and sifted in less than a minute.

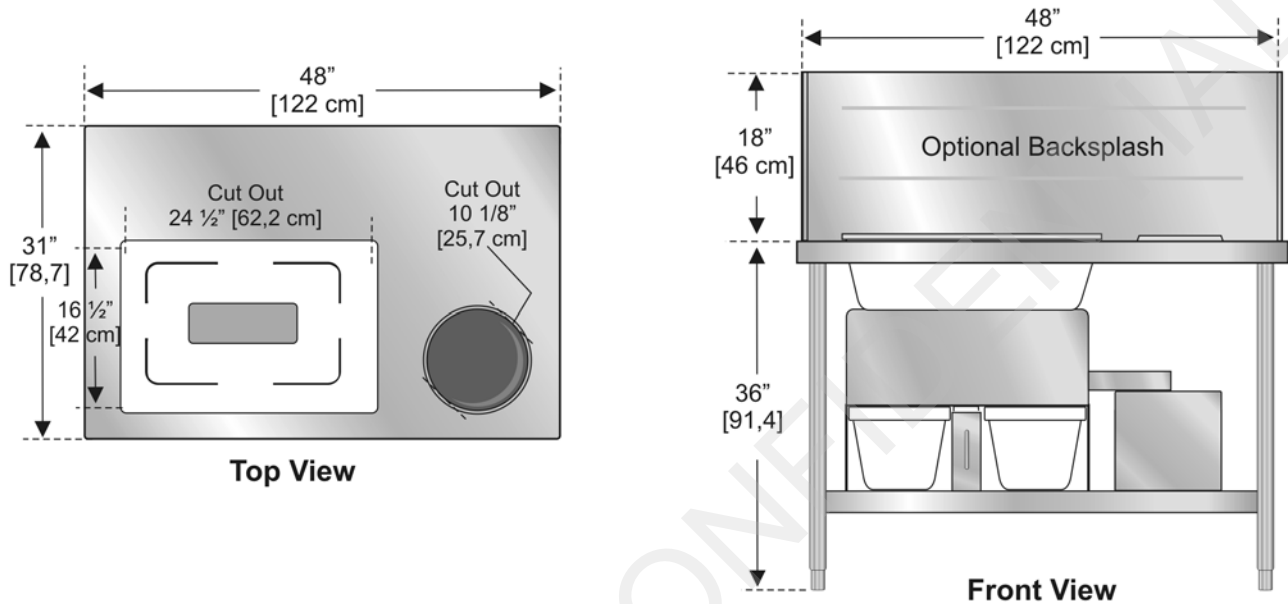
## **FEATURES**

- The highly effective oscillating action of the DuraSift® provides an even distribution of spices and other ingredients throughout the breading mixture. With no settling, you are assured the final product conforms to your exact specifications.
- The unique oscillating sifting basket and automatic separator breaks down more dough balls for increased sifting efficiency, while capturing more reusable breading.
- A solid-state timer automatically shuts the sifter off at the end of a timed cycle, so your employees can perform other tasks while the unit is in operation.
- The DuraSift® features solid stainless steel construction and a heavy-duty drive train that ensures long-life durability and dependable performance.



## SPECIFICATIONS

### Measurements



### Electrical

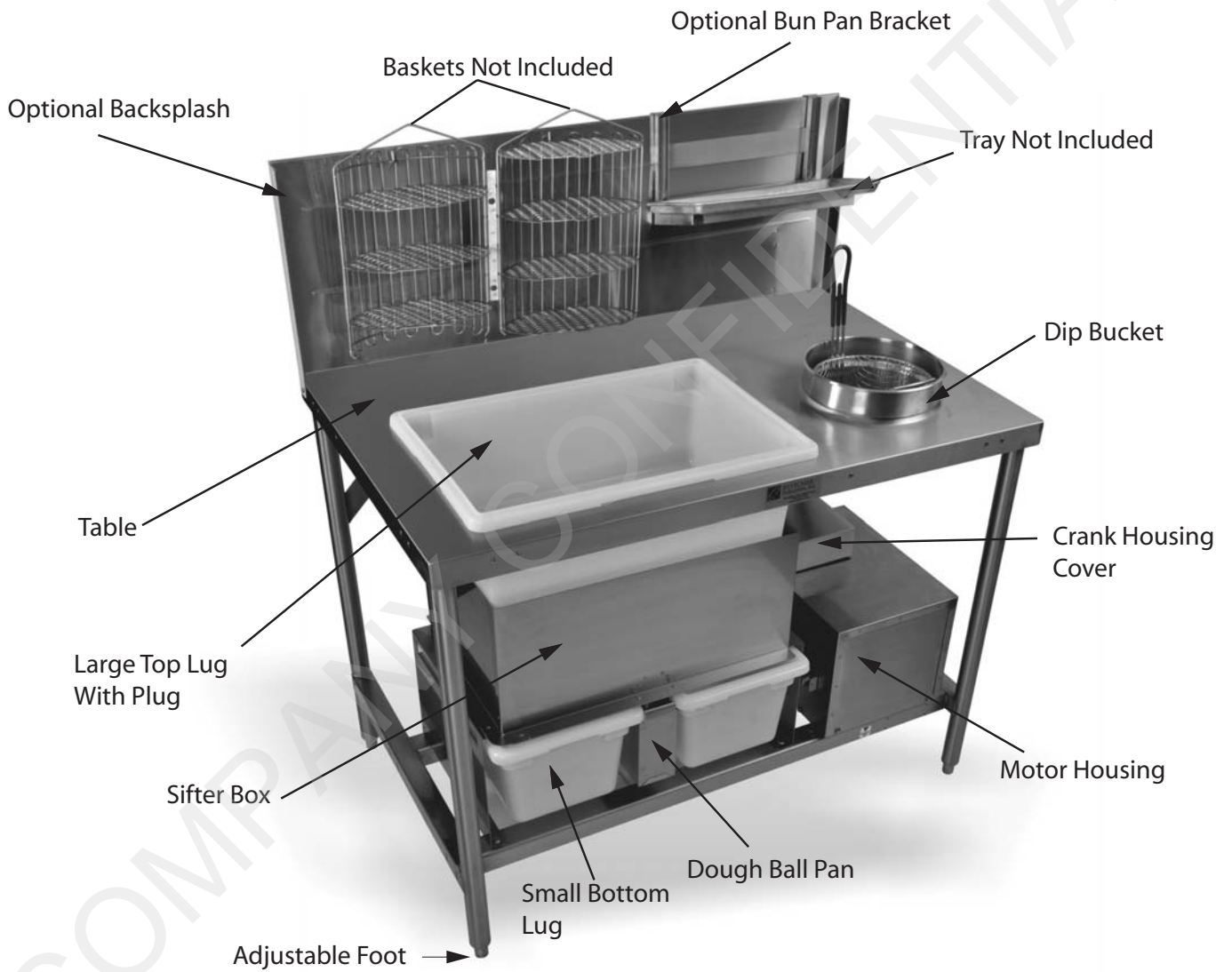
<b>Line Voltage</b>	120 Vac	240 Vac
<b>Line Frequency</b>	60 Hz	50 Hz
<b>Current</b>	9.0 Amp	4.5 Amp



# BETTCHER

*DuraSift® Breader / Sifter Table*

## DURASIFT® BREADER / SIFTER COMPONENTS





## GROUNDING INSTRUCTIONS

**! WARNING**

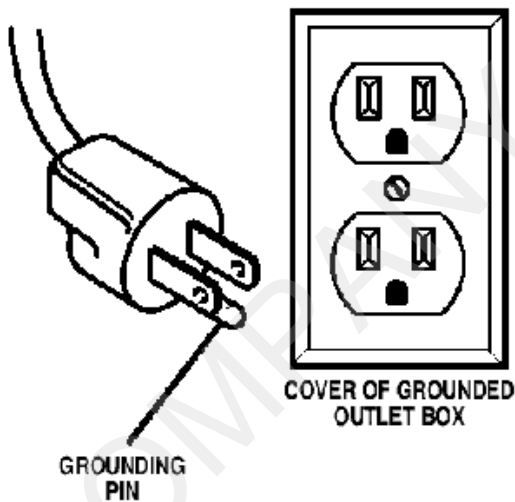


Electrical components must be serviced by a qualified electrician.

