

BLACK DIAMOND

INSTRUCTION MANUAL

BDPM-60

60 Qt. Planetary Mixer

This manual contains important information regarding your Black Diamond unit. Please read this manual thoroughly prior to equipment set-up, operation and maintenance. Failure to comply with regular maintenance guidelines outlined in this manual may void the warranty.

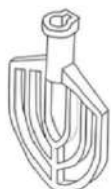
WARNINGS

- Do not immerse unit, cord or plug in liquid at any time
- Unplug cord from outlet when not in use and before cleaning
- Plug only into a 3-hole grounded electrical outlet of appropriate voltage
- Do not operate unattended
- Do not use this unit for anything other than intended use
- Do not use outdoors
- Always use on a firm, dry and level surface at least 12" from walls or any other obstruction
- Do not use if unit has a damaged cord or plug, in the event the appliance malfunctions, or has been damaged in any manner
- Keep children and animals away from unit
- Any incorrect installation, alterations, adjustments and/or improper maintenance can lead to property loss and injury. All repairs should be done by authorized professionals only
- Ensure that the designated power supply is adequate for continual usage
- Do not hose down mixer
- Do not operate with wet hands
- Unplug from the electrical supply prior to any maintenance or repairs

TO INSTALL:

1. Remove unit from box and make sure all plastic, tape and packing materials are removed.
2. Place the unit on a flat, secure surface with at least 12" of open space around all sides.
3. Check to make sure the outlet of the correct voltage for this item (220V) is near. Do not use an extension cord, this item must be plugged directly into an outlet.

STANDARD ACCESSORIES - This mixer comes with one of each of the following accessories:



Flat Beater



Dough Hook



Wire Whip



Mixing Bowl

When mixing always use the correct agitator for the job. To install agitator raise into the mixing axle and rotate clockwise on the shaft until it locks into place. To remove an agitator, raise it on the shaft until it clears the lock and rotate counterclockwise and lower. All of the accessories are fitted to the mixing bowl for precise use.

Flat Beater - Used for mixing dry ingredients and can work on all speeds. Do not run for more than 15 minutes.

Dough Hook - Used for mixing dough and can work in low and medium speeds only. Do not use on high speed. Do not run for more than 20 minutes.

Wire Whip - Used for mixing liquids and soft ingredients and can work in all speeds. Do not run for more than 15 minutes.

NOTE: Always stop the machine first before changing speeds in order to avoid damage to the unit's gears. Always ensure that the bowl is fully lifted and the wire guard is closed when in use.

- Slow speed is the middle setting (Dough hook setting with the knob facing forward)
- Medium speed is the bottom setting (Flat beater setting with the knob facing down)
- High speed is the top setting (Wire Whip setting with the knob facing up)

MIXER CAPACITY CHART

Product	Agitator	Speed	Max Bowl Capacity (60 qt)
Bread and roll dough - 60% AR *•◆	Dough hook	1st only	80 lbs
Heavy bread dough - 55% AR *•◆	Dough hook	1st only	70 lbs
Pasta Basic Egg Noodle	Dough hook		40 lbs
Pizza dough, thin - 40% AR *x•◆□	Dough hook	1st only	40 lbs
Pizza dough, medium - 50% AR *•◆□	Dough hook	1st only	70 lbs (1st)/35lbs (2nd)
Pizza dough, thick - 60% AR *•◆	Dough hook	1st only	70 lbs
Raised donut dough - 65% AR *◆	Dough hook	1st and 2nd	60 lbs
Mashed potatoes	Flat beater		40 lbs
Waffle or Hotcake batter	Flat beater		24 qts
Egg whites	Wire whip		2 qts
Meringue (Qty. of water)	Wire whip		1 3/4 qts
Whipped cream	Wire whip		12 qts
Fondant Icing	Flat Beater		36 lbs
Cake	Flat beater		60 lbs
Pie Dough	Flat beater		50 lbs

* **NOTE:** The mixer capacity depends on the moisture content of the dough. When mixing doughs (pizza, bread, or bagels) remember to check your AR%!

%AR (% Absorption Ratio) = Water weight divided by flour weight. The capacities listed in the chart above are based on flour at room temperature and 70 °F water temperature

x Maximum Mixing Time – 7 minutes

- If high gluten flour is used, reduce the batch size by 10%

- ◆ If using chilled flour, water below 70 °F, or ice, reduce batch size by 10%

- 2nd speed should never be used on 60% AR or lower with the exception of the BDPM-60. BDPM-60 requires a 50% reduction in batch size to mix in speed 2 with 50% AR doughs.

