

Drum-Type Polisher

INSTRUCTION MANUAL



Original instructions

For your personal safety,
READ and UNDERSTAND before using.
SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

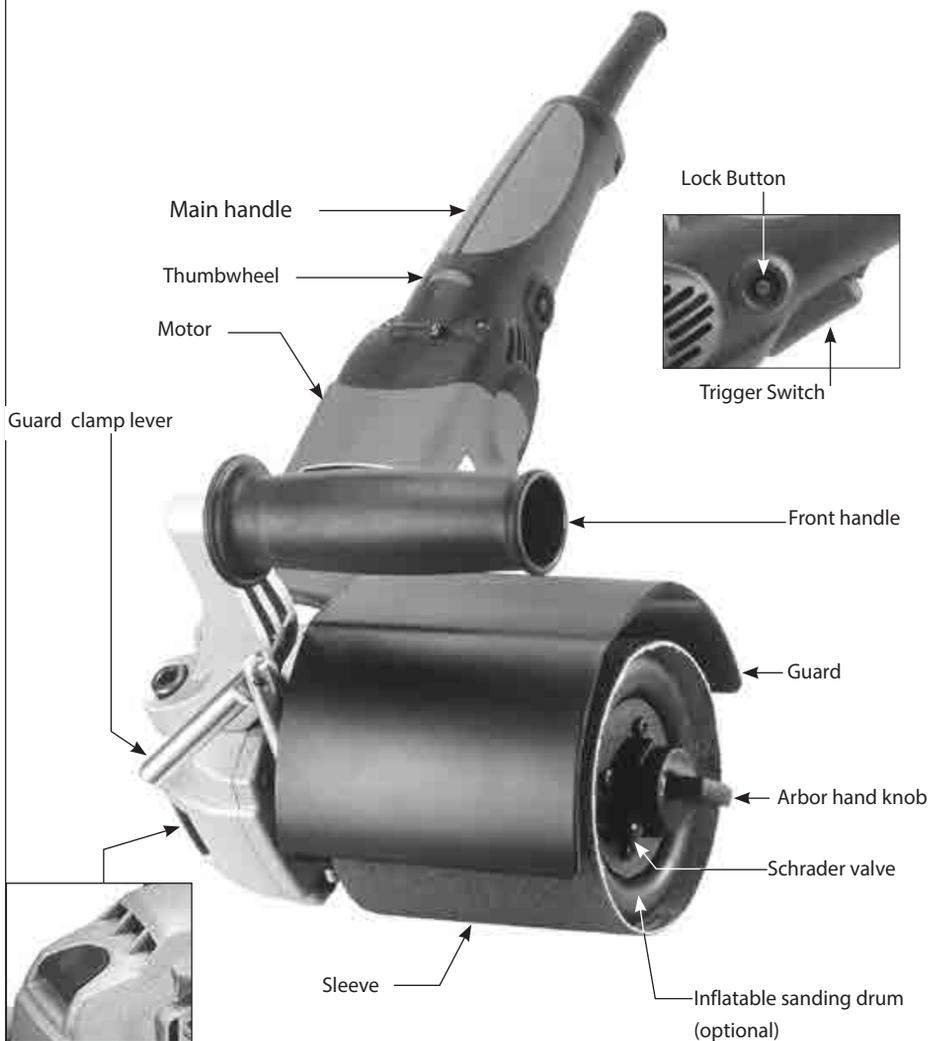
CAUTION:

For tools equipped with overload protection, when the motor shuts off due to overload, always run the machine with no load for at least 3 minutes to reduce temperature before returning to operation to avoid burn-out of the motor.



Voltage	See machine nameplate
Power input	1200 W (with feedback speed stabilization)
No load min ⁻¹	1500-2800
Arbor	19mm double keyed x 100mm long
Maximum wheel diameter	100mm
Net weight	3.5kg(7.71Lbs)

INFLATABLE SANDING DRUM (drum optional)



FINISHING / FLAP WHEELS



BELT SANDING DRIVE PULLEY



GENERAL SAFETY INSTRUCTIONS



WARNING! Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference. The term “power tool” in the warnings refers to your mainsoperated (corded) power tool or battery-operated (cordless) power tool.

