

1989

PARIS DAKAR: un motore
a Ducati engine

1990

1991

1992

1993

1994

1995

1996

1997

1998



MUSEO DUCATI

Introduction

Located at the Ducati factory headquarters, the 1,000 m² Ducati Museum highlights 50 years of racetrack heritage.

The Ducati Museum opened on 12th June 1998, during the first annual WDW (World Ducati Week), and was officially inaugurated on 16th October later that year. The Museum has preserved over half a century of Ducati racing history and also the history of the company (even before it produced motorcycles), founded by the Ducati brothers in 1926.

From the popular post-World War II “Cucciolo” to the breakthrough with the Desmosedici, the museum highlights 50 years of Ducati technological innovation, award-winning design and, above all, exceptional racetrack performance. The museum is arranged as an illuminated racetrack that hosts 33 legendary motorcycles with a special spectator area housed inside a gigantic red helmet. Adjacent to the track is a set of seven thematically organized rooms, set up by Marco Montemaggi (the Museum’s first curator) and subsequently by Livio Lodi, the current curator; these rooms provide more detailed information on each of the museum’s sections. This layout also highlights the history and emotions that have made Ducati such a success.

“It is a true product of our time”, says Livio Lodi “through which older generations of Ducatisti can relive the splendor of an age that seems to have disappeared, while younger generations can discover the importance of Ducati’s vast, rich history. Finally, a huge dream has come true for all of those who love these superb Bologna-built motorcycles.”

The planning and design of the museum were entrusted to architects Pietrogrande and Martera with Studio Associates; construction was carried out by ICET.

Come and discover Ducati’s glorious past. An unrivaled tradition built on technology, style and stunning race victories that go all the way back to 1926.



The layout of the Ducati Museum

This permanent exhibition tells the racing history of Ducati by recreating, stage by stage, its most significant moments.

The museum opens with an exhibit illustrating how Ducati became a motorcycle company, with a broad overview of some of the most significant products made during the thirty years prior to motorcycle production. It is a true tribute to the founders, the brothers Bruno, Marcello and Adriano Cavalieri Ducati.

The story begins with the Cucciolo, the first engine produced by Ducati in 1946 when the company made its first foray into the motorcycle world.

Then came the Taglioni era. With the arrival of this legendary engineer, a man who became famous for, among other things, the Desmodromic valve system, things changed forever. From Taglioni to the present day, the Desmodromic valve gear would be the hallmark of Ducati bikes. Taglioni was also responsible for the highly successful Marianna 100 and 125 Gran Sports, kings of the Motogiro d'Italia in the mid 1950s.

The exhibit continues by illustrating a brief yet intense period of motorcycle development – the tri-camshaft racing twin which marked the debut of a young yet soon-to-be-legendary rider named Mike Hailwood™.

This is followed by the single-cylinders, which achieved significant victories, despite limited means and their derivation from production models.

The subsequent section marks the unveiling of V-twins with bevel gears, an era best represented by two wonderful riders whose careers mark the beginning and the end of the period: Paul Smart, winner of the 1972 Imola 200 and Mike Hailwood™, winner of the 1978 Tourist Trophy. Next comes a jewel of Italian engineering: the famous Pantah twin cylinder. Designed at the end of the 1970s, the Pantah generated many successful descendants including the coveted TT2 and 750 F1.

Our story continues in 1986 with the revolutionary four-valve Desmodromic engine, and the man whose name has become synonymous with the modern Ducati brand, Gian Luigi ("Gigi") Mengoli.

Next are the bikes – first the 851 (later to become the 888) and then the legendary 916 – that have made Ducati the envy of the industry and perennial winners at Superbike World Championships. This journey through Ducati's racing history ends perfectly with a look of Ducati's greatest innovation, the Desmosedici: its introduction heralded a whole new generation of racing engines from Ducati.





