CAUTIONS

1. The wheel runs off a standard UK domestic three pin plug providing 230amps 50hz. The plug should be fitted with a 13amp fuse, if desired it can be used with a household circuit breaker RCD, (not supplied).
2. Inexperienced young people and children should be supervised when using the wheel.
3. Do not clean the wheel with a hose, avoid splashing the wheel with water that might get into the electrics and motor.
4. Empty out the wheel-tray during use to avoid water flowing into the bearings.
5. Always return the foot pedal to the stop position before turning off and never store or transport the wheel with the foot pedal in the operating position. This may damage the drive ring.

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Brickkiln Lane Etruria Stoke-on-Trent Staffordshire ST4 7BP
Authorised importer and distributor of Cowley products for the Northern Hemisphere

COWLEY

Double Drive Potter's Wheel

OPERATING MANUAL

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Congratulations

on choosing a Cowley Double Drive

potter's wheel from Potclays!

Cowley wheels' reputation for robust build and reliability has been earned over forty years of manufacture; the simplicity of its design makes it easy to maintain, powerful and comfortable to use to a professional standard. The surprisingly reasonable price makes it an excellent introductory wheel as well as a workhorse for the production potter.

INTRODUCTION

Cowley wheels are powered by a friction drive which is mechanically simple yet powerful, power from the electric motor drives an aluminium alloy cone. The cone rotates at a constant speed, but because the base of the cone is wider it rotates faster than the tip of the cone. The cone is moved by the operation of the foot pedal or hand lever so that it comes in contact with the neoprene drive ring. The tip of the cone touches the drive ring first causing the wheelhead to rotate slowly, the more the pedal is pressed the wider part of the cone comes into contact and the faster the wheel turns. The drive ring transfers power to the wheel shaft via a V belt which increases the torque so it can handle as much as 20 kgs of clay. The foot pedal is tensioned to hold its position so that you can 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 it also makes it easy to control the wheel from a standing position.

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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 alloy 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 of parts is: 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.

OPTIONAL EXTRAS

Easy-lift wheelhead

The Easi-Lift wheelhead enables you to throw on wooden bats, easy to use and fits in seconds.

Spare seat for teaching

The tutor seat fits on the back of the wheel opposite the student so both tutor and student can have hands on the clay. Does away with painful backs from bending over the wheel.

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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. The smaller bearings on the small pulley assembly are well away from moisture and are unlikely to need replacing; they are 62012RS.

Ring Replacement

Over time, the drive ring may need replacing as they can harden and become rough with wear making the wheel very 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.

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DOUBLE DRIVE DESCRIPTION

Parts, clockwise from motor:-

- Motor
- Drive cone
- Drive ring
- Small pulley
- V belt
- Wheel shaft

SETTING UP YOUR COWLEY WHEEL

1. Remove the foot pedal and lever from the box on top of the wheel.
2. Lift up the box with the wheelhead inside.
3. Fit tray with the four screws, ensure that they are fully tightened.
4. Fit foot pedal over the shaft ensure that the fixing screw is lined up with the flat on the shaft and fully tighten the fixing screw.
5. If required, fit the hand lever to the hole in the pedal and fully tighten the nut.
6. Attach the seat to the wheel by unscrewing the top screw on the side panels and place the seat strut so that the screws pass through the holes in the seat strut and the side panel, screw in tight to retain the seat and the side panel.

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OPERATING YOUR COWLEY WHEEL

Check with a spirit level that the wheel is level. Plug in and switch on the wheel with the power switch on the right-hand side panel, the power is 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 whirring then stop, then move the switch to the new direction. If you switch too fast the wheel will just continue in the original direction.

SPECIFICATIONS

- Motor: 0.5 hp 0.37kW
- Power supply: 13amp 3kW domestic three pin socket.
- Speed: 0 to 240 rpm.
- Wheelhead: Aluminium 280mm (11") diameter.
- Reverse switch, clockwise/anticlockwise
- Maximum centering weight: 20kgs.
- Width:510mm
- Length: 700mm (1050mm with seat attached)
- Height: 580mm
- Weight: 45kgs

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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 cause rusting on the frame. Never lift the wheel by the tray, always use the lifting handles provided.

MAINTENANCE

Bearings

Bearings are sealed for life and do not need any greasing. All ball-race bearings are rubber sealed, the main shaft pair are reference: 62032RS. 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

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