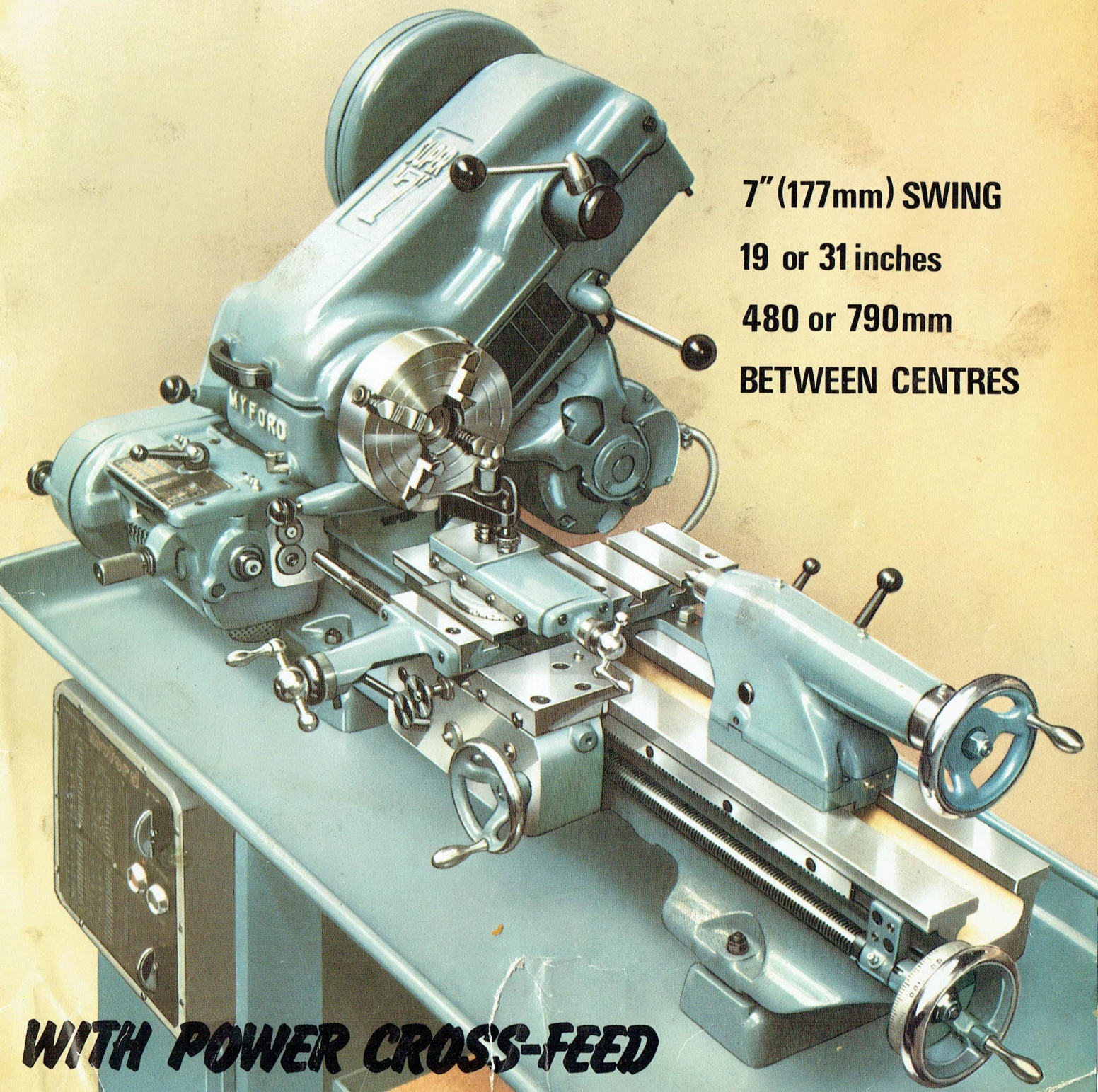


# **myford**

## **SUPER 7**

### **HIGH SPEED CENTRE LATHE**



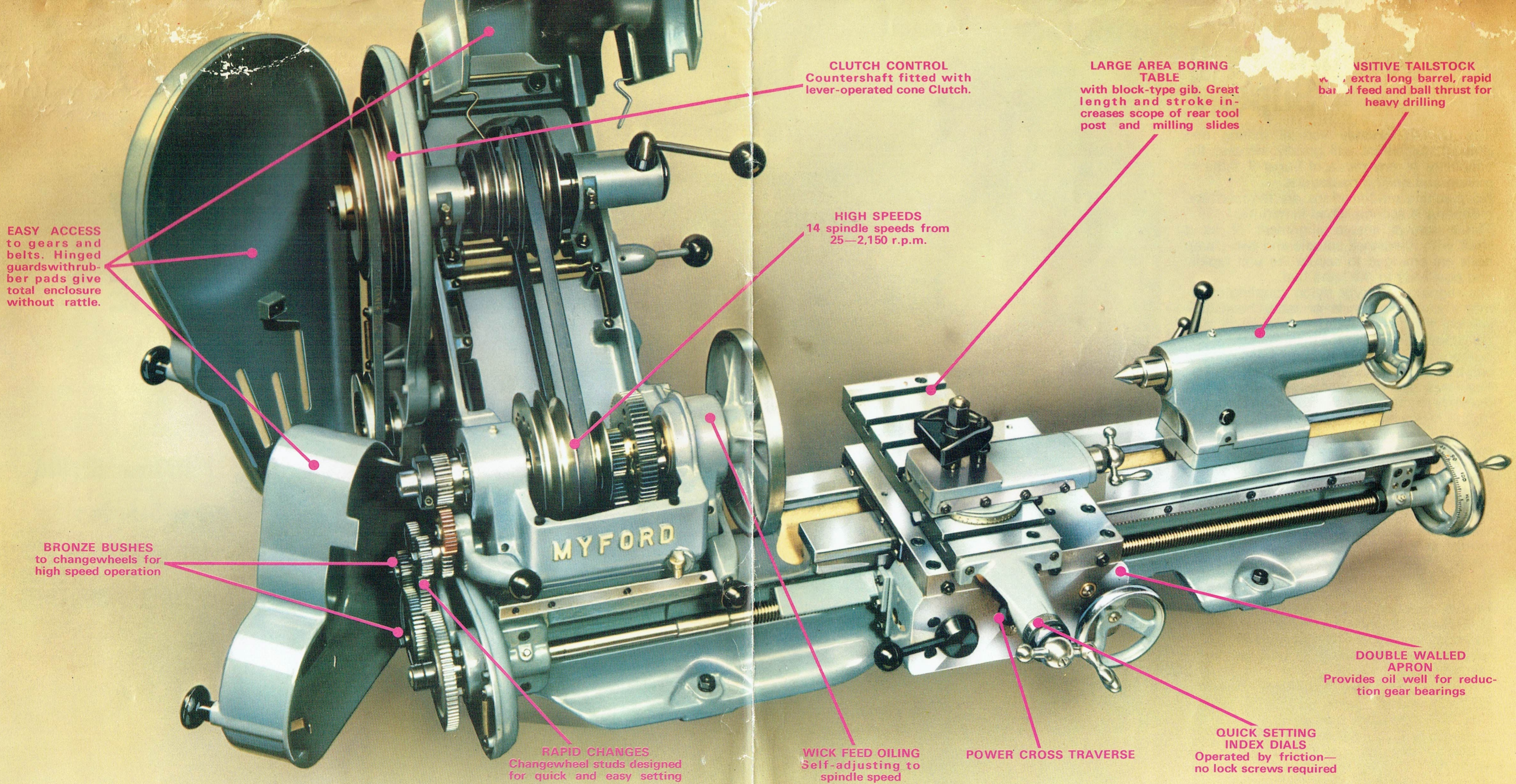
**7" (177mm) SWING**

**19 or 31 inches**

**480 or 790mm**

**BETWEEN CENTRES**

**WITH POWER CROSS-FEED**



**EASY ACCESS**  
to gears and belts. Hinged guards with rubber pads give total enclosure without rattle.

**BRONZE BUSHES**  
to changewheels for high speed operation

**RAPID CHANGES**  
Changewheel studs designed for quick and easy setting

**CLUTCH CONTROL**  
Countershaft fitted with lever-operated cone Clutch.

**HIGH SPEEDS**  
14 spindle speeds from 25—2,150 r.p.m.

**LARGE AREA BORING TABLE**  
with block-type gib. Great length and stroke increases scope of rear tool post and milling slides

**SENSITIVE TAILSTOCK**  
with extra long barrel, rapid barrel feed and ball thrust for heavy drilling

**WICK FEED OILING**  
Self-adjusting to spindle speed

**POWER CROSS TRAVERSE**

**QUICK SETTING INDEX DIALS**  
Operated by friction—no lock screws required

**DOUBLE WALLED APRON**  
Provides oil well for reduction gear bearings

## Established throughout the world as a symbol of precision and performance — Now with additional **POWER CROSS-FEED** feature and **VERTICAL MILLING AND DRILLING** capability

- **BELT DRIVE FOR QUIET HIGH-SPEEDS.**
- **ESSENTIAL LOW-SPEEDS FOR HEAVY DUTY WORK.**

