

# evOLUTION®

400W MULTIPURPOSE  
PRECISION FILE SANDER

## Original Instructions

Read instructions before operating this tool.



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UK

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## EC - DECLARATION OF CONFORMITY

UK

We, manufacturer and importer  
**Evolution Power Tools Ltd.**  
**Venture One**  
**Sheffield**  
**S20 3FR**

Declare that the product

Part numbers: **EVOPFS400**

Evolution: **Precision File Sander**

Complies with the essential requirements of the following European Directives:

**2006/42/EC** – Machine Directive

**2006/95/EC** – Low Voltage Directive

**2004/108/EC** – EMC Directive

**2002/95/EC** – Restriction of the use of Certain Hazardous Substances in Electrical and Electric equipment.

The following standards have been applied:

**EN 61029-1:2000+A11 +A12**

**EN 60745-1:2006**

**EN 61029-2-9:2002**

**EN 60745-2-4:2003+A11:2007**

**EN 55014-1:2000 +A1 +A2**

**EN 55014-2:1997+A1**

**EN 61000-3-2:2006**

**EN 61000-3-3:1995+A1+A2**

All documentation is held on file at the above address and is available, on request for review.

**Authorized Signatory**

**Date: 26/4/2011**



**Name:** Mr Matthew J Gavins

**Position:** Managing Director

FIGURES



FIG 1

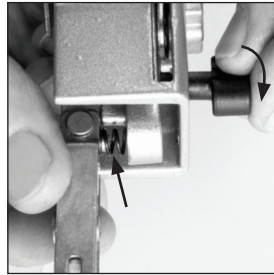


FIG 2

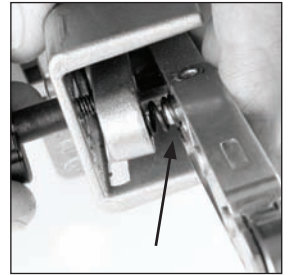


FIG 3

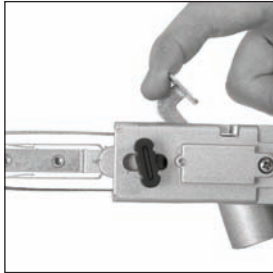


FIG 4



FIG 5



FIG 6

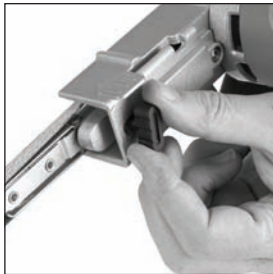


FIG 7



FIG 8



FIG 9



FIG 10



FIG 11



FIG 12

**IMPORTANT INFORMATION****UK**

Please read these operating and safety instructions carefully and completely. For your own safety, before using this equipment check that the voltage is correct and that all handles and parts are firmly secured. If you are uncertain about any aspect of using this equipment, please contact our Technical Help Resource.

**UK:** 0870 609 2297  
**USA:** 1-866-EVO-TOOL  
info@evolutionpowertools.com

**EVOLUTION PRECISION FILE SANDER**

**Congratulations on your purchase of an Evolution Power Tools Precision File Sander. Please complete your product registration online to validate your machine's warranty period and ensure prompt service if needed. We sincerely thank you for selecting a product from Evolution Power Tools.**

**12 MONTH WARRANTY****UK**

Evolution Power Tools reserves the right to make improvements and modifications to design without prior notice.

Evolution Power Tools will, within twelve (12) months from the original date of purchase, repair or replace any goods found to be defective in materials or workmanship. This warranty is void if the tool being returned has been used to cut materials beyond the recommendations in the Instruction Manual or if the saw has been damaged by accident, neglect, or improper service. This warranty does not apply to machines and/or components which have been altered, changed, or modified in any way, or subjected to use beyond recommended capacities and specifications. Electrical components are subject to respective manufacturers' warranties. All goods returned defective shall be returned prepaid freight to Evolution Power Tools. Evolution Power Tools reserves the right to optionally repair or replace it with the same or equivalent item.

