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THE RICHLIN COMP

"Equipment Demonstration Center & Offices"

77 FLORIDA STREET - FARMINGDALE - NEW YOR 516-694-9400

Precision Machine Tools

BUY - SELL - TRADE - LEASE
BROKERS IN PRECISION PLANTS
PRECISION PLANT LIQUIDATIONS
APPRAISALS

<u> RAMBAUDI</u>

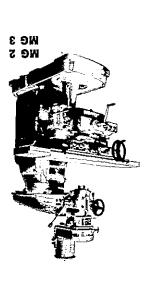
- OVER 40 STYLES OF MILLING MACHINES
- VERTICLES HORIZONTALS COMBINED VERTICLES & HORIZONTALS
- HYDRAULIC TRACING TAPE CONTROLLED VAN NORMAN STYLE
- DIRECT FACTORY SERVICE CENTER FARMINGDALE, L.I.

Due to the large volume of machines sold, the Rambaudi Milling Machine Company, long known under the name of VRG-2, has established their own factory sales and service center here in Farmingdale, L.I. Due to the breadth of the line and the interchangeability of major components, Rambaudi is able to manufacture extremely high quality milling equipment at reasonable prices.

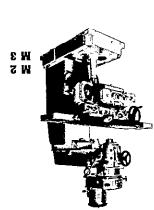
Some of the most outstanding characteristics built into the Rambaudi are:

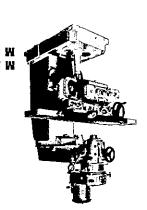
- ALL LEAD SCREWS HARDENED AND GROUND
- 3" DIAMETER TABLE LEAD SCREW WITH BUILT IN ANTI-BACKLASH ADJUSTMENT ALLOWS CLIMB MILLING - RUNS IN OWN OIL BATH
- SPEED RANGE UP TO 5750 RPM
- TRAVELS 29-1/2" to 60"
- WIDE RANGE VERTICAL SPINDLE "OVERARM POSITIONING" 22" MAXIMUM
- ALL DRIVE SHAFTS HARDENED AND GROUND FEED GEARS SYNCHROMESH GROUND
- HORSEPOWER 3.6 to 20

09 RU

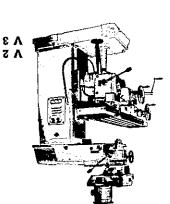


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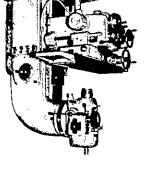




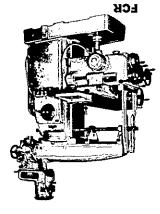




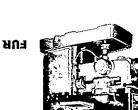
RAMBAUDI

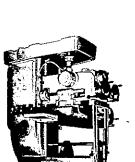


FVR











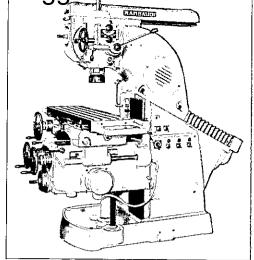


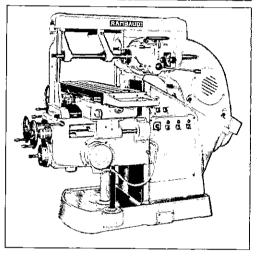
MILWINGSANDCBOBHY CM MACHINE im sriggers.com

UR 60

PRINCIPAL FEATURES

- The base is divided into two parts the top of which is mobile; the movement is controlled by an electric motor mounted inside the column with automatic stops at stroke end in the two directions.
- The mobile top part of the column slides on the tilted base so that the capacities of the machine remain unaltered, whether the head is in a vertical or horizontal position, or tilted.
- This machine, owing to its particular shape, can drill, bore, and cut on a 150° arc for the length of 1200 mm (47") which corresponds to the table travel.
- The spindle has 18 rotating speeds in geometrical progression and an automatic and hand controlled spindle travel of 150 mm (6") with 6 spindle feeds in geometrical progression. An automatic disengaging device adjusts the depth of the travel required to the precision of 0,02 mm (.001).
- The mesh gearbox and the motor, are mounted inside the mobile top part of the base and the speeds are selectioned by one sole lever with direct speed reading dial placed on the front of the top part of the base.
- The spindle is equipped with electromagnetic brake.
- All the controls are arranged on the front of the machine, including the handwheel for longitudinal traverse.
- Lead screws for the table, cross feed and knee are hardened and ground.
- The table lead-screw revolves in oil bath and is equipped with climb milling device. Backlash compensation for longitudinal and cross feeds.
- The spindle rotation, the electromagnetic brake, the operating feeds and the rapid feed, are centralized on one sole control lever.
- All castings are of Mehanite. All shafts, spindles, sleeve and gears are made of chrome nickel steel, hardened and ground.





STANDARD EQUIPMENT

Electric plant — Cooling system — Belts — 2 horizontal spindle supports — 1 horizontal spindle \varnothing 1"1/4 — Braces — Tie in rod ASME 2"3/4 spindle end — Servicing spanners — Instruction and spare parts manual.

SPECIAL EQUIPMENT

Universal dividing head centers height 6''3/8 complete with tailstock gearings - support - dividing plates — Circular table \varnothing 15" complete with 3 dividing plates — Parallel vice jaw opening 6", width of jaws 6"3/8 — Horizontal spindle cutter arbor 1" complete with guide and spacing bushes — Collets arbor, collets up to 3/4" in diam. and adaptor for Morse tapers 1, 2, 3, 4.

GENERAL SPECIFICATIONS

											_				
National standard sp	oindle er	ıd .			_									N I	E0.
TIANA COMBUNICA AME	20101111	me ana	trav	AI .							•	•	•	N.	50
														ins.	6
Range of spindle sp	ngde N	10	•	•	•	•	•	•	•	•	•	•	•	in.p.rev.	.0015~.008
Head rotation	ccus IV.	10 .	•	•	-	•	•		•	٠				r.p.m.	25-1500
Head rotation .		11	. •	•			т				•			1	150∘
Table Working Sung	JU - BIZE	: uveran	_											in.	13" x 59"
														in.	11/16"
Longitudinal and Cit	OS DUVI	31 17111111	1880	ч гаг	าตอ	INI .	ソハ							in./min.	1/2 - 40
														in./min.	1/4 - 20
Eungituumai illovelli	ווג טו נוו	ie table		_										in.	47
														in.	12
vertical travel of the	кпее													1	
Rapid traverse { long	itudinal	and tra	nsve	rse	•	200	•	•	•	•	•	•	•	in.	18
Rapid traverse { veri	ical .			.00	•	•	•	•	•	•	•	•	•	in./min.	120
Maximum distance b	etween	enindla	noco	in.	· (artic			. :4!	•			•	•		60
Maximum distance b	otwoon	opinale	11056	: III \	eine.	٠ التاد	pos	arriou	an	uta	pie	•	•	in.	22
Maximum distance b	CTMCCII	spindle	axis	m n	Orizo	onte	aı.p	ositio	on a	ınd	table		•	in.	16
Spindle motor , Knee motor	•		•	•		•	•	•						HP	5 2
														HP !	2
Top base in motor														HP !	0,5
Top base lift motor Electropump motor														HP	0,25
HOE WEIGHT													_	lbs.	5750
Gross weight .											_		-	lbs.	6830

RAMBAUDI & C. - VIA ACQUI - LEUMANN (TORINO - ITALY) - PHONE 950.303-4-5-6

tomasone & c. - torino - Tel. 500.518

HE RICHIMS CARPAINERY Movers mimsriggers.com
SHOWROOM AND OFFICES
FLORIDA ST. FARMINGDALE, L.I., N.Y. 11735
UR 60

