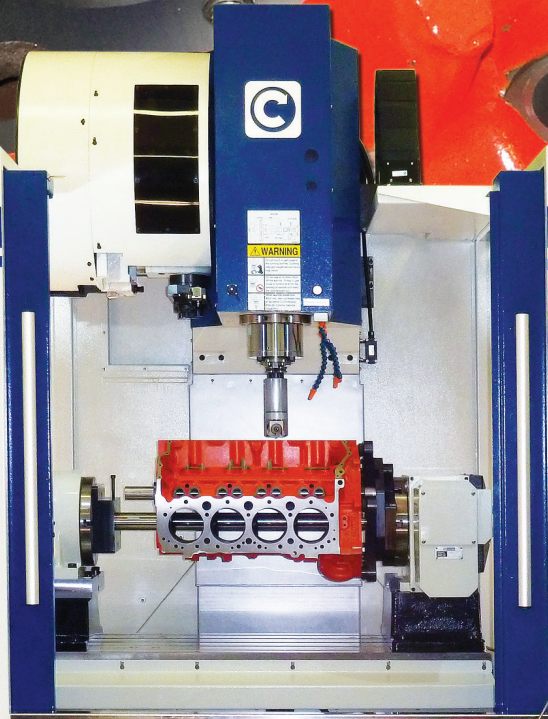




CENTROID™

B4250
CNC Block Machining Center

B4250



CENTROID

Performance Racing



**MADE IN
USA**



**CNC Blocks and Parts
with the Same Machine**

CENTROID
DP-7P
S/N 1009
US PATENT
6553682

1

Probe

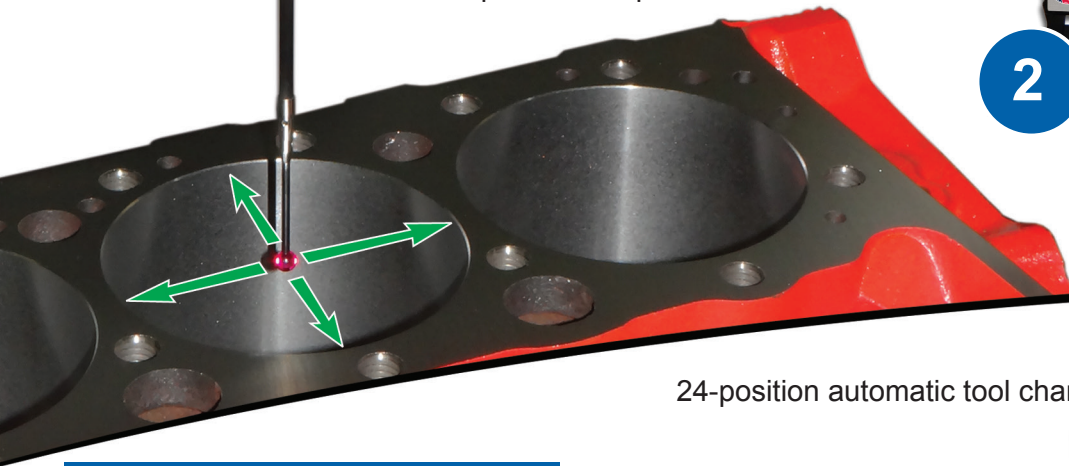
Automated probing provides quick & easy block setup. Probe any standard or custom points, verify block data, and compare to blueprint.



2

Select Program

Load existing or create new programs using digitized, blueprint, or custom data. No G-code required!



