

SOUTH BEND LATHE WORKS

SOUTH BEND 22, INDIANA, U.S.A.

MARCH 1956

THERE ARE STAR PERFORMERS IN EVERY FIELD ...

those who "Stand Out" from all the others and can always be depended on to do the job.

Such star performances are the rule, when a South Bend Turret Lathe takes over. Whether our big 16" 2-H, the New 13" or the 10" model, Ease in Setting Up - Dependable Precision - Speed in Production - All are builtin to SOUTH BEND TURRET LATHES.

To return a profit on invested capital, a Turret Lathe must fit the job, do it right, then take on another job without loss of time and effort.

We're sending along this folder illustrating <u>South Bend</u> <u>Turret</u> <u>Lathes</u> with specifications, so that you can see

- HOW SOLIDLY BUILT...for the rough, tough handling that day after day production gives a Turret Lathe.
- HOW WELL DESIGNED... by practical men who understand the problems involved in quantity production of machined parts.

HOW WE'VE BUILT FOR EASY HANDLING...conveniently arranging controls, open and accessible to speed every operation.

HOW WE'VE MADE SOUTH BEND TURRET LATHES A BIGGER VALUE FOR YOUR DOLLARS!

Producing dependable tools that will do the job has been our business for the last FIFTY years. We've learned a lot about making good machine tools in those years, and you can bet that all we've learned has been put to use in building SOUTH BEND Machine Tools.

We have a GOLDEN ANNIVERSARY Catalog ready to send to you, describing our complete line of Machine Tools and Accessories. A postcard or a letter and your copy will be mailed right away. In the meantime, our distributor near you will be pleased to stop by and discuss your problems.

> Very truly yours, SOUTH BEND LATHE WORKS

MILLING MACHINES . LATHES . DRILL PRESSES . SHAPERS . PEDESTAL GRINDERS

No. 2-H Precision Turret Lathe



SPECIFICATIONS

CAPACITY OF LATHE Hole through spindle
SPINDLE SPEEDS (Standard spindle speeds with two-speed motor, approximate, not exact) High spindle speeds r.p.m. of spindle, direct belt drive945, 550, 300 r.p.m. of spindle, back-gear drive118, 70, 32
Low spindle speeds (Not available with 1-speed motor)
r.p.m. of spindle, direct belt drive475, 278, 150 r.p.m. of spindle, back-gear drive60, 33, 20
TURRET Diameter of holes in turret faces
UNIVERSAL CARRIAGE Thread cutting range
7 ft. bed 34½" Power cross-feeds, 48 .0006" to .0315" Cross travel of cross slide .934" Tool block openings for cutter bits .58" x 58"
MOTOR For operating on 3-phase A.C2-speed, 1800-900 r.p.m., 2 h.p1 h.p. For operating on 1-phase A.C. or D.C1-speed, 1800 r.p.m., 1½ h.p.

Note-These lathes can be supplied with hand feed only for the turret if desired. Write for information. Designed for the efficient production of duplicate parts, the South Bend No. 2-H Turret Lathe has the precision for exacting close-tolerance operations, smooth power for producing a fine finish, and versatility that reduces set-up time to a minimum.

The universal carriage has 48 power cross-feeds, 48 power longitudinal feeds, and 48 thread cutting feeds ranging from 4 to 224 per inch. All changes are made through the quick change box at the headstock end of the lathe. Front and back tool blocks are supplied on the screw feed cross slide and a 4-way turret tool block is available to order. The large diameter micrometer graduated collar on the cross slide handwheel permits adjusting the cutting tools with extreme accuracy.

The ram-type turret has both power feed and hand feed, with an adjustable feed trip and stop for each of the six turret faces. The turret head indexes automatically on the return stroke of the turret slide. The quick change box provides 48 changes for power turret feeds. Change gears in the turret apron provide an additional change for turret power feed, independent of the universal carriage feeds in both rate of feed and direction of feed. Turret ram lock is provided.

Full advantage may be taken of the higher cutting speeds of tungsten carbide tools as the result of the wide range of speeds and feeds available. The use of a two-speed motor permits quick change from high speeds to low speeds for reaming and tapping operations.

