



6", 8" AND 10" VARIABLE SPEED BUFFERS



Read carefully and follow all safety rules and operating instructions before first use of this product.

DESCRIPTION

Palmgren's variable speed buffers are equipped with the latest technology variable speed inverter for a broad range of continuous speeds. Powerful totally enclosed ball bearing motor. Armature assembly is dynamically balanced for smooth operation. Motor housing is compact so long pieces of work can press against both buffing wheels without touching the motor frame. Buffing wheels are included with the 6" and 8" buffers.

The control panel with LED readout for the buffers indicates 3 power ranges, Low-Medium-High. The speed changes can be made in 100 RPM increments. For the 6" and 8" buffers you have 3 hard speed settings of 900 / 1800 / 3600 RPM. For the 10" buffer the hard settings are 900 / 1800 / 3000 RPM.

SPECIFICATIONS

	9682106	9682107	9682108
Horsepower	3/4	1.0	1.5
Voltage	115/240	115/240	115/240
Amperes	7/3.5	12/6.0	14/7.0
Hertz	50-60	50-60	50-60
Phase	Single	Single	Single
RPM	900-3600	900-3600	900-3000
Rotation (viewed from left)	Clockwise	Clockwise	Clockwise
Wheel Diameter	6"	8"	10"
Arbor	1/2"	5/8"	1"
CSA US 180264	Yes	Yes	Yes

STRUCTURAL REQUIREMENTS

Make sure all supporting structures and load attaching devices are strong enough to hold your intended loads. If in doubt, consult a qualified structural engineer.

ELECTRICAL REQUIREMENTS

9682106	115/240 Volts	7/3.5 Amps	1	50-60 Hz
9682107	115/240 Volts	12/6 Amps	1	50-60 Hz
9682108	115/240 Volts	14/7 Amps	1	50-60 Hz

The standard allowable voltage variation is plus or minus 10%.

TOOLS NEEDED:

Standard mechanic's hand tool set.

UNPACKING

Carton should be handled with care to avoid damage from dropping, bumping, etc. Store and unpack carton with correct side up. If any damage or loss has occurred, claim must be filed with carrier immediately. Check for completeness. Immediately report missing parts to dealer.

CONTENTS:

- Buffer
- Hex Nuts (2)
- Wheel Flanges (4)
- Spacers (2)
- Spiral Sewn Wheel (1) - Included with 9682106 and 9682107 only.
- Soft Wheel (1) - Included with 9682106 and 9682107 only.
- Operating Instructions & Parts Manual (1)

UNPACK:

- Open carton and carefully remove Buffer components from packing material. Do not discard packing materials until after unit has been inspected for damage and completeness. Locate loose parts and set aside.

INSPECT:

- After unpacking the unit, carefully inspect for any damage that may have occurred during transit. Check for loose, missing or damaged parts. Shipping damage claims must be filed with the carrier.
- All tools should be visually inspected before use, in addition to regular periodic maintenance inspections.
- Be sure that the voltage labeled on the unit matches your power supply.

SAFETY RULES

WARNING: For your own safety, read all of the instructions and precautions before operating tool.

PROPOSITION 65 WARNING: Some dust created by using power tools contain chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks and cement and other masonry products.
- Arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area and work with approved safety equipment. Always wear **OSHA/NIOSH** approved, properly fitting face mask or respirator when using such tools.

WARNING: Always follow proper operating procedures as defined in this manual even if you are familiar with the use of this or similar tools. Remember that being careless for even a fraction of a second can result in severe personal injury.

BE PREPARED FOR JOB

- Wear proper apparel. Do not wear loose clothing, gloves, neckties, rings, bracelets or other jewelry which may get caught in moving parts of machine.
- Wear protective hair covering to contain long hair.
- Wear safety shoes with non-slip soles.
- Wear safety glasses complying with United States ANSI Z87.1. Everyday glasses have only impact resistant lenses. They are **NOT** safety glasses.
- Wear face mask or dust mask if operation is dusty.
- Be alert and think clearly. Never operate power tools when tired, intoxicated or when taking medications that cause drowsiness.

