

SOUTH BEND

MACHINE TOOLS

J. A. JEAN MACHINERY CO.

302 INDUSTRIAL WAY ■ SAN CARLOS, CALIF. 94070

PHONE 593-2118

SOUTH BEND LATHE

Catalog 6801

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Specifications In accordance with our established policy, specifications are subject to change without notice and accordingly specifications herein are not necessarily those at which deliveries will be made at any future date.

SOUTH BEND LATHE

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ONE OF THE **Amsted**
INDUSTRIES

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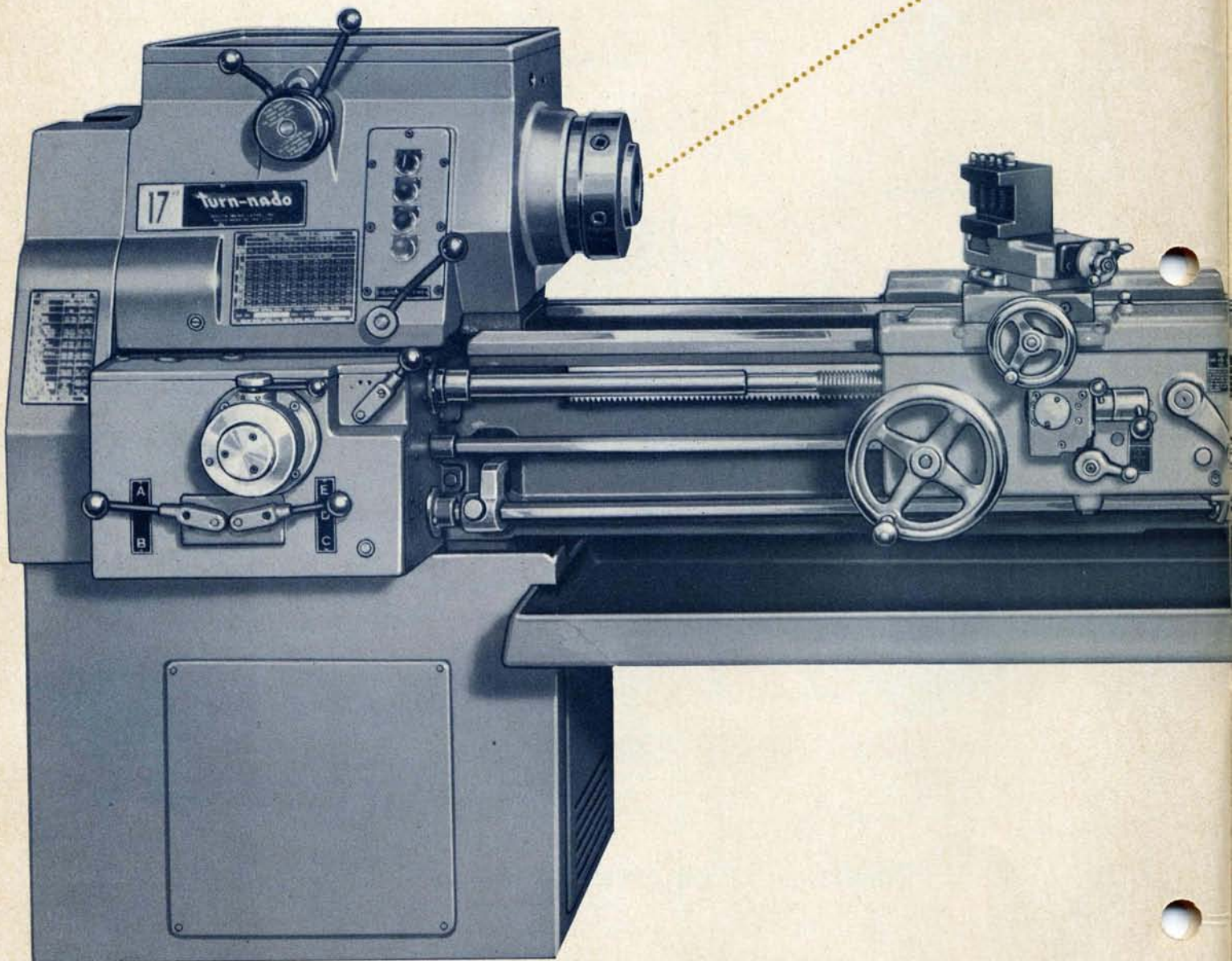
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SOUTH BEND LATHE

17" turn-nado*

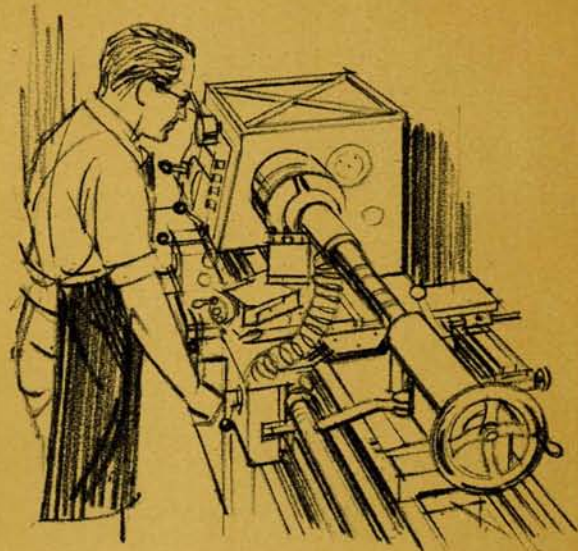
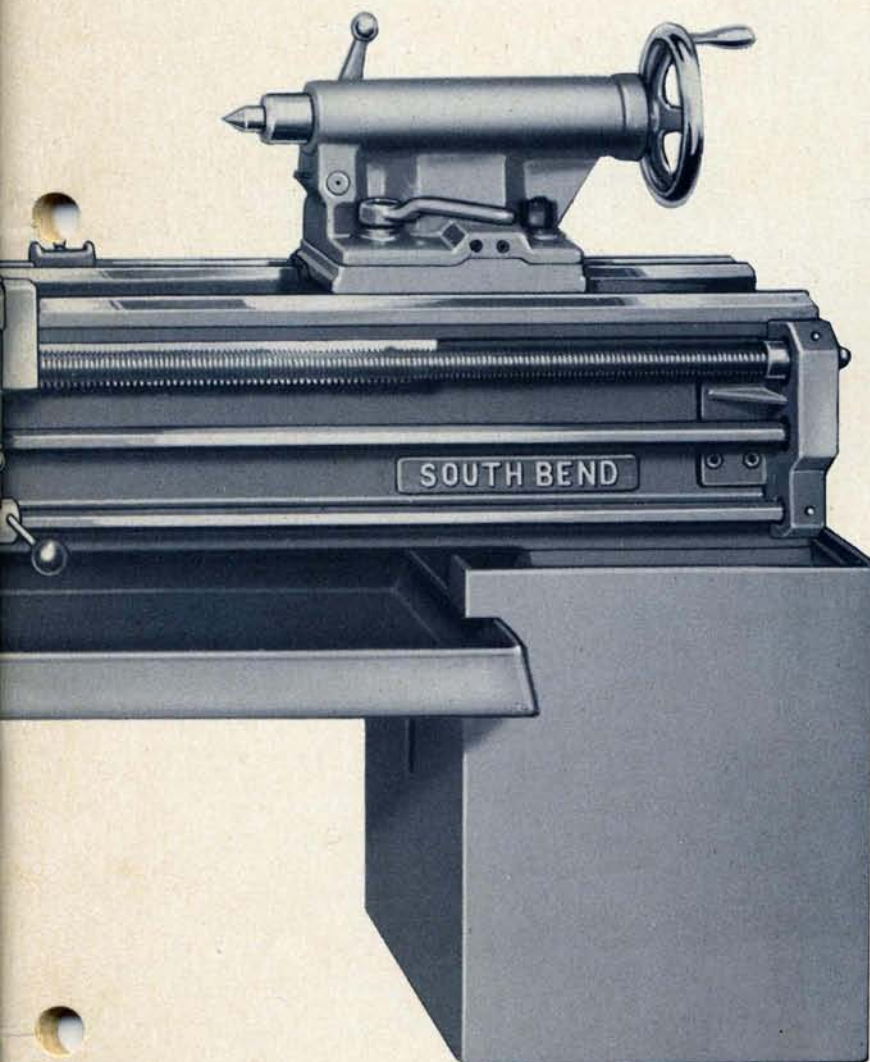
GEARED HEAD

with BIG 2 $\frac{9}{16}$ " spindle hole ... and flame



ENGINE LATHES

hardened bed ways



... outstanding

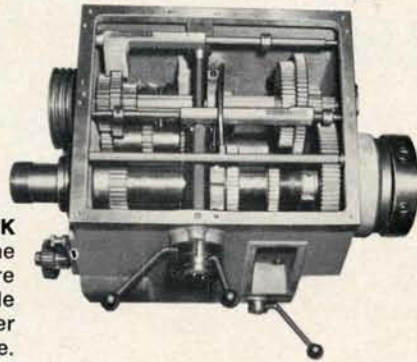
These are the lathes that industry is talking about. And with good reason. The 17" Turn-nado Geared Head Engine Lathes turn out machining faster. They have greater capacity for work (a full $2\frac{9}{16}$ " spindle hole) and require almost effortless operation. This results in less chance for operator fatigue and error.

From head to tail you get more value—with an 8" D-1 Cam Lock Spindle Nose included as standard equipment. Hardened and ground bed ways and cross-feed screws are also supplied at no extra cost. You'll like the standard built-in leveling screws. In every way this precision equipment measures up to the excellence you expect from South Bend Lathe. And . . . they're designed to fit into any size shop . . . where they will turn out more work . . . more accurately than you ever imagined.

The following two pages reveal the heart of the Turn-nado story. Get the inside facts and you'll be convinced that this is the finest, hardest working lathe available today. And another point—the price is right!

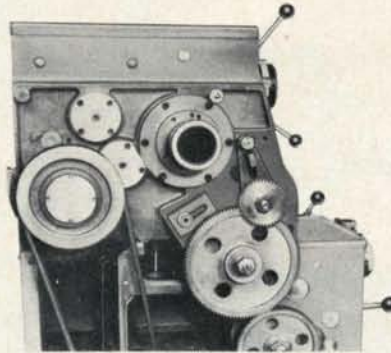
17"

SOUTH BEND TURN-NADO /geared head



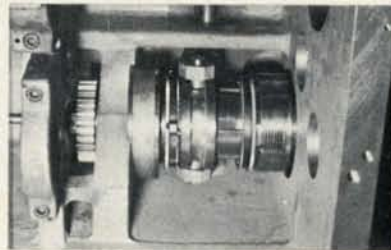
MASSIVE HEADSTOCK

Two shifting levers obtain either the 9 or 18 available spindle speeds. Pressure oiling system showers every part. Spindle is supported by four bearings. One lever for friction disc clutch and spindle brake. Extra wide gears transmit full rated motor horsepower. The spindle nose is supported by precision tapered roller bearings.



LEAD SCREW DRIVE

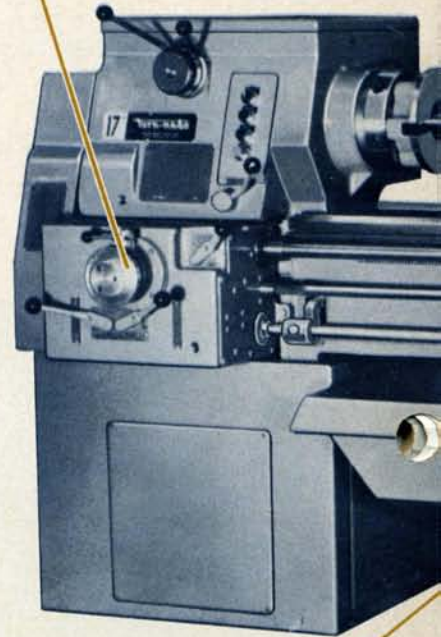
Pivoted lever with spring loaded plunger controls forward and reverse rotation, as well as disengagement of the gear box. Special gear for very coarse threading is stored in position shown and can be easily installed.



MULTIPLE DISC CLUTCH AND BRAKE

One lever controls both. Clutch disengages before brake can be applied. Brake locks until lever is released. Clutch and brake are adjustable.

GEAR BOX Totally enclosed; choice of 70 screw threads, 60 changes for power longitudinal and power cross feeds. Constant flow oiling system. Threads from 1 $\frac{3}{8}$ to 160 per inch.



APRON AND CARRIAGE Perfect alignment. Direct reading micrometer dials are satin chrome finished. Hardened and ground cross-feed screw.

FOR HIGH PRECISION LOW-COST MACHINING ON EVERY JOB

You get big value when you buy South Bend

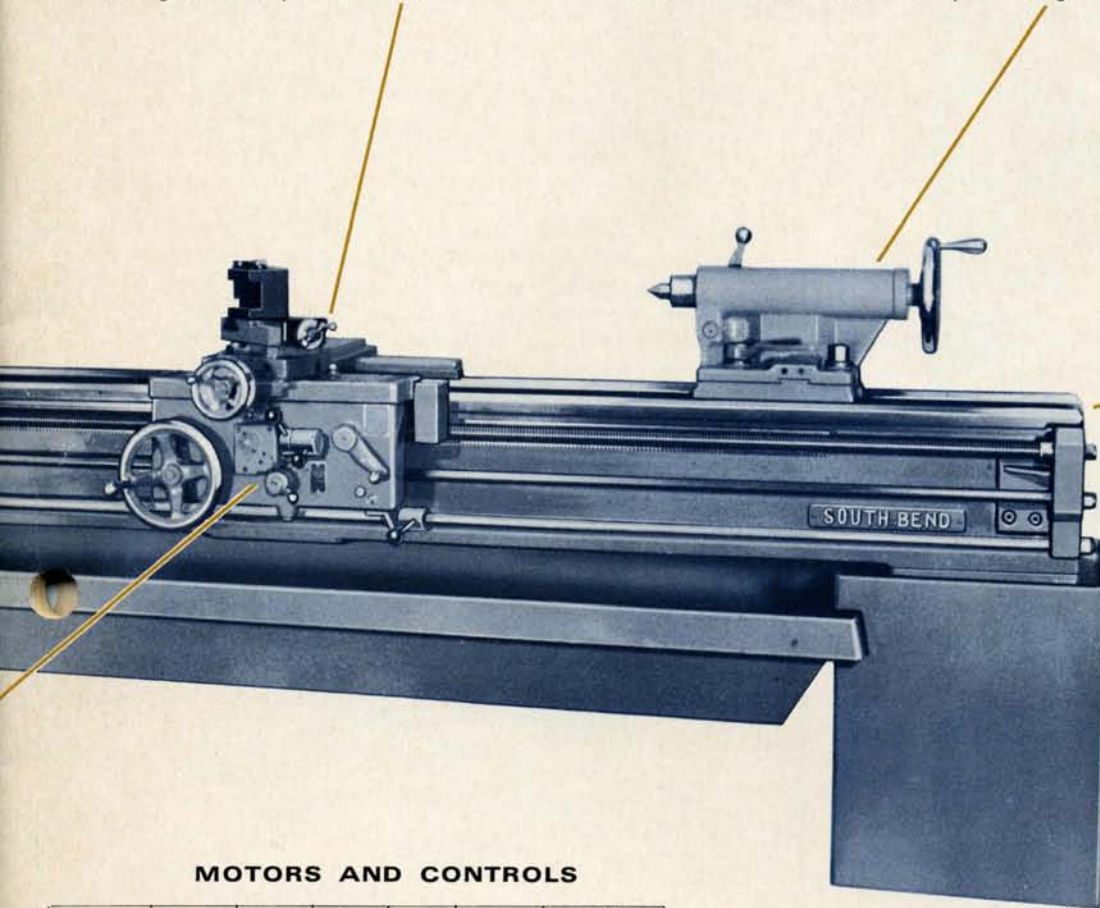
Here you are! 60 power feeds and 70 thread feeds. Combine this range of threads and feeds with the big 2 $\frac{9}{16}$ " spindle hole and you have a lathe that will tackle a bigger range of jobs. Rigidity of bed, headstock and tailstock eliminates twist and deflection. And look at the convenient placement of the controls. Operators go for this!

Add all this to the more than 60 years of lathe building experience and you have the remarkable 17" South Bend Turn-nado Geared Head Lathe . . . the most productive . . . and the biggest value lathe you'll find anywhere. Compare it to all others and you'll see what we mean.

engine lathes

COMPOUND REST Compound rest base and top have easily adjustable tapered gibs. Hardened and ground compound screw.

TAILSTOCK Spindle is 2½" dia. with 6" travel. Non-freeze feature prevents binding when fully retracted. Maximum set-over of ½" for taper turning.



BED CONSTRUCTION Designed for permanent precision alignment. Hardened and ground ways for long life. Chips and coolant slide out back of bed into chip pan.

CL1785GJ. Half-speed option to reduce all spindle speeds by one-half. Factory installed.

MOTORS AND CONTROLS

Cat. No.	H.P.	Speed	Phase	Cycle	Voltage	P. B. Linestarter
CE1710P	7½	1	3	60	208	CL710D
CE1710D	7½	1	3	60	230	CL710D
CE1710F	7½	1	3	60	460	CL710F
CE1720P	7½-3¾	2	3	60	208	CL705D
CE1720D	7½-3¾	2	3	60	230	CL705D
CE1720F	7½-3¾	2	3	60	460	CL705F

Catalog Number	Bed Length	Between Centers	Crated Weight
CL170C	6'6"	30"	3865 lbs.
CL170E	8'6"	54"	4300 lbs.
CL170G	10'6"	78"	4800 lbs.
CL170H	12'6"	102"	6200 lbs.

STANDARD EQUIPMENT

8" D-1 Cam-Lock Spindle, Hardened and Ground Bedways, Hardened and Ground Cross Feed and Compound Rest Screws, Chip Pan, Small Face Plate, Thread Dial Indicator, Open Side Tool Post, Thread Cutting Stop, Spindle Sleeve, No. 4 MT 60° Center, No. 5 MT 60° Center and wrenches.

APRON MOUNTED CLUTCH AND BRAKE CONTROL (Factory Installed)

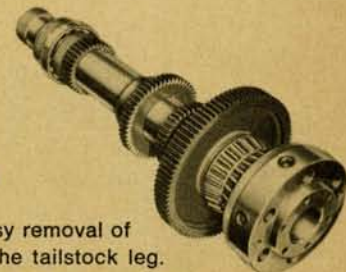
CL172C. Apron Clutch and Brake Control for 17" lathe with 6' bed.
CL172E. Apron Clutch and Brake Control for 17" lathe with 8' bed.
CL172G. Apron Clutch and Brake Control for 17" lathe with 10' bed.
 Above apron clutch and brake control is standard equipment on 17" lathe with 12' bed.

2⁹/₁₆" SPINDLE HOLE FOR BIG BAR JOBS

Big 2⁹/₁₆" hole through the spindle gives you greater capacity for more jobs. Front end of spindle supported by double tapered roller bearings.

SLIDING CHIP PAN Designed for easy removal of chips. Chip screen is located near the tailstock leg.

"ONE SHOT" LUBRICATION SYSTEM Provided for apron and saddle. It simplifies proper lubrication of saddle V-ways, cross slide, cross feed nut and the cross feed and longitudinal feed selector assembly.



QUALITY FEATURES OF SOUTH BEND 10-K, 10

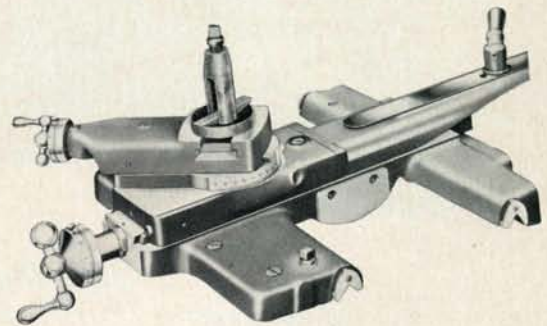
What makes South Bend Lathes so great? It's the component parts—all carefully engineered and perfected through the experience of 60 years of lathe manufacturing. It's also the ability to do it economically. It's also dedication to the belief that testing, retesting, checking and rechecking are part of a manufacturer's responsibility to his customers. Inspect any South Bend Lathe and you'll see why there's such a big difference. South Bend Lathes remain trouble-free throughout long years of rough and tough service.

ENGINE LATHES Standard equipment included with each engine lathe consists of necessary belting and motor pulley, thread indicator dial, thread cutting stop except on 10-K models, small face plate, round tool post assembly, 60° centers and spindle sleeve, chip pan, wrenches, installation plan and manual. Electrical equipment is not included.

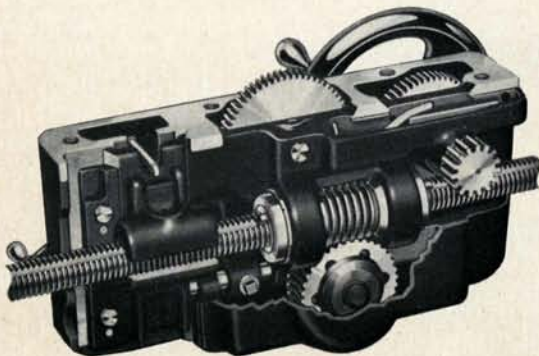
TOOLROOM LATHES Standard equipment included with each toolroom lathe consists of necessary belting and motor pulley, thread indicator dial, thread cutting stop, micrometer carriage stop, small face plate, large face plate, telescoping taper attachment, round tool post assembly, 60° centers and spindle sleeve, chip pan, hand-wheel type draw-in collet attachment, collet rack (without collets), precision lead screw, wrenches, installation plan and manual. Electrical equipment is not included.



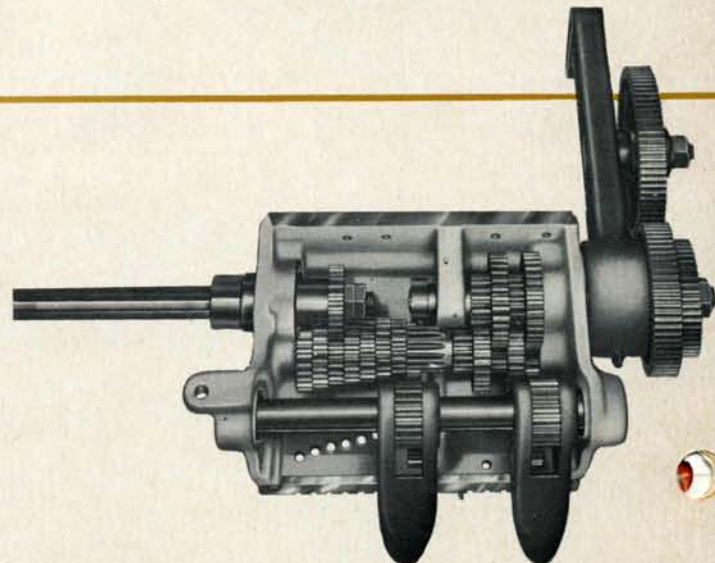
Headstock, cone pulley type with underneath belt drive.



Compound rest, cross slide and saddle.



Cut-away rear view of double walled apron.



Cross section rear view of quick change gear box.

13", 16" & 16-24" LATHES

HARDENED AND GROUND BED WAYS

South Bend Lathes, with the exception of 9" and 10-K models, are supplied with hardened and ground bed ways that resist wear and scoring. We use heat-treating to produce extra hardness throughout the wearing area and special grinding to obtain the precision finish. This standard feature is one of the bonuses you get with South Bend Lathes . . . one of the reasons why they're famous throughout industry everywhere.

DEPENDABLE PERFORMANCE

The one-piece double wall apron supplied on 10"-1 $\frac{1}{2}$ " collet and larger lathes provides positive support for both ends of the gear shafts. Gears in the apron are made of steel and have reservoir and wick oiling system. These fine features help deliver dependable performance. The unusually long bearing surfaces of the saddle are hand-scraped to conform to the outer V-ways of the lathe bed and the cross slide dovetail is hand-scraped square with the V-ways of the saddle.

HANDLING EASE

South Bend equipment is especially easy to set-up and operate. All controls are convenient to the operator and this pays off with more production for your shop.

ECONOMICAL

South Bend Lathes are priced low; yet they deliver long dependable performance. Operating costs are minimal and with proper care your maintenance costs will be almost non-existent. Dollar for dollar you just can't beat South Bend and that's exactly why there are probably more of them in use today than all others combined.

SERVICE

The best materials available and the highly specialized skills of our workmen are used in building South Bend Machine Tools. That's why they give almost endless service. If needed, replacement parts are readily available and our distributors are strategically located so they are in a position to assist you at any time.

OPTIONAL FEATURES



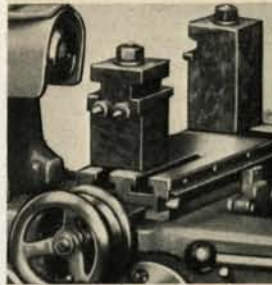
CAM LOCK SPINDLE

4" Type D1 Cam Lock Spindle supplied to order in lieu of regular threaded spindle at extra cost. Chucks, face plates and other accessories available. See page 21.



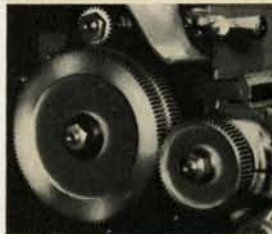
LONG TAPER SPINDLE

Size L00 Long Taper Key Drive Spindle supplied to order in lieu of regular threaded spindle at extra cost. Chucks, face plates, and other accessories available. See page 21.



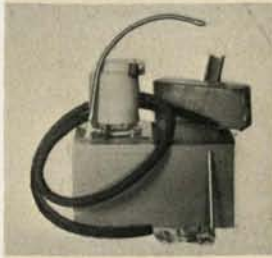
DOUBLE TOOL CROSS SLIDE

This cross-feed may be power operated through friction clutch in apron or manually by cross-feed handwheel. Ideal where multiple tool set up is necessary. See page 26.



METRIC EQUIPMENT

Metric transposing gears available at extra cost. See page 25.



COOLANT EQUIPMENT

Coolant pump, reservoir, oil pan and piping speed production and improve finish on many classes of work. Supplied at extra cost. See page 35.



HARDENED TAILSTOCK TAPER

Tailstock spindle with hardened and precision ground taper hole furnished in lieu of regular at small extra cost. See page 34.



FINE FEED HANDWHEEL

With this fine feed handwheel planetary gear reduction assures smooth, steady movement of carriage as handwheel is turned. Available for 13" and 16" lathe. See page 28.



HARDENED AND GROUND THREAD SCREWS

Provided in place of regular screws on 10" and larger models to give smoother operation and longer life. See page 27.

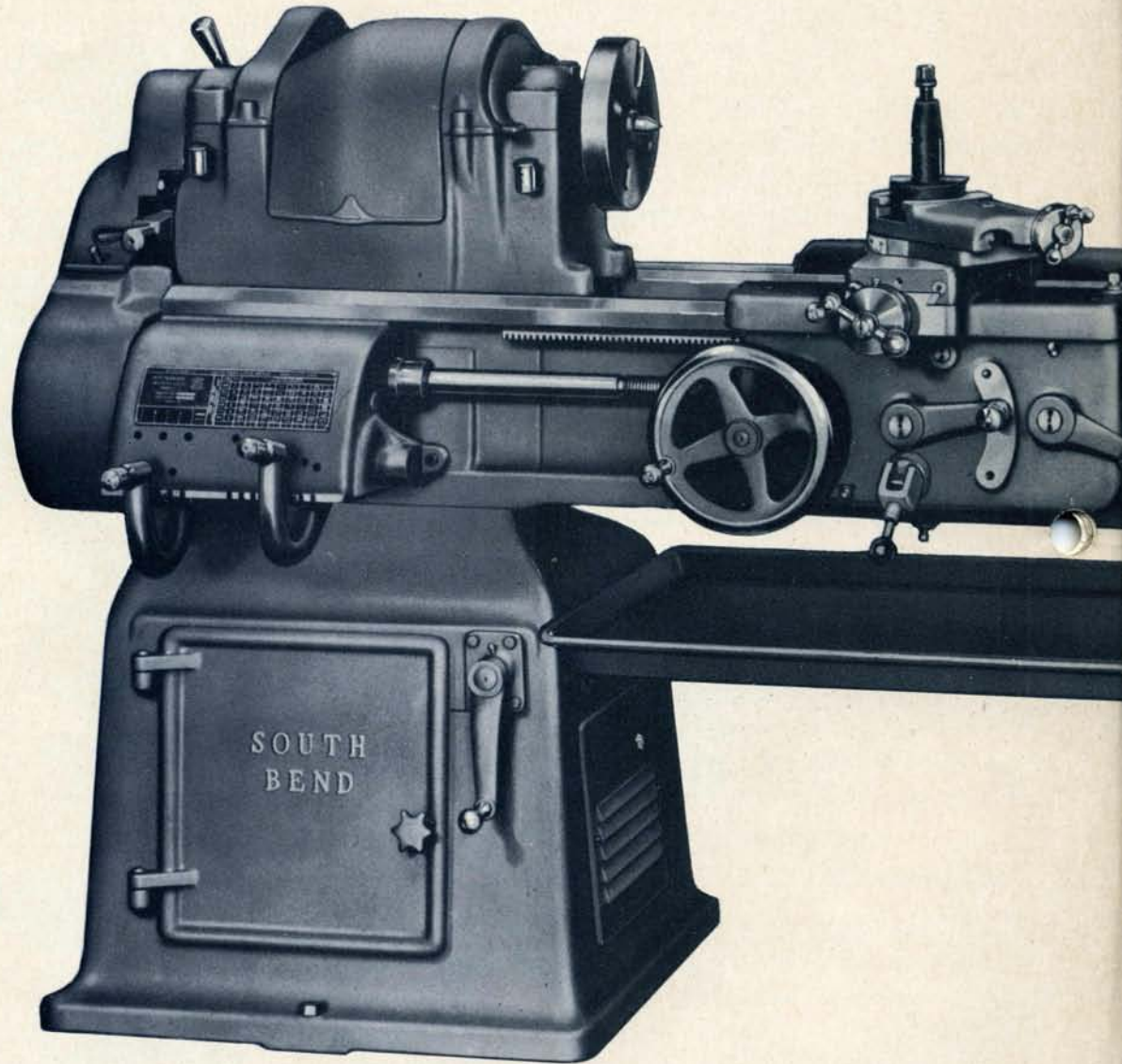


SECTION OF GROUND THREAD SCREW

16"

SOUTH BEND PRECISION LATHES /engine

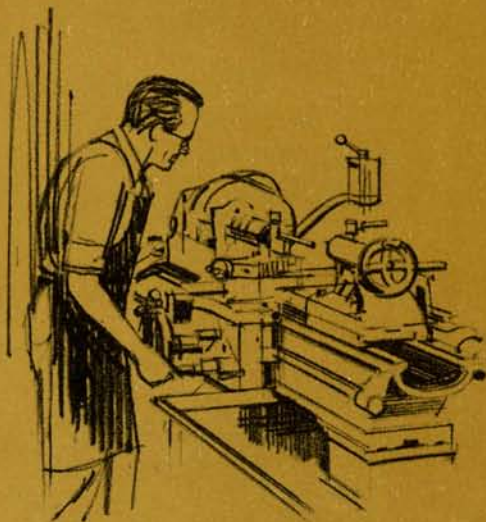
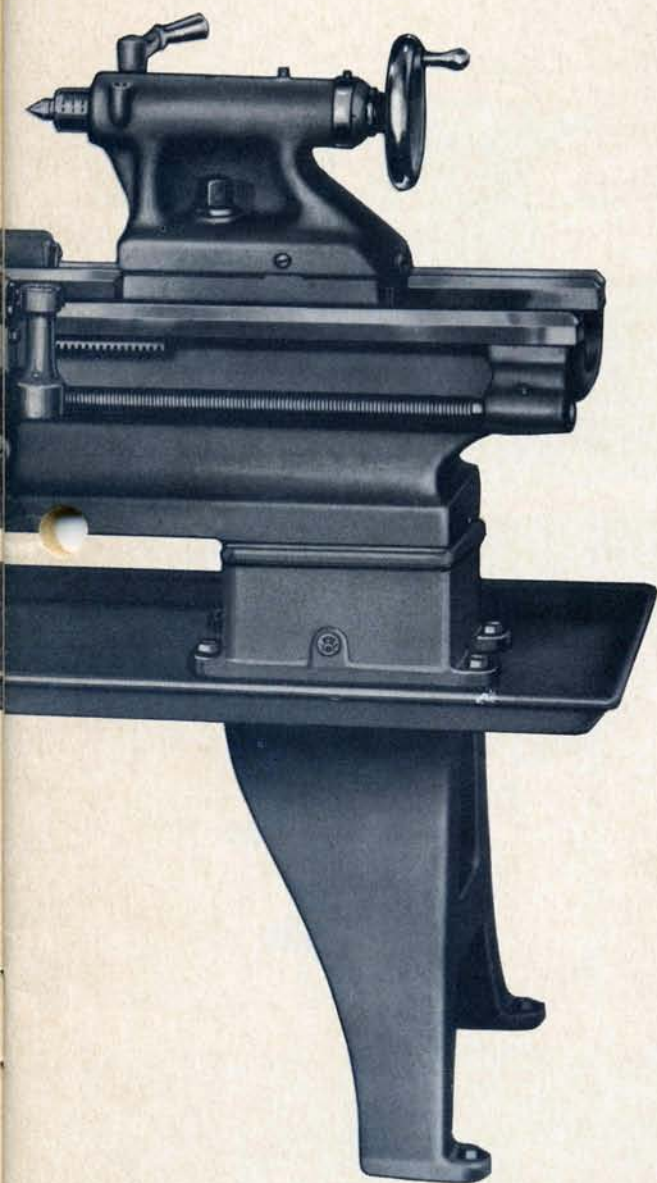
flame hardened bed ways are a



Type of Lathe	Catalog Number	Bed Length Feet	Between Centers Inches	Crated Weight Pounds
ENGINE LATHES	CL117C	6	33	2300
	CL117D	7	45	2380
	CL117E	8	57	2460
	CL117G	10*	81	2800
	CL117H	12*	105	2975
	CL117K	14*	129	3200
TOOLROOM LATHES	CL8117C	6	33	2525
	CL8117D	7	45	2605
	CL8117E	8	57	2685

*Center leg is supplied with 10', 12' and 14' beds.
Electrical equipment is not included.

and toolroom models
standard feature



Here's just what you need for trouble-free, big lathe performance—the 16" South Bend Precision Lathe. Tough and ready as a lathe can be . . . easy to set-up, quiet and free of vibration. Proven design and expert workmanship give this workhorse extreme accuracy. And it handles more routine jobs, tools-up faster for special jobs with off-the-shelf attachments. This lathe has the capacity to handle close tolerance tooling and die operations, precision maintenance work and short run production where an extremely fine finish is required in a single operation. Make no mistake about it . . . this is the lathe for efficient production with precision on a modest budget.