516-694-9400

Plain Carriage

Net weight lbs. 5750

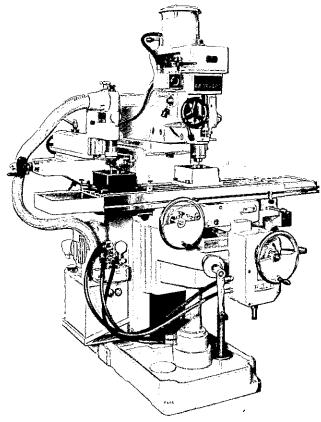
UR 60-U

Universal carriage

MILLING AND BORING MACHINE

6 FEEDS .002" - .012" 18 SPEEDS 25-1500 RPM FEEDS 1/2"-40"/MIN

	INC	HES
SPECIFICATIONS	V2	V3
SPINDLE Spindle taper Quill diameter N. 16 spindle speeds range N. 16 spindle feeds N. Spindle feeds N. Spindle feeds range Quill vertical traverse Spindle motor (two speeds) Head swivel Max. and min. distance spindle nose to table Overarm hand-controlledscross traverse Max. and min. distance spindle center to column. ins.	R 8 3 ³ / ₈ 75-5700 3 .0015006 5 3-2.5 180° 2 ³ / ₄ -19 16 6	N. 40 4 ³ / ₈ 60-3000 6 .0015008 5 5-3.6 180° 1/ ₄ -17 16 22
TABLE Working surface ins. N. 4 T slots, size ins. Longitudinal traverse ins. Cross traverse ins. Vertical traverse ins. 12 feeds range ins. p. m. Rapid traverse ins. p. m. Motor HP	42) 9/ 29 1: 16 ; ¹ / ₂ ; 8	16 1 ¹ / ₂ 2 2
WEIGHTS and DIMENSIONS Net weight	3000 3660 62 x 59 x 83	3200 3860 62 x 59 x 87



STANDARD EQUIPMENT

Electric motors - Electrical equipment - Belts - Spindle draw bar - Set of wrenches - Lubricating pump - Instruction book with spare parts list.

COPY MILLING

The V2 and V3 milling machines can be supplied with the hydraulic copying attachment. This feature must be built in at the factory.

The application of this attachment does not effect the operation of the machine as a conventional milling machine.

The machine can be operated either automatically or by hand. When the machine is set for the automatic operation, attention from the Operator is required only at the beginning of each new cut.

An electric wire, contouring the master form, controls the automatic reversal of the table which operates a solenoid operated hydraulic valve supplying fluid to a hydraulic picking device mounted on the front of the knee. A cross stepping increment is thereby applied at each table reversal and this can be adjusted from .002" to .040".

After each complete scanning of the area the machine stops automatically.

Literature on copy milling machines is available on request.

HEAD MODEL V3

The vertical head V3 provides 16 spindle speeds from 60 to 3000 r.p.m.

60	75	100	120	150	180	220	360
500	600	850	1000	1200	1500	1800	3000

6 rates of power down feed are provided. An overload slipping clutch is incorporated providing protection in the feed drive.

Inches rev0015	.002	.003	.004	.006	.008
----------------	------	------	------	------	------

Vertical travel 5" Quill diameter 43/8" Spindle nose N. 40 Taper Power of two speeds motor HP 4.8 - 3.6

Working capacity.

Face milling: max. dia. 4" with inserted tooth cutters.

Drilling: with the max. feed .008 inch/rev. the max. dia. in

steel is $1^{3}/_{16}$ " in cast iron $1^{9}/_{16}$ ". Boring: max. dia. 8" with boring heads.

Grinding: min. wheel dia. 3".

The vertical heads are of sturdy design and only highest quality material is used in their construction. All parts are manufactured and assembled to high precision standards, thereby ensuring maximum operating efficiency. The spindle is hardened and ground and mounted in high precision bearings. The quill is also hardened and ground and is one piece with the rack, the teeth are finish ground.

HEAD MODEL V2

The vertical head V2 provides 16 spindle speeds from 75 to 5700 RPM.

75	125	150	210	250	355	420	600
710	1000	1200	1680	2000	2850	-3360	5700

3 rates of power down feed are provided. An overload slipping clutch is incorporated providing protection in the feed drive.

Inches rev0015	.003	.006
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Vertical travel 5" Quill diameter 3 3/8" Spindle nose R8 Taper

Power of two speeds motor HP 3-2.5

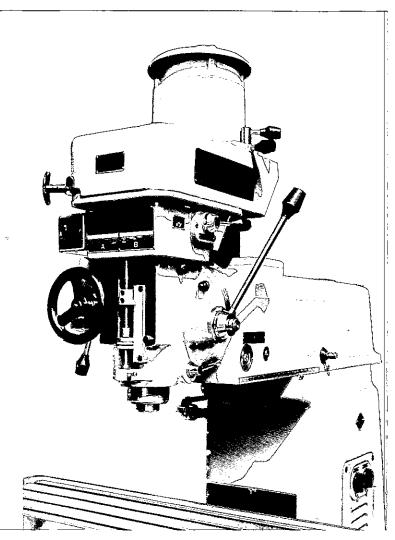
Working capacity.

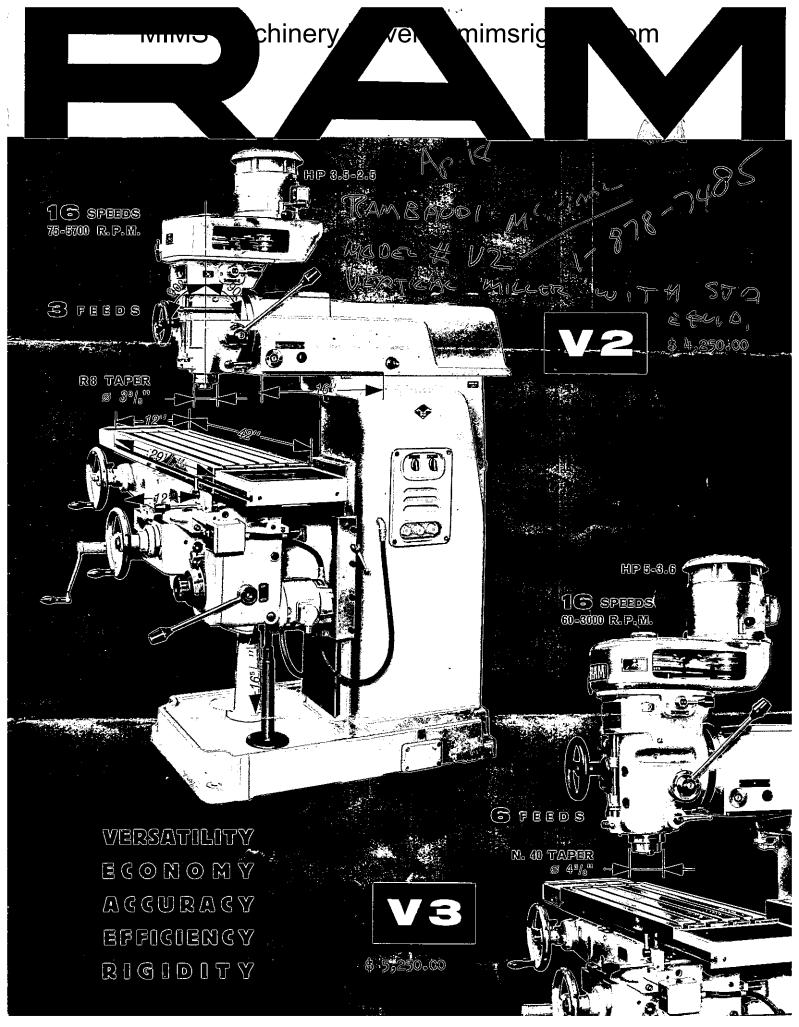
Face milling: max. dia. 3" with inserted tooth cutters.

