Hercus

260 LATHE

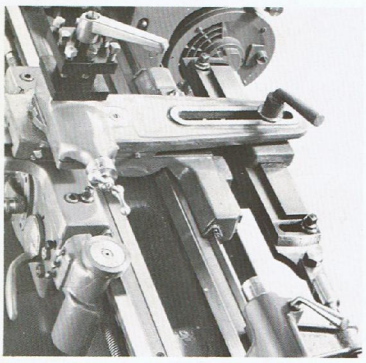
MODEL T

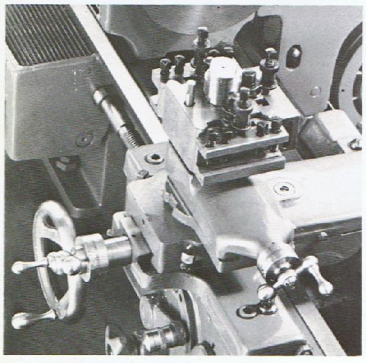
260T Belt Drive Back Geared Head

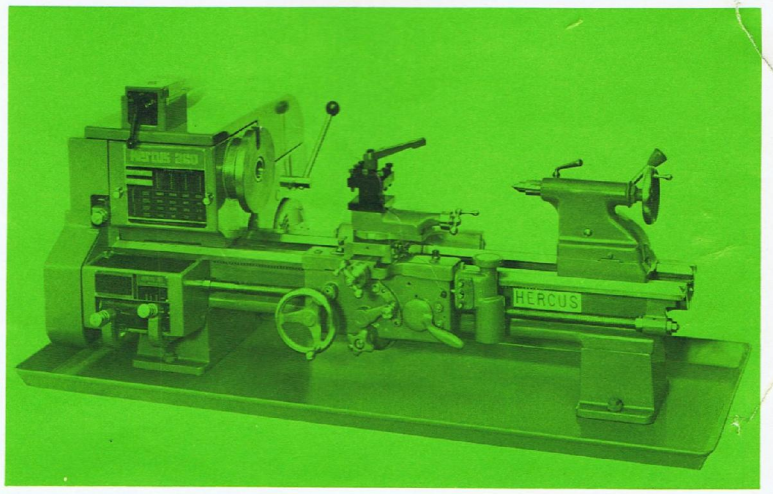
The Hercus 260T Lathe
Is a precision machine tool built to high standards of accuracy and workmanship established during over fifty years of manufacturing experience. Designed to modern principles of safety and compactness this lathe is ideally suited for both Industrial and Technical Training purposes. Many years of dependable service with only a minimum of maintenance is built into every lathe and this is supported by a reliable spare parts service. The lathe can be supplied in several models to suit various requirements and a wide range of attachments and accessories are available to increase the scope of work that can be performed.

The Inspection Record
Shows the normal accuracy standard and each lathe is supplied with its own inspection record. For instrument or toolroom work requiring higher precision the instrument version can be supplied which is aligned to half of normal accuracy standards.

Lathes are Supplied
To operate on either the Inch or Metric system. This affects the screws and graduated collars of the cross slide and top slide as well as the leadscrew and associated change gears or gearbox. Completely different thread chasing dials are required for the inch and metric machines.

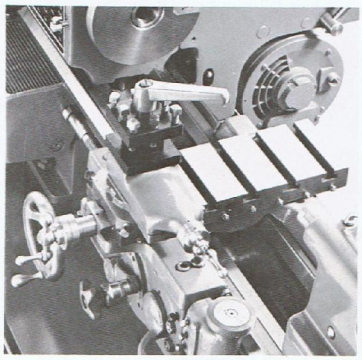

Taper Turning Attachment

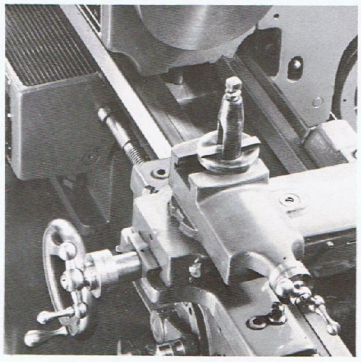

Rapid Style



Model ATM Bench Mounting

The Lathe Bed
Of close grained high quality cast iron is precision ground. The saddle is supported on the two outer vee ways while the inner vee and flat align the headstock and tailstock. Two lengths of bed are available and lathes can be supplied with flame hardened ways if required.


Extended Cross Slide


American Type Tool Post

The Headstock
Is fitted with precision taper roller bearing and the spindle is of high tensile alloy steel. The large clearance bore through the spindle gives the lathe increased versatility. A total of 16 spindle speeds can be obtained through the vee belt drive and back gears. The quick action belt tensioning simplifies speed changing while ensuring vibration-free operation. The countershaft is mounted on ball bearings.