1) WORK AREA SAFETY

- a. **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- b. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
- c. **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

2) ELECTRICAL SAFETY

- a. **Power tool plugs must match the outlet.**

Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.

Unmodified plugs and matching outlets will reduce risk of electric shock.

- b. **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- c. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- d. **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
- e. **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- f. **If operating a power tool in a damp location is unavoidable, use an earth leakage circuit breaker.** Use of an earth leakage circuit breaker reduces the risk of electric shock.

3) PERSONAL SAFETY

- a. **a) Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- b. **b) Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- c. **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
- d. **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- e. **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- f. **Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewelry or long hair can be caught in moving parts.
- g. **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

4) POWER TOOL USE AND CARE

- a. **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.

- b. **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- c. **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- d. **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- e. **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
- f. **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- g. **Use the power tool, accessories and tool bits etc., in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

5) SERVICE

Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.

Symbols used in this manual

V.....volts

A.....amperes

Hz.....hertz

W.....watt

~.....alternating current

n_ono load speed

min^{-1}revolutions or reciprocation
per minute



.....warning of general danger



.....class II tool



.....with electrical earth



.....read these instructions



.....always wear eye protection



.....always wear a dust mask.



.....always wear hearing protection



.....wear safety-approved hard hat



.....Keep hands clear – pinching hazard.



DANGER! Keep hands away from cutting area and the blade.



rotating parts - entanglement hazard. Keep hands, loose clothing and long hair away from moving parts



do not dispose of electric tools, accessories and packaging together with household waste material

SPECIFIC SAFETY RULES

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known 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 mason 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 NIOSH/OSHA approved, properly fitting face mask or respirator when using such tools.

1. **Use clamps or other practical way to secure and support the workpiece to a stable platform.** Holding the work by hand or against your body is unstable and may lead to loss of control.
2. **Keep hands away from rotating parts.**
3. **Wear eye and hearing protection. Always use safety glasses.** Everyday eyeglasses are NOT safety glasses. USE CERTIFIED SAFETY EQUIPMENT.
4. **Use of this tool can generate and disburse dust or other airborne particles, including wood dust, crystalline silica dust and asbestos dust.** Direct particles away from face and body. Always operate tool in well ventilated area and provide for proper dust removal. Use dust collection system wherever possible. Exposure to the dust may cause serious and permanent respiratory or other injury, including silicosis (a serious lung disease), cancer, and death. Avoid breathing the dust, and avoid prolonged contact with dust. Allowing dust to get into your mouth or eyes, or lay on your skin may promote absorption of harmful material. Always use properly fitting NIOSH/OSHA approved

respiratory protection appropriate for the dust exposure, and wash exposed areas with soap and water.

TERMINOLOGY

DANGER: indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING: indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION: indicates a potentially hazardous situation which, if not Avoided, may result in minor or moderate injury. or indicates potentially hazardous situation which, if not avoided, may result in property damage.

SAFETY WARNINGS COMMON FOR GRINDING, SANDING OR POLISHING OPERATIONS

1. **This power tool is intended to function as a grinder, sander or polisher. Read all safety warnings, instructions, illustrations and specifications provided with this power tool.** Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.
2. **Operations such as wire brushing or cutting-off are not recommended to be performed with this power tool.** Operations for which the power tool was not designed may create a hazard and cause personal injury.
3. **Do not use accessories which are not specifically designed and recommended by the tool manufacturer.** Just because the accessory can be attached to your power

tool, it does not assure safe operation.

4. **The rated speed of the accessory must be at least equal to the maximum speed marked on the power tool.** Accessories running faster than their rated speed can break and fly apart.
5. **The outside diameter and the thickness of your accessory must be within the capacity rating of your power tool.** Incorrectly sized accessories cannot be adequately guarded or controlled.
6. **The arbour size of wheels, flanges, backing pads or any other accessory must properly fit the spindle of the power tool.** Accessories with arbour holes that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.
7. **Do not use a damaged accessory. Before each use inspect the accessory such as abrasive wheels for chips and cracks, backing pad for cracks, tear or excess wear, wire brush for loose or cracked wires. If power tool or accessory is dropped, inspect for damage or install an undamaged accessory. After inspecting and installing an accessory, position yourself and bystanders away from the plane of the rotating accessory and run the power tool at maximum no-load speed for one minute.** Damaged accessories will normally break apart during this test time.
8. **Wear personal protective equipment. Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and workshop apron capable of stopping small abrasive or**

workpiece fragments. The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtering particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.

