



Single Speed Self-Contained Tapping Units-Series 29000

Designers & Manufacturers of Drilling & Tapping Solutions

Style SLH & LSH Single Speed Self-Contained Tapping Units-Series 29000

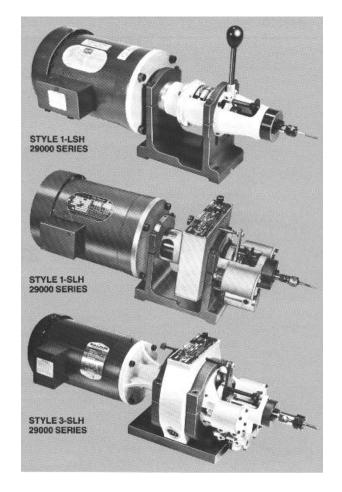
- · Complete unit with single speed, direct drive motor.
- Lead screw operation for perfect tapping every time.
- Use independently or with other units to form special machines
- Reverses at twice forward speed to increase productivity 33% and avoid tap jamming.

Procunier self-contained "package" units give you high speed precision tapping – just about anywhere you need it. These Lead Screw Tapping Units are designed for maximum efficiency, high production and low operating cost on a wide variety of tapping jobs. They easily adapt to many standard and specialized set-ups to give you versatility and value you just can't match in any other unit.

Each SLH model is a self-contained unit requiring no drill press or outside feeding mechanism. The adjustable tapping stroke is "built-in," air-operated and electrically controlled. Models can be used with an existing machine, tied in with a production machine for secondary operations, or placed in special set-ups with other units in virtually any configuration.

Our "packaged units" feature the Renowned Procunier lead screw tapping head, the most reliable and precise tapping head ever designed! The lead screw feeds the tap at exactly the proper rate through a smooth, extra sensitive friction clutch. So the tap is fed into the work gently and automatically, with a minimum of air pressure. And the results are the same, time after time — uniform, precisely tapped pieces that never vary.

Built-in controls provide single cycle, jog and automatic operation with either push-button, foot switch or external actuating equipment.



	(CO. CO.)		APACIT	NAME OF STREET	MAX	SHIP		
STYLE	SO	T MATER	IAL	STEEL	STEEL	MAX.	CVCLEC	WEIGHT
	INCH	MM	PIPE	INCH MM		STROKE	per hr.	lbs.
1-LS	00-#8	M1-M4	_	00-#8	M1-M4	11/8"	3600	7
1-LSH	00-#8	M1-M4	-	00-#8	M1-M4	11/8"	3600	32
1-ALS	0-1/4"	M2-M6	-	0-#10	M2-M4	3/4"	3600	16
1-SLH	0-1/4"	M2-M6	35A	0-#10	M2-M4	3/4"	3600	55
3-ALS	#10-3/4"	M6-M18	1/4"	#10-1/2"	M6-M12	21/4"	1800	36
3-SLH	#10-3/4"	M6-M18	1/4"	#10-1/2"	M6-M12	21/4"	1800	81

For LEFT HAND operation the unit must be modified. Series Order Number 57550. (Use left hand Lead Screw.)

STANDARD EQUIPMENT

Furnished with grounded tapper power cord, air line with fittings, foot control grounded cord and switch, set of 4 tap collets, wrenches and coupling per motor. Style SLH includes holding brackets as required. Controls and power lines for motor not included. Models 1LS, 1-LSH, 1-ALS & 1-SLH use #1 collets (51800 Series) and models 3-ALS & 3-SLH use #3 collets (53800 Series).

Note: Collets & Lead screw assemblies are not included.



ROCKFORD DRILL HEAD





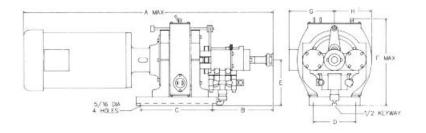
Single Speed Self-Contained Tapping Units-Series 29000

Designers & Manufacturers of Drilling & Tapping Solutions

		with Moto			
		SERIES ORDER NUMBERS			
STYLE	HP	RPM	115/230-1-60	230/460-3-60	
1-LSH	1/2	1725	29041	29042	
1-LSH	1/2	1140	29043	29044	
1-SLH	1/2	1725	29002	29004	
1-SLH	1/2	1140	29006	29008	
3-SLH	1	1140	-	29022	
3-SLH	3/4	860		29024	







