Wadkin

Combined Disc and Bobbin Sander, J.T.

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This machine is a wonderful labour saver in any pattern shop, either large or small. It is particularly useful for those shops where available floor space, or the volume of work, does not justify separate Disc and Bobbin machines, combining as it does the functions of both types. Both disc and bobbin can be used at the one time, and when only one is in use the other need not be running.

After 40 years' specialised experience in pattern making machinery, during which we have supplied this type of machine to many of the leading firms throughout the world, we have no hesitation in saying that the machine in its latest form is undoubtedly the most practical and most efficient sander on the market for the ever-varying needs of engineers' pattern work.

Features

1. *Independent ball and roller bearing motors to sanding disc and vertical bobbin.*
2. *Independent control gear to each motor.*
3. *All motors and control gear totally enclosed and made by well known British makers.*
4. *Both disc and bobbin tables cant above and below horizontal, and are provided with graduated scales.*
5. *Swivelling fence fitted to disc table.*
6. *Bobbin has a reciprocating motion to ensure smooth finish to work.*
7. *The gearing for reciprocating motion is machine-cut and totally enclosed.*
8. *Turned steel sander disc.*
9. *Sandpaper is cemented on to disc, ensuring dead flat surface. This is essential for accurate work and avoids any possibility of the sandpaper being torn off.*
10. *Sanding bobbin slide can be adjusted vertically to allow for wear on the abrasive paper.*
11. *Quick and easy method of attaching sandpaper to metal bobbin.*
12. *Various diameters of bobbins may be used.*
13. *Dust outlets provided to disc and bobbin for connecting to main dust extracting system.*
14. *Efficient guard over sanding disc.*

Specification

The Main Frame

The main frame, containing the motors and control gear is well proportioned, having a large base area to ensure steady running.

The Sanding Disc

The sanding disc is of steel, accurately turned and balanced and recessed at the back for securing to driving flange plate. The flange is mounted on a taper spindle, thereby ensuring accuracy and true running. It is driven by an electric motor, the shaft of which forms the disc spindle. The disc is guarded to conform to the Factory Acts.

The Disc Work Table

The disc work table is arranged to cant 45 degrees below and 10 degrees above the horizontal and can be locked where desired. The canting motion is controlled by handwheel and screw. A scale registers the principal angles. A stop is provided, giving instantly the horizontal position of table. A horizontal adjustment to and from the disc is provided, operated by handwheel to facilitate removal of the disc and for use in conjunction with the canting mechanism.

The disc fence is of the universal swivelling type and is slideable across the face of the disc. It can be reversed to suit right or left-handed work.

Specification (*Contd.*)

The Vertical Sanding Bobbin

The vertical sanding bobbin is driven by an electric motor built direct on to the vertical spindle, while a reciprocating motion is given to the bobbin by means of a worm and wormwheel drive. The teeth of the gears are machine-cut, and made of special material. These gears are mounted in a totally enclosed gearbox and run in an oil bath. This arrangement keeps the gearing entirely free from dust and ensures an even and steady motion to the reciprocating slide frame. The carriage forming the motor unit is counter-balanced, while a screw adjustment is provided

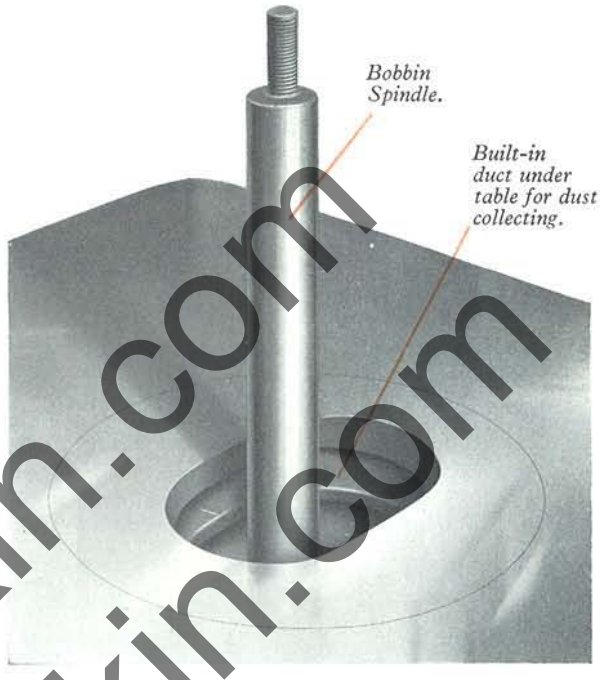
to enable the operator to raise or lower the bobbin slide to allow the full length of the abrasive paper to be used. This motion is operated by a hand-wheel and machine-cut steel gears.

