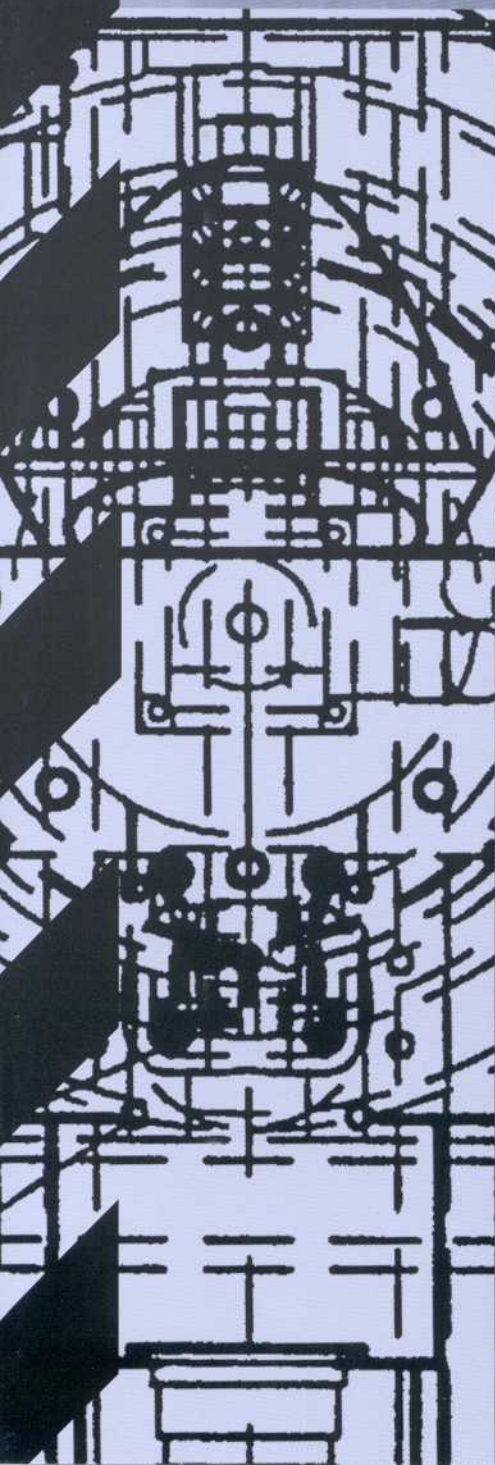


Advancing the Technology of Metal Removal



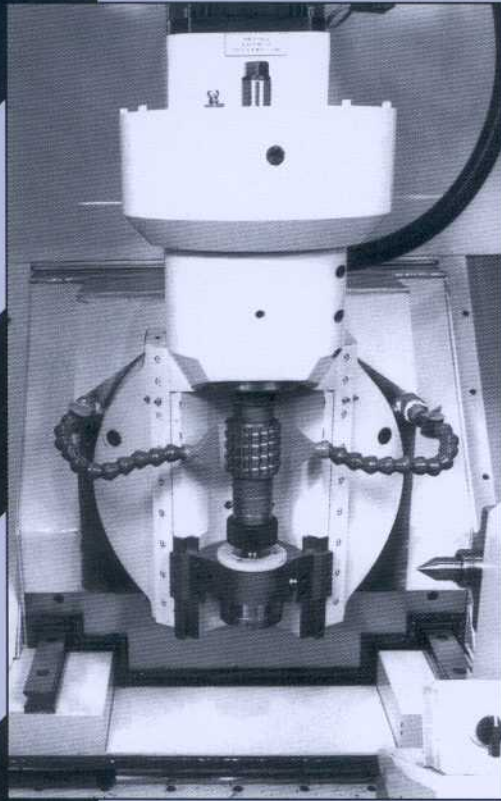
BOURNSKOCH

200H/400H *Series II* GEAR HOBBIING MACHINE



200H/400H Series II CNC HOBBERs

**The New Series II Horizontal Gear Hobbers
Have Been Redesigned To Include Many New Benefits.**



**Improved hob
spindle/swivel/
cartridge assembly**



**Pendent operator
station**

- > **Overall Improvements**
 - Standard seven (7) axis
 - Standard full enclosure
 - No hydraulics required on standard
 - Improved chip removal
 - Flat screen CNC control panel
 - Modern electronics
 - Completely redesigned hob swivel and slide
- > **Base**
 - Bases are similar between the two models
 - Constructed from steel-polymer concrete composite structure
 - Available in a standard or long version
 - Improved chip/coolant removal with flexible configurations for dry hobbing
- > **Work Spindle, C-axis**
 - Standard work spindle speed range of 80 rpm max., other ratios available
 - Work spindle housing constructed of steel – polymer concrete composite
 - 42" height from the floor
- > **Hob Rotation, B-axis**
 - Proven technology
 - Standard spindle speed range is 20 – 375 rpm
 - Cartridge design
 - Optional interchangeable spindles available.
- > **Axial Feed, Z-axis**
 - Precision linear roller ways
 - Precision ball screw
 - Peak velocity of 640 ipm
 - Stainless steel roller covers for high-speed dry hobbing
- > **Radial In-Feed, X-axis**
 - Precision linear roller ways
 - Precision ball screw
 - Peak velocity of 200 ipm
- > **Hob Shift, Y-axis**
 - Completely redesigned to improve performance and clean appearance
 - Incorporates super alloy for large bearing surface
 - Precision ball screw
 - Peak velocity of 80 ipm
- > **Hob Swivel, A-axis**
 - Completely redesigned on the Series II
 - Increased stiffness and improved packaging.
 - Standard CNC controlled axis
 - Peak velocity 10 deg/sec
- > **Tailstock, W-axis**
 - CNC positioning
 - CNC load setting
- > **CNC Control & Electronics**
 - NUM 1060 Flat Screen CNC
 - Indromat AC digital amplifiers and motors
 - Conversational software with graphics
 - Switchable handwheel
 - RS-232 interface
 - IEC style components
 - Nema 12 rated electrical enclosure
- > **Machine Enclosure**
 - Completely enclosed work zone
 - Operator doors with overhead access
 - Interlocks on operator doors
 - Easy access side and rear panels
 - Stainless steel way covers
 - Containment of chips/coolant to work zone
 - One fluorescent light
- > **Utilities**