Tapping Head Only				
STYLE	115-1-60			
1-LS	29040			
1-ALS	29000			
3-ALS	29020			

SERIES	STYLE	A MAX.	В	C MTG.	D MTG.	E	F MAX.	G	H
29041-44	1-LSH	203/4	47/8	63/16	31/4	41/2	111/4	5	31/2
29002-08	1-SLH	231/2	5 ³ /a	63/16	31/4	41/2	81/2	5	31/2
29022	3-SLH	271/2	71/4	81/2	5	55/16	101/4	69/16	43/8
29024	3-SLH	29	71/4	81/2	5	55/16	101/4	69/16	43/8



ROCKFORD DRILL HEAD





Style VLHH & VLHV Self-Contained Tapping Units-Series 29000

- Complete unit utilizing standard motors, gear belt drive or 3 step pulley.
- Lead screw operation for perfect tapping every time.
- Easy adaptable to special set-ups.
- Reverses at twice forward speed to increase productivity 33% and avoid tap jamming.

These high speed self-contained "package" units give you production precision tapping. And they offer something style SLH doesn't – single speed gear belt drives or 3 speed V-belt drives that provide varying speeds for different conditions.

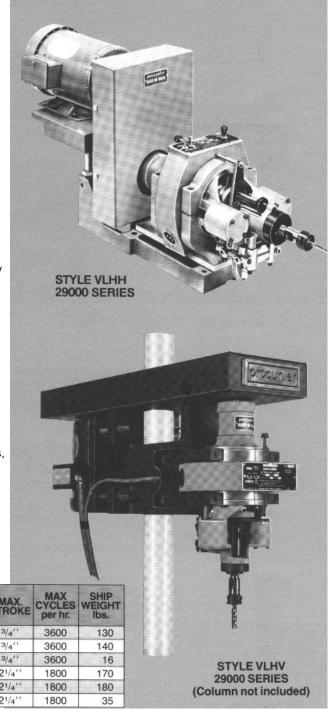
Because they're self-contained, they can be set up just about anywhere, do the job quickly and well, and be easily moved. These versatile and flexible units can be adapted for use with an existing machine or used for secondary operations on a production machine, tool.

But no matter how you use them, all of our units use the exclusive Procunier lead screw tapping head, recognized throughout industry as the most reliable and precise tapping head made. The lead screw, turning in the stationary lead screw nut, feeds the tap at exactly the proper rate through a smooth, sensitive friction clutch. The tap is fed into the work gently, automatically, with a minimum of air pressure. The results – always the same – precisely tapped, perfect parts again and again.

Built-in controls provide for just about any operation you want, whether it's single cycle, jog or automatic operation.

STANDARD EQUIPMENT

All styles furnished with grounded tapper power cord, air line with fittings, foot control grounded cord and switch, wrenches. Controls, column, raising mechanism, flange and power lines for motor not included. Models 1-VLHH, 1-VLHV and 1-ALH, use #1 collets (51800 Series) and models 3-VLHH, 3-VLHV and 3-ALH use #3 collets (53800 Series).



	199		CAPACIT		No.	MAX	SHIP		
STYLE	SOI	TMATERIAL		SOFT MATERIAL STEEL ST		STEEL	MAX. STROKE	CVOLEC	WEIGHT
	INCH	MM	PIPE	INCH			per hr.	lbs.	
1-VLHH	#0-1/4"	M2-M6	_	#0-#10	M2-M5	3/4"	3600	130	
1-VLHV	#0-1/4"	M2-M6	-	#0-#10	M2-M5	3/4"	3600	140	
1-ALH	#0-1/4"	M2-M6	-	#0-#10	M2-M5	3/4"	3600	16	
3-VLHH	#10-3/4"	M5-M18	*3/8"	#10-1/2"	M5-M12	21/4"	1800	170	
3-VLHV	#10-3/4"	M5-M18	#3/8"°	#10-1/2"	M5-M12	21/4"	1800	180	
3-ALH	#10-3/4"	M5-M18	*3/8''	#10-1/2"	M5-M12	21/4"	1800	35	

*For 3/8" Pipe tap use #3-AL4TG lead screw assembly (24000 Series) and use #4 collets (54000 Series).



