



Engine Rebuilding Equipment, Inc.

5775 Bridgeview Center

Saginaw, Mi 48604

Web Site: www.rmcequipment.com

USA & Canada

Phone

Fax

(800) 248-5062

(989) 754-3611

(989) 754-1696



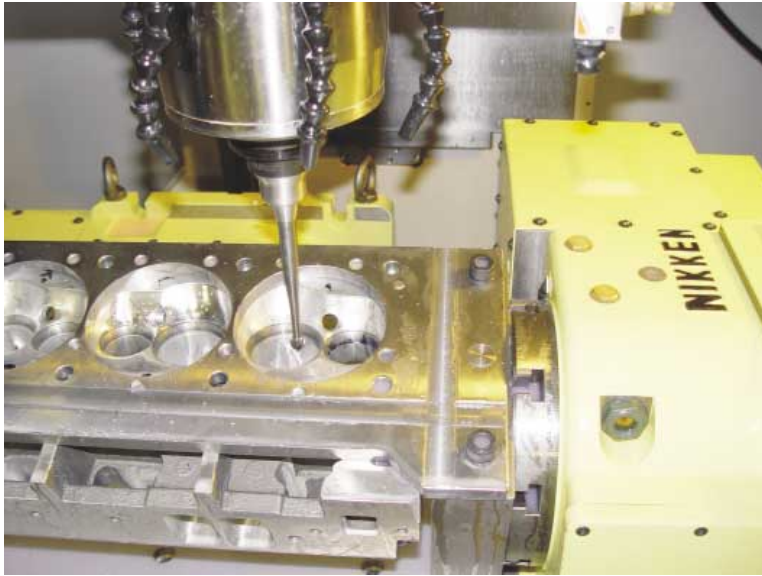
CNC Head Porting System



RMC-V50HP Head Porting System

shown above

Highly accurate Nikken Rotary Tables – make the system's accuracy and repeatability far superior.



Packaged Precision ... For Fast and Efficient Head Porting ...

The technologically advanced RMC V50HP takes CNC head porting to an all-new level of precision and efficiency. Its true simultaneous 5-axis, PC based CNC control handles all your precision head porting needs.

Until now, professionals looking for CNC head porting solutions had to buy very expensive products from three or four different suppliers, then hope someone could put it all together for them. No More! Today we've combined our popular CNC Engine Machining Centers with:

- » High accuracy Nikken rotaries
- » Specially designed head porting fixturing systems
- » High speed machining with ultimate rigidity
- » Ability to create a finished head from a raw casting

And it all adds up to "one" ... "one" supplier that makes your job easier by doing more jobs faster, with more precision and dependability.



Superior through spindle coolant option – allows the system to be able to remove head material at exceptionally fast rates throughout the machining process.

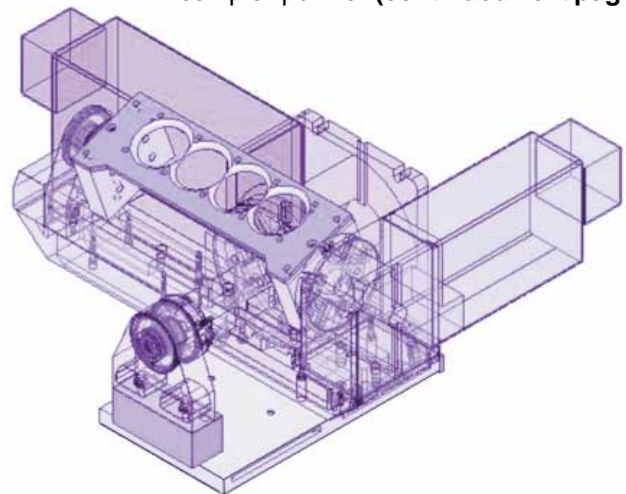
The V50HP Packs 5 axis simultaneous Head Porting operations into one truly impressive package

True CNC Machining – the V50HP's use industry standard CNC programming language (G-code) and conversational programming as compared to other proprietary programs some suppliers use that limit machine versatility.

Nikken Rotary Table – this industry standard, heavy duty work horse helps achieve highly accurate head positioning requirements of the many machining operations needed for truly accurate head porting. When combined with our heavy duty head holding fixture, you have the ability to create a finished head from a raw casting.

Rapid Traverse – 1000 ipm (25.4 mpm) traverse speed with look ahead and high speed machining memory is four times as fast as most industry models when moving from position to position greatly increases efficiency and production rates.

Hardware and software Integration – several software packages, to include cad cam and digital scanning (for off line digitizing) have been integrated into the overall head porting package. Utilizing these specific packages with our hardware, fixturing and tooling insures the success of each individual piece in this complex puzzle. **(continued next page)**



These heavy duty rotary tables combined with RMC's (patent pending) fixturing – meets the demanding needs of today's serious head porting operators, from one supplier, at a remarkably new entry level price.



Heavy-Duty Rigid Spindle – 5.7 inch (145 mm) rigid spindle cartridge with exclusive 70 mm spindle bearings provides maximum stability for deep runner porting.

