

# Space Required for Installing South Bend Lathes

Applying to All Sizes and Types of Bench and Floor Leg Lathes

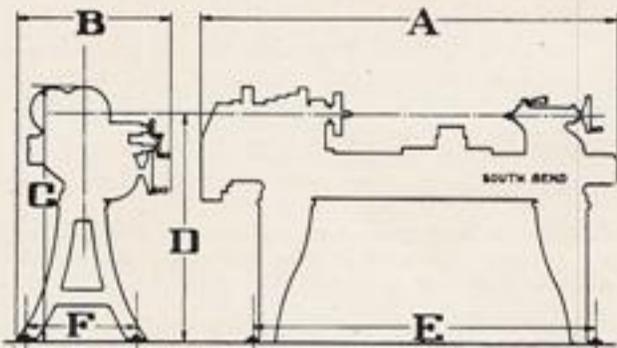


Fig. 1. Floor Leg Lathe, Countershaft Drive

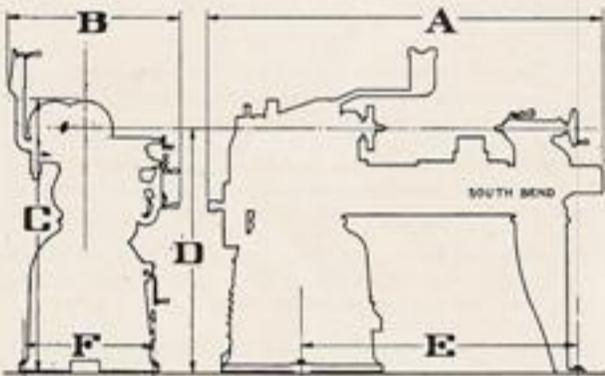


Fig. 2. Underneath Belt Motor Drive Lathe

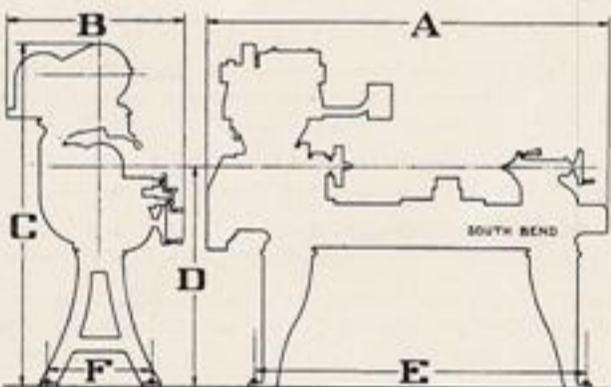


Fig. 3. Floor Leg Lathe, Silent Motor Drive

To find the space required for installing a particular size and type of South Bend Lathe, consult the drawings at left and the table below. "A" equals the over-all length; "B" equals the width; "C" the height, etc.

The most popular size bed length is shown with each size lathe. The space required for a lathe with longer bed length than that given is the same in every dimension except length of lathe. By adding the extra inches to the length listed, you have the length of the lathe desired.

Bench Lathes take up approximately the same space on a bench as a floor leg lathe, of similar size, does on the floor.

## Space Required for Various Sizes and Types of Lathes

Size of Lathe Inches	Length of Bed Feet	Floor Space Required		Height of Lathe Inches	Height to Center Inches	Approx. Distance Between Bolts in Inches	
		Length of Lathe Inches	Width of Lathe Inches			E	F
		A	B	C	D	E	F

### Floor Leg Lathes—Countershaft Drive (See Fig. 1)

Toolmaker	3	41	18 1/4	44 1/2	41 1/2	38	16
9	3	41	20 3/4	44 1/2	41	35	18
11	4	52 1/2	22 1/2	44 3/4	41	45	18 1/4
13	5	64 3/4	26	45 1/2	41 1/2	52 1/4	21
15	5	65 1/2	27 1/2	46 1/2	42	50 1/4	21
16	6	77 3/4	29 1/2	40 3/4	42	63 1/2	20 1/4
18	8	103 1/4	31 1/2	47 1/2	42	87 1/2	20 1/2
16-24	8	102	29	48 1/2	43	75 1/2	21 1/4
36	8	102	29 1/2	46 3/4	42	75 3/4	21 1/2

