

CLAUSING

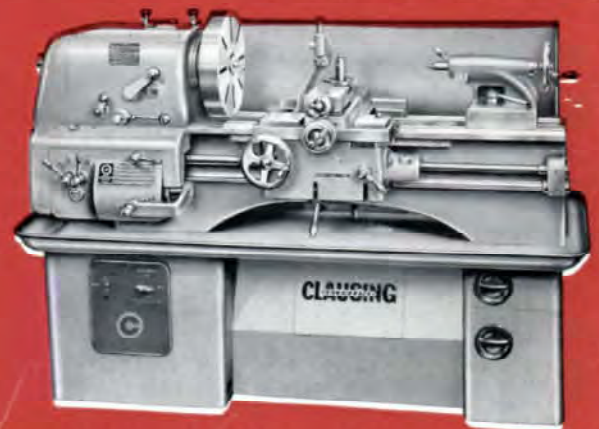
COLCHESTER



13" 15" 17"



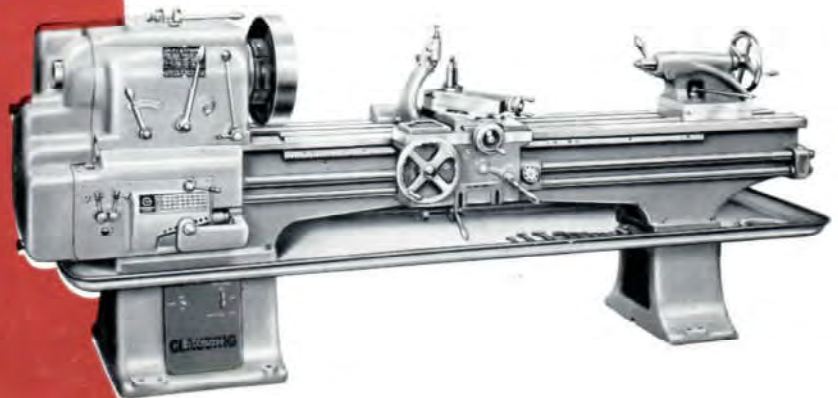
GEARED-HEAD



PRECISION
LATHES

SOLD BY:

MCDONALD MACHINERY CO.
MACHINE SHOP—WOODWORKING—SHEET METAL
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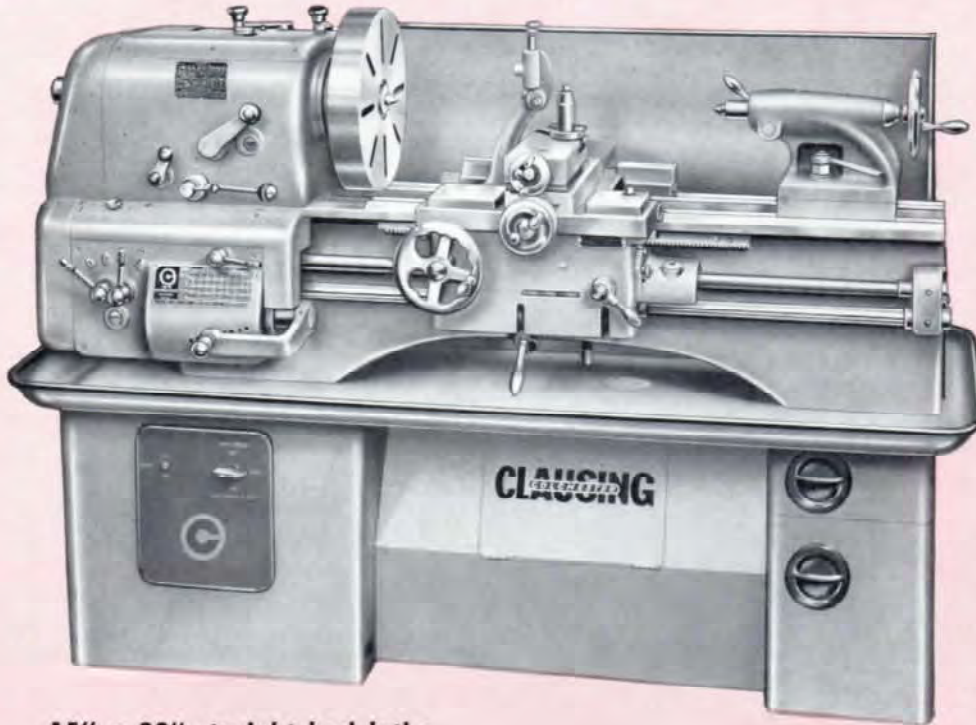


CLAUSING DIV. ATLAS PRESS
KALAMAZOO, MICHIGAN, U.S.A.

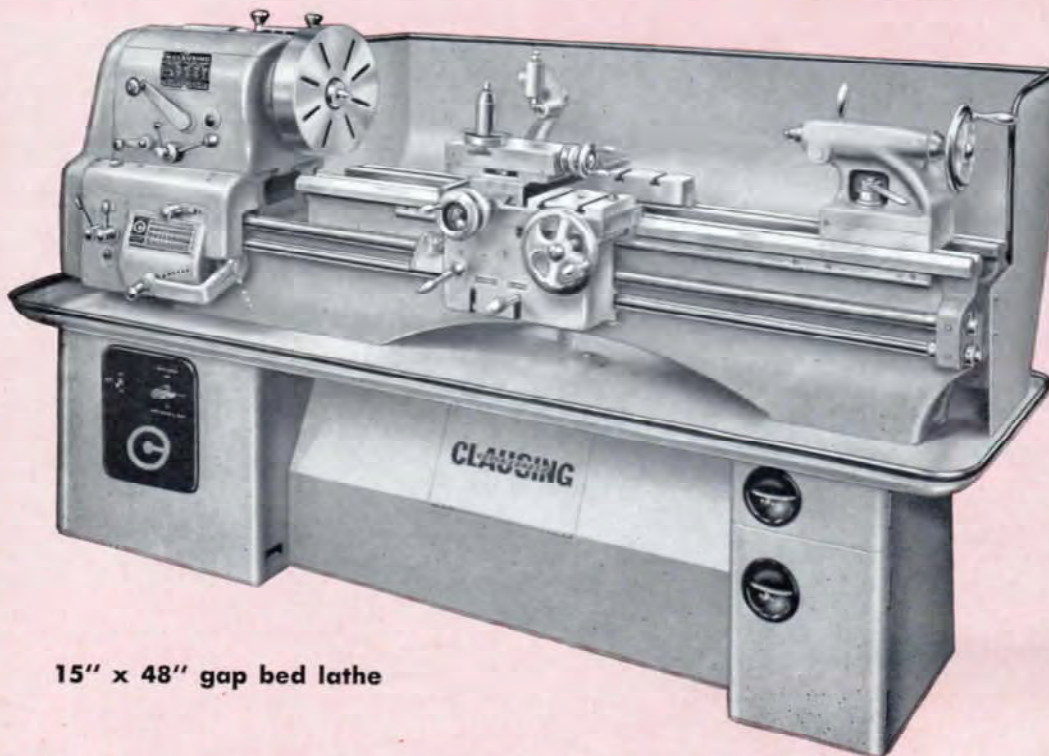
CLAUSING

COLCHESTER

13", 15", 17", heavy duty geared head precision lathes



15" x 30" straight bed lathe



15" x 48" gap bed lathe

Clausing-Colchester lathes are the achievement of over 50 years' experience in the manufacture of precision lathes.

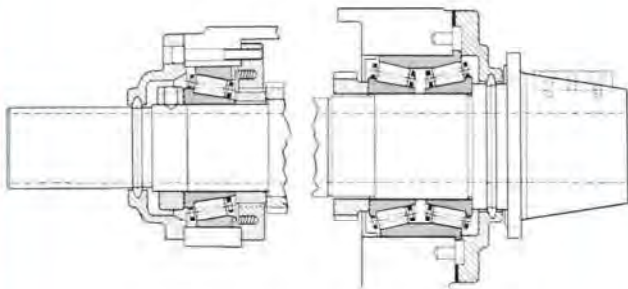
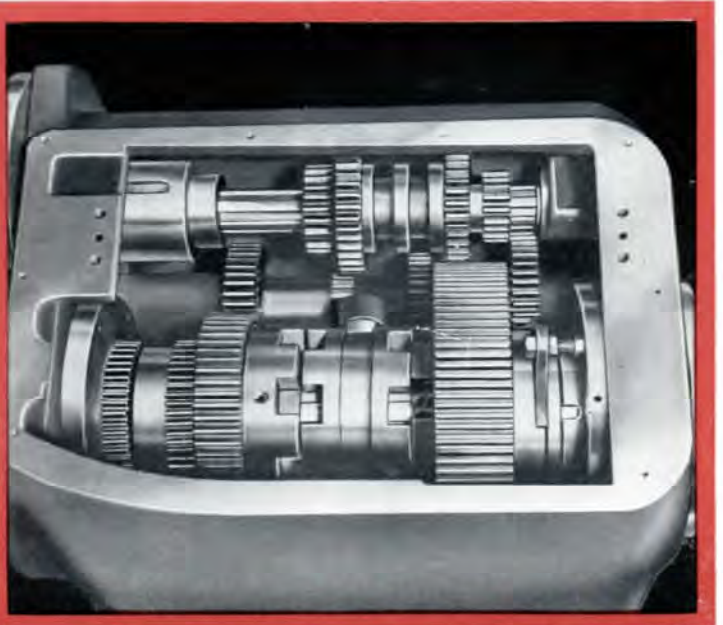
Their outstanding value and record of performance are the result of this experience, and the modern production facilities used in their manufacture. Highly specialized precision equipment, coupled with a unique system of tooling and gauging, assure the highest standards of accuracy, and uniformity of every part.