Helpful measurements for calculating the correct size mixer for your application

8.3 lbs = 1 gallon of water - 2.08 lbs = 1 Quart

NOTES:

- Do not use attachments on the #12 hub while mixing

TO USE:

1. Plug the unit into an outlet of the appropriate voltage.
2. With unit turned off insert the mixing bowl into the holder in the down position and align on the pins. Once bowl is securely aligned on pins, lock into place with the side clips.
3. Insert the desired **agitator** onto the mixing axle and turn to lock into place as directed on page 2.
4. Once the bowl and **agitator** are locked into place, add ingredients to the bowl and raise the bowl by pulling the bowl lift handle towards you until it hits its full raised position.
5. Adjust your speed setting for the correct application by turning the knob to the correct position as described on page 2.
6. Set the timer for the desired mixing time. The timer has two settings; turn the dial to the left for manual run or you can turn the dial to the right to a desired set time for mixing. Once the timer goes off the machine will shut down. The timer must be set to one of these settings or the machine will not operate.
7. With bowl in the fully raised position, the **agitator** locked into place and the correct speed setting selected, close the wire guard over the bowl, set the timer and press the green power button to start mixing. The wire guard must be closed fully for machine to operate.
8. Once mixing is completed, press the red stop button to stop the **agitator**.
9. Open the wire guard and lower the bowl to its lowest setting. If more mixing is needed repeat step 7.

NOTE: Always stop the machine before changing speeds.

Meat Grinder Attachment:

- The Meat Grinder should only be used for purposes intended
- Please remove bones, skins and any other foreign materials before grinding
- Meats and other food should be defrosted and not used when frozen
- For best results, cut the meat into smaller size pieces to fit easily through the feed tube
- If not in use, please remove the meat grinder attachment from the unit
- Do not run the grinder for longer periods of time then necessary

CLEANING - NOTE: To maintain cleanliness and increase service life, this item should be cleaned daily. Do not immerse the unit in water or any other liquid, if liquid enters the electrical compartment it may cause a short circuit or electrical shock.

1. Before cleaning or attempting to move this item always turn off and unplug.
2. Wipe the entire unit with a clean soft cloth until it is completely dry.
3. To avoid damage to the unit, do not use abrasive cleaners or scouring pads.
4. If soap or chemical cleaners are used, be sure they are completely rinsed away with clean water immediately after cleaning. Chemical residue could damage or corrode the surfaces of the unit.
5. After using of the machine, please remove the flat beater, dough hook, wire whip and meat grinder from the machine and wash these parts thoroughly in hot, soapy water to prevent the growth of bacteria.
6. When clean and maintain the inside of the protective cover and swivel mount, please loosen the screw around the protective cover and take off the protective cover. If there is no sign of oil leak, no need to take off the swivel mount. Clean the swivel mount with a wet cloth, the protective cover can be cleaned by detergent and washed under the water supply tap. After washing by clean water, use dry cloth to wipe out the water and make it dry.

To avoid serious injury or damage, never attempt to repair or replace a damaged power cord yourself. Contact a professional repair service.

TO REMOVE GUIDE RAIL DUST GUARD PLATE FOR REGULAR CLEANING:

1. Rotate wheel to release bowl to the lowest position
2. Loosen screws on both sides of the guide rail dust guard plate
3. Remove the guide rail dust guard plate to clean, and ensure to clean inside the hole.
(Note: If screws are loosened manually, it is not necessary to remove the handwheel. If a power tool is used, the handwheel must be removed first)

