说明书材质要求： 105g 有光铜版纸	说明书成品尺寸：105*143mm
Black（单色印刷）	
折叠方式：风琴折（20P 以下用风琴折）/ 骑马钉（20P 以上用骑马钉） 特殊情况：16P/20P：风琴折 + 对折	备注：

特别注意：此页内容不印刷

风琴折 + 对折 页面顺序

16P 页面顺序

9	10	11	封面
12	13	14	封底

1	2	3	4
5	6	7	8

20P 页面顺序

11	12	13	14	封面
15	16	17	18	封底

1	2	3	4	5
6	7	8	9	10

更改记录

1. 新制作

版本号	日期	设计师
0424.V06	2024.4.15	xi

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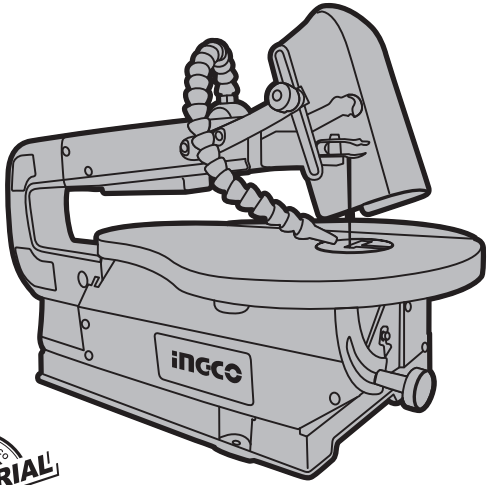
PRODUCT MANUAL

SCROLL SAW



INNOVATED BY INGCO
INDUSTRIAL
INNOVATED BY INGCO

SS852 USS852 SS852xy USS852xy
x(blank,1,2,3,4,5,6,7,8,9,E,S,A,M)
y(blank,-1,-2,-3,-4,-5,-6,-7,-8,-9,E,S,A,M)

SCAN FOR VIDEO

Original Instructions

GENERAL POWER TOOL SAFETY WARNINGS

⚠ **WARNING! Read all safety warnings, instructions, illustrations and specifications provided with this power tool.** *Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.*

Save all warnings and instructions for future reference.

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

1) Work area safety

a) **Keep work area clean and well lit.** *Cluttered or dark areas invite accidents.*

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

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

2) Electrical safety

a) **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** *Unmodified plugs and matching outlets will reduce risk of electric shock.*

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

c) **Do not expose power tools to rain or wet conditions.** *Water entering a power tool will increase the risk of electric shock.*

d) **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** *Damaged or entangled cords increase the risk of electric shock.*

e) **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** *Use of a cord suitable for outdoor use reduces the risk of electric shock.*

f) **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** *Use of an RCD reduces the risk of electric shock.*

3) Personal safety

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

b) **Use personal protective equipment. Always wear eye protection.** *Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.*

c) **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** *Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.*

d) **Remove any adjusting key or wrench before turning the power tool on.** *A wrench or a key left attached to a rotating part of the power tool may result in personal injury.*

e) **Do not overreach. Keep proper footing and balance at all times.** *This enables better control of the power tool in unexpected situations.*

f) **Dress properly. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts.** *Loose clothes, jewellery or long hair can be caught in moving parts.*

g) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** *Use of dust collection can reduce dust-related hazards.*

h) **Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles.** *A careless action can cause severe injury within a fraction of a second.*

4) Power tool use and care

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

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

c) **Disconnect the plug from the power source and/or remove the battery**

pack, if detachable, from the power tool before making any adjustments, changing accessories, or storing power tools. *Such preventive safety measures reduce the risk of starting the power tool accidentally.*

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

e) **Maintain power tools and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** *Many accidents are caused by poorly maintained power tools.*

f) **Keep cutting tools sharp and clean.** *Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.*

g) **Use the power tool, accessories and tool bits etc. in accordance with these instructions, 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.*

h) **Keep handles and grasping surfaces dry, clean and free from oil and grease.** *Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.*

5) Service

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

THE SYMBOLS IN INSTRUCTION MANUAL

	Double insulated for additional protection
	Read the instruction manual before using.
	CE conformity.
	Safety alert. Please only use the accessories supported by the manufacturer.
	Wear safety glasses, hearing protection and dust mask.
	Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice.

