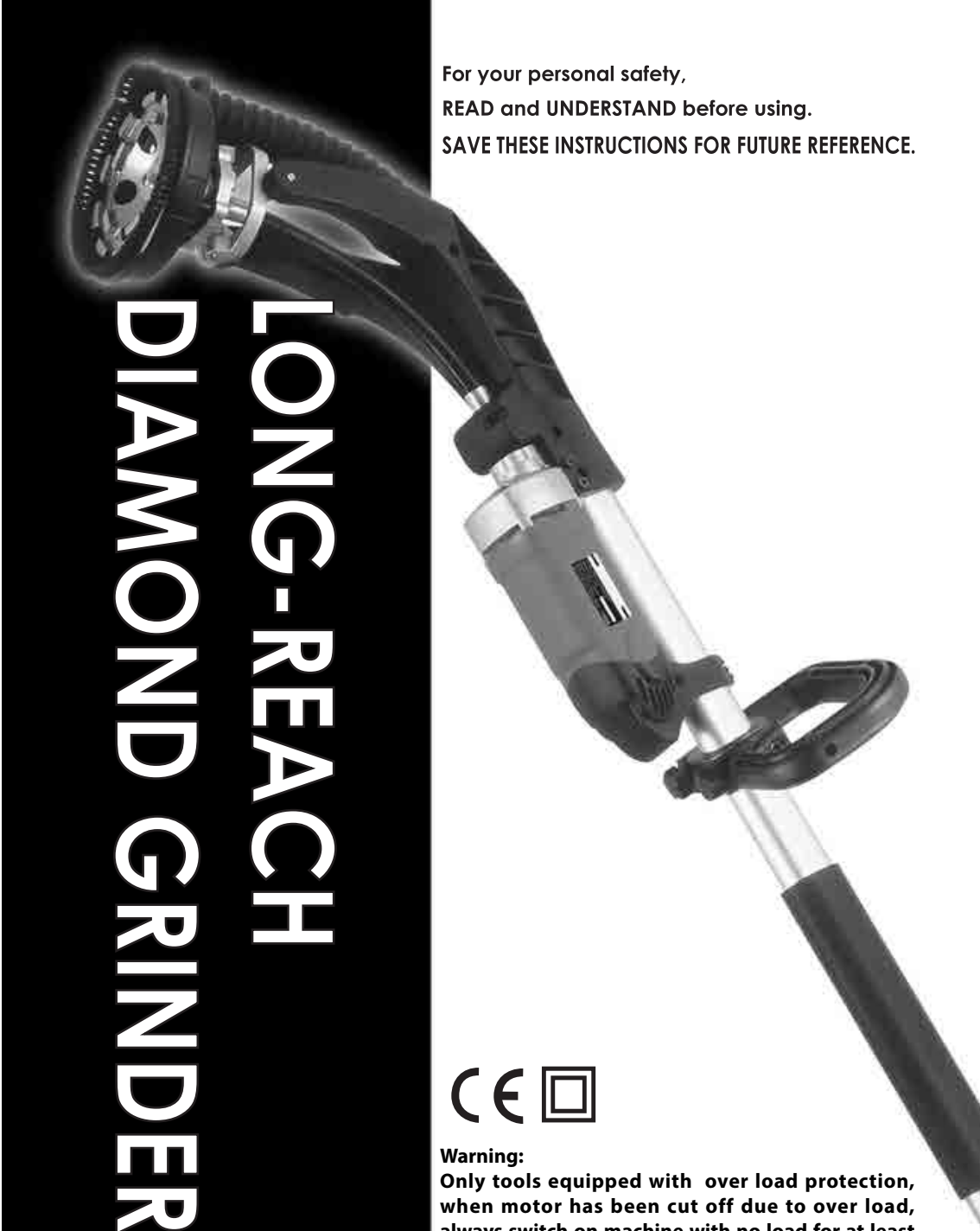
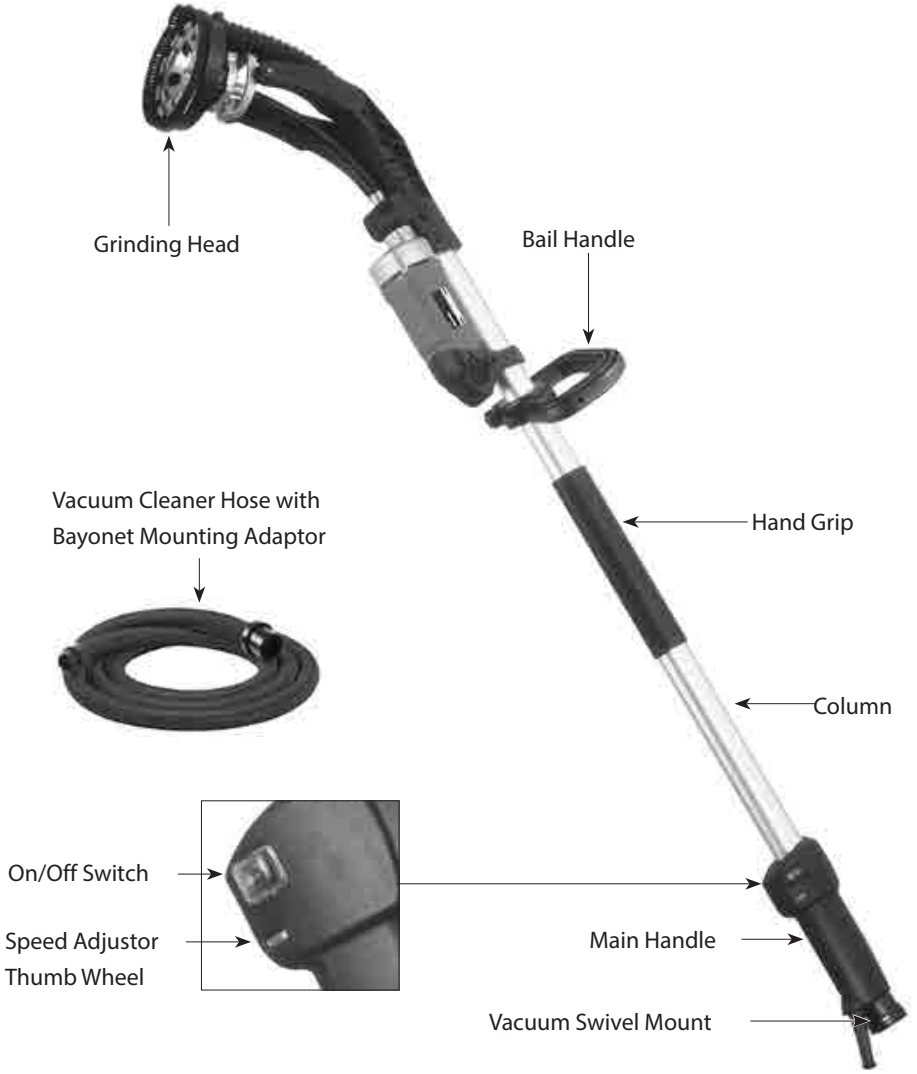
LONG-REACH DIAMOND GRINDER



