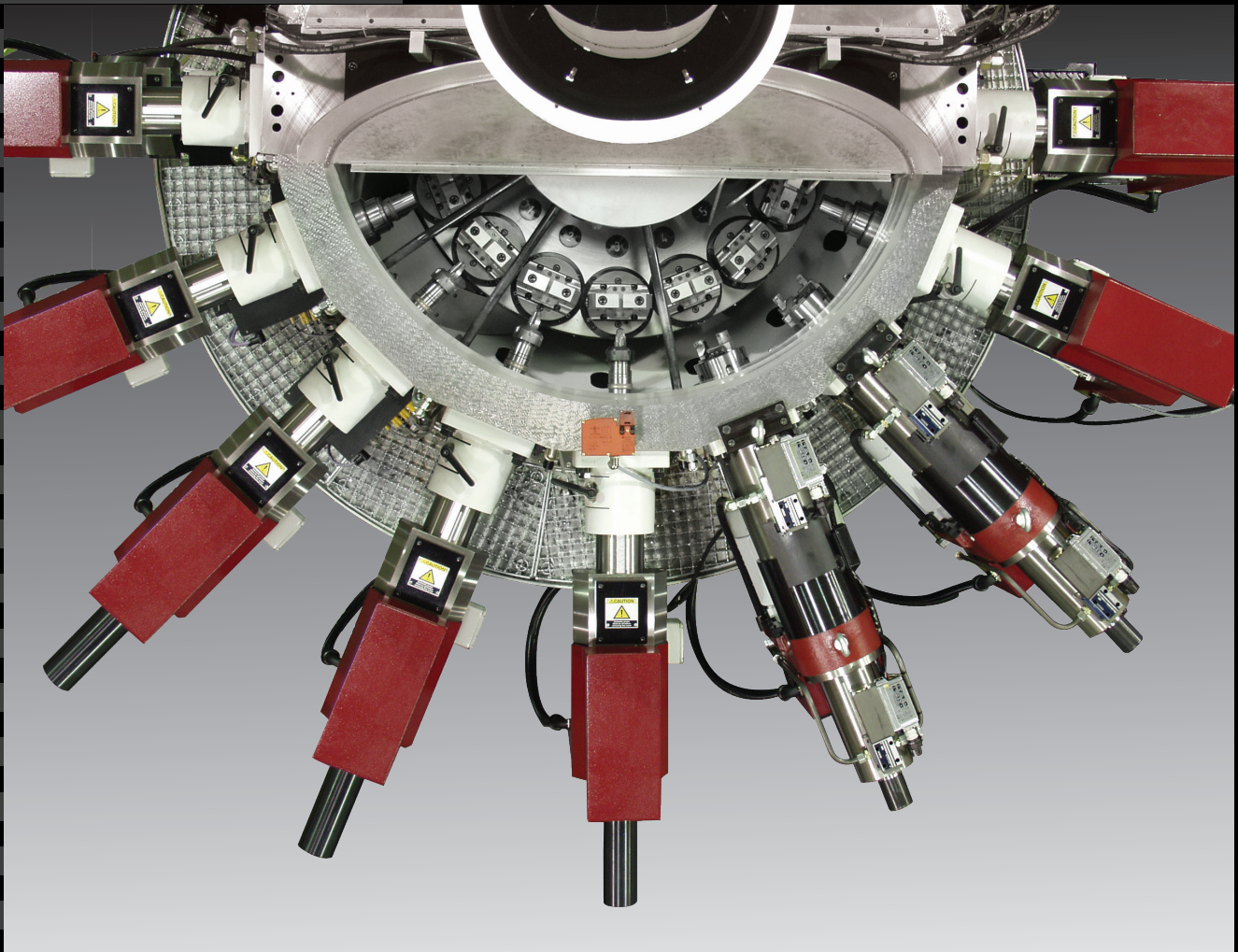


EPIC II

EPIC II Indexing Chuck Rotary Transfer Machine



HYDROMAT[®]

PROFITABILITY

MODULAR TOOLSPINDLE UNITS

The EPIC II 32/45-16 has infinitely variable feeds for each toolspindle unit. Each of the independently controlled toolspindle units work simultaneously allowing the longest machining operation to control the cycle time. All toolspindle units are modular and provide maximum interchangeability for retooling.

The modular tool head system provides full flexibility to change machining operation (i.e., from drilling to turning or milling), simply by changing the quick-change tool head 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.

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EPIC II Indexing Chuck Rotary Transfer

The EPIC II Indexing Chuck machine combines precision chucks with the indexing accuracy and reliability of the Hirth ring.