Clausing-Colchester lathes, manufactured in England, are the product of Europe's largest and most modern factory devoted exclusively to the manufacture of precision lathes. They are backed by the nation-wide Clausing sales, service and dealer organization.

Built to American standards of toolroom lathe accuracy

Clausing-Colchester geared headstocks are designed and built to deliver the power required for heavy-duty operations, and for smooth performance throughout the spindle-speed range. Gears are shaved, heat-treated. Gear shafts are multi-splined high-tensile steel — turn in phosphor bronze bearings. Splined shafts — no loose or sliding keys — assure high standards of accuracy and surface finish. Headstock is completely enclosed — entire gear drive mechanism travels in bath of oil.

Gear change and reverse levers are conveniently located. Front lever operates both starting switch and mechanical brake in drive pulley, a feature that permits rapid and sensitive control of machine.



Headstock spindles are high-tensile steel hammered forgings. Nose is American Standard taper key-lock — spindle may be reversed without danger of the chuck's coming off. Nose is hardened. Note — in chart at left — the larger sizes and capacities — greater than those of lathes in the Clausing-Colchester class.

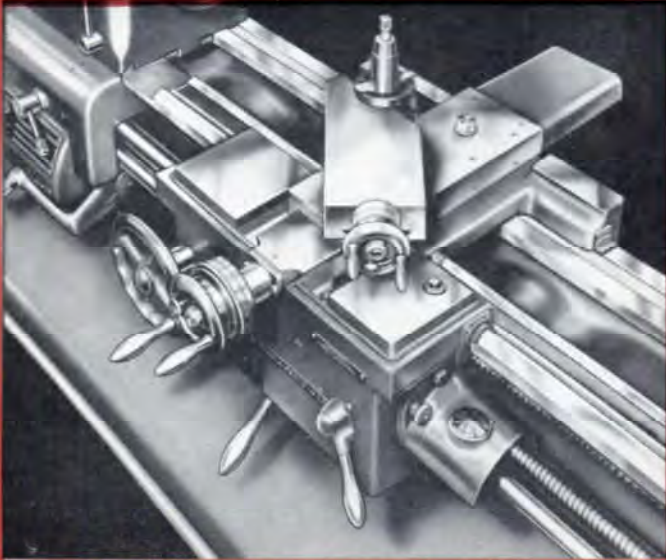
SPINDLE CAPACITIES			
Lathe	17"	15"	13"
Thru-Hole	3-1/16"	2-1/16"	1-9/16"
Nose Taper	L-2	L-1	L-0
Key Drive			

Spindle bearings are larger — see chart at right.

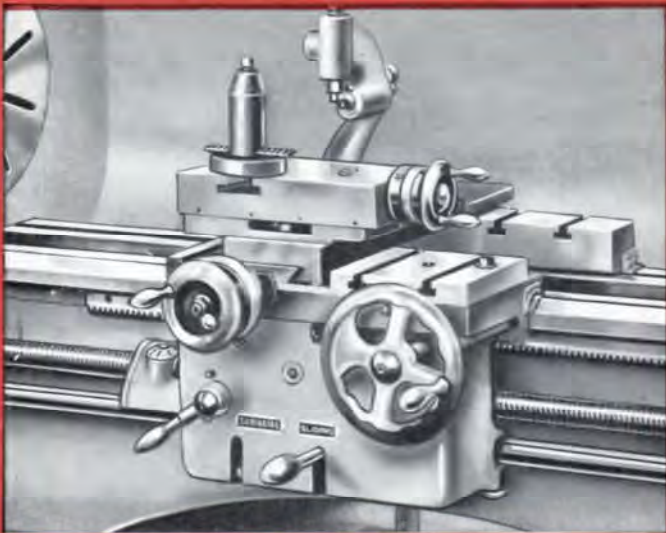
Front spindle bearing is double row tapered roller bearing — rear spindle bearing is single row tapered roller bearing, spring loaded for automatic adjustment. Both are Gamet Micron Precision Bearings with oil-flow lubrication — hole through bearing rollers assures maximum lubrication and cool running. Produced under strictly controlled conditions, these bearings are the most efficient and accurate known to industry. Evidence of the precision you can expect with Clausing-Colchester lathes is detailed on page 15.



Lathe	17"	15"	13"
Front Spindle Bearing O. D.	7 1/2"	5 1/2"	4"
Rear Spindle Bearing O. D.	6"	4 3/8"	3-9/16"



Apron is one-piece, double-walled — all shafts turn in two bearings — gear trains are protected against misalignment and dirt. Carriage has large bearing surfaces on bed, and is secured to bed by heavy plates bearing on front and rear ways. All surfaces of the saddle, cross slide and compound are precision ground. Large diameter micrometer dials reading in .001" are fitted to both slides and can be set at zero and clamped for easy operation. Power feed and screw cutting controls are interlocked to prevent simultaneous engagement. Half nuts are Mehanite. Power feeds are engaged by a positive single lever control action. Thread dial is furnished.

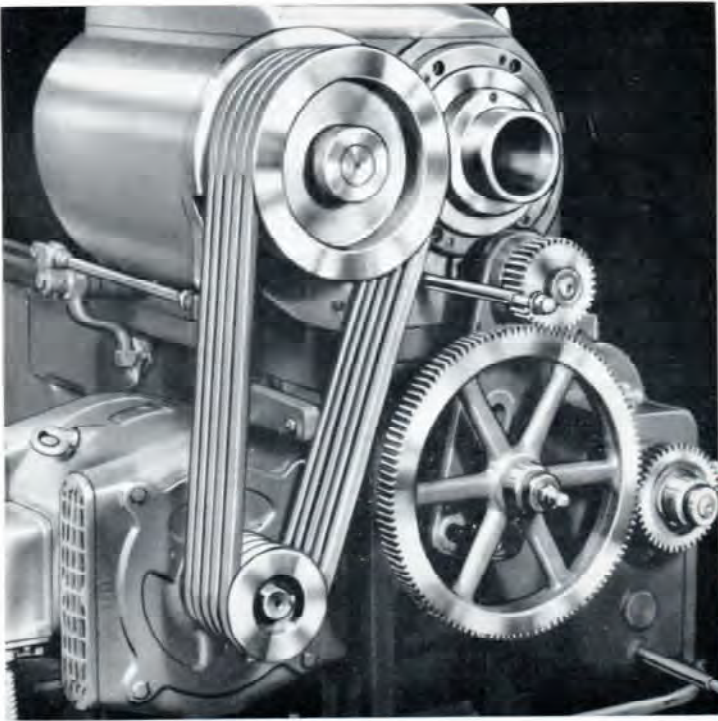


Note, in second illustration at left, the carriage provided with gap-bed lathes. Cross slide position brings cutting tool to outer edge of gap. Has boring-type tee-slotted saddle. Controls on apron are located away from gap, for operator convenience and safety.

Quick-change mechanism provides instant selection of 45 threads and feeds. Quick-change gear box is cast integrally with the bed for maximum strength. Box is totally enclosed, and mechanism runs in a bath of oil. Gears are shaved, high-tensile steel, and are carried on multi-splined high-tensile steel shafts. Shafts turn in phosphor bronze bearings.



Power feeds are taken from a separate feed rod. The lead screw is used for threading *only* — another feature of design that gives you longer service and accuracy with a Clausing-Colchester. Feed rod has springball clutch that releases rod whenever the load becomes too great and automatically re-engages when strain is removed — carriage may be fed to positive stop. 13" and 15" lathe lead screws are protected by easy-to-replace shear pin in gear train.



