



FIRED UP KILNS

and pottery supplies



Pottery Wheel Owner's Manual

Fired Up Kilns Wheel Range: PW-DC (fixed & adjustable leg) & Cowley Double Drive.

Last Updated: January 2024

Special Notes



Please take special note of the following:

- DO NOT OPERATE IF PACKAGE SUSTAINED DAMAGED DURING TRANSIT.
- ENSURE ELECTRICAL SUPPLY IS APPROPRIATE & SECURED. AVOID EXTENSION CORDS, DOUBLE ADAPTORS OR POWER BOARDS.
- DO NOT OPERATE ELECTRICAL SWITCHES WITH WET HANDS.
- ENSURE THE FOOT PEDAL IS ALWAYS IN THE OFF POSITION WHEN STOPPING OR MOVING YOUR WHEEL.
- ENSURE YOUR WHEEL IS SWITCHED OFF AND UNPLUGGED FROM THE POWER SOURCE BEFORE CLEANING OR ANY MAINTENANCE.
- NEVER TOUCH OR TAMPER WITH ANY OF THE ELECTRICAL COMPONENTS OF THE WHEEL.
- TO CLEAN THE WHEEL, USE A WET SPONGE. DO NOT USE A GARDEN HOSE.
- DO NOT BLOCK OFF ANY DRAINAGE SPOUTS OR OVERFILL THE WHEEL TRAY AS THIS MAY RESULT IN WATER INGRESS INTO THE MOTOR.
- WHEELS ARE HEAVY, HANDLE WITH CARE WHEN MOVING OR LIFTING.
- DO NOT LIFT OR DRAG A WHEEL BY THE WHEELHEAD.
- ENSURE LONG HAIR AND LOOSE CLOTHING ARE SECURED AND UNABLE TO BE CAUGHT UP IN THE ROTATING MECHANISM OF THE WHEEL.
- DO NOT WEAR METAL ACCESSORIES OR JEWELLERY WHILE USING THE WHEEL.
- ENSURE THE WHEEL IS OPERATED ON A FLAT AND LEVEL SURFACE.
- ENSURE CHILDREN ARE NOT LEFT UNATTENDED NEAR THE MACHINE.
- ENSURE TOOLS AND ANY SMALL PARTS ARE OUT OF REACH OF CHILDREN.
- STOP OPERATION OF THE MACHINE IF YOU SMELL OR SEE SMOKE OR IF THERE ARE UNUSUAL NOISES.
- DO NOT INSERT HANDS OR OBJECTS INTO OPENINGS OR MOVING PARTS.
- REPAIRS OR MODIFICATION OF THE WHEEL IS MAY VOID ANY WARRANTY.
- ENSURE THE POWER CORD DOES NOT CREATE A TRIP HAZARD.
- IF THE POWER CORD BECOMES DAMAGED, DO NOT USE AND SEEK ADVICE FROM AN ELECTRICIAN.
- CONTACT US IF YOU HAVE ANY QUESTIONS OR CONCERNS. WE ARE ALWAYS HAPPY TO HELP.
- HAVE FUN AND ENJOY CREATING WONDERFUL PIECES OF ART.

Locating your Wheel:

The location of your wheel is important and there are certain precautions that should be observed when choosing a suitable position. Accessibility and safety are primary considerations.

- Select a dry, well-ventilated area that has good access.
- Ensure that the wheel is placed on a flat, solid surface.
- Position water and cleaning products within easy reach.
- Ensure all combustible and flammable materials such as curtains, plastic, paper etc. are well away from the wheel.
- Do not rest anything against the wheel or place heavy objects on top of the wheel.
- If you are positioning your wheel in an outdoor area, such as a verandah, outdoor shed, or carport, ensure it is always shielded from rain & condensation.
- A heavy-duty BBQ cover placed over the wheel when not in use is a good idea.

NOTE

Electricity & Water can be a deadly combination!

Stop & think, always use sensible precautions and keep children under close supervision.

Maintaining your Wheel

Wheels can last many, many years when they are carefully care for. There are some simple tricks to maintaining your kiln in tip-top condition.

Please ensure you operate your wheel with due care and attention.

