

20" x 48"
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Monarch Lathes

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

Details and Specifications
Type "C"

20" Helical-gear
16-speed Completely Timkenized
Tool Room Lathe



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

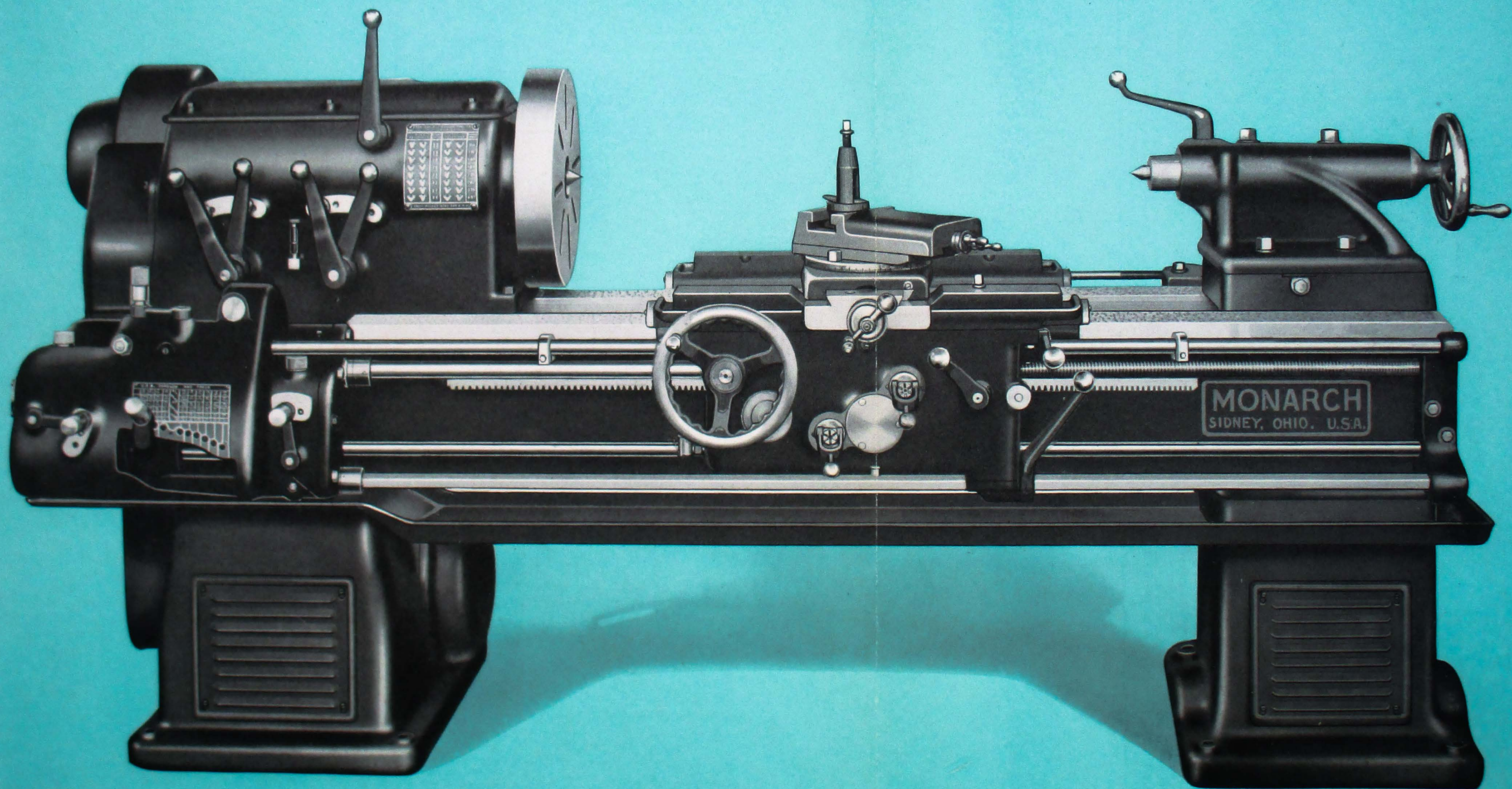
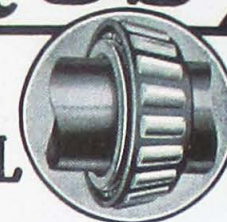
THE MONARCH MACHINE TOOL CO.
SIDNEY, OHIO, U. S. A.

