

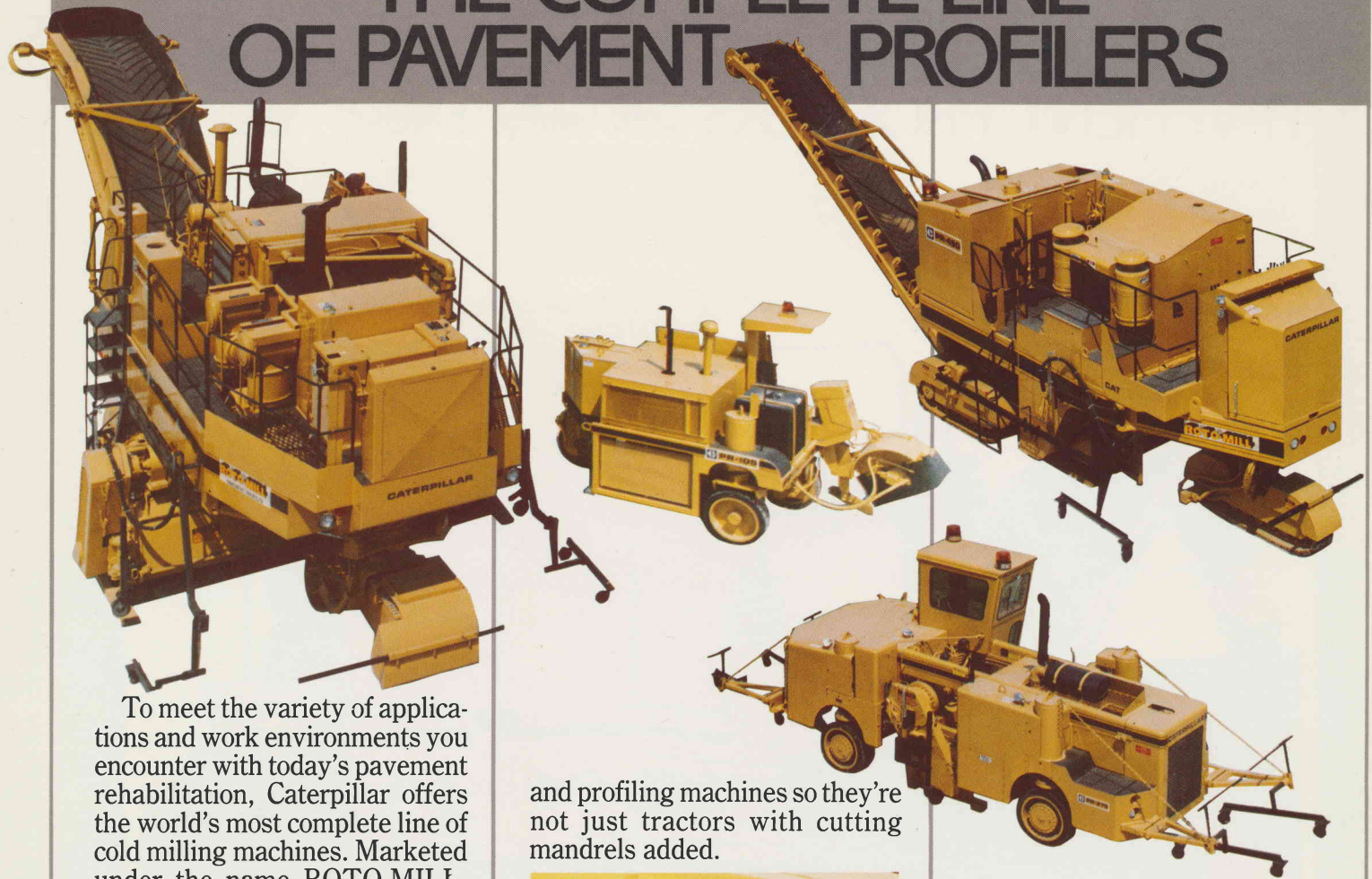
# ROTO-MILL®

PAVEMENT PROFILERS



**CATERPILLAR**

# ONLY CATERPILLAR OFFERS THE COMPLETE LINE OF PAVEMENT PROFILERS



To meet the variety of applications and work environments you encounter with today's pavement rehabilitation, Caterpillar offers the world's most complete line of cold milling machines. Marketed under the name ROTO-MILL, Caterpillar Profilers enable you to accomplish a wide range and high volume of work.

