



VERTICAL MILLING MACHINES

TODAYS STANDARD OF THE INDUSTRY

THE LEADING BUILDER OF MILLING MACHINES

35 Years of Building Quality Machine Tools

TIGER TOOL & MACHINE

SAN MARCOS SANTA FE SPRINGS

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BENDIX ELECTRICAL
TEXAS A&M UNIVERSITY
TEXAS SOUTHERN UNIV
REPUBLIC OF KOREA



MODEL FTV-2



MODEL FTV-4



MODEL FTV-3L



MODEL FTV-510



MODEL T-RAM



MODEL FT-5

Member



AMTDA

PRINTED IN U.S.A. CAT 750-89

REPUBLIC-LAGUN MACHINE TOOL CO.

1000 EAST CARSON

CARSON, CALIFORNIA 90749-4586

(213) 518-1100

(1-800) 421-2105

FAX (213) 830-0923

SPECIFICATIONS
(Subject to change without notice)



FT-1
10 - 1001



FT-2
12 - 1004



FTV-1
14 - 1008



FTV-2
16 - 10132



FTV-3L
20 - 1015

SPECIFICATIONS

T U R R E T M I L L S

		FT-1 10 - 1001	FT-2 12 - 1004	FTV-1 14 - 1008	FTV-2 16 - 10132	FTV-3L 20 - 1015
TABLE						
TABLE SIZE	INCH	44" x 10"	50" x 10"	44" x 10"	50" x 10"	58" x 11"
SQUARE WAYS (On Knee)		-	-	-	OPT	STD
HARDENED & GROUND WAYS		-	-	OPT	OPT	STD
CHROME WAYS		-	-	OPT	OPT	OPT
TRAVERSE						
LONGITUDINAL TRAVEL MANUAL	INCH	30"	33"	30"	33"	36"
WITH POWER FEED	INCH	26"	30"	26"	30"	33"
CROSS TRAVEL	INCH	16"	16"	16"	16"	15-1/2"
VERTICAL KNEE TRAVEL	INCH	16"	16"	16"	16"	16"
RAM TRAVEL	INCH	22-3/16"	22-3/16"	22-3/16"	22-3/16"	22-3/16"
HEAD						
MAIN MOTOR (Other H.P. Available)		2 HP	2 HP	3 HP	3 HP	3 HP
STEP HEAD 8 SPEED (RPM)		65-3000	65-3000	-	-	-
STEP HEAD 16 SPEED (RPM)	OPT.	65-6000	65-6000	-	-	-
INFINITE VARIABLE SPEED HEAD (RPM)		-	-	55-4250	55-4250	55-4250
HEAD MOVES RIGHT TO LEFT		YES	YES	YES	YES	YES
TILT BACK AND FRONT		YES	YES	YES	YES	YES
ELECTRIC PANEL		-	-	-	-	-
QUILL						
POWER FEED TO QUILL PER REVOLUTION		.003"- .0015"- .006"	.003"- .0015"- .006"	.003"- .0015"- .006"	.003"- .0015"- .006"	.003"- .0015"- .006"
INFINITE QUILL FEED		OPT	OPT	OPT	OPT	OPT
SPINDLE TAPER	STD.	R - 8	R - 8	R - 8	R - 8	R - 8
SPINDLE TAPER	OPT.	#30 - #40	#30 - #40	#30 - #40	#30 - #40	#30 - #40
QUILL DIAMETER (CHROMED)		3-3/8"	3-3/8"	3-3/8"	3-3/8"	3-3/8"
QUILL TAVEL		5"	5"	5"	5"	5"
KNEE FEEDS (3DIRECTIONS)						
LONG & CROSS	IN./MIN.	-	-	-	-	-
VERTICAL	IN./MIN.	-	-	-	-	-
RAPID TRAVERSE						
LONG & CROSS		-	-	-	-	-
VERTICAL		-	-	-	-	-
ONE SHOT LUBE		YES	YES	YES	YES	YES
MACHINE WEIGHT APPROX.		2,600 LBS.	2,700 LBS.	2,750 LBS.	2,850 LBS.	3,700 LBS.
MACHINE CONSTRUCTION DIMENSIONS						
COLUMN - Turret diameter, column graduated		15" DIA. GRAD.	15" DIA. GRAD.	15" DIA. GRAD.	15" DIA. GRAD.	16" DIA. GRAD.
KNEE - Knee width & Knee to column bearing length		11-1/2x18" LONG	11-1/2x18" LONG	11-1/2x18" LONG	11-1/2x18" LONG	15-3/4x19" LONG
SADDLE - Saddle & table bearing length		20"	23"	20"	23"	23"
RAM - Ram and turret bearing length		19"	19"	19"	19"	19"
- Ram total length		36"	36"	36"	36"	36"
Workpiece capacity uniformly distributed		750 LBS.	750 LBS.	750 LBS.	750 LBS.	1,000 LBS.

WHEN YOU NEED A Good Vertical Mill . . .

Talk To The People Who Make A Great Vertical Mill *

- 8 Models Available
- 3 HP To 7.5 HP Variable
- Manual Or Full Power Knee With PRT
- R-8 Or No. 40 Taper
- 10x44, 10x50, 11x54, And 11x58 Tables
- Precision Ground Screws
- Available With Hardened & Ground Ways
- Flood Coolant Standard
- Only Top Grade USA Spindle Bearings Used



FT/FTV-1, 2
10x44 or 50" Tables,
2 HP Step or 3 HP
Variable



Deluxe Model
11x54 or 11x58
18" Cross
4 HP, No. 40

• Or Any Of Our Almost 40,000
Satisfied Customers

FTV-510
11x58 Table, 5.5 or 7.5
HP, No. 40, 4-3/8"
Quill Full Power Knee



FTV-4L
11x58 Table
4 HP, No. 40
Full Power Knee

(OTHER MODELS AVAILABLE)

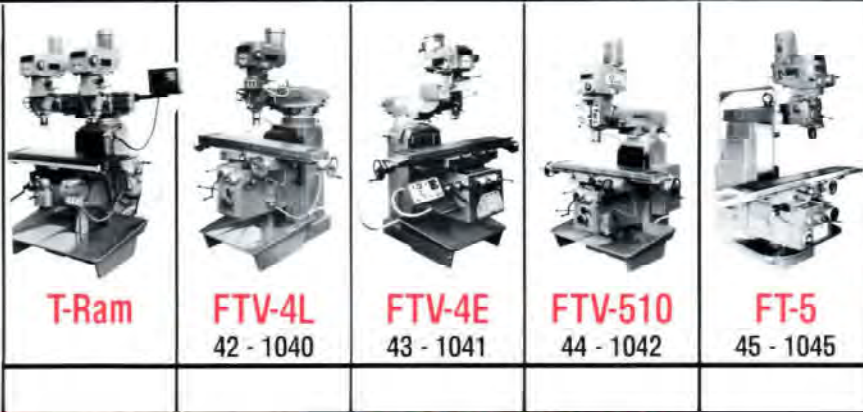
WESTERN EUROPE
CRAFTSMANSHIP & AMERICAN
TECHNOLOGY

Republic-Lagun Machine Tool Co.
1000 E. Carson Street
Carson, CA 90745

310-518-1100 800-421-2105
Fax: 310-830-0923



DIAL TYPE VERTICAL MILLING MACHINES



BASE PRICE INCLUDES ALL OF THESE "EXTRA" FEATURES AS STANDARD.

30% MORE CAPACITY THAN ANY OTHER MAKE.