The Tailstock
Can be set over for taper turning and has an eccentric locking lever for clamping it to the bed. The barrel has both inch and metric graduations and is self ejecting for the No. 2 Morse taper centre.

The Saddle
Has a long bearing on the bedways and is hand scraped to obtain a good matching. The top slide swivels to any angle and is graduated through 360°. The extended cross slide can be fitted in place of the standard slide and has four tee slots which can accommodate another tool post or workpieces for boring or milling operations. Also a taper turning slide can be fitted in place of the standard slide.

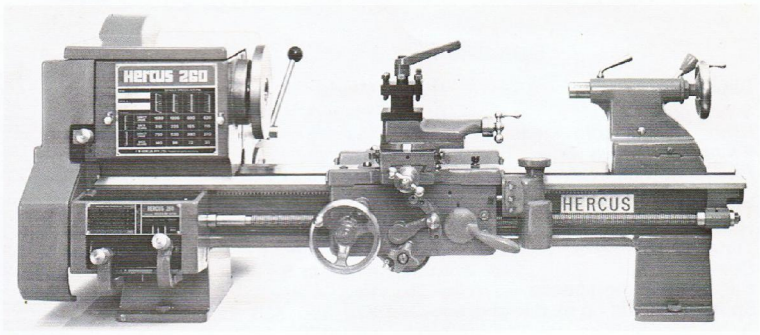
The Standard Lathe
Is supplied with a square tool post with both indexing and angular setting capabilities. Alternatively the lathe can be supplied with an American type tool post or a rapid style tool block.

The Three Basic Lathe Models
Differ only with regard to the screwcutting and feed mechanisms.

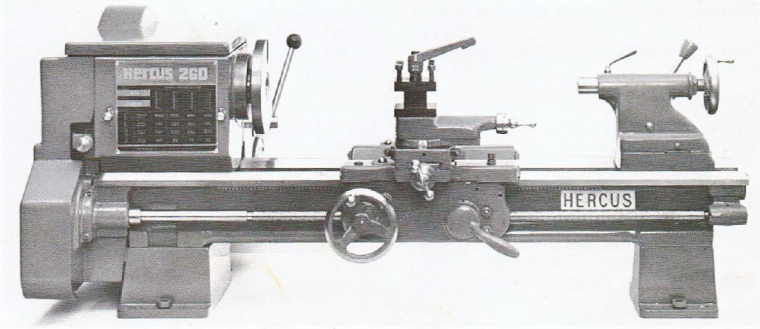
The Model A
Has a quickchange gearbox and power feed apron. The gearbox enables a quick and simple selection of screw threads or feed rates while the apron may be used to either engage the leadscrew thread for screw-cutting or drive from the leadscrew keyway for power feeds. The power feed engaging lever can select either longitudinal or cross feeds and is interlocked with the thread half-nuts to prevent simultaneous engagement.

The Model B
Has the same power feed apron but is not fitted with the quick change gearbox. Screw threads and feed rates are obtained by using a set of change gears.

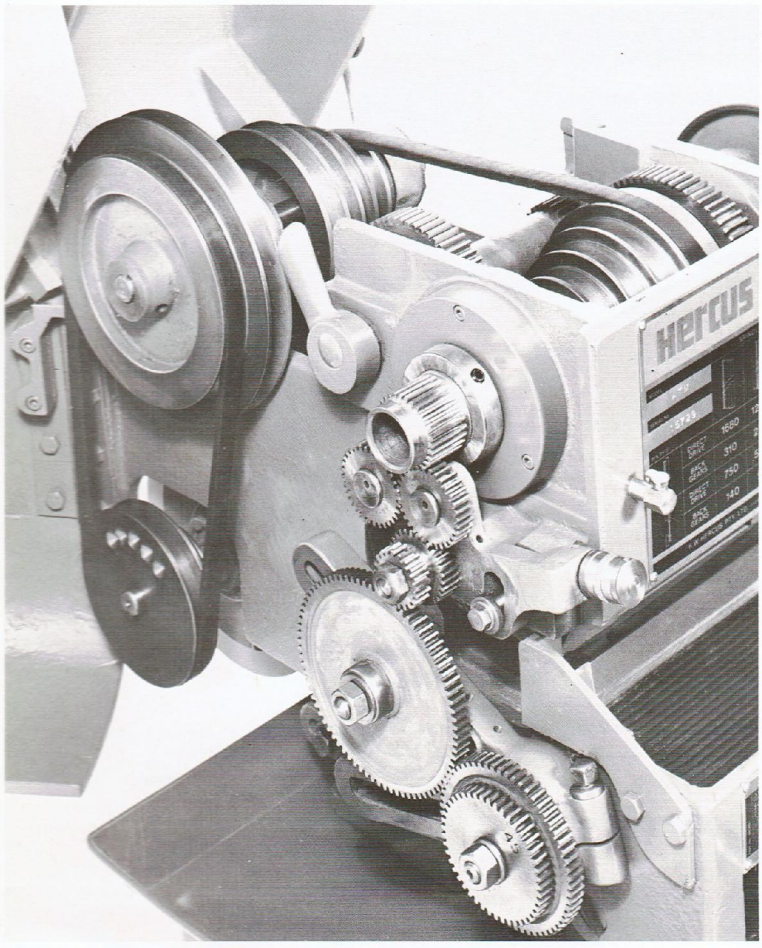
The Model C
Is the simplest version having a plain apron which engages the leadscrew thread for screw cutting and also for a limited range of longitudinal feeds only. Screw threads and feed rates are obtained by using a set of change gears.



