

# Viber® Power Unit

Operating Instructions

ELECTRIC POWER UNITS FOR  
VIBER® INTERNAL CONCRETE VIBRATORS

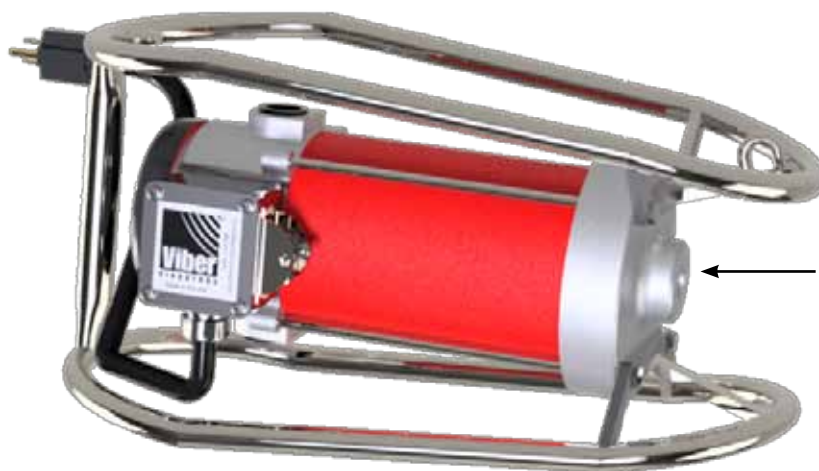
## Models

VMK-2750 120V  
VMK-3500 120V

VMK-2750 240V  
VMK-3500 240V



**VMK-2750  
with  
quick disconnect  
fitting**



**VMK-3500  
without  
quick disconnect  
fitting**



VIBRATORS



VIBRATORS



AIR BLASTERS

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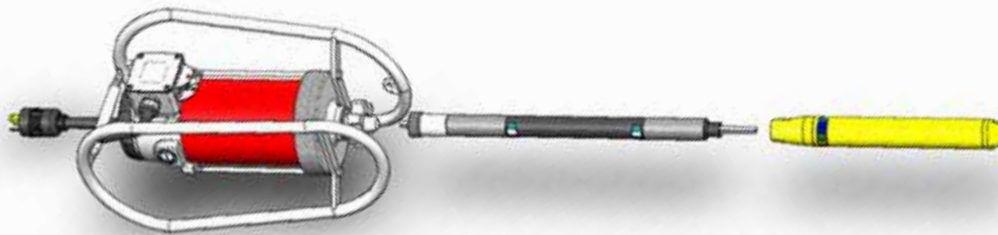
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## I. Introduction

You have purchased a Viber<sup>®</sup> Electric Power Unit, the center of your Smart!Parts<sup>™</sup> Internal Concrete Vibrator System. The other system components include a Viber<sup>®</sup> vibrator head and a Viber<sup>®</sup> reversible flexible drive.



Power Unit+ Flexible Drive+ Head = Smart!Parts<sup>™</sup> System

You build the right Smart!Parts<sup>™</sup> System for your application by choosing from the wide range of Viber<sup>®</sup> components including many different power options, different flexible drive lengths, and steel and rubber tipped vibrator heads or heads coated completely with polyurethane. These components all use identical fittings so that Viber<sup>®</sup> components are completely interchangeable. Any flexible drive can be used with any of the power units (electric, pneumatic, or gasoline) and any of the heads. See Section VI for recommendations to select the best Viber<sup>®</sup> power unit, head and flex drive for your application.

When properly used, your Smart!Parts<sup>™</sup> System will effectively compact concrete to remove entrapped air, producing high quality concrete that is dense, strong, durable, and impermeable.

## CAUTION!

### CHECK YOUR EQUIPMENT

1. Inspect the vibrator system for damage.  
Never use a damaged vibrator.
2. Have all components of the vibrator system received proper maintenance?

**VMK Electric Motors:** Monitor brushes and bearings. No lubrication required.

**Flexible Shafts:** Re-grease core after every 50 hours of use or if core rattles excessively.

**Vibrator Head:** Monitor bearings. Viber<sup>®</sup> heads are permanently lubricated at the factory. No further lubrication required.

3. Are all vibrator system connections tight?  
Apply Teflon<sup>®</sup> tape to the casing threads, before attaching the head and motor. This gives a water tight connection that will not come loose during operation.
4. Do you have the proper power source?  
VMK 2750, 2750L, 2750Q, 2750QL / 120V models = 120 volt, 15 amp service

VMK 3500L, 3500QL / 120V model = 120 volt, 20-amp service

VMK 2750, 2750Q, 3500, 3500Q / 240 volt models = 240 volt, 15 amp service

5. If using an electric motor, is it properly grounded?
6. Use the proper size extension cord.

### CHECK YOUR FORMS

***They need to be well made to withstand the strains of vibration.***

1. Use screws instead of nails (nails will back out with vibration).
2. Forms need to be well braced to prevent bulging.
3. Joints need to be closely fit to prevent leaking.
4. Monitor forms during placement of concrete. Tighten as needed.

### EXTENSION CORD RECOMMENDATIONS

The voltage drops along the length of an extension cord because of the resistance of the wire. This voltage drop is important to consider because as the voltage drops the motor slows down and has less power, which leads to decreased performance. More importantly, the power drop causes the motor to pull more current. The temperature of the motor windings increases considerably with small increases in current. This combined with the slower speed, which greatly reduces the effect of the cooling fan, causes the winding temperatures to exceed the rating of the insulation. Breakdown of the insulation is cumulative. You may use the motor infrequently, but if it is overloaded each time it will fail after a few uses. A motor can withstand about a 10% voltage drop without too many problems. Unless the supplied voltage is known (it has been measured while motor is running), assume 5% less source voltage than stated. For 120 volts, assume 114 volts. For 240 volts, assume 228 volts.

To protect your motor and maximize its performance, use the proper size extension cord to prevent the voltage from dropping more than 6 volts over the length of the cord (12 volts for 240V systems). The table below shows the gauge of wire to use for various lengths of extension cords. ***The smaller the number the heavier the cord. Never use a lighter weight cord than specified.*** If you connect two or more cords together, the total length of ALL cords must be used to determine proper sized wire.

Motor Model	VMK-2750	VMK-3500	VMK-2750	VMK-3500
Voltage	120V	120V	240V	240V
Cord Length	Wire Size (Gauge)		Wire Size (Gauge)	
Up to 50'	#14	#12	#14	#14
50' to 100'	#12	#10	#14	#14
100' - 150'	#10	#8	#14	#14
150' - 200'	#8	#8	#14	#14
200' - 250'	#8	#6	#14	#12
250' - 300'	#8	#6	#14	#12
300' - 400'	#6	#4	#12	#10
400' - 500'	#4	#4	#12	#10

## II. Assembling Internal Concrete Vibrator

All Viber<sup>®</sup> system components are interchangeable. All flexible drives (cores and casings) can be used to attach any head to any power unit (although certain combinations are not recommended). For optimum performance and wear consult your Smart!Parts<sup>™</sup> System Guide on page 17 or the tables on page 16 for the best combination of components.