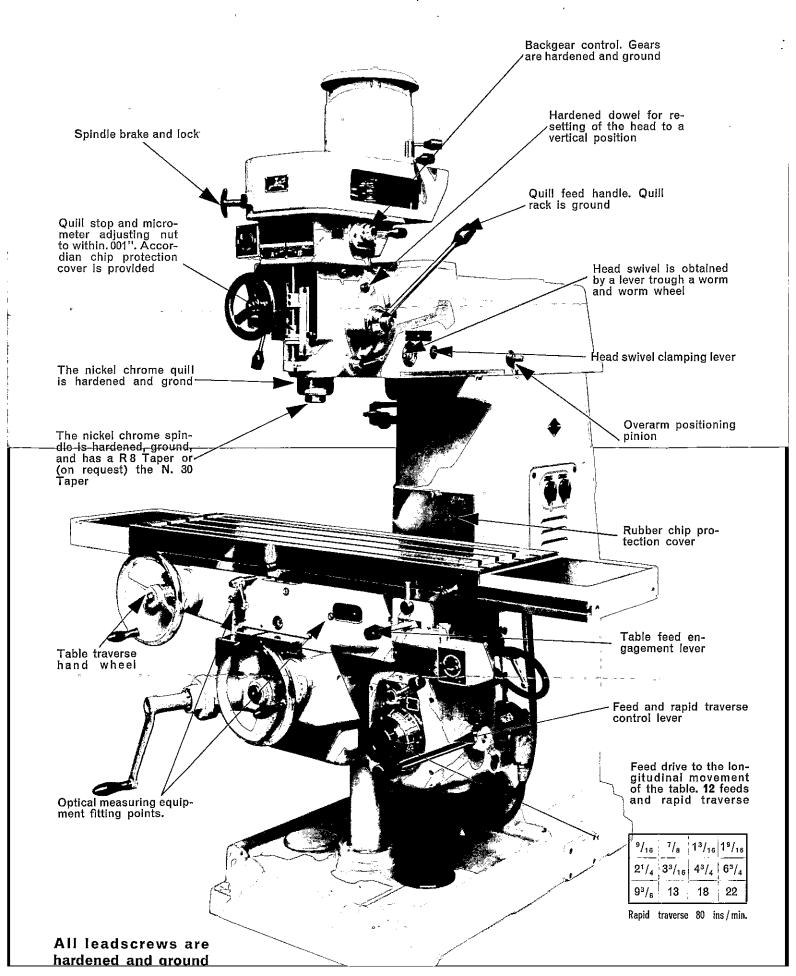
Drilling: with the max. feed .006 inch/rev. the max. dia. in steel is 13/16" in cast iron 1".

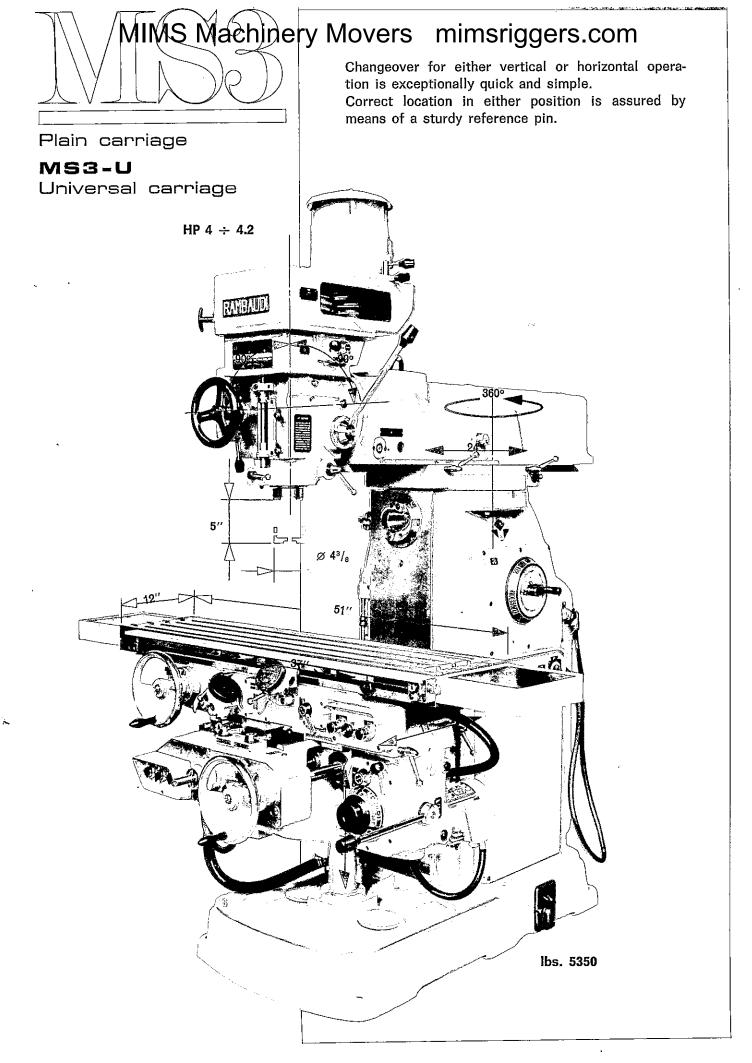
Boring: max. dia. 6" with boring heads.

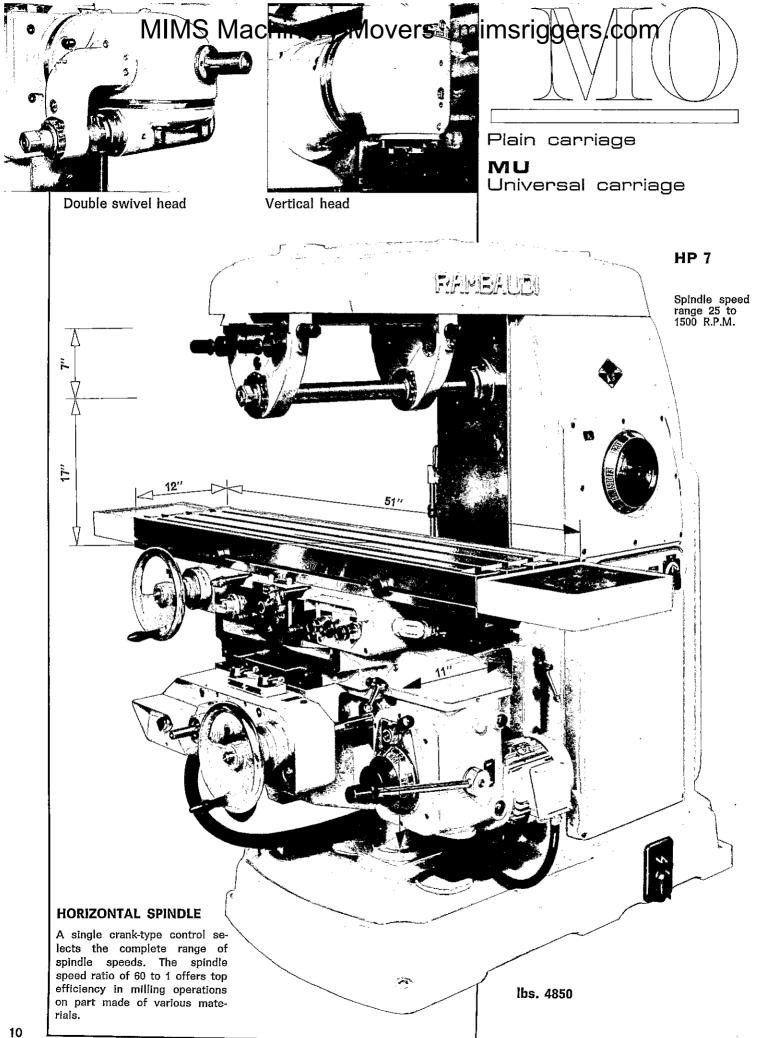
Grinding: min. wheel dia. 19/16".