A compact integral belt drive unit provides efficient, quick power transmission without the inevitable noise associated with high-speed geared headstocks—making the Super 7 especially suited to quiet environments.

The lever operated cone clutch provides fine inching capability and smooth starts without the high electrical loads associated with direct electrical starting.

Fourteen speeds are provided (25-2,150 r.p.m.) with no embarrassing wide gaps and realistically including the essential lower speeds to match the large diameter turning capacity of the SUPER 7, (10" diameter), provided by the gap bed and long cross-travel of the tool-slide.

The tapered form of the hardened spindle with its conical bore phosphor bronze front bearing bush provides essential Chuck-mounting rigidity and permits critical bearing clearance adjustment. A 60T main spindle gear facilitates useful angular spindle dividing.

- **POWER TRAVERSE TO CROSS SLIDE WITH OVER-RUN PROTECTION.**
- **ORIGINAL *Myford* TEE-SLOTTED CROSS SLIDE/WORK TABLE.**

Power traverse to the cross slide is readily operated by a push-pull clutch knob. Cross-feed rates are approximately equal to the longitudinal feed rates and Automatic Disengagement occurs at the limit of inward movement.

The Super 7 is fitted with a tee-slotted cross slide/work table—a standard feature since the inception of *Myford* lathes, and now emulated by other makers.