This museum was explicitly created to offer visitors two ways of viewing the Ducati story. First, there is the chronological placing of the bikes along a circular, luminous “racetrack”. The second viewpoint lies parallel to the track; it is a set of seven thematically organized rooms, each providing a more in depth exploration of the museum’s nine main sections. The museum project was made possible by essential contributions from collectors, riders, Ducati enthusiasts and all of the staff at Ducati Motor Holding, who have generously contributed their expertise to this huge operation. The Ducati Museum is dedicated to all of those, from 1926 onwards, who have offered their knowledge, effort and love to Ducati, making it a symbol of success all around the world.

Livio Lodi

Below are some writings by illustrious authors who have made motorcycling a profession as well as a passion; journalists whose words have thrilled us and made the extraordinary story of Ducati an undying one.



Room 1

Cucciolo, the Original Ducati

“Come with me, I’ll take you on the Cucciolo, the moped is small but the beat of the engine is like my heart.”

1946: With the end of World War II, Italy found itself with little money and a desperate need for transportation – a combination of circumstances that made the introduction of an inexpensive moped the right invention at just the right time. The Ducati Cucciolo – advertised with a catchy jingle heard on radios throughout Italy – was a huge success and contributed to the advent of mass motoring in Italy.

Designed during the war by two loyal *Motociclismo* magazine freelancers – lawyer Aldo Farinelli and his brother, engineer Enzo Furio – the Cucciolo, with its two-speed gearbox, was able to carry two passengers and tackle the steep hills that are so common in Italy. Moreover, being a four-stroke (with overhead valves!) it could cover 100 kilometers on just one liter of petrol without fouling the spark plugs. Other mopeds, almost all two-strokes, consumed greater amounts of petrol and had spark plugs that frequently needed cleaning.

Six versions of the Cucciolo were manufactured between 1946 and 1958 – each model boasting significant improvements. According to Bruno Ducati, one of the three founding brothers of the company, almost a million of them – a record amount – were made, including those built under license abroad.

The Cucciolo was not simply a popular vehicle for use around town. It also won in tourism and sport competitions, including the 18,000 kilometer Paris-Tokyo ride in 1949 and the world speed records at Monza in 1950. The Cucciolo won on Zitelli circuit and many other racetracks in the 50s, including the Six Day International off-road competition in 1951 with Tamarozzi.

Finally, let us not overlook the Cucciolo’s other considerable achievement – that of making Ducati one of the brightest stars in the motorcycling firmament.

Carlo Perelli



Room 2

Marianna

Forerunners of both sporting and commercial successes, the 100 and 125 Gran Sport motorcycles represent milestones in Ducati history. In fact, it was with the Gran Sport bikes – affectionately called the Mariannas – that Ducati began its racing success.

The Marianna immediately became unbeatable, making the Ducati name synonymous with victory in the racing world. Associated with reliability, durability and victory, the Gran Sport versions were designed for long distance races, including the Tour of Italy and the Milan-Taranto, two exhausting competitions covering thousands of kilometers during which no stops were allowed due to mechanical faults.

