

## Ducati, by Audi

As it turns out, the negotiations between Volkswagen-owned Audi and Ducati owner Investindustrial has finally culminated to a deal. The German luxury carmaker has agreed to buy Italian bikemaker, Ducati, for a sum of 1.12 billion USD. Audi will also inherit all of Ducati's current financial liabilities. The union between the two mega-industries marks a giant leap in Audi's ambitious 'Project Eagle,' which is aimed at elevating Volkswagen becoming the world's largest auto manufacturer.

Earlier, Andrea Bonomi, Investindustrial head had stated that Ducati was looking for a world-class industrial partner for its future growth and wanted to sell the iconic brand for one billion Euros. The purchase will make Ducati the 11<sup>th</sup> brand in VW's portfolio. Ducati sold 42,000 motorcycles through 2011 and commands a nine percent share in its segment. The company has been making all the right moves over the past few years, launching segment-leading motorcycles like its versatile Multistrada 1200, the Diavel power-cruiser and 1199 Panigale race replica.



The Duke 1199 Panigale

In 1926, three brothers, Adriano, Marcello and Bruno Ducati, founded *Societa Scientifica Radio Brevetti Ducati* in Bologna to produce vacuum tubes, condensers and other radio components, becoming successful enough by 1935 to construct a new factory in the Borgo Panigale area of the city. Production was maintained during World War II, despite the Ducati factory being a repeated target for Allied bombing.



Ducati "Cucciolo", 1950

Meanwhile, at the small Turinese firm SIATA (*Societa Italiana per Applicazioni Tecniche Auto-Aviatorie*), Aldo Farinelli began developing a small pushrod engine for mounting on bicycles. Barely a month after the official liberation of Italy in 1944, SIATA announced its intention to sell this engine, called the "Cucciolo" (Italian for "puppy," in reference to the distinctive exhaust sound) to the public. The first Cucciolos were available alone, to be mounted on standard bicycles, by the buyer; however, businessmen soon bought the little engines in quantity, and offered complete motorized-bicycle units for sale.

In 1953, management split the company into two separate entities, Ducati Meccanica SpA and Ducati Elettronica, in acknowledgment of its diverging motorcycle and electronics product lines. Ducati Elettronica became Ducati Energia SpA in the eighties. Dr. Giuseppe Montano took over as head of Ducati Meccanica SpA and the Borgo Panigale factory was modernized with government assistance. By 1954, Ducati Meccanica SpA had increased production to 120 bikes a day.

In the 1960s, Ducati earned its place in motorcycling history by producing the fastest 250 cc road bike then available. In the 1970s Ducati began producing large-displacement V-twin motorcycles and in 1973, released a V-twin with the trademarked desmodromic valve design. In 1985, Cagiva bought Ducati and planned to rebadge Ducati motorcycles with the lesser-known Cagiva name (at least outside of Italy). By the time the purchase was completed, Cagiva kept the "Ducati" name on its motorcycles. In 1996, Texas Pacific Group bought a 51% stake in the company for US\$325 million; then, in 1998, bought most of the remaining 49% to become the sole owner of Ducati. In 1999, TPG issued an IPO of Ducati stock and renamed the company Ducati Motor Holding SpA. TPG sold over 65% of its shares in Ducati, leaving TPG the majority shareholder. In December 2005, Ducati returned to Italian ownership with the sale of Texas Pacific's stake (minus one share) to Investindustrial Holdings, the investment fund of Carlo and Andrea Bonomi.

In April 2012, Volkswagen Group's Audi subsidiary announced its intention to buy Ducati for €860 million (US\$1.2 billion). Volkswagen chairman Ferdinand Piëch, a motorcycle enthusiast, had long coveted Ducati, and had regretted that he passed up an opportunity to buy the company from the Italian government in 1984. Analysts doubted a tiny motorcycle maker would have a meaningful effect on a company the size of Volkswagen, commenting that the acquisition has "a trophy feel to it," and, "is driven by VW's passion for nameplates rather than industrial or financial logic".

### **Motorcycle designs**



2006 Ducati Paul Smart 1000LE

Ducati is best known for high performance motorcycles characterized by large capacity four-stroke, 90° V-twin engines, featuring a desmodromic valve design. Ducati refer to this configuration as L-twin because one cylinder is vertical while the other is horizontal, making it look like a letter "L". Modern Ducatis remain among the dominant performance motorcycles available today partly because of the desmodromic valve design, which is nearing its 50th year of use. Desmodromic valves are closed with a separate, dedicated cam lobe and lifter instead of the conventional valve springs used in most internal combustion engines in consumer vehicles. This allows the cams to have a more radical profile, thus opening and closing the valves more quickly without the risk of valve-float, which causes a loss of power, that is likely when using a "passive" closing mechanism under the same conditions.

