

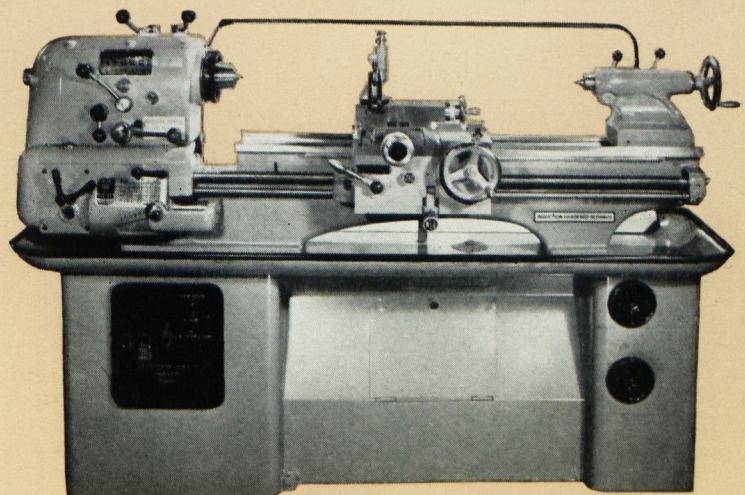


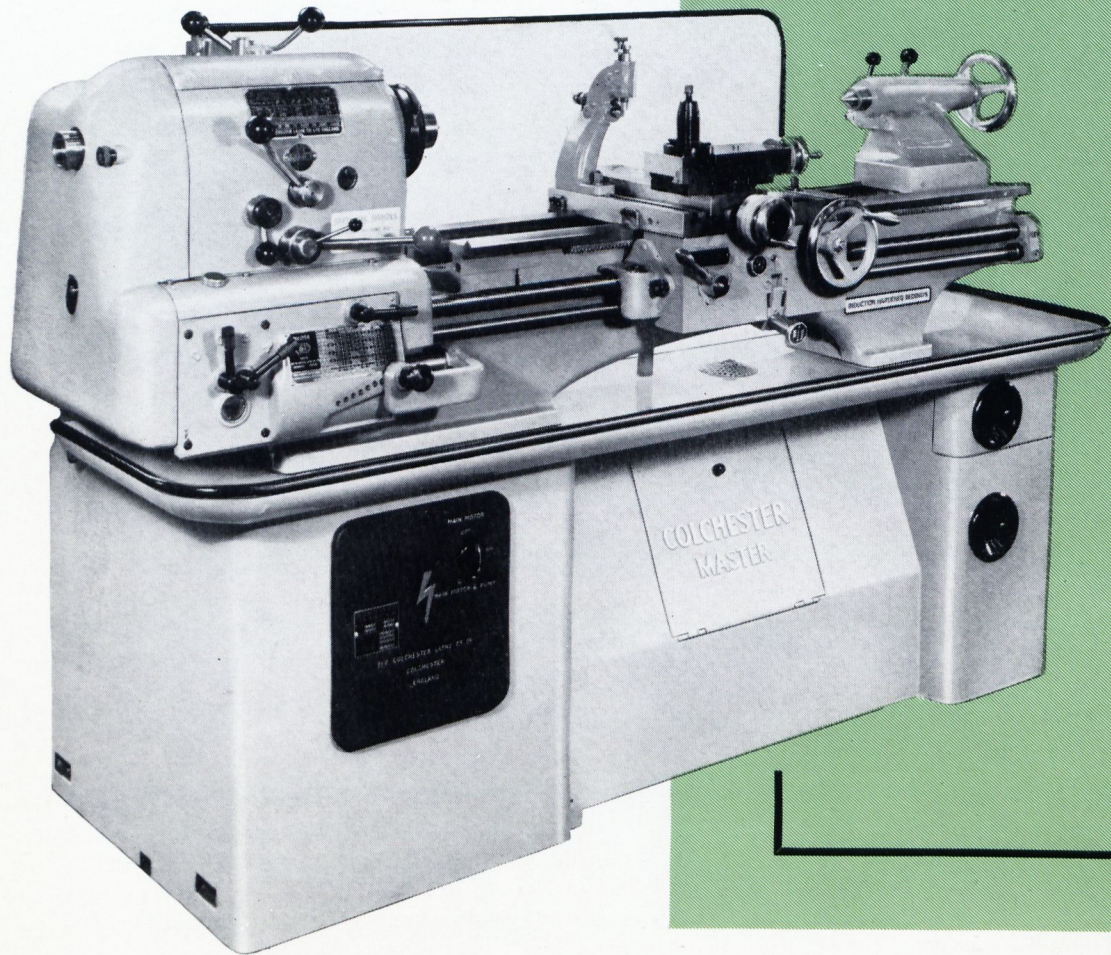
Registered Trade Mark

# COLCHESTER

## Master High Speed Lathe

Colchester Master  
6½ in. x 36 in. (165 mm x 915 mm)  
High Speed Lathe.