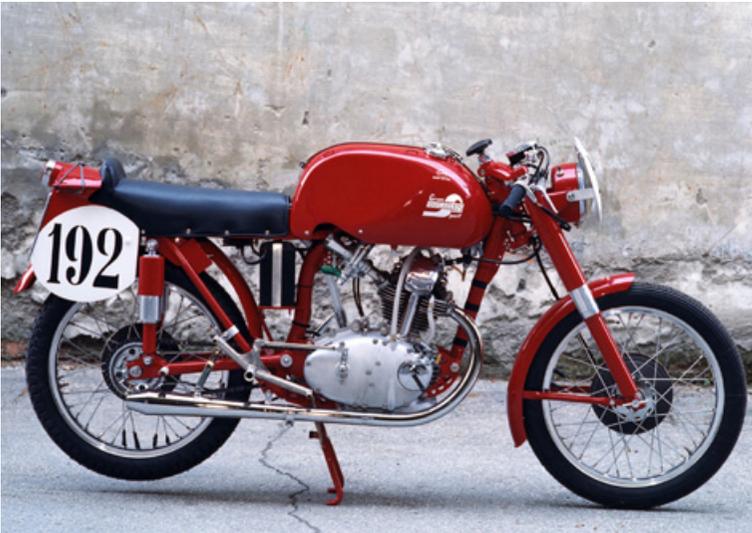
So competitive were the Mariannas that with just a few minor adjustments they could be used on circuits worldwide by ambitious private riders, thus becoming the backbone of the 125 class for their period, first in Italy and then in the World Championships. Finally, the bike's unforgettable design – created by the legendary Fabio Taglioni – made the Gran Sport truly unique. The Gran Sport Family formed the basis of the modern Ducati Grand Prix bikes – including the Desmodromic 125s, which by a stroke of bad luck, just missed out on the World Championship title in 1958. The technical refinement of the Desmodromic engine, used for the first time on 125s, is still Ducati's strong point, representing the mechanical exclusiveness, which distinguishes the brand from the rest.

The Marianna was the forerunner of the company's first commercially successful road models: the series of single-cylinder, single overhead camshaft bikes which were sought after by riders worldwide for many years. In particular, the "Scrambler" - the first motorcycle suitable for both road and off-road riding - paved the way for off-road models that would soon become international best sellers. These legendary bikes, much like the first Desmodromic road models, are very much coveted by connoisseurs today.

One of the bike's great distinguishing characteristics is that it shaped many motorcycling champions. Only a few are named here, as the full list would be too long: from the beginning, Gianni Degli Antoni (whose most successful years were with Ducati) then Bruno Spaggiari, Alberto Gandossi, Luigi Taveri, Francesco Villa, Romolo Ferri, Franco Farné, Giuliano Maoggi, and Giuseppe Mandolin, all of whom won championships with Ducati.

The Marianna, its designer Taglioni, its technicians and mechanics and all of the riders who rode the bike to victory after victory, are hailed by sport motorcyclists everywhere.

Giovanni Perrone



Room 2

Ducati "Siluro 100": Winner Of 46 World Records

The 50s witnessed enormous activity on behalf of motorcycle manufacturers who at that time were deeply committed both to winning the world records that had caught the public's imagination and promoting sales of mass-produced motorcycles. In November of 1956, on the banked track at Monza, riders Mario Carini and Santo Ciceri took turns on the Siluro (torpedo), powered by a 98 cc engine with single overhead camshaft – also seen on the Gran Sport used in track and road competitions. By the end of the session, 46 world records had been broken, not just in the 100 class, but those in the 125, 175 and even 250 classes. With just a few mechanical adjustments, the Marianna was transformed into a record-breaking vehicle. The only change was the addition of a Dell'Orto SS carburetor with a 25 mm choke instead of the 20 mm version normally used. More importantly, the superbly streamlined fairing – in light aluminum, hand-modeled alloy, fixed to the chassis by a slender tubular framework with silent-blocks – was designed by engineer Nardi to ensure maximum aerodynamic penetration and to prevent vibration from damaging the fairing.

The maximum power of this single overhead camshaft motorcycle was estimated at around 12 hp at 10,000 rpm. That may not sound like much nowadays, but during its fastest lap, the Ducati "siluro" averaged 171.910 km/h. This exceptional session was divided between record-breaking speeds on a 50 km competition and six-hour endurance rides – providing further proof of the reliability of this small engine.

The two record-breaking riders, Ciceri and Carini, prepared the bike with the help of Ducati (Fabio Taglioni and Cosimo Calcagnile, who headed the company at that time, were present trackside). Though not the strongest of riders, both performed respectably: the former had not been competing for long, and the latter had considerable experience in track racing and time trials.

