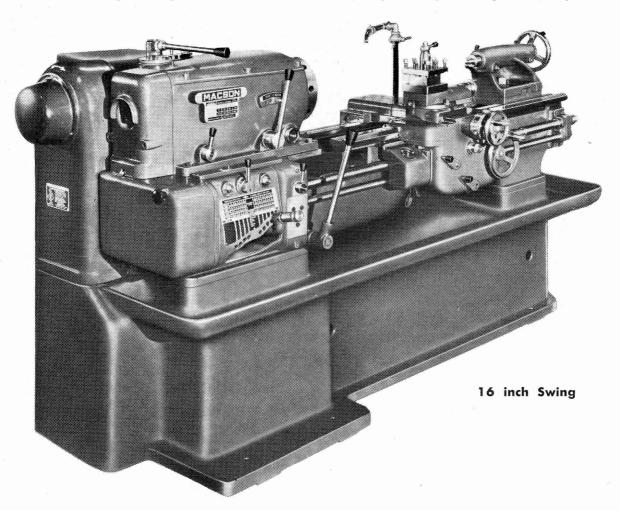


MACSON LATHES

Thousands of Macson Lathes all over the Commonwealth have given splendid service in Engineering Works, Dockyards, Railway Repair Shops, Garages and Ships.



The Macson Lathe, in any year and in any size, has always been the best lathe in its price class, but it is still the subject of continual development to maintain its leadership.

Macson Lathes are available in a wide range of standard sizes as listed:

- 16 in. Swing Roller Bearing Straight Bed.
- 16 in. Swing Roller Bearing Gap Bed.
- 18-21 in. Swing Roller Bearing Gap Bed.
- 18-21 in. Swing Roller Bearing Straight Bed.
- 18-21 in. Swing Copying Lathe.
 - 25 in. Swing Roller Bearing Gap Bed.
 - 25 in. Swing Roller Bearing Straight Bed.

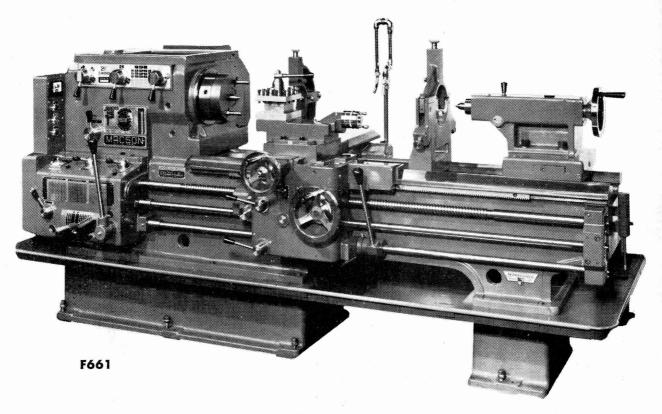
- 25 in. Swing Copying Lathe.
- 30 in. Swing Roller Bearing Gap Bed.
- 30 in. Swing Roller Bearing Straight Bed.
- 30 in. Swing Copying Lathe.
- 38-43 in. Swing Roller Bearing Gap Bed.
- 38-43 in. Swing Roller Bearing Straight Bed.
- 38-43 in. Swing Plain Bearing Gap Bed.
- 38-43 in. Swing Plain Bearing Straight Bed.

Complete specifications for all Macson Lathes available on request.

178

MACSON LATHES

18 in. and 21 in. Swing



Macson 18" and 21" Swing Lathes, in addition to regular Macson features, include these advantages:

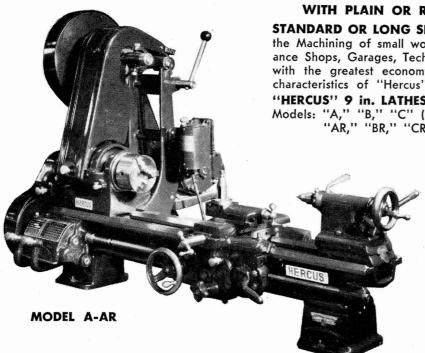
- ▶ 18 spindle speeds in ranges up to 1600 Inverted asymmetric Vee guide ways. r.p.m.
 - More power. Ranges up to 15 h.p.
 - Large diameter hole through main spindle.
 - Precision Roller Bearing Spindle.
 - Multi disc brake.
 - Built-in horsepower meter.
 - Cutting speed calculator.