# COLCHESTER MASTER

6½ in. x 36 in. (165 mm. x 915 mm.) High Speed Lathe

**GUARANTEED TO TURN  
ROUND WITHIN ONE TENTH  
OF A THOU! (0.0001 in.)**

Compare this with  
the following:—  
Schlesinger Finish Turning Lathe  
0.0004 in.  
Schlesinger Toolroom Lathe  
0.0002 in.  
American Toolroom Lathe  
0.0003 in.

The Colchester Master lathe incorporates all the safety features of the Colchester Student lathe and has the capacity, accuracy and dependability for both production and toolroom application.

- \* Built to Toolroom accuracy
- \* Gamet micron precision bearings
- \* Large bore spindle
- \* Adjustable knock-off worm-box
- \* Built-in safety features

## Accessories

### Specially Recommended

Series '300' Hydraulic copying attachment with adjustable slide comprising profile slide assembly, rear beam assembly and hydraulic power unit for 220/380/440/3/50 electric supply.

5-station hand operated inclined head capstan slide, with adjustable rotating stops and maximum working stroke of 4½ in. (114 mm.), bored to receive ¾ in. (20 mm.) dia. shank toolholder.

Colchester type No. 260 quick change toolpost complete with 4 standard toolholders, 1 vee holder, 1 Morse taper holder and 2 wrenches. 7½ in. dia. Burnerd 3-jaw geared scroll direct on spindle mounting chuck (no backplate required).

10 in. dia. Burnerd 4-jaw independent direct on spindle mounting chuck (no backplate required). Burnerd 1½ in. capacity Key operated 'Multisize' Collet Chuck.

Flexible round bore collets for 'Multisize' Collet Chuck; each having ⅛ in. capacity in steps from ⅞ in. to 1½ in. (12 in full set).

Multi-position longitudinal bed stop with 12½ in. adjustment.

Electric coolant pump and fittings.

Telescopic taper turning attachment.

Lever-operated tailstock quill attachment with four adjustable depth stops and one fixed centre.

**These are a selection of the many accessories available which are detailed in full in the price list.**

## Features

### Bed

With all bearing surfaces precision ground and induction hardened, the heavy duty, seasoned casting has separate vee and flatways for the saddle and tailstock.

The bed is securely mounted on a rigid cabinet base which incorporates a coolant storage tank and mounting position for a coolant pump; the cabinet contains all electric wiring. Gap bed machines are fitted with a removable gap piece, allowing large diameters to be turned and giving maximum support when working close to the chuck.

### Headstock

The totally enclosed oil bath headstock with all gears hardened and honed, gives eight spindle speeds 54-1200 r.p.m. as standard and sixteen spindle speeds 34-1500 r.p.m. when a two speed electric motor is fitted. Speed selection is by two levers on the top of the headstock and one on the front, a fourth lever reverses the direction of the feeds. The 'Safti-Lok' starting and brake lever has the finger tip reverse inset through its centre, the whole must be pulled out against a spring pressure before it can be moved to the starting position. This lever also operates the mechanical clutch when fitted. The spindle is a high-tensile steel forging, bored to pass 1½" diameter bar, with a hardened American Type 'LO' taper nose. The spindle is carried on GAMET Micron Precision Bearings, a double-row type being used at the front and a single-row bearing at the rear.

### Gearbox

Both the standard and continental gearbox are of the totally enclosed oil bath type and of similar robust construction but arranged to provide different ranges of feeds and threads. Drive to the gearbox is through an all-gear end train from the headstock which can be supplemented by change gears to extend the ranges of threads and feeds.

Full gearbox specifications are shown in the table on the back page of this leaflet.

### Saddle & Slides

The saddle is of boring type on gap bed machines and of winged type on straight bed lathes. It slides on separate vee and flat ways on the bed, with long bearing surfaces to ensure stability under heavy cutting conditions. Bedway wipers are fitted as standard. The saddle is fitted with a full width cross slide, and on gap bed machines is tee slotted for work clamping. Micrometer dials are fitted to both traverse screws; metric dials are optional at no extra charge.

The saddle is pre-drilled and tapped to accept all the standard additional equipment. A pillar type toolpost is fitted as standard but the Colchester Quick Change or 4-way automatic indexing toolposts are readily available.