Self-Contained Automatic Rigid Tapping Capability – increases productivity and does not require special and expensive tapping heads

Infinitely Variable High Speed Spindle – 50 - 8000 rpm spindle speed allows the V50HP to achieve optimum finishes on a variety of materials such as cast iron, aluminum, compacted graphite and others. A 12,000 rpm spindle is optionally available.

24-Position Automatic Tool Changer (standard) – after setup, the V50HP can run many operations unattended allowing the operator to handle other jobs for increased shop efficiency. A 32 pocket tool changer is also (optionally) available.

Digital Probe Option – a must option that is unique to engine building and combined with CNC controls makes the V50HP a stand-out in the industry. The digital probe acts as an automated coordinate measuring device, eliminating many tedious and time-consuming manual measurements.

Cat 40 Taper Tooling – unlike competitive machines, the V50HP uses industry standard, readily available Cat 40 tooling, which makes “tooling up” for special jobs much easier.

Full metal enclosure with safety doors retains workchips to maintain a cleaner work area. The normally optional chip auger has been included as part of the head porting package’s standard equipment.

Powerful AC Brushless Servo Motors – provide precise, on demand torque and spindle travel performance on all axes.

Check out the results for yourself— a picture is worth a thousand words, seeing the system in action for yourself is even more impressive. Visit our Saginaw, Michigan showroom for a free demonstration of the V50HP’s awesome capabilities.



Superior head porting results – are the result of this complete head porting CNC based system.

Four years in development and design, countless hours of testing, much appreciated customer input and lots of just plain hard work has gone into the creation of this package.

We have combined accuracy, repeatability and high speed machining with all the necessary fixturing, tooling and software you need to meet the high standards that your professional head porting customers demand.



Exclusive

RMC V50HP Head Porting CNC Machining Center

Note: Machines may be shown with optional equipment

RMC's CNC Head Porting Machining Center ...

These are **true** simultaneous 5 axis, PC based **CNC controlled** machining centers equipped to handle precision head porting as well as other CNC related engine rebuilding operations. All of RMC's CNC based machines employ simple conversational menu driven programming as well as conventional "G" coding capabilities.



RMC's Helmel Digitizing Option

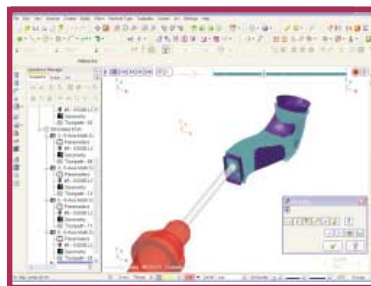


Thru spindle coolant

Specifications	V50HP
Tilting Rotary Table	40°
Tool changer (optional)	24 pocket (32/40)
Boring range (various tooling)	0.98" - 6.00"
Max boring depth (various tooling)	12.50"
Table traverse (X-axis)	50.0"
Cross traverse (Y-axis)	24.0"
Vertical head travel (Z-axis)	26.0"
Spindle nose to table height	35.00"
Spindle center to column	27.00"
Rapid traverse (X-Y axis)	1,000 ipm
(Z-axis)	1,000 ipm
Feed rate range	0.1 - 1,000 ipm
Accuracy: Positioning	± .0002"
Repeatability	± .00015"
Table size (l x w)	54.0" x 25.0"
Max weight on table	3,500 lbs
Main spindle motor	24/15 hp
Spindle speed - rpm (optional)	50-8,000 (12,000)
Spindle taper	Cat 40
Net/shipping weight	17,000/25,000 lbs
Work space required (w x d x h)	144 x125 x126"



Heavy Duty Nikken 5 axis Rotary Tables



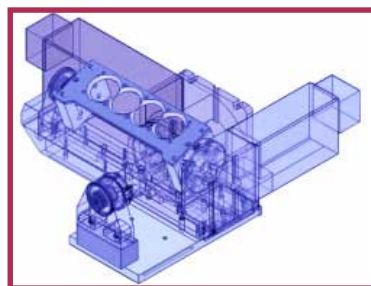
MasterCam - Tool path verification



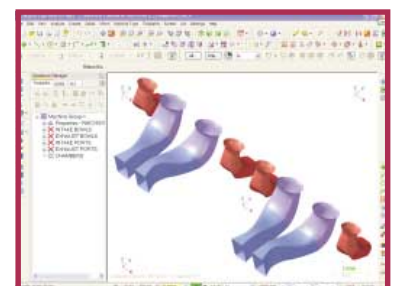
Head Porting Partners



RMC's Head Fixture in action



RMC's Head Porting Fixture



MasterCam - port design

In order to bring you the most advanced features as soon as possible, all features, descriptions and technical specifications are subject to change.



RMC Engine Rebuilding Equipment, Inc.

5775 Bridgeview Center
Saginaw, Mi 48604

Web: www.rmcengine.com

USA/Canada

Phone

Fax

(800) 248-5062

(989) 754-3611

(989) 754-1696