

# S8M

The S8 is designed to surface large diesel heads, blocks and manifolds. All S machines use the same tooling and fixturing for quick, rigid setup and versatility. Fine surface finishes are easily obtained with both variable speeds and feeds as standard equipment.



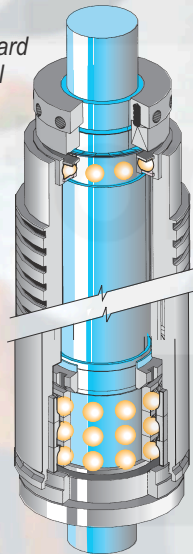
S8M with Leveling Table and CAT 3406E Cylinder Head



S8M with Cummins 855 Block

## Extra Heavy Duty Spindle designed for CBN and PCD tooling.

Large diameter, hard chromed tool steel spindle utilizes high precision triple angular contact bearings resulting in years and years of super fine surface finishes.



The NEW Rottler SM Surfacing Machines are the answer to improved productivity and profits for automotive and diesel machine shops. 2 models available designed for the needs of the performance racing team, heavy duty diesel rebuilder, large production engine remanufacturer, and one man workshop.

# S7M



Wedge shape cylinder head set up on the leveling table

## Features

### Reduced Floor Space

Compact, one piece castings and multi layer slideway guards give the most compact surfacing machines available today.

### Super Fine Surface Finish

Belt driven precision ball screw and infinitely variable speeds and feeds allows surface finished as low as 2Ra to 6Ra for today's MLS (Multi Layer Steel) head gaskets.

### Dry Cutting System

Eliminates coolant disposal and makes clean up a breeze! Cutterhead shroud directs dust and chips into optional vacuum system.

### Latest Control Technology

State of the art closed loop electronic controls make the most advanced surfacing machines available today.

### Protection and Long Life

Multi Layer Steel Guards cover and protect the slideways for extra long service life.

### Fast Floor to Floor Time

Heads can be surfaced in less than 2 minutes and a pair of V8 heads in less than 8 minutes.

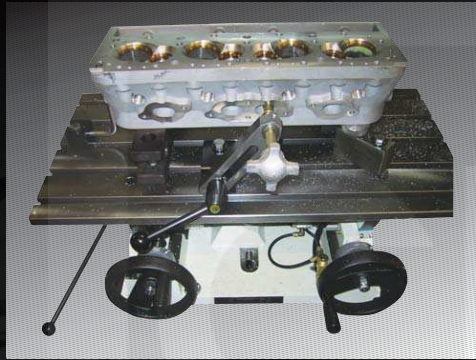
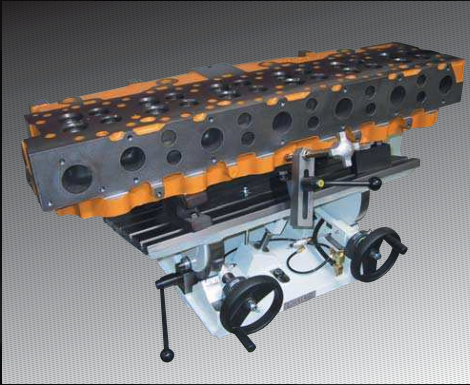
### Versatile

Capable of surfacing large diesel heads such as CAT3406 and 3412, and diesel blocks such as Detroit V71 and Mercedes OM440.

### T Slot Base

Large, flat T Slot One Piece Mehanite Cast Iron Base allows mounting of any fixture and any job - jacks and clamps can be placed anywhere!

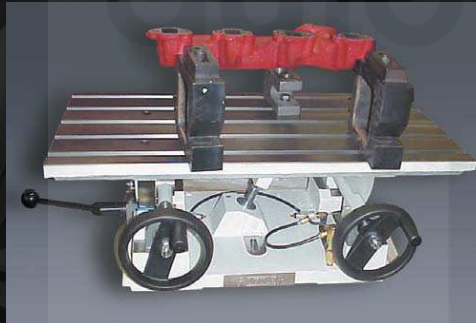
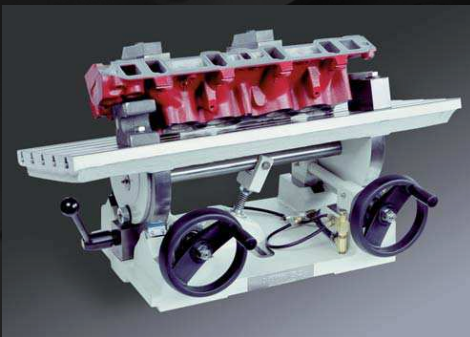
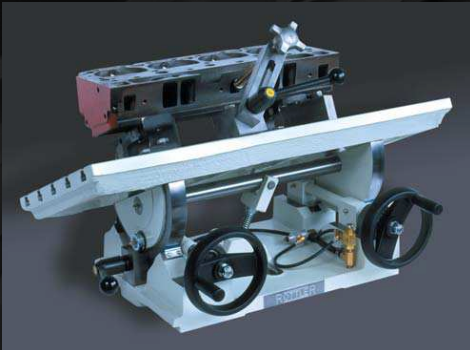
# Fixtures



## Rottler's answer to holding a wide variety of Heads, Blocks and Manifolds

The Dual Axis Leveling Table allows cylinders to be completed first – then the level to be quickly adjusted in both directions – simply by rotating the wheels – fast and rigid! Combined with Rottler's Dual Axis Level, any work piece can be clamped and leveled in seconds! Air Float allows the work to be floated out from the machine for easy loading and clamping then floated back into the machine for positioning for surface grinding for cylinder bores, clamping for minimum distortion of surface.