1. Electric Motor
2. Flood Coolant System
3. Ground Lead Screws
4. One-Shot Lubrication
5. Extra Long Cross Traverse
6. Chrome Hardened Quill

Special Applications	W/POWERED KNEE			
58" x 11" STD STD OPT	58" x 11" NO OPT -	58" x 11" UNIV NO OPT -	58" x 11" - NO OPT -	63" x 13-3/8" UNIV STD OPT -
36" 33" 15-1/2" 16" 12"	39" 38" 15" 16-1/8" 22-3/16"	39" 38" 15" 16-3/4" 22-3/16"	39" 38" 15" 16-1/8" 19"	46" 45-1/4" 12-5/8" 16-7/8" 37"
2 Heads 3 HP OPT OPT 55-4250 YES YES -	4 HP - - 55-4250 YES YES *	4 HP - - 55-4250 YES YES *	5-1/2HP (7-1/2HP Opt) - - 70-4200 YES NO *	5-1/2HP (7-1/2HP Opt) - - 70-4200 NO NO *
.003"- .0015"- .006" - R - 8 #30 - #40 3-3/8" 5"	.003"- .0015"- .006" OPT #40 #40 Erickson 3-3/8" 5"	.003"- .0015"- .006" OPT #40 #40 Erickson 3-3/8" 5"	.003"- .0015"- .006" - #40 Erickson - 4-3/8" 6"	.003"- .0015"- .006" - #40 Erickson - 4-3/8" 6"
	12 1/2" - 22-5/8" 1/8" - 6-5/8" 75" 19-1/2"	Inf Variable 3/8" - 24" 1/8" - 7" 78" 27"	12 1/2" - 22-5/8" 1/8" - 6-7/8" 75" 19-1/2"	18 1/2" - 31-1/2" 1/8" - 9" 118" 35"
YES 4,850 LBS.	YES 4,000 LBS.	YES 4,500 LBS.	YES 4,900 LBS.	YES 7,800 LBS.
16" DIA. GRAD. 15-3/4x19" LONG 23" 19" 36" 1,000 LBS.	16" DIA. GRAD. 14-1/2x19" LONG 26" 19" 36" 1,200 LBS.	16" DIA. GRAD. 14-1/2x19" LONG 26" 19" 36" 1,500 LBS.	16" DIA. GRAD. 14-1/2x19" LONG 26" 24" 36" 1,200 LBS.	FIXED 17-1/2x21" LONG 38" 26" 53" 2,500 LBS.

The end result of designing and building Milling Machines for over 35 years is included in this catalog. All models have those features which have proven their value over the years under all conditions.

SALES AND SERVICE

Lagun's extensive network of Distributors maintains a stock of spare parts for the convenience of Lagun users and they also have factory trained service personnel to be of service to you and your company.

Check for Accessories in this Catalog!

ASSEMBLED IN CARSON, CA.

MILLING MACHINE ATTACHMENTS AND ACCESSORIES THAT WILL MULTIPLY THE VERSATILITY OF ALL VERTICAL MILLS

Attachment with auxiliary support



SHOWN: Is the assembled combination of right angle attachment, arbor support and mill arbor



For Dimensions See page 9.

ARBOR SUPPORT

For use with right angle attachment and mill arbor-needle bearings support.
Order 129-1113



For Dimensions See page 9

MULTI ANGLE ATTACHMENT

(all Angle Head)
Supplements the right angle attachment described on this page. Any corner with a small radius can be finish milled. The unit is supplied with 3 collets for 1/8", 3/16" and 1/4" and also is available for vertical heads with R-8 #30 or #40 spindle nose. Rotational speeds is increased 50%.
Order for R-8 - 132 - 1115



RISER BLOCK

Use to obtain clearance for very large workpieces; riser block extends the height range 4", 8", 12". Are easily mounted to the column of the machine with four bolts.
Order #146 - 1135 4" High
Order #147 - 1135A 8" High
Order #148 - 1137 12" High

3-376



RIGHT ANGLE ATTACHMENT

Designed to simplify right angle work by reducing the need of special tooling and difficult fixtures.

Ideal for cavities & pocket jobs. It has aligning pads for quick positioning available for R-8, NMT #30 and #40.
Order for R-8 - 127 - 1112A
Order for #30/40 - 127 - 1112B



For use with Right Angle attachment.
Order 130 - 1114A for R - 8
Order 130 - 1114B for #40 or #30

SLOTING ATTACHMENT

The 3/4 HP vertical shaping head performs intricate shapes, extruded dies and complex pattern, can be placed at any vertical or compound angle to the table. This means you can produce shapes which normally requires special broach. It is a must in cases of blind holes. This model can be mounted permanently on the ram rear support and by merely swinging it 180 to position it over the table for usage.
A shaping 5/8" tool set is also available.

SHAPING HEAD

149 - 1140
Slotting Head

3-4 HP

4" Stroke
adj. w 1/8" increments
5/8" Tool Cap
(6) 80 - 100 - 145
205 - 295 - 420
strokes per min. See page 9



VICES

6-1/2 Flame Hardened Vise w/swivel base
Order #122 - 1107



MACHINE TOOL LIGHT

Straight prong plug for direct plant lighting circuits. Flexible tube and plastic heavy duty lamp.
Order # 201 - 1176



PHASE CONVERTER
(Operated 220 volts, 3 phase motor on 220 single phase line.)
Order #222 - 7072
3 to 5 HP motors
Order #223 - 7073
4 to 8 HP motors



INFINITE VARIABLE POWER FEED UNIT

Longitudinal # 140 Order #194 - 1152
Cross #140 Order #190 - 1143
Vertical Knee # 140 Order #193 - 1150



SLOTTER TOOL KIT

#149 - 1140A Slotter Tool Kit w/7 shaped tools 3 bit holders.



DIGITAL READ-OUT

• 2 Axis Japan Model with preset and inch/metric switchable console support (Installed) 0005. Glass scale Order 250-8006
• 2 Axis Mini Wizard w/ keyboard entry preset memory instant inch/metric switchable. Absolute; Zero recall. console support (Installed) Order 251-8006
• 2 Axis wizard w/ keyboard entry 125 position programmable memory battery back-up, absolute, zero recall, instant inch/metric conversion. Calculator add/subtract and automatic error compensation (Installed) Order 252-8007



DUAL READING DIALS

Which reads in millimeters and inches are quickly mounted in place of existing dials. Installation provides immediate conversion to the metric system. Dials available for long, cross and vertical. Available set of 3 dials for long and cross and vertical.
Order 270 - 1162



ROTARY TABLES

These tables can be mounted either horizontally or vertically, supplied w/3 dividing plates. A wide range of angular divisions can be made using an indexing plate having several circles of equally rotation of the workpiece to within 20 seconds of arc.
Order # 179 - 1120 10" Diameter
Order # 161 - 1125 12" Diameter



UNIVERSAL DIVIDING HEAD

Universal model with gears to drive from left side of table, tallstock, indexing plate for manual operation rapid index feature and steady rest. 40 to 1 ratio
8" UNIVERSAL order #175 - 1111 (A)
10" UNIVERSAL order #176 - 1111 (B)
12" UNIVERSAL order #522 - 3302
14" UNIVERSAL order #534 - 3303
16" UNIVERSAL order #535 - 3304



BALL LEAD SCREWS

X - Y - Z TRAVEL
Contact Factory

#101 - 1174
#74 - 1175
only nut



QUICK CHANGE SPINDLE

One piece spindle w/ nose threaded for #40 Erickson Quick change spindle, complete w/lock nut, wrench, and drive keys
Universal # 200 & #300



COLLET CHUCK W/15 COLLETS

For spindle R-8 - #40
Order # 103 - 1175
Collet Chuck with 15 collets from 1/8" up to 1" cap. for R-8 or No. 40.