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

Warning:
Only tools equipped with over load protection, when motor has been cut off due to over load, always switch on machine with no load for at least 3 minutes to reduce temperature before switch on again to avoid burn out to the motor.



Length	1475mm
Voltage	See machine nameplate
No load min^{-1}	1700~3500
Power input	1100W
Diamond cup wheel	125mm
Net weight	3.8 kg (8.4 lbs)

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_o……..no 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


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

SPECIFIC SAFETY RULES

1. **Keep hands away from rotating disc area at all times!**
2. **Prolonged breathing of airborne dust from grinding operations may effect respiratory function:**
   Always use a vacuum cleaner with a bag approved for fine dust installed.
   Always wear a respirator approved for dust and mist.
3. **Grinding LEAD-BASED paint is extremely toxic and should not be attempted.** Only allow professionals with special training and equipment perform this task.
4. **Maintain proper footing and balance at all times.** Do not overreach. Use proper scaffolding
5. **Always wear appropriate safety equipment when operating.**
6. **Important: After completing operation,** switch off the switch and wait for the coasting disc to stop completely before putting the tool down.
7. **Never operate** the tool in an area with flammable solids, liquids, or gases. Sparks from the commutator/carbon brushes could cause a fire or explosion.
8. **There are certain applications for which this tool was designed.** The manufacturer strongly recommends that this tool NOT be modified and/or used for any application other than for which it was designed. If you have any questions relative to its application DO NOT use the tool until you have written the manufacturer and have been advised.
9. **Use the machine with both hands at all times.** Loss of control can cause personal injury.
10. **Keep power supply cord clear from the working range of the machine.** Always lead the cable away behind you.
11. **Immediately switch off the machine if unusual vibrations or if other malfunctions occur.** Check the machine in order to find out the cause.
12. **The dust that arises when working with this tool can be harmful to health.** Use a dust absorption system and wear a suitable dust protection mask and remove deposited dust with a vacuum cleaner.