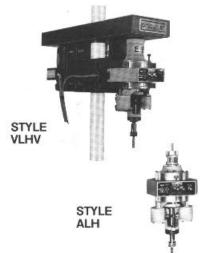
ROCKFORD DRILL HEAD





Self-Contained Tapping Units-Series 29000





		Models with Mo	tor	
		DOM:	Series Ord	er Number
Model	HP	RPM	115/230-1-60	230/460-3-60
1-VLHH	1/2	3-speed V-belt 578-1035-1725	29011	29012
3-VLHH	11/2	800 thru 1200*		29031
3-VLHH	11/2	450 thru 750*	-	29032
3-VLHH	11/2	280 thru 400*		29033
1-VLHV	1/2	3-speed V-belt 578-1035-1725	29015	29016
3-VLHV	11/2	800 thru 1200*		29035
3-VLHV	11/2	450 thru 750*	-	29036
3-VLHV	11/2	280 thru 400*	_	29037

For LEFT HAND operation, the unit must be modified. Series Order Number 57550.(Use left hand Lead Screw.)

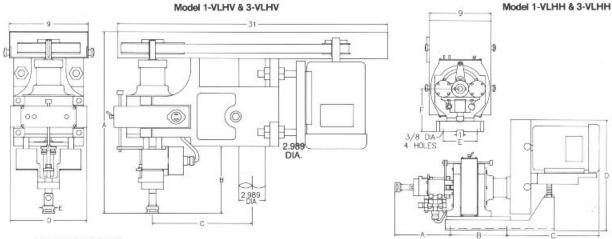
*Select single speed within range, uses gear belt and pulley.

Tapping Head Only					
Model	Series Order Number				
1-ALH (with %" dia. pulley shaft)	29010				
3-ALH (with %" dia. pulley shaft)	29030				

All tapper controls are 115V, 1PH, 60HZ. Lower voltages available upon request

Air controls are required.

Order lead screw assemblies separately
1-VLHV use style 1-AL (21000 Series) and models 3-ALH, 3-VLHH and 3-VLHV use style 3-AL (23000 Series).



DIMENSIONS

SERIES	STYLE	A	В	C	D	E	SERIES	STYLE	A
29015	1-VLHV	159/16	6	113/8	61/4	3/4	29011	1-VLHH	51/s
29016	1-VLHV	159/16	6	113/8	61/4	3/4	29012	1-VLHH	51/s
29035	3-VLHV	21	8	115/16	83/4	13/8	29031	3-VLHH	81/2
29036	3-VLHV	21	8	115/16	83/4	13/8	29032	3-VLHH	81/2
29037	3-VLHV	21	8	115/16	83/4	13/8	29033	3-VLHH	81/2



ROCKFORD DRILL HEAD

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6

65/16

65/16

57/8

83/8

83/8

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13

13

16

16

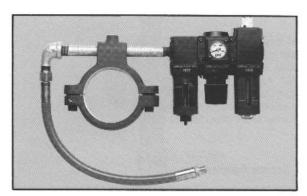
163/a

163/s





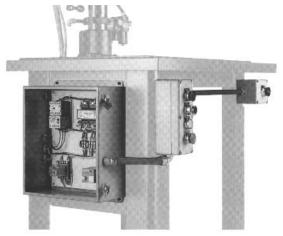
Machine Controls



AIR CONTROL ASSEMBLY

Includes air regulator, gauge, filter, lubricator, 2-piece clamp to fit machine column, air line and fittings. Also available as accessory for Drill Presses with column diameters of (2 3/4" to 4") as listed below.

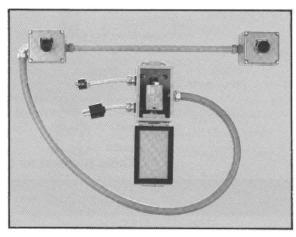
MODEL	COLUMN DIA.	SERIES ORDER NUMBER
1000A or 3000A	3"	57520
1A03 or 3A03	2%*	57501
1A03 or 3A03	3"	57503
1A03 or 3A03	3%"	57505
1A03 or 3A03	3%*	57507
1A03 or 3A03	4"	57509



COMPLETE ELECTRICAL PACKAGE

For Styles 1000A, 3000A and 3037 includes antitiedown dual palm push button controls in an oil-tight housing mounted to machine table. Has illuminated "power on" motor start button, emergency shut-off, 230/460V to 110V transformer for controls, magnetic motor starter with overloads, machine tools control relay and fuse. Furnished as standard equipment on all complete machines.