Marco Masetti



Room 3

Singles and Twins Cylinders

Wide-case production models represent the pinnacle of Ducati single-cylinders, motorcycles characterized by a single camshaft driven by bevel gears. A direct descendent of the narrow-case family, the 250 and 350 versions of the wide-case models were first produced in the spring of 1968, with the 450 added the following year. The performance and elegant mechanics of the bikes immediately caught the attention of enthusiasts worldwide.

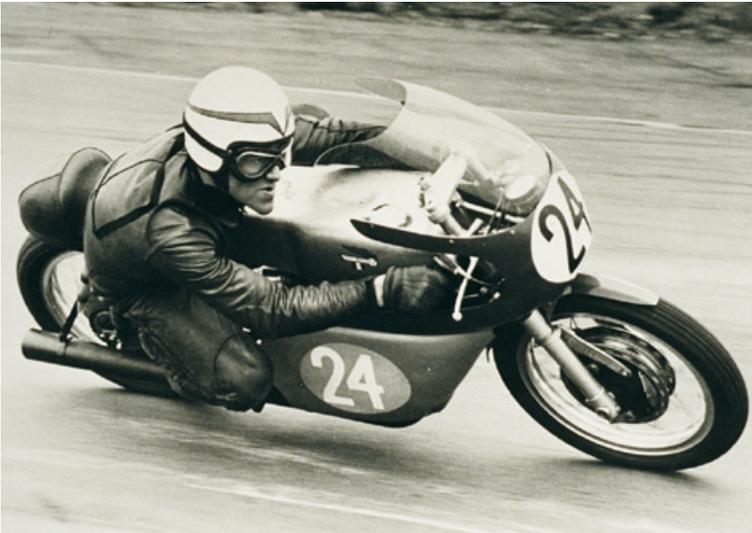
Perhaps the most famous wide-case Ducati was the Scrambler, a model that sold tens of thousands around the world, becoming legendary. The fast and agile Mark 3 sports model was soon joined by the Mark 3D – a bike fitted with a cylinder head mounting and Desmodromic valve gear. With this bike, Ducati became the world's first manufacturer to fit Desmodromic valve gears on a production model. The single camshaft – with two opening and closing rocker arms – is still used on twin valve cylinder head models. In 1971, the Mark 3D was developed into the famous Desmo model and produced in three versions: the 250, 350 and 450. Later on, the bike was also available with front disc brakes. Other famous wide-case models include the 450 T/S and the 450 RT.

Production models were easily transformed into racing models – for both track and hill climb races – by the able mechanics in the Ducati race department. The bikes were raced by prominent riders such as Bruno Spaggiari and Roberto Gallina. Production of these motorcycles ended in 1974.

Ducati is famous worldwide for its single cylinder and 90° V-twin cylinder engines. However, the racing bikes of the 50s and 60s, fitted with straight twin cylinders, are truly legendary.

Starting with the 125 GPs from 1958, the straight twin cylinder bikes earned their keep in the racing world thanks to their enormous power. Among these models, the most fascinating and successful was undoubtedly the 250 – basically a fusion of two 125 GPs – raced successfully by HailwoodTM. This very handsome Desmo twin cylinder engine was also fitted to a bike raced in Italy by Francesco Villa.

Massimo Clarke



Room 4

Ducati Bevel-Drive Engines



The development of the first multi-cylinder Ducati production engine in the early 1970s, in the form of engineer Taglioni's groundbreaking bevel-drive 90-degree V-twin design, marked a radical change of direction at the company. Ducati was now on the path to its present supremacy in sport bike engineering.

Until this moment, the largest capacity Ducati motorcycle yet build had been a 450 single. The advent of the 750cc V-twin range – developed in prototype form via the 500cc Grand Prix bikes which raced in 1971 – not only established Ducati's credentials as a big-bike manufacturer, it also set a benchmark of technical merit. The first multi-cylinder Desmodromic engine of any type – car or bike – to be offered for sale to the public, the new 750ss and its sprung-valve sisters were the first transverse-crankshaft 90-degree V-twin motorcycles ever to be marketed. With reduced vibration through perfect primary balance and the narrow girth – inherent in such a design- performance was fantastic. Insisting on a more costly but more technically sophisticated method of valve operation with vertical conical shaft and overhead cams, Taglioni offered Ducati street customers an engine worthy of a Grand Prix racer. Together with a chassis design derived from Britain's legendary school of frame-makers, the engine delivered a new standard of sporting excellence.

