CON-TREAT
CONCRETE HI-PERFORMANCE TREATMENTS

Shark S460

SAFETY & OPERATORS MANUAL

CAUTION: Read the instruction manual before using.

SHARK CONCRETE GRINDERS

Table of Contents

Specifications

Voltage	220-240V Single Phase, 10A
Power	3KW, 4HP
Working width	460mm
Weight	150kg
Extra weight	30kg
Rotating speed	300-1460rpm
Tool holder diameter	200mm x 3
Water tank capacity	20Ltr
Packing	120cm x 75cm x 115cm

Safety Instructions

1. Read and understand the instructions of the machine in this manual and the engine manual (if applicable). Different models may have different parts and controls.
2. Equipment should only be operated by trained personnel, in good physical condition and mental health (not fatigued). The operator and maintenance personnel must be physically able to handle the bulk weight and power of this machine.
3. This is a one person machine. Maintain a safe operating distance to other personnel. Remember - one machine, one operator.
4. This equipment is intended for industrial, commercial and residential use.
5. For the operators safety and the safety of others, always keep all guards and shrouds in place.
6. Never start or run the machine when unattended.
7. This machine is intended for use on floor surfaces only.
8. Never start or run the machine with the handle folded or when the disks are not in contact with the surface.
9. Do not lend or rent the machine without the operating instructions for the machine (and the engine, if applicable).
10. Wear clothing suitable for the job and for the work place including, safety shoes, hard hat, hearing protection, non-fogging vented safety goggles, and suitable dust mask.
11. Keep body parts and any loose clothing away from moving parts. Failure to comply could result in bodily injury.

Safety Instructions

12. Do not modify the machine in any way. Only use genuine Shark S460 parts and accessories.

13. Repairs should be performed by qualified persons only.

14. Ensure parts have stopped moving and disconnect power when servicing or changing blades and accessories.

15. Never operate machine in rain or if heavy moisture is present.

16. Do not operate the Shark S460 with any covers or doors removed or open.

17. The Shark S460 can produce sound pressure levels greater than 85db. The operator must wear approved safety ear protection.

18. Do not allow the supply cord to come in contact with the cutting head or other moving parts of this machine.

Operating Instructions

1. Wear clothes suitable for the job and work place including; safety boots, hard hat, hearing protection, non-fogging vented safety goggles and a dust respirator.

2. Ensure all equipment is tested and tagged prior to use on any job.

3. *WARNING: Inspect the entire area to be ground before grinding to remove any bolts or concrete nails (etc.) that could damage diamond tooling or the machine, causing a hazardous situation.*

4. Ensure there are no obstacles or existing structures that could present a hazard to the operator. If so, take necessary action to eliminate hazards.

5. To change the polishing pads; Fold handle into the tooling mode (see Handle Positions) and lock in place using the locking lever, then tilt machine back so that the handle is resting on the floor.

6. The metal bond and resin pads replacement can be fast finished with the help of a straight screwdriver

7. Install appropriate diamond tooling or other available tooling onto the machine. Failure to comply could result in bodily injury.

8. Tilt the machine back onto the disk and lock the handle into the best position In the operate mode for grinding comfort. (See Handle Positions)

9. Connect machine to a suitable power outlet. Only use heavy duty power leads suitable for high current use (minimum 240v 2.5mm² cable), no longer than 20 meters.

10. If no power is available within the specified distance, have a qualified person install a suitable power outlet closer to your work. Alternatively use a minimum 240v 4mm² cable for up to 40 meters.

11. Connect a suitable dust extractor to the machine via a 50mm flexible hose. The machine is designed to take the standard 50mm hose ends to make connection of dust extractors easy and hassle free.

12. Keep machine clear of drainage pits and grates or any such hazard. Failure to comply could result in bodily injury and or could damage the machine or property.

13. Ensure machine is on a level surface and handle is not folded (see Handle Positions).

14. Switch on the dust extractor when grinding

15. Hold the handles firmly and switch the machine on by starting the emergency stop button, forward and reverse button.

16. This machine is designed to operate with the pads in contact with the floor at all times. Do not operate with the diamond pads off the floor.

17. Do not attempt to make any adjustments while the machine is in operation. Any adjustments must only be performed when machine is stopped and power disconnected.

18. In the event of the machine pulling to one side all the time; adjust the axle height to obtain the best result. (at the rear of the machine).

19. After a few minutes of grinding check the wear of the diamond tooling. If the diamonds are wearing out fast due to soft concrete / abrasive concrete it may be necessary to change to a harder bond diamond.

20. If LVA/LVD/LVN/LVS shows on the control panel, it indicates machine has low voltage (lower than 200V) or overloading. At this time, you should check if the leads are hot or if the breaker has tripped.
For a lead length of less than 20m, use 240v 2.5mm² cable.
For a lead length between 20-40m, use 240v 4mm² cable.
For the breaker, make sure breaker at least C25.
For overloading, take off the additional weight or slow down the speed.

21. When Orp shows on control panel, it means the active wire has come loose. It can be at the mains or the grinder's single phase plug.

22. When GFF shows on control panel, it indicates the earth wire in the motor's electric box has come loose.

23. When you see OCA shows on control panel, it indicates that active wires has come loose. It can be between the inverter output and the motor connection or inside the motor electric box.

24. All Shark grinders must have the gear oil changed after running 500 hours (2-3 months) for the first time, later each 1500 hours (5-6months). Gear oil - Castrol Universal 80W-90. Volume 4 ltrs.

