

Dear valued customer,

Thanks for you choose our products, and hope it will bring the convenience and enjoyment to you.

! WARNING

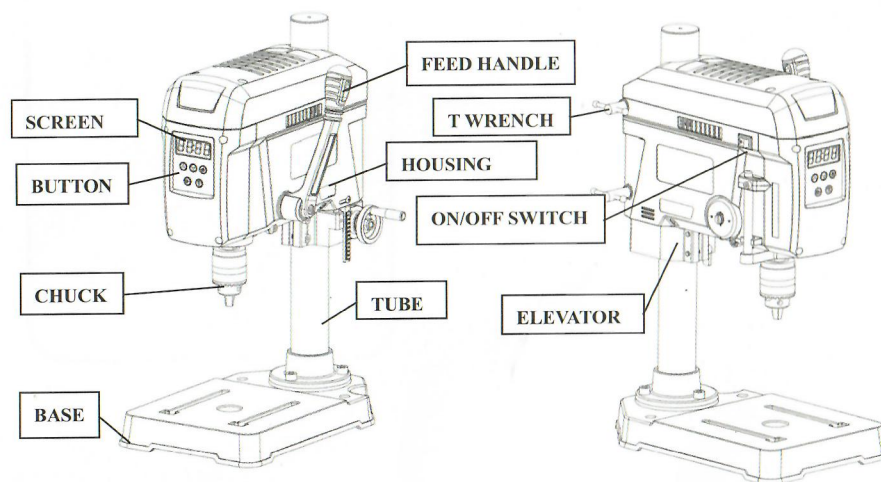
Read and understand all instructions. Failure to follow all instructions listed below, may result in electric shock, fire and/or serious personal injury.

SAVE THESE INSTRUCTIONS

This mini bench drill is designed for a precision drilling and milling machine, and suitable for industry and home use both, thanks to cast iron base and extra thickness tube, brushless motor, speed and power constant circuit, speed display, with LED light and Laser. It is really DIY funs wise choice.

Note: the specification is different to different models. Please check with the nameplate on the machine you get for correct data

Rated Voltage	220-240V	Chuck Capacity	1.5-13mm
Rated Frequency	50Hz	Max. Travel	58mm
Rated input Power	400W	Working Radius	148mm
No load Speed	300-2500r/min	Table Size	193X200mm



Safety Rules

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Work Area

Keep your work area clean and well lit. Cluttered benches and dark areas invite accidents. Keep the floor around the machine clean and free of scrap material, oil and grease,

Do not operate drill press in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Machine creates sparks which may ignite the dust or fumes.

Keep by-standers, children, and visitors away while operating a machine. Distractions can cause you to lose control.

Electrical Safety

Before plugging in the machine, be certain the outlet voltage supplied is within the voltage marked on the nameplate. Do not use "AC only" rated machine with a DC power supply.

Make sure the machine is properly grounded. 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. Electrician's rubber gloves and footwear will further enhance your personal safety.

Don't expose this drill press to rain or wet conditions. Water entering a machine will increase the risk of electric shock.

Do not abuse the cord. Never use the cord to carry the machines 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 machine 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 the drill press. Do not use machine while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating machine may result in serious personal injury.

Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts. Keep handles dry, clean and free from oil and grease.

Avoid accidental starting. Be sure switch is "OFF" before plugging in. Carrying tools with your finger on the switch or plugging in tools that have the switch "ON" invites accidents.

Remove adjusting keys or wrenches before turning the tool "ON". A wrench or a key that is left attached to a rotating part of the machine may result in personal injury.

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

Use safety equipment. Keep safety guards in place at all times when the machine is in use. If removed for maintenance purposes, use extreme caution and replace the guards immediately.

Machine Use and Care

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.

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

Do not use machine if switch does not turn it "ON" or "OFF". Any machine 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 machine.** Such preventive safety measures reduce the risk of starting the machine accidentally.

Store idle machines out of reach of children and other untrained persons. Machines are dangerous in the hands of untrained users.

Maintain machines with care. Keep cutting tools sharp and clean. Properly maintained tools, with sharp cutting edges are less likely to bind and are easier to control. Any alteration or modification is a misuse and may result in a dangerous condition.

Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained machines. Develop a periodic maintenance schedule for your machine.

Use only accessories that are recommended by the manufacturer for your model. Accessories that may be suitable for one machine, may become hazardous when used on another machine.

Never leave the machine running unattended. Turn the power off and do not leave the machine until it comes to a complete stop.

Service

Machine service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury. For example: internal wires may be misplaced or pinched, safety guard retusprings may be improperly mounted.