Quick change from high to low speeds

When a two-speed motor is used, it provides sixteen spindle speeds. This not only increases the speed range but with optional push button control it provides instantaneous changes between corresponding high speeds and low speeds. This feature saves time on multiple operations requiring frequent speed changes such as drilling and tapping, boring and reaming, or turning and facing. The low spindle speeds are approximately one-half the corresponding high speeds.

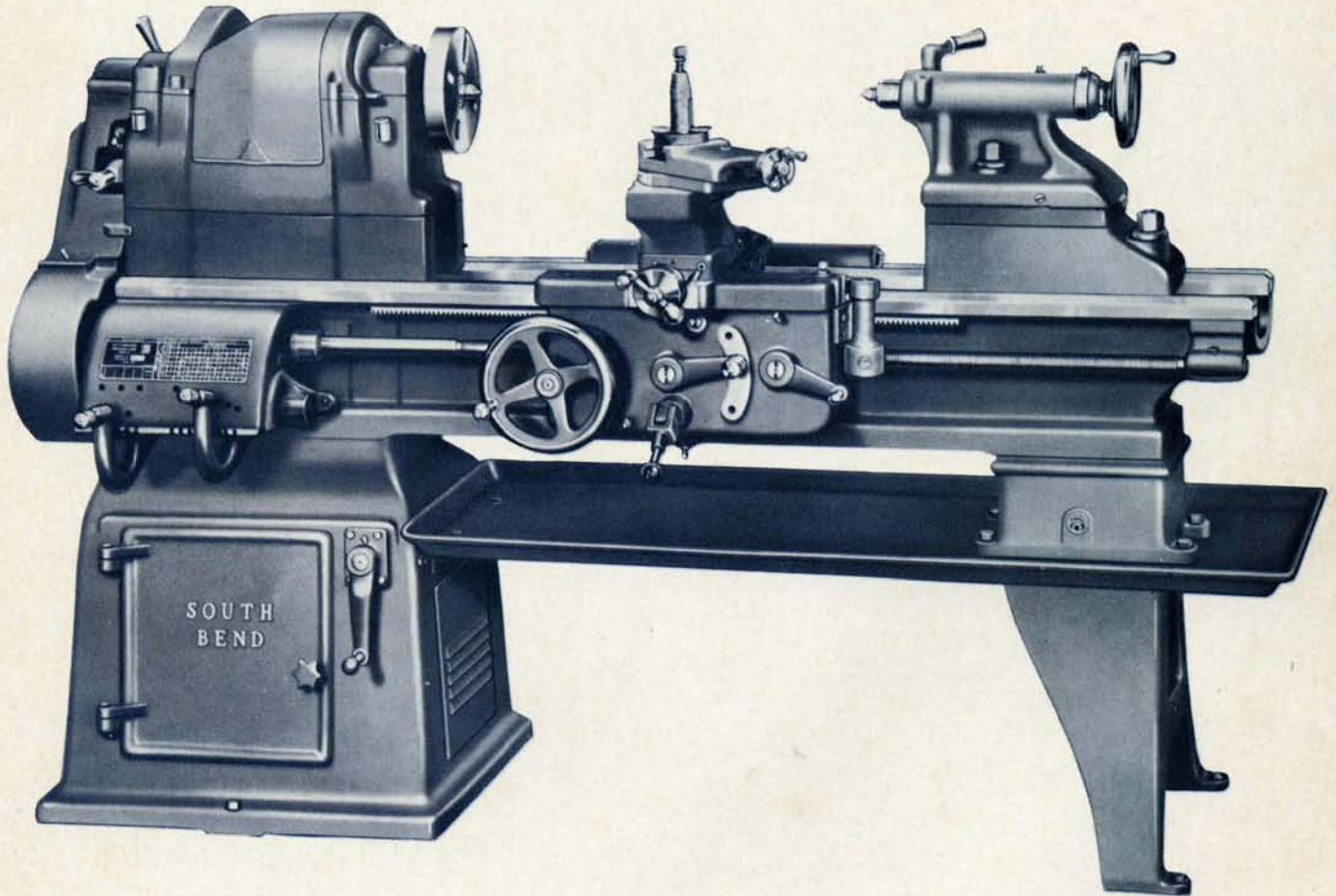
MOTORS AND CONTROLS

Cat. No.	H. P.	Speed	Phase	Cycle	Voltage	Drum Control	P. B. Linestarter
CE2592P	3	1	3	60	208	EQ965	ES841CO
CE2592D	3	1	3	60	230	EQ965	ES841CO
CE2592F	3	1	3	60	460	EQ965	ES841DTO
CE2594P	3-1½	2	3	60	208	EQ765	ES843CO
CE2594D	3-1½	2	3	60	230	EQ765	ES843CO
CE2596F	3-1½	2	3	60	460	EQ765	ES843DTO

16-24"

SOUTH BEND PRECISION LARGE

flame hardened bedways are



SOUTH BEND ROLLER GRINDING LATHES

Designed especially for restoring like new surface to rubber and plastic rollers by precision surface grinding. Can be purchased as a complete unit mounted on a South Bend 16-24" lathe or the grinding unit can be supplied for attaching to your own 16-24" South Bend. Ideal for printing plants, aluminum strip coating plants, lithographed tin and steel plate manufacturers, etc., who require frequent resurfacing of ink and paint rollers.

The grinder is a precision, balanced unit with weight supported by carriage and bedways thus eliminating chatter and carriage rock.

The regular compound rest unit comes with the

machine and, therefore, it can be used as a regular lathe or roll grinder. With the compound and grinder unit both in position, a work piece of 7½" O.D. may be mounted. With only the grinder mounted, a 14" O.D. roll will clear.

The tailstock has been modified for quick acting set-over operation.

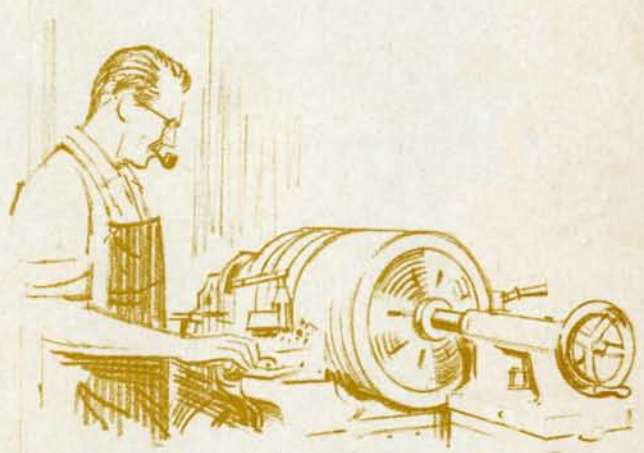
Limit switches are mounted on both sides of the apron and on the tailstock. Stops can be set for automatic motor shut off at the end of work piece and for safety. Any single limit switch shuts off all motors.

SWING ENGINE LATHES

a standard feature

With a full 25" swing and up to 126" between centers, these bruisers are just right for large jobs. With their big capacity, the 16-24" South Bend Lathes are perfect for medium weight, large swing work that requires extreme accuracy and a fine finish. These versatile machines are also readily set up and easy to handle. Ideal for small work, too!

A useful feature is the same quick change from high to low speeds that is found on the 16" lathes. With a two-speed motor it doubles the number of spindle speeds. This not only increases the speed range but, with optional push button control, provides instantaneous changes between corresponding high and low speeds. It saves you a lot of time on multiple operations such as drilling, tapping, facing, turning and boring.

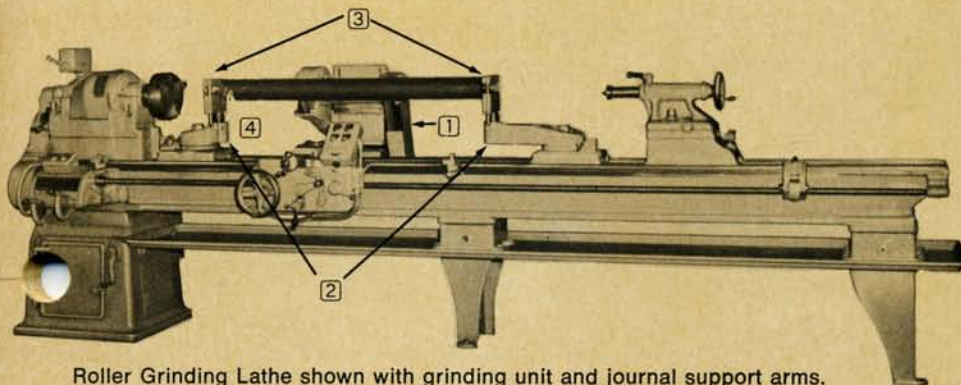


DRIVE UNIT	Catalog Number	Bed Length Feet	Between Centers Inches	Crated Weight Pounds
FOR ONE-SPEED MOTOR	CL198C	6	30	2480
	CL198D	7	42	2560
	CL198E	8	54	2640
	CL198G	10*	78	2980
	CL198H	12*	102	3155
	CL198K	14*	126	3350
FOR TWO-SPEED MOTOR	CL179C	6	30	2555
	CL179D	7	42	2635
	CL179E	8	54	2715
	CL179G	10*	78	3055
	CL179H	12*	102	3230
	CL179K	14*	126	3425

*Center Leg is supplied for 10', 12' and 14' bed lengths

MOTORS AND CONTROLS

Cat. No.	H. P.	Speed	Phase	Cycle	Voltage	Drum Control	P. B. Linestarter
CE2592P	3	1	3	60	208	EQ965	ES841CO
CE2592D	3	1	3	60	230	EQ965	ES841CO
CE2592F	3	1	3	60	460	EQ965	ES841DTCO
CE2594P	3-1½	2	3	60	208	EQ765	ES843CO
CE2594D	3-1½	2	3	60	230	EQ765	ES843CO
CE2596F	3-1½	2	3	60	460	EQ765	ES843DTCO



Roller Grinding Lathe shown with grinding unit and journal support arms.

① CL724. Grinding unit consisting of special 1½" cross slide, grinder spindle, wheel guard, balancing type wheel holder, grinding wheels (2), pulleys, belt, belt guard, 5 H.P. motor and mounting base, gib and compound mounting hole cover plate. Entire unit drop shipped f.o.b. Chicago for customer installation and fitting.

CL725. Grinding Unit mounted on special 1½" cross slide in lieu of standard, including grinder spindle, wheel guard, balancing type wheel holder, grinding wheels (2), pulleys, belt, belt guard, 5 H.P. motor mounted on pivoted base, gib, and compound mounting hole cover plate. The tailstock is modified for grinder clearance and has a fast acting set-over device. Entire unit fitted and mounted on lathe at factory.

② CL726. Set of one left hand and one right hand journal support arms on pivoting mounting pads, with universal drive unit, driving bushing and cam lock mounting plate.

③ CL727. Set of one left hand and one right hand ball bearing journal supports with ball bearing hold down clamps.

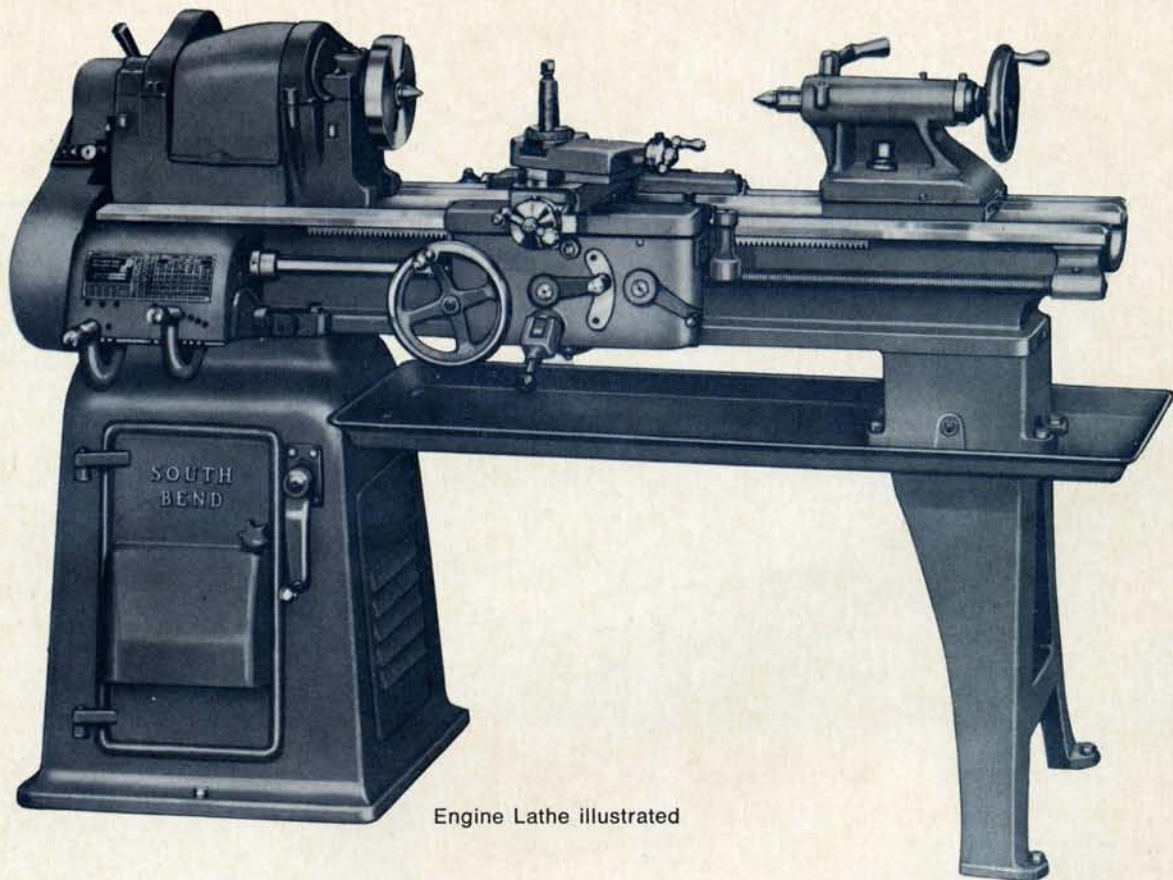
④ CL728. Extra balancing type wheel holder with spacers for double wheel mounting, balanced and includes two wheels.

NOTE: Control unit for lathe and grinder is priced as an extra.

13"

SOUTH BEND PRECISION LATHES

engine and toolroom models
flame hardened bed ways are a standard feature



Engine Lathe illustrated

South Bend 13" Lathes are exceedingly easy to operate. All controls are fast and positive in action . . . distinctively shaped knobs are quickly identified by touch . . . large feed dials can be read instantly. As a result, machine handling is no problem and production time is kept to a bare minimum. These lathes are heavy enough to do the job, light enough

to be quick and responsive to the operator. And you save money . . . in original cost . . . power consumption . . . by years of trouble-free service. The South Bend 13" Precision Lathes have always been especially popular for small and medium size jobs where speed and accuracy are required

	Catalog Number	Bed Length Feet	Between Centers Inches	Crated Weight Pounds
ENGINE LATHES	CL145A	4	16	1460
	CL145B	5	28	1510
	CL145C	6	40	1560
	CL145D	7	52	1615
TOOLROOM LATHES	CL8145B	5	28	1665
	CL8145C	6	40	1715
	CL8145D	7	52	1770

MOTORS AND CONTROLS

Cat. No.	H. P.	Speed	Phase	Cycle	Voltage	Drum Control	P. B. Linestarter
CE2631B	2	1	1	60	115	EQ790	ES841AO
CE2631D	2	1	1	60	230	EQ790	ES841CO
CE2543P	2	1	3	60	208	EQ790	ES841CO
CE2543D	2	1	3	60	230	EQ790	ES841CO
CE2543F	2	1	3	60	460	EQ790	ES841DTCO
CE3373	2-1	2	3	60	208	EQ765	ES843CO
CE2130	2-1	2	3	60	230	EQ765	ES843CO
CE2131	2-1	2	3	60	460	EQ765	ES843DTCO

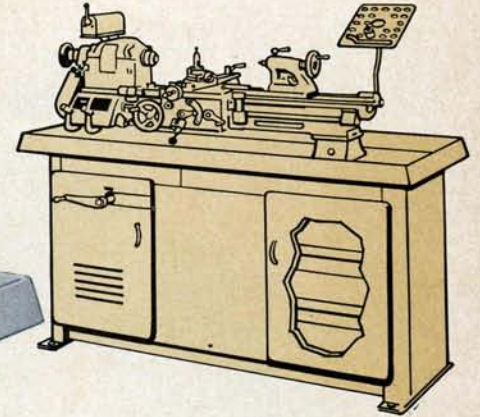
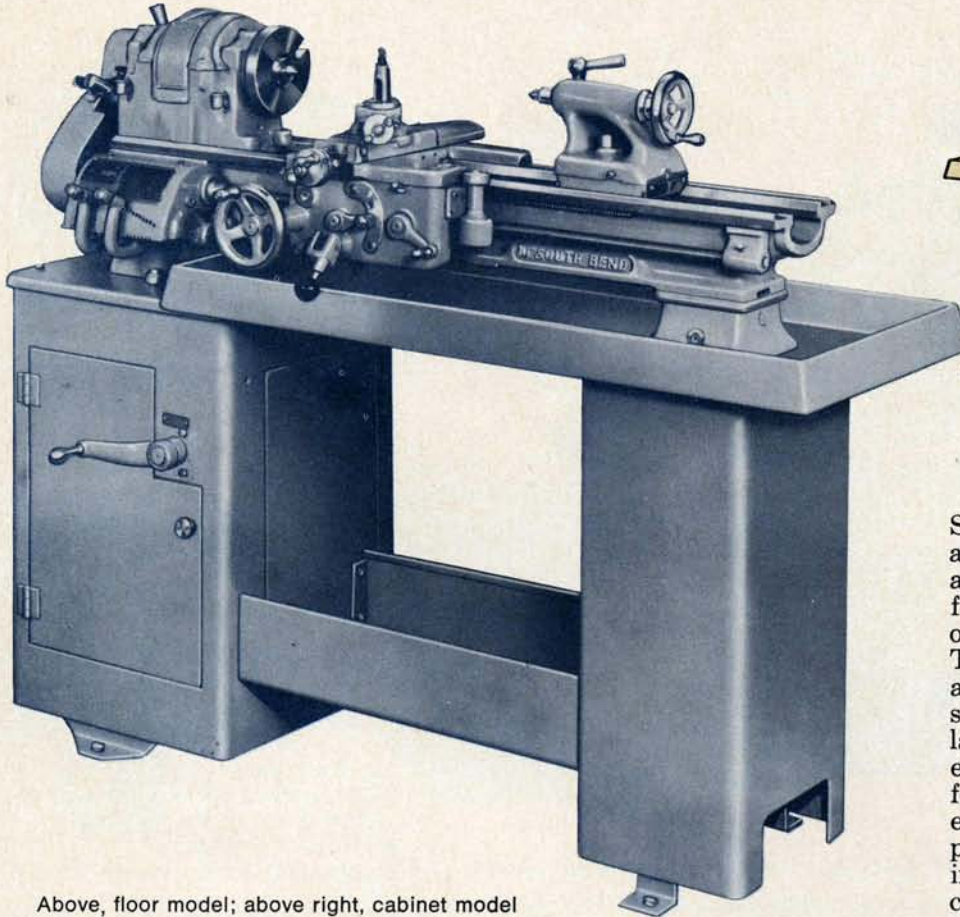
Electrical equipment not included



10"

SOUTH BEND PRECISION LATHES

*engine and toolroom lathes
in floor and metal cabinet types*



Above, floor model; above right, cabinet model

flame hardened bed ways are a standard feature

South Bend 10" Precision Lathes are built with care, they're fast and accurate. With high spindle speeds for efficient machining and plenty of power for heavy roughing cuts. They are capable of finish turning and boring with such precision that subsequent grinding, honing and lapping operations can often be eliminated. They are unsurpassed for cutting screw threads to the exacting tolerances required for precision thread gauges, taps, dies, instruments, etc. $1\frac{1}{16}$ " maximum collet capacity.

Satin finish micrometer dials make fine adjustments easier and give less chance for operator error. Swiveling machine handles fit the hands, reducing operator fatigue.

Through the years, no lathe has been as popular as South Bend 10" lathes. Always reliable . . . exceptionally accurate. Set-up is simple. Operation is easy. This is especially valuable where short run production is required or for toolroom and maintenance operations. Available with floor or metal cabinet mounting.

Wide range gear box provides 70 screw threads, 70 cross-feeds and 70 longitudinal feeds.

Type of Lathe	Type of Mounting	Catalog Number	Bed Length Feet	Between Centers Inches	Crated Weight Pounds
ENGINE LATHES	FLOOR	CL187Z	3½	20	880
		CL187R	4½	34	980
	METAL CABINET	CL187ZB	3½	20	960
		CL187RB	4½	34	1000
TOOLROOM LATHES	FLOOR	CL8187Z	3½	20	990
		CL8187R	4½	34	1040
	METAL CABINET	CL8187ZB	3½	20	1010
		CL8187RB	4½	34	1060

MOTORS AND CONTROLS

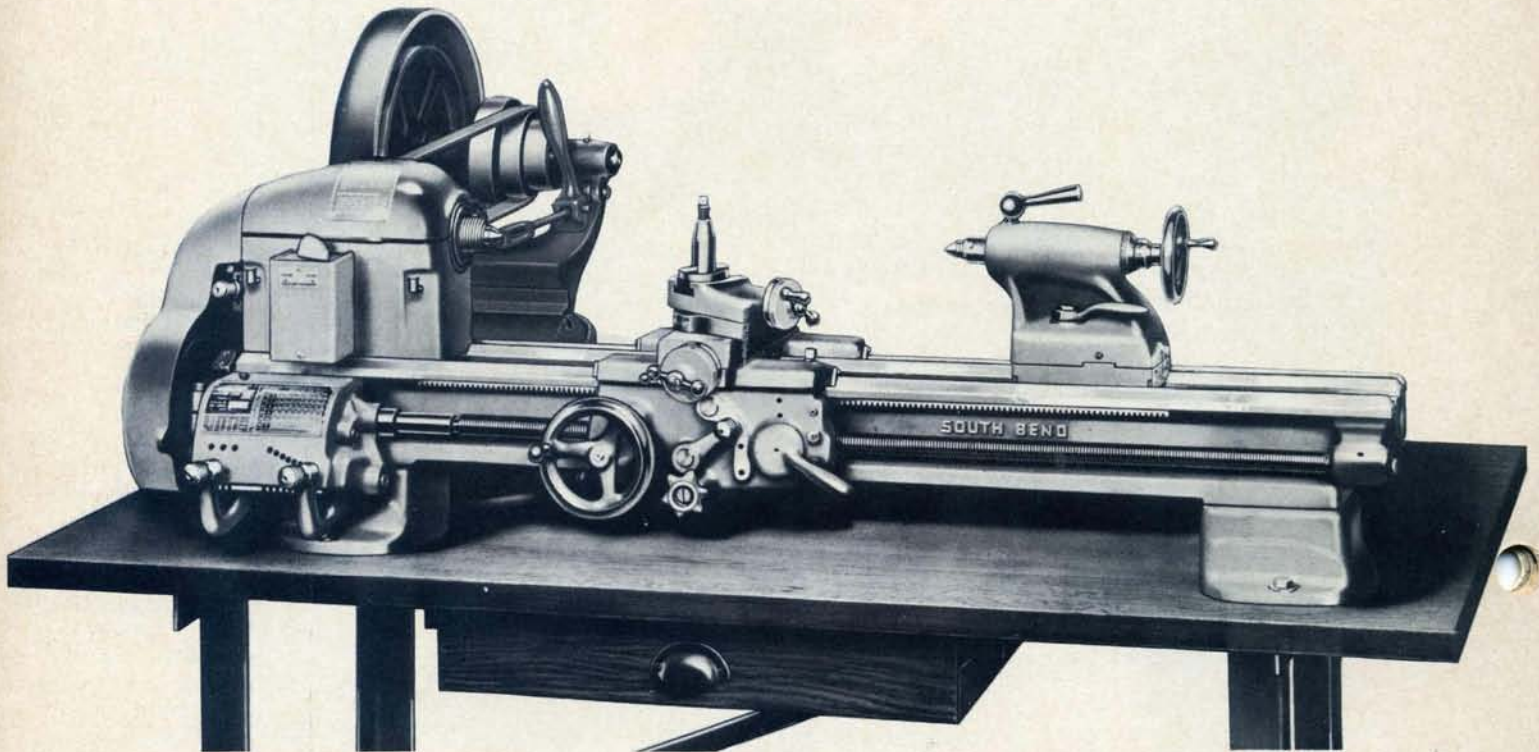
Cat. No.	H. P.	Speed	Phase	Cycle	Voltage	Drum Control	P. B. Linestarter
CE2628B	1	1	1	60	115	EQ790	ES841AO
CE2628D	1	1	1	60	230	EQ790	ES841CO
CE2625P	1	1	3	60	208	EQ790	ES841CO
CE2625D	1	1	3	60	230	EQ790	ES841CO
CE2625F	1	1	3	60	460	EQ790	ES841D0
CE3384	½-1	2	3	60	208	EQ765	ES843CO
CE3385	½-1	2	3	60	230	EQ765	ES843CO
CE3386	½-1	2	3	60	460	EQ765	ES843D0

Electrical equipment not included

10-K

SOUTH BEND PRECISION LATHES

/engine lathes in bench and metal



The 10-K Bench Lathes are precision lathes for small work in the toolroom, manufacturing plant or maintenance department. Outstanding features include precision finished V-ways, heat-treated and superfinished spindle, replaceable bronze sleeve bearings for spindle with oil reservoir and capillary oiling system, Oilite bushings in countershaft bearing, large satin chrome micrometer dials on cross-

feed screws and compound screw and built-in leg leveling screw.

Lathes have full quick change box and patented worm drive apron with friction clutch which provide a wide range of thread cutting feeds, power cross-feeds and power longitudinal feeds. Also choice of 12-speed flat belt or 16-speed V-belt for horizontal motor drive.

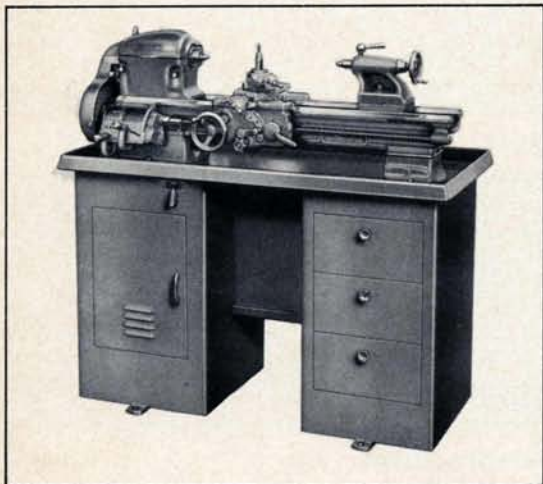
SOUTH BEND GAP BED BENCH LATHES

10-K

The 10-K Gap Bed Bench Lathes are made with a 4½" bed and have a 1" gap measured from the face plate when bed insert is in place. When 4" insert is removed, the 5" gap allows 14⅞" swing capacity. Saddle and cross slide design allows the cutting tool to do work up to the spindle . . . gives greater support to

the tool. Unit can be supplied with flat belt or V-belt cone pulleys for the headstock. Gap Bed Lathes have the same equipment as corresponding models of 10-K Bench Lathes and all other specifications are the same except for shipping weights.

cabinet types



Cabinet type lathes are the same as the bench models except for underneath drive, spindle speeds and necessary alterations in the headstock. Cabinet has three drawers. Built-in chip pan forms the top of the cabinet.