1. Always be sure the electric power unit is unplugged before assembling or disassembling your system.

### IMPORTANT!

The flexible drive includes a casing with a lubricated core installed. If you do not have an assembled flexible drive, the core must be lubricated before installing it in the casing. Run the core through a handful of Viber<sup>®</sup> Core Grease as you insert it into the casing. Attach the end of the casing, where the core was inserted, to the motor. As the system runs the grease will migrate from the motor end towards the head.

2. To attach the Vibrator Head to the flexible drive, apply two layers of Teflon<sup>®</sup> tape to the casing threads before attaching the head. Engage the core in the head drive coupling. Turn the head clockwise to tighten. Use a crescent wrench on the machined flats on the head and channel locks or a small pipe wrench on the casing fitting to make sure the connection is tight.



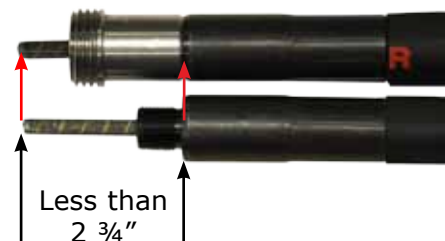
### IMPORTANT!

Do NOT leave out the Teflon<sup>®</sup> tape! It is required to provide a watertight seal between the head and casing. If Teflon<sup>®</sup> tape or a similar sealant is not used the Head can be damaged by water that penetrates this connection and the Head may unscrew during operation and fall into the pour.

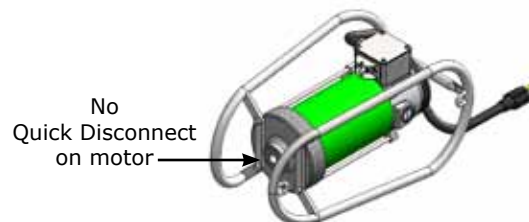
Also apply Teflon<sup>®</sup> tape to the male threads of the casing before attaching to the motor.



3. Before attaching the power unit, check the length of core extending from the motor end of the flexible drive. Measure from the shoulder on the casing fitting to the end of the exposed core. If this length is greater than 2-3/4", twist the core while pushing it into the casing to make sure it is fully seated in the head. If the exposed core is greater than 2-3/4" when it is fully seated in the head it might bind and cause damage to the core, casing, or head. Do not use the system. Contact your dealer or Global Manufacturing at 1-800-551-3569.

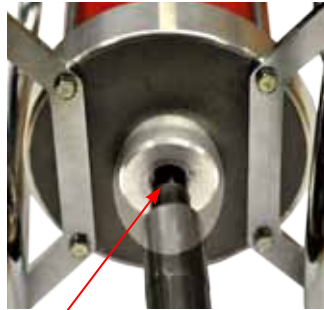


4. Attaching the Flexible Drive to the Power Unit with NO Quick Disconnect on Motor:



Apply two layers of Teflon<sup>®</sup> tape to the casing threads before attaching the flexible drive (casing with lubricated core installed) to the power unit. Engage the core in the motor drive coupling

located in the end of the shaft. Turn the casing clockwise to tighten. Once the threads are engaged let the motor hang vertically from the flexible drive and spin the motor until it cannot be turned by hand.



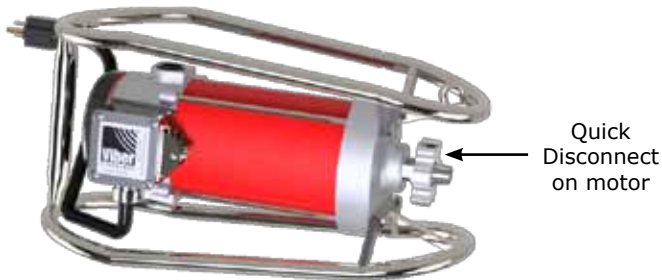
Must apply Teflon<sup>®</sup> tape to the casing threads



Pipe wrench

Use a small pipe wrench or channel locks to tighten the connection.

Attaching the Flexible Drive to the Power Unit with a Quick Disconnect on Motor:



Quick Disconnect on motor

The flexible drive must have a quick disconnect fitting on the motor end. If it was not purchased this way attach a quick disconnect drive fitting (pn 414911) to the casing fitting. Apply two layers of Teflon<sup>®</sup> tape to the casing threads before screwing on the drive fitting in a clockwise direction. Tighten the fitting securely with a small pipe wrench. File off any burrs this creates.



Drive Fitting

Engage the core in the motor drive fitting located inside the motor quick disconnect fitting. Press the quick disconnect drive fitting onto the cone of the motor fitting.



Turn the large hand nut clockwise to tighten the connection as viewed from the flexible shaft side. The hand nut has left hand threads to ensure it will remain tight while operating the system. Once the large hand nut feels tight tap the nut with a mallet on one of its wings to be sure the connection is secure.



An o-ring inside the nut helps keep the connection secure. If the connection comes loose during operation make sure the o-ring is not missing.

5. Plug the power unit into the appropriate electrical service:

120 Volt Models	Service
VMK-2750	120-Volt 15 Amp
VMK-3500	120-Volt 20 Amp
240 Volt Models	Service
VMK-2750	240-Volt 15 Amp
VMK-3500	240-Volt 15 Amp

If a portable generator is used, the total kilowatt requirements for the generator is determined by multiplying the voltage times the total current requirements (the amps) for the system. VMK power units have the following current requirements:

#### VMK Maximum Amp Draw

VMK-2750 / 120V = 15 amps  
VMK-3500 / 120V = 20 amps  
VMK-2750 / 240V = 8 amps  
VMK-3500 / 240V = 12 amps

If two VMK-2750/120 volts, and a VMK-3500/120 volts all run off the same generator, you would calculate the generator requirements as follows:

120 volt X ( 15 amps + 15 amps + 20 amps) =  
6,000 WATTS or 6 KW.

### III. Operation

Follow the guidelines below when using your Viber<sup>®</sup> Internal Concrete Vibrator for consolidating concrete:

1. Do not leave the vibrator running in air. Totally submerge the vibrator head in the concrete. This cools the bearings. Running the vibrator in air without regularly submersing it in the concrete will overheat the bearings.
2. Avoid making sharp bends in the flexible shaft.
3. Make sure you can see the concrete surface. Use lighting if necessary.
4. Place the concrete in layers no deeper than the length of the vibrator head plus 4-6". Layers should not exceed 18-20", otherwise the weight of the concrete will prevent the entrapped air from escaping.
5. Keep the vibrator head at least 3-4" from the forms. It can damage the forms causing surface defects in the concrete.
6. Do not allow the vibrator head to touch reinforcements, such as rebar. Vibration can break the bond between the reinforcement and preceding layers of stiffened concrete.
7. Let the vibrator head penetrate to the bottom of the layer as quickly as possible under its own weight.
8. Keep the vibrator head vertical to minimize voids and enhance the release of entrapped air. For shallow flat slabs, lay the vibrator head horizontally and drag it through the concrete or use our Shallow Pour Head - VH34-SP.
9. Withdraw the vibrator head slowly. Be sure concrete fills in behind leaving no hole. Do not attempt to "stir" the concrete.