This product must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric shock. This product is equipped with a cord having an equipment grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Improper connection of the equipment grounding conductor can result in a risk of electric shock. Check with a qualified electrician if you are in doubt as to whether the product is properly grounded. Do not modify the plug provided. Have a proper outlet installed by a qualified electrician.

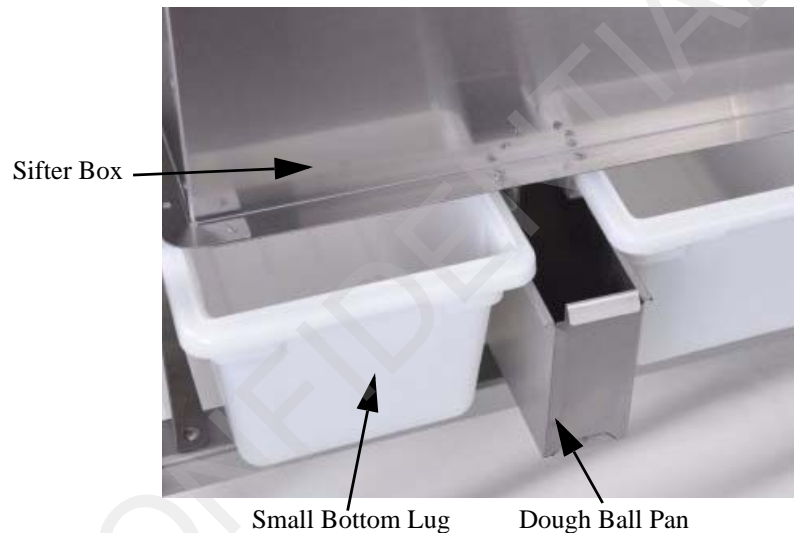
Do not use an adapter with this product.



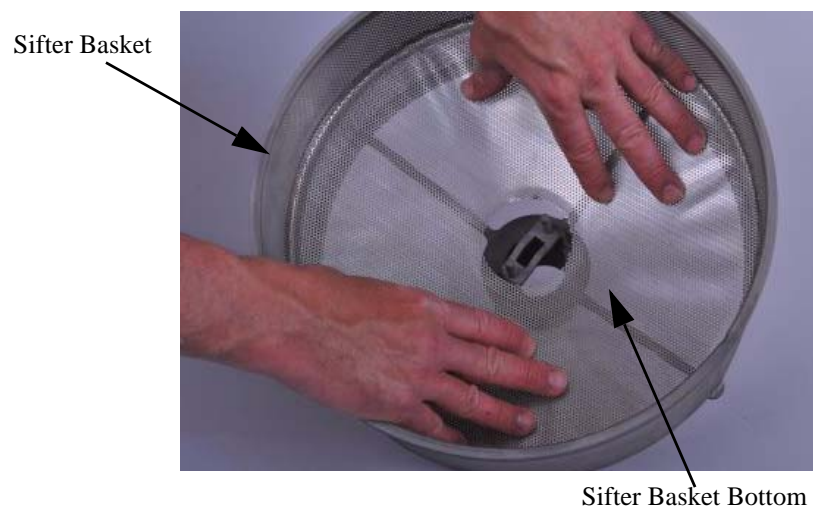


## INSTALLATION

**Step 1: Place the small bottom lugs and dough ball pan underneath the sifter box.**



**Step 2: Set the sifter basket bottom in place inside the sifter basket. Use fingers to gently press the sifter bottom completely down into the sifter basket.**





## INSTALLATION (CONTINUED)

### NOTICE

As you assemble the sifter assembly, apply a light coating of Bettcher® Max-Z-Lube lubricant on all parts which are subject to friction. You may also use petroleum jelly or cold shortening on all parts that are subject to friction.

Do not rotate sifter basket while connected to the operating rod. Such movement may loosen the counter balance weight (under cover).

**Step 3: Set flour divider in position over main bearing.**



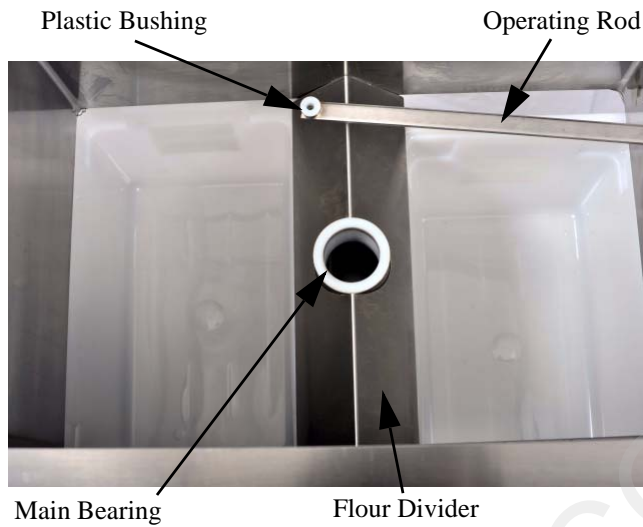
**Step 4: Lubricate the sifter basket hub using Bettcher® Max-Z-Lube. You may also use petroleum jelly or cold shortening on all parts that are subject to friction.**





## INSTALLATION (CONTINUED)

**Step 5: Place the sifter basket into the main bearing. Guide the sifter basket drive pin into the plastic bushing of the operating rod.**