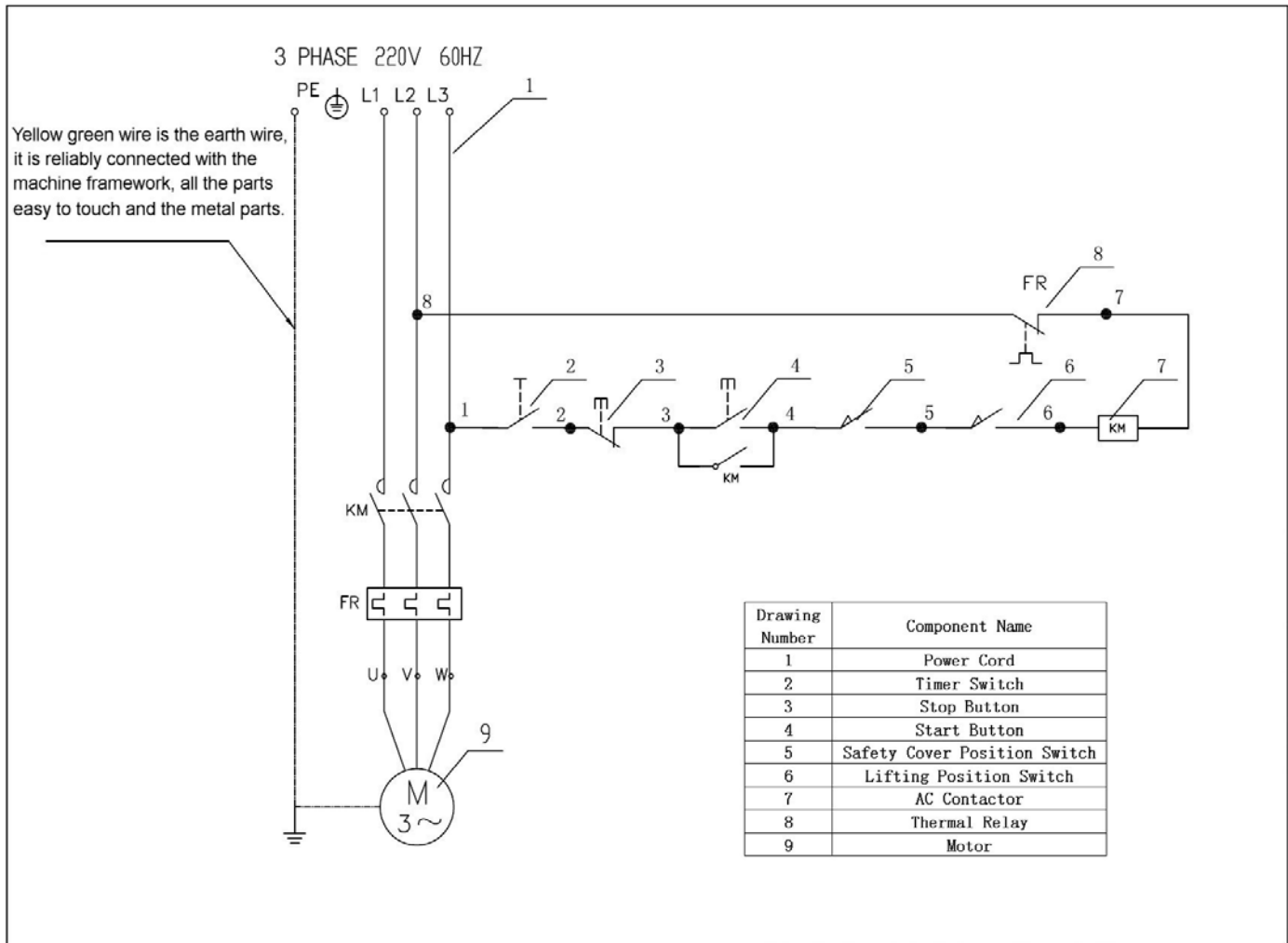
Net Weight: 661.5 lbs (300 KGS)

Dimensions: 30.5"x 26" x 52" (770 x 660 x 1315 mm)