FUNCTIONAL DESCRIPTION

This Long-Reach Diamond Grinder is specially designed for the minimum effort and maximum speed in grinding difficult to reach areas. It is designed to work in conjunction with a vacuum cleaner for minimum dust and maximum efficiency. The pivoting grinding head allows it to follow surface contours for ease of handling.

Electrical connection

The network voltage must conform to the voltage indicated on the tool name plate. Under no circumstances should the tool be used when the power supply cable is damaged.
A damaged cable must be replaced immediately by an authorized Customer Service Center. Do not try to repair the damaged cable yourself. The use of damaged power cables can lead to an electric shock.

Extension cable

If an extension cable is required, it must have a sufficient cross-section so as to prevent an excessive drop in voltage or overheating. An excessive drop in voltage reduces the output and can lead to failure of the motor. The following table shows you the correct cable diameter as a function of the cable length for this machine. Use only approved extension cables. Never use two extension cables together. Instead, use one long one.

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

UNPACKING

Carefully remove the tool and all loose items from the shipping container.
Retain all packing materials until after you have inspected and satisfactorily operated the machine.

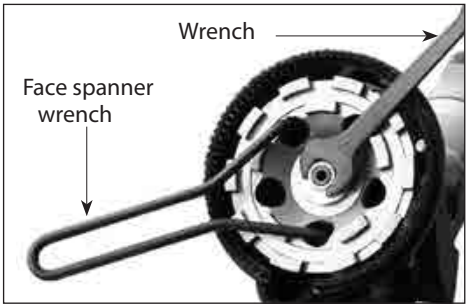
CARTON CONTENTS

1. Long-reach grinder machine
2. Vacuum cleaner hose
3. Instruction manual
4. Bail handle
5. Carry bag
6. Face spanner wrench
7. T-socket wrench
8. 125mm diamond cup wheel

DO NOT OPERATE THIS TOOL UNTIL YOU READ AND UNDERSTAND THE ENTIRE INSTRUCTION MANUAL

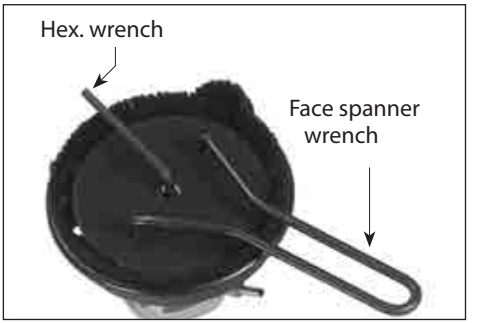
To install a diamond cup wheel:

1. Unplug the machine.
2. Place the Diamond Cup Wheel on the arbor and thread on the Arbor Nut.
3. Using the Face Spanner Wrench to keep the Diamond Cup Wheel from turning, tighten the Arbor Nut with the Wrench.
4. Removal is the opposite of assembly.



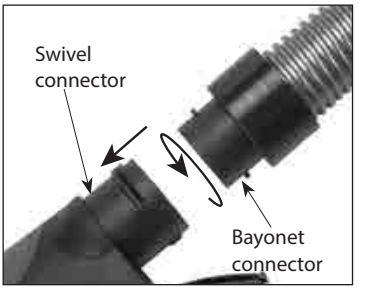
To install a Diamond polishing:

1. Unplug the machine.
2. Place the Hoop and loop plate on the arbor and thread on the Arbor Nut.
3. To remove use the Hex. wrench to lock spindle, use face Spanner Wrench to release.



To install the vacuum cleaner hose:

1. Unplug the machine.
2. Plug the vacuum cleaner hose bayonet connector into the swivel connector in the back of the machine. Once the tangs of the bayonet connector are fully inserted in the slots, hold the swivel connector from turning and turn the hose bayonet connector clockwise to lock.
3. Removal is the opposite of assembly.