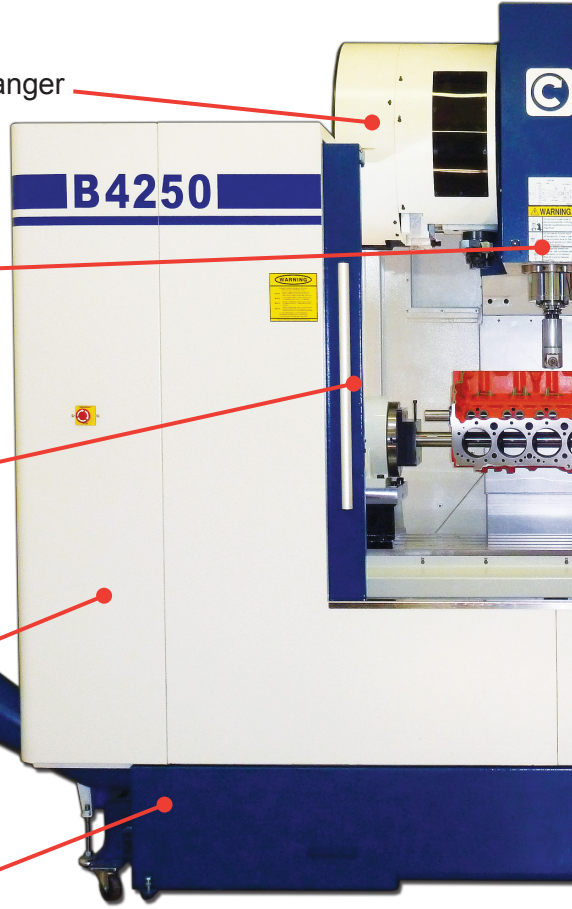
24-position automatic tool changer

20HP 10,000 RPM programmable spindle

Easy access sliding doors with windows

Fully enclosed cabinet with flood coolant & chip auger

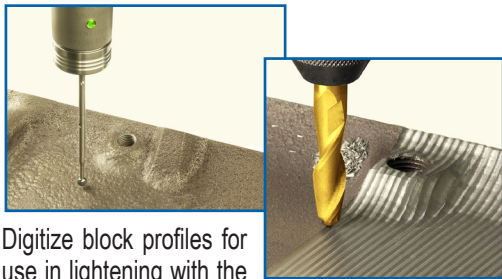
Heavy-duty cast iron frame with a wide saddle and linear ways provides superior accuracy and rigidity with reduced maintenance



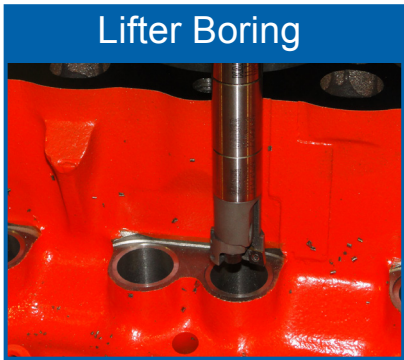
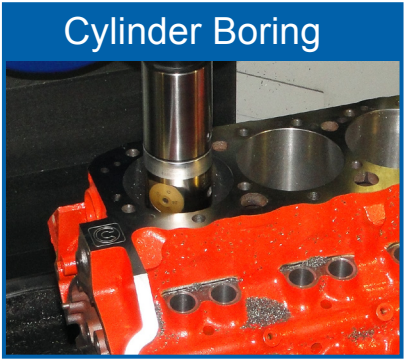
Air blast & wash down

Turnkey System Includes

- ✓ 4-Axis machining center
- ✓ M400 CNC control
- ✓ Precision Universal block fixture
- ✓ Conversational block software
- ✓ On-site personalized training
- ✓ Standard tooling package
- ✓ Digitizing probe
- ✓ Auto tool length setter
- ✓ 24-position ATC
- ✓ MPG electronic handwheel



Digitize block profiles for use in lightening with the included probe and software. Copy and cut nearly any 3D shape, and reproduce hard-to-find or unavailable parts!



Additional capabilities: O-ring Grooving, Chamfering, Sp...

Machine the Block

The selected operations are performed with the push of a button.