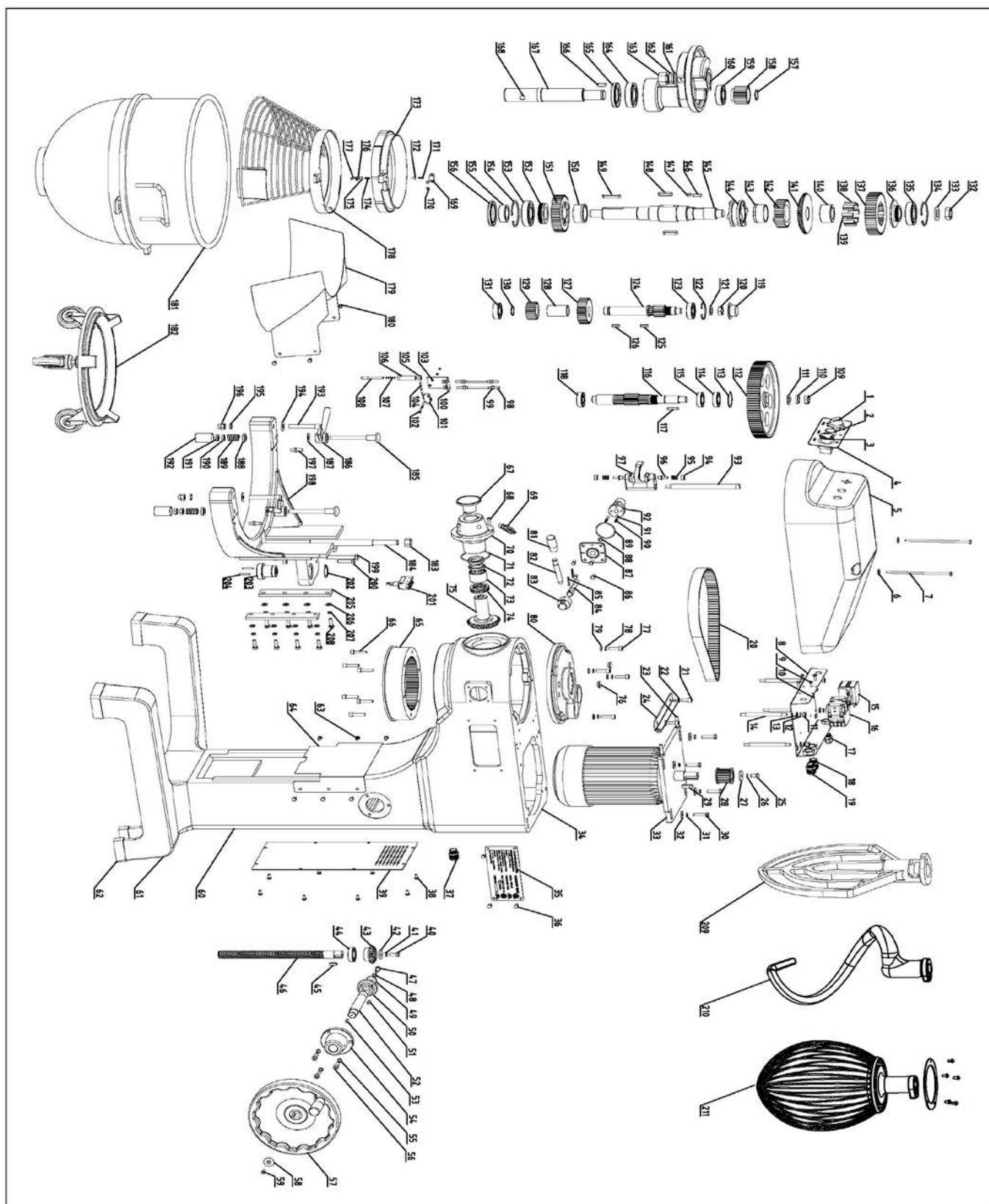
TROUBLESHOOTING

Problem	Possible Causes	Solution
The axles don't work when operating the machine	Electrical connection is not good	Check the plug in the outlet
Leaking oil	Oil gaskets are worn out or damaged	Replace the oil gasket(s)
Difficult to raise or lower the bowl	Either the slideway is corroded, or the lead screw, bevel gear or hand wheel shaft is dried out	Clean and oil the dried out parts
Motor is overheating and speed has decreased	The voltage is not enough, incorrect speed is set or there is too much food in the bowl	Check the voltage or adjust the speed to a better setting. If the bowl is overloaded, remove some of the food to lighten the load
Item is making too much noise and overheating	Poor lubrication	Add or replace oil
Agitator touches bowl	Either the bowl or agitator is deformed	Repair or replace deformed part
Mixing bowl is out of position	Moving direction is not correct	Adjust position