PREPARE WORK AREA FOR JOB

- Keep work area clean. Cluttered work areas invite accidents.
- Do not use power tools in dangerous environments. Do not use power tools in damp or wet locations. Do not expose power tools to rain.
- Work area should be properly lighted.
- Proper electrical plug should be plugged directly into properly grounded, three-prong receptacle.

SAFETY RULES (CONTINUED)

- Extension cords should have a grounding prong and the three wires of the extension cord should be of the correct gauge.
- Keep visitors at a safe distance from work area.
- Keep children out of workplace. Make workshop childproof. Use padlocks, master switches or remove switch keys to prevent any unintentional use of power tools.

TOOL SHOULD BE MAINTAINED

- Always unplug tool prior to inspection.
- Consult manual for specific maintaining and adjusting procedures.
- Keep tool lubricated and clean for safest operation.
- Remove adjusting tools. Form habit of checking to see that adjusting tools are removed before switching machine on.
- Keep all parts in working order. Check to determine that the guard or other parts will operate properly and perform their intended function.
- Check for damaged parts. Check for alignment of moving parts, binding, breakage, mounting and any other condition that may affect a tool's operation.
- A guard or other part that is damaged should be properly repaired or replaced. Do not perform makeshift repairs. (Use parts list provided to order repair parts.)

KNOW HOW TO USE TOOL

- Use right tool for job. Do not force tool or attachment to do a job for which it was not designed.
- Disconnect tool from power when changing accessories such as grinding wheels, buffing wheels and the like.
- Avoid accidental start-up. Make sure that the switch is in the off position before plugging in.
- Do not force tool. It will work most efficiently at the rate for which it was designed.
- Keep hands away from moving parts and grinding surfaces.
- Never leave a tool running unattended. Turn the power off and do not leave tool until it comes to a complete stop.
- Do not overreach. Keep proper footing and balance.
- Never stand on tool. Serious injury could occur if tool is tipped over.
- Know your tool. Learn the tool's operation, application and specific limitations.
- Use recommended accessories. Understand and obey all safety instructions supplied with accessories. The use of improper accessories may cause risk of injury to persons.
- Do not over tighten wheel nut. Use only flanges supplied with the buffer.
- Handle the workpiece correctly.

CAUTION: Think safety! Safety is a combination of operator common sense and alertness at all times when tool is being used.

ASSEMBLY

Refer to Figures 4 and 5.

Buffer comes completely assembled with hex nuts, wheel flanges and spacers packed separately. One spiral sewn wheel and one soft wheel are included.

IMPORTANT: Do not attempt assembly if parts are missing. Use this manual to order repair parts.

INSTALL BUFFING WHEELS

To install buffing wheels on the buffer refer to Figures 4 and 5.

1. Remove plastic protective sleeves from armature shaft.
2. Slide spacer onto armature shaft.
3. Slide inner wheel flange onto armature shaft.
4. Slide in buffing wheel on to the armature shaft and butt it against the inner wheel flange.
5. Slide in the outer wheel flange and butt the flat side of the flange against the buffing wheel.
6. Tighten hex nut on to the armature shaft. Make sure the buffing wheel is firmly held in place and the hex nut is snug against the outer wheel flange. Use additional spacers (not supplied) if required.
7. Repeat steps 1 – 6 to install buffing wheel on the other side of the buffer.

INSTALLATION**MOUNT BUFFER**

- Mount buffer to a solid horizontal surface (hardware not provided). If mounted to metal pedestal, align mounting holes with corresponding holes in pedestal. Insert a 1/4"-20 x 1 1/4" hex head bolt with flat washer through base of buffer. From bottom of pedestal, place a 1/4" flat washer and 1/4"-20 hex nut onto the bolt. Tighten only until space between buffer base and pedestal is 1/8". Using second nut on each bolt, jam tighten against the first to prevent loosening by vibration.
- To mount buffer to wooden bench top, use 1/4" x 1 1/4" wood screws with flat washers beneath heads. Tighten screws until space between buffer base and bench top is 1/8".