Series order number 57525



1-AL & 3 -AL DUAL PALM BUTTONS

Converts 21000 Series and 23000 series to two-hand operation. Requires operator to use both hands to actuate cycle. Anti-tiedown feature. Optional accessory.

Series order number 57530



INTERLOCK SWITCH

For use when automating a lead screw tapper in conjunction with a turn table or part feeding mechanism which requires an electrical signal after completion of a cycle. Also is used to control mist coolant systems. Assembly is furnished complete with switch, actuating arm with adjustable actuator, screws and nuts.

MODEL	SERIES ORDER NUMBER
1-AL	57535
3-AL	57537



ROCKFORD DRILL HEAD





Model 1000A & 3000A Complete Lead Screw Tapping Machines-Series 29000

- Easily changed lead screw assembly
- · Rigid base with coolant trough
- · Head raising mechanism
- Water-tight pushbutton controls
- Reverses at twice forward speed to increase productivity 33% and avoid tap jamming.

Whether you want your Procunier Lead Screw tapping machine in a single spindle or multiple had configuration, there's one that's right for your needs, production requirements and budget. Single spindle machines are described here.

The 1000A and 3000A Single Spindle Lead Screw Tapping Machines are precision machines offering you all the advantages of lead screw tapping - perfect pieces every time without stripping threads, breaking taps or damaging pieces. Ideal where one tapping spindle is all that's required.

Complete, ready-to-use machine. All you do is plug it in, connect the air and push a button.

Gear belt pulley on Model 3000A provides positive power, eliminates slippage, insures full torque. 1000A uses 3-speed V-belt drive.

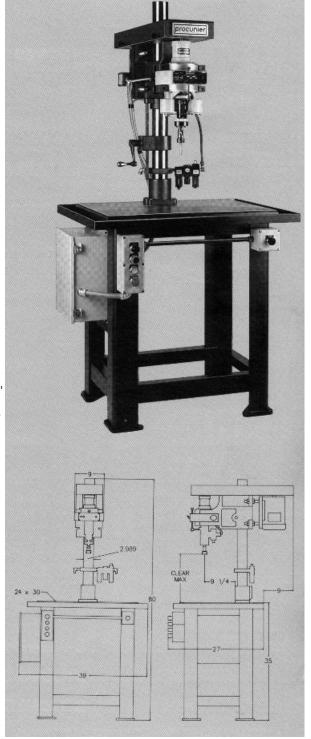
STANDARD EQUIPMENT

Models 1000A and 3000A are supplied with complete electrical packages, air control assembly (filter, regulator, lubricator) and wrenches. Model 1000A uses #1 (51800 Series) and Model 3000A uses #3 (53800 Series). Note: Lead screw assemblies are not included.

For LEFT HAND operation the unit must be modified. Series Order Number 57550. (Use left hand Lead Screw).

	MODEL 1000A	MODEL 3000A
Capacity—Steel Soft Material Pipe Thread Stroke (Max.) Cycles (Max.) Depth Control Speed (Max.) Pulley's Motor Tapper controls Clearance (Max.) Table Working Surface Shipping Weight	0-#10, M2-M4 0-1/," M2-M6	#10-½," M6-M12 #10-½," M6-M18 ½, " to ¾" 2½," 1800 per hr. ½ of Turn 400 to 1200 R.P.M. Gear Belt 1½ HP 230/460-3-60 Air—110V 25" 27" x 36" Oil Trough 24" x 30" Work Surface 780 lbs.
Order Numbers	29051	29053

When ordering: Specify voltage required. Select speed desired on 3000A between 400-1200 RPM. Order lead screw assemblies separately Model 1000A uses style 1-AL (21000 Series) and Model 3000A uses style 3-AL (23000 Series).





ROCKFORD DRILL HEAD





Style 3037 Multiple Tapping Machines Series 29000

Designers & Manufacturers of Drilling & Tapping Solutions

- · Complete and ready-to-use lead screw tapping.
- Taps up to 17 holes. Minimum spindle centers = 1/2" collet or 3/8" bored type.
- Simplicity of set-up ease of operation.
- Reverses at twice forward speed to increase productivity 33% and avoid tap jamming.

