



*This Mark
identifies the Product of America's Largest
Producers of High Grade Engine Lathes*

Details and Specifications

Model "BB"

18" Helical-gearred

8-speed or 16-speed

Timkenized Lathe

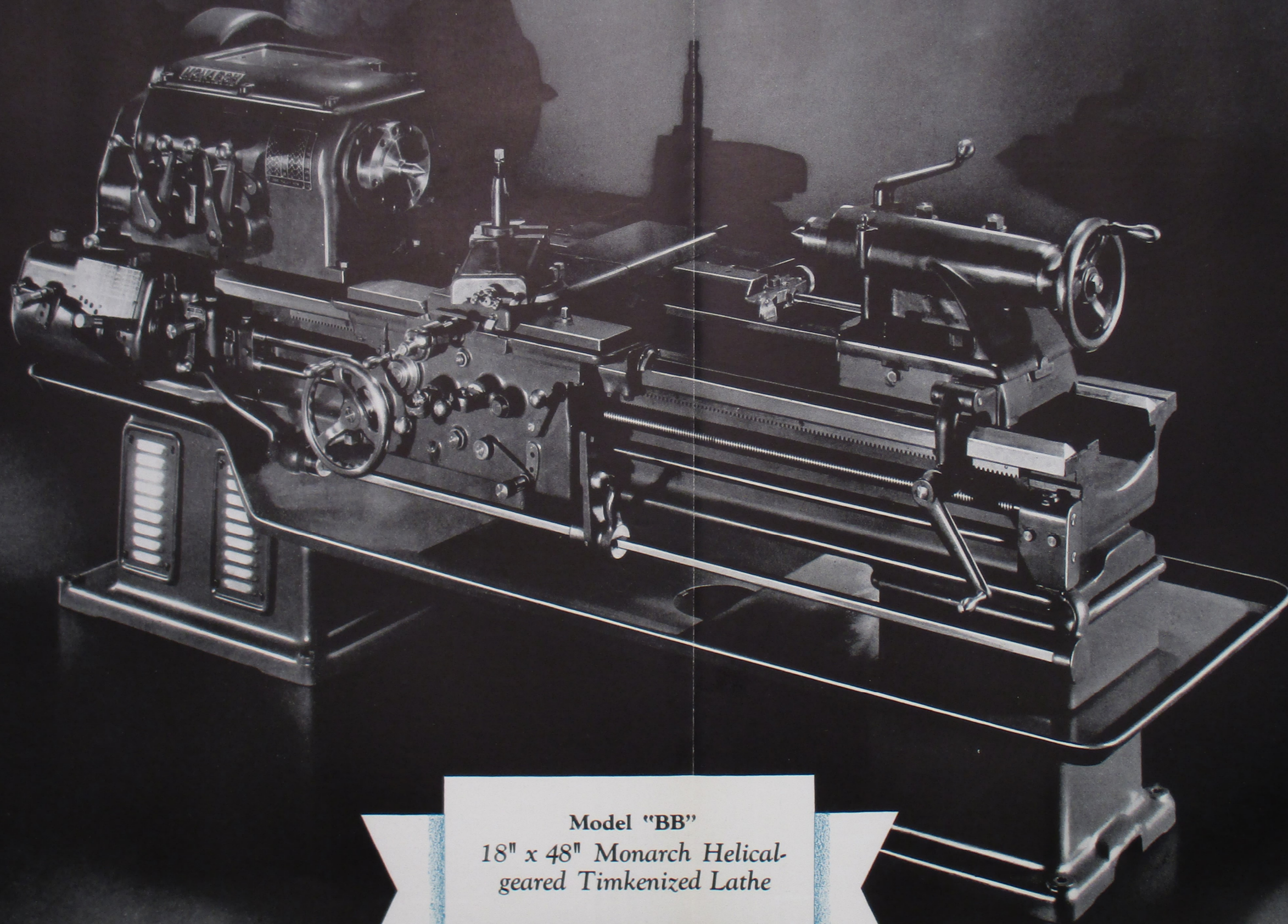
CODE WORD "BERTHA"

THE MONARCH MACHINE TOOL COMPANY

SIDNEY, OHIO, U. S. A.

New York Sales Office: 413 Graybar Bldg.

Chicago Sales Office: 622 W. Washington Blvd.



