

# MicroLux<sup>®</sup>

## #82959 Variable Speed Miniature Drill Press *with Digital Depthfinder*



## INSTRUCTION MANUAL

Distributed by Micro-Mark  
340 Snyder Avenue, Berkeley Heights, NJ 07922  
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MM013108

## **IMPORTANT SAFETY INSTRUCTIONS**

### ***READ ALL INSTRUCTIONS AND WARNINGS BEFORE USING THIS TOOL***

#### **Operator**

##### **PLEASE REMEMBER:**

1. When using electric tools, machines or equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and personal injury.
2. Keep work area clean. Cluttered areas invite injuries.
3. Consider work area conditions. Do not use machines or power tools in damp, wet, or poorly lit locations. Do not expose equipment to rain. Keep work area well lit. Do not use tools in the presence of flammable gases or liquids.
4. Keep children away from the work area.
5. Guard against electric shock. Prevent bodily contact with grounded surfaces, such as pipes, radiators, ranges, and refrigerator enclosures.
6. Stay alert. Never operate if you are tired.
7. Do not operate the product if under the influence of alcohol or drugs. Read warning labels on prescriptions to determine if your judgment or reflexes might be impaired.
8. Do not wear loose clothing or jewelry, as they can be caught in moving parts.
9. Wear restrictive hair covering to contain long hair.
10. Always wear eye and ear protection.
11. Keep proper footing and balance at all times.
12. Do not reach over or across running machines.

#### **Before Operation**

1. Be sure the power switch is OFF when not in use and before plugging in the tool.
2. Do not attempt to use inappropriate attachments in an attempt to exceed the tool's capacity. Approved accessories are available from Micro-Mark.
3. Before using any tool, check for damaged parts. Any part that appears damaged should be carefully checked to determine if it will operate properly and perform its intended function.
4. Check for alignment and binding of all moving parts, broken parts or mounting fixtures and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician.
5. Do not use the tool if the power switch does not turn off and properly stop the machine.

#### **Operation**

1. Never force the tool or attachment to do the work of a larger industrial tool. This tool will do a better job if its capacity is not exceeded or if it is not overloaded.
2. Do not carry the tool by its power cord.
3. Always unplug the cord by the pulling on the molded plug. Never yank the cord out of the wall by pulling on the wire.
4. Always turn off the machine before unplugging it.

