

YZ125/250/490



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# WHEN YOU'RE THE LEADER IN MOTOCROSS, THIS IS HOW YOU STAY AT THE TOP

The all-new Yamaha YZ125, YZ250 and YZ490. Three more reasons why we will maintain our great reputation as leaders in every class of Motocross. Three more major feats that will leave the competition shaking in our YZ's tracks.

Last year the technological advancements we applied to Motocross proved victorious. They proved to you that Yamaha knows what you need to win the race. This year we continue on in that tradition as we refine those technical features, adapt them to more of our models and add even more new advancements to our new 1982 Motocross machines.

The YZ125. For starters, let's look at the amazing YZ125. In a class where horsepower and a useable powerband are critical, we have incorporated a unique Yamaha Power Valve System with a Liquid Cooling System to make the critical difference.

YPVS dramatically improves the low and mid-range powerband without sacrificing any top end power. The Liquid-Cooling prevents power fade.

And to keep you in front of the competition race after race, we've incorporated Yamaha's new fully adjustable Monocross suspension system on the rear.

The YZ250. If your choice is the tough 250 class, this new model will give you the best the world has to offer, with all of that winning factory technology that's been applied to the new YZ250. It was leading technology like Yamaha's Liquid-Cooling System, the Yamaha Power Valve System and Yamaha's new Monocross rear suspension system that took first place in the 250cc world championship in 1981.

The same technology is available to you with the production Yamaha YZ250 for 1982.

And last, but by no means least, the YZ490. Yamaha revolutionized the Open Motocross Class with the introduction of the YZ465. Continuing on for 1982 with nothing less than a leader, we introduce the powerful all-new YZ490.

The first major step we took was to make the engine a full 487cc for more power and torque. We then incorporated our proven YEIS to further improve the low and mid-range powerband while making the engine run clean and crisp.

To get the most from this powerplant, a new 4-speed transmission transmits the power to the rear wheel with less shifting required.

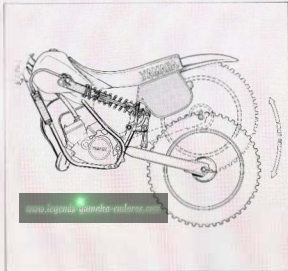
Yamaha's new fully-adjustable Monocross suspension system puts all this power firmly to the ground and, at the same time, gives the 490 handling that's precise and sure.

All three new YZ's have new red and white battle colours that won't go unnoticed. All three have aggressive new styling. Like the integrated seat and tank design that allows for more rider movement and improved control. And the larger side and front number plates for easier lap scoring. As well as new wide fenders for improved protection from mud and rocks.

Every feature, from the smallest to the most innovative, brings you closer to the famous Yamaha works machines the pros-ride to capture world championships.

But that's not where it stops for us, either. Yamaha not only leads in technology, but in Motocross support programs, genuine Yamaha parts backup and in a complete line of exclusive Yamaha Motocross accessories.

Everything we do is meant to help you take the race in stride. Because we believe that winning is everything. Keeping at the top is of utmost importance to us. And we know, at Yamaha, that the YZ125, the YZ250 and the YZ490 for 1982 are three sure ways to stay there.



We refined our Monocross rear suspension system on our YZ motocrossers to create an even better, higher performing fully-adjustable rear suspension system. First, the Monoshock unit itself on this new Monocross system has been optimally positioned to provide more wheel travel. Next, a simplified linkage system combines superb springing and dampening, resulting in an ideal system of progressive cushioning that's been thoroughly tested through everything from GP to local track conditions. This linkage system offers complete and quick adjustability to both compression and rebound dampening as well as spring preload.

Here's how it works: During the initial stages of rear wheel travel over hard choppy surfaces, the large lever ratio of the linkage creates a very low dampening force against the upward motion of the rear axle. Smooth, soft operation of the Monoshock unit keeps the rear wheel effectively in the ground.

As the rear wheel travels further upward to handle large bumps, the dampening force against the upward axle motion becomes progressively greater. Thus both dampening and spring rates are smoothly increased to prevent suspension bottoming.  
(YZ125, YZ250, YZ450)



To keep the YZ125 and YZ250 engines highly responsive over a wider powerband, we gave each model Yamaha's patented Power Valve System and Liquid-Cooling.

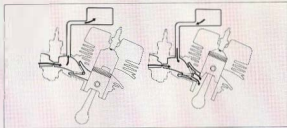
YPVS effectively controls the exhaust port timing so that peak power is produced at high rpm and greater torque is developed at low to mid-range speeds.

YPVS incorporates a mechanically-driven valve in the exhaust port that automatically raises and lowers effective port height in response to engine speed.

The result is a much more useable powerband and improved combustion efficiency over different motocross racing conditions.

Yamaha's proven Liquid-Cooling System has been designed to be compact, lightweight and dependable. This unique system utilizes the frame downtube as an integral liquid carrying member in order to minimize bulky external parts, as well as extra weight.

Liquid cooling improves peak horsepower output, retains power output longer and helps improve engine reliability better than conventional air cooled engines.



Yamaha's patented Energy Induction System, or YEIS, boosts low and mid-range power in the high performance YZ490 2-stroke engine. By means of a simple equalization chamber, it sharply reduces fluctuations in the speed of the intake stream so the optimum fuel/air mixture will be maintained.

The benefits of this increased precision are twofold: Torque in the low and mid-ranges is increased at any given throttle opening, without sacrificing any top end power.

YEIS adds hardly any weight and no moving parts to the engine so there's no extra maintenance required.  
(YZ490)



# YZ125

Our exclusive monocross suspension has been redesigned for better performance, fully-adjustable compression and rebound damping, and better cooling with the addition of a larger, lightweight aluminium remote reservoir.