Drive is through multiple V-belts powered by heavy-duty motor furnished with lathe. Note choice of single and two speed motors. Drive is self-contained — motor is mounted at rear of headstock base below chip pan to keep out dirt, chips and coolant. Adjustment for belt tension is provided. V-belts are completely guarded. Electric panel in base has master control switch for magnetic starter. On-off switch furnished is air-break type controlled by lever on front of headstock. Reversing switch, available extra, see page 13, is furnished with linkage that mounts inside switch control-lever shaft.



Bed ways are induction hardened to a Brinell hardness of 500, and are precision ground parallel to extremely close tolerance. Beds are massive, dense castings — 50% steel, 50% iron — with elliptical cross ribbing for maximum rigidity. 17" and 15" lathes have two V-ways at front, two flat ways at rear. 13" lathes have a V-way and flat way at both front and rear. Castings are rough machined and naturally aged before finish grinding. Gap bed lathes have removable block.

**INDUCTION
HARDENED
BEDS**



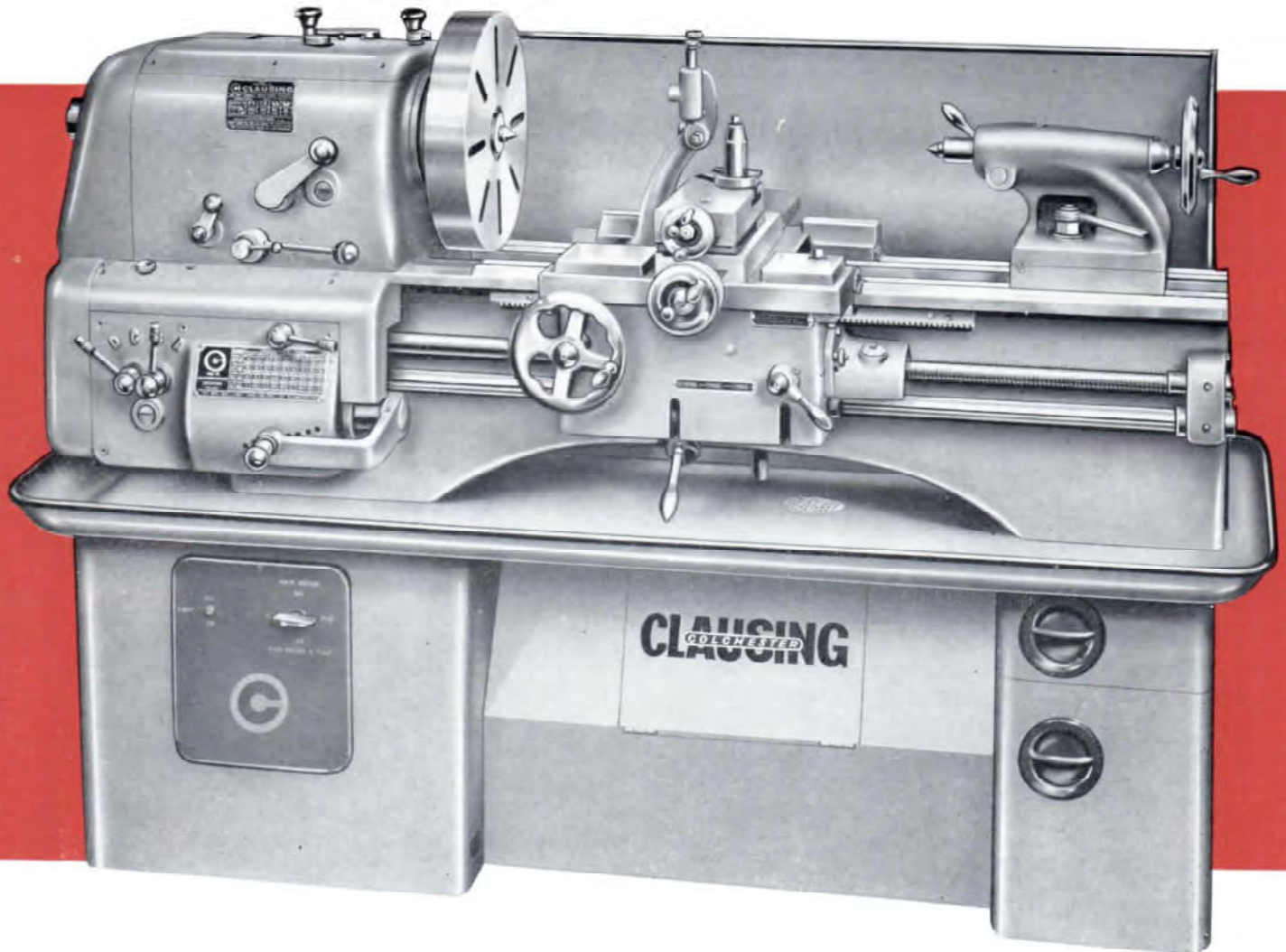
Husky tailstocks have large spindle and screw. Hole for spindle is honed with MicroMatic hones to super-finish standards for accuracy, rigidity, smooth operation. Spindles are graduated, have self-ejecting centers. Tailstock may be set over for taper turning — zero setting line simplifies resetting.

13" and 15" lathes are furnished with cabinet bases of welded steel columns, heavily cross ribbed to provide a firm foundation for the lathe and to keep vibration at a minimum. Built-in chip pan, splash guards and coolant tank. Tailstock pedestal has two shelves, and a drawer with lock.

CLAUSING

COLCHESTER

15-inch heavy duty geared head precision lathe



Catalog Number	Swing Over Bed	Between Centers	Bed Length	Net Weight	Shipping Weight
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STRAIGHT BED LATHES

ONE SPEED MOTOR

6574	15"	30"	65"	2100 lb.	2700 lb.
6575	15"	48"	85"	2250 lb.	2970 lb.

TWO SPEED MOTOR

6534	15"	30"	65"	2100 lb.	2700 lb.
6535	15"	48"	85"	2250 lb.	2970 lb.

GAP BED LATHES

ONE SPEED MOTOR

6576	15"	30"	65"	2100 lb.	2700 lb.
6577	15"	48"	85"	2250 lb.	2970 lb.

TWO SPEED MOTOR

6536	15"	30"	65"	2100 lb.	2700 lb.
6537	15"	48"	85"	2250 lb.	2970 lb.

EQUIPMENT FURNISHED

Cabinet base with built-in chip pan, splash guards and coolant tank.

One-speed or two-speed motor.

Electric panel with master control switch for magnetic starter—all electrical controls are of American manufacture.

Air-break type on-off switch.

14" face plate, 8" driving plate.

Two No. 3 MT centers, reducing sleeve.

Thread dial indicator.

Follower rest, tool post, Change gear.

Wrenches.

Instruction and Parts List manual.

Design and specifications are subject to change without notice. Weights shown are approximate.

S P E C I F I C A T I O N S

CAPACITIES AND CLEARANCES

Swing over bed	15"
Swing over cross slide	8 ³ / ₄ "
Swing over carriage wings	14"
Distance between centers, flush	30" or 48"
Face plate, dia.	14"
Driving plate, dia.	8"
Follower rest, capacity	2 ¹ / ₂ "
Steady rest, capacity	5"

HEADSTOCK

Hole through spindle	2-1/16"
Spindle nose, A.S. taper key drive	L-1
Taper in spindle nose bushing	No. 3 MT
Spindle center	No. 3 MT
Spindle bearings, Gamet Micron Precision tapered roller bearings	
Front	double row
Rear	single row, spring loaded
Spindle bearing outside diameters	
Front	5 ¹ / ₂ "
Rear	4 ³ / ₈ "

BED

Ways	2 V, 2 Flat
Length	65" or 83"
Width	10"
Depth at ends	14 ⁷ / ₈ "
Depth at center	10"

TAILSTOCK

Spindle, dia.	1 ¹ / ₂ "
Center	No. 3 MT
Spindle travel	6"
Spindle graduated	0" to 6" by 1/8"

CARRIAGE AND COMPOUND

Carriage length	17 ¹ / ₂ "
Width of carriage bridge	8"
Width of cross slide	5 ¹ / ₈ "
Width of compound rest	4 ¹ / ₂ "
Cross slide travel	7"

Compound rest travel	4 ⁵ / ₈ "
Tool post, slot	for 5/8" square tools

SPINDLE SPEEDS

Spindle speeds, with 1 speed motor	8
Speed range, with 1 speed motor, RPM	40, 77, 109, 161, 205, 305, 425, 800
Spindle speeds, with 2 speed motor	16
Speed range, with 2 speed motor, RPM	30, 58, 60, 82, 115, 120, 153, 163, 229, 241, 307, 319, 457, 600, 637, 1200

MOTORS

One speed	3 HP, 1720 RPM, 3 ph., 220-440 V, 60 C
Two-speed	2 ¹ / ₂ —5 HP, 900-1800 RPM, 3 ph. 220 or 440 V, 60 C
	<i>Specify voltage when ordering.</i>
Number of V-belts	3

THREADS AND FEEDS

Lead screw, dia.	1 ¹ / ₄ "
threads per inch, Acme	4
Feed rod, dia.	1"
Number of threads	45
Range	4, 4 ¹ / ₂ , 4 ³ / ₄ , 5, 5 ¹ / ₂ , 5 ³ / ₄ , 6, 6 ¹ / ₂ , 7, 8, 9, 9 ¹ / ₂ , 10, 11, 11 ¹ / ₂ , 12, 13, 14, 16, 18, 19, 20, 22, 23, 24, 26, 28, 32, 36, 38, 40, 44, 46, 48, 52, 56, 64, 72, 76, 80, 88, 92, 96, 104, 112
Number of feeds	45
Feed range	0.048" to 0.0017"

NOTE: Threads 4 thru 7 are obtained by using change gear furnished.