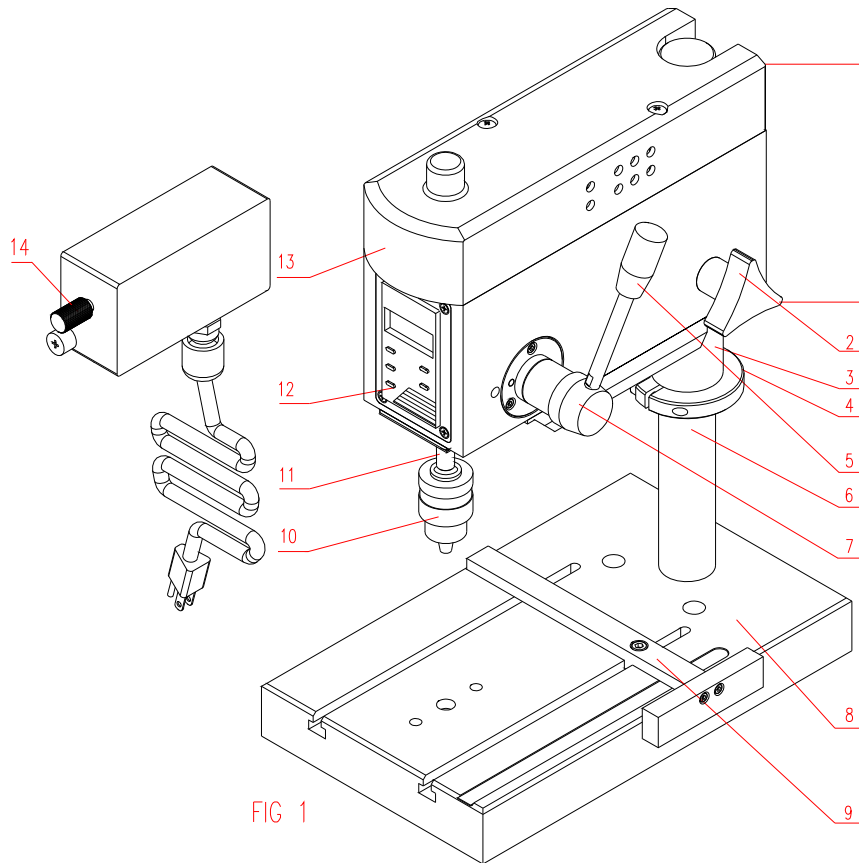
***IF THERE IS ANY DOUBT ABOUT THE SAFETY OF THE MACHINE, DO NOT OPERATE IT!***

#### **Grounding Instructions**

This machine has a three-prong plug. The third prong is the ground and is there for YOUR safety. Plug this cord into a three-prong receptacle only. Do not attempt to fit the plug into a two-slot wall outlet by cutting off the round grounding prong. Cutting off the ground will result in a safety hazard and void the warranty. **DO NOT MODIFY THE PLUG IN ANY WAY. IF YOU HAVE ANY DOUBT, CALL A QUALIFIED ELECTRICIAN.**

## Operation Cautions

1. Before any operation or adjustment, please make sure that the machine is unplugged from the wall socket.
2. Before operation, please put on your safety goggles.
3. Do not run the machine if the Upper Cover (#13) is open.
4. For different sizes of holes and different materials of workpieces, please set to the proper running and feeding speeds.
5. Please hold the workpiece firmly while performing machining operations.



## Component List

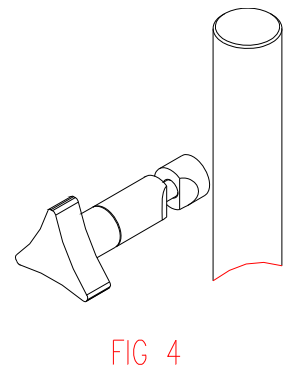
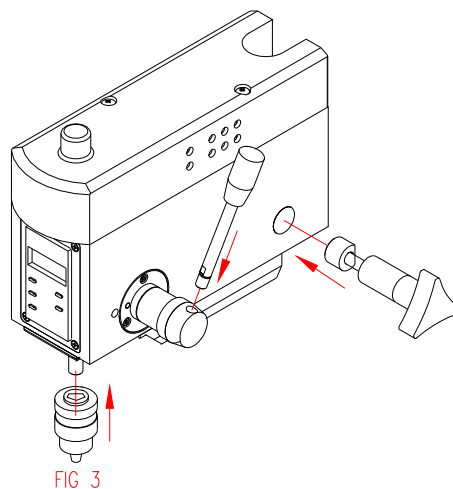
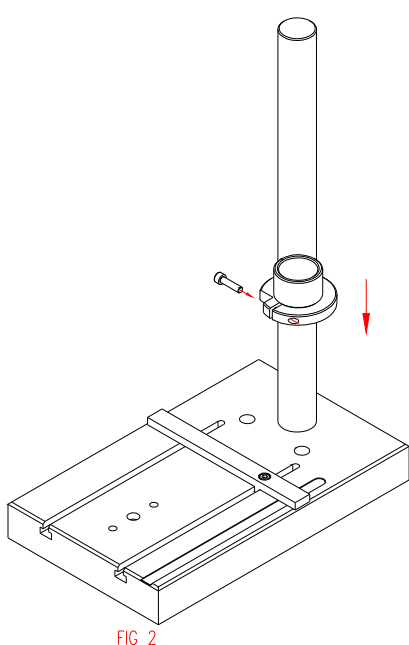
1	Headstock	8	Base
2	Star Knob	9	Parallel Bar
3	Collar	10	Drill Chuck
4	Stop Ring	11	Spindle
5	Handle	12	Digital Readout
6	Column	13	Upper Cover
7	Handle Seat	14	Power Switch Box

## Specifications

Max. drilling capacity .....	1/4"
Spindle travel .....	1.57"
Clearance between bottom of Chuck and top of Base .....	8" max
Distance from front of column to centerline of Chuck .....	6-1/4"
Headstock travel .....	7.8"
Spindle taper .....	JT1
Spindle speed - High range .....	0 to 5000rpm
Spindle speed - Low range .....	0 to 3600rpm
Base size .....	6-1/2" wide x 10-1/2" deep
Column size .....	1.181" diameter
Motor power .....	150 W (0.2 hp)
Speed control .....	Pulse width modulation for high torque at low speed
Weight .....	30 lbs.

