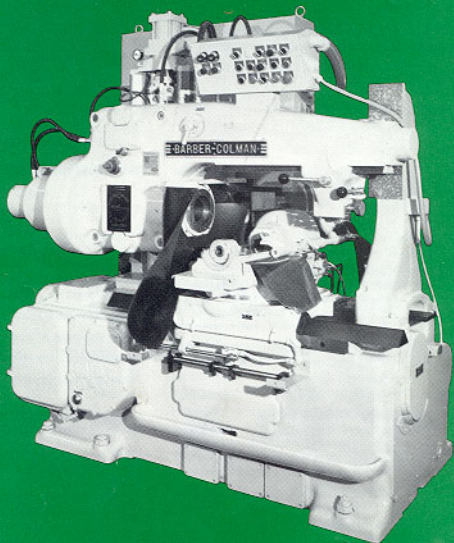


HORIZONTAL HOBBING MACHINE



NOTE: Guarding removed for illustration purposes

**Model 14-15
Series A-2**

STANDARD PRODUCT LINE MACHINE

Barber-Colman Model 14-15 Horizontal Hobbing machine, Series A-2, with Automatic Double Cut and Axial Approach Feed, including electrical equipment and motors.

Main Drive Motor, 10 HP, TE-FC-55, 1800 RPM, FR, 215T.

Hydraulic Pump Motor, 3HP, TE-FC-63, 1800 RPM, FR, 184T.

Lubricating Pump Motor, 1/4 HP, TE-4W-68, 3600 RPM, Fr, 58.

Coolant Pump with Integral, Face Mounted Motor, 1 HP, TE-FC-60, 1800 RPM.

Electrical Panel and Controls wired for 230/480 volt, 3 phase, 60 cycle current (please specify voltage when ordering).

Base Price \$



Model 14-15
Series A-2

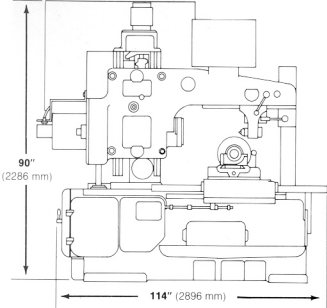
Note: Guarding removed for illustration purposes.

EQUIPMENT

1-1/4" Diameter Hob Arbor (Maximum Hob Width is 5")	Standard
1-1/2" Diameter Hob Arbor (Maximum Hob Width is 6") .....	.....
No. 5 B-C Taper Hob Arbor (Maximum Hob Width is 4") .....	.....
2" Diameter Hob Arbor (Maximum Hob Width is 6") .....	.....
Hob Arbor End Support for 1-1/4", 1-1/2" and No. 5 B-C Taper Hob Arbors	Standard
Hob Arbor End Support for 2", Hob Arbor .....	.....
One set-up of Index and Lead Change Gears .....	.....
One set of 36 continuously used Index and Lead Change Gears .....	.....
One set of 81 Index and Lead Change Gears (9-100) .....	.....
One set of Two Speed Change Gears for Two Speeds .....	.....
One set of 12 Speed Change Gears for 11 Speeds as follows: 64/382, 74/313, 90/255, 105/224, 127/185 and 153/163 RPM .....	.....
Auxiliary Coolant Tank Assembly .....	.....
Hydraulic Work Clamp Cylinder, Draw Tube and Mounting .....	.....
Change Gear Cabinet .....	.....

Magnetic Chip Separator for discharging chips
48 inches above floor level for use with Portable
Chip Containers (must be ordered with auxiliary
coolant tank)

Metric Scales and Gages



Note: Guarding removed for illustration purposes.

Note: Approximate metric conversions shown in parenthesis

KEY DIMENSIONS & LIMITS OF MACHINE FUNCTIONS

Distance: Workspindle Face to Tail Center

Maximum 27.25" (692.15 mm)

Distance: Workspindle Face to Center Line of Hob Spindle (dependent upon center distance & helix angle)

Minimum 3.5" (88.9 mm)

Maximum 18.5" (469.9 mm)

Distance: Center Line of Workspindle to Center Line of Hob Spindle

Minimum 1.75" (44.4 mm)

Maximum 9.75" (247.6 mm)

Maximum Hobshft Travel 4' 101.6 mm)

Workspindle Dimensions

Overall Diameter 8" (203 mm)

Counterbore Diameter 5.5010"/5.5015"
(139.7257 mm/139.7384 mm)

Bore Diameter 4.1875" (106.3 mm)

Bolt Circle Diameter 6.75" (171.45 mm)

Bolt Circle Tapped Hole Dimensions 1/2" 13 UNC

Index Worm Gear P.D. 17.9" (454.6 mm)

Number of Teeth

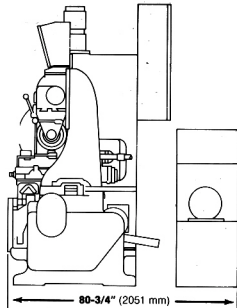
Minimum 4

Maximum 300

STANDARD FEATURES

1-1/4" DIAMETER HOB ARBOR AND END SUPPORT.