GAP BED MODELS

Swing in gap	24"
Length of gap in front of face plate	6"

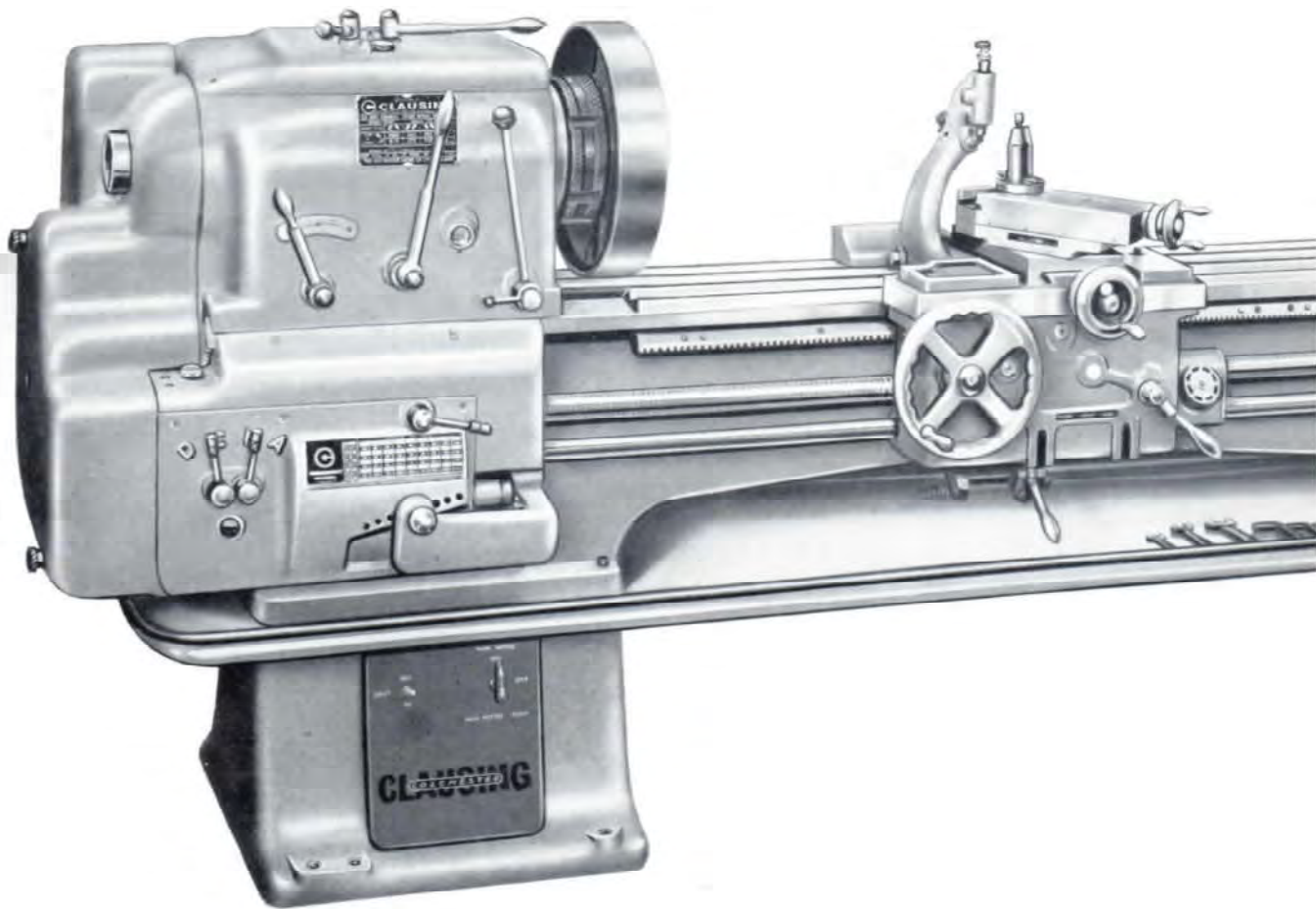
NOTE: Other specifications similar to straight bed model.

Finish, all models, light machine tool grey.

CLAUSING

COLCHESTER

17-inch heavy duty geared head precision lathes



Catalog Number	Swing Over Bed	Between Centers	Bed Length	Net Weight	Shipping Weight
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STRAIGHT BED LATHES

ONE SPEED MOTOR					
6582	17"	75"	120"	4020 lb.	5160 lb.

TWO SPEED MOTOR					
6542	17"	75"	120"	4020 lb.	5160 lb.

GAP BED LATHES

ONE SPEED MOTOR					
6594	17"	54"	96"	3720 lb.	4620 lb.
6583	17"	75"	120"	4020 lb.	5160 lb.

TWO SPEED MOTOR					
6554	17"	54"	96"	3720 lb.	4620 lb.
6543	17"	75"	120"	4020 lb.	5160 lb.

EQUIPMENT FURNISHED

Cast-iron mounting bases with chip and coolant tray.

One-speed or two-speed motor.

Electric panel with master control switch for magnetic starter—all electrical controls are of American manufacture.

Air-break type on-off switch.

16" face plate, 10" driving plate.

Two No. 4 MT centers, reducing sleeve.

Thread dial indicator.

Follower rest, tool post. Change gear.

Wrenches.

Instruction and Parts List manual.

Design and specifications are subject to change without notice. Weights shown are approximate.



CAPACITIES AND CLEARANCES

Swing over bed	17"
Swing over cross slide	10 ¹ / ₈ "
Swing over carriage wings	16"
Distance between centers, flush	54" or 75"
Face plate, dia.	16"
Driving plate, dia.	10"
Follower rest, capacity	3"
Steady rest, capacity	6"

HEADSTOCK

Hole through spindle	3-1/16"
Spindle nose, A.S. taper key drive	L-2
Taper in spindle bushing	No. 4 MT
Spindle center	No. 4 MT
Spindle bearings, Gamet Micron Precision tapered roller bearings	
Front	double row
Rear	single row, spring loaded

Spindle bearing outside diameters

Front	7 ¹ / ₂ "
Rear	6"

BED

Ways	2 V, 2 Flat
Length	96" or 120"
Width	12 ⁷ / ₈ "
Depth at ends	18"
Depth at center	11 ³ / ₄ "

TAILSTOCK

Spindle, dia.	2"
Center	No. 4 MT
Spindle travel	6 ³ / ₄ "
Spindle graduated	0" to 6" by 1/8"

CARRIAGE AND COMPOUND

Carriage length	20"
Width of carriage bridge	8 ³ / ₄ "
Width of cross slide	6 ³ / ₄ "
Width of compound rest	5 ¹ / ₂ "
Cross slide travel	10 ¹ / ₂ "
Compound rest travel	6"
Tool post, slot	for 3/4" square tools

SPINDLE SPEEDS

Spindle speeds, with 1 speed motor	8
Speed range, with 1 speed motor, RPM	37, 56, 87, 125, 180, 270, 415, 600
Spindle speeds, with 2 speed motor	16
Speed range, with 2 speed motor, RPM	28, 42, 55, 65, 84, 94, 130, 135, 187, 202, 270, 311, 405, 450, 622, 900

MOTORS

One speed	5 HP, 1720 RPM, 3 ph, 220-440 V, 60 C
Two speed	4 - 8 HP, 900 - 1800 RPM, 3 ph, 220 or 440 V, 60 C

Specify voltage when ordering.

