

SAFETY INSTRUCTIONS

WARNING!

When using electric tools, always follow basic safety precautions to reduce the risk of fire, electric shock and personal injury, including the following: **READ ALL INSTRUCTIONS AND SAVE THEM FOR FUTURE USE.** Be sure everyone operating this tool reads and understands these instructions.

- 1. KNOW YOUR POWER TOOL.** Read this manual carefully to learn your power tool's applications and limitations as well as potential hazards particular to this tool.
- 2. KEEP WORK AREA CLEAN AND WELL LIT.** Cluttered, dark work areas invite accidents.
- 3. KEEP CHILDREN AWAY.** All visitors should be kept at a safe distance from the work area to avoid distracting the operator and contacting the tool or extension cord.
- 4. AVOID DANGEROUS ENVIRONMENTS.** Do not expose power tools to rain or use them in wet or damp locations. Do not use tools in the presence of flammable liquids or gases.
- 5. OUTDOOR USE EXTENSION CORDS.** When tool is used outdoors, use only extension cords intended for use outdoors and so marked.
- 6. USE SAFETY GLASSES.** Use a face or dust mask if operation is dusty.
- 7. DRESS PROPERLY.** Do not wear loose clothing or jewelry, and contain long hair since these may be caught in moving parts. Wear rubber gloves and insulated non-skid footwear when working outdoors.
- 8. SECURE WORK.** Use clamps or vise to hold work securely and free both hands to operate tool.
- 9. GUARD AGAINST ELECTRIC SHOCK.** Prevent body contact with grounded surfaces such as pipes, radiators, ranges and refrigerator enclosures. Always check the work area for live wires, and hold your tool by insulated surfaces.
- 10. KEEP HANDS AWAY FROM ALL MOVING PARTS.**
- 11. DO NOT FORCE TOOL.** It will do the job better and safer at the rate for which it was intended.
- 12. USE RIGHT TOOL.** Do not force a small tool or attachment to do the job of a heavy-duty tool. Do not use tool for a purpose for which it was not designed, such as using a circular saw for cutting tree limbs or logs.
- 13. DO NOT ABUSE CORD.** Never carry tool by its cord or disconnect by yanking the cord from the receptacle. Keep the cord from heat, oil and sharp objects.
- 14. MAINTAIN TOOLS CAREFULLY.** For best performance, keep tools clean. Follow instructions for lubricating and changing accessories. Keep tool handles clean, dry and free of oil or grease. Periodically inspect switches, tool cord and extension cord. Check moving parts for alignment and binding as well as for breakage, improper mounting and any other conditions that may affect its operation. Have an authorized service center replace or repair any damaged parts.
- 15. DO NOT OVER REACH.** Keep proper footing and balance at all times.
- 16. AVOID ACCIDENTAL STARTING.** Be sure the tool is turned off before plugging it in. Do not carry a connected tool with finger on the switch.
- 17. CHECK DAMAGED PARTS.** Before using the tool, damaged parts should be carefully checked to be sure it will operate properly and perform its intended function. Have an authorized service center repair or replace any damaged parts.
- 18. UNPLUG TOOL.** When it is not in use and before changing accessories or performing maintenance, be sure that the tool is disconnected.
- 19. STAY ALERT.** Watch what you are doing, and use common sense. Do not operate a tool when you are tired, distracted or under the influence of drugs or alcohol.
- 20. STORE IDLE TOOLS.** When not in use, store tools in a dry and high or locked area-out of reach of children.