The tee-slotted worktable with power feeds—similar to milling and boring machine tables—greatly enhances the adaptability and the square form bed shears increase the capabilities of the lathe in terms of rigidity when milling and boring. It facilitates the direct mounting of workpieces, machine vices, vertical milling and boring slides, dividing heads, etc., for a wide variety of milling, drilling, boring and gear cutting operations.

The saddle and cross slide are both provided with locks to ensure maximum rigidity when milling, boring, facing, etc. Both cross-slide and topslide have index dials of the friction setting type.

- **RUGGED TAILSTOCK WITH SENSITIVE FEED.**

The heavy tailstock has a graduated barrel and is equipped with a robust lever operated positioning clamp. The combination of ball thrust bearing and multi-start feed screw provides an extremely smooth and frictionless quick-action feed.

- **OPTIONAL QUICK-CHANGE THREADING/FEEDING GEARBOX.**

A wide range of threads together with a suitable selection of longitudinal feeds, can be set either through changewheels or by manipulation of the optional quick-change gear box (No. 1680).

The pitch range of the quick change box can be further extended through the use of an accessory quadrant and change-wheel (No. 1481/1).

- **VERTICAL MILLING & DRILLING UNIT**

The RODNEY Vertical Milling and Drilling Unit, which can be mounted in a matter of minutes, utilizes the whole power and speed-range of the SUPER 7 lathe (14 speeds)—as against other contemporary self-powered units which are limited in respect of both power and speed selection.