CENTROID

Customer Information:
 • Customer Name: Wilson Racing
 • Tel. Number: 814-555-1212

Block Details:
 • Block Name: Chevrolet V8 - Small Block 350
 • Block Notes: decked, bored cylinders, bored lifters
 • Additional Notes: none

Block Database Information							
Number of Cylinders	Angle Between Banks	Blueprint Deck Height	Blueprint Bore Diameter	Blueprint Bore Spacing	Blueprint Bore Depth	Blueprint Bank Offset	
8.0000	90.0000	9.0250	4.0000	4.4000	6.0000	0.8800	
Number of Lifters	Intake Lifter Angle	Exhaust Lifter Angle					
16.0000	41.0000	41.0000					

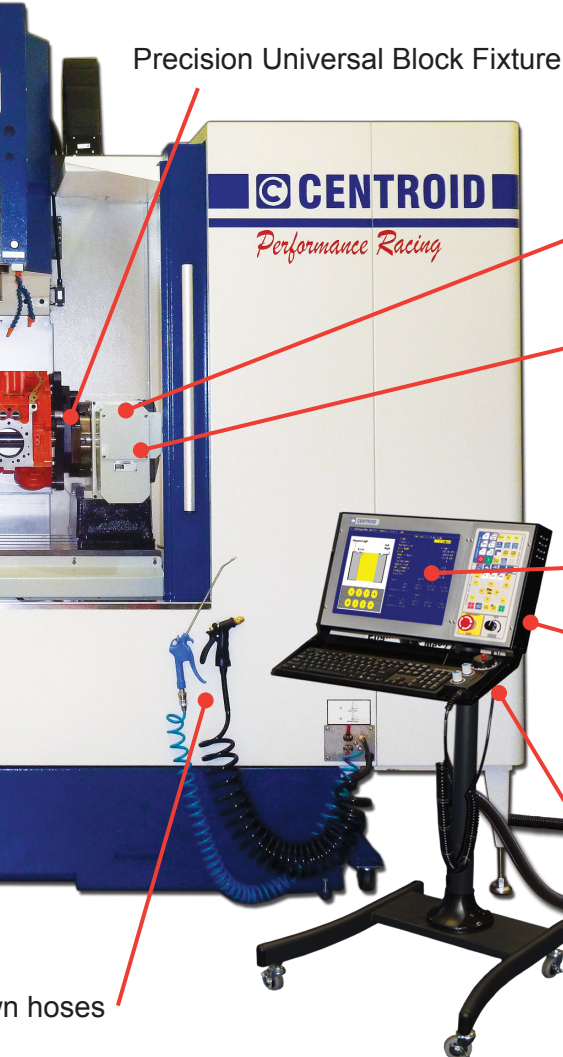
Cylinder Bore Details									
Cylinder Number	Blueprint X	Blueprint Y	Probed X	Probed Y	Probed Bore Dia.	X Deviation	Y Deviation	Bore Deviation	
1	2.4000	0.0000	2.3972	0.0032	4.0092	-0.0028	0.0032	0.0092	
2	6.8000	0.0000	6.7953	0.0037	4.0112	-0.0047	0.0037	0.0112	
3	11.2000	0.0000	11.1944	0.0046	4.0098	-0.0056	0.0046	0.0098	
4	15.6000	0.0000	15.5969	0.0061	4.0087	-0.0032	0.0061	0.0087	
5	3.2000	0.0000	3.2759	0.0052	4.0103	-0.0042	0.0052	0.0103	
6	7.6000	0.0000	7.6751	0.0021	4.0099	-0.0049	0.0021	0.0099	
7	12.0000	0.0000	12.0746	0.0066	4.0076	-0.0054	0.0066	0.0076	
8	16.4000	0.0000	16.4745	0.0055	4.0085	-0.0055	0.0055	0.0085	



Generate Report

Create detailed reports including blueprint data and deviations. Even add your own custom logo.

