



SENTINEL™

Planetary Mixer Instruction Manual



HLM-20C

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Pack Contents

The following is included:

- Food Mixer
- Spiral Dough Hook
- Whisk
- Mixing Bowl
- Beater
- Instruction Manual

General Description

Your new HLM-20C Planetary Mixer is a changing speed gear mixer with a three speed motor and a non-rotation bowl.

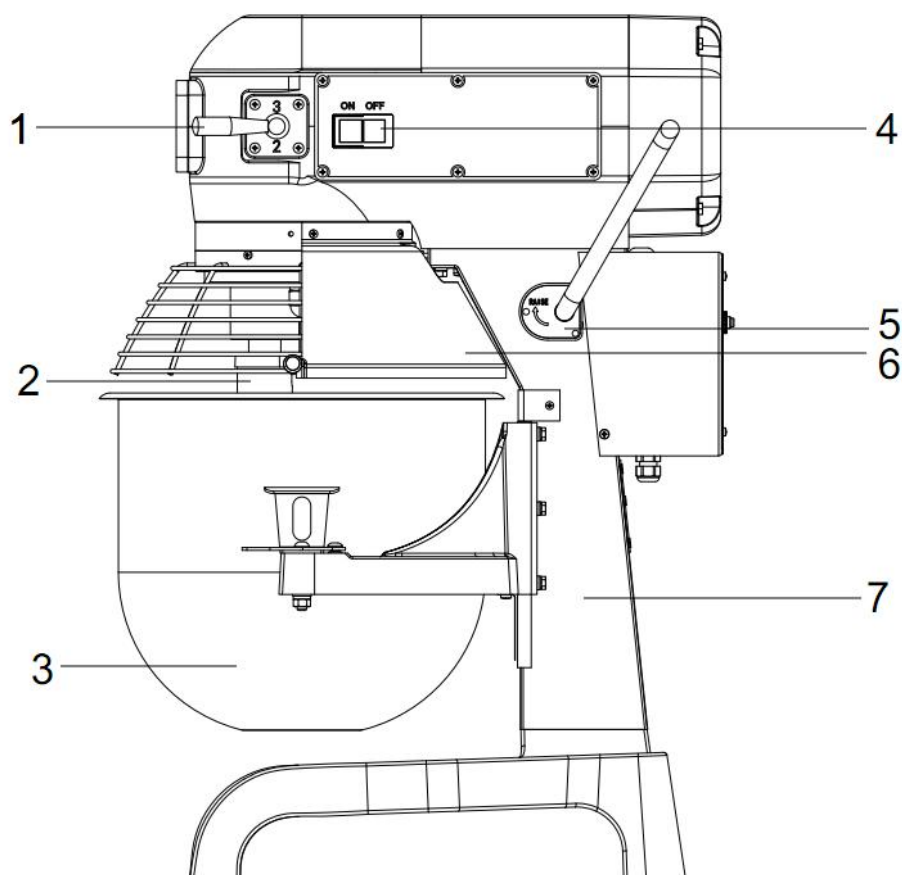
Planetary mixers are an excellent choice for general purpose kitchens, bakeries and pizzerias.

This type of mixer is great for blending ingredients and kneading dough, and with the addition of appropriate attachments is capable of chopping meat, grating cheese and whipping light meringues.

Technical Parameters

Name	Power (KW)	Weight (lbs)	Speed of Stirring Shaft (r/min)			Overall Dimensions (inch)
			1st Speed	2nd Speed	3rd Speed	
HLM-20C	1.1	212	108	195	355	25" x 23" x 37"

Main External Parts of Mixer



- 1 Gear-change Hand Lever
- 2 Stirring Shaft
- 3 Stainless Steel Bowl
- 4 Power Switch
- 5 Bowl-lift Handle
- 6 Safety guard
- 7 Support

Operating Instructions

- ① Standard power supply - 110 v/ 60 Hz Ac. (Please use a plug with 3 wide contacts and good grounding.)
- ② Installation of mixer: Put the stirring shaft 2 in Mixer 3 and rotate it in clockwise direction.
- ③ Starting procedures: Pull the gear change hand lever 1 to position 1 before starting, then turn on the power switch 5 and set the speed required. After the mixer is in normal operation, pull the hand lever 6 to the highest point and lift the support 7 to the highest position.
- ④ Speed transformation: If you want to change speed, please turn off the power switch first, and then pull the gear change hand lever 1 to the position required.
- ⑤ Shutting down: when the operation is complete, turn off the power switch first, then pull the gear change hand lever 1 to position 1, and pull back the hand lever 6 to the lowest point and finally disconnect power supply.