9. **Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment.** Fragments of workpiece or of a broken accessory may fly away and cause injury beyond immediate area of operation.
10. **Position the cord clear of the spinning accessory.** If you lose control, the cord may be cut or snagged and your hand or arm may be pulled into the spinning accessory.
11. **Never lay the power tool down until the accessory has come to a complete stop.** The spinning accessory may grab the surface and pull the power tool out of your control.
12. **Do not run the power tool while carrying it at your side.** Accidental contact with the spinning accessory could snag your clothing, pulling the accessory into your body.
13. **Regularly clean the power tool's air vents.** The motor's fan will draw the dust inside the housing and excessive accumulation of powdered metal may cause electrical hazards.
14. **Do not operate the power tool near flammable materials.** Sparks could ignite these materials.
15. **Do not use accessories that require liquid coolants.** Using water or other liquid coolants may result in electrocution or shock.

KICKBACK AND RELATED WARNINGS

Kickback is a sudden reaction to a pinched or snagged rotating wheel, backing pad, brush or any other accessory. Pinching or snagging causes rapid stalling of the rotating accessory which in turn causes the uncontrolled power tool to be forced in the direction opposite of the accessory's rotation at the point of the binding. For example, if an abrasive wheel is snagged or pinched by the workpiece, the edge of the wheel that is entering into the pinch point can dig into the surface of the material causing the wheel to climb out or kick out. The wheel may either jump toward or away from the operator, depending on direction of the wheel's movement at the point of pinching. Abrasive wheels may also break under these conditions.

Kickback is the result of power tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below.

1. **Maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces. Always use auxiliary handle, if provided, for maximum control over kickback or torque reaction during start-up.** The operator can control torque reactions or kickback forces, if proper precautions are taken.
2. **Never place your hand near the rotating accessory.** Accessory may kickback over your hand.
3. **Do not position your body in the area where power tool will move if kickback occurs.** Kickback will propel the tool in

direction opposite to the wheel's movement at the point of snagging.

- 4. Use special care when working corners, sharp edges etc. Avoid bouncing and snagging the accessory.** Corners, sharp edges or bouncing have a tendency to snag the rotating accessory and cause loss of control or kickback.
- 5. Do not attach a saw chain woodcarving blade or toothed saw blade.** Such blades create frequent kickback and loss of control.

SAFETY WARNINGS SPECIFIC FOR GRINDING AND ABRASIVE CUTTING-OFF OPERATIONS

- 1. Use only wheel types that are recommended for your power tool and the specific guard designed for the selected wheel.** Wheels for which the power tool was not designed cannot be adequately guarded and are unsafe.
- 2. The guard must be securely attached to the power tool and positioned for maximum safety, so the least amount of wheel is exposed towards the operator.** The guard helps to protect the operator from broken wheel fragments, accidental contact with wheel and sparks that could ignite clothing.
- 3. Wheels must be used only for recommended applications. For example: do not grind with the side of cut-off wheel.** Abrasive cut-off wheels are intended for peripheral grinding, side forces applied to these wheels may cause them to shatter.
- 4. Always use undamaged wheel flanges that**

are of correct size and shape for your selected wheel. Proper wheel flanges support the wheel thus reducing the possibility of wheel breakage. Flanges for cut-off wheels may be different from grinding wheel flanges

- 5. Do not use worn down wheels from larger power tools.** Wheel intended for larger power tool is not suitable for the higher speed of a smaller tool and may burst.

SAFETY WARNINGS SPECIFIC FOR SANDING OPERATIONS

Do not use excessively oversized sanding disc paper. Follow manufacturers recommendations, when selecting sanding paper. Larger sanding paper extending beyond the sanding pad presents a laceration hazard and may cause snagging, tearing of the disc or kickback.