Drive Interlock Feature

Underneath motor drive lathes have an automatic drive interlock which makes it difficult to open the end gear guard or cone pulley cover until the belt tension lever is placed in the non-drive position.

Variable Speed Drive

Attachment to provide variable speed drive is available for 10-K underneath motor drive lathes. It must be ordered with the lathe and installed at the factory. It changes spindle speed ranges of 325 to 1800 r.p.m. in direct drive and 65 to 360 r.p.m. in back gear drive. Catalog No. CL222

	Bed Length Feet	Between Centers Inches	Crated Weight Pounds	With 16-Speed V-Belt Horizontal Motor Drive Catalog No.	With 12-Speed Flat Belt Drive Catalog No.
Bench	3½	22	505	CL770Z	CL670Z (HMD)
	4½	34	535	CL770R	CL670R (HMD)
Cabinet	3½	22	720		CL370ZD (UMD)
	4½	34	760		CL370RD (UMD)

MOTORS AND CONTROLS

HMD

Cat. No.	H. P.	Speed	Phase	Cycle	Voltage	Drum Control	P. B. Linestarter
CE4920B	½	1	1	60	115	EHB790	EB841AO
CE4920D	½	1	1	60	230	EHB790	EB841CO
CE4924P	½	1	3	60	208	EHB790	EB841CO
CE4924D	½	1	3	60	230	EHB790	EB841CO
CE4924F	½	1	3	60	460	EHB790	EB841DTO

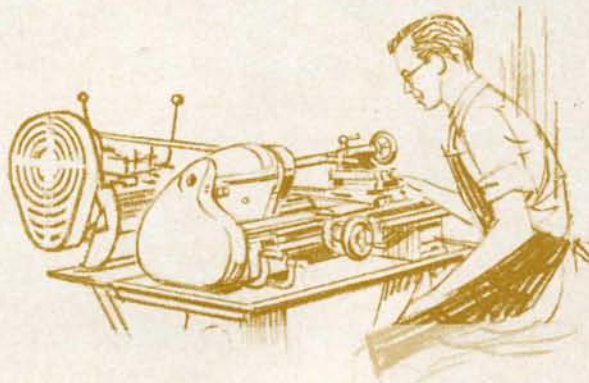
Note: Push button controls are supplied unmounted for horizontal motor drive lathes.

UMD

CE4920B	½	1	1	60	115	EB790	EB841AO
CE4920D	½	1	1	60	230	EB790	EB841CO
CE4924P	½	1	3	60	208	EB790	EB841CO
CE4924D	½	1	3	60	230	EB790	EB841CO
CE4924F	½	1	3	60	460	EB790	EB841DTO

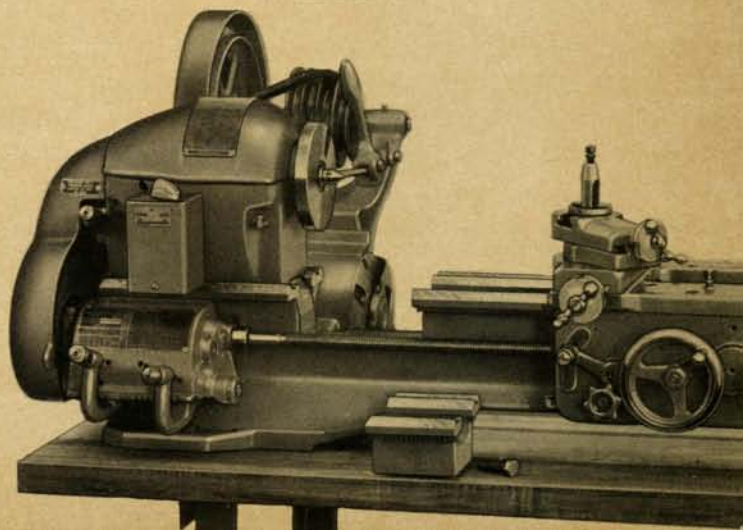
VARIABLE SPEED

CE2804	¾	1	1	60	115	EB790	EB841AO
CE2805	¾	1	1	60	230	EB790	EB841CO
CE2801D	¾	1	3	60	230	EB790	EB841CO
CE2801F	¾	1	3	60	460	EB790	EB841DTO



10-K HORIZONTAL MOTOR DRIVE GAP BED LATHES

Bed Length 4½'
 Between Centers 34"
 Crated Weight, pounds 565
 Catalog Number **CL770RG** with 16-speed V-belt drive.
 Catalog Number **CL670RG** with 12-speed flat belt drive.



17" GEARED HEAD LATHES

CAPACITY

Swing over bed and saddle wings	17 $\frac{1}{8}$ "
Swing over cross slide	10 $\frac{1}{2}$ "
Swing over cross slide without chip guard	11 $\frac{1}{4}$ "
Swing over compound rest	4 $\frac{1}{4}$ "

HEADSTOCK

Spindle nose	8" D-1 Cam-Lock
Size of center (Morse taper)	No. 5
Distance from spindle center to floor	44"
Hole through spindle	2 $\frac{1}{16}$ "

SPINDLE SPEEDS

1800-rpm motor (single speed)	(9) 60—1580 rpm
900-rpm motor (single speed)	(9) 30—790 rpm
1800—900 rpm motor (two speeds)	(18) 30—1580 rpm*
Motor size	7 $\frac{1}{2}$ hp
Two-speed motor	7 $\frac{1}{2}$ —3 $\frac{3}{4}$ hp

BED

Width	13"
Depth	12 $\frac{1}{8}$ "
Length	6'6", 8'6", 10'6", 12'6"
Distance between centers	30", 54", 78", 102"

Special Spindle Speed Unit is available to provide $\frac{1}{2}$ speed range.

GEARBOX-THREADS & FEEDS

Number of thread selections	70
Range of threads (20T stud gear)	2 $\frac{3}{4}$ —160 t.p.i.
Range of threads (40T stud gear)	1 $\frac{3}{8}$ —2 $\frac{1}{2}$ t.p.i.
Range of longitudinal feeds (60)	0.0021—0.1242"
Range of cross-feeds (60)	0.0011—0.0678"
Lead screw	1 $\frac{3}{8}$ "—4"

SADDLE

Cross-feed travel (without taper attachment)	12 $\frac{1}{4}$ "
Cross-feed travel (with taper attachments)	14"
Compound rest travel	3 $\frac{1}{2}$ "
Round tool post opening	1 $\frac{3}{16}$ x 2"

TAILSTOCK

Spindle diameter	2 $\frac{1}{2}$ "
Spindle travel	6"
Size of centers (Morse taper)	No. 4
Set over in either direction from center	$\frac{1}{2}$ "

TAPER ATTACHMENT

Maximum taper per foot	4"
Maximum turning length at one setting	16"

CL1785GJ. One-half speed range optional in lieu of standard, factory installed.

NOTE: When this unit is factory installed, spindle speeds in above specifications are cut in half.

APRON MOUNTED CLUTCH AND BRAKE CONTROL (Factory Installed)

CL172C. Apron Clutch and Brake Control for 17" lathe with 6' bed.

CL172E. Apron Clutch and Brake Control for 17" lathe with 8' bed.

CL172G. Apron Clutch and Brake Control for 17" lathe with 10' bed.

Above apron clutch and brake control is standard equipment on 17" lathe with 12' bed.

CAPACITY

Swing over bed and saddle wings
Swing over cross slide, engine lathes
Swing over cross slide, toolroom lathes
Swing over cross slide without chip guard, engine lathes
Center distances

HEADSTOCK

Capacity through spindle, nose type collet chuck or jaw chuck
Maximum collet capacity, drawbar type
Threaded spindle nose, diameter and threads per inch
Cam lock spindle nose, size and type
Long taper key drive spindle nose, size
Size of center, Morse taper

SPINDLE SPEEDS (Approx.)

Direct Drive	1-speed motor
	2-speed motor
Back Geared	1-speed motor
	2-speed motor

Max. spindle speed, optional extra

Recommended motor

Recommended 2-speed motor

GEAR BOX—THREADS AND FEEDS

Number of threads and feeds
Range of threads per inch
Longitudinal feeds per spindle revolution
Cross feeds per spindle revolution
Lead screw, diameter and threads

COMPOUND REST

Cross slide travel, engine lathes (without tape attachment)
Cross slide travel, toolroom lathes (with tape attachment)
Angular hand feed of top slide
Tool post opening for tool holder shank

TAILSTOCK

Size of center, Morse taper
Spindle travel
Set-over of top for taper turning

for all South Bend Lathes

16-24" LATHES	16" LATHES	13" LATHES	10" LATHES	10-K LATHES
25 $\frac{1}{8}$ "	16 $\frac{1}{4}$ "	13 $\frac{1}{8}$ "	10 $\frac{1}{8}$ "	9 $\frac{1}{16}$ "
18 $\frac{3}{4}$ "	9 $\frac{5}{8}$ "	7 $\frac{3}{4}$ "	5 $\frac{7}{8}$ "	6 $\frac{1}{4}$ "
	9 $\frac{5}{8}$ "	8"	5 $\frac{3}{4}$ "	5 $\frac{7}{8}$ "
19 $\frac{1}{4}$ "	11 $\frac{1}{8}$ "	8 $\frac{3}{4}$ "	6 $\frac{3}{4}$ "	
30", 42", 54", 78", 102", 126"	33", 45", 57", 81", 105", 129"	16", 28", 40", 52"	20", 34"	22", 34"
1 $\frac{3}{8}$ "	1 $\frac{3}{8}$ "	1 $\frac{3}{8}$ "	1 $\frac{3}{8}$ "	2 $\frac{7}{32}$ "
1 $\frac{1}{16}$ "	1 $\frac{1}{16}$ "	1 $\frac{1}{16}$ "	1 $\frac{1}{16}$ "	$\frac{5}{8}$ "
2 $\frac{3}{8}$ "-6	2 $\frac{3}{8}$ "-6	2 $\frac{1}{4}$ "-8	2 $\frac{1}{4}$ "-8	1 $\frac{1}{2}$ "-8
4"-D1	4"-D1	4"-D1	4"-D1	
L00	L00	L00	L00	
No. 3	No. 3	No. 3	No. 2	No. 2
4-105 to 470	4-240 to 980	4-270 to 940	8-304 to 1400	6-268 to 1475*
8-104 to 900	8-120 to 980	8-135 to 940	16-152 to 1400	
4- 15 to 60	4- 30 to 125	4- 40 to 135	6- 55 to 250	6- 52 to 285*
8- 15 to 116	8- 15 to 125	8- 20 to 135	12- 27 to 250	
	1200 rpm	1600 rpm	1800 rpm	
3 hp	3 hp	2 hp	1 hp	$\frac{1}{2}$ hp
3-1 $\frac{1}{2}$ hp	3-1 $\frac{1}{2}$ hp	2-1 hp	1- $\frac{1}{2}$ hp	
48	48	48	70	48
4 to 224	4 to 224	4 to 224	4 to 480	4 to 224
.0015" to .0841"	.0015" to .0841"	.0015" to .0841"	.0007" to .0836"	.0015" to .0853"
.0006" to .0315"	.0006" to .0315"	.0006" to .0315"	.0003" to .0303"	.0004" to .0255"
1 $\frac{1}{8}$ "-6	1 $\frac{1}{8}$ "-6	1"-6	$\frac{3}{4}$ "-8	$\frac{3}{4}$ "-8
10 $\frac{1}{2}$ "	10 $\frac{1}{2}$ "	8 $\frac{3}{4}$ "	6 $\frac{1}{4}$ "	5 $\frac{7}{8}$ "
10 $\frac{1}{16}$ "	10 $\frac{1}{16}$ "	8 $\frac{1}{8}$ "	5 $\frac{7}{8}$ "	5 $\frac{7}{8}$ "
3 $\frac{3}{4}$ "	3 $\frac{3}{4}$ "	3 $\frac{1}{8}$ "	2"	2 $\frac{1}{4}$ "
$\frac{5}{8}$ "x1 $\frac{3}{8}$ "	$\frac{5}{8}$ "x1 $\frac{3}{8}$ "	$\frac{1}{2}$ "x1 $\frac{1}{8}$ "	$\frac{3}{8}$ "x1 $\frac{3}{16}$ "	$\frac{3}{8}$ "x1 $\frac{3}{16}$ "
No. 3	No. 3	No. 3	No. 2	No. 2
5 $\frac{3}{4}$ "	5 $\frac{3}{4}$ "	4 $\frac{1}{4}$ "	2 $\frac{1}{8}$ "	2 $\frac{1}{8}$ "
1"	1"	1 $\frac{5}{16}$ "	1 $\frac{1}{16}$ "	$\frac{5}{8}$ "

*The above is for 12-speed Horizontal Motor Drive. 16-speed V-belt drives available with speeds of 312 to 1277 and 80 to 247. All 10-K Underneath Motor Drives, direct 240 to 1365; back geared 50 to 265.

SOUTH BEND LATHE

thread and feed ranges

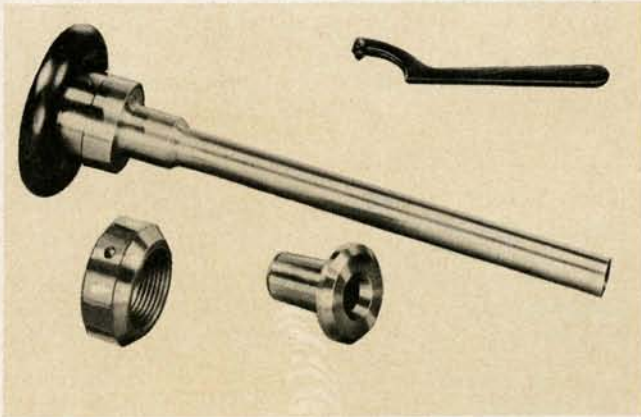
10-K threads per inch and carriage feeds per spindle revolution	4	4½	5	5½	5¾	6	6½	7		
	.0853	.0758	.0683	.0621	.0594	.0569	.0525	.0488		
	8	9	10	11	11½	12	13	14		
	.0427	.0379	.0341	.0310	.0297	.0284	.0263	.0244		
	16	18	20	22	23	24	26	28		
	.0213	.0190	.0171	.0155	.0148	.0142	.0131	.0122		
32	36	40	44	46	48	52	56			
.0107	.0095	.0085	.0078	.0074	.0071	.0066	.0061			
64	72	80	88	92	96	104	112			
.0053	.0047	.0043	.0039	.0037	.0036	.0033	.0030			
128	144	160	176	184	192	208	224			
.0027	.0024	.0021	.0019	.0019	.0018	.0016	.0015			
10" threads per inch and carriage feeds per spindle revolution	4	4½	5	5½	5¾	6	6½	6¾	7	7½
	.0836	.0743	.0669	.0608	.0582	.0557	.0515	.0495	.0478	.0446
	8	9	10	11	11½	12	13	13½	14	15
	.0418	.0372	.0334	.0304	.0291	.0278	.0257	.0248	.0239	.0223
	16	18	20	22	23	24	26	27	28	30
	.0209	.0186	.0167	.0152	.0145	.0139	.0129	.0124	.0119	.0112
	32	36	40	44	46	48	52	54	56	60
.0104	.0093	.0084	.0076	.0073	.0070	.0064	.0062	.0060	.0056	
64	72	80	88	92	96	104	108	112	120	
.0052	.0046	.0042	.0038	.0036	.0035	.0032	.0031	.0030	.0028	
128	144	160	176	184	192	208	216	224	240	
.0026	.0023	.0021	.0019	.0018	.0017	.0016	.0016	.0015	.0014	
256	288	320	352	368	384	416	432	448	480	
.0013	.0012	.0011	.0010	.0009	.0009	.0008	.0008	.0008	.0007	
13", 16" and 16-24" threads per inch and carriage feeds per spindle revolution	4	4½	5	5½	5¾	6	6½	7		
	.0841	.0748	.0673	.0612	.0585	.0561	.0518	.0481		
	8	9	10	11	11½	12	13	14		
	.0421	.0374	.0337	.0306	.0293	.0280	.0259	.0240		
	16	18	20	22	23	24	26	28		
	.0210	.0187	.0168	.0153	.0146	.0140	.0129	.0120		
32	36	40	44	46	48	52	56			
.0105	.0093	.0084	.0076	.0073	.0070	.0065	.0060			
64	72	80	88	92	96	104	112			
.0053	.0047	.0042	.0038	.0037	.0035	.0032	.0030			
128	144	160	176	184	192	208	224			
.0026	.0023	.0021	.0019	.0018	.0017	.0016	.0015			
17" threads per inch and carriage feeds per spindle revolution	1¾	1⅞	1½	1⅝	1⅞	1¾	1⅞	2	2¼	2½
	.1242	.1188	.1138	.1051	.1012	.0976	.0911	.0854	.0759	.0683
	5½	5¾	6	6½	6¾	7	7½	8	9	10
	.0621	.0594	.0569	.0525	.0506	.0488	.0455	.0427	.0379	.0341
	11	11½	12	13	13½	14	15	16	18	20
	.0310	.0297	.0285	.0263	.0253	.0244	.0228	.0213	.0190	.0171
	22	23	24	26	27	28	30	32	36	40
.0155	.0148	.0142	.0131	.0126	.0122	.0114	.0107	.0095	.0085	
44	46	48	52	54	56	60	64	72	80	
.0078	.0074	.0071	.0066	.0063	.0061	.0057	.0053	.0047	.0043	
88	92	96	104	108	112	120	128	144	160	
.0039	.0037	.0036	.0033	.0032	.0030	.0028	.0027	.0024	.0021	

ASK YOUR DISTRIBUTOR

Your South Bend Lathe distributor knows shop practice and he knows turning tool equipment. His experience with machine tools enables him to offer sound advice on solving your machining problems. He will be glad to help you select the right lathe to suit your particular production problem.

VERSATILITY . . .

FROM A COMPLETE LINE OF ACCESSORIES FOR SOUTH BEND LATHES



HANDWHEEL COLLET ATTACHMENTS

A great time saver, especially when extremely accurate centering is required. Bar and tube stock can be fed through the hollow drawbar which operates the collet. When handwheel is tightened, collet automatically grips and centers work. Equipment includes steel drawbar with handwheel, spindle nose cap, spanner wrench, and heat-treated steel closing sleeve if required.

FOR THREADED SPINDLE

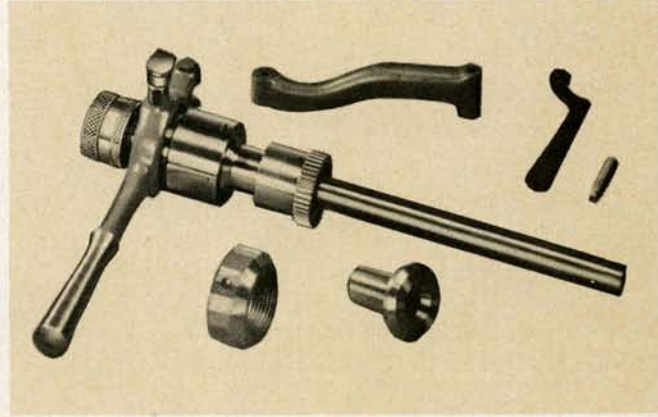
Catalog Number	Size of Lathe	Collet Used	Max. Collet Cap.	Shipping Weight
CL4306N	9"	No. 3	1/2"	5 lbs.
CL4306K	10-K	No. 6K	3/8"	5 lbs.
CL4306L	10"-1 1/16" Collet	No. 5	1 1/16"	10 lbs.
CL4306Q	13"	No. 5	1 1/16"	14 lbs.
CL4306H	16"-16-24"	No. 5	1 1/16"	15 lbs.

FOR 4" TYPE D1 CAM LOCK SPINDLE

CB4306L	10"-1 1/16" Collet	No. 5	1 1/16"	10 lbs.
CB4306T	13"	No. 5	1 1/16"	14 lbs.
CB4306H	16"-16-24"	No. 5	1 1/16"	15 lbs.

FOR TYPE L00 LONG TAPER KEY DRIVE SPINDLE

CA4306L	10"-1 1/16" Collet	No. 5	1 1/16"	10 lbs.
CA4306T	13"	No. 5	1 1/16"	14 lbs.
CA4306H	16"-16-24"	No. 5	1 1/16"	15 lbs.



HANDLEVER COLLET ATTACHMENTS

Speed and accuracy are combined in the Handlever Collet Attachment. Without stopping the lathe spindle, the collet can be released, bar stock fed through the spindle, and the collet tightened again. Equipment includes adjustable chuck closing mechanism and hollow drawbar, spindle nose cap, spanner wrench and heat-treated steel closing sleeve if required.

FOR THREADED SPINDLE

Catalog Number	Size of Lathe	Collet Used	Max. Collet Cap.	Shipping Weight
CL5206N	9"	No. 3	1/2"	10 lbs.
CL5206K	10-K	No. 6K	3/8"	10 lbs.
CL5206L	10"-1 1/16" Collet	No. 5	1 1/16"	20 lbs.
CL5206Q	13"	No. 5	1 1/16"	25 lbs.
CL5206H	16"-16-24"	No. 5	1 1/16"	32 lbs.

FOR 4" TYPE D1 CAM LOCK SPINDLE

CB5206L	10"-1 1/16" Collet	No. 5	1 1/16"	20 lbs.
CB5206T	13"	No. 5	1 1/16"	25 lbs.
CB5206H	16"-16-24"	No. 5	1 1/16"	32 lbs.

FOR TYPE L00 LONG TAPER KEY DRIVE SPINDLE

CA5206L	10"-1 1/16" Collet	No. 5	1 1/16"	20 lbs.
CA5206T	13"	No. 5	1 1/16"	25 lbs.
CA5206H	16"-16-24"	No. 5	1 1/16"	32 lbs.

HOW TO ORDER ATTACHMENTS

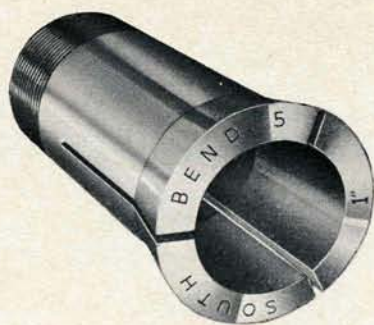
Many practical attachments and accessories designed especially for South Bend machine tools are shown in this catalog. Most of them may be ordered, either with the machine or later. You will save time and expense by selecting a wide range of appropriate equipment for the most efficient lathe operation.

When ordering attachments, chucks, or tools for South Bend Lathes, always state the swing of the lathe and also give the serial number of the lathe, which is stamped on top of the lathe bed at the tailstock end between the front V-way and the flat way.

SOUTH BEND

Precision

COLLETS



South Bend Steel Collets are manufactured with exacting care to give long, dependable service. They are your best investment for work requiring utmost precision, maximum durability and smooth, easy operation. All bearing surfaces including the screw thread are ground after heat-treating. This process enables us to hold exceedingly close tolerances for size and concentricity. Each collet is carefully inspected and tested, and is individually packed in a plastic box with transparent lid through which the collet size can be read.

NOTE: You do not need a separate set of collets for each size lathe when you use South Bend collets. Our number 5 collet fits 10", 13" and 16" South Bend Lathes. This not only saves a substantial investment, but is a real convenience that any shop man can appreciate.

BUY STEEL COLLETS IN COMPLETE SETS

Collet No.	Collets in Set	Ship. Wt. Lbs.	Sizes of Collets	Cat. No.
3	8	3	1/16" to 1/2" in 16ths.....	CE3065
	7	3	3/32" to 15/32" in odd 32nds.....	CE3066
	14	6	5/64" to 31/64" in odd 64ths.....	CE3067
6K	10	7	1/16" to 5/8" in 16ths.....	CE3068
	9	7	3/32" to 19/32" in odd 32nds.....	CE3069
	18	12	5/64" to 39/64" in odd 64ths.....	CE3070
5	16	11	1/16" to 1" in 16ths.....	CE3077
	15	11	3/32" to 31/32" in odd 32nds.....	CE3078
	30	20	5/64" to 63/64" in odd 64ths.....	CE3079

SOUTH BEND STEEL COLLETS

Catalog Number	Collet No.	Sizes of Lathes Used on	Collet Capacities for Round Work	Shipping Weight
CE3050	3	9"	1/16" to 1/2" in 64ths.	6 ozs.
CE3051	6K	10-K	1/16" to 5/8" in 64ths.	8 ozs.
CE3054	5	10", 13", 16", 16-24" 1 1/16" Col.	1/16" to 1 1/16" in 64ths.	1 lb.

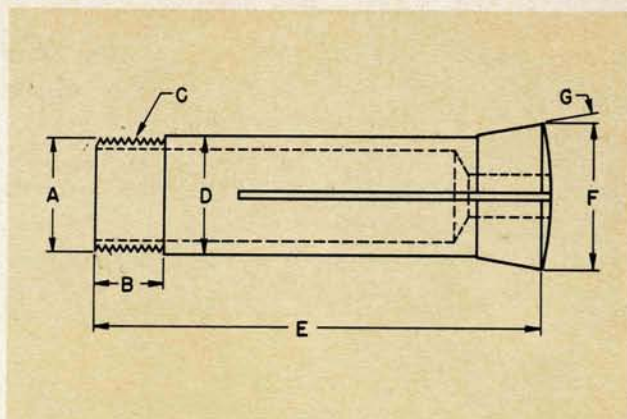
BRASS COLLETS

South Bend Brass Collets are indispensable for many applications. They can be readily machined for holding tapered or irregular shapes. When worn they can be rebored to larger diameters.

COLLETS WITH STANDARD HOLE SIZES FOR ROUND WORK

State capacity of each collet wanted.

Catalog Number	Collet No.	Sizes of Lathes Used on	Collet Capacities for Round Work	Ship. Wt.
CE2825	3	9"	1/16", 1/8", 1/4", 3/8" only	6 ozs.
CE2826	6K	10-K	1/16" only	8 ozs.
CE2828	5	10", 13", 14 1/2", 16"-16-24", 1 1/16" Col.	1/16", 1/8", 1/4", 1/2" only	1 lb.



COLLET SPECIFICATIONS

South Bend No. 3 and 5 collets are interchangeable with 3-C and 5-C respectively. If you are not sure which collet fits your lathe or other machine, compare the measured length and body diameter with specifications in table below. The thread diameter of your collet may be worn and should not be considered an accurate dimension for comparison.

Collet No.	3	6K	5
Sizes of Lathes Used on	9"	10-K	All 1 1/16" Col. Cap. S.B. Lathes
A, Thread Diameter	.642"	.767"	1.242"
B, Thread Length	3/4"	2 1/32"	3/4"
C, Threads per in.	26	26	20
D, Body Diameter	.6495"	.8425"	1.2495"
E, Collet Length	2 1/16"	3"	3 3/32"
F, Head Diameter	.852"	1.160"	1.452"
G, Angle of Head	12°	15°	10°



COLLET SPLASH GUARD

To prevent chips or coolant from flying off lathe spindle, the collet splash guard is attached to the lathe headstock as shown. Guard hooks into socket head cap screws and fits snugly around spindle nose and collet, but does not interfere with use of collet attachment.

FOR THREADED SPINDLE

Cat. No.	Size and Type of Lathe	Ship. Wt.
CL5223NK	9" & 10-K	2 lbs.
CL5223NK	10-K H. M. D.	2 lbs.
CL5223R	10" Underneath M. D.	2 lbs.
CL5223T	13" Underneath M. D.	2 lbs.
CL5223H	16"-16-24"	3 lbs.

FOR 4" TYPE D1 CAM LOCK SPINDLE

Cat. No.	Size and Type of Lathe	Ship. Wt.
CB5223L	10"-1 1/16" Collet	2 lbs.
CB5223T	13"	2 lbs.
CB5223H	16"-16-24"	3 lbs.

FOR TYPE L00 LONG TAPER KEY DRIVE SPINDLE

Cat. No.	Size and Type of Lathe	Ship. Wt.
CA5223L	10"-1 1/16" Collet	2 lbs.
CA5223T	13"	2 lbs.
CA5223H	16"-16-24"	3 lbs.

JACOBS COLLET CHUCKS

CE505. Jacobs Collet Chuck Model 50. Capacity $\frac{3}{32}$ " to $1\frac{1}{16}$ ". For use on all 9" and 10-K lathes. Requires following adaptor plate for fitting. Shipping weight 8 lbs.

CE475NK. Threaded Adaptor Plate, fully machined, ready to assemble on Model 50 Jacobs Collet Chuck listed above, to fit 9" and 10-K lathes. Shipping weight 4 lbs.

CE506. Jacobs Collet Chuck Model 91-82. Capacity $\frac{1}{16}$ " to $1\frac{3}{8}$ ". For direct mounting on threaded spindle of 10" and 13" lathes. Shipping weight 30 lbs.

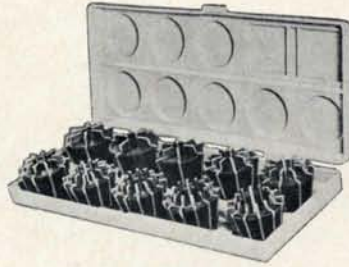
CE507. Jacobs Collet Chuck Model 91-83. Capacity $\frac{1}{16}$ " to $1\frac{3}{8}$ ". For direct mounting on threaded spindles of $14\frac{1}{2}$ ", 16" and 16-24" lathes. Shipping weight 30 lbs.

CE508. Jacobs Collet Chuck Model 91-C8. Capacity $\frac{1}{16}$ " to $1\frac{3}{8}$ ". For direct mounting on 8" D1 Cam Lock Spindle of 17" geared head lathe. Shipping weight 45 lbs.

COLLETS FOR JACOBS COLLET CHUCKS

CE550. Set of 8 Rubber-Flex® Collets for use with CE505 Collet Chuck. Capacity .10" in increments of $\frac{1}{10}$ ".

CE920GJ. Set of 11 Rubber-Flex® Collets for use with CE506, CE507 or CE508 Collet Chuck. Capacity $\frac{1}{16}$ " through $1\frac{3}{8}$ ". Packed in two boxes.



COLLET RACK

This Collet Rack provides a convenient place for keeping collets, centers, spindle sleeve and draw-bar. Recess along lower edge of collet rack is provided for holding spanner wrench. Clamp for attaching to back V-way of lathe bed is supplied.

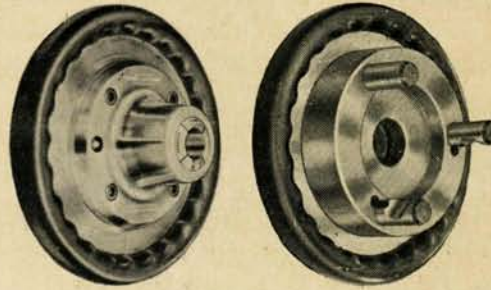
COLLET RACKS FOR SOUTH BEND LATHES

Catalog Number	Size of Lathe	Rack Holds	Ship. Wt.
CE1770NK	9" and 10-K.....	19 Collets	9 lbs.
CE1770L	10"- $1\frac{1}{16}$ " Collet.....	17 Collets	10 lbs.
CE1770Q	13".....	17 Collets	12 lbs.
CE1770H	16"-16-24".....	17 Collets	15 lbs.