When servicing a machine, use only identical replacement parts. Follow instructions in the Maintenance section of this manual. Use of unauthorized parts or failure to follow Maintenance Instructions may create a risk of electric shock or injury. Certain cleaning agents, such as gasoline, carbon tetrachloride, ammonia, etc. may damage plastic parts.

Assembly

! WARNING Read and understand all assembly instructions before attempting assembly! Failure to comply may cause serious injury!

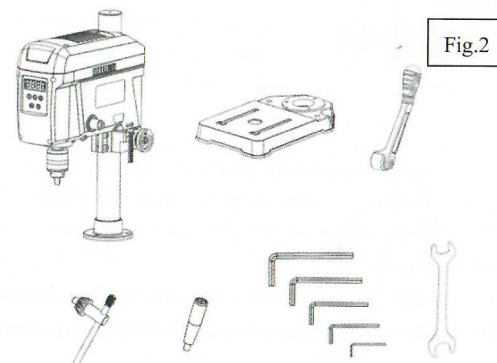
! WARNING Do not attempt to turn on power before this machine is completely assembled.

Before Assembly

- 1, Compare the contents of the shipping container with the list on this manual. Report any shortages or damage to your distributor.
- 2, Clean all rust protected surfaces with kerosene or a light sovent. Do not use lacquer thinner, paint thinner, or gasoline. These will damage plastic components and painted surface.

Shipping Contents

Unpack the carton and verify that all parts listed below are included



Head assy. (included chuck)	1 set	Wrench (13mm)	1 piece
Base	1 piece	Hex key (2mm, 3mm, 4mm, 5mm, 6mm)	5pieces
Feed handle	1 set	Chuck key (13mm)	1 piece
Elevator wheel (with screws)	1 set		

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Column Assembly

- 1, Place the base on a level floor.
- 2, Place the Tube Assy. (75) on the base(77), and keep align the holes on the base.
- 3, Using attached 6mm Hex Key to tight the two pieces Hex Bolts(76) on the side of base. (Fig.3)

Assembly Feed Handle

Insert the Feed Handle (65) into the transverse shaft (66), and fix it by screws (64, 61);

Mount or Remove the Chuck

Note: The thread of chuck must be cleaned of oil, dust and other irrelevant.

- 1, The Chuck with British thread connected to the Output Shaft of machine,
 - 2, Hold the output shaft (12) by open end wrench, Hold the body of Chuck(79) and screw it onto output shaft in clockwise. Anti-clockwise to then use chuck key to tighten the chuck.
- Remove the Chuck
- Hold the chuck by open end wrench, then insert the chuck key into the side hole of chuck, and hammer the key lightly to loosen the chuck.

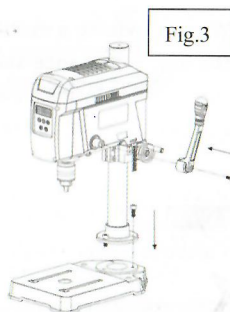


Fig.3

Adjustment

! WARNING Unplug the machine from the power source before making any adjustment.

Adjust the Shaft Sleeve Play

Before the first use or after long-term use, it is necessary to check the play between the Shaft Sleeve (10) and the Housing (57). If found it is too large or small, it is necessary to reset the play by adjusting screw (70), loosen the lock nut (28), and screw in or out the adjusting screw, then tighten the lock nut again.

Note: The adjusting screw should not be too tight, small play will lead to the shaft sleeve difficult to press or unable to rebound reset, and big play will lead to shaft swing, affect the

accuracy. And add some lubricating grease on the shaft sleeve and housing regularly.

Adjusting belt tension (Fig. 4)

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Tension belt no tighter than necessary, i.e., tighten until there is no more slack. An over-tensioned belt distends over longer periods of inactivity and reduces motor output.

1. Loosen the screw and remove the cover (41);
2. Properly loosen the combination screw (46), so that the motor bracket (49) can move;
3. Tighten the belt by rotating the screws clockwise and loosen the belt by rotating the screws counterclockwise with the 3mm rotating screws (47) of the accessories hex wrench;
4. Re-tighten the screw (46);

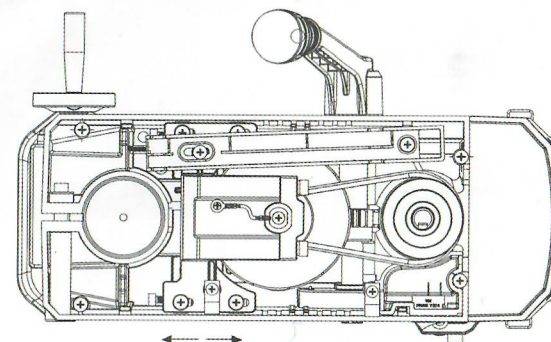


Fig.4

Adjust the Depth Stop

- 1, Loosen the fixed plastic screw(84)
- 2, Press the feed handle, down the drill bit to desired depth, and let the depth stop rod (81) touch to the clamp(83).
- 3, Tighten the fixed plastic screw firmly again

Raise or Down the head

- 1, Hold the Head Assy. by hand firmly
- 2, Loosen two lock lever (51) by the other hand
- 3, Loosen two screws (103) of elevator(104)
- 4, Lift or down the head and elevator to desired height
- 5, Tighten the lock lever firmly again.

