

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

# LONG-REACH DIAMOND GRINDER



**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 <sup>-1</sup>	1700~3500
Power input	1100W
Diamond cup wheel	125mm
Net weight	3.8 kg ( 8.4 lbs)

## GENERAL SAFETY RULES

**WARNING! Read and understand all instructions.** Failure to follow all instructions listed below, may result in electric shock, fire and / or serious personal injury. The term "power tool" in all of the warnings listed below refers to your mains-operated (corded) power tool.

### SAVE THESE INSTRUCTIONS.

#### ■ Work area safety

**Keep your work area clean and well lit.** Cluttered worksites and dark areas invite accidents.

**Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquid, gases, or dust.** Power tools create sparks which may ignite the dust or fumes.

**Keep bystanders, children, and visitors away while operating a power tool.** Distractions can cause you to lose control.

#### ■ Electrical Safety

**Grounded tools must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any adaptor plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded.** If the tools

should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.

**Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is grounded.

**Don't expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.

**Don't abuse the cord. Never use the cord to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately.** Damaged cords increase the risk of electric shock.

**When operating a power tool outside, use an outdoor extension cord marked "W-A" or "W."** These cords are rated for outdoor use and reduce the risk of electric shock.

#### ■ Personal Safety

**Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating power tools may result in serious personal injury.

**Use safety equipment. Always wear eye protection.** Safety equipment such as dust mask, non-skid safety shoes, hard hat, or

hearing protection used for appropriate conditions will reduce personal injuries.

**Avoid accidental starting. Be sure switch is off before plugging in.** Plugging in tools that have the switch on invites accidents.

**Remove adjusting keys or switches before turning the tool on.** A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.

**Do not overreach. Keep a proper footing and balance at all times.** Proper footing and balance enables better control of the tool in unexpected situations.

**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.

#### ■ Tool use and care

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

**Do not use tool if switch does not turn it on or off.** Any tool that cannot be controlled with the switch is dangerous and must be repaired.

**Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool.** Such

preventive safety measures reduce the risk of starting the tool accidentally.

**Store idle tools out of reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Tools are dangerous in the hands of untrained users.

**Maintain tools with care.** Properly maintained tools are less likely to bind and are easier to control.

**Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tools operation. If damaged, have the tool serviced before using.** Many accidents are caused by poorly maintained tools.

**Use the power tool, accessories and blades etc., in accordance with these instructions and in the manner intended for the particular type of power tool, 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.

#### ■ Service

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

**-WARNING- To reduce the risk of injury, user must read instruction manual.**

### Symbols used in this manual

V.....volts

A.....amperes

Hz.....hertz

W.....watt

~.....alternating current

$n_0$ .....no load speed

$\text{min}^{-1}$ ... ..revolutions or reciprocation  
per minute

.....class II tool

### 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.

<b>Total Extension Cord Length (feet)</b>	<b>Cord Size (AWG)</b>
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.

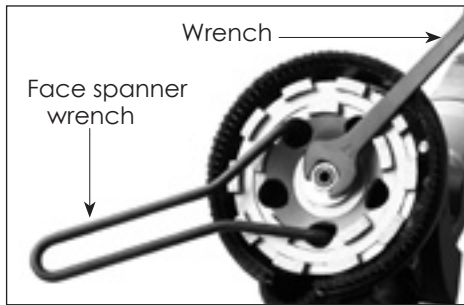
## ■ CARTON CONTENTS

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**

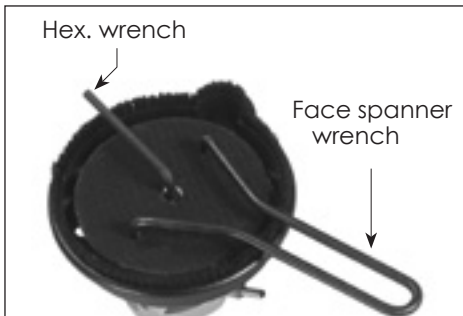
### ■ To install a diamond cup wheel:

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.



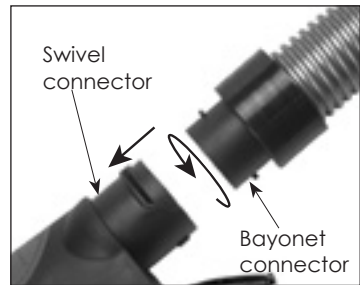
### ■ To install a Diamond polishing:

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.**

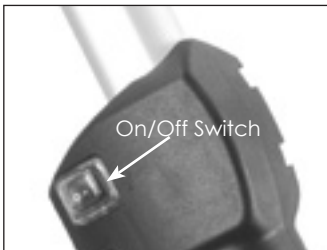
## ■ STARTING AND STOPPING TOOL

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.

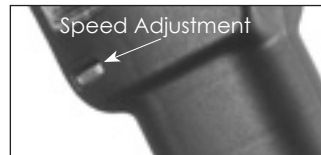


#### To switch off:

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

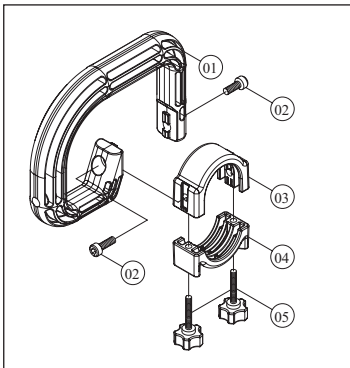


cleaner and then the machine. (If you are using a vacuum cleaner with integrated switching, then simply turn the machine on.)

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

##### ■ 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.**

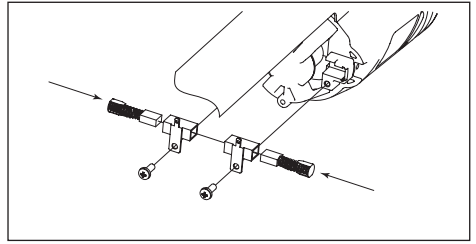
The carbon brushes furnished will last approximately 50 hours of running time or 10,000 on/off cycles. Replace both carbon brushes when either has less than 1/4" length of carbon remaining. To inspect or replace brushes, first unplug the machine and lay it on its side. Remove the 3 screws to remove

the left and right motor rear bracket halves. Unscrew the two Carbon Brush Holders and remove the Carbon Brushes.

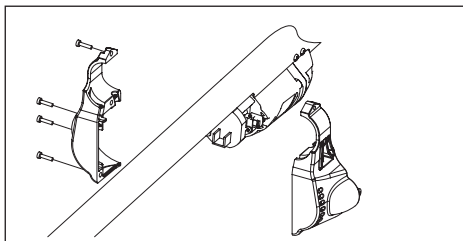
**NOTE: When putting the Carbon Brushes back into the Carbon Brush Holders it is essential that both flanges go back inside the holder.**

**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.**

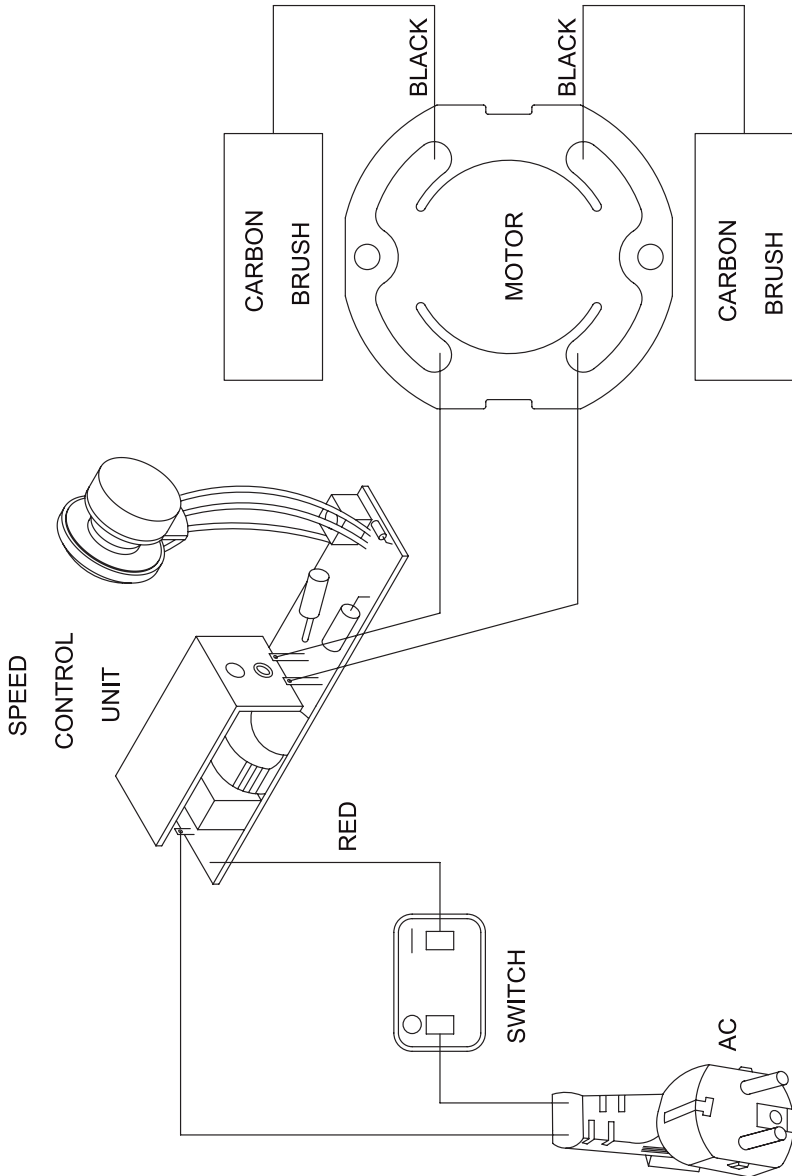
Replacing is the reverse of removal. When Replacing all covers, take great care that all wires are in place and not in a position to be pinched when they are retightened. It is recommended that, at least once a year, you take the tool to an Authorized Service Center for a thorough cleaning and lubrication.



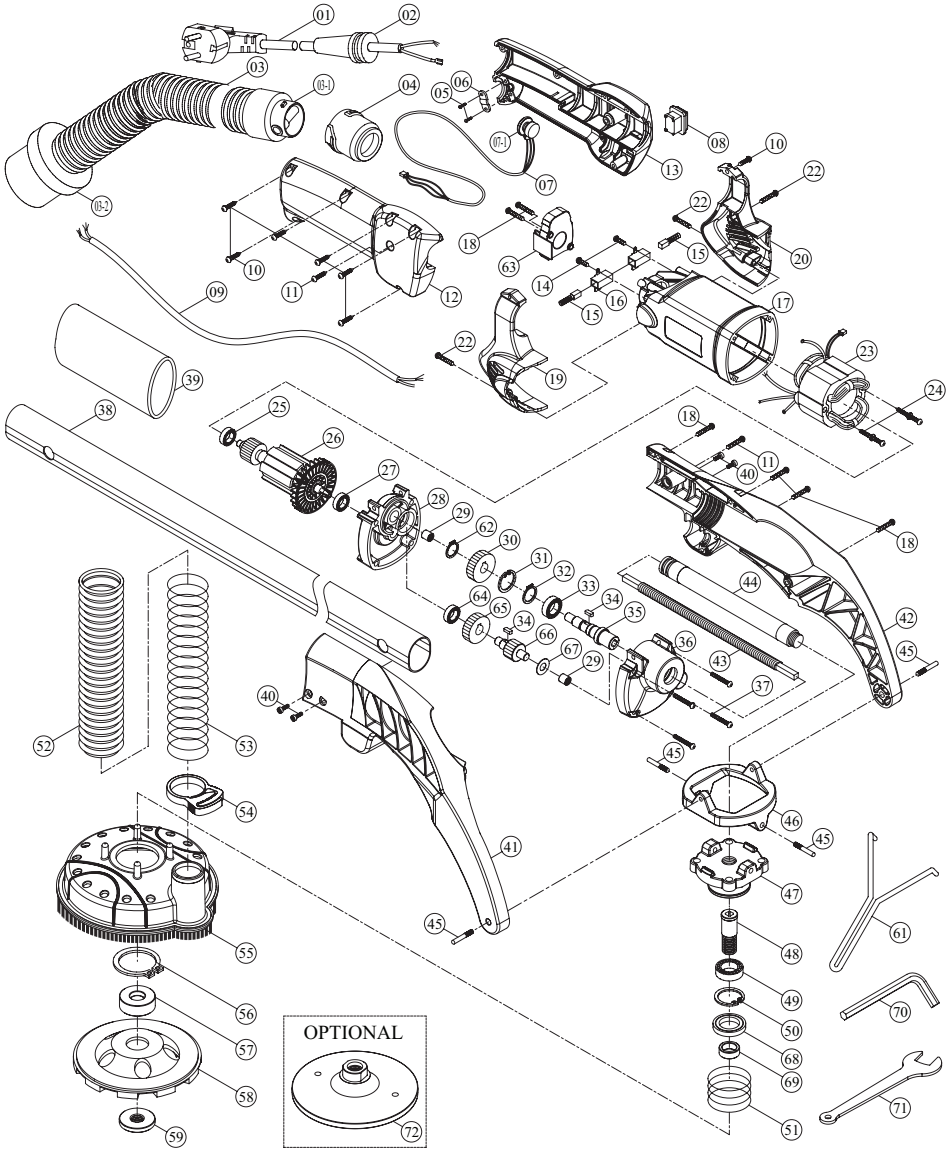
- If the replacement of the power supply cord is necessary, this has to be done by the manufacturer or their agent in order to avoid a safety hazard.



# WIRING



# EXPLODED VIEW



## PARTS LIST

No.	Parts Name	QTY	No.	Parts Name	QTY
1	POWER SUPPLY CABLE	1	39	FOAM HANDLE GRIP	1
2	CORD ARMOR	1	40	SCREW M5 x 12	4
3	VACUUM EXTENSION HOSE 4M	1	41	RIGHT FORK ARM	1
3-1	HOSE BAYONET CONNECTOR	1	42	LEFT FORK ARM	1
3-2	HOSE END CONNECTOR	1	43	FLEXIBLE DRIVE CABLE	1
4	BAYONET SWIVEL CONNECTOR	1	44	DRIVE CABLE COVER	1
5	SCREW M4 x 14	2	45	SCREW M5	4
6	CABLE CLIP	1	46	PIVOT BRACKET	1
7	SPEED CONTROL RHEOSTAT	1	47	PIVOT HUB	1
7-1	THUMB WHEEL	1	48	CONNECTING SPINDLE	1
8	MOTOR SWITCH	1	49	BALL BEARING 6002 2RS	1
9	WIRE LEAD W/ TERMINALS 0.75X2CX106CM	1	50	CIRCLIP-INTERNAL R-32	1
10	SCREW M4 x 16	7	51	SPRING $\varnothing 2 \times \varnothing 45 \times \varnothing 49 \times 40L \times 4T$	1
11	SCREW M5 x 20	2	52	VACUUM HOSE	1
12	RIGHT HANDLE COVER	1	53	SPRING $\varnothing 1 \times \varnothing 30 \times \varnothing 32 \times 363L \times 30T$	1
13	LEFT HANDLE COVER	1	54	PLASTIC CLIP	1
14	SCREW M4 x 8	2	55	DUST SHROUD	1
15	CARBON BRUSH	2	56	CIRCLIP-EXTERNAL S-40	1
16	CARBON BRUSH HOLDER	2	57	INNER FLANGE $\varnothing 22.2 ; \varnothing 25.4$	1
17	MOTOR HOUSING	1	58	DIAMOND CUP WHEEL $\varnothing 22.2 ; \varnothing 25.4$	1
18	SCREW M4 x 20	6	59	ARBOR NUT M14 x $\varnothing 35$	1
19	MOTOR REAR BRACKET-RIGHT	1	60	N/A	-
20	MOTOR REAR BRACKET-LEFT	1	61	FACE SPANNER WRENCH	1
21	N/A	-	62	CIRCLIP-EXTERNAL S-10	1
22	SCREW M4 x 25	3	63	ELECTRONICS UNIT	1
23	STATOR	1	64	BALL BEARING 608 zz	1
24	STATOR SCREW M4 x 60	2	65	INPUT GEAR M1.0 x 25T	1
25	BALL BEARING 608 2RS	1	66	INTERMEDIATE GEAR PINION M1.25 x 12T	1
26	ARMATURE M1.0 x 6T	1	67	THRUST WASHER $\varnothing 8 \times 0.5$	1
27	BALL BEARING 6000 2RS	1	68	RADIAL SHAFT SEAL $\varnothing 20 \times \varnothing 32 \times 5$	1
28	GEAR PLATE	1	69	SHAFT RACE $\varnothing 15 \times \varnothing 20 \times 7.5$	1
29	NEEDLE BEARING TLA 0810	2	70	6mm HEX KEYM6	1
30	OUTPUT GEAR M1.25 x 21T	1	71	WRENCH M17	1
31	CIRCLIP-INTERNAL R-28	1	72	ALUMINUM CUP WHEEL	1
32	CIRCLIP-EXTERNAL S-12	1			
33	BALL BEARING 6001 2RS	1	<b>BAIL HANDLE</b>		
34	PARALLEL KEY 4 x 4 x 8	2	1	BAIL HANDLE	1
35	SPINDLE	1	2	BOLT M8 x 15	2
36	GEAR CASE	1	3	CLAMP BASE	1
37	SCREW W/ WASHER M4 x 40	4	4	CLAMP CAP	1
38	EXTENSION COLUMN	1	5	THUMB SCREW M5 x 32	2