

# 2005 FMX650

Angular super-motard styling really sets the pace. Bold looks combine with slim proportions for great looks and an easy ride. Comfortable contoured seat provides an easy reach to the ground for most riders, and conceals four fold-out bungee hooks to assist in carrying all sorts of cargo with ease.



NEW

Sharply tapered tail terminates into a brilliant LED taillight that really attracts attention when you need it most.



NEW

Impressive dual canister exhaust system points up and back for an aggressive street scrambler look. Exhaust exits down and outward from the sides of the styled endcaps for a sound that's just as exhilarating as its performance and style.



NEW

Progressive Pro-Link monoshock rear suspension system supports a rigid box-section steel swingarm for long-travel riding comfort over rough roads and excellent control everywhere.



NEW

NEW

Rigid and lightweight box-section steel Mono-Backbone frame combines strength and simplicity for assured handling, whatever sort of riding you're up for.

NEW

Aggressive dual front fender combines 'hugger'-style lower fender with large, overhanging Adventure Sports-style mudguard. Upper fender features large central hole that directs a steady stream of cooling air to the engine.



NEW

Stout gold-anodised inverted front fork speaks performance while assuring a quick-handling and a confident ride. Wide-profile Super Sports-class tyres mounted on black-anodised alu rims look the biz while delivering excellent cornering control and a comfortable ride.



NEW

Front and rear disc brakes deliver braking control to match the FMX's go power. Big 296mm front rotor is gripped by a responsive dual-piston calliper for quick and sure stopping power.



NEW

Rugged and powerful 644cc RFVC (Radial Four Valve Combustion chamber) air-cooled single-cylinder engine delivers breathtaking surges of power for exciting motard-style street riding performance.



**2005**  
**FMX650**  
**PRESS INFORMATION**

## Introduction

Honda have always kept a steady eye on the ebb and flow of ever-changing trends in motorcycling around the world, and have followed with great interest the developments in many of Europe's unique niche motorcycle markets. One category that has been growing steadily over the last few years, and most particularly in Europe, has been the widely popular 'Super Motard' class. Initially consisting of off-road race bikes that had been specially adapted to run—and slide—on paved racetracks in exciting displays of astounding riding skill, this new style of motorcycle racing caught on big with young riders throughout Europe and its distinctive design variations have simply not lost their appeal.

From customised street bikes built by hand from small off-roaders with specialised after-market parts to full-blown street-legal factory racers decked out with the hottest chassis and engine components, this niche category has really taken the Continent by storm. Besides providing identifying links to the famous riders who pilot these creations at racing events, the main appeal of the Super Motards is rooted in their unique combination of the light weight and quick, responsive control of off-road machines fused with fully streetable road bike equipment that gleams of super-trick high-tech racing componentry exuding a daring sense of 'Xtreme' riding fun and 'out of the ordinary' style.

While Honda has, over the years, produced several models that combine off-road or rally styling and features in versatile on-road fun bikes, there has not yet been a machine in the Honda line-up that integrates all the essential elements of full-bodied Super Motard-style in a stand-out machine that really maximises a rider's riding and styling enjoyment.

Now, for 2005, Honda introduces an exciting new, European-developed and European-exclusive entry into the exciting Super Motard category, wrapping the booming power of a proven 650cc 'big-single' engine in a light, confident-handling road bike with trick-looking equipment, fat low-profile tyres and eye-catching styling that really shouts of performance and riding enjoyment, and inject a big blast of light-hearted fun into any urban street scene. The new FMX650 gives riders a sharp-looking yet easy-riding and economical new ticket to the fun of Super Moto riding with ample performance and abundant style to keep the excitement level running high for days on end.

## Development Concept

Honda's new FMX650 was developed as a wildly impressive, large-displacement yet low-cost 'Fun Moto' that can tackle the streets and motorways in exhilarating style. Designed not so much for hard-core racing and riding experts—though it does deliver a satisfying blast of performance for those able to take advantage of it—the FMX makes a perfect mount for those simply looking for a strong and dependable machine that offers a strong dose of flashy style to set one apart from the crowd.

