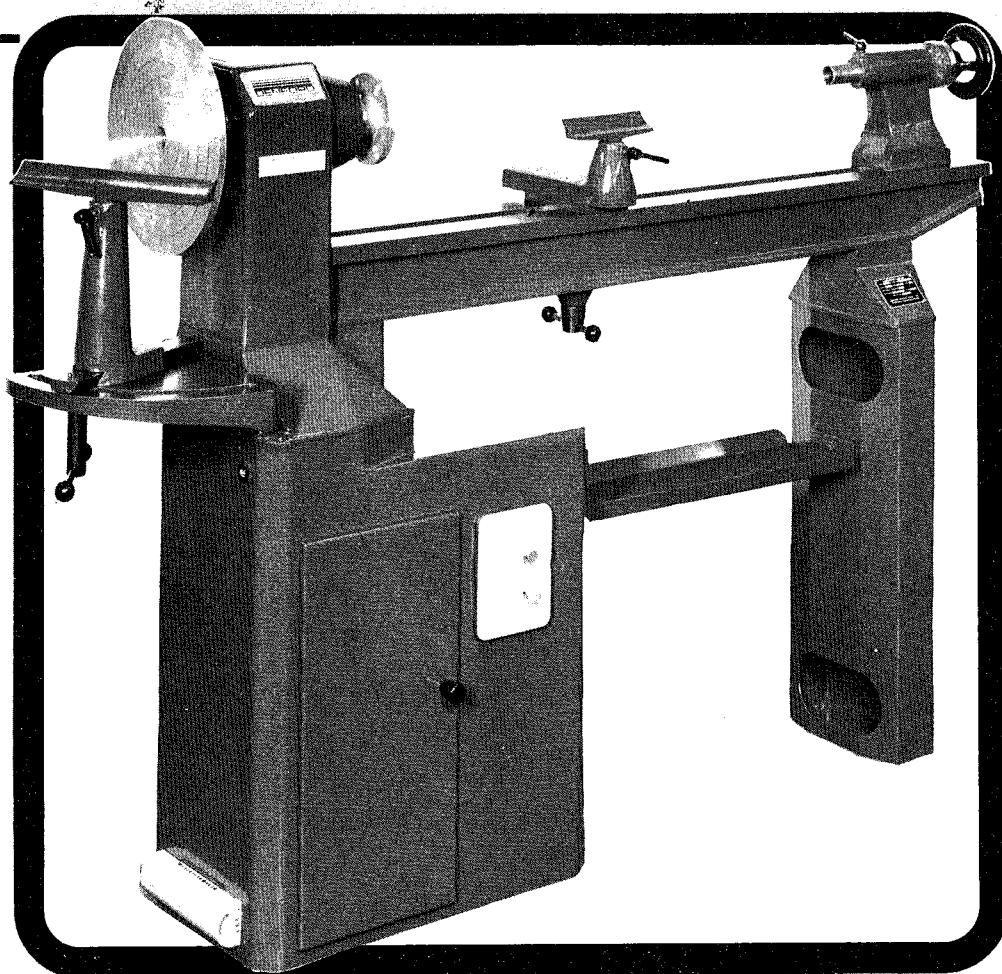


# VICEROY

## WOOD TURNING LATHE TDS 6WL

Viceroy lathes have been designed to meet the requirements of practical wood turners within industry or for students, the design being based on

- Ease of Operation
- Safety
- Robust Construction



### A CLOSE-UP OF THE VICEROY WOOD TURNING LATHES.

**BED** - Heavy duty rigid box section close grain iron casting with machined ways.

**HEADSTOCK** - Enclosed box design with spindle nose proud to facilitate ease of movement when turning, from rear of work-piece.

**MAIN SPINDLE AND BEARINGS** - The 1.5 mm dia. No. 3 M.T. 20 mm bore spindle is made of high tensile steel and is mounted in deep groove, prepacked totally enclosed ball bearings for quiet vibration free running.

**TAILSTOCK** - Incorporates quick action clamp with 20 mm hollow spindle and No. 3 M.T.

**DRIVE** - The 0.56 or 1.12 kW motor (3 phase or 1 phase) is mounted on an adjustable platform for ease of belt tension. The drive from motor to main spindle is through a countershaft.

**PEDESTALS** - Are of welded heavy gauge steel construction and houses the motor and all electrics which are isolated when the pedestal door is opened for belt change etc.

