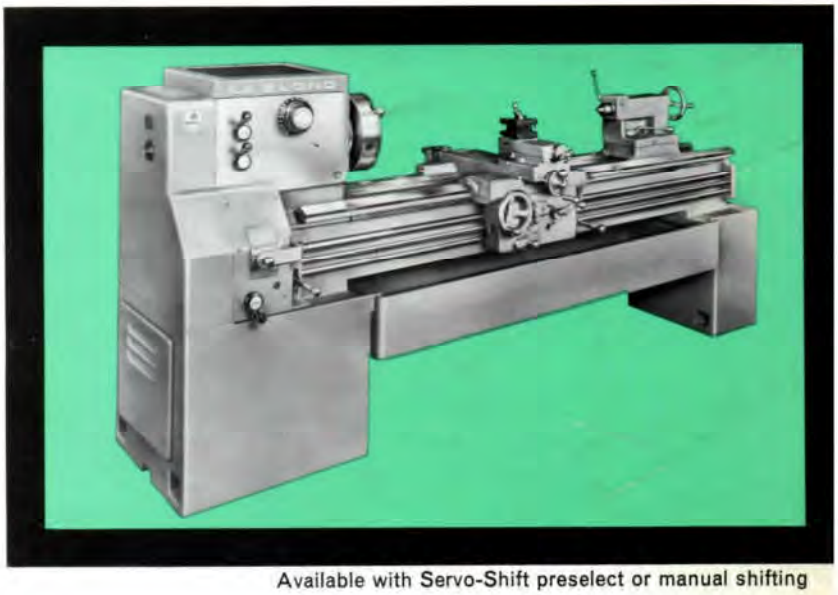
13″ 15″

17″ 19″



Available with Servo-Shift preselect or manual shifting

Regal Lathes

LeBLOND of Cincinnati

THE R. K. LeBLOND MACHINE TOOL COMPANY, CINCINNATI 8, OHIO

...with Servo-Shift preselect

LeBlond Regal ...the Low Cost Lathe with

Twelve reasons why LeBlond Regal Lathes are great favorites with machine shops and tool rooms . . .

COMPENSATING GUIDEWAYS
for maximum accuracy, hardened and ground for minimum wear

MANY MODELS AVAILABLE
Engine, plain bed gap, sliding bed gap, various bed lengths

PRECISION
Aligned to exacting requirements

BOTH FEED ROD & LEADSCREW

3 BEARING SPINDLE
2 precision Timkens and 1 ball bearing

RUGGED TAILSTOCK
with new top shoe locking

12 SPEED HEADSTOCK
eight geared and four timing belt speeds

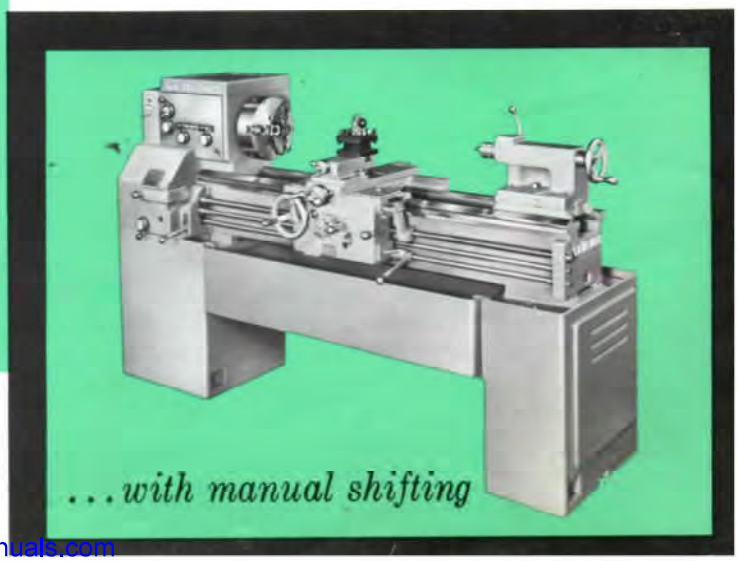
OIL LEVEL SIGHT GAGE
oil level shows at a glance

RIGID APRON AND CARRIAGE
accurate tool guidance and efficient feed power transmission

BIG CHIP PAN
slides out for easy chip removal

TOTALLY ENCLOSED QUICK-CHANGE BOX
provides 48 feeds and threads; automatically lubricated

CHOICE OF SHIFTS
either manual shift or Servo-Shift at slightly higher cost.



the Big Lathe Features

Manual shift headstock is provided with easy shifting levers and direct-reading speed plate.

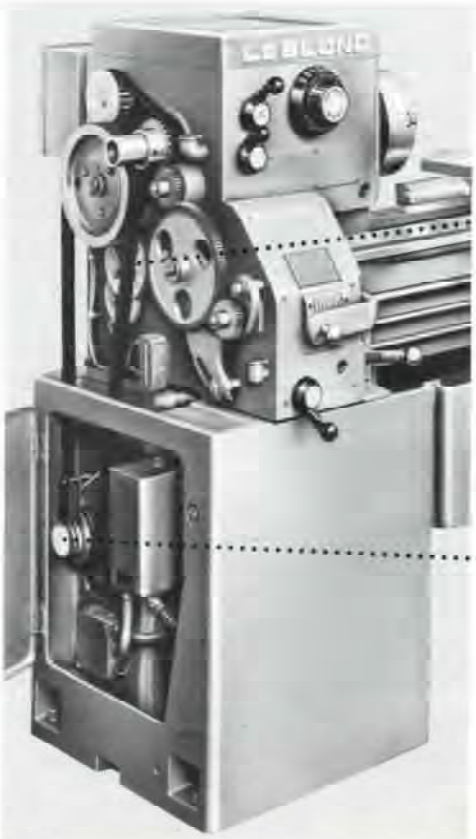
NEW CONCEPT

Brand new Regal Servo-Shift makes speed changing faster and easier than ever before. You select your next spindle speed while still cutting. Then, move spindle control handle and get almost instantaneous automatic shifting—*with no clashing of gears!* This is the fastest and safest hydraulic shift available in a lathe today!

The Servo-Shift mechanism is beautifully simple. When you select your next speed by turning the Servo-Shift dial, your action also positions a servo valve linked directly by shifter forks to the gear train. But no actual shifting occurs while the lathe is running.

However, stop the spindle by moving the spindle control handle, and almost immediately a unique "zero speed switch" takes over. This switch does two things: It starts the hydraulic pump and the servo valve responds by moving the shifter forks to positions which set up the new gear range. At the same time, it clutches in a "crawl speed gear train" which begins jogging the spindle, making it easy for the gears to slide smoothly into mesh. Shift the spindle control handle back and you're off and running in the new gear range—you can't make the gears clash! Total shifting time: about three seconds!

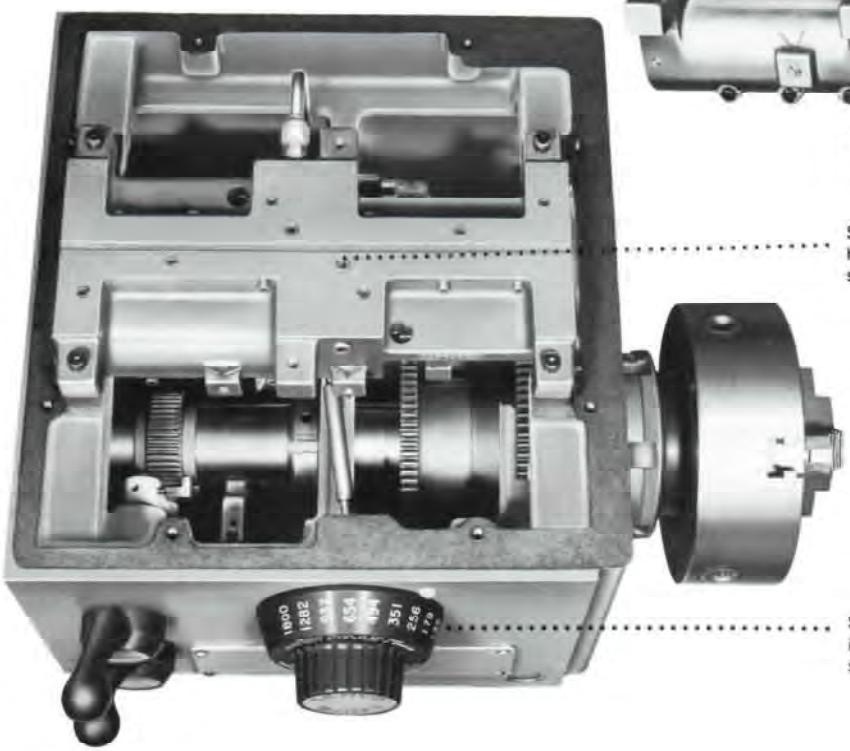
Be among the first to learn the advantages of hydraulic shifting on small lathes. Ingenious design of the new LeBlond Regal headstock places this feature in *your* shop at modest cost . . . an investment that makes the Regal an even better buy than ever before.



Servo-Shift headstock features fast and easy speed change and, in addition, speed preselection.