Model "BB"
18" x 48" Monarch Helical-
geared Timkenized Lathe

Monarch Lathes

Helical Gears - Timken Bearings
SMOOTHER... QUIETER... MORE POWERFUL

18" x 48" Monarch Model "BB" Helical-gear Timkenized Lathe

Swing over bed	20½"
Swing over compound rest	12"
Takes between centers, tailstock flush	48"
Tailstock can be overhung	5"
Base length weight without motor, 8-speed	5250 lbs.
Base length weight without motor, 16-speed	5500 lbs.
Weight extra two feet	350 lbs.
Hole through spindle	1¾"
Front spindle bearing	Precision Timken
Rear spindle bearing	Precision Timken
Center Morse taper	No. 4
Spindle nose, standard flange type	8¼" diam.
Lead screw diameter and threads per inch	1½"—4 thd.
Range of threads per inch, quick-change	1½ to 92
Range of feeds per inch, quick-change	.0027 to .170"
Number of threads and feed changes, regular quick-change	48
Headstock base length, 8-speed	27"
Headstock base length, 16-speed	28"
Tailstock base length	15½"
Tailstock, spindle diameter	2⅞"
Tailstock, spindle traverse and set-over	10"—1¼"
Steady rest opening, regular	6"
Maximum capacity oversize steady rest	12"
Carriage length	31½"
Carriage bridge width	9"
Compound rest top slide travel	5"
Size of lathe tool	¾" x 1⅝"
Motor, size recommended	7½ to 10 HP
Distance, spindle center to floor	43"
Geared head driving pulley, diameter, face	10" x 5"
Width of bed	18½"
Depth of bed	13½"
Distance between centers in multiples of 2' from 4' to 20'	
Maximum collet capacity, bar type	1⅝"

Maximum collet capacity, spindle nose type 1¾"

Actual threads cut with quick-change gear box: 1½, 1⅝, 1¾, 2, 2¼, 2½, 2¾, 2⅞, 3, 3¼, 3½, 4, 4½, 5, 5½, 5¾, 6, 6½, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 16, 18, 20, 22, 23, 24, 26, 28, 32, 36, 40, 44, 46, 48, 52, 56, 64, 72, 80, 88 and 92.

Spindle speeds obtained on 8-speed geared head lathe with driving pulley operated at 345 R.P.M.: 13, 22, 32, 55, 75, 127, 183 and 311 R. P. M.

Spindle speeds obtained on 16-speed geared head lathe with driving pulley operated at 500 R.P.M.: 12, 15, 19, 25, 31, 41, 52, 68, 84, 110, 140, 180, 225, 292, 375 and 487,

See price list for spindle speed ranges.

REGULAR EQUIPMENT consists of face plate, dog plate, steady rest, compound rest, centers, chasing dial, chasing stop and wrenches. Equipped with automatic force feed lubrication to carriage, bed ways, compound rest and apron.

MOTOR DRIVE is thru either silent chain or multiple "V" ropes as preferred. Motor is mounted inside headstock leg.

ACCESSORY EQUIPMENT which can be furnished includes: All styles of tool rests and turret (see special bulletin showing all these accessories). Taper attachment. Oil pan. Follow rest. Single or multiple automatic length or cross feed stops. Carriage spacing attachment. Ball turning rest. Micrometer carriage stop. Tool cabinet, pyramid for holding chucks, rests, etc. Sub-headstock for chasing coarse leads. Electrical apron control in addition to mechanical apron control. (See special bulletin illustrating all accessories).

Exclusive Features

Helical headstock gears . . . only 10 gears in headstock on 8-speed head . . . 14 gears on the 16-speed head . . . high carbon alloy steel, heat treated and hardened . . . silent, smooth transmission of power . . . no gear tooth marks on work.

Spindle speed changes made by double jawed clutches sliding on splined shafts, by means of levers on front of headstock. Impossible to engage conflicting gear ratios and no interference devices necessary. Extreme simplicity, rigid construction, nothing to get out of order.

Spindle and headstock shaft bearings are Timken, giving greater rigidity, greater precision, greater production without chatter, longer life and greater power economy.

Oiling by splash system. A cascade of oil

floods every working part in headstock. Filtered oil supplied to Timken spindle bearings.

Multiple disc driving clutch with brake, operated both from headstock and apron.

Headstock oil tight. No gears, oil tubes or other mechanism in top cover plate.

Apron is complete box section. All bearings are anti-friction, automatically oiled.

Quick-change gear box has all shafts mounted in Timken bearings, oiled from central reservoir. Multiple integral keys are used.

Ball thrust bearings on tailstock and cross feed screws.

Equipped with automatic force feed lubrication to carriage, bed ways, compound rest and apron.

We guarantee every Monarch Lathe to give complete satisfaction to the purchaser

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