OSCILLATING SPINDLE/BELT SANDER

TSS04

www.thetoolshed.co.nz

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Thank You

For the purchase of this ToolShed product. We try our hardest to supply customers like you with the best quality products available, at the best price possible. We cant wait to continue working together in the future.

Please contact us for any servicing, replacement parts, or questions you might have about your ToolShed product by visiting our website, or calling: 0800 948 665.

PRODUCT DETAILS

Product Model	*ToolShed Oscillating Spindle/Belt Sander*
Product Code	*TSS04*

DISTRIBUTED BY:

Note:

This manual is for your reference only. Due to the continuous improvement of the ToolShed products, changes may be made at any time without obligation or notice.

Warranty:

This product may be covered under The ToolShed warranty. For more information, see our Terms & Conditions at www.thetoolshed.co.nz

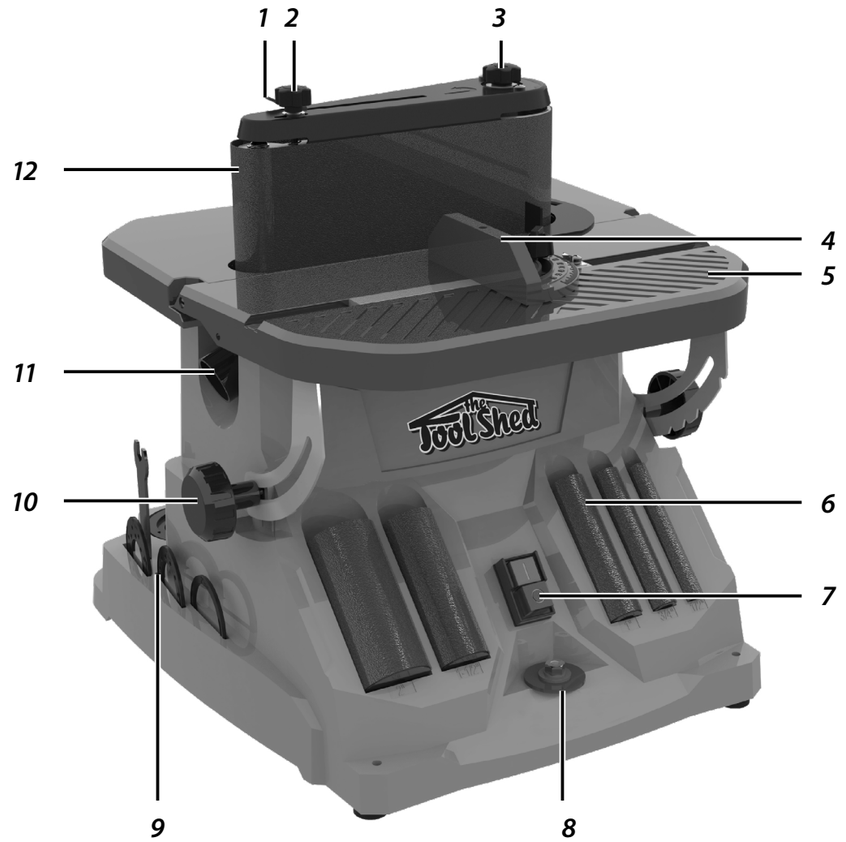
SPECIFICATIONS

Bobbin Speed	2000 RPM
Oscillations	58 OPM
Oscillation Travel	16mm
Sanding Height	90mm
Max Bobbin Working Height	11mm
Sanding Table Dimensions (LxW)	400 x 407mm
Dust Extraction Outlet Diameter	38mm
Operating Voltage and Frequency	230 Volts | 50 Hertz
Input Power @ Rated Load	450 Watts
Sanding Drum Diameters	19mm | 26mm | 38mm | 51mm
Grit Grade	80 Grit
Sound Pressure Level	LpA: 7dB LWA: 8dB
Uncertainty Factor K	3dB
Vibration aw	< 25 m/s^2
Product Dimensions (LxWxH)	440 x 470 x 500mm
Net Weight	12.5 kg

Intended Use

Bench-mounted sanding machine with a rotating and height oscillating sanding drum. For sanding curved and straight surfaces on intricate as well as larger workpieces. This machine has only been designed for sanding wood or similar materials.