DIAMOND CORE DRILL SAFETY PRECAUTIONS

1. Always wear safety glasses and approved hearing protection.
2. Stop immediately if any abnormal sounds are heard or if there are any abnormalities in operation.
3. Never hammer on, or drop the machine.
4. Make sure that accessories are installed properly and securely.
5. Ensure that motor cooling vents are not covered.
6. Always ensure that tool is grounded and that the ground prong has not been removed from plug.
7. Check that the cord fits securely in receptacle.
8. The 6" model must always be anchored to the workpiece. The 4" model must always be anchored to the workpiece when using a bit larger than 2 1/2".
9. Never attempt to use tool if it has not been anchored to the workpiece. (6" models)
10. Ensure that after anchoring, everything is safe and stable.
11. Only use a diamond bit with this tool.
12. Always feed water during operation. Without water, diamond bit will overheat.
13. Take care that no water enters the motor.
14. Never attempt to drill in a vertical (overhead) direction. It will allow water to enter the motor.
15. Always check the location of electrical wiring and plumbing before drilling into concrete structures.
16. When drilling through floors, always ensure there is protection for the area below!

OPERATION Anchoring

1. Drill an anchor hole about 200mm to 270mm from the core center to be drilled. Drill about 200mm (8") away for 4" models or 270mm (10 1/2") for 6" models. (See fig.1) This hole should be sized for the bolt anchor to be used. Ensure that the hole is free of chips, otherwise the anchor may loosen during operation.
2. Drive in a bolt anchor.

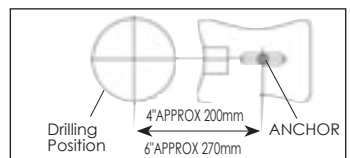
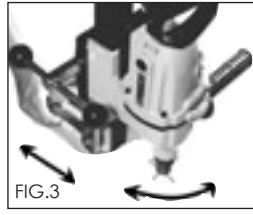
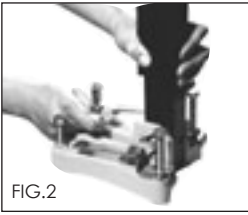


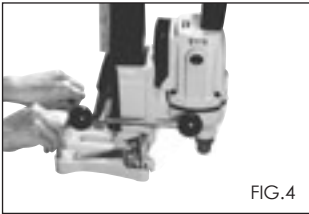
FIG.1

3. Screw the bolt into the bolt anchor at least 6 threads.
4. Bolt down the base and install the drill head on the pole (without the bit attached). Run the drill head down the pole until the spindle meets the workpiece. (See fig.2&3) Adjust the position of the base by aligning the drill head spindle with the hole centerline.



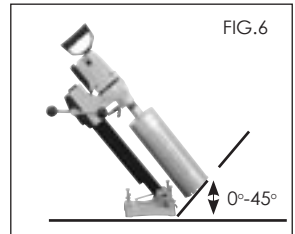
5. If leveling adjustment is necessary, using a sight level, align the base using the four leveling bolts. Retighten the base. (See fig. 4)

Note: If you are using a small 2 1/2" or less bit with 4" models, it is possible to remove the drill head from the pole base and operate by hand. (see fig.5)



Set up

1. Apply anti-seize lubricant or grease to the threads and screw bit on to the drill head.
2. Hook up a hose and turn on water valve. Adjust flow to about 3L/min.
3. Use a water collector ring (optional on 6" models) if water is not allowed to splatter. Line up the collector ring with the bit and clip it in place with the water collector retainer. Always position the collector ring's drain at the lowest possible point to allow complete draining.
4. Choose a soft metal bond bit for harder materials like stone or Choose a hard metal bond bit for softer materials such as asphalt.
5. If your machine is equipped with a swivel base, you may choose the angle of the hole.(see fig.6)



●Drilling

Switch on and allow machine to come up to full speed before contacting workpiece.

Note: Some models use a toggle switch and circuit breaker button. Some models use a push-button switch with built-in circuit breaker. If your machine uses a push- button switch, hold the "on" button down for a moment before releasing. This will allow the relay to hold. If the power supply is interrupted, this switch will automatically switch off.

Use very light pressure for the first few millimeters to keep the bit from wandering. Then proceed normally.

It's not necessary to use excessive force. This will only slow drilling and overload the motor.