Number of V-belts	5
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THREADS AND FEEDS

Lead screw, dia.	1 ¹ / ₂ "
threads per inch, Acme	4
Feed rod, dia.	1 ¹ / ₄ "
Number of threads	45
Range	4, 4 ¹ / ₂ , 4 ³ / ₄ , 5, 5 ¹ / ₂ , 5 ³ / ₄ , 6, 6 ¹ / ₂ , 7, 8, 9, 9 ¹ / ₂ , 10, 11, 11 ¹ / ₂ , 12, 13, 14, 16, 18, 19, 20, 22, 23, 24, 26, 28, 32, 36, 38, 40, 44, 46, 48, 52, 56, 64, 72, 76, 80, 88, 92, 96, 104, 112
Number of feeds	45
Feed range	0.050" to 0.0018"

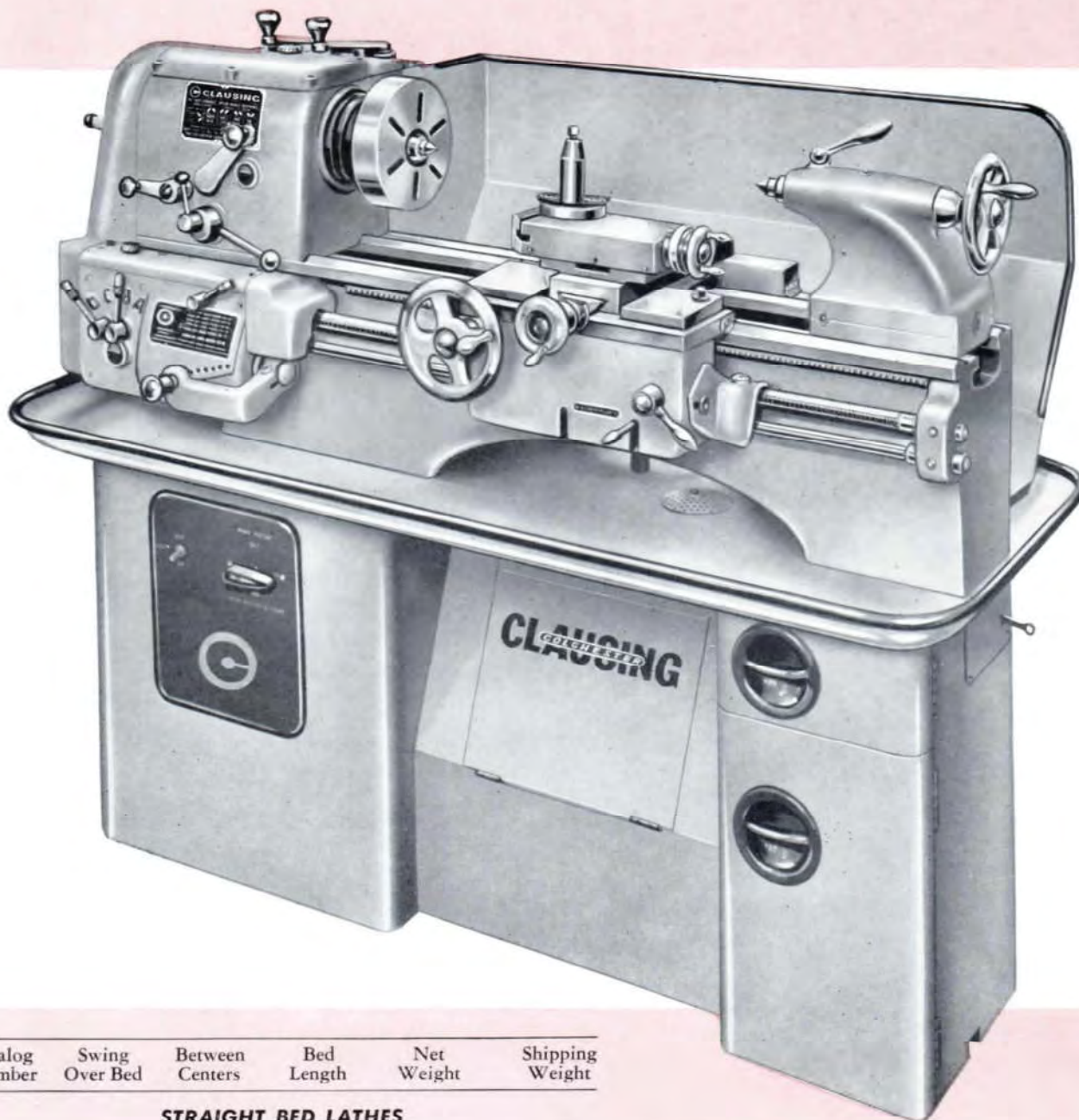
NOTE: Threads 4 thru 7 are obtained by using change gear furnished.

GAP BED MODELS

Swing in gap	28"
Length of gap in front of face plate	9 ¹ / ₄ "

NOTE: Other specifications similar to straight bed models.

Finish, all models, light machine tool grey.



Catalog Number	Swing Over Bed	Between Centers	Bed Length	Net Weight	Shipping Weight
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STRAIGHT BED LATHES

		ONE SPEED MOTOR				
6564	13"	24"	52½"	1350 lb.	1860 lb.	
6565	13"	36"	64"	1410 lb.	1920 lb.	
		TWO SPEED MOTOR				
6524	13"	24"	52½"	1350 lb.	1860 lb.	
6525	13"	36"	64"	1410 lb.	1920 lb.	

GAP BED LATHES

		ONE SPEED MOTOR				
6566	13"	24"	52½"	1350 lb.	1860 lb.	
6567	13"	36"	64"	1410 lb.	1920 lb.	
		TWO SPEED MOTOR				
6526	13"	24"	52½"	1350 lb.	1860 lb.	
6527	13"	36"	64"	1410 lb.	1920 lb.	

EQUIPMENT FURNISHED

Cabinet base with built-in chip pan, splash guards and coolant tank.
 One-speed or two-speed motor.
 Electric panel with master control switch for magnetic starter—all electrical controls are of American manufacture.
 Air-break type on-off switch.
 12" face plate, 6" driving plate.
 Two No. 3 MT centers, reducing sleeve.
 Thread dial indicator.
 Follower rest, tool post. Change gear.
 Wrenches.
 Instruction and Parts List Manual.
 Design and specifications are subject to change without notice. Weights shown are approximate.

S P E C I F I C A T I O N S

CAPACITIES AND CLEARANCES

Swing over bed	13"
Swing over cross slide	8"
Swing over carriage wings	12"
Distance between centers, flush	24" or 36"
Face plate, dia.	12"
Driving plate, dia.	6"
Follower rest, capacity	2"
Steady rest, capacity	4"

HEADSTOCK

Hole through spindle	1-9/16"
Spindle nose, A.S. taper key drive	L-0
Taper in spindle nose bushing	No. 3 MT
Spindle center	No. 3 MT
Spindle bearings, Gamet Micron Precision tapered roller bearings	
Front	double row
Rear	single row, spring loaded
Spindle bearing outside diameters	
Front	4"
Rear	3-9/16"

BED

Ways	2 V, 2 Flat
Length	52 1/2" or 64"
Width	8 1/2"
Depth at ends	11 7/8"
Depth at center	8"

TAILSTOCK

Spindle, dia.	1 3/8"
Center	No. 3 MT
Spindle travel	4 1/4"
Spindle graduated	0" to 4 1/4" by 1/8"

CARRIAGE AND COMPOUND

Carriage length	13 1/2"
Width of carriage bridge	6"
Width of cross slide	4"
Width of compound rest	3 1/2"
Cross slide travel	6 1/2"

Compound rest travel	3 3/4"
Tool post, slot	for 9/16" square tools

SPINDLE SPEEDS

Spindle speeds, with 1 speed motor	8
Speed range, with 1 speed motor, RPM.	52, 86, 118, 192, 272, 445, 610, 1000
Spindle speeds, with 2 speed motor	16
Speed range, with 2 speed motor, RPM.	39, 65, 78, 88, 129, 144, 177, 204, 288, 334, 408, 457, 667, 750, 915, 1500

MOTORS

One speed	1 1/2 HP, 1720 RPM, 3 ph, 220-440 V, 60 C
Two speed	1 1/2 - 3 HP, 900 - 1800 RPM, 3 ph, 220 or 440 V, 60 C
	<i>Specify voltage when ordering.</i>
Number of V-belts	2

THREADS AND FEEDS

Lead screw, dia.	1 1/8"
threads per inch, Acme	6
Feed rod, dia.	3/4"
Number of threads	45
Range	4, 4 1/2, 4 3/4, 5, 5 1/2, 5 3/4, 6, 6 1/2, 7, 8, 9, 9 1/2, 10, 11, 11 1/2, 12, 13, 14, 16, 18, 19, 20, 22, 23, 24, 26, 28, 32, 36, 38, 40, 44, 46, 48, 52, 56, 64, 72, 76, 80, 88, 92, 96, 104, 112
Number of feeds	45
Feed range	0.068" to 0.0025"

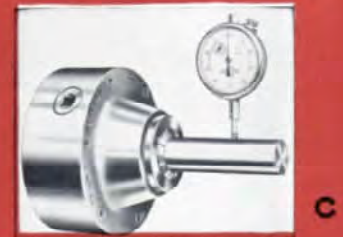
NOTE: Threads 4 thru 7 are obtained by using change gear furnished.