PRODUCT IDENTIFICATION



1 Belt Adjustment Handle
2 Belt Tension Handle
3 Belt Locking Handle
4 Mitre Gauge
5 Movable Work Table
6 Sanding Drums
7 ON/OFF Switch
8 Sanding Drum Locking Washer/Nut
9 Workbench Cover Plate
10 Table Locking Handle
11 Dust Extraction Port
12 Sanding Belt

Included in the box:

- 1x 15mm Ø Sanding Sleeve
- 1x 21mm Ø Sanding Sleeve
- 1x 28mm Ø Sanding Sleeve
- 1x 40mm Ø Sanding Sleeve
- 1x 53mm Ø Sanding Sleeve
- 1x 20mm Ø Table Insert
- 1x 26mm Ø Table Insert
- 1x 33mm Ø Table Insert
- 1x 45mm Ø Table Insert
- 1x 57mm Ø Table Insert
- 1x 14mm Ø Spindle Washer
- 1x 24mm Ø Spindle Washer
- 1x 44mm Ø Spindle Washer
- 1x Nut
- 1x Fence
- 1x Mitre Gauge
- 1x 19mm Ø x 115mm Sanding Bobbin
- 1x 26mm Ø x 115mm Sanding Bobbin
- 1x 38mm Ø x 115mm Sanding Bobbin
- 1x 51mm Ø x 115mm Sanding Bobbin

SAFETY GUIDELINES

WARNING

READ ALL SAFETY WARNINGS & INSTRUCTIONS. Failure to follow instructions and warnings could lead to serious injury, electric shock, or fire.

Work Area Safety

- **Ensure that your work area is kept clean and well lit.** Lack of visibility and clutter greatly increase the risk of accident when using tools.
- **Keep bystanders, pets, and children clear when operating this power tool or machine.** They can cause distraction or risk injury to themselves.
- **Ensure you are not operating the power tool or machinery in the presence of dust, liquids, flammable gases, or anything that can create an explosive atmosphere.** Power tools and machinery can create sparks which can lead to ignition and fire hazards in working environments.

Personal Safety

- **Always wear personal protective equipment (PPE).** Eye protection, ear protection, dust masks, and other protective equipment will help to reduce the risk of personal injury or long-term illnesses.
- **Dress appropriately. DO NOT wear loose clothing that can get caught in moving parts.** Keep hair, loose clothing, jewellery, and anything else that could be of risk, away from moving parts in the machine, or they could become caught therein.
- **Always remain alert and DO NOT operate power tools or machinery under the influence of any substances such as alcohol or drugs, including prescription medications.** Lack of focus could lead to injury or accidents while operating these power tools and machinery.
- **Always ensure proper footing and balance.** Overreaching can lead to slipping and falling which can result in injury or accident.
- **Ensure the power switch is in the OFF position before connecting any battery, or power source to the power tool or machinery.** This can cause injury as tools and machinery can suddenly fire incidentally when live, causing accidents.
- **Use all provided dust collection and extraction attachments, if included.** This equipment, along with the use of PPE dust masks, can help keep you safe from dust, and keep your work site clear from hazards.
- **Ensure loose parts such as wrenches or adjusting keys are removed before starting the power tool or machinery.**

SAFETY GUIDELINES

Electrical Safety

- **DO NOT use the power tool or machinery in rainy conditions or wet areas where the power tool or machinery could get wet.** Water in this power tool or machinery can lead to electric shock.
- **Only use the power tool or machinery when the plug correctly matches the power outlet.** Modifying plugs greatly increases the risk of electric shock.
- **Keep the power cord away from anything that could damage it such as sharp edges, moving parts or heat.** A damaged power cord increases the risk of electric shock.
- **Only operate outdoors with the use of an outdoor extension lead.** Not all extension leads are suited to outdoor use and using one which is not can greatly increase the risk of electric shock.
- **Avoid body contact with grounded or earthed surfaces.** Surfaces such as radiators, ranges, pipes, and refrigerators can increase the risk of electric shock due to your body being earthed or grounded.
- **Never carry the power tool by the cord, or yank the cable from the power outlet.** This can damage the internal wiring and may become a hazard.

WARNING

Electric shock can cause serious injury or, in some cases be fatal.

Power Tool & Machinery Use & Care

- **Use the correct tool for the job.** Forcing a tool to do a job it was not designed for increases the risk of accident or injury.
- **Disconnect tools and machinery from power, or remove batteries before doing any maintenance or adjustments, or before storing the tools and machinery.** This reduces or removes the risk of a power connection that causes the tool or machinery to accidentally fire, which can help prevent injury or accident.
- **Check the general condition of the power tool for damage or any problems that could affect the way the tool or machine works.** An unrepaired tool or machine can lead to accident and injury. Only have your tool or machine repaired with genuine parts from The ToolShed.
- **Only use the power tool and machinery with genuine parts or accessories that are designed to be used with this power tool and machinery.** Failure to do so could result in accident or injury, or damage your tool or machinery.
- **Store your tool or machinery out of reach of children, and away from untrained personnel when not in use.** Use by somebody untrained, or a child, could lead to accident or serious injury.

SAFETY GUIDELINES

Service

- **Have your tools and machinery serviced at The ToolShed with ToolShed replacement parts.** This will ensure that the safety of the power tool or machine is maintained.

WARNING

The warnings and precautions discussed in this manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Always Use Common Sense

- It is not possible to cover every conceivable situation you can face. Always exercise care and use your common sense. If you get into a situation where you feel unsafe, stop and seek expert advise. Contact your dealer, service agent, or an experienced user. Do not attempt any task you feel unsure of!
- **Do not let familiarity gained from the 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.