BORING HEADS

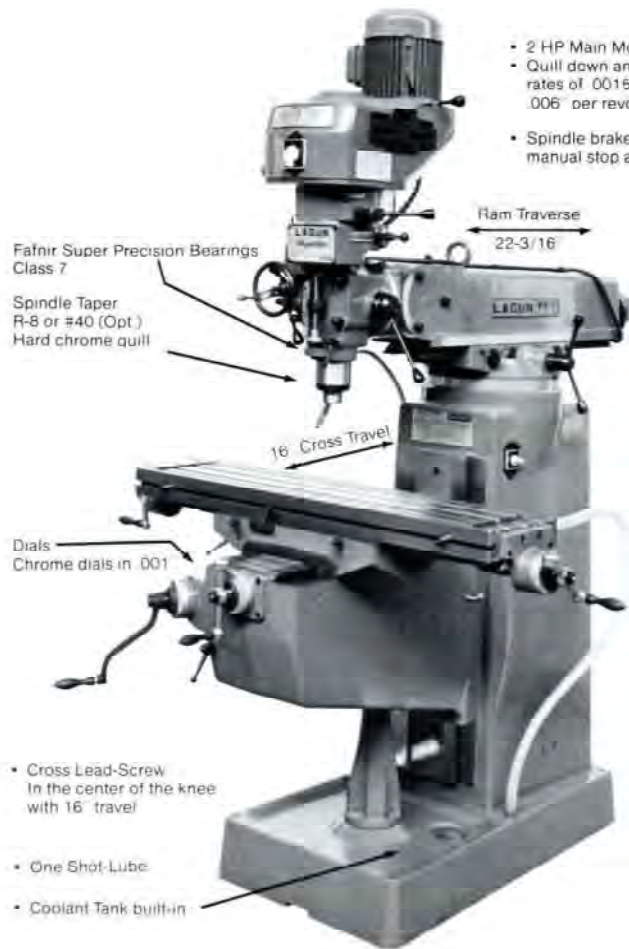
Order # 108 - 1164
3-3/8" Body diameter Head 5/8" tool 3/4" max. for spindle R-8 - #40
manual offset - 1 Div = .001

SPECIAL BACK PLATE

Flange to hold Vertical Head



For T-Ram and special machines.
Order No. 62 - 1170



- 2 HP Main Motor
- Quill down and up feed with rates of .0015", .003" and .006" per revolution
- Spindle brake for quick manual stop at any time

MODEL FT-1 Table 44" x 10" 2 HP
(Order 10-1001)

MODEL FT-2 Table 50" x 10" 2 HP
Extra Long Saddle 23"
(Order 12-1004)

- Head angular adjustment of 45° back and forth and 90° left and right.
- Quill down feed lever for manual fast feeds; hand-wheel for manual fine feeds
- Quill travel is 5 in.
- R-8 collet capacity
- Depth stop is graduated in thousands of an inch.

• Machine shown is the basic model. There is a full line of options and accessories available. See page 3

IMPORTANT FEATURES

- **AMERICAN MADE MAIN BEARINGS**
- **30% MORE CAPACITY THAN COMPARABLE MACHINES**
- One shot lubrication for long and cross ways, nuts and lead screws
- Back-lash compensation
- Hand scraped ways and gibs
- Extra long saddle 16" cross traverse
- Ground Lead Screws
- Flood Coolant System
- 2 HP motor
- R-8 Spindle
- (8) speeds from 65 to 3000 rpm
- Chrome hardened quill
- 3 Quill Feeds up & down w/auto stops
- Automatic & manual feeds
- Micrometer Stop
- All ground surfaces
- Extra Large 3-5/8" dia. dials
- 8 (Speeds) 65-115-195-325-600-1000-1700-3000 RPM

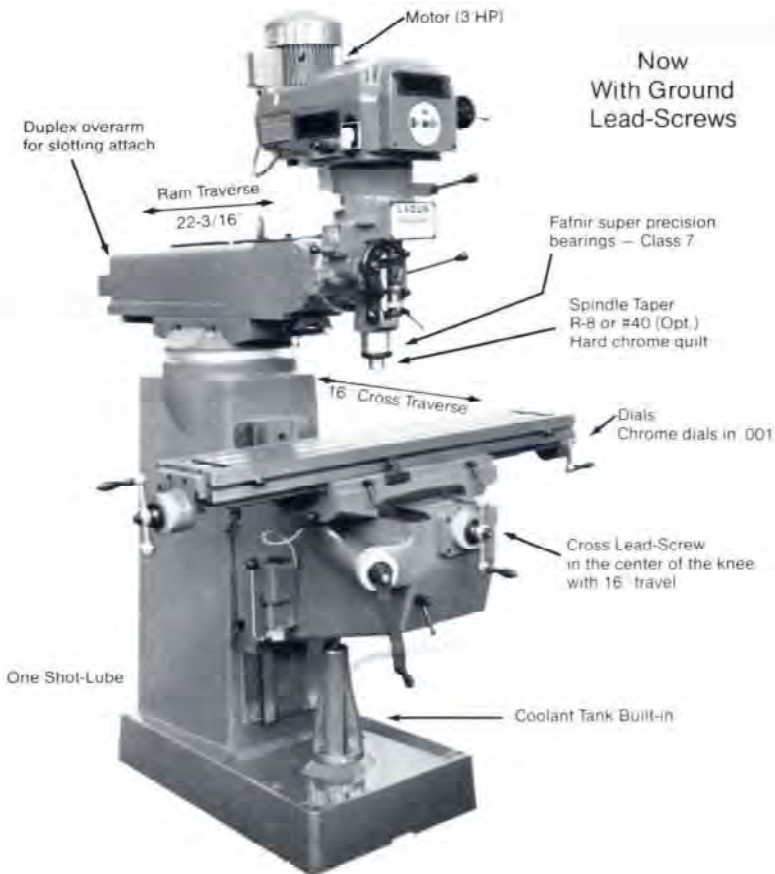
VERTICAL HEAD Order 54-1068
(See page 10 for additional information)



FT-1 shown with Right Angle Attachment Arbor Support and Mill Arbor
(See page 3 for additional accessories)



VERTICAL MILLING MACHINE
Shown with Slotter Attachment
(See page 3)



Now
With Ground
Lead-Screws

MODEL FTV-1 Table 44" x 10" 3 HP
(Order 14-1008)

MODEL FTV-2 Table 50" x 10" 3 HP
Extra Long Saddle 23"
(Order 16-1012)

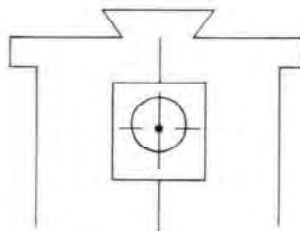
IMPORTANT FEATURES

- AMERICAN MADE MAIN BEARINGS
- 30% MORE CAPACITY THAN COMPARABLE MACHINES
- One shot lubrication for long and cross ways, nuts and lead screws
- Back-lash compensation
- Hand scraped ways and gibs
- 16" cross traverse
- Flood Coolant System
- 3 HP main motor
- Infinite variable speed from 55 up to 4250 rpm
- Automatic & manual feed with up & down stop

CAPACITY MILLING & DRILLING

Drilling Steel	
mild (manual)	3/4"
(power)	1/2"
Boring range	
mild steel	to 6"
Milling	
mild steel	3 cu. in./min.