10. Use repeated placements of the vibrator in a systematic pattern to be sure the entire surface has been vibrated. The area of action can be observed by noting how far from the vibrator head bubbles appear on the surface. Placements of the head should insure overlapping of the areas of action.

11. When compacting concrete placed on a previously compacted layer, push the vibrator 4-6" into the lower layer. Move the vibrator up & down for 5-15 seconds to "knit" the two layers together.

12. Avoid placing the concrete in "heaps". If it is necessary to flatten a heap, insert the vibrator head around the perimeter of the heap using as many placements as necessary.

13. Consolidation is complete when no new bubbles come to the top, a glistening layer of mortar covers the concrete surface, and the "whine" of the motor indicates that the vibrator speed has leveled off.

14. Clean all vibrator parts immediately following each use.

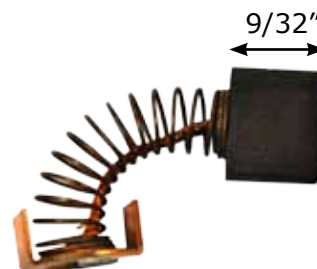
### IV. Maintenance

Routine monthly maintenance is recommended unless the power unit is used for multiple shifts per day or in harsh environments (heavy dust, snow, sand, etc.).

## CAUTION!

Always disconnect the motor from the power source before starting any maintenance or repair.

1. Clean or replace Air Filter.
2. Replace brushes before they are worn to a minimum height of 9/32" (0.285").



3. Bearings are permanently lubricated with special high-speed grease and require no additional lubrication. Replace bearings when shaft rotation appears restricted or if bearings become noisy.

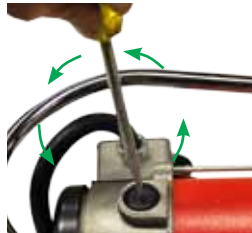
## V. Disassembly and Assembly

Required Tools:

1. Wide blade screwdriver
2. Phillips head screwdriver
3. 5/16" socket wrench
4. 3/8" socket wrench
5. Mallet
6. 1/4" Drive
7. Wire cutter/strippers/crimpers

**Disassembly Procedures** - To disassemble the motor proceed in the sequence below:

**A. Brush Removal** - Using a wide blade screwdriver press in on the bush cap while turning counter-clockwise.



Once the cap is removed pull the brush with attached spring from the brush tube.



Repeat to remove second brush.

### B. Air Filter Removal

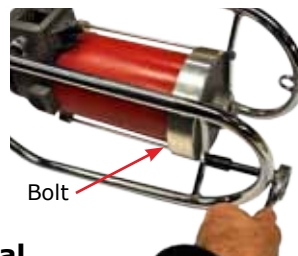
Remove the two hex screws that secure the filter cover at the back of the motor.

Slide off the cord clamp, filter cover, and air filter.



### C. Handle Removal -

Remove four 1/4" bolts.



### D. Front Housing Removal

Tap lightly on the back of the front housing, near the exhaust ports, to help separate the front housing from the rest of the motor. Watch for the wave finger washer which might fall out when the bearing releases from the front housing.



### E. Armature/Fan/Bearing Assembly Removal

Grasp the shaft in front of fan and pull the Armature/Fan/Bearing Assembly from the brush housing.

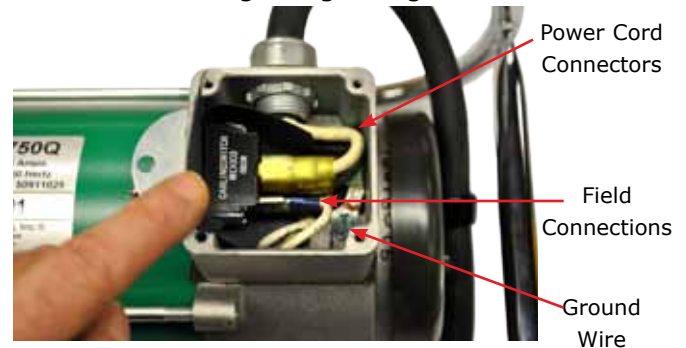


It might be necessary to tap the brush housing with a rubber mallet to release the rear bearing of the Armature/Fan/Bearing Assembly from the brush housing. The tolerance rings should remain seated in the front and brush housing bearing bores.

**F. Switch / Power Cord Removal** - Remove the four Phillips head screws that secure the cover to the switch housing.



Remove the cover and gasket. The power cord can be removed by loosening the cord restraint and pulling the yellow slide connectors off the switch, and disconnecting the green ground wire.

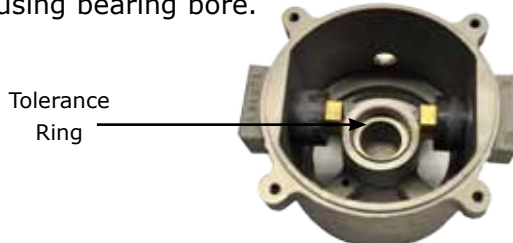


**G. Field Removal** - Pull the blue slide connectors for the field leads (white) from the switch. Cut the slide connectors off the field leads and push the leads through the rubber grommet into the brush housing. While holding the field/housing assembly tap the brush housing with a rubber mallet to separate the two.

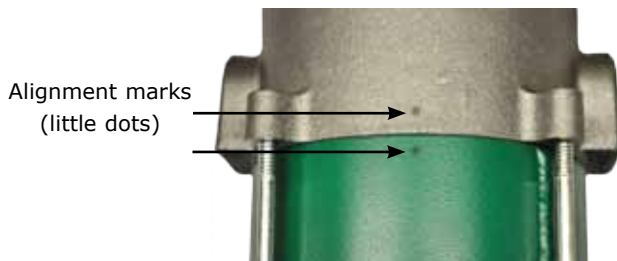


**Assembly Procedures:** The power unit is assembled in the sequence that follows. Advance to the section appropriate for your repair or service and follow the instructions from that point onward.

**A. Field/Housing Assembly Installation** - Be sure the tolerance ring is properly placed in the brush housing bearing bore.



Locate the alignment marks on the field/housing assembly and the brush housing. When assembly is complete these two marks must be properly aligned to insure the motor runs efficiently with full power.