SAFETY WARNINGS SPECIFIC FOR POLISHING OPERATIONS

Do not allow any loose portion of the polishing bonnet or its attachment strings to spin freely. Tuck away or trim any loose attachment strings. Loose and spinning attachment strings can entangle your fingers or snag on the workpiece.

NOTE: indicates useful advice for operating the machine for best performance or convenience, etc.

MOTOR

Always check the nameplate to ensure the A.C. current supply is the correct voltage for your machine.

This tool will operate on voltage within plus or minus 5 percent of that shown on the specification plate on the tool. Refer to the specification plate on your tool for proper voltage and current rating.

Do not operate your tool on a current on which the voltage is not within correct limits.

If an extension cord is used, make sure the conductor size is large enough to prevent excessive voltage drop which will cause loss of power and possible motor damage.

If an extension cord is to be used outdoors, it must be marked with the suffix WA or W following the cord type designation. For example – SJTW-A to indicate it is acceptable for outdoor use. Always choose the shortest possible cord.

EXTENSION CORD SELECTION

Total Extension Cord Length (feet)	Cord Size (AWG)
25	16
50	12
100	10
150	8
200	6

DRUM-TYPE POLISHER

included accessories

10 Arbor Spacer Discs (for fitting smaller wheels to the arbor)

OPTIONAL ACCESSORIES

Surface Conditioning Flap Wheel (fine) 105 x 100 x 19mm

DRIVE PULLEY FOR BELTS

Hook and loop belt backing straps

Hook and Loop Surface Conditioning belt

Hook and Loop 120 grit Sandpaper belt

Hook and Loop Sanding Sponge Belt-Fine

INFLATABLE RUBBER SANDING DRUM

AIR PUMP FOR DRUM

Surface Conditioning Sleeve

Sanding Sponge Sleeve - Fine

Sanding Sponge Sleeve – Medium

Sandpaper Sleeve- 60 grit

Sandpaper Sleeve- 100 grit

Sandpaper Sleeve- 180 grit

FOREWORD

This Drum-Type Polisher is especially designed for fast compounding, high polishing, buffing and sanding of stainless steel and aluminum panels and forms. There are many accessories for specific applications and tasks.

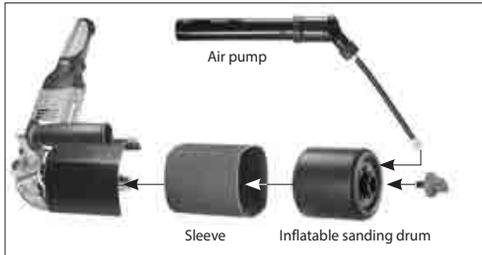
ASSEMBLY

CAUTION: DISCONNECT TOOL FROM POWER SOURCE. THE GUARD AND HANDLE:

Place the guard in position on the gearcase and rotate to the desired angle. Tighten with the built-in lever.

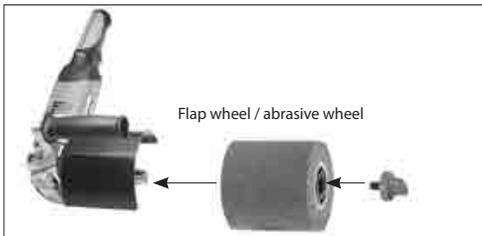
INFLATABLE SANDING DRUM (Optional)

1. Place the drum on the arbor in line with the slot and tighten the hand knob.
2. Ensuring that the drum is uninflated, slide the desired type of sleeve in place on the drum.
3. Using the air pump , inflate the drum to the desired pressure. This will hold the sleeve in place.



FINISHING / FLAP WHEELS (optional)

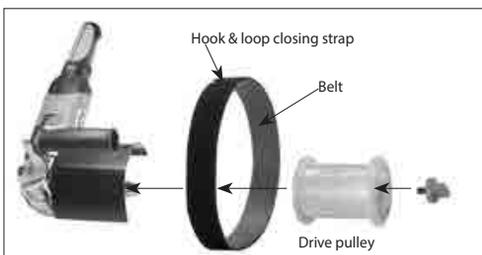
1. Place the wheel on the arbor in line with the slot and tighten the hand knob.
2. If the wheel is too narrow, then place the appropriate number of spacers on the arbor.