Use especially light pressure when you encounter steel reinforcing rods. High pressure against reinforcing rods will trip the circuit breaker.

If the circuit breaker trips, remove the bit from contact with the workpiece before resetting.

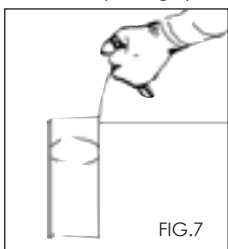
Note: This machine is not designed to drill through heavy steel plate or heavy steel girders.

At the completion of drilling, sometimes the core will jump out. Be aware of this and take precautions. Conversely, if the core is stuck in the bit, unscrew the bit tube from the bit coupling and carefully remove the stuck core with a hammer and chisel.

After finishing the hole, make a habit of running the machine for a minute under no load. This will allow the motor to cool and will blow dust and dirt out of the motor, ensuring longer life for the machine.

If you have drilled a blind hole, remove the core as follows:

1. Use a chisel to break the base of the core.
2. Make a lasso with flexible wire and loop it around the core.
3. Pull the core out. (See fig.7)



•Maintenance

Always keep your machine clean and dry. This especially applies to the inside of the motor. Compressed air may be used to blow dust out of the motor. Never use solvents to clean the motor housing.

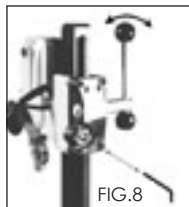
Periodically check all screws for tightness.

Replace bit immediately when worn. Use appropriate tube wrenches to avoid deformation of tube. Use anti-seize lubricant when reassembling.

Lightly lubricate base and clamp.

If transmitted torque is lowered, clutch disc requires adjustment. Entrust this to an authorized service center.

Periodically check clamp for free-play. Evenly adjust eight adjusting screws. Make them tight enough to eliminate free-play while moving handle back and forth to ensure that it still moves freely.(See fig.8)



•CARBON BRUSHES

The carbon brushes are a normal wearing part. Replace them when they are worn to 1/4" (6mm).Always replace both brushes as a set.

•To replace

1. Remove the respective brush caps with a slot-head screwdriver.
2. Withdraw the old brushes.
3. Insert new ones,ensuring that they line up properly and slide freely.
- 4.Replace the brush caps. (See fig. 9). Keep brushes clean for best performance.



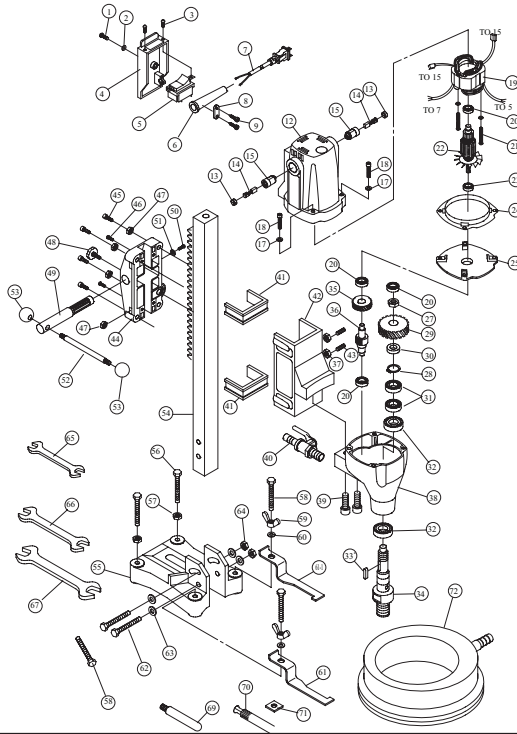
All other repairs should be entrusted to an authorized service center.