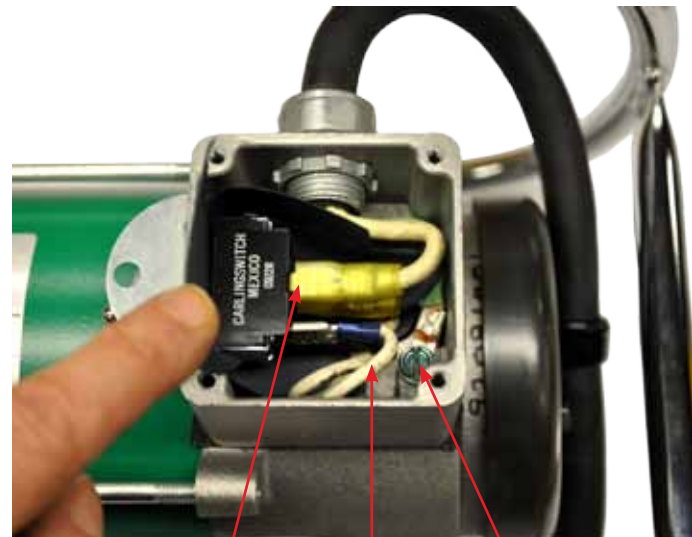


Orient the field/housing assembly so its alignment mark is close to the brush housing alignment mark. Feed the two white field switch leads through the grommetted hole in the brush housing. Attach the two black field brush leads to the brush tubes by sliding the attached clips into the slots on the sides of the brush tubes.



Be sure to connect each wire to the closest brush tube. If the wires are attached improperly the motor will run backwards. Push the field/housing assembly onto the brush housing. Be sure none of the leads get trapped between the two housings. Rotate the brush housing so the two alignment marks line up as in the photo. Stand the motor assembly upright on the field/housing assembly. Tap the back of the brush housing with a rubber mallet to seat the brush housing firmly into the

field/housing assembly. **Check to see that the alignment marks line up properly.** If necessary, tap the brush housing with the rubber mallet to align the marks. Pull the two white field switch leads until all the slack is removed. Attach the crimp-on slide connectors to the ends of the field switch leads and connect to the switch terminals farthest from the cord restraint. Looking down into the motor assembly make sure the brush leads do not protrude into the space the armature will occupy. If the leads appear to be in the way, use a long screw driver to push them aside.



Cord  
power lead  
connections

Field Switch  
Leads

Ground Lead  
Connections

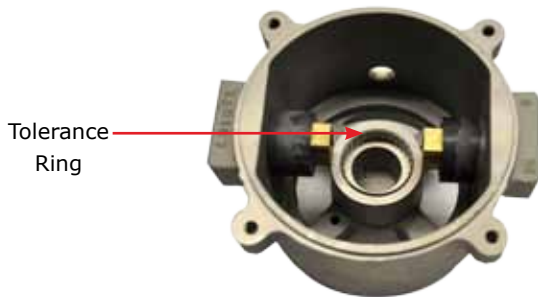
**IMPORTANT!** The field windings are coated with a clear insulating coating. Handle the field/housing assembly with much care. If the insulation is compromised by rough handling the field will short out and the motor will fail. **Damage to the insulation caused by rough handling of the field/housing assembly is not covered by the product warranty.**

**B. Switch / Power Cord Connections** - When installing a new power cord, slide the cord through the cord restraint until the cord (not just the individual wires) is even with the inside of the cord restraint. Tighten the cord restraint securely. Using the hex head screw attach the green power cord ground lead to the ground terminal located in the corner of the switch housing opposite the cord restraint. Tighten securely with the 5/16" socket wrench. Connect the black and white power cord leads to the switch terminals closest to the cord restraint using the yellow slide connectors.

Fold the switch insulation down to cover the switch terminals, align the cover gasket and cover, and secure the cover using the four Phillips head screws.



**C. Armature/Fan/Bearing Installation** - Be sure the tolerance ring is properly positioned in the brush housing bearing bore.



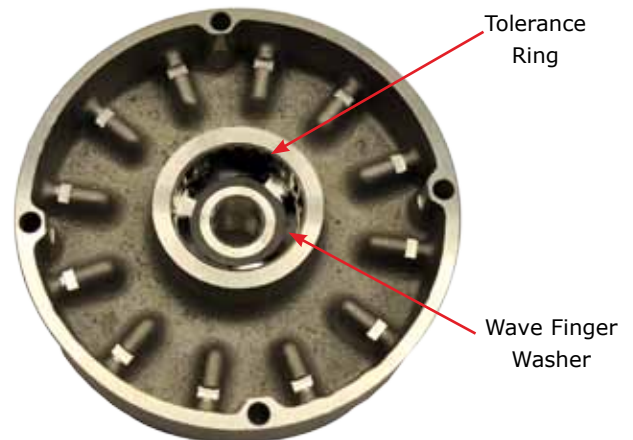
Holding the armature/fan/bearing assembly by the shaft at the fan end, gently lower it, commutator first, into the motor until the rear bearing reaches the brush housing bearing bore.

With the motor standing vertically on the brush housing, use a rubber mallet to tap on the end of the shaft to seat the rear bearing in its bore.

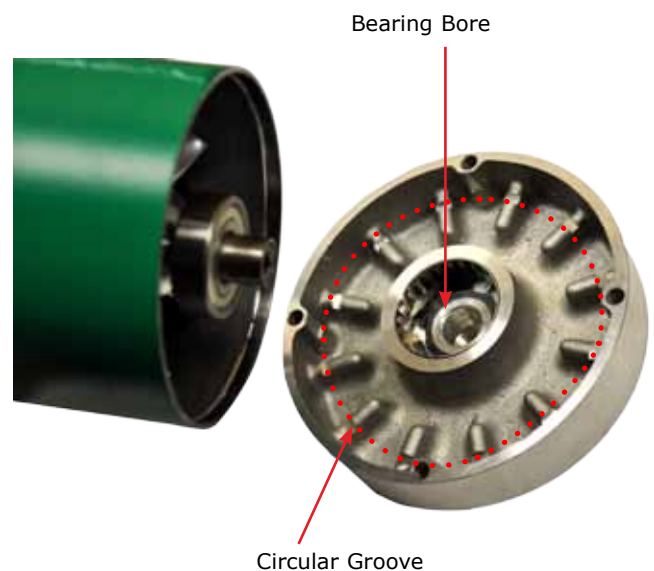


When properly seated the commutator should be centered in the brush tube opening. You should not see the motor shaft at all when looking into the brush tube.

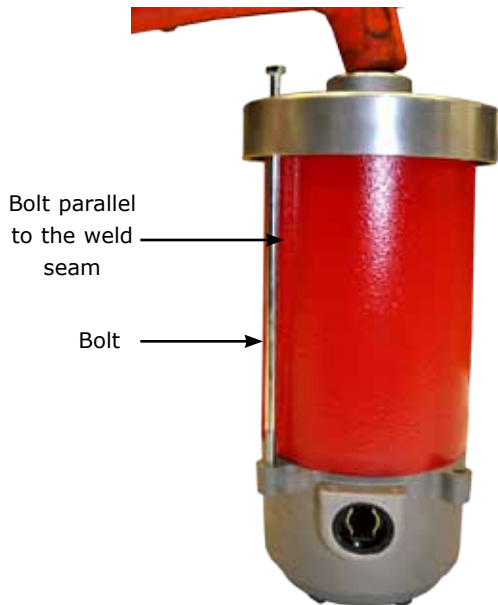
**D. Front Housing Installation** - Be sure the tolerance ring is properly seated in the front housing bearing bore. Place the wave finger washer into the bearing bore with fingers facing up. Fingers must contact the outer ring of the bearing once assembled.