BELT SANDING DRIVE PULLEY (optional)

1. Place the drive pulley on the arbor in line with the slot and tighten the hand knob.
2. Loop the desired type of belt around the tubular workpiece facing inwards.
3. Hold the belt to make a straight butt joint and use one of the hook and loop belt backing straps to close the loop
4. Place the belt in place on the pulley.

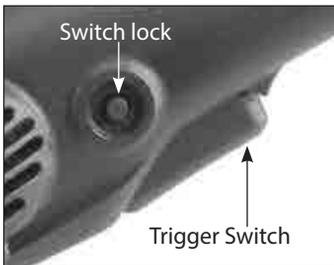
Note: One piece belts may also be used on open tube forms.



TO START AND STOP THE MACHINE

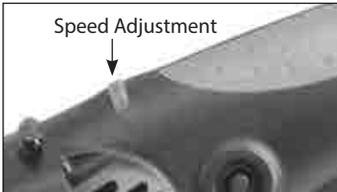
CAUTION: Make sure switch is OFF and power circuit voltage is the same as that shown on the specification plate.

1. Connect tool to power source.
2. Grip machine firmly to resist starting torque.
3. Squeeze trigger switch to turn tool on. Release the trigger to shut tool off.
4. To lock the switch in the "on" position, press the lock pin while the switch is fully on. To release the lock, press the switch and release it.



CONTROLLING THE VARIABLE SPEED

The thumbwheel sets the maximum speed, while the trigger turns the machine on and off. With switch in the locked ON position the thumbwheel may be used to adjust the speed. This machine incorporates feedback speed stabilization so that the speed will not slow with load. It will maintain the preset speed regardless of the load. Always start at a slower speed and work up to the best speed.



OPERATION

WARNING: If the workpiece is not attached to

anything and is light enough to be moved by the spinning drum, it should be securely clamped or anchored to prevent it being thrown or flung, resulting in possible injury.

1. Hold the machine firmly by the front and rear handles, making sure the drum is clear of foreign objects.
2. Start the machine and lower it to the work.
3. Move the machine in long overlapping strokes. **DO NOT HOLD TOO LONG IN ONE SPOT** Doing so will overheat the surface and cause uneven results.
4. Always be sure motor has stopped before setting the machine down.

When using the machine to apply products (compounds, polishes, waxes, cleaners, etc).

always read and follow the manufacturers directions supplied with product.

In this case do not run the machine without the drum in contact with work surface. Otherwise the media will be thrown outwards. Start and stop the machine with the drum against work surface.

NOTE: Do not use the same wheel to apply different grades of compound. The coarser compound will contaminate the finer compound, causing poor results.

MAINTENANCE

Every 50 hours of operation blow compressed air through the motor while running at no load to clean out accumulated dust. (If operating in especially dusty conditions, perform this operation more often.)

KEEP TOOL CLEAN

Periodically blow out all air passages with dry compressed air. All plastic parts should be cleaned with a soft damp cloth. NEVER use solvents to clean plastic parts. They could possibly dissolve or otherwise damage the material.

Wear safety glasses while using compressed air.

FAILURE TO START

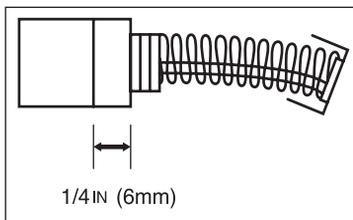
Should your tool fail to start, check to make sure the prongs on the cord plug are making good contact in the outlet. Also, check for blown fuses or open circuit breakers in the line.

THE CARBON BRUSHES

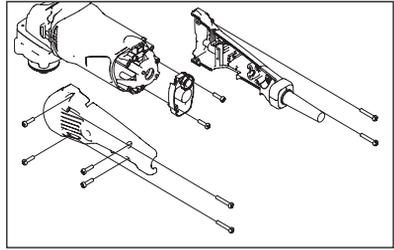
The carbon brushes are a normal wearing part and must be replaced when they reach their wear limit.

NOTE: Checking and replacing the carbon brushes should be entrusted to a qualified service center.

The carbon brushes furnished will last approximately 50 hours of running time or 10,000 on/off cycles. Replace both carbon brushes when either has less than 1/4" length of carbon remaining.