DISTANCES BETWEEN CENTERS FOR LATHES WITH 4" TYPE D1 CAM LOCK SPINDLES OR TYPE L00 LONG TAPER KEY DRIVE SPINDLES

Size of Lathes	Distance Between Centers									
	3½' bed	4' bed	4½' bed	5' bed	6' bed	7' bed	8' bed	10' bed	12' bed	14' bed
10"	19"	...	33"	...	...	...	...	...	...	...
13"	...	15"	...	27"	39"	51"	...	...	...	...
16"	...	...	...	...	32"	44"	56"	80"	104"	128"
16-24"	...	...	...	...	29"	41"	53"	77"	101"	125"

SPINDLE NOSE COLLET CHUCK FOR 17" LATHES



SJOGREN HANDWHEEL SPINDLE NOSE COLLET CHUCKS

For direct mounting on 8" D1 Cam Lock Spindle of 17" geared head lathe.

SJOGREN SPINDLE NOSE COLLET CHUCKS

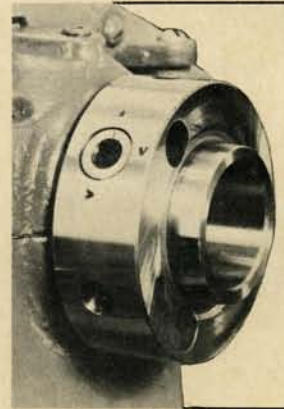
Cat. No.	Capacity	Mfg. Model Number	Uses Collet	Shipping Weight
CE917GJ	$\frac{1}{8}$ "- $1\frac{3}{8}$ "	2	2J	30
CE918GJ	$\frac{1}{8}$ "- $1\frac{3}{4}$ "	3	3J	35
CE919GJ	$\frac{1}{8}$ "- $2\frac{1}{4}$ "	22	22J	40

COLLETS FOR SJOGREN COLLET CHUCKS

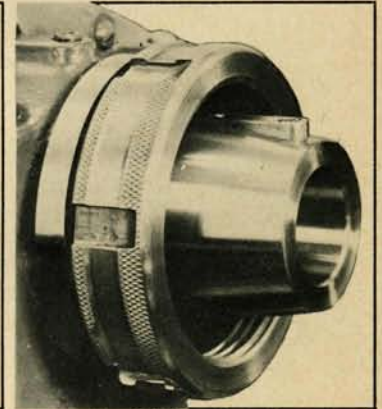
Cat. No.	Fit Collet Chuck No.	Mfg. Model Number
CE3017	CE917GJ	2J
CE3018	CE918GJ	3J
CE3019	CE919GJ	22J

CAM LOCK AND LONG TAPER KEY DRIVE SPINDLES

All South Bend Lathes, $1\frac{1}{16}$ " Collet, can be supplied with 4" Type D1 Cam Lock Spindles or Size L00 Type L Long Taper Key Drive Spindles in lieu of the regular threaded spindles at extra cost. This includes small face plate. Tool room lathes also include Large Face Plate and Handwheel Collet Attachment for Cam Lock or Long Taper Key Drive Spindle Nose. Spindle nose dimensions conform with ASA standards, but spindle bore and inside taper are larger to accommodate our collet equipment, spindle sleeves and centers.



Type D1 Cam Lock Spindle Nose



Type L00 Long Taper Key Drive Spindle Nose

Size of Lathe	Size L00 Long Taper Key Drive Spindle Nose in Lieu of Regular Threaded Spindle Nose	4" Cam Lock Spindle Nose in Lieu of Regular Threaded Spindle Nose
	Cat. No.	Cat. No.
10"	CA8050L	CB8050L
13"	CA8050T	CB8050T
16"-16-24"	CA8050H	CB8050H

Size of Lathe	Size L00 Long Taper Key Drive Spindle Nose in Lieu of Regular Threaded Spindle Nose	4" Cam Lock Spindle Nose in Lieu of Regular Threaded Spindle Nose
	Cat. No.	Cat. No.
10" Toolroom	CA8051L	CB8051L
13" Toolroom	CA8051T	CB8051T
16" Toolroom	CA8051H	CB8051H

STEP CHUCK EQUIPMENT *for South Bend Lathes*

Step chucks are similar to regular collets, except they are designed for holding larger diameters and are used with either the Handwheel type or the Handlever draw-in chuck attachment for holding discs, gear blanks and similar round work.

A step chuck closer, with an internal taper, screws onto the threaded lathe spindle nose. As the step chuck is drawn back into the closer by the draw-bar of the collet attachment, the three jaws of the step chuck are tightened on the work by the taper in the step chuck closer.

The work is rigidly supported and can be chucked quickly and accurately. The large gripping surface prevents distortion of thin walled parts such as tubing and also prevents marring the work.



CLOSERS FOR STEP CHUCKS

Closer required for each size of step chuck, except for the 2" size which fits directly into the collet sleeve included in the equipment of the collet attachment. Closers are threaded to fit spindle nose of lathe.

FOR THREADED SPINDLES

Catalog Number	Size Lathe	Takes Step Chuck Sizes	Shipping Weight
CL6309NK CL6311NK	9" & 10-K	3" and 4" 5" and 6"	3 lbs. 5 lbs.
CL6309LQ CL6311LQ	10" and 13"	3" and 4" 5" and 6"	4 lbs. 6 lbs.
CL6309MH CL6311MH	16", 16-24"	3" and 4" 5" and 6"	5 lbs. 7 lbs.

FOR 4" TYPE D1 CAM LOCK SPINDLE

CB6309LH CB6311LH	10" to 16-24" 10" to 16-24"	3" and 4" 5" and 6"	3 lbs. 5 lbs.
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FOR TYPE L00 LONG TAPER KEY DRIVE SPINDLE

CA6309LH CA6311LH	10" to 16-24" 10" to 16-24"	3" and 4" 5" and 6"	3 lbs. 5 lbs.
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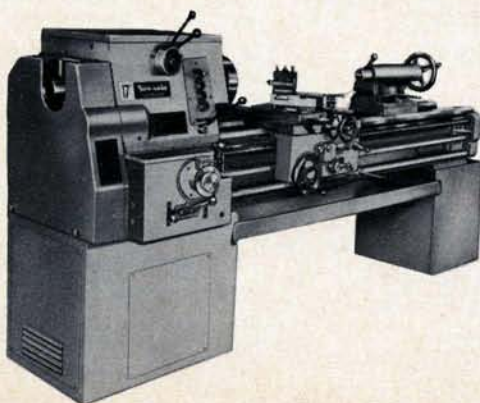


STEP CHUCK BLANKS

Extreme precision can be attained by mounting a step chuck blank in the closer of the lathe and machining either multiple steps or a single cavity. The 2" size fits directly into the collet sleeve and does not require a closer, but all other sizes must be used with a closer of required size.

Catalog Number	Size Lathe	Nominal Size	Maximum Capacity	Shipping Weight
CE5916*	9"	2"	2"	2 lbs.
CE5917		3"	3"	3 lbs.
CE5918		4"	4"	5 lbs.
CE5919		5"	5"	8 lbs.
CE5920		6"	6"	12 lbs.
CE5936*	10-K	2"	2"	3 lbs.
CE5937		3"	3"	4 lbs.
CE5938		4"	4"	6 lbs.
CE5939		5"	5"	8 lbs.
CE5940		6"	6"	12 lbs.
CE5926*	10", 13", 16", 16-24"	2"	2"	4 lbs.
CE5927		3"	3"	4 lbs.
CE5928		4"	4"	5 lbs.
CE5929		5"	5"	9 lbs.
CE5930		6"	6"	13 lbs.

*This step chuck fits directly into collet sleeve and does not require a closer.



SPECIAL PAINT COLORS

South Bend Lathes and other Machine Tools can be finished to order in any special color of paint, or in any combination of colors. When special colors are ordered, the manufacturer's name, paint color and number must be furnished. If certain portions of the machinery are to be finished in different colors, clear and specific instructions must be supplied.

CE5510GJ. One special color paint for 17" Lathe.

CE5515. One special color paint for 16" and 16-24" Lathes with 12' or 14' beds.

CE5522. One special color paint for all Drill Presses, Milling Machines, Shapers, 10-K, 10", 13", 16" and 16-24" Lathes with 6', 7', 8', 9' and 10' beds.

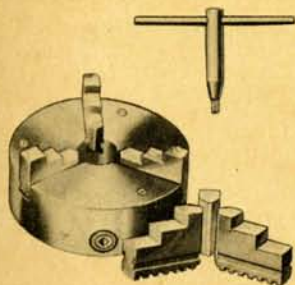
CE5534. For each additional color on any of the above.

MEDIUM DUTY 3 and 4 JAW CHUCKS

Recommended types for South Bend Lathes

THREE-JAW UNIVERSAL LATHE CHUCKS

Two sets of jaws. One set of external—one set internal. Chuck body ground, jaws hardened. Jaws move simultaneously, automatically centering work. Includes wrench, chuck plate fitted to lathe spindle.



FOR THREADED SPINDLES:

Number	Size	Thread	Size of Lathe	Weight
CL3005NK	5"	1½"-8	9" and 10-K	14 lbs.
CL3505NK	5"	1½"-8	9" and 10-K	16 lbs.
CL3506NK	6"	1½"-8	9" and 10-K	25 lbs.
CL3505LQ	5"	2¼"-8	10"-1½/16" Collet	18 lbs.
CL3506LQ	6"	2¼"-8	10"-1½/16" Collet	33 lbs.
CL3505LQ	5"	2¼"-8	13"	18 lbs.
CL3506LQ	6"	2¼"-8	13"	33 lbs.
CL3507Q	7½"	2¼"-8	13"	49 lbs.
CL3505MH	5"	2¾"-6	16"-16-24"	19 lbs.
CL3506MH	6"	2¾"-6	16"-16-24"	29 lbs.
CL3507MH	7½"	2¾"-6	16"-16-24"	50 lbs.
CL3509MH	9"	2¾"-6	16"-16-24"	62 lbs.

FOR 4" TYPE D1 CAM LOCK SPINDLES:

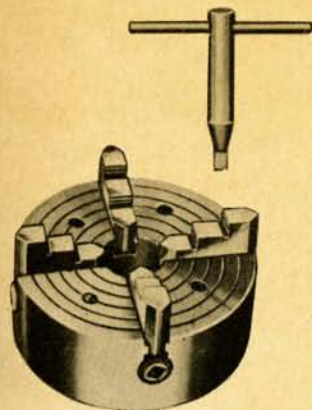
CB3505	5"	3 Pinion	10" & 13"	18 lbs.
CB3506	6"		10", 13"	33 lbs.
CB3507	7½"	Cam Lock Spindle	16"-16-24"	50 lbs.
CB3509	9"		13"	62 lbs.

FOR TYPE L00 LONG TAPER SPINDLES:

CA3505	5"	3 Pinion	10" & 13"	18 lbs.
CA3506	6"		10", 13"	33 lbs.
CA3507	7½"	Long Taper Spindle	16"-16-24"	50 lbs.
CA3509	9"		13"	62 lbs.

FOUR-JAW INDEPENDENT LATHE CHUCKS

Have four reversible jaws with individual screw adjustment. Chuck body ground, jaws hardened and ground. Includes wrench, chuck fitted ready to mount on spindle. Recommended size in bold type.



FOR THREADED SPINDLES:

Number	Size	Thread	Size of Lathe	Weight
CL4006NK	6"	1½"-8	9" and 10-K	14 lbs.
CL4206NK	6"	1½"-8	9" and 10-K	26 lbs.
CL4206R	6"	1⅞"-8	10"-1½/16" Collet	28 lbs.
CL4207R	7½"	1⅞"-8	10"-1½/16" Collet	40 lbs.
CL4206LQ	6"	2¼"-8	10"-1½/16" Collet	28 lbs.
CL4207LQ	7½"	2¼"-8	10"-1½/16" Collet	40 lbs.
CL4206LQ	6"	2¼"-8	13"	28 lbs.
CL4207LQ	7½"	2¼"-8	13"	40 lbs.
CL4209Q	9"	2¼"-8	13"	51 lbs.
CL4207MH	7½"	2¾"-6	16"-16-24"	42 lbs.
CL4209MH	9"	2¾"-6	16"-16-24"	52 lbs.
CL4210MH	10"	2¾"-6	16"-16-24"	62 lbs.
CL4212H	12"	2¾"-6	16"-16-24"	84 lbs.

FOR 4" TYPE D1 CAM LOCK SPINDLES:

CB4206	6"		10" & 13"	26 lbs.
CB4207	7½"	Cam	10", 13"	42 lbs.
CB4209	9"	Lock	16"-16-24"	52 lbs.
CB4210	10"		13"	62 lbs.
CB4212	12"	Spindle	16"-16-24"	84 lbs.

FOR TYPE L00 LONG TAPER SPINDLES:

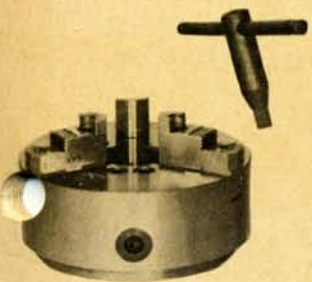
CA4206	6"		10" & 13"	26 lbs.
CA4207	7½"	Long	10", 13"	42 lbs.
CA4209	9"	Taper	16"-16-24"	52 lbs.
CA4210	10"		13"	62 lbs.
CA4212	12"	Spindle	16"-16-24"	84 lbs.

FOR 8" TYPE D1 CAM LOCK SPINDLES:

CL4210GJ	10"	Cam Lock	17"	65 lbs.
CL4212GJ	12"	Spindle	17"	89 lbs.

LATHE CHUCKS WITH THREE 2-PIECE JAWS

(Reversible Tops.)
Chuck body ground, jaws hardened. Jaws move simultaneously, automatically centering work. Includes wrench.



FOR THREADED SPINDLES:

Number	Size	Thread	Size of Lathe	Weight
CLR3506NK	6"	1½"-8	9" and 10-K	33 lbs.
CLR3506R	6"	1⅞"-8	10"-1½/16" Collet	33 lbs.
CLR3506LQ	6"	2¼"-8	10"-1½/16" Collet	33 lbs.
CLR3506MH	6"	2¾"-6	14½" thru 16-24"	33 lbs.
CLR3507Q	7½"	2¼"-8	13"	50 lbs.
CLR3507MH	7½"	2¾"-6	14½" thru 16-24"	50 lbs.
CLR3509MH	9"	2¾"-6	14½" thru 16-24"	62 lbs.

FOR 4" TYPE D1 CAM LOCK SPINDLES:

CBR3506	6"	Cam	10"-1½/16" Collet	33 lbs.
CBR3507	7½"	Lock	13"	50 lbs.
CBR3509	9"	Spindle	16"-16-24"	62 lbs.

FOR TYPE L00 LONG TAPER SPINDLES:

CAR3506	6"	Long	10"-1½/16" Collet	33 lbs.
CAR3507	7½"	Taper	13"	50 lbs.
CAR3509	9"	Spindle	16"-16-24"	62 lbs.

FOR 8" D1 CAM LOCK SPINDLES:

CL3510GJ	10"	Cam Lock	17"	65 lbs.
CL3512GJ	12"	Spindle	17"	89 lbs.



CHUCK PLATES

The outside diameter and face are rough machined. Specify plate that will machine to fit the diameter of the recess in back of chuck.

FOR THREADED SPINDLES: (Accurately Threaded)

Catalog Number	Size Lathe	Spindle Nose Th'd.	O.D. of Plate	Shipping Weight
CE2703NK CE2704NK CE2709NK	9" and 10-K	1½"-8	3½" 5" 7½"	3 lbs. 4 lbs. 10 lbs.
CE2703LQ CE2704LQ CE2705LQ CE2707LQ CE2708LQ CE2709LQ CE2710LQ	10"-1½/16" Collet & 13"	2¼"-8	3½" 5" 5½" 6¼" 7½" 9" 10¼"	4 lbs. 5 lbs. 6 lbs. 7 lbs. 11 lbs. 13 lbs. 18 lbs.
CE2704MH CE2705MH CE2706MH CE2707MH CE2708MH CE2710MH CE2711MH	16"-16-24"	2¾"-6	5" 5½" 6" 6¼" 7½" 10¼" 11¾"	8 lbs. 8 lbs. 9 lbs. 9 lbs. 13 lbs. 20 lbs. 24 lbs.

FOR 4" TYPE D1 CAM LOCK SPINDLES:

CB2704RH CB2707RH CB2709RH	10"-1½/16", 13" 16"-16-24"	Cam Lock Spindle	5" 6¼" 9"	8 lbs. 9 lbs. 16 lbs.
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FOR TYPE L00 LONG TAPER SPINDLES:

CA2704RH CA2707RH CA2709RH	10"-1½/16", 13" 16"-16-24"	Taper Spindle	5" 6¼" 9"	8 lbs. 9 lbs. 16 lbs.
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CHUCK PLATES FITTED TO CHUCKS

Catalog numbers listed below cover fitting charges when chucks are shipped to us to be fitted with chuck plates. Transportation costs not included.

Catalog Number	Size Lathe	Spindle Type
CE2935NK CE2935LQ	9" & 10-K 10"-1½/16" Collet & 13"-1½/16" Collet	Threaded Threaded
CE2935MH CB2935 CA2925	16"-16-24" 10" thru 16-24" 10" thru 16-24"	Threaded 4" D1 Cam Lock L00 Long Taper



SPINDLE NOSE THREAD PROTECTORS

Protect threads of the lathe spindle nose when chuck or face plates are not in use. Includes spanner wrench.

Catalog Number	Thread Size	Size Lathe	Ship. Weight
CL3515NK CL3515LT CL3515FH	1½"-8 2¼"-8 2¾"-6	9" & 10-K 10"-1½/16" Collet & 13" 16"-16-24"	2 lbs. 3 lbs. 4 lbs.



LARGE FACE PLATES FOR 17" LATHES

For 8" D1 Cam Lock Spindle. Has 3 T-slots for clamping work or fixtures plus regular drive slots for lathe dogs. Plate is 15" in diameter. Cam lock studs furnished for mounting on Cam Lock Spindle. **CL2180GJ**. Shipping weight 70 lbs.



LARGE FACE PLATES

Heavily constructed and ribbed on back. Accurately machined and ground with milled thread for precision fit on lathe spindle. Slots provided for clamping work or fixtures.

FOR THREADED SPINDLES:

Catalog No.	Size Lathe	Outside Dia.	Thread	No. of Slots	Shipping Weight
CL2180NK CL2180L CL2180Q CL2180MH CL2180V*	9" and 10-K 10"-1½/16" Collet 13" 16"-16-24" 16-24"	7¾" 8¾" 10¾" 13¼" 22¾"	1½"-8 2¼"-8 2¼"-8 2¾"-6 2¾"-6	6 8 8 8 12	8 lbs. 10 lbs. 19 lbs. 38 lbs. 96½ lbs.

FOR 4" TYPE D1 CAM LOCK SPINDLES:

CB2180L CB2180T CB2180FH CB2180V*	10"-1½/16" Collet 13" 16"-16-24" 16-24"	8¾" 10¾" 13¼" 22¾"	Cam Lock Spindle	8 8 8 12	10 lbs. 19 lbs. 38 lbs. 96½ lbs.
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FOR TYPE L00 LONG TAPER SPINDLES:

CA2180L CA2180T CA2180FH CA2180V*	10"-1½/16" Collet 13" 16"-16-24" 16-24"	8¾" 10¾" 13¼" 22¾"	Taper Spindle	8 8 8 12	10 lbs. 19 lbs. 38 lbs. 96½ lbs.
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*This is an extra large face plate for mounting large diameter work in 16-24" lathe only.



SMALL FACE PLATES

Heavily constructed and accurately finished with milled thread for precision fit on lathe spindle. Have slot for driving lathe dog.

FOR THREADED SPINDLES:

Catalog No.	Size Lathe	Outside Dia.	Thread	No. of Slots	Shipping Weight
CL2175NK CL2175L CL2175Q CL2175MH	9" and 10-K 10"-1½/16" Collet 13" 16"-16-24"	5½" 5¾" 6¾" 8½/16"	1½"-8 2¼"-8 2¼"-8 2¾"-6	1 1 4 4	4 lbs. 5 lbs. 4 lbs. 13 lbs.

FOR 4" TYPE D1 CAM LOCK SPINDLES:

CB2175LT CB2175FH	10"-1½/16" Collet & 13" 16"-16-24"	5¾" 8½/16"	Cam Lock Spindle	1 1	5 lbs. 13 lbs.
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FOR TYPE L00 LONG TAPER SPINDLES:

CA2175L CA2175T CA2175FH	10"-1½/16" Collet 13" 16"-16-24"	5¾" 5¾" 8½/16"	Tapered Spindle	1 1 1	5 lbs. 5 lbs. 13 lbs.
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SMALL FACE PLATES FOR 17" LATHES

For 8" D1 Cam Lock Spindle. Has slots for driving lathe dog. 8¾" in diameter. Cam Lock Studs furnished for mounting on Cam Lock Spindle. **CL2175GJ**. Small Face Plate. Shipping weight 35 lbs.



MULTI-TAPPED FACE PLATES

Have six slots and thirty tapped holes for clamping work or special work holding fixtures. The cored slots are ⅞" wide, and the tapped holes have ⅞"-18 threads. Plates are ⅞" thick.

Catalog No.	Size Lathe	Outside Diameter	Spindle Thread	Shipping Weight
CL1483NK CL1483LQ	9" & 10-K 10"-1½/16" Collet & 13"	8½" 8½"	1½"-8 2¼"-8	13 lbs. 13 lbs.



METRIC TRANSPOSING GEARS

Permit right-hand and left-hand metric threads to be cut (in addition to the regular English pitches) on South Bend Lathes having an English lead screw. When "English" lathes are ordered with

metric transposing gears, the graduations on the tailstock spindle, the cross-feed screw, and the compound rest screw are supplied with English graduations and the compound rest screw and cross-feed screw have English pitch threads. Any deviation will be handled on a special order basis. Write for information for older lathes with single tumbler gear box.

METRIC TRANSPOSING GEARS ORDERED WITH LATHE

Size of Lathe	With English Graduations Catalog Number
10-K	CL1955NK
10"	CL1955R
13"	CL1955T
16"-16-24"	CL1955H
17"	CL1955GJ

METRIC TRANSPOSING GEARS ORDERED SEPARATE FROM LATHE

Size of Lathe	Shipping Weight	Catalog Number
9"	8 lbs.	CL1957NK
10-K	8 lbs.	CL1957NK
10"	51 lbs.	CL1957R
13"	73 lbs.	CL1957T
16"-16-24"	65 lbs.	CL1957H



LATHE DOGS

Should correspond in capacity with diameter of work to be held. Malleable iron. Hollow, headless set screws.

Catalog Number	Cap. In.	Ship. Wt.	Catalog Number	Cap. In.	Ship. Wt.
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LATHE DOGS FOR 13"-16-24" AND LARGER LATHES

CE3826	1/2	1 lb.	CE3832	2	4 lbs.
CE3827	3/4	1 lb.	CE3833	2 1/2	5 lbs.
CE3828	1	2 lbs.	CE3834	3	6 lbs.
CE3829	1 1/4	2 lbs.	CE3835	3 1/2	7 lbs.
CE3830	1 1/2	3 lbs.	CE3836	4	9 lbs.
CE3831	1 3/4	3 lbs.			

LATHE DOGS FOR 9" AND 10" LATHES

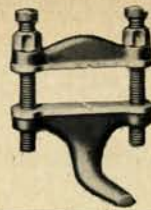
CE3820	3/8	1 lb.	CE3823	1	2 lbs.
CE3821	1/2	1 lb.	CE3824	1 1/4	3 lbs.
CE3822	3/4	2 lbs.	CE3825	1 1/2	3 lbs.

SETS OF LATHE DOGS

Having the correct size of lathe dog at hand for any job will more than compensate for the cost of a full set. Two or more dogs of each size will often save time on production work, as this permits changing one dog while the other is in use.

Cat. No. CE2103. Set of 11 Lathe Dogs, 1/2" to 4" capacity for 13" and larger lathes. Ship. wt. 36 lbs.

Cat. No. CE2107. Set of 6 Lathe Dogs, 3/8" to 1 1/2" capacity for 9" and 10" lathes. Ship. wt. 6 lbs.



CLAMP LATHE DOGS

For holding round, hexagonal or rectangular work. The nuts permit adjusting screws for minimum projection of screw heads beyond body of lathe dog. Each is boxed separately.

Catalog Number	Capacity		Size Lathe Used With	Shipping Weight
	Maximum Opening	Distance Between Screws		
CE160	1 5/8"	1 3/4"	9" & larger	1 lb.
CE161	1 7/8"	2 1/4"	13" & larger	2 lbs.
CE162	2 1/2"	2 3/4"	13" & larger	3 lbs.
CE163	3 1/4"	3 1/2"	14 1/2" & larger	4 lbs.

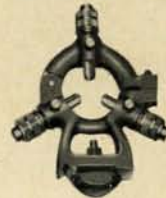


TAPER REDUCING SLEEVES

Standard Morse Taper Reducing Sleeves for fitting drills, reamers, and other taper shank tools to spindle taper of lathe or other machine.

Catalog No.	Morse Taper		Shipping Weight
	Outside	Inside	
CE2525	2	1	8 ozs.
CE2526	3	1	12 ozs.
CE2527	3	2	12 ozs.

STEADY RESTS AND FOLLOWER RESTS



TELESCOPING JAW STEADY REST

Wrenchless adjustment and locking of jaws. Tops are hinged to facilitate inserting and removing shafts or bars. Clamp to inside of bedway. Jaws and other parts are replaceable.

Catalog Number	Size Lathe	Maximum Capacity	Minimum Capacity	Shipping Weight
CL2400N	9 inch	3 in.	3/16 in.	11 lbs.
CL2400K	10-K	3 in.	3/16 in.	11 lbs.
CL2400R	10 inch	3 in.	3/16 in.	13 lbs.
CL2400T	13 inch	3 3/4 in.	3/16 in.	21 lbs.
CL2400H	16 inch	4 3/4 in.	3/16 in.	30 lbs.
CL2400V	16-24 inch	4 3/4 in.	3/16 in.	47 lbs.
CL2400GJ	17 inch	6 in.	3/16 in.	50 lbs.



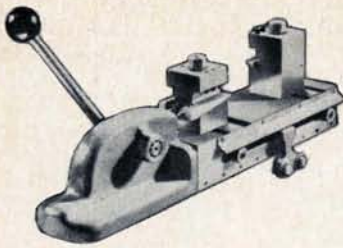
TELESCOPING JAW FOLLOWER REST

The follower rest is attached to the lathe carriage and travels with it. Used to support long, slender shafts while being machined between the lathe centers.

Catalog Number	Size Lathe	Maximum Capacity	Minimum Capacity	Shipping Weight
CL2395N	9 inch	2 in.	3/16 in.	7 lbs.
CL2395K	10-K	2 in.	3/16 in.	7 lbs.
CL2395R	10 inch	2 1/2 in.	3/16 in.	9 lbs.
CL2395T	13 inch	3 3/4 in.	3/16 in.	11 lbs.
CL2395H	16 inch	4 1/4 in.	3/16 in.	17 lbs.
CL2395V	16-24 inch	4 1/4 in.	3/16 in.	21 lbs.
CL2395GJ	17 inch	4 1/4 in.	1/8 in.	35 lbs.

EXTRA LARGE STEADY RESTS for large dia. work.

Cat. No.	Lathe	Capacity	Ship. Wt.
CL2266H	16 inch	4 3/4" to 10 3/4"	65 lbs.
CL2266V	16-24 inch	4 3/4" to 10 3/4"	85 lbs.



COMBINATION DOUBLE TOOL SLIDES

This combination Handlever and Screw Feed Double Tool Cross Slide is mounted on the saddle cross slide dovetail in place of the compound rest assembly. The power cross-feed can be used by removing the handlever and replacing it with the cross-feed screw. This cross slide has front and back square tool blocks in which $\frac{7}{16}$ " square cutter bits can be mounted. The front tool block takes two cutter bits, and the back tool block takes one.

Cat. No.	Size Lathe	Swing over Cross Slide	Ship. Wt.
CL2030N	9"	3 $\frac{3}{16}$ "	36 lbs.
CL2030K	10-K	3 $\frac{3}{16}$ "	37 lbs.
CL2030R	10"	3 $\frac{3}{16}$ "	45 lbs.

SQUARE TURRETS



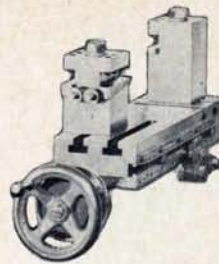
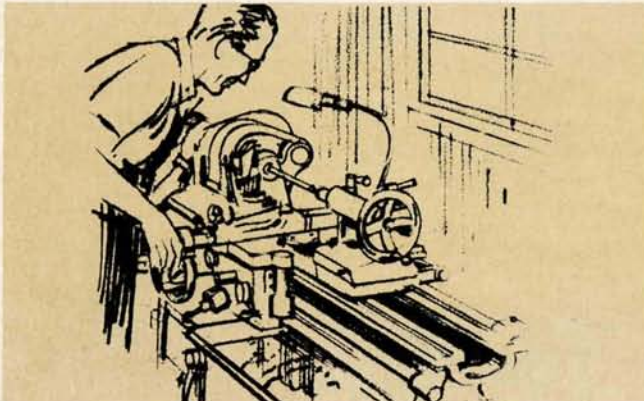
For Double Tool Cross Slides. Designed for use only on screw feed double tool cross slide. Cannot be used with handlever feed or with compound rest cross slide. Four cutting tools can be mounted in the turret tool block. The turret indexes accurately, permitting each tool to be used in proper sequence. A quick acting lever locks the turret securely in each of the four positions.

Catalog Number	Size of Lathe	Size Square	Takes Tools	Shipping Weight
CL3376NR	9" and 10"	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	10 lbs.
CL3376K	10-K	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	11 lbs.
CL3376T	13"	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	20 lbs.
CL3376H	16"	4"	$\frac{5}{8}$ " x $\frac{5}{8}$ "	28 lbs.

TAPER ATTACHMENTS FOR 17" LATHES



Attachments are permanently mounted on the lathe carriage and always ready to use. The swivel bar is graduated in degrees on one end and in inches per foot on the other end. Taper attachment provides a maximum taper of 4" per foot and 16" maximum turning length at one setting. **CL1545GJ**. Taper Attachment for 17" Geared Head Lathe. Ship. wt. approx. 100 lbs.



SCREW FEED DOUBLE TOOL SLIDES

For 13" and 16" lathes. This cross slide fits on the saddle dovetail in place of the compound rest assembly. The cross-feed may be operated by power through the friction clutch in the apron, as well as by the cross-feed handwheel.