Lower the motor assembly so the shaft with bearing enters the bearing bore in the front housing, and the rim of the field/housing assembly seats in the circular groove in the front housing.



Reposition the motor assembly in a vertical position resting on the brush housing. Insert one of the long 1/4" bolts into the front housing hole closest to the welding seam that runs the length of the field/housing assembly. Thread the bolt into the corresponding hole in the brush housing, **but do not tighten**. Align the front housing with the field/housing assembly and the brush housing by rotating the front housing until the bolt appears to be parallel to the welding seam. While holding the front housing in place, tap the housing firmly with a rubber mallet to seat the front bearing and to seat the field /housing assembly in its groove.

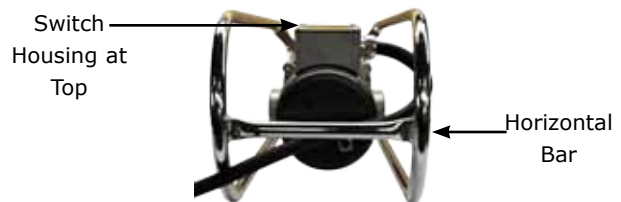


When fully seated the front housing should no longer rotate. Check to make sure the armature turns freely by inserting the 1/4" square drive into the shaft drive fitting and rotating.

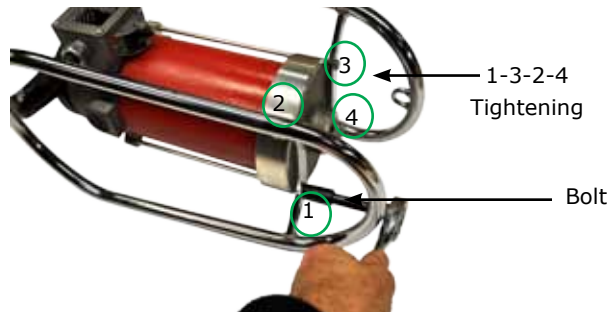


If there is resistance or binding the front housing is not fully seated. Continue to tap with the rubber mallet around the circumference of the front housing until the shaft turns freely. Remove the 1/4" bolt.

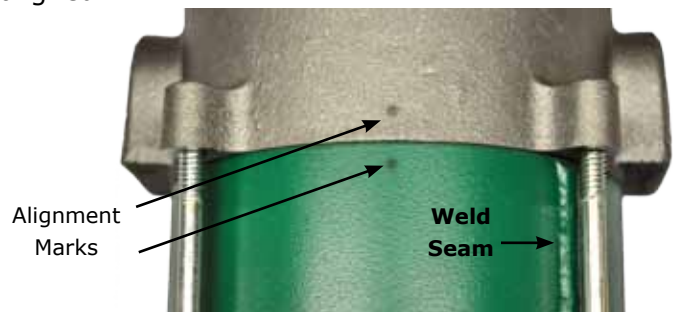
E. Handle Installation - Insert the four (4) long 1/4" bolts through the mounting holes on the handle bracket and on the front housing. The handle should be oriented so the cross bar at the back of the motor is horizontal. The motor should be oriented with the switch housing on the top.



Insert the bolts into the four threaded holes on the brush housing. Be sure the front housing, field/housing assembly, and the brush housing do not shift. Gradually tighten the four bolts with the 3/8" socket wrench using a crossing sequence pattern.



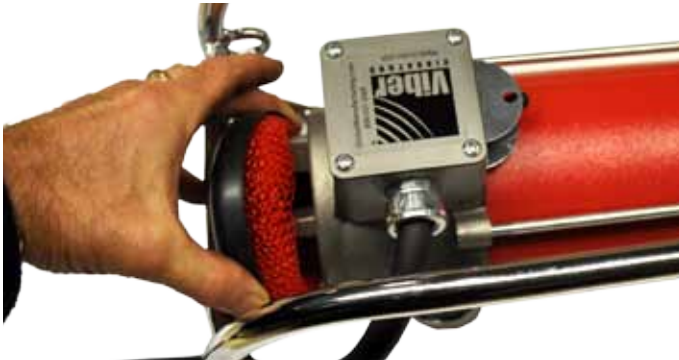
When the bolts are secure check to be sure the armature turns freely by inserting the 1/4" square drive into the shaft drive fitting and rotating. There should be very little resistance with no binding of the shaft in any position. Also check the alignment of the front housing with the brush housing. The 1/4" through bolt securing the handle should be parallel to the welding seam on the side of the field/housing assembly. Lastly check the alignment of the marks on the field/housing assembly and the brush housing. They should still be properly aligned.



If the marks are **NOT** exactly aligned, loosen, but do **NOT** remove, the four (4) through bolts. While holding the field/housing assembly stationary, gently tap on the brush housing to rotate it and bring the marks back into perfect alignment.

Retighten the four (4) bolts using the same crossing sequence pattern as before. Recheck for binding of the shaft and for proper alignment of the front housing, field/housing assembly, and brush housing.

F. Air Filter Installation - Place the filter in the cover. Place the cover on the end of the brush housing. Be sure the filter seats on the outside of the two mount posts.



Insert the upper screw and partially tighten with the 5/16" socket wrench.

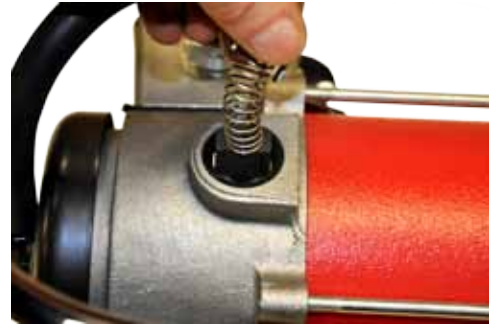


Place the second screw through the cord clamp before inserting it through the cover and into the lower mount post. Partially tighten the second screw.



Tighten both screws until the filter cover seats firmly against the two support posts. Be sure the cord does not have too sharp of a bend after it exits the cord restraint on the switch housing.

G. Brush Installation - Insert a brush into the brush tube.



Using the plastic cap compress the spring until the tabs on the plastic cap fit into the tube.



Using a wide blade screw driver carefully turn the plastic cap clockwise to tighten. Proceed cautiously to make sure the threads are properly engaged and not cross-threaded. **Do not over tighten the plastic cap.** It only needs to be snug. The spring pressure will hold it secure. If the cap is too tight it will be very difficult to remove, which can result in a damaged or broken cap. Repeat to install the second brush.