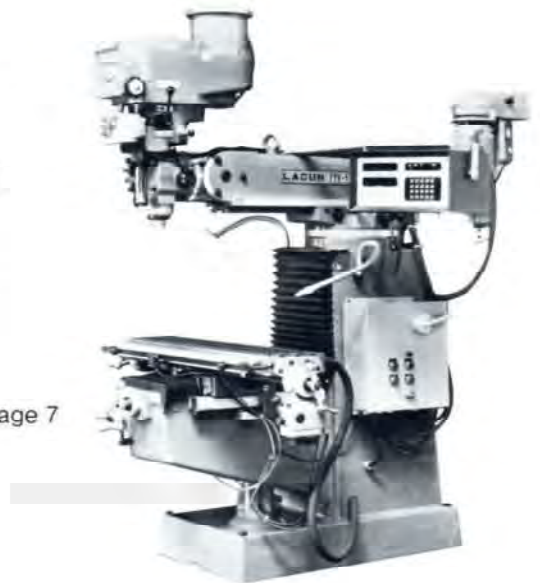
- **HARDENED WAYS** (Opt.) See page 7
Knee always w/Square Ways



- **CHROMED WAYS** (Opt.) See page 7
Knee always w/Dovetail ways



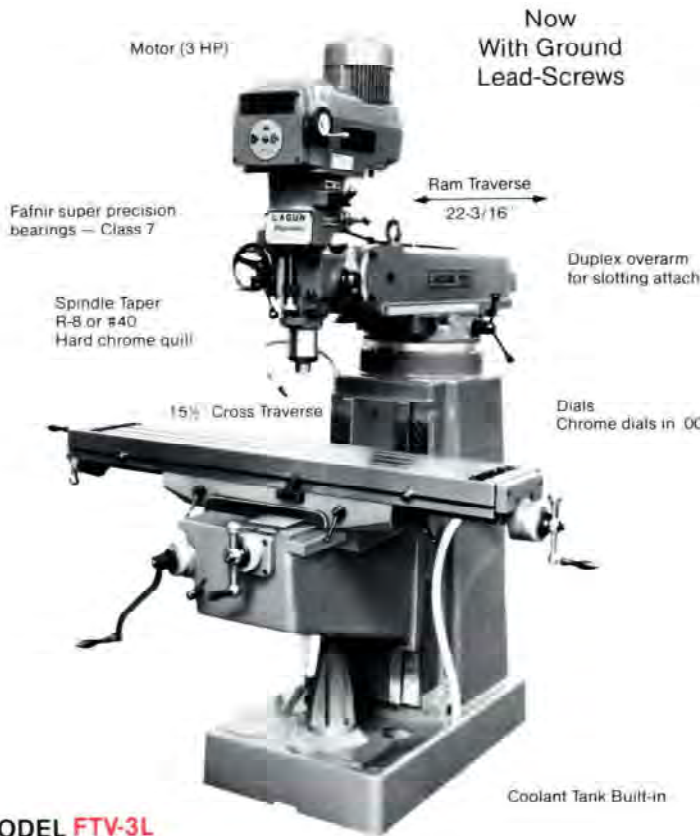
Machine shown is the basic model. There is a full line of options and accessories available. See page 3.



FTV-1 shown with Longitudinal Servo Feed, Read-out, Machine Light, Slotter Attachment, JIC Electric Controls and Way Covers.
(See page 3 for additional accessories)

VERTICAL VARIABLE HEAD ONLY

Order 56-1069
(Check page 10 for additional information)



MODEL FTV-3L

Machine shown is the basic model. There is a full line of options and accessories available. See page 3.

MODEL FTV -3L Table 58" x 11" 3 HP

(Order 20-1015)

With Square Heavy Duty Ways

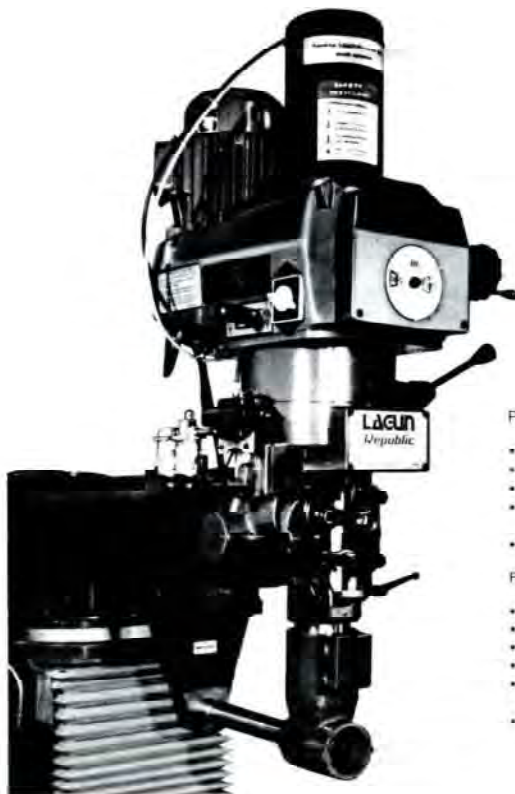
Provides the heavier workhandling capability of a heavy mill, workpieces up to 1000 lbs. with the versatility of the FT-1 Mill for toolrooms and shops requiring intermediate workpiece capacity. Extra wide saddle and knee for support of the large table with maximum stability and accuracy.

This FTV-3 model weighs 850 lbs. (more than Model FTV-2).

Will use all the standard accessories and attachments of Models FT-1/FTV-2.

AVAILABLE (OPT.)

- X-Y-Z Axis power feeds units
- Riser blocks
- Wide choice of accessories (see page 3)
- Hard chromed ways
- Hardened & ground ways
- Powered draw bar



POWER DRAW BAR

INCREASES PRODUCTION
CHANGES R-8 #30 - #40 TAPER
TOOLING IN SECONDS

PRECISION AIR GUN FEATURES

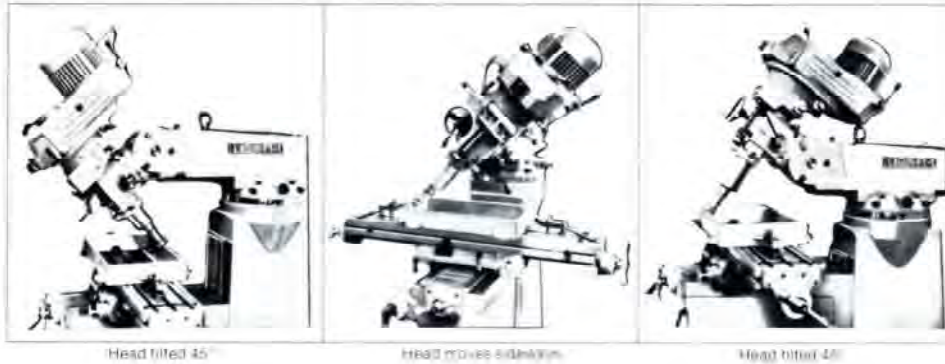
- High quality precision pneumatic gun
- Uses standard draw bar
- Will fit R-8 #30 or #40 national tapers
- Rotation of air gun is delayed until socket has captured the draw bar
- 1 year full warranty

PRECISION AIR VALVE FEATURES

- Convenient operation station
- Self-lubrication
- Precision air valve
- Water trap
- Uses standard 90 to 120 PSI shop air
- Install in minutes



FTV-3L shown with Cross Long Heavy Duty Feed Motors, Vertical Knee Feed Motor and Special Electric Installation.

