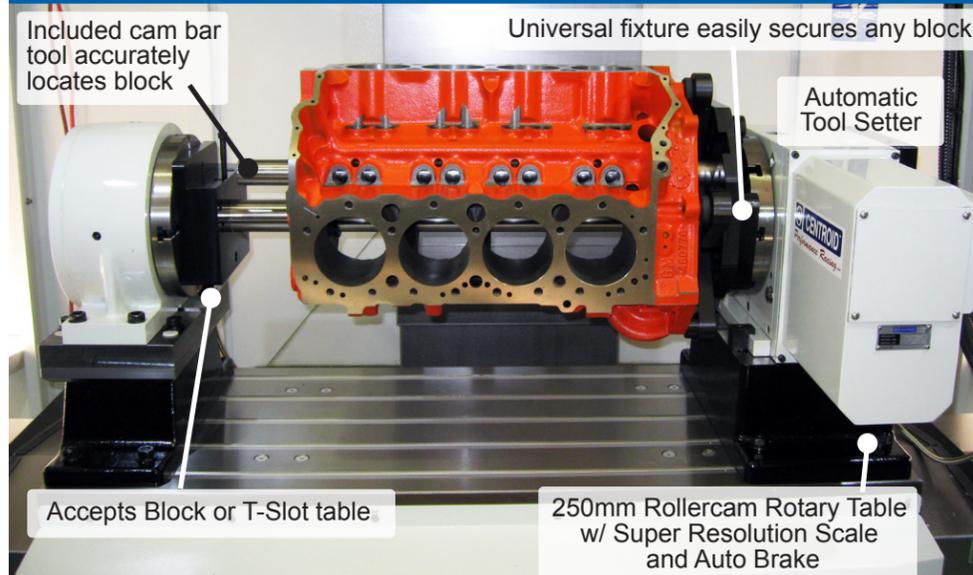


## Specifications B4250

Table Size:	20" x 49.5" (508x1257 mm)
Longitudinal travel (X):	42" (1067 mm)
Cross travel (Y):	24" (610 mm)
Vertical travel (Z):	37" (950 mm)
Spindle nose to table top:	4.7" - 41" (120-1041 mm)
Spindle center to column:	22" (559 mm)
Maximum table load:	2200 lbs (998 kg)
Spindle power:	20 HP / (15 kW)
Spindle speed:	10,000 RPM
Spindle Taper	CAT 40
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
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, 85 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



Universal fixture easily secures any block

## Warranty

One year warranty for parts, labor and technical support.

## M400 CNC Control Features

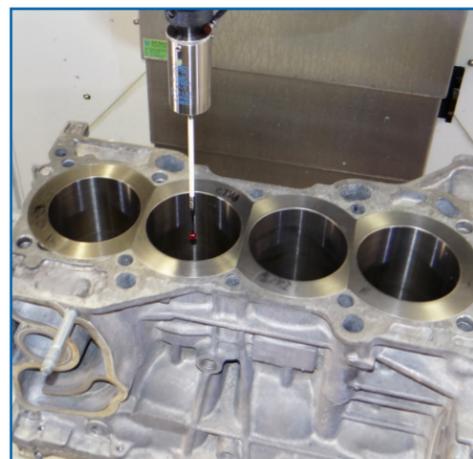
Standout CNC Features Include: Windows 10 OS, Touch screen, Intercon conversational software with Engine Block interface, auto digitizing and probing cycles, graphical program preview, automatic tool measurement, sub-programs and macros, rigid tapping, extensive canned cycles including threadmilling, 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 Digitizing Touch Probe.



Centroid's DP7 Digitizing Touch Probe. is specifically designed for long stylus operation, which yields ultra precise Block measurements.

## Optional Features

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



QR code B4250 webpage link



**CENTROID**  
159 Gates Road  
Howard, PA 16841  
814.353.9256 ext. 101 Sales  
814.353.9265 Fax  
www.centroidcnc.com



# CENTROID™

# B4250

CNC Block Machining Center

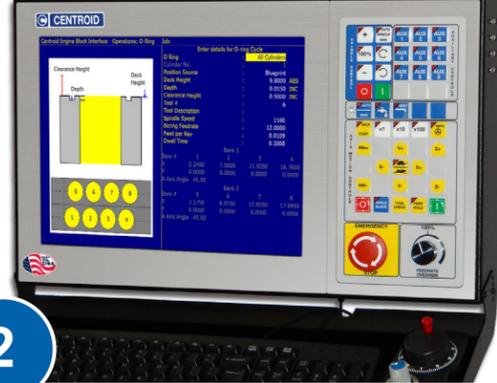


**CNC Blocks and Parts**  
with the Same Machine

CENTROID  
DP-7P  
5/11 1000  
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!