Oscillating Spindle Sander Specific Safety

- Always wear safety goggles.
- This machine may only be operated indoors.
- IMPORTANT: Mount and use the machine on a horizontal surface. A non-horizontal surface can damage the motor.
- If the machine tends to tilt or walk (especially when sanding long and heavy panels), it must be fastened to a solid surface of sufficient carrying force.
- Firmly hold the workpiece when sanding.
- Do not wear gloves. Do not hold the workpiece with a cloth during sanding.
- Never sand workpieces too small to be held safely.
- Avoid awkward hand positions where a sudden slip could cause your hand to touch the sanding belt or disc.
- When sanding a large piece of material, provide an additional support at table height.
- Never sand an unsupported workpiece. Secure the workpiece with the table or the fence. Exceptions are the sanding of curved workpieces on the outside of the sanding disc.
- Always clear the table, fence or sanding belt of scraps or other objects, before turning the machine on.
- Do not perform any layout assembly or set-up work on the table while the sanding machine is switched on.
- Switch the machine off and unplug the power plug from the socket when fitting or removing accessories.

SAFETY GUIDELINES

- Never leave the working area of the sanding machine while the tool is running, or as long as it has not come to an absolute standstill.
- Always place the work piece on the grinding table. To sharpen bent tools with the grinding disc, place them securely on the table.
- Check the condition of the spindle sander. If any part is missing, bent, or does not operate properly, replace the part before using the sander.
- Be aware of the direction of feed. Feed the workpiece into the sanding sleeve against the direction of rotation of the sanding sleeve.
- Make sure there are no nails or other foreign objects in the area of the workpiece to be sanded.
- Never use this sander for wet sanding. Failure to comply may result in electrical shock, causing serious injury or worse.
- Use only identical replacement parts when servicing this spindle sander.
- Make sure the spindle has come to a complete stop before touching the workpiece.
- Take precautions when sanding painted surfaces. Sanding lead-based paint is NOT RECOMMENDED. The contaminated dust is too difficult to control, and could cause lead poisoning.

When Sanding Paint

- Protect your lungs. Wear a dust mask or respirator.
- Do not allow children or pregnant women in the work area until the paint sanding job is finished and the clean-up is completed.
- Do not eat, drink, or smoke in an area where painted surfaces are being sanded.
- Use a dust collection system when possible. Seal the work area with plastic. Do not track paint dust outside of the work area.
- Thoroughly clean the area when the paint sanding project is completed.

WARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- ***Lead from lead-based paint,***
- ***Crystalline silica from bricks, cement, and other masonry products, and,***
- ***Arsenic and chromium from chemically-treated lumber.***

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.

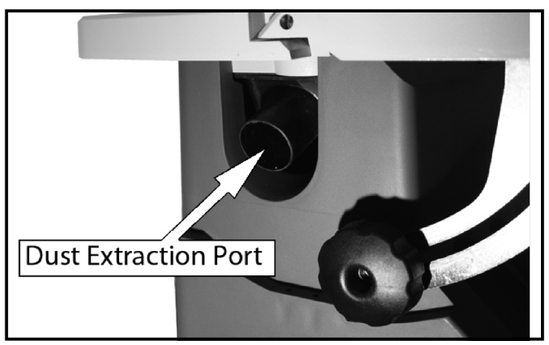
ASSEMBLY

Securing to a Workbench

- If the sander is to be used in a permanent location, it should be fastened securely to a workbench via the four securing holes (one on each corner).
- An alternative method is to fasten the sander to a mounting board. The board should be sufficient size to avoid tipping while in use. Any good grade of 3/4" plywood or chip-board will be sufficient.
- The mounting board can then be clamped to a workbench when required.
- Use the holes in the base of the spindle sander as a template to mark and drill four holes in your intended mounting surface.
- Secure the spindle sander into position using large bolts, washers and nuts (not supplied).
- If using bolts, make sure they are long enough to penetrate the workbench or board sufficiently for a secure fix.

Dust Extraction

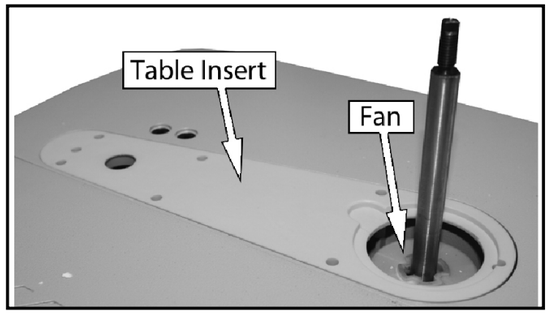
- It is recommended that the spindle sander is used with a dust extraction system for a cleaner and safer work environment.
- The dust exhaust port has an inner diameter of 36mm and an external diameter of 39mm.