- Always avoid excessive clay build up, especially around the wheel shaft bearing.
- Keep your wheel head clean with a damp sponge.
- Please contact us if you have any questions or queries.



FOOT PEDALS:

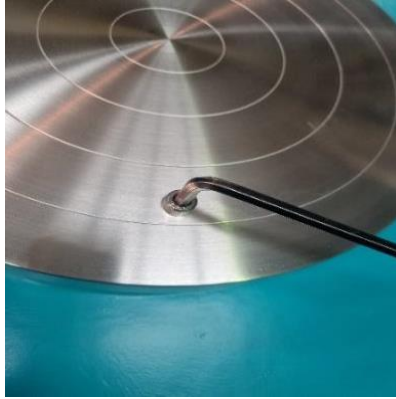
Foot pedals are very low voltage (similar to a 9V battery), however you should be careful and considerate with its use to prevent damage.

- With the foot pedal tipped back, the wheel head should not rotate.
- As the foot pedal is pushed forward, the speed should increase smoothly.
- Always allow the motor to come to a complete stop before changing directions of the wheel head.
- Store the foot pedal on the wheel table when not in use to prevent accidental damage.
- If the wheel does not turn off with the foot pedal back, or does not run fast enough, you may need to adjust.
- If you wish to reverse the direction, tip the foot pedal toward you in the "off" position. When the wheel stops, move the FWD/REV toggle switch to either Forward or Reverse.

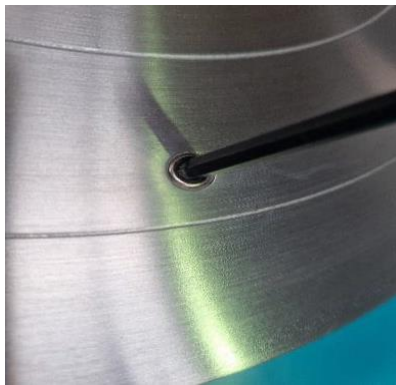


Bat Pins:

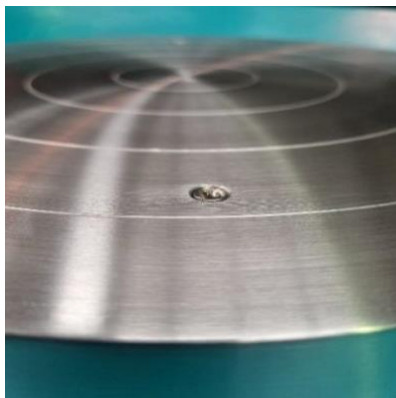
Bat pins are used to attach a 'bat' to the wheelhead when throwing. Also known as a batter board, a pottery wheel bat is a thin slab of wood, plaster, or plastic that is used to support pottery forms while you throw. Because the bat piece can be lifted from the wheel head, there's no need to directly handle your clay piece and risk distorting its shape.



- Remove Bat Pins using a 6mm Allen Key.



- Replace Bat Pins with blanking plugs using a 4mm Allen Key.



- Blanking plugs sit just below flush with the wheelhead.

The Fired Up Kilns PW-DC Wheel:

Make sure the foot pedal is in the off position and the rotation switch is in the middle position before connecting your wheel to the power supply.

- Always avoid excessive clay build up, especially around the wheel shaft bearing.
- Keep your wheel head clean with a damp sponge.
- The Reversing Switch:
 - Right - Wheelhead rotates counter clockwise
 - Left - Wheelhead rotates clockwise
- Before changing wheelhead direction:
 - Turn Motor off
 - Wait until wheelhead has stopped spinning
 - Then turn switch in opposite direction
- Speed is controlled by how much you depress the pedal. Step forward to increase wheelhead speed and step back to slow down the speed.
- Splashpan Installation:
 - Facing the front of the wheel, slide the smaller half-moon portion of the splashpan under the wheelhead flange.
 - From the back side of the wheel, slide the larger portion of the splashpan under the wheelhead flange until both pieces fit together.
 - Slide the 2 clips over the splashpan joints. The clips help prevent water entering the wheelhead bearing. However, the splashpan is not designed to be watertight.
 - To remove the splashpan reverse the above process.
- To remove the wheelhead:
 - Unscrew the hex-bolt under the wheelhead.
 - Using both hands, grasp each side of the wheelhead and lift straight upward.
 - When re-installing, the hex-bolt must be aligned against the **flat side** of the wheel shaft and tightened securely.



