COLCHESTER STUDENT 1800

6 1/2 in x 25 in or 40 in (165 mm x 635 mm or 1000 mm)
COLCHESTER STUDENT 1800

- 3 h.p. motor
- 16 spindle speeds in geometric progression, 22 – 1800 r.p.m.
- 13/4" spindle bore
- Induction hardened bed
- 4in D.1 Camlock Nose

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This 6½ in centre height machine, designed primarily for training requirements, is also a very useful production tool with 3 h.p. drive to the spindle and a range of 16 speeds with a maximum of 1800 r.p.m. Available in straight or gap bed versions, 25 in or 40 in between centres.

**Safety Features**

The Colchester Student 1800 incorporates a number of safety features including:

- Full length foot brake interlocked with motor controls
- Electrics include no-volt release and 110v control to push buttons
- Conveniently placed emergency stop button
- Self centring apron control handle fitted with latch, providing positive neutral position
- Interlock between apron thread and feed engagement levers
- Leadscrew and change gears fully protected from overload by shear pins

**Spindle**

The spindle is mounted on self-adjusting Gamet Precision Machine Tool Spindle Bearings, guaranteeing roundness accuracy better than 0.0001 in (2 microns)

- 4 in D.1 Camlock Nose mounting provides minimum chuck overhang combined with fast and safe mounting
- 1 ³/₄ in diameter spindle bore accepts 1 ½ in diameter bar

**Headstock**

- Hardened and Reishauer-ground gears on main transmission
- Speeds 22 – 1800 r.p.m. in geometric progression
- Rapid stopping foot brake interconnected with main motor control

**Gearbox**

- Totally enclosed Universal Gearbox providing a comprehensive range of English and Metric threads (use of change wheels required for coarse range)
- Hardened gears and clutches
- Fitted with anti-friction bearings and lubricated throughout

**Saddle and Slides**

- Micrometer dials reading 0.001 in (0.02 mm) fitted to top and cross-slides
- Cross-slide nut incorporates backlash eliminator
- Taper gibbs for fine adjustment are provided for the saddle, cross-slide and top-slide
- Bedway wips are fitted as standard
## Specification

<table>
<thead>
<tr>
<th></th>
<th>Height of centres</th>
<th>Width of bedways</th>
<th>Swing over bed</th>
<th>Total travel of cross slide</th>
<th>Swing over cross slide</th>
<th>Total travel of top slide</th>
<th>GAP BED MODELS</th>
<th>Total travel of tailstock barrel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6(\frac{1}{2}) in (165 mm)</td>
<td>9(\frac{1}{2}) in (230 mm)</td>
<td>13(\frac{3}{4}) in (335 mm)</td>
<td>8(\frac{1}{2}) in (210 mm)</td>
<td>8(\frac{1}{2}) in (210 mm)</td>
<td>3(\frac{1}{2}) in (95 mm)</td>
<td>6(\frac{1}{2}) in (145 mm)</td>
<td>6(\frac{1}{2}) in (145 mm)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Swing in gap</th>
<th>Number of spindle speeds</th>
<th>Width in front of faceplate</th>
<th>Range of spindle speeds</th>
<th>Spindle bore (max. bar dia.)</th>
<th>Overall width of machine</th>
<th>Spindle nose mounting</th>
<th>Overall height of machine</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>19 in (480 mm)</td>
<td>16</td>
<td>4(\frac{1}{4}) in (115 mm)</td>
<td>22 - 1800 r.p.m.</td>
<td>1(\frac{1}{4}) in (40 mm)</td>
<td>35 in (890 mm)</td>
<td>4 in D.1 Camlock</td>
<td>47 in (1193 mm)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Taper in spindle nose bush</th>
<th>Taper in tailstock barrel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. 3 Morse</td>
<td>No. 3 Morse</td>
</tr>
<tr>
<td></td>
<td>Drive</td>
<td>Motor</td>
</tr>
<tr>
<td></td>
<td>2 A' Section Vee Belts</td>
<td>3 h.p.</td>
</tr>
</tbody>
</table>