MIMS Machine Movers mimsriggers.com Peed Controls

Table traverse handwheel.

Table clamping levers.

Vertical feed engaging lever.

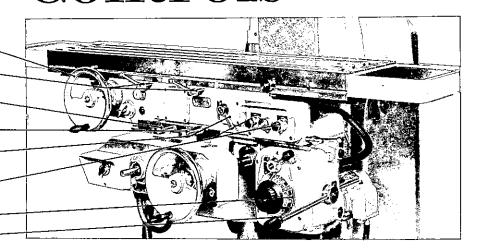
Cross feed engaging lever.

Longitudinal feed engaging lever.

Feed directional push buttons.

Feed selector dial.

Rapid traverse control lever.



All controls - knee, saddle and table - are compactly situated on the front in easy-to-reach positions, thereby reducing effort and inducing automatic movements by the operator.

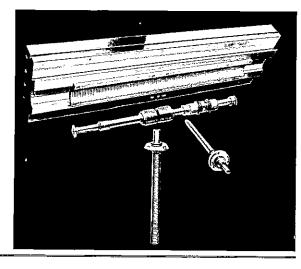
A safety device is also incorporated to prevent damage should the operator make a wrong control.

UNIVERSAL TABLE

On request all the models can be supplied with a universal swivel type table, graduated in degrees, available rotation \pm 45°. When so equipped a «U» is added to the machine designation.

LEADSCREWS

All leadscrews are made of finish ground special steel with excellent wearability and long operating life. Screw accuracy is .001"/foot (0,02 mm. on 300 mm).





MISTACIONETY MARSAGINS iggers.com

HEAD MOD. N. 2

The vertical head N. 2 provides 16 spindle speeds from 75 to 5700 R.P.M. at 60 cycles.

75	125	150	210	250	355	420	600
710	1000	1200	1680	2000	2850	3360	5700

and from 65 to 4750 R.P.M. at 50 cycles.

65	105	130	175	210	300	350	500
600	825	1000	1400	1650	2375	2800	4750

3 rates of power down feed are provided. An overload slipping clutch is incorporated providing protection in the

Inches	.0015	.003	.006
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Vertical travel 5"

Quill diameter 3 3/8"
Spindle nose R8 Taper (N.S. 30 on request)

Power of two speeds motor HP 3 - 2.5 (60 cycles) HP 2.5 - 2 (50 cycles)

WORKING CAPACITY

Face milling: max. dia. 3" with inserted tooth cutters. Drilling: with the max. feed .006 inch/rev. the max. dia. in steel is ¹³/₁₆" in cast iron 1". Boring: max. dia. 6" with boring heads. Grinding: min. wheel dia. 1 1/16".

HEAD MOD. N. 3

The vertical head N. 3 provides 16 spindle speeds from 60 to 3000 R.P.M. at 60 cycles.

60	75	100	120	150	180	220	360
500	600	850	1000	1200	1500	1800	3000

and from 50 to 2500 R.P.M. at 50 cycles.

50	60	85	100	120	150	180	300
400	500	700	800	1000	1200	1500	2500

3 rates of up and down power feed are provided. An overload slipping clutch is incorporated providing protection in the feed drive.

Inches	.0015	.003	.006

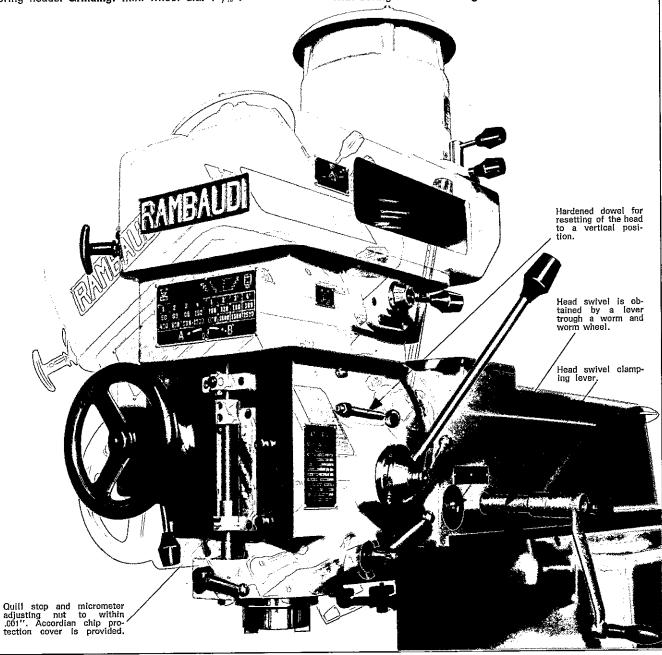
Vertical travel 5" Quill diameter 43/8

Spindle nose N. 40 Taper

Power of two speeds motor HP 3 - 3.6 (60 cycles) HP 4 - 3 (50 cycles)

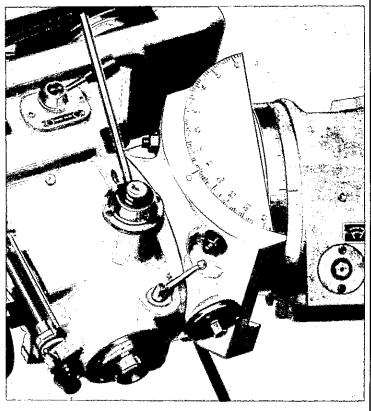
WORKING CAPACITY

Face milling: max. dia. 4" with inserted tooth cutters. Drilling: with the max. feed .006 inch/rev. the max. dia. in steel is 13/16", in cast iron 19/16". Boring: max. dia. 8" with boring heads. Grinding: min. wheel dia. 3".



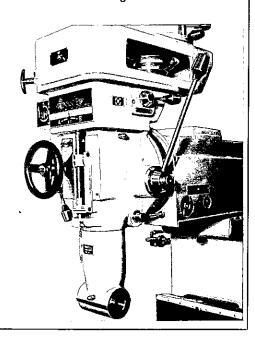
SWIVEL JOINT

With this attachment the spindle swings across table 30 degrees forward and backward and of course rotates in the direction of table 180 degrees. Both angular movements of the head are controlled by worm gears for ease of adjustment. Both swivels are engraved to assist in settings. Despite this universal feature the head is extremely rigid in its mounting.



RIGHT ANGLE ATTACHMENT

The right angle attachment further increases the capacity and range of the vertical heads. Many awkward machining operations in angles and cavities which would not ordinarily be possible are thus added to the M machines range.