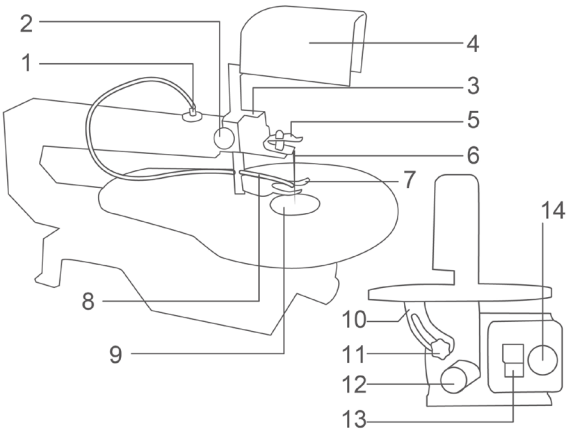
ADDITIONAL SAFETY WARNING

a) Wear safety goggles as protection against flying wood chips and saw dust.
b) A dust mask is recommended to keep saw dust out of your lungs.
c) This scroll saw is for indoor use only.
d) Do not cut pieces of material which are too small to be held by hand.
e) Clear the work table of all objects except the work piece (tools, scraps, rulers etc.) before turning the saw on.
f) Make sure the blades' teeth are pointing down, toward the table, and that the blade tension is correct.
g) When cutting a large piece of material, support it at the height of the table.
h) Do not feed the work piece through the blade too fast. Feed only as fast as the blade will cut.
i) Keep your fingers away from the blade. Use a push stick as you near the end of the cut.
j) Take care when cutting a work piece which is irregular in cross section. Mouldings for example must lie flat, and not 'rock' on the table while being cut. A suitable support must be used.
k) Switch off the saw and make sure the blade has come to a complete stop before clearing sawdust or off-cuts from the table.
l) Make sure there are no nails or foreign objects in the part of the work piece to be sawn.
m) Be extra cautious with very large or small, or irregularly shaped work pieces.
n) Set up the machine and make all adjustments with the power OFF, and disconnected from the supply.
o) DO NOT operate the machine with the covers off. They must all be in place and securely fastened when performing any operation
p) Be sure to use the correct blade size and type.
q) Use approved replacement saw blades. Contact your local supplier for advice. The use of inferior blades can increase the risk of injury

INTENDED USE

The scroll saw is designed for cutting wood up to a maximum thickness of 50mm. It may also be used to cut other materials, including plastic and composite boards.

SPECIFICATIONS



Components

1. Sawdust blower output hose
2. Pressure plate height adjustment knob
3. Blade tension release lever
4. Blade guard
5. Top blade holder
6. Blade
7. Work piece pressure plate
8. Blower nozzle
9. Table insert
10. Angle adjustment scale
11. Table tilt lock knob
12. Dust extraction outlet
13. On/Off switch
14. Blade speed regulator

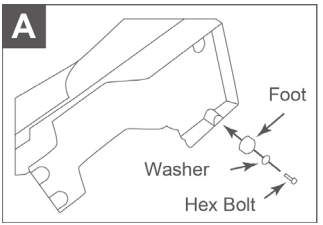
Technical specifications

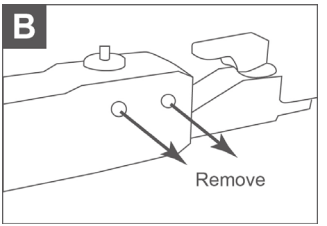
Model No.	SS852	USS852
Rated voltage	220~240V~50Hz	110~120V~60Hz
Input power	85W	85W
No-load speed	1450rpm	1650rpm
Max cutting depth	50mm(2")	50mm(2")
Max cutting width	410mm(16-9/64")	410mm(16-9/64")
Blade size	133x2.6x0.25mm	5-15/64"×3/32"×5/508"
Table size	375 x 250 mm	14-49/64"×10"
Table tilt angle	0-45º	0-45º
Weight	11.5 kg	11.5 kg

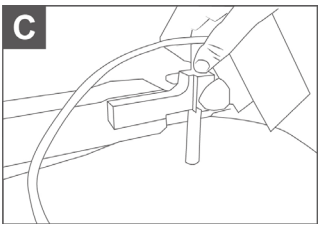
Model No. Note: x (blank, 1,2,3,4,5,6,7,8,9,E,S,A,M); y (blank, -1,-2,-3,-4,-5,-6,-7,-8,-9,E,S,A,M)

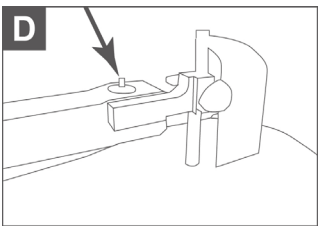
- Due to our continuing program of research and development, the specifications herein are subject to change without notice.