Accessories and Functions

- ① Whisk: Used for stirring of liquids, such as cream and egg. Recommended speed: mid or high speed.
- ② Beater: Used for stirring batters, such as stuffing and cake dough. Recommended speed: start with low speed, end with mid speed.
- ③ Spiral dough hook: Used for making dough. Recommended speed: low speed.
- ④ Mixing Bowl

Operating Instructions

- ① The outlet must be provided with a ground wire to guarantee the mixer's grounding through it. Electric shock could occur if the ground wire is improperly mounted.
- ② Never put your hands or fingers into the bowl during operation, serious injury could occur. Power supply should be disconnected before working with the bowl.
- ③ Don't operate the mixer beyond the time limit to prevent reduction of its service life.
- ④ The mixer should be mounted in a stable and clean place. Keep it away from hot or wet environments.
- ⑤ Clean mixer after each use. Disconnect power supply before cleaning. Clean it with a piece of soft, damp cloth. Don't clean it with liquid or spraying detergent.

Maintenance

The entire mixer, including removable parts, must be thoroughly cleaned and sanitized using the procedures identified by your local health department.

Clean the bowl and attachments after each use to keep mixer functioning properly. Never use a scrubber pad, steel wool, or abrasive material to clean the mixer.

Hand wash using mild soap and water, rinse, dry and sanitize. The bowl can also be placed in the dishwasher.

The transmission gear box is lubricated in the factory. Check the gearbox lubrication every 6 months. To add or refill grease, open the top cover, then fill grease from aperture or replace the grease directly.

 **DO NOT IMMERSE MACHINE INTO WATER!**

Troubleshooting

Problems	Causes	Solutions
Tool shaft does not rotate after starting the machine	Loose electric wiring	Check electric wiring, plug and cord
Oil leakage	The seal rings are worn out	Replace seal rings
Motor temperature raised while reduced output speed	Too low voltage	Check the power supply
	Overloaded	Reduce load
	The speed of mixing is too high or you may be using the wrong attachment.	Select a suitable speed and attachment
The attachments hit the bowl	The attachment or bowl may be damaged	Repair or replace the attachment or bowl
Noise or high temperature from gearbox	Insufficient lubrication	Add or replace the grease

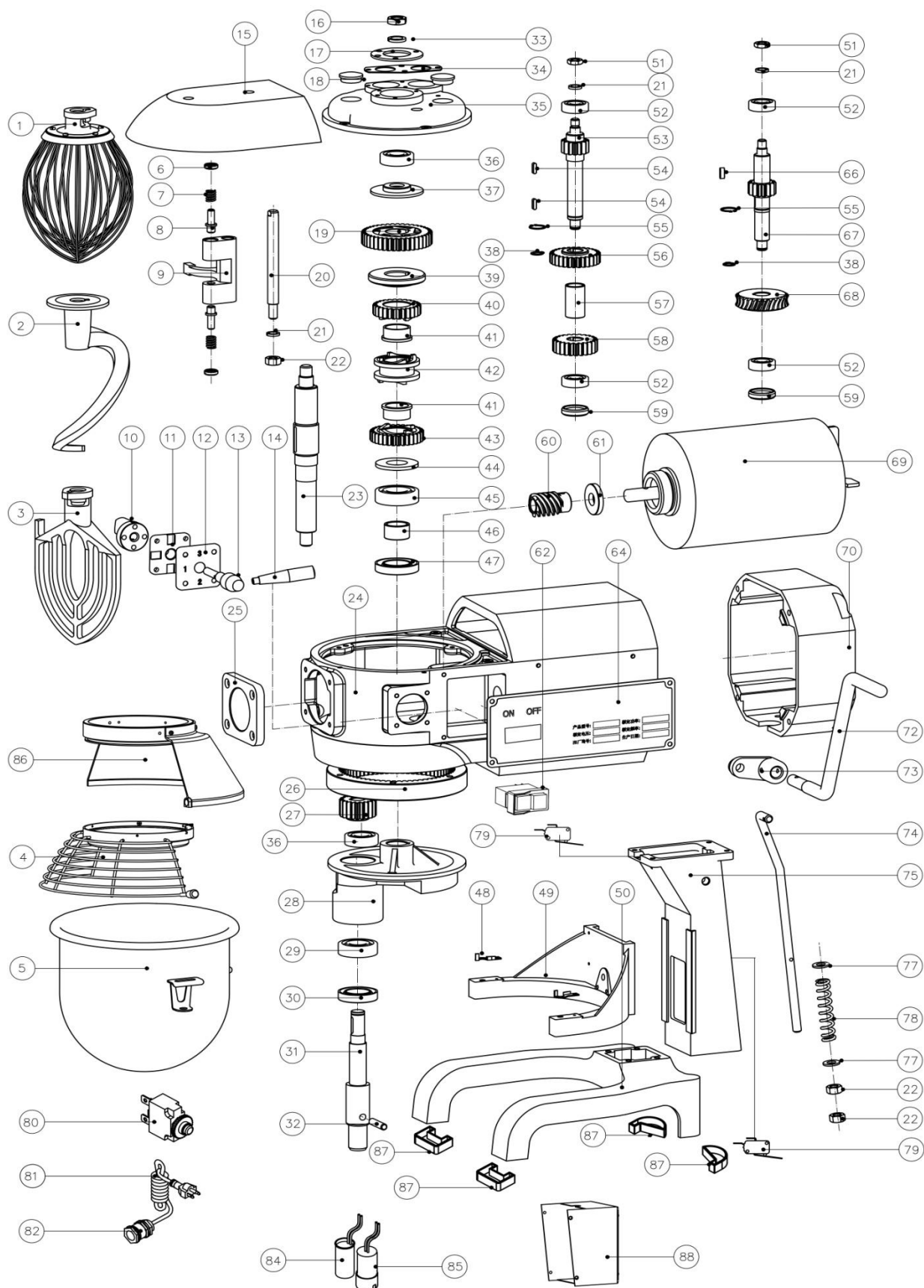
Warning!