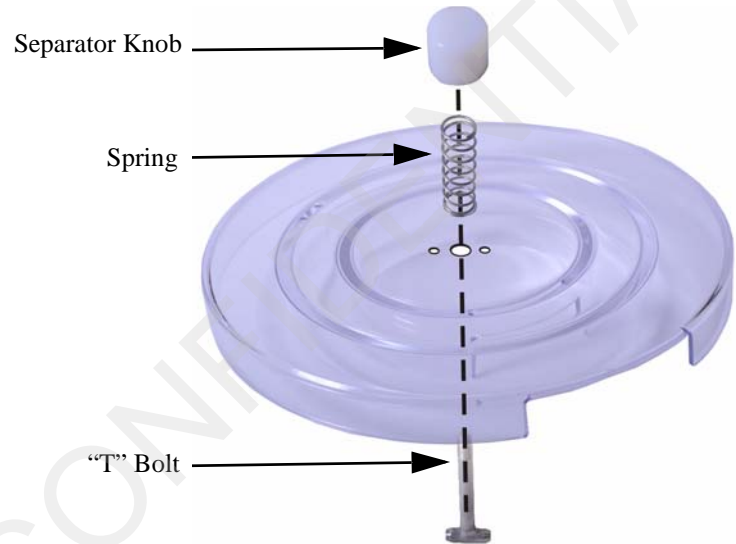




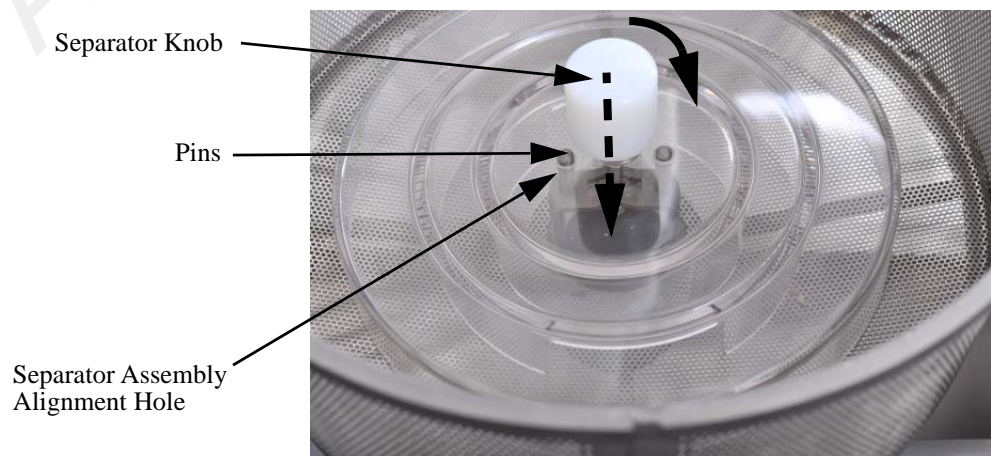


## INSTALLATION (CONTINUED)

**Step 6: Assemble the dough ball separator by inserting the “T” bolt through the bottom of the separator. Place the spring over the top of the “T” bolt then apply loctite 242 to threads on the “T” bolt. Thread the separator knob onto the “T” bolt.**



**Step 7: Place the separator assembly into the sifter basket by aligning the separator assembly alignment holes with the pins of the locking bracket located in the center of the sifter basket. Push the separator release knob completely down and turn it clockwise 90° to lock. Gently pull up on the separator release knob to make certain it is correctly in place.**







## INSTALLATION (CONTINUED)

**Step 8: Install the large top lug and the lug plug.**

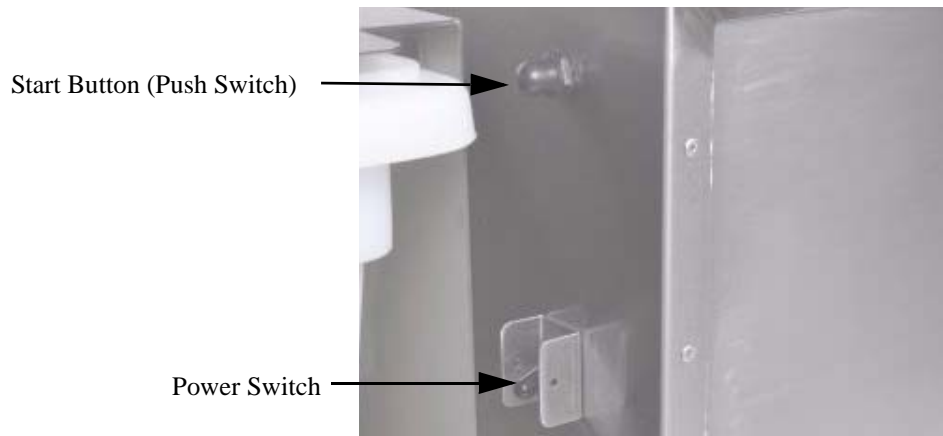


Large Top Lug With Plug



**Step 9: Adjust the feet.** For optimal operation, it is important to properly adjust the feet to evenly support the table. In all but the most extreme cases of unlevel floors, it is recommended that 3 of the feet are firmly adjusted to the shortest position (*turn counter-clockwise as viewed from the top*), with the 4th foot then adjusted until all four feet are firmly resting on the floor.

**Step 10: Test the sifter mechanism** by switching the power switch to the on position and pressing the start button. Visually verify that the machine is working correctly. *Note: You may turn the machine off at any time by turning the power switch to the off position.*



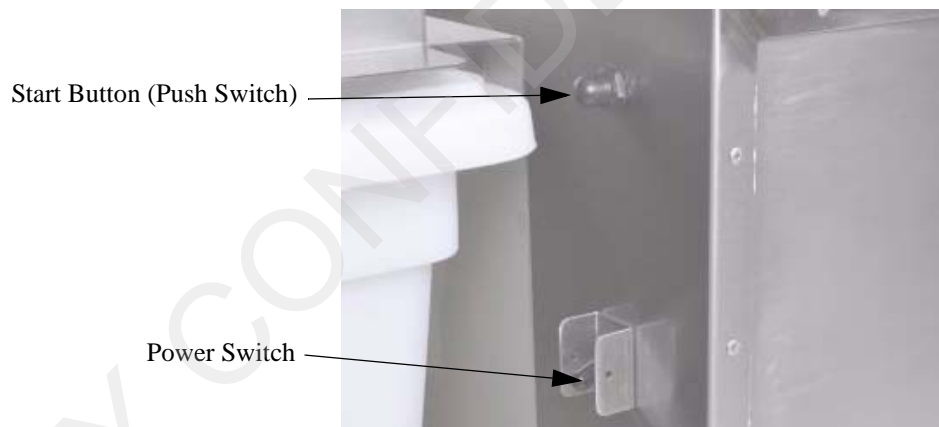


## INSTALLATION (CONTINUED)

### Timer

The DuraSift® features a solid-state timer. The timer automatically shuts the sifter action off at the end of the timed cycle. The sifter is pre-set to run for approximately 3 minutes.

- To continue with another cycle, press the start button again.
- If you wish to turn the machine off, you may turn the machine off with the power switch.



### Emergency Stop Switch

On machines equipped with an emergency stop switch:

This switch can be used to stop the machine at any time.

- To stop the machine
  - Push down on the emergency stop switch
- To reset the emergency stop switch
  - Turn stop switch in the direction of the arrows to release.



## DISASSEMBLY

**WARNING**

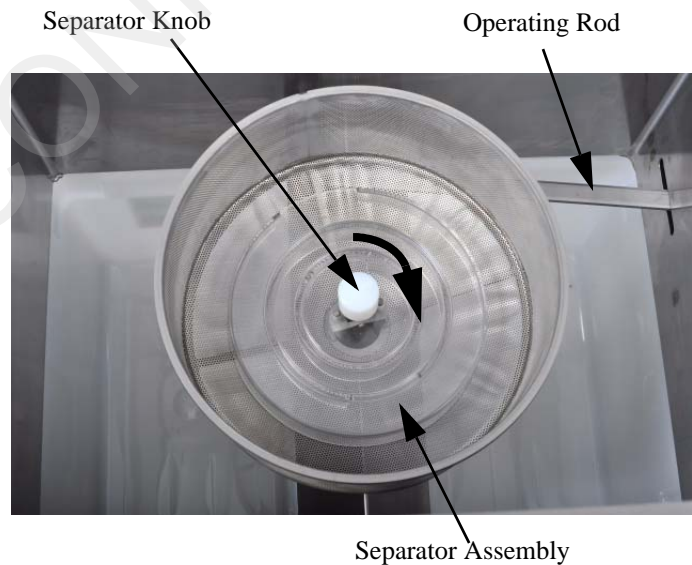
To avoid personal injury, always disconnect the power cord before performing any adjustments, disassembly / assembly, trouble shooting or cleaning.



