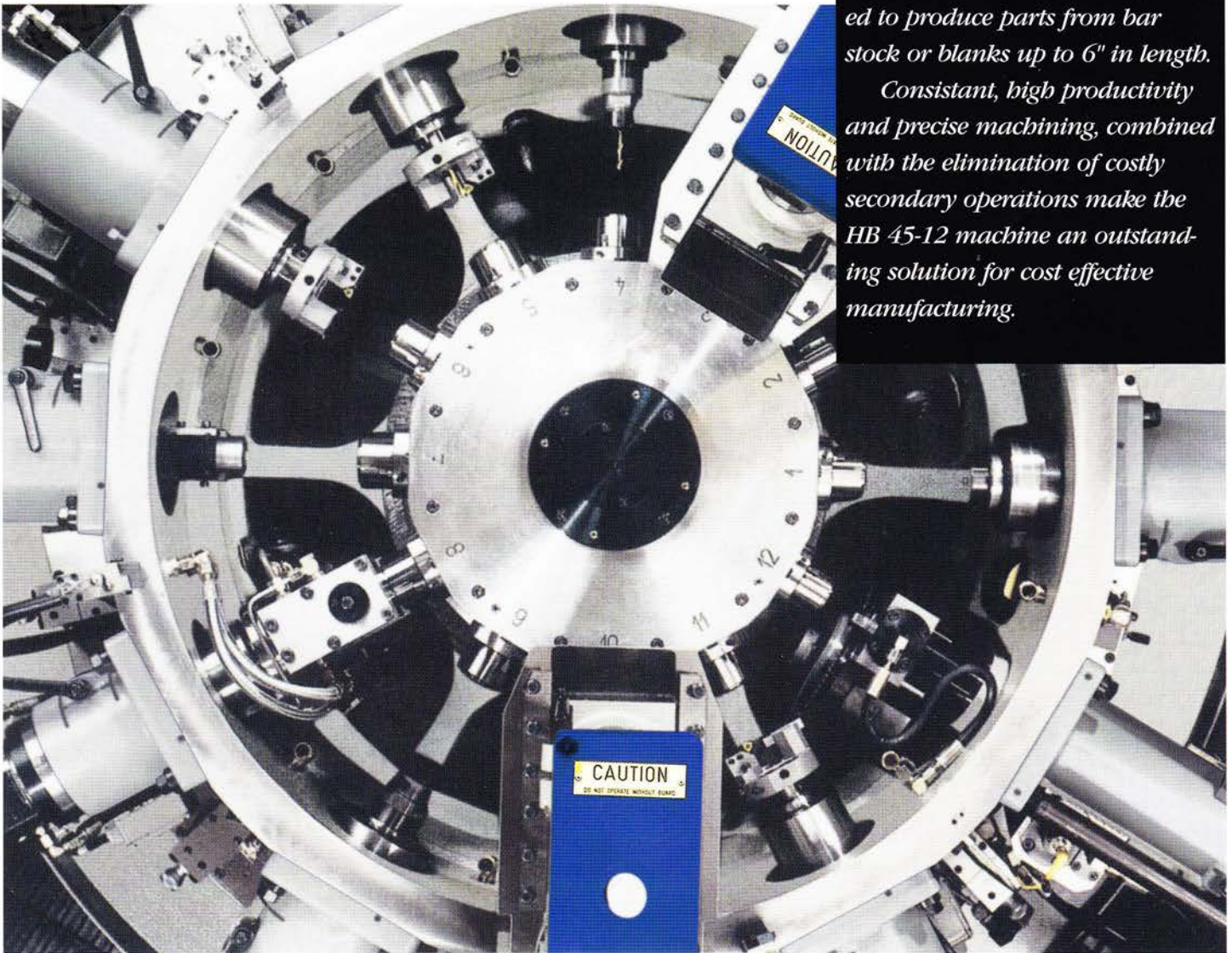


HB 45-12

ROTARY TRANSFER



The HB 45-12 rotary transfer machine is a modular system consisting of up to 12 horizontal and 6 vertical toolspindle units rigidly mounted around a precision cast iron ring. This arrangement has the capability of providing tremendous versatility and flexibility in a turnkey machining system.