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			INC	HES			METRIC			
GENERAL SPECIFICATIONS		M 2	MG 2	М 3	MG 3		M 2	MG 2	М 3	MG
VERTICAL HEADSTOCK										
Spindle taper		R 8 (or N.S. 30) N.S. 40			R 8 (or	N.S	N.S. 40			
Spindle stroke, power or hand operated	in.	5		mm.			25			
3 Spindle power feeds range	i.p.r.	.0015 ÷ .006			mm/rev.		0.035	÷ 0.14		
16 Spindle speed range: 50 cycles	R.P.M.	65-4750 50-2500			R.P.M.	65-	2500			
60 cycles	R.P.M.	75-5700 60-3000			R.P.M.	75-	5700	60-3000		
Head swivel		1800				1800				
Max. distance spindle nose to table	in.	20	211/2	19	20	mm.	505	545	475	51
Min, distance spindle nose to table	in.	21/2	4	1	21/2	mm.	60	100	30	65
Overarm travel	in.	16	24	14	24	mm.	400	600	350	600
Max. distance spindle center to column	in.	22	28	22	30	mm.	560	700	550	76
Min. distance spindle center to column	in.	6	4	8	6	mm.	160	100	200	16
Overarm swivel		-	1800	—	1800		-	180°	-	18
TABLE	!									
Working surface	în.	51 x 12			mm.					
T-slots number (width)		4 (11/16)				4 (18)				
Table longitudinal traverse	in.	37			mm.	950				
Manual cross traverse	in.	12			mm.	300				
Power cross traverse	in.	11			mm.	280				
Manual vertical traverse	in.	171/2			mm.	445				
Power vertical traverse		161/2			mm.	415				
12 longitudinal and cross power feeds range	î.p.m.	9/16 ÷ 22			mm./1'	12 ÷ 550				
12 vertical power feeds range	i.p.m.	4/16 ÷ 11			mm./1'	6 ÷ 275				
Longitudinal and cross rapid traverse	i.p.m.	80			mm./1'	2000				
Vertical rapid traverse	J.p.m.	40			mm./1'	1000				
ELECTRICAL EQUIPMENT								_		
Vertical spindle: 50 cycles	HP		÷ 3		3.5	HP		÷ 3		- 3.5
60 cycles	HP	3 ÷	- 3.6	3.5 ÷	- 4.2	HP	3 =	- 3.6	3.5	÷ 4.2
Power feed	HP	1.25			HP		1.25			
Coolant pump	HP	0.15			HP	1	0.15			
WEIGHTS AND DIMENSIONS						16-		4050	1 4000	401
Net weight	lbs.	4000	4100	4250	4350	Kg.	1800	1850	1900	19
Shipping weight	lbs.	4900	5000	5100	5200	Kg.	2200	2250	2300	23
Overall dimensions (width-lenght-helght)	in.		71x55x87 71x59x87			cm.		40x220	1	150x22
Shipping crate dimensions (width-length-height)	in.	69x	55x83	69x5	55x83	cm.	175x1	40x210	175X1	40x21

EXTRA EQUIPMENT

The use of correct attachments can give the machine increased versatility and usefulness.

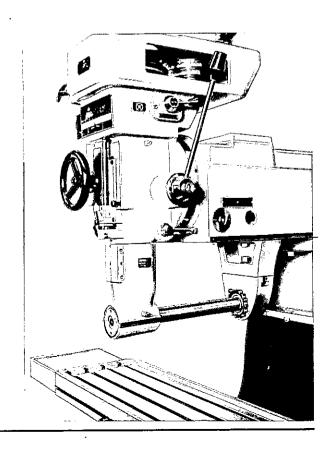
Ask for the leaflets covering the following equipment:

Dividing heads — Universal swivelling table — Rotary table — Swivel vice — Optical measuring equipment — Precision measuring equipment with dial indicators and trays for rods — Graduated scales — Slotting attachment — Right angle attachment — Horizontal milling attachment — Boring head — Manual copying attachment — Raising block — Magnifying glass — Illuminating lamp — Drill chuck — M. Adaptors — Collets — Shell end mill arbors — Stub arbors — Cutters — Grinding attachment.

HORIZONTAL MILLING ATTACHMENT

With the right angle attachment in conjunction with the arbor support the vertical machine can be converted from vertical to a horizontal machine capable of slotting, sawing, etc.

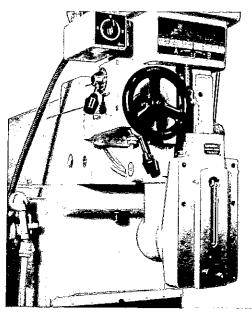
The attachment mounts on the spindle nose and the arbor support on the overarm thus providing rigid support for the milling cutter.



Homes Machiner Novers mimsriggers.com and Universal Models

OFNIEDAL CRECIFICATIONS				INCHE		METRIC							
GENERAL SPECIFICATIONS		MS2	MS2/U	MS3 MS3,	σ MO	MU		MS2	M\$2/U	MS3	MS3/U	WO	MU
3 Spindle power feeds range 16 Spindle speed range: 50 cycles	in. i.p.r. R.P.M. R.P.M. in. in. in. in. in.	65 - 75 - 21½ 4		20 18 2½ ½ 1/2 29½ 6			mm. mm/rev. R.P.M. R.P.M. mm. mm. mm. mm.	65 - 75 - 545 100	7 NS.30) 12 0.035 - 4750 - 5700 - 18 455 - 10 - 50 - 36	25 ÷ 0.14 50 - 60 - 0° 515 70 10	2500 3000		——————————————————————————————————————
18 Spindle speeds range	in R.P.M. In. in.	171/2	15	N.S. 50 12 25 - 1500 0 171/2 15		15	mm R.P.M. mm. mm.	440	385	25 -	. 50 00 1500 0	440	i 385
Table swivel Number T-slots ("V," width) Longitudinal traverse Manual cross traverse Power cross traverse Manual vertical traverse Power vertical traverse 12 longitudinal and cross power feeds range Longitudinal and cross rapid traverse Longitudinal and cross rapid traverse	in. in. in. in. in. in. in. i.p.m. i.p.m. i.p.m.	4 37	±45° 3 35	51 x 12 4 3 37 12 11 171/2 161/2 9/16 - 22 4/16 - 11 80 40	4	±45° 3 35	mm. mm. mm. mm. mm. mm. mm. mm./1' mm./1' mm./1'	 4 950	±45° 3 900	950 3 25 4 12 6 -	x 300 ±45° 3 900 00 80 45 15 550 275 00	4 950	±45° 3 900
ELECTRICAL EQUIPMENT Vertical spindle: 50 cycles	HP HP HP HP HP HP		÷ 3 3.6	3 ÷ 3.5 3.5 ÷ 4.2 6 7.2 1.25 0.15	:	-	HP HP HP HP HP		÷ 3	3 ÷ 3.5 - 7 1.	- 3.5 - 4.2 6 .2 25] =	<u>-</u>
Shipping weight Overall dimensions (width-lenght-height)	lbs. lbs. in. in.	5100 6000 71x5 69x5	5x83	5300 540 6200 630 71x55x83 69x55x83	5800 71x6 69x6	3x65 37x71	Kg. Kg. cm. cm.	2300 2700 180x14 175x14	0x210	2400 2850 180x14 175x14	10x210	175x17	

Specifications and illustration must not be considered binding in detail as it is our constant aim to supply machines representing te latest developments in machine tool design.



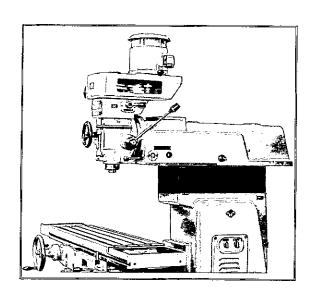
SHAPING ATTACHMENT

The shaping attachment can be easily mounted on the head. The ram stroke is adjustable from 0 to 3.3/16" (0 to 80 mm.).