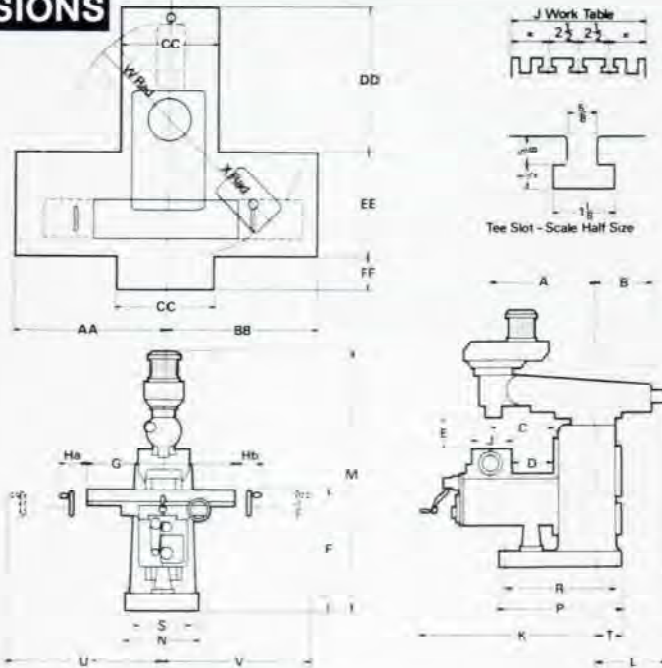


Head tilted 45°

Head moves sideways

Head tilted 45°

DIMENSIONS



Model		A		B		C		D		E		F		G	H		J	K	L	
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max		a	b			Min	Max
FT-1	Inches	15 1/4	37 1/4	8	30	6 1/2	29	3/4	16 1/4	2 1/2	18 1/2	32	48	44	8 1/2	13	10	48	14 1/4	36 1/4
FTV-1	mm	400	960	200	760	165	735	10	410	64	470	810	1219	1118	216	330	254	1219	360	920
FT-2	Inches	15 1/4	37 1/4	8	30	6 1/2	29	3/4	16 1/4	2 1/2	18 1/2	32	48	50	8 1/2	13	10	48	14 1/4	36 1/4
FTV-2	mm	400	960	200	760	165	735	10	410	64	470	810	1219	1270	216	330	254	1219	360	920
FTV-3	Inches	16 1/4	38	7 1/4	29 1/4	5	27	1	15 1/4	0	15 1/2	35 1/4	51 1/4	58	8 1/4	8 1/4	11	52	13 1/4	37 1/4
FTV-4	mm	430	965	180	740	127	685	25	387	0	394	892	1296	1473	222	222	279	1321	340	949

Model		M	N	P	R	S		T	U		V		W	X	AA	BB	CC	DD	EE	FF
						Front	Rear		Min	Max	Min	Max								
FT-1	Inches	83	23 1/4	40 1/4	37 1/4	19 1/4	17 1/4	12 1/4	17	45 1/4	23	51 1/4	30 1/4	47 1/4	44 1/4	50 1/4	27 1/4	45	24	16
FTV-1	mm	2100	600	1030	960	505	445	320	432	1156	584	1306	781	1201	1130	1283	700	1143	610	406
FT-2	Inches	83	23 1/4	40 1/4	37 1/4	19 1/4	17 1/4	12 1/4	17	45 1/4	23	51 1/4	30 1/4	47 1/4	46 1/4	52 1/4	27 1/4	45	24	16
FTV-2	mm	2100	600	1030	960	505	445	320	432	1156	584	1306	781	1201	1180	1334	700	1143	610	406
FTV-3	Inches	87	24	39 1/4	36 1/4	20 1/4	20 1/4	10 1/4	20 1/4	53	20 1/4	53	26 1/4	44 1/4	53 1/4	55	40	47 1/4	29 1/4	12 1/4
FTV-4	mm	2210	608	1010	924	527	527	273	511	1346	511	1346	673	1137	1353	1397	1016	1200	749	317

(ABOVE SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE)

CONSTRUCTION DETAILS

(All machines performance-tested before shipment)

Quality materials used throughout. Castings are close grained, semi-steel. Aluminum castings are made of a special, high ductile, shock resistant alloy. Steel components are machined from stress relieved alloy.

Engineered for added rigidity, Column has multiple internal ribbing; ram designed with continuous internal zig-zag supports.

Built with many exclusive features. Anti-friction bearing draw bar, supplied on self-holding taper spindle machines, facilitates collet ejection.

Designed for operator convenience. Dials are large, satin chrome finished. Elevating crank fits draw bar and knee locks. Adjustable gibs with convenient locks on knee, saddle and table.

Complete accuracy is assured through use of precision lead screws for each machine movement. At each point, an adjustable nut is provided for wear and back-lash take-up.

FRAME

Expanding dovetail locks ram and turret into one unit to prevent vibration.

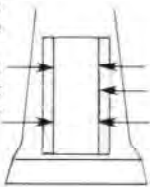
Column, knee and table are constructed with extra wide ways and taper gibs for maximum rigidity.

Heavier more rigid base, with 500 lbs. more structural reinforcement.

IMPORTANT FEATURE

Knee locking mechanism. Most knee-type vertical milling machines have a single lock to the column permitting rotation about the single point.

Lagun's new knee is equipped with a dual lock system which gives excellent contact on both sides of the column dovetail. The knee cannot rock laterally.

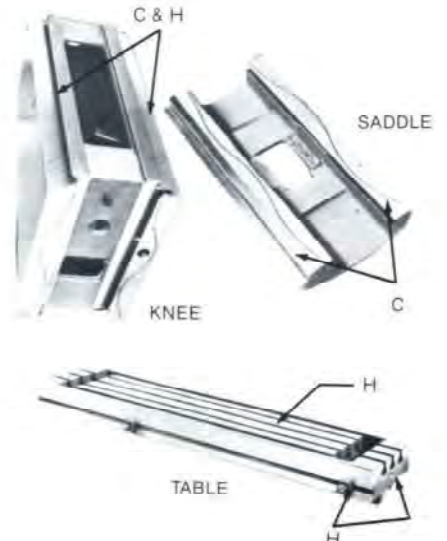


● HARDENED WAYS (Opt.)

See pages 5 and 6.
KNEE ALWAYS W/SQUARE WAYS
Hardened and ground ways, heat treated (X-Y) - (Table & Knee Hardened Ways)
HARDENED Surfaces marked with "H"

● CHROMED WAYS (Opt.)

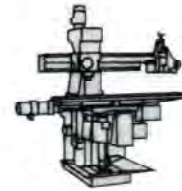
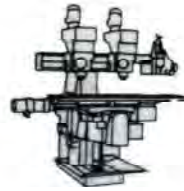
See pages 5 and 6.
KNEE ALWAYS W/DOVETAIL WAYS
CHROMED Surfaces marked with "C"



CHECK WITH PLANT



2 AND 3 HEADS T-RAM
3D Tracer Mill w/fluid motors



MODEL T-RAM Table 58" x 11" W(2) 8 speed heads -
Order 24-1020

MODEL T-RAM Table 58" x 11" W/(2) Variable
speed heads
Order 28-1022

- Hardened & ground ways
- Hard chromed ways



3 HEAD T-RAM (Basic Machine)
Available for special applications. Show the heavy
duty 54" long T-RAM and the rear end lead screw
of 6" RAM Traverse.



T-RAM 2 HEADS with Feed Motors

LAGUNMATIC — 3 HEAD CNC MACHINE
(Built in California)



CNC MACHINE shown with air powered
draw-bar and CNC Control
(Built in California)

For information about
CNC Machines
call the plant:
(213) 518-1100, Ext. 302
(1-800) 421-2105

Call plant — (213) 518-1100

LAGUN MILLING HEADS ARE ENGINEERED AND BUILT TO TAKE IT . . . and hold original accuracies over long, hard days-in, days-out service

8 SPEED HEAD MECHANISM



Shown step pulleys and back gear mechanism.