**Step 1: Lift large top lug out of the table to access the sifter assembly.**

**Step 2: Press down on the separator release knob and turn clockwise 90°.**

**Step 3: Lift off separator assembly.**

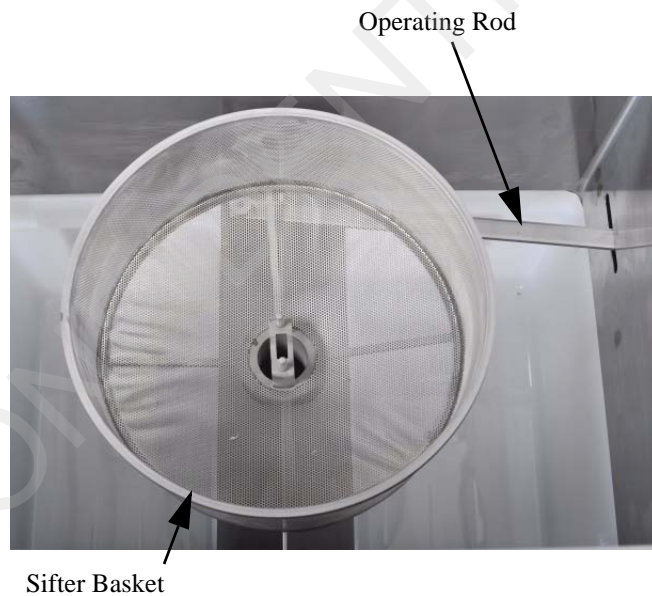




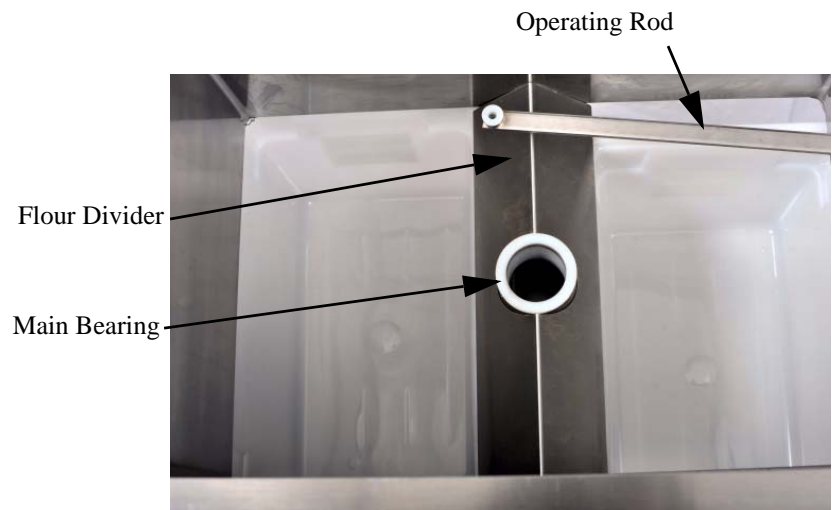
## DISASSEMBLY (CONTINUED)

**Step 4:** Using your right hand, reach under the sifter assembly from the top and find the operating rod.

**Step 5:** While holding the operating rod, pull the sifter basket straight up and out while steadying the operating rod in position.



**Step 6:** Lift out the flour divider.





## **DISASSEMBLY (CONTINUED)**

**Step 7: When the sifter basket is free of the sifter assembly, set the basket up-side-down on a clean flat surface. Lightly press down with finger tips on formed sifter bottom so that it will fall out of the basket.**





## CLEANING

**! WARNING**

To avoid personal injury, always disconnect the power cord before performing any adjustments, disassembly / assembly, trouble shooting or cleaning.



**! WARNING**

It is recommended that you clean and sanitize all parts of the DuraSift® sifter assembly at the end of each eight hour shift.

Thoroughly dry ALL of the sifter mechanism parts before reassembling.

**NOTICE**

The recommended cleaning solution for the DuraSift® is eXtra® Heavy Duty Cleaner.



eXtra® Heavy Duty Cleaner, (PN: 184332), is a concentrated cleaner and degreaser for food processing equipment. Contact Bettcher Industries, Inc. for details.

**NOTICE**

Do not submerge or directly spray frame and motor assembly. Damage could occur and may void the warranty. Clean with damp cloth or sponge only. Dry after cleaning.

**CLEANING (CONTINUED)**

**Step 1: Remove knobs to take off crank housing cover.**

**Step 2: Clean the flour from around the counter weight using a damp cloth.**

**Step 3: Re-install crank housing cover by placing it over the counter weight and re-installing the knobs.**

**NOTE**

*Machine will not operate with the crank housing cover open.*

**Step 4: Thoroughly clean ALL parts of the sifter assembly and sifter housing.**

**Step 5: After all the parts are clean, thoroughly dry them.**

**WARNING**

To avoid personal injury, do not attempt to open the crank housing cover while machine is in operation.







## SERVICE PARTS

When ordering parts, please include the following information with your request.

- Part number from parts list.
- Complete description of the part as given in the parts list.
- Model number and serial number of your machine.

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All maintenance procedures should be performed by qualified personnel.

### **WARNING**

Electrical components must be serviced by a qualified electrician



This product must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric shock. This product is equipped with a cord having an equipment grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

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Do not use an adapter with this product.





## SERVICE PARTS (CONTINUED)

 **WARNING**

To avoid personal injury, always disconnect the power cord before performing any adjustments, disassembly / assembly, trouble shooting or cleaning.