Easy-handling and comfortable in all riding situations, the new FMX was designed on a dual-sport-style chassis configuration with long-travel suspension systems providing an ideal balance of on-road riding characteristics to tackle crowded city streets, fast-paced main thoroughfares and tight, winding mountain passes with equal confidence and effortless ease.

Delivering a powerful helping of performance with stylish panache and excellent economy was also one of the central tenets of the FMX's fundamental design concept. Given the need for versatile performance characteristics that can best appeal to the widest range of rider needs, the new machine's power needed to come on strong and smooth, yet never overwhelm its rider with an unexpected show of force.

Boasting a long, proven history of providing impressive get-up-and-go with reliable and economical operation, Honda's famed RFVC (Radial Four Valve Combustion chamber) air-cooled single-cylinder engine—one of Honda's best-loved standards of big-bore single power and dual-sport performance—was thus selected to power the new FMX. Strong, responsive and easy to handle, this engine delivers an exciting blast of power that puts smiles on faces as easily as a yank on its throttle can lift its wheel into the air.

With outrageously fun styling sense, impressive power and always easy handling, the new FMX650 gives a brilliant new definition to the term 'Fun Moto,' and will certainly win fast friends with its breathtaking combination of street smart performance, style and second-to-none Honda quality.

## Styling

Standing out with sharp, angular lines highlighted by bold expanses of colour, the new FMX650 is aggressively styled for exciting riding days ahead, and for attracting lots of attention along the way. Built on a slim and lightweight chassis that offers swift and agile handling ease, the new FMX captivates with an ultra-modern look of racy style that lifts spirits as it catches the eye. Extending in bold strokes from the tip of its large, front fender extension to the sleek edge of its pointed tail, this new Fun Moto's bodywork exudes excitement from every curve.

Borrowing from the latest look of many hard-charging off-road machines, the FMX650's black-painted 11-litre fuel tank is partially enshrouded by the cowling of its impressive bodywork, providing a layered look that fits right in with its dynamic Super Motard styling.

The FMX's bright, rectangular headlight is integrated into the angular design of its front visor, while a compact instrument panel resides behind it, providing a high-visibility readout of operating conditions. Its wide, competition-style aluminium Renthal handlebar features a handy hazard light button among its standard array of switch gear.

With its contoured seating area delivering a comfortable ride, the FMX's sleek seat cowl angles sharply upward, its lower lines paralleled by the impressive canisters of its polished dual exhaust system, and terminates into a sharply angled upturned end with a slim yet brilliant multi-segment LED taillight element integrated into its underside curves.

Under the seat are installed a set of four handy fold-out hooks for attaching straps and hooks to secure cargo to the rear seat area.

Small, angular indicators like those featured on Honda's Hornets also complement the FMX's sharply modern looks, and double as attention-getting hazard lights in emergency situations when switched on at the left-side handlebar control unit.

### **Dual Front Fender**

The FMX's wide, grippy Super Sports-style front tyre is covered by a hugger-style fender mounted close to its tread. High above it, a large extension of the upper fender reaches over the wheel with the look of a big, wide-coverage off-road mudguard.

This prominent upper fender extension features a large air vent hole built into its upper surface, which is designed to direct a steady stream of cooling air down to the engine's head and cylinder when up to speed. The large gap opened between the two mudguards also serves to direct a more effective stream of air to the air-cooled engine.

# Colouring Concept

Bold design is best seen in bold colours, and the new FMX650 fits the bill in three starkly attractive colour variations that really highlight its sharp angles and grab attention like nothing else.

## Colours

- Fighting Red
- Rhinoceros Grey

# Engine

## **Powerful 644cm<sup>3</sup> Big-Single Engine**

The new FMX650 gets its big surge of thumper power from a rugged 644cm<sup>3</sup> air-cooled RFVC single-cylinder engine for optimised combustion efficiency and a strong, responsive thrust of big-single acceleration. Honda's highly original Radial Four Valve Combustion chamber (RFVC) configuration has won renown in the worlds of racing for providing exceptional power and solid, dependable reliability. A push-button electric starter and fully electronic ignition combine with the engine's fully automatic camshaft-integrated decompression system for quick and easy one-touch starts in all weather conditions, and a single-shaft balancer reduces vibration to provide comfortably smooth operation throughout the engine's strong rev range.