 - Electrical–480/240v, 60 cycle, 3 phase
 - Pneumatics–100 psi
 - Lube–Manual Trabon system
 - Coolant–Oil or water based, dry
- > **Optional Equipment**
 - GE Fanuc CNC system
 - Color CRT
 - Emergency withdraw at power loss
 - Extended base
 - Work spindle speed ranges
 - Hob spindle speed ranges
 - 8 inch hob shift
 - Automatic stock dividing system
 - Quick change hob arbor clamp system
 - Work clamp assembly
 - Automated part loading and handling
 - Part steady rests
 - Deburring attachment
 - Interchangeable hob arbor assemblies
 - Magnetic chip conveyor
 - Paddle chip conveyor
 - Special and live tail centers
 - Additional enclosure lighting
 - Electronically operated operator doors
 - Smoke and mist collector
 - Machine leveling wedges
 - Replacement parts kit
 - Customer part runoff
 - Installation and training
 - Export packaging

Basic Capacity Specifications

DESCRIPTION	200H	400H
Maximum Coarseness	4 NDP, 6.4 Mod	4 NDP, 6.4 Mod
Maximum Work Diameter	8 in. (203.2 mm)	16 in. (400 mm)
Maximum Hob Length	7 in. (177 mm)	7 in. (177 mm)
Maximum Hob Diameter	6 in. (152 mm)	6 in. (152 mm)
Maximum Hobshift Travel	6.0 in. (150 mm)	6.0 in. (150 mm)
Hob Swivel Range	+/- 45 deg. (Left or Right)	+/- 45 deg. (Left or Right)
DISTANCE: Work Spindle Face to Tail Center, Maximum	52 in. (1321 mm) 76 in. (1930.4 mm)* Long	52 in. (1321 mm) 76 in. (1930.4 mm)* Long
DISTANCE: Work Spindle Face to C.L. of Hob Spindle. (Dependent upon Center Distance & Helix angle)	Min: 6 in. (152.4 mm) Max: 52 in. (1321) Max: 76 in. (1930.4) Long	Min: 6 in. (152.4 mm) Max: 52 in. (1321) Max: 76 in. (1930.4) Long
DISTANCE: C.L. of Work Spindle to C.L. of Hob Spindle	Min: 0.5 in. (12.7 mm) Max: 8 in. (203.2 mm)	Min: 0.5 in. (12.7 mm) Max: 12 in. (304.8 mm)
DISTANCE: C.L. of Work Spindle to Floor	Min. 42.5 in. (1270 mm) w/o leveling wedges	Min. 42.5 in. (1270 mm) w/o leveling wedges
TYPICAL QUALITY:	AGMA 10 Double Cut AGMA 9 Single Cut	AGMA 10 Double Cut AGMA 9 Single Cut
Overall Dimensions	L x W x H 128 x 96 x 88 in. (3.17 x 2.3 x 2.2 m) 155 x 96 x 88 in. Long* (3.93 x 2.44 x 2.24 m*)	L x W x H 128 x 96 x 88 in. 3.17 x 2.3 x 2.2 m 155 x 96 x 88 in. Long* (3.93 x 2.44 x 2.24 m*)
Approximate Weight	16,000 lb (7250 kg) 20,000 lb (9070 kg) Long	17,000 lb (7703 kg) 21,000 lb (9515 kg) Long
Seven Axis CNC Control	Standard	Standard
NUM 1060 CNC	Standard	Standard
GE Fanuc CNC with Absolute Encoders	Optional	Optional
Conversational Programming	Standard	Standard
CNC controlled Tail Center CNC Load Setting	Standard	Standard