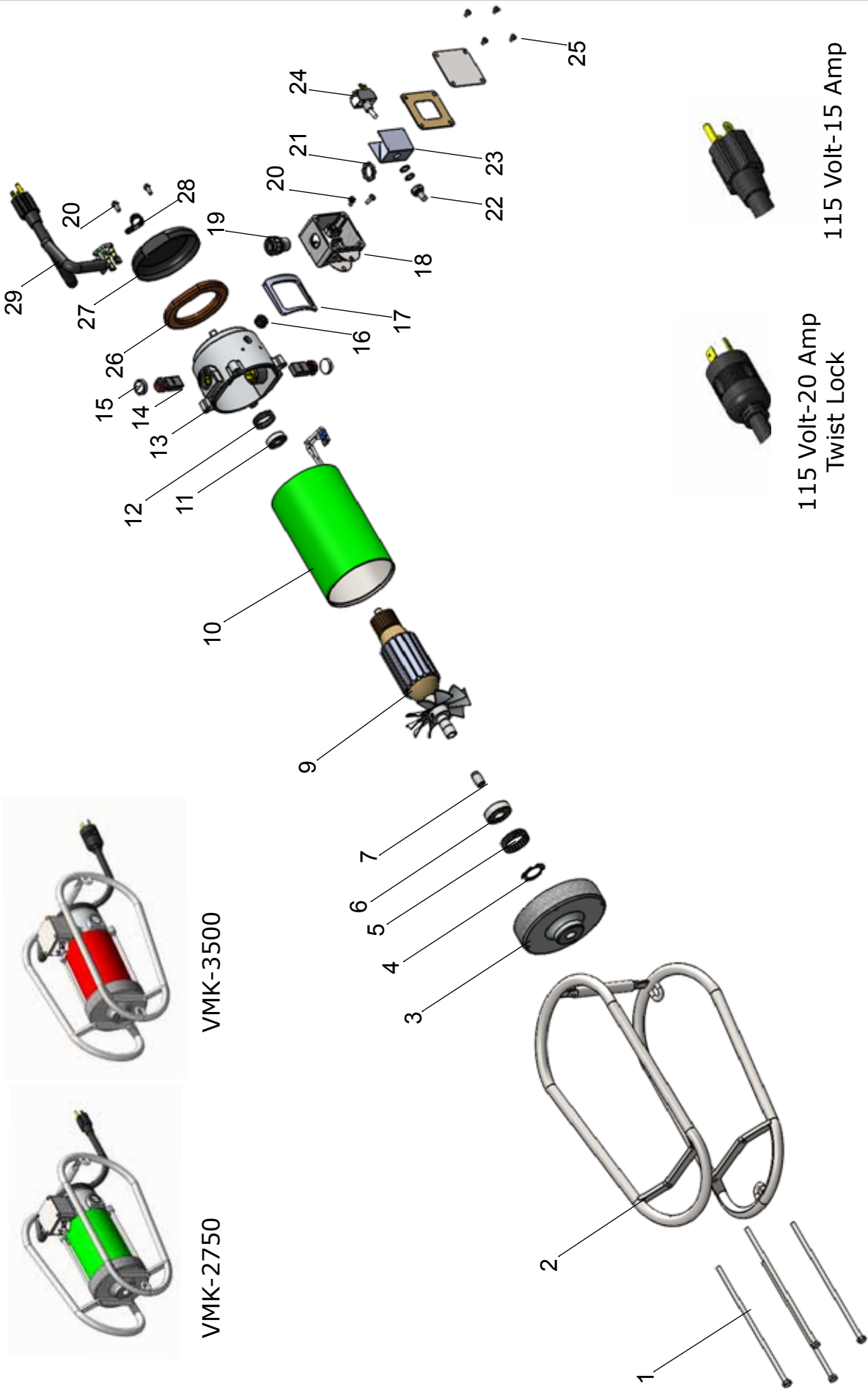


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# VMK MODELS - STANDARD No Quick Disconnect



## VMK Electric Motors Parts List - No Quick Disconnect 2750 (p.n.921200) 2750L (p.n.921201) 3500L (p.n.921301)

Item no.	Part Number	Description	VMK-2750	VMK-2750L	VMK-3500L
1	331085	bolt 1/4-20 x 8-3/4" x 3/4"	4	4	4
2	490692	handle	1	1	1
3	146103	front housing	1	1	1
4	338531	wave finger washer	1	1	1
5	389911	tolerance ring	1	1	1
6	382233	bearing	1	1	1
7	470020	drive shaft insert	1	1	1
9	471231	armature VMK-2750 120v	1	1	-
9	471331	armature VMK-3500 120v	-	-	1
10	471235	field/housing assembly VMK-2750 120v	1	1	-
10	471335	field/housing assembly VMK-3500 120v	-	-	1
11	382190	bearing	1	1	1
12	389914	tolerance ring	1	1	1
13	1461075	brush housing with brush holders	1	1	1
14	470107	brush	2	2	2
15	470119	brush cap	2	2	2
16	490647	grommet	1	1	1
17	450930	gasket	1	1	1
18	146105	switch housing with guard	1	1	1
19	450438	cord restraint	1	1	1
20	333342	screw shh #10-16 x 1/2" WF type B	5	5	5
21	450440	lock nut 1/2"	1	1	1
22	450910	switch boot	1	1	1
23	450920	switch box insulation	1	1	1
24	450905	switch	1	1	1
25	3333035	screw 8-32 x 2/2"-f-st-php	4	4	4
26	490510	air filter	1	1	1
27	490520	air filter cover	1	1	1
28	450448	clamp	1	1	1
29	450393	cord 115v std plug	1	-	-
29	450392	cord 115v twist lock plug	-	1	1
Kit 1	4712315	armature-bearing assy for VMK-2750 includes #'s 6, 9, 11	1	1	
Kit 2	4713315	armature-bearing assy for VMK-3500 includes #'s 6, 9, 11			1