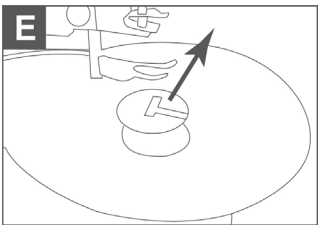
OPERATION PICTURE

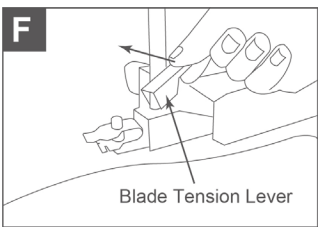


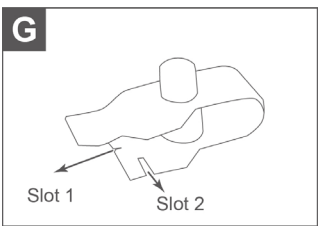


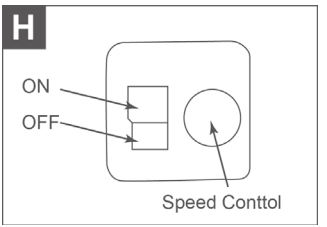




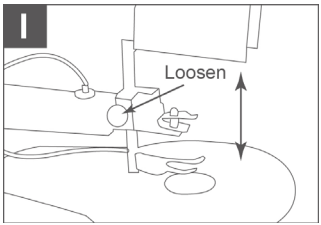


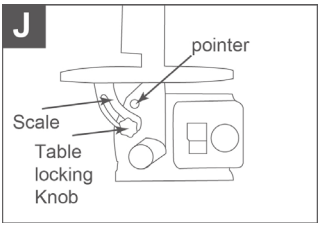






OPERATION PICTURE





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OPERATION

Assembly

Attach the feet

1. Use the hex bolts and flat washers supplied to attach the feet to the scroll saw.

- Alternatively, you can use suitable nuts and bolts (not supplied), to attach the scroll saw directly to a workbench.
- To decrease vibration and noise, install a fine ribbed rubber mat 3-13 mm thick (not supplied) between the workbench and scroll saw.
- Rubber mats are available from your supplier.

NOTE: Do not over tighten the bolts (see Figure A)

Attach the blade guard assembly

1. Remove the screws shown in the picture. (see Figure B)
2. Attach the blade guard support arm and replace the screws removed. (see Figure C)
3. Connect the plastic tube to the bellows output on top of the scroll saw. (see Figure D)

Changing the blades

1. Disconnect the saw from the power supply.
2. Remove the table insert. (see Figure E)
3. Raise the blade tension lever to remove the tension from the saw blade. (see Figure F)
4. Push down the upper arm and remove the blade.
- Blades are available from your supplier
- 18TPI
5. Hook the new blade onto the blade holder. (see Figure G)
   The blade holder has two slots.
- Use slot 1 to cut in line with the upper arm.
- Use slot 2 to cut at right angles to the upper arm.
6. Push the blade tension lever down to re-tension the blade.
7. Replace the table insert

Blade tension

1. Raise the blade tension lever.
2. Rotate the blade tension lever:
   - Clockwise to increase the blade tension

- Anti-clockwise to decrease the blade tension.

3. Lower the blade tension lever

NOTE: Too much tension will decrease the life of the blade.

NOTE: Not enough tension can cause the blade to bend or break. (see Figure F)

Using the scroll saw

Before you start, turn the saw on and listen to the sound it makes. If you notice excessive vibration or an unusual noise, stop the saw immediately and unplug it. Do not start the saw until you have corrected the problem.

- It is possible that some blades will break whilst you learn how to use and adjust the blade tension correctly.
- Hold the workpiece tightly against the saw table.
- Use light pressure and two hands when feeding the work piece into the blade.
- Feed the work piece slowly towards the blade.
- Avoid awkward hand positions where a sudden slip can cause you to touch the blade.
- Do not place your hands near the blade.
- When cutting an irregularly shaped workpiece, plan your cut so the work piece will not pinch the blade.

⚠ WARNING!

Before removing offcuts from the table, turn the saw off and wait for the blade to come to a full stop.

The controls

ON / OFF switch

- To start the saw, push the ON button.
- To stop, push the OFF button.

NOTE: The scroll saw switches off automatically if power is lost.

Speed control

The speed control lets you select the correct blade speed for the material being cut. The speed range is 400 to 1,600 Strokes Per Minute.

- To increase the speed, turn the speed control clockwise.
- To decrease the speed, turn the speed control counterclockwise (see Figure H)

Carrying out internal cuts

A scroll saw can be used to make scroll cuts within a work piece without breaking or cutting through the edge or perimeter of the work piece.