NOTE

Always disconnect from the power source before undertaking repairs or maintenance.

The Cowley Double Drive Wheel:

Cowley wheels are manufactured in New Zealand and use the ring/cone friction drive system; power is transferred from the motor by a cone that moves against a drive ring. The cone rotates at a constant speed, but the tip rotates at a slower speed than the base of the cone. When the tip of the cone is touching the drive ring it rotates slowly, as the cone is moved bringing the wider bottom edge of the cone into contact with the drive ring it rotates at progressively faster speeds.



The V belt from the small pulley to the large pulley under the wheelhead increases the torque and isolates vibration from the first part of the drive.

The cone is operated by a foot pedal that is tensioned to hold its position when you remove your foot from the pedal at the desired speed. A hand lever is attached to the pedal for people who prefer this method of control and for standing at the wheel when producing very tall pots. The hand lever can be unscrewed if not required.

Bearings

Bearings are sealed for life and do not need any greasing. If the main wheelhead shaft is noisy, it is usually the top bearing only. To remove the main spindle housing you will have to remove the motor. Take both side panels off; remove the clips from around the resilient mounts beneath the cone and at the back of the motor. This is easily done with a long Phillips screwdriver. PLEASE NOTE. You will have to remove the M5 nut holding the earth wire on the back clip first; a long nut driver is needed for this operation. After removing the clips swing the motor to a horizontal position and it will clear the underside of the large pulley. Do not unwire the motor, just remove the insulation tape tying the cable to the aluminium bracket, lift the motor out and place it next to the wheel on the bench. The main spindle assembly can now be removed. After replacing the bearings refit the assembly and adjust the V-belt tension before tightening the three retaining bolts.

Ring Replacement

Over time, the drive ring may need replacing as they can harden and become rough with wear making the wheel noisy. To replace, remove the left hand side panel (the plain side) with an allen key. Remove the four screws holding the saddle clips. Remove the pulley. Place the pulley end in a vice and flip the old ring off with a small screwdriver. Stretch the new ring on by fitting from the front and stretching on with your two thumbs from the inside. Fit the pulley assembly back in with the saddles and allen head cap screws, try to seat it in the position it was originally. By sliding the pulley down slightly you can achieve a little more pressure on the drive. This can be obtained by undoing the screws slightly and levering the pulley downwards with a screwdriver placed between the top bearing and the frame. Make sure that you do not lever on the pulley. NB Make sure the V-belt is fitted under the small pulley before fitting the pulley.

Increasing Drive Pressure

You can achieve a heavier drive by loosening the cone screw and levering the cone forward slightly. This will change the accuracy of the radius slightly but not enough to upset the mechanism. If the drive is set fairly heavily over time the rubber mounts on the pulley and motor will allow the drive to settle to its own tension.

Wheelhead Removal.

The wheelhead fits over the drive shaft which has a locating pin projecting from one side the wheelhead sleeve has a vertical slot which fits over the pin holding it in position. To remove the wheelhead lift upwards, if the wheelhead has not been removed for some time it might seize so considerable upwards force may be needed. Remove the wheelhead frequently, make sure the shaft and inside the wheelhead sleeve are clean and apply a small amount of WD40 or similar, to prevent corrosion.

Foot pedal

The correct tension on the foot pedal allow the speed to be maintained when the foot is removed from the pedal. The tension can be adjusted by tightening or loosening the locknuts on the top and bottom of the linkage slightly. If the linkage is removed completely remember when re-fitting the order should be: fibre washer, linkage, spring washer, flat washer, nuts. When not powered up the foot pedal must not be pressed as this can damage the drive ring.

On/Off/Reversing Switch

The switch on the right hand side panel is power off in the upright position, the forward position marked FWD starts the wheel in an anti- clockwise direction, reverse marked RVS starts the wheel in a clockwise direction. To change direction, you must first move the switch to the off position and wait a few seconds for the centrifugal clutch to disengage, you can hear it wiring then stop, then move the switch to the new direction. If you switch too fast the wheel will just continue in the original direction.