- - Wide, deep section bed with diagonal bracing.
 - Wide range of feeds and threads, including metric pitches.
 - Sensitive feed trip on apron.
 - Large diameter hardened tailstock spindle.
 - Wide range of extra equipment.

The Macson 18" and 21" Swing Lathes can be supplied with Gap or Straight Beds, and also as Hydraulic Copy Turning Lathes. Flame hardened bed ways are available on both Gap and Straight Beds, and are standard on Hydraulic Copy Turning Lathes.

F662—"HERCUS" 9 in. SWING VEE BED LATHER





WITH PLAIN OR ROLLER BEARING HEADSTOCK

STANDARD OR LONG SERIES BED is built to handle efficiently the Machining of small work in Workshops, Toolrooms, Maintenance Shops, Garages, Technical Schools, etc. Accuracy, together with the greatest economy in power and floor space are the characteristics of "Hercus" Lathes.

"HERCUS" 9 in. LATHES are available with 40 or 49 in. Beds. Models: "A," "B," "C" (Plain Bearings).

"AR," "BR," "CR" (Roller Bearings).

MODEL "A" or "AR" Lathe is fitted with quick change gear box with automatic feeds by friction clutch to both longitudinal and cross motions.

Belt guards are available to cover either or both belts of both types of unit drives on any model of lathe. Motor belt guards are of fibreglass, fitting over a backplate and quickly removable to provide access to the belt.

MODEL "B" or "BR" is similar to above but without quick-change gear box.

MODEL "C" or "CR." The changes of feeds and threads are obtained through the gear trains. The machine incorporates hand feed to the cross slide and power longitudinal feed to the saddle.

Tray and Stand available as extra.

ASK FOR SPECIAL FOLDER GIVING FULL PARTICULARS OF "HERCUS" LATHES

PRINCIPAL DIMENSIONS

Swing over Bed $9\frac{1}{4}$ in.	Range of Speed 60-700 R.P.M.
Swing over Saddle	Speeds available 60, 81, 112, 176, 280, 370,
Length of Bed 40 in. or 49 in.	515, 700 R.P.M.
Width of Bed 6 in.	UNIT DRIVE, TWO SPEED
Admits between Centres 21 in. or 30 in.	Number of Speeds
Diameter of Hole through Spindle Clear 3/4 in.	Number of Speeds
Size of Centre No. 2 Morse Taper	Range of Speeds
	Speeds available — "S" 47, 61, 86, 118, 215,
UNIT DRIVE, SINGLE SPEED	280, 395, 540 R.P.M.
	Speeds available — "H" 92, 120, 170, 230, 420,
Number of Speeds 8	550, 770, 1,050 R.P.M.

STANDARD EQUIPMENT includes necessary change wheels, catch-plate, screw-cutting chart, centres, centre sleeve and working spanners.

LIST OF OTHER EQUIPMENT AVAILABLE FOR HERCUS 9" LATHE

Handwheel Draw-in Collet Attachment (3 pieces).

Set of Collets $\frac{1}{16}$ " to $\frac{1}{2}$ " in $\frac{1}{32}$ " steps.

Extra Change Wheels for cutting metric threads.

Models "A" and "C".

Faceplate.