RAISING BLOCK

By the fitting of a raising block (on request) the spindle nose to table distance can be increased.

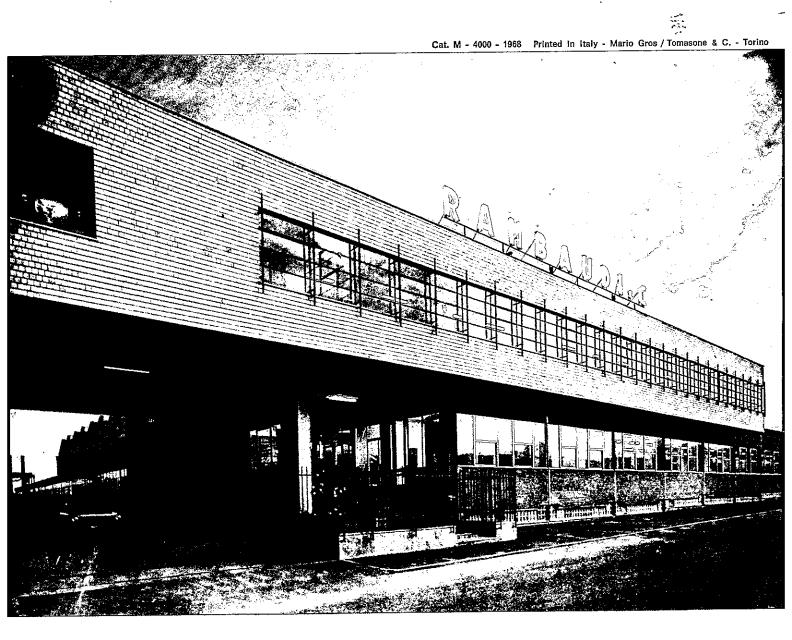
Two blocks are available: 4" and 8" (100 and 200 mm.) thickness.



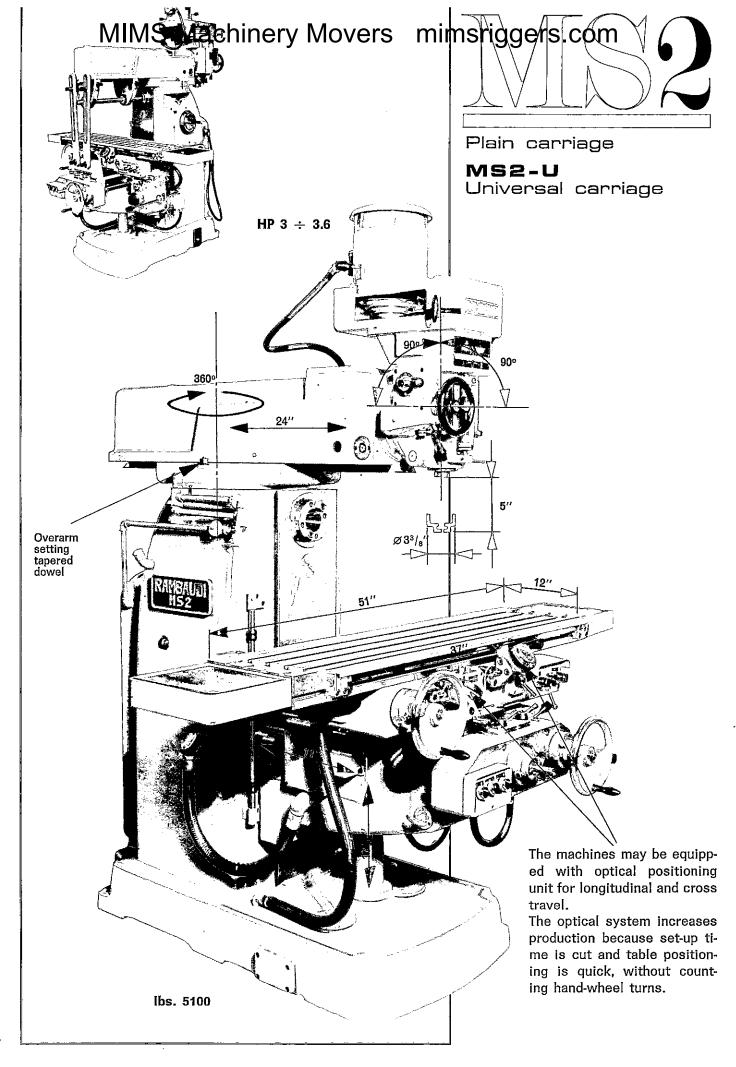
MIMS Machinery Movers mimsriggers.com Rambaudi range of milling machines