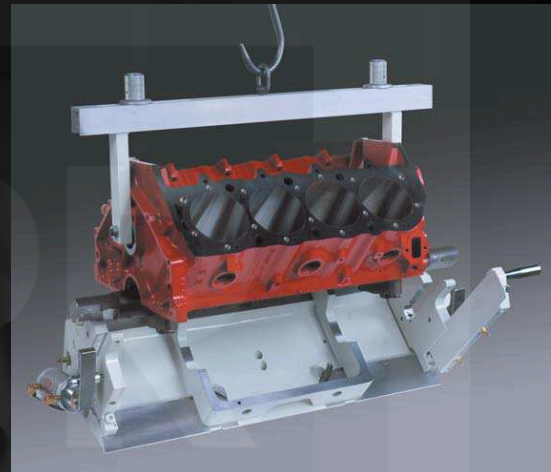
- #7209M Leveling Table with Parallel Tooling for cylinder heads and in-line blocks
- #7152A Dual Axis Leveling Assembly
- #7219W 5.2" Parallels required for model #7209M leveling Table on SF7 and SF8 machines



Exhaust Manifold

## Intake/Exhaust Manifold Tooling

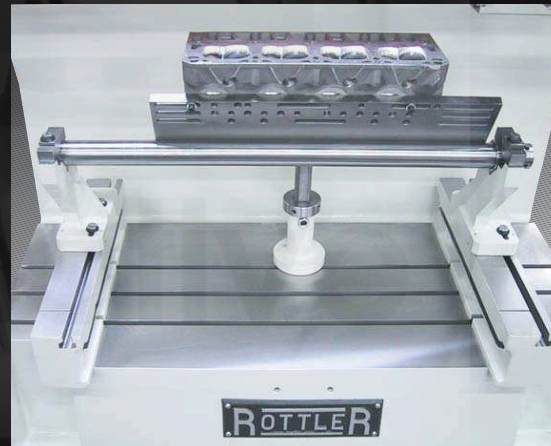
Intake and Exhaust Manifold area surfacers with indexable tooling. Workpiece is held in place by clamping.



## V-Block Fixture Multiple Angle 15°, 30°, 60°, 90°

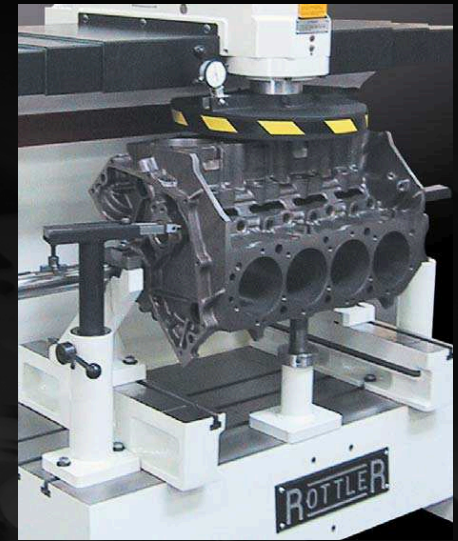
V-Block fixture has two modes of operation; one is automatic, aligns to main bearing and pan rail in adjustment mode. This allows you to use the fixture design to the original deck surface. The same fixture can be used on Rottler boring machines. Block holder allows easy handling for manual grinding and rotation of block.

- Model #7219W with Airfloat Parallel Clamp
- Model #7219W with Manual Clamp
- Model #7219W with Manual Clamp



## Universal Head & Block Fixture

Impressions, scratches, and marks on the blocks can be eliminated by grinding on the universal fixture. The parallel tooling is held in place by supports bolted to the T-slot base for rail blocks. Custom tooling can also be easily mounted on the base of the machine.



## Universal Head and Block Fixture

Mount V and In-Line blocks, angle and parallel heads, manifolds on the universal fixture. 2" Main Line Bearings are needed for decking the machine. The main line one or fine adjusted bearings.



Extra high bank angle and behind the main blocks to be used without the main line bearings.