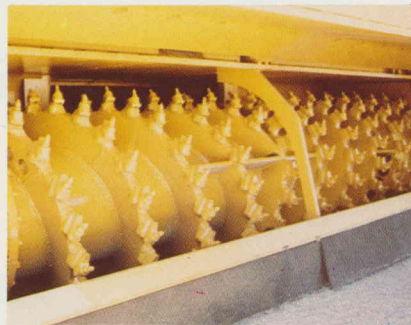
Choose from any one of the four Caterpillar Profilers and you're assured of getting a machine with the features you need and want.

Current models range from a 90HP utility clean-up machine to a 1000HP Profiler/Excavator with cutting widths from 3½" to 150" and cutting depths from 4" to 10".

**S**uperior design makes ROTO-MILL Profilers the industry's most powerful and productive cold milling machines.

The fact that all Caterpillar Profilers cut concrete as well as asphalt is a testimonial to their superior design. ROTO-MILL Profilers are designed from the ground up to be pavement mining

and profiling machines so they're not just tractors with cutting mandrels added.



*Up-cutting mandrels deliver greater cutting efficiency and longer bit life.*

Each ROTO-MILL Profiler is rugged and solid in construction featuring a heavy-duty all-steel welded mainframe. Basic design of Caterpillar Profilers places the machine's weight over the cutting mandrel and powerful Cat Engines deliver higher breakout force to the cutting teeth than any other profiler.

This optimum weight-to-horsepower balance along with a high efficiency direct mechanical drive

system moves ROTO-MILL Profilers smoothly and positively through the toughest pavements.

**E**xclusive features bring you the latest milling technology.

Since ROTO-MILL Profilers were the first machines designed exclusively for cold milling applications, they have always offered the latest in milling technology.

All Caterpillar Profilers feature weld-on bit holders for extra strength and snap-in bits for quick tool change. Up-cutting mandrels provide greater cutting efficiency and result in longer bit life.

And when it comes to profiling proficiency, ROTO-MILL Profilers are known the world over for producing the smoothest profile control in the industry, thanks to the exclusive HYDRA-MATION Grade & Slope Control System.



*HYDRA-MATION Grade & Slope Control provides superior profiling accuracy.*

Unlike electro-hydraulic systems that can run into trouble with dusty, wet and often hostile job conditions, HYDRA-MATION is a 100% hydraulic system. It's also simple to operate and maintain. Most important, it's an accurate system. With HYDRA-MATION, Caterpillar Profilers consistently meet specifications within  $\pm 1/8''$  tolerances.

**O**utstanding job performance provides the productivity and profit you need.

Caterpillar Profilers offer you job productivity in a number of ways.

Consider maneuverability, each ROTO-MILL Profiler has an extremely short turning radius for its size, which means you not only achieve higher productivity but also greater jobsite flexibility.

For example, the PR-105 has a cutting radius of just 4'' so you can easily mill around small utility covers, water gates, gas valves and other obstacles. With the higher production PR-275, the turning radius is only 11'' combined with a 67'' wide cutting mandrel which makes the PR-275 the most maneuverable, high production profiler available for urban milling tasks.



*ROTO-MILL Profilers have a short turning radius for cutting around obstacles.*

Even the larger ROTO-MILL Profiler models offer outstanding maneuverability. The PR-450 and PR-1000 incorporate a three-track, rear-loading design. This gives them a turning radius of 10-12' which is far superior to competitive four-track machines requiring 3-4 times the turning area due to their front track steering being limited by the discharge conveyor.

As a result, when it comes to cutting intersections that include cutbacks or rebates into side streets or when urban jobs require tight-quarter milling work, there is no substitute for ROTO-MILL maneuverability and rear-discharge flexibility.

It's this kind of high productivity that allows one model of ROTO-MILL Profiler to cross over into profiling markets that would normally require additional larger or smaller machines. The bottomline is one-machine versatility that can actually increase your work market and your potential for profits.