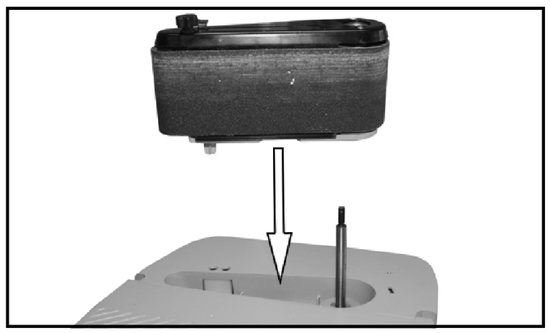
NOTE: Even with a dust collection system, it is necessary to periodically clean sanding dust from the recess in the table. A build up of dust in the table recess may prevent the belt or spindle from making a complete oscillation.

Edge Sanding Setup

- If fitted, remove the fan and table insert from the sander.
- Clear the recess of any debris. Slide the fan onto the motor shaft (vanes face down).
- You may need to rotate the fan to get it to locate properly, (when correctly fitted the fan rotates with the spindle).
- The fan must be used at all times.

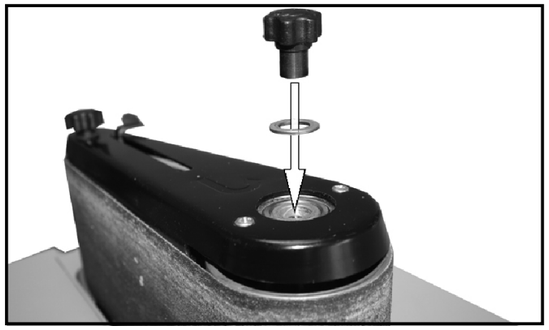


- Slide the sanding belt assembly over the spindle as shown below.

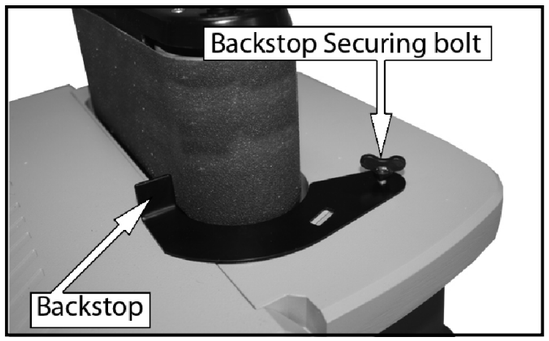


ASSEMBLY

- Fit the washer and hand nut.
- Do not over tighten the hand nut.
- Install the sanding belt (See the following section *"Removing/Installing the Sanding Belt").*



- Place the backstop into position and secure in place with the backstop securing bolt.

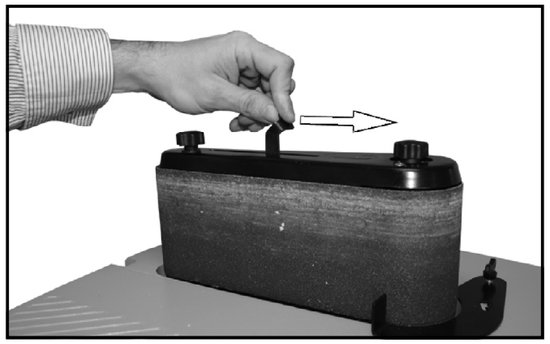


Removing/Installing the Sanding Belt

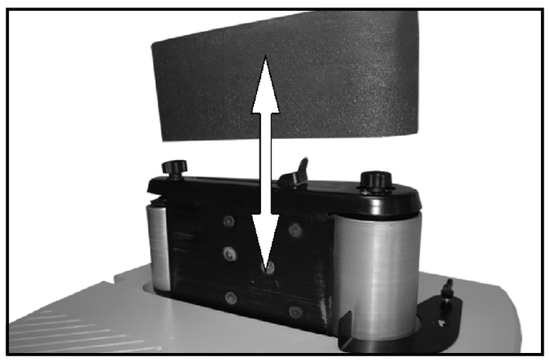
⚠ WARNING

Always be sure that the tool is switched off and unplugged before changing or installing the sanding belt.

- Move the belt tension lever fully to the right as shown.



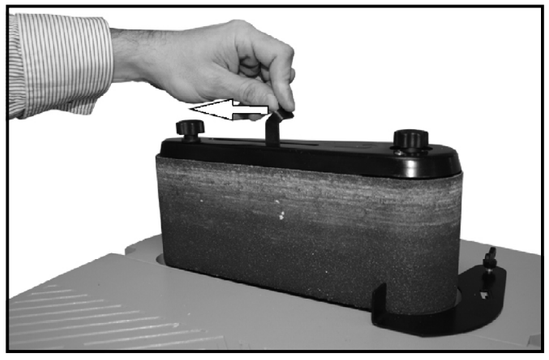
- Slide the belt over the rollers and centralise the belt.
- The arrows on the sanding belt and machine should be pointing in the same direction.