Adjustable stops are provided for locating the position of the front and rear tools for repetitive operations. The front tool block takes two square cutter bits and the back tool block takes one. T-slots in the cross slide base are provided for adjusting the position of the tool blocks. Should be ordered with the lathe. Cannot be used on lathe with taper attachment.

Catalog Number	Size Lathe	Swing over Cross Slide	Cross-Feed	Size Bit	Shipping Weight
CL2027T	13"	6 $\frac{7}{8}$ "	ENGLISH	$\frac{7}{16}$ " sq.	60 lbs.
CL2027H	16"	6 $\frac{7}{8}$ "		$\frac{5}{8}$ " sq.	95 lbs.

SQUARE TURRETS



For Compound Rest Cross Slide. It cannot be used on the double tool cross slide. Four cutting tools can be mounted in the turret tool block. The turret indexes accurately, permitting each tool to be used in sequence. A quick acting lever locks the turret securely in each of the four positions.

Catalog Number	Size of Lathe	Size Square	Takes Tools	Shipping Weight
CL3375N	9"	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	13 lbs.
CL3375K	10-K	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	14 lbs.
CL3375R	10"	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	15 lbs.
CL3375T	13"	3"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	24 lbs.
CL3375H	16"-16-24"	4"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	40 lbs.
CL3375GJ	17"	4"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	43 lbs.

TAPER ATTACHMENT



Supplied on 10"-1 $\frac{1}{16}$ " Collet and larger lathes. A telescopic cross-feed screw eliminates the necessity of disconnecting the cross-feed nut when tapers are machined. The cross-feed screw may be used to adjust the lathe tool for the required diameter. When the binding lever is tightened, the cross slide base is rigidly locked to the taper attachment swivel slide, and the thrust is removed from the cross-feed screw. A plain taper attachment is supplied for the 9" and 10-K lathes.

TAPER ATTACHMENT WITH ENGLISH GRADUATIONS

Catalog Number	Size of Lathe	Swing Over Cross Slide	Maximum Taper			Approx. Shipping Weight
			At One Setting	Per Foot	In Degrees	
CL428NK	9"	5"	7"	3 $\frac{1}{2}$ "	16 $\frac{1}{2}$	35 lbs.
CL428NK	10-K	5 $\frac{7}{8}$ "	7"	3 $\frac{1}{2}$ "	16 $\frac{1}{2}$	35 lbs.
CL1545R	10"	5 $\frac{3}{4}$ "	8 $\frac{1}{2}$ "	3 $\frac{1}{2}$ "	16 $\frac{1}{2}$	40 lbs.
CL1545T	13"	8"	9 $\frac{1}{4}$ "	3 $\frac{1}{2}$ "	16 $\frac{1}{2}$	65 lbs.
CL1545H	16"	9 $\frac{5}{8}$ "	11 $\frac{1}{2}$ "	3 $\frac{1}{2}$ "	16 $\frac{1}{2}$	100 lbs.
CL1545H	16-24"	18 $\frac{3}{4}$ "	11 $\frac{1}{2}$ "	3 $\frac{1}{2}$ "	16 $\frac{1}{2}$	100 lbs.

HARDENED AND GROUND THREAD SCREWS

Cross-feed Screws and Compound Rest Screws with hardened and ground threads can be supplied in lieu of regular screws on 10" and larger South Bend Lathes.

CROSS-FEED AND COMPOUND REST SCREWS WITH HARDENED AND GROUND THREAD IN LIEU OF REGULAR SCREWS

Regular Cross-Feed		Taper Attachment Cross-Feed	
Cat. No.	Size Lathe	Cat. No.	Size Lathe
CL2032L	10"	CL2198L	10"
CL2032T	13"	CL2198T	13"
CL2032H	16"-16-24"	CL2198H	16"-16-24"

CL2222T. Hardened and ground thread cross-feed screw in lieu of regular screw for 13" lathe screw feed double tool cross slide.

CL2222H. Hardened and ground thread cross-feed screw in lieu of regular screw for 16" lathe screw feed double tool cross slide.

FOUR POSITION CROSS SLIDE STOPS



Used with the double tool cross slide. Four adjustable stops for locating positions of the cutting tools for each of four successive operations.

Cat. No.	Size Lathe	Ship. Wt.
CL2154NR	9", 10-K and 10"	2 lbs.

MILLING ATTACHMENTS



They mount on the compound rest base, permitting the power cross-feeds and power longitudinal feeds to be employed for milling and boring operations on work held in the milling attachment vise. The angle plate to which the vertical slide is attached is graduated 180° in both the horizontal and vertical planes. Includes: milling and keyway cutting attachment, two V-blocks for holding round work, one crank handle for feed screw, one double end wrench, and necessary bolts and nuts for installing attachment on lathe.

Catalog Number	Size of Lathe	Vert. Feed Ins.	Cross Feed Ins.	Vise Holds Ins.	Jaw Depth Ins.	Jaw Width Ins.	Ship. Wt. Lbs.
CL2680NK	9-10-K	3	5/8	1 1/2	1 3/16	3	13
CL2680R	10"	3	5/8	1 3/4	1 5/16	3 1/2	25
CL2680T	13"	4 1/2	8/8	2 7/8	1 11/16	4 7/8	40
CL2680H	16"	6	10 1/2	4	2	5 3/4	65
CL2680H	16-24"	6	10 1/2	4	2	5 3/4	65



PLAIN MILLING ARBORS

For milling cutters with 1-inch hole. Have No. 3 Morse taper shank, nut and spacing collars.

CE109. Plain Arbor. Ship. wt. 3 lbs.

OFFSET BASE FOR MILLING ATTACHMENTS

For the 9" and 10-K lathes. When used, the position of the milling attachment is 1 1/2" farther away from the center line of the lathe spindle. Permits milling parts that might otherwise be too large for machining. Includes screws for mounting.

CL2408NK. Offset Base for milling attachment. Fits 9" and 10-K lathes only. Ship. wt. 5 lbs.

GRINDING ATTACHMENTS



EXTERNAL GRINDING ATTACHMENTS

Supplied with 1/4 h.p. constant speed motor and 4" x 1/2" CE2759 grinding wheel. Spindle speed is approximately 5275 r.p.m. Clamp bolt equipment is not included. See below.

Catalog Number	Motor Specifications			Shipping Weight
	Phase	Cycle	Volts	
CE301B	1	60	115	43 lbs.
CE303DF	3	60	230/460	43 lbs.

CLAMP BOLT EQUIPMENT

The Clamp Bolt Equipment required for various sizes of South Bend Lathes is listed in the table below. Be sure to include this when ordering a grinding attachment.

Catalog Number	Size Lathe	Shipping Weight
CE307NK	9" & 10-K	1 lb.
CE307R	10"	1 lb.
CE307T	13"	3 lbs.
CE307H	16"-16-24"	4 lbs.
CE307GJ	17"	5 lbs.

INTERNAL GRINDING ATTACHMENT

SPECIFICATIONS

Grinding wheel speed.....30,000 r.p.m.
Maximum depth of ground hole with 1-inch wheel.....3 7/8 inches
Maximum wheel diameter recommended.....1-inch

Accessories supplied:

Four 1/4" wheel arbors: approx. lgths. 2 3/16", 2 1/8", 3 1/16", 4 1/16".
Two grinding wheels: 1/4" bore; 1/4" face; 5/8" and 3/4" diameters.
One chuck for mounted wheels.....1/8" capacity
Eight-foot extension cord, plug, and switch. (115 volt motor only)

CE601B. Internal Grinding Attachment with 1 ph., 60 cy., 115 v., A.C. motor and accessories listed above, but without clamp bolt equipment.

CE603DF. Same as above but with 3 ph., 60 cy., 230/460 v., A.C. motor less switch.

GRINDING WHEELS

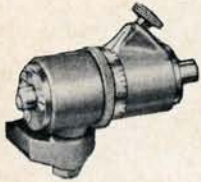
The grinding wheels listed below cover the more important classes of work. They are 4" in diameter with 1/2" face and 1/2" hole, to fit external grinding attachment. Shipping weight 2 lbs. each.

Cat. No.	Type of Work	Class of Work
CE2759	General Work	Rough or Finish
CE2758	Cutting Tools	Rough or Finish
CE2774	Automobile Valves	Rough or Finish
CE2757	Cast Iron	Finish Grinding
CE2769	Soft Steel	Finish Grinding

CUP GRINDING WHEELS

3/4" outside diameter, 1 1/4" face, 1/2" hole for use with External Grinding Attachment. Used for sharpening reamers, milling cutters, etc.

CE3236. Cup Grinding Wheel. Ship. wt. 2 lbs.



MICROMETER CARRIAGE STOPS

Have accurately graduated micrometer collars. Stops may be locked for repetitive operations on duplicate work.

Cat. No.	Size Lathe	Ship. Wt.
CL968NK	9" & 10-K	2 lbs.
CL968R	10"	4 lbs.
CL968T	13"	4 lbs.
CL968FH	16"-16-24", 17"	7 lbs.

DIAL INDICATOR CARRIAGE STOPS



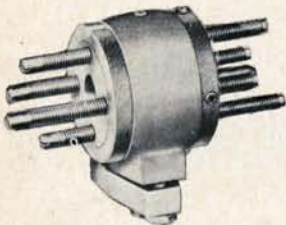
Position of carriage is clearly shown on face of dial which has a total movement of .250". Indicator support bar has 5 1/2" adjustment in bracket.

Case is so constructed that indicator is protected from accidental damage by excessive pressure of carriage against the indicator.

Two mounting brackets are supplied, one for work close to headstock, and the other for any position along length of bed.

CL2795RT. Dial Indicator Carriage Stop for 10" or 13" Lathe. Shipping wt. 10 lbs.

CL2795FH. Dial Indicator Carriage Stop for 16", 16-24" or 16" Turret Lathe.



FOUR POSITION CARRIAGE STOPS

Each of the four adjustable stops may be set for a different tool position and may be revolved into position to locate the carriage for each of four successive cuts.

Catalog Number	Size Lathe	Shipping Weight
CL2185NK	9" & 10-K	6 lbs.
CL2185R	10"	6 lbs.
CL2185T	13"	6 lbs.
CL2185FH	16"-16-24"	10 lbs.
CL2185GJ	17"	10 lbs.



THREAD CUTTING STOPS

Used to regulate the depth of cut for each successive chip when cutting screw threads.

Catalog Number	Size Lathe	Shipping Weight
CL2250NK	9" & 10-K	1/2 lb.



PLAIN CARRIAGE STOPS

Locate the position of the cutting tool for facing, necking, cutting shoulders, machining grooves and similar operations.

Catalog Number	Size Lathe	Shipping Weight
CL758NK	9" & 10-K	2 lbs.
CL758R	10"	4 lbs.
CL758T	13"	4 lbs.
CL758FH	16"-16-24"	7 lbs.



THREAD INDICATOR

Eliminates reversing the lathe spindle when cutting threads. Dial is numbered and graduated to show when to close half-nuts on lead screw to catch the thread on each successive cut.

Catalog Number	Size Lathe	Shipping Weight
CL810NK	9" & 10-K	2 lbs.
CL810R	10"	3 lbs.
CL810TH	13", 16"-16-24"	5 lbs.
CL810GJ	17"	5 lbs.



FINE FEED HANDWHEELS

Supplied separate from lathe as an extra or in lieu of regular apron handwheel assembly at extra cost when specified at time lathe is ordered.

Size Lathe	In Lieu of Regular Handwheel	Extra, in Addition to Regular Handwheel	
	Cat. No.	Cat. No.	Ship. Wt.
13"	CL3305TF	CL3307TF	12 lbs.
16"-16-24"	CL3305H	CL3307H	15 lbs.

TURNING TOOL HOLDERS



Straight



Right-Hand



Left-Hand

Include tool holder with hardened steel set screw, one un-ground hardened high-speed steel cutter bit, and a hardened drop-forged steel wrench.

Catalog Number	Size Lathe	Size Shank	Size Cutter	Ship. Wt.
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STRAIGHT SHANK TURNING TOOL HOLDERS

CE847S	9", 10-K & 10"	3/8" x 1 3/16"	1/4" x 1/4"	1 lb.
CE846S	9", 10-K & 10"	3/8" x 7/8"	1/4" x 1/4"	2 lbs.
CE852S	13"	1/2" x 1 1/8"	5/16" x 5/16"	3 lbs.
CE853S	16"-16-24"	5/8" x 1 3/8"	3/8" x 3/8"	3 lbs.

RIGHT-HAND TURNING TOOL HOLDERS

CE847R	9", 10-K & 10"	3/8" x 1 3/16"	1/4" x 1/4"	1 lb.
CE846R	9", 10-K & 10"	3/8" x 7/8"	1/4" x 1/4"	2 lbs.
CE852R	13"	1/2" x 1 1/8"	5/16" x 5/16"	3 lbs.
CE853R	16"-16-24"	5/8" x 1 3/8"	3/8" x 3/8"	3 lbs.

LEFT-HAND TURNING TOOL HOLDERS

CE847L	9", 10-K & 10"	3/8" x 1 3/16"	1/4" x 1/4"	1 lb.
CE846L	9", 10-K & 10"	3/8" x 7/8"	1/4" x 1/4"	2 lbs.
CE852L	13"	1/2" x 1 1/8"	5/16" x 5/16"	3 lbs.
CE853L	16"-16-24"	5/8" x 1 3/8"	3/8" x 3/8"	3 lbs.

CUTTING-OFF TOOL HOLDERS



Straight

Right-Hand

Left-Hand

Include tool holder, one cutter blade and wrench.

Catalog Number	Size Lathe	Size Shank	Size Cutter	Ship. Weight
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Straight Shank Cutting-off Tool Holders

CE833S	9", 10-K & 10"	3/8" x 1 3/16"	3/32" x .595"	1 lb.
CE736S	9", 10-K & 10"	5/16" x 1 3/16"	5/64" x .475"	2 lbs.
CE883S	13"	1/2" x 1 1/8"	1/8" x .735"	3 lbs.
CE884S	16"-16-24"	5/8" x 1 3/8"	1/8" x .870"	3 lbs.

Right-Hand Cutting-off Tool Holders

CE833R	9", 10-K & 10"	3/8" x 1 3/16"	3/32" x .595"	1 lb.
CE736R	9", 10-K & 10"	5/16" x 1 3/16"	5/64" x .475"	2 lbs.
CE883R	13"	1/2" x 1 1/8"	1/8" x .735"	3 lbs.
CE884R	16"-16-24"	5/8" x 1 3/8"	1/8" x .870"	3 lbs.

Left-Hand Cutting-off Tool Holders

CE736L	9", 10-K & 10"	5/16" x 1 3/16"	5/64" x .475"	2 lbs.
CE883L	13"	1/2" x 1 1/8"	1/8" x .735"	3 lbs.
CE884L	16"-16-24"	5/8" x 1 3/8"	1/8" x .870"	3 lbs.

CARBIDE TURNING TOOL HOLDERS



Straight

Right-Hand

Left-Hand

Include tool holder with hardened steel set screw and a hardened, drop-forged steel wrench. Cutter bit not included.

CE817S. Straight Carbide Turning Tool Holder. For 3/8" cutter bits. Shipping weight 3 lbs.

CE817R. Right-Hand Carbide Turning Tool Holder. For 3/8" cutter bits. Shipping weight 3 lbs.

CL817L. Left-Hand Carbide Turning Tool Holder. For 3/8" cutter bits. Shipping weight 3 lbs.

GROUND CUTTER BITS FOR TURNING TOOL HOLDERS

Finish ground and ready for use when mounted in tool holder. When ordering, be sure to specify the catalog numbers and the letters designating shapes of bits wanted.



A L.H. Turning
B Round Nose
C R.H. Turning
D L.H. Side
E Threading
F R.H. Side

Size Square Inch	Length Cutter Inches	Single Bit		Set of 6 Bits	
		Cat. No.	Shpg. Wt.	Cat. No.	Ship. Wt.
1/4	2	CE1305	4 ozs.	CE1779	10 ozs.
5/16	2 1/2	CE1313	5 ozs.	CE1777	10 1/2 ozs.
3/8	3	CE1316	5 ozs.	CE1778	11 ozs.

UNGROUND CUTTER BITS

These cutter bits are made of good quality high-speed steel. They are heat-treated and hardened and are ready for use when sharpened.

UNGROUND HIGH SPEED STEEL CUTTER BITS

Catalog Number	Size Square	Length Cutter	Shipping Weight
CE3531	3/16"	1"	3 ozs.
CE3532	3/16"	1 1/2"	3 ozs.
CE3533	1/4"	2"	4 ozs.
CE3534	5/16"	2 1/2"	5 ozs.
CE3535	3/8"	3"	5 ozs.
CE3536	7/16"	3 1/2"	7 ozs.
CE3537	1/2"	4"	12 ozs.
CE3538	5/8"	4 3/8"	1 lb.

UNGROUND HIGH SPEED STEEL CUTTER BITS IN LOTS

Size Square Inch	Length Cutter Inches	Lot of 6 Bits		Lot of 24 Bits	
		Cat. No.	Ship. Wt.	Cat. No.	Ship. Wt.
3/16	1			CE2370	1 lb.
3/16	1 1/2			CE2371	1 lb.
1/4	2	CE1629	10 ozs.	CE2372	2 lbs.
5/16	2 1/2	CE1632	10 1/2 ozs.	CE2373	3 lbs.
3/8	3	CE1633	11 ozs.	CE2374	4 lbs.
7/16	3 1/2	CE2501	2 lbs.	CE2375	6 lbs.
1/2	4	CE2502	3 lbs.	CE2393	13 lbs.
5/8	4 3/8	CE2503	4 lbs.	CE2376	15 lbs.

BLADES FOR CUTTING OFF TOOL HOLDERS



Made from high-speed steel, heat-treated, hardened, ground on the edges.

Cat. No.	Size of Blade	Ship. Wt.
CE876	3/32" x .595" x 5"	5 ozs.
CE1192	3/32" x .475" x 4 1/2"	5 ozs.
CE878	1/8" x .735" x 5"	6 ozs.
CE879	1/8" x .870" x 6"	8 ozs.

CUTTER BIT GRINDING BLOCKS



Just dial your angle and grind! These new cutter bit grinding blocks come complete with master block—4 bit holders—3/16", 1/4", 3/8" and 5/8" capacity. Wrench included.

CE2168. Cutter Bit Grinding Block. Ship. wt. 3 lbs.

SURFACE PLATES

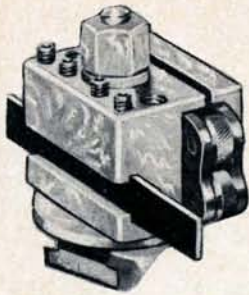
Made of close-grained normalized cast iron. Top surface is precision ground and is supported by heavy ribs on back. Wooden cover is supplied to protect ground surface. Size 12" x 17" x 3" with top 3/4" thick.

CE2215. Surface Plate. Shipping weight 75 lbs.

ANGLE PLATES

For clamping work on the face plate or compound rest base of the lathe. Also for setting up work on the shaper, drill press, milling machine, etc. Size 4 1/2" x 3" x 2".

CE9640. Angle Plate. Shipping weight 4 lbs.

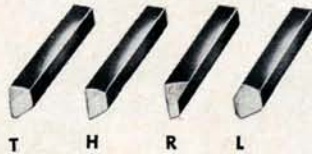


10 IN 1 TOOL HOLDERS

Provide rigid support and are equipped with self-aligning knurling heads having No. CE3151 medium diamond knurls. Screw adjustments for tool height are easily made, and they stay put. No readjustment is required when replacing tools. Cut off blade shown in illustration is not included.

Catalog Number	Size Lathe Inches	Holds Cutter Bits Inch	Holds Boring Bars Inch	Holds Cut-off Blades Inch	Ship. Wt. Lbs.
CE1413NK CE1413R	9 & 10-K 10	$\frac{3}{8} \times \frac{3}{8}$ $\frac{3}{8} \times \frac{3}{8}$	$\frac{3}{8}$ to $\frac{3}{4}$ $\frac{3}{8}$ to $\frac{3}{4}$	$\frac{3}{32} \times .595$ $\frac{3}{32} \times .595$	5 5

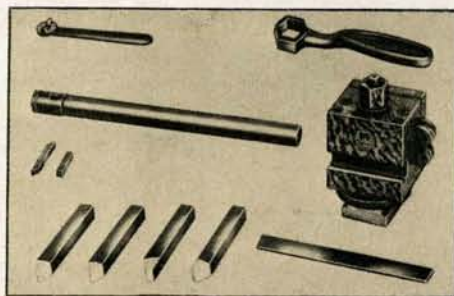
GROUND CUTTER BITS FOR 10 IN 1 TOOL HOLDERS



For use in 10 in 1 tool holder listed above. Made in four shapes: T for turning, H for threading, R for facing on right side of work, and L for facing on left side of work. When ordering single bits be sure to specify shape wanted.

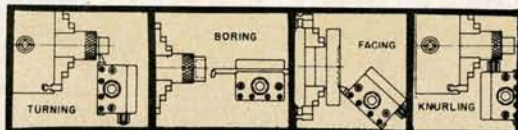
Size Square Inch	Length Cutter Inches	Single Bit		Set of 4 Bits	
		Cat. No.	Ship. Wt.	Cat. No.	Ship. Wt.
$\frac{3}{8}$	3	CE2267	5 ozs.	CE2776	1 lb.

10 IN 1 TOOL HOLDER KITS



Save money by purchasing this kit. It includes boring bar, cut-off blade, set of four ground high speed cutter bits, tool holder, knurling head, bolt, clamp and all other equipment regularly supplied with the 10 in 1 tool holder.

Catalog No. of Kit	Size of Lathe	Items Included in Kit			Ship. Weight
		Cutter Bits	Boring Bar	Cut-off Blade	
CE2930NK CE2930R	9" & 10-K 10"	CE2776 CE2776	CE2419 CE2419	CE876 CE876	7 lbs. 7 lbs.



KNURLING TOOLS

Holder is made of drop-forged steel, heat-treated and hardened. Knurls are made of tool steel, hardened and tempered. Supplied with medium diamond knurls only.

Cat. No.	Size Lathe	Shank Size	Ship. Wt.
CE820	9", 10-K & 10"	$\frac{3}{8}$ " x $\frac{3}{4}$ "	2 lbs.
CE665	9", 10-K & 10"	$\frac{5}{16}$ " x $\frac{3}{4}$ "	2 lbs.
CE893	13"	$\frac{1}{2}$ " x $1\frac{1}{8}$ "	2 lbs.
CE894	16"-16-24" & 17"	$\frac{5}{8}$ " x $1\frac{3}{8}$ "	3 lbs.

REVOLVING HEAD KNURLING TOOLS



Revolving head carries three sets of knurls for fine, medium and coarse diamond patterns.

Cat. No.	Size Lathe	Shank Size	Ship. Wt.
CE3615	9", 10-K & 10"	$\frac{3}{8}$ " x $\frac{7}{8}$ "	2 lbs.
CE3616	13"	$\frac{1}{2}$ " x $1\frac{1}{8}$ "	2 lbs.
CE3617	16"-16-24" & 17"	$\frac{5}{8}$ " x $1\frac{3}{8}$ "	3 lbs.

EXTRA KNURLS FOR KNURLING TOOLS



For use with Knurling Tools and with 10 in 1 Tool Holder. Illustrations above show actual style of knurling produced. Supplied in pairs.

Catalog Number	Pattern	Size	Fits Knurling Tools	Ship. Wt.
CE3150†	Fine Diamond	$\frac{5}{8}$ " x $\frac{5}{16}$ "	CE820 & CE665	4 ozs.
CE3151†	Med. Diamond	$\frac{3}{8}$ " x $\frac{5}{16}$ "	CE820 & CE665	4 ozs.
CE3152†	Coarse Diamond	$\frac{3}{8}$ " x $\frac{5}{16}$ "	CE820 & CE665	4 ozs.
CE3153†	Fine Straight	$\frac{5}{8}$ " x $\frac{5}{16}$ "	CE820 & CE665	4 ozs.
CE3154†	Med. Straight	$\frac{5}{8}$ " x $\frac{5}{16}$ "	CE820 & CE665	4 ozs.
CE3155†	Coarse Straight	$\frac{5}{8}$ " x $\frac{5}{16}$ "	CE820 & CE665	4 ozs.
CE3156	Fine Diamond	$\frac{3}{4}$ " x $\frac{3}{8}$ "	CE893 & CE894	5 ozs.
CE3157	Med. Diamond	$\frac{3}{4}$ " x $\frac{3}{8}$ "	CE893 & CE894	5 ozs.
CE3158	Coarse Diamond	$\frac{3}{4}$ " x $\frac{3}{8}$ "	CE893 & CE894	5 ozs.
CE3159	Fine Straight	$\frac{3}{4}$ " x $\frac{3}{8}$ "	CE893 & CE894	5 ozs.
CE3160	Med. Straight	$\frac{3}{4}$ " x $\frac{3}{8}$ "	CE893 & CE894	5 ozs.
CE3161	Coarse Straight	$\frac{3}{4}$ " x $\frac{3}{8}$ "	CE893 & CE894	5 ozs.

†Fits all sizes of 10 in 1 Tool Holders.

HARDENED AND GROUND BED WAYS

Heat Treated and precision ground, they resist wear and scoring.

Catalog Number	Size	Bed Length Feet
CL4954Z	10-K	$3\frac{1}{2}$
CL4954R	10-K	$4\frac{1}{2}$

HEAVY DUTY BORING AND TURNING TOOLS



Holder takes bars from $\frac{3}{8}$ " up to capacity listed in tabulation. Tool may be swiveled to any angle and holder may be reversed for turning extra large diameters. Bar has slots for holding bit at 90° and 45°. Supplied either with or without boring bar.

Size Lathe	9" & 10-K	10"	13"	16" & 16-24"
Max. Bar Cap.	$\frac{3}{4}$ "	$\frac{3}{4}$ "	$1\frac{1}{4}$ "	$1\frac{1}{2}$ "
Size Boring Bar	$\frac{3}{4}$ " x 12"	$\frac{3}{4}$ " x 12"	1" x 16"	$1\frac{1}{8}$ " x 18"
Size Cutter Bit	$\frac{1}{4}$ " x $\frac{1}{4}$ "	$\frac{1}{4}$ " x $\frac{1}{4}$ "	$\frac{5}{16}$ " x $\frac{5}{16}$ "	$\frac{3}{8}$ " x $\frac{3}{8}$ "
Holder Only				
Cat. No.	CE3677NK	CE3677R	CE3677T	CE3677H
Ship. Wt. Lbs.	3	3	5	7
Holder and Bar				
Cat. No.	CE469NK	CE469R	CE469T	CE469H
Ship. Wt. Lbs.	8	8	14	18



STYLE "B" BORING TOOLS

Includes drop-forged steel boring tool holder with hardened steel set screws, sleeve bar, end cap, two wrenches and two unground high-speed steel cutter bits. Will take the following sizes of boring bars: No. CE423, $\frac{1}{8}$ " to $\frac{1}{2}$ "; No. CE431, $\frac{1}{4}$ " to $\frac{3}{4}$ "; No. CE432, $\frac{3}{8}$ " to 1".

Cat. No.	Size of Lathe	Size of Shank, Inches	Size Bar Inch	Size of Cutter, Inch	Ship. Wt. Lbs.
CE423	9", 10-K, & 10"	$\frac{5}{16}$ x $\frac{3}{4}$	$\frac{1}{2}$ x $7\frac{5}{8}$	$\frac{3}{16}$ x $\frac{3}{16}$	2
CE431	13"	$\frac{1}{2}$ x $1\frac{1}{8}$	$\frac{3}{4}$ x 11"	$\frac{1}{4}$ x $\frac{1}{4}$	5
CE432	16", 16-24"	$\frac{5}{8}$ x $1\frac{3}{8}$	$1\frac{1}{16}$ x $13\frac{1}{4}$	$\frac{5}{16}$ x $\frac{5}{16}$	8



STYLE "D" BORING TOOLS

For small internal diameters. Includes drop-forged steel boring tool holder, one boring bar, and wrench. Will take the following sizes of boring bars: No. CE3175, $\frac{1}{8}$ " to $\frac{1}{2}$ "; No. CE3176, $\frac{1}{4}$ " to $\frac{3}{4}$ "; No. CE3177, $\frac{3}{8}$ " to 1".

Cat. No.	Size of Lathe	Size of Shank, Inches	Size Bar, Inches	Ship. Wt. Lbs.
CE3175	9", 10-K, & 10"	$\frac{5}{16}$ x $\frac{3}{4}$	$\frac{1}{4}$ x 5"	2
CE3176	13"	$\frac{1}{2}$ x $1\frac{1}{8}$	$\frac{3}{8}$ x 7"	4
CE3177	14 $\frac{1}{2}$ ", 16", 16-24"	$\frac{5}{8}$ x $1\frac{3}{8}$	$\frac{7}{16}$ x 8"	6



SOLID BORING BARS

For use with Style "B" and "D" Boring Tools and in the 10 in 1 Tool Holder. Can be ground for boring or internal thread cutting.

Cat. No.	Bar Inches	Ship. Wt.
CE3856	$\frac{1}{8}$ x 4	3 ozs.
CE3857	$\frac{3}{16}$ x $4\frac{1}{2}$	4 ozs.
CE3858	$\frac{1}{4}$ x 5	5 ozs.
CE3859	$\frac{5}{16}$ x 6	5 ozs.
CE3860	$\frac{3}{8}$ x 7	8 ozs.
CE3861	$\frac{7}{16}$ x 8	1 lb.

SLEEVE BORING BARS



For use with Style "B" and "D" Boring Tools, Heavy Duty Boring Tool and in the 10 in 1 Tool Holder. Sleeve can be adjusted to hold square high speed steel cutter bit at 45° and 90° angles for boring and inside thread cutting operations. Includes two cutter bits and wrench.

Cat. No.	Size of Bar	Size of Cutter Bit	Ship. Wt.
CE2419	$\frac{1}{2}$ " x $7\frac{5}{8}$ "	$\frac{3}{16}$ " x $\frac{3}{16}$ "	1 lb.
CE2420	$\frac{3}{4}$ " x 11"	$\frac{1}{4}$ " x $\frac{1}{4}$ "	2 lbs.
CE2421	$1\frac{5}{16}$ " x $13\frac{1}{4}$ "	$\frac{5}{16}$ " x $\frac{5}{16}$ "	4 lbs.



PLAIN BORING BARS

For use with 10 in 1 Tool Holder and other Boring Tool Holders. Bars will hold cutter bit at 45° and 90° angles. Includes cutter bit and wrench.

Cat. No.	Bar Size	Cutter Bit	Ship. Wt.
CE2943	$\frac{3}{4}$ " x 12"	$\frac{1}{4}$ " x $\frac{1}{4}$ "	3 lbs.
CE2944	1" x 16"	$\frac{5}{16}$ " x $\frac{5}{16}$ "	5 lbs.
CE2945	$1\frac{1}{8}$ " x 18"	$\frac{3}{8}$ " x $\frac{3}{8}$ "	7 lbs.



PRECISION BORING BARS FOR CHUCK

Designed especially for boring holes in turret head with extreme precision. Can be used for any similar operation in which the work is mounted on the lathe carriage or turret and the boring bar is held in the lathe chuck.