Precision Universal Block Fixture



Auto tool length setter

250mm Rollercam Rotary Table w/ High Resolution Digital Scale and Auto Brake

Windows 10, Touch screen, High end CNC computer w/ multi core CPU, SSD, Wifi, USB

MPG electronic handwheel

Flexible, Easy-to-use Software

Centroid Engine Block Interface - Operations: O-Ring Job

Enter details for O-ring Cycle

O Ring: All Cylinders

Cylinder No.: 9.8000 ABS

Position Source: 0.0150 INC

Deck Height: 0.5000 INC

Depth: 6

Clearance Height: 6

Tool #

Spindle Speed: 1100

Boring Feedrate: 13.0000

Feed per Rev: 0.0109

Dwell Time: 0.5000

Bank #	1	2	3	4
X	2.2400	7.0800	11.9200	16.7600
Y	0.0000	0.0000	0.0000	0.0000
A Axis Angle	-45.00			

Bank #	5	6	7	8
X	3.1750	0.0150	12.8550	17.6950
Y	0.0000	0.0000	0.0000	0.0000
A Axis Angle	-45.00			

CENTROID's innovative conversational block-machining software allows you to quickly create or modify programs for any block right at the machine. No G-code knowledge required.

Centroid Engine Block Interface - Operations: Main Cap Job

Enter details for Main Cap Conversion Cycle

Machine: All

Register Angle: 180.00°

Bot. Holes: Inner

Machine Registers?: Inner

Cap Dimensions:

Inner Bolt Spacing: 2.2500

Inner Front Length: 1.1250

Inner Rear Length: 1.1250

Inner Register Depth: 0.0350 ABS

Center Length: 2.1000

Outer Front Length: 1.2500

Outer Rear Length: 1.2500

Outer Register Depth: 0.0350 ABS

Overall Length: 6.8500

Width: 1.0100

Cap 1 X: 5.6500

Cap 2 X: 10.5000

Cap 3 X: 15.3300

Inner Register Machining: Rough + Finish

Inner Register Roughing: 2

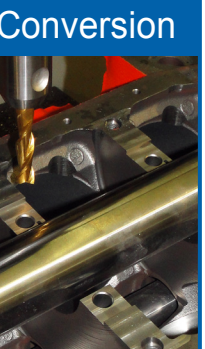
Tool #

Description

Spindle Speed: 3000

Feedrate: 25.0000

Inner Register Finishing: 2



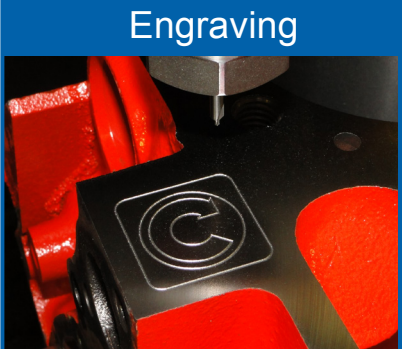
Conversion



Threadmilling



Head Stud Conversion



Engraving

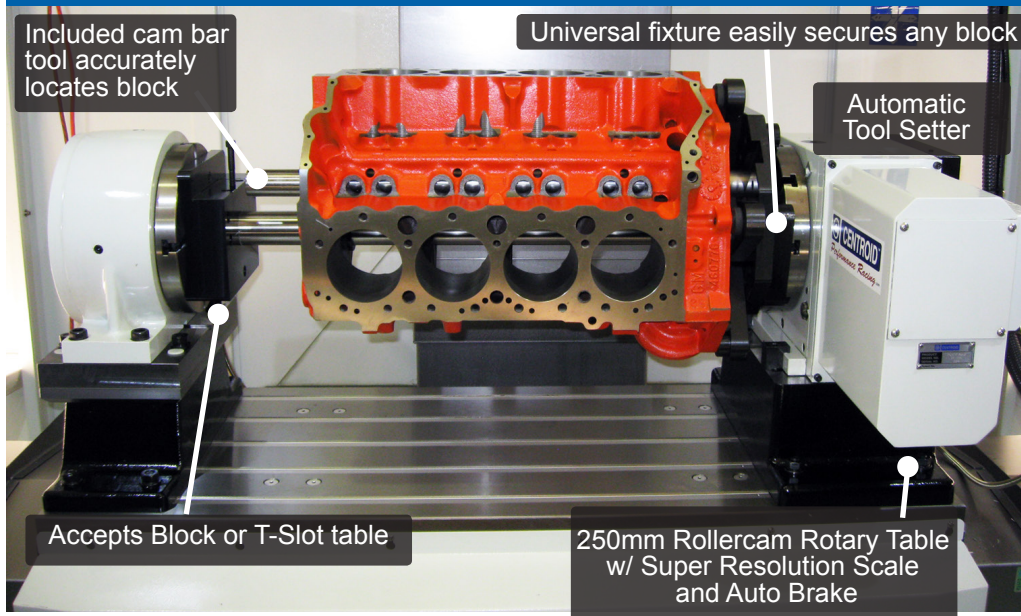
Spot Facing, Rigid Tapping, Block Sleeving, Drilling, Pocketing, Lightening, & General Part Machining