### THREADS

<table>
<thead>
<tr>
<th>Number of Whitworth threads</th>
<th>Number of Module pitches</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>18</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Range of Whitworth threads</th>
<th>Range of Module pitches</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 - 21 t.p.i.</td>
<td>0.3 - 3.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Diametral pitches</th>
<th>Range of Sliding feeds per rev. of spindle</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>0.001 in - 0.040 in (0.033 mm - 1.0 mm)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Metric pitches</th>
<th>Range of Surfacing feeds per rev. of spindle</th>
</tr>
</thead>
<tbody>
<tr>
<td>39</td>
<td>0.0005 in - 0.020 in (0.015 mm - 0.6 mm)</td>
</tr>
</tbody>
</table>

### FEEDS

<table>
<thead>
<tr>
<th>Range of Metric pitches</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2 mm - 14.0 mm</td>
</tr>
</tbody>
</table>

### STANDARD EQUIPMENT (unless otherwise specified)

- Slotted toolblock
- Driving plate
- Centre bush
- Two No. 3 Morse Taper centres
- Thread indicator
- Electrical equipment for standard 3 phase 50 cycle a.c. supply 110 volt control
- End guard limit switch
- Set of spanners and keys
- Instruction and spare parts manual
- Accuracy chart
- Electric coolant pump, tank and fittings
- Splash guard
- Chuck guard
- Apron dial (English or Metric)
- Emergency Stop Button
- Latheula Isolator switch
- Rear adjustable spindle lock

### Models available

<table>
<thead>
<tr>
<th>Code Word</th>
<th>Bed Type</th>
<th>Distance between Centres</th>
<th>Overall Length of Machine</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>STUDENT 1800 25-straight</td>
<td>straight</td>
<td>25 in</td>
<td>63 in</td>
<td>1740 lb</td>
</tr>
<tr>
<td>STUDENT 1800 25-gap</td>
<td>gap</td>
<td>635 mm</td>
<td>1605 mm</td>
<td>790 kg</td>
</tr>
<tr>
<td>STUDENT 1800 40-straight</td>
<td>straight</td>
<td>40 in</td>
<td>70 in</td>
<td>1060 lb</td>
</tr>
<tr>
<td>STUDENT 1800 40-gap</td>
<td>gap</td>
<td>1000 mm</td>
<td>1985 mm</td>
<td>840 kg</td>
</tr>
</tbody>
</table>

### PRODUCT CODE

- ENGLISH: With English pitch leadscrew; dial graduations in inches.
- METRIC: With Metric pitch leadscrew; dial graduations in millimetres.

### For increased versatility, use COLCHESTER Accessories

- Hydraulic Profiling Equipment, with Final Cut facility
- Capstan Equipment
- High-speed Threading Units (English and Metric)
- Toolposts—Front 4-way automatic indexing turret
- Colchester Quick-Change Toolposts
- Rear slotted toolpost
- Colchester Quick-Change Rear Toolposts
- 1\(\frac{1}{2}\)in capacity Burnerd key-operated 'Multisize' Collet Chuck
- 1\(\frac{1}{2}\)in capacity Burnerd lever-operated 'Multisize' Collet Chuck
- Faceplates
- Bedspins
- Travelling steady
- Stationary steady
- Taper Turning Attachment
- Machine Lighting
- G.M.T Centring Centre
- Longitudinal Positioning Accessory
- English/Metric Dual Reading Dials
- Universal Magnetic based dial gauge

These are a selection of the many accessories available which are described in full in the price list and the comprehensive brochure.

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

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THE COLCHESTER LATEH COMPANY LTD

COLCHESTER : ESSEX : ENGLAND

THE 600 GROUP

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Telephone: Colchester 865161 Telex: 98256 Telegrams: Lathes, Telex, Colchester

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