### Underneath Belt Motor Driven Lathes (See Fig. 2)

9	3	45	24	44 1/2	41	33	16 1/4
11	4	56 1/4	26 1/4	44 3/4	41	42 1/4	19
13	5	68 1/2	28	45 1/4	41 1/2	50 1/4	19 1/2
15	5	70	30	46 1/2	42	47	22 1/2
16	6	83	30	46 1/4	42	59 1/4	22 1/2
18	8	110	44 1/2	47 1/2	42	73 1/2	22 3/4

### Floor Leg Lathes—Silent Motor Drive (See Fig. 3)

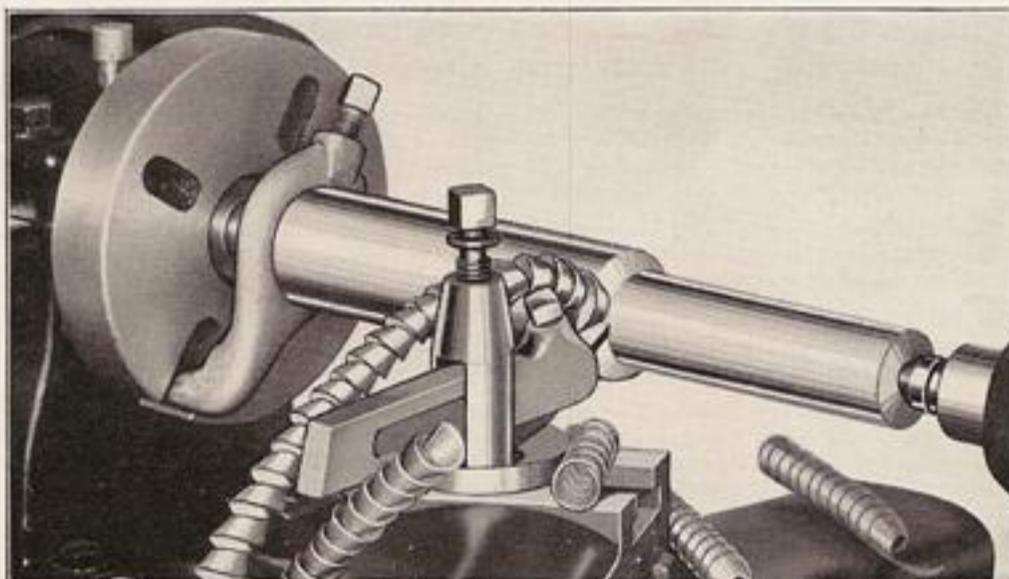
Toolmaker	3	41	22 1/2	60 1/4	41 1/2	38	16
9	3	41	23 3/4	60 1/2	41	35	18
11	4	52 1/2	26	62	41	45	18 1/4
13	5	64 3/4	28 1/2	63 3/4	41 1/2	52 1/4	21
15	5	65 1/2	32	65 1/2	42	50 1/4	21
16	6	77 3/4	34 1/4	67 1/4	42	63 1/2	20 1/4
18	8	103 1/4	39 1/4	69 1/2	42	87 1/2	20 1/2
16-24	8	102	34 3/4	67 3/4	43	75 1/2	21 1/4
36	8	102	36	67 3/4	42	75 1/4	21 1/2

## The Cutting Power of South Bend Lathes

Depth of Chip which can be Taken by Lathes of Various Sizes

The machining power of South Bend Lathes is shown in the chart below, which lists the power of the various size Countershaft Drive and Motor Drive Lathes when in operation machining a bar of machinery steel. The illustration

below shows a shaft of machinery steel being turned between centers in a 16-inch South Bend Lathe. The chip taken is 3/8" in depth, which reduces the diameter of the shaft 3/4" in one cut.



Close-up of 16" Lathe Reducing Diameter of Machinery Steel Bar 3/4-inch

### Chart Showing Cutting Power of South Bend Lathes

Size and Type of Lathe	Reduces diameter of steel shaft in one cut
9" Toolmaker	1/4 inches
9" Junior	3/8 inches
9" Quick & Standard	3/8 inches
11" Quick & Standard	1/2 inches
13" Quick & Standard	5/8 inches
15" Quick & Standard	11/16 inches
16" Quick & Standard	3/4 inches
18" Quick & Standard	7/8 inches



South Bend Lathe Works

425 East Madison Street,  
South Bend, Ind., U. S. A.

## Booklets and Bulletins for the Shop Mechanic

After more than twenty-seven years of practical engineering experience gained in building the line of South Bend Lathes, we have developed a number of booklets and bulletins covering the various classes of work showing the application of the lathe in the latest shop practice in metal working shops.