The Sanding Bobbin

The ease with which the sandpaper on the bobbin can be changed is one of the big features of the Wadkin machine. The bobbin is of metal, the part carrying the paper being in two sections with a narrow slot between. This slot is arranged to close by screw motion, the closing action both stretching the paper and holding it perfectly taut. This type of bobbin is available with $3\frac{1}{2}''$ or $5''$ diameters. Alternative metal type can be supplied, $2''$ or $2\frac{3}{4}''$ diameter.

The Bobbin Table

The bobbin table is arranged to cant 30 degrees below and 10 degrees above the horizontal. The canting motion is controlled by handwheel and screw. A graduated scale readily indicates the angle of the table. The horizontal position is definitely located. A loose filling-in ring is provided in order to keep the table opening for the sanding bobbin as small as possible. A hopper cast in the table is the collecting point for the dust.



The Motors

Both motors built into the machine consist of rotor and stator units.

The machine is available for alternating current supply only, 2 or 3-phase, and any voltage.

Control Gear

Control gear for both motors is of the contactor type. Each motor is separately controlled, the respective control gear being mounted conveniently for the operator.

All the gear is totally enclosed against the entrance of dust, and automatic no-volt and overload features are provided.

Dust Collecting Arrangement

A compact self-contained dust collecting unit can be supplied to special order as illustrated on page 4. The unit embodies a quickly detachable dust storage bin of four cubic feet capacity.

The exhaust fan is housed inside the unit and driven by a 2 h.p. totally enclosed fan-cooled motor. The dust-laden air is filtered by a series of flame-proof fabric sleeves, complete with push-button operated shaker mechanism.

Should a main dust extracting system be available, a separate dust unit may not be required, in which case the machine hoods are connected direct to the main piping.

Specification (*Contd.*)

Disc Cementing Arrangement

On the Wadkin machine the abrasive disc is attached to the steel sanding disc by a cementing process, in preference to holding by means of a loose ring or other mechanical device. This method of cementing the sandpaper to the discs has the big advantage of ensuring a dead flat surface, which is essential for accurate work on patterns. At the same time it eliminates any possibility of the sandpaper being torn off whilst a job is being sanded.

To simplify the renewal of abrasive discs, we supply a press as illustrated complete with two steel sanding discs.

Details included with the machine

Control gear for motors ; One steel disc 30″ diameter ; One split metal bobbin, 3½″ diameter ; One filling-in ring for 3½″ bobbin ; One universal swivelling fence ; Dust exhaust hood and guard to disc ; Dust exhaust connection to bobbin ; Disc press and two spare steel discs ; One set of spanners ; Lubricating pump and tin of ball bearing lubricant.

Disc Cementing Press.

Dust Collecting Unit.

Principal Dimensions and Capacities

Diameter of disc	30″ (760 mm.)
Bobbin supplied	3½″ (90 mm.) diam., 9½″ (240 mm.) long
Maximum depth bobbin will sandpaper	7″ (180 mm.)
Maximum diameter of bobbin	5″ (125 mm.)
Minimum diameter of bobbin	2″ (50 mm.)
Bobbin spindle	1¼″ (31·8 mm.) diam., 11″ (280 mm.) long
Size of disc table	2′ 10″ × 1′ 5″ (860 × 430 mm.)
Disc table cants 45° below and 10° above horizontal	
Lateral adjustment of table from face of disc	3″ (75 mm.)
Height of disc table from floor	2′ 10½″ (880 mm.)
Size of bobbin table	2′ 2″ × 2′ 1½″ (660 × 650 mm.)
Bobbin table cants 30° below and 10° above horizontal	
Height of bobbin table from floor	3′ 1½″ (950 mm.)
Floor space without dust collector	5′ 6″ × 2′ 10″ (1680 × 860 mm.)
Motor for disc	4 h.p.—900 r.p.m.
Motor for bobbin	1½ h.p. 3000 r.p.m. on 50 cycles ; 3600 r.p.m. on 60 cycles
Net weight without dust collector	2016 lb. (914 kg.)
Gross weight without dust collector	2352 lb. (1067 kg.)
Net weight with dust collector	2380 lb. (1080 kg.)
Gross weight with dust collector	2912 lb. (1321 kg.)
Shipping dimensions in cubic feet without dust collector	80 (2·26 cu. m.)
Shipping dimensions in cubic feet with dust collector	152 (4·30 cu. m.)

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