Wiring Diagram for the Planetary Mixer



Parts Diagram and Replacement Parts for the Planetary Mixer



Replacement Parts for the Planetary Mixer

Drawing Number	Part Description
1	Timer
2	Start Button
3	Stop Button
4	Switch Panel
5	Convex Upper Cover
6	Large Flat Washer
7	Hex Bolt
8	Electrical Base Board
9	Cross Recessed Pan Head Screw
10	Hex Nut
11	Hex Nut
12	Spring Washer
13	Flat Washer
14	Electrical Base Board Fixed Rod
15	Thermal Relay
16	AC Contactor
17	Power Line Sheath
18	Power Line Sheath
19	Power Line Sheath
20	Synchronous Belt
21	Inner Hexagon Screw
22	Loose Rib
23	Hex Bolt
24	Motor Adjusting Base
25	Hex Bolt
26	Spring Washer
27	Motor Shaft Circlip
28	Motor Pulley
29	Flat Key
30	Hex Bolt
31	Spring Washer
32	Large Flat Washer
33	Motor
34	Casing
35	Data Plate
36	Hex Bolt
37	Power Line Sheath
38	Hex Bolt
39	Rear Cover Plate
40	Hex Bolt
41	Spring Washer
42	Bevel Gear Circlip
43	Lifting Bevel Gear
44	Rolling Bearing
45	Flat Key
46	Lifting Screw Arbor
47	Hex Bolt
48	Spring Washer
49	Bevel Gear Circlip
50	Lifting Bevel Gear

Drawing Number	Part Description
51	Flat Key
52	Handwheel Shaft
53	Flat Key
54	Handwheel Shaft Fixing Base
55	Spring Washer
56	Inner Hexagon Screw
57	Elevating Handwheel
58	Shaft Circlip
59	Cross Recessed Countersunk Head Screw
60	Support Pillar
61	Base
62	Podotheca
63	Hex Bolt
64	Guide Rail Dust Guard Plate
65	Annular Gear
66	Inner Hexagon Screw
67	Front Cover
68	Inner Hexagon Screw
69	Locking Screw
70	Bevel Gear Base
71	O Ring
72	Oil Seal
73	Needle Roller Bearing Without Inner Ring
74	Plane Bearing
75	Passive Bevel Gear
76	Bearing Base Oil Hole Cover
77	Inner Hexagon Screw
78	Spring Washer
79	Loose Rib
80	Bearing Base
81	Handle Sleeve
82	Variable Speed Handle
83	Variable Speed Handle Base
84	Variable Speed Mandrel
85	Elastic Cylindrical Pin
86	Hex Bolt
87	Variable Speed Base
88	O Ring
89	O Ring
90	Position Limit Spring
91	Steel Ball
92	Eccentric Bushing
93	Shifting Fork Guide Rod
94	Shifting Fork Nut
95	Shifting Fork Spring
96	Shifting Fork Top Latch
97	Shifting Fork
98	Double-screw Bolt
99	Hex Nut
100	Protective Shield Position Switch Base

Replacement Parts for the Planetary Mixer

Drawing Number	Part Description
101	Position Switch
102	Cross Recessed Pan Head Screw
103	Hex Nut
104	Splitpin
105	Contact Terminal
106	Carrier Rod Base
107	Carrier Rod Spring
108	Carrier Rod
109	Hex Thin Nut
110	Spring Washer
111	Loose Rib
112	Passive Belt Wheel
113	Circlip For Hole
114	Rolling Bearing
115	Rolling Bearing
116	Input Shaft
117	Flat Key
118	Rolling Bearing
119	Bridge Shaft Dust Proof Cover
120	Hex Thin Nut
121	Small Flat Washer
122	Circlip For Hole
123	Rolling Bearing
124	Bridge Shaft
125	Flat Key
126	Flat Key
127	Bridge Shaft Big Gear
128	Bridge Shaft Sleeve
129	Bridge Shaft Small Gear
130	Shaft Circlip
131	Rolling Bearing
132	Hex Thin Nut
133	Loose Rib
134	Circlip For Hole
135	Rolling Bearing
136	Ratchet Upper Cover
137	External Star Wheel
138	Roller
139	Roller Spring
140	Clutch Inner Ring
141	Driving Bevel Gear
142	Upper Coupling Gear
143	Output Shaft Gear Sleeve
144	Clutch
145	Output Shaft
146	Flat Key
147	Flat Key
148	Flat Key
149	Flat Key
150	Output Shaft Gear Sleeve