On the job, ROTO-MILL Profilers keep you productive in other ways. Take serviceability, most major components on ROTO-MILL Profilers are of modular design for easy removal and large access doors make inspection, adjustments and repairs quick and easy. For added assistance, each ROTO-MILL Profiler comes equipped with on-board pneumatic impact hammers and knock out tools so you can replace cutting bits, fast. This feature, along with large swing-out front side cutter access doors, allows "pit crew" style service when changing cutter teeth.

You also get maximum cutting time from ROTO-MILL Profilers because their larger capacity water tanks mean fewer refills. Other standard features that increase your productivity include swing out radiator/hydraulic oil coolers, central location of hydraulic pumps/motors and filters as well as high pressure wash-down systems.

**G**etting your share of the growing profiling market is why you need to get with Caterpillar.

The profiling market continues to grow at an unprecedented rate, thanks to the emphasis now being placed on 4-R programs. A lot of recycling work means a lot of profiling and when it comes to profiling there are no better cold milling machines from which to select than you'll find at your Caterpillar Dealer.

Caterpillar Profilers continue to lead the industry by setting state and world production records. Several records have been set by one machine, the Caterpillar PR-1000, the largest profiler made. This ROTO-MILL is noted for milling more than nine miles of pavement in one day (67,000 square yards of material). In a thirty day period the same PR-1000 profiled over 800,000 square yards.

With performance like this, it's no wonder contractors and governments the world over are relying on the ROTO-MILL to handle such varieties of work as:

**Leveling and Bonding**

Profiling to enable the placement of a thin, evenly compacted layer of pavement on a level surface with superior bonding characteristics.

**Surface Refinishing**

Profiling to refinish an existing rough pavement to a specified grade and slope to establish a new riding surface.

**Surface Repair**

Excavation of deteriorated pavement sections prior to new pavement overlay.

**Pavement Removal**

Profiling to reduce elevations in order to correct drainage problems and maintain height clearance and curb reveal.

**Surface Retexturing**

The application of a highly skid resistant texture to slick pavement surfaces.

**Pavement Mining**

Recovery of materials from an existing road surface for recycling.

ROTO-MILL Pavement Profilers enable you to cover the full spectrum of job applications that you encounter in today's profiling market. With nearly 10 years of research and on the job experience having gone into ROTO-MILL design and construction, you have all the reasons you need to choose Caterpillar for the most advanced and proven profilers available.



# PR-105 THE BIG MACHINE

- 12" wide cut/305mm
- 6" maximum cut in a single pass/152mm
- Cutting radii:  
Left hand — 8' 203mm  
Right hand — 13' 6"/  
4115mm
- Travel Speed — 5.0 mph/  
8.04km/h
- Mechanical drive to side cutter.
- Flush to curb cutting capability.
- Optional auxiliary front cutter.

The Caterpillar PR-105 is a highly maneuverable machine designed for maximum production on a variety of utility, clean up and production assignments. With a 90HP Cat Engine, 12" standard side cutter and working weight of 17,000 lbs, the PR-105 is the heaviest, most powerful small milling machine ever built. It's no wonder it has earned the reputation as "The Little Giant."

The Cat PR-105 offers great versatility. Superior strength and power allow the PR-105 to muscle its way through concrete as well as dense asphalt, thanks to optimum weight distribution.

The PR-105's engine is positioned above the cutter and both the engine and side cutter are mounted on a vertically controlled moveable sub-frame that keeps them relative to

the rest of the machine. This allows the entire machine weight to be applied to the cutter, holding it in the cut which provides greater depth penetration with less machine vibration.

In addition, a highly efficient direct mechanical drive system delivers maximum available horsepower to the cutting bits, a far superior system than hydrostatic drive which can rob you of as much as 40% horsepower.

In the area of maneuverability, the PR-105's short 4' turning radius lets you easily cut around utility devices and an optional 12" auxiliary front cutter can get you into tight places that are inaccessible to side cutting machines. Using the front cutter, you can mill in corners of parking lots or parking garages and cut next to abutments extending from buildings, bridges, retaining walls or other vertical obstructions.



# PR-275 AT ITS BEST ON TO

- Profiles 67'/1702mm wide cut.
- 4"/102mm maximum cut in a single pass.
- 11"/279mm inside turning radius.
- Four hard rubber tire wheels.
- Flush to curb cutting capacity.
- Bolt-on flighting and snap-in teeth for quick replacement.