CE3420. Precision Boring Bar for Chuck. Shipping weight 1 lb.



THREADING TOOLS

Includes threading tool holder, wrench and one high speed steel single point cutter. Choice of 60° cutter for U. S. Standard, V, or metric thread.

Cat. No.	Size of Lathe	Size of Shank	Ship. Wt.
CE845	9", 10-K & 10"	$\frac{3}{8}$ " x $\frac{3}{4}$ "	2 lbs.
CE648	9", 10-K & 10"	$\frac{5}{16}$ " x $\frac{3}{4}$ "	2 lbs.
CE867	13"	$\frac{1}{2}$ " x $1\frac{1}{8}$ "	3 lbs.
CE868	16"	$\frac{5}{8}$ " x $1\frac{3}{8}$ "	4 lbs.

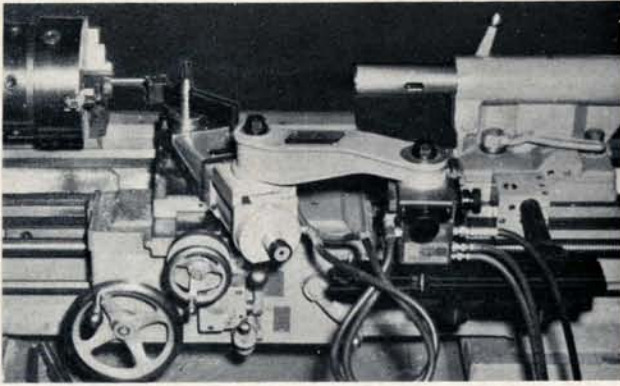


EXTRA CUTTERS FOR THREADING TOOLS

Formed cutters properly heat-treated and ground, ready for use with Threading Tools described above. Made of high speed steel.

Catalog Number	Fits Thread Tools	Shipping Weight
60° Angle		
CE3480	CE845 & CE648	3 ozs.
CE3481	CE867	4 ozs.
CE3482	CE868	5 ozs.

TRUE-TRACE TRACING ATTACHMENTS



SELF CONTAINED UNIT—Uses its own set of dovetail ways and cylinder. Template rail, bracket and power unit with all lines and fittings furnished.

NO MACHINE CONVERSION REQUIRED—Can be moved from machine to machine quickly, easily—after initial installation. Tracer requires but a few minutes to install or remove from lathe.

PROVEN HYDRAULIC OPERATION—Trouble free hydraulic servo-valve and cylinder has proven itself in thousands of installations—completely reliable—year after year.

ELIMINATES OPERATOR ERROR—Only one dimension to measure then other dimensions stay true, part after part. Only low cost single point tools are used. Shape and contour are controlled by template and tracer.

SPECIFICATIONS

Attachment Series	Mark "O-A"	Mark II-A
	(for 10" & 13" lathes)	(for 16" & 17" lathes)
Cylinder Bore	1.75 in.	3.0 in.
Cylinder Stroke	3.0 in.	4.0 in.
Tracer Stylus		
Pressure	6-9 oz.	6-9 oz.
Tracer Stylus Bore...	0.375 in.	0.375 in.
Lathe Swing	10-13 in.	14½, 16, 16-24, & 17 in.
Valve Slide Adjustment:		
Parallel to Cross Slide (In-and-out)	3¾ in.	3 in.
Parallel to Bed (Longitudinal)	½ in.	1 in.
Length of Template Roll	14 in.	48 in.
Hydraulic Power Unit		
Horsepower	½	½
Voltage	115/230V	115/230V
Amps.	80/40	5.8/2.9
Phase	single	single
Cycle	60	60
Pump Capacity	1.5 gpm	1.5 gpm
Normal Operating Pressure	160 psi	160 psi
Maximum Output Pressure	275 psi	275 psi
Reservoir Capacity ..	15 gal.	15 gal.
Shipping Weight (Complete Attachment)	185 lbs.	275 lbs.

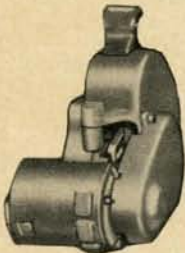
F.O.B. El Monte, Cal.

NOTE: A 230/460 V., 3PH, 60 CPS heavy duty power unit may be supplied at additional cost.

BASIC ATTACHMENT—Unit is furnished complete except for fitting to specific lathe. Customer does own fitting to lathe, following instructions furnished by True-Trace factory.

CUSTOM FITTED ATTACHMENT—Unit is furnished complete from True-Trace, fitted to specific lathe. Customer has only to install on machine.

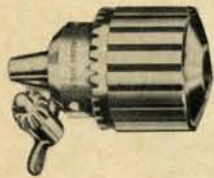
INDEPENDENT POWER FEEDS FOR 10" LATHES



Includes a special high-speed drive which provides spindle speeds ranging from 55 to 2400 r.p.m., and a separate motor with gearing for driving the power carriage feeds independent of the lathe spindle speeds. The rate of feed is determined by the speed of the lathe spindle. For example, when the spindle revolves at 2400 r.p.m., the power longitudinal feeds range from .00015" to .018"

per revolution of the sprindle, approximately. Independent power feed may be disconnected and regular power carriage feeds used for coarser feeds or for cutting screw threads.

Cat. No. Floor Model	Cat. Number Bench Model	Cur.	Motor Specification		
			Ph.	Cy.	Volt.
CL212DR	CL333DR	A.C.	3	60	230
CL212FR	CL333FR	A.C.	3	60	460
CL221BR	CL331BR	A.C.	1	60	115
CL221DR	CL331DR	A.C.	1	60	230



DRILL CHUCKS

Constructed so they will hold the drill securely and accurately. Jaws are tempered steel. Includes pinion key, but does not include arbor.

Catalog Number	Make of Chuck	Capacity of Chuck	Net Wt. Lbs.	Ship. Wt. Lbs.
CE1200	Jacobs	0 to 3/8 in.	1 1/8	1 1/8
CE1201	Jacobs	0 to 1/2 in.	1 3/4	2 3/8
CE1202	Jacobs	3/16 to 3/4 in.	3 1/8	3 1/2
CE1206	Jacobs	3/8 to 1 in.	6 3/8	7 1/2

TAPER ARBOR FOR DRILL CHUCKS

Have short taper to fit chuck and Morse taper shank to fit taper of lathe headstock spindle or tailstock spindle.

For Drill Chuck	No. 2 Morse Taper		No. 3 Morse Taper	
	Cat. No.	Ship. Wt.	Cat. No.	Ship. Wt.
CE1200	CE2300	3/8 lb.	CE2301	3/4 lb.
CE1201	CE2302	1/2 lb.	CE2303	7/8 lb.
CE1202	CE2304	1/2 lb.	CE2305	3/4 lb.
CE1206	CE2306	1 1/8 lb.	CE2307	1 1/2 lb.

SEMI-MACHINED DRILL CHUCK ARBORS

Have either straight or taper shanks for fitting drill chucks and other tools to lathe spindle or turret head. Must be machined to fit drill chuck or other tool.

Cat. No.	Shank	Ship. Wt.
CE1500	No. 2 Morse Taper	1 lb.
CE1501	No. 3 Morse Taper	2 lbs.



HOLLOW BODY SPINDLE NOSE CHUCKS

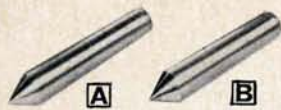
Have 1 1/2"—8 thread to fit spindle nose of 9" and 10-K lathes only. 5/8" chuck can be used in tailstock of lathe when fitted with taper arbor, No. CE2304 or CE2305. Includes pinion key.

Cat. No.	Capacity	Ship. Wt.
CE907	1/8" to 5/8"	3 3/4 lbs.
CE925	3/16" to 3/4"	4 1/4 lbs.

TAPER ARBORS FOR 17" LATHES



Fit tailstock spindle. Have tang to be used with CE1206, drill chuck. CE1217GJ, shipping weight 2 lbs.



LATHE CENTERS

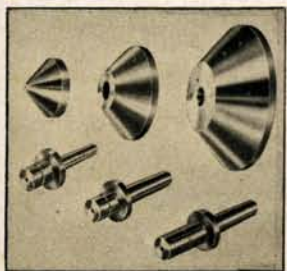
Description	No. 2 Morse Taper Shank		No. 3 Morse Taper Shank	
	Catalog Number	Ship. Wt.	Catalog Number	Ship. Wt.
A—60° Center	CE2401	1 lb.	CE2402	2 lbs.
B—60° Carbide Center	CE1889	1 lb.	CE1890	2 lbs.



BALL BEARING LIVE CENTERS

For high speeds and heavy roughing cuts. Available with a 60° external point or 60° hollow. Both are made with No. 2 and No. 3 Morse standard tapers.

Catalog Number	Style of Center	Morse Taper	Shipping Weight
CE3900	60° Point	No. 2	3 lbs.
CE3901	60° Point	No. 3	5 lbs.
CE3903	60° Hollow	No. 2	3 lbs.
CE3904	60° Hollow	No. 3	5 lbs.



PIPE CENTERS

For mounting tubing, pipe, etc., between the lathe centers. Centers have accurately ground 90° cone, and revolve on steel shanks with plain bearings.

PIPE CENTERS

Catalog Number	Takes Pipe	Requires Shank	Shipping Weight
CE2160	1/2" to 3"	CE2172	4 lbs.
CE2161	3" to 5"	CE2174	6 lbs.
CE2162	5" to 8"	CE2173	17 lbs.

PIPE CENTER SHANKS

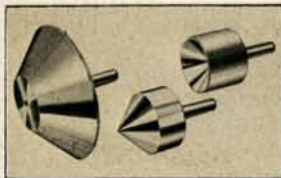
Catalog Number	Shank Taper	Takes Centers	Shipping Weight
CE2172	No. 2	CE2160 & CE2161	2 lbs.
CE2174	No. 3	CE2160 & CE2161	3 lbs.
CE2173	No. 3	CE2162	4 lbs.



HARDENED PIPE CENTERS

Take pipe 1/2" to 3". Same as CE2160, but made of heat-treated and hardened steel.

CE2163. Shipping weight 4 lbs.



BALL BEARING PIPE CENTERS

Fitted with large, double row ball bearings, these extra large precision centers provide rigid support for pipe and other large diameter work.

Catalog Number	Style of Center	Capacity	Morse Taper	Shipping Weight
CE2445	90° Point	7/32" to 3/8"	No. 2	9 lbs.
CE2446	90° Point	7/32" to 3/8"	No. 3	9 lbs.
CE2449	90° Point	3/8" to 8/16"	No. 3	20 lbs.
CE2447	90° Hollow	7/16" to 3/16"	No. 2	8 lbs.
CE2448	90° Hollow	7/16" to 3/16"	No. 3	8 lbs.



SPRING LOADED PRECISION LIVE CENTER

60° spindle maintains constant tailstock thrust. A fine live center for high speed, precision operations.

Catalog Number	Morse Taper	End Thrust Spring Limit	Over-All Taper Length	Radial Load Cap. Pounds
CE3905	2	120	3"	1400
CE3906	3	290	3 3/4"	1850
CE3907	4	420	5"	2500



DIE HOLDER

Die holder has 1/2" hole, 3" deep for stock clearance.

Catalog Number	Takes Dies	Taper Shank	Shipping Weight
CE1829	1" Diameter	No. 2	2 lbs.
CE1838	1 1/2" Diameter	No. 2	2 lbs.

ORDER COMPLETE CHUCK AND TOOL ASSORTMENT

Several practical assortments of equipment are listed on this page. You can save time and money by purchasing one or more of these assortments rather than individual items. For use with threaded spindles only.

11-TOOL ASSORTMENT FOR 9" AND 10-K LATHES

These assortments consist of the basic equipment required for general machine work in the average shop. The most popular sizes of chucks are included. **CL2890NK**, Shipping weight 28 lbs.

EQUIPMENT INCLUDED IN 11-TOOL ASSORTMENTS

Item	Description
1	6"—4-Jaw Independent Lathe Chuck.
2	Jacobs 3-Jaw Drill Chuck Size: 1/2 in.
3	Arbor Fitted to above Drill Chuck.
4	6 Ground Cutter Bits for Tool Holder.
5	Boring Tool Holder, Style "D".
6	Cutting-off Tool Holder, Right-Hand.
7-10	4 Lathe Dogs. Sizes: 1/2", 3/4", 1" and 1 1/2".
11	Straight Shank Tool Holder.

11-TOOL ASSORTMENTS WITH UNIVERSAL CHUCKS

For 9-inch and 10-K lathes only. Same as above, except that a No. **CL3005NK**, 5" 3-Jaw Universal Chuck is supplied in lieu of the 6" 4-Jaw Independent Chuck. Shipping weight 20 lbs. **CL2960NK**.

20-TOOL ASSORTMENT FOR 9" AND 10-K LATHES

This is a more complete assortment than those listed above and consists of the following equipment:

Item	Cat. No.	Description
1	CL4006NK	6" Four-Jaw Independent Lathe Chuck, fitted.
2	CL3005NK	5" Three-Jaw Universal Lathe Chuck, fitted.
3		Jacob's Three-Jaw Drill Chuck, 1/2" capacity.
4		Taper Shank Arbor (No. 2 M.T.) fitted to Drill Chuck.
5	CE847S	Straight Shank Turning Tool Holder.
6	CE847R	Right-Hand Turning Tool Holder.
7	CE847L	Left-Hand Turning Tool Holder.
8	CE833R	Right-Hand Cutting-off Tool Holder.
9	CE833S	Straight Shank Cutting-off Tool Holder.
10	CE1779	Set (6) Ground Cutter Bits for Turning Tools.
11-12	CE1629	Two Sets (6) Unground Cutter Bits for Turning Tools.
13	CE3175	Style "D" Boring Tool Holder.
14	CE423	Style "B" Boring Tool Holder.
15	CE3820	3/8" Lathe Dog.
16	CE3821	1/2" Lathe Dog.
17	CE3822	3/4" Lathe Dog.
18	CE3823	1" Lathe Dog.
19	CE3824	1 1/4" Lathe Dog.
20	CE3825	1 1/2" Lathe Dog.

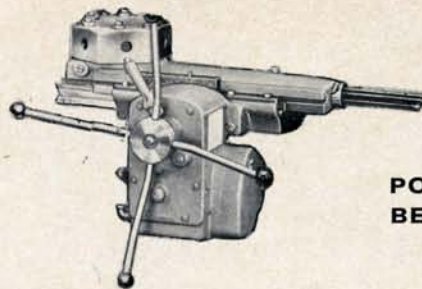
CL2970NK. Shipping weight 52 lbs.



HARDENED TAPER TAILSTOCK SPINDLES

Can be supplied for 10" and larger South Bend Lathes. They are recommended for lathes that are to be used with taper shank tools in tailstock for drilling, reaming, and similar operations. If wanted in lieu of regular tailstock spindle, they must be specified when lathe is ordered.

Size Lathe	In Lieu of Regular Tailstock Spindle Catalog Number	As An Extra	
		Catalog Number	Ship. Wt.
10"	CL3870R	CL3875R	2 lbs.
13"	CL3870T	CL3875T	4 lbs.
16"-16-24"	CL3870H	CL3875H	7 lbs.

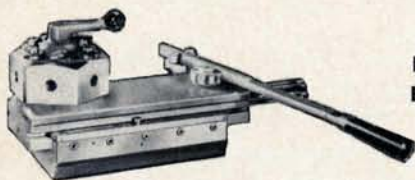


POWER FEED BED TURRETS

For 13" Lathes. Effective feed of turret slide is $6\frac{1}{2}$ ". Turret head revolves on a precision ball bearing and has six 1" diameter holes for tools. Locks automatically on the return stroke of the turret slide. Turret ram lock is provided. Clearance from center of tool hole to top of turret slide is $1\frac{7}{8}$ ".

Power feed turret has three feed changes in turret apron which, with gear box on lathe provide 144 feeds .0006" to .0193". Lever shift gears in turret apron provide quick selection of fast, intermediate or slow feeds. Direction of feed is reversed by changing gears in turret apron. When ordered separate from lathe, purchaser must assume responsibility of fitting and boring.

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



HANDLEVER BED TURRETS

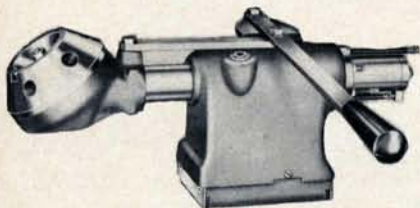
For 9", 10-K and 10" lathes. Can be locked into position at any point along the length of the bed. Indexes automatically. Each face of the turret has an independently adjustable feed stop screw which accurately regulates the length of the cut. Ram lock is provided.

Accurate indexing of the turret head is assured.

The effective feed of the turret slide is 4". Center of turret hole to top of turret slide $1\frac{1}{8}$ ". Takes standard turret tools with $\frac{5}{8}$ " diameter shank.* Distance between opposite flats on turret head is $4\frac{7}{8}$ ". When ordered separate from lathe, purchaser must assume responsibility of fitting and boring.

Catalog Number	Size Lathe	Shipping Weight
CL1611N	9"	76 lbs.
CL1611K	10-K	76 lbs.
CL1611R	10"	83 lbs.

*Can be supplied to order with $\frac{3}{4}$ " holes in turret face. No extra charge.



HANDLEVER TURRETS

Tailstock Type, for 9" and 10-K Lathes. Mounted on the lathe bed in place of the tailstock. The turret head has six holes for tools with $\frac{5}{8}$ " diameter shanks. Adjustable stops are provided for each of the six turret holes. Turret head is geared to the stop roll so that the stop is brought in line with each stop screw as the corresponding tool in the turret head is revolved to the working position. Index lock releases automatically at the end of the return movement of the turret slide. The turret head is revolved by hand. The maximum length of stroke is $3\frac{3}{4}$ ". When ordered separate from lathe, purchaser must assume responsibility of fitting and boring.

Catalog Number	Size Lathe	Shipping Weight
CL2045N	9"	50 lbs.
CL2045K	10-K	76 lbs.

SPLASH PANS

These are an essential addition to the oil tight chip pans for all lathes that are equipped with taper attachments.

SPLASH PANS FOR FLOOR LEG SOUTH BEND LATHES

Size Lathe	Splash Pans Catalog Number	Size Lathe	Splash Pans Catalog Number
9" and 10-K U.M.D.	CL2057Z	16-24" x 6'	CL2062C
13" x 4'	CL2060A	16-24" x 7'	CL2062D
13" x 5'	CL2060B	16-24" x 8'	CL2062H
13" x 6'	CL2060C	16-24" x 10'	CL2062H
13" x 7'	CL2060D	16-24" x 12'	CL2062H
16" x 6'	CL2062C	16-24" x 14'	CL2062H
16" x 7'	CL2062D	17" x 6'	CL1762GJ
16" x 8'	CL2062H	17" x 8'	CL1763GJ
16" x 10'	CL2062H	17" x 10'	CL1764GJ
16" x 12'	CL2062H	17" x 12'	CL1765GJ
16" x 14'	CL2062H		

PANS FOR SOUTH BEND BENCH LATHES

Size Lathe	Chip Pans Catalog Number	Splash Pans Catalog Number
9" and 10-K x $3\frac{1}{2}$ '	CL1297Z	CL2057Z
9" and 10-K x 4'	CL1297A	CL2057Z
9" and 10-K x $4\frac{1}{2}$ '	CL1297R	CL2057R



PREPARING LATHES FOR USE WITH COOLANT

Catalog Number	For Lathe
CL2195NK	9" or 10-K UMD
CL2195R	10" Metal Cabinet
CL4010	10" Floor
CL4013	13"
CL4016	16"
CL4024	16-24"

COOLANT PUMP AND RESERVOIR FITTED TO 10"-1 1/16" COLLET CAPACITY THROUGH 17" FLOOR LEG LATHES

Catalog Number	Current	Phase	Cycle	Voltage
CL503D	A.C.	3	60	230/460
CL501B	A.C.	1	60	115

COOLANT PUMP AND RESERVOIR FITTED TO 9" OR 10-K U.M.D. LATHES, OR 10" METAL CABINET LATHES

Catalog Number	Current	Phase	Cycle	Voltage
CL513D	A.C.	3	60	230/460
CL511B	A.C.	1	60	115

When ordered for 10-K U.M.D. Lathes or 10-inch U.M.D. Lathes on metal cabinet, there is an additional charge for making chip pan oil tight and installing necessary drain pipes, splash guards, and oil tight seal.



MOTOR BELT GUARDS

For 9" Lathes. They enclose the motor, motor V-belt, and countershaft drive of 9-inch Horizontal Motor Driven Bench Lathes.

CL2885. Motor Belt Guard for 9" Horizontal Motor Drive with 1/2 h.p. NEMA No. 56 frame motor. Ship. wt. 26 lbs.



FIBER GLASS BELT GUARDS

Cover the drive belt and cone pulleys on 9" and 10-K HMD Lathes.

CL2882NK. Belt Guard for 9" & 10-K HMD lathes. With instructions for installing.

CL2883K. Belt Guard for 10-K HMD lathe when ordered with lathe. With instructions for installing.



9" AND 10-K SELF-CONTAINED ASSEMBLY KITS

Easily converts your 9" or 10-K Horizontal Motor Drive Bench Lathe into a self-contained floor leg model. Consists of two floor leg units, chip pan, mounting shelf for drive unit and necessary hardware. Available in three bed lengths as listed below.

If ordered for use with lathe previously shipped, include the lathe serial number with your order. It is stamped between front ways at the tailstock end of the lathe.

Legs stand 29 3/4" high. With drive unit mounted, self-contained lathe will be approximately 40 inches wide.

CL470Z. Self-Contained Assembly Kit for 9" or 10-K HMD lathe with 3 1/2' bed. Shipping weight 185 lbs.

CL470A. Self-Contained Assembly Kit for 9" or 10-K HMD lathe with 4' bed. Shipping weight 190 lbs.

CL470R. Self-Contained Assembly Kit for 9" or 10-K HMD lathe with 4 1/2' bed. Shipping weight 195 lbs.

WORK LIGHTS

When attached to the carriage the light travels with the cutting tool. With quick acting snap-on arrangement, light can be put into use or removed in seconds.

CE2815. Work Light for Lathe, including snap bolt for attaching to lathe bed. Shipping weight 5 lbs.



SPINDLE BRAKE FOR 13" LATHE

As you apply brake, a micro-switch automatically disconnects power to the lathe motor. For micro-switch to operate it is necessary that the lathe be

equipped with magnetic line-starter equipment with pushbutton. Supplied only for factory installation on new lathes.

CL2350. Lever operated Friction Spindle Brake with Micro-Switch.

12" PRECISION LEVELS

These levels have a ground and graduated vial mounted in a twelve-inch cast iron frame with machined base having a V-way for leveling shafts. It has been carefully designed to provide just the right degree of sensitivity. Can be used only in horizontal position.

CE2218. Precision Level. Packed in wooden case. Shipping weight 5 lbs.



MODERN CABINET STYLE BENCH

Designed especially for 9" and 10-K lathes with horizontal motor drive.

The top is 26" x 60" x 1 3/4" thick. Cabinet legs are 16" wide by 21" deep and each

is provided with an adjustable steel shelf and a locking door handle. Two keys are included.

Bench is shipped unassembled in three units. Necessary hardware for assembling is included.

CE1731. Cabinet Style Bench 34" high with Hardwood Top. Shipping weight 216 lbs.

ANGLE STEEL BENCH

Heavy angle steel construction, 29 3/4" or 34" high with hardwood top 26" x 60" x 1 3/4" thick. For 9" and 10-K

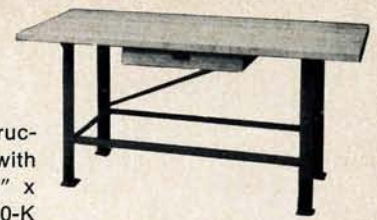
Horizontal Motor Driven Bench Lathes, any bed length. Bench is shipped knocked down with all necessary bolts for assembling.

CE1780. Steel Bench 29 3/4" high with wood top (less drawer). Shipping weight 124 lbs.

C1849. Same as above but 34 1/8" high.

DRAWER FOR BENCH

C1780D. Drawer for angle steel bench, 20 1/8" wide, 14" long, 3 3/8" deep. Shipping weight 9 lbs.



GRAY FINISH ENAMEL

For refinishing and touching up South Bend Lathes, Drill Presses, Shapers, and other machine tools. Cannot be shipped by parcel post.

Catalog Number	Size Can	Number of Cans	Ship. Wt.
CE3421	Pint	1	2 lbs.
CE3422	Quart	1	4 lbs.
CE3423	Gallon	1	12 lbs.

BELTS AND LUBRICATION

FLAT BELTS

Recommended for use with South Bend Lathes. They withstand continual flexing without significant stretch or loss of efficiency. Skived on both ends. Cementing kit is included with each belt. Shipping weight each approx. 1/2 lb.

Type of Drive	Catalog No.	Type of Drive	Catalog No.
9" & 10-K HMD	CE3750N	13" 4-Step	CE3752T
10-K HMD*	CE3750K	13" 3-Step	CE3753T
9" UMD	CE3752N	16" 4-Step	CE3752H
10-K UMD	CE3752K	16" 3-Step	CE3753H
10-K Variable	CE3751K	16-24" 4-Step	CE3752V
10" Met. Cab.	CE3753R	16-24" 3-Step	CE3753V
10" Floor	CE3752R		

*Use only on 10-K HMD Codes HDV100/HDV104

BELT SPLICING KITS

For cold splicing skived ends of flat belts.

CE1789. Belt Splicing Kits.

CE2323N. Oak tan single ply flat leather belts without cord reinforcing for 9" Horizontal Motor Drive only. Has square ends and lace for joining.

BELT SPLICING CLAMPS



For gluing skived ends of cone pulley belts or other flat leather belts. Made of heavy steel plate with guide for aligning edges of belt ends.

Catalog Number	Maximum Size of Belt			Shipping Weight
	Width	Thickness	Skive Length	
CE1898	1 3/4"	1/2"	6 3/8"	4 lbs.
CE1899	3"	1/2"	6 3/8"	5 lbs.

"TEFLON" ALL-PURPOSE LUBRICANTS

CE1625. 1 1/2 oz. tube "Teflon" Perfect All-Purpose Lube.

BED WAY LUBRICANTS

Specially refined lubricants of superior quality for bed ways and other flat bearing surfaces.

CE1671. Ship. wt. 3 lbs. Twelve ounce can.

LUBRICATING OILS

Nothing is more important to the satisfactory operation and life of fine machinery than correct lubrication. The lubricating oils listed below have been thoroughly tested and are highly recommended. It is essential that the correct type of oil be used for the lathe spindle, lathe apron and shaper oil reservoirs and general lubrication. A supply of each kind of oil should be kept on hand and used as needed. The Saybolt viscosity of the various oils is indicated in seconds at 100°F.

GENERAL LUBRICATING OIL (SEE OIL CHART FOR INDIVIDUAL MACHINE)

Catalog Number	Viscosity	Quantity	Shipping Wt.
CE1603	240-500	1 quart	3 lbs.
CE1906	240-500	12 quarts	31 lbs.
CE2019	240-500	Gal. can	11 lbs.

OIL FOR SPINDLE BEARINGS OF SOUTH BEND LATHES (FOR OTHER COMPONENTS SEE OIL CHART FOR INDIVIDUAL MACHINES)

CE1600	100	1 quart	3 lbs.
CE1905	100	12 quarts	31 lbs.
CE2017	100	Gal. can	11 lbs.

OIL FOR LATHES AND SHAPERS (SEE OIL CHART FOR INDIVIDUAL MACHINES)

CE1602	150-240	1 quart	3 lbs.
CE1904	150-240	12 quarts	31 lbs.
CE2018	150-240	Gal. can	11 lbs.

MARLA OPEN GEAR SPRAY LUBRICANTS

These oils are an extreme pressure adhesive lubricant recommended for gearing not running in oil and is effective in reducing gear noise. It is available in 12 oz. pressure cans with a spray dispenser which makes it easy to apply.

CE1605. Shipping wt. 3 lbs. Twelve oz. can.

HYDRAULIC OIL

For use in Power Quill Feed on Vertical Milling Machine. This Hydraulic Oil is also used in the headstock of the 17" Geared Head Lathe.

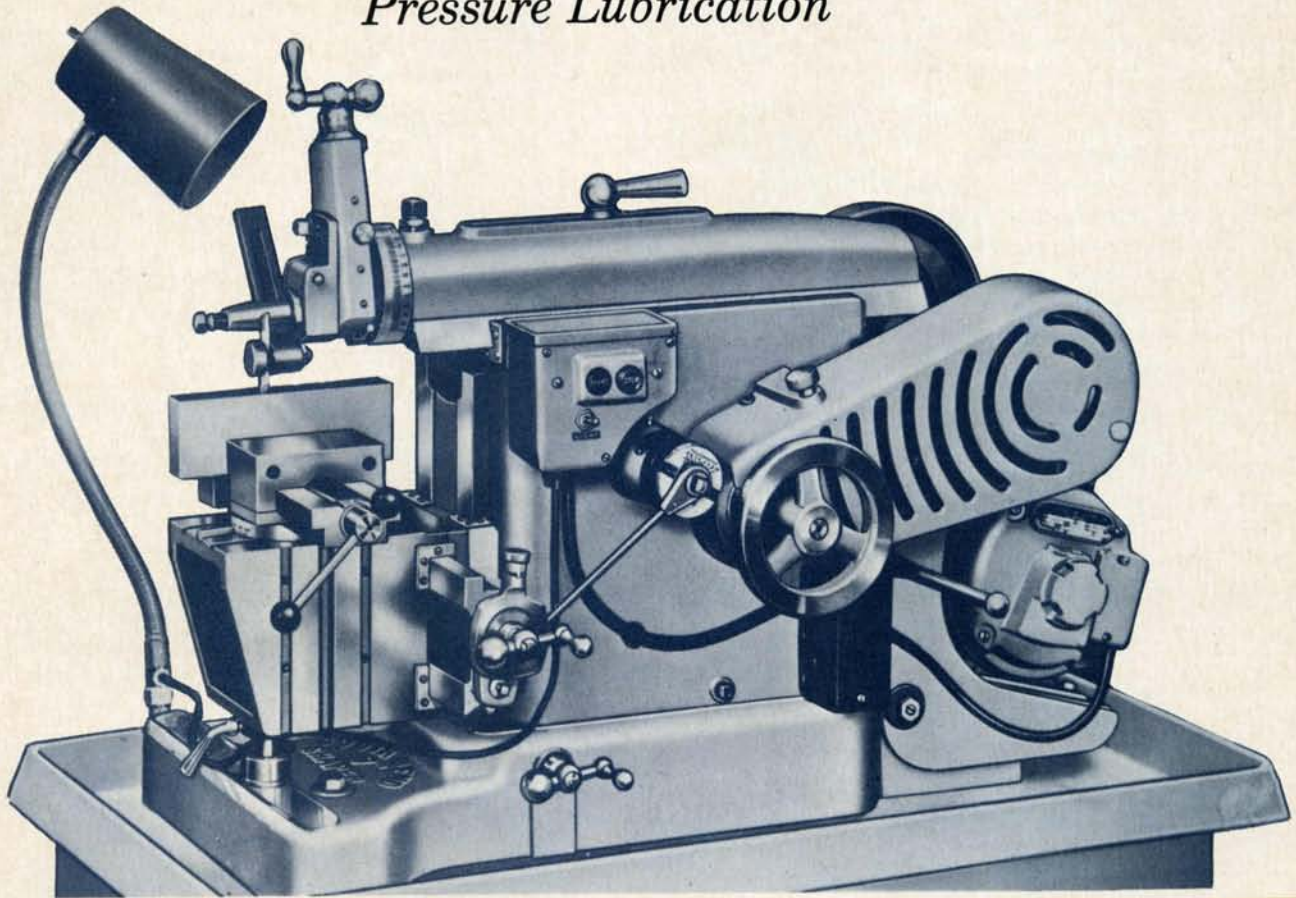
CE7053. 1 qt. can Hydraulic Oil.