With 1-3/4" capacity, the HB 45-12 machine is ideally suited to produce parts from bar stock or blanks up to 6" in length.

Consistent, high productivity and precise machining, combined with the elimination of costly secondary operations make the HB 45-12 machine an outstanding solution for cost effective manufacturing.



Committed to Excellence

Hydromat® Inc.
precision transfer machines

ACCURACY & FLEXIBILITY

The major elements of the HB 45-12 rotary transfer machine are: the basic machine—including indexing table and toolspindle units—electrical cabinet, hydraulic power supply, automatic loading system or barfeeder, and the chip conveyor/coolant filtration system. These major components are fully integrated to provide the highest system performance and production efficiency. ■

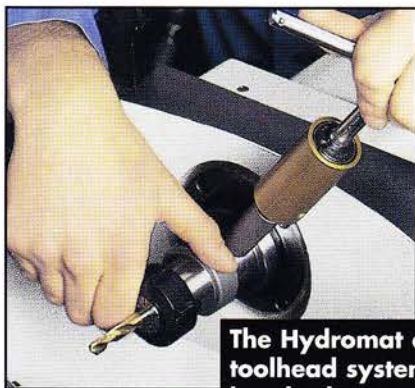
The stationary workpiece undergoes many types of machining operations, (i.e., drilling, cross drilling, boring, turning, milling, external and internal recessing, threading, tapping, broaching, etc.). A precision ground Hirth ring assures that table accuracy and reliability from station-to-station repeats within .0002". ■

The HB 45-12 machine comes equipped with an inverting unit which removes the workpiece from the collet, turns it 180° end for end, and places it precisely back in the same collet, which is being continuously flushed with filtered coolant. In this manner, the back side of the part can be completely machined, thereby eliminating normal secondary operations. ■

MODULAR TOOLSPINDLE UNITS

The machine is hydraulically controlled and has infinitely variable feeds for each toolspindle unit. Each of the independently controlled toolspindle units works simultaneously allowing the longest machining operation to control the cycle time. All toolspindle units are modular and provide maximum interchangeability for retooling. ■

Overall Machine View of HB 45-12 Rotary Transfer Machine.



The Hydromat quick-change toolhead system showing single-hand release concept and drill-head disengaged from unit.

The modular toolhead system provides full flexibility to change machining operations (i.e., from drilling to turning or milling) simply by changing the quick-change toolhead attached to the end of the

toolspindle unit. The quick-change system design provides quick, easy tool changing for worn tool replacement or complete job changeovers. ■



Sample parts produced on Hydromat machine.



ADVANTAGES OVER CONVENTIONAL MACHINING

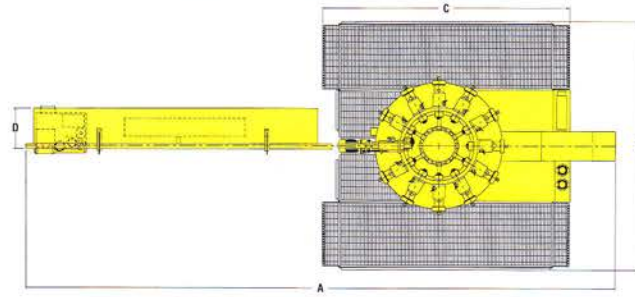
- Eliminates Secondary Operations
- Reduces Work in Process
- No Cams or Limit Switches
- Independent Infinitely Variable Feed Rate Control for Each Station
- Non-Rotating Bar Stock Provides Quiet Vibration-Free Operation
- Enclosed Easily Accessible Tooling Area
- Modular Toolspindle System with Quick-Change Pre-Settable Heads for Easy Changeover
- Coolant and Chips Contained in Tooling Area away from Motors and Controls (Suitable for Water Soluble)
- Extremely Short Bar End and Thin Cutoff Provides Significant Material Savings Compared with Screw Machines and Single Spindle Machines
- All Operating Controls and Machine Adjustments Readily Accessible and Easy to Use
- Precision Table Indexing and Repeatability Provides Consistency and Accuracy to Ensure Quality Parts with SPC to 2.0 CpK in some instances
- Standard Inverting Unit Repositions the Part End for End to Provide Capability to Completely Machine Both Ends of the Part Being Produced
- Easily Adapted Vertical Flanges Provide Flexible Application of Cross Drilling, Milling or other Vertical Machining Requirements
- Part Ejection Between Stations Eliminates the Need of Allocating a Separate Station for Part Ejection