Power reaches the rear wheel by way of a smooth-shifting five-speed transmission that's been geared for comfortable on-road operation. In town or out on the open road, performance is impressive, with high-torque surges of low-to-midrange acceleration leaping forth at the twist of the FMX's throttle.

## **Eye-Catching Dual-Canister Exhaust System**

The FMX650 features a large-volume, dual-canister exhaust system that feeds out in parallel from the engine's two exhaust ports. Made entirely of rugged stainless steel, the system stands out with its two large-capacity buff-finish silencers reaching upward and back along the bottom edge of the seat. The combined volume of this twin system contributes to optimised power output while providing an aggressive look and an impressive sound.

The system's twin canisters also feature uniquely designed endcaps, which direct the exhaust output down and outward, instead of straight back, for a more exhilarating aural accompaniment to the brisk riding the new FMX was designed to do. Besides looking and sounding better than conventional systems, this unique design also more effectively draws the exhaust out of the silencers by making use of the low pressure effect created by wind passing over the exit holes.

To ensure complete compliance with Europe's strict EURO-2 emissions regulations, this dual exhaust system also features built-in catalytic heat tubes to protect the environment by reducing output of harmful exhaust gases.

# Chassis

## Simple and Strong Mono-Backbone Frame

The FMX650 is built on Honda's innovative Mono-Backbone frame format, which shares several fundamental design features with the frames developed for Honda's popular Hornet line-up. This lightweight and rigid construction is formed of large-diameter, thin-wall pieces of rectangular-section steel tubing laid out in a simple yet highly rigid single-cradle configuration. The frame's main backbone also performs double duty as the oil reservoir for the dry sump engine, and holds an ample 2.5 litres of oil capacity. Its single rectangular-section steel seat rail is attached to the backbone section at one point, and is braced by two triangulated box-section pieces for optimal rigidity, providing a solid mount for both the seat and the exhaust system's dual canisters.

Designed, like the Hornets, to provide light and agile on-road handling, the FMX650's frame combines with compliant suspension components to achieve a 'Fun to Ride' sensation that can really be felt, and an easy reach to the ground for most riders.

Large, lightweight, open forged aluminium plates mounted on either side of the base of the frame carry foot pegs, levers and related components, and are bolted directly onto the ends of the swingarm pivot shaft. These eye-catching pieces also impart an impressive sense of urban style to complement the FMX650's attractive angular bodywork.

## Competitive Motard-Style Suspension Systems

The FMX's front and rear suspension systems really look the part of a Motard-style street dodger. Up front, the two massive gold-anodised stanchion tubes of its impressive inverted front fork stand out with purposeful intent and a look of high performance. Featuring large-diameter 45mm sliders and leading-axle forged aluminium end caps, this fork delivers a full 218mm of responsive, calmly assured axle stroke, and precise handling over smooth roads and rough patches. To ensure light and easy handling with its wide and grippy front tyre, the fork's stanchion tubes are set slightly wider apart than usual for optimal leverage that requires minimal effort to wind through city traffic or slice through the tight corners of a mountain road.

At the back, the FMX650 comes fully equipped with Honda's progressive Delta-Link Pro-Link rear suspension system, which utilises a large 40mm-diameter gas-charged damper to support a rigid rectangular-section steel swingarm for superb control and a plush, comfortable ride for one or two throughout its 186mm of axle travel.

### **Lightweight Aluminium Rims and Responsive Disc Brake**

The FMX's lightweight and sturdy 17" black-anodised aluminium rims are attached to compact and lightweight hubs with strong and shiny stainless steel spokes, and mounted with high-performance low-profile street tyres for quick handling, racy looks and impressive cornering control.

For premier stopping performance, the FMX was also equipped with superb disc brake control front and rear. Up front, its large 296mm rotor is ably stopped by a lightweight dual-piston calliper, while a compact, swingarm-mounted single-piston rear calliper grips a 220mm drilled rotor between sintered metal pads for a highly responsive balance of braking control.