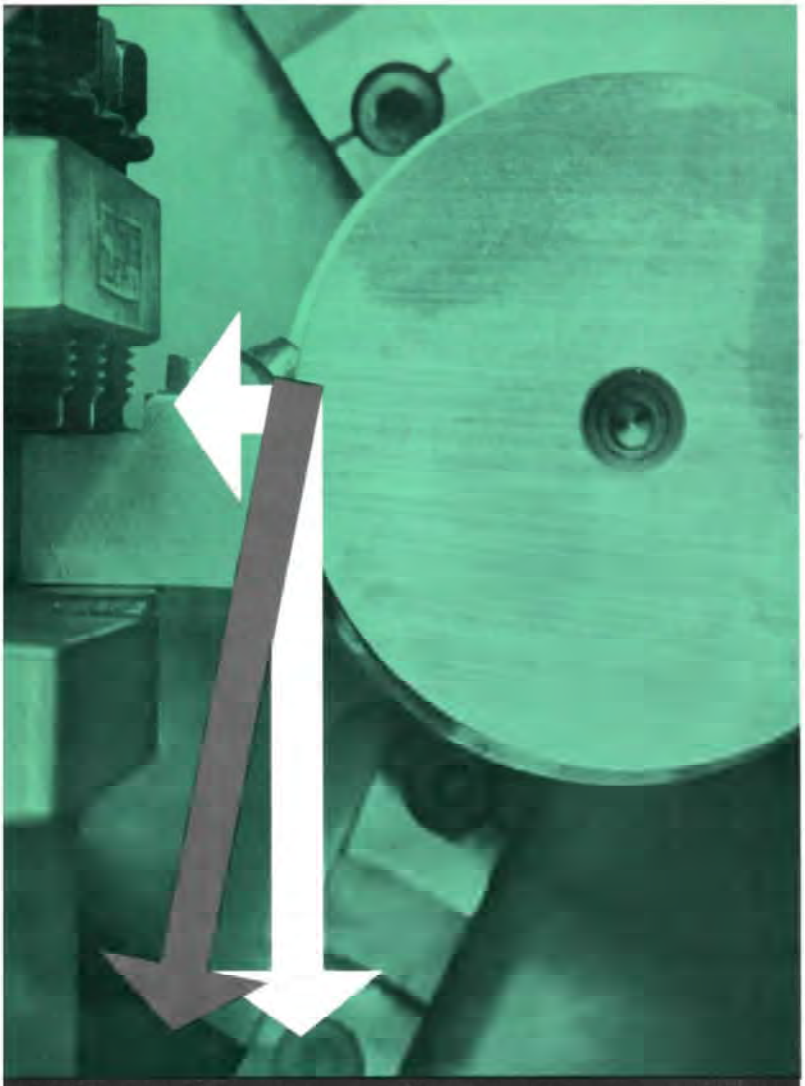
Servo valve fitted neatly under headstock cap is directly linked to speed selector dial and gear train.

Crawl speed gear train automatically jogs spindle so that gears shift smoothly with no chance of clashing.



Zero speed switch energizes hydraulic pump and crawl speed gear train a fraction of a second after spindle stops.

Speed is preselected while spindle is running by turning Servo-Shift selector dial.

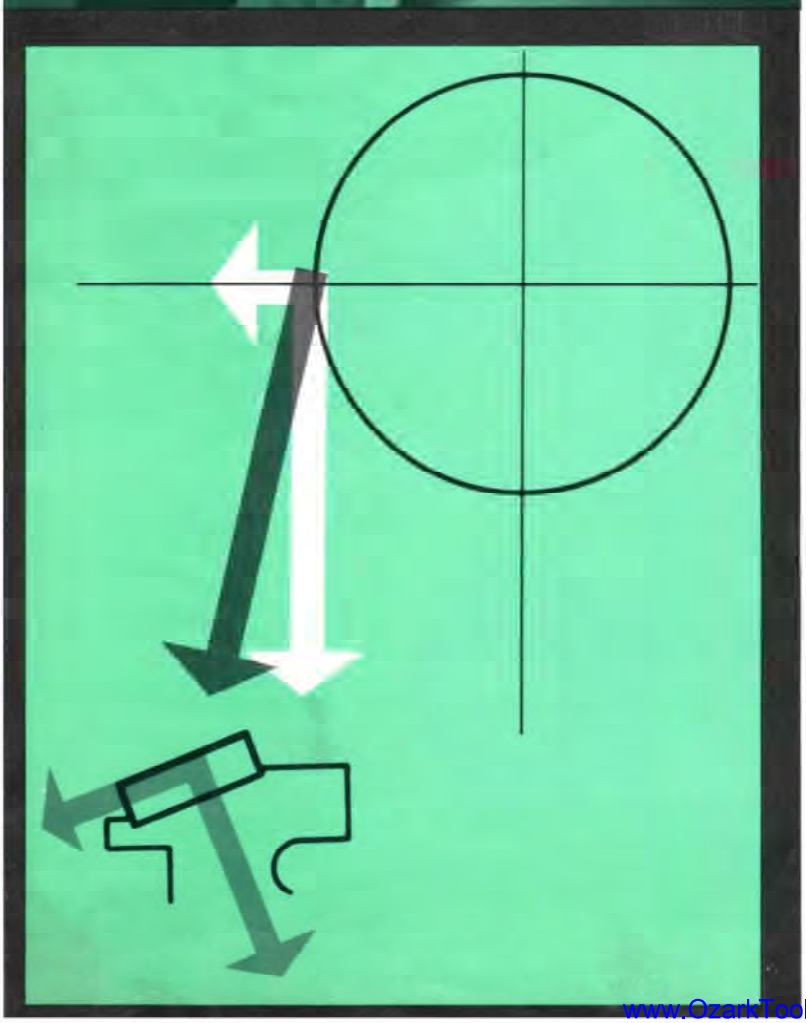


Controlled Cutting Force

Every lathe has to cope with twisting and bending moments in the bed, carriage and tailstock; thrust and radial forces in the headstock and quick-change box. These are the reactions to the forces created by cutting metal—all working to upset accuracy by "give" and wear.

There's a world of difference in the ability of different makes of lathes to resist the action of these forces over many years. It's this ability that determines how heavy a cut they will take, how long they will hold their initial accuracy, how much maintenance they will require.

Ask any Regal owner how his Regals hold up under stress. Our most enthusiastic salesmen are Regal owners who have proved the merit of these lathes through the years.



Compensating Guideway

A good lathe, like the LeBlond Regal, is designed to withstand forces resulting from cutting in proportion to their magnitude. This is the significance of LeBlond's compensating way design which combines a wide, flat rear way to absorb and dissipate downward forces with a 20° compensating front guideway to assure accurate alignment and at the same time direct vertical forces into the bed.

This means that wear will be even and accuracy maintained over long periods of use. And because most of the cutting force acts in the direction of the bed, heavy cuts can be taken without creating undue distortion.

Bed Construction

The foundation of a lathe is its bed. Accuracy, finish and long life can be no better than the bed's ability to resist the bending and torsional forces created by the cutting process.

Any lathe can have "beef," but unless metal is distributed where it will absorb and resist distorting forces, it does no good. The LeBlond design puts metal where it works for better lathe performance.

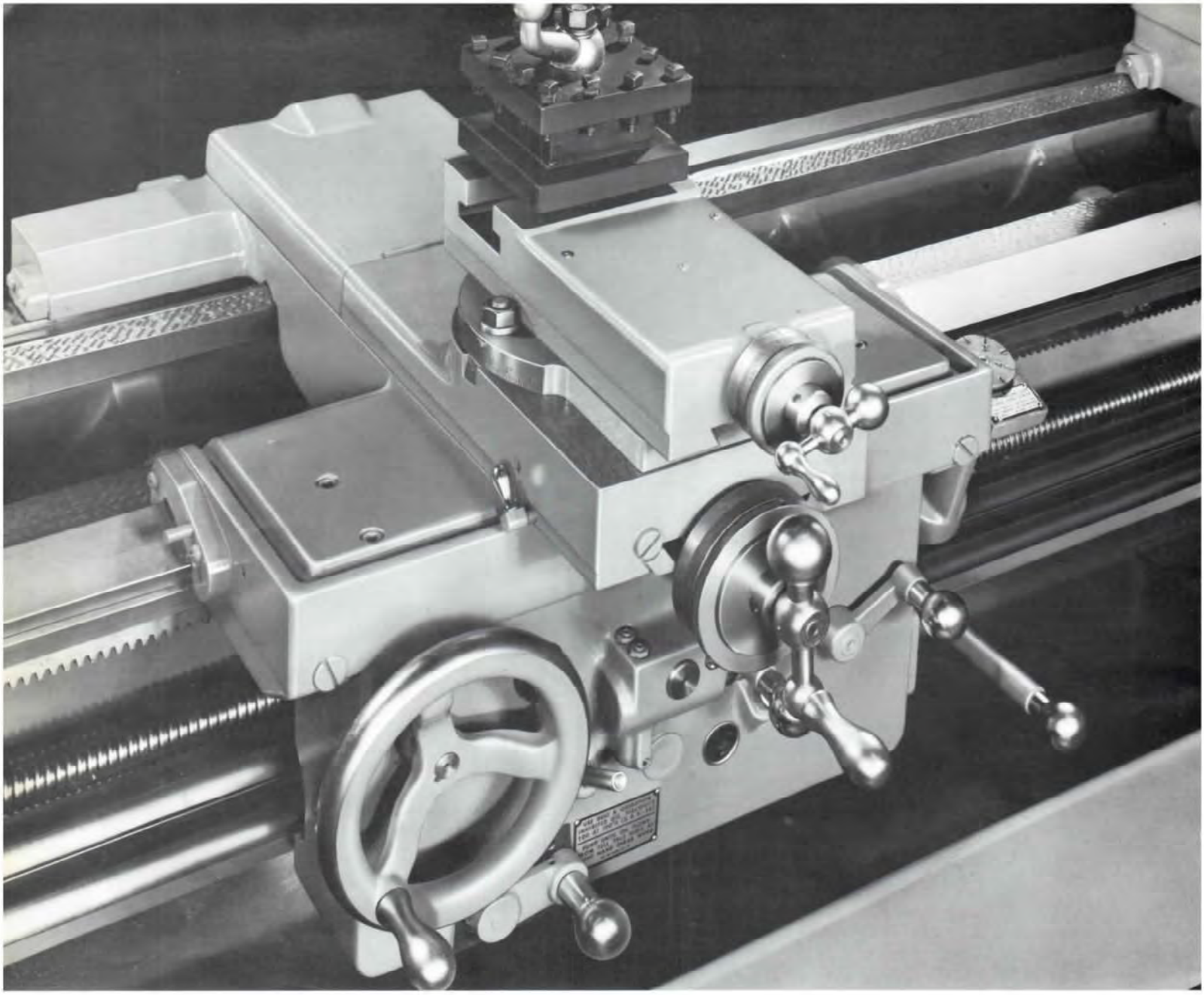
LeBlond design uses truss construction, modified for ease of chip disposal. This is a very rigid structure and provides the stability necessary for heavy cuts and continuing accuracy. LeBlond beds are cast in high grade iron with 50% steel.