Raise or Down the head in small size

This machine can be raise or down the head in small size, smaller than 60mm by elevator. Loosen the above mentioned lock lever(51) and rotate the elevator wheel to adjust the head height. It's down or up be showed by depth point.

Installing Drills

Insert the Drill Bit into the chuck jaws with about 10mm insertion. When using a small drill do not insert it so far that the jaws touch the flutes of the drill. Make sure

the drill bit is centered in the chuck before tightening the chuck with the key. To tighten chuck, insert key into each of the three key holes in succession and tighten clockwise firmly. The chuck can be released by using one hole only.

TURN ON/OFF

1. When the boat switch (29) is pressed to "I", the machine is powered on;
2. Emergency power off. When the motor is working, in case of danger, you can directly press the switch "O" to achieve emergency power OFF.

SCREEN OPERATION

1. Press "▲" to acceleration, and long press to accelerate quickly;
2. Press "▼" to deceleration, and long press to deceleration quickly;
3. The button "☀" to turn ON/OFF laser.
4. The button "💡" to turn ON/OFF LED light



Usage of speed memory function

1. Machine has integrated speed memory function, after setting speed up, press down the button "⏻", then motor will stop working and data will be saved.
2. If you directly cut off the power supply by ship switch (29) rather than press down the button "⏻", then the system will NOT save speed-related data.

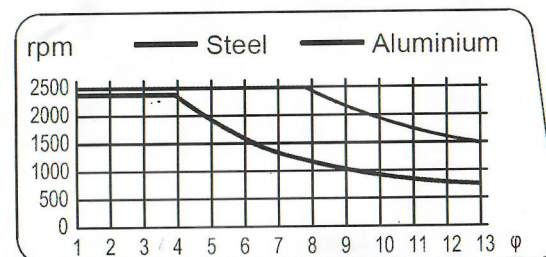
LASER ADJUSTING

The laser (73) can assist the operator to align the drill bit with the workpiece to be drilled.

Note: it is strictly forbidden to look directly at the laser source with your eyes avoid damage your eyes.

Loosen the fix screw (35) and rotary the Laser Assy. can adjust the position of laser.

Speed Recommend for drilling different materials



Above sheet is the recommended speed table for steel or aluminium (for reference only, the actual drilling condition shall prevail). Tip: the drill bit needs to be sharpened. If

necessary, brush cutting fluid on the drill bit to avoid "burn discoloration". If the workpiece is hard steel with hardness over 20HRC, the rotation speed should be reduced appropriately.

Maintenance

Service

! WARNING

Preventive maintenance performed by unauthorized personnel may result in misplacing of internal wires and components which could cause serious hazard. We recommend that all machine service be performed by a Factory Authorized Service Station.