The unit is provided with selectable dual down-feed arrangements via rack and pinion/worm and wheel for drilling and milling operations respectively.

**31" CENTRE HEIGHT**  
**10" SWING IN GAP**  
**CHANGE WHEELS OR QUICK CHANGE GEARBOX**

**19" OR 31" BETWEEN CENTRES**  
**FOR LEADSCREW DRIVE**

Cat. No.	Type	Description	Between Centres
10/038	Super 7	Basic machine standard bed	19" (480 mm)
10/039	Super 7B	Quick change lathe " "	19" (480 mm)
10/040	Super 7	Basic machine long bed	31" (790 mm)
10/041	Super 7B	Quick change lathe " "	31" (790 mm)

**SPECIFICATION** (Machines admitting 19")

**Bed**

Overall length	36½"	930 mm
Width across shears	4½"	114 mm
Depth of shears	½"	12.7 mm
Swing over bed (diameter)	7"	178 mm
Maximum admitted between centres	19"	485 mm
Swing in gap (diameter)	10"	254 mm
Swing in gap in front of faceplate	1½"	38 mm

**Headstock**

Centre height	3½"	88.9 mm
Spindle nose register	1¼" dia. × 7/16" long	
Spindle nose thread	1⅝" dia. × 12 t.p.i.	
Spindle nose bored	No. 2 M.T.	
Hole through spindle (diameter)	19/32"	15 mm
Backgear reduction	7.794 : 1	
Faceplate (8 slots) (diameter)	6¾"	170 mm

**14 Spindle Speeds (1420 r.p.m. motor)**

Fast range ungeared	2150, 1480, 1020, 700 r.p.m.
Slow range ungeared	615, 425, 290, 200 r.p.m.
Fast range backgeared	130, 90 r.p.m.
Slow range backgeared	80, 55, 40, 25 r.p.m.

**Carriage**

Swing over cross slide (diameter)	4⅞"	104 mm
Cross slide travel	6¾"	162 mm

**SPECIFICATION, LONG BED MACHINES**

As above except:-  
 Overall bed length, maximum admitted between centres, length of lathe including guard, all increased by 12", 305 mm.  
 Nett weight of bench lathe, less motor 244 lb, 111 kg  
**For standard equipment for Super 7B lathes see foot of page 5.**

**Area of cross slide**

(boring table area)	41 sq. in.	1040 mm <sup>2</sup>
Topslide travel	2¼"	57 mm
Topslide swings		360°
Topslide and cross slide feedscrews (Imperial)	10 t.p.i. Acme	
Micrometer dials division (Imperial)	0.001"	
Topslide and cross slide feedscrews (Metric)		2 mm Acme
Cross slide micrometer dial (Metric, on diameter)		0.05 mm
Topslide micrometer dial (Metric, movement)		0.05 mm
Leadscrew	8 t.p.i. Acme	
Standard screwcutting range	6-112 t.p.i.	0.020-3.50 mm
Standard finest feed per rev.	0.0037"	0.094 mm

**Tailstock**

Barrel bored		No. 2 M.T.
Barrel travel	2¾"	70 mm
Set over to front	7/16"	11 mm
Set over to rear	3/16"	5 mm