LeBlond bedways are hardened and ground to 58-63 Rockwell C (Scleroscope 81-89) and can be replaced in case of damage by accident. Unretouched photo (left) shows etched cross section of hardened steel way.

Precision Accuracy Standards

The new LeBlond Regal Lathes are accurately built to the close precision tolerances usually found in much more expensive lathes. The examples of Regal accuracy standards shown below are typical of all tolerances held in the manufacture of these outstanding lathes.

Headstock alignment (horiz.) . . .0 to ± .0003" at end of 12" test bar
Headstock alignment (vert.) . . .0 to .0005" high at end of 12" test bar
Cross slide alignment . . . . . .0 to .0005" concave on 12" diameter
Spindle nose runout . . . . . .0 to .0003" total indicator reading



Carriage

The carriage provides guidance to the tool and transmits cutting forces into the bed. The LeBlond carriage has far larger bearing surface on the ways (see specifications) than any other lathe of equal size. The minimum force per square inch that results means less wear and more accuracy, especially under heavy cuts.

In addition to transmitting downward forces, the carriage must also resist twisting due to feeding. Here LeBlond's 20° compensating guideway provides important advantages. The carriage is guided by the long, narrow inner way surface which permits feeding smoothly under the heaviest cuts without a tendency to climb or cramp.

Drive to the carriage is from a rack mounted directly under the front way. Power consumed in feeding is minimized by this design.

The rear of the carriage is supported by a flat way which provides guidance in the horizontal plane only. In keeping with sound engineering principles, primary tool guidance depends only upon one reference—the inner surface of the front way.

Compensation for wear is provided by two gibs, one at each end of the carriage wing. The top slide dovetail is gibbed on the headstock side where most wear occurs. The carriage is amply ribbed for rigidity and the bridge is deep and wide. Dials are graduated in diameter reduction for easy sizing calculations.

Apron

The apron transmits power from the feed rod to either the drive pinion for length feed or to the cross feed screw. A single lever engages either feed without slippage through a positive jaw clutch.

The 17″ & 19″ Regals have feed reverse control on the apron in addition to normal feed reverse control on the headstock.

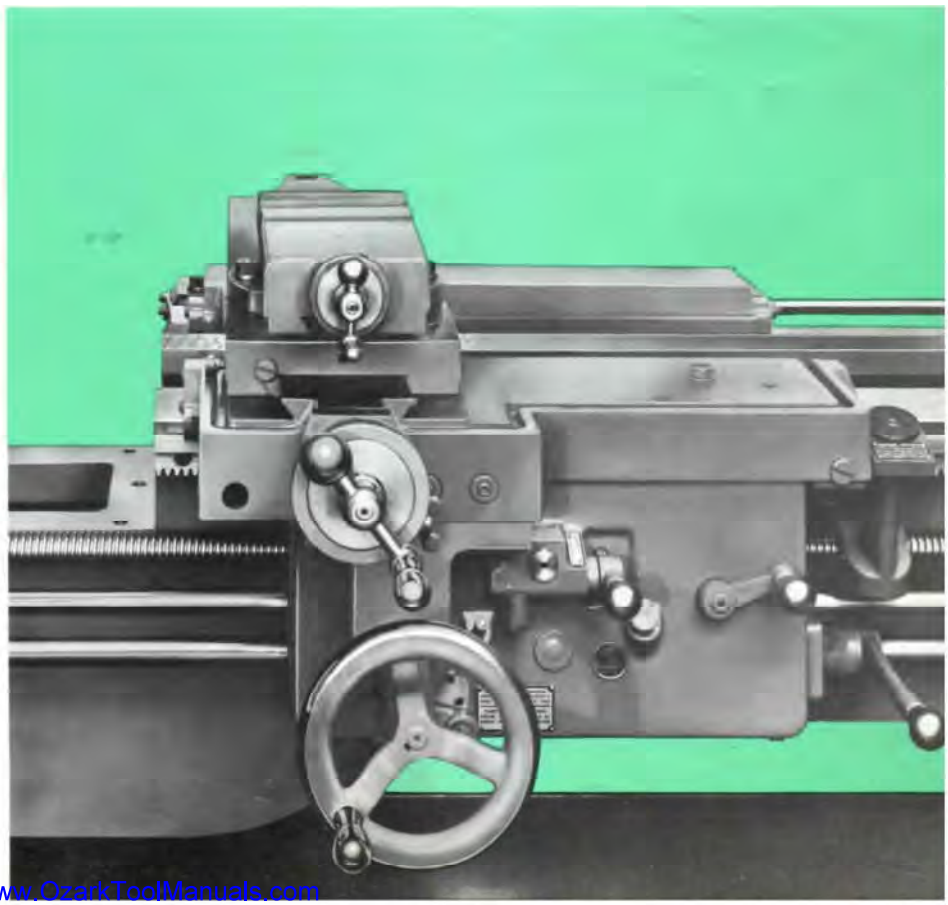
The heavy, double-wall casting maintains gear alignment and resists torsional forces under heavy feeds. All gears are heat treated and shafts are anti-friction mounted. Lubrication to the apron gearing and ways is by forced feed.

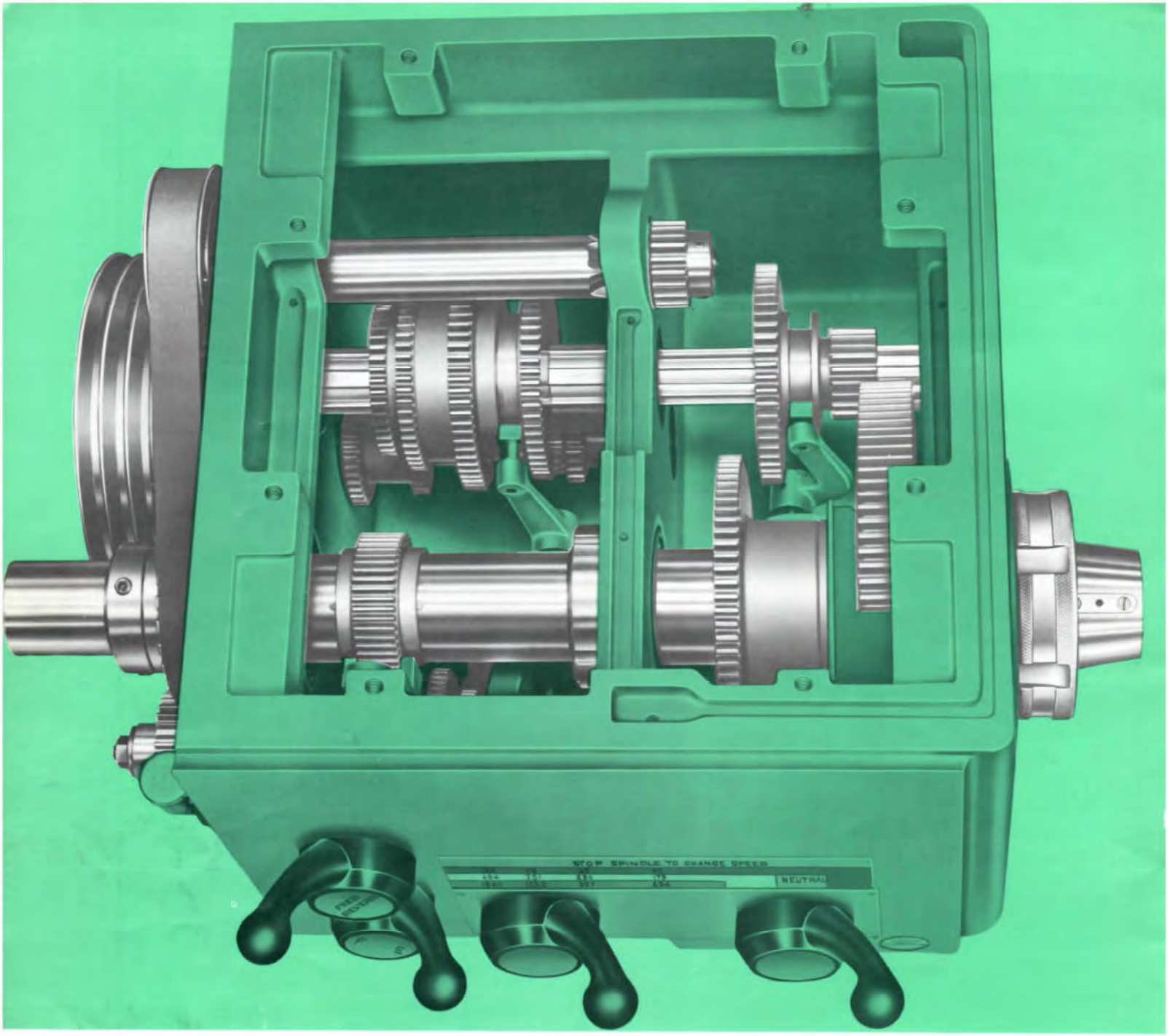
The lead screw is used exclusively for chasing threads and leads, which assures accuracy over the life of the lathe. It is accurate within ±.0012″ in any 12 inches, and is mounted in tension. Feed is powered through a splined feed rod. All rods are amply dimensioned to carry maximum loads without windup.