GROUNDING INSTRUCTIONS

WARNING: Improper connection of equipment grounding conductor can result in the risk of electrical shock. Equipment should be grounded while in use to protect operator from electrical shock. Check with a qualified electrician if grounding instructions are not understood or if in doubt as to whether the tool is properly grounded.

This buffer is equipped with an approved 3-conductor cord rated at 300V and a 3-prong, grounding type plug (See Figure 1) for your protection against shock hazards.

Grounding plug should be plugged directly into a properly installed and grounded 3-prong grounding-type receptacle (See Figure 1).

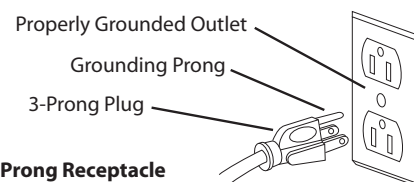


Figure 1 – 3-Prong Receptacle

Do not remove or alter grounding prong in any manner. In the event of a malfunction or breakdown, grounding provides a path of least resistance for electrical shock.

WARNING: Do not permit fingers to touch the terminals of plug when installing or removing from outlet.

INSTALLATION (CONTINUED)

Plug must be plugged into matching outlet that is properly installed and grounded in accordance with all local codes and ordinances. Do not modify plug provided. If it will not fit in outlet, have proper outlet installed by a qualified electrician.

Inspect tool cords periodically, and, if damaged, have repaired by an authorized service facility.

Green (or green and yellow) conductor in cord is the grounding wire. If repair or replacement of the electric cord or plug is necessary, do not connect the green (or green and yellow) wire to a live terminal.

Where a 2-prong wall receptacle is encountered, it must be replaced with a properly grounded 3-prong receptacle installed in accordance with National Electric Code and local codes and ordinances.

WARNING: This work should be performed by a qualified electrician.

A temporary 3-prong to 2-prong grounding adapter (See Figure 2) is available for connecting plugs to a two pole outlet if it is properly grounded.

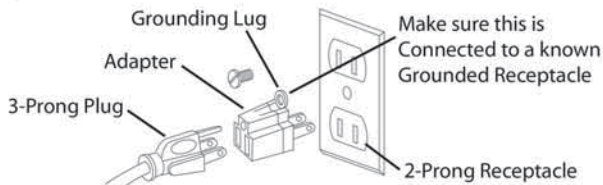


Figure 2 – 2-Prong Receptacle with Adapter

Do not use a 3-prong to 2-prong grounding adapter unless permitted by local and national codes and ordinances.

(A 3-prong to 2-prong grounding adapter is not permitted in Canada.) Where permitted, the rigid green tab or terminal on the side of the adapter must be securely connected to a permanent electrical ground such as a properly grounded water pipe, a properly grounded outlet box or a properly grounded wire system.

Many cover plate screws, water pipes and outlet boxes are not properly grounded. To ensure proper ground, grounding means must be tested by a qualified electrician.

EXTENSION CORDS

- The use of any extension cord will cause some drop in voltage and loss of power.
- Wires of the extension cord must be of sufficient size to carry the current and maintain adequate voltage.
- Running the unit on voltages which are not within $\pm 10\%$ of the specified voltage may cause overheating and motor burn-out.
- Use the table to determine the minimum wire size (A.W.G.) extension cord.
- Use only 3-wire extension cords having 3-prong grounding type plugs and 3-pole receptacles which accept the tool plug.
- If the extension cord is worn, cut or damaged in any way, replace it immediately.

Length	9682106	9682107	9682108
Up to 25 ft	18 A.W.G.	16 A.W.G.	14 A.W.G.

NOTE: Using extension cords over 50 ft. long is not recommended.

ELECTRICAL CONNECTIONS

WARNING: All electrical connections must be performed by a qualified electrician. Make sure tool is off and disconnected from power source while motor is mounted, connected, reconnected or anytime wiring is inspected.