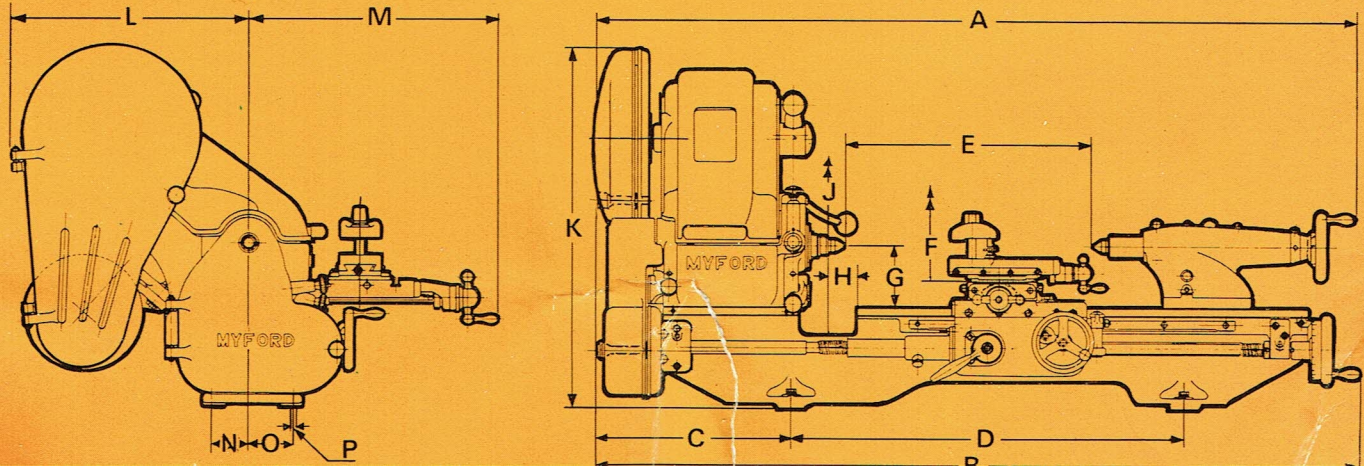
**Weight**

Net weight of bench lathe, less electric motor	220 lb	100 kg
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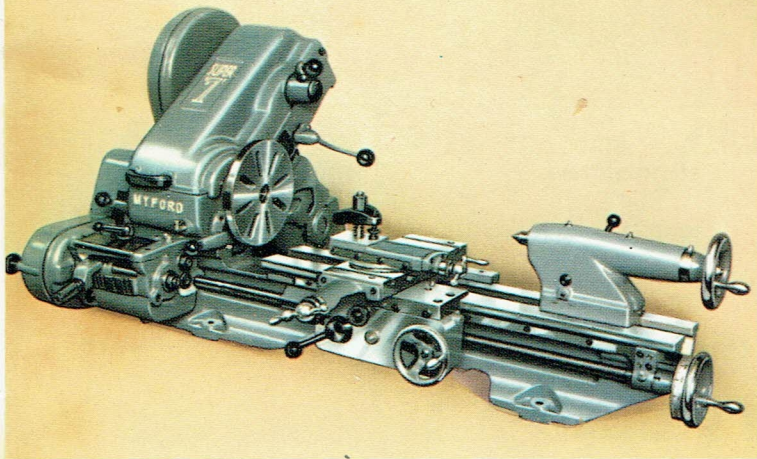
**STANDARD EQUIPMENT**

(except quick change machines) includes:-  
 6¾" diameter faceplate, catchplate, 4" diameter backplate, set of 14 changewheels and spacer, changewheel guard, two double ended spanners, square mouth spanner, Tee spanner, 4 hexagon keys, oil gun, screwcutting chart, centres for headstock and tailstock, two belt guards, vee belts and motor pulley.

A	46½" or 58½"	1181 or 1486 mm	J	10" dia.	254 mm dia.
B	43½" or 55½"	1105 or 1410 mm	K	20½"	521 mm
C	11½"	286 mm	L	13½"	343 mm
D	22¼" or 31½"	565 or 794 mm	M	15¾" Max.	400 mm
E	19" or 31"	485 or 787 mm	N	2-1/16"	52.5 mm
F	4" dia.	101 mm dia.	O	2-9/16"	65 mm
G	3½" C.H.	88.9 mm	P	For 5/16" dia. Bolts	For 8 mm dia. Bolts
H	1½"	38 mm			