CE7054. 1 gal. can Hydraulic Oil.

7"

7" SOUTH BEND PRECISION BENCH SHAPERS

THE ONLY 7" SHAPER WITH
Pressure Lubrication



South Bend 7" Bench Shapers are precision engineered and sturdily constructed to give you a lifetime of rapid accurate machining. The ease of setting up work, high operating speeds and the low power consumption, keep costs to a bare minimum.

Pressure lubrication is provided by an automatic pump which circulates oil from a large reservoir in the base of the shaper to the ram dovetail, bull gear and pinion, pinion shaft and rocker arm shaft.

Look for these quality features: Tool head locks in any position—rugged clapper bar is also adjustable, guards on all belts and pulleys—quick-acting belt tension release, rocker arm is graduated for accurate stroke adjustment, bearing surface on base for adjustable table support, machining clutch teeth with rotary indexing table, machining of flat surfaces on shaft with indexing head. Also tool head swivels to any angle and

has 3½" diameter mounting with graduations 0 to 90° right and left.

Motor required is ½ h.p., 1725 r.p.m., and is mounted on a cradle at the back of the shaper. Power is transmitted by V-belts. A quick acting belt tension release is provided for easy shifting of the belt to change speeds. All V-belts and pulleys are enclosed in substantial metal guards. If shaper is ordered without motor, specify voltage, phase, and cycle of motor to be used so that correct wiring can be supplied.

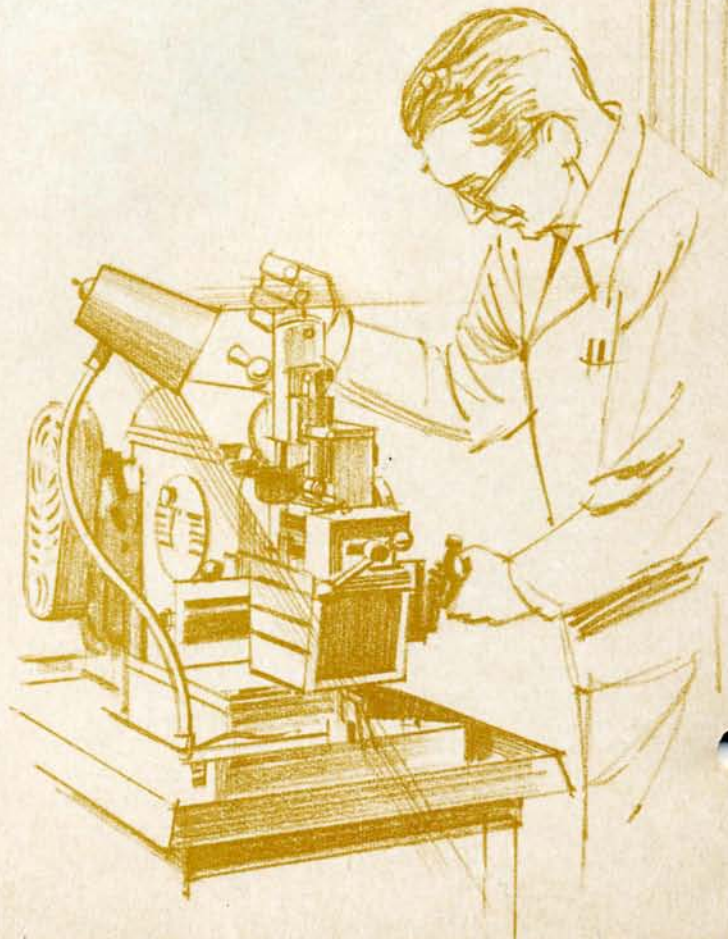
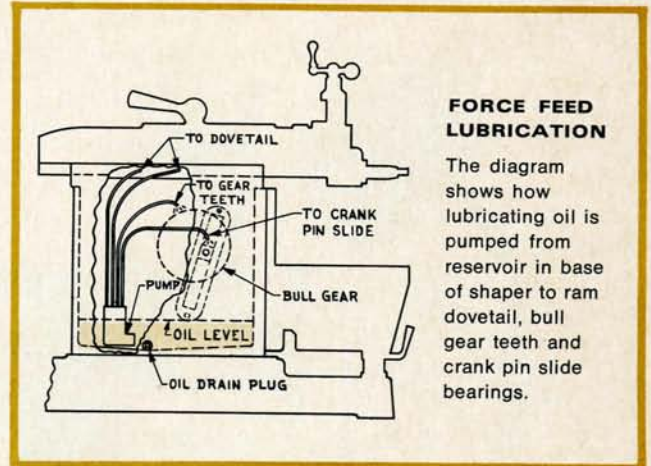
CS100. South Bend 7" Precision Bench Shaper with vise, drive unit for ½ h.p. motor, motor pulley, V-belts, guards, work light, and built-in pushbutton type across-the-line manual starter for motor, but without motor, steel stand, or tool holder. (See page 39.) Shipping weight crated 330 lbs.

FEATURES

- Extreme precision for the most exacting tolerances.
- Convenient controls for maximum ease of operation.
- Built-in work light to prevent eye strain.
- Ample bearing surfaces assure rigidity and durability.
- Force feed lubrication to ram dovetail, bull gear, and crank pin slide.
- Powerful built-in V-belt motor drive.
- Smooth, quiet operation at all speeds.
- Quick acting belt tension release for changing speeds.
- Sliding support shoe for outer end of table.
- Convenient length of stroke adjustment graduated 0 to 7".
- Reversible power cross-feed in thousandths.
- Swivel vise graduated in degrees, mounts on top or side of table. Locks at any angle.
- Swivel tool head graduated in degrees, locks at any angle.
- Tool slide has swivel clapper box and heat-treated steel tool post and tool post screw.
- Cross-feed screw for table has micrometer graduated collar.
- Tool slide feed screw has micrometer graduated collar.
- Swivel handles on down feed, cross-feed and table elevating crank.

SPECIFICATIONS

Length of ram stroke	0 to 7"
Strokes per minute, approximate	42-75-120-195
Cutting speeds	3 to 114 feet per minute
Vertical feed of tool	.3"
Tool post takes tool	$\frac{3}{8}$ " x $\frac{1}{16}$ "
Tool head swivels	360°
Width of vise jaws	.4"
Depth of vise jaws	.1"
Maximum opening of vise jaws	.4"
Length of table top	6 $\frac{5}{16}$ "
Width of table top	.5"
Depth of table	5 $\frac{3}{8}$ "
Horizontal travel of table	.9 $\frac{1}{2}$ "
Vertical travel of table	.5"
Distance of table from ram	$\frac{1}{2}$ " to 5 $\frac{1}{2}$ "
Power cross-feeds (reversible)	.002" to .012"
Width of slots in table	$\frac{5}{16}$ "
Holes in table for clamp bolts	$\frac{9}{32}$ "
Motor size	$\frac{1}{2}$ h.p.



ACCESSORIES FOR SOUTH BEND 7" BENCH SHAPERS



STEEL STANDS FOR SHAPERS

A built-in chip pan forms the top of the stand. Three drawers provide plenty of storage space. Finished with gray wrinkle enamel. Width 19", depth 36", height 28 $\frac{3}{8}$ ". Shipping weight 150 lbs. **CS9600.**



WOOD TOP MACHINE STANDS

Made of heavily constructed angle steel; stands 29 $\frac{3}{4}$ " high. The glued wood top is 20" x 32" and is 1 $\frac{1}{8}$ " thick. Steel parts are finished in gray enamel. Shipped knocked down. Shipping weight 52 lbs. **CE9141.**

DRAWERS FOR MACHINE STANDS

Finished to match stand CE9141. Drawer is 20 $\frac{1}{8}$ " wide, 14" long, 3 $\frac{3}{8}$ " deep. Includes metal pull and wood slides. Shipping weight 9 lbs. **CE1780D.**

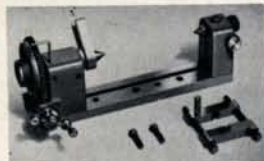


INDEXING TABLES

Used for accurately spacing bolt holes, indexing clutch teeth, machining square, hexagonal or octagonal shapes, etc. Table is 4 $\frac{1}{2}$ " in diameter and has three T-slots for clamping work. Edge of table is graduated 360°. Clamping device is provided for locking table in any position. Top of table is precision ground. Base has two bolt holes for clamping to machine table. Includes eight clamping bolts with nuts and washers. Shipping weight 14 lbs. **CE9144.**

INDEXING CENTERS

This is an indispensable device for cutting splines or flutes in shafts, laying out work, gear cutting, shaping hexagons, squares, etc. Takes work between centers up to 5" in diameter, 6" long. Revolving center has large dial graduated 360°. Worm gear can be disengaged for quick positioning of indexing center. Clamping device is provided for locking center in any position. Base has two bolt holes for clamping to machine table. Includes two clamping bolts. Shipping weight 12 lbs. **CE9635.**



CHUCK ADAPTER STUDS

Consist of accurately machined base plate with threaded stud on which lathe chuck may be screwed. When ordering be sure thread on stud conforms with thread in back of chuck to be used. Includes bar for screwing stud into base plate but does not include clamps or bolts.

Catalog Number	Diameter of Plate	Thread Diameter	Threads Per Inch	Shipping Weight
CE3445	6 $\frac{1}{4}$ "	1 $\frac{1}{2}$ "	8	7 lbs.
CE3447	7 $\frac{1}{2}$ "	2 $\frac{1}{4}$ "	8	13 lbs.



MOTORS AND CONTROLS FOR SOUTH BEND SHAPERS

Ball bearing motors listed below are recommended. All single phase motors are capacitor type. Approximate shipping weight 50 lbs. Write for additional information.

Catalog No.	H.P.	Current	Volts	Phase	Cycle
CS4920B	$\frac{1}{2}$	A.C.	115	1	60
CS4920D	$\frac{1}{2}$	A.C.	230	1	60
CS4924D	$\frac{1}{2}$	A.C.	230	3	60
CS4924F	$\frac{1}{2}$	A.C.	460	3	60

Motors with other characteristics available, contact your distributor.



UNIVERSAL TABLES

Both upper and lower slides have graduated swivels and may be turned through full 360°.

CE9150. Universal Table complete with base for South Bend 7" Shaper, two slides, two graduated swivels, and eight clamp bolts with nuts. Ship. wt. 37 lbs.



CE9157. Single Table with one graduated swivel and four clamp bolts with nuts. Shipping weight 19 lbs.



CE9158. Base only for adapting single table to South Bend 7" shaper. Ship. wt. 3 lbs.



SHAPER TOOL HOLDER

For $\frac{1}{4}$ " square cutter bits. Adjustable to work at all angles. Head can be swiveled and locked at eight different positions for machining many odd shapes and for cutting various angles without shifting the work. Shipping weight 1 lb. **CS9630.**



EXTENSION SHAPER TOOL

For internal work. Adapted for die work, internal keyways or for any work on the shaper in which extra clearance is needed. Size of bar is $\frac{1}{2}$ " x $7\frac{1}{2}$ ". Takes cutter bit $\frac{3}{16}$ " x $\frac{3}{16}$ ". Shipping weight 2 lbs. **CS9631.**

GROUND CUTTER BITS FOR SHAPER



High speed steel cutter bits, $\frac{1}{4}$ " square, ground to shape, ready for use in shaper tool holder CS9630. Shipping weight 4 ozs. each.



CE9620. Right-Cut Shaper Tool Bit.

CE9621. Left-Cut Shaper Tool Bit.

CE9622. Slot-Cutting Shaper Tool Bit.



CE9623. Set of Three Tool Bits (one ea. of above).

ANGLE PLATES

Heavy cast iron. Size 4 $\frac{1}{2}$ " x 3" x 2". Six bolt holes. Shipping weight 4 lbs. **CE9640.**

SOUTH BEND

Vertical Milling Machines

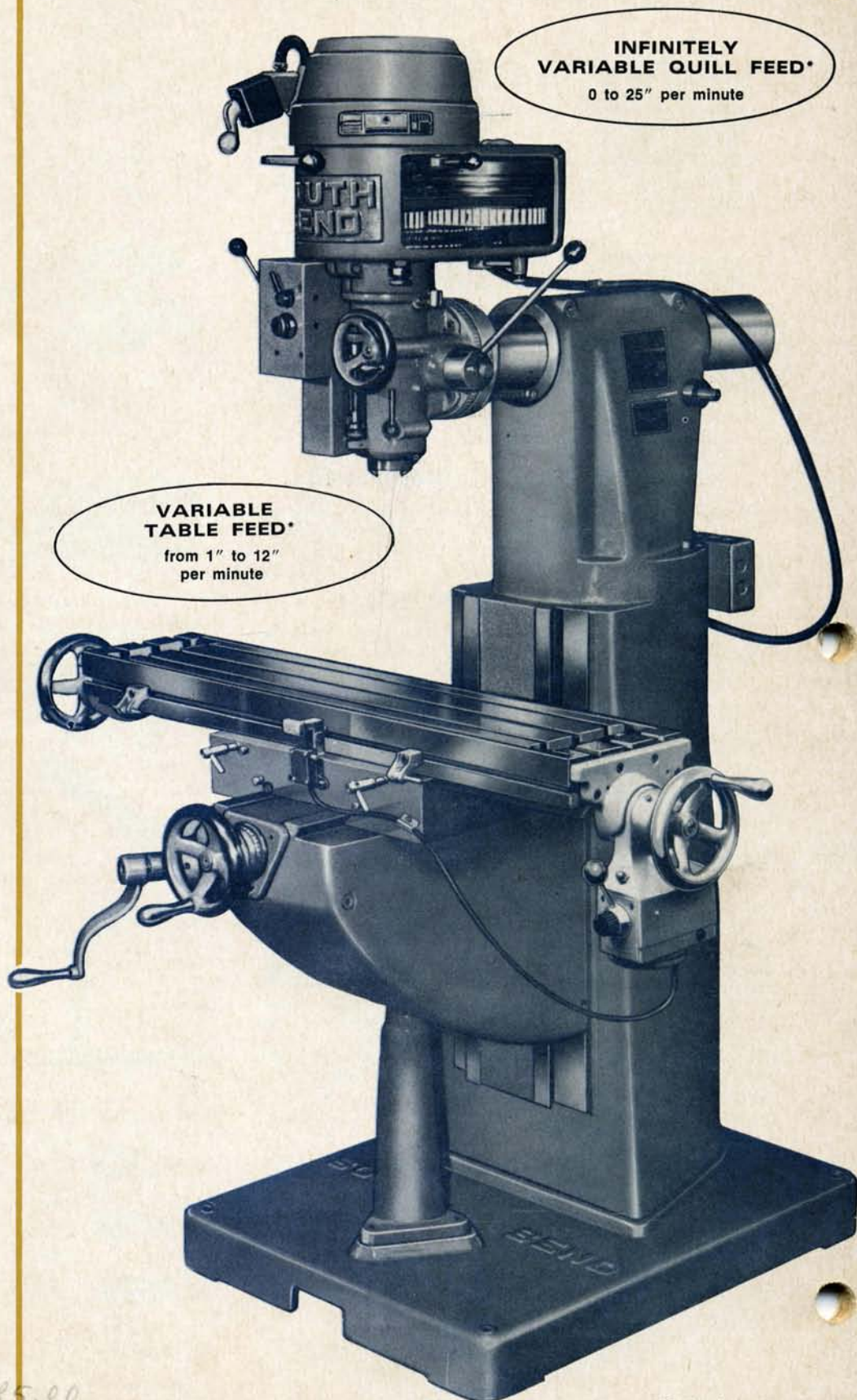
The South Bend Vertical Spindle Precision Milling Machine is designed for maximum convenience and ease of operation with massive knee having wide dovetail bearings and long tapered gibs for both column and table.

The universal type head is mounted on a large flange on the end of the overarm and swivels full 360° for milling, drilling or boring at any angle. Convenient belt tension release permits changing speeds quickly and easily. Reversing switch controls direction of spindle rotation, permitting right or left-hand milling. Convenient mechanical brake permits stopping spindle quickly. Spindle lock is provided for easy changing of cutting tools. A dependable micrometer depth stop is graduated in thousandths and positive quill lock is provided.

Table has dual controls for operating from either end. Adjustable stops are provided for regulating the length of table feed. Three T-slots for clamping work or fixtures extend full length of table.

Equipment included consists of three phase, 60 cycle, 230/460 v. A.C. motor; reversing switch; master collet holder; wrenches and four collets having $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{5}{8}$ " and $\frac{3}{4}$ " capacities. See pages 42 and 43 for complete accessories.

Catalog Number	Table Length	Motor	
		R.P.M.	H.P.
MIL3212	32"	1200	1
MIL3218	32"	1800	1
MIL4212	42"	1200	1
MIL4218	42"	1800	1



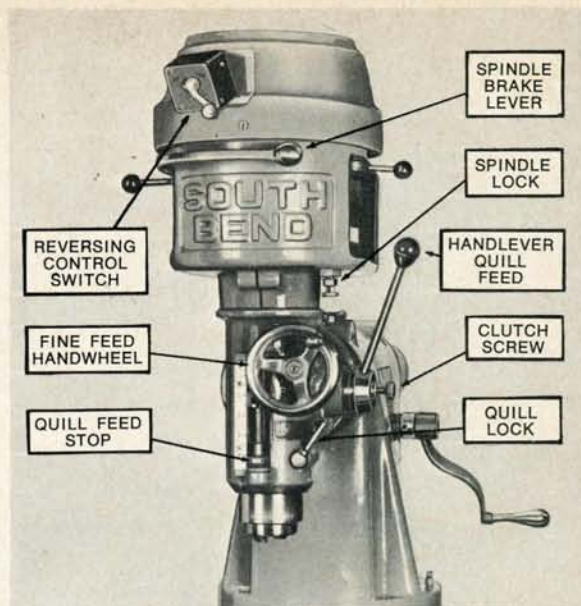
*Optional at extra cost

FEATURES

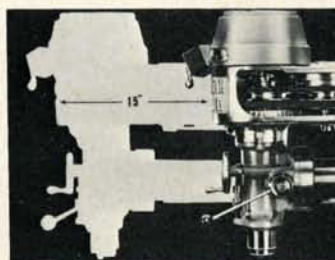
- Overarm has large key with tapered gib and rack and pinion adjustment for positioning head in or out without disturbing angular alignment of head.
- "Lo-Loss" combination timing belt and V-belt drive to spindle transmits full h.p. efficiently at all speeds. Convenient belt tension release is provided for quick and easy speed changes.
- Quill is ground and accurately fitted to semi-steel head casting. Quill bearing in head is bored and honed to a perfect precision fit with quill. Quill has lever operated fast feed and hand-wheel operated slow feed as standard equipment. (Hydraulic power feed is available at extra cost.) Turnstile lever for rapid hand feed disengages when worm and worm gear fine feed is used.
- Spindle has dependable micrometer depth stop graduated in thousands, and positive quill lock. Independent spindle lock is also provided.
- Spindle is made of hardened and ground alloy steel, has spline drive, takes No. 30 MM taper quick change individual holders.
- Spindle face has four $\frac{3}{8}$ "-16 bolt holes for mounting face milling cutters, etc.
- Large diameter easy reading micrometer collars for positioning table have nonglare satin finish surface with black graduations.
- Lever locks for table, knee and saddle are conveniently located on front of machine. Chip guard between dovetails protects cross-feed screw from damage.
- Adjustable stops in T-slots are provided for regulating length of table travel.
- Manual longitudinal and cross-feeds to table are standard equipment. Power longitudinal feeds available at extra cost.

SPECIFICATIONS

Table width .....	.9"
Table lengths	32"-42"
Table travel, longitudinal	20"-30"
Table travel, cross .....	.9½"
Table travel, vertical .....	.18"
Table feed screws, Acme thread	1¼"-5"
Table to spindle, maximum .....	.20"
Spindle to column, maximum .....	.20"
Ram travel by rack and pinion .....	.15"
Ram diameter	4½"
Head rotates	360°
Quill diameter	¾"
Quill travel .....	.4"
Collet capacity, maximum	¾"
Spindle taper	#30MM
Spindle speeds .....	.8
r.p.m. with 1 h.p., 1800 r.p.m. motor	135, 220, 350, 560, 900, 1450, 2330, 3750
r.p.m. with 1 h.p., 1200 r.p.m. motor	90, 150, 230, 375, 600, 965, 1550, 2500
Net weight, approx.	
With 32" Table	1635 lbs.
With 42" Table	1700 lbs.
Shipping weight crated, approx.	
With 32" Table	1950 lbs.
With 42" Table	2000 lbs.

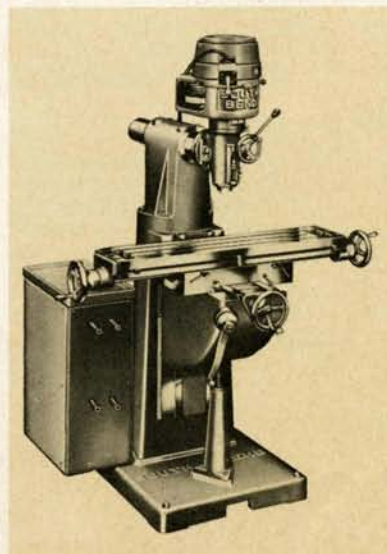


The principal controls for the Milling Machine head are illustrated above. The controls are conveniently located and so easy to operate that you will become familiar with them in just a few minutes.



KEYED RAM SAVES TIME

This feature saves you the time and annoyance of resetting the head angle every time the ram is moved transversely. A large key fitted with adjustable tapered gib holds the ram and head assembly in angular alignment, even when ram lock is released for transverse movement of head. The head swivels on a large flange on the end of the ram. Vernier graduations and worm adjustment make angular setting precise and easy.



South Bend Vertical Mill is also available without power feeds as illustrated at left. Cabinet is extra. Easy to set-up, truly accurate and built to give you long years of service.

ALTERNATE MOTORS AND CONTROLS

Below are shown alternate single phase motors available in lieu of regular three phase motors of corresponding horsepower and speed, when specified at time milling machine is ordered.

Cat. No.	H.P.	Phase	Cycles	Volts	R.P.M.
MIL2628B	1	1	60	115	1800

VARIABLE FEED TO TABLE

A variable speed table drive is provided as an option. This feed is a light weight, self-contained unit, which mounts to one end of the table. Excellent response and power transmittal are obtained from one to twelve inches per minute. The unit will feed in either direction and is provided with positive stops.

The variable speed table drive can be installed quickly in the field with simple hand tools. The unit does not interfere with normal operation of the handwheel. With the use of this low cost option the versatility of the South Bend Milling Machine in your shop will be greatly increased.

MIL3501. Servo Power Table Feed in lieu of regular

HYDRAULIC POWER QUILL FEED

Hydraulic power quill feed attachment can be supplied at extra cost when specified at time Milling Machine is ordered. A single control lever permits feeding the spindle in either direction, up or down, and also has neutral or off position. Rate of feed is infinitely variable 0 to 25" per minute. Rapid traverse lever permits positioning quill quickly. Length of travel can be accurately controlled by positive depth stop. The hydraulic feed quill also has the regular manual feed lever and manual fine feed handwheel. When ordering, specify phase, cycle and voltage of motor required.

MIL7049. Power feed spindle in lieu of regular

CABINETS

This steel cabinet has two compartments, one for holding the hydraulic pump and reservoir for operating power spindle feed and the other for coolant pump and reservoir.

MIL7052. Cabinet for Milling Machine

COOLANT EQUIPMENT

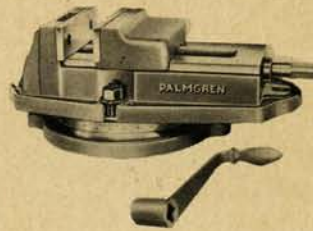
Coolant Pump Equipment for Milling Machine includes coolant pump, tubing, reservoir, ¼ h.p. motor, and switch. If coolant pump equipment is purchased with the milling machine, piping will be assembled in place and necessary electrical connections made.

Catalog Number	Current	Motor		
		Phase	Cycle	Voltage
MIL7061B	A.C.	1	60	115
MIL7063DF	A.C.	3	60	230/460

Motors with other characteristics available. Contact your distributor.

ACCESSORIES FOR SOUTH

SWIVEL VISES



Have 360° swivel base. Vise jaws are 4" wide, 1½" deep and open 4". Shipping weight 51 lbs.

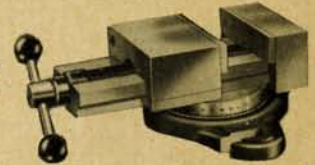
MIL7450. 4" Swivel Milling Machine Vise.

MIL7014. 6" Swivel Vise with Base. Same features as above. Jaws are 6" wide, 2" deep and open 6". Shipping weight 105 lbs.

4" SWIVEL VISES

Swivel is graduated 180° to permit setting vise at any angle with slots in machine table. Jaws are 4" wide, 1" deep and open 4" Shipping weight 18 lbs.

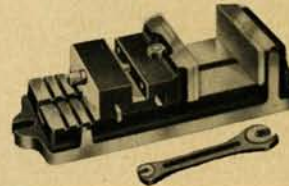
CE9100. Swivel Machine Vise



QUICK-ACTING VISES

Have quick-acting adjustment for self-aligning jaw. Vise screw is wrench operated. Vise jaws are 5½" wide, 2¼" deep and open 6½". Shipping weight 40 pounds.

MIL7013. 5½" Quick-acting Milling Machine Vise.



MILLING CUTTER ARBORS



Hold standard side milling cutters and dovetail cutters from 3" to 6" diameter with

½" to ¾" face and either a 1" or 1¼" diameter arbor hole. Spacing collars are provided to accommodate various face widths. Shipping weight 3 pounds.

MIL7035. Side Milling Cutting Arbor.

QUICK CHANGE TOOL HOLDERS



Fit into No. 30 MM taper to hold single end straight shank end mills, drills, boring bars, etc. No. MIL7016 will also hold double end mills. Shipping weight 4 lbs. each.

Cat. No.	Capacity	Cat. No.	Capacity
MIL7016	3/16"	MIL7020	3/4"
MIL7017	3/8"	MIL7021	7/8"
MIL7018	1/2"	MIL7022	1"
MIL7019	5/8"		

MASTER COLLET HOLDERS



One is supplied with each milling machine. Additional holders are supplied as extras. Shipping weight 3 lbs.

MIL7000. Master Collet Holder and Wrench.

EXTRA COLLETS

These collets fit into master collet holder (standard equipment) to take straight shank milling cutters, boring tools, etc. Shipping weight 1 pound each.

Cat. No.	Capacity	Cat. No.	Capacity
MIL7001	1/16"	MIL7007	7/16"
MIL7002	1/8"	MIL7008	1/2"
MIL7003	3/16"	MIL7009	9/16"
MIL7004	1/4"	MIL7010	5/8"
MIL7005	5/16"	MIL7011	11/16"
MIL7006	3/8"	MIL7012	3/4"

END VERTICAL MILLING MACHINES

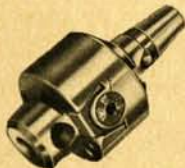
MORSE TAPER SLEEVES



Have No. 30 MM taper on the outside and a No. 2 Morse taper inside to receive taper shank drills, reamers, boring bars, end mills, etc. Shipping weight 1 pound.

MIL7039. No. 2 Morse Taper Sleeve for Milling Machine. *8.90*

OFFSET BORING HEADS



Also have No. 30 MM taper shank. Body is 2 3/4" diameter and maximum bar offset is 5/8". Offsetting screw has dial with graduations reading in thousandths. Bar or tool capacity is 5/8". Shipping weight approx. 4 1/4 lbs.

MIL7043. Offset Boring Head. *106.00*

BORING TOOL SETS

For use with Offset Boring Head described above. Consists of nine boring bars and boring tools for 3/8" and larger holes. 5/8" diameter shanks. Includes wood base. Shipping weight 3 1/2 lbs.

MIL7044. Boring Tool Set.

MEASURING TRAYS AND RODS

Are attached to table and knee of machine. Used with 5/8" diameter end measuring rods and micrometers. Especially useful for jig boring operations. Dial indicators have 100 graduations reading in thousandths of an inch. Shipping weight approximately 35 pounds.

MIL7040. Measuring Trays and Indicators for 32" Table.

MIL7041. Measuring Trays and Indicators for 42" Table.

MIL7042. Set of Precision End Measuring Rods consisting of two 4" to 5" inside micrometers, one 10" solid rod, and two each solid rods 1", 2", 3", and 6" long. Packed in wooden case. Shipping weight 5 lbs.

90° MILLING HEADS



Clamp onto quill of machine and can be set at any angle. Have No. 30 MM taper and take same holders, arbors, or other tools normally used in regular spindles. Also supplied are draw-in collet attachments for the spindle and one 1/2" capacity No. 3 collet. Shipping weight 20 lbs.

MIL7050. 90° Milling Head. *96.50*

EXTRA COLLETS FOR 90° MILLING HEAD

Regular South Bend No. 3 steel collets. Any capacity 1/8" to 1/2" round in increments of 1/64". Shipping weight each 6 ozs.

CE3050. Steel Collet.

CHUCK ADAPTER STUDS



Consist of machined base plate with threaded stud on which lathe chuck may be screwed. When ordering be sure thread on stud conforms with thread in back of chuck to be used. Includes bar for screwing stud into base plate but does not include clamps or bolts.

Catalog Number	Diameter of Plate	Thread Diameter	Threads per Inch	Shipping Weight
CE3445	6 1/4"	1 1/2"	8	7 lbs.
CE3447	7 1/2"	2 1/4"	8	13 lbs.

WORK LIGHT

Can be permanently installed by drilling and tapping one hole in the milling machine column. Shipping weight 5 pounds. Bulb is not included.

MIL7047. Work light for milling machine.

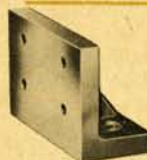
FLY CUTTERS

For use with Vertical Milling Machines. 5/8" shank and takes 3/16" cutter bit. (Cutter bit not included.)

MIL 7058. Fly Cutter.



ANGLE PLATES



Sizes 4 1/2" x 3" x 2". Have six bolt holes. Shipping weight 4 pounds.

CE9640. Angle Plate.

