

Colchester & Harrison Centre Lathes

# Engineered for efficiency

Colchester & Harrison manual lathes are renowned worldwide for quality and reliability.

### Built to withstand rugged, heavy duty use, our lathes give years of outstanding service with the absolute minimum of maintenance. At the same time, all Colchester & Harrison manual lathes are capable of very fine precision turning.

Our VS manual lathes produce outstanding results not least due to their infinitely variable spindle speed feature. The standard ACU-RITE CSS DRO allows exactly the right speed for every job so tools perform better, cycle times are optimised and quality improves.

Our entire range gives you exceptional ease of use and a huge choice of optional and ancillary equipment guarantees top of the range performance even for the most complex and challenging jobs.

With our investment in modern machine tool manufacturing technology, plant and assembly techniques, coupled with the latest quality-driven methodology and business practices, Colchester & Harrison are able to provide the same traditional solution to customers as yesteryear. However, today, customers have the additional benefit of a machine tool building company driven by the ambition of a 'world-class' strategy.

# Student / M300



- Fully geared headstock with 12 spindle speeds from 40-2500rpm
- 2.2kW (3hp) spindle motor
- 635mm and 1000mm bed length options
- 330mm swing over bed
- D1-4 Camlock spindle nose
- Induction hardened and ground bed
- Fully universal gearbox with most metric and imperial threads catered for
- Built to standards DIN 8606 and BS4656 Part 1
- Optional DRO (no CSS)
- Super high precision taper roller spindle bearings
- The "number 1" choice for training establishments worldwide

# Master VS\* / V350



# Triumph VS\* / V390



- New ergonomic design for optimum performance
- Advanced variable speed spindle drive from 17-3250rpm in 3 infinitely variable ranges
- 7.5kW (10hp) spindle motor
- 650mm gap bed
- 350mm swing over bed
- D1-4 Camlock spindle nose
- Induction hardened and ground bed
- Precision hardened and ground gears in headstock
- Built to meet all known world safety standards
- The ultimate variable speed training lathe
- CSS DRO as standard

- New ergonomic design for optimum performance
- 3 range variable speed drive from 14-2500rpm
- 7.5kW (10hp) spindle motor
- 1250mm gap bed
- 400mm swing over bed
- D1-6 Camlock spindle
- Induction hardened and ground bed
- Precision hardened and ground gears in headstock
- The world's "best known" centre lathe
- CSS DRO as standard

## Mascot VS / V460

# Colcheste Machine Tool Solutions 600 Group Harrison MASCOT VS / V460 1

Magnum/V660



- Medium duty, variable speed spindle drive in 3 ranges from 20-2000rpm
- 11kW (15hp) spindle motor
- 1000, 1500 and 2000mm gap bed length options
- Mastiff VS / V550
- 460mm swing over bed • D1-8 Camlock spindle nose
- Induction hardened and ground bed
- Precision hardened and ground gears in headstock
- Fingertip traverse control via saddle mounted joystick
- The "number 1" toolroom/general purpose centre lathe
- CSS DRO as standard

- 104mm spindle bore with 155mm option
- Heavy duty 22kW (30hp) spindle motor
- 1500 to 4000mm gap bed length options available
- Heavy duty variable speed spindle drive in 3 ranges from 18 -1800 rpm (1000rpm on 155mm bore option)
- 670mm swing over bed

# Magnum LS/ V800





- 104mm spindle bore
- Heavy duty, variable speed spindle drive in 3 ranges from 18-1800rpm
- 11kW (15hp) spindle motor
- 1000mm to 3000mm gap bed length options
- 554mm swing over bed
- D1-11 Camlock spindle nose
- Induction hardened and ground bed
- Precision hardened and ground gears in headstock
- Fingertip traverse control via joystick
- World's "number 1" heavy duty
- production centre lathe
- CSS DRO as standard

- 104mm spindle bore with 155 and 230mm options
- Heavy duty 22kW (30hp) spindle motor
- 1500 to 4000mm gap bed length options now available
- Heavy duty variable speed spindle drive in 3 ranges from 18 -1800rpm (1000rpm on 155mm bore and 600rpm on 230mm options)
- 820mm swing over bed