The success of the new Ducati design became evident at its debut in the 1972 Imola 200, when works riders Paul Smart and Bruno Spaggiari dominated the numerous factory teams in the race, finishing 1st and 2nd on modified race versions of the 750SS streetbike. A year later, in the grueling Barcelona 24 Horas endurance race held at the Montjuic Park circuit, the 864 cc prototype big-bore version of the bevel-drive engine also grabbed its very first race victory in the hands of Benjamin Grau and Salvador Canellas. The same riders repeated their victory in 1975, heralding the debut of the 900ss model derived from the same bike. This production model defeated the more powerful multi-cylinder Japanese opposition in the 1977 Daytona Superbike race in the hands of Cook Neilson.

But it was not until 1978 that the first of the V-twin Ducati family of bikes scored a major racetrack victory. The legendary Mike Hailwood™ chose a Ducati for his comeback race on the Isle of Man, defeating the works Honda team to win the Formula 1 TT. Reaching record speeds on one of the world's most demanding road race circuits, it was the perfectly-timed pinnacle of success for the "classic" Ducati V-twin engine. Of course, engineer Taglioni – the classic visionary – was already hard at work on its belt-drive successor, the Pantah.

Alan Cathcart

Room 5

The Pantah family

Introduced as a 500 in 1979, the Pantah engine was designed and built by engineers Fabio Taglioni and Gian Luigi Mengoli. It formed the basis of the Ducati production/racing program for years to come. So advanced was the design that it was still in production throughout the 1980s. Derived from the four-valve Armaroli 500 cc Grand Prix engine of 1973, the two-valve single overhead camshaft Pantah used a toothed belt camshaft drive instead of the earlier bevel-gears. Other important technical developments were the racing-inspired 60° included valve angle and the forged one-piece crankshaft. These features improved the bike's reliability and made the design more suitable for competition.

The first production version was the 500SL, but in 1981 the Pantah grew to 581 cc with the 600SL. This increase in capacity enabled the Pantah to compete in the TT Formula 2 World Championship where English rider Tony Rutter triumphed four years in a row (1981-1984). By 1982 the engine had grown to 597 cc and was housed in a specific racing chassis. This was the classic TT2, which in the hands of Massimo Broccoli and Walter Cussigh won the Italian Formula 2 Championships in 1981 and 1982. The compact Pantah engine in a tubular steel TT2 type frame with a cantilever swingarm was to become a trademark for sporting street Ducatis for many years afterwards.

The popularity of the Pantah continued to grow and in 1983 it became the 650SL. By now the racing versions were full 750s, which won notable victories at Montjuich Park (with Benjamin Grau, Enrique de Juan, and Luis Reyes) and in the Italian Formula One Championship (with Virginio Ferrari). In 1986, Marco Lucchinelli went on to triumph on the 750 cc TT1 at Daytona, Laguna Seca, and Misano. Street replicas of the TT1 became available in 1985 with the 750 F1, prior to evolving into the 900 Supersport of 1989. No longer forming the basis of the official racing program, the Pantah assumed a different role and grew into three complementary street families: the Monster, the ST2 and the Supersport. In the history of Ducati, the Pantah has been one of the most enduring and successful designs.

Ian Falloon



Room 6

Ducati In World Superbike Championships

Ducati's history will forever be associated with the World Superbike Championship simply because without Ducati there may never have been a World Superbike Championship in the first place. When the series began in 1988, Ducati was a vital part of the new World Championship series, and one of only two European manufacturers competing against the mighty Japanese brands. It was also the only twin-cylinder motorcycle.