- #7219W 5.2" Parallels required for model #7209M leveling Table on SF7 and SF8 machines
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# M Control



- Soft Touch Buttons with LED Lights**  
 Soft Touch Buttons light up a LED once pressed - simplifying operation.
- Rapid Traverse Rate**  
 High Rapid Traverse Rates reduce cycle time to a minimum.
- Ball Screw Drive**  
 Long Lasting Precision Ground Ball Screw is driven by a tooth belt for exceptionally smooth workhead feed.
- Variable Speeds and Feeds**  
 Infinitely Variable Speeds (up to 1250 RPM) and Feeds allows the use of a wide variety of cutting inserts for any metal to be surfaced.

# Inserts

## Versatile SF tooling provides the right tool for every job!

Rottler SF machines use indexable cutting inserts held by adjustable toolholders in the standard double insert flycutterheads. Rottler offer inserts designed specifically for high speed dry milling of cast iron, aluminum, diesel heads with prechambers, aluminum blocks with iron liners, as well as optional cutterheads for weld removal.

### CBN (Cubic Boron Nitride) Inserts

These inserts provide an excellent finish on cast iron and have an exceptionally long life giving savings over grinding stones.

### PCD (Poly-Crystalline Diamond) Inserts

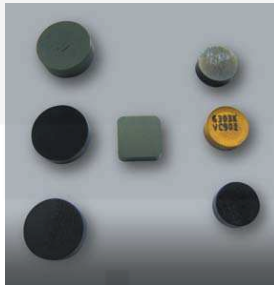
These inserts are designed for high speed dry cutting of aluminum giving a super fine surface finish for today's MLS (Multi Layer Steel) head gaskets.

### Coated Carbide Inserts

These inserts are inexpensive and can be used for roughing work at low speeds.

### Special Inserts

Rottler has developed special inserts for surfacing difficult jobs such as aluminum heads with steel pre chambers and aluminum blocks with ductile iron liners.



# Cutterheads

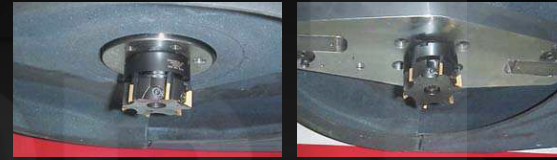


Rottler Surfacing Machines use 2 Toolholders which are radially and axially adjustable. The standard toolholders use 3/8" (9.52mm) IC round or square inserts. Optional interchangeable 1/2" IC Round and square insert toolholders are available.

The S7M has a 14" (360mm) cutterhead and the S8M has a larger 16" (420mm) cutterhead.



# Accessories



### Indexable Shell Mills

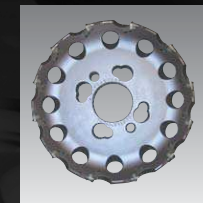
2-1/2" (60mm) and 4" (100mm) diameters install quickly without removing the fly cutterhead. Shell mills can be used for the removal of cutterhead for maximum height capacity. The large cutter will remove heavy welds without grinding or use of a die. The diesel cast iron welded head takes less than 10 minutes to surface finishing from a rough weld condition. The 2-1/2" cutter can be used to surface areas inaccessible to other surfacing machines, such as exhaust manifolds and turbocharging manifolds.

2-1/2" (60mm) Shell Mill #7225 4" (100mm) Shell Mill #7226



### Pre-Combustion Chamber Tool

You can surface pre-combustion chambers with SF surfacers or use the Rottler Pre-Combustion Chamber Tool to take the Counterbore back to standard depth. #7213A thru K



### Multi Insert Face Mill

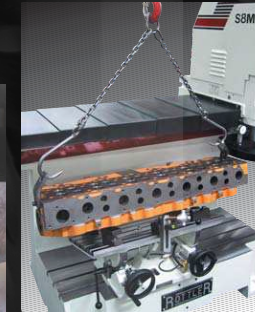
Special design Face Mill with Wiper Inserts for high feed rate surfacing of difficult metals.

#7225F 10" (250mm) Multi Insert Face Mill

# Features



Belt Driven Planer and Ball Screw ensures



Workhead moves to some position and leveling table located on an air cushion for easy loading of large, heavy jobs such as this CAT340 head



Wiper Inserts Way Guards heavy duty leveling table complete for long life. Wiper Inserts for long life. Wiper Inserts for long life. Wiper Inserts for long life.

# Specifications

	S7M	MADE IN U.S.A.	S8M
Cutter Diameter	14" (360mm)		16" (420mm)
Cutter Travel Horizontal	40" (1000mm)		50" (1275mm)
Cutter Travel Vertical	8" (190mm)		8" (190mm)
Max. Distance - Cutter to the Base	20" (635mm)		20" (635mm)
Spindle Speed Variable	50-1250 RPM		50-1250 RPM
Table Feeds Variable	0.001-0.010" (0.025-0.25mm)		0.001-0.010" (0.025-0.25mm)
Table Travel Horizontal	50" (1270mm)		54" (1380mm)
Table Travel Vertical	8" (190mm)		8" (190mm)
Table Weight excl Fixtures	1000 lbs (450kg)		1000 lbs (450kg)