



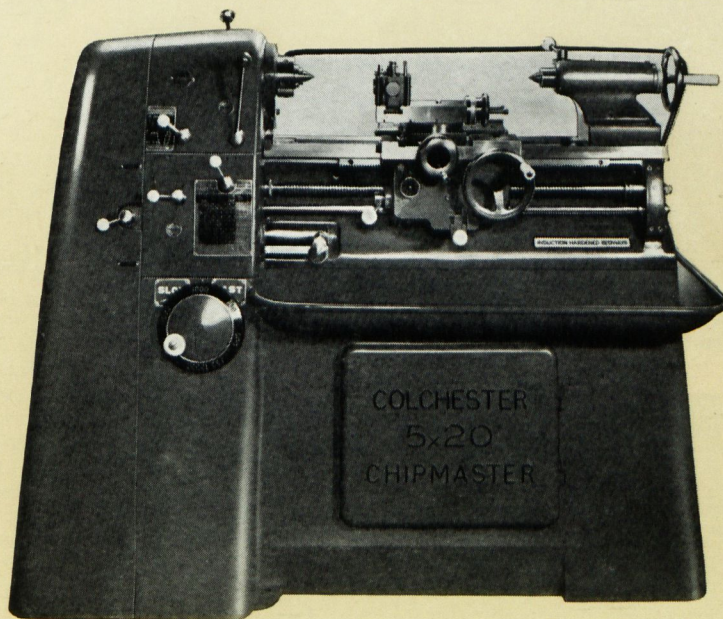
REGISTERED TRADE MARK

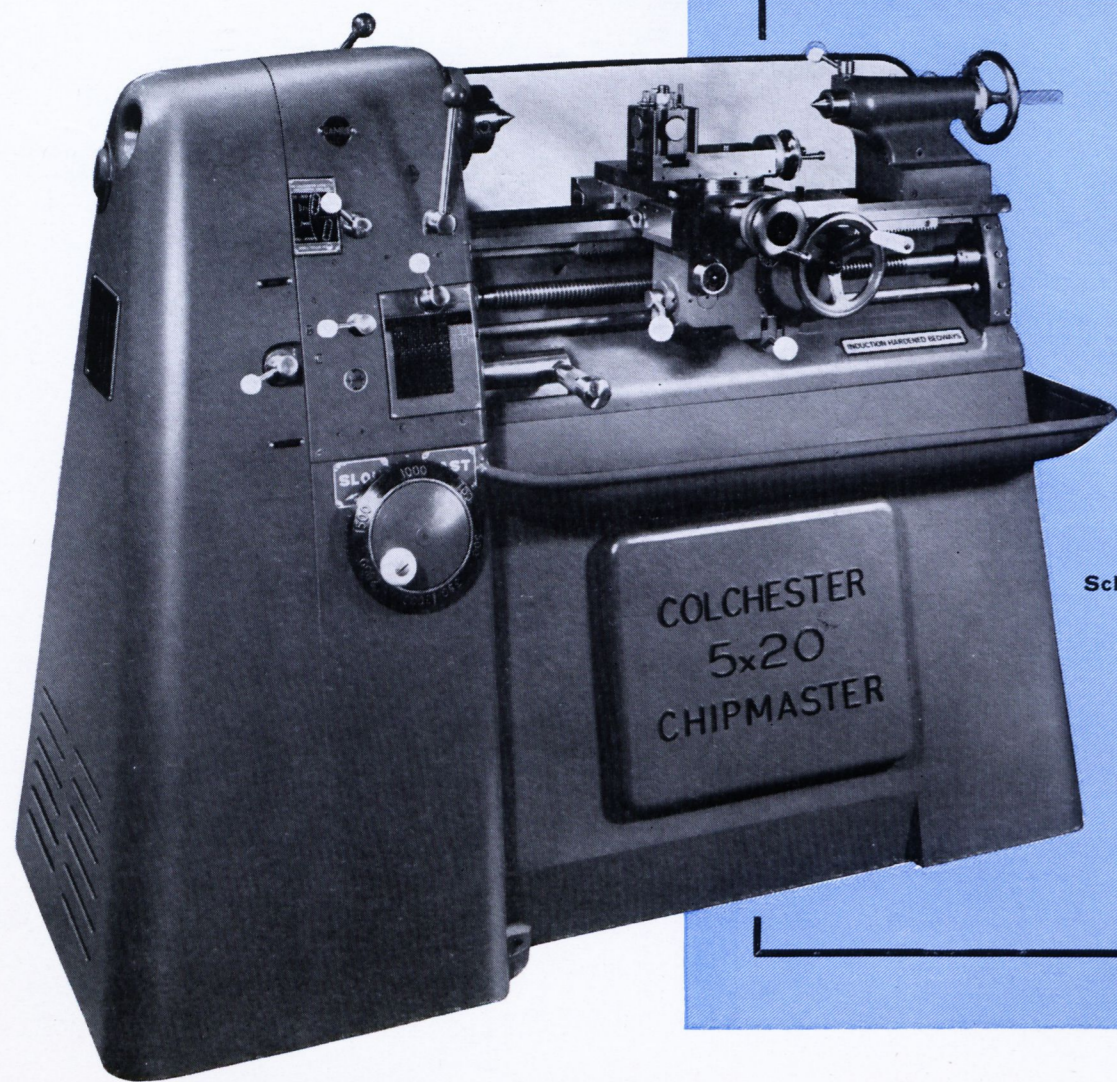
COLCHESTER

Chipmaster Precision Lathe

**Colchester Chipmaster
5 in. x 20 in. (130 mm x 510 mm)
High Speed Precision Lathe.**

**Infinitely variable
spindle speeds
35-3,000 r.p.m.**





COLCHESTER CHIPMASTER

5 in. x 20 in. (130 mm. x 510 mm.) High Speed Precision 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 unique design of the machine was made to meet the following basic requirements.

- * A rigid, compact machine having modern lines.
- * Unit construction, permitting the use of modern production techniques, resulting in low initial cost to the user and minimum outlay for routine maintenance.
- * Infinitely variable vibration free drive to the spindle, combined with the high speeds (3,000 r.p.m.) necessary for the production of small precision components requiring a high degree of surface finish.