The Style 3037 is a total multiple Lead Screw tapping machine including the fabulous Procunier Lead Screw. About all you do for perfect pieces throughout a production run, is plug it in, mount the fixture, and push the button. Everything you need for instant set-up and production has been carefully combined into this one tapping machine. It can provide up to 17 perfectly tapped holes with every stroke.

While the results are uniformly precise pieces, without damage to taps, threads or parts, the machine is so simple and easy to operate, you don't need trained, expensive help to give you perfect results, piece after piece.

The Style 3037 machine is available with your choice of multiple tapping attachments.

STANDARD EQUIPMENT

Style 3037 machine furnished with Lead Screw tapper, motor, multiple head of your choice, air control assembly, base assembly, complete electrics and overload protection and oil trough table with column and raising mechanism. Lead screw assemblies, spindles with U-joints & collets (not included with the machine.)

SPECIFICATIONS

Power - 230/460VAC, 3Phase, 60Hz

Stroke - 2 1/4" max.

Cycles - 1800 per hr. max.

Speed - 400 to 1200 RPM max.

Motor - 1 1/2 HP

Working Surface - 9" x 14"

Approximate Weight (less accessories) - 840 lbs.

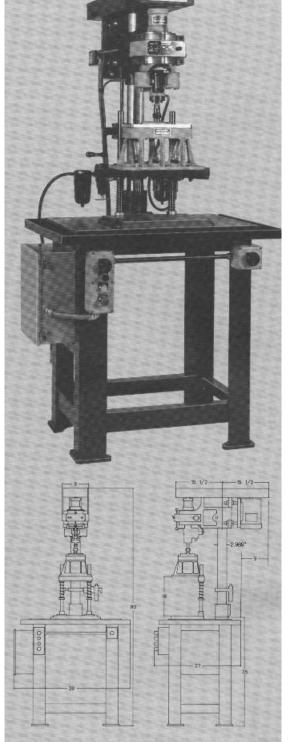
When ordering: Specify voltage required. Select speed desired on 3037 between 400-1200 RPM Lower RPM special.

For LEFT HAND operation the unit must be modified. Series Order Number 57500 (Use left hand Lead Screw.)

Order Numbers for Style 3037 Machines

		10000		CAPA	CITY*		
STYLE	NO OF DRIVERS	GEAR	QTY.	MIN. SIZE	QTY.	MAX. SIZE	ORDER
3037MJ	7	1:1	7	#2-56	4	5/16-18	29071
3037MJ	6	1:2	6	#2-56	4	5/16-18	29072
3037MK	9	1:1	9	#2-56	4	5/16-18	29073
3037MK	8	1:2	8	#2-56	4	5/16-18	29074
3037ML	9	1:1	9	#2-56	4	5/16-18	29075
3037ML	8	1:2	8	#2-56	4	5/16-18	29076
3037MM	13	1:1	13	#2-56	4	5/16-18	29077
3037MM	12	1:2	12	#2-56	4	5/16-18	29078
3037MN	13	1:1	13	#2-56	4	5/16-18	29079
3037MO	17	1:1	17	#2-56	4	5/16-18	29080
3037-MP	10	1:1	10	#2-56	4	5/16-18	29081
3037MQ	17	1:1	17	#2-56	4	5/16-18	29082

^{*}Based on free machining steel and type of spindle assembly used.





ROCKFORD DRILL HEAD







ATU - 4 Production Tapping **Machine and Tapping Unit**

Precision lead screw tapping to keep you at the cutting edge of tapped hole production.

The ATU series tapping units and machines from Ettco give you precise efficient hole production.

The new solid-state programmable controller allows faster set up and control, reduces the size of the control panel, and decreases the number of mechanical relays. The operator interface terminal is swivel mounted for easy positioning and viewing. The terminal shows operational and alarm messages and allows the spindle to be jogged in either direction.

The ATU-4 is available either as a floor-standing machine or as unit that can be mounted in any position from vertical to horizontal. The machine includes a welded steel base and table with T-slot, coolant line, coolant tank with pump and double palm start buttons.

AT a glance....