25. Place machine slowly and gently back to floor surface during transportation or after changing diamond pads.

26. All plates should be cleaned daily which will prolong the oil sealer span.

27. Check gear oil depth weekly with the deep stick. Add more when oil is lower than the oil meter.

Handle Position

STORAGE AND LIFTING MODE

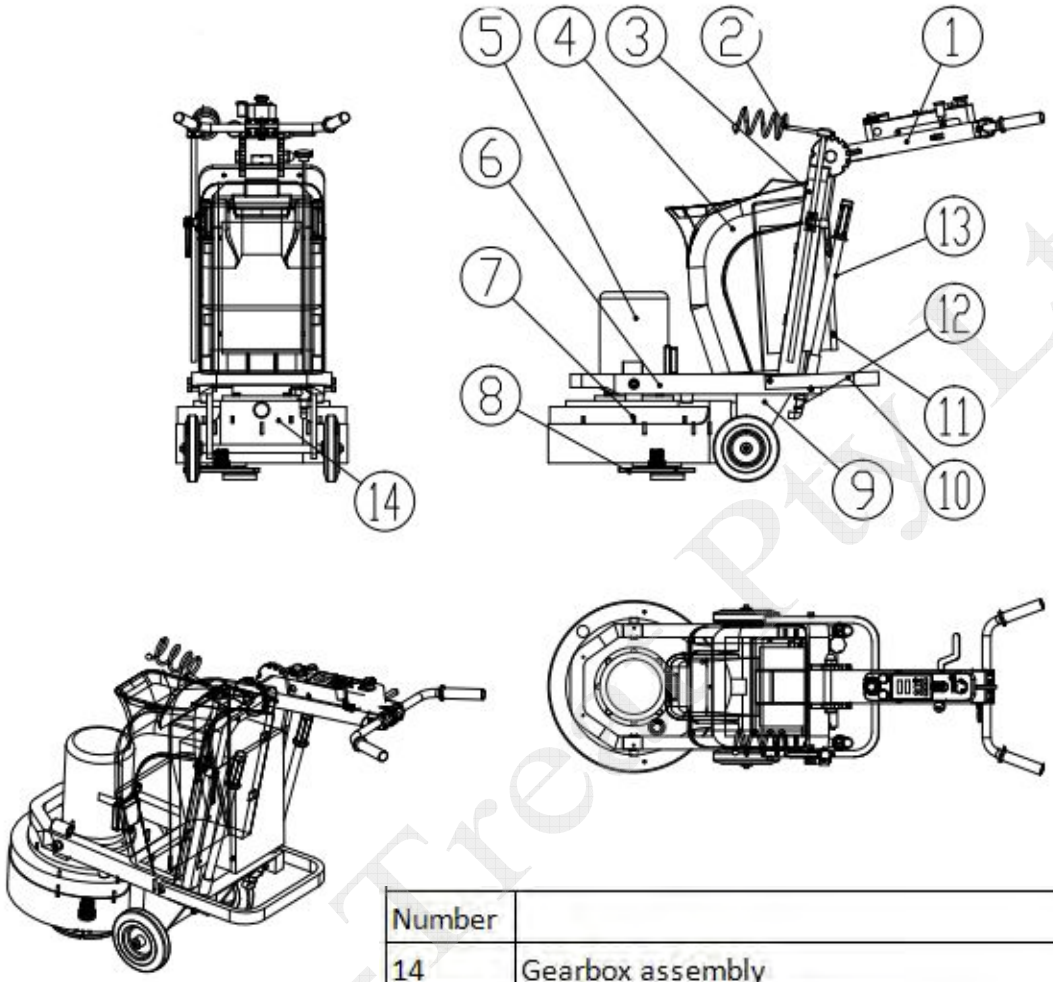
TOOLING MODE

OPERATING MODE

Problem Solving

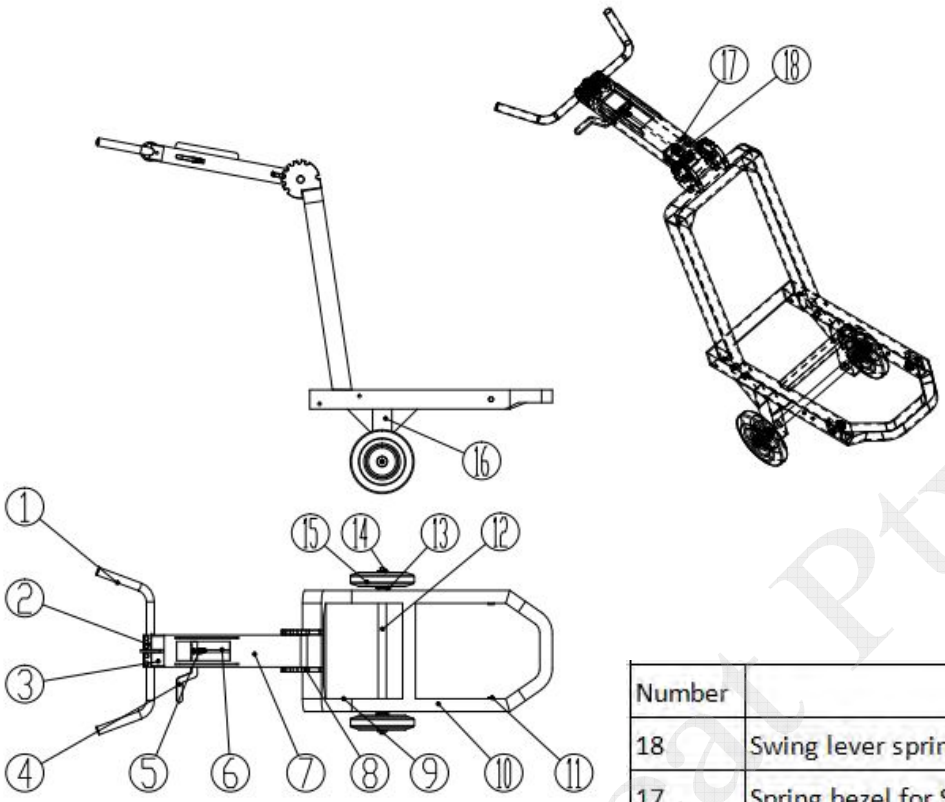
Error Code	Cause	Remedy
GFF Ground Fault	Ground fault protection circuit action. When ac motor drives measure the output ground and the grounding power is more than 50% than the rated current of ac motor drive. Note: The protection system aims at ac motor driver instead of the human body.	1.Check if there is a short circuit phenomenon or ground connection. 2.Confirm if IGBT power modules are damaged or not. 3. Check the connection of side is defective insulation or not.