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., bored to receive ¾ in. dia. shank toolholder.

Colchester type No. 259 quick change toolpost complete with 4 standard toolholders, 1 vee holder, 1 morse taper holder and 2 wrenches. 5 in. dia. Burnerd 3-jaw geared scroll D.1. camlock chuck (no backplate required).

8 in. dia. Burnerd 4-jaw independent D.1. camlock chuck (no backplate required).

Burnerd 1½ in. capacity Key operated 'Multisize' Collet Chuck.

Flexible round bore collets for 'Multisize' Collet Chuck; each having ½ in. capacity in steps from ¼ in. to 1½ in. (12 in full set).

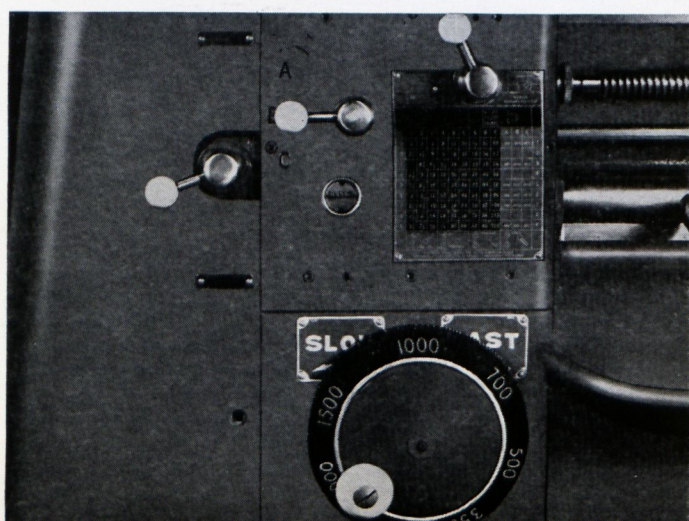
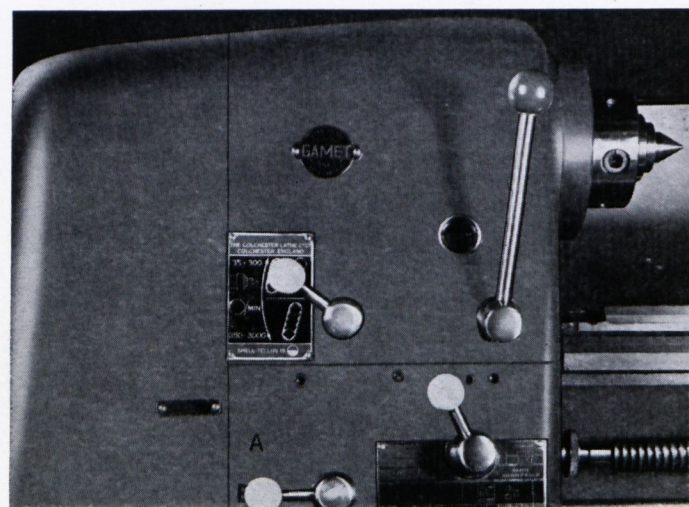
Multi-position longitudinal bed stop with 9½ in. adjustment.