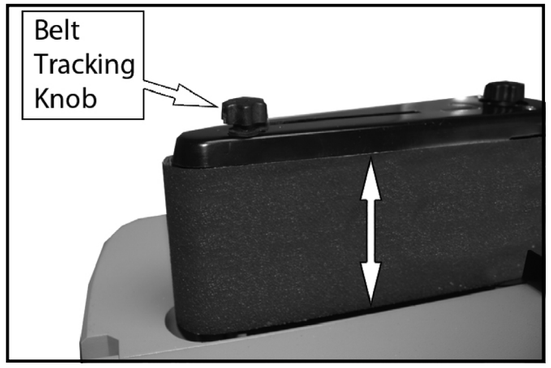


ASSEMBLY

Removing/Installing the Sanding Belt (Cont.)

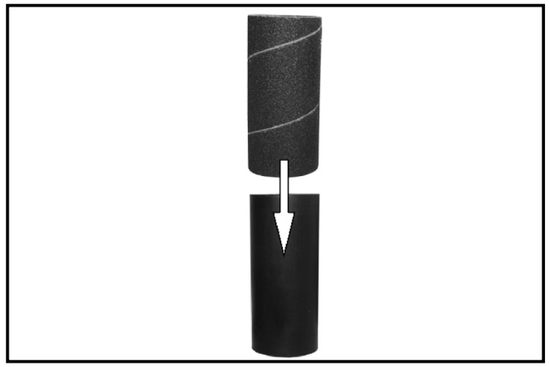
- Move the belt tensioning lever to the left.
- Keep control of the belt tensioning lever at all times, do not allow it to spring back.
- Make sure the belt tracks correctly before use, see the following section *"Sanding Belt Tracking"*.





Assembling the Bobbin

- Slide the sanding sleeve over the drum as shown.
- If the sanding sleeve is difficult to slide over the drum, apply talcum powder to the outside surface of the drum.
- The smallest sanding sleeve slides directly onto the spindle shaft and does not require a drum.



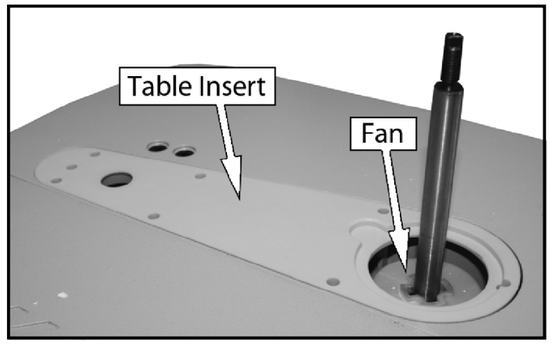
Sanding Belt Tracking

- Plug in the power cable. Turn the switch ON and immediately turn the switch OFF again. Note if the belt tends to slide off the drums.
- If it did not tend to slide off, it is tracking properly.
- If the sanding belt runs down (towards the table), turn the tracking knob clockwise 1/4 turn.
- If the sanding belt runs up (away from the table), turn the tracking knob counter-clockwise 1/4 turn.
- Turn the switch ON and immediately OFF again, noting belt movement. Re-adjust the tracking knob if necessary.

ASSEMBLY

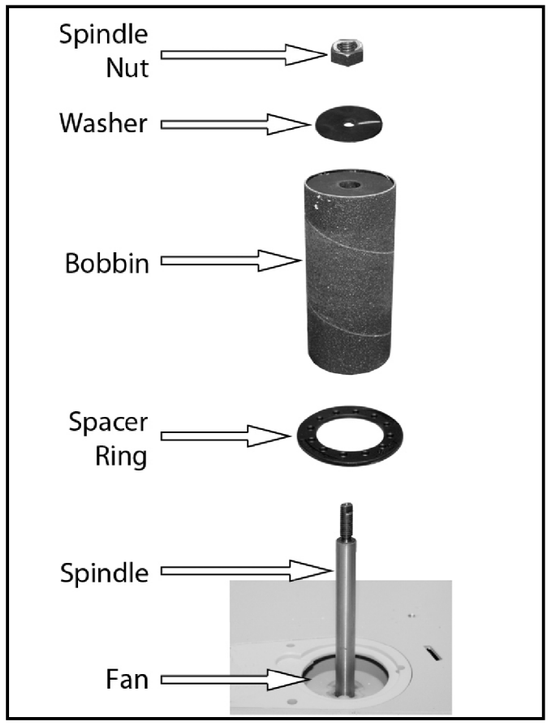
Fitting the Bobbin to the Sander

- If fitted, remove the fan and table insert from the sander.
- Clear the recess of any debris.
- Slide the fan back on to the spindle (vanes face down) and engaged fully.
- The fan must be used at all times.