GAP BED MODELS

Swing in gap	18"
Length of gap in front of face plate	4 1/2"

NOTE: Other specifications similar to straight bed model.
Finish, all models, light machine tool grey.

ACCESSORIES



BURNERD CHUCKS

Chuck bodies are Meehanite castings for greater strength and long accurate service. Scrolls of universal chucks are heat treated nickel chrome steel, pinions are case hardened nickel steel. 4-jaw independent chucks have heat treated alloy steel jaw-operating screws. Jaws are case hardened steel — bearing and gripping surfaces are ground. Mount directly on lathe spindle nose — *no back plates required*. Wrench furnished.

A 3-JAW UNIVERSAL SCROLL CHUCKS

No.	Dia.	For Spindle	Jaws Furnished	Ship. Wt.
13-201	7½"	ASA—L-0	2 sets, solid	43 lb.
13-211	7½"	ASA—L-0	Master with reversible hard top	43 lb.
15-401	9"	ASA—L-1	2 sets, solid	68 lb.
15-411	9"	ASA—L-1	Master with reversible hard top	68 lb.
17-501	12"	ASA—L-2	2 sets, solid	135 lb.
17-517	12"	ASA—L-2	Master with reversible hard top	135 lb.

Chucks furnished with two sets of jaws have one inside set, one outside set. Those furnished with master jaws have one set of reversible hard tops. Soft blank jaws, and master jaws with soft tops are also available — data on request.

B 4-JAW INDEPENDENT CHUCKS

No.	Dia.	For Spindle	For Lathe	Ship. Wt.
13-202	10"	ASA—L-0	13"	77½ lb.
15-402	12"	ASA—L-1	15"	111½ lb.
17-502	16"	ASA—L-2	17"	187 lb.

CHUCK BACK PLATES

Meehanite castings with hole finish-bored for tapered spindle nose.

- No. 13-218 BACK PLATE for ASA—L-0 spindle nose. 25 lb.
- No. 15-417 BACK PLATE for ASA—L-1 spindle nose. 35 lb.
- No. 17-519 BACK PLATE for ASA—L-2 spindle nose. 57 lb.

C SPINDLE NOSE COLLET CHUCK

Trugrip precision spindle nose collet chucks save time and improve work accuracy. Collet is operated by simply turning a key — no need to hold or lock lathe spindle, no draw tube hand-wheel to tighten. Provides a rigid uniform grip on work that eliminates risk of distortion. Accuracy is guaranteed to .001" one inch from collet face. Collets are listed below.

No. 13-206 COLLET CHUCK for ASA—L-0 spindle nose. Less collet. Capacity, 1/16" to 1" dia. No. 13-207 Round Collets for above — specify diameter. 10 lb.

No. 15-406 COLLET CHUCK for ASA—L-1 spindle nose. Less collet. Capacity, 3/16" to 2" dia. No. 15-407 Round Collets for above — specify diameter. 28 lb.

No. 17-506 COLLET CHUCK for ASA—L-2 spindle nose. Less collet. Capacity, 3/16" to 2" dia. No. 17-507 Round Collets for above — specify diameter. 28 lb.

D JACOBS COLLET CHUCK

Equips Clausing-Colchester 13" and 15" lathes for fast, accurate chucking of round work fed through the spindle. Mounts directly on spindle — compact design permits chucking work close to spindle nose.

9" dia. handwheel is solid aluminum — turns with a flick of the wrist. Impact tightening assures firm, even grip. Forged alloy steel body is hardened and ground. All other parts of body are hardened and ground alloy steel. Collets, extra, are positive gripping "rubber-flex".

No. 91-T0 JACOBS COLLET CHUCK for ASA—L-0 spindle of 13" lathe. 16 lb.

No. 91-T1 JACOBS COLLET CHUCK for ASA—L-1 spindle of 15" lathe. 16 lb.

JACOBS ROUND COLLETS

Collet No.	Collet Range	Wt. Lb.	Collet No.	Collet Range	Wt. Lb.
7553	⅜" - ⅜"	1	7558	5/8" - 3/4"	1
7554	1/8" - 1/8"	1	7559	3/4" - 7/8"	1
7555	1/8" - 3/8"	1	7560	7/8" - 1"	1
7556	3/8" - 1/2"	1	7561	1" - 1 1/8"	1
7557	1/2" - 5/8"	1	7562	1 1/8" - 1 1/4"	1
			7563	1 1/4" - 1 3/8"	1

No. 7593 JACOBS HEXAGON COLLETS for Nos. 91-T0 and 91-T1 chucks available in 16ths between 1/4" and 1". *Specify diameter.*

No. 7594 JACOBS SQUARE COLLETS for Nos. 91-T0 and 91-T1 chucks available in 16ths between 1/4" and 1". *Specify diameter.*

FACE PLATES for GAP BED LATHES

Finish machined, ready to mount on lathe spindle nose.

- No. 13-203 18" FACE PLATE for ASA—L-0 spindle nose. 65 lb.
- No. 15-403 21" FACE PLATE for ASA—L-1 spindle nose. 105 lb.
- No. 17-503 25" FACE PLATE for ASA—L-2 spindle nose. 180 lb.

E PLAIN TAPER ATTACHMENTS

Taper attachments for 15" and 17" lathes cut external or internal tapers up to 12" long at one setting — 13" lathe, 10" at one setting. Simply reset along bed for longer work. Two sets of graduations show degrees of taper and inches per foot. Range, 9° both sides of center line.

No. 13-209 TAPER ATTACHMENT for Clausing-Colchester 13" lathes. 45 lb.

No. 15-409 TAPER ATTACHMENT for Clausing-Colchester 15" lathes. 85 lb.

No. 17-510 TAPER ATTACHMENT for Clausing-Colchester 17" lathes. 96 lb.



F STEADY REST

No. 13-210 STEADY REST for 13" lathes. 4" dia. maximum bar capacity. 24 lb.

No. 15-410 STEADY REST for 15" lathes. 5" dia. maximum bar capacity. 40 lb.

No. 17-511 STEADY REST for 17" lathes. 6" dia. maximum bar capacity. 60 lb.

G GAMET ROTATING CENTERS

Gamet rotating centers are ideal for high speeds and heavy roughing cuts. Point rotates on tapered roller bearings. Bearings are grease packed, pre-loaded, and sealed. 60° replaceable points.

No. 13-215 GAMET ROTATING CENTER with No. 3 MT shank for 13" lathes. 2 lb.

No. 15-421 GAMET ROTATING CENTER with No. 3 MT shank for 15" lathes. 2 lb.

No. 17-516 GAMET ROTATING CENTER with No. 4 MT shank for 17" lathes. 3 lb.

H ENCO Self-Indexing HEX BED TURRETS

Model No.	For Lathe	Hex. Head Dims.		Finish Bore To	Slide Length	Slide Total Travel	Slide Working Travel
		Across Flats	Face Dims.				
13-651	13"	5 5/8"	2 7/8" x 3"	1"	16 1/2"	7 1/2"	6 1/2"
15-650	15"	7"	3 1/2" x 4"	1 1/4"	16 1/2"	7 1/2"	6 1/2"
17-650	17"	7"	3 1/2" x 4"	1 1/4"	16 1/2"	7 1/2"	6 1/2"

Turret must be fitted to lathe bed, and holes for tool holders must be bored and reamed on lathe with which turret is to be used.

I ENCO TURRET TOOL POST

Mounts in tool post slot. Each tool has 3 working positions.

Order No.	For Lathe	Tool Size Range	Tool Block Specifications	Shipping Weight
13-4 1/2-S	13"	3/4"	4 TOOL—12 POSITION 4 1/2" sq. x 2 1/4" thick	15 lb.
15-4 1/2-R	15"	1" or #1 HSS tool holder	4 TOOL—12 POSITION 4 1/2" sq. x 2 3/4" thick	17 lb.
17-6-S	17"	1 1/4" or #2 HSS tool holder	4 TOOL—12 POSITION 6" sq. x 3 3/16" thick	33 lb.

J MICRO CARRIAGE STOPS

Clamps on front bed way. Micrometer control graduated in .001 inch—hardened stop locks securely in any position. Will not automatically stop carriage.