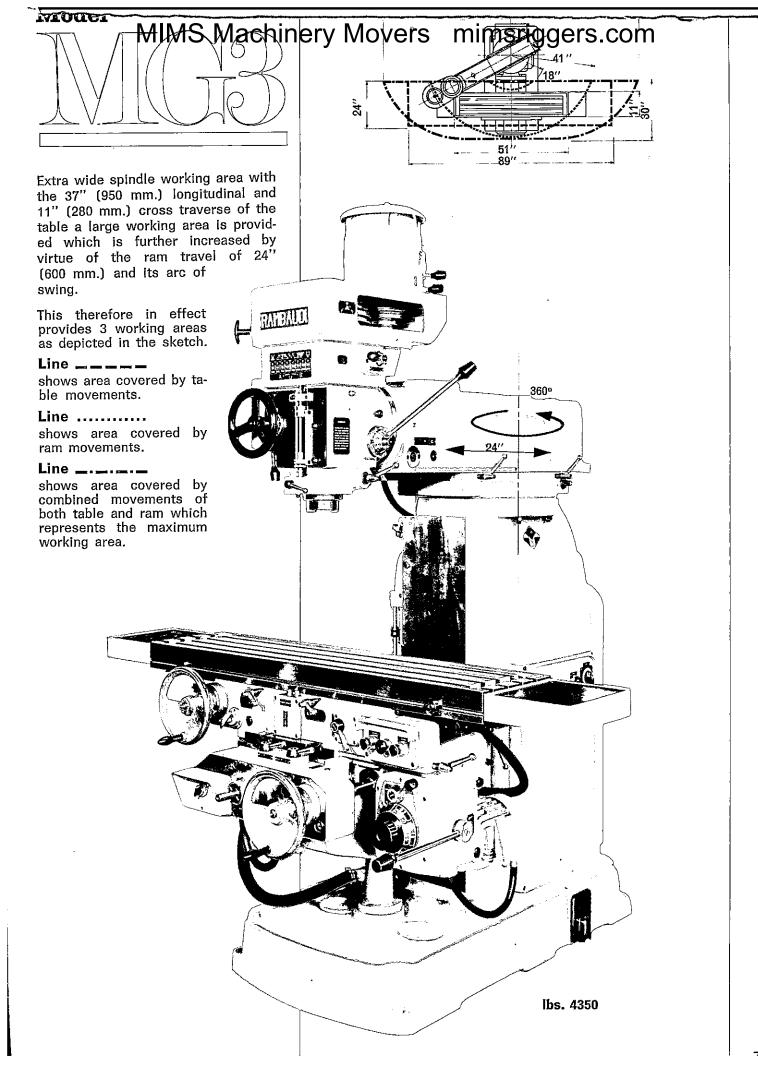
RAM

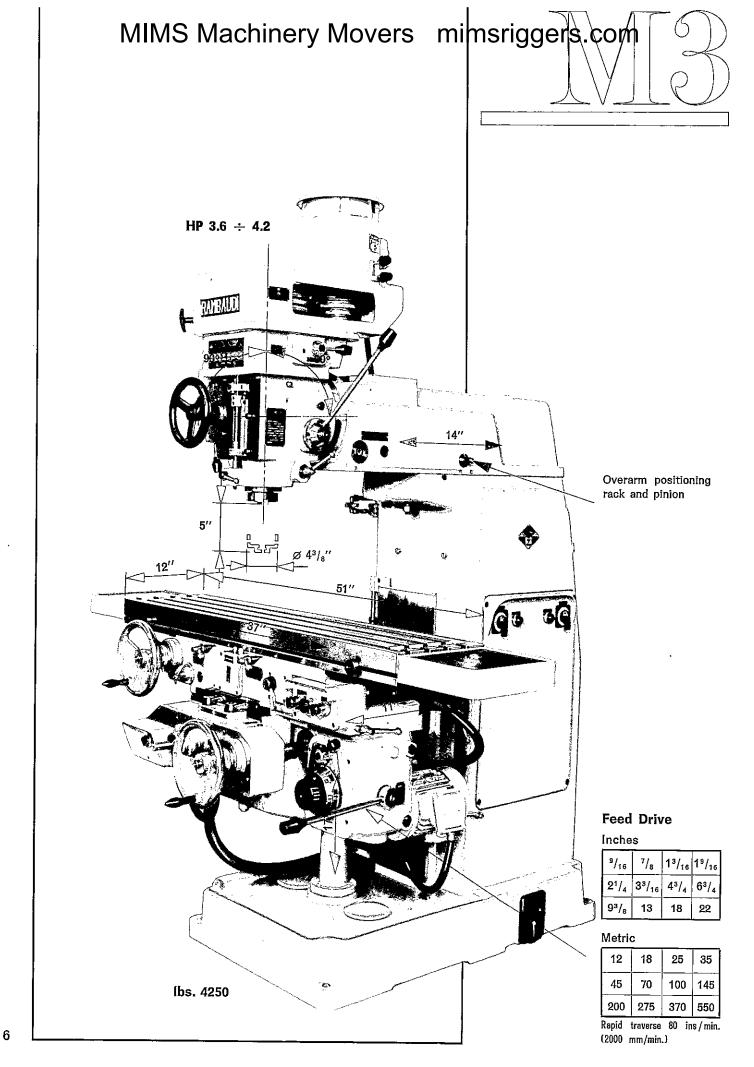
- V Series Turret type machines
- M Series Machines
- F Series Machines
- Die-sinking machines
- Ramcop 360° 2D and 360° 3D hydraulic tracing machines
- N.C. milling machines

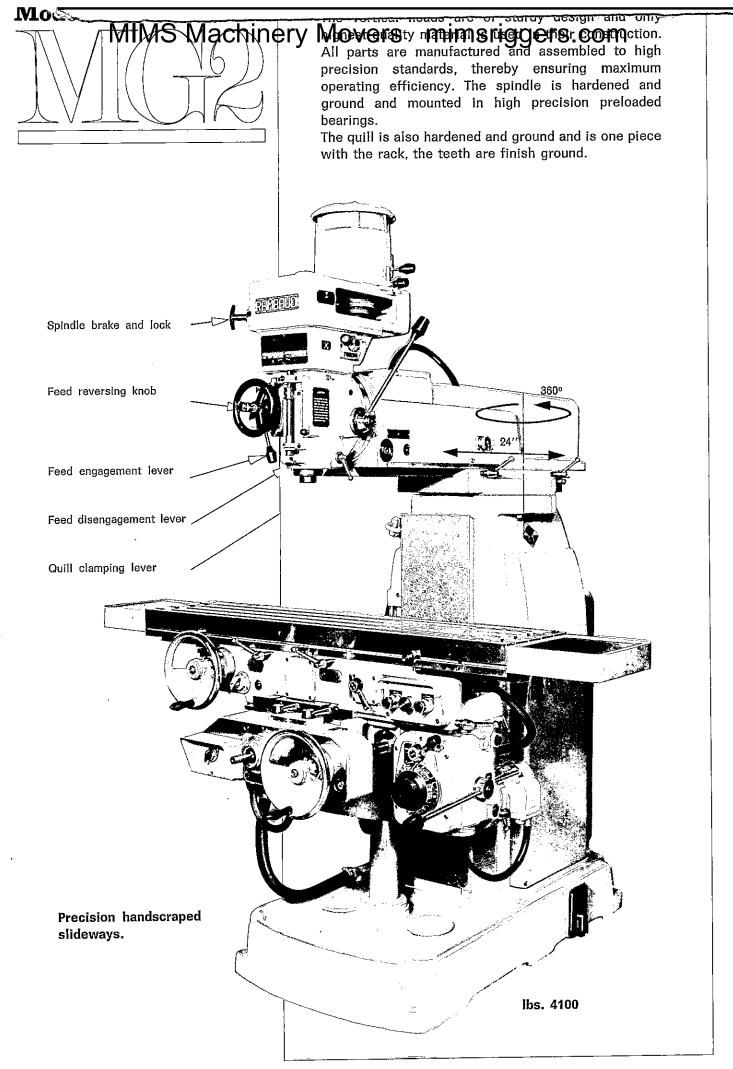


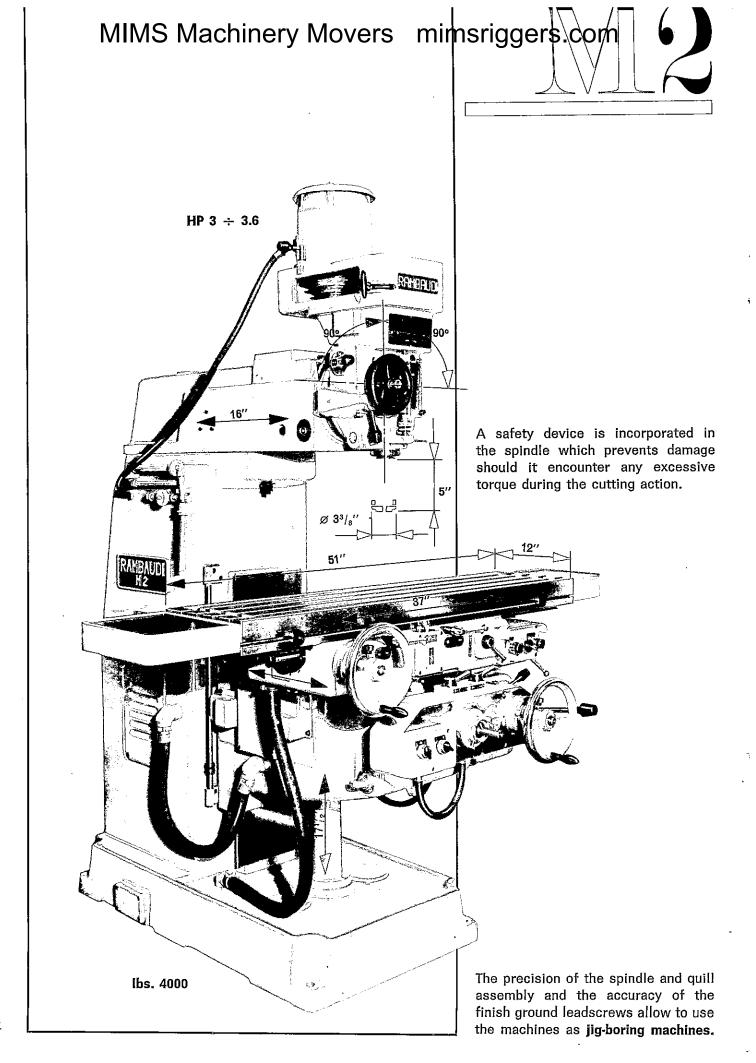
RAMBAUDI & CO. - VIA ACQUI 18 - 10096 LEUMANN - TORINO - ITALY - PHONES: 950.303-4-5-6











MIMS Machinery Movers mimsriggers.com RAMBAUDI milling machines Movers mimsriggers.com RAMBAUDI milling Machines



10 Standard Models

designed especially for toolrooms, maintenance, and small-lot production operations. Any potential user is enable to select a machine precisely fitted to his needs and budget.