**ELECTRICS** - 3 phase (or 1 phase with capacitor start) controlled through no-volt overload starter with on and off push button remote control.

See over for Specifications.

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**WOOD TURNING LATHE**  
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**TDS 6WL**  
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## DENFORD MACHINE TOOLS LIMITED

### INSTRUCTION MANUAL FOR THE "VICEROY" WOOD TURNING LATHE

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#### INTRODUCTION:

Once delivery of a Viceroy Lathe has been effected, clean the machine thoroughly with paraffin or similar, wiping dry afterwards with a clean cloth. The unpainted surfaces should be covered with a film of good quality oil to protect against rust. Standard and extra equipment should all be inspected and cleaned; and carefully stored away.

At this stage, installation can then be started.

#### INSTALLATION AND FOUNDATION:

The Viceroy Wood Lathes and Bowl Turning Machines' base plates are of large area, especially designed to be mounted on rubber or felt pads. Holes are also provided for bolting down in the traditional manner.

Installation drawing and details of the anti-vibration pads or mats are available on request. Whichever method is chosen for the foundation of the lathe, it is essential that the floor under the machine is level and if it is wooden, adequate steps must be taken to ensure that it is secure. If it is decided to bolt the lathe down it is essential that the locking nuts of the foundation bolts are not over tight.

#### OPERATION:

Once the preliminary installation, lubrication and removing of protective grease is completed, ensure that all moving, running parts are free before lathe is started, ensuring the running-in period is on slow range of speeds.

Spindle Bearings; The 1½" diameter 3 M.T. 13/16" bore spindle is made of high tensile steel and is mounted in deep groove pre-packed totally-enclosed ball bearings for quiet vibrationless running.

Headstock: The cast iron headstock has been designed to allow maximum tool clearance for turning (when using small faceplates and the 6" tool-rest) from behind the spindle nose. This allows work to be virtually completed without the need for re-setting of the work, after the initial set-up on the faceplate.

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Spindle Safety Cover: This fits rear and front of the spindle - whichever position is not in use.

Spindle Speeds: Full details are shown on speed chart fitted to headstock.

Cabinet Micro Switch: When adjustments have been effected inside the cabinet a test run can be made by LIFTING and PULLING LIGHTLY the toggle of the microswitch fitted to the cabinet door into the maintenance position.

Electrical Power Notes: Viceroy Lathes are fitted with three phase or single phase electric motors. If single phase, they are fitted with a capacitor start motor. All Viceroy Machine Tools are fitted with a No-Volt Overload Release Starters, with a large mushroom stop button. The overload Amperage is 7 Amps for single phase motor, 1.2 Amps for three phase motors. In both cases they are set and tested at the works.

OPTIONAL EXTRA EQUIPMENT:

Chucks (Mechanical): Three types of mechanical chucks are available: 3-jaw Self-Centring, 4-jaw Independant and the Drill Chuck. All chucks are supplied fitted to the back plate, ready for screwing on to the spindle nose of the lathe. Before fixing the chuck on to the spindle nose, ensure that there are no particles of dirt, either on the spindle nose or in the chuck back-plate thread. The register on the lathe spindle must equally be free from chips or burrs and kept perfectly clean. After cleaning the spindle nose threads and the back-plate thread, it is advisable to put a drop of oil on the spindle, this will facilitate the removal of the chuck when required. In addition to this precaution, always make sure that your chuck is fully located on the rear register of the spindle. It must never be tightened up against the thread of either the back-plate or the spindle or difficulty will be experienced when removing the chucks or faceplates.

Cup Chucks: These are made of mild steel with a hardened sheer edge and are 2" in diameter with no outside projections. The wood is driven into the taper bore for retention when using short or long lengths - if longer than 4", support with the tailstock centre.

Screw Chuck and Faceplate: The 3" combined screw chuck and faceplate is supplied with a hardened screw which is linked in position by a special grub screw from behind the face-plate, after removing the screw.

Centres: A full range of centres, conical or fork number 3 M.T. can be supplied.

cont'd ...

Sanding Table and Mitres: This consists of an adjustable table for fixing in the outrigger support arm, to be used in conjunction with the sanding disc. A separate mitre is supplied to allow compound angles to be machined.

Wood Turning Tools: Two sets offered, one is the long and strong type which are most favoured and the other is the loughborough scapper tool. Both sets are recommended for their robust design and high quality.