Foolproof safety interlocks prevent simultaneous engagement of feed and threading mechanism. An overload clutch on the feed rod prevents damage to the machine if the carriage is inadvertently run into the headstock, tailstock or workpiece. After pressure is relieved, the clutch will automatically re-engage.

Gap Carriage

On Regal Gap Lathes, the carriage is designed with the cross slide at the far left of the carriage wings so that the tool can be positioned right up to the gap. Over 82 square inches of carriage bearing surface distribute cutting forces for longer wear. A wide carriage bridge provides rigid tool support.



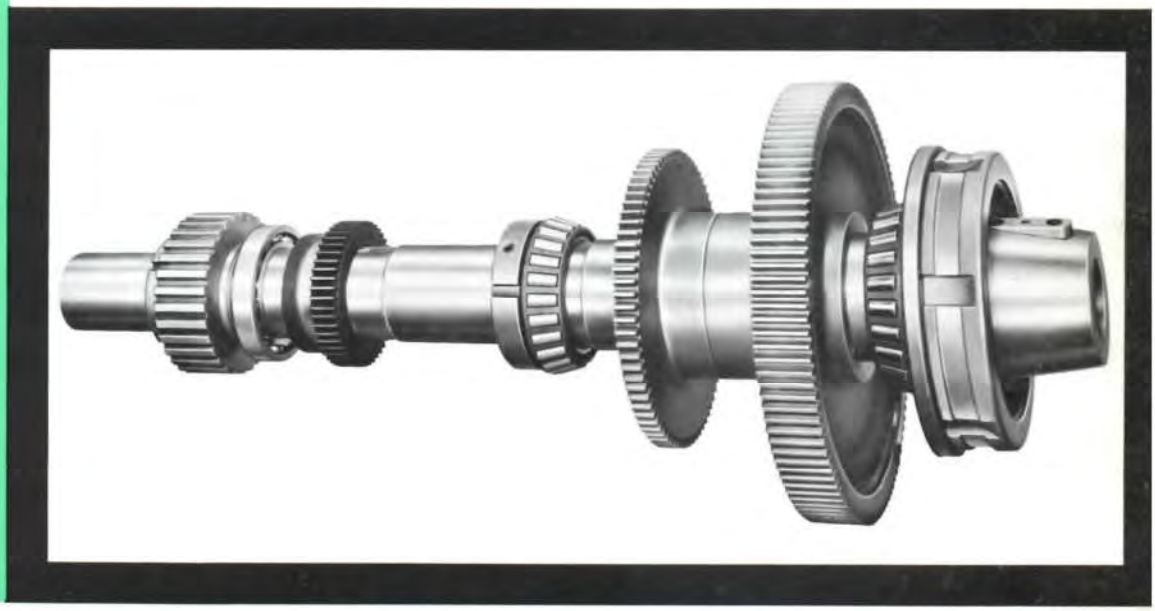


Headstock

Regal headstock design provides maximum power for roughing, and smoothness for finishing with either high speed steel or carbide tools. Twelve standard speeds or twelve optional high speeds are available with either manual or Servo-Shift headstocks to provide versatility for every turning job.

Spur gear design minimizes horsepower loss. Only gears for a specific speed are engaged—other gears run idle on their shafts. Gears are shaved and hardened and have ample width for maximum power transmission. They have correct involute form for proper contact and quiet running. Short, heavy shafts minimize deflection and are anti-friction mounted. All gears drive through keys or splines.

Combination gear / belt drive provides gear driven low and intermediate speeds for positive full power. The high-speed range is driven through a steel-reinforced cog-type belt for elimination of gear drive on the spindle and vibration-free transmission



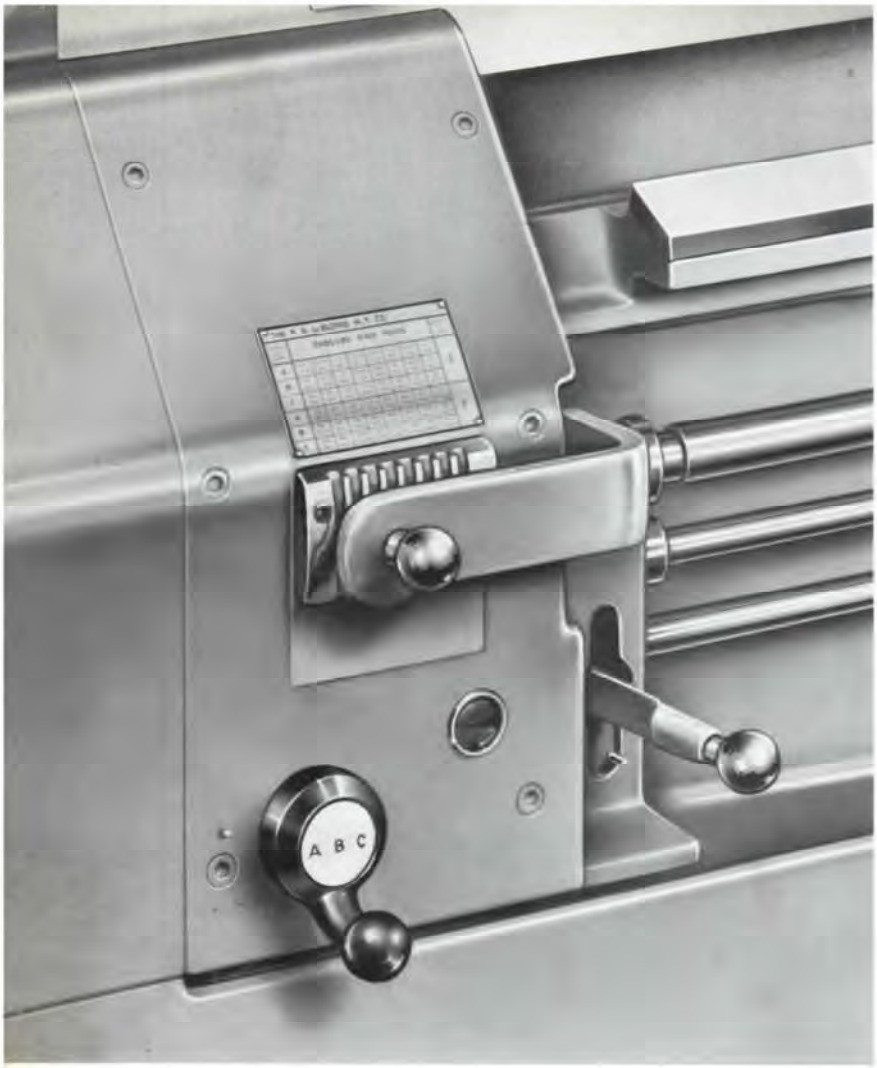
of full power. The headstock is automatically lubricated.

Convenient speed change. Operator simply moves easy-shifting levers to match up with color-coded, direct-reading speed plate. When the headstock is equipped with Servo-Shift, speed is *preselected* by turning a dial. Moving a single lever stops the spindle and re-starts it again in the newly selected speed.

Spindle

The American Standard spindle nose provides the most accurate location of work-holding devices by reference to a single ground conical surface. The long taper nose key drive is positive and makes changing chucks easy and fast.

High bearing capacities provide ample safety factors for the greatest loads to be encountered. The spindle is supported at three positions by two precision Timken roller bearings at front and center and by a ball bearing at the rear.



13″ and 15″ Feed Plate

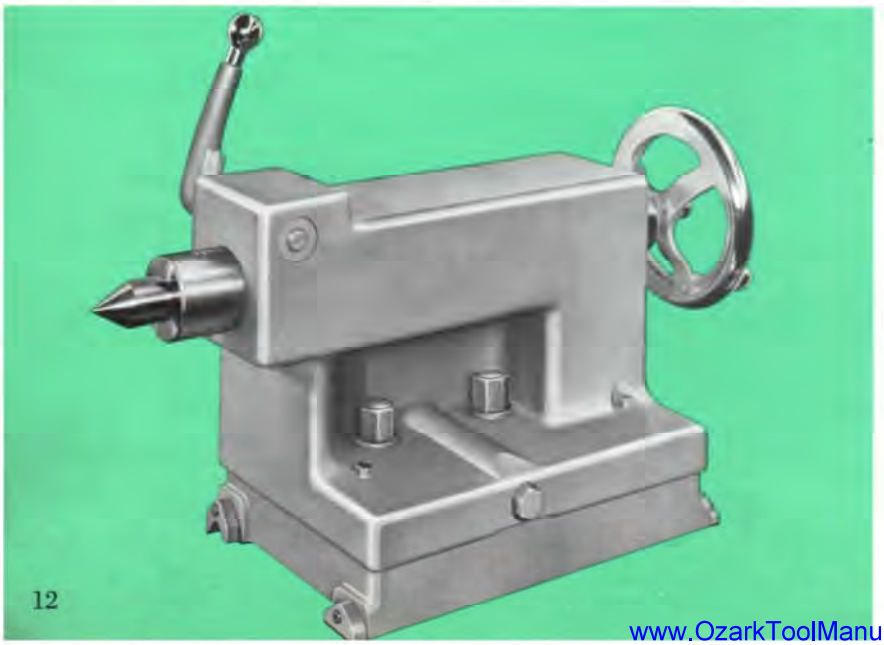
THE R. K. LeBLOND M. T. CO. CIN'TI, O., U. S. A.