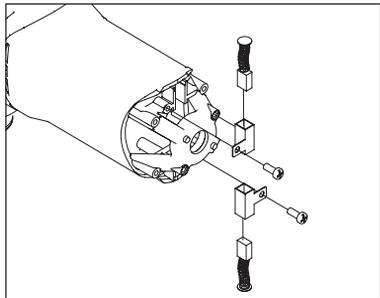
1. To inspect or replace brushes, first unplug the machine. Carefully remove the 8 screws to separate the two handle halves and remove from the motor housing. Remove the left handle half first.
2. There will still be wires connected to the rear handle, so take care that these are not stressed. Simply hold the rear handle off to one side.
3. Next remove the two screws holding on the Electronics Unit to allow access to the Brush Holder screws. Hold the Electronics Unit off to one side and avoid stressing the wires.
4. Unscrew the two Carbon Brush Holders in turn and remove the Carbon Brushes.



NOTE: When putting the Carbon Brushes back into the Carbon Brush Holders it is essential that both flanges go back inside the holder.

NOTE: To reinstall the same brushes, first make sure the brushes go back in the way they came out. Otherwise a break-in period will occur that will reduce motor performance and increase brush wear.

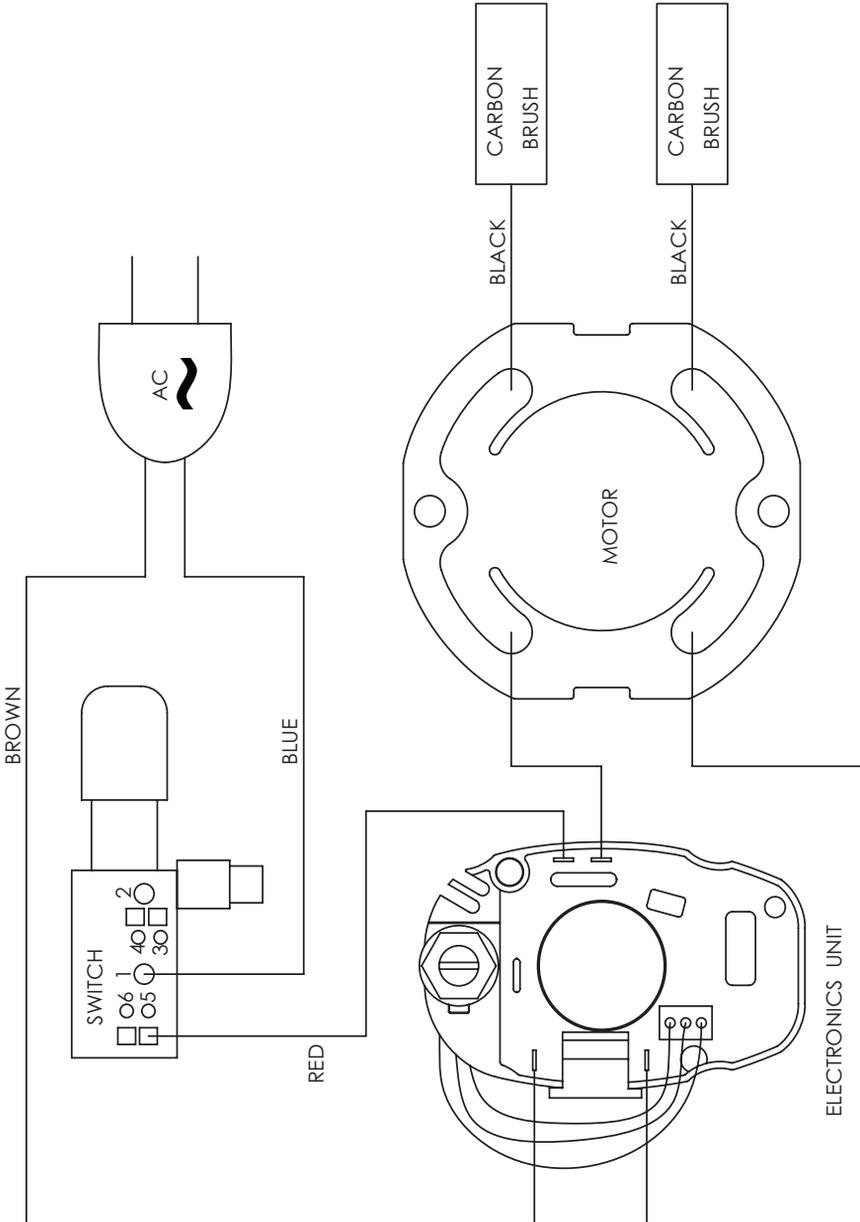
Replacing is the reverse of removal. Replace the Brush Holder screws, then the Electronics Unit screws. When Replacing the rear handle to the motor housing, take great care that all wires are in place and not in a position to be pinched when it is retightened. It is recommended that, at least once a year, you take the tool to an Authorized Service Center for a thorough cleaning and lubrication.