- Replace the table insert.
- Slide the bobbin onto the spindle.
- Position the spacer ring in the recess on the table insert.
- Use the smallest spacer ring insert that will fit over the drum.
- Install the correct washer.
- Use the largest washer that does not overhang the sanding sleeve.
- Secure everything in place with the spindle nut.
- A spindle nut wrench is supplied.

NOTE: As you tighten the spindle nut, the drum expands outwards slightly to hold the sanding sleeve secure.



OPERATION

Using the Sander

CAUTION

Before turning the switch on, make sure the belt, or drum, and sleeve are properly installed.

WARNING

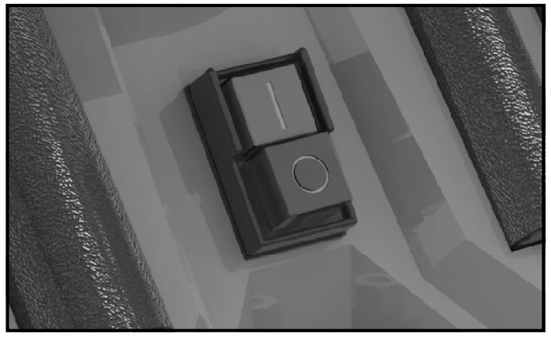
Always wear safety goggles or safety glasses with side shields when operating power tools. Failure to do so could result in objects being thrown into your ryes, resulting in possible serious injury.

WARNING

Ensure gloves and clothes worn do not have loose threads that could get caught by the rotating spindle and drag your hand or head into the rotating spindle causing severe injury. It is recommended to wear gloves that are not fabric based.

On/Off Switch

- Press green button " - " to turn switch ON
- Press red button " O " to turn switch OFF.



When the Sander is Running

- Before starting your work, watch the sander while it runs.
- If it makes an unfamiliar noise or vibrates excessively, stop immediately. Switch off and unplug the sander. Do not restart until identifying and correcting the problem.
- Don't force the sander. It will perform better and safer at its designed rate. Press the work-piece against the sanding sleeve or belt hard enough to begin sanding without binding.

Before Freeing any Jammed Material

- Switch the sander OFF "O".
- Unplug the sander.
- Wait for all moving parts to stop.

Before Leaving the Sander

- Switch the sander OFF "O".
- Do not leave the sander until the unit comes to a complete stop.

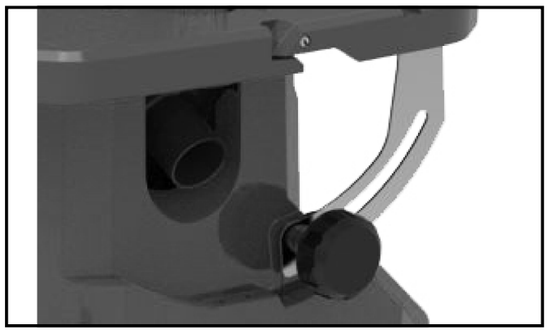
OPERATION

Adjusting the Table Angle

WARNING

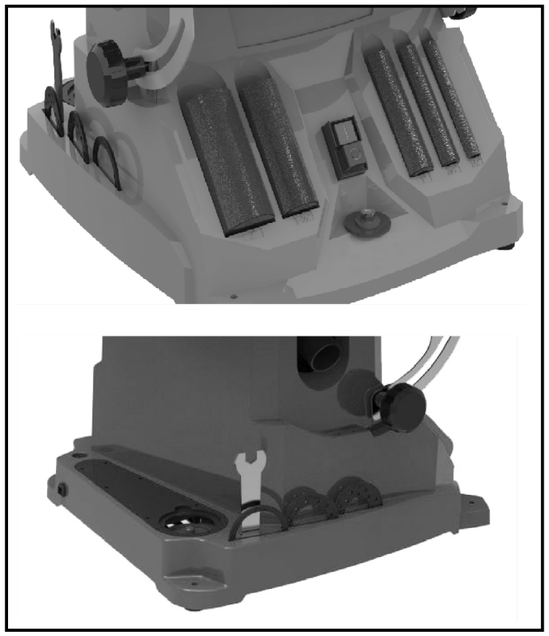
Before performing any adjustment, make sure the sander is switched off and unplugged from the power supply. Failure to heed this warning could result In serious personal injury.

- Loosen the table adjustment knobs (one each side) and move the table to the required angle.
- There are stops on the right hand bracket at the following angles 0, 15, 22.5, 30, and 45 degrees.
- Use a protractor or set square to confirm the angle.
- Retighten both table adjustment knobs.



Parts Storage

- The storage slots on the front are used to store bobbins/sanding sleeves and washers.
- Spindle nut wrench and spacer rings and the are stored on the sides.
- The edge sander is stored at the rear.