Drawing Number	Part Description
151	Lower Coupling Gear
152	Upper Sleeve For Bearing
153	Rolling Bearing
154	Circlip For Hole
155	Lower Sleeve For Bearing
156	Oil Seal
157	Shaft Circlip
158	Planetary Gear
159	Rolling Bearing
160	Swivel Mount
161	Flat Washer
162	Spring Washer
163	Hex Nut
164	Rolling Bearing
165	Oil Seal
166	Flat Key
167	Planetary Shaft
168	Taper Pin
169	Position Limiting Seat
170	Cross Recessed Pan Head Screw
171	Position Limiting Spring
172	Position Limiting Pin
173	Movable Cover Base
174	Position Limiting Spring
175	Position Limiting Pin
176	Position Limiting Pin Guard
177	Cross Recessed Countersunk Head Screw
178	Movable Shield
179	Fixed Shield
180	Hex Bolt
181	Bowl
182	Bowl Trolley
183	Hex Nut
184	Bowl Tight Pressing Shaft
185	Handle Core Shaft
186	Bowl Tight Pressing Handle
187	Pin Shaft Washer
188	Decorative Sheath Bushing
189	Core Shaft Spring
190	Hex Thin Nut
191	Hex Thin Nut
192	Decorative Sheath
193	Bowl Locating Pin
194	Pin Shaft Washer
195	Spring Washer
196	Cap Nut
197	Handle Lever
198	Bowl Base
199	Hex Bolt
200	Hex Bolt

Replacement Parts for the Planetary Mixer

Drawing Number	Part Description
201	Position Switch
202	Shaft Circlip
203	Lifting Nut
204	Elastic Cylindrical Pin
205	Pressplate
206	Flat Washer
207	Spring Washer
208	Hex Bolt
209	Beater
210	Hook
211	Whip

ACE Equipment One Year Limited Warranty

ACE warrants its equipment against defects in materials and workmanship, subject to the following conditions:

ACE Equipment is warranted for one year, effective from the date of purchase by the original owner. A copy of the original receipt or other proof of purchase is required to obtain warranty coverage. This warranty applies to the original owner only, and is not assignable.

Should any product fail to function in its intended manner under normal use within the limits defined in this warranty, at ACE's discretion, such product will be repaired, replaced with a refurbished unit, or replaced with a new unit by ACE, after defective unit has been inspected and defect has been confirmed. ACE does not assume any liability for extended delays in replacing any item beyond its control. This warranty does not apply to rubber and non-metallic synthetic parts that may need to be replaced due to normal usage, wear or lack of preventative maintenance.

This warranty covers products shipped into the 48 contiguous United States. Warranty coverage on products used outside the 48 contiguous United States, Hawaii, Alaska, Puerto Rico, and Canada, cover parts only.

The following conditions are not covered by warranty:

- Equipment failure relating to improper installation, improper utility connection or supply and problems due to improper ventilation.
- Equipment that has not properly been maintained, damage from improper cleaning, and water damage to controls.
- Equipment that has not been used in an appropriate manner, or has been subject to misuse, neglect, abuse, accident, alteration, negligence, damage during transit, delivery or installation, fire, flood, riot, or act of God.
- Equipment that has the model number or serial number removed or altered.
- Equipment on which the security seal has been broken.

If the equipment has been changed, altered, modified, or repaired without express written permission from ACE, then the manufacturer shall not be liable for any damages to any person or to any property, which may result from the use of this equipment thereafter.

This equipment is intended for commercial use only and this warranty is void if equipment is used in other than a commercial application.

For warranty and non-warranty related issues, technical support, please contact NSA at 1-877-672-7740. To purchase replacement parts and warranty registration visit www.admiralcraft.com. Please have your model number, serial number and proof of purchase ready. It is not necessary to contact the place where you originally purchased your product from.

"THE FOREGOING WARRANTY IS IN LIEU OF ANY AND ALL WARRANTIES EXPRESSED OR IMPLIED INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSES AND CONSTITUTES THE ENTIRE LIABILITY OF ACE. IN NO EVENT DOES THE LIMITED WARRANTY EXTEND BEYOND THE TERMS STATED HEREIN."

WARRANTY REGISTRATION CARD

MAIL CARD IMMEDIATELY



This card must be mailed immediately after installation date for warranty to be in effect.

National Service America • 230 Park Ave, 3rd Floor WEST • New York, NY • 10169

(Name of Business)

(Dealer Purchased From)

(Address)

(City)

(State)

(Zip Code)

(Model Number)

(Serial Number)

This is to inform that I, _____
(Please print name of individual who owns business)

have had the above installed in my place of business _____
(Date of Purchase)

(Contact Phone Number)

(Contact E-mail)

(Signature of Individual Who Owns Business)

The above warranties are in effect from this installation date, or 90 days, whichever comes first.