PROBLEM SOLVING CHART

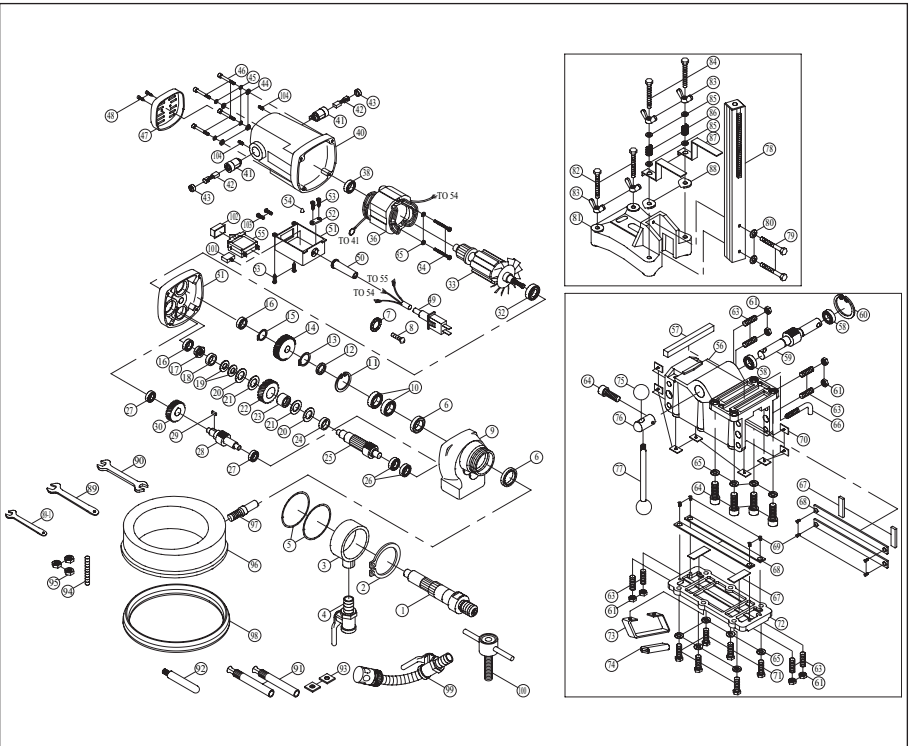
Problem	Steps on the spot	Reason	Solution
Drilling unusually slow.	1.Check bit.	1. Bit is worn out.	replace bit.
		2. Bit is clogged with chips.	clean bit with a wire brush and increase water pressure.
		3. Diamond is rounded.	Use a softer bond bit. Increase force on handle.
Bit is stuck.	2.Check for metal powder in waste water. Shut off drill	1. Drill is cutting reinforcing rods.	Ease up on the handle to avoid tripping the circuit breaker.
		1.Stone or steel bar is caught between core and bit.	Using a wrench, rotate the bit clockwise to free it while backing out the handle. (Rotating it counterclockwise may unscrew the bit from the tube.)
		2.Base wanders during drilling.	Reset the base and tighten securely.
		3. Clamp has too much free-play.	Adjust clearance of clamp properly.
Tube is abraded.		4. The bit's outer diameter is the same as the tube's.	Replace bit.
		1. Clamp has too much free-play.	Adjust clearance of clamp properly.
		2. Bit, tube, or base are loose.	Tighten securely.
		3. Bit is deformed.	Tighten securely.
		4. Chips not discharging well.	Increase water pressure and volume.