LVA/LVN Lvat Accel	The voltage of ac motor drive measuring internal dc high voltage side is lower than 06-00 when accelerating.	1. Check if the input power and voltage are normal or not. 2. Check if there is a sudden heavy load.
Orp Phase Lacked	Phase lacked protection	1. Check the input power correct or not. 2. Check if machine is larger than 40HP. If yes, check AC breaker is melting or not.

Parts Diagram - Main



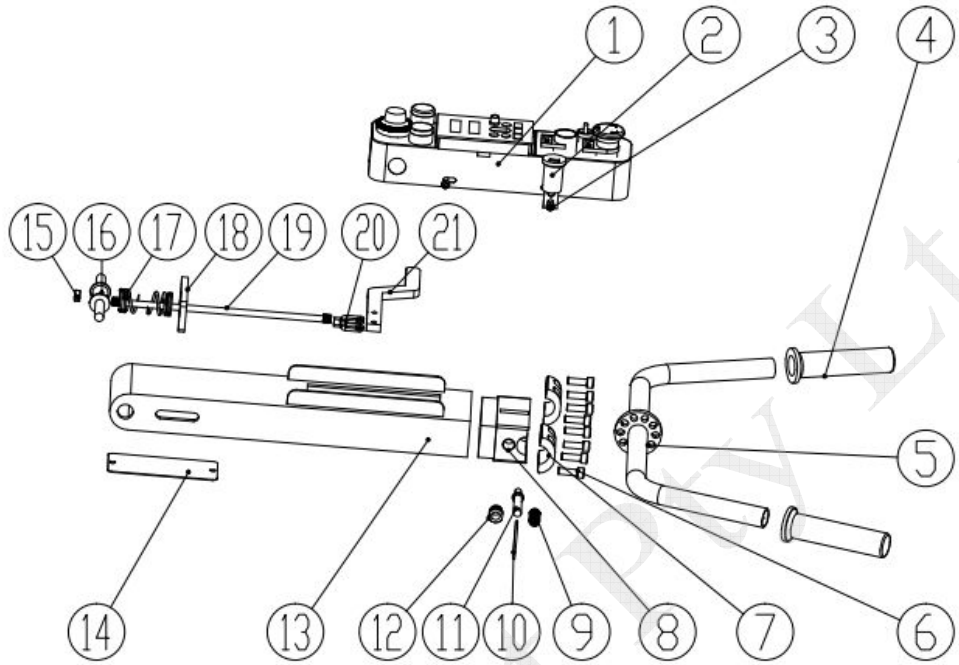
Number		Qty
14	Gearbox assembly	1
13	Carrying stick	2
12	Drain switch assembly	1
11	Inverter housing assembly	1
10	Backpedal	1
9	Wheel base assembly	2
8	Grinding plate assembly	3
7	Gearbox housing	1
6	Frame base assembly	1
5	Motor 4KW	1
4	Water tank	1
3	Frame assembly	1
2	Wire wrack assembly	1
1	Control switch assembly	1

Parts Diagram - Frame



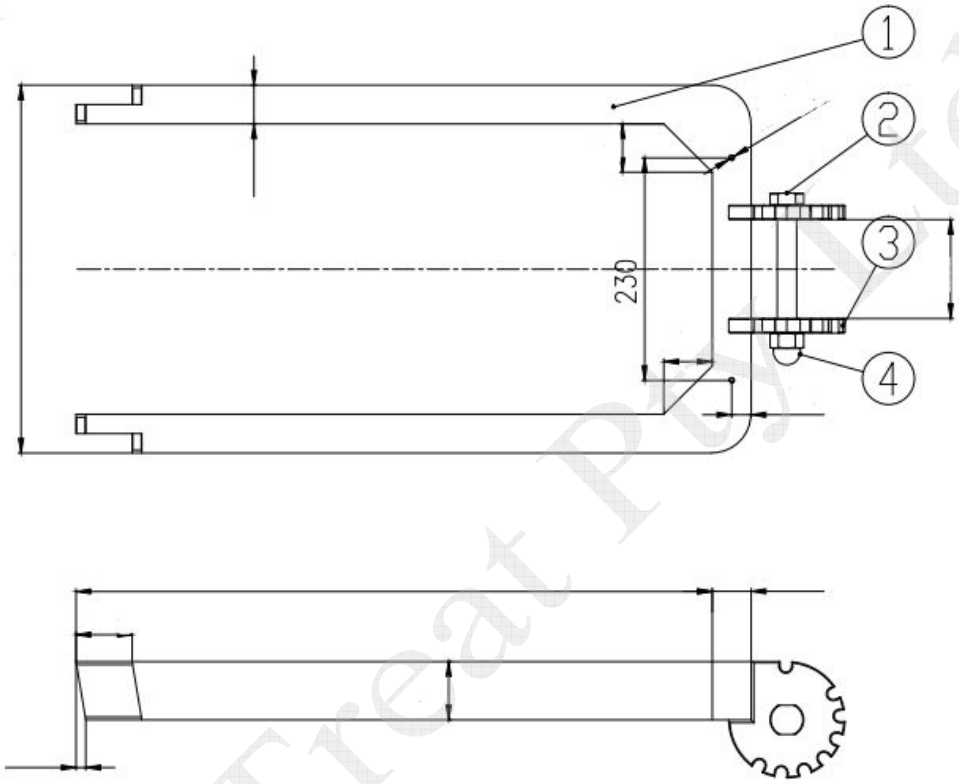
Number		Qty
18	Swing lever spring	1
17	Spring bezel for Swing lever spring (small)	1
16	axle base	2
15	Wheel	2
14	External gasket for wheels	2
13	Wheel gasket	2
12	Wheel shaft	1
11	Hand wheel nut (small)	2
10	Frame base	1
9	Fame base	1
8	Sector plate (small)	2
7	Swing lever	1
6	Swing lever trolley	1
5	Y shape extended arm	1
4	Swing lever handle	1
3	Swing lever clamping seat (small)	1
2	Swing lever clamping seat cover (small)	1
1	Handle assembly	1

Parts Diagram - Control Switch



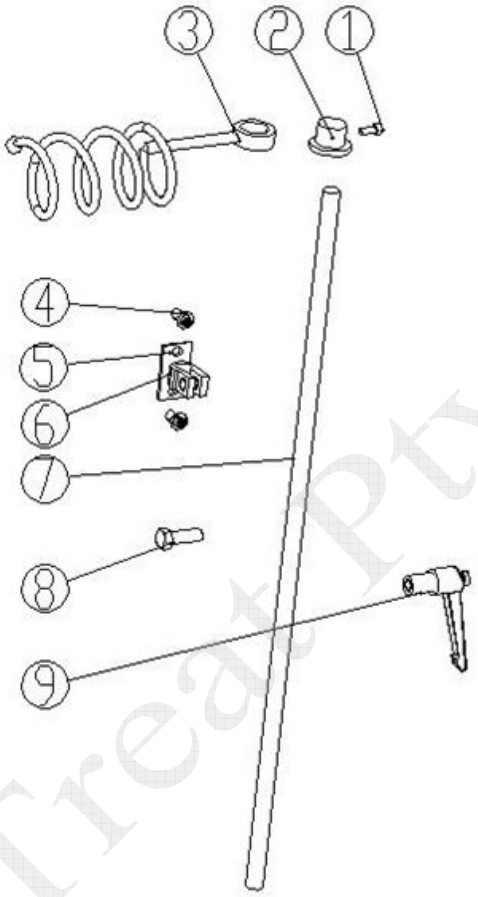
Number		Qty
21	Oscillating rod handle	1
20	Y shape extended arm	1
19	Swing lever trolley	1
18	Spring bezel for swing lever (small)	1
17	Swing lever spring	1
16	Locking lever for swing lever	1
15	Nut M8	1
14	Cover plate for swing lever	1
13	Swing lever	1
12	The clamping seat bolt nut	1
11	Clamping seat bolt for swing lever (small)	1
9	Clamping seat bolt spring	1
7	Clamping seat cover for swing lever (small)	2
6	Hexagon screw M8X25	8
5	Swing lever handle	1
4	Arm rubber	2
3	Hexagon screw M6X16	4
2	USB interface	1
1	Control panel	1

Parts Diagram - Frame



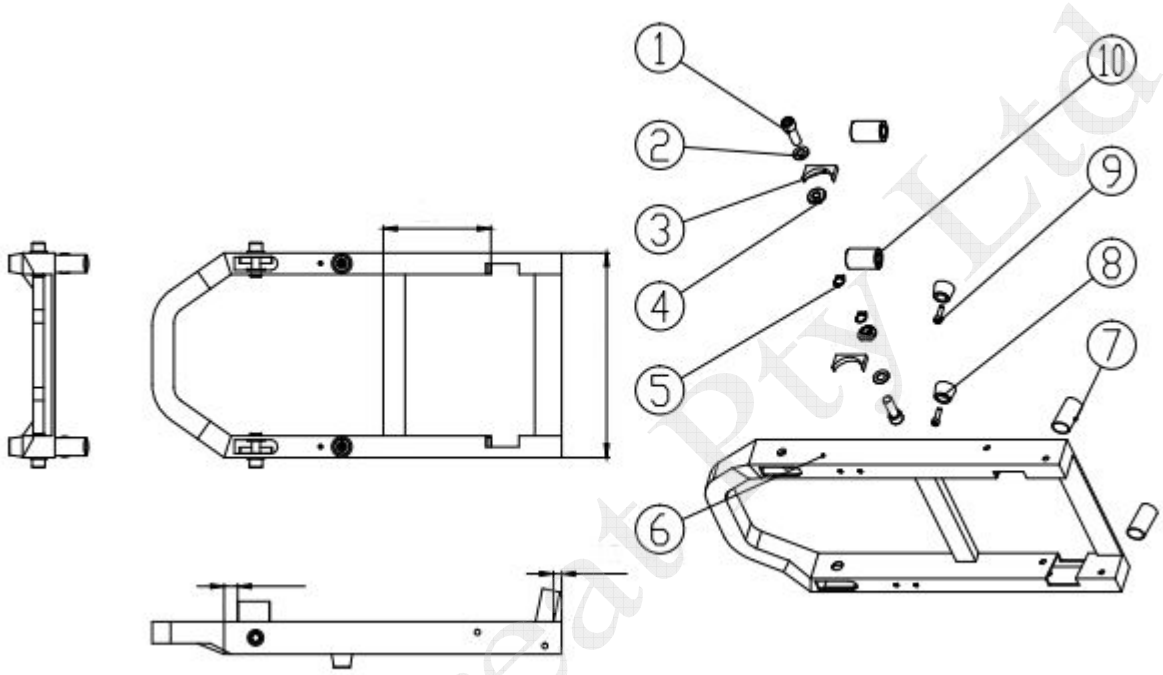
Number		Qty
4	Round nut M20	1
3	Sector plate (small)	2
2	Sector plate bolt (small)	1
1	Frame	1

Parts Diagram - Wire Rack



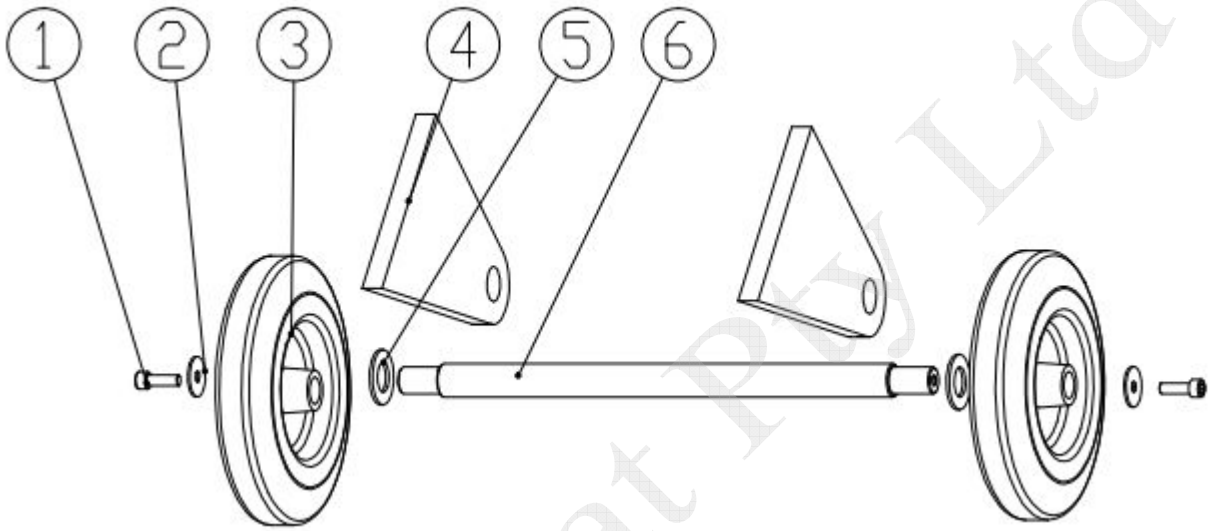
Number		Qty
9	Wire wrack hand grip	1
8	Hexagon bolt	1
7	Wire wrack bar	1
6	Wire wrack sleeve	1
5	Wire wrack fixing plate	1
4	Half-moon hexagon bolt	2
3	Wire wrack	1
2	Wire wrack fixing base	1
1	Hexagon screw M6*20	1

Parts Diagram - Frame Base



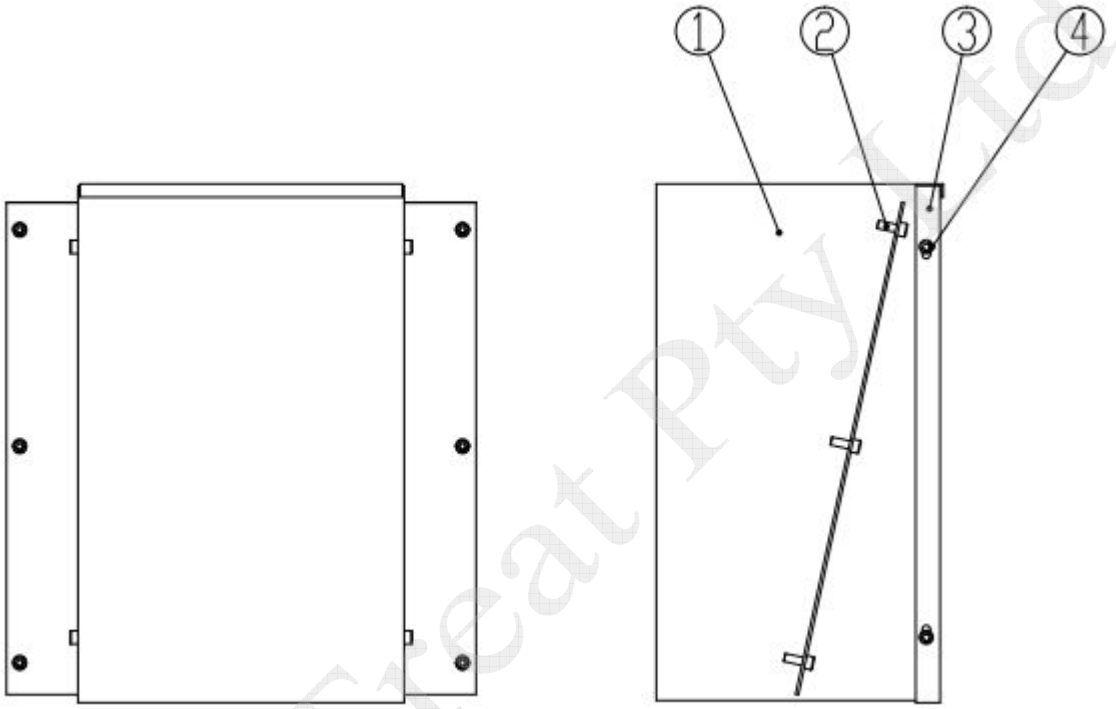
Number		Qty
10	Carrying stick sleeve	2
9	Hexagon screw M8 *25	2
8	Machine leg	2
7	Carrying sticks base	2
6	U shape seat	1
5	external circlip	2
4	Hex nut M12	2
3	Half-moon washer	2
2	Flat pad	2
1	Hexagon screw M10*45	2

Parts Diagram - Wheel Base



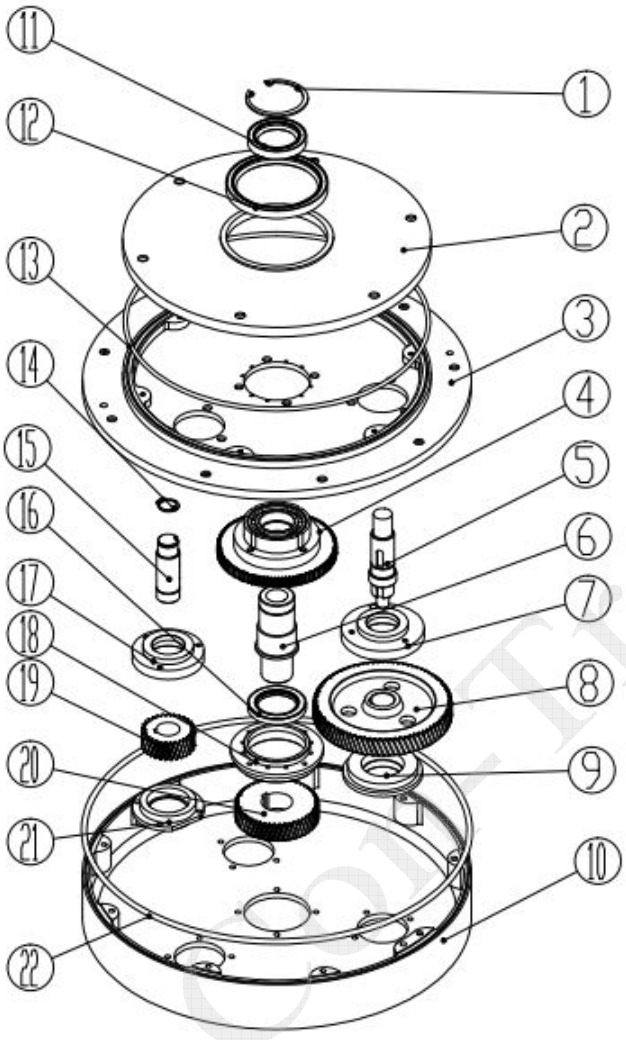
Number		Qty
6	Axle	1
5	Washer	2
4	Triangle plate	2
3	Rubber wheel	2
2	Flat pad	2
1	Hexagon screw M8 *25	2

Parts Diagram - Inverter Housing



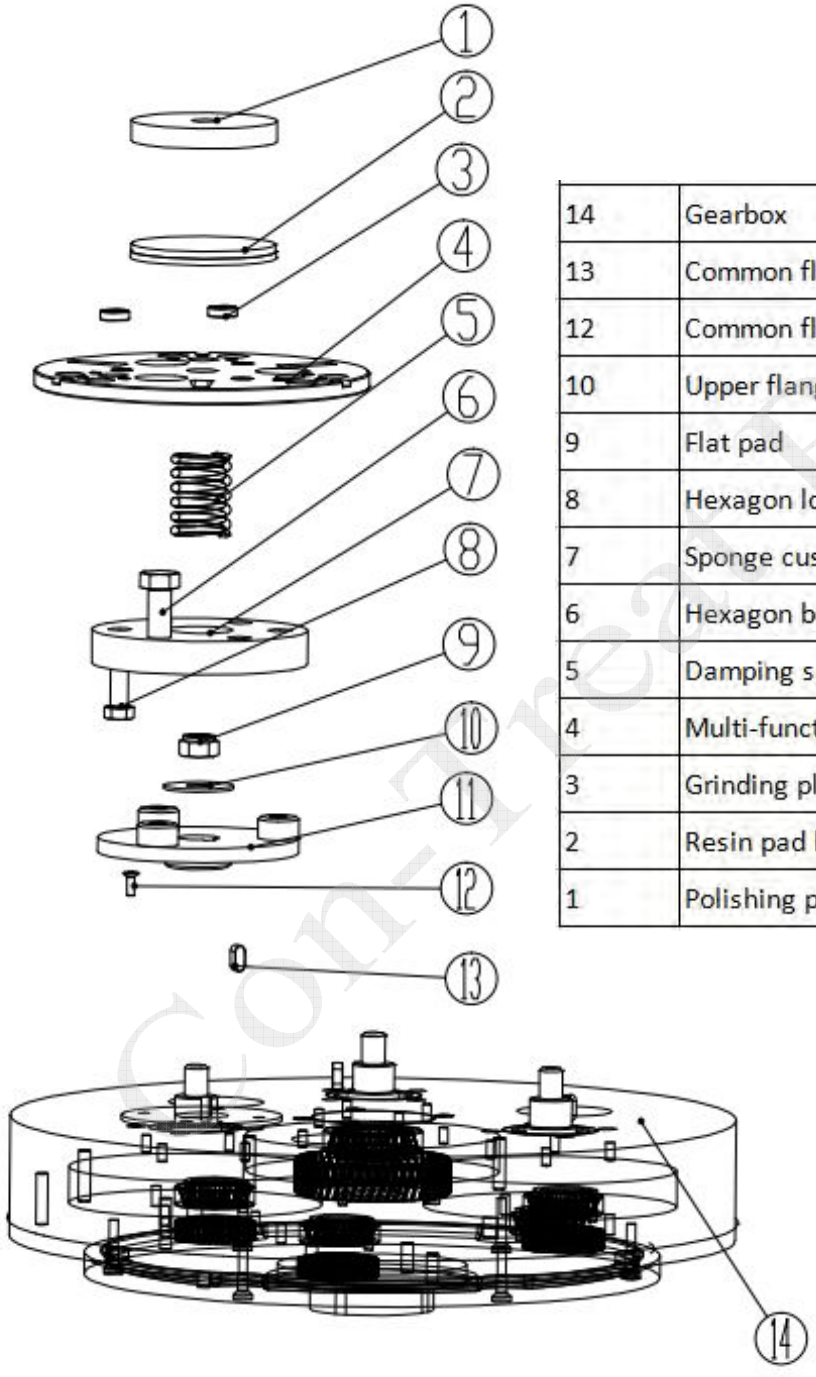
Number	Name	Qty
4	Hexagon screw M6*16	4
3	Inverter housing	1
2	Hexagon screw M6*16	6
1	Inverter	1

Parts Diagram - Gearbox



Number		Qty
22	O shape rubber sealing tape	1
21	Flange seat	3
20	Helical gear 49	1
19	Gear 24	3
18	Middle flange	1
17	Upper flange	3
16	Deep Groove Ball Bearing	1
15	Transtion shaft	3
14	external circlip	3
13	O shape rubber sealing tape	1
12	Framework oil sealer	1
11	Framework oil sealer	1
10	Gearbox housing	1
9	Lower flange	3
8	Helical gear 81	3
7	Shaft cover	3
6	Middle shaft	1
5	Shaft	3
4	Gear 84	1
3	Clapboard	1
2	Upper cover	1
1	Framework oil sealer	1

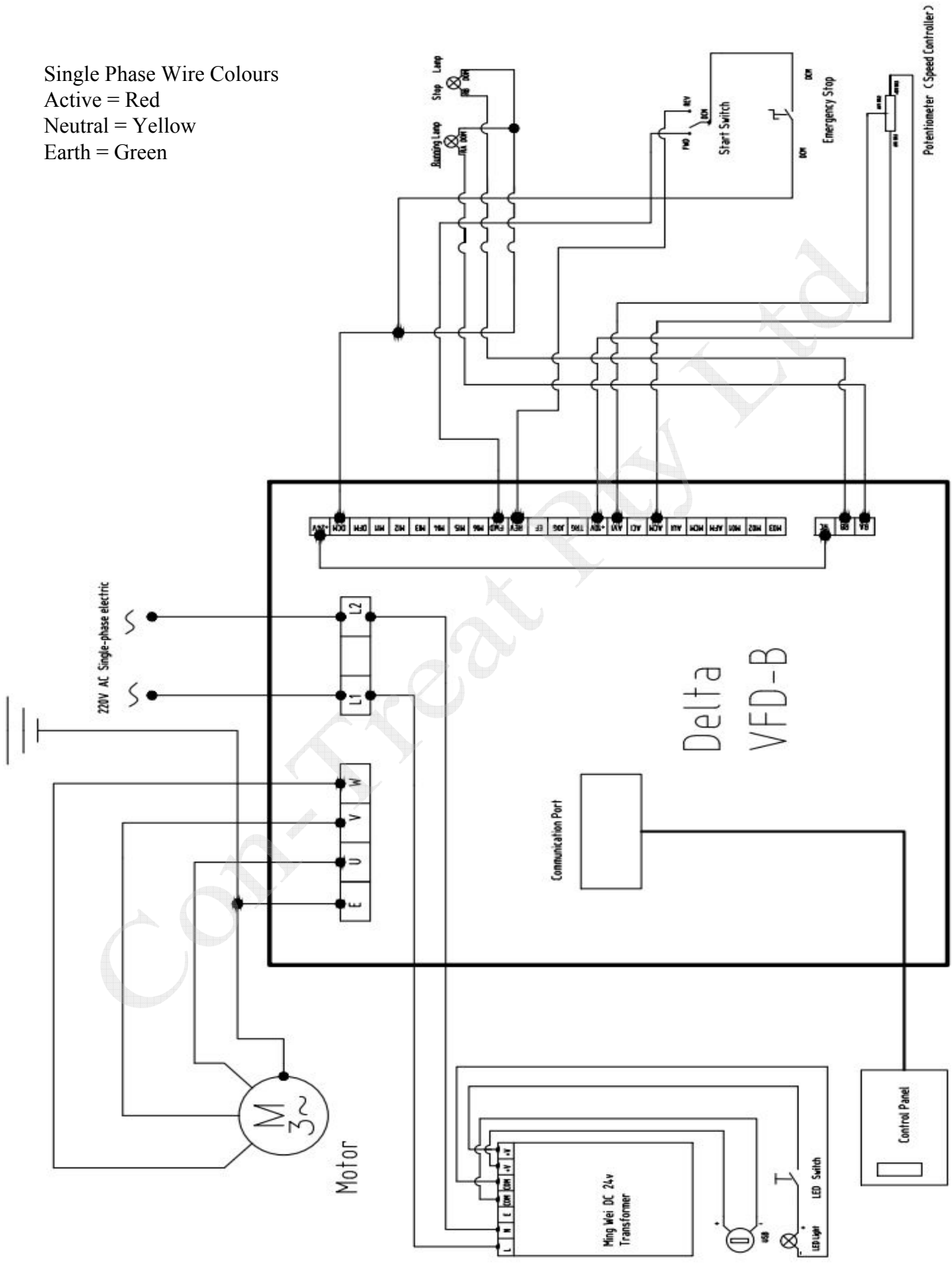
Parts Diagram - Gearbox Housing



14	Gearbox	1
13	Common flat key 8*7*18	3
12	Common flat key 8*7*18	3
10	Upper flange	3
9	Flat pad	3
8	Hexagon locknut M16	3
7	Sponge cushion	3
6	Hexagon bolt M16*45	9
5	Damping spring	3
4	Multi-functional grinding plate	3
3	Grinding plate screws	27
2	Resin pad holder 100mm	9
1	Polishing pads	9

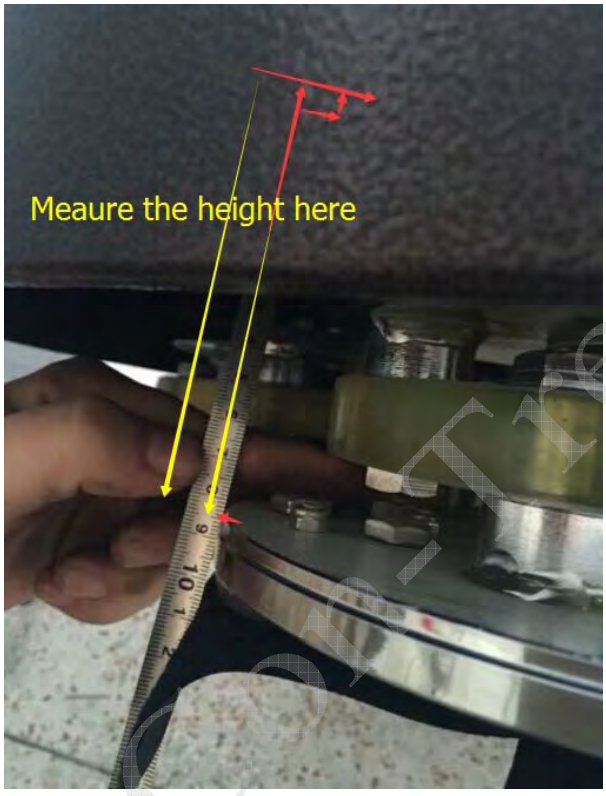
SHARK CONCRETE GRINDERS

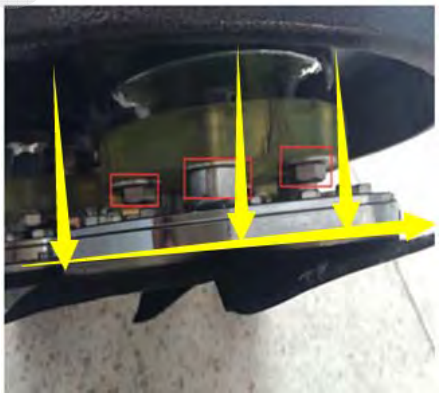
Single Phase Wire Colours
Active = Red
Neutral = Yellow
Earth = Green



Below are the steps required to adjust the 3 grinding plates to the same horizontal surface.

Take a tape measure, stand vertical along the plate to the gearbox, to measure the height from the gearbox bottom to the plate side. (Total needed to measure is 9, as there are each 3 screws on one plate. The height from gearbox bottom to the plate at the side of screws is what we need to measure)





There may be different figures here at the 9 positions. For example

Plate 1: 82mm 85mm 83mm
Plate 2: 83mm 85mm 86mm
Plate 3: 87mm 84mm 88mm

82mm 83mm 85mm 86mm 87mm 88mm

Average for all of these figures is 85mm

So what we need to do is to adjust the others less or more than 85mm to 85mm. (the tolerance is +/- 1mm)