Model ATM



Model CTM



Headstock and Drive Unit

Safety Requirements
Have been taken into account in the design of this Lathe. The headstock, drive unit and change gears are enclosed by two hinged guards which can be easily opened for belt or gear changing. When special protection is required an electrical safety switch can be fitted to stop the machine while the guards are open. The switch is operated by the top guard using a positive switching action which makes it impossible to start the motor while the guard is open. A mechanical interlock ensures that the top guard cannot be closed while the change gear guard is open. An adjustable stop at the rear of the saddle can be set to operate the same switch to limit the forward movement of the saddle. This safety switch requires the lathe to be fitted with a magnetic contactor switch.

The 260 Lathe
Is basically a bench lathe but it can be supplied with a sturdy steel cabinet stand. To this stand an electrical panel can be fitted which includes a magnetic contactor with overload protection and no-volt release. Also a reversing switch, low volt light, coolant system and isolating switch can be added if required.

Standard Equipment
For all lathes includes a drive plate, taper sleeve for headstock spindle, pair hardened centres working spanners and necessary change gears. Also each machine is supplied with an operators handbook and spare parts book.

HERCUS 260 LATHE

Specifications

Capacities	Inch	Metric
Swing over bed	10¼"	260 mm
Swing over saddle wings	10"	254 mm
Swing over cross slide	6¼"	159 mm
Admits between centres	21" or 30"	535 mm or 765 mm
Headstock		
Hole through spindle	1 1/16"	27 mm
Taper in spindle	No. 4 Morse	No. 4 Morse
Spindle nose	1¾" 8 T.P.I.	44.4 mm 8 T.P.I.
Number spindle speeds	16	16
Spindle speeds r.p.m. direct drive (50 Hz)		270, 390, 530, 620, 750, 890, 1200, 1680
Spindle speeds r.p.m. back gears (50 Hz)		50, 72, 98, 115, 140, 165, 225, 310
Spindle speeds r.p.m. direct drive (60 Hz)		325, 465, 635, 740, 900, 1060, 1430, 2000
Spindle speeds r.p.m. back gears (60 Hz)		60, 85, 116, 135, 165, 195, 270, 370
Tailstock		
Spindle taper	No. 2 Morse	No. 2 Morse
Spindle travel	2⅛"	54 mm
Tailstock set over	5/8"	16 mm
Slides		
Cross slide travel	6"	152 mm
Compound slide travel	2¼"	57 mm
Compound swivel graduated	360°	360°
Base tool post to lathe centre	1 1/16"	18 mm
Threads and Feeds		
Leadscrew Acme thread	¾" x 8 T.P.I.	19 mm x 3 mm pitch
Range screw threads:		
Model A (36) 5 to 76 T.P.I.		(35) 5-0.25 mm pitch
Model B (41) 4 to 112 T.P.I.		(44) 7.5 to 0.2 mm pitch
Model C (41) 4 to 112 T.P.I.		(44) 7.5 to 0.2 mm pitch
Range longitudinal feeds:		
Model A (36) .0388-.0026 inches/Rev.		(35) 1.026-.051 mm/Rev.
Model B (34) .0242-.0017 inches/Rev.		(36) .718-.041 mm/Rev.
Model C (13) .0156-.0021 inches/Rev.		(13) .402-.054 mm/Rev.
Range cross feeds:		
Model A (36) .0123-.0008 inches/Rev.		(35) .257-.013 mm/Rev.
Model B (34) .0077-.0005 inches/Rev.		(36) .180-.010 mm/Rev.
Motor (if fitted)		
Power	½ or ¾ h.p.	0.37 or 0.56 kW
Type	4 pole	4 pole
Standard Equipment		
Drive plate	5⅞" dia.	150 mm
Spindle sleeve – taper	No. 2 Morse	No. 2 Morse
Centres (2)	No. 2 Morse	No. 2 Morse
Spanners (2)		
Handbook		
Spare parts book		
Short Bed Bench Lathe		
Net weight	342 lbs.	155 kg
Gross weight packed	496 lbs.	225 kg
Case dimensions	54" x 32" x 26"	1.37 x .81 x .66 metres
Short Bed Lathe on Cabinet		
Nett weight	485 lbs.	220 kg
Gross weight packed	717 lbs.	325 kg
Case dimensions	54" x 32" x 56"	1.37 x .81 x 1.42 metres
Long Bed Bench Lathe		
Nett weight	366 lbs.	166 kg
Gross weight packed	540 lbs.	245 kg
Case dimensions	63" x 32" x 26"	1.60 x .81 x .66 metres
Long Bed Lathe on Cabinet		
Nett Weight	518 lbs.	235 kg
Gross weight packed	805 lbs.	365 kg
Case dimensions	63" x 32" x 56"	1.60 x .81 x 1.42 metres