LEVER ON BOX	THREADS AND FEEDS B-800-53-S								LEVER ON HEAD
A	7 .069	6.5 .074	6 .080	5.75 .083	5.5 .087	5 .096	4.5 .107	4 .120	E
B	14 .034	13 .037	12 .040	11.5 .042	11 .044	10 .048	9 .054	8 .060	
C	28 .017	26 .018	24 .020	23 .021	22 .022	20 .024	18 .027	16 .030	
A	56 .0085	52 .0090	48 .010	46 .0105	44 .011	40 .012	36 .0135	32 .015	F
B	112 .0042	104 .0044	96 .0047	92 .005	88 .0055	80 .006	72 .0067	64 .0075	
C	224 .002	208 .0022	192 .0024	184 .0026	176 .0028	160 .003	144 .0033	128 .0037	

17″ and 19″ Feed Plate

THE R. K. LeBLOND M. T. CO. CIN'TI, O., U. S. A.

LEVER ON BOX	THREADS AND FEEDS D-800-53-S								LEVER ON HEAD
A	3.5 .076	3.25 .081	3 .088	2.875 .091	2.75 .096	2.5 .106	2.25 .118	2 .132	E
B	7 .038	6.5 .040	6 .044	5.75 .045	5.5 .048	5 .053	4.5 .059	4 .066	
C	14 .019	13 .020	12 .022	11.5 .0225	11 .024	10 .026	9 .029	8 .033	
A	28 .0095	26 .010	24 .011	23 .0112	22 .012	20 .013	18 .0145	16 .0165	F
B	56 .0047	52 .005	48 .0055	46 .0056	44 .006	40 .0065	36 .0072	32 .0082	
C	112 .0023	104 .0025	96 .0027	92 .0028	88 .003	80 .0032	72 .0036	64 .0041	



Totally Enclosed Quick Change Box

The totally enclosed quick-change box offers a selection of 48 feeds and threads. With the feed reverse and compounding gears entirely within the head, the single gear train on the end of the lathe eliminates overhang of the bearings and gives a powerful, quiet drive. The quick-change box is automatically lubricated from a reservoir. An automatic resetting safety device on the feed rod disengages rod and feed mechanism when strain is thrown on these parts.

Tailstock

The Regal tailstock features positive spindle clamping. It is so designed that the compound rest can be used parallel to it. A standard Morse taper spindle hole allows the use of drills and reamers with Morse taper shanks. The tailstock spindle is graduated. Cross adjustment provides for alignment and for emergency taper turning. Tang driver in tailstock spindle is standard.

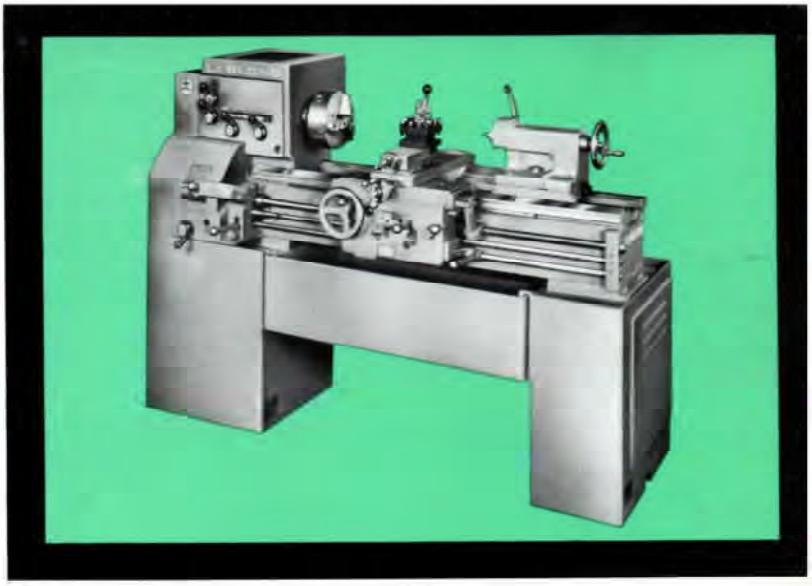
Standard Equipment:

Small face plate; hardened and ground replaceable steel bedways; graduated compound rest; No. 1 tool post; taper spindle sleeve; tang driver in tailstock spindle; set of leveling plates; apron spindle control; chasing dial; chip pan; feed drive safety clutch; centers; necessary wrenches; machine arranged for multiple V-Belt motor drive but not including motor, electrical controls or electric brake.

Extra Equipment:

Servo-Shift; turret tool post; Hydra-Trace; Versa-Mil; grinding attachment; taper attachment; milling and keyway cutting attachment; large face plate; adjustable thread cutting stop; connected rest; steady rest; follow rest; drill pads; special centers; metric transposing gears; pump and piping; chucks, tools, motor, electrical equipment and many others.

Regal Lathe 13"



Specifications

CAPACITY

Swing over bed and carriage wings	14½"
Swing over cross slide	8½"
Distance between centers, base length	30"*
Center distance increases in increments of	12"*
Size of tool—forged	½" x 1"
Size of tool holder	½" x 1⅛"
Steady rest capacity	½" to 4"
Follow rest capacity	½" to 2¾"
Face plate, small, diameter	8"
Face plate, large, diameter	14"

HEADSTOCK Manual or Servo-shift

Spindle speeds, number	12
Spindle speed ranges:	
Low range, rpm	30 to 1200
Gear drive: 30, 46, 63, 88, 119, 171, 234 and 329	
Belt drive: 436, 625, 855 and 1200	
High range, rpm	45 to 1800**
Gear drive: 45, 69, 95, 132, 179, 256, 351 and 494	
Belt drive: 654, 937, 1282 and 1800	
Spindle bearings, number of	3
Spindle bearing diameters:	
Front	2½"
Center	2⅜"
Rear	2½"
Front spindle bearing, Timken precision	
Outside diameter	4⅛"
Radial load at 100 rpm, pounds	7290
Thrust load at 100 rpm, pounds	5200
Center spindle, roller bearing	
Outside diameter	3⅛"
Radial load at 100 rpm, pounds	6305
Rear spindle, ball bearing	
Outside diameter	3⅜"
Radial load at 100 rpm, pounds	3400
Spindle, size of hole, straight	1⅞"
Spindle, size of hole, taper, Morse taper No.	5
Spindle, size of center, Morse taper No.	3
Spindle nose, taper key drive, standard, size	L-0
Spindle nose, camlock drive, optional, size	4" D-1
Spindle nose, diameter large end of taper	3¼"
Headstock length on bed	15⅞"

BED

Length, standard	5'6¼"
Length increases in increments of	12"*
Width	12⅛"
Depth	10¼"

CARRIAGE

Length on bed	18⅜"
Bearing surface, square inches	62
Bridge width	6¼"
Cross slide travel without taper attachment	8⅞"
Cross slide travel with taper attachment	7⅞"
Compound rest travel	3⅞"

FEEDS—THREADS

Feed changes, gear or belt drive	48
Feed range, in. per rev.	.002 to .120
Thread changes, gear drive only	48
Threads per inch, range	4 to 224
4, 4½, 5, 5½, 5¾, 6, 6½, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 16, 18, 20, 22, 23, 24, 26, 28, 32, 36, 40, 44, 46, 48, 52, 56, 64, 72, 80, 88, 92, 96, 104, 112, 128, 144, 160, 176, 184, 192, 208 and 224	
Leadscrew diameter and threads per inch	1", 6

TAILSTOCK

Spindle diameter	1⅜"
Center, Morse No.	3
Spindle travel and set over right or left	5", 1"
Length on bed	10¾"

TAPER ATTACHMENT

Maximum taper per foot	3½"
Turns at one setting	10"

MOTOR RECOMMENDATIONS

Motor hp and rpm	3, 1800**

SHIPPING DATA
(For Basic Machine With Average Accessories)

Net weight, pounds, approx.	2345
Domestic shipping weight, pounds, approx.	2645
Export shipping weight, pounds, approx.	3145
Net weight, each additional 12" of bed, pounds, approx.	125
Floor space required	78" x 40"
Distance, spindle center to floor	42½"

*30", 42", 54" and 78" standard center distances. 18", 102" lengths and over available on special order.

**On special order, a 5 H.P. motor for a 75 to 3000 R.P.M. speed range will be furnished. Such an application requires a 4" D-1 spindle nose which is provided at additional cost.