Motor is assembled with approved, 3-conductor cord to be used at 120 volts. Motor is prewired at the factory for 120 volts.

OPERATION

See Figure 3.

WARNING: Always wear safety glasses complying with United States ANSI Z87.1 before commencing power tool operation. Safety glasses are available through your Grainger catalog.

- To turn power on press the "ON/OFF" button
- The control panel indicates 3 power ranges: Low-Medium-High
- To operate grinder at max speed press "High" button.
- To change speeds in the high range press the (UP) or (DOWN).
- Remember you are starting at the max speed within that range.
- You may change ranges while the wheels are rotating.
- You may change speeds within the range while the wheels are rotating.
- To turn the power off press the "ON/OFF" button again.



Figure 3 – Control Panel

- Keep a steady, moderate pressure on the work and keep it moving at an even pace for smooth buffing.
- Pressing too hard overheats the motor and prematurely wears down the buffing wheels.
- The buffing wheel should rotate into object being buffed.

MAINTENANCE

- Replacement wheels must have a minimum rated speed of 3600 RPM.
- Maximum wheel diameter is 6" for 9682106, 8" for 9682107, and 10" for 9682108.
- Disconnect unit from power source before replacing buffing wheels or before performing any maintenance work.
- The threads on the right side of the buffer (facing unit) are right hand; threads on the left side are left hand. Hold the wheels firmly to loosen the hex nut.
- Make sure hex nuts are tight and snug against the outer wheel flange prior to restarting buffer.

TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Buffer won't start	<ol style="list-style-type: none"> 1. Blown line fuse or tripped circuit breaker 2. Low line voltage 3. Defective switch 4. Defective, blown capacitor 5. Defective circuit board 	<ol style="list-style-type: none"> 1. If fuse is blown, replace with fuse of proper size. If breaker tripped, reset it 2. Check power supply for voltage and correct as needed 3. Replace switch 4. Replace capacitor 5. Replace circuit board
Excessive vibration	<ol style="list-style-type: none"> 1. Improper mounting of buffer 2. Buffing wheels not balanced. 	<ol style="list-style-type: none"> 1. Remount buffer 2. Remount wheels, but rotate one wheel 90° with respect to its previous position. Other wheel should remaining its original position
Motor overheating	<ol style="list-style-type: none"> 1. Excessive pressure required to buff workpiece 2. Buffing on side of wheel 3. Motor not turning freely (without power) 	<ol style="list-style-type: none"> 1. Worn wheel; replace 2. Perform buffing only on face of wheel 3. Clean around wheels and shaft and/or replace bearings
Fuses are being blown or circuit breakers are being tripped	<ol style="list-style-type: none"> 1. Overloading due to binding 2. Defective plug 3. Defective cord 4. Defective switch 5. Faulty internal wiring 	<ol style="list-style-type: none"> 1. Clean around wheels and shaft and/or replace bearings 2. Replace plug 3. Replace cord 4. Replace switch 5. Contact authorized Palmgren Service Center
Buffer will not operate in variable speed mode	<ol style="list-style-type: none"> 1. Defective variable speed switch 2. Defective sensor 3. Defective circuit board 	<ol style="list-style-type: none"> 1. Replace switch 2. Replace sensor 3. Replace circuit board