The vacuum cleaner:

Ensure that you have a bag installed in your vacuum cleaner which is approved and rated for fine dust

WARNING: Failure to use an approved dust bag in your vacuum will increase the level of airborne dust in the work area. Prolonged

exposure to such dust may cause respiratory harm.

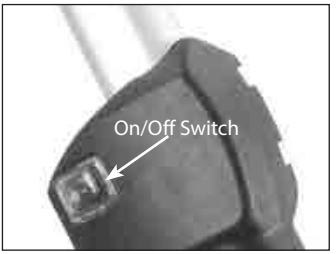
STARTING AND STOPPING TOOL

Make sure that the power circuit voltage is the same as that shown on the specification plate of the machine and that switch is "OFF" before connecting the tool to the power circuit.

Switching the machine on and off

To switch on:

While holding with the left hand on the column and the right hand on the main handle, Press the rocker switch to the "on" position. Anticipate and be ready for the start up torque when the machine first starts.

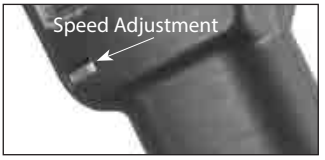


To switch off:

Press the rocker switch to the"off" position. After the machine has been switched off, the grinding wheel will still rotate for a time. Take care that parts of your body do not come into contact with the wheel and do not set the machine down while it is still rotating!

Adjusting the rotation speed:

The speed of the machine is variable to suit different tasks. It can be adjusted from 2500/min up to 5000/min by using the thumb wheel. turn in the downward direction to increase the speed and in the upward direction to decrease the speed. Generally, you should use the higher speed for fast stock removal and the lower speed for more precise control.



HOW TO USE THE TOOL

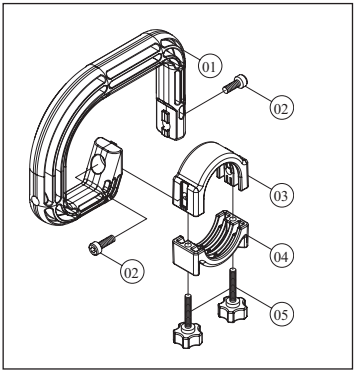
Effective control of this machine requires **two-handed** operation for maximum safety and control. The proper hold is to keep one hand on the main handle and the other hand on the sponge grip on the column or the bail handle. It is vitally important to keep stable footing at all times, especially when standing on scaffolding or stilts.

GRINDING OPERATIONS

1. Once the machine and vacuum cleaner are set up and all safety measures and equipment are in place, begin by turning on the vacuum cleaner and then the machine. (If you are using a vacuum cleaner with integrated switching, then simply turn the machine on.)
2. Begin grinding and contact the work surface with enough down force to keep the grinding head flat against the surface.
3. The U-joint in the grinding head will allow the grinding wheel to follow the contours of the work surface.

MOUNTING THE BAIL HANDLE:

1. Loosen the 2 thumb screws (05) and remove the clamp cap (04).
2. Place the handle in the desired position on the column.
3. Clamp the handle in place by replacing the clamp cap and tightening the 2 thumb screws.



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

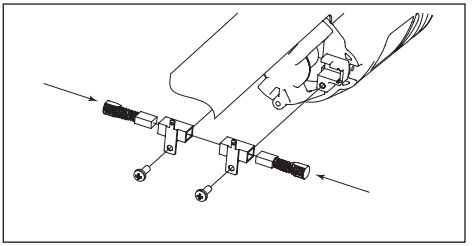
Periodically blow out all air passages with dry compressed air. All plastic parts should be cleaned with a soft damp cloth. NEVER use solvents to clean plastic parts. They could possibly dissolve or otherwise damage the material.
Wear safety glasses while using compressed air.
Clean the vacuum swivel connector as too much dust will keep it from turning freely.

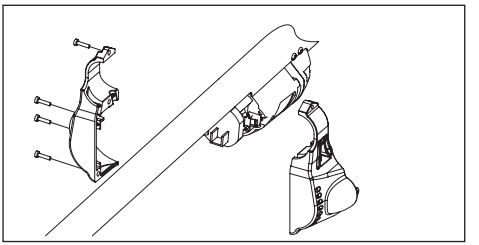
THE CARBON BRUSHES

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. To inspect or replace brushes, first unplug the machine and lay it on its side. Remove the 3 screws to remove the left and right motor rear bracket halves.
Unscrew the two Carbon Brush Holders 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.