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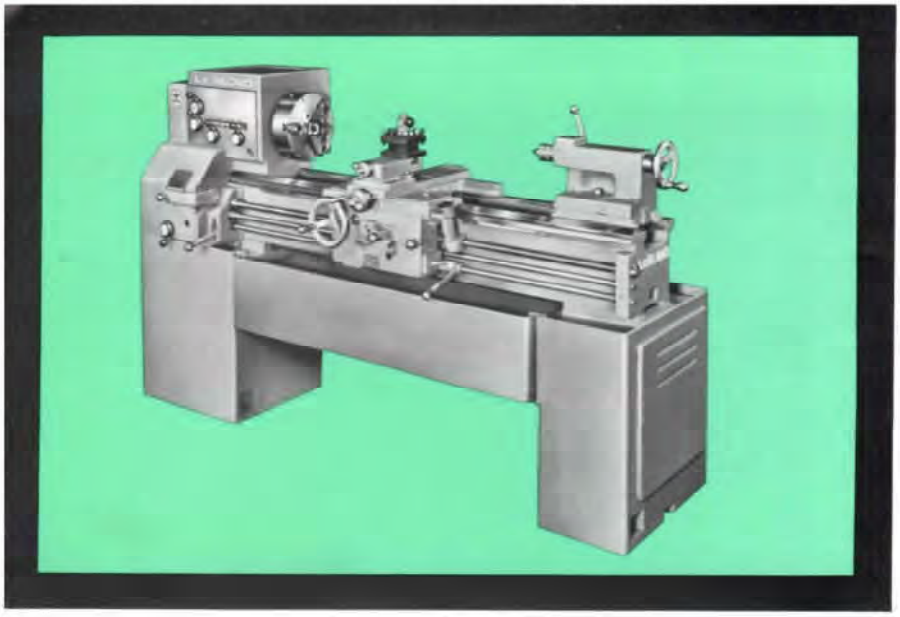


Regal 15" Lathe

Specifications

CAPACITY

Swing over bed and carriage wings	15½"
Swing over cross slide	9½"
Distance between centers, base length	30"*
Center distance increases in increments of	12"*
Size of tool—forged	½" x 1"
Size of tool holder	½" x 1⅛"
Steady rest capacity	½" to 4"
Follow rest capacity	½" to 2¾"
Face plate, small, diameter	8"
Face plate, large, diameter	14"

HEADSTOCK Manual or Servo-shift

Spindle speeds, number	12
Spindle speed ranges:	
Low range, rpm	30 to 1200
Gear drive: 30, 46, 63, 88, 119, 171, 234 and 329	
Belt drive: 436, 625, 855 and 1200	
High range, rpm	45 to 1800**
Gear drive: 45, 69, 95, 132, 179, 256, 351 and 494	
Belt drive: 654, 937, 1282 and 1800	
Spindle bearings, number of	3
Spindle bearing diameters:	
Front	2½"
Center	2⅜"
Rear	2½"
Front spindle bearing, Timken precision	
Outside diameter	4⅜₁₆"
Radial load at 100 rpm, pounds	7290
Thrust load at 100 rpm, pounds	5200
Center spindle, roller bearing	
Outside diameter	3⅛₁₆"
Radial load at 100 rpm, pounds	6305
Rear spindle, ball bearing	
Outside diameter	3³¹⁄₆₄"
Radial load at 100 rpm, pounds	3400
Spindle, size of hole, straight	1⅞₃₂"
Spindle, size of hole, Morse taper No.	5
Spindle, size of center, Morse taper No.	3
Spindle nose, taper key drive, standard, size	L-0
Spindle nose, camlock drive, optional, size	4" D-1
Spindle nose, diameter large end of taper	3¼"
Headstock length on bed	15⅞"

BED

Length, standard	5'6¼"
Length increases in increments of	12"*
Width	12⅛₆"
Depth	10¼"

CARRIAGE

Length on bed	18⅜"
Bearing surface, square inches	62
Bridge width	6¼"
Cross slide travel without taper attachment	8⅞"
Cross slide travel with taper attachment	7⅞"
Compound rest travel	3⅞"

FEEDS—THREADS

Feed changes, gear or belt drive	48
Feed range, in. per rev.	.002 to .120
Thread changes, gear drive only	48
Threads per inch, range	4 to 224
4, 4½, 5, 5½, 5¾, 6, 6½, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 16, 18, 20, 22, 23, 24, 26, 28, 32, 36, 40, 44, 46, 48, 52, 56, 64, 72, 80, 88, 92, 96, 104, 112, 128, 144, 160, 176, 184, 192, 208 and 224	
Leadscrew diameter and threads per inch	1", 6

TAILSTOCK

Spindle diameter	1¹¹⁄₁₆"
Center, Morse No.	3
Spindle travel and set over right or left	5", 1"
Length on bed	10¾"

TAPER ATTACHMENT

Maximum taper per foot	3½"
Turns at one setting	10"

MOTOR RECOMMENDATIONS

Motor hp and rpm	3, 1800**

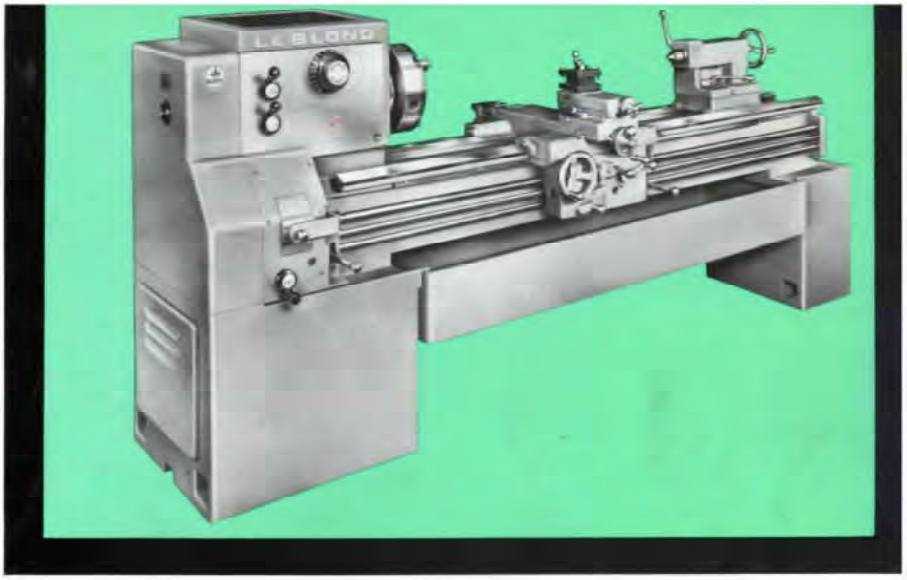
SHIPPING DATA
(For Basic Machine With Average Accessories)

Net weight, pounds, approx.	2425
Domestic shipping weight, pounds, approx.	2725
Export shipping weight, pounds, approx.	3225
Net weight, each additional 12" of bed, pounds, approx.	125
Floor space required	78" x 40"
Distance, spindle center to floor	43"

*30", 42", 54" and 78" standard center distances. 18", 102" lengths and over available on special order.

**On special order, a 5 H.P. motor for a 75 to 3000 R.P.M. speed range will be furnished. Such an application requires a 4" D-1 spindle nose which is provided at additional cost.

Regal 17" Lathe



Specifications

CAPACITY

Swing over bed and carriage wings	17¾"
Swing over cross slide	10¾"
Distance between centers, base length	30"
Center distance increases in increments of	12"*
Size of tool—forged	⅝" x 1¼"
Size of tool holder	⅝" x 1⅜"
Steady rest capacity	½" to 6"
Follow rest capacity	½" to 3¼"
Face plate, small, diameter	9½"
Face plate, large, diameter	17"

HEADSTOCK Manual or Servo-shift

Spindle speeds, number	12
Spindle speed ranges:	
Low range, rpm	25 to 1000
Gear drive: 25, 35, 50, 68, 97, 137, 194 and 265	
Belt drive: 363, 513, 725 and 1000	
High range, rpm	38 to 1500
Gear drive: 38, 53, 75, 102, 145, 205, 290 and 396	
Belt drive: 544, 770, 1090 and 1500	
Spindle bearings, number of	3
Spindle bearing diameters:	
Front	3⅝"
Center	2⅞"
Rear	2⅜"
Front spindle bearing, Timken precision	
Outside diameter	5⅜"
Radial load at 100 rpm, pounds	9239
Thrust load at 100 rpm, pounds	7051
Center spindle, roller bearing	
Outside diameter	4⅜"
Radial load at 100 rpm, pounds	8510
Rear spindle, ball bearing	
Outside diameter	3⅛"
Radial load at 100 rpm, pounds	4070
Spindle, size of hole, straight	1⅝"
Spindle, size of hole, taper, Amer. Std. No.	200
Spindle, size of center, Morse taper No.	4
Spindle nose, taper key drive, standard, size	L-1
Spindle nose, camlock drive, optional, size	4" D-1
Spindle nose, diameter large end of taper	4⅛"
Headstock length on bed	21⅛"

BED

Length, standard	6'3"
Length increases in increments of	12"*
Width	14⅛"
Depth	11½"

CARRIAGE

Length on bed	21"
Bearing surface, square inches	89
Bridge width	7⅞"
Cross slide travel without taper attachment	11¼"
Cross slide travel with taper attachment	9⅜"
Compound rest travel	4⅜"

FEEDS—THREADS

Feed changes, gear or belt drive	48
Feed range, in. per rev.	.0023 to .132
Thread changes, gear drive only	48
Threads per inch, range	2 to 112
2, 2¼, 2½, 2¾, 2⅞, 3, 3¼, 3½, 4, 4½, 5, 5½, 5¾, 6, 6½, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 16, 18, 20, 22, 23, 24, 26, 28, 32, 36, 40, 44, 46, 48, 52, 56, 64, 72, 80, 88, 92, 96, 104 and 112	
Leadscrew diameter and threads per inch	1¼", 4