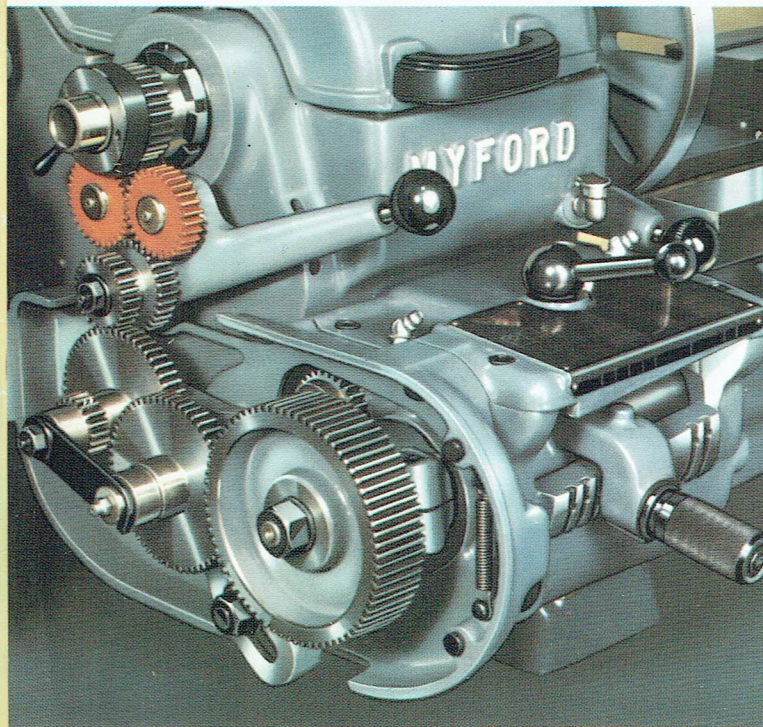


# QUICK CHANGE LATHES



**No. 10/039 Super 7B Quick Change Lathe admitting 19" between centres.**

A chart inside the hinged guard covering the input drive gears shows the set-up for 29 metric threads from 0.2 mm. to 4.0 mm. pitch. Twenty-six of these pitches, from 0.2 mm. to 2.75 mm. can be obtained merely by manipulating the levers and altering the first driving gear. The book of operating instructions supplied with the gearbox includes a reproduction of the metric chart, also charts for the cutting of B.A. threads from 0 to 12 and to simplify the cutting of worms, from 16 to 120 D.P., and 0.2 to 1.0 module. On certain of the pitches special changewheels are required and these are available. Many of the diametral pitches are covered by the 1481/1 metric conversion set but others, also all the module and B.A. pitches require special changewheels in addition.



Showing headstock end of Quick Change Lathe with gear guard open. Clearly visible are the oil nipples for the quadrant gear pins and input shaft also the swing latch which retains the reversible cluster in position and, below the gearing, the quadrant clamping stud.

## SUPER 7B QUICK CHANGE LATHES RAPID SELECTION OF 48 THREADS AND FEEDS

including threads 8 to 56 T.P.I. and feeds  
.0139 in. to .0020 in. per revolution  
of spindle

Nos. 10/039  
10/041

Quick Change Lathes are great time savers, not only when screw cutting but also on general turning since the rate of feed can be instantaneously varied as required. As can be seen from the reproduction of the box chart a very fine feed can be doubled or quadrupled merely by movement of the upper lever. Small variations of feed rate are given by movement of the front lever. Changing the setting of the box from feed to screwcutting is achieved simply by reversing the position of one of the double gears in the input drive; the gear being retained on its stud by means of a swing latch.

The Myford Quick-Change Gearbox is designed for smooth, easy operation and long life. The box gears which are all of hardened steel are mounted on precision ground, high tensile steel shafts. The bottom of the box is closed and forms an oil bath in which the lower gears revolve, ensuring lubrication to the teeth throughout. The input gears inside the hinged guard at the end of the lathe are also of hardened steel and run on extra large diameter hardened pins which are provided with oil nipples for pressure lubrication. For maximum rigidity, and to ensure correct meshing of the gears, the gear pins are clamped securely in the holes bored for them in the gear quadrant. The latter is provided with a double anchorage, being clamped to the input shaft housing and to a stud which passes through the quadrant below the gearing.