Racing has always been in the company's blood and Ducati was serious about winning from the start. Ducati had the perfect bike to do the job – the formidable V-twin 851 – and with a rider like the former 500 cc GP World Champion, Italian Marco Lucchinelli, it was a guaranteed success.

The 851, and the 888 it spawned, may have been the only twins competing against the fours, but they featured such technical innovations as Desmodromic four-valve heads and fuel injection, all wrapped in a state-of-the-art tubular chassis. The competition used aluminum beam frames, but Ducati bucked the trend by proving that a correctly designed tubular chassis could be just as good, if not better. Former World Endurance Champion and GP star, Frenchman Raymond Roche, took over riding duties in 1989 and won five races including four at the fastest tracks on the calendar – proving that twin-cylinder motorcycles could give the fours more than just a run for their money.

1990 was the beginning of Ducati domination in the series. The bikes were fast and reliable – and soon earned the nickname “the Bologna Bullets”. Roche and Ducati scooped the title, appearing on the rostrum sixteen times (out of twenty-six), including eight race wins. Ducati had arrived.

1991 and 1992 saw Ducati take the World Superbike title again, with back-to-back wins by American Doug Polen. Roche displayed the superiority of the 888 design by taking the runner-up spot both times. There should have been another win for Ducati in 1993, this time with Britain's Carl Fogarty, but the cancellation of the last race of the year in Mexico deprived him of the title. But he didn't have to wait long.





At the start of the 1994 season, Ducati showed up at the World Championship with an absolute bombshell – the radical 916. At the time – and for years to come – it was described as the world’s sexiest motorcycle – stunning to look at from every angle and totally unlike anything that had preceded it. Critics ran out of complimentary adjectives. It still featured Ducati’s trademark V-twin engine configuration and tubular chassis, but was all-new from the ground up. Technically, it was so far ahead of the game that, even four years after its arrival, the competition was still struggling to catch up with it.

The 916 was an instant success on both track and road. If the 851 and 888 were the cornerstones of Ducati success – and in no small way part of the brand’s worldwide resurrection – then the 916 was the ultimate embodiment of style, function and performance. Ducati again won the title three years running (twice with Fogarty and once with Australian Troy Corser). It was, quite simply, the bike to beat.

Apart from the title winners – Raymond Roche, Doug Polen (twice), Carl Fogarty (twice), Troy Corser, Troy Bayliss and Neil Hodgson – many other famous riders have represented Ducati. The roll call reads like a “Who’s Who” of racing, and the following are just some who have tasted success: Marco Lucchinelli, Pierfrancesco Chili, John Kocinski, Baldassarre Monti, Giancarlo Falappa, Davide Tardozzi, Juan Garriga, Carlos Cardus, Jamie James, Stéphane Martens, Mauro Lucchiari, Virginio Ferrari, Fabrizio Pirovano, Andy Meklau, Jamie Whitham, Ben Bostrom and Ruben Xaus. Their place in motorcycle racing history – like that of Ducati bikes – is assured.

Kel Edge



Room 7

The Desmosedici and the return to the MotoGP

As predicted, after an incredible dream-like season, the Ducati Desmosedici had won the hearts of new and old lovers of Ducati. This new room created in its honor was inaugurated during World Ducati Week 2004.

The legendary return to the Grand Prix was, without a doubt, the most demanding and daunting test that Ducati Corse has ever faced. It had been over 30 years since Ducati had participated in the Motomondiale championship, and over the years, the technology used on these motorcycles has become incredibly sophisticated. Their performance is now truly unbelievable.

Ducati Corse impressively stepped up to the challenge, and in little more than a year after its announcement of intending to re-enter the supreme race category, Ducati created one of the most powerful engines that the world has ever seen.

Since 2003, Ducati has achieved incredible results with this bike. Without a doubt, the most important of these is the MotoGP World Title won by Casey Stoner with the Desmosedici GP07 at the Motegi circuit on 23rd September 2007.

Livio Lodi



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