While most other manufacturers utilize wet clutches (with the spinning parts bathed in oil) Ducati uses multiplate dry clutches in many of their current motorcycles. The dry clutch eliminates the power loss from oil viscosity drag on the engine even though the engagement may not be as smooth as the oil bath versions, and the clutch plates can wear more rapidly.

### **Product history**

The chief designer of most Ducati motorcycles in the 1950s was Fabio Taglioni (1920–2001). His designs ranged from the small single-cylinder machines that were successful in the Italian 'street races' to the large-capacity twins of the 1980s. Ducati introduced the Pantah in 1979; its engine was updated in the 1990s in the

Ducati SuperSport (SS) series. All modern Ducati engines are derivatives of the Pantah, which uses a toothed belt to actuate the engine's valves. Taglioni used the Cavallino Rampante (identified with the Ferrari brand) on his Ducati motorbikes, Taglioni chose this emblem of courage and daring as a sign of respect and admiration for Francesco Baracca, a heroic World War I fighter pilot who died during an air raid in 1918.

### **Some company highlights**

#### **1970s**

Main article: Ducati V-twin motorcycles. In 1973, Ducati commemorated its 1972 win at the Imola 200 with the production model green frame Ducati 750 SuperSport, representing the Ducati V-twins.

Ducati also targeted the offroad market with the two-stroke Regolarità 125, building 3,486 models from 1975 to 1979, but the bike was not successful. In 1975, the company introduced the 860 GT, designed by noted car stylist Giorgio Giugiaro. Its angular lines were unique, but raised handlebars made for an uncomfortable seating position at high speeds and also caused steering issues.

#### **1980s**

Main article: Ducati Desmoquattro motorcycles

Ducati's liquid-cooled multi-valve V-twins made from 1985 on are known as *Desmoquattro* ("desmodromic valve four"). These include the 851, 916 and 996, 999 and a few predecessors and derivatives.

#### **1990s**

In 1993, Miguel Angel Galuzzi introduced the Ducati Monster, a naked bike with exposed trellis and engine.

Today the Monster accounts for almost half of the company's worldwide sales. The Monster has undergone the most changes of any motorcycle that Ducati has ever produced.

#### **2000s**

In 2006, the retro-styled Ducati PaulSmart1000LE was released, which shares styling cues with the 1973 750 SuperSport (itself a production replica of Paul Smart's 1972 race winning 750 Imola Desmo).

Ducati (in its various incarnations) has produced several styles of motorcycle engines, including varying the number of cylinders, type of valve actuation and fuel delivery. Ducati is best known for its V-twin engine, called a L-twin by the company, which is the powerplant in the majority of Ducati-marqued motorcycles. Ducati has also manufactured engines with one, two, three or four cylinders; operated by pull rod valves and push rod valves; single, double and triple overhead camshafts; two-stroke and even at one stage manufactured small diesel engines, many of which were used to power boats, generators, garden machinery and emergency pumps (for example, for fire fighting). The engines were the IS series from 7 to 22 hp (5.2 to 16 kW) air-cooled and the larger twin DM series water- and air-cooled. The engines have been found in all parts of the globe. Wisconsin Diesel even assembled and 'badge engineered' the engines in the USA. They have also produced outboard motors for marine use. Currently, Ducati makes no other engines except for its motorcycles. In the 1960s and 1970s Ducati produced a wide range of small two-stroke bikes, mainly sub-100 cc capacities. Large quantities of some models were exported to the U.S.

### **Enthusiasts groups**

A key part of Ducati's marketing strategy since the 1990s has been fostering a distinct community identity in connection with branding efforts, including online communities, and local, regional and national Ducati enthusiast clubs. There are more than 400 Ducati clubs worldwide, and 20,000 registered users of the Ducati Owners Club web site and 17,000 subscribers to the racing web site. Enthusiasts and riders are informally referred to in the motorcycling community as Ducatista (singular) or Ducatisti (plural).

In North America there are several Ducati enthusiasts organizations, with varying degrees of factory sponsorship. DESMO, the Ducati Enthusiast Sport Motorcycle Organization, is a North American group affiliated with the factory Desmo Owners Club. Some groups are focused on vintage Ducatis, while several are based primarily or entirely on email discussion lists or web forums, such as Ducati.net.

### **Ducati products other than motorcycles**

Ducati Meccanica (as the company was previously known) has its marque on non-motorcycle products as well. In the 1930s and 1940s, