

Bung Entering Mixers

OWNERSMANUAL

Warranty

Our products are guaranteed against defective materials and workmanship, we will repair or replace such items as may prove defective at our option. Warranty period is one year on items manufactured by INDCO, except for the MixMaster Series Shakers which carries a two year warranty. On items not manufactured by INDCO, the manufactures warranty applies. All component parts of our products are covered by this warranty, except for normal wear items such as belts or impellers. We cannot be responsible for damage or abuse to equipment caused by improper installation or operation. Warranties can also be voided by unauthorized disassembly of equipment. For warranty repairs, equipment is returned to INDCO at the customer's expense; we will repair and return to customer at our expense. Under no circumstances will we allow labor charges or other expense to repair defective merchandise. This warranty is exclusive and is in lieu of all other warranties, whether express or implied. INDCO shall not be liable for any other damages, whether consequential, indirect, or incidental, arising from the sale or use of its products.



CB(G) Series Mixers

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4040 Earnings Way • New Albany, IN 47150
P: 812-941-5954 F: 812-944-9742
INDCO.COM • INFO@INDCO.COM

CB(G) Series Bung Entering Mixers

Model: _____

Serial No.: _____

Date: _____

Order No.: _____

100 - Motor:

Part No.: _____

HP: _____ RPM: _____

volts: _____ cycles: _____ phase: _____

frame: _____ enclosure: _____

200 - Gear Box: (CBG series only)

G.Box Part No.: _____

RPM output _____

300 - Shaft:

Diameter _____

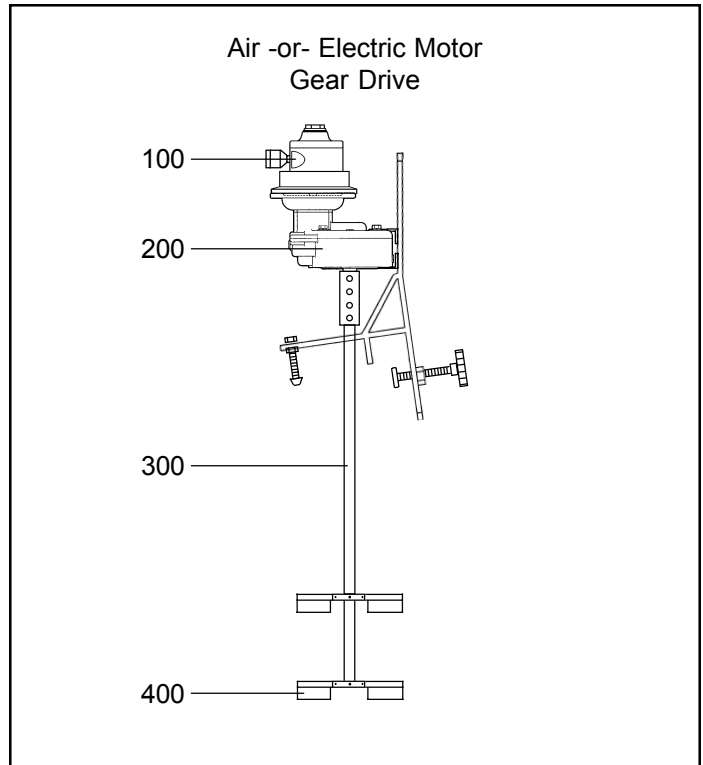
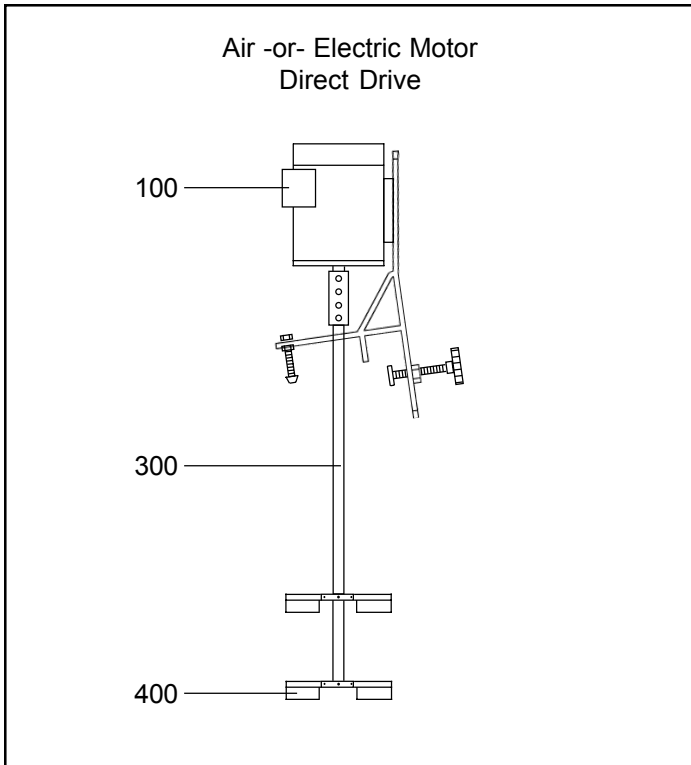
• Total length _____

• Length exposed _____

400 - Impellers:

Diameter _____

Type _____



Safety

Please follow the below safety precautions. If there are any questions, please call INDCO at 800-942-4383. Please read this complete manual before trying to operate your mixer. Failure to follow these instructions could result in serious bodily injury or death.

- Do not touch moving parts while mixer is operating. Do not wear loose-fitting clothes or jewelry around an operating mixer. Keep all hands, feet, clothes, neckties, necklaces and other objects clear of moving parts.
- Never move the unit without a suitable lifting device.
- Have a qualified individual bring power to your unit.
- Always ground the unit. Never use an extension cord.
- Never run the unit in open air.
- Never adjust the speed without the unit running.
- Always lockout the power when working on the unit.

Electric Motor Safety:

Motors should be installed, protected and fused in accordance with latest issue of National Electrical Code, NEMA Standard Publication No. MG 2 and local codes. Frames and accessories of motors should be grounded in accordance with National Electrical Code (NEC) Article 430. For general information on grounding refer to NEC Article 250.

Not all rotating parts are guarded. Keep hands and clothing away from moving parts.

Trained, qualified personnel should make electrical repairs and non-standard connections.

If environment has hazardous combustible fumes present, use only explosion-proof electric motors.

Air Motor Safety:

The air motor is designed to be driven by compressed air and under no circumstances be driven with any other gases. Fluids, particles, solids or any substance mixed with air, particularly combustible substances likely to cause explosions, must not drive air motor.

- Do not drive with flammable or explosive gases or operate unit in an atmosphere containing them.
- Air motor is designed for air only. Do not allow corrosive gases or particulate material to enter motor. Water vapor, oil-based contaminants, or other liquids must be filtered out.
- Do not use a hammer or force coupling or drive pulley onto shaft when installing drive onto air motor. This causes end thrust that could damage air motor.
- Ambient temperature should not exceed 250°F.
- Beware of any exposed and/or movable parts. Proper guards should be in place to prevent personal and/or property damage.
- Solid or liquid material exiting unit can cause eye or skin damage. Keep away from air stream.
- Always disconnect air supply before servicing.
- Do not allow air motor to “run free” at high speeds with no loads. Excessive internal heat build-up, loss of internal clearances and rapid motor damage will result.
- Some models may exceed 85dB(A) sound level. Hearing protection should be worn when in close proximity to these models.

General

- Single-phase TEFC models include cord, plug and switch.
- EP models must be wired in the field by the user.
- DC-Variable-Speed electric models have a controller mounted to the mixer and they are pre-wired.
- Air motors include exhaust muffler.

CB - Rim Mount Series

Direct Drive Models - These direct drive mixers are ideal for mixing and blending low to medium viscosity materials or for resuspending settled solids. They clamp on to the rim of a steel drum and allow the shaft to be inserted into either a closed or open drum. All models come with 2-blade folding impellers, which fit easily through all 2” NPT openings.

CBG - Rim Mount Series

Gear Drive Models - The heavy duty 5:1 ratio helical gearbox provides plenty of torque for all sorts of tough jobs. They will quickly mix drums of higher viscosity materials like heavy paints, resins, polymers, etc., as well as resuspend settled materials. As the direct drive models above, they clamp on to the rim of either closed or open steel drum. They too, come with stainless steel folding impellers that will fit through the bung opening of a closed drum.

Receiving

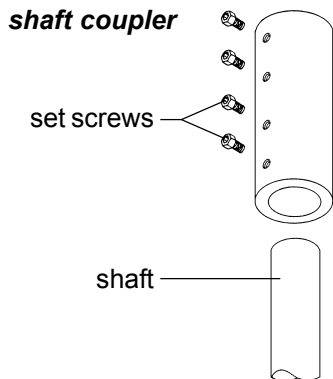
Before removing any packing, visually inspect the exterior of the shipment for any sign of damage. Should there be any damage, bring it to the attention of the delivering UPS or truck line and note the same on the receiving ticket. Should there be damage you must place a claim with the truck line. *They are the only ones who will pay for the damage done and you are the only one who can place that claim.*

Installation

Your new mixer requires some assembly. Ensure ALL set-screws and fasteners on the unit have been tightened completely before operating the equipment. The impeller(s) and impeller-shaft have to be fitted to the machine before it's operational. For more information, see the parts list pages for general arrangement drawings.

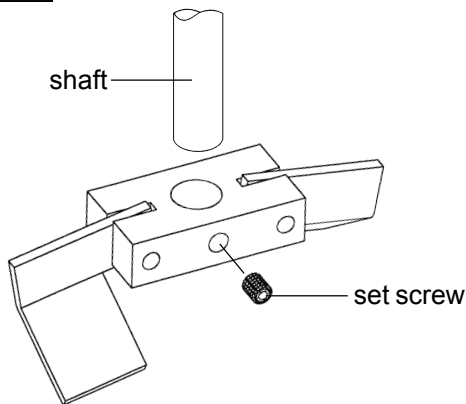
Shaft & Coupler

To install mixer shaft, back off the set screws as far as possible without removing them. Insert mixing shaft into the coupler as far as it will go. Tighten all the set screws firmly to secure the shaft to the coupler.



Impellers

To install the impeller, back off the set screw(s) as far as possible without removing them. Insert mixing shaft into the bore and tighten the set screw(s) firmly to secure the impeller to the shaft.



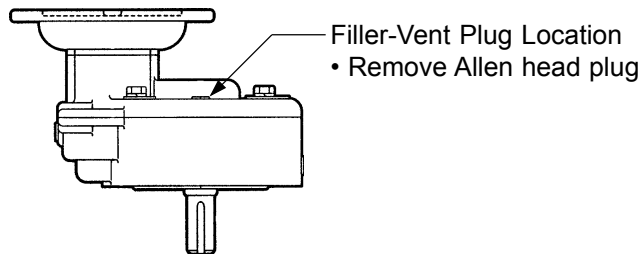
Impeller Placement

For mixers with ONE impeller, mount it 1 to 2 impeller diameters distance off the bottom of mixing container. For mixers with TWO or more impellers, mount the lowest impeller 1 to 2 impeller diameters distance off the bottom of mixing container. Mount the other impellers 1 to 2 impeller diameters apart. The uppermost impeller should be positioned approximately 1 impeller diameter under the surface of the liquid.

The above guidelines are "rules of thumb" and may not be the best for your situation. Experimenting with impeller placement may provide your best results.

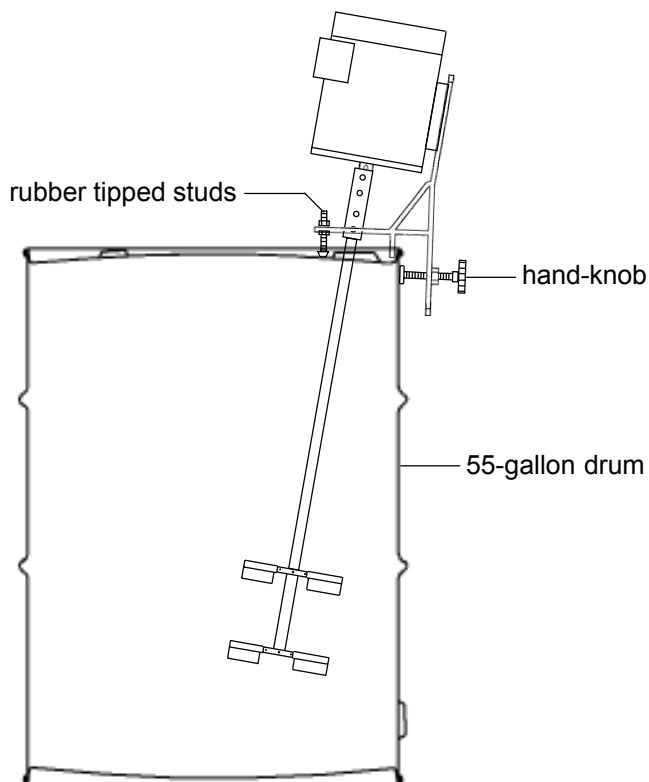
Gear Drive, CBG Series

- The gear box is filled with oil.
- The brass plug supplied loose is a Filler-Vent Plug. After mounting the mixer, install the Filler-Vent Plug in the highest filler point as shown below.



Mounting

Insert shaft and impellers through the drum's 2" bung opening. Rest mixer rim bracket on top of drum. Adjust the rubber tipped studs to the desired height. Gently tighten hand-knob to side of drum. Mixer is now ready to operate.



Operation

Electric Power: Once the electric motor has been wired, check rotation to be sure the mixer shaft is rotating in a clockwise direction, looking downward into the container.

Air Power: Check to ensure the air valve is in the closed position, then connect air supply. Check rotation to be sure the mixer shaft is rotating in a clockwise direction, looking downward into the container.

Once the mixer is in the container, it is now safe to operate.

CAUTION:

- ✓ **Never run mixer without a propeller.**
- ✓ **Never run the propeller in open air.**
- ✓ **Never run propeller outside a container.**

Maintenance

Maintaining your mixer is not difficult if you follow these guidelines:

- Keep the mixer clean.
- Check all wiring on a regular basis and repair as needed.
- Air motor powered units:
 - Keep air supply dry and oil in the lubricator.

Lubrication:

CBG Series

The gear box contains oil from the factory. The recommended replacement oil is:

- All CBG models, gearbox model #RPQ1:
 - Mobil Extra Hecla
 - Shell Oil Omala 680
 - Texaco Meropa 680
 - or equivalent to aboveFor 50°F to 125°F ambient.
Oil capacity is 11 ounces.