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

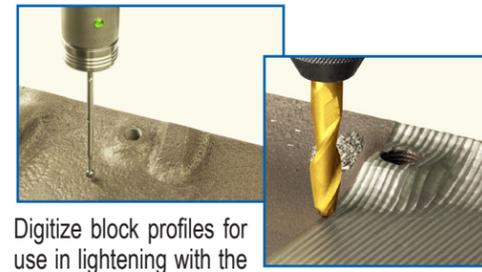
3

4

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

CENTROID									
Customer Information:									
Customer Name: Wilson Racing									
Tel. Number: 814-955-1212									
Block Details:									
Block Name: Chevrolet V6 - Small Block 350									
Block Notes: decked, bored cylinders, bored lifters									
Additional Notes: none									
Block Database Information									
Number of Cylinders	Angle Between Banks	Deck Height	Block Diameter	Block Spacing	Block Depth	Block Offset			
8.0000	90.0000	9.0250	4.0000	4.4000	6.8000	8.8800			
Number of Lifters	Intake Lifter Angle	Exhaust Lifter Angle							
16.0000	41.0000	-41.0000							
Cylinder Bore Details									
Cylinder Number	Block X	Block Y	Probe X	Probe Y	Probe Dia.	X Deviation	Y Deviation	Dia Deviation	
1	2.4000	0.8000	2.3972	0.8032	4.0092	-0.0028	0.0032	0.0092	
2	6.8000	0.8000	6.7953	0.8037	4.0112	-0.0047	0.0037	0.0112	
3	11.2000	0.8000	11.1944	0.8044	4.0098	-0.0056	0.0044	0.0098	
4	15.6000	0.8000	15.5993	0.8067	4.0087	-0.0013	0.0067	0.0087	
5	2.0000	0.8000	3.2758	0.0552	4.0103	-0.0042	0.0552	0.0103	
6	7.8800	0.8000	7.6751	0.0221	4.0099	-0.0049	0.0221	0.0099	
7	12.0800	0.8000	12.0748	0.0066	4.0076	-0.0054	0.0066	0.0076	
8	16.4800	0.8000	16.4745	0.0055	4.0085	-0.0055	0.0055	0.0085	

- 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!

- 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



- 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
- Air blast & wash down hoses

**Flexible, Easy-to-use Software**

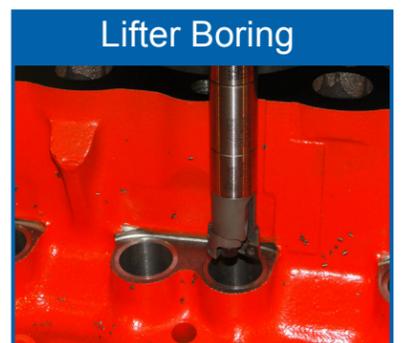
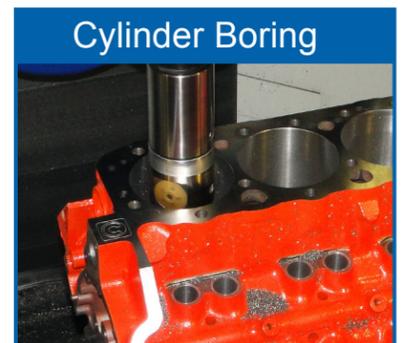
Centroid Engine Block Interface - Operations: O-Ring Job

Enter details for O-Ring Cycle									
All Cylinders									
Clearance Height	Deck Height	Depth	Clearance Height	Tool #	Tool Description	Spindle Speed	Boring Feedrate	Feed per Rev	Dwell Time
9.8000 ABS	0.2150 INC	0.5000 INC	6	1100	12.0000	0.0100	0.5000		
Bank #	1	2	3	4					
1	2.4000	7.8800	11.9200	16.7600					
2	0.0000	0.0000	0.0000	0.0000					
A Axis Angle	45.00								
Bank #	5	6	7	8					
1	3.1750	8.0150	12.8550	17.6950					
2	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 Register Angle	180.00°								
Bank Name	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	0.0550 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								
Tool #	2								
Description	Inner Register Roughing								
Spindle Speed	3000								
Feedrate	25.0000								
Inner Register Finishing									



Additional capabilities: O-ring Grooving, Chamfering, Spot Facing, Rigid Tapping, Block Slewing, Drilling, Pocketing, Lightening, & General Part Machining