Urban milling and profiling, with its specialized job requirements and traffic congested work environments, provide the greatest challenge that cold milling machines face. Caterpillar's profiler answer is the remarkable PR-275. This ROTO-MILL is specially designed for the many obstacles and adverse conditions common to urban areas and has the ability to do high production profiling as well as utility type milling.

Maximum breakout force is delivered to the 67" cutting mandrel because the 275 horsepower engine and 30,000 lb working weight are fully utilized in a well balanced horsepower-to-weight ratio. As a result, the PR-275 can cut concrete or asphalt to maximum cutting depths of 4" in a single pass and at working speeds within a range of 0-160 ft. per minute. All cuttings

are windrowed to the rear of the machine for easy pick-up.

With this high production profiling capability the PR-275 is perfect for urban leveling and bonding, texturizing and other surface repair applications.

It rides on four independently mounted solid rubber tires controlled through an exclusive geometric power system which produces a turning radius of just 11". This combined with its compact size means you can cut around manhole covers, negotiate cul-de-sacs, perform detail work around intersections, storm drains and complete similar assignments.

For the operator, the PR-275 offers a well-engineered cab which includes a control console with hydraulic gauges mounted in floating panels for shock protection, digital readouts of travel speed and cutting mandrel RPM, and outstanding

## FOR SMALL JOBS

A variety of optional cutters is available for special assignments and local specification work with all cutters having flush-to-the-curb cutting capability.

The PR-105 is also an operator's machine. With the operator's station positioned slightly ahead of the cutter on the side of the machine, you have an unobstructed view of both the cutters and their related work areas.

Other features of the PR-105 include a working speed that ranges from 0 to 440 feet per minute and a travel speed of up to 5 miles per hour. The PR-105 is equipped with a 56 gallon fuel tank and a 100 gallon water capacity for controlling dust and cooling cutter teeth. Standard lighting system includes head lights, tail lights, backup lights and a rotating beacon atop a steel reinforced cab.



## UGH, URBAN ASSIGNMENTS

visibility. An auxiliary power unit provides power for machine elevation and for rotating the cutting mandrel during tooth change. Independent of the PR-275's diesel engine, the auxiliary unit also lifts the cowlings that house the cutter.

The PR-275 is also highly portable. It self-loads and transports quickly and easily on a single low-bed trailer. Even more important, the rubber tire feature makes it ideal for traveling about large urban milling projects without disturbing traffic flow.





- Profiles 75"/1905mm wide cut.
- Full 10"/254mm deep cut in a single pass for pavement mining.
- Mechanical drive system to cutter.
- Tension idler roller allows quick, positive adjustment of the wide V-belt power bands.
- Three crawler tracks powered by hydrostatic drives.
- Self-loads on standard low-bed trailer.



- 150"/3810 mm side cut at speeds up to 75 fpm/23 mpm for high volume excavating.
- Full 10"/254 mm deep cut in a single pass.
- 48"/1219 mm wide discharge conveyor with 45° swing either side of center.
- Separate diesel engines for cutter and ground drives.
- Dual control console with full instrumentation for operation from right or left side.
- Quick change snap-in teeth.

# PR-450 THE MOST PR

The Caterpillar PR-450 is the industry's standard for sophisticated midsize pavement profilers. With a 450HP engine, 75" standard width cutter, 55,000 lb. working weight, 10" cutting depth potential and 176' fpm operating speed, it gives the lowest cost per square yard of any cold milling machine in its class.

Engineered for heavy highway and airport operations, the PR-450 is also designed to operate equally as well in congested city and residential areas, tunnels, and on freeway ramps and shoulder widening projects.

The PR-450's high production capabilities can be taken to the city streets, thanks to its optimum maneuverability and wide range of profiling applications. Its hydrostatically driven 3 track design and high capacity 30" rear-loading discharge conveyor provide an extremely short turning radius while

maintaining maximum loadout flexibility. The PR-450 can cut flush to a curb or other vertical obstructions making it perfect for eliminating pavement build-up at the curb line, improvement of drainage and overhead height clearance. It can remove bumps, ruts, washboarding and other imperfections with speed and accuracy within  $\pm 1/8$ " tolerances. The resulting surface is immediately ready for traffic and is textured to provide a strong monolithic bond with the new overlay.