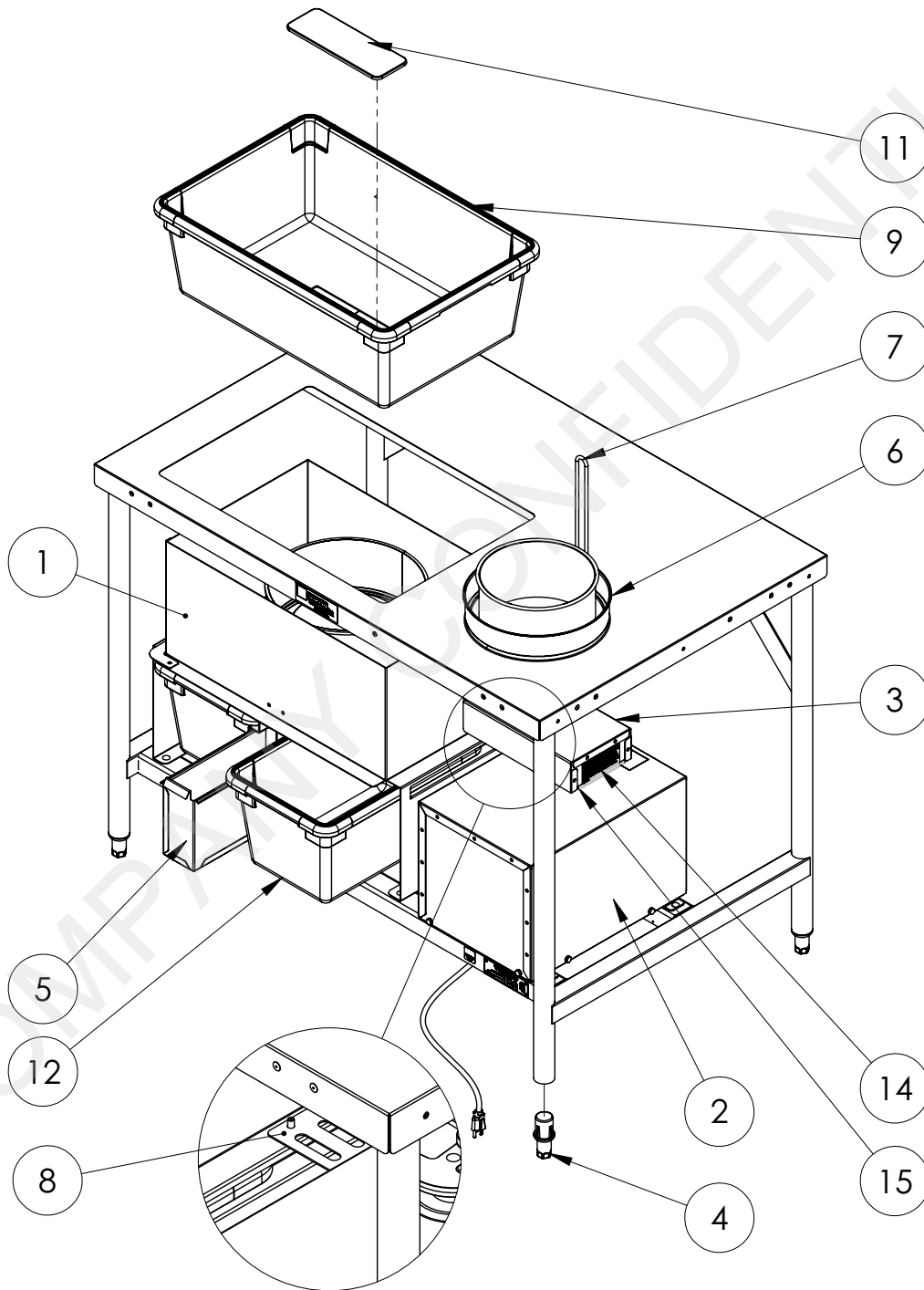
**NOTICE**

As you assemble the sifter assembly, apply a light coating of Triple B lubricant on all parts which are subject to friction. You may also use petroleum jelly or cold shortening on all parts that are subject to friction.

Do not rotate sifter basket while connected to the operating rod. Such movement may loosen the counter balance weight (under cover).



## EXTERNAL PARTS





# BETTCHER

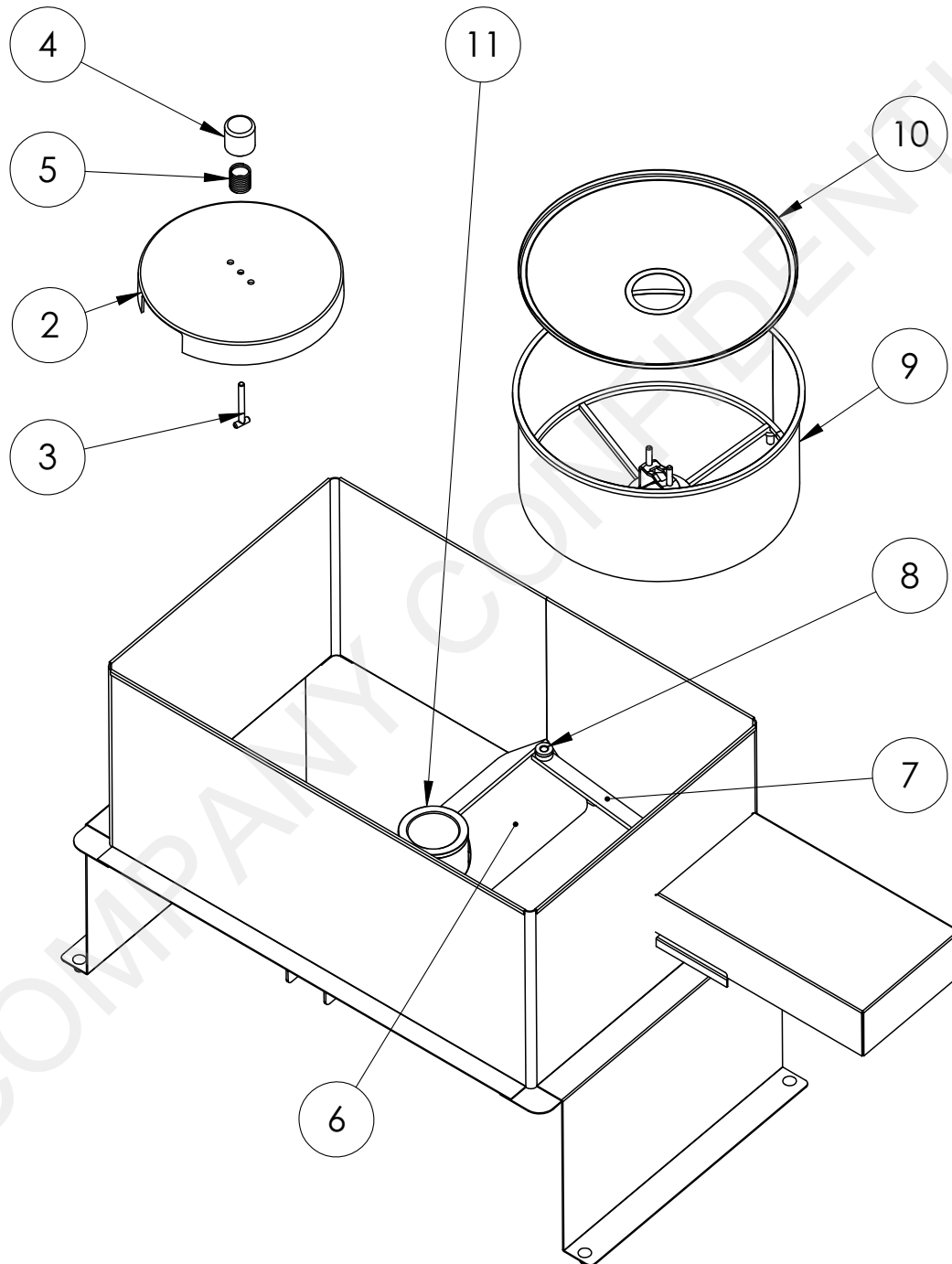
DuraSift® Breeder / Sifter Table

## EXTERNAL PARTS (CONTINUED)

ITEM	DESCRIPTION	PART NUMBER (115V)	PART NUMBER (230V)
1	SIFTER BOX	100014	100014
2	MOTOR COVER	100022	187211
3	CRANK HOUSING COVER	100033	100033
4	ADJUSTABLE FOOT	187071	187071
5	DOUGH BALL PAN	100177	100177
6	DIP BUCKET	187086	187086
7	DIP BASKET	187085	187085
8	BRACE, SLOTTED	100190	100190
9	LARGE TOP LUG	187012	187012
11	<b>LUG PLUG</b>	--	--
--	LUG PLUG, PLASTIC	187010	187010
--	LUG PLUG, STAINLESS STEEL	187011	187011
12	SMALL BOTTOM LUG	187013	187013
13	COVER, SMALL LUG (NOT SHOWN)	187066	187066
14	LABEL, MOVING PARTS	187032	187032
15	DAMPER, COUNTER WEIGHT COVER	187177	187177



## SIFTING MECHANISM





# BETTCHER

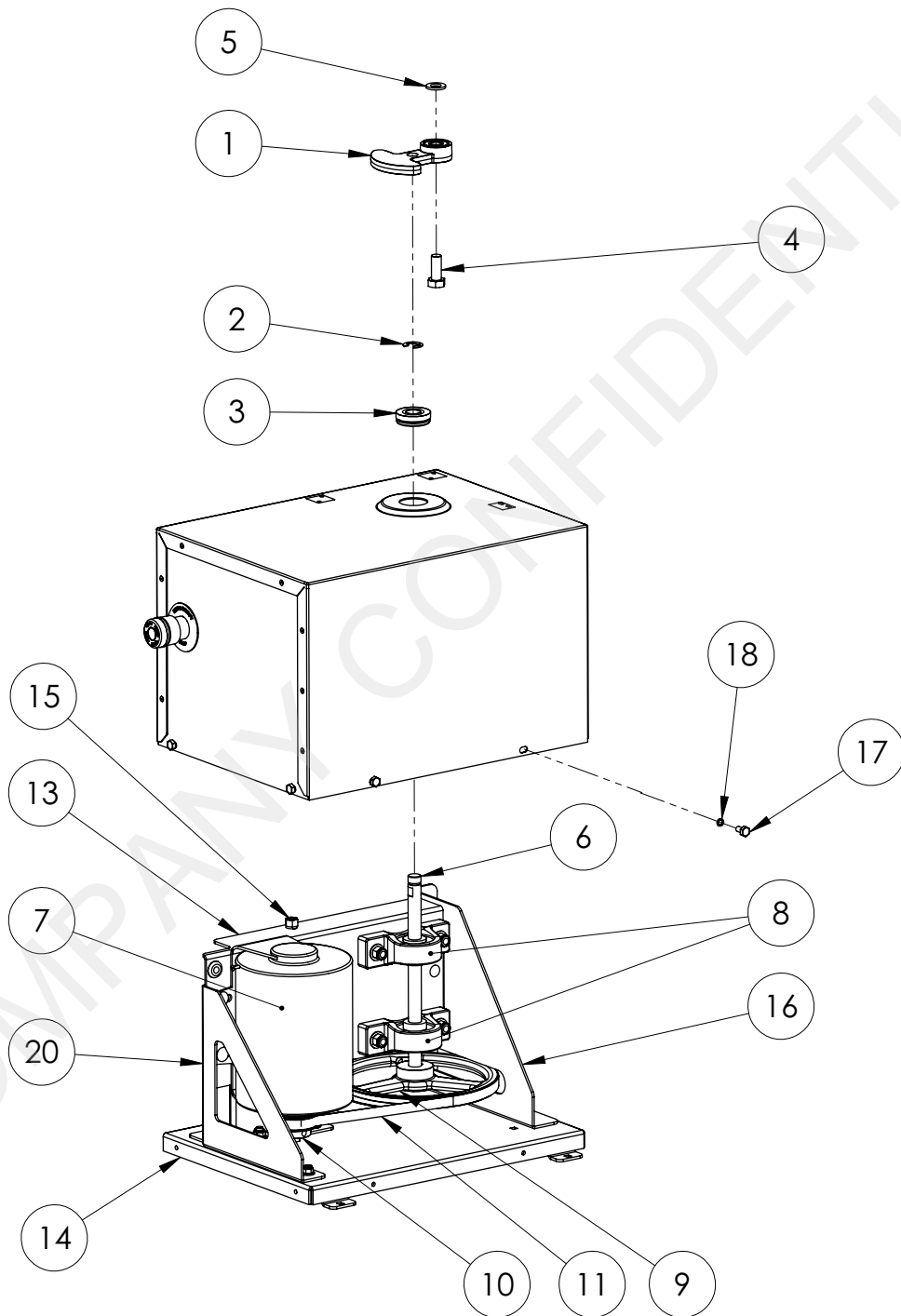
DuraSift® Breeder / Sifter Table

## SIFTING MECHANISM (CONTINUED)

ITEM	DESCRIPTION	PART NUMBER (115V)	PART NUMBER (230V)
1	SEPARATOR ASSEMBLY, COMPLETE (Includes items 2,3,4 and 5)	187002	187002
2	SEPARATOR	187068	187068
3	“T” BOLT	187069	187069
4	KNOB	187063	187063
5	SPRING	187070	187070
6	FLOUR DIVIDER	187008	187008
7	OPERATING ROD (W/BUSHING)	100178	100178
8	BUSHING, OPERATING ROD	187040	187040
9	BASKET	187007	187007
10	<b>BOTTOM, BASKET</b>	--	--
--	BOTTOM, BASKET (1/16” HOLES, REGULAR)	187014	187014
11	MAIN BEARING	187067	187067