MAINTENANCE

- Before cleaning or performing any maintenance, you must ensure the tool is switched off and disconnected from the power supply.
- Compressed air is the most effective way to clean this tool. Always wear PPE safety goggles when cleaning tools with compressed air.
- Ventilation openings and switch levers must be kept clean. DO NOT attempt to clean by inserting pointed objects through openings.
- Regularly check that all the fixing screws are tight. They may vibrate loose over time.
- If you discover any damaged or broken parts, consult your nearest ToolShed for replacements and advise.

WARNING

Always be sure that the tool is switched off and unplugged before attempting to perform any inspection or maintenance.

Environment & Disposal

- Packaging materials are raw materials and can be re-used. Separate the different packaging materials and take them to the appropriate waste disposal facility. More information can be obtained from your local authorities.
- Old machines do not belong in your household garbage! Dispose of old machines appropriately, we are all responsible for the environment.

Cleaning

- Remove dust and dirt regularly. Frequently blow or vacuum dust away from all sander parts and the motor housing.
- Periodically remove the table insert and lower washer from the spindle and remove any dust accumulation in the table insert area.
- Re-lubricate all moving parts at regular intervals.
- Never use caustic agents to clean plastic parts.
- Do not use cleaning agents to clean the plastic parts of the tool. A mild detergent on a damp cloth is recommended. Water must never come into contact with the tool.

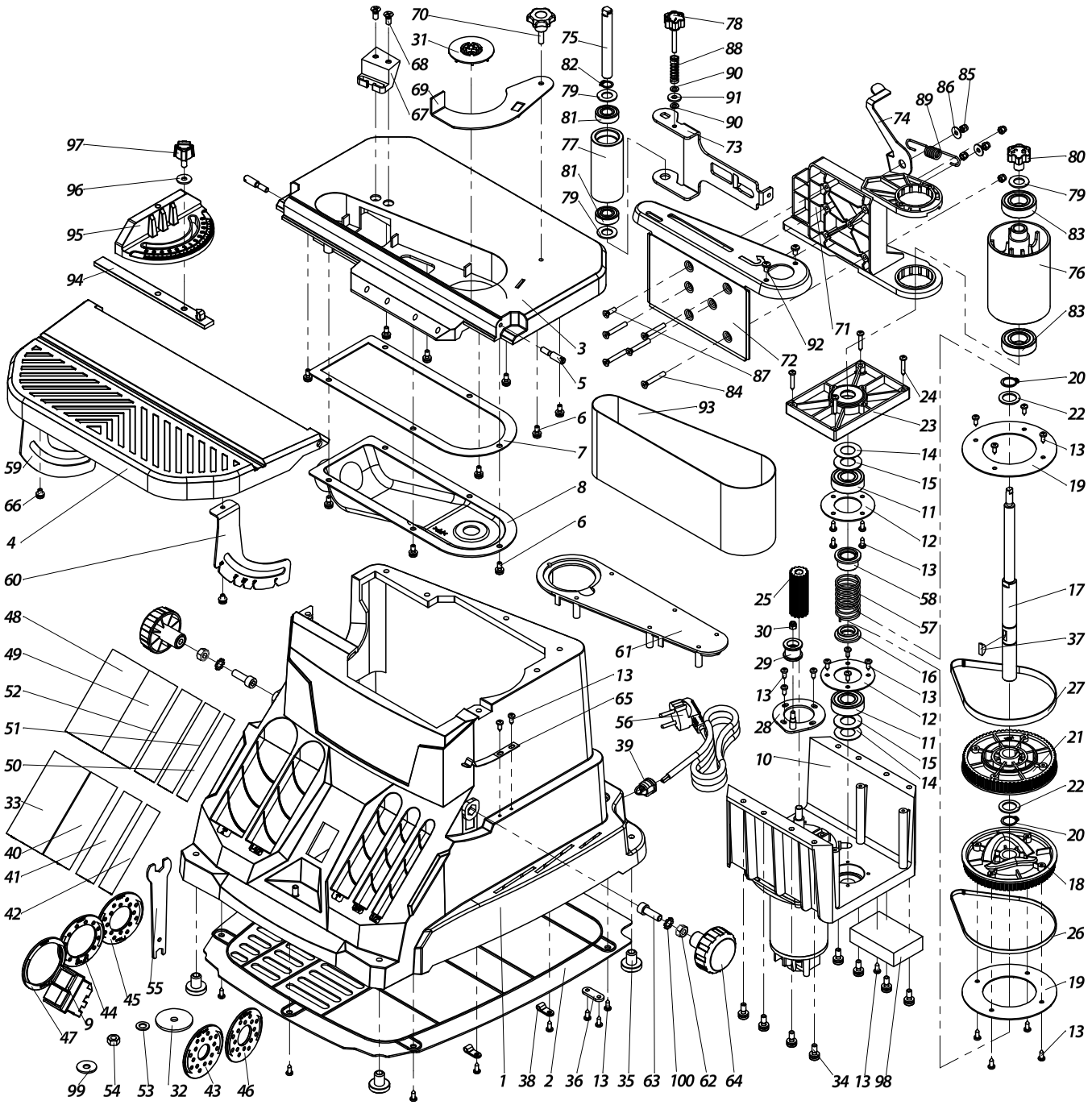
Lubrication

- All of the bearings in this sander are lubricated with a sufficient amount of high grade lubricant for the life of the unit under normal operating conditions. Therefore, no further lubrication is required.