TAILSTOCK

Spindle diameter	2⅞"
Center, Morse No.	4
Spindle travel and set over right or left	7", 1"
Length on bed	12¾"

TAPER ATTACHMENT

Maximum taper per foot	3½"
Turns at one setting	15"

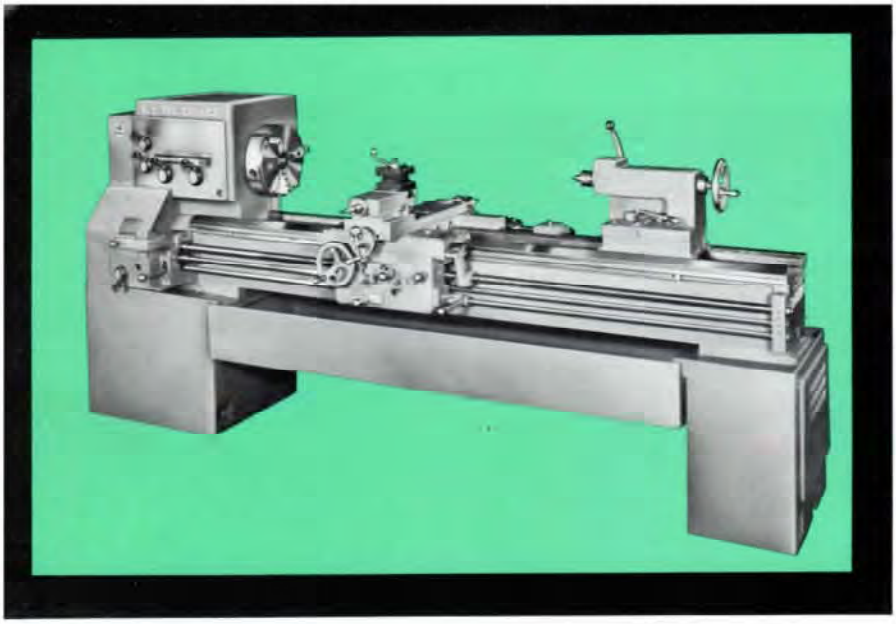
MOTOR RECOMMENDATIONS

Motor hp and rpm	5 ,1800

SHIPPING DATA
(For Basic Machine With Average Accessories)

Net weight, pounds, approx.	3300
Domestic shipping weight, pounds, approx.	3700
Export shipping weight, pounds, approx.	4300
Net weight, each additional 12" of bed, pounds, approx.	220
Floor space required	89" x 50"
Distance, spindle center to floor	42"

*30", 42", 54", 78", 102", and 126" standard center distances. Other lengths available on special order.



Regal 19" Lathe

Specifications

CAPACITY

Swing over bed and carriage wings	19¼"
Swing over cross slide	12¼"
Distance between centers, base length	30"
Center distance increases in increments of	12"*
Size of tool—forged	⅝" x 1¼"
Size of tool holder	¾" x 1⅜"
Steady rest capacity	½" to 6"
Follow rest capacity	½" to 3¾"
Face plate, small, diameter	9½"
Face plate, large, diameter	17"

HEADSTOCK Manual or Servo-shift

Spindle speeds, number	12
Spindle speed ranges:	
Low range, rpm	25 to 1000
Gear drive: 25, 35, 50, 68, 97, 137, 194 and 265	
Belt drive: 363, 513, 725 and 1000	
High range, rpm	38 to 1500
Gear drive: 38, 53, 75, 102, 145, 205, 290 and 396	
Belt drive: 544, 770, 1090 and 1500	
Spindle bearings, number of	3
Spindle bearing diameters:	
Front	3⅛"
Center	2⅞"
Rear	2⅝"
Front spindle bearing, Timken precision	
Outside diameter	5⅜"
Radial load at 100 rpm, pounds	9239
Thrust load at 100 rpm, pounds	7051
Center spindle, roller bearing	
Outside diameter	4⅜"
Radial load at 100 rpm, pounds	8510
Rear spindle, ball bearing	
Outside diameter	3⅛"
Radial load at 100 rpm, pounds	4070
Spindle, size of hole, straight	1⅝"
Spindle, size of hole, taper, Amer. Std. No.	200
Spindle, size of center, Morse taper No.	4
Spindle nose, taper key drive, standard, size	L-1
Spindle nose, camlock drive, optional, size	4" D-1
Spindle nose, diameter large end of taper	4⅛"
Headstock length on bed	21⅛"

BED

Length, standard	6'3"
Length increases in increments of	12"*
Width	14⅜"
Depth	11½"

CARRIAGE

Length on bed	21"
Bearing surface, square inches	89
Bridge width	7⅛"
Cross slide travel without taper attachment	11¼"
Cross slide travel with taper attachment	9⅛"
Compound rest travel	4⅜"

FEEDS—THREADS

Feed changes, gear or belt drive	48
Feed range, in. per rev.	.0023 to .132
Thread changes, gear drive only	48
Threads per inch, range	2 to 112
2, 2¼, 2½, 2¾, 2⅞, 3, 3¼, 3½, 4, 4½, 5, 5½, 5¾, 6, 6½, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 16, 18, 20, 22, 23, 24, 26, 28, 32, 36, 40, 44, 46, 48, 52, 56, 64, 72, 80, 88, 92, 96, 104 and 112	
Leadscrew diameter and threads per inch	1⅜", 4

TAILSTOCK

Spindle diameter	2⅜"
Center, Morse No.	4
Spindle travel and set over right or left	7", 1"
Length on bed	12¾"

TAPER ATTACHMENT

Maximum taper per foot	3½"
Turns at one setting	15"

MOTOR RECOMMENDATIONS

Motor hp and rpm	5 ,1800

SHIPPING DATA
(For Basic Machine With Average Accessories)

Net weight, pounds, approx.	3390
Domestic shipping weight, pounds, approx.	3790
Export shipping weight, pounds, approx.	4390
Net weight, each additional 12" of bed, pounds, approx.	220
Floor space required	89" x 50"
Distance, spindle center to floor	42¾"

*30", 42", 54", 78", 102", and 126" standard center distances. Other lengths available on special order.

Regal Plain Bed Gap Lathes

Extra Capacity at Moderate Cost

Plain bed gap lathes differ from the regular engine lathe only in their bed, carriage and apron construction. The bed has a gap into which an accurately machined gap block is fitted, held rigidly in alignment by locating pins and screws.

The special carriage has the cross slide located at the left end of the carriage wing. This allows the operator to place his tools to take full advantage of the gap. An extension rest (optional equipment) facilitates even fuller use of the gap. The apron is designed and constructed to provide for the necessary mechanism changes required by the special carriage.

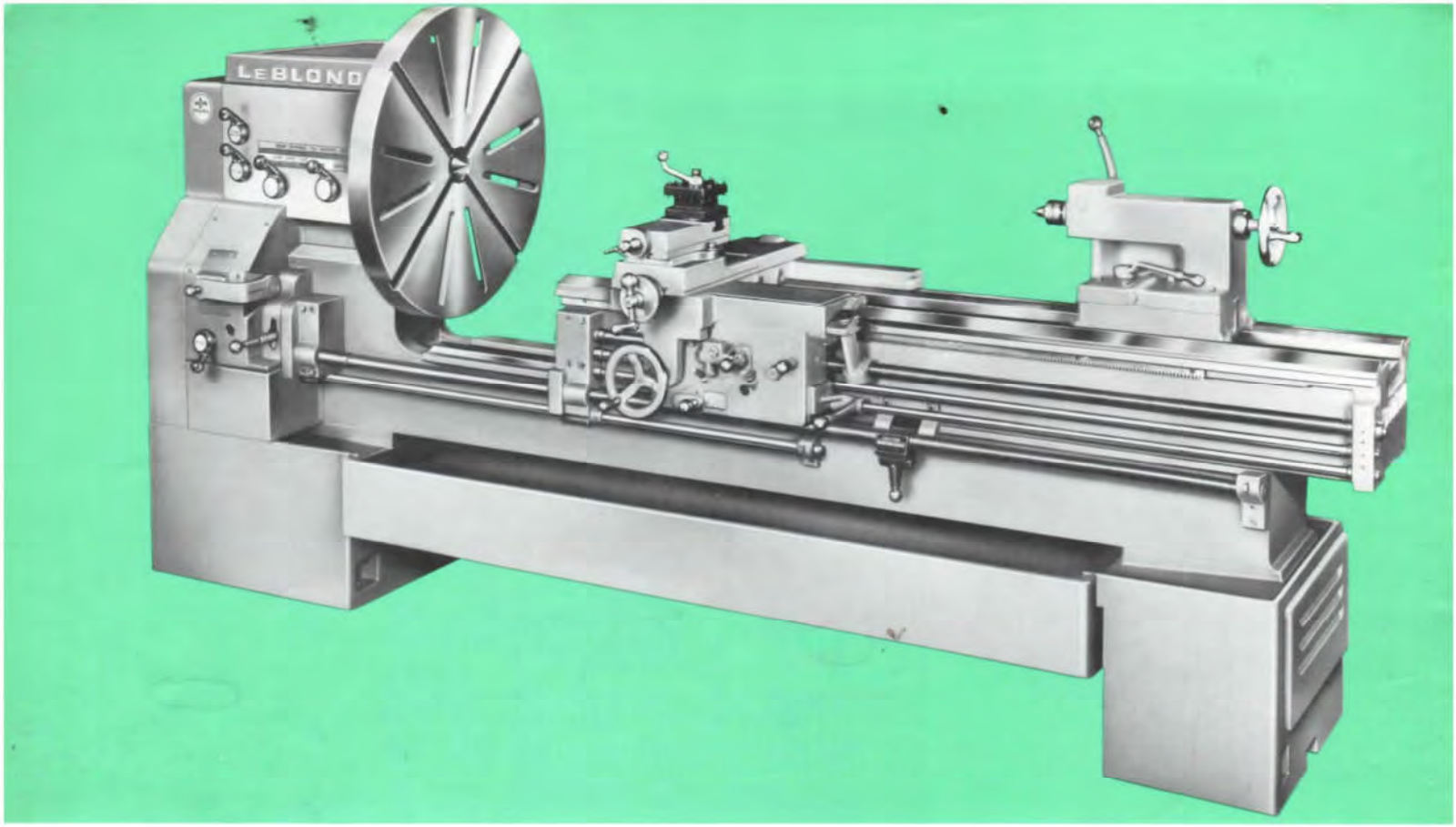
The Plain Bed Gap Lathe increases the versatility of the regular Regal Lathe. The swing is increased by 50% through the gap. Unusual jobs, such as work with wide flanges or projections have ample clearance. If you have odd-shaped work, you can't afford to overlook the possibilities of a LeBlond Plain Bed Gap Lathe.