There is no warranty – written or verbal – for consummables. In no event shall Evolution Power Tools be liable for loss or damage resulting directly or indirectly from the use of our merchandise or from any other cause. Evolution Power Tools is not liable for any costs incurred on such goods or consequential damages. No officer, employee or agent of Evolution Power Tools is authorised to make oral representations of fitness or to waive any of the foregoing terms of sale and none shall be binding on Evolution Power Tools. Questions relating to this limited warranty should be directed to the company's head office, or call the appropriate Helpline number.

Read and understand all instructions before operating this product. Failure to follow all instructions listed below may result in electric shock, fire and / or serious personal injury. **SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.**



**WARNING:** When using electric tools basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury including the following:

**Read all these instructions before attempting to operate this product and save these instructions.**

### 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.
- d) Keep the floor area around the machine level, well maintained and free of loose materials e.g. chips and cut-offs.**

### 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 dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce the risk of personal injuries.
- c) Prevent unintentional starting.** Ensure the machine 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, clothing and gloves 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.

#### 4) Power Tool Use & 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 if used 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 the battery pack 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.** 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.

#### 5) Service

**a) Have your power tool serviced by a qualified repair person using only identical replacement parts.** This electric tool complies with the relevant safety rules. Repairs should only be carried out by qualified persons using original spare parts, otherwise considerable danger to the user may result.

**b) When servicing a tool, use only genuine Evolution 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.



#### HEALTH ADVICE

**WARNING:** When drilling, sanding, sawing or grinding, dust particles will be produced. In some instances, depending on the materials you are working with, this dust can be prejudicial to your health. Some examples could be:


- Lead from lead based paint.
- Arsenic and Chromium from chemically treated timber.
- Crystalline silica from certain masonry products (plaster, cement etc).




**To reduce your exposure to such chemicals you should:**

**a) Work in a well-ventilated area.**

**b) Work with approved safety equipment, such as dust masks that are specially designed to filter microscopic particles.**

- a) **Always remove the plug from the outlet socket before carrying out any adjustments, maintenance or servicing.**
- b) **A damaged supply cord must be replaced by a qualified technician.**
- c) **Do not use this sander for 'wet sanding'.** There is a significant risk of electric shock if this sander is used for 'wet sanding'.
- d) **Wear appropriate PPE (Personal Protection Equipment).** A dust mask and safety glasses should always be worn when using this tool. Additional safety equipment such as ear defenders, gloves, safety shoes and overalls should be employed as necessary.
- e) **Inspect the workpiece for screws and nails etc.** Remove these before operations are attempted.
- f) **Only use sanding belts that are in good condition.** Do not use worn out, ripped or damaged sanding belts.
- g) **Wherever possible the workpiece should be securely clamped to prevent movement.**
- h) **The Precision Belt Sander is designed to be held with both hands so that it can be run over the workpiece.** Do not attempt to clamp the Precision Belt Sander to a work bench or similar in an attempt to mimic a fixed sanding machine.
- i) **Do not apply excessive force to the machine in an attempt to slow it down quickly after 'switch off'.** Allow the belt to slow down and stop naturally.
- j) **Do not eat or drink in the work area.** The sanding process can create dust that may remain within the work area for quite long periods. Eating and drinking in such areas can be harmful to health.
- k) **If possible seal off the work area so that dust is contained within the area.** Dust will settle and can be removed at a later date.
- l) **People entering the work area should wear the appropriate PPE.** Do not allow casual visitors to enter the work area.

 **WARNING:** Do not operate machine if warning and/or instruction labels are missing or damaged. Contact Evolution Power Tools for replacement labels.