See separate leaflet for attachments

Inspection Chart

F. W. HERCUS PTY. LIMITED
CNR. BEANS ROAD & ANDERSON STREET, THEBARTON, S.A. 5031

HERCUS 260 PRECISION LATHE

Model ATM Machine No. 15729

INSPECTION RECORD

	Permissible Error	Test Record	Tested By
HEADSTOCK SPINDLE			
Spindle taper run-out–			
At end of 7" bar	.001"	.0003	"
At Spindle Nose	.0003"	.0001	"
Test Bar parallel with bed–			
Horizontal plane (free end inclined towards tool)	.0007"	.0005	"
Vertical plane (free end rising)	.0007"	.0002	"
Axial Slip (Measured at two points displaced by 180°)	.0005"	.0001	"
TAILSTOCK SPINDLE			
Test Bar parallel with bed–			
Horizontal plane (free end inclined towards tool)	.0004 in 2"	.0003	"
Vertical plane (free end rising)	.0004 in 2"	.0003	"
AXIS OF CENTRES			
Horizontal plane (tailstock end inclined towards the tool)	.0005"	.0004	"
Vertical plane (tailstock end rising)	.0005"	.0004	"
CROSS SLIDE ALIGNMENT			
Lathe must face concave only within	.001 on 9" diam.	.001	"
Does saddle fit bed correctly, travel smoothly, and clamp firmly?		✓	"
Do Cross Slide and Compound Rest work smoothly?		✓	"
Does Lead Screw turn freely and nut fit correctly?		✓	"
Tailstock moves freely on bed and clamps firmly		✓	"
Tailstock barrel works smoothly and clamps correctly		✓	"
Tailstock Centre knocks out		✓	"
Tailstock Set-over works correctly and graduations are correct		✓	"
Headstock gears work correctly		✓	"
Gear Box gears and Tumblers all work correctly		✓	"
Apron Gears work correctly		✓	"
All Change Wheels and bushings have been tested and fit into place		✓	"

REMARKS:

Inspected by John Hoyle Date 28 : 4 : 76

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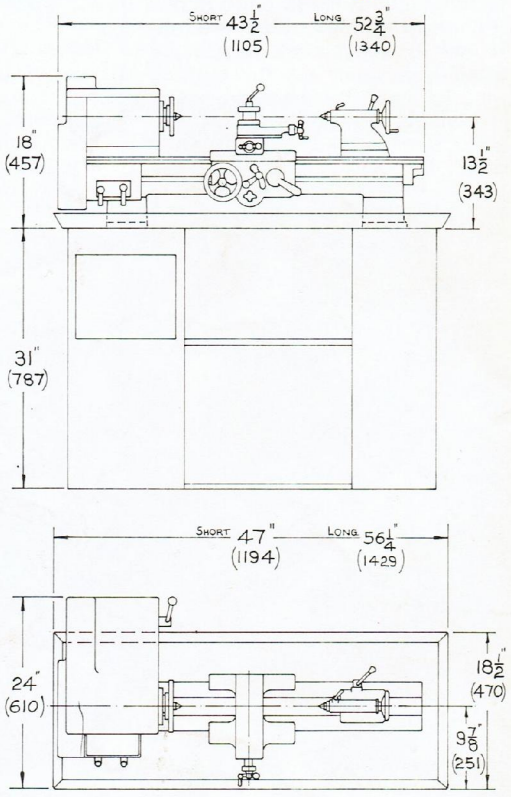
Dimension Drawing



The model designation of the 260 lathe is made up as follows:

Basic model is specified A, B or C
All belt drive lathes have T
If long bed required L
If metric lathe required M
If hardened bed required H
If instrument version required N

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