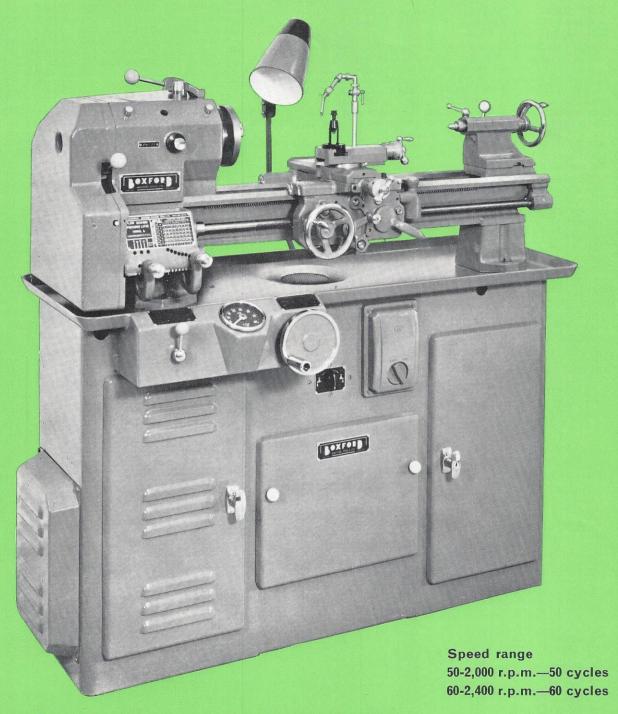
## BOXFORD VARI-SPEED



94" SWING (48" CENTRES)
PRECISION VARIABLE SPEED
DRIVE SCREWCUTTING LATHE

## BOXFORD PRECISION VARIABLE SPEED DRIVE SCREWCUTTING LATHE

**THE BOXFORD** Variable Speed Drive Lathe is the latest in the Boxford range of 9 ins. swing lathes. It incorporates all the latest improvements together with infinitely variable spindle speeds from 50-2000 r.p.m.

**THE BED** is of substantial width, having three vee ways and one flat way. The front and rear vees ensure accurate and easy travel of the saddle.

**THE HEADSTOCK** is arranged to provide two speed ranges. Direct vee belt drive gives the higher speed range 250-2000 r.p.m. whilst the lower speed range 50-400 r.p.m. is obtained by engagement of the back gear. A single lever on top of the headstock operates the change from direct to back geared drive. An electrical interlock is incorporated in the back gear lever which interrupts the power supply when the lever is depressed. The position of the lever should not be moved until the machine is stationary. The back gear lever can also be used as an emergency stop as a slight depression of the lever will operate the micro-switch and cut off the power supply to the motor.

**THE MAIN SPINDLE** which is bored  $\frac{13}{10}$  in. to pass  $\frac{3}{4}$  in. dia. is mounted on pre-loaded opposed Precision Timken Taper Roller Bearings. A spring loaded plunger is situated on the front of the headstock to lock the spindle to facilitate the removal of chucks, etc. This should only be used when the machine is in direct vee belt drive.

THE TAILSTOCK is of orthodox design and is located on the centre vee and flat of the bed. It can be locked in any position with the quick action lever provided at the rear. The barrel is graduated for control of drilling depths, etc., and can also be locked in any desired position.

THE CARRIAGE which includes the apron, saddle, compound rest and toolpost, locates on the two outer vee's of the bed. Both cross and compound rest slides have leadscrews which are fitted with ball thrust races. Dull chrome plated micrometer friction dials are fitted for easy re-setting to zero. Machines with ENGLISH gear box have a Thread Dial Indicator fitted to apron, but this is not available for metric pitches.

A NORTON TYPE GEARBOX is fitted to provide changes of threads and feeds. Two types are available, one for ENGLISH threads and one for METRIC pitches. Special

changewheels are available for transposing and for nonstandard threads. The changewheel guard is fitted with an electrical cut-out switch which stops the motor when the guard is opened.

LONGITUDINAL AND CROSS SLIDE power feeds are through a friction clutch in the apron with the drive from the combined leadscrew and driveshaft. The threads of the leadscrew are used only for screwcutting and engagement of the half nuts is by a conveniently located lever. Feeds are obtained from the longitudinal keyway in the leadscrew and friction clutch. A safety interlocking device prevents the movement of the half-nut lever when the friction clutch feeds are in operation.