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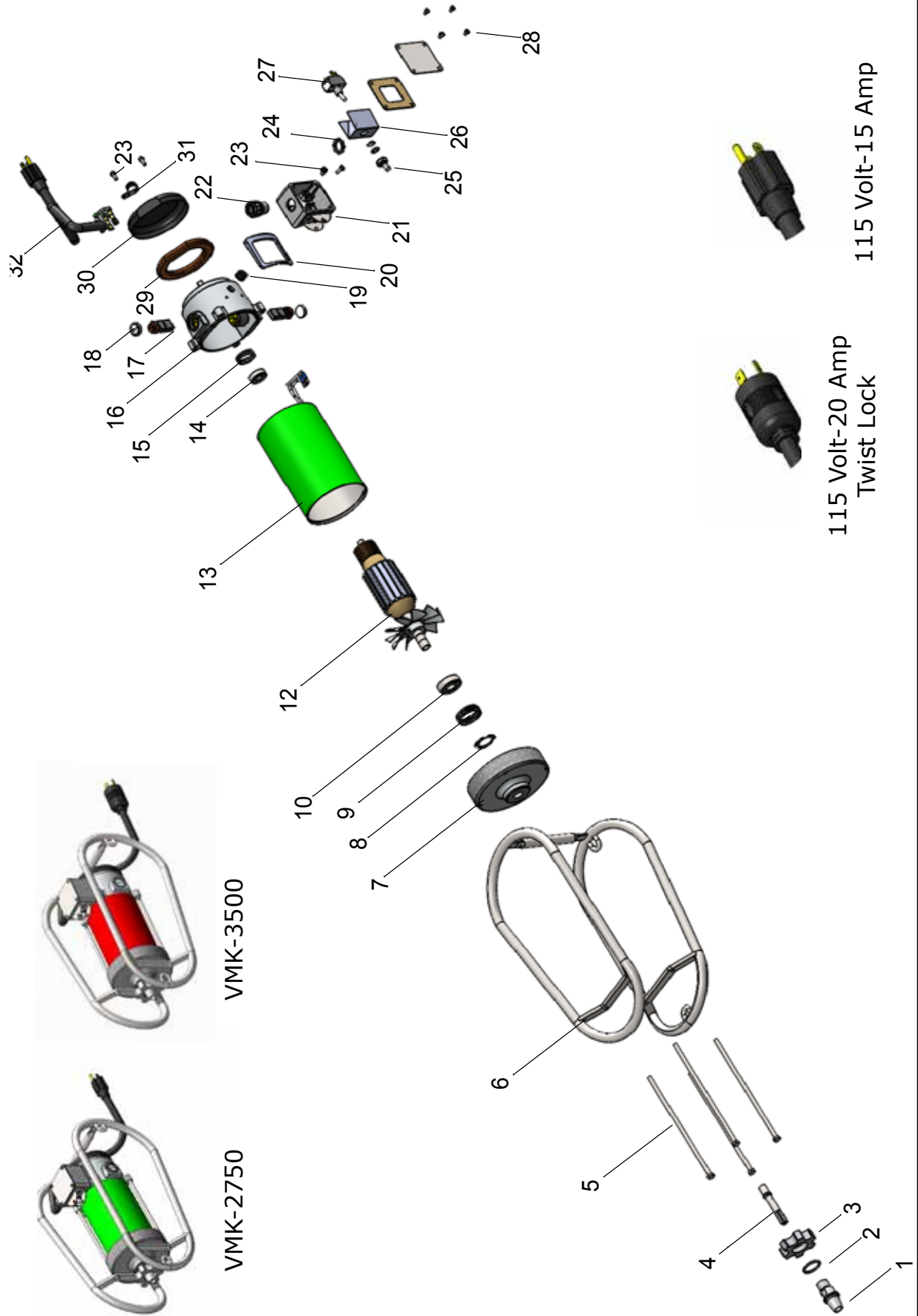
# **VMK MODELS - QD** **With Quick Disconnect**



**VMK-2750**



**VMK-3500**



## VMK Electric Motors Parts List - With Quick Disconnect

### 2750Q (pn 921210) 2750QL (pn 921211) 3500QL (pn 921311)

Item no.	Part Number	Description	VMK-2750Q	VMK-2750QL	VMK-3500QL
1	414912	Fitting	1	1	1
2	385216	o-ring buna 568-216	1	1	1
3	414913	nut	1	1	1
4	470023	insert	1	1	1
5	331085	bolt 1/4-20 x 8-3/4" x 3/4"	4	4	4
6	490692	handle	1	1	1
7	146103	front housing	1	1	1
8	338531	wave finger washer	1	1	1
9	389911	tolerance ring	1	1	1
10	382233	bearing	1	1	1
12	471231	armature VMK-2750 120v	1	1	-
12	471331	armature VMK-3500 120v	-	-	1
13	471235	field/housing assembly VMK-2750 120v	1	1	-
13	471335	field/housing assembly VMK-3500 120v	-	-	1
14	382190	bearing	1	1	1
15	389914	tolerance ring	1	1	1
16	1461075	brush housing with brush holders	1	1	1
17	470107	brush	2	2	2
18	470119	brush cap	2	2	2
19	490647	grommet	1	1	1
20	450930	gasket	1	1	1
21	146105	switch housing with guard	1	1	1
22	450438	cord restraint	1	1	1
23	333342	screw shh #10-16 x 1/2" WF type B	5	5	5
24	450440	lock nut 1/2"	1	1	1
25	450910	switch boot	1	1	1
26	450920	switch box insulation	1	1	1
27	450905	switch	1	1	1
28	3333035	screw 8-32 x 1/2"-f-st-php	4	4	4
29	490510	air filter	1	1	1
30	490520	air filter cover	1	1	1
31	450448	clamp	1	1	1
32	450393	cord 115v std plug	1	-	-
32	450392	cord 115v twist lock plug	-	1	1
Kit 1	4712315	armature-bearing assy for VMK-2750 includes #'s 10, 12, 14	1	1	
Kit 2	4713315	armature-bearing assy for VMK-3500 includes #'s 10, 12, 14			1



## VII. Performance Specifications

VIBER <sup>®</sup> ELECTRIC POWER UNITS						
PART #	MODEL #	VOLTAGE	PLUG	AMPS	MAX HEAD SIZE	NET WT - LB
910210	VMK-2750	120 V	Standard	15	2-1/8"	21.65
910211	VMK-2750 L	120 V	Twist Lock	15	2-1/8"	21.65
910220	VMK-2750 240V	240 V	240V	8	2-1/8"	21.50
910262	VMK-2750 Q	120 V	Standard	8	2-1/8"	22.10
910263	VMK-2750 QL	120 V	Twist Lock	15	2-1/8"	22.10
910282	VMK-2750 Q 240V	240 V	240V	8	2-1/8"	21.95
910310	VMK-3500 L	120 V	Twist Lock	20	2-1/2"	22.25
910320	VMK-3500 240V	240V	240V	12	2-1/2"	22.25
910362	VMK-3500 QL	120 V	Twist Lock	20	2-1/2"	22.65
910382	VMK-3500 Q 240V	240 V	240V	12	2-1/2"	22.65
"L" indicates the motor comes with a twist lock plug. "Q" indicates the motor comes with a quick disconnect. "QL" indicates the motor comes with a twist lock plug and a quick disconnect. *All VMK-3500-120 Volt motors only come with a twist lock plug.						

PERFORMANCE DATA FOR VIBER® ELECTRIC POWER UNITS & INTERCHANGEABLE HEADS											
								VMK-2750		VMK-3500	
Part #	Model #	Size Dia.	Head Length	Weight	Unbalance	Amplitude Peak-to-Peak	Radius of Action	Speed	Force	Speed	Force
		IN	IN	LB	LB-IN	IN	IN	RPM	LB	RPM	LB
STANDARD HEADS - STEEL TIP OR RUBBER TIP											
950014	VH14	7/8	11.95	1.3	.030	.046	4.6	15,000	185	15,250	192
950016	VH16	1	12.13	2.0	.030	.030	5.0	15,000	185	15,250	192
950020	VH20	1-1/4	12.18	2.9	.094	.065	7.5	12,950	438	14,675	563
950024	VH24	1-1/2	12.03	4.1	.170	.083	9.5	11,950	657	13,200	802
950028	VH28	1-3/4	12.04	5.6	.210	.075	11.0	11,500	886	12,650	1,073
950034	VH34	2-1/8	12.29	8.8	.396	.090	14.0	10,400	1,035	12,000	1,378
950040	VH40	2-1/2	13.52	13.9	.600	.086	18.0	10,250	1,426	11,900	1,922
POLLY HEADS											
950328	VH28-PH	1-3/4	13.25	4.7	.170	.07	10.0	11,950	657	13,200	802
950332	VH32-PH	2	13.40	6.4	.210	.06	12.0	11,800	830	12,800	977
SPECIAL PURPOSE HEADS											
950014	VH14-ST	7/8	11.95	1.3	.030	.046	4.6	15,000	185	15,250	192
951014	VH14-LF	7/8	9.95	1.1	.017	.031	5.6	15,400	115	16,000	124
952034	VH34-SP	2-1/8	5.88	3.3	.147	.089	14.0	12,100	611	13,400	750
<i>Gray Shaded areas are NOT recommended. Vibrator motor and head performance are reduced because speed is either too fast or too slow.</i> The speed provided is an approximation of the head speed in concrete for the specified motor-head combination. The actual speed will vary depending on temperature, consistency of the concrete, the power unit's condition, the hours on the bearings, etc...											