## DRIVE ASSEMBLY

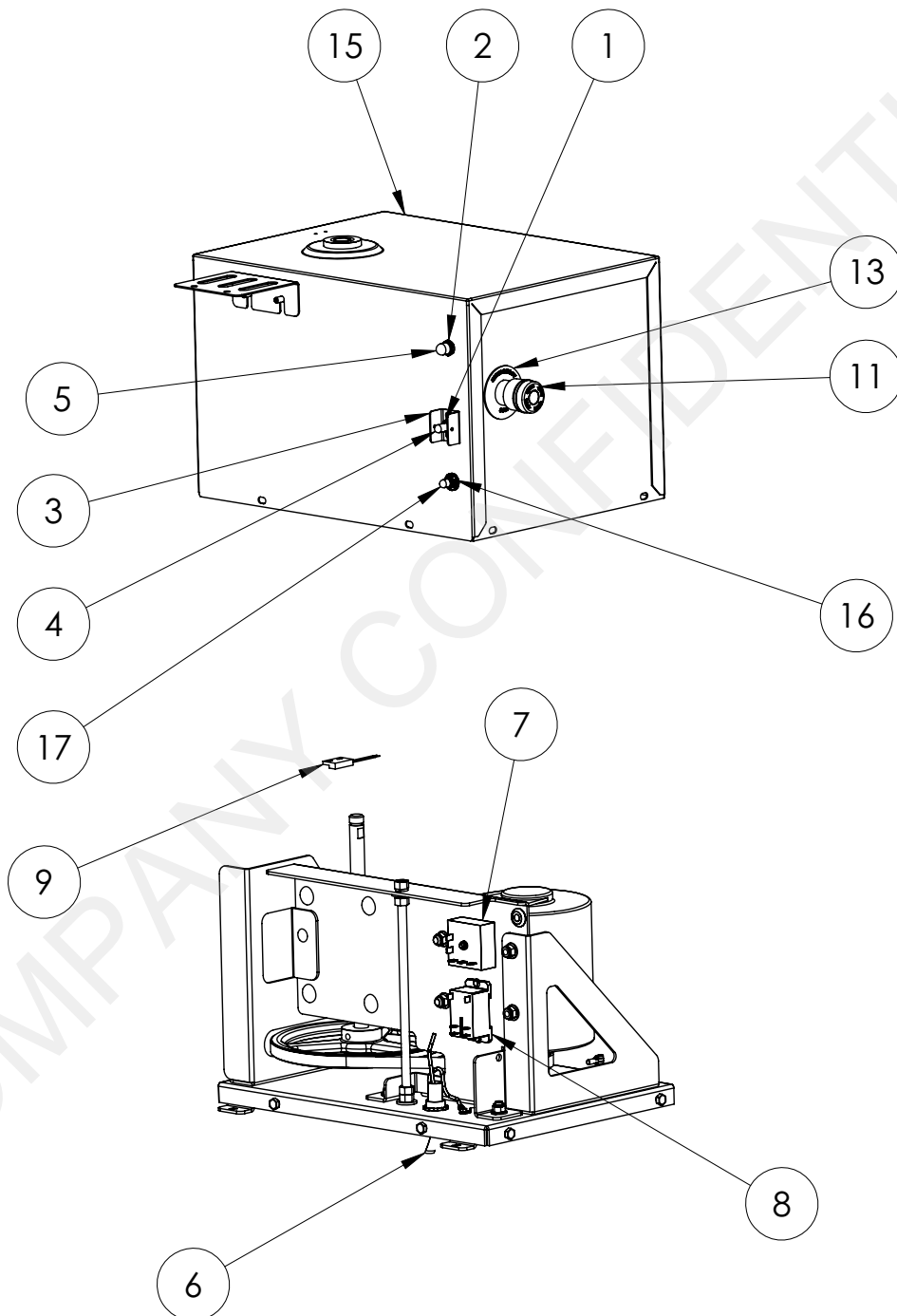


**DRIVE ASSEMBLY (CONTINUED)**

<b>ITEM</b>	<b>DESCRIPTION</b>	<b>PART NUMBER (115V)</b>	<b>PART NUMBER (230V)</b>
1	COUNTER WEIGHT (W/BEARINGS)	187155	187155
2	RING, RETAINING	122048	122048
3	SEAL, SHAFT	100183	100183
4	M12 X 30MM BOLT	187023	187023
5	M12 WASHER	152508	152508
6	SHAFT, EXTENDED WITH FLATS	100187	100187
7	MOTOR	187052	187053
8	PILLOW BLOCK BEARING	187054	187054
9	PULLEY 8"	187057	187057
10	PULLEY, MOTOR	187055	187056
11	V-BELT	187058	187058
12	3/16" KEY (NOT SHOWN)	117356	117356
13	FRAME, MOTOR MOUNT	100185	100185
14	BASE, MOTOR MOUNT	100186	100186
15	STUD, SUPPORT	102370	102370
16	BRACKET, RH	102540	102540
17	SCREW	121419	121419
18	WASHER	120220	120220
20	BRACKET, LH	102539	102539



## ELECTRICAL







## ELECTRICAL (CONTINUED)

ITEM	DESCRIPTION	PART NUMBER (115V)	PART NUMBER (230V)	PART NUMBER (115V) CANADA
1	SWITCH, TOGGLE	187045	187084	187045
2	SWITCH, PUSH	187046	187046	187046
3	SWITCH GUARD	187020	187020	187020
4	RUBBER BOOT (TOGGLE SWITCH)	187082	187082	187082
5	RUBBER BOOT (PUSH SWITCH)	187081	187081	187081
6	WIRING HARNESS (NOT SHOWN)	100188	100625	100188
7	TIMER	187044	187077	187044
8	RELAY	187133	187143	187133
9	SENSOR, INTERLOCK SWITCH	187135	187182	187135
10	ACTUATOR, INTERLOCK SWITCH (NOT SHOWN)	187141	187141	187141
11	E-STOP ACTUATOR	---	187213	---
12	E-STOP CONTACT BLOCK (NOT SHOWN)	---	187214	---
13	E-STOP LEGEND PLATE	---	187215	---
14	TAG, WIRING GUIDE (NOT SHOWN)	---	163591	---
15	COVER, MOTOR BOX	100022	101400	104288
16	ASSEMBLY, CIRCUIT BREAKER	---	---	104295
17	BOOT, SWITCH CLEAR	---	---	104412