Induction hardened & ground bed

 Precision hardened and ground gears in headstock

• Induction hardened & ground bed

• Precision hardened and ground gears in headstock

# Specifications

#### Digital Readout with Constant Surface Speed Features

- Standard on all VS series lathes +
- DRO automatically adjusts spindle speed to maintain constant surface cutting speed during facing operations
- Lock axis feature to establish tool offsets with tool under load
- Instant conversions for radius/diameter and inch/ metric
- Position-TRAC<sup>™</sup> a unique feature to re-establish workpiece zero after power loss
- 2axis or 3axis LCD display with graphics and conversational prompt
- Absolute and incremental displays with pre set and zero reset
- Taper calculator
- 16 Tool offsets/diameter
- Near zero warning
- Intuitive operation with multi-language support
- Accuracy ± 5µm, repeatability within 1 count



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

+ Options on the Magnum / V660 and Magnum LS / V800 versions.

+ + Dependant on tailstock, centres and tooling specified.

### **Centre Lathes** Specifications

|                                | Student / M300  | Master VS /<br>V350 |
|--------------------------------|---|---------------------|
| Height of Centres              | 167mm   | 170mm               |
| Bed Length Between<br>Centre++ | 635/1000mm  | 650mm               |
| Swing over Bed                 | 330mm   | 350mm               |
| Swing in Gap                   | 480mm   | 535mm               |
| Swing over Cross Slide         | 210mm   | 196mm               |
| Spindle Bore                   | 40mm  | 42mm                |
| Spindle Nose Mounting          | D1-4 Camlock  | D1-4 Camlock        |
| Morse Taper in Nose Bush       | No. 3 MT  | No. 3 MT            |
| Number of Speed Ranges         | 12  | 3 Variable          |
| Range                          | 40-2500rpm  | 17-3250rpm          |
| Motor                          | 2.2kW   | 7.5kW               |
| Number of Metric Pitches       | 45  | 51                  |
| <b>Range of Metric Pitches</b> | 0.2 to 14mm   | 0.2 to 14mm         |
| Number of Imperial Pitches     | 52  | 56                  |
| Range of Imperial Pitches      | 2 to 56 TPI   | 2 to 56 TPI         |
| Number of Diametral<br>Pitches | 18  | 20                  |
| Range of Diametral Pitches     | 8 to 56 DP  | 8 to 56 DP          |
| Number of Module Pitches       | 18  | 20                  |
| Range of Module Pitches        | 0.3 to 3.5 MOD  | 0.2 to 3.5 MOD      |
| Width over Bedways             | 140mm   | 318mm               |
| Travel of Cross Slide          | 135mm   | 250mm               |
| Travel of Top Slide            | 90mm  | 90mm                |
| Tailstock Travel               | 100mm   | 140mm               |
| Taper in Tailstock Barrel      | No. 3 MT  | No. 4 MT            |
| Weight (Net)                   | 640 / 720kg   | 1480kg              |
| Dimensions L x W x H           | 1.68 x .97 x 1.40 2.03 x 1.35 x   2.13 x 1.02 x 1.45 1.65 |                     |