HYDRAULIC OIL

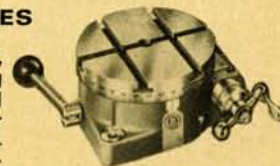
For use in Power Feed Quill of Vertical Milling Machines.

CE7053. 1 qt. can Hydraulic Oil.

CE7054. 1 gal. can Hydraulic Oil.

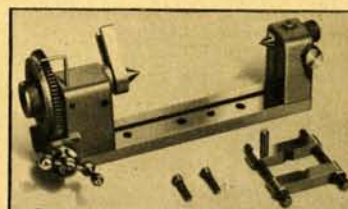
ROTARY INDEXING TABLES

Used for accurately spacing holes, indexing clutch teeth, machining squares, hexagonal or octagonal shapes, milling circular grooves or T-slots, etc. Tables are 4 1/2" in diameter and have three T-slots for clamping work. Edge of table is graduated 360°. Table is turned by worm gearing having graduated collar and ball crank. Thumb screw on front of ball crank locks graduated collar in any position. Clamping device is provided for locking table in any position. Includes eight clamping bolts with nuts and washers. Shipping weight 14 lbs.



CE9144. Indexing tables.

INDEXING CENTERS



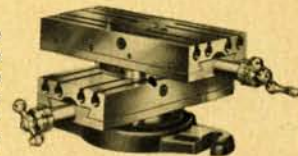
Take work between centers up to 5" in diameter, 6" long. Revolving center has large dial graduated 360°. Center is turned by worm gearing having graduated collar and ball

crank. Clamping device is provided for locking center in any position. Base has two bolt holes for clamping to machine table. Includes two clamping bolts. Shipping weight 12 lbs.

CE9635. Indexing Centers.

UNIVERSAL TABLES

Both upper and lower slides have graduated swivels and may be turned through full 360°. The ground work surface is 4" x 8 7/8" and maximum travel is 4" for either slide. Tables have four slots for clamping work. Clamp bolts fit snugly into round slots in such a way that there is little danger of breaking out or otherwise damaging the slots. Supplied with base. **CE9156.** Universal Table complete with base, two slides, two graduated swivels, and eight clamp bolts with nuts. Shipping weight 43 lbs.



CE9157. Single Table with one graduated swivel and four clamp bolts with nuts. Shipping weight 19 lbs.



CE9159. Base only for adapting single table to South Bend milling machine or other machine tool. Shipping wt. 8 lbs.



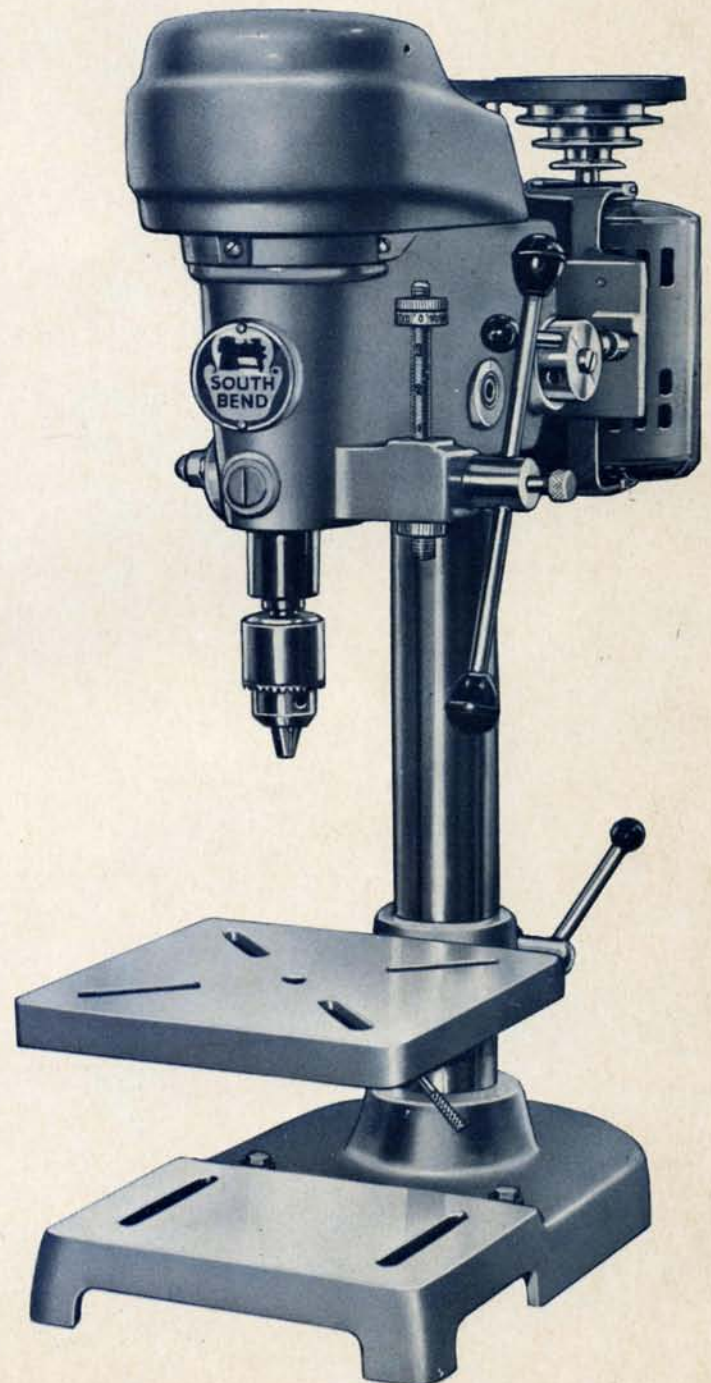
14"

SOUTH BEND PRECISION *bench and floor model* **DRILL PRESSES**

South Bend 14" Drill Presses are the only drill presses in their size and price range with a Patented Design Rack Type Depth Gage completely integrated with the quill. Designed to eliminate spindle and small drill deflection. Depth stop is direct reading, in thousandths of an inch. A built-in light provides shadowless illumination on the work area.

The free-floating spindle design prevents misalignment, side thrust, and whip. Two precision ball bearings carry the spindle, which is spline driven. All ball bearings pre-lubricated and sealed; require no oiling.

Standard equipment supplied with each drill press includes motor base, balanced motor pulley, balanced spindle pulley, V-belt, built-in work light, wiring in drill press head, spindle equipment as indicated in table, switch for work light, and switch for single phase motor, but does not include motor.



PRECISION MODEL FLOOR DRILL PRESSES

Catalog Number	Spindle Equipment	Crated Weight
CD400F	1/2" Jacobs Key Chuck	235 lbs.
CD414F	No. 2 Morse Taper Socket	235 lbs.

NOTE: If ordered less motor, specify voltage, phase, and cycle of motor to be used.

PRECISION MODEL BENCH DRILL PRESSES

Catalog Number	Spindle Equipment	Crated Weight
CD400B	1/2" Jacobs Key Chuck	190 lbs.
CD414B	No. 2 Morse Taper Socket	190 lbs.

NOTE: If ordered less motor, specify voltage, phase, and cycle of motor to be used.

FEATURES

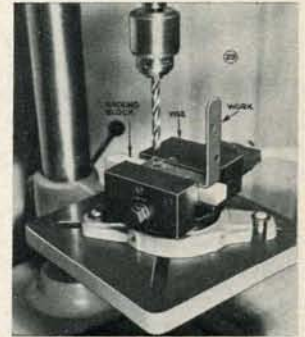
- **ONE-PIECE HEAD CASTING** insures accurate alignment. Internal clutch locks the head to column.
- **BUILT-IN LIGHT** provides shielded shadowless illumination of work area. Independent switch is built-in.
- **ADJUSTABLE FEED LEVER** can be centered or extended for increased leverage or convenience.
- **INTERCHANGEABLE SPINDLES** take No. 2 Morse taper shank tools and ½" straight shank tools, bits and cutters.
- **ADJUSTABLE QUILL RETURN SPRING** retracts quill instantly.
- **FOUR PRECISION BALL BEARINGS**, two on spindle and two on drive sleeve. Lubricated and sealed.
- **RACK TYPE DEPTH GAUGE** eliminates spindle deflection; graduated in thousandths.
- **QUILL SHOE ADJUSTMENT** for feather-touch tensioning and locking. Quill bearing is **not** split.
- **FREE FLOATING SPINDLE** prevents misalignment, side thrust and whip.
- **BELT TENSION RELEASE** helps you make easy speed changes.
- **TABLE LOCK** eliminates misalignment. Column bearing is not split.
- **WIDE CLAMPING RIB ON PRECISION TABLE** holds work more securely.

SPECIFICATIONS

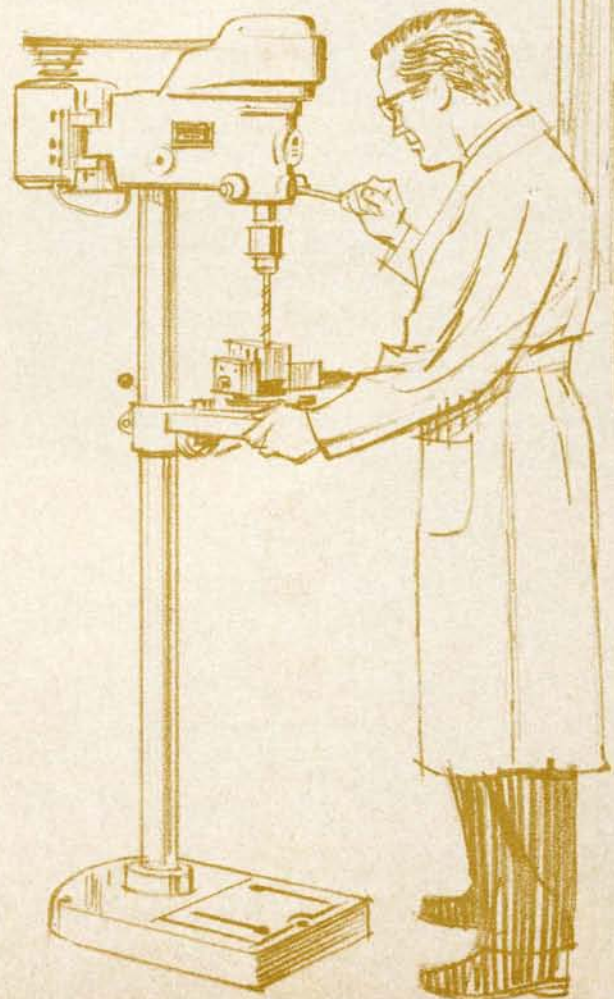
Maximum drill size in iron or steel.....	½"
Drills to center of.....	14¼" circle
Net weight, bench type, less motor.....	130 lbs.
Net weight, floor type, less motor.....	165 lbs.
Chuck capacity	0 to ½"
Spindle Speeds:	
With 1725 r.p.m. motor, four, approx.....	720 to 4325 r.p.m.
With 1140 r.p.m. motor, four, approx.....	480 to 2885 r.p.m.
With 1725 r.p.m. motor and multi-speed attachment, (see pages 46 and 47)	
twelve, approx.	255 to 5340 r.p.m.
Spindle travel, maximum.....	4"
Spindle run out, maximum.....	.001"
Spindle, square with table within.....	.002" in 5"
Chuck to base, maximum, bench type.....	16"
Chuck to base, maximum, floor type.....	45¼"
Chuck to table, maximum, bench type.....	11¾"
Chuck to table, maximum, floor type.....	40¾"
Base, work surface, bench type.....	7" x 10"
Base, work surface, floor type.....	.8" to 12"
Table, work surface.....	10" x 10"
Table tilt.....	Any angle
Column diameter	2.730"
Motor size	½ h.p.



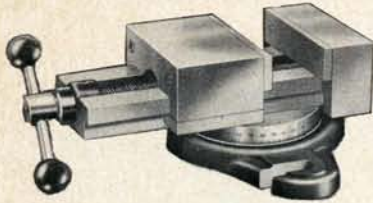
Precision drilling operation with use of a universal table for handling and clamping of work. See page 46.



Drilling an angle plate clamped in a drill press vise. A practical method of holding small work rigidly for drilling or reaming operations. See page 46.



ACCESSORIES for South Bend Drill Presses



SWIVEL MACHINE VISES

Swivel is graduated 180° to permit setting vise at any angle with slots in table. Hardened and replaceable

jaws are 4" wide and 1" deep. Maximum jaw opening is 4". Shipping weight 18 lbs. **CE9100.**

MULTI-SPEED ATTACHMENTS



Provide twelve spindle speeds 380 to 8010 r.p.m. with 1725 r.p.m. motor or 255 to 5340 r.p.m. with 1140 r.p.m. motor. Consists of an eccentric spindle, which is

mounted in the drill press column to support a 4-step auxiliary cone pulley with two V-belts. Shipping weight 8 pounds. **CD9135A.** For 1/3 h.p. or 1/2 h.p. NEMA No. 56 frame motor. NOTE: This attachment cannot be used with Head Positioning Attachment.

WOOD TOP MACHINE STANDS

Heavily constructed angle steel, 29 3/4" high. The glued wood top is 20" x 32" and 1 3/8" thick. Steel parts are finished in gray enamel. Shipping weight 52 lbs. **CE9141.**

DRAWER FOR MACHINE STANDS

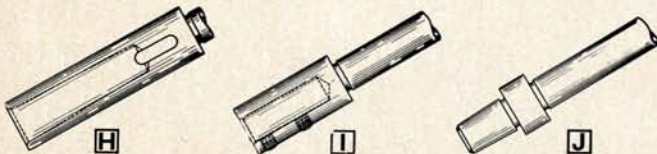
Finished to match stand CE9141. Drawer is 20 1/8" wide, 14" long, 3 3/8" deep. Includes metal pull and wood slides. Shipping weight 9 pounds. **CE1780D.**

CHUCKS AND ARBORS

Recommended for use with drill presses having spindles with No. 2 Morse taper.

CE1201. Jacobs 3-jaw smooth body drill chuck, 0 to 1/2" capacity with pinion key. Shipping weight 2 3/8 lbs.

CE9110. No. 2 Morse taper shank arbor with tang, for fitting chuck No. CE1201 to drill press spindle No. CD9125. Shipping weight 3/4 pound.



EXTRA SPINDLES

Interchangeable with regular drill press spindles.

CD9125. Spindle "H" with No. 2 Morse taper hole for holding taper shank tools. Drift included. Ship. wt. 3 lbs.

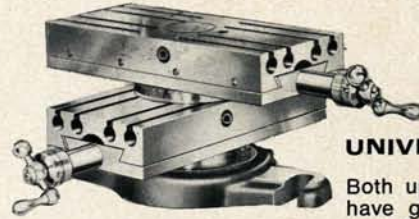
CD9128. Spindle with No. 3 Morse taper hole for holding taper shank tools. Drift included. Ship. wt. 5 lbs.

CD9126. Utility spindle "I" with 1/2" x 1 5/8" deep straight hole for holding routing tools, etc. Shipping weight 2 lbs.

CD9127. Spindle "J" with short taper for 1/2" Drill Chuck No. CE1201. (Jacobs No. 34) Ship. wt. 2 lbs.

BELT GUARDS

These belt guards provide complete enclosure for V-belt. Guard is hinged and may be raised for changing spindle speeds. May be used with or without Multi-Speed Attachment. Shipping weight 16 lbs. **CD9136.**



UNIVERSAL TABLES

Both upper and lower slides have graduated swivels and may be turned through full 360°. The precision ground work surface is 4" x 8 7/8" and maximum travel is 4" for either slide.

CE9156. Universal Table "K" complete with base, two slides, two graduated swivels, and eight clamp bolts with nuts. Shipping weight 43 lbs.

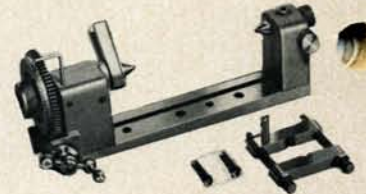
CE9157. Single Table "L" with one graduated swivel and four clamp bolts with nuts. Shipping weight 19 pounds.

CE9159. Base only "M" for adapting single table to South Bend Drill Press. Shipping weight 8 lbs.



INDEXING CENTERS

Take work up to 5" in diameter and 6" long. Worm gear dial is graduated in degrees and each graduation on ball crank collar indicates 3 minutes. Shipping weight 12 lbs. **CE9635.**



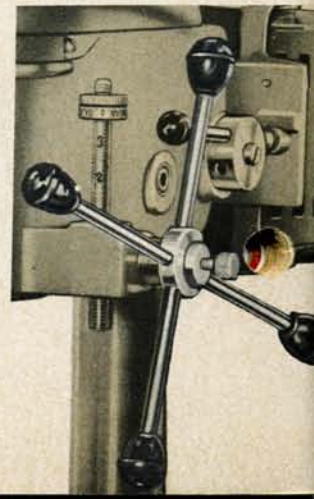
INDEXING TABLES

Table is 4 1/2" in diameter and has three T-slots for clamping work. Edge of table is graduated 360°. Each graduation on ball crank collar indicates table movement of 3 minutes. Shipping weight 14 lbs. **CE9144.**



TURNSTILE FEED LEVER ATTACHMENTS

Add two spokes to the regular feed lever to provide a four spoke turnstile feed for the drill press spindle. Does not interfere with the adjustable feature of the regular feed lever. Shipping weight 3 lbs. **CD9170.**



TABLES WITH COOLANT TROUGHS

Heavily constructed with large flat underneath edge for clamping. Precision ground work surface is 10½" square. Coolant trough has drain hole with ¼" pipe thread.

CD9165. Table with Coolant Trough in lieu of regular table at time drill press is purchased.

CD9166. Table with Coolant Trough in addition to regular table or separate from drill press. Shipping weight 40 lbs.



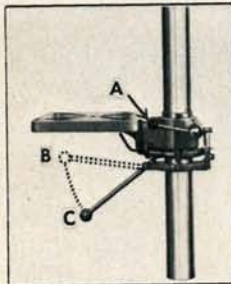
HEAD POSITIONING ATTACHMENTS

Provide a quick and convenient means for adjusting the position of the drill press head on the column. Can be used at any point on the column, and

provides four inches of vertical adjustment at one setting. Designed for drill presses which have columns 2.730" in diameter. The head positioning attachment and the multi-speed attachment cannot be used at the same time. Ship. wt. 10 lbs. **CE9131.**

NEW EASY-UP TABLE ELEVATORS

To operate, release table clamp A—then move raising lever from B to C in a pumping motion. Table climbs right up column. To lower, swing table slightly from left to right. Table will slide down. Works with table at 45° and swivels to any position.



CD9186. Easy-Up Drill Press Table Elevator for use with South Bend Drill Press (2.730 column).

CD9180. Easy-Up Drill Press Table Elevator for use with any drill press with 2.750 column.

ANGLE PLATES

These are heavy cast iron angle plates suitable for clamping work on the drill press, shaper, milling machine, face plate of lathe, etc. Size 4½" x 3" x 2". Shipping weight 4 lbs. **CE9640.**

CHUCK ADAPTER STUDS

Consist of accurately machined base plate with threaded stud on which lathe chuck may be screwed. When ordering be sure thread on stud conforms with thread in back of chuck to be used. Includes bar for screwing stud into base plate but does not include chuck, clamps or bolts.

Catalog Number	Diameter of Plate	Thread Diameter	Threads Per Inch	Shipping Weight
CE3445	6¼"	1½"	8	7 lbs.
CE3447	7½"	2¼"	8	13 lbs.

TOOL TRAYS



May be clamped on the drill press column either above or below the table. Especially desirable for floor type drill presses. Shipping wt. 5 lbs. **CD9175.**

TABLE SUPPORT RINGS

Permit releasing the table clamp and swinging the table around the column to any position without danger of the table dropping. Convenient for surface grinding with cup wheel and similar surfacing operations. Shipping weight 1½ pounds. **CE9140.**

MOTORS AND CONTROLS

MOTORS

Motors listed below are recommended for use with South Bend 14" Drill Presses. Standard spindle speeds with 1725 r.p.m. motors are approximately 720 to 4325 r.p.m. and with 1140 r.p.m. motors 480 to 2885 r.p.m. These are all vertical mounting ball-bearing motors. All single phase motors are capacitor type. Prices of 230 V. single phase motors include 230 V. lamp in lieu of 115 V lamp regularly supplied.

Motors operating on two or three phase A.C. require either remote control or across-the-line manual starter equipment described below the motor table.

Wiring and switches for single phase motors are supplied with Precision Model Drill Presses, and need not be ordered as extras.

Cat. No.	R.P.M.	H.P.	Current	Volts	Phase	Cycle
CE4920B	1725	½	A.C.	115	1	60
CE4924D	1725	½	A.C.	230	3	60
CE4924F	1725	½	A.C.	460	3	60
CE4934B	1140	½	A.C.	115	1	60
CE4935D	1140	½	A.C.	230	3	60
CE4935F	1140	½	A.C.	460	3	60

Motors with other characteristics available, contact your distributor.

CONTROLS

For two and three phase motors. All two and three phase motors require remote control of across-the-line manual starter equipment. Remote control equipment includes step-down-transformers and relays which reduce current to operating switch to 110 volts, and provide overload protection and low voltage release.

CE4901. Across-the-line Manual Starter for three phase or Two phase three wire 208-220/440 v., 50/60 cycle A.C. motors. Shipping weight 5 pounds.

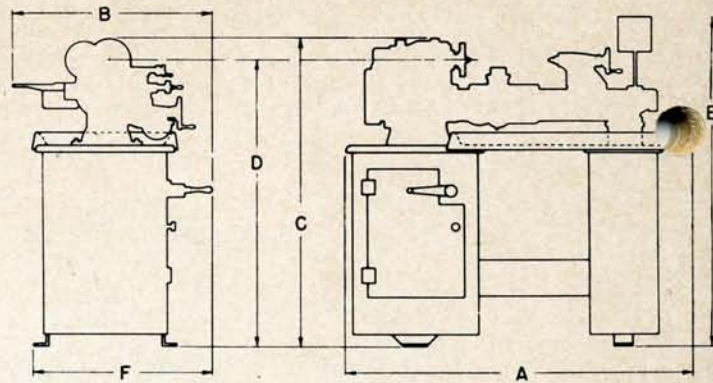
FLOOR SPACE REQUIRED FOR SOUTH BEND MACHINE TOOLS

Dimensions A to G
in tables are in inches.

The drawings shown here indicate the amount of the floor space that these lathes occupy when installed in your shops.

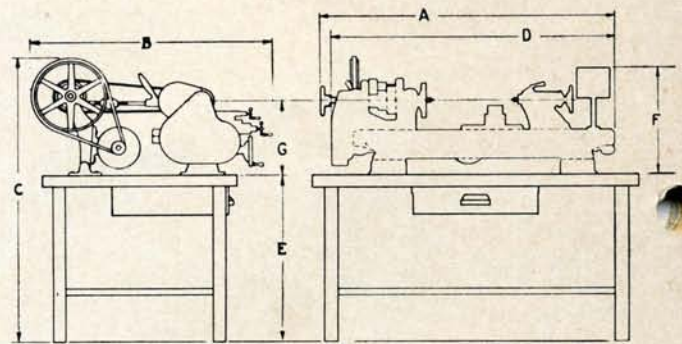
The drawings give the entire length and width of the lathe. They show the distances from the floor to the center of the lathe and the height overall.

All dimensions have been taken from an actual machine measurement, however, because of variations in castings, fabrications, etc., we cannot certify them for preparation of foundations. Write for exact measurements.



10" UNDERNEATH MOTOR DRIVEN FLOOR LATHES

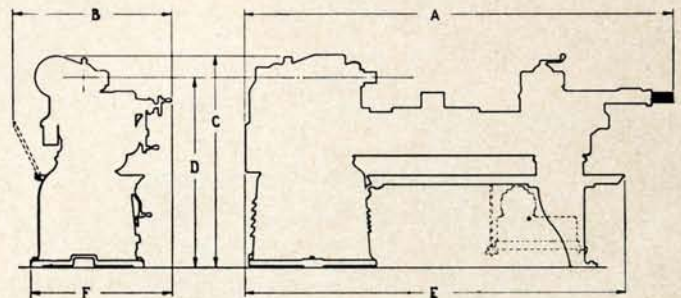
Size Lathe	Bed Length	A	B	C	D	E	F
10"	3½'	53	28	47	43	51	26
10"	4½'	67	28	47	43	51	26



HORIZONTAL MOTOR DRIVEN BENCH LATHES

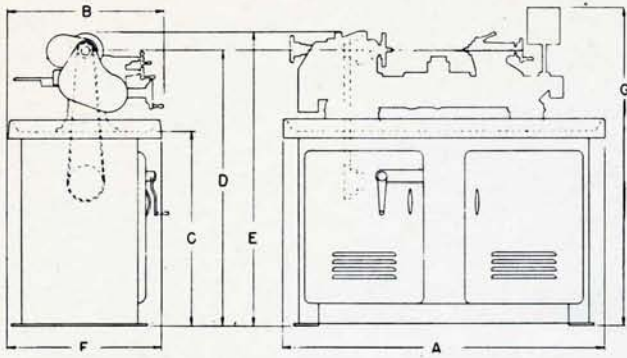
Size Lathe	Bed Length	A	B	C	D	E	F	G
10-K	3½'	48	39	51	45	29*	20	13
10-K	4½'	60	39	51	57	29*	20	13

*Benches also made 34" high.



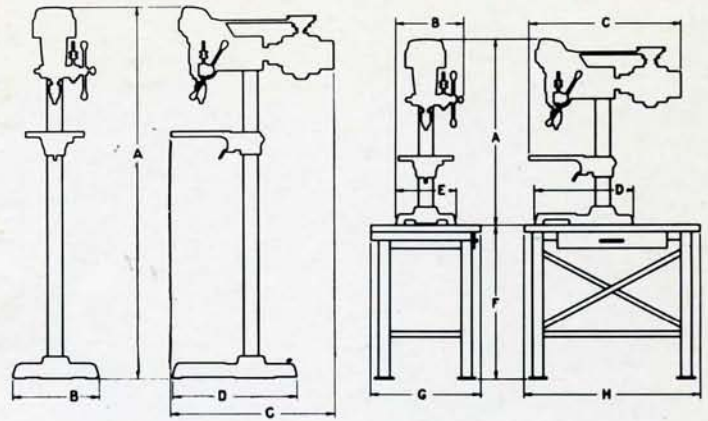
UNDERNEATH MOTOR DRIVEN FLOOR LATHES

Size Lathe	Bed Length	A	B	C	D	E	F	G
13"	5'	65	34	46	42	53	26	70
16"	8'	103	41	47	42	54	29	107
16-24"	10'	127		52	47		29	



UNDERNEATH MOTOR DRIVEN METAL CABINET LATHES

Size Lathe	Bed Length	A	B	C	D	E	F	G
10"	3½'	52	26	32	46	49	25	54
10"	4½'	66	26	32	46	49	25	54

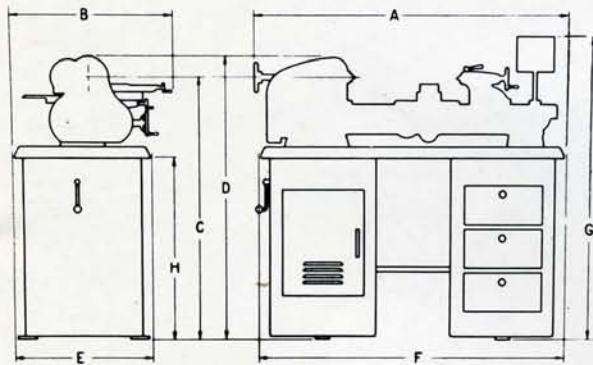


FLOOR TYPE DRILL PRESSES

A	B	C	D
66	15	½ h.p. 29	21

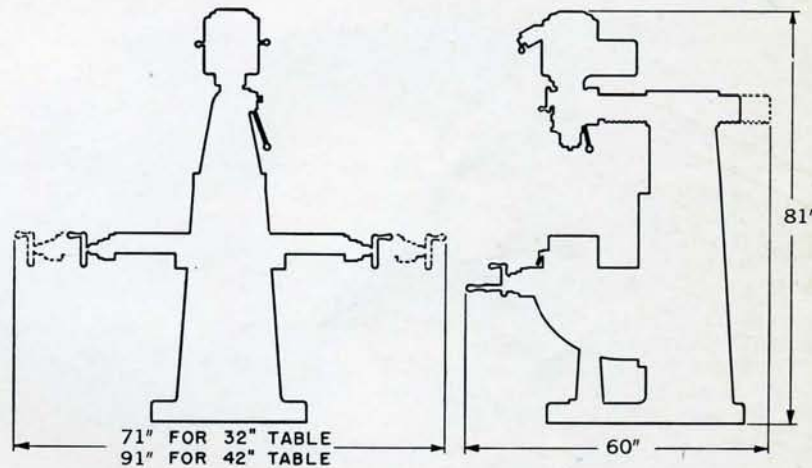
14" BENCH DRILL PRESSES

A-36	E-11
B-12	F-29
C-½ h.p. motor-29	G-20
D-18	H-32

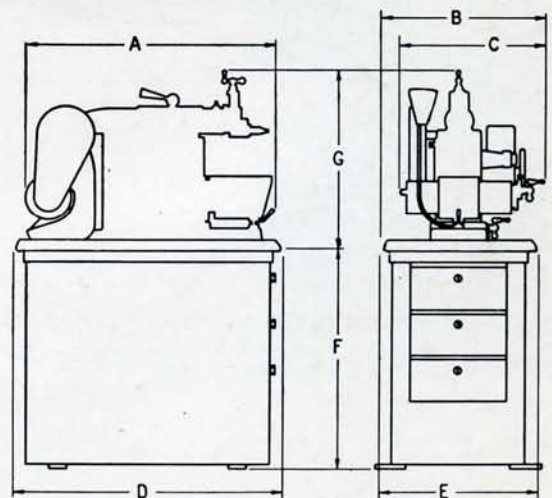


UNDERNEATH MOTOR DRIVEN METAL CABINET LATHES

Size Lathe	Bed Length	A	B	C	D	E	F	G	H
10-K	3½'	49	25	42	45	23	50	49	29
10-K	4½'	63	24	42	45	23	64	49	29

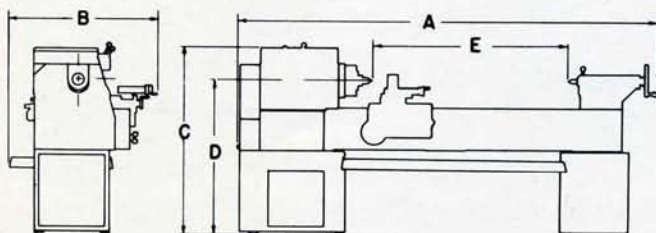


MILLING MACHINES



7" SHAPERS AND STANDS

A	B	C	D	E	F	G
½ h.p. 35	21	19	36	19	28	26



17" GEARED HEAD LATHES

Size Lathe	Bed Length	A	B	C	D	E
17"	6'6"	93	39	53	44	30
17"	8'6"	117	39	53	44	54
17"	10'	141	39	53	44	78
17"	12'	165	39	53	44	102

D I S T R I B U T E D B Y

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