Shown the chrome hardened quill and the ground rack and the counter balanced spindle.



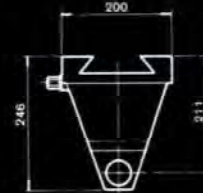
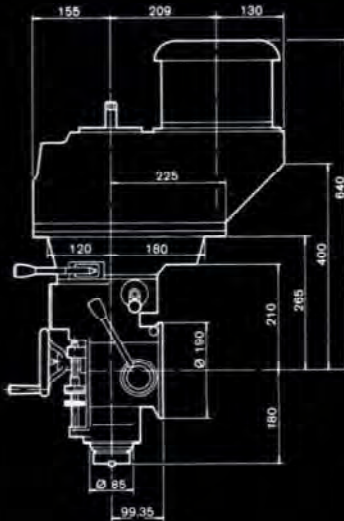
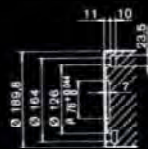
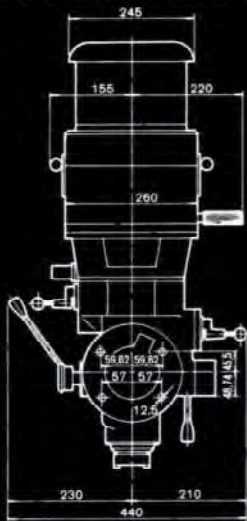
Shown Feed Mechanism (the same for both heads) with the adjustable safety overload clutch.

VARIABLE SPEED MECHANISM

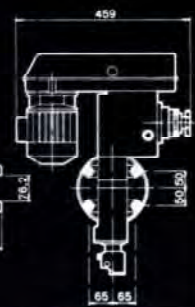
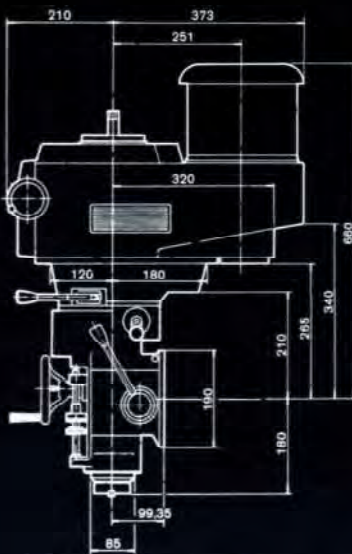
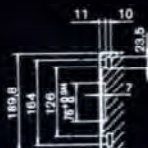
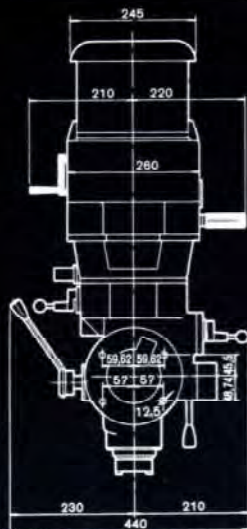
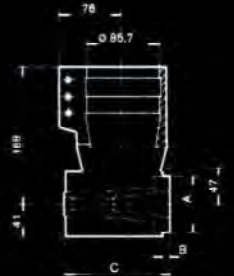


Shown the extra large variable speed pulleys and back gears.

DIMENSIONS (in metric)



	A	B	C
ISO-30	70	16	133
ISO-40	81	40	180
R 6	70	3	121





VERTICAL HEAD - Order 54-1068 2 HP model milling, drilling and boring head. It is provided with power down-feed and up-feed with automatic stop. A separate lever allows rapid manual movement of the quill. Controlled manual feed is obtained through a separate hand wheel.

IMPORTANT FEATURES are: a) the micrometer depth control, b) the hardened and ground quill, c) the dynamic balanced gears, pulleys and the quill locking device.



VERTICAL VARIABLE HEAD - Order 56-1069

This 3 HP milling, drilling and boring head has variable speeds from 55 up to 4250 rpms. All parts are balanced to supply a power downfeed and up-feed, counter balanced quill and spindle, micrometer depth control graduated. A special air cooling system recognizes distortion of the spindle.



VERTICAL VARIABLE HEAD EXTRA HEAVY - Order 60-1070

This 4 HP vertical head has special electric control and an extra heavy motor. A special round tooth timing belt provides the torque needed in the low range of speeds.

MODEL				CNC	
Order and Model No.	54-1068	56-1069	60-1070	70-1071	72-1095
TYPE OF MILLING HEAD	Step Speed Head	Variable Speed Head	Heavy Duty Variable Speed Head	NC Head	Extra Heavy Duty
MAIN MOTOR (3 Phase Motors) (Phase Converters available)	2 HP	3 HP	4 HP	4 HP	5.5 HP
SPEEDS – (8 Speed Head) RPM (Variable Speed Head) RPM	65-3000 —	— 55-4250	— 55-4250	— 55-4250	70-4200 RPM —
QUILL DIAMETER (Hard Chromed)	3-3/8	3-3/8	3-3/8	4-3/8	4-3/8
QUILL TRAVERSE (Automatic)	5	5	5	6-1/2	6
SPINDLE TAPER & NOSE – STD – OPT.	R-8	R-8 #40	R-8 #40	#40 Erickson	#40 Erickson
QUILL FEED	(3) RANGE .003" - .0015" - .006"			W/Ball Screw	(3) .003" - .0015" - .006"
HEADSTOCK WEIGHT LBS	205	220	245	350	508
HEADS ARE SUPPLIED WITH –	208/220/440 Volts - 3 phase 60 H3 electric motor with the electric switch to reverse spindle rotation (Model 60-1070 is supplied with push buttons)				
ACCESSORIES (Available)	Yes page 3	Yes page 3	Yes page 3	Yes page 3	Yes page 3



CNC HEAD (Order 70-1071)
w/built in Z axis
4 HP Variable speed heavy duty head with 4-3/8" hardened and ground quill dia. spindle mounted on 3 super precision bearings 6-1/2" stroke with 7" still supported in quill housing-speeds from 55 to 4250 rpms. (Z Axis) vertical ball lead screw installed (to be powered by customer unit) NMT #40 spindle threaded for Erickson tooling.

EXTRA HEAVY HEAD
5.5 HP Variable speed heavy duty head with 4-3/8" hardened and ground quill dia. spindle mounted on 3 super precision bearings 6-1/2" stroke. Speeds from 70 up to 4200 rpms. #40 NMT with Erickson spindle threaded nose.



MODEL CNC Order 70-1071

Combines outstanding versatility with heavy metal removal rates.

- 30% more capacity than comparable machine. All operation controls are at the operators fingertips; graduated dials are extra large for easy reading.
- Table, knee and saddle locks located in front of machine for convenience.
- Anti-friction bearings are used throughout the machine.
- Worm and gear controls are used for angular settings of head.
- One shot lubrication for long, and cross ways, nuts and lead-screw.
- Extra long, saddle 15" cross traverse.
- Ground lead-screws.
- Heavy duty knee with long vertical slideways for extra rigidity.
- Hardened & ground knee ways.



FTV-4L

With Low Voltage Control

CAPACITY MILLING & DRILLING

Drilling mild steel
 manual 1"
 power 5/8"
 Milling mild steel
 3.750 cu. in./min.