1. Drill a 6.3 mm (1/4”) hole inside the boundary of the aperture to be cut from the work piece.
2. Remove the blade.
3. Place the work piece on the saw table with the drilled hole above the blade access hole.
4. Install the blade through the hole in the work piece and adjust the blade tension.
5. When you have completed the internal cut, remove the blade from the blade holders and take the work piece off the table.

Stack cutting

⚠ WARNING!

To prevent injury, do not cut a stack of work pieces unless they are properly attached to each other.

Stack cutting can be used when several identical shapes need to be cut. Several work pieces can be stacked one on top of the other and secured to each other before cutting.

Pieces of wood can be joined together by placing double sided tape between each piece or by wrapping tape around the corners or ends of the stacked wood.

The stacked pieces must be attached to each other in such a way that they can be handled on the table as a single work piece.

Sawdust blower

The sawdust blower is designed to direct air to the most effective point on the cutting line. Make sure the pressure plate is adjusted to secure the work piece and direct air at the cutting surface. (see Figure I)

What to do if the saw blade jams in the work piece

When withdrawing the work piece, the blade can bind in the kerf (cut). This is usually caused by sawdust clogging the kerf or by the blade coming out of the blade holders. If this happens:

1. Push the OFF button.
2. Wait until the saw has stopped and unplug it from the power source.
3. Remove the blade and the work piece.

4. Wedge the kerf open with a small flat screwdriver or wooden wedge then remove the blade from the work piece

Squaring the saw table to the blade

⚠ WARNING!

To avoid accidental starting which could result in serious injury, turn the saw off, and unplug the saw from the power source.

1. Loosen the pressure plate adjustment knob.
2. Raise the pressure plate and lock it in the raised position. (see Figure I)
3. Loosen the table lock knob and tilt the table until it is approximately at right angles to the blade.
4. Place a small square on the saw table next to blade and lock the table at 90° to square.
5. Retighten the table lock knob.

Setting the scale indicator

1. Loosen the securing screw holding the scale indicator. Move the indicator to the 0° mark and securely tighten the screw.

a) Remember, the scale is a guide only and should not be relied upon for precision.

b) Make practice cuts on scrap material to ensure your angle setting is correct.

2. Lower the pressure plate so it just rests on top of the work piece and lock in place. (see Figure J)

MAINTENANCE&MALFUNCTIONS

Possible malfunctions and methods of their eliminations

Malfunction	Probable causes	Actions
When the machine is turned on, the electric motor does not work.	● Switch failure ●The power cord or wiring is broken, power cord plug malfunction; ● No brush contact with the collector; ● Wear/damage of brushes	Disconnect the machine from the mains and contact a qualified specialist.
Formation of a circular fire on the collector	● Brush wear/damage of the brush holder; ● Malfunction in the armature coil	Disconnect the machine from the mains and contact a qualified specialist. Please don't repair the machine by your own.
When working, smoke or the smell of burning insulation appears from the ventilation openings.	● Malfunction in the electric motor coil; ● Malfunction of the electrical part of the tool.	
Increased noise in the gearbox	● Wear/breakage of gears or bearings	
When the machine is turned on, the spindle does not rotate	● Gearbox failure.	

Critical state criteria

Critical state criteria	Probable causes	Actions
Cracks on the surfaces of bearing and housing parts	Fatigue deformation of metal	Disconnect the machine from the mains and contact a qualified specialist. Please don't repair the machine by your own.
The power cord or plug is damaged	Overload or breakage	
Excessive wear or damage to the motor or reductor mechanism, or a combination of signs	Fatigue deformation of metal	

Critical state criteria

List of critical failures	Actions
Electric motor sparking	It is necessary to contact a qualified specialist
The appearance of extraneous noise	It is necessary to contact a qualified specialist
If the above malfunctions are detected, it is necessary to disconnect the machine from the mains and contact a qualified specialist	

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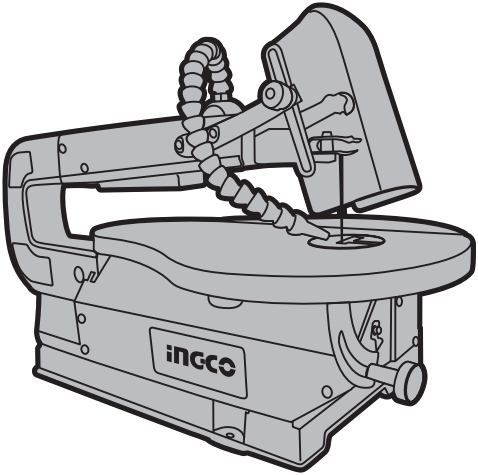

MADE IN CHINA 0424.V06

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