Special Safety Inside Bowl Turning Rest: This new toolrest is specially designed for turning the interiors of large wood bowls on barrels and makes turning inside large bowls a far less hazardous operation than in the past. The rest is manufactured from malleable iron to ensure safety and is now available right hand or left hand.

Hollow Centre (fixed): This is normally supplied for use in conjunction with the long hole boring drill and fits inside the tailstock barrel M.T..

Hollow Centre (revolving): This fits inside the M.T. of the tailstock barrel. The four dogs on the thrust plate of the ball bearing are driven in to the wood, which must be over 2" square - and is used in conjunction with the long hole boring drill, eliminating any friction between the centre and work. It can also be useful for supporting heavy and unbalanced or large diameter work.

Longhole Boring Drill 9.5 mm ( $\frac{3}{8}$ ): This specially designed longhole drill is easy to use and is supplied with 457 mm long extension, the extension being screwed through the wooden handle, and is pushed through the hollow centre (fixed or revolving) in the tailstock, intermittent movement approx  $\frac{1}{2}$ " at a time.

Metal Spinning Attachment: This consists of a special locking arrangement for the hand rest saddle and a special 6" toolrest. This rest is provided with four positions to locate the spinning tools.

Dust Extraction: This is self-contained unit fitted to the rear position when using the sanding table only.

LUBRICATION AND MAINTENANCE:

- 1) HEADSTOCK SPINDLE BEARINGS - no greasing required, deep groove totally-enclosed.
- 2) COUNTERSHAFT - no greasing required, totally-enclosed prepacked ball bearings.
- 3) TAILSTOCK - oil barrel daily, clean and oil barrel thread daily.
- 4) CROSS-SLIDE AND BED - clean and oil all moving parts.
- 5) OUTRIGGER PLATFORM - clean and oil all moving parts.
- 6) MOTOR PLATFORM ADJUSTMENT - oil lever nuts and bearings monthly.
- 7) MOTOR BEARINGS - inspect and oil annually.

A lubricants plate is fixed to all Viceroy machines and shows recommended lubricants. If the recommended lubricants are not available be sure that in all cases a high quality product is used.

MISCELLANEOUS EQUIPMENT:

A full range of accessories are available, as shown on list included i.e. centres, faceplates, chucks, rests etc, as well as other equipment which is available on request and special prices can be quoted for alternative or additional items of non-standard design.

SPARE PARTS:

A complete range of spare parts for your Viceroy product are available as well as comprehensive After Sales Service.

SERIAL NUMBER:

Always quote the code and serial number of the machine when entering in to any correspondence or when ordering spares. This number will be found clearly marked on the lubrication plate on the foot. If electrical, state whether single or three phase. Should any difficulty be experienced with our Wood Lathe or any of our other products - please bring the matter to the attention of your supplier, or contact our Service Department, who will treat your complaints or queries with the necessary urgency.

We trust these instructions are of assistance and will help to ensure that your Viceroy Lathe will give you many years of efficient service.

Please do not hesitate to contact us, should you require any technical advise or further information<sup>3</sup>

COMPREHENSIVE SERVICE AND AFTER SALES POLICY INCLUDES:

- 1) Delivery by our own transport, fitted with off-loading crane and positioning (not fastening down or electrical installation) of the machine in the room at a convenient time pre-arranged with the Headmaster or Contractor on site.
- 2) Testing and demonstrating of the machine ~~when~~ under power to the satisfaction of the user by Denford Machine Tools' Service Engineer, or Technical Representative.
- 3) Periodic inspection by our Service Engineer, or Representatives during the twelve month's guarantee, which also includes materials or workmanship, should they prove to have design or manufacturing faults.