Equipment included in the price of lathe consists of: universal carriage with screw feed double tool slide having front and rear square tool blocks; power feed ram-type turret; quick change box; oil pan; coolant return assembly; wrenches; and installation plan. Electrical equipment, handlever collet attachment, collet splash guard, coolant reservoir, coolant pump, splash pan, and piping are not included in price of lathe.

No. 2-H Turret Lathes with Power Feed Carriag	e and Turret
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Catalog Number	Bed Length Feet	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	Factory Price
CL2CT	6	115	3175	2810	\$3350
CL2DT	7	130	3300	2900	3413

Collet attachment, electrical equipment, splash pan, coolant reservoir, and pump shown in illustration are not included in price of lathe.

here's an example of WELL PLANNED TOOLING

The problem was to produce a two-piece cigarette lighter case holding close tolerances to insure smooth wring fit of cap on base. Smooth finish was required all over.

Illustrations show how a 10" South Bend Turret Lathe was used to solve the problem.

These attractive precision made pocket lighters were produced complete in less than two minutes per case including all operations on both upper and lower parts. Produced primarily as a Turret Lathe demonstration item, we have samples of this lighter available for 50¢ each. On request we will furnish tooling information with each lighter. Send coin or stamps to: South Bend Lathe Works, Dept. 8, South Bend 22, Indiana.

NEED EASY PAY

PLAN? - Write for

details on our 31/4% TIME PAYMENT PLAN





Illustrated ACTUAL SIZE



Bed Turret for 16" Lathe

Mount on lathe bed in place of tailstock. Indexes automatically on return stroke of ram within plus or minus .0005" measured 4" from turret face. Has automatic feed stops for each turret face.

CL1917H Hand Feed Turnstile Bed Turret for 16" Lathe. Turret Tool Holes 11/2" diameter. Shipping Weight 505 lbs.

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Bed Turrets for 13" Lathe

Choice of power and handfeed or turnstile handfeed only. Has feed trip and stop for each turret position. Effective feed of turret slide is 61/2". Turret head revolves on precision ball bearings and has 1" tool holes. Power feed model has 144 power turret feeds. Direction of feed can be reversed by changing gears in turret apron.

CL1917T Hand Feed Turnstile Bed Turret for 13" South Bend Lathe. Approx. Shipping Weight. 346 lbs.

\$495 F.O.B. Price

CL2620T Power Feed Turnstile Bed Turret for 13" South Bend Lathe. Approx. Shipping Weight 414 lbs.





Handlever Bed Turrets

These Handlever Bed Turrets mount on lathe in place of tailstock. Index automatically on return stroke within plus or minus .0005" measured 4" from turret face. Have effective slide feed of 4" with automatic feed stops for each turret position. Tool holes may be bored either $\frac{5}{8}$ " or $\frac{3}{4}$ ".

F.O.B. Price for 9" Lathe --5273 as low as

Turret Lathe Conversion Units for All 9" and Light Ten South Bend Lathes



Any South Bend 9" or Light Ten Lathe can be supplied as a Turret Lathe with handlever bed turret and combination handlever or screw feed double tool cross slide in place of the regular tailstock and compound rest assemblies. Turret lathe conversion units must be specified when the lathe is ordered.

Conversion unit consists of handlever bed turret which mounts on inside bedways in place of tailstock and combination handlever and screw feed double tool cross slide mounted on the saddle cross slide dovetail in place of the compound rest assembly. Write for prices.

SPECIFICATIONS

CAPACITY OF LATHE

SPINDLE SPEEDS (standard spindle speeds with two-speed motor, approximate, not exact)

High spindle speeds r.p.m. of spindle, direct belt drive.....940, 497, 270 r.p.m. of spindle, back-gear drive.....135, 71, 40 Low spindle speeds (not available with 1-speed motor)

r.p.m. of spindle, direct belt drive 470, 248, 135 r.p.m. of spindle, back-gear drive..... 67, 35, 20 TURRET

Diameter of holes in turret faces......14 Distance between opposite flats......8" Maximum distance between spindle nose and turret face at

beginning of indexing movement....6 ft. bed 355/8"

UNIVERSAL CARRIAGE

MOTOR For operating on

1-phase A.C. or D.C.-1-speed, 1800 r.p.m.....1 h.p.

For operating on 3-ph. A.C.-2-speed, 1800-900 r.p.m.....11/2-3/4 h.p.