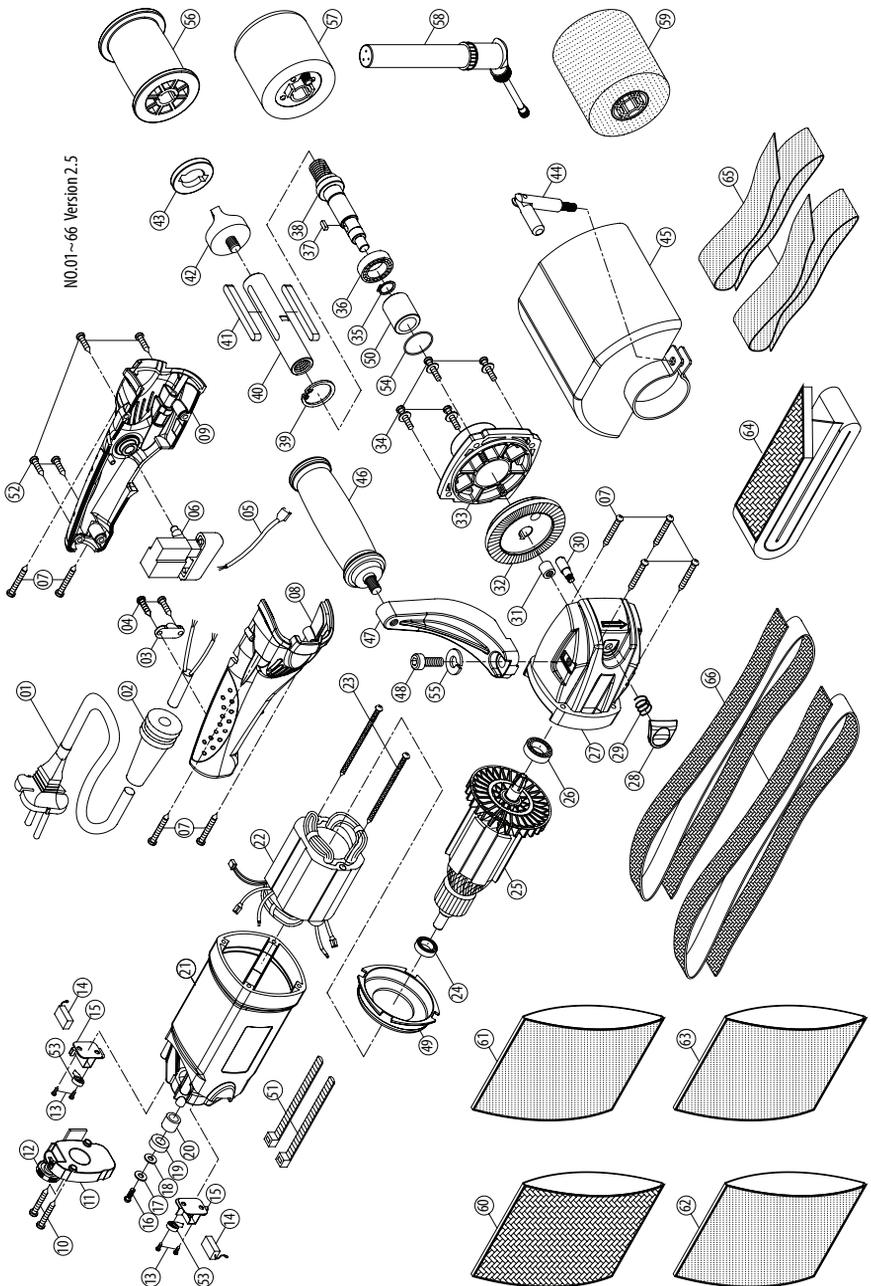
If the replacement of the power supply cord is necessary, this has to be done by the manufacturer or their agent in order to avoid a safety hazard.