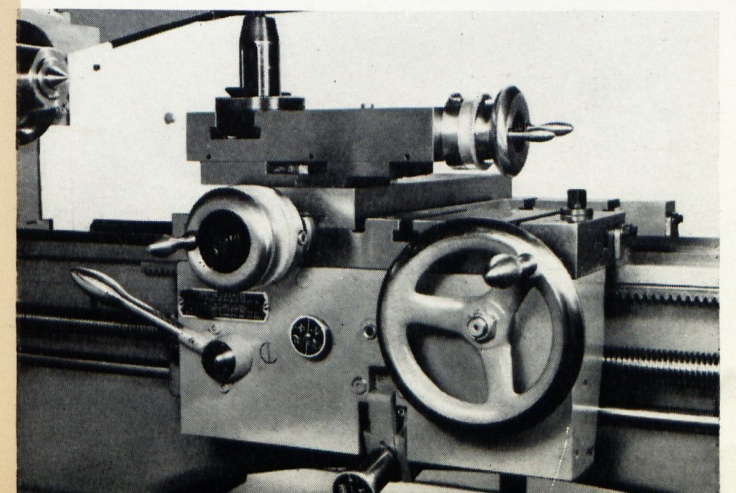
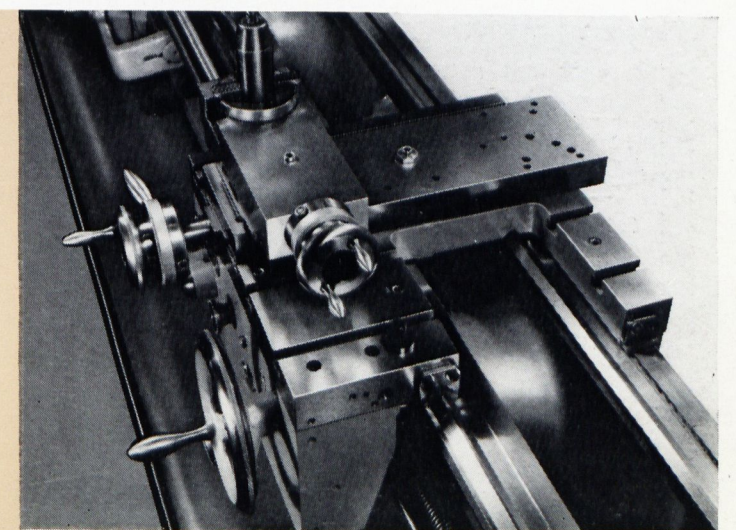
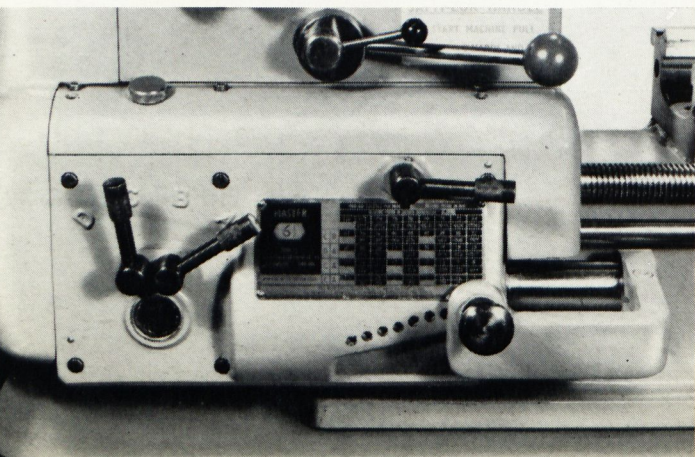
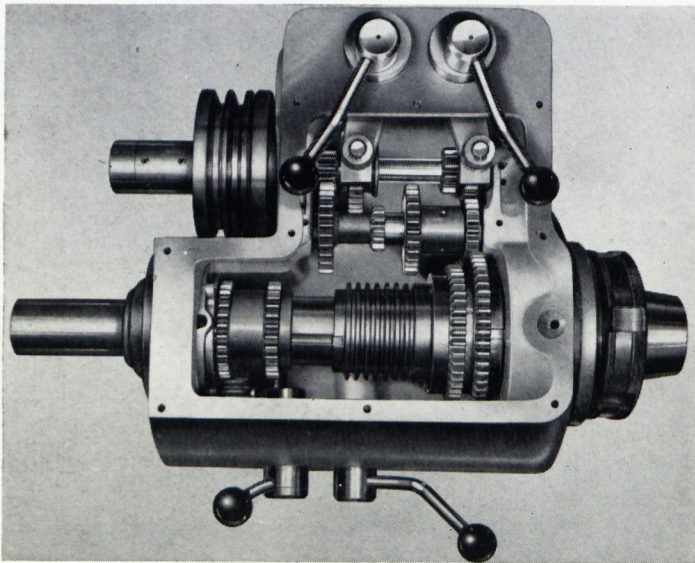
### Apron

The apron is of the double wall type and the robust design gives each shaft two bearing support. Sliding, surfacing and screwcutting motions are fully interlocked; sliding or surfacing selection is by means of a push-pull plunger. The patented knock-off wormbox allows positive finger tip operation of the single position engaging lever which allows accurate working to stops for sliding and surfacing in both directions, the knock-off pressure being easily adjusted by rotating the lever.