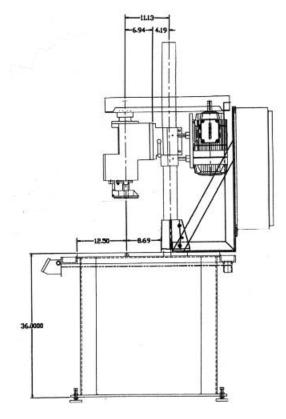
- 4" of lead screw travel.
- 25 cycles per minute possible.
- · Swivel mounted operator interface terminal, with English or Spanish display.
- Solid-state programmable controller.
- 3.5 HP, 1140 RPM high reversing motor 230/460/3/60.

Features & Specifications:

- Unit & Machine:
- · 4" of lead screw travel.
- 25 cycles per minute possible.
- · Solid-state programmable.
- 3.5, hp 1140 RPM high reversing motor 230/460/3/60.
- 194 Inch pounds torque.
- Pulley drive (370-1500 RPM)
- No hole protection
- Electrical control panel and controls for double palm
- Push button operation.
- · Lead screw drip oiler, with adjustable flow rate.
- Resettable cycle counter, accessible through interface terminal
- · Optional speed reducer to permit speeds as low as 55 RPM.

Machine:

- · Swivel mounted operator interface terminal, with English or Spanish display.
- 4" Diameter column with raising & lowering mechanism.
- 24" W X 36" H Machine base of welded steel construction.
- 10 Gallon capacity coolant system.
- Excellent power source for Ettco multiple spindle heads.





ROCKFORD DRILL HEAD



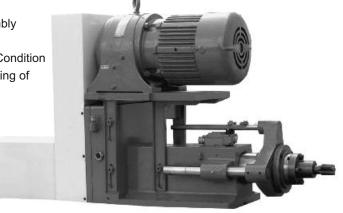
Model LQ-1530 Lead Screw Tapper

Designers & Manufacturers of Drilling & Tapping Solutions

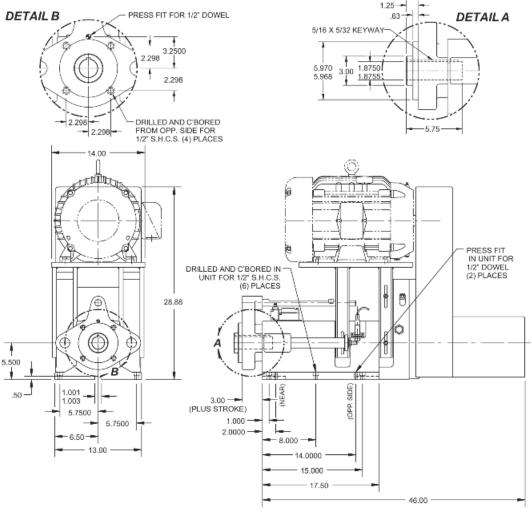
Model LQ-1530 Self Contained, Lead Screw Operated Tapping Unit

Standard Features

- Precision Thread Ground Lead Screw and Nut Assembly
- Quick Change of Lead Screw and Nut Assembly
- Tap Jam Limit Switch for No Hole or Undersize Hole Condition
- Safety Return Override Limit Switch to Prevent Jamming of the Lead Screw
- · Alloy Aluminum Main Body
- · Large Quill Diameter and Quill Bearings
- · All Ball Bearing, Spline Driven
- · ASA I.D. Spindle
- · Enclosed Belt Guard
- · Mounting for Multi SpindleHead
- 1: 2.46 Reduction Gear Box Assembly
- · Conveniently Located Control Dogs
- Heavy-Duty Motor Mounting Bracket with Jack Screw Assembly



STROKE	0 - 8 INCHES
LEAD SCREW PITCH	6 TO 32
DRIVE SHAFT	2 INCHES
DIAMETER OF QUILL	4-1/2 INCHES
MOTOR HORSE POWER	7-1/2 TO 15





ROCKFORD DRILL HEAD



Model VSQ-3250 Vertical Drill

Designers & Manufacturers of Drilling & Tapping Solutions

Model VSQ-2500 & VSQ-3250 Vertical Drill Machine

Standard Features

- •Rockford Self-Contained, Hydraulic Powered Quill Type Power Unit
- •3 HP Separate Pump Drive Assembly
- •3 to 25 HP Spindle Drive Motor
- •HTD Pulleys and Belt
- •Enclosed Belt Guard
- •Swing Motor Plate Assembly for Easy Adjustment of HTD Drive Belt
- Air Counterbalance Assembly
- •Fabricated Steel Base, Riser and Column
- •Complete Set of Electrical Controls for Manual and Automatic Operation
- •Programmable Controller