- If the equipment is not functioning properly, it should be serviced by an authorized service agent only.
- Persons under 18 years of age are not permitted to operate
- Read all instructions and safety warnings prior to operating
- Keep hands and fingers away from the bowl while in operation
- Do not attempt to clear/clean or adjust attachments without shutting off the power and disconnecting the power cord.
- Do not operate without the bowl in place.

Parts List for HLM-20C

SER.NO.	PART.NO.	PART NAME	SER.NO.	PART.NO.	PART NAME
1	20-1	Wire whip	43	20-43	Gear
2	20-2	Spiral dough hook	44	20-44	Gasket
3	20-3	Flat Beater	45	30-26	Bearing
4	20-4	Safety guard	46	20-46	Bushing
5	20-5	Bowl assembly	47	20-47	Oil seal
6	30-7	Adjusting screw	48	20-48	Fore lump
7	30-8	Spring	49	20-49	Support
8	30-9	Fork pin	50	20-50	Base
9	20-9	Shifting yoke	51	20-51	Nut
10	30-11	Eccentric mounting	52	20-52	Bearing
11	30-12	Handle seat	53	20-53	Gear shaft
12	20-12	Handle seat cover	54	20-54	Flat key
13	20-13	Handle spindle	55	20-55	Circlip for shaft
14	20-14	Speed handle	56	20-56	Gear
15	20-15	Gear-case gland	57	20-57	Bushing
16	20-16	Nut	58	20-58	Gear
17	20-17	Pressing plate	59	20-59	Cap
18	30-35	Rubber cover	60	20-60	Worm
19	20-19	Super machine parts	61	20-61	Oil seal
20	20-20	Declutch shift shaft	62	20-62	ON-OFF switch
21	20-21	Spring washer	64	20-64	Brand
22	20-22	Nut	66	20-66	Flat key
23	20-23	Main shaft	67	20-67	Worm gear shaft
24	20-24	Gear + Motor box	68	20-68	Worm gear
25	20-25	End cap	69	20-69	110V/60Hz Motor (with tool)
26	20-26	Inner gear	70	20-70	Back housing
27	20-27	Planet gear	72	20-72	Handle
28	20-28	Moving frame	73	20-73	Crank lever
29	30-36	Bearing	74	20-74	Connecting rod
30	20-30	Oil seal	75	20-75	Stud
31	20-31	Working shaft	77	20-77	Flat washer
32	20-32	Retainer pin	78	20-78	Compression spring
33	20-33	Spring washer	79	20-79	Micro switch
34	20-34	Pressing plate	80	20-80	Overload switch
35	20-35	Transmission shaft support	81	20-81	Power cord
36	30-53	Bearing	82	20-82	Waterproof Joint
37	20-37	Cap for main shaft	84	20-84	Capacitor 1 (running capacitor)
38	20-38	Circlip for shaft	85	20-85	Capacitor 2 (starting capacitor)
39	20-39	Ring gasket	86	20-86	Back guard
40	20-40	Gear	87	20-87	Rubber feet
41	30-40	Gear shaft sleeve	88	20-88	Electricity box
42	20-42	Claw clutch			

Parts List for HLM-20C



Proper Disposal

To help prevent possible harm to human health and/or the environment, the product must be disposed of in an approved and environmentally safe recycling process. For further information on how to dispose of this product correctly, contact the product supplier, or the local authority responsible for waste disposal in your area.



Parts have undergone strict product testing in order to comply with regulatory standards and specifications set by international, independent, and federal authorities.

Certification





One Year Limited Warranty

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

Sentinel 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 Sentinel's discretion, such product will be repaired, replaced with a refurbished unit, or replaced with a new unit by Sentinel, after defective unit has been inspected and defect has been confirmed. Sentinel 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, Hawaii, and metropolitan areas of Alaska and Canada. Warranty coverage on products used outside the 48 contiguous United States, Hawaii and metropolitan areas of Alaska and Canada may vary.

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 Patriot, 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 service call 888-585-9440. Please have your model number, serial number and proof of purchase ready.

"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."