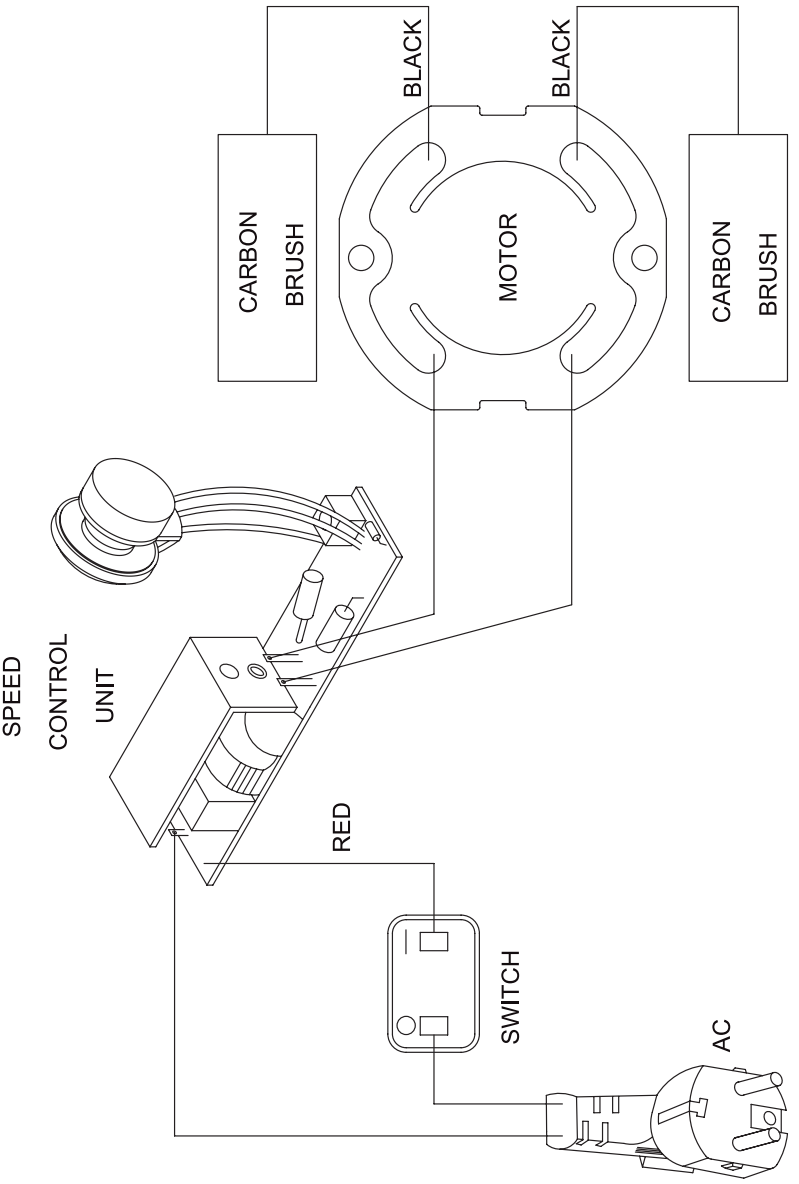
NOTE: To reinstall the same brushes, first make sure the brushes go back in the way they came out. Otherwise a break-in period will occur that will reduce motor performance and increase brush wear.

Replacing is the reverse of removal. When Replacing all covers, take great care that all wires are in place and not in a position to be pinched when they are 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.