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 seasoned casting has separate vee and flat ways for the saddle and tailstock.

The rigid straight bed design is well ported to allow free fall of swarf and coolant to the rear, and the front wall shaped to provide maximum protection for leadscrew and spline shaft. The bed is securely mounted on a rigid cabinet base which incorporates a suds tray and full length splash guard.

Headstock

The Headstock of totally enclosed oilbath type, incorporating a High (320-3000 r.p.m.) and Low (35-300 r.p.m.) speed range, is driven via a Matrix Clutch.

The change over to High or Low speed is controlled from the front of the Headstock. Having selected the range required the speed within this range is infinitely variable and controlled by a large graduated Handwheel, which may be operated whilst the machine is cutting.

The spindle, which has a hardened D1-3" camlock spindle nose, is carried on Gamet 'Micron Precision' Taper Roller Bearings. A double row bearing is used at the front and a single row at the rear, a light preload being maintained by spring pressure.

Gearbox

Both the Standard and Continental gearbox are of the totally enclosed oilbath type.

Drive to the gearbox is via the normal end gear train when the low spindle speed range is selected being replaced by a toothed rubber belt drive for the high spindle speed range.

A full gearbox specification is given in the table on the back page of this leaflet.

Saddle & Slides

The saddle is of the winged type sliding on separate vee and flat ways with long precision ground bearing surfaces to ensure stability and long life. Large micrometer dials are fitted to both traverse screws. The full width cross slide is machined and drilled during manufacture to accept all the standard extra equipment offered by Colchester.

A single Pillar Type toolpost is supplied as standard but the Colchester Quick Change Toolpost may be readily fitted without modifications.

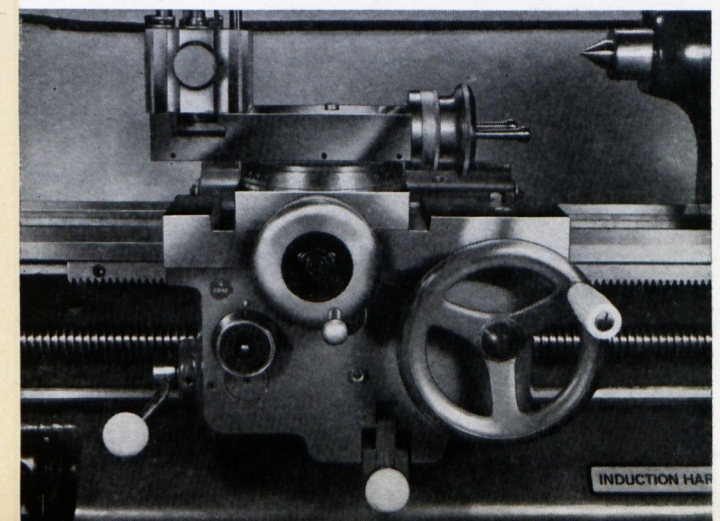
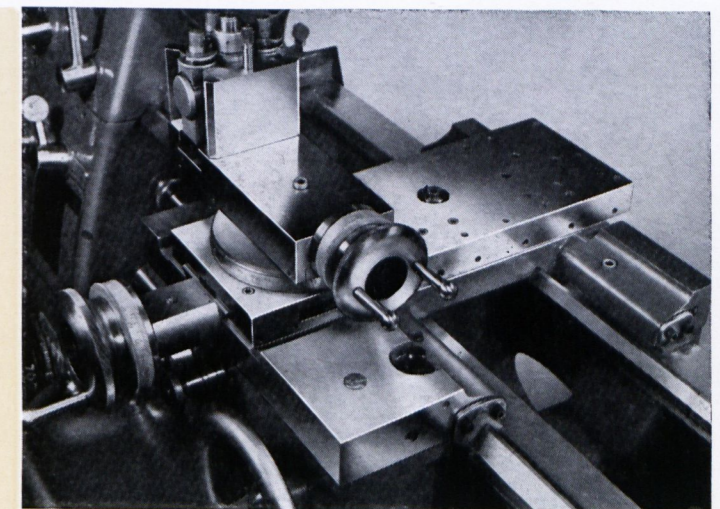
Apron