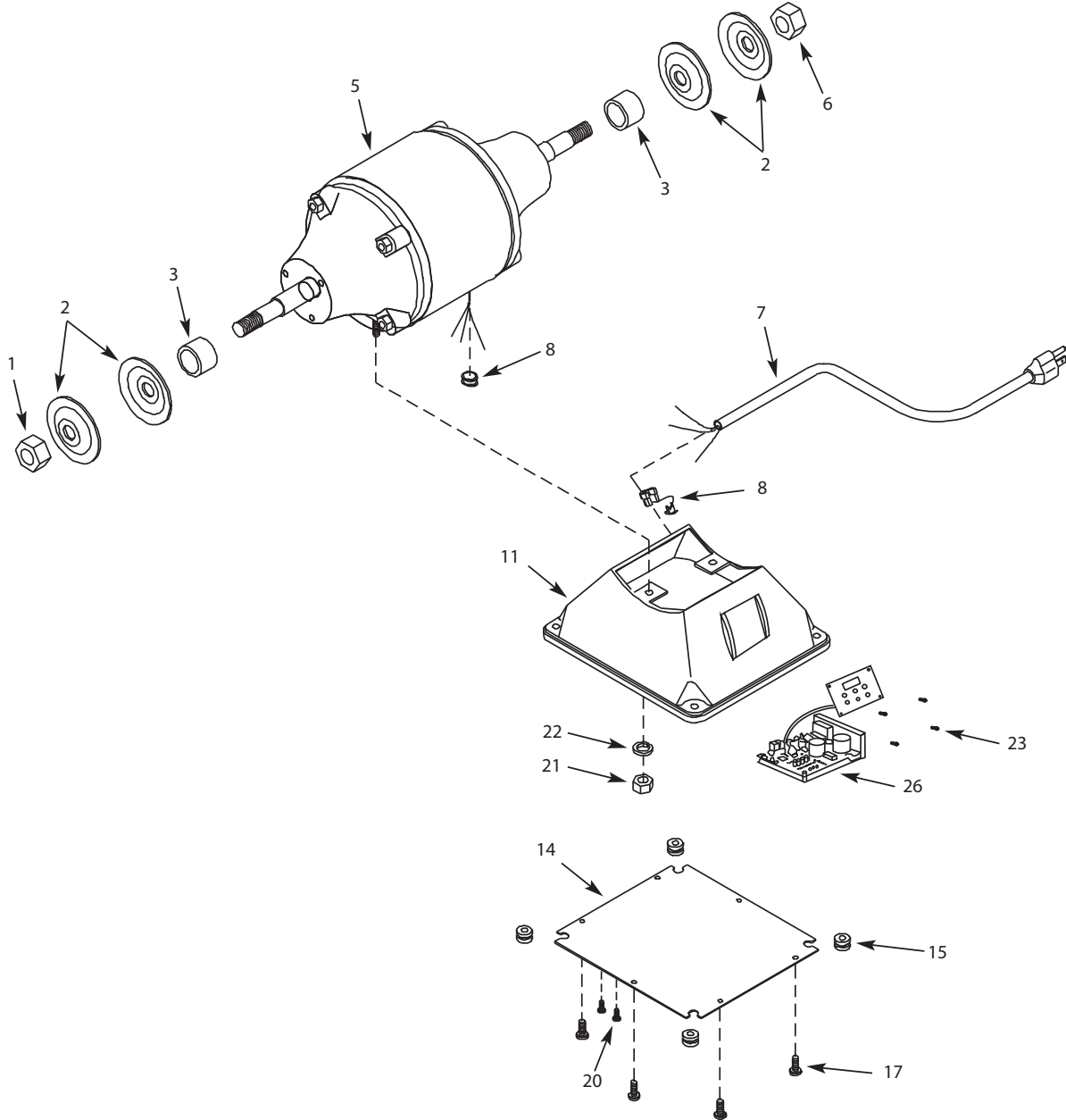


Figure 4 – Illustration for 6" Buffer model 9682106 and 8" Buffer model 9682107

REPLACEMENT PARTS LIST FOR 6" AND 8" BUFFERS

Ref. No.	Description	Part No. for Model 9682106	Part No. for Model 9682107	Qty.
1	1/2"-12 Hex Nut (LH Thread)	9600064.00	-	1
1	5/8"-11 Hex Nut (LH Thread)	-	9600087.00	1
2	Flange	9604515.01	9600089.00	4
3	Spacer	9604647.00	9623985.00	2
5	Motor	N/A	N/A	1
6	1/2"-12 Hex Nut (RH Thread)	9600548.00	-	1
6	5/8"-11 Hex Nut (RH Thread)	-	9600088.00	1
7	Line Cord	9600067.00	9600090.00	1
8	Strain Relief	9604055.00	9601601.00	1
11	Base	N/A	N/A	1
14	Base Cover	9623758.00	9624500.00	1
15	Base Bumper	9623991.00	9623991.00	4
17	#10-24x1/4" Flange Screw	*	*	4
20	Screw M6 x 10	*	*	2
21	Hex Nut 1/4"-20	*	*	2
22	Lockwasher	*	*	2
23	M3 x 10mm Screw	*	*	4
26	Inverter & Control Panel Assy.	9640118.01	9640118.02	1
Optional Accessories				
Δ	Cast Iron Tool Stand	9670101	9670101	

(Δ) Not shown.

(*) Standard hardware item, available locally.

(N/A) Not available as replacement part.