Symbol	Description
V	Volts
A	Amperes
Hz	Hertz
Min <sup>-1</sup>	Speed
~	Alternating Current
n <sub>0</sub>	No Load Speed
	Double Insulated
	Wear Safety Goggles
	Wear Ear Protection

**MACHINE OVERVIEW**

UK



- 1. SANDING BELT RELEASE LEVER**
- 2. BELT CENTRING CONTROL SCREW**
- 3. DUST OUTLET PORT**
- 4. SANDING ARM LOCKING LEVER**

- 5. SPEED CONTROL**
- 6. ON/OFF TRIGGER SWITCH**
- 7. SOFT GRIP AREA**
- 8. TRIGGER LOCK BUTTON**



**EVOLUTION PRECISION FILE SANDER**

<b>Voltage:</b>	230V ~ 50Hz
<b>No Load Speed:</b>	300-1700 m/min
<b>Motor:</b>	400W
<b>Belt Width:</b>	13mm
<b>Belt Length:</b>	457mm
<b>Recommended Max Duty Cycle:</b>	30mins

**Noise and Vibration Data**

<b>Sound Levels:</b>	$L_{pA}$ 80.2 dB (A) $K=3$ dB
	$L_{WA}$ 91.2 dB (A) $K=3$ dB
<b>Vibration:</b>	$a_h=1.215$ m/s <sup>2</sup> $K=1.5$ m/s <sup>2</sup>

The declared vibration total value has been measured in accordance with a standard test method and may be used for comparing one tool with another.

The declared vibration total value may also be used in a preliminary assessment of exposure.



**WARNING:** The vibration emission during actual use of the power tool can differ from the declared total value depending on the ways in which the tool is used. The need to identify safety measures and to protect the operator are based on an estimation of exposure in the actual conditions of use (taking account of all parts of the operating cycle, such as the times the tool is switched off, when it is running idle, in addition to trigger time)

**Items Supplied**

Instruction Manual.....	1
Sanding Belts.....	2
Single Wheel Head.....	1
Twin Wheel Head.....	1
Dust Bag (for use with wood, paint removal and plastics only).....	1

**Note:** This machine is supplied with two (2) Sanding Heads – a single wheeled head and a twin wheeled head. **(Fig. 1)** This gives the operator the opportunity to select the head best suited to the task in hand. Either head accepts the standard sanding belts supplied.

**1. Changing the Sanding Head**

**WARNING:** The machine must be disconnected from its power source before changing the Sanding Head is attempted.

- Remove the sanding belt as detailed in 2 below.
- Slowly and carefully unscrew the Belt Centring Control Screw with one hand, whilst holding the sanding head with the other hand. **(Fig. 2)**

**Note:** The Sanding Head is sprung loaded, and the operator should carefully observe the position and deployment of the spring as the Sanding Head is released from the Sanding Arm. Allow the compression in the spring to gradually ease and carefully remove the spring from its locating socket in the Sanding Arm and store safely for future use.

- The Sanding Heads can only be successfully fitted one way round, and we recommend that the operator has a 'dry run' without the spring being fitted to familiarise themselves with procedure.
- Fit the spring into its locating socket towards the front of the Sanding Arm. **(Fig. 3)**
- Align the Sanding Head with the Sanding Arm, ensuring that the free end of the spring is located on the 'lug' cast into the 'inner' face of the Sanding Head.
- Replace the Belt Centring Screw and slowly turn the screw clockwise so that it draws the Sanding Head into the Sanding Arm.
- Centre the sanding belt as detailed in 3 below.

**2. Replacing/changing a Sanding Belt**

**WARNING:** Always ensure that the machine is disconnected from its power source before attempting to change or replace the sanding belt.

- Pull the belt release lever (located just above the belt tracking control knob) upwards to release the tension on the belt. **(Fig. 4)**
- Slide out the belt to be replaced.
- Refit the required belt over the rear and front rollers. **(Fig. 5)**

**Note:** Always ensure that the direction of rotation arrows found on the inside of the belt match the direction of rotation arrow found on the body of the machine. **(Fig. 6)**

- Return the belt release lever to its original position.

**3. Centring the Sanding Belt**



**WARNING:** Wear eye protection when attempting to centre the sanding belt.

- Hold the machine so that you have a clear view of the belt.
- Start the motor and observe the position the belt adopts after a few seconds of running at operational speed.