TROUBLESHOOTING

FAULT	*POSSIBLE CAUSE*	*SUGGESTED SOLUTION*
Motor doesn't start	On/Off switch damaged	Replace all damaged parts before you use your machine again.
	On/Off cable damaged	
	On/Off relay damaged	
	Fuse blown	
	Motor burnt	Contact your nearest ToolShed. Every attempt to carry out a repair, can be dangerous if it is not done by skilled personnel.
No function when On/Off Switch is operated	No power	Check power supply.
	Defective On/Off Switch	Replace the On/Off Switch at your nearest ToolShed service centre.
Machine gets slower during work	Too much pressure put on the workpiece	Reduce the pressure on the workpiece.
Sanding belt comes off the drive pulleys	Belt does not run straight	Reset the track.
The wood gets burnt during sanding	Sanding disc or belt covered with grease	Replace disc or belt.
	Excessive pressure on workpiece	Reduce pressure on workpiece.
Strong vibrations	Loosely mounted tool	Tighten tool.
	Defective tool	Change tool.
	Spindle knocks	Repair at your nearest ToolShed service centre.
Sanding Sleeve does not rotate with the Drum	Spindle Lock Nut not tight enough	Tighten Spindle Lock Nut in small increments until the Drum secures the Sanding Sleeve.

TSS04 EXPLODED VIEW & PARTS LIST



1	Base
2	Baseplate
3	Fixed Table
4	Movable Table
5	Axis Pin X2
6	Screw, Spring & Flat Washer M5×12 X2
7	Rubber Ring
8	Dust Port
9	Switch
10	Motor
11	Deep Groove Ball Bearing X2
12	Pressing Plate X2
13	Screw St4.2×12 X32
14	Rubber Blanket X2
15	Felt Blanket X2
16	Shaft Sleeve 2
17	Spindle
18	69 Teeth Synchronous Belt Wheel
19	Press Plate With Wheel X2
20	Circlip For Shaft X2
21	70t Synchronous Belt Wheel
22	Spring Backed Plate X2
23	Support Plate
24	Screw St4.2×25 X4
25	Motor Wheel
26	Synchronous Belt
27	Synchronous Belt
28	Tightening Rack Assembly
29	Tightening Wheel Assembly
30	Nut M5
31	Connector
32	Sand Cylinder Pressure Plate
33	51mm Sand Cylinder Roller
34	Screw, Spring & Flat Washer M6×16 X8
35	Foot X4
36	Cable Joint
37	Half Round Key 5×6.5
38	Install Wire Fixing Button X2
39	Ply-Yarn Drill
40	38mm Sand Cylinder Roller
41	26mm Sand Cylinder Roller
42	19mm Sand Cylinder Roller
43	13mm Work Table Plate
44	38mm Work Table Plate
45	26mm Work Table Plate
46	19mm Work Table Plate
47	51mm Work Table Plate
48	Sand Cylinder 51mm×80#
49	Sand Cylinder 38mm×80#
50	Sand Cylinder 13mm×80#

51	Sand Cylinder 19mm×80#
52	Sand Cylinder 26mm×80#
53	Washer 8
54	Nut M8
55	Wrench
56	Power Cord
57	Spring
58	Axle Sleeve
59	Left Table Support
60	Right Table Support
61	Belt Work Table Plate
62	Nut M8 X2
63	Screws M8×25 X2
64	Tension Handle X2
65	Leaf Spring
66	Screw, Spring & Flat Washer M5×8 X2
67	Fixed The Slider
68	Screws M6×14 X2
69	Limit Board
70	Index Plate Handle
71	Belt Support
72	Support Plate
73	Guide Frame
74	Sand Belt Tension Handle
75	Driven Shaft
76	Drive Roller
77	Driven Roller
78	Sand Belt Adjusting Handle
79	Washer X3
80	Sand Belt Lock Handle
81	Deep Groove Ball Bearing X2
82	Circlip For Shaft 12
83	Deep Groove Ball Bearing X2
84	Screws M5×35 X5
85	Nut M5 X5
86	Washer 5 X2
87	Screws M5×16
88	Regulating Spring
89	Extension Spring
90	Washer 5 X2
91	Rubber Washer
92	Screws M5×8
93	Belt
94	Mitre Rods
95	Index Plate
96	Washer 6
97	Handle
98	Circuit Board
99	Large Washer 8
100	Outer Tooth Lock Washer 8 X2