Parts List - Drive Motors

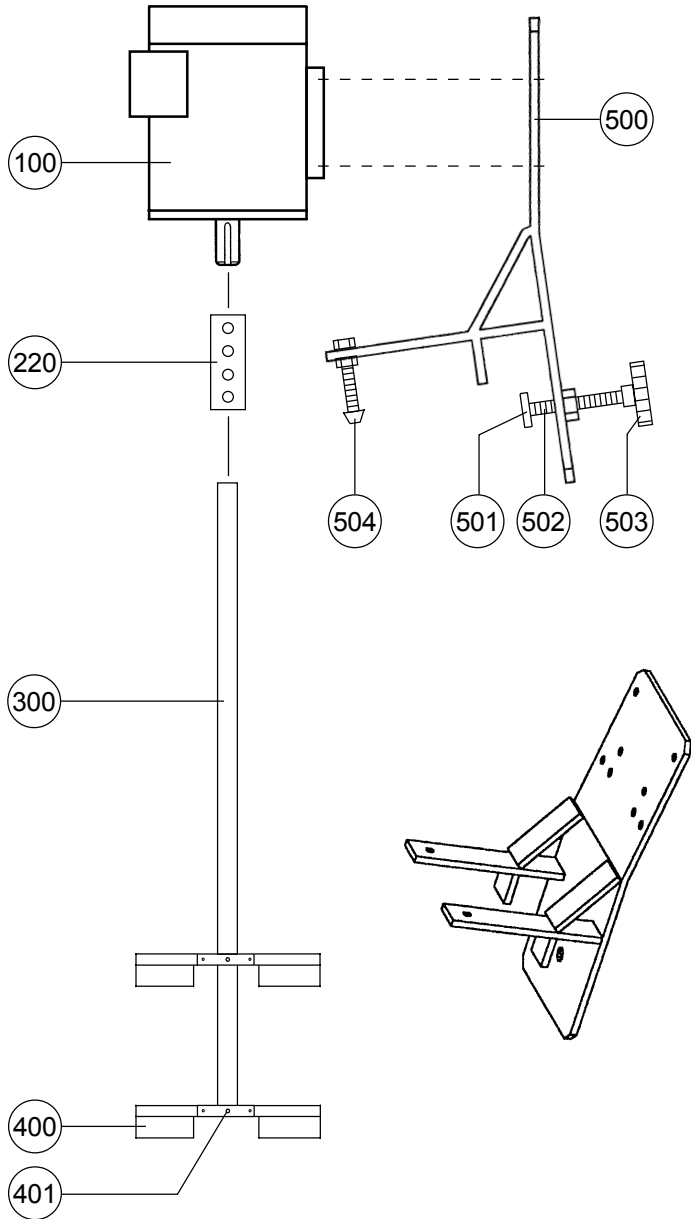
Item 100	Part No.	Description		
Air Motors	3/4 HP	MTR-3/4-FOOT-AIR-CCW N-K202	Foot Mount - 3/4 HP (2AM-FCC-1) CCW rotation only Repair Kit* (2AM-FCC-1)	
		MTR-3/4-56C-AIR N-K510	56C Mount - 3/4 HP (2AM-NRV-90) bi-rotational Repair Kit* (2AM-NRV-90)	
		HDW-1/4-VALVE HDW-2502-SNB N-AL445 N-AC980	Needle valve, brass - 1/4" Pipe nipple, steel - 1/4" X 2" Muffler, plastic Muffler, metal	
	1.5 HP	MTR-1.5-FOOT-AIR N-K205	Foot Mount - 1.5HP (4AM-FRV-13C) bi-rotational Repair Kit* (4AM-FRV-13C)	
		MTR-1.5-56C-AIR N-K206A	56C Mount - 1.5 HP (4AM-NRV-50C) bi-rotational Repair Kit* (4AM-NRV-50C)	
		HDW-1/4-VALVE HDW-25-CNG N-AL445 N-AC980	Needle valve, brass - 1/4" Pipe nipple, steel - 1/4" X 7/8" Muffler, plastic Muffler, metal	
	4 HP	MTR-4-FOOT-AIR N-K208	Foot Mount - 4 HP (6AM-FRV-5A) bi-rotational Repair Kit* (6AM-FRV-5A)	
		HDW-1/2-VALVE HDW-50-CNG N-AC990	Needle valve, brass - 1/2" Pipe nipple, steel - 1/2" X 1-1/8" Muffler, metal * Repair Kits include: Vanes, shaft seal, o-rings, DE & NDE bearings, body & end cap gaskets.	
	Electric Motors	1/3 HP	MTR-1/3-56C-1-EP	56C, fixed speed 1/3 HP Explosion-Proof 115/230VAC 1-phase
			MTR-1/3-56C-1-TEFC CPG-INLINE-18/3	56C, fixed speed 1/3 HP TEFC 115/230VAC 1-phase Cord 18/3 - 6', plug and in-line ON-OFF switch
			MTR-098004 MTR-DC-CONTROL CPG-18/3 MET-VSO-BRACKET	56C, variable speed 1/3 HP TEFC 115VAC to 90VDC 1-phase DC motor controller, variable speed - 1/3 thru 2HP Cord 18/3 - 6' with plug Angle brackets, mounts v.s. controller to motor (2 req'd)