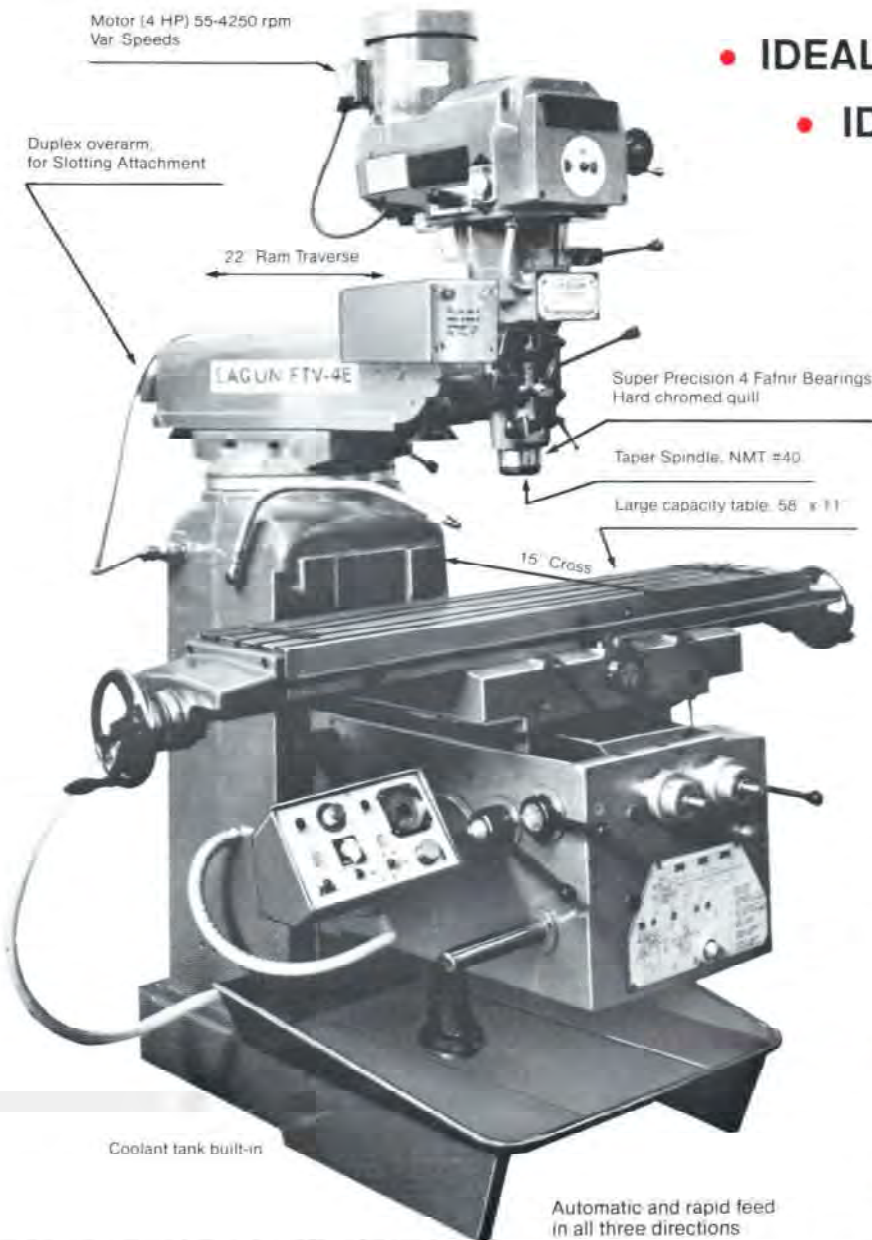
TABLE		
TABLE SIZE	INCH	58" x 11"
SQUARE WAYS (On Knee)		NO
HARDENED & GROUND WAYS		OPT.
CHROME WAYS		
TRAVERSE		
LONGITUDINAL TRAVEL MANUAL	INCH	39"
WITH POWER FEED	INCH	38"
CROSS TRAVEL	INCH	15"
VERTICAL KNEE TRAVEL	INCH	16-1/8"
RAM TRAVEL	INCH	22-3/16"
HEAD		
MAIN MOTOR		4 HP
INFINITE VARIABLE SPEED HEAD (RPM)		55-4250
HEAD MOVES RIGHT TO LEFT		YES
TILT BACK AND FRONT		YES
QUILL		
POWER FEED TO QUILL PER REVOLUTION		.003"-.0015"-.006"
INFINITE QUILL FEED		OPT
SPINDLE TAPER	STD	#40 Erickson
QUILL DIAMETER (CHROMED)		3-3/8"
QUILL TRAVEL		5"
KNEE FEEDS - 3 DIRECTIONS		12

For more specifications see page 2

- WITH INFINITE VARIABLE SPEEDS
- WITH INFINITE VARIABLE FEEDS
- WITH INFINITE QUILL FEEDS (Opt)

W/POWERED KNEE - 3 DIRECTIONS

- IDEAL FOR DIE MAKERS
- IDEAL FOR PRODUCTION



Shown with Infinite Quill Feed (Opt.)

Standard Equipment

- Spindle supported on 4 super precision Fafnir bearings class 7
- Main 4 HP spindle motor
- Hard chromed spindle quill
- One shot lube system
- Ground lead screws
- Workpiece capacity . . . 1500 lbs.
- Knee control (Std.)
- Base chip pan
- Pendant control (Opt.)

SADDLE / Universal saddle and swivel base. The large ways give longitudinal support to the table - hand scraped for extreme accuracy, uniform lubrication and low friction table movements. One shot lubrication for table and saddle. Double locking device. Automatic feed for rapid and longitudinal, cross and vertical travel.

FEED BOX / Compact, monoblock type gear box - all gears - spline shafts hardened and ground, all in bath of oil. A 2 HP direct current electric motor supplies the infinitely variable speed range and a 1 HP alternate current electric motor is only used for the rapid traverse.

KNEE / The knee has been designed to enable the console and feed gear box assembly unit to be easily removed for quick service. The feed gear box incorporates both standard and rapid traverse feed movements in all three directions.

This complete unit can be removed from the knee of the machine in a matter of a few minutes. The lever assemblies on either side of the knee are dismantled by removing the front screws.

Full length ways and drop center construction fulfill modern, functional design requirements and provide excellent lateral stabilization of the knee.

TABLE		58" x 11"
TABLE SIZE	INCH	UNIV.
SQUARE WAYS (On Knee)		NO
HARDENED & GROUND WAYS		OPT
CHROME WAYS		-
TRAVERSE		
LONGITUDINAL TRAVEL MANUAL	INCH	39"
WITH POWER FEED	INCH	38"
CROSS TRAVEL	INCH	15"
VERTICAL KNEE TRAVEL	INCH	16-3/4"
RAM TRAVEL	INCH	22-3/16"
HEAD		
MAIN MOTOR		4 HP
INFINITE VARIABLE SPEED HEAD (RPM)		55-4250
HEAD MOVES RIGHT TO LEFT		YES
TILT BACK AND FRONT		YES
QUILL		
POWER FEED TO QUILL PER REVOLUTION		003-.0015-.006"
INFINITE QUILL FEED		OPT
SPINDLE TAPER	STD.	#40 Erickson
QUILL DIAMETER (CHROMED)		3-3/8"
QUILL TRAVEL		5"
KNEE FEEDS		Inf Variable

For more specifications see page 2

W/POWERED KNEE - 3 DIRECTIONS

CAPACITY MILLING & DRILLING

Drilling mild steel
 manual 2"
 power 1 1/4"
 Milling mild steel 5 cu. in./min.

- 5-1/2 HP MAIN MOTOR
- INFINITE VARIABLE SPEED
 In direct drive from 600 up to 4200 rpm
 In back gear from 70 up to 480 rpm
- 4-3/8" dia. quill
- 6" automatic quill travel
- Heavy duty design

For more information see pages 2 and 10.