DENFORD MACHINE TOOLS LIMITED  
BIRDS ROYD  
BRIGHOUSE  
WEST YORKSHIRE  
HD6 1NB

Tel: 0484-712264  
Telex: 517478  
Fax: 0484-722160

SECURE WORK PIECE ON CENTRE

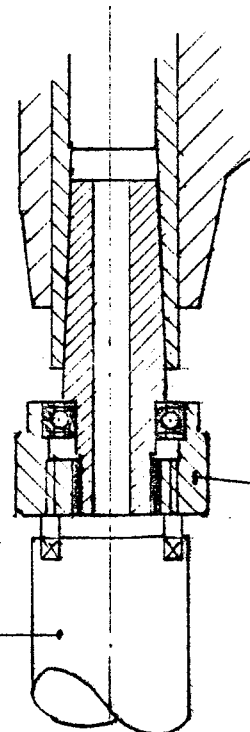
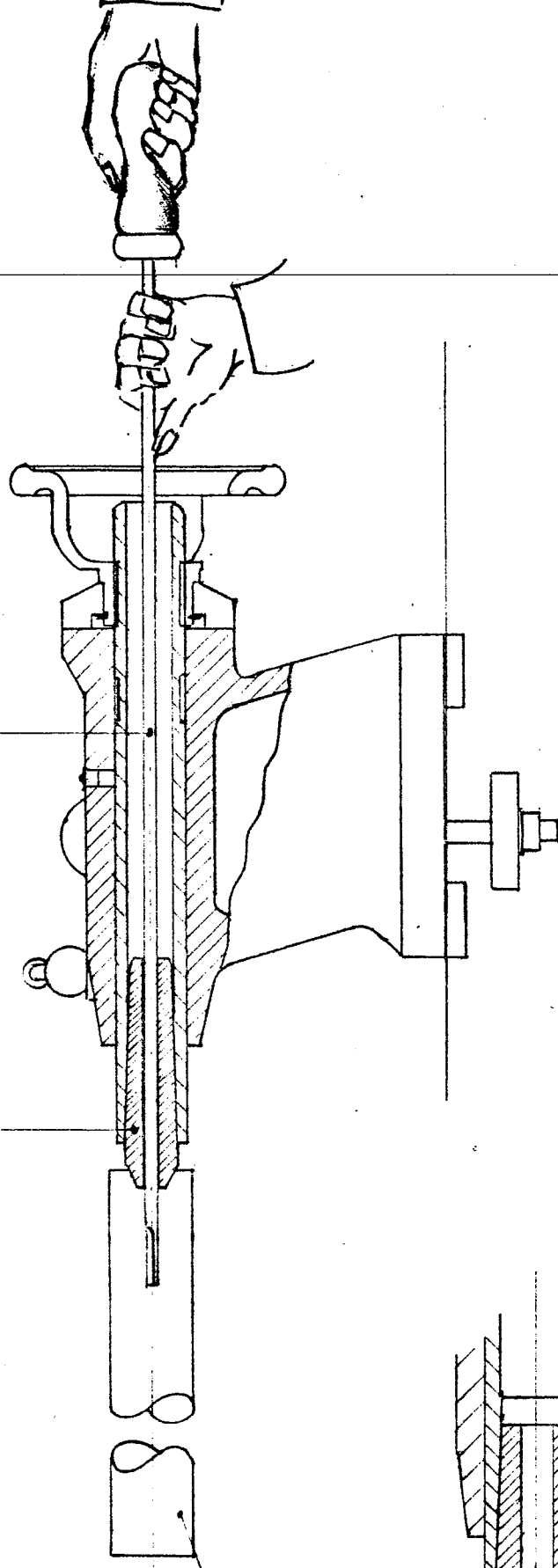
WITH WORK ROTATING AND HOLDING THE LONG HOLE  
AUGER SECURE, FEED THROUGH TAILSTOCK AND HOLLOW  
CENTRE INTO WORK PIECE.