VSQ-2500

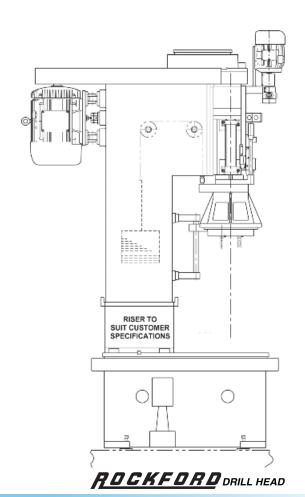
STROKE	0 - 12 INCHES
THRUST	4900 LBS. AT 500 PSI
RAPID APPROACH	110 IPM
MOTOR HORSE POWER	3 TO 20
H.P. TO OPERATE UNIT	3
PUMP RPM	1800
CAPACITY OF RESERVOIR	4 GALLONS
PRESSURE ADJUSTMENT	350 TO 1000 PSI

VSQ-3250

STROKE	0 - 12 INCHES
THRUST	8300 LBS. AT 500 PSI
RAPID APPROACH	80 IPM
MOTOR HORSE POWER	3 TO 25
H.P. TO OPERATE UNIT	3
PUMP RPM	1800
CAPACITY OF RESERVOIR	4 GALLONS
PRESSURE ADJUSTMENT	350 TO 1000 PSI



All Machines Can Be Custom Made To Meet Your Specifications









Model PQ-2500 & PQ-3250 Self Contained Hydraulically Powered Quill Type Power Units

Standard Features

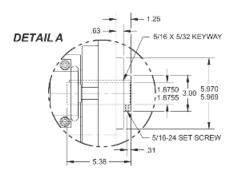
- •71/2 GPM, Variable Pressure, Variable Volume Vane Type Hydraulic Pump
- •Commercial Temp. and Pressure Compensating Feed Valve
- •Commercial Directional Valves
- Commercial Sub-Plate Mounted Hydraulic Cylinders
- •Alloy Aluminum Main Body
- Large Quill Diameter and Quill Bearings
- •All Ball Bearing, Spline Driven
- •ASA I.D. Spindle
- •Mounting for Multi Spindle Head
- Conveniently Located Control Dogs
- •Heavy-Duty Motor Mounting Bracket with Jack Screw Assembly

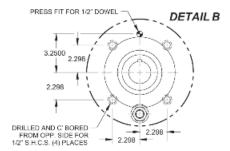
PQ-3250

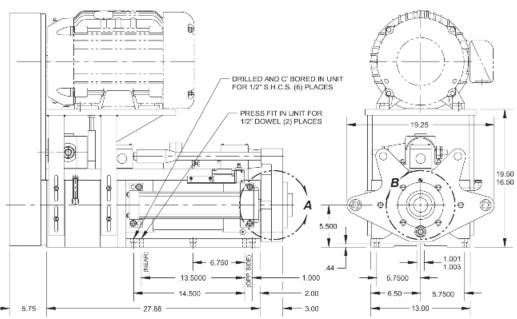
STROKE	0 - 12 INCHES
THRUST	8300 LBS. AT 500 PSI
RAPID APPROACH	80 IPM
MOTOR HORSE POWER	3 TO 25
H.P. TO OPERATE UNIT	3
PUMP RPM	1800
CAPACITY OF RESERVOIR	4 GALLONS

PQ-2500

0 - 12 INCHES
4900 LBS. AT 500 PSI
110 IPM
3 TO 20
3
1800
4 GALLONS









ROCKFORD DRILL HEAD



Model VSLQ-1530 Vertical Tapper

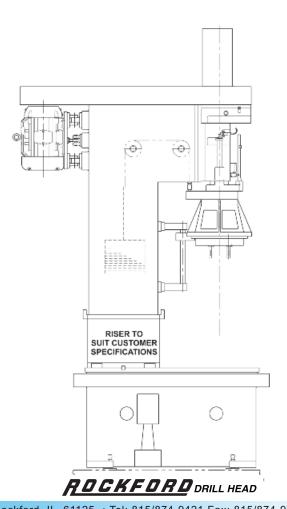
Designers & Manufacturers of Drilling & Tapping Solutions