Motor

If the motor fails to work, check the overload switch first. This can be reset through the mesh at the wheelhead end of the motor. Check for damage to cable, plug connections and plug fuse. If the motor hums and gradually starts in either direction the fault will be in the centrifugal switch inside the motor. The contacts should be touching when the motor is stopped so that the start windings are powered initially when the motor is turned on. At about mid revs the start windings disconnect and the run windings are brought into operation. You can tweak the contacts a little closer and make sure they are in contact when they should be.

Wheel Tray

Ensure that excess water does not build up in the wheeltray to avoid it flooding over the moulding and into the motor. The tray can be removed by unscrewing the four screws, remove the wheelhead before lifting the tray clear. It is worth doing this occasionally to ensure that there are no deposits of water under the tray which can over time cause rusting on the frame. Never lift the wheel by the tray, always use the lifting handles provided.

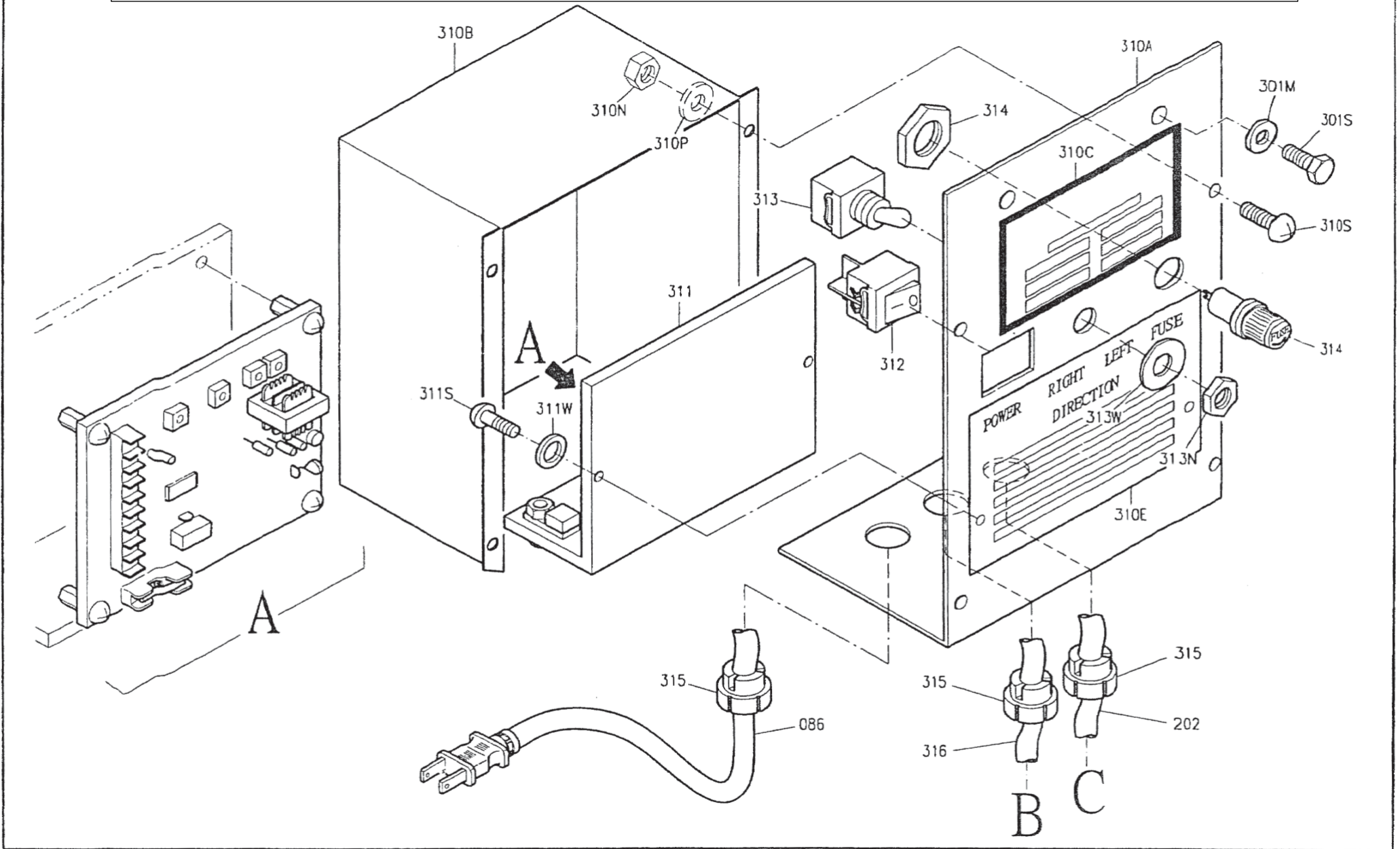
(adapted from Pottercrafts UK)