Specifications

B4250

Table Size:	27.55" x 47.24" (700x1200 mm)
Longitudinal travel (X):	42" (1067 mm)
Cross travel (Y):	26" (660 mm)
Vertical travel (Z):	27.55" (700 mm)
Spindle nose to table top:	4.7" - 32.28" (120-820 mm)
Spindle center to column:	28.5" (724 mm)
Maximum table load:	1540 lbs (700 kg)
Spindle power:	20 HP / (15 kW)
Spindle speed:	10,000 RPM (Direct Drive)
Spindle Taper	CAT40 ANSI CAT-40 Short Pull Stud
Optional Spindle taper:	BT-40, short pull stud style (Optional)
Automatic Tool Changer:	24 Position Swing Arm (7kg/15.4lb. Max Tool Weight)
Rapid feed rates (X, Y, Z):	X,Y 1000 IPM, Z 800 IPM
Ball Screw Dia. & Pitch X,Y,Z	40mm diameter and 12mm Pitch, Class:C3
Accuracy:	0.0005" (0.0127 mm)
Repeatability:	0.0002" (0.006 mm)
Axis drive motors (X, Y, Z):	Yaskawa AC Brushless Servos X,Y 2.9 kW Z 4.4kW
Axis way design:	Heavy Duty Linear guideways
Lifter Boring Diameter Range:	0.787" - 1.220" (20-31 mm), .984" - 1.575" (25-40 mm)
Cylinder Boring Ranges:	2.68" - 5.91" (68 - 151 mm)*, Max Depth 9.5" (242 mm)*
Coolant Pump	80 PSI, 55 Gallon Capacity
Machine Footprint:	L 130" (3300 mm), W 100" (2540 mm), Max H126" (3200 mm)
Weight:	Machine: 16,500 lbs (7500 kg)

Precision Universal Block Fixture



Warranty

One year warranty for parts, labor and technical support.

M400 CNC Control Features

Standout CNC Features Include: Windows 10 OS, Touch screen, Intercon conversational software with Engine Block interface, auto digitizing and probing cycles, graphical program preview, automatic tool measurement, sub-programs and macros, rigid tapping, extensive canned cycles including threadmilling, cutter radius compensation, pockets, drilling, tapping, part scaling and mirroring and much more. Create your own program for any block in minutes!

Standard Tooling Package



Included Standard Tooling Package*:

- Cylinder Boring Tool
- Tool Setting Micrometer
- 12" Deck Surfacing Tool
- Lifter Boring Tool and Lifter Spot Facing Tool
- Cylinder Bore Chamfering Tool
- CENTROID DP7 Digitizing Touch Probe. Specifically designed for long stylus operation, yields ultra precise measurements.



Optional Features

- Coolant Through Spindle (CTS)
- BT40 Spindle taper
- Mastercam CAD/CAM software
- Quick swap T-Slot Table
- Main Cap Conversion Tooling



CENTROID

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