EXPLODED VIEW

4"DIAMOND CORE DRILL



NO.	Parts Name	Q'ty	NO.	Parts Name	Q'ty
1	PHILLIPS HD SCREW M4 x 12	1	38	GEAR CASE	1
2	FLAT WASHER Ø4 x Ø10 x 1	1	39	ALLEN HD BOLT M10 x 30	2
3	PHILLIPS HD SCREW M3.5 x 12	2	40	WATER COCK	1
4	SWITCH BOX	1	41	SLIDE PLATE	2
5	SWITCH	1	42	CLAMP BODY	1
6	CORD GUARD	1	43	ALLEN SCREW M6 x 16	4
7	POWER SUPPLY CORD	1	44	CLAMP CASE	1
8	CORD RETAINER	1	45	ALLEN SCREW M6 x 25	4
9	PHILLIPS HD SCREW M4 x 16	2	46	ALLEN SCREW M6 x 20	4
10	N/A	-	47	NYLOCK NUT M6	4
11	N/A	-	48	HAND BOLT	1
12	MOTOR HOUSING	1	49	SHAFT	1
13	BRUSH CAP 7 x 11	2	50	BOLT M6 x 10	1
14	CARBON BRUSH 7 x 11	2	51	FLAT WASHER Ø6 x Ø25 x 1	1
15	BRUSH HOLDER 7 x 11	2	52	HANDLE	1
16	N/A	-	53	KNOB	2
17	NAMEPLATE	4	54	POLE	1
18	ALLEN HD SCREW M5 x 40	4	55	BASE	1
19	STATOR ASS'Y	1	56	LEVELING BOLT M10 x 50	2
20	BALL BEARING 608 zz	4	57	NUT M10	3
21	PHILLIPS HD SCREW M5 x 60	2	58	LEVELING BOLT M10 x 70	3
22	ARMATURE ASS'Y 8T	1	59	WING NUT M10	2
23	BALL BEARING 609 zz	1	60	FLAT WASHER M10	2
24	FAN GUIDE	1	61	WATER COLLECTOR RETAINER LEFT	1
25	CRANK PLATE	1	61-1	WATER COLLECTOR RETAINER RIGHT	1
26	N/A	-	62	BOLT M8 x 70	2
27	HEX.NUT M4 x P1.25	1	63	FLAT WASHER Ø10 x Ø14 x 1	4
28	SNAP RING R35	1	64	NYLOCK NUT M8	2
29	DRIVEN GEAR 40T	1	65	WRENCH 17mm	1
30	THRUST WASHER	1	66	WRENCH 24 x 27	1
31	BALL BEARING 6003 zz	2	67	WRENCH 32mm	1
32	OIL SEAL Ø22 x Ø32 x 7	2	68	N/A	-
33	WOODRUFF KEY 5 x 5 x 10	1	69	DRIVING HOLDER M10	1
34	DRIVEN PINION	1	70	HOLE ANCHOR M10	2
35	DRIVE GEAR 42T	1	71	SQUARE WASHER	1
36	DRIVE PINION 9T	1	72	WATER COLLECTOR RING (OPTIONAL) 4"	1
37	HEX.NUT M6	4			