PW-DC Components Parts List:

Parts No.	Description	Parts No.	Description
006	Bearing	121	Splash pan, back
007	Wave Washer	123	Splash Pan Clamp
008	Washer	180	Hex Head Bolt
009	Lock Washer	182	Washer
010	Bearing	183	Washer
011	Snap Ring	184	Washer
013	Plate Nut	185	Washer
015	Hex Head Screw	186	Hex Nut
016	Hex Head Screw	188	Bushing
018	Dust Cover	189	Washer
080	Socket Head Cap Screw	190	Pad
081	Wing Nut	190F	Bottom Plate
082	Socket Head Cap Screw	190S	Round Head Screw
092	Idle Pulley	190W	Washer
093B	Motor Pulley	191	Cable Fastener
093S	Socket Head Set Screw	200	Potentiometer
100	Wheel head	200N	Hex Nut
110	Main Shaft	200P	Lock Washer
110K	Key	200S	Round Head Screw
111	Bearing Holder	201	Bracket
116	Foot Pedal, Upper	201P	Lock Washer
116S	Socket Head Set Screw	201S	Round Head Screw
117	Foot Pedal, Bottom	202	Cable
118	Toggle	301	Top Frame
118S	Socket Head Set Screw	302	Leg Bracket
120	Splash Pan, forehead	303	Leg

304	Leg Pad	341S	Round Head Screw
305	Belt Cover	342	Spring Plate
305N	Hex Nut	343	DC Motor
305P	Lock Washer	343K	Key
305W	Washer	343N	Hex Nut
316	Electric Wire	343P	Lock Washer
316E	Earth Wire	343S	Hex Head Screw
331	Spring	344	Cushion
332	Nut Bracket	344A	Round Head Nut
332N	Nut	344M	Nylon Washer
332S	Hex Head Screw	344N	Hex Nut
332W	Washer	344P	Lock Washer
340	Motor Rack	344W	Washer
341	Bracket, Spring	460	Poly-V Belt

PW-DC Control Panel Components:



PW-DC Control Panel Parts List:

Parts No.	Description	Parts No.	Description
086	Plug & Cable	311	DC Controller
202	Cable	311S	Round Head Screw
301M	Nylon Washer	311W	Washer
301S	Hex Head Screw	312	Main Switch
310A	Control Plate	313	Toggle Switch
310B	Control Box	313N	Hex Nut
310C	Name Plate	313W	Washer
310E	Instruction Label	314	Fuse Box & Fuse
310N	Hex Nut	315	Cable Fastener
310P	Lock Washer	316	Cable
310S	Rivet		

Disclaimer

Please note that your wheel has been designed and manufactured for precision work. Your wheel must be operated in accordance with both this operating manual as well as any manual provided by the manufacturer. Any unauthorized use that violates the above preconditions, shall immediately void all warranties. Fired Up Kilns makes no representations, guarantees whether expressed or implied, other than those as contained within the respective operating manuals.

For detailed information on the Fired Up Kilns [warranty](#) or to review the [Terms & Conditions](#), please refer to the resources section of the Fired Up Kilns website



FIRED UP KILNS

and pottery supplies

hello@firedupkilns.com.au

20 Helen Street, Heidelberg West, Victoria 3081, Australia

www.firedupkilns.com.au

ABN: 365 984 307 89

Fired Up Kilns works from the lands of the Wurundjeri Woi Wurrung and Bunurong peoples of the Kulin Nation and pay our respects to their Elders past and present. We also acknowledge the Elders, Ancestors, cultures, and heritage of all Aboriginal and Torres Strait Islander Nations.