Type "C"
20" x 48" Monarch 16-speed
Helical-gear
Completely Timkenized
Tool Room Lathe

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Dimensions and Specifications of 20" x 48" Monarch Type "C" 16-speed Helical-geared Timkenized Tool Room Lathe

Swing over bed.....	20½"
Swing over cross slide.....	12"
Takes between centers, tailstock flush.....	48"
Takes between centers, tailstock overhung..	54"
Base length, shipping weight, without motor.	4900 lbs.
Weight extra two feet.....	350 lbs.
Hole through spindle.....	1⅞"
Front spindle bearing.....	Precision Timken
Rear spindle bearing.....	Precision Timken
Center Morse taper.....	No. 4
Spindle nose, standard flange type.....	8¼"
Lead screw diameter and threads per inch..	1½"—4 thd.
Range of threads per inch, quick change....	1 to 60
Range of feeds per inch, quick change.....	.0025 to .150
Number of thread and feed changes, regular quick change.....	60
Headstock base length.....	27½"
Tailstock base length.....	15½"
Tailstock, spindle diameter.....	2⅞"
Tailstock, spindle traverse and setover....	10"—1¼"
Steady rest opening, regular.....	6"
Maximum capacity oversize steady rest we can furnish.....	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
Motor, constant speed, recommended.....	1150 R.P.M.
Distance, spindle center to floor.....	44"
Speed of geared head driving pulley.....	500 R.P.M.
Geared head driving pulley, diameter, face..	12" x 4¾"
Width of bed.....	18½"
Depth of bed.....	13½"
Length between centers.....	72", 96", 120" and 144"
Maximum collet capacity, bar type.....	1⅞"

Maximum collet capacity, spindle nose type 1¾"
Maximum diameter of work which can be relieved..... 5"
Maximum amount of relief..... ¼"
Actual number of flutes that can be relieved: 2, 3, 4, 5, 6, 7, 8, 10, 12, 14 and 16.
Thread cutting range: 1, 1⅛, 1⅜, 1¼, 1⅝, 1⅞, 1½, 1⅝, 1¾, 1⅞, 2, 2¼, 2⅜, 2½, 2¾, 2⅞, 3, 3¼, 3½, 3¾, 4, 4½, 4¾, 5, 5½, 5¾, 6, 6½, 7, 7½, 8, 9, 9½, 10, 11, 11½, 12, 13, 14, 15, 16, 18, 19, 20, 22, 23, 24, 26, 28, 30, 32, 36, 38, 40, 44, 46, 48, 52, 56 and 60.
Metric thread range: ⅛ MM pitch to 13 MM pitch.
Spindle speeds obtained 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.

REGULAR EQUIPMENT consists of face plate, dog plate, steady rest, compound rest, centers, chasing dial, chasing stop, micrometer carriage stop, lead screw reverse, oil pan and wrenches.

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 (see special bulletin showing all these accessories). Taper attachment. Chuck plates. Follow rest. Carriage spacing attachment. Ball turning rest. Relieving attachment. 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 tool room accessories).

Exclusive Features

Helical headstock gears—only 14 gears in headstock—high carbon alloy steel, heat treated, hardened and lapped; silent; smooth transmission of power—no gear tooth marks on work.

Sixteen spindle speeds with only 14 gears; speed changes made by double jawed clutches sliding on splined shafts, by means of four 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.

Monarch-Edgemont 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 box type casting, all high carbon steel stub tooth gears and shafts, and is equipped with the Monarch patented eccentric ball feed control levers. All bearings are anti-friction, automatically oiled.

All quick change gear box bearings are Timken. Bearings in end gear train are Hyatts.

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

THE MONARCH MACHINE TOOL COMPANY
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