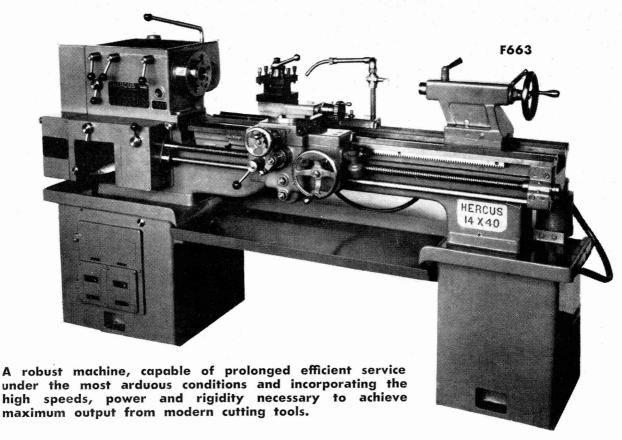
Miller Cutting Arbor.

Taper Turning Attachment.

6-position Saddle Stop.
Quick Acting Collet Attachment.
Drip Can and Stand.
Fixed Steady Rest.
Travelling Steady.
Countershaft.
Legs and Tray.
Screwed Backplate.
Milling Attachment.
Micrometer Saddle Stop.
Range of Special Centres.

Dial Thread Indicator.
7%" diam.
Square Turret.
Square Turret Indexing Type.
Hexagon Turret with Turret
holes rough bored.
Quick Cut-off Slide.
Boring Table.
Wood Turning Equipment.
Belt Guards.

"HERCUS" 14 in. SWING SLIDING, SURFACING & SCREWCUTTING LATHE



SPECIFICATIONS

STANDARD EQUIPMENT

Coolant Pump and Fittings. Faceplate.
Driving Plate.
Centres.

Centre Sleeve. Travelling Steady. Stationary Steady. Thread Dial Indicator. Oil Gun. Working Spanners. Handbook.

EXTRA EQUIPMENT

Taper Turning Attachment. Hydraulic Copy Turning Attachment. Metric Screw Cutting Gears. Special Change Gears.
Reversing Switch.
Low Volt Machine Light.

Rear Chip Guard. Chucks. 18" Faceplate. Chuck Mounts.

Ask for special descriptive folder on this lathe.



F664-

WARD LATHES

Ward Lathes are recognised throughout the world as the finest precision Machine Tools of their type.

Range includes:

No. 7DS Capstan

No. 7 Turret

2CA Capstan No. 8 Turret

2DS Capstan No. 10 Turret 3CA Capstan No. 10/13 Turret

3DS Capstan No. 16 Turret

2DS Auto.

3DS Auto.

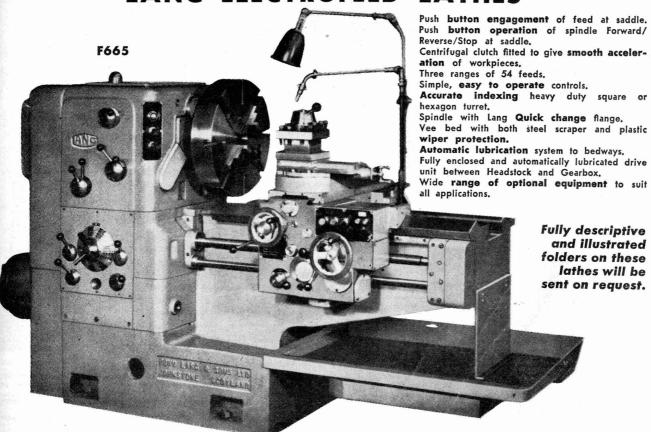
7D Prelector

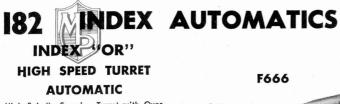
Turret

Full description on request.

Ward







High Spindle Speeds. Turret with Overtaking Threading Spindle. Wide range of attachments. In this machine, the high spindle speeds, overtake threading system and swinging side tools of the INDEX ON automatic are combined with the added advantages of a turret, enabling a very wide range of work to be produced at extremely fast rates.