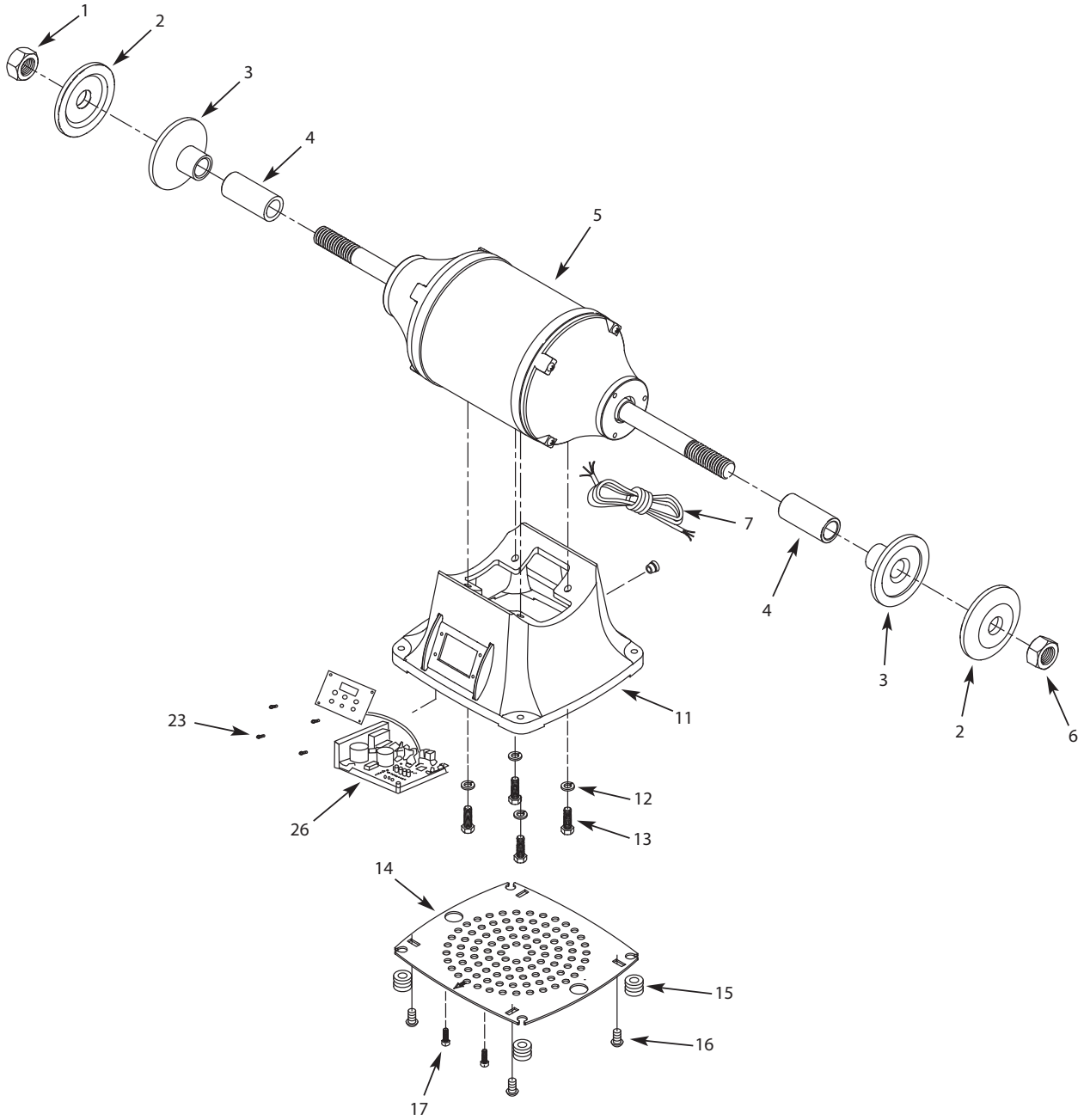


Figure 5 – Illustration for 10" Buffer, model 9682108

REPLACEMENT PARTS LIST FOR 10" BUFFER

Ref. No.	Description	Part Number for: Model 9682108	Qty.
1	1"-8 Hex Nut (LH Thread)	9600111.00	1
2	Flange	9624880.00	2
3	Inner Wheel Flange	9624481.00	2
4	Spacer	9631340.00	2
5	Motor	N/A	1
6	1"-8 Hex Nut (RH Thread)	9600110.00	1
7	Line Cord	9607860.00	1
8	Strain Relief	9601601.00	1
11	Base	N/A	1
12	Lockwasher 8mm	*	4
13	M8 x 25mm Hex Head Bolt	*	4
14	Base Cover	9616919.00	1
15	Base Bumper	9623991.00	4
16	Flange Screw #10-24 x 3/8"	*	4
17	M6 x 10mm Flange Screw	*	4
23	M3 x 10mm Screw	*	4
26	Inverter & Control Panel Assy.	9640118.03	1
Optional Accessories			
Δ	Cast Iron Tool Stand	9670101	

(Δ) Not shown.

(*) Standard hardware item, available locally.

(N/A) Not available as replacement part.

NOTES

NOTES

WARRANTY

Palmgren warrants their products to be free of defects in material or workmanship. This warranty does not cover defects due directly or indirectly to misuse, abuse, normal wear and tear, failure to properly maintain the product, heated, ground or otherwise altered, or used for a purpose other than that for which it was intended. The warranty does not cover expendable and/or wear parts (i.e. v-belts, coated screws, abrasives), damage to tools arising from alteration, abuse or use other than their intended purpose, packing and freight. The duration of this warranty is expressly limited to one year parts and labor, unless otherwise noted below beginning from the date of delivery to the original user. The Palmgren products carry the following warranties on parts with a 1 year warranty on labor:

- USA Machine vises – Lifetime
- IQ Machine vises – Lifetime
- Bench vises – Lifetime
- Positioning tables – Lifetime
- Bench grinders & buffers – 3 years
- Tapping machines – 2 years
- Drilling machines – 2 years
- Finishing machines – 2 years
- Band saws – 2 years
- Work stands – 2 years
- Arbor presses – 2 years
- Metal forming equipment – 2 years
- Accessories – 1 year

The obligation of Palmgren is limited solely to the repair or replacement, at our option, at its factory or authorized repair agent of any part that should prove deficient. Purchaser must lubricate and maintain the product under normal operating conditions at all times. Prior to operation become familiar with product and the included materials, i.e. warnings, cautions and manuals. **Failure to follow these instructions will void the warranty.**

This warranty is the purchaser's exclusive remedy against Palmgren for any deficiency in its products. Under no circumstances is Palmgren liable for any direct, indirect, incidental, special or consequential damages including lost profits in any way related to the use or inability to use our products. This warranty gives you specific legal rights which may vary from state to state.

SERVICE & REPAIR

1. If a Palmgren product requires a repair or warranty service **DO NOT** return the product to the place of purchase.
2. All warranty related work must be evaluated and approved by Palmgren.
3. Prior to returning any item the user must obtain factory approval and a valid RGA number.
4. For instructions and RGA number call toll free (800) 827-3398.

PALMGREN®