## Assembly

1. Carefully remove all parts from the package.
2. Install Stop Ring (#4) onto Column and tighten at a position about half-way up the Column. Slide the Collar (#3) down the Column until it rests on the Stop Ring.
3. Insert the Star Knob (#2) into the Headstock Hole (Fig 3).
4. Install the Headstock part-way onto the Column. While holding the Headstock in this position, reach into the Headstock Hole with a screwdriver and gently adjust the two locking blocks on the Star Knob shaft so that the notches align with the Column (See Fig 4). Then slide the Headstock on the rest of the way.
5. Push the Drill Chuck (#10) smartly onto the tapered shank of Spindle. Then twist the Drill Chuck to confirm it is held tightly by the taper.
6. Install the Handle (#5) into the Handle Socket (#7) and tighten with provided wrench (Fig 3).



## Operation

### Spacing of Headstock (#1)

Make sure Headstock Star Knob is tight. Loosen the hex head lock screw to adjust the height of Stop Plate (#4) and Collar (#3) on the Column as a safety to avoid damage by accidentally dropping a loosened Headstock.

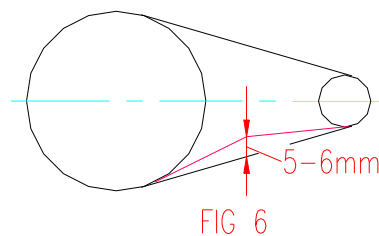
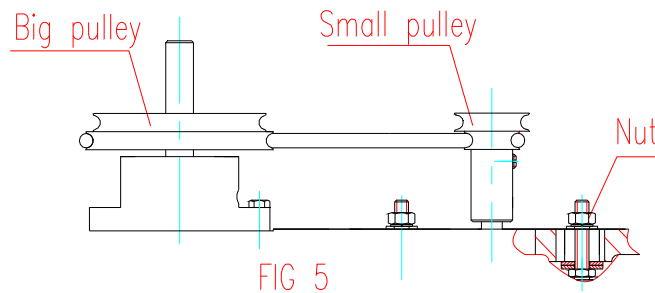
### Adjust the Height of Headstock

Loosen the Star Knob (#2) and move the Headstock (#1) up and down to make suitable distance between Headstock and the surface of workpiece. If you want to drill through the workpiece, please make sure the drill will pass through the hole in the Base; otherwise, you'll drill into the Base and possibly damage it and the drill bit.

### Adjust the Spindle Speed

Normally, low speed is for hard material and big holes; soft material and small holes normally require high speed. To change speed, turn the Speed Control Knob to the desired speed. To switch between speed ranges, do the following:

Use the provided screwdriver to loosen the two screws on Cover (#13). Open the Cover and change the Belt from one pair of pulleys to the other. First move the Belt to the Small Pulley and then revolve the Small Pulley to move the Belt to the Large Pulley (Fig 5). Before closing the Cover and starting the Drill Press, please check the belt tension (Fig 6). This can be adjusted by loosening the two Motor Mounting Nuts, adjusting the position of the Motor, and then retightening the nuts. Using the upper pair of pulleys puts the machine into the high-speed range.