Specifications of 17" and 19" Regal Lathes apply to gap models except for those shown here.

Specifications

CAPACITY	**17"**	**19"**
Swing through gap	26"	27½"
Distance, spindle nose to end of gap	10⅜"	10⅜"
Distance, face plate to end of gap	10⅛"	10⅛"
Turning length, with extension rest	11½"	11½"
Maximum diameter to turn with extension rest	23½"	23½"
Spindle speed range (5HP 1800 rpm motor)	25 to 1000 rpm	
Spindle speed range (5/2½HP 1800/900 rpm, two speed motor	13 to 1000 rpm	

CARRIAGE		
Length on bed	22"	22"
Bearing surface, square inches	92	92
Bridge width	7⅛"	7⅛"
Cross slide travel, with or without taper attachment	15½"	15½"
SHIPPING DATA (Basic Machine With Average Accessories)		
Net weight, pounds, approx.	3900	4000
Domestic shipping weight, pounds, approx.	4300	4400
Export shipping weight, pounds, approx.	4900	5000
Net weight, each addl. 12" of bed, pounds, approx.	220	220



Sliding Bed Gap Lathes

Turning Department in One Machine

On Regal Gap Lathes the carriage is designed with the cross slide at the far left of the carriage wings so that the tool can be positioned right up to the gap. Over 82 sq. in. of carriage bearing surface distribute cutting forces for longer wear. A wide carriage bridge provides rigid tool support. Cross slide and top slide dials are graduated in diameter reduction for easy sizing calculations.

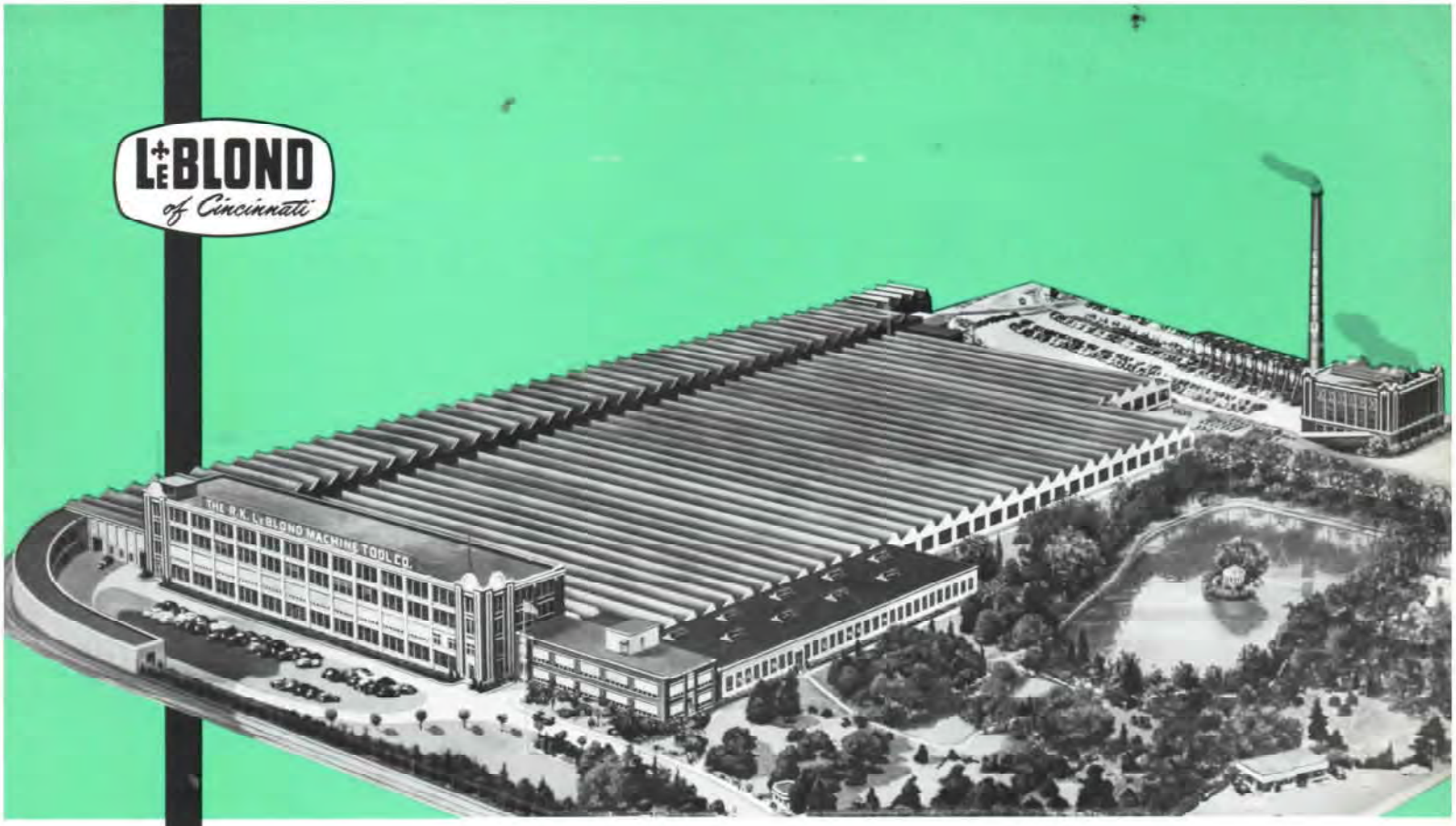
The LeBlond Regal Sliding Bed Gap Lathe is the most versatile turning machine ever built. With the bed closed it functions as a regular engine lathe. Its special bed *slides* open to form a gap that that will accept odd-shaped parts and large diameter jobs. Sliding the bed open also provides greater bed length and more than 50% greater distance between centers. In addition, you get all the outstanding features, the stamina and dependability you expect in a LeBlond Lathe.

Specifications of the 17" Regal Engine Lathes apply to the Sliding Bed Gap Model except for those shown here.

Specifications

CAPACITY	**17"/28"**
Swing through gap	35"
Center distance, bed closed	30"
Center distance, bed extended	50"
Maximum distance, spindle nose to end of gap	20"
Turning length, with extension rest	11½"
Maximum diameter to turn with extension rest	23½"
Spindle speed range (5HP 1800 rpm motor)	25 to 1000 rpm
Spindle speed range (5/2½HP 1800/900 rpm, two speed motor)	13 to 1000 rpm
Floor space, bed closed	84⅜" x 60"
Floor space, bed extended	108⅜" x 60"
Gap face plate diameter	24"
Distance, spindle center to floor	45¼"

BED	
Length, centers closed	6'3¼"
Top bed length	50⅜"
Width	14⅜"
Depth, top	9½"
Depth, lower	9¾"
CARRIAGE	
Length on bed	22"
Bearing surface, square inches	92
Cross slide travel, with or without taper attachment	15½"
SHIPPING DATA (Machine with average accessories)	
Net weight, pounds, approx.	4250
Domestic shipping weight, pounds, approx	4650
Export shipping weight, pounds, approx.	5250



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Heavy duty toolroom—models 1610, 2013 and 2516
Heavy duty plain bed gap—model 1610 to model 3220
Heavy duty sliding bed gap—model 2013/46 to model 4025/65
Heavy duty hollow spindle—2516, 3220 and 4025
Roll turning—model 3220, 50 hp to model 5235, 100 hp
Missile—72" to 168"
Model RT toolroom—16"

REGAL

Regal engine—13" to 24"
Regal plain bed gap—17" to 24"
Regal sliding bed gap— 17"/28" and 24"/39"
Regal hollow spindle—24"

TOOL and DIEMAKER

14" and 16"

TRACERS

Hydra-Trace tracing attachment
90° hydraulic tracer
Two-directional tracer

NUMERICAL CONTROL

Tape-Turn—model 2013, 20 hp to model 4025, 75 hp
Tape-Turn—missile
Tape-Turn—face plate drive

CRANKSHAFT

Automatic crankshaft—line bearing
Automatic crankshaft—pin bearing

The true significance of LeBlond's long history lies in the fact that the Company has never ceased to pioneer new ways to help you turn a profit. The line of Regal Lathes described in this booklet is a typical example of user-oriented engineering and again explains why "with LeBlond, you can cut with confidence".

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