SHOWN WITH
 ELECTRIC POWER
 DRAW-BAR (OPT)



GORTON TYPE

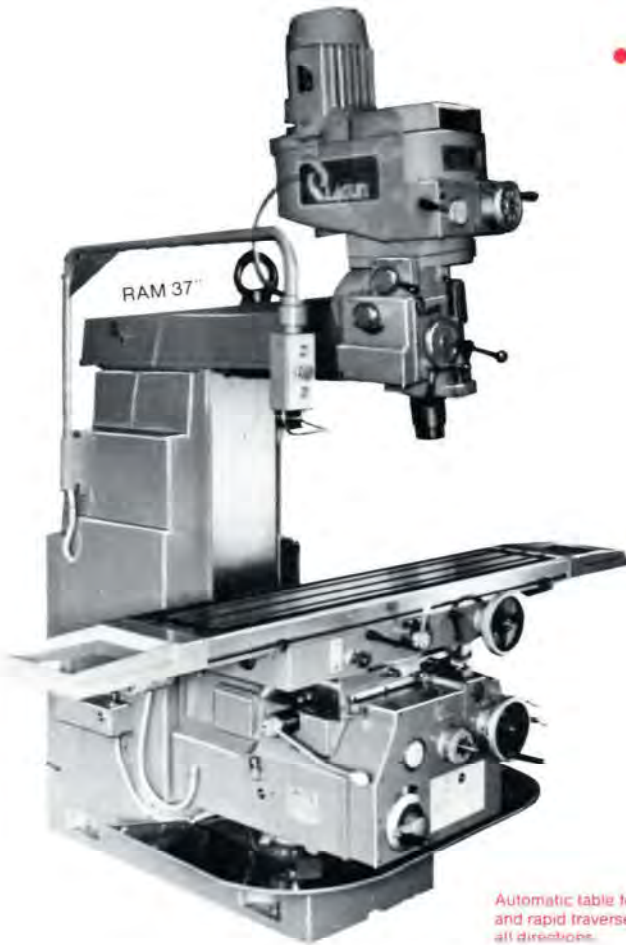


POWERED KNEE
 (X-Y-Z)

FTV-510

TABLE		
TABLE SIZE	INCH	58" x 11"
HARDENED & GROUND WAYS		OPT
CHROME WAYS		-
TRAVERSE		
LONGITUDINAL TRAVEL MANUAL	INCH	39"
WITH POWER FEED	INCH	38"
CROSS TRAVEL	INCH	15"
VERTICAL KNEE TRAVEL	INCH	16-1/8"
RAM TRAVEL	INCH	19"
HEAD		
MAIN MOTOR	(Other H.P. Available)	5-1/2 HP
INFINITE VARIABLE SPEED HEAD (RPM)		(7-1/2HP Opt)
HEAD MOVES RIGHT TO LEFT		70-4200
ELECTRIC PANEL		YES
QUILL		
POWER FEED TO QUILL PER REVOLUTION		.003"-.0015"-.006"
SPINDLE TAPER	STD.	#40 Erickson
QUILL DIAMETER (CHROMED)		4-3/8"
QUILL TRAVEL		6"
KNEE FEEDS		12

For more specifications see page 2.



Automatic table feed and rapid traverse all directions.

- IDEAL FOR DIE & MOLD MAKERS
- THE HEAVIEST DUTY TOOL ROOM MILLING MACHINE ON THE MARKET
- ELECTRIC DRAW BAR (OPT.)

TABLE		63" x 13-3/8"
TABLE SIZE	INCH	UNIV. STD. OPT.
SQUARE WAYS (On Knee)		
HARDENED & GROUND WAYS		
CHROME WAYS		
TRAVERSE		
LONGITUDINAL TRAVEL MANUAL	INCH	46"
WITH POWER FEED	INCH	45-1/4"
CROSS TRAVEL	INCH	12-5/8"
VERTICAL KNEE TRAVEL	INCH	16-7/8"
RAM TRAVEL	INCH	37"
HEAD		5-1/2 HP STD. (7-1/2HP Opt) 70-4200 YES
MAIN MOTOR (Other H.P. Available)		
INFINITE VARIABLE SPEED HEAD (RPM)		
HEAD MOVES RIGHT TO LEFT		
QUILL		
POWER FEED TO QUILL PER REVOLUTION		.003"-.0015"-.006"
SPINDLE TAPER	STD.	#40 Erickson
QUILL DIAMETER (CHROMED)		4-3/8"
QUILL TRAVEL		6"
KNEE FEEDS		18

For more specifications see page 2

HEAVY-DUTY MILLING OPERATIONS WORKPIECES UP TO 2500 LBS. FEATURES:

- Large work capacity
- NS 40 quick-change spindle (Erickson Type)
- Spindle brake
- 6" Quill feed with automatic stop
- 4-3/8" Quill diameter
- Cutter stability under severe climb milling conditions
- Coolant system
- Pendant electric control
- Increased metal removal capability to take advantage of carbide tooling
- Automatic lubrication for table, saddle and knee
- Swivel table 47° both sides
- 18 table feeds (dial type)
- Knee vertical leadscrew in oil bath

Universal Milling Machine with automatic and rapid feeds in all directions. Self motorized vertical head with automatic and manual quill traverse.

RAM TRAVEL HANDWHEEL / Readily accessible for manual control of in-and-out movements of ram.

RAM CLAMPS / Equalized pressure front and rear for positive clamping of ram to column — as rigid as one piece construction.

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LOS ANGELES, CA. PLANT #1

For the past 3 decades THE REPUBLIC LAGUN MACHINE TOOL CO. has been producing excellent Quality Machines Tools at competitive prices.

Due to our commitment with "PROGRESS THRU PRODUCTIVITY" we now have a joint effort with major CNC Control Builders to offer an excellent line of CNC Machine Tools.

The LAGUN-MATIC 250-310 and 320 are completely manufactured by REPUBLIC LAGUN CNC CORP., a division of Republic Lagun Machine Tool Co.

Our machines have been in operation through the years in thousands of Plants, Government, Navy, Army, Shipyards, Oil Industry, Etc. Etc.

As you can see we have a commitment to INDUSTRY and we are here to STAY.



LOS ANGELES, CA. PLANT #2

REPUBLIC-LAGUN offers you complete line of metal working machines

ENGINE LATHES

- 12" Swing
- 14" Swing
- 16" Swing



- Hollow Spindle Lathes
- Oil Country Lathes
- Heavy Duty Lathes
- Roll Turning Lathes

VERTICAL TURRET MILLING MACHINES

- 10 x 44 Table 2 HP - R-8
- 10 x 50 Table 3 HP - R-8
- 10 x 44 Table 3 HP - R-8
- 11 x 56 Table 3 HP - #30 - #40
- 13 x 62 Table 5 HP - #40



HORIZONTAL MILLING MACHINES

- 7 x 25 Table Production Mill 1 1/2 HP
- 11 x 49 Table Universal Mill 4 HP
- 13 1/2 x 50 Table Universal Mill 7 1/2 HP
- 13 1/2 x 63 Table Universal Mill 10 HP
- 15 x 71 Table Universal Mill 15 HP
- 18 x 80 Universal Mill 20 HP



BED TYPE MILLING MACHINES

- 27 x 63 Table 15 HP
- 28 x 79 Table 20 HP
- 31 x 118 Table 25 HP

OTHER PRODUCTS

CNC MILLS & LATHES



BUILT WITH PRIDE IN THE USA
(California Plant)

CNC MILLS TABLE

- 10 x 44 5 HP
- 10 x 50 5HP
- 11 x 58 5HP

CNC LATHES

- 13 x 40
- 15 x 50
- 17 x 60
- 21 x 80

CNC SLOTS

Catalog mail on request.

- Accessories available for all the machines.
- Parts and Service (1-800) 421-2105

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