NO.	Parts Name	Q'ty	NO.	Parts Name	Q'ty
1	DRIVEN PINION (ACME),(UNC)	1	53	SCREW M4 x 16	4
2	SNAP RING ISTW-52 S-52	1	54	WIRE CONNECTOR C4	1
3	WATER COVER	1	55	SWITCH	1
4	WATER COCK 1/4"	1	56	CLAMP CASE	1
5	O-RING Ø47 x 2	2	57	KEY	1
6	SEAL Ø30 x Ø42 x 8	2	58	BALL BEARING 6003 zz	2
7	SUN WASHER M5	1	59	GEAR SHAFT 2M x 14T	1
8	SCREW M4 x 6	1	60	SNAP RING C35 R-35	1
9	GEAR CASE	1	61	HEX.NUT M6	8
10	BALL BEARING 6005 zz	2	62	N/A	-
11	SNAP RING R-47	1	63	SCREW M6 x 20	8
12	BEARING COLLAR Ø25 x Ø31.5 x 2.5	1	64	SCREW M8 x 30	5
13	SNAP RING S-25	1	65	SPRING WASHER M8	10
14	DRIVEN GEAR 36T	1	66	L-BOLT M8 M9	1
15	SNAP RING S-19	1	67	PLATE TENSIONER BLOCK	4
16	BALL BEARING 6201 zz	2	68	SLIDE PLATE (LARGE)	4
17	HEX.NUT M16	1	69	SCREW M4 x 12	8
18	SPACER Ø18 x Ø24 x 6	1	70	SLIDE PLATE (SMALL)	8
19	FLAT WASHER Ø18 x Ø35 x 2	2	71	SCREW M8 x 30	6
20	DISC	2	72	CLAMP COVER	1
21	SPACER Ø23 x Ø41 x 1	2	73	GRIP	1
22	SECOND GEAR 42T	1	74	WARNING LABEL	1
23	INNER GEAR COLLAR Ø28 x 13.7 x 21T	1	75	KNOB PB 40x12	2
24	SPACER Ø24 x Ø34 x 9	1	76	HANDLE BOSS 32x 59 13.5 x 13.5 x 650LMZ	1
25	SECOND PINION 15T	1	77	HANDLE BOSS 32x 59	1
26	BALL BEARING 6901 zz	2	78	POLE WITH RACK 49 x805mm	1
27	BALL BEARING 6200 zz	2	79	SCREW M10 x 65	2
28	FIRST PINION 8T	1	80	SPRING WASHER Ø10 x Ø23 x 2	2
29	WOODRUFF KEY 5 x 5 x 12	1	81	BASE	1
30	FIRST GEAR 29T	1	82	SCREW M12 x 75	2
31	GEAR PLATE	1	83	WING NUT M12 M12	4
32	BALL BEARING 6202-2RS	1	84	SCREW M12 x 110	2
33	ARMATURE 8T	1	85	FLAT WASHER Ø12 x Ø24 x 2.5	4
33	ARMATURE 8T	1	86	SPRING WASHER M3.5 x 35	2
34	SCREW M5 x 80	2	87	WATER COLLECTOR RETAINER	2
35	SPRING WASHER M5	2	88	PLATE	2
36	SATOR 73 x 42 x 45 Ø15	1	89	WRENCH M36	1
36	SATOR	1	89-1	WRENCH M45	1
37	N/A	-	90	WRENCH M17 x 19	1
38	BALL BEARING 6300-2RS	1	91	HOLE ANCHOR 1/2" 1/2"	2
39	N/A	-	92	DRIVING HOLDER 1/2" 1/2"	1
40	MOTOR HOUSING	1	93	SQUARE WASHER 1/2" 1/2"	2
41	BRUSH HOLDER 7 x 17	2	94	BOLT 1/2" 1/2"	1
42	CARBON BRUSH 7 x 17 x 17	2	95	HEX.NUT 1/2"	3
43	BRUSH CAP 7 x 17	2	96	WATER COLLECTOR	1
44	FLAT WASHER Ø6 x Ø13 x 1	4	97	CONNECTOR	1
45	SPRING WASHER M6	4	98	RUBBER RING	1
46	SCREW M6 x 80	4	99	HOSE CONNECTOR	1
47	TAIL COVER	1	100	JACK SCREW	1
48	SCREW M4 x 8	2	101	OVERLOAD PROTECTION (110v),(220v)	1
49	POWER SUPPLY 14AWG x 3C x 3.6M	1	102	SWITCH COVER	1
50	CORD GUARD	1	103	SCREW M3 x 12	2
51	SWITCH BOX	1	104	SCREW M5 x 6	2
52	CORD CLIP	1			

4"&6" DIAMOND CORE DRILL

INSTRUCTION MANUAL



4"DIAMOND CORE DRILL



6"DIAMOND CORE DRILL

SYSTEM ASSESSMENT & CERTIFICATION TO ISO 9002

SPECIFICATIONS

Model	Applicable Bit Dia	No Load Speed	Effective Stroke	Weight
4"Dia. Core Drill	ø27-ø120mm	1000R.P.M	350mm	7.8kg(17Lbs)
6"Dia. Core Drill	ø1"-6"	800R.P.M	480mm	18kg(39.6Lbs)

Manufacturer reserves the right to change specifications of parts and accessories without notice.