The apron is of the double wall type and the robust design gives each shaft a two bearing support. The patented knock-off wormbox allows finger tip, positive, operation of the engaging lever and enables accurate working to stops for both sliding and surfacing feeds, it also protects the feedshaft and apron gears from overload. Sliding, surfacing and screwcutting motions are fully interlocked.

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. The main switch controls both forward and reverse running of the motor. A special safety micro-switch fitted to the end guard isolates the motor when the guard is open and the circuit will not operate until the end guard is closed and locked.



Colchester Chipmaster Specification

CAPACITIES OF ALL MODELS

	English	Metric		English	Metric
Height of centres	5 $\frac{5}{8}$ in.	143 mm	Total travel of cross slide	6 $\frac{3}{8}$ in.	162 mm
Distance between centres	20 in.	510 mm	Total travel of top slide	3 $\frac{5}{8}$ in.	92 mm
Swing over bed	11 $\frac{1}{4}$ in.	286 mm	Total travel of tailstock barrel	4 $\frac{1}{4}$ in.	108 mm
Swing over Cross slide	7 in.	178 mm	Taper in tailstock barrel	No. 3 Morse	
Spindle Bore (max. bar. dia.)	1 $\frac{3}{8}$ in.	35 mm	Number of Spindle Speeds	INFINITE	
Spindle nose mounting	3 in. D1 Camlock		Range of Spindle Speeds	35-3000	
Taper in spindle nose bush	No. 3 Morse		Overall length of machine	59 $\frac{1}{4}$ in.	1505 mm
Width of bedways	8 in.	204 mm	Overall width of machine	29 in.	737 mm
Width of bed base	10 in.	254 mm	Overall height of machine	47 $\frac{1}{4}$ in.	1200 mm
Depth of bed	10 in.	254 mm	Drive	Kopp variator via Matrix Clutch	
Motor	3 H.P.		Weight	1120 lbs.	508 kg

MODELS AVAILABLE

TYPE OF GEARBOX	STANDARD	CONTINENTAL
PITCH OF LEADSCREW	4 t.p.i.	6 mm
THREADS:—		
Number of Whitworth threads	53	31
Range of Whitworth threads	2-120 t.p.i.	3-60 t.p.i.
Number of Metric pitches	14	29
Range of Metric pitches	0.5 mm to 12 mm	0.35 mm to 12 mm
Number of Module Pitches	—	15
Range of Module Pitches	—	0.4 — 3.0
FEEDS:—		
Number of sliding feeds	18	10
Range of sliding feeds per rev of spindle	0.001 in.—0.008 in.	0.04 mm—0.28 mm
Number of surfacing feeds	18	10
Range of surfacing feeds per rev of spindle	0.0005 in.—0.004 in.	0.02 mm—0.14 mm

Every Machine is supplied with the Following Standard Equipment:—

Pillar type toolpost	Bedway wipers
Finger-tip electrical reversing switch	Travelling steady
Patented feed cut-out device	Full length splash guard
Two-tone colour finish	Chip and water tray
Faceplate	Electrical equipment for standard
Driving plate	50-cycle, 3-phase, A.C. supply
Two No. 3 Morse taper centres	Set of spanners and keys
Centre bush	Spare parts and operator's manual
Thread indicator (On Standard machines only)	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.,
COLCHESTER ESSEX ENGLAND

Telephone: Colchester 5161

Telex 18255

Telegrams: Lathes, Telex, Colchester



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