WARNING: All repairs must be entrusted to an authorized service center. Incorrectly performed repairs could lead to injury or death.

WIRING



EXPLODED VIEW



PARTS LIST

NO.	Parts Name	QTY	NO.	Parts Name	QTY
1	POWER SUPPLY CABLE	1	34	SCREW M4 x 16	4
2	CORD ARMOR	1	35	EXTERNAL CIRCLIP S-15	1
3	CABLE CLIP	1	36	BALL BEARING 6002LLU	1
4	SCREW M4 x 14	2	37	PARALLEL KEY 5 x 5 x 10	1
5	WIRE LEAD	1	38	SPINDLE	1
6	SWITCH	1	39	INTERNAL CIRCLIP R-32	1
7	SCREW M4 x 25	8	40	LONG ARBOR	1
8	RIGHT HANDLE COVER	1	41	PARALLEL KEY 6 x 6 x 60	2
9	LEFT HANDLE COVER	1	42	HAND KNOB M8 x P1.25	1
10	SCREW M4 x 20	2	43	ARBOR SPACER DISC	10
11	ELECTRONICS UNIT	1	44	GUARD CLAMP LEVER M6 x P1.0	1
12	THUMB WHEEL	1	45	GUARD	1
13	BRUSH SCREW M4 x 10	4	46	FRONT HANDLE	1
14	CARBON BRUSH 7 x 11 x 17 +33L+FLDNBI-110	2	47	HANDLE BRACKET	1
15	CARBON BRUSH HOLDER	2	48	SOCKET CAP BOLT M8 x 16	1
16	SCREW M4 x 10	1	49	FAN BAFFLE	1
17	FLAT WASHER $\phi 4 \times \phi 10 \times 1$	1	50	SPACER $\phi 15 \times \phi 22 \times 24.4$	1
18	PLASTIC WASHER $\phi 4 \times \phi 11 \times 1$	1	51	ZIP TIE 2.4 x 80mm	2/1000
19	PICKUP MAGNET $\phi 8 \times \phi 15 \times 5$	1	52	SCREW M4 x 16	4
20	SPACER $\phi 8 \times \phi 12 \times 10.5$	1	53	SPIRAL TORSION SPRING	2
21	MOTOR HOUSING	1	54	O-RING $\phi 32 \times 2$	1
22	STATOR 110V/220V 62x36.5x58	1	55	SPRING WASHER M8	1
23	STATOR SCREW M4 x 60	2	56	BELT PULLEY	1
24	BALL BEARING 608-2RU	1	57	INFLATABLE SANDING DRUM	1
25	ARMATURE 110V/220V M1.0 x 6T	1	58	AIR PUMP	1
26	BALL BEARING 6000LLU	1	59	FLAP WHEEL $\phi 100 \times 100 \times 19\text{mm}$	1
27	GEAR CASE	1	60	SURFACE CONDITIONING SLEEVE 100mmx292mm	1
28	SPINDLE LOCK BUTTON	1	61	SANDPAPER SLEEVE #60 #60(100mmx294mm)	1
29	SPRING $\phi 0.9 \times \phi 10 \times \phi 11.8 \times 13.5\text{L} \times 4\text{T}$	1	62	SANDPAPER SLEEVE #100 #100(100mmx294mm)	1
30	SPINDLE LOCK	1	63	SANDPAPER SLEEVE #180 #180(100mmx294mm)	1
31	NEEDLE BEARING HK 0810	1	64	SURFACE CONDITIONING BELT 40mmx600mm	1
32	BEVEL GEAR M1.0 x 67T	1	65	SANDPAPER BELT #120 #120(40mmx600mm)	2
33	GEAR PLATE	1	66	HOOK & LOOP BELT CLOSING STRAPS 30mmx700mm	2