If the sanding belt is not running centrally along the length of the sanding arm, turn the belt tracking control knob a little in either direction until correct tracking is achieved. **(Fig. 7)**

Only turn the tracking control knob by a few degrees at a time before observing the position of the belt along the sanding arm.

**4. Positioning the Sanding Arm**

For operator convenience and operational efficiency the position of the sanding arm relative to the machines handle can be adjusted through approximately 120°. **(Fig.8)**



**WARNING:** Always ensure that the machine is disconnected from its power source before repositioning the sanding arm.

To reposition the Sanding Arm:

- Release the arm by pushing the sanding arm locking lever forwards (towards the sanding arm).
- Position the sanding arm at the required angle.
- Pull back the locking lever to lock the arm in the required position.

**5. ON/OFF Trigger switch (Fig. 9)**

The 'ON/OFF' trigger switch is located in the machines handle.

- Depress the trigger to start.
- Release the trigger to stop.

**Note:** For operator convenience the ON/OFF trigger switch can be locked in the 'ON' position by depressing the trigger locking button. **(Fig. 10)** To switch off from the 'locked' position, gently press the trigger switch and then release.



**WARNING:** Always ensure that the machine is switched 'off' and the belt is stationary before putting the machine down onto a workbench or similar.

**6. Speed Control**

The rotary speed control selector is located on the top of the machines handle. **(Fig. 11)** Turn the selector to set the speed required (infinitely variable between 300 – 1600 m/min)

**7. Hand Grip Area**

The top surface of the machines handle is coated with a soft grip area for enhanced operator control and comfort.

**8. Grit selection**

Sanding belts are available in a variety of grades depending upon the coarseness (particle size) of the grit embedded in the cloth.

**As an approximate guide:**

MATERIAL	BELT GRIT
SOLID WOOD	80
CHIPBOARD	60/80
VENEERED WOOD	150
PLASTICS	100
STEEL	80
PAINT REMOVAL	40/60
ACRYLICS	100

## 9. Using the machine

This is a compact but powerful machine and should only be used by competent operators who have read and understood the Instruction Manual.

This Precision File Sander can be regarded as a powered file. It should be held with both hands, one hand holding the handle, the other hand holding the motor casing. **(Fig. 12)**

**Caution:** A severe abrasion hazard exists when using this machine. We recommend that the operator considers wearing suitable protective gloves especially when sanding metallic substances.

**Note:** A Dust Bag (supplied) can be connected to the machines outlet port when sanding wood, plastics or paint removal. It should not be used when sanding metallic materials.

### Some general guidance:

- Always wear a dust mask and safety glasses, and any other safety equipment as necessary.
- Select the sanding belt carefully for the job in hand.
- Be aware that the sanding belt may 'travel' along the workpiece. Hold the machine firmly and guide it along the workpiece.
- Light downwards pressure is all that is necessary to achieve best results. There is no need to press the machine into the workpiece with any great force.
- Two, three or more passes over the same track will achieve better results than trying to remove all of the waste material in one pass.

## MAINTENANCE


UK

**Note:** Any maintenance must be carried out with the machine switched off and disconnected from the power supply.

Check that all safety features and guards are operating correctly on a regular basis. Only use this machine if all guards/safety features are fully operational.

All motor bearings in this machine are lubricated for life. No further lubrication is required.

Use a clean, slightly damp cloth to clean the plastic parts of the machine. Do not use solvents or similar products which could damage the plastic parts.

 **WARNING:** Do not attempt to clean by inserting pointed objects through openings in the machines casings etc. The machines air vents should be cleaned using compressed dry air.

Excessive sparking may indicate the presence of dirt in the motor or worn out carbon brushes. If this is suspected have the machine serviced and the brushes replaced at an authorised service centre.

## ENVIRONMENTAL PROTECTION

UK

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.

The logo features a grey, curved swoosh that starts from the bottom left and curves upwards and to the right, ending under the letter 'v'.

**evolution<sup>®</sup>**

[www.evolutionbuild.com](http://www.evolutionbuild.com)