## Optional Equipment

- A handy steel tube rear carrier can be bolted-on behind the seat to facilitate carrying larger objects with security and ease.
- A convenient and versatile cargo net helps secure even larger objects to the rear carrier or seat.
- An optional 20mm lower recontoured seat gives shorter riders an easier reach to the ground for enhanced riding confidence.
- Attractive Cheetah and Cheque patterned seat skins fit over the seat to give the FMX an even wilder and more Xtreme look of street sliding style.
- Easy-appliqué decal sets add a striking touch of street cred to the FMX's dynamic lines.
- A rugged, water-resistant bike cover manufactured from breathable fabric allows the FMX to dry while covered. Its strong, reflective outer material protects paint against damage by ultraviolet light. Ropes attached to the cover's lower edges allow it to be tied down to protect the FMX's paint from possible damage resulting from a fluttering cover. The cover also features two holes in its lower front section to facilitate the secure attachment of a U-Lock.
- Beautifully designed, wide-coverage knuckleguard set protects the hands from wind and grime, while emphasising the FMX's rugged good looks.

**Specifications****FMX650 (ED-type)****Engine**

Type	Air-cooled 4-stroke RFVC SOHC single
Displacement	644cm <sup>3</sup>
Bore x Stroke	100 x 82mm
Compression Ratio	8.3 : 1
Max. Power Output	27.7kW/5,750min <sup>-1</sup> (95/1/EC)
Max. Torque	52.3Nm/4,500min <sup>-1</sup> (95/1/EC)
Idling Speed	1,300min <sup>-1</sup>
Oil Capacity	2.5 litres

**Fuel System**

Carburation	40mm VE-type carburettor
Aircleaner	Dry, cartridge-type paper filter
Fuel Tank Capacity	11 litres (including 3.8-litre reserve)

**Electrical System**

Ignition System	Fully transistorised electronic
Ignition Timing	8° BTDC (idle) ~ 26° BTDC (5,750min <sup>-1</sup> )
Sparkplug Type	DPR8EA-9 (NGK); X24EPR-U9 (ND)
Starter	Electric
Battery Capacity	12V/8AH
ACG Output	210W
Headlight	12V 60W x 1 (low) / 55W x 1 (high)

**Drivetrain**

Clutch	Wet, multiplate with coil springs
Clutch Operation	Mechanical; cable-actuated
Transmission Type	5-speed
Primary Reduction	2.029 (69/34)
Gear Ratios	1 2.666 (32/12) 2 1.750 (28/16) 3 1.250 (25/20) 4 1.000 (23/23) 5 0.800 (20/25)
Final Reduction	3.000 (42/14)
Final Drive	O-ring sealed chain

**Frame**

Type Single Cradle Mono-Backbone; Steel tube

**Chassis**

Dimensions	(LxWxH)	2,151 x 823 x 1,157mm
Wheelbase		1,490mm
Caster Angle		29° 06'
Trail		97mm
Turning Radius		2.4m
Seat Height		875mm
Ground Clearance		216mm
Dry Weight		163kg
Kerb Weight		170kg (F: 80kg; R: 90kg)
Max. Carrying Capacity		155kg
Loaded Weight		325kg (F: 115kg; R: 210kg)

**Suspension**

Type	Front	45mm inverted leading-axle telescopic fork, 218mm axle travel
	Rear	Pro-Link, 186mm axle travel

**Wheels**

Type		Aluminium rim/steel spoke
Rim Size	Front	17M/C x MT3.50
	Rear	17M/C x MT4.00
Tyre Size	Front	120/70 R17M/C 58H
	Rear	150/60 R17M/C 66H
Tyre Pressure	Front	200kPa
	Rear	225kPa

**Brakes**

Type	Front	296 x 4mm hydraulic disc with dual-piston calliper and sintered metal pads
	Rear	220 x 5mm hydraulic disc with single-piston calliper and sintered metal pads

All specifications are provisional and subject to change without notice.