8	9	9½	10	11	12	13	14	A
								.0139
16	18	19	20	22	24	26	28	B
								.0069
32	36	38	40	44	48	52	56	C
								.0035

**No. 1680** Quick change gearbox as an attachment for existing machines; complete with hinged guard for input gearing, also installation and operating instructions.

**No. 1481/1** Metric conversion set, comprising slotted quadrant No. 2469, 12 changewheels, two spacers and two studs No. 1485. Covers pitches shown on metric chart inside hinged guard.

**No. 2469** Slotted quadrant, as included in No. 1481/1 set, see above. May be used for odd pitches or for metric conversion where No. 1680 has been fitted subsequently (one each 28, 45, 50, 60 and 63 tooth changewheels required to make up metric conversion set).

# Mill and drill with Super 7

The 20/140 Rodney vertical milling and drilling attachment will greatly increase the capability of any model of Super 7 lathe in milling and drilling operations.

No machine modifications are required and mounting is accomplished in minutes!

Thrust screws ensure alignment of input shaft with headstock spindle and two clamp bolts are arranged to secure the unit rapidly and positively to the lathe bed.

The aligning gear-type nylon coupling transmits the whole range of lathe headstock speeds via bevel gears, vertical shaft and adjustable vee-belt to the main spindle which is mounted in heavy duty angular contact ball bearings.

The bevel gears are oil-bath lubricated, and the drive shaft bearings etc. are sealed for life. Rough setting for height is obtained by raising or lowering the spindle bracket on the column. Fine settings or vertical milling feeds are by handwheel through a 50:1 worm/wormwheel reduction.

A lever operated down-feed is provided for sensitive drilling, for which purpose the worm can be disengaged by releasing a clamp lever. To improve capacity, drills above  $\frac{1}{4}$ " diameter should be held in a No. 1031 collet.

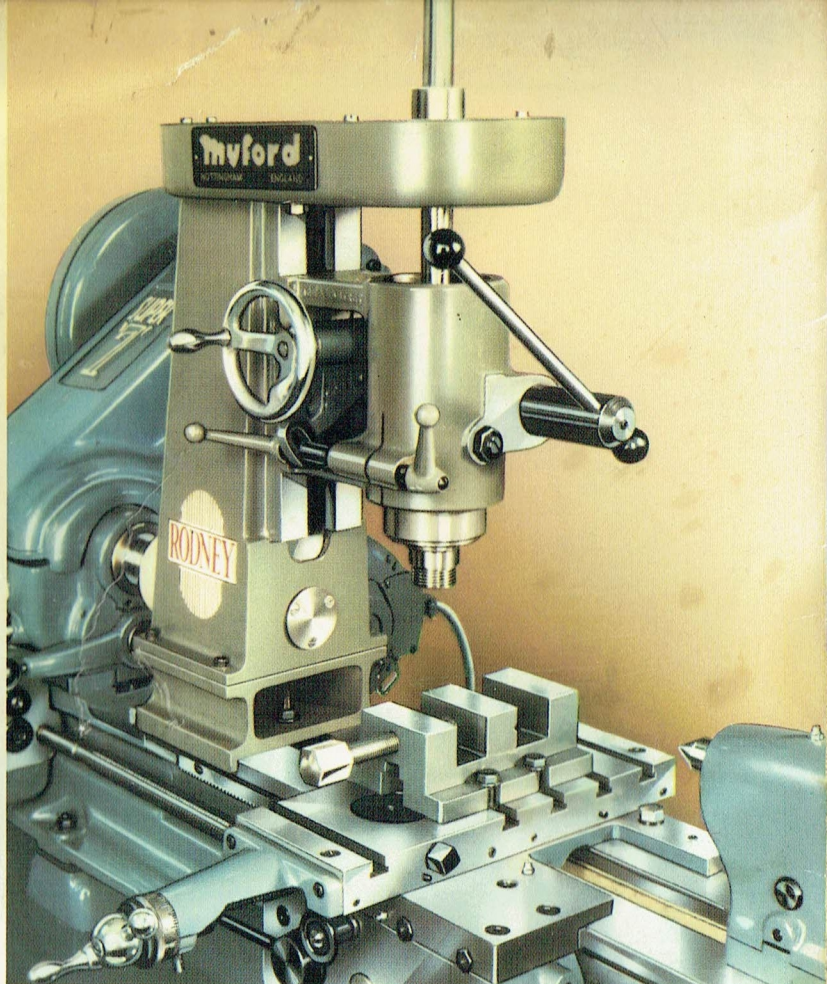
The attachment is supplied complete with flexible coupling including adaptor (No. 2 M.T.), with drawbar for headstock spindle and open ended key (to prevent rotation of spindle when tightening or releasing nose cap etc.).