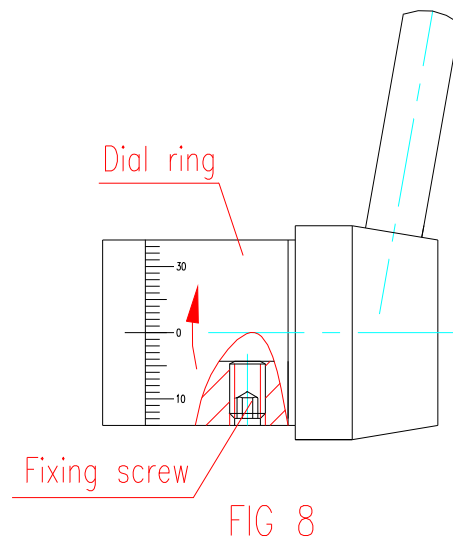


## Digital Readout

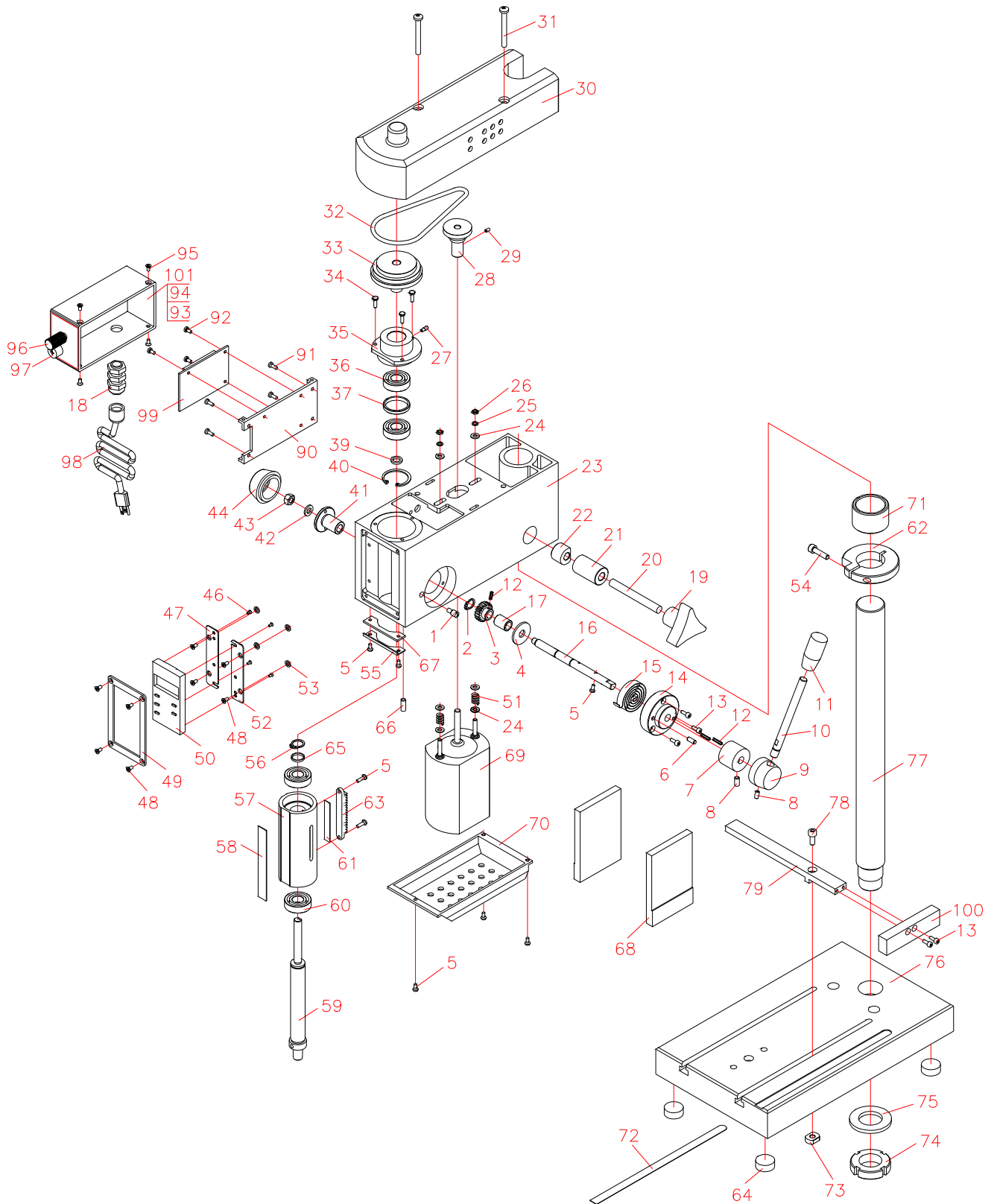
For drilling operation, first press the ON/OFF switch, then press the "ZERO" button. Press "mm/in" button to switch between metric or inch measurements. These two buttons may be pressed at any handle position. You can now start drilling. When the display has no readings or if it flashes, the battery is low and should be replaced with a new one. To replace the battery, slide the Battery Cover to the right to open it. After installing a new battery, replace the Battery Cover and slide it to the left to close.

## Setting the Depth Stop

Loosen the set screw on the Dial Ring (#7 on parts diagram) and align the zeroes on the adjacent two rings. Turn the Dial Ring to the required depth, then use the supplied hex wrench to tighten the set screw on Dial Ring. Pull the Handle (#5) to drill. The spindle will automatically stop at the required depth. **Note:** The Pressing Plate (#100) may be removed from the Parallel Bar (#79) to perform in-line drilling operations on long parts. Simply remove the two hex head screws to separate the parts.