Versatile machines

easy to operate, quick to respond, the «M» machines will produce a wide variety of work with utmost efficiency.

Rugged machines

with many features designed for fast, accurate and safe milling operations.

Built in the Rambaudi tradition

of sturdy, dependable construction, with casting made of selected grades of iron.

Accurate machines

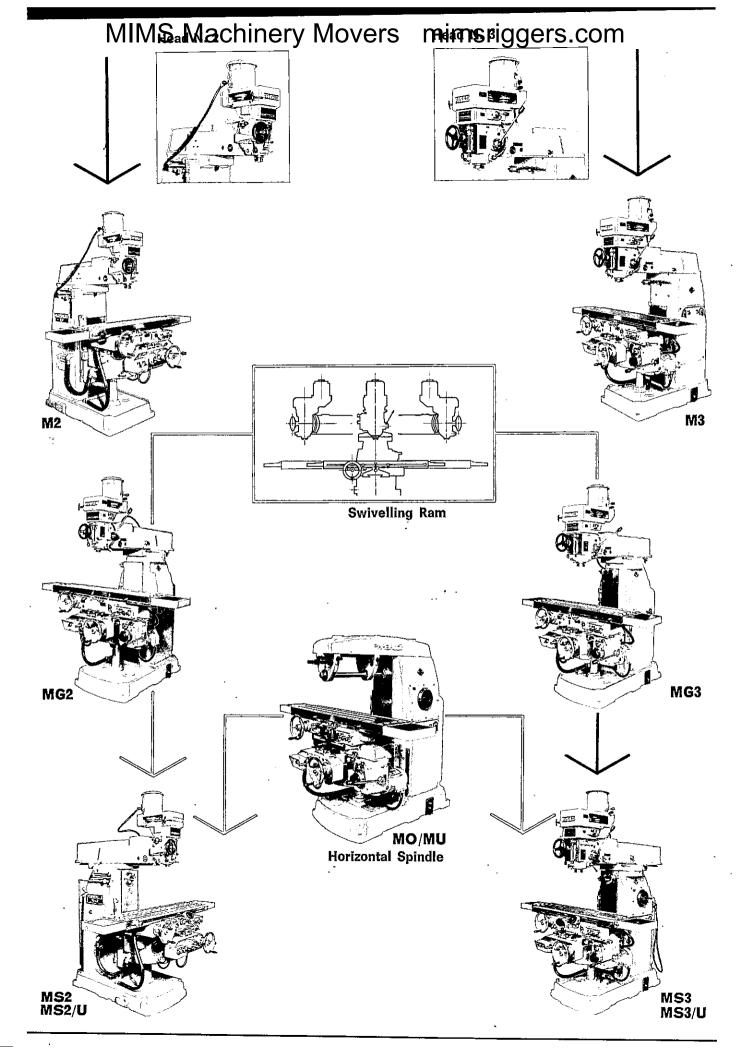
with hand screaped ways and all leadscrews made of finish ground hardened special steel for long operating life.

Power controlled machines

The table, saddle and knee are power controlled. Three up and down power feeds available for the vertical quill.

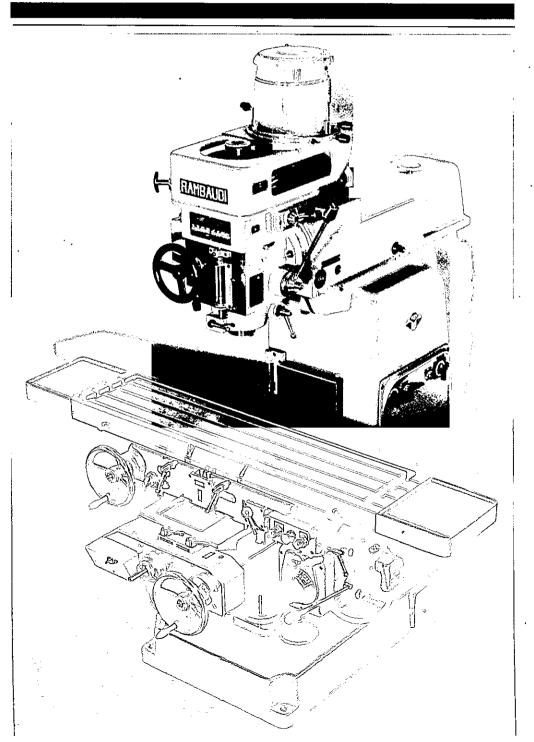
New spindle assembly

with new extra precision bearings for longer life and full-powered cuts.



RAM

milling machines Mseries

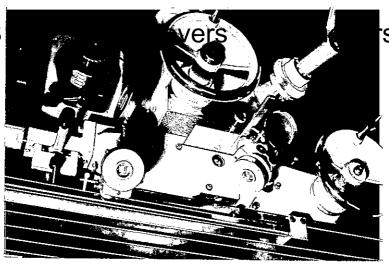




device for longitudinal and cross travel, The machines may be equipped with optical positioning by the operator. reducing effort and inducing automatic movements situated on the front in easy-to-reach positions, thereby All controls - knee, saddle and table - are compactly movements. in oil bath. It is made in two precession are also harbacklash. Vertical and cross leadscrews are also hardened and ground to ensure a lasting accuracy of The table leadscrew is hardened and ground and runs-

 $"_{bt}$ \⁸ sxis stole- $\overline{\Gamma}$ The table with a working surface of 42" x 12", has 4.



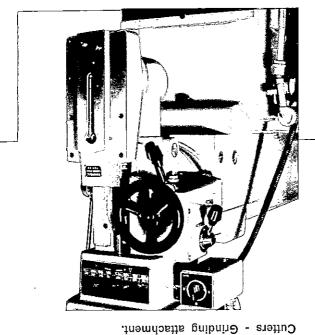


тизмчійра Аятхэ

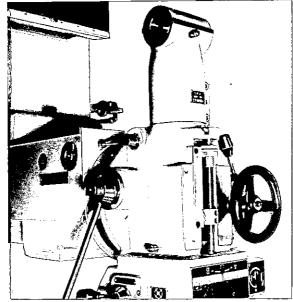
The use of correct attachments can give the machine increased versatility and usefulness. Ask for the leaflets covering the following equip-

ment:

Coolant system - Dividing heads - Universal coolant system - Dividing heads - Universal swivelling table - Rotary table - Swivel vice - Optical measuring equipment - Precision measuring equipment with dial indicators and trays for rods - Graduated scales - Slotting attachment - Right angle attachment - Horizontal milling attachment - Boring head - Manual copying attachment - Boring head - Magnifying glass - Miluminating lamp - Drill chuck - C, M. Adaptors - Collets - Shell end mill arbors - Stub arbors - Collets - Shell end mill arbors - Stub arbors -



Stroke adjustable from 0 to $3^{3}/16$ ".



Machiner<u>y </u>ֈֈֈֈ֎ֈֈ֎ֈֈ_{ու}այլը