THE DRILL MUST BE REMOVED FREQUENTLY TO  
CLEAR WOOD TURNINGS AND THUS  
PREVENT SEIZURE

LONG HOLE AUGER DRILL

STATIONARY HOLLOW CENTRE

WORK PIECE



HEAVY DUTY HOLLOW REVOLVING CENTRE

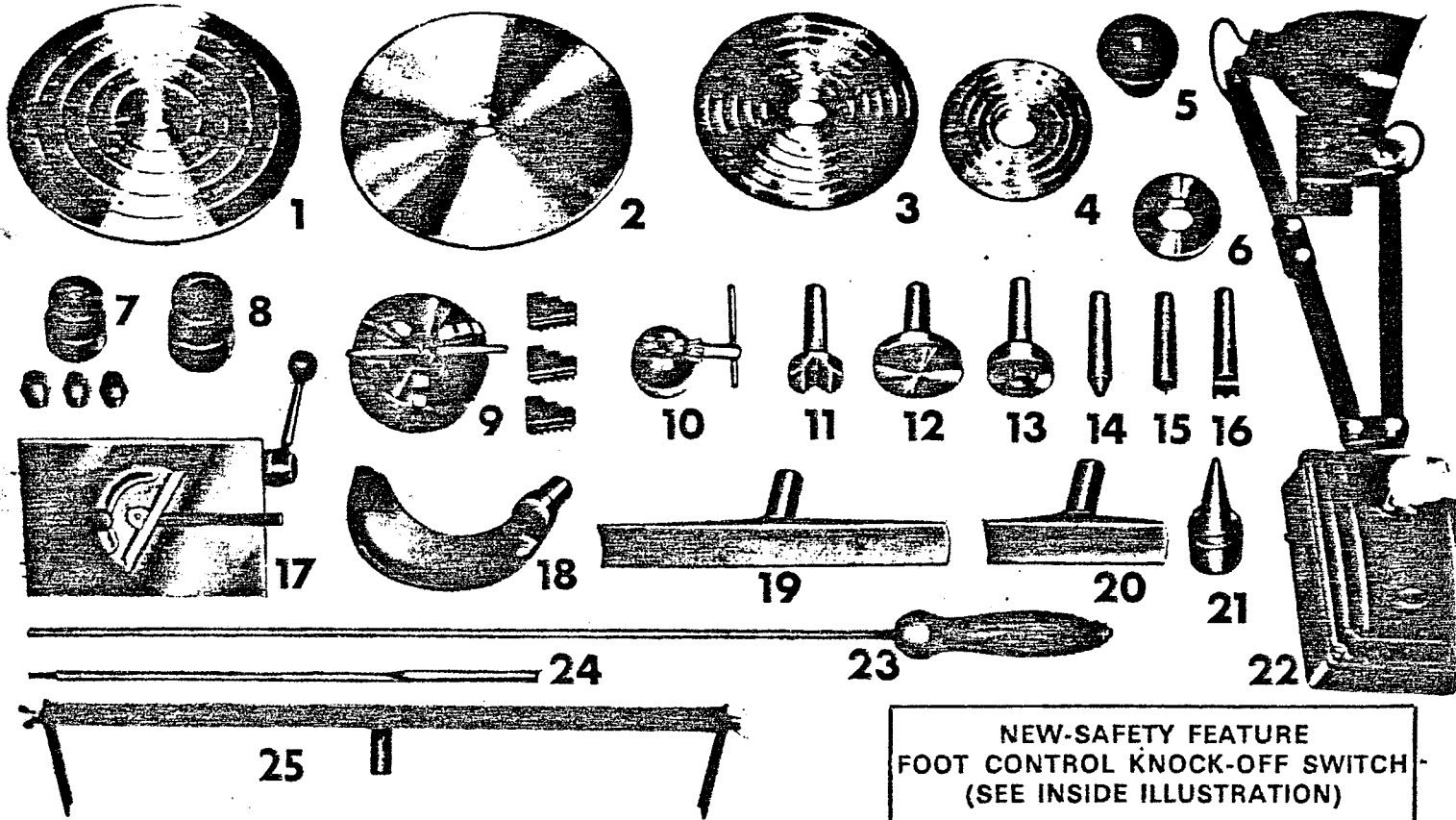
DENFORD MACHINE TOOLS LTD - WOODLATHE LONG HOLE BORING ARRANGEMENT

DRG NO  
SK. 626

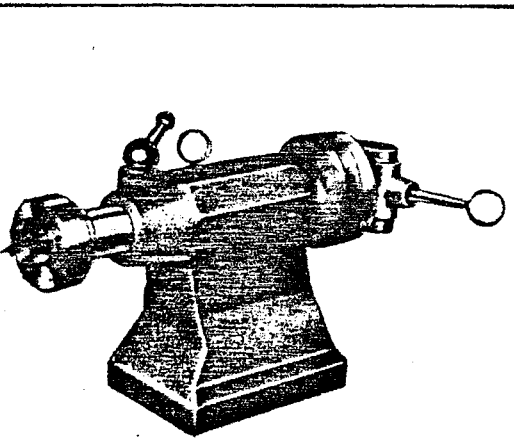


# ACCESSORIES

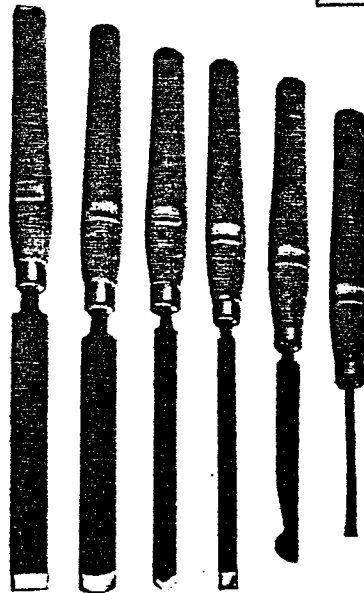
- |                           |   |   |
|---------------------------|---|---|
| 1 12" Face Plate          | 9 4" or 5" Three Jaw Chuck                      | 18 Inside L.H. or R.H. Tool Rest                |
| 2 Sanding Disc            | 10 $\frac{1}{2}$ " Drill Chuck                  | 19 12" Malleable Tool Rest                      |
| 3 8" Face Plate           | 11 Vee Pad                                      | 20 6" Malleable Tool Rest                       |
| 4 5" Face Plate           | 12 Drill Pad                                    | 21 Polishing Spindle                            |
| 5 3" F.P. and screw chuck | 13 H.D. Revolving $\frac{1}{2}$ " Hollow Centre | 22 Low-volt Lighting & Transformer              |
| 6 3" Face Plate           | 14 Standard Hollow $\frac{1}{2}$ " Centre       | 23 Long Hole Drill Extension                    |