Parts List - Drive Motors (continued)

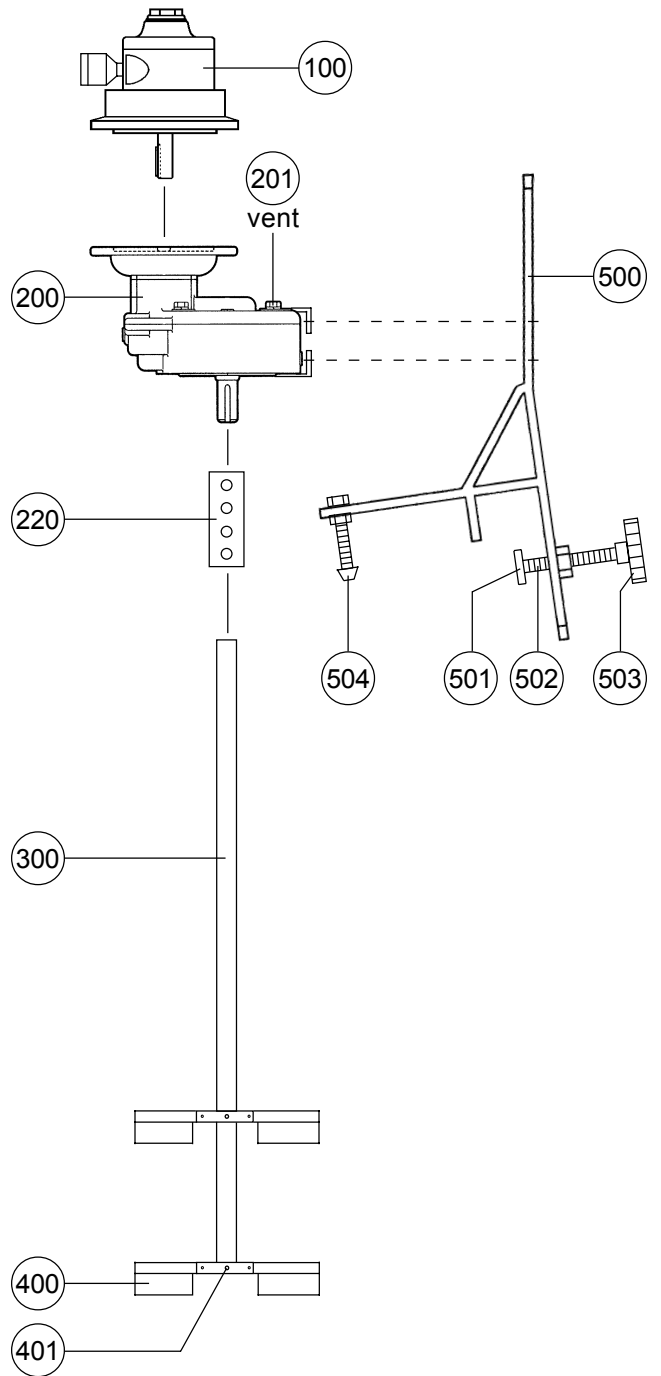
Item 100	Part No.	Description				
Electric Motors	MTR-1/2-56C-1-EP	56C, fixed speed	1/2 HP Explosion-Proof	115/230VAC	1-phase	
	MTR-1/2-56F-1-EP	56F, fixed speed	1/2 HP Explosion-Proof	115/230VAC	1-phase	
	1/2 HP	MTR-1/2-56C-1-TEFC	56C, fixed speed	1/2 HP TEFC	115/230VAC	1-phase
		MTR-1/2-56F-1-TEFC	56F, fixed speed	1/2 HP TEFC	115/230VAC	1-phase
		CPG-INLINE-18/3	Cord 18/3 - 6', plug and in-line ON-OFF switch			
	MTR-098000	56C, variable speed	1/2 HP TEFC	115VAC to 90VDC	1-phase	
	MTR-DC-CONTROL	DC motor controller, variable speed - 1/3 thru 2HP				
	CPG-18/3	Cord 18/3 - 6' with plug				
	MET-VSO-BRACKET	Angle brackets, mounts v.s. controller to motor (2 req'd)				
	3/4 HP	MTR-3/4-56F-1-EP	56F, fixed speed	3/4 HP Explosion-Proof	115/230VAC	1-phase
		MTR-3/4-56F-1-TEFC	56F, fixed speed	3/4 HP TEFC	115/230VAC	1-phase
		CPG-14/3	Cord 14/3 - 5' with plug			
		SWT-TOGGLE	ON - OFF switch			
		SWT-GUARD	Switch guard			
		MTR-108018	56C, variable speed	3/4 HP TEFC	115VAC to 90VDC	1-phase
MTR-DC-CONTROL	DC motor controller, variable speed - 1/3 thru 2HP					
CPG-14/3	Cord 14/3 - 5' with plug					
MET-VSO-BRACKET	Angle brackets, mounts v.s. controller to motor (2 req'd)					
1 HP	MTR-1-56F-1-EP	56F, fixed speed	1 HP Explosion-Proof	115/230VAC	1-phase	
	MTR-1-56F-1-TEFC	56F, fixed speed	1 HP TEFC	115/230VAC	1-phase	
	CPG-14/3	Cord 14/3 - 5' with plug				
	SWT-DP-TOGGLE	ON - OFF switch				
	SWT-GUARD	Switch guard				
	MTR-108022	56C, variable speed	1 HP TEFC	115VAC to 90VDC	1-phase	
MTR-DC-CONTROL	DC motor controller, variable speed - 1/3 thru 2HP					
CPG-14/3	Cord 14/3 - 5' with plug					
MET-VSO-BRACKET	Angle brackets, mounts v.s. controller to motor (2 req'd)					