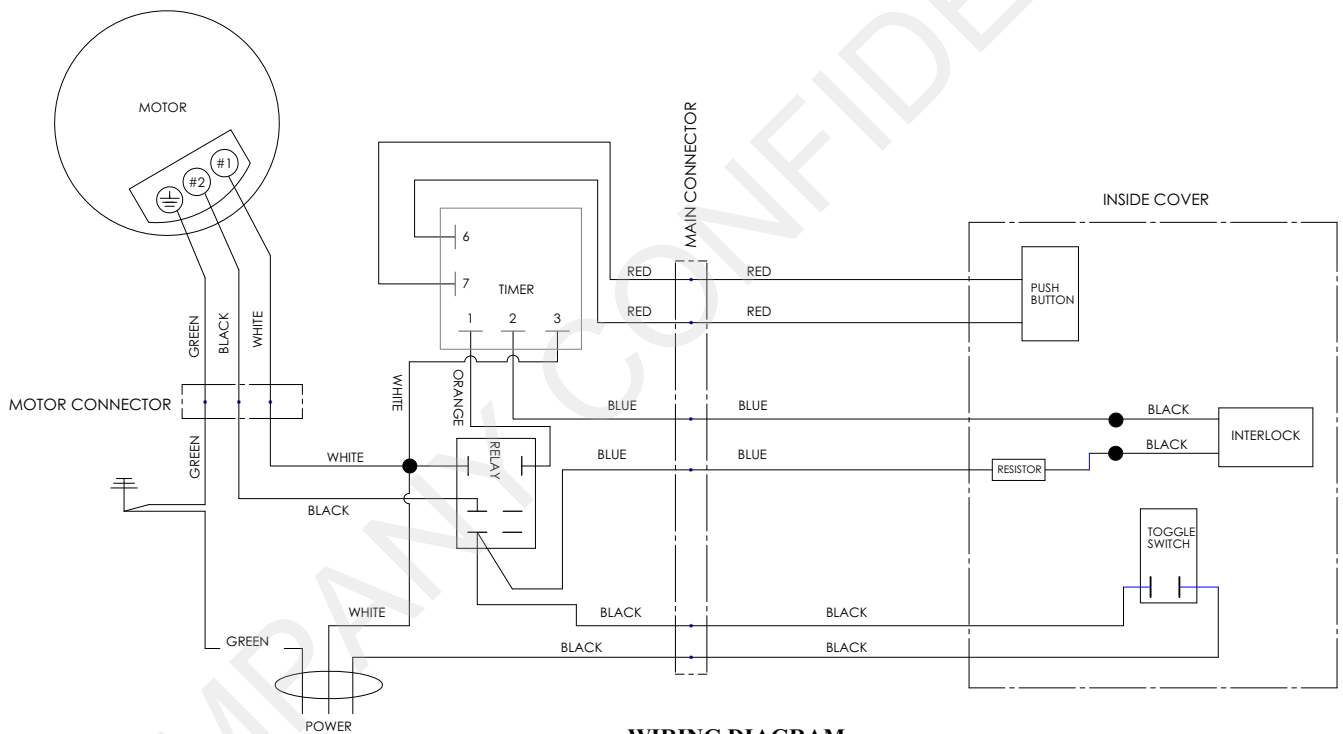


## OPTIONAL ITEMS

ITEM	DESCRIPTION	PART NUMBER
1	BETTCHER® MAX-Z-LUBE	184282
2	EXTRA© HEAVY DUTY CLEANER	184332



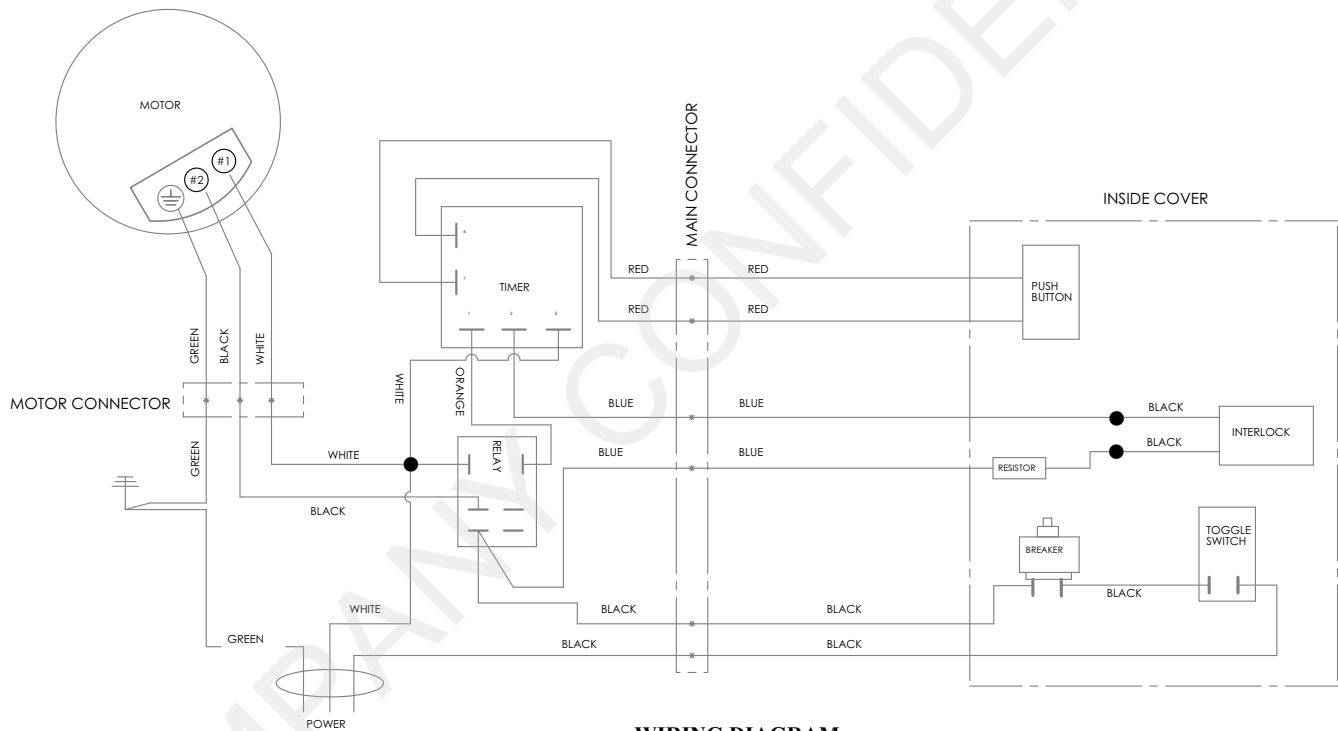
## SCHEMATICS - 115V



**WIRING DIAGRAM  
115V / 1PH / 60Hz**



## SCHEMATICS - 115V CANADIAN

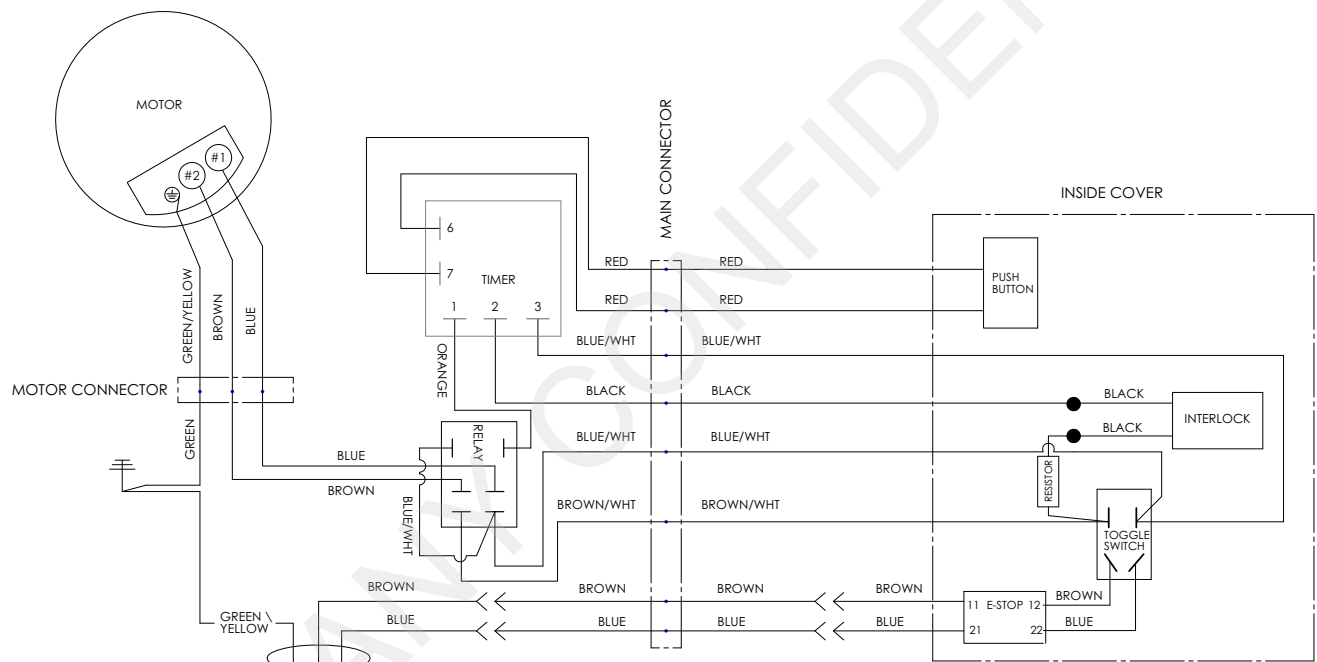


**WIRING DIAGRAM**  
**115V / 1PH / 60Hz**  
**CANADIAN**



## DuraSift® Breeder / Sifter Table

### SCHEMATICS - 230V



**WIRING DIAGRAM  
240V / 1PH / 50Hz / E-STOP**



# BETTCHER

*DuraSift® Breeder / Sifter Table*

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## CONTACT ADDRESS AND PHONE

For additional information, service providers, technical support and spare parts, contact your Regional Manager, Distributor, or Bettcher Industries Representative:

Bettcher Industries, Inc.  
P.O. Box 336  
Vermilion, Ohio 44089  
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Fax: +55 11 4083 2515

## DOCUMENT IDENTIFICATION

Copies of this Operation Instruction may be ordered by quoting the Document ID as listed below:

Document ID:	Manual # 100307
Document Description:	Operating Instructions and Spare Parts List for the DuraSift® Breeder / Sifter table
Issued:	June 5, 2012

## SOFTWARE AND DUPLICATION

For more information, contact your local Representative or:

Bettcher Industries, Inc.  
Administrative Assistant/Engineering Department  
P.O. Box 336  
Vermilion, Ohio 44089  
U.S.A.