New aggressive-style integrated seat and tank design allows more rider movement for improved control thus reducing rider fatigue.

New extra-large square-type front and side number plates.

Bevel gear throttle provides smooth sure throttle operation while minimising the chance of damage.

Yamaha's unique cooling system routes the water through the frame downtube, steering head and triple clamps. Radiator is ideally located for optimal cooling, air flow and radiator protection and weighs a mere 0.5 kg.

Yamaha-designed fully-adjustable leading axle front forks provide 300 mm of travel. Large diameter tubes provide more responsive, flex-free travel.

New extra-wide front and rear fenders for maximum protection from rocks and mud.



Race-proven close ratio six-speed transmission and improved clutch assembly for increased durability.

New fully-adjustable Monocross suspension system provides the optimum in single shock adjustability and performance and provides an extra-long 310 mm of travel.

New, strong box-section aluminium swing arm for increased rigidity and better

Powerful Liquid-Cooled 123 cc engine with Yamaha's patented Power Valve System. YPVS dramatically improves the low to mid-range without sacrificing top-end performance.

Powerful front brake allows you better control since stopping is smooth and predictable.

# YZ250

Aggressive new integrated seat and tank design allows better rider movement for improved control.

Our exclusive monocross suspension is lightweight aluminum and has been redesigned for better performance and fully-adjustable compression and rebound damping. Remote reservoir is large for improved cooling.

Bevel gear throttle minimizes the chance of damage and provides sure, smooth throttle operation.

The successful liquid-cooling system proven on the YZ125 has been adapted to maintain strong engine performance through even the longest races and help increase engine life.

All new liquid-cooled 246 cc engine with Yamaha's patented Power Valve System. YPVS dramatically improves the low to mid-range without sacrificing top-end performance.

Extra-large 43 mm diameter front forks provide 300 mm of front wheel travel.

New extra-wide front and rear fenders provide further protection from flying mud and rocks.

New square number plates on front and side are larger for better visibility.

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250

New Monocross suspension system represents a major breakthrough in single shock adjustability and performance. Provides extra-long rear wheel travel of 320 mm.

New, strong but girder aluminum swing arm gives better stability and increased rigidity.

Race-proven five-speed gearbox and clutch assembly have both been improved for increased durability.

New improved CD Ignition provides better performance under all riding conditions.

New double-leading front brake gives you sure stopping power.

New lighter rear brake for sure stopping power.



# YZ490

New style integrated seat and tank design allows for a more aggressive riding position, better rider movement and improved control.

New extra-large front and side number plates.

Our exclusive monocross suspension has been redesigned to be fully adjustable for compression, rebound dampening, and spring preload. The addition of a larger lightweight aluminum remote reservoir provides better shock cooling.

Bevel gear throttle provides sure, smooth throttle operation while minimizing chance of damage.

All-new 487 cc engine puts out plenty of torque. YES improves the low and mid-range powerband without sacrificing top-end performance.

Long-travel leading axle front forks provide 300 mm of travel up front. 43 mm fork tubes prevent excessive flex.

New extra-wide front and rear fenders provide further protection from flying mud and rocks.

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Lightweight rear brake provides sure stopping power.

Yamaha's new Monocross suspension system provides the optimum in single shock adjustability and performance as well as an extra-long 320 mm of rear wheel travel.

Strong new bra-section aluminum swing arm provides better stability and increased rigidity.

New race-proven four-speed transmission means less shifting while still maintaining strong pulling power.

New stronger clutch assembly for inspired durability.

Double-leading front brake provides sure stopping power.



# SPECIFICATIONS

	YZ125	YZ250	YZ490
<b>ENGINE</b>			
Type	2-stroke, liquid-cooled, single	2-stroke, liquid-cooled, single	2-stroke, single
Displacement	123 cc	246 cc	487 cc
Bore and stroke	56.0 × 50.0 mm	70.0 × 64.0 mm	87.0 × 82.0 mm
Compression ratio	8.2 : 1	7.0 : 1	7.0 : 1
Max. power	31.0PS (22.8 kW) @11,500 rpm	42.5PS (31.3 kW) @8,250 rpm	53.0PS (39.0 kW) @7,000 rpm
Max. torque	1.95 kg-m (19.1 Nm) @11,000 rpm	3.85 kg-m (37.8 Nm) @8,000 rpm	5.83 kg-m (57.2 Nm) @6,000 rpm
Lubrication	Pre-mix	Pre-mix	Pre-mix
Carburetion	Mikuni VM-34SS	Mikuni VM-38SS	Mikuni VM-38SS
Ignition	C.D.I.	C.D.I.	C.D.I.
Starter system	Primary kick	Primary kick	Primary kick
Fuel tank capacity	8.2 lit.	9.1 lit.	10.0 lit.
Transmission system	6-speed	5-speed	4-speed
Final transmission	Chain	Chain	Chain
<b>CHASSIS</b>			
Overall length	2,150 mm	2,190 mm	2,200 mm
Overall width	870 mm	870 mm	870 mm
Overall height	1,255 mm	1,230 mm	1,210 mm
Wheelbase	1,465 mm	1,490 mm	1,500 mm
Ground clearance	350 mm	325 mm	320 mm
Dry weight	92 kg	103 kg	106 kg
Suspension			
Front	Telescopic forks	Telescopic forks	Telescopic forks
Rear	New Monocross suspension	New Monocross suspension	New Monocross suspension
Brakes			
Front	Drum	Drum	Drum
Rear	Drum	Drum	Drum
Tires			
Front	3.00-21	3.00-21	3.00-21
Rear	4.00-18	5.10-18	5.10-18

*\*Because of our ongoing efforts to make Yamaha motorcycles even better, specifications are subject to change without notice.*



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