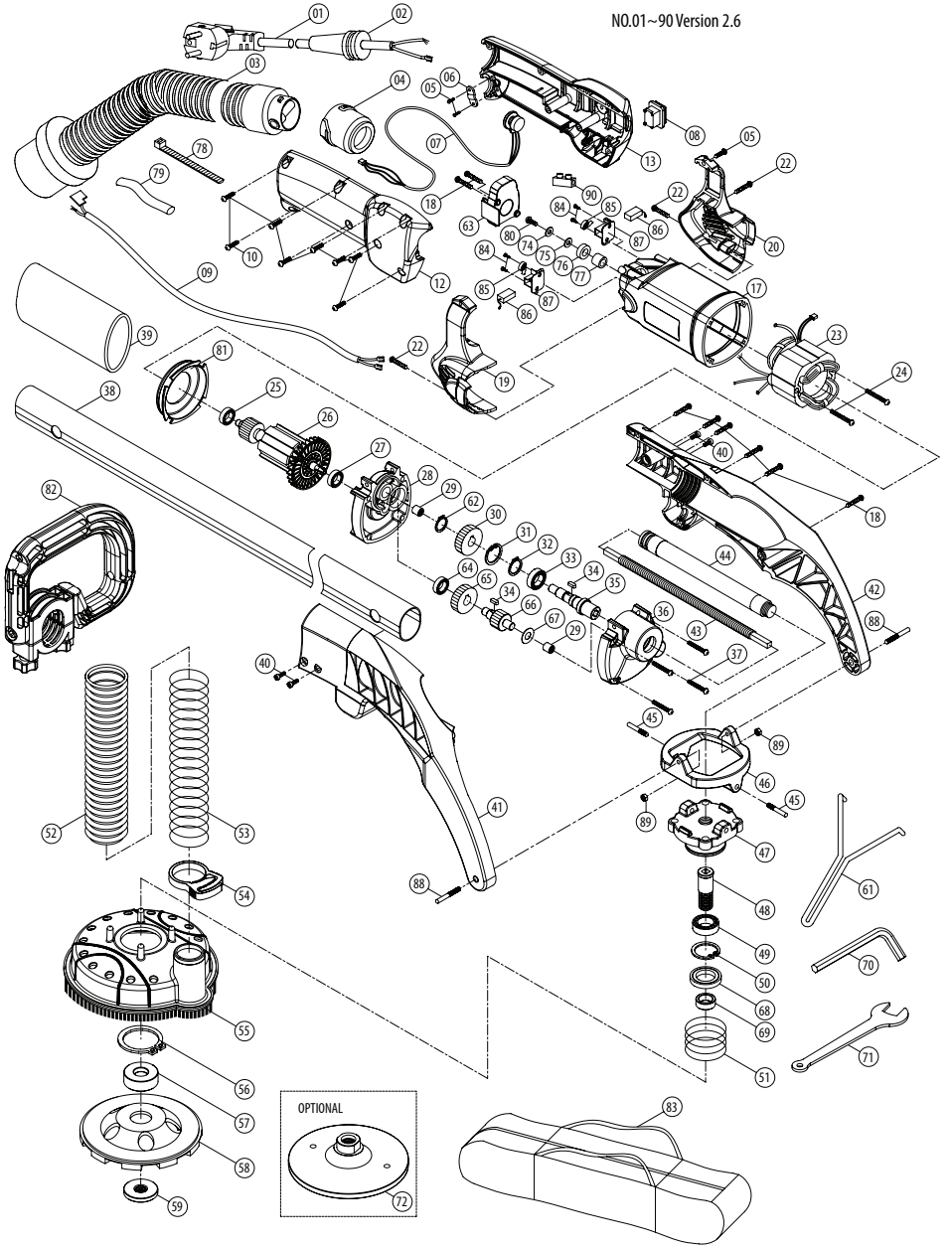
If the replacement of the power supply cord is necessary, this has to be done by the manufacturer or their agent in order to avoid a safety hazard.