INDEX 12-18-25 TURRET AUTOMATIC

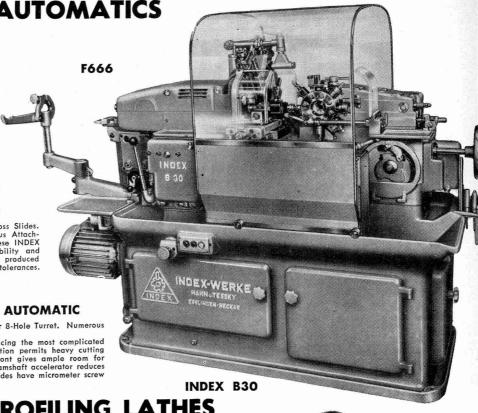
Wide range of Spindle Speeds. Three Cross Slides. Six-Hole Turret, Swing Stop and Numerous Attachments. The design and construction of these INDEX turret automatics ensure maximum reliability and enable a very wide range of work to be produced at efficient cutting speeds and to close tolerances.

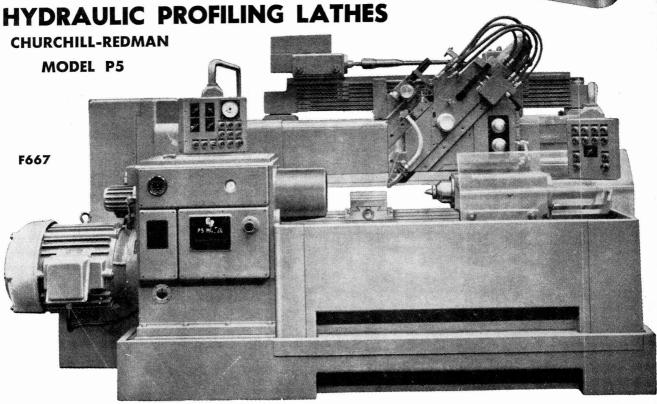
INDEX B30-B42-B60 TURRET AUTOMATIC

High Spindle Speeds. 4 Cross Slides. 6 or 8-Hole Turret. Numerous

High Spindle Speeds. 4 Cross Stides. 6 of 8-note forter. Numerous attachments.

These new machines are capable of producing the most complicated work, and their especially robust construction permits heavy cutting even on high tensille steels. The open front gives ample room for chips and access to tools, and a built-in camshaft accelerator reduces idle time to a minimum. All four cross slides have micrometer screw adjustment.





- Fa	Model 15" x 20"	Model 15" x 40"
Swing over bed	15"	15"
Swing over saddle	9"	9"
Maximum turning diameter	9"	9"
Maximum distance between centres	20"	40"
Travel of auxiliary slide	51/2"	51/2"

DESIGN FEATURES

Hydraulically operated headstock clutches and brake, which are self adjusting. Machine hydraulically operated and all movements electrically controlled by push button. Sequencing of slide movements is obtained merely by selection of rotary

Sequencing of slide movements is obtained merely by selection of loudy switches.

All machine movements can be operated separately by push button for ease of setting.

The profiling carriage has infinitely variable hydraulic feed up to 30"/mln. and automatic feed change.

F668— BUTLER PRECISION SLOTTERS

PRECISION SLOTTERS are intended for use where accuracy as opposed to cutting power is of paramount importance. They are, therefore, guaranteed to a maximum error of .0005" for the table traverses and for the alignment of the ram, while the surface of the table is perfectly flat and the tee slots machined at right angles, or parallel with one another, within the same limits.

Mid. Adj. 10"
Ram Adjustment 16"
Max. under Ram 24"

F669—

BUTLER SUPER SHAPERS

Not illustrated

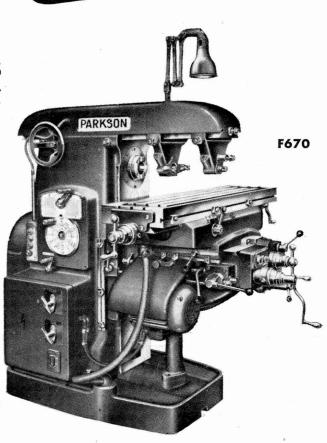
		Ins.	Ins.
Maximum Length of Stroke		18	26
Table —			
Top (length x width)		18 x 17 1/4	26 x 221/2
Side (length x depth)		15 x 17	221/2 x 22
Horizontal travel on slides		20	30
Vertical travel		12	14
Admits on top		141/2	151/2
Toolbox, vertical adjustment		6	9
Number of speeds Speeds obtainable —	••	8	8
Cycles per minute		15 - 150	9 - 100
Number of feeds		10	10
Range of Feeds		.010 to .105	.012 to .125

Ask for full specifications and illustrations of Butler Super Shapers.

F670— PARKSON

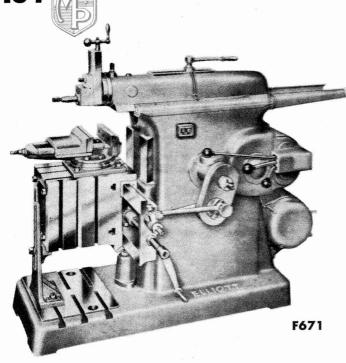
2NP PLAIN and 2NU UNIVERSAL MILLERS

2NP PLAIN MILLER	2NU UNIVERSAL MILLER
TABLE Working surface 51 x 12 ³ / ₄ "	51" x 11½"
CAPACITY 30" Longitudinal 30" Cross 10" Vertical 18" Centreline spindle to top of table Maximum 18" Minimum 0"	28" 10" 18" 18" 0"
Maximum distance face of column to arbor support 27"	27"
SPINDLE 5½" dia. Spindle nose 5½" dia. Internal taper 3½" per ft. Spindle speeds 11.	5½6" dia. No. 50 size. 23¼" at large end. rates. 29 to 775 r.p.m.
FEEDS Number of feeds 12 12 12 13 14 15 15 16 15 16 15 16 15 16 15 16 15 16 15 16 15 16 16	12 ½" to 10½" ½" to 10½" ½" to 5¼"
RAPID TRAVERSE Longitudinal 100" Cross 100" Vertical 50"	100" 100" 50"
DRIVE Spindle motor 5 H.P. at 1,430 r.p.m.	5 H.P. at 1,430 r.p.m.
DIVIDING HEAD Will swing and admit between centres, 12" dia. \times 30". Spindle bored, No. 10 B. & S. taper. Hole through spindle, $11/6\pi$ dia.	No. 26 SWIVEL BASE VICE Width of jaws, 6". Depth of jaws, 11/2". Opening, 33/4".



183

184 ELLIOT 18 in. HIGH SPEED SHAPING MACHINES



AICE																		
Jaws open .	•	•			•	•	•		•	•				•	1	0	3 // 4	
GENERAL																		
Floor space										7	1	1/	,	x	3	6	1"	
Horsepower																	3	

F672

These improved machines have been designed to incorporate many refinements combined with a simplicity of operation. They are built for heavy, continuous duty.

Production has been planned with a view to economy in order to offer them at an attractive price. They combine first-class workmanship with the best quality materials and are capable of handling all classes of Shaper work with accuracy and rapidity.

The Table is provided with tee slots on the top, vertical vee and tee slots on the operating side and bolt holes on the reverse side. The Table Base has tee slots in alignment with those on the Table, and is fitted with a full-length taper gib to the cross slide guide.

Maximum stroke
TABLE Top surface
TOOL HEAD Down feed

F672—THIEL DUPLEX 158 TOOL AND PUNCH MILLER

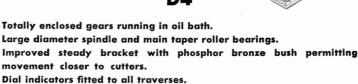
Fixed dowel positions for all attachments and tables, etc., help the setting and ensure consistent accuracy.

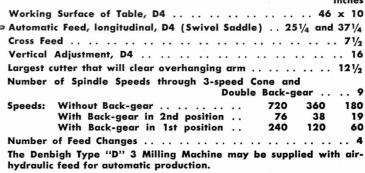
Horizontal Spindle

No. of spindle speeds	12
R.P.M. of spindle from 60-1,200 r.p.	m.
Collet capacity	1"
3-jaw chuck capacity	1" 2
Headstock, Horizontal, hand and power traverse	8″
Overarm, Horizontal hand adjustment	<u>1</u> "
Overarm, Distance centre of spindle to underside 2	3 // 4
Universal Swivel and Tilting Table	
(Standard Equipment)	
Working surface	1"
Maximum distance centre of spindle to table surface 1	6"
Table swivels each way and tilts front and rear 30)°
Hand and power longitudinal traverse	
_	

DENBIGH MILLING MACHINE

D4





This high production machine is fitted with a robust air-hydraulic feed providing automatic production cycles. The large diameter pneumatic cylinders give very rapid approach and return feeds. The cutting feed is hydraulically controlled, infinitely variable, and very readily pre-set and adjusted to suit the work in hand.

F674—SCHAUBLIN SV 13 MILLING MACHINE

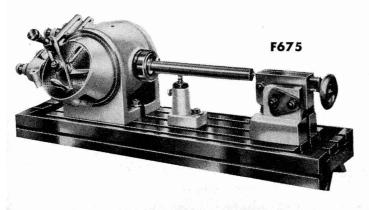
Suitable for the manufacture of single parts and batches of parts for the production of tools, templates, punches, dies, gauges and forms, and for use in laboratories and prototype departments.

Plain drive through variable-speed unit and gearbox. All gears are made of hardened and ground chrome-nickel steel, allowing transmission of maximum power at low speeds. Infinite range of spindle speeds from 56 to 2,100 r.p.m., permitting the milling of all metals, light alloys, and plastic materials, by means of hard-metal tools.

Friction type safety device protecting feedbox against overload and incorrect operation. Single lever for engaging and reversing longitudinal and vertical automatic feeds.

F675—VICTORIA PRECISION HEAVY DUTY DIVIDING HEAD

This Dividing Head is suitable for simple or differential indexing as well as for helical milling (helical gears, spiral fluted cutters, etc.) in a horizontal axis. The Dividing Plate assembly is mounted directly on to an inclined worm shaft for easy reading. All parts which could with advantage be hardened and ground are made from alloy steel suitably heat treated, whilst the main castings are of meehanite iron. Sine bar pins are fitted to the body for setting to extreme accuracy of inclination when using the head out of the horizontal position. Degrees are calibrated on the body for rapid and approximate setting. The tailstock is of the inclinable type and the equipment includes two hole plates, a set of change gears, work support jack and shaft extensions for differential indexing.



F674

Height of centres	6"
Worm gear ratio	40:1
Total length with centres touching	251/2"
Height in vertical position	131/2"
Recommended for table lengths	40" upwards
Spindle nose	I.S.T. No. 40
Spindle nose adapter	No. 2 Morse
Tailstock centre	No. 1 Morse

Set of eleven change wheels extra equipment.

186 BEAVER'

Swivelling Turret Milling Machine Model VBRP Mark 11

RP Mark II Milling Head

This all angle milling head is a complete self-contained unit. Ten reversible spindle speeds are provided, five high, five low. Low speed is selected by a quick one finger action single lever.

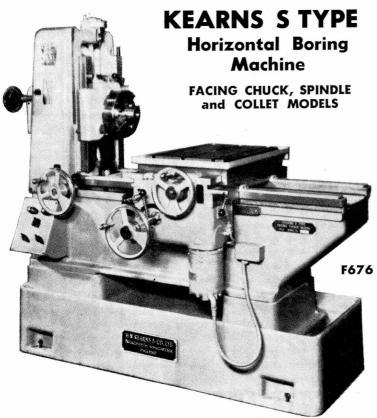
RANGE

SPINDLE MOTOR

RANGE
Table length
Longitudinal Feed
Rapid Trayerse reduces above by 2"
All available with power feed
Width of table
Longitudinal Power Feed table only.
L.H. or R.H
Cross table traverse
Vertical table traverse
SPINDLE
Spindle nose No. 30 I.S.T. or No. 40 extra
Spindle speeds No. 8 or 10
Spindle speeds range 80-3,000 R.P.M.
Spindle quill traverse 5"
Spindle centre line turns through 180° (in longitudinal plane and
90° in traverse plane).

1½-2 h.p. recommended at 1,500 R.P.M. or 3 h.p. as extra.

F675



S TYPE FACING CHUCK MODEL
Facing Chuck Maximum dia, machine will face .8" Number of speeds 6 Range of speeds, r.p.m. .40-500 Surfacing feed number 1 Rate per revolution of chuck .006 ins.
S TYPE SPINDLE MODEL
Main Spindle Spindle bore to B.S. 1660 No. 40 taper Number of speeds
S TYPE COLLET MODEL
Main SpindleMaximum bore at collet in spindle
Traverses Longitudinal. Without boring stay
Maximum Distances Spindle centre to main table
Feeds To longitudinal and transverse motions of main table. Number
Horse nower 11

F678—THIEL SEGURA 117 PRECISION BANDSAWING AND BANDFILING MACHINE

Precision Bandsawing and Bandfiling Machine for toolmaking and production is a valuable addition to the THIEL programme. THIEL machines are a "must" for economical toolmaking!

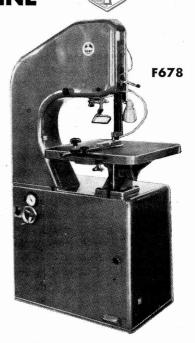
Outstanding advantages of the new THIEL SEGURA 117 are:

Three saw guide rollers, cutting speeds 50-2,950 ft./min., large robust work table, large throat, large work clearance, simple quick operation, special THIEL precision saw guides.

Diameter of three saw guide rollers 12"
Cutting speeds infinitely variable
50/395 ft./min.
When set to high range 395/2,950 ft./min.
Throat 195%"
Maximum height of work 934"
Table size 23½" x 23½"
Table swivel —
To the right and left 30°

To the front and back 15°
Max./Min. length of saw band 133"/128"
Width of saw band 1/8" - 3/8"
Length of band file, approx 129"
H.P. of motor 1.5
R.P.M. of Motor 940
Height of machine71"
Machine base 36" x 21"

THIEL SEGURA 117 permits rapid and accurate working following marked outlines — reducing or eliminating further operation and saving many highly paid hours of toolmaker's time!



F679_VAUNSAW HACKSAW MACHINES

A NEW DEVELOPMENT IN HACKSAW DESIGN

The VAUNSAW British-built fully automatic hacksaw embodies design features to bring sawing into line with the considerable advances made in other metal cutting machine tools.

MAIN DRIVE is from a quick change V belt on three-step pulleys through an oil bath gear box and finally transmitted to the bow by a shaper action ball-bearing link.

AUTO BAR FEED is of simple, sturdy construction and will accept a 15 ft. bar length. Accommodation for extra length bars can be provided upon request. The feed mechanism moves the bar to any pre-determined billet length up to an adjustable stop. Axial pressure is kept on the bar until the automatic vice grips.

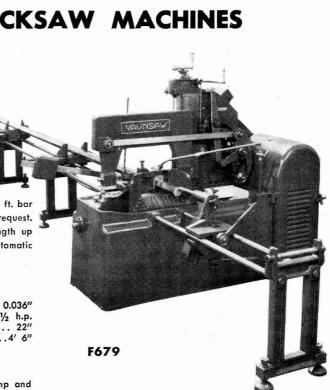
SPECIFICATIONS

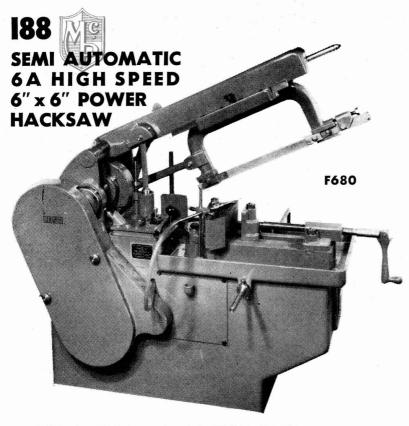
Sawing capacity, 6" dia. or 6" squ	are
Bar feed length (standard)	15'
Blade length	14"
Stroke length	
Strokes per. min (standard)	
75-115-1	145