New! South Bend 13" Precision Turret Lathe

The South Bend 13" Turret Lathe is a dependable tool for the manufacture of duplicate parts. It has the stamina for exacting close-tolerance work, ample power for smooth performance, and rigidity for producing a fine finish.

The turret head indexes and locks automatically when the turret slide is returned to the starting position. An individual feed trip and stop for each face of the turret accurately regulates the length of the cut with either the power feed or the hand feed. The turret head may be back-indexed or spun when it is desired to skip tool positions. Turret slide has tapered gibs on both sides which provide adjustment for wear and alignment. Power feeds for the turret slide are driven by lever operated friction clutch, permitting instant engagement and disengagement. Lever shift gears in turret apron provide three changes for fast, slow and intermediate feeds. The power feed is reversible to permit feeding the turret toward the headstock regardless of direction of universal carriage feed. A large turnstile operates the hand feed. Turret ram lock is provided.

Equipment includes: universal carriage; double tool slide; front and rear tool blocks; power feed turret; quick change box; oil pan; coolant return assembly; wrenches; and installation plan. Electrical equipment, handlever collet attachment, collet splash guard, coolant reservoir; coolant pump; splash pan and piping are not included in price.

13" TURRET LATHES WITH POWER FEED CARRIAGE AND TURRET

SOUTH REND

Catalog Number	Length	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	Factory Price
CL1BT	5	88	1875	1570	\$2344
CL1CT	6	103	1950	1620	2397
CL1DT	7	117	2025	1670	2450

Note: These lathes can be supplied with hand feed turret if desired. Write for information.

Collet attachment, electrical equipment, splash pan, coolant reservoir and pump shown in illustration are not included in price of lathe.

SPECIFICATIONS

CAPACITY OF LATHE

Hole through spindle. Swing over bed and sa Width of lathe bed Spindle nose diameter Maximum collet capaci collet chuck. Maximum capacity through the chuck.	ddle wings and threads per i ity through handi such universal	1014" 714" inch214"-8 ever
TURRET Diameter of holes in the Center of turret hole to Effective feed of turret Distance between oppo Maximum distance betw ret face at beginning	stop of turret slid slide site flats ween spindle nose	1013/4" 4" 47/8"
SPINDLE SPEEDS (appr	roximate, not exa	ct)
With one-speed motor	Direct Drive	Back-Geared
High speeds, r.p.m., . Low speeds, r.p.m With two-speed motor	. 1400, 898, 585	250, 160, 105 130, 85, 55
High speeds, r.p.m		250, 180, 105 130, 85, 55
Low speeds, r.p.m	700, 449, 292 350, 224, 146	125, 80, 52
UNIVERSAL CARRIAGE		
Thread cutting range Power longitudinal feed Maximum longitudinal carriage, hand or pow	18	015" to .0836"

DOUBLE TOOL CROSS SLIDE Swing over double tool cross slide. Gross travel of cross slide. Maximum size cutter bit tool block opening will take. Power cross-feeds. .0006" to .0303
COMPOUND REST CROSS SLIDE Swing over compound cross slide
MOTOR (Standard size) One-speed
*Can be supplied to order with 3⁄4" holes in turret head No extra charge.

NOTE: Splash pan, tailstock, compound rest, centers, spindle sleeve, face plates, draw-in collet chuck attachment, lathe chuck, thread cutting stop, coolant equipment, and electrical equipment are not included in price of lathe.

South Bend 10" Turret Lathes are made with 3½' bed length and with either bench or floor mounting, as illustrated. They are precision tools capable of fast, efficient production and are easily adaptable to a wide variety of work. There is no excessive weight in moving parts to slow down operation and cause fatigue. These lathes can be equipped with a one-speed motor or a two-speed motor to provide twelve or twenty-four spindle speeds as listed in the specifications.



South Bend 10" Bench Turret Lathe

South Bend 10" Precision Turret Lathes



The turret is mounted on the inside bed ways and can be locked in position at any point along the length of the bed. The turret base can be placed close to the headstock to eliminate excessive overhang of the work or the turret tools. Turret head indexes automatically when the lever is moved to the extreme right, and has individual stops for each of the six turret faces. The turret head will index within plus or minus .0005", measured 4" from turret face and it may be back indexed or spun to skip tool positions. Turret ram slide can be locked for mounting work between centers if desired.