Available in 12 or 16 station models, the Indexing Chuck machine is fully integrated into the Hydromat program, so the same modular components used with Hydromat's popular EPIC R/T models are compatible with the EPIC II Indexing Chuck models.

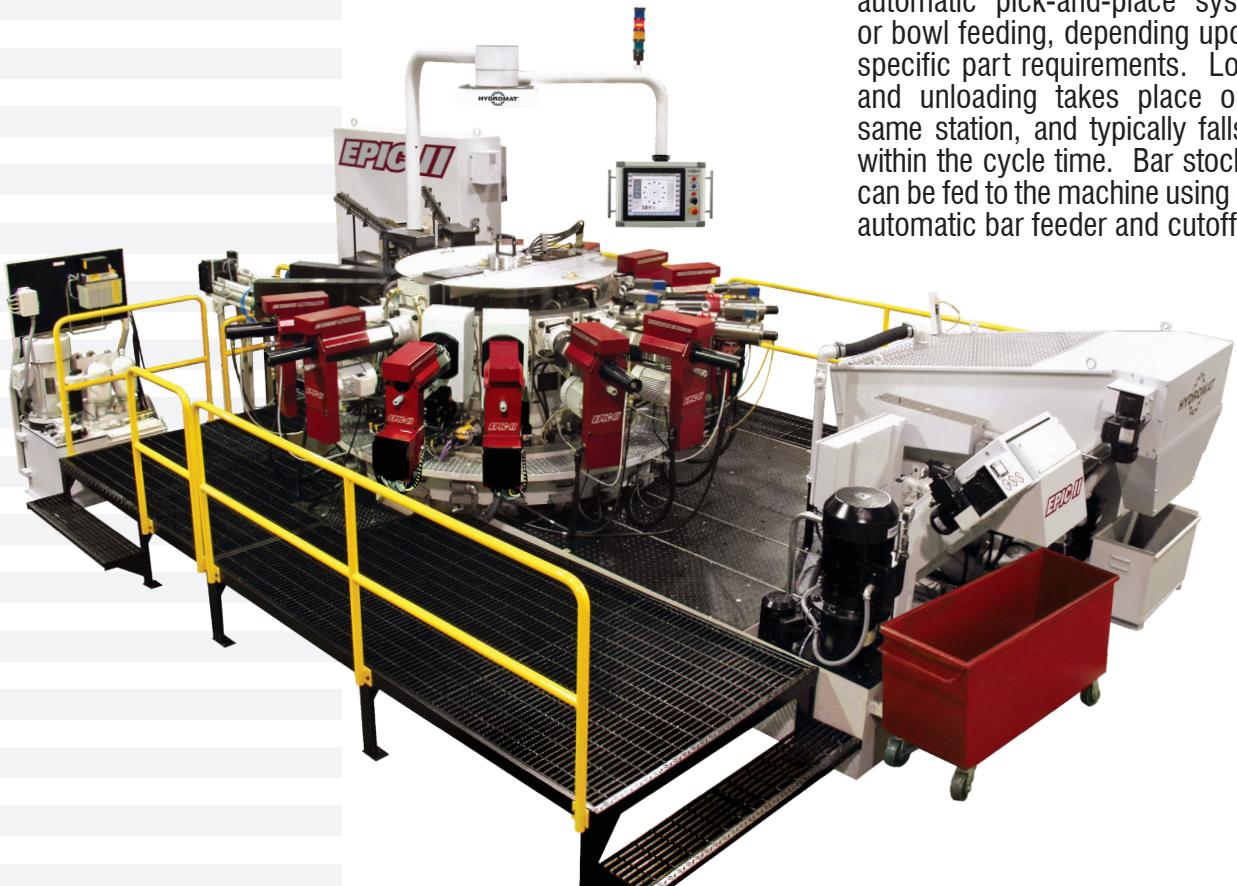
This system is ideal for the mid to high-volume, precision production of irregular-shaped castings or forgings and is designed with the flexibility to easily accommodate families of parts.

The EPIC II Indexing Chuck machine utilizes hydraulically-actuated, self-centering two or three-jaw chucks, or custom clamp fixtures, to provide the highest accuracy and part clamping

rigidity. This type chuck indexing provides precise part positioning for complex multi-axis machining that requires one chucking to maintain overall part quality and statistical capability.

The indexing chucks are positioned on the rotary table in a satellite arrangement and are indexed hydraulically. Indexing of the satellite chucks is free programmable, CNC controlled, and can be arranged so that no cycle time is lost. Variable clamping pressure can be provided to critical chucks at certain stations for ideal gripping performance without damaging or distorting the finished part.