These booklets and bulletins are of great value to the experienced machinist, the mechanic, the apprentice, and to anyone interested in the fundamentals of shop work. The list below gives a brief summary of the contents of each booklet and bulletin. Copies are mailed postpaid, on request.

### Bulletins for the Industrial Shop Mechanic Showing Latest Shop Practice in Industry

**Handbook No. 44 as Illustrated** shows South Bend Lathes in the manufacturing plant, tool room, industrial laboratory and maintenance shop. Also contains several pages of valuable rules, formulas, etc., used in the modern industrial plant. Contains 32-pages,  $5\frac{1}{2}'' \times 8\frac{1}{2}''$ . Sent free, postpaid.

**Draw-In Collet Chuck Bulletin No. 11.** 8 pages,  $8\frac{1}{2}'' \times 11''$ , illustrating and describing the draw-in collet or split chuck which is used for fine accurate precision work, more especially in connection with the Tool Room Lathe. Sent free, postpaid.

**Screw Thread Bulletin No. 12.** An 8 page,  $8\frac{1}{2}'' \times 11''$ , bulletin showing how to gear the lathe for the various pitches of standard and special screw threads. Contains tables showing latest standard screw threads selected by the Bureau of Standards, A.S.M.E. and S.A.E. Sent free, postpaid.

**Highway Shop Bulletin No. 202** contains 12-pages,  $8\frac{1}{2}'' \times 11''$ , containing practical information for the highway shop mechanic. Shows methods being followed in highway shops, in maintenance and repair of road machinery and construction equipment. Sent free, postpaid, to any highway shop mechanic or supervisor.

**List of Users of South Bend Lathes.** A booklet listing the users of South Bend Lathes in your state, is now available. This booklet lists the owners of South Bend Lathes in your community, whose lathes you may see and examine and from whom you can obtain an actual user's opinion of the lathe. Sent free, postpaid.

**What Users Say About South Bend Lathes—No. 4-A.** A small handy booklet that gives the comments of over three hundred users of South Bend Lathes, giving their experiences with South Bend Lathes in operation in industrial, tool room, laboratory, experimental, repairing and all classes of lathe work. Free on request.

**How to Run a Lathe No. 30.** A valuable reference containing a wealth of information on shop kinks, modern shop practice and over three hundred illustrations of practical jobs. A copy is included with each South Bend Lathe. Sent for 25c per copy, postpaid.

### Bulletins for the Automotive Mechanic Showing Authoritative Methods of Automotive Servicing

**Handbook No. 33 as Illustrated** contains 32 pages,  $5\frac{1}{2}'' \times 8\frac{1}{2}''$ . Shows latest approved methods of servicing the mechanical units of the motor car, bus and truck such as valves, armatures, connecting rods, pistons, flywheels, differential gear cases, brake drums, wheels, etc. Mailed free, postpaid.

**Valve Bulletin No. 1** shows the practical and modern way of refacing automobile, truck and tractor valves, sharpening reamers, straightening valve stems, etc. 12-pages,  $8\frac{1}{2}'' \times 11''$ , fully illustrated. Sent free, postpaid.

**Armature Bulletin No. 2** shows complete servicing of armatures, including commutator truing, mica undercutting, mounting centerless armatures, etc. 8-pages,  $8\frac{1}{2}'' \times 11''$ , over 25 large illustrations. Sent free postpaid.

**Flywheel Bulletin No. 3.** A valuable bulletin on complete flywheel servicing, shows how to fit new starter gears, true the flywheel clutch face, how to mount flywheel, etc. 8-pages,  $8\frac{1}{2}'' \times 11''$ , with more than twenty-five illustrations. Mailed free, postpaid.

**Brake Drum Bulletin No. 4.** A 12-page,  $8\frac{1}{2}'' \times 11''$ , illustrated bulletin showing latest and most accurate brake drum service methods. Also shows how to service hubs, balance wheel assemblies and how to handle general wheel service jobs. Every shop doing or planning to do brake work should have a copy. Sent free, postpaid.

**Differential Bulletin No. 5** shows how to true differential flanges for fitting new ring gears. Contains over twenty-five illustrations of this and other jobs. 8-pages,  $8\frac{1}{2}'' \times 11''$ . Sent free, postpaid.

**Connecting Rod Bulletin No. 6.** 12-pages,  $8\frac{1}{2}'' \times 11''$ , fully illustrated, showing modern economical way of boring rebabbitted connecting rods. Shows new lathe attachment which will bore complete set of six rods in thirty minutes. Sent free, postpaid.