The powerful PR-450 can also mine pavement at highly productive tonnage rates. In one operation materials can be reclaimed as a sized, crushed aggregate that is ideal for hot mix recycling and with an optional ROTO-MIXER attachment, you can convert it into an in-place cold recycling machine.

Standard features include a simple but highly efficient V-belt

# PR-1000 THE PROFIL

Caterpillar's PR-1000 is the massive high production profiler/excavator that has no competition.

The PR-1000 provides the most practical, productive and cost-efficient method of pavement mining available and feature for feature no competitive profiler can match its performance and flexibility.

The PR-1000 is designed to remove up to 10" of pavement in a single 12' 6" wide pass. And it moves through pavement material with little effort because two powerful Cat Engines provide 1000 horsepower. One 250HP engine powers the conveyor, control system and ground drive while another 750HP engine is totally dedicated to powering the cutting mandrel.

A highly efficient V-belt mechanical drive system delivers maximum horsepower to the rotary cutter providing full depth excavating capabilities at rates of up to 900 tons per hour.

To keep up with the PR-1000's production rates it carries a high capacity 48" wide covered discharge conveyor. The conveyor swings 45° each side of center for maximum load-out flexibility into haul trucks or when creating windrows.

In addition, a breakover, batter board is located at the end of the conveyor for greater control over discharging the material at points as far back as 37' 7" of the cutter's center line. This allows most tandem haul units to be loaded while driving at the cut's edge.

Just because it's big doesn't mean the PR-1000 isn't maneuverable. The machine's hydrostatically driven three-track design and rear-discharge conveyor actually give the PR-1000 a shorter turning radius and greater maneuverability than many smaller sized machines. And like other ROTO-MILL Profilers, the PR-1000 utilizes the HYDRA-

# DUCTIVE MACHINE IN ITS CLASS

mechanical cutter drive with shock absorbing power bands, high capacity 700 gallon water spray system for suppressing dust while cooling the cutter bits for longer life, convenient operator control station, excellent visibility, snap-on bits, automatic lubrication system, selfloading capability for quick transport on a single lowbed trailer, lights for night work, pneumatic impact hammers and knock out tools for changing bits, operation from either side, easy maintenance, and Caterpillar's exclusive HYDRAMATION Grade and Slope Control System with built-in direct and averaging skis that allow you to match elevation to existing grade, slab, curb or gutter. Optional cutter widths up to 90" are available as well as rubber pads that bolt on to the metal tracks.



# ER/EXCAVATOR IN A CLASS OF ITS OWN

MATION Grade and Slope Control System. With direct and averaging skis that are built into the track system, the PR-1000 provides controlled depth removal to within  $\frac{1}{8}$ " tolerances.

Other features include a quick attach cutter assembly, optional cutters up to 190", high capacity water system and self-loading capability.

It's outstanding production features like these that can allow you to take full advantage of large scale excavating and recycling opportunities. The PR-1000 cuts concrete as well as asphalt and is ideally suited for profiling and texturing interstate highways in preparation for overlays.



One of the biggest values of a Caterpillar ROTO-MILL Profiler is your Caterpillar Dealer. He provides CAT PLUS, the most comprehensive, total customer support program in the industry. You can depend on his staff of factory certified servicemen and complete parts inventory. In addition, you'll get a whole list of programs and services that are specially designed to reduce downtime and increase productivity.



On-the-job technical analysis by a qualified inspector keeps a careful check on equipment performance to keep it in top condition.



Exchange service saves you expensive downtime. You can exchange a worn component for one already built to factory specifications.



In - the - field service. Your Caterpillar Dealer has experience, skilled mechanics and fully equipped service trucks to keep your downtime to a minimum.



CAT PLUS is also the most complete program of customer support services. It offers you:



Counseling before the sale, selecting the right machine and equipping it fully for your work.



Financing... with us or a financial institution plus rental and leasing programs, all tailored to your needs.



Uptime support... programs like S-O-S (Scheduled Oil Sampling) and Custom Track Service help you curtail problems before they happen.