A large group of irregular-shaped components, cast or forged, can be loaded by semi-automatic or fully-automatic pick-and-place systems, or bowl feeding, depending upon the specific part requirements. Loading and unloading takes place on the same station, and typically falls well within the cycle time. Bar stock also can be fed to the machine using a fully automatic bar feeder and cutoff saw.



ACCURACY

The EPIC II 12 & 16 station Indexing Chuck machines have the rigidity to handle all components within the capacity range of the machine: 4" cube capacity on the 12 station and 3" cube capacity on the 16 station.

A precision ground Hirth ring assures that the table accuracy and reliability from station-to-station repeats within .0002".

The EPIC II machines possess all of the general characteristics of the more conventional Hydromat machines and maintains the integrity, reliability, and flexibility of its predecessors. Applying CNC technology to the manufacture of precision parts is generally accepted as a premium that

one must pay for the advantages over conventional actuation systems.

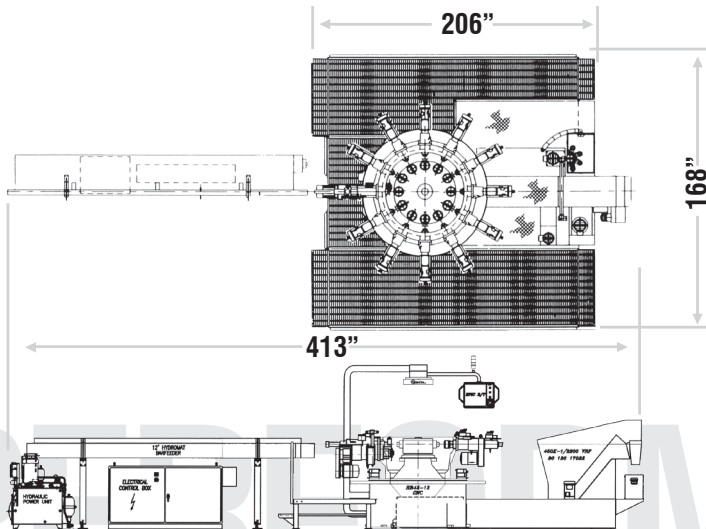
When it comes to improving profitability, the EPIC II machines with full CNC programmability are able to enhance ROI by reducing changeover times by 300 - 400% (1-3 hours versus 7-9 hours). This reduced changeover time increases overall machine productivity by over 15%: based on a two-shift operation and 2 changeovers a week. The increased productivity equates to payback or ROI for the Hydromat EPIC II Machines being up to 20%* faster due to reduced changeover and greater productivity.

*(based on hypothetical 6.0 second cycle time and 30 cent part selling price)



Specifications

Model	Blank	Round	Length	Hor. Station	Vert Station	Index Time	Weight LBS	Machine Power	Size Unit
12 Station	4" cube	1 3/4"	8"	12	6	1.2	18,500	53HP (Avg.)	20/80 26/80 35/60
16 Station	3" cube	1 3/4"	6"	16	8	1.0	20,000	66HP (Avg.)	36/100 46/120 50/100



The Evolution Continues:

**NEW TECHNOLOGY
DRIVEN DESIGN**

IMPROVED ACCURACY

**PERFORMANCE
ENHANCEMENTS**

FASTER PRODUCTION

**MODIFICATIONS AND
STANDARDIZATION**

This new iteration of the EPIC platform boasts advancements such as enhanced operations, production reporting, down time analysis, trouble shooting, and preventative maintenance interval scheduling. These features, among others, will yield improved part set-ups, changeovers, process-tooling development, and integrated tool monitoring. An upgraded servo control features absolute positioning, and a more efficient architecture that reduces failure points.

The EPIC II is a rotary transfer solution specifically made for advanced production solutions in the future.



EPIC II

Operational Features

- Improved Accuracy With Absolute Positioning Which Eliminates Need For Unit Home Prox
- Replacement Servo Valves Can Be Locally Configured And Programmed On The Machine And Does Not Require Hydromat Assistance
- Expanded Canned Cycle Selections To Generate Programs Faster And Easier
- Enhanced Operation, Trouble Shooting, and PM Intervals
- Standard CNC Controls For Improved Part Set-Up, Change-Overs, and Process-Tooling Development
- Integrated Tool Monitoring

Control Benefits

- Bosch CNC/PLC Common Control
- Direct Access For Valves, Programming & Feedback
- Standardized Common Servo Valve
- Reduced Wiring And Machine Plugs
- Efficient Architecture With Reduced Failure Points



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FLEXIBILITY