Parts List: CB(G) Series

Air -or- Electric Motor
Direct Drive



Air -or- Electric Motor
Gear Drive



Parts List: CB(G) Series

Item	Qty.	Part No.	Description
100.	1	see 'Parts List - Drive Motors'	Motor, air
100.	1	see 'Parts List - Drive Motors'	Motor, electric
200.	1	HDW-GB-56C	Gear Box, 5:1 ratio
201.	1	HDW-4704-0004	Vent, 1/4" MNPT - brass (for HDW-GB-56C only)
210.	1	HDW-GB-56C-FEET	Mounting feet (set) gearbox to rim bracket.
220.	1	CPL-5062	Coupling - shaft, 1/2" bore x 5/8" bore - stainless
220.	1	CPL-6262	Coupling - shaft, 5/8" bore x 5/8" bore - stainless
300.	1	SS632	Shaft - impeller, 5/8" dia. x 32" long - stainless
300.	1	SS636	Shaft - impeller, 5/8" dia. x 36" long - stainless
400.	1,2,3	FP334	Folding Impeller, 4" diameter, 2-blade with 5/8" bore - stainless
400.	1,2,3	FP762	Folding Impeller, 7" diameter, 2-blade with 5/8" bore - stainless
401.	2,4,6	N-HARDWARE	Set screw, 1/4"-20 x 1/4" long - stainless

Rim Bracket Assembly:

500.	1	CLP-N	Rim ~ Clamp mount - painted steel
501.	1	HDW-CSP-1	Swivel pad
502.	1	SHF-TR124	Threaded rod, 1/2" x 4" long
503.	1	HDW-HK42	Hand knob - cast aluminum
504.	2	HDW-CL518208FC	Rubber tipped stud with nuts