Equipped with front and rear tool blocks the handlever cross slide has adjustable stops which limit the movement of the cross-feed in either direction, in or out. The handlever can be removed and the cross-feed screw attached, permitting use of all power cross-feeds and longitudinal feeds with the double tool cross slide.

Equipment included in the price of turret lathe consists of: underneath motor drive unit (patented); universal carriage with combination handlever and screw feed double tool slide having front and rear square tool blocks; handlever bed turret; quick change box, oil pan; coolant

return assembly; splash guards; wrenches; and installation plan. Bench turret lathes also include rigid tubular steel bench with 3 roomy drawers.

SOUTH BEND 10" TURRET LATHES					
Catalog Number	Type of Mounting	Cubic Feet Boxed	Boxed Weight Pounds	Crated Weight Pounds	Factory Price
CL1006Z	Floor	59	1350	1050	\$1601
CL1005Z	Bench	56	1250	950	1641







*Akron, Ohio, Reynolds Machinery Co.—BL 7095

*Akron, Ohio, Reynolds Machinery Co.-BL 7095
*Albany, N. Y., Sager-Spuck Supply-3-4461
*Albuquerque, N. M., Equipment Sales Co.-8212 Albuquerque, N. M., Harry Cornelius Co.-3-7739
*Amarillo, Tex., Amarillo Supply Company-Drake 2-6529
*Atlanta, Ga., Chandler Machinery Co.-WAL 3843
*Auburn, Me., W. D. Matthews Machinery Co.-4-5759
*Augusta, Ga., Augusta Mill Supply Co.-2-4657/8 Baltimore, Md., Carey Machinery & Supply Co.-6-1600
*Bangor, Me., N. H. Bragg & Sons-7311 Barre, Vt., Reynolds & Son, Inc.-334
Billings, Mont., Hines Motor Supply Co.-2155
*Binghamton, N. Y., Binghamton Ind. Supply Co.-4-3221
Birmingham, Ala., Young & Vann Supply Co.-7-5161
*Boston, Mass., Packard Machinery Co.-UN 4-3400
Bozeman, Mont., Hines Motor Supply Co.-262
*Brownsville, Tex., Alamo Iron Works-2-4343
*Buffalo, N. Y., R. C. Neal Co.-MO 1110
*Burlington, Iowa, Kacena Co. Calgary, Alta., Can., Canadian Fairbanks-Morse-6-4061
*Cambridge, Mass., Packard Machinery Co.-UN 4-3400
*Cedar Rapids, Iowa, Kacena Co.-3-0255
*Charleston, S. C., Charleston Supply Co.-2-8851
*Charleston, W. Va., Wm. S. Bolden Co.-35-644
Charleston, W. Va., Wm. S. Bolden Co.-35-644
Charleston, W. Va., Jones Sylar Supply Co.-5-1601
*Charleston, Ohio, Reynolds Machinery Co.-UN 1-0354
Cincinnati, Ohio, The Wm. T. Johnston Co.-GAR 1-6262
*Cleveland, Ohio, Reynolds Machinery Co.-EN 1-3745
*Clinton, Iowa, Kacena Co.
Columbia, S. C., Columbia Supply Co.-5121 Clincinnati, Ohio, The Wm. T. Johnston Co.-GAR 1-6262
*Cleveland, Ohio, Reynolds Machinery Co.-EN 1-3745
*Clinton, Iowa, Kacena Co.
Columbia, S. C., Columbia Supply Co.-5121
Columbus, Ohio, Reynolds Machinery Co.
*Corpus Christi, Tex., Alamo Iron Works-3-9241
*Cumberland, Md., McKaig's-754
*Dallas, Tex., Nicholas & Parks Machinery Co.-RI 3246
*Danville, III., Danville Industrial Supply Co.-695
*Dayton, Ohio, C. H. Gosiger Machinery Co.-FU 5174
*Decatur, III., Miller Industrial Supply Company-8-3474
Denver, Colo., M. L. Foss, Inc.-KE 5151
Des Moines, Iowa, Iowa Machinery & Supply Co.-8-0123
*Detroit, Mich., Robt. F. Brown Machinery-Temple 2-3540
*Detroit, Mich., Lee Machinery Co.-LO 7-4257
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*Erie, Pa., Modern Machinery Sales Co.-6-2729
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