# Parts Diagram

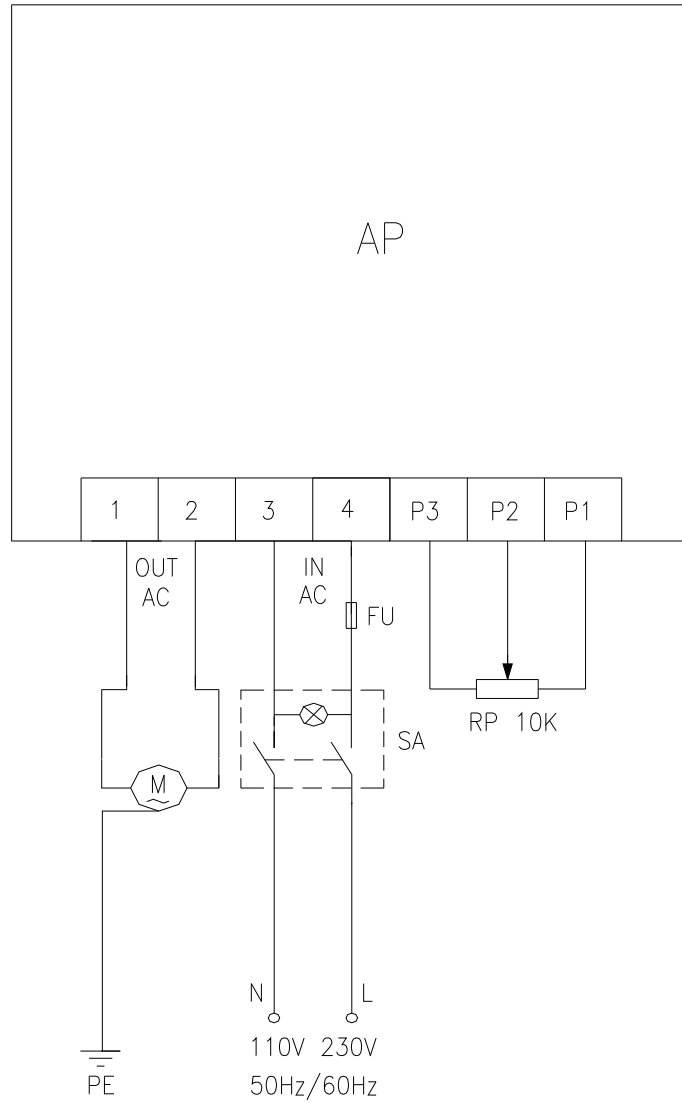


## Parts List

P/No.	Description	P/No.	Description
1	Screw M6x14	47	Connecting Plate (left)
2	Check Ring 8	48	Screw M3x6
3	Gear	49	Face Plate
4	Washer	50	Digital Readout
5	Screw M3x6	51	Compressing Spring
6	Pin 4x10	52	Connecting Plate (right)
7	Dial Ring	53	Rubber Circle
8	Screw M5x8	54	Screw M5x20
9	Handle Seat	55	Cover for avoiding dust
10	Handle Shaft	56	Check Ring 15
11	Cap of Handle Shaft	57	Spindle Sleeve
12	Pin 3x12	58	Inductive Plate
13	Screw M3x12	59	Spindle
14	Spring Seat	60	Bearing 6002-Z
15	Wound Spring	61	Copper Plate
16	Shaft	62	Stop Ring
17	Washer	63	Rack
18	Fixing Ring for Cord	64	Rubber Foot
19	Star Knob	65	Washer
20	Star Knob Sleeve	66	Screw M5x14
21	Fixture Block (I)	67	Felt Plate for avoiding dust
22	Fixture Block (II)	68	Rubber Pad
23	Headstock	69	Motor
24	Washer 4	70	Bottom Cover
25	Spring Washer 4	71	Collar
26	Nut M4	72	Ruler
27	Fixing Pin	73	Nut
28	Small Pulley	74	Nut M24x1.5
29	Screw M4x5	75	Flat Washer 24
30	Upper Cover	76	Base
31	Screw M5x45	77	Column
32	O Belt	78	Screw M5x12
33	Spindle Pulley	79	Parallel Bar
34	Bolt M4x12	90	Electric Box Sole Plate
35	Bearing Seat	91	Screw M3*8
36	Bearing 6001-Z	92	Screw M3*6
37	Washer	93	Power Switch
39	Check Ring	94	Switch Label
40	Check Ring 28	95	Screw M3*6
41	Eccentric Bushing	96	Variable Speed Knob
42	Washer 6	97	Fuse
43	Nut 6	98	Power Line
44	Side Cover	99	PC Board
46	Screw M2x6	100	Pressing Plate
		101	Electric Box



## Electrical Circuit Diagram



## Packing List

No.	Description	Quantity
1	Hex Keys: 2, 2.5, 3, 4mm	1 each
2	Double End Wrench: 5.5 x 7mm	1
3	Screwdriver	1
4	Drill Chuck with Key	1
5	Hardware to attach X-Y Table	set