MANY APPLICATIONS

The flexibility of Hydromat machines has been used successfully on applications in a wide variety of industries including:

- Automotive
- Plumbing & HVAC
- Hardware
- Hand Tools
- Electrical Components
- Defense & Aerospace
- Fittings & Connectors

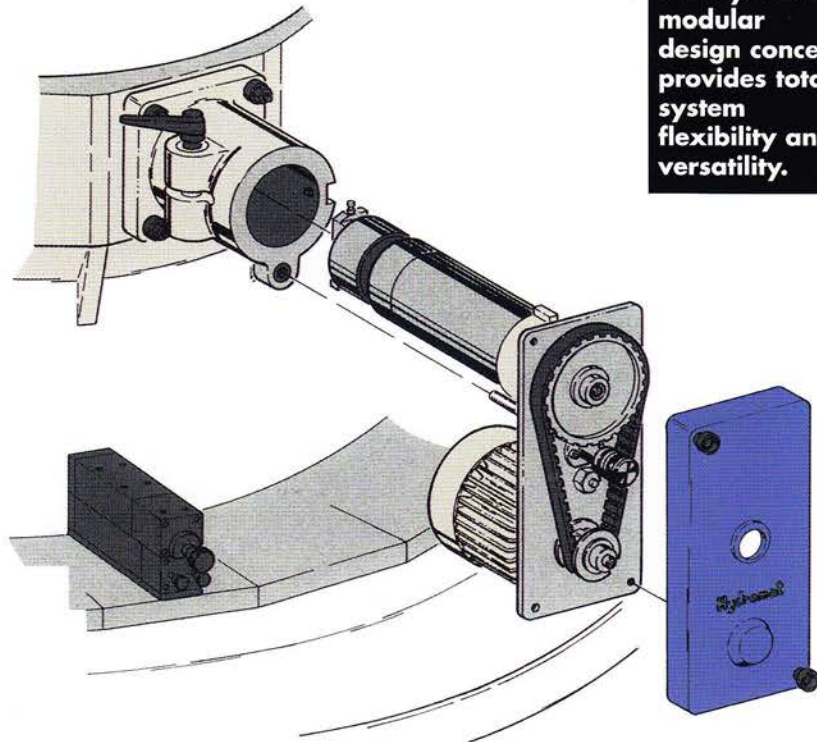
TECHNICAL SPECIFICATIONS



ROTARY TRANSFER MACHINE MODEL HB 45-12

Machine Model	Dimensions				Max. Stock Sizes				Hor. Sta.	Ver. Sta.	Index Time	Weight lbs.	Machine Power	Size Unit
	A	B	C	D	Rnd.	Hex.	Sq.	Lgt.						
HB 45-12	362"	129"	148"	27"	1 3/4"	1 1/2"	1 1/4"	6"	12	6	.8	15,000	43 HP (AVG.)	20/80 26/80 35/60 35/100 45/80

STANDARD COMPONENTS & MODULAR DESIGN



The Hydromat modular design concept provides total system flexibility and versatility.

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