| 7 Dowel Collet Chuck      | 15 Cup Centre                                   | 24 Long Hole Auger Drill                        |
| 8 Cup Chuck               | 16 Fork Centre                                  | 25 Long Toolrest 750 mm (30") for TDS.6 WL only |
|                           | 17 Sanding Table and Mitre                      |   |



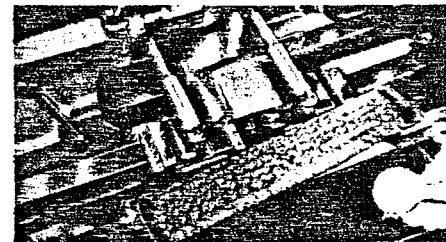
**NEW-SAFETY FEATURE**  
**FOOT CONTROL KNOCK-OFF SWITCH**  
 (SEE INSIDE ILLUSTRATION)



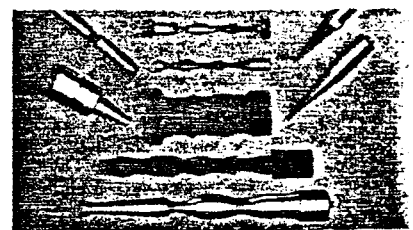
Quick Action Lever Operated Hollow Tailstock with H.D. Hollow Revolving Centre (Extras) for Deep Hole Boring.



A selection of long and strong chisels and gouges.



Illustrating the new Taper Turning and copying attachment fitted to the T.D.S.3 Combined Metal and Wood Turning Lathe.



Typical examples of work produced.

# VICEROY MACHINE TOOLS



MANUFACTURED BY

**DENFORD MACHINE TOOLS LTD.**

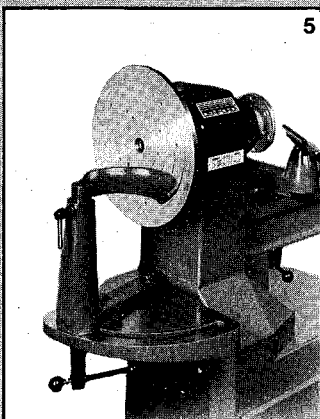
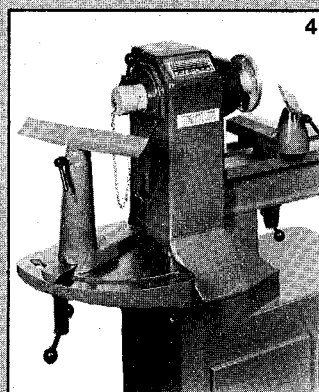
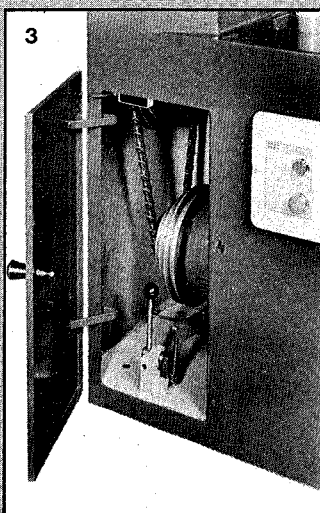
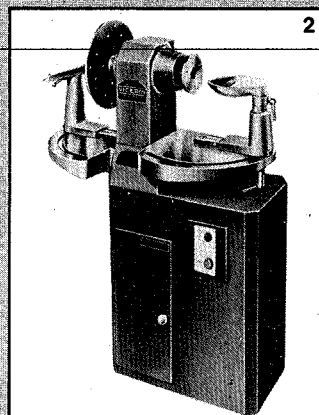
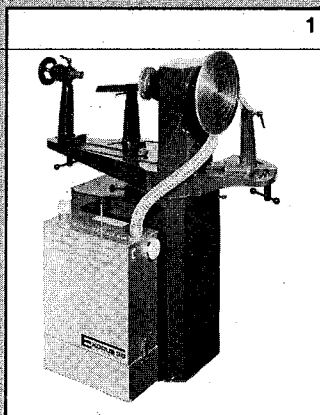
BRIGHOUSE HD6 1NB. YORKSHIRE. U.K.