**THE CABINET BASE** is rigidly constructed of  $\frac{3}{16}$  in. thick sheet steel. It houses the drive unit, which is powered by a 1 H.P. motor, in a compartment below the headstock. The centre compartment of the cabinet base has a built in tank suitable for an electric coolant pump. The right hand compartment, which can be locked, has shelves for the storage of equipment together with a rack for collets.

**THE DRIVE UNIT** consists of a manually operated variable pulley mounted on the motor which drives on to a spring loaded automatic variable pulley on the intermediate shaft by means of a robust vee belt. The intermediate shaft is mounted on deep groove ball bearings which are greased and sealed for life. The final drive to the headstock is by link belt through the cabinet base tray and lathe foot.

**SPEED ADJUSTMENT** is by means of a conveniently placed handwheel, mounted at the front of the cabinet base, which operates a lever linkage to give movement to the variable pulley.

**AN ELECTRIC IMPULSE TACHOMETER** operates on a built-in 12 volt D.C. supply. A magnetic perception head gives a clear indication of spindle speeds on the Tachometer when the machine is running.

A SEMI-ROTARY reversing switch is fitted for controlling the machine. In addition to selecting direction of spindle rotation the switch actuates a direct on line starter which incorporates overload and no volt protection; this being operative when the switch is depressed beyond the normal running position.

## **SPECIFICATION**

GENERAL Centre height	ENGLISH MACHINE 45/8"	METRIC MACHINE 117 mm	CROSS SLIDE AND TOOLSLIDE SCREWS	ENGLISH MACHINE	METRIC MACHINE
Distance between centres	22"	560 mm	Thread	10 TPI Acme	2.5 mm
Bed length	42"	1065 mm	illieau	10 ITT Active	Trapezoidal
Swing over bed	91"	235 mm	Diameter of Dial	1.6	40·6 mm
Swing over saddle wings	9"	228 mm	C	004"	-02 mm*
Swing over cross slide	51/	130 mm	Graduations on Dial	001	*Direct reading
Centre height above tool slide	1"	25 mm			cross slide
Cross slide travel	6"	150 mm			dial (1 div=
Tool slide travel	25"	66 mm			
Spindle Speeds (Infinitely Variable)	~8	00 11111			
50 cycle supply	50-2000 r.p.m.	50-2000 r.p.m.			diameter) can be supplied as
60 cycle supply	60-2400 r.p.m.	60-2400 r.p.m.			alternative on
Spindle bored to pass (dia.)	3"	20 mm			metric mach-
Spindle nose diameter	11/2"	38·1 mm			ine
Spindle nose thread (whit form)	8 TPI	8 TPI			ine
Spindle internal morse taper	No. 3	No. 3	LEADSCREW		
Morse taper of centres	No. 2	No. 2	LEADSCREW		
Draw bar collet capacity (dia.)	1"	12·5 mm	Diameter	3 4	19·05 mm
Motor	1 HP	1 HP	Thread	8 TPI Acme	3 mm
Nett weight (standard machine)	660 lbs.	300 kgs.			Trapezoidal
Shipping case dimensions	53"×27"×53"	135 × 69 × 135			
	00 1121 1100	cms.	RANGE OF FEEDS		
Gross weight (standard machine)	850 lbs.	385 kgs.			
oroso morgine (otaniaana masimio)	000 103.	565 kgs.	Longitudinal	(48)	(32)
TAILSTOCK				·0015"-·0853"	0·07-1.08 mm
Diameter of Barrel	1 16"	27 mm	Cross	(48)	(32)
Travel of Barrel	2 <u>1</u> "	54 mm		·0004"-·0252"	0.02-0.3 mm
Graduations on Barrel	2 B 1 6"	2·0 mm			
Barrel internal morse taper	No. 2	No. 2	RANGE OF THREADS	(48)	(52)
Set over for taper turning	5 "	8 mm	MANUE OF THREADS	4-224 TPI	0·2-7·5 mm

The makers reserve the right to alter designs, specifications and prices without notice.

## BOXFORD MACHINE TOOLS LIMITED

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