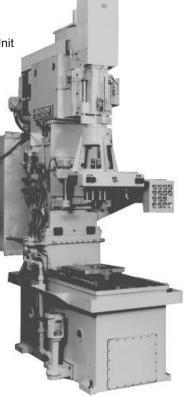
Model VSLQ-1530 Vertical Tapping Machine

Standard Features

- Rockford Model LQ-1530 Self-Contained, Lead Screw Operated Tapping Unit
- 7-1/2 to 15 HP Spindle Drive Motor with Brake
- HTD Pulleys and Belt
- · Enclosed Belt Guard
- Swing Motor Plate Assembly for Easy Adjustment of HTD Drive Belt
- · Air Counterbalance Assembly
- Fabricated Steel Base, Riser and Column
- Complete Set of Electrical Controls for Manual and Automatic Operation

	STROKE	0 - 8 INCHES
	LEAD SCREW PITCH	6 TO 32
	DRIVE SHAFT	2 INCHES
	DIAMETER OF QUILL	4 1/2 INCHES
ı	MOTOR HORSE POWER	7-1/2 TO 15





All Machines Can Be Custom Made To Meet Your Specifications







Model VSLQ-7520 Vertical Tapping Machine

Designers & Manufacturers of Drilling & Tapping Solutions

Model VSLQ-7520 Vertical Tapping Machine

STANDARD FEATURES INCLUDE:

- Rockford Model LQ-7520 Self-Contained, Lead Screw Operated Tapping Unit
- 1 to 7-1/2 HP Spindle Drive Motor with Brake
- · HTD Pulleys and Belt
- · Enclosed Belt Guard
- Swing Motor Plate Assembly for Easy Adjustment of HDT Drive Belt
- · Air Counterbalance Assembly
- · Fabricated Steel Base, Riser and Column
- Complete Set of Electrical Controls for Manual and Automatic Operation
- Allen-Bradley Programmable Controller

OPTIONAL EQUIPMENT

- Mechanical Counterbalance Assembly
- Coolant System
- Automatic Lubrication System
- · Chip Conveyor
- · Slide, for Rapid Advance
- Universal or Fixed Center Head to Meet Your Specifications
- Fixture and Tooling to Meet Your Specification





ROCKFORD DRILL HEAD

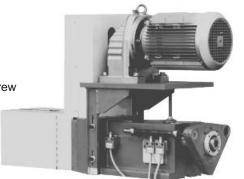




Model LQ-7520 Self Contained, Lead Screw Operated Tapping Unit

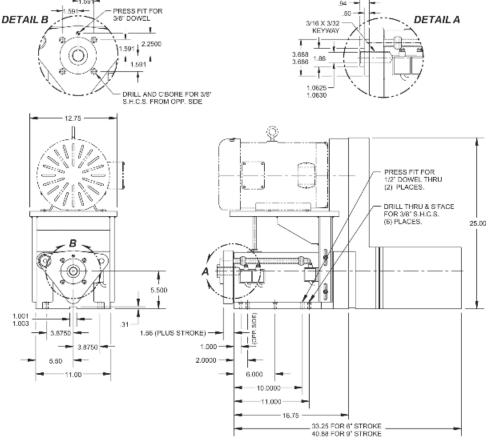
Standard Features

- •Precision Thread Ground Lead Screw and Nut Assembly
- Quick Change of Lead Screw and Nut Assembly
- •Tap Jam Limit Switch for No Hole or Undersize Hole Condition
- •Safety Return Override Limit Switch to Prevent Jamming of the Lead Screw
- Alloy Aluminum Main Body
- Large Quill Diameter and Quill Bearings
- •All Ball Bearing, Spline Driven
- •ASA I.D. Spindle
- •Mounting for Multi Spindle Head
- •Enclosed Belt Guard
- Conveniently Located Control Dogs
- •Heavy-Duty Motor Mounting bracket with Jack Screw Assembly



Also available as a vertical tapping machine

STROKE	0 - 6 INCHES & 0-9 INCHES
LEAD SCREW PITCH	6 TO 32
DRIVE SHAFT	1-3/16 INCHES
DIAMETER OF QUILL	3 INCHES
MOTOR HORSE POWER	1 TO 7-1/2





ROCKFORD DRILL HEAD