Tel: Brighouse 2264 (3 lines).

Export Dept: 12/13, Robinson Row, Hull, U.K.

Tel: 36304. Cables: "Viceroy" Hull, U.K.

# VICEROY



## 1. TDS 6S.B. (SHORT BED) WOOD TURNING LATHE

has been designed with perfect balance and quiet running to meet the demand for a machine to supplement the standard Wood Turning Lathe, giving a considerable saving in space and cost, also shows Exodus 30 Dust Extractor fitted.

## 2. TDS 6B.T. WOOD BOWL TURNING MACHINE

The 'Viceroy' Bowl Turning Machine has been designed to meet the ever-increasing demand for a machine complementary to the Basic Wood Turning Lathe, where turning between centres is not required.

3. Showing belt change position - also Microswitch which isolates the power whilst the door is open. This safe method compliments the one position belt change using lever to lift the motor until change is effected. The door cannot be closed or power started until the lever is in drive position.

4. Illustrating the robust C.I. Headstock Housing with Spindle mounted on H.D. Deep Journal Bearings. The Spindle Nose is thrown forward enabling the operator to turn from behind when using small face plates. Showing also the universal cross-slide with single levers for all position positive clamping.

5. Illustrating Universal Outtrigger for Large Diameter Work, with internal bowl turning rest (extra) in position. All position adjustment is effected by releasing single lever fitted below the outrigger, which also gives positive clamping when tightened. Shown also is the spindle lock for removing face plates etc.

A full range of optional equipment is available on separate lists.

## SPECIFICATIONS TDS 6W.L. WOOD TURNING LATHE

Height of Centres	150 mm	6"	Range of speeds	425-2,275 r.p.m.
Swing over bed	300 mm	12"	Motor speed	1,425 r.p.m.
Swing over outrigger	152 x 457 mm	6" x 18"	Motor B.H.P.	0.56 or 1.12 kW ¾ or 1½ h.p.
Swing over crossslide	152 mm	6"	Drive	"V" Belt "V" Belt
Distance between centres	914 mm	36"	Toolrests (standard)	152 and 304 mm 6" and 12"
Width of bed	165 mm	6½"	Faceplates (standard)	127 and 304 mm 5" and 12"
Depth of bed	111 mm	4¾"	Travel of Tailstock Barrel	76 mm 3"
Height to spindle centre line	1016 mm	40"	Tailstock taper	Morse No. 3
Spindle bored	20 mm	13/16"	Tailstock Barrel Bore	20 mm 13/16"
Spindle nose taper		Morse No. 3	Overall width	431 mm 17"
Spindle threads R/H	8 x 1½"		Overall length	1,828 mm 72"
Spindle threads L/H	9 x 1¼"		Overall height	1,117 mm 44"
No. of spindle speeds	4		Weight	228 kg 4 cwt 2 q

## WORK CAPACITIES OF TDS 6 S.B. (SHORT BED) LATHE OTHER SPECIFICATIONS AS TDS 6W.L.

Distance between centres, double or single ended	381 mm-15"
Maximum swing when turning bowls etc., double or single ended	457 mm-18"

## WORK CAPACITIES OF TDS 6B.T. MACHINES OTHER SPECIFICATIONS AS TDS 6W.L.

Maximum swing (when turning bowls etc.) Left hand position if D.E.	457 mm-18"
Maximum swing (when turning bowls etc.) Right hand position if D.E.	330 mm-13"
Maximum swing (when turning bowls etc.) Right hand position if S.E.	330 mm-13"

Our policy is one of continuous improvement, we therefore reserve the right to change specification without notice.