No. 13-2000 MICRO CARRIAGE STOP for Clausing 13" lathes. 3 lb.

No. 15-4000 MICRO CARRIAGE STOP for Clausing 15" lathes. 3 lb.

No. 17-5000 MICRO CARRIAGE STOP for Clausing 17" lathes. 3 1/2 lb.

K COOLANT SYSTEMS

Unit consists of motor, circulating pump, switch, connections. Piping supplied is universal, with telescopic piping for feeding coolant in any position. Patented ball type shut-off valve permits easy control of coolant flow. Pump capacity is 3 1/2 gallons per minute. Tank capacity, 5 gallons.

Pump for 13" and 15" lathes mounts in built-in tank in lathe base—both are readily accessible through door in front of lathe. Pump and tank for 17" lathe mount on floor beneath chip pan. Switch mounts in electric control panel. System is installed and wired at factory when ordered with 13" and 15" lathes.

No. 13-208 COOLANT SYSTEM for 13" lathes.

No. 15-408 COOLANT SYSTEM for 15" lathes.

No. 17-508 COOLANT SYSTEM for 17" lathes.

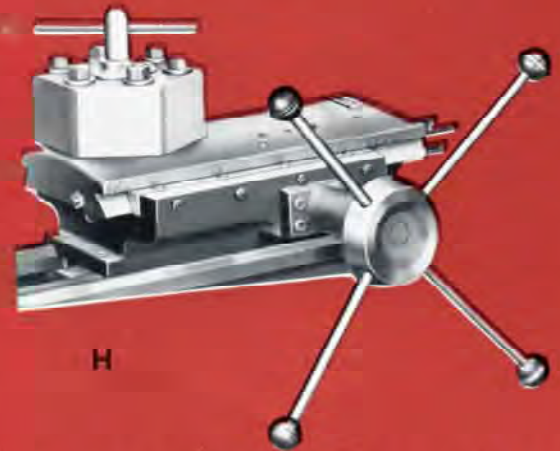
REVERSING SWITCH

Switch is furnished with linkage that mounts inside switch control-lever shaft. Installed and wired when ordered with lathe. Brake must be used to stop spindle before motor is reversed.

No. 13-212 REVERSING SWITCH for 13" lathe.

No. 15-412 REVERSING SWITCH for 15" lathe.

No. 17-513 REVERSING SWITCH for 17" lathe.



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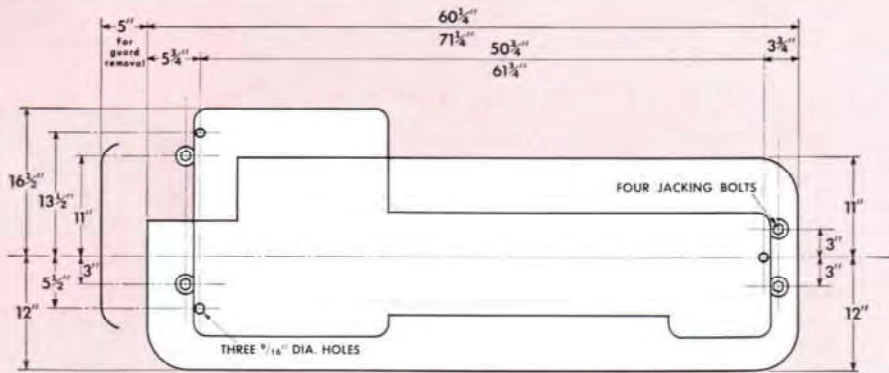
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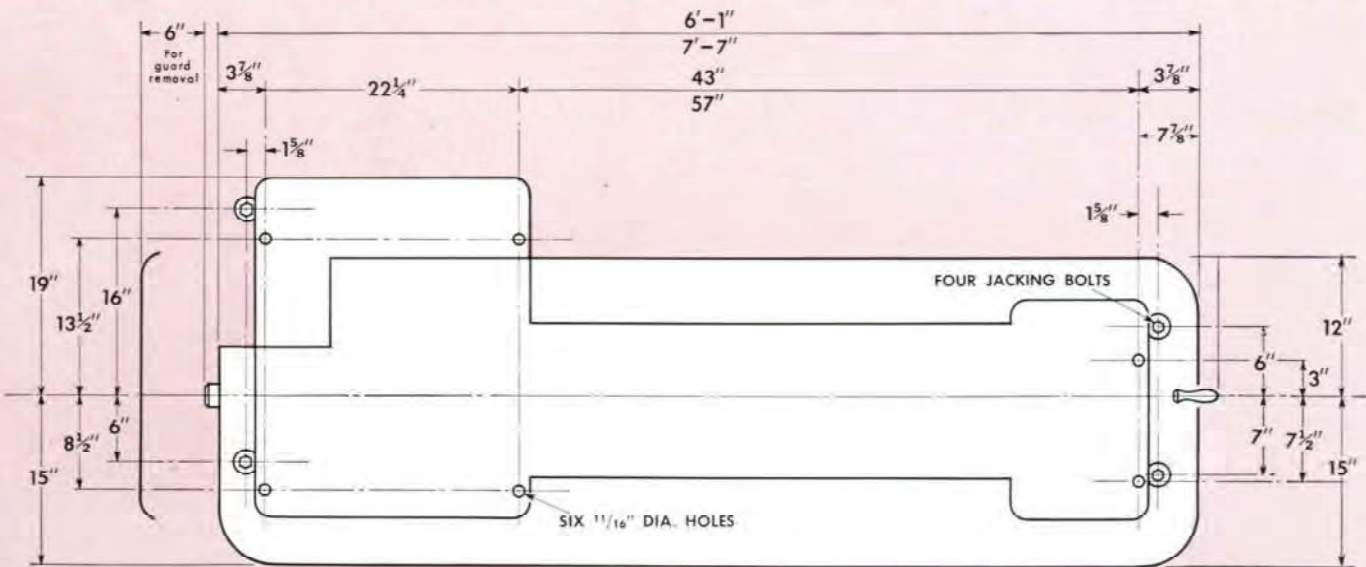
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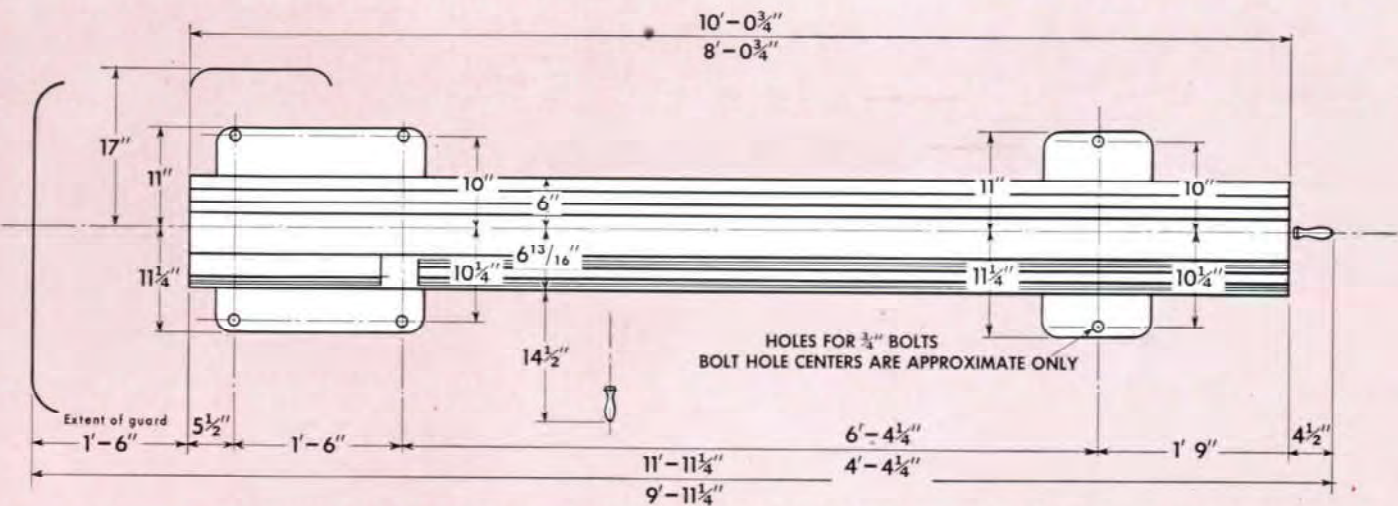
13" LATHES