# System Selection Guide

1		2	3		4	5								
Application	Slump	Space Limitations	Head Diameter	Radius of Action	Power Units	Flexible Drive Length (Feet)								
						1	3	5	7	10	14	21	28*	35*
<b>Block Walls &amp; Small Diameter Fills:</b> Plastic and flowing concrete for very thin members & walls & confined places.	> 3"	2.5" x 2.5"	7/8" VH 14	5"	VMK-1500	X	X	X	X	X	X	X	X	X
					VMP TURBO	X	X	X	X	X	X	X	X	X
					VMG-1750BP	X	X	X	X	X	X	X	X	X
					VMG-2500BP	7' or longer			X	X	X	X	X	X
<b>Thinnest Prestressed Sections:</b> Plastic and flowing concrete for very thin members & walls & confined places.	>3"	3" x 3"	1" VH 16	5"	VMK-1500	X	X	X	X	X	X	X	X	X
					VMP TURBO	X	X	X	X	X	X	X	X	X
					VMG-1750BP	X	X	X	X	X	X	X	X	X
					VMG-2500BP	7' or longer			X	X	X	X	X	X
<b>Thin Prestressed Sections:</b> Plastic concrete in thin walls, columns, beams, precast piles, thin slabs, and along construction joints.	3 - 5"	3.25" x 3.25"	1-1/4" VH 20	7"	VMK-1500	X	X	X	X	X	X	X	X	X
					VMK-2500	X	X	X	X	X	X	X	X	X
					VMK-2750	X	X	X	X	X	X	X	X	X
					VMP TURBO	X	X	X	X	X	X	X	X	X
					VMG-1750BP	X	X	X	X	X	X	X	X	X
					VMG-2500BP	7' or longer			X	X	X	X	X	X
<b>Thin Wall Sections and General Use:</b> Plastic concrete in thin walls, columns, beams, precast piles, thin slabs, and along construction joints.	3 - 5"	3.5" x 3.5"	1-1/2" VH 24	13"	VMK-1500	X	X	X	X	X	X	X	X	X
					VMK-2500	X	X	X	X	X	X	X	X	X
					VMK-2750-	X	X	X	X	X	X	X	X	X
					VMP TURBO	X	X	X	X	X	X	X	X	X
					VMG-1750BP	X	X	X	X	X	X	X	X	X
					VMG-2500BP	7' or longer			X	X	X	X	X	X
<b>General Use:</b> Plastic & stiff plastic concrete in general construction such as walls, columns, beams, pre-stressed piles, and heavy slabs.	2 - 4"	3.75" x 3.75"	1-3/4" VH 28	17"	VMK-2500	X	X	X	X	X	X	X	X	X
					VMK-2750	X	X	X	X	X	X	X	X	X
					VMK-3500	X	X	X	X	X	X	X	X	X
					VMP TURBO	X	X	X	X	X	X	X	X	X
					VMG-1750BP	X	X	X	X	X	X	X	X	X
					VMG-2500BP	7' or longer			X	X	X	X	X	X
<b>Stiff Low-Slump Concrete:</b> Stiff plastic concrete in general construction such as walls, columns, beams, prestressed piles, and heavy slabs.	1 - 3"	4" x 4"	2-1/8" VH 34	21"	VMK-2750	X	X	X	X	X	X	X	X	X
					VMK-3500	X	X	X	X	X	X	X	X	X
					VMP TURBO	X	X	X	X	X	X	X	X	X
					VMG-2500BP	7' or longer			X	X	X	X	X	X
<b>Stiffest Low-Slump Concrete:</b> Mass and structural concrete deposited in relatively open forms.	< 2"	5" x 5"	2-1/2" VH 40	24"	VMK-2750	X	X	X	X	X	X	X	X	X
					VMK-3500	X	X	X	X	X	X	X	X	X
					VMP TURBO	X	X	X	X	X	X	X	X	X
					VMG-2500BP	7' or longer			X	X	X	X	X	X
<b>Shallow Pours:</b> Plastic & stiff plastic concrete in slabs and other shallow pours less than 12" thick.	2-4"	4" x 4"	2-1/8" VH 34-SP	13"	VMK-1500	X	X	X	X	X	X	X	X	X
					VMK-2500	X	X	X	X	X	X	X	X	X
					VMP TURBO	X	X	X	X	X	X	X	X	X
					VMG-1750BP	X	X	X	X	X	X	X	X	X
					VMG-2500BP	7' or longer			X	X	X	X	X	X
<b>ICF Applications:</b> Plastic and flowing concrete for very thin members & walls & confined places where insulated concrete forms are used.	> 4"	2.5" x 2.5"	7/8" VH 14-LF	4"	VMK-1500	X	X	X	X	X	X	X	X	X
					VMP TURBO	X	X	X	X	X	X	X	X	X
					VMG-1750BP	X	X	X	X	X	X	X	X	X
					VMG-2500BP	7' or longer			X	X	X	X	X	X

- Find description in column 1 that matches your application.
- Use column 2 to adjust for any size restrictions due to reinforcements, such as rebar, or other limiting structures.
- Column 3 gives the diameter of the vibrator head needed.
- Select the power unit desired from column 4. **VMK** units are universal electric motors available in 10 amps (1500), 15 amps (2500 OR 2750), or 20 amps (3500). The VMK-3500 and the models ending with an "L" come with a twist lock plug. The motor with the higher amp rating will consolidate low slump concrete more efficiently. **VMP TURBO** is a 2hp pneumatic motor. **VMG-1750BP** is a 1.6 hp backpack mounted gasoline engine (also available as a handheld unit). **VMG-2500BP** is a 2.5 hp backpack mounted gasoline engine.
- Find the core and casing length desired in section 5. Smart Part Systems with a 7/8" head come with 7/8" diameter flexible drive. All other systems come with a 1-1/16" diameter flexible drive.

\*Note: 28' and 35' flex drives require coupling two shorter drives together using a Viber VCP Coupling.