The upper and lower illustrations show the RODNEY machine vice (20/141). This is attached to the cross slide using 4 A1845 tee nuts with  $\frac{1}{4}$ " B.S.F. x  $1\frac{5}{8}$ " hexagon bolts and  $\frac{1}{4}$ " washers. Jaw width  $2\frac{1}{4}$ " (57 mm), jaw height  $\frac{13}{16}$ " (20 mm), maximum opening  $1\frac{15}{16}$ " (50 mm), overall height app.  $2\frac{1}{16}$ " (app. 52 mm).

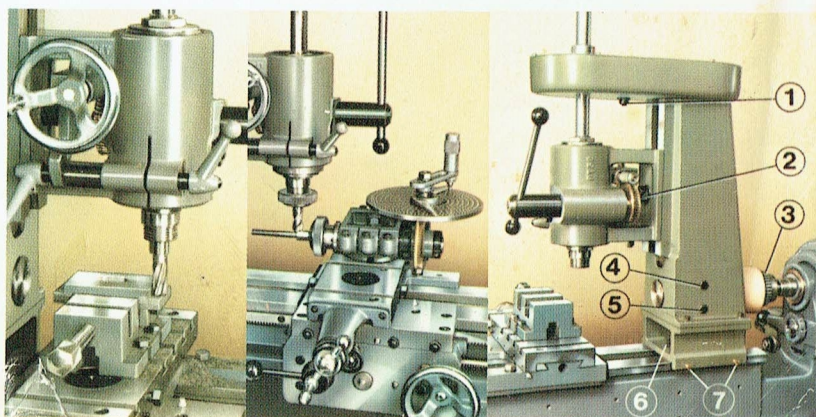
**The L.H.** illustration shows the milling of a cast iron clamp plate. This was machined all over, from the solid including the central slot.

**Centre.** Showing the 1495 dividing attachment mounted on the cross slide. The dividing attachment spindle is  $2\frac{3}{4}$  in. (70 mm) above the lathe bed and the maximum height from milling spindle nose to dividing attachment spindle  $4\frac{1}{16}$  in. (120 mm).

**R.H.** 1, locking nut for jockey pulley spindle, for belt tension adjustment. 2, securing nut for spindle bracket. 3, flexible coupling (steel gear and nylon muff). 4, oil filler plug and 5, oil level plug for bevel box. 6, nut for clamp plate for securing to lathe bed (one at each end). 7, thrust screws.



Specification	inches	mm
Throat depth to face of slide	$4\frac{3}{8}$	110
to bevel box cover	$4\frac{3}{4}$	120
Max height above cross slide		
to spindle nose	6	152
to front of 1031 collet	$5\frac{1}{2}$	140
to end of $\frac{1}{2}$ " collet in Clarkson Autolock collet chuck	$2\frac{1}{4}$	57
to $\frac{1}{4}$ " cap. 1A Jacobs drill chuck	$3\frac{1}{4}$	82
Adjustment of spindle bracket on column	$3\frac{1}{4}$	82
Movement (feed) of quill	3	76
Taper in spindle		No. 2 M.T.
Spindle nose, thread	$1\frac{1}{8}$ " x 12 T.P.I.	} As ML7 & Super 7
register diameter	$1\frac{1}{4}$ "	
Nett weight, approx.	60 lbs	27 Kg



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