| Triumph VS / V390  | Mascot VS / V460                    | Mastiff VS / V550                          | Magnum / V660   | Magnum LS / V800                         |
|--------------------|-------------------------------------|--|---|--|
| 195mm              | 230mm                               | 280mm                                      | 335mm   | 412mm                                    |
| 1200mm             | 1000/1500/2000mm                    | 1000/1500/2000/3000mm                      | 1500/2000/3000/4000mm                                 |  |
| 400mm              | 460mm                               | 554mm                                      | 670mm   | 820mm                                    |
| 585mm              | 730mm                               | 830mm                                      | 910mm   | 1060mm                                   |
| 246mm              | 270mm                               | 370mm                                      | 430mm   | 580mm                                    |
| 54mm               | 76mm                                | 104mm                                      | 104 / 155mm   | 104 / 155 / 230mm                        |
| D1-6 Camlock       | D1-8 Camlock                        | D1-11 Camlock                              | D1-11 / A2-11   | D1-11 / A2-11 / A2-15                    |
| No. 4 MT           | No. 5 MT                            | No. 5 MT                                   | No. 6 MT  | No. 6 MT                                 |
| 3 Variable         | 3 Variable                          | 3 Variable                                 | 3 Variable  | 3 Variable                               |
| 14-2500rpm         | 20-2000rpm                          | 18-1800rpm                                 | 18-1800 / 1000 rpm                                    | 18-1800/1000/600 rpm                     |
| 7.5kW              | 11kW                                | 11kW                                       | 22kW  | 22kW                                     |
| 51                 | 66                                  | 66   | 59  | 59                                       |
| 0.2 to 14mm        | 0.2 to 14mm                         | 0.2 to 14mm                                | 0.2 to 14mm   | 0.2 to 14mm                              |
| 56                 | 73                                  | 73   | 51  | 51                                       |
| 2 to 56 TPI        | 2 to 84 TPI                         | 2 to 84 TPI                                | 2 to 84 TPI   | 2 to 84 TPI                              |
| 20                 | 27                                  | 27   | 27  | 27                                       |
| 8 to 56 DP         | 8 to 72 DP                          | 8 to 72 DP                                 | 8 to 72 TPI   | 8 to 72 TPI                              |
| 20                 | 20                                  | 20   | 20  | 20                                       |
| 0.2 to 3.5 MOD     | 0.2 to 3.5 MOD                      | 0.2 to 3.5 MOD                             | 0.2 to 3.5mm  | 0.2 to 3.5mm                             |
| 318mm              | 400mm                               | 400mm                                      | 480mm   | 480mm                                    |
| 250mm              | 300mm                               | 300mm                                      | 406mm   | 406mm                                    |
| 125mm              | 195mm                               | 195mm                                      | 165mm   | 165mm                                    |
| 140mm              | 180mm                               | 180mm                                      | 300mm   | 300mm                                    |
| No. 5 MT           | No. 6 MT                            | No. 6 MT                                   | No. 6 MT  | No. 6 MT                                 |
| 1725kg             | 2730 / 2870 / 3120kg                | 2820 / 2890 /<br>3120 / 3700kg             | 3700 / 4000 / 4700 / 5400kg                           | 4400 / 4900 / 6000 / 7100kg              |
| 2.72 x 1.35 x 1.65 | 2.75 / 3.25 /<br>3.75 x 1.70 x 2.05 | 2.75 / 3.25 / 3.75 /<br>4.75 x 1.70 x 2.10 | 3.85 / 4.35 / 5.35 / 6.35 /<br>7.35 / 8.3 x 1.8 x 1.9 | 3.85 / 4.35 / 5.35 / 6.35<br>x 1.8 x 1.9 |

# **Support & Service**

### **Buy Spare Parts**

With over £4 million of Colchester, Harrison & Clausing spares, our experts are there to help you identify the correct replacement part and ensure prompt delivery every time.



Reliable Servicing Our factory trained engineering team are always available to support your machine tool, either through our dedicated help-desk or out in the field.



### Machine Tool Finance

Colchester Machine Tool Solutions offer a range of innovative and highly competitive finance packages to support your machine tool purchase.



Valuable Training Whether it's when your new machine arrives, or more intensive courses to ensure that you make the most of your machine tool, our applications specialists are there to support you.



**Delivery & Installation** Our highly trained transport and service teams are on-hand to effectively deliver, install and commission your machine tool exactly to your satisfaction.



#### Preventative Maintenance

We work closely with you on a range of preventative maintenance contracts ensuring your assets are utilised fully, whether for one machine or a workshop of our machine tools.

FOR FURTHER INFORMATION, TO REQUEST A BROCHURE OR DEMONSTRATION PLEASE CONTACT OUR SALES TEAM +44 (0) 1924 415000 | mail@colchester.co.uk | colchester.co.uk



Lowfields Way, Lowfields Business Park, Elland, West Yorkshire, HX5 9DA, United Kingdom