15" LATHES



17" LATHES

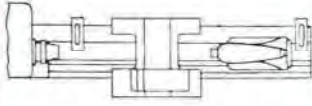
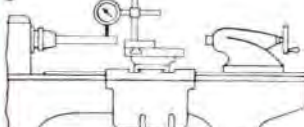
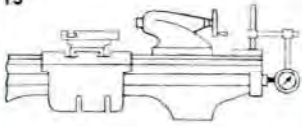
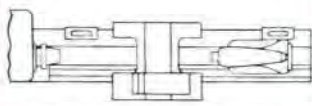
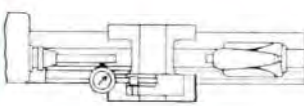
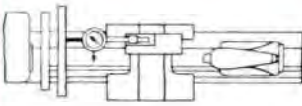
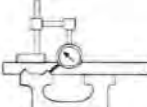
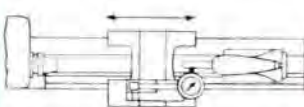
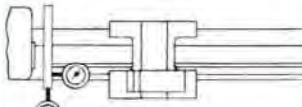
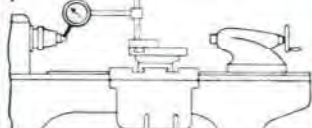
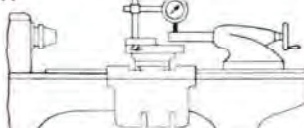
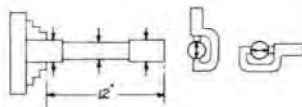
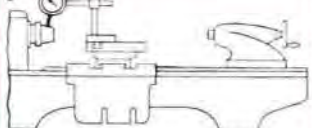
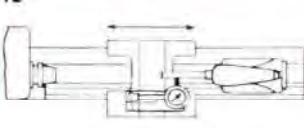
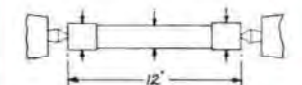
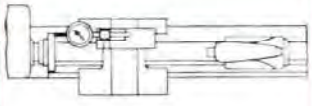
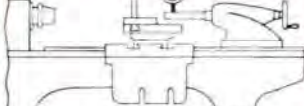
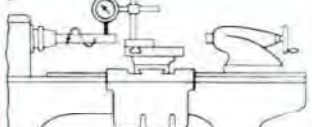
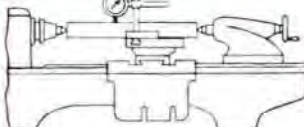


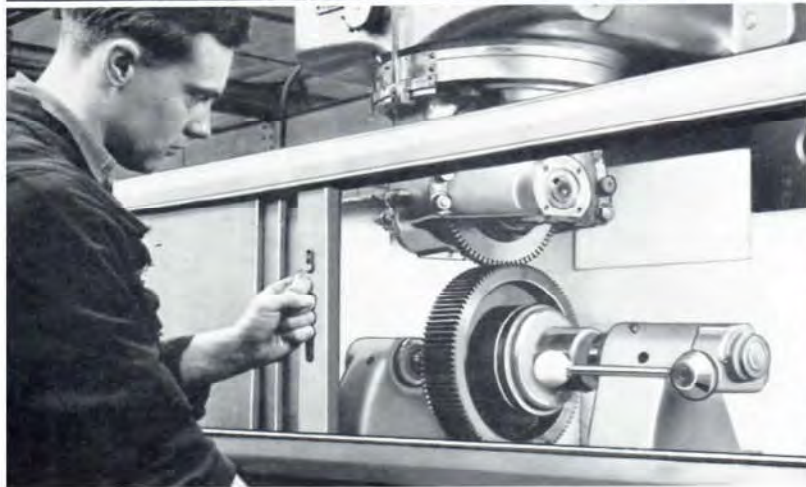
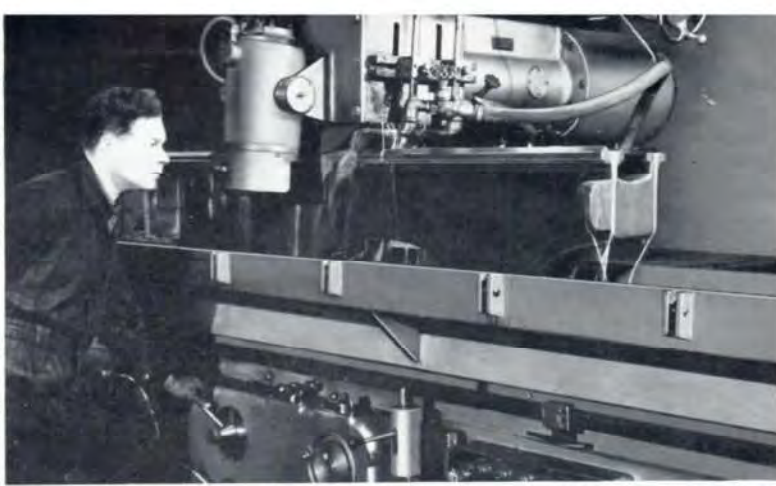
Built to American standards of toolroom lathe accuracy

Each Clausing-Colchester lathe must pass tolerance tests such as those shown below. Inspection after inspection, and test after test — at every stage of manufacture and assembly — assure that every lathe measures

up to rigid specifications of construction and performance.

The Clausing-Colchester name plate is a symbol of quality, precision and value.

TEST	PERMISSIBLE ERROR ACTUAL ERROR	TEST	PERMISSIBLE ERROR ACTUAL ERROR	TEST	PERMISSIBLE ERROR ACTUAL ERROR
1  BED LEVEL—TRANSVERSE DIRECTION	When using Precision Level all Readings to be within 0.0006 in 12 in. of Bed Length	8  HEADSTOCK ALIGNMENT—VERTICAL	High at end of 12 in. Test Bar rising towards Tailstock End 0 to 0.0005	15  LEAD SCREW CAM ACTION	Maximum 0.0003
2  BED LEVEL—LONGITUDINAL DIRECTION	When using Precision Level along Bed Maximum Reading to be within 0.0005 in 12 in. of Bed Length	9  HEADSTOCK ALIGNMENT—HORIZONTAL	At end of 12 in. Test Bar 0 to 0.0003	16  CROSS SLIDE ALIGNMENT	To face hollow or concave only on 12 in. diameter 0 to 0.0005
3  TAILSTOCK WAY ALIGNMENT	Maximum Reading along length of Bed 0.0005 in 48 in.	10  TAILSTOCK SPINDLE ALIGNMENT—HORIZONTAL	Forward at end of Spindle when fully extended 0 to 0.0005	17  FACE PLATE RUNOUT	On diameter 0 to 0.0005 on face at normal diameter 0 to 0.001
4  SPINDLE CENTER RUNOUT	Total Indicator Reading 0 to 0.0004	11  TAILSTOCK SPINDLE ALIGNMENT—VERTICAL	High at end of Spindle when fully extended 0 to 0.0005	18  WORK MOUNTED IN CHUCK	Must turn round 0.0003 Must turn cylindrical on 12 in. length of workpiece 0.0008
5  SPINDLE NOSE RUNOUT	Total Indicator Reading 0 to 0.0003	12  TAILSTOCK TAPER ALIGNMENT—HORIZONTAL	End of 12 in. Test Bar 0 to 0.0005	19  WORK MOUNTED IN CENTERS	Must turn cylindrical on a 12 in. length of workpiece 0.0004
6  CAM ACTION OF SPINDLE	Total Indicator Reading with Indicator on rear side of Test Plate 0 to 0.0003	13  TAILSTOCK TAPER ALIGNMENT—VERTICAL	High at end of 12 in. Test Bar 0 to 0.0005	20 LEAD SCREW LEAD PER FT. LEAD IN ANY 4"	± 0.001 ± 0.0004
7  SPINDLE TAPER RUNOUT	Total Indicator Reading at end of 12 in. Test Bar 0 to 0.0006 at end of Spindle Nose 0 to 0.0003	14  VERTICAL ALIGNMENT OF HEAD AND TAIL CENTERS	High at Tailstock 0 to 0.001	21 BACK LASH ON CROSS FEEDS SCREW ON COMPOUND REST SCREW	0.004 0.004



Clausing-Colchester lathes are produced in England by Europe's largest manufacturer of precision lathes — recognized as the leader in its field for more than fifty years.

They are built to American standards of tool room lathe accuracy. All parts are completely interchangeable and replacement parts are readily available. Screws and bolts used in assembly have threads and heads that are standard in the United States.

Clausing-Colchester lathes are backed by the coast-to-coast sales, service and dealer organization of one of America's leading machine tool manufacturers — Clausing.

Clausing-Colchester lathes are guaranteed to equal or exceed the standards of accuracy as represented.

They are guaranteed against defects in material and workmanship for a period of one year, subject to standard warranty procedure. Design and construction are subject to modification and improvement without notice.

CLAUSING
COLCHESTER

CLAUSING DIVISION, ATLAS PRESS CO., KALAMAZOO, MICH., U. S. A.