**Bushing Bulletin No. 7.** 8-pages,  $8\frac{1}{2}'' \times 11''$ , showing how to make bushings of brass, bronze, steel, fibre, etc. This bulletin is of especial value to the electrical shop and general motor service machine shop. Sent free postpaid.

**Piston Bulletin No. 9** shows how to finish round pistons and cam shaped pistons, cast iron, aluminum alloy, all shapes, types and sizes. Contains 8-pages,  $8\frac{1}{2}'' \times 11''$ , showing latest shop practice. Free, postpaid.

### Bulletins for the Instructor in Vocational Shops Showing Modern Industrial Training of Students and Apprentices

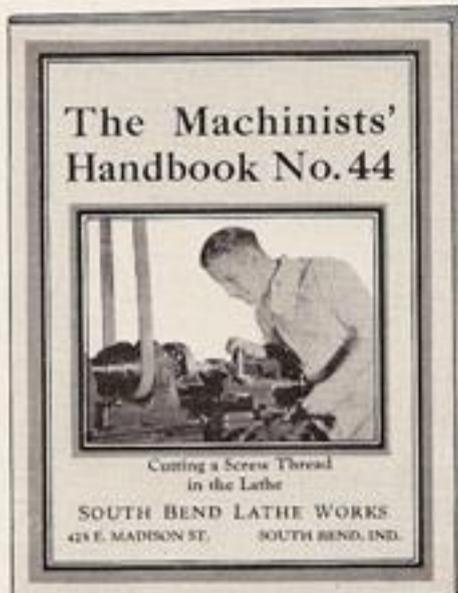
**Vocational Bulletin No. 55 as Illustrated** at left should be in the hands of every apprentice, instructor, supervisor and engineer who is interested in the training of students and apprentices. Book is  $5\frac{1}{2}'' \times 8\frac{1}{2}''$ , 32-pages, and contains many helpful rules, tables, layouts and illustrations of practical shops all over the United States. Sent free, on request, postpaid.

**Small General Shop Bulletin No. 50.** This book contains information of value to the school officials in small communities desiring to give a fundamental training in several shop activities. Outlines courses of study, shows layouts and itemizes complete equipment. Sent free, postpaid.

**Farm Mechanics Bulletin No. 31.** This book is of especial interest in the farming communities where fundamentals of several shop activities are covered as farm mechanics. Shows list of equipment, practical shop methods, illustrates successful shops, gives layouts, etc. Sent free, postpaid.

**Machine Shop Course Bulletin No. 55-A,** illustrates and describes fifty-two practical machine shop projects ranging from a simple nail set to a complex gasoline engine. Used by the engineering and vocational school for teaching fundamentals of machine shop practice. Blue prints and job sheets explain how to do the work step by step as it would be done by modern industrial methods. Free on request.

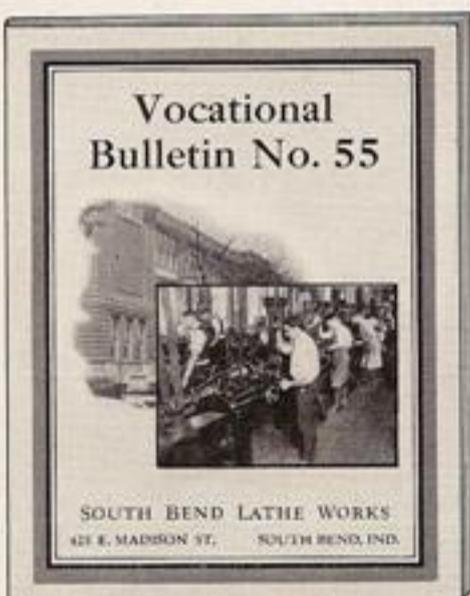
**Automotive Service Instruction Manuals** showing how to do all the automotive service jobs listed above can be furnished. Manuals contain blue prints showing job set-ups. Illustration sheets explain step by step how each operation is performed. A valuable aid to the practical mechanic and the student. Write for price list of manuals, Circular No. 56. Sent free, postpaid.



Machinists' Handbook No. 44, 32-pages, size  $5\frac{1}{2}'' \times 8\frac{1}{2}''$ , mailed free, postpaid, on request.



Motor Mechanics' Handbook No. 33, 32-pages, size  $5\frac{1}{2}'' \times 8\frac{1}{2}''$ , mailed free, postpaid, on request.



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