A screwcutting dial is fitted to the apron on Standard Gearbox machines, but is not available on the Continental version.

### Electrics

The safety electrical panel incorporates a no-volt release system and thermal overloads. A special micro-switch fitted to the end guard isolates the motor when the end guard is open and the circuit will not operate until the end guard is closed and locked. Another micro-switch fitted to the tool drawer, isolates the circuit when the drawer is locked.



# Colchester Master Specification

## CAPACITIES OF ALL MODELS

	English	Metric		English	Metric
Height of centres	6½ in.	165 mm	Total travel of cross slide	7½ in.	190 mm
Distance between centres	36 in.	915 mm	Total travel of top slide	3⅝ in.	92 mm
Swing over bed	13 in.	330 mm	Total travel of tailstock barrel	5½ in.	133 mm
Swing over cross slide	8 in.	203 mm	Taper in tailstock barrel	No. 3 Morse	
Spindle Bore (max. bar dia.)	1½ in.	38.1 mm	Number of spindle speeds	8 *	
Spindle nose mounting	LO		Range of spindle speeds	54-1200 *	
Taper in spindle nose bush	No. 3 Morse		Overall length of machine	77½ in.	1970 mm
<b>GAP BED MODELS</b>			Overall width of machine	39½ in.	1003 mm
	Swing in Gap	19 in.	483 mm	Overall height of machine	49 in.
Width in front of faceplate	4⅝ in.	111 mm			
Width of bedways	8⅝ in.	214 mm	Drive	Vee Belt	
Motor *	3 H.P.		Weight	1468 lb.	666 kg

\* 2 speed motor available as an extra giving 16 spindle speeds from 34-1500 r.p.m.

## MODELS AVAILABLE

Code word

- BUCK** — Gap bed machine with quick change gearbox  
**BOXER** — Gap bed machine without quick change gearbox  
**QUARTER** — Straight bed machine with quick change gearbox

TYPE OF GEARBOX	STANDARD	DOMINION	NON-GEARBOX	CONTINENTAL
PITCH OF LEADSCREW	6 t.p.i.	6 t.p.i.	6 t.p.i.	6 mm
<b>THREADS:—</b>				
Number of Whitworth threads	45	45	36	32
Range of Whitworth threads	4-120 t.p.i.	4-120 t.p.i.	4-60 t.p.i.	2½-60 t.p.i.
Number of Metric pitches	12	*—	17	31
Range of Metric pitches	0.25-6.0 mm	*—	0.5 mm-6.0 mm	0.3-12.0 mm
Number of Module pitches	—	—	—	16
Range of Module pitches	—	—	—	0.3-3.0 mm
<b>FEEDS:—</b>				
Number of sliding feeds	45	45	72	24
Range of sliding feeds per rev of spindle	0.0025 in.-0.068 in.	0.0025 in.-0.068 in.	0.002 in.-0.040 in.	0.04 mm-0.53 mm
Number of surfacing feeds	45	45	72	24
Range of surfacing feeds per rev of spindle	0.00125 in.-0.034 in.	0.00125 in.-0.034 in.	0.001 in.-0.020 in.	0.02 mm-0.25 mm

\* No metric pitches are available but 11½ and 23 t.p.i. are included in Range of Whitworth threads.

Every Machine is supplied with the Following Standard Equipment:—

Pillar type toolpost · 12 in. dia. faceplate · 5 in. dia. driving plate · Centre bush · Two No. 3 Morse taper centres · Bedway wipers · Thread indicator dial (not on Continental machines) · Travelling steady · Full-length splash guard · Chip and water tray · Electrical equipment for standard 50 cycle 3-phase a.c. supply · Finger-tip electrical reversing switch (3-phase a.c. machines only) · Electrical control panel with isolating switch, no volt and overload releases · Set of spanners and keys · Spare parts and operators manual · Accuracy chart

Illustrations and specifications are not binding in detail. The designs are subject to modification and improvement without notice.

**THE COLCHESTER LATHE COMPANY LTD.,**  
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