STANDARD EQUIPMENT

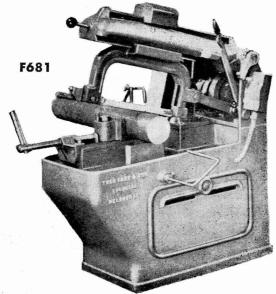
Automatic bar feed, automatic vice, hand operated vice, coolant pump and fittings, spanner key, one high power saw blade.

The VAUNSAW is completely automatic from the first loading of a full length bar until this is reduced to billets. The movement of one control immediately converts the machine from automatic cycle to "one-off" production.





PARKANSON 6 INCH HIGH SPEED HEAVY DUTY HACKSAW



Motor unit completely housed in machine base.
 Self-contained coolant system.
 Complete hydraulic unit incorporated.
 Adjustable cutting pressure.
 Fully enclosed Main Drive Pulley.

SPECIFICATIONS

Capacity	• •				Up to 6" x 6"
Blades					14" x 1" x 1" x 1" can be used)
			ed pressure	e control. ettings up to 45	•
Gib fitte	d in	saw-box	for adjust	tment of the gu	ides.
Motor .				1	h.p., 1,440 r.p.m.
Speed .			• •• •• •	120	strokes per minute

A modern, powerful machine, designed for faster cutting, greater accuracy, longer blade life and ease of operation.

HYDRAULIC RAISING AND LOWERING is fitted to the saw guide. A control lever enables the operator to raise, lower or stop the saw in any desired position while the machine is running. At the end of the cut the saw is automatically returned to the raised position, after which a limit switch is actuated to stop the machine.

DRIVE is by twin Vee belts and machine generated gearing, both fully enclosed. The motor is mounted on a hinged platform with a simple and effective belt tensioning device.

FEED AND CUTTING PRESSURE is hydraulically controlled and the pressure on the saw is infinitely adjustable to give the wide range of feed pressures needed to efficiently handle light and heavy sections in soft and hard materials.

SAMPLE CUTTING TIMES

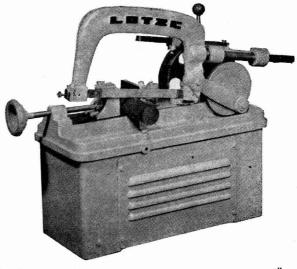
Machine Speed — 120 strokes/min.
Blade — 6 Teeth/inch.

Dia. of Bar	Actual Cu	tting Time
Material	3% Nickel Steel	Free Cutting Steel
6"	27½ mins.	
5"	18 mins.	9 mins.
4" 3" 2"	$10\frac{1}{2}$ mins.	5 mins.
3"	$4\frac{1}{2}$ mins.	2½ mins.
2"	2 mins.	11 mins.
1"	½ min.	½ min.

SPECIFICATIONS

Capaci	ty	٠.							 			6"	x	6"
Capaci	ty	aŧ	45	0					 			6"	x :	3½"
Dimen	sior	15	of	S	w	Bla	de	s	 	10"	to	14"	×	1"
Length	of	FS	tro	ke					 					5"
Speed	(si	ng	le)						 	. 120) s	troke	es/r	nin.
										1 120				
Motor									 1	H.P.,	1.	430	R.F	.M.

F682—"LOTZE" HACKSAW MACHINE



Capaci	ty		٠.																		. :	5"	x 5"
Saw b	lade														12	2"	1	or	ıg	x	: 1	"	wide
Stroke																							
Motor	requi	red																				. 4	h.p.
Hydrau	ılic li	ft t	o b	ow.																			
Swivel	vice	to	45°																				
C h		-1:-		.: 46	_	 ۱.,۱		 	_	4	:	~1	_	٠	11,				L	:1	. :		motor

Can be supplied with clutch-operated single pulley or built-in motor drive.