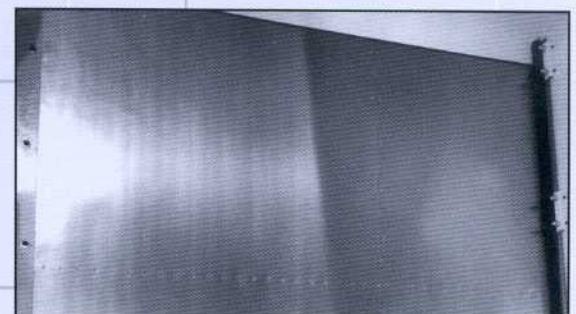
* Optional Long Version



Front view



Side & back view



Stainless steel
interior guarding

O.E.M. Products

Gear Manufacturing

Horizontal Hobbers

25H CNC	1" x 4" Capacity
100H CNC	5" x 20" Capacity
100H-L CNC	5" x 32" Capacity
200H CNC	8" x 52" Capacity
200H-L CNC	8" x 76" Capacity
400H CNC	16" x 52" Capacity
400H-L CNC	16" x 76" Capacity
600H CNC	25" x 100" Capacity
600H-L CNC	25" x 148" Capacity

Vertical Gear Grinders

500 VG CNC	19.685" x 12" Capacity
1000 VG CNC	39.37" x 12" Capacity
1400 VG CNC	55.118" x 11.8" Capacity

Hob Sharpening Checkers

HSC 100-001	9" x 16" Capacity
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Gear Software

Other Metal Cutting

Extrusion Milling Machines

EMC-12 Extrusion Milling Machine
Up to 12 CNC axis including contouring capabilities.

Rotary Transfer Machines

Designed around the customers specialized needs based on a modular design for easy change overs.

Special Purpose Machining Centers

Special application machines for special applications which are not addressed by standard machine builders.

Specialty Machines

Engineering solutions designed around the customers requirements.

We specialize in designing manufacturing solutions around our customers. We would be happy to review your requirements.

Remanufactured/ Retrofitted Products

Gear Products

We have extensive experience in gear products and metal cutting machines. In many cases we have developed standard packages to shorten the lead time and minimize your investment.

Barber-Colman

Hobbers: 6-10, 6-16, 16-16, 16-36, 16-56, 14-15, 14-30, 25-15, 16-15, 10-10, 10-20

Shapers: HD150, HD200, HD250, 10-04, 18-04
Hob Sharpeners 6-5, 6-7, 10-12

Pfauter

Hobbers: PA300, PA402, P900, P1501

Liebherr

Hobbers: L301, L402, L652, L1202

Fellows

Shapers: 4AGS, 36-6, 20-4, 50-8, 50-12

Other gear machines such as Red Ring Shavers, ITW Gear Inspection Machines, Gleason Gear Grinders, etc.

Other Metal Cutting Products

Lathes

Cincinnati Milacron
American

Machining Centers

- Sundstrand OM-1, OM-2, OM-2A, OM-3, OM-4, S40, S60, S80
- Kearney & Trecker
- Bourn & Koch

Boring Machines

- DeVlieg
- Giddings & Lewis
- Gray

Grinders

- Mattison (Surface and Rotary)
- Bryant
- Springfield
- Norton

VTL's

- Giddings & Lewis
- Bullard

Gantry Machines

- Ingersoll
- Ekstrom Carlson

Services

Replacement Parts

- Barber-Colman Gear Machines
- Ferguson Machining Units
- Bourn & Koch
- Mattison
- Parts reversed engineered from your worn out parts on other brands.

Service

- Barber-Colman
- Bourn & Koch
- Sundstrand
- Mattison
- Many brands of Gear Equipment

Seminars

Formal training at customer's plant

Laser Alignment

Portable equipment capable of processing 5 tests at once in your plant.

Subcontract Machining

Planing, machining, turning and hobbing

For More Information About
Bourn & Koch's Capabilities,
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