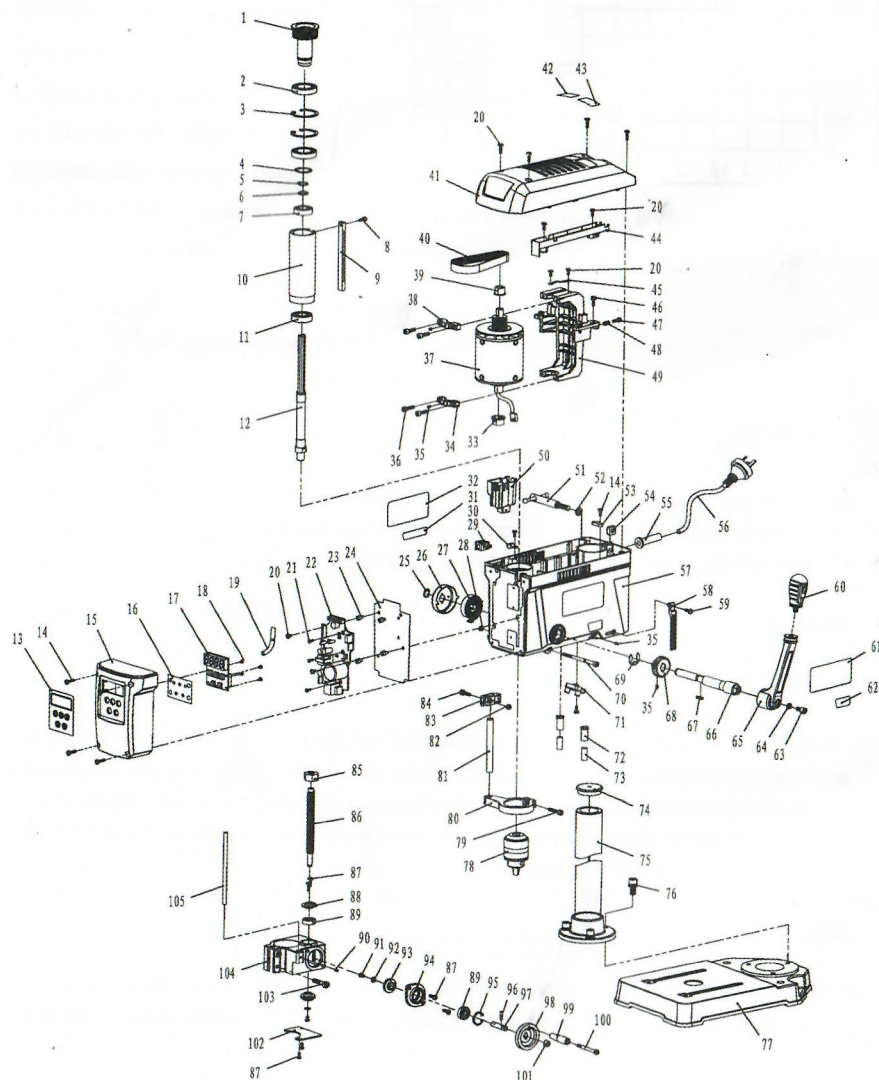
Cleaning

! WARNING

To avoid accidents always disconnect the machine from the power supply before cleaning or performing any maintenance. The machine may be cleaned most effectively with compressed dry air. Always wear safety goggles when cleaning tools with compressed air. Ventilation openings and switch levers must be kept clean and free of foreign matter. Do not attempt to clean by inserting pointed objects through openings.

! CAUTION

Certain cleaning agents and solvents damage plastic parts. Some of these are: gasoline, carbon tetrachloride, chlorinated cleaning solvents, ammonia and household detergents that contain ammonia.



1	Output shaft pulley	38	Upper press plate	75	Steel tube
2	Bearing 6950	39	Plastic bushing Ø12	76	Screw M8x20
3	Circlip for hole Ø42	40	Poly V-belt	77	Base
4	Circlip for shaft Ø25	41	Top cover	78	Chuck Ø13
5	Circlip for shaft Ø15	42	Warning sticker	79	Screw M5x25
6	Distance washer	43	Laser warning sticker	80	Shaft sleeve hoop
7	Bearing 6002	44	Spacer plate	81	Limited level
8	Screw M4x10	45	Grounded wire	82	Screw M5
9	Rack	46	Screw set M4x16	83	Point
10	Shaft sleeve	47	Screw M4x16	84	Screw M5x16
11	Bearing 6003	48	Small spring	85	Hexagon nut Tr12
12	Output shaft 13MM	49	Motor bracket	86	Screw rod Tr12x120
13	Button face paste	50	Switch box	87	Screw M5x8
14	Screw M4x14	51	T-wrench	88	Bearing cover
15	Switch seat	52	Flat washer 8	89	Bearing 608
16	Insulate paper pad	53	Cord anchor	90	Set screw M5x5
17	Screen module	54	Square nut M8	91	Screw M4x8
18	Screw ST3x6	55	Cord sleeve	92	Flat pad Ø4xØ11x1.6
19	Glass fiber tube Ø5	56	Cord	93	Angle gear
20	Screw M4x8	57	Housing	94	End cap
21	Screw M3x8	58	Scale plate	95	Ring for hole Ø22
22	Controller	59	Screw ST4x10	96	Cylindrical pin Ø3x10
23	Spacer column M4x8x6	60	Operating handle	97	Hand wheel axle
24	Insulating tape	61	Nameplate	98	Handwheel
25	Ring for shaft Ø12	62	Lighting sticker	99	Handle
26	Coil spring cover	63	Screw M6x12	100	Screw M5x51
27	Coil spring	64	Spring washer 6	101	Lock nut M8
28	Lock nut M5	65	Handle bar	102	Cover plate
29	Boat switch	66	Transverse shaft	103	Screw M6x30
30	Wire anchor	67	Plat key 4x4x10	104	Elevator seat
31	Laser sticker	68	Lifting gear	105	Guide bar
32	Speed table	69	C ring Ø12	107	
33	Plastic bushing Ø15	70	Screw M5x85	108	
34	Lower press plate	71	LED light	109	
35	Set screw M4x6	72	Laser sleeve	110	
36	Screw M5x18	73	Laser assembly	111	
37	Motor	74	Column end cover	112	