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

WIRING


BLACK
BLACK
CARBON BRUSH
MOTOR
CARBON BRUSH
SPEED CONTROL UNIT
RED
SWITCH
AC

EXPLODED VIEW



PARTS LIST

NO.	Parts Name	Q'TY	NO.	Parts Name	Q'TY
1	POWER SUPPLY CABLE	1	49	BALL BEARING (6002)	1
2	CORD ARMOR	1	50	INTERNAL CIRCLIP (R-32)	1
3	VACUUM EXTENSION HOSE (4M)	1	51	SPRING (Ø2xØ45xØ49x40Lx4T)	1
4	BAYONET HOSE CONNECTOR	1	52	VACCUM HOSE	1
5	PANHEAD TAPPING SCREW-B (M4x14)	3	53	SPRING (Ø1xØ30xØ32x363Lx30T)	1
6	CABLE CLIP	1	54	PLASTIC CLIP	1
7	SPEED CONTROL RHEOSTAT	1	55	SANDING PLATE COVER (5')	1
8	MOTOR SWITCH (110V&220V)	1	56	EXTERNAL CIRCLIP (S-40)	1
9	WIRE (0.75x2Cx98CM-H05VVF)	1	57	INNER FLANGE (Ø22.2/Ø25.4)	1
10	PANHEAD TAPPING SCREW (M4x16)	8	58.)	DIAMOND GRINDING HEAD (60/80) Ø22.2	1
11	N/A	-	58.)	DIAMOND GRINDING HEAD (60/80) Ø25.4	1
12	HANDLE HALF-RIGHT	1	58.)	DIAMOND GRINDING HEAD (100/120) Ø22.2	1
13	HANDLE HALF-LEFT	1	58	DIAMOND GRINDING HEAD (100/120) Ø25.4	1
14~16	N/A	-	59	ARBOR WASHER (M14xØ35)	1
17	MOTOR HOUSING	1	60	N/A	-
18	PANHEAD TAPPING SCREW (M4x20)	8	61	FACE SPANNER WRENCH (78MM)	1
19	MOTOR REAR BRACKET-RIGHT	1	62	EXTERNAL CIRCLIP (S10)	1
20	MOTOR REAR BRACKET-LEFT	1	63	SPEED CONTROL + SOFT START (110V/220V)	1
21	N/A	-	64	BALL BEARING (608)	1
22	PANHEAD TAPPING SCREW (M4x25)	3	65	INPUT GEAR (M1.0x25T)	1
23	STATOR (110V/220V-62x36.5x50)	1	66	INPUT SHAFT (M1.25x12T)	1
24	PANHEAD TAPPING SCREW (M4x60)	2	67	THRUST RING (0816)	1
25	BALL BEARING (608)	1	68	OIL SEAL (Ø20xØ32x5)	1
26	ARMATURE (110V/220V-62x36.5x50)	1	69	SHAFT RACE (Ø15xØ20x7.5)	1
27	BALL BEARING (6000)	1	70	SOCKET HEX KEY (M6)	1
28	GEAR PLATE	1	71	WRENCH (M17)	1
29	NEEDLE BEARING (HK 0810)	2	72	ALUMINUM PAD (M14)	1
30	OUTPUT GEAR (M1.25x21T)	1	73	N/A	-
31	INTERNAL CIRCLIP (R-28)	1	74	FLAT WASHER (Ø4xØ10x1)	1
32	EXTERNAL CIRCLIP (S-12)	1	75	RUBBER WASHER (Ø4xØ11x1)	1
33	BALL BEARING (6001)	1	76	PICKUP MAGNET (Ø8xØ15x5)	1
34	PARALLEL KEY (4x4x8)	2	77	SPACER (Ø8xØ12x10.5)	1
35	SPINDLE (M14xP2.0)	1	78	ZIP TIE (2.4x80MM)	1
36	GEAR HOUSING	1	79	WIRE SLEEVE (Ø6)	6/100
37	PANHEAD TAPPING SCREW (M4x45)	4	80	PANHEAD MACHINE SCREW (M4x8xP0.7)	1
38	EXTENSION COLUMN (L1000MM)	1	81	FAN SHROUD	1
39	FOAM HANDLE GRIP (250MM)	1	82	BAIL HANDLE	1
40	SOCKET CAP SCREW (M5x10xP0.8)	4	83	CARRY BAG	1
41	RIGHT FORK ARM	1	84	PANHEAD TAPPING SCREW-B (M4x10)	4
42	LEFT FORK ARM	1	85	BRUSH SPRING (0.35x3x3.5T)	2
43	SECONDARY DRIVE SHAFT (320MM)	1	86	CARBON BRUSH (7x11x17)	2
44	DRIVE SHAFT COVER	1	87	BRUSH HOLDER (7x11)	2
45	SCREW	2	88	SCREW	2
46	PIVOT BASE	1	89	NYLOCK NUT (M5xP0.8)	2
47	PIVOT CONNECTING BRACKET	1	90	TERMINAL CONNECTOR BLOCK (PA-8-H)	1/12
48	CONNECTING SPINDLE (M14xP2.0)	1			