DOUBLE CUT FOR BOTH ROUGH AND FINISH HOBBIING in one cycle without taking the work from the machine. Double cut provides two hobbing levels: a partial depth for roughing and a final depth for finishing, as part of the automatic cycle for each load. This saves unloading, reloading and unloading again, with all the handling involved, which would be necessary if roughing and finishing operations were performed



separately. Feeding can be selected for either direction (climb or conventional). Stock allowance for finishing is adjustable. Double cut and automatic feed change control has unusually flexible cycle capabilities.

AXIAL APPROACH FEED CHANGE automatically adjusts the feed rate and permits use for high or low rate during the approach portion of the cycle. When the hob reaches a position just ahead of where the involute form is being fully generated, the feed rate changes automatically to the desired rate for full depth cutting. This feature will generally produce a saving regardless of the hob size or type.

THE FEED IS HYDRAULICALLY POWERED AND ELECTRICALLY CONTROLLED. The standard feed rate is infinitely variable from .030 to 2.6 inches per minute and can be set by moving the control dial to the desired rate of feed.

DOUBLE THREAD INDEX WORM AND GEAR affords maximum versatility and production. The index worm is hardened and ground and mounted in precision tapered roller bearings. The worm gear is of high density centrifugally cast aluminum bronze to assure stability and long life.

ANTI-FRICTION HOB AND WORKSPINDLES are mounted in precision tapered roller bearings for precise motion and minimum of friction and noise.

HARDENED AND GROUND BEDWAYS are ground to the finest precision. The V-way and flat way are rigid guides for the hob carriage.

6-1/4" (158.75 mm) DIAMETER HOB SLIDE accommodates a larger hob containing more flutes, greater accuracy, longer hob life and a major improvement in finish. Maximum hob length is 7".

AUTOMATIC HOB SHIFTER for increased hob life by uniformly distributing the wear so that all the hob teeth have approximately the same amount of wear. The hob slide is rigidly clamped during the cutting cycle.

THE DIFFERENTIAL provides a timed relationship to allow recutting a helical gear or maintaining a timing location of a gear tooth relative to another point on the gear blank. It also allows flexibility in computing index and lead change gears.

STANDARD FEATURES (Cont.)

HOB SWIVEL SETTING VERNIER for accurate setting of the hob slide for helical and spur gears.

METERED, INTERMITTENT, AUTOMATIC LUBRICATION is used in maintaining precision accuracies, as well as insuring longer life to bearing surfaces.

DWELL TIMER FOR BLIND CUTS providing a dwell period for complete full depth form generation.

HOB REVERSING DRUM SWITCH provides for the direction of main drive motor and hob rotation.

FUSED DISCONNECT insures against electrical overload.

ELECTRICAL PANEL CONFORMS TO CODES set by the National Machine Tool Builders Association and conforms to EGP-1-1967.

CHANGE GEAR DOOR INTERLOCKS are provided.

Machine is built to meet or exceed the construction section of A.N.S.I. B11.11 Draft 1974 safety requirements for the construction, care and use of gear cutting machines.

MACHINE DESIGN

The base of each Barber-Colman Horizontal Hobbing Machine is a single sturdy casting. A rugged overarm, securely fastened to the machine bed by an end support, completes the square lock design which supplies rigidity and accuracy during the hobbing operation. Versatile, adaptable, productive and dependably accurate have long been bywords of Barber-Colman Horizontal Hobbers.

SPECIAL MODELS

Many special variations of the Barber-Colman Horizontal Hobbing Machines are available. When production requirements so dictate, automated versions of the standard product line machines combine productivity with versatility. Increased piece part capacities, diameters and lengths are also available options in the Barber-Colman Horizontal Hobbing Machine line.

TOTAL ACCOUNTABILITY

For nearly 70 years Barber-Colman has been a pioneer and leading supplier of gear cutting machines and cutting tools for general industry and very specialized markets. The company enjoys a unique position in the industry as a manufacturing source for a full line of both gear cutting machines and cutting tools — an obvious advantage to companies engaged in machining and gear cutting.

Because engineering and manufacturing are conducted in the same location, customer contact and service support for any of the product lines are immediately available. Barber-Colman's experience and applied technology, combined with ultra modern facilities and equipment, devoted to the design, manufacture, and coordinated support of its product lines, assure the manufacture and serviceability of top quality products.

Possessing total capability to design, develop, and manufacture all of its product lines, Barber-Colman readily accepts total responsibility and accountability to the customer for any aspect of its machine tools and cutting tools program. The ability of customers to obtain SINGLE SOURCE RESPONSIBILITY assures complete coordination of their program, resulting in the lowest possible piece part cost and the greatest possible return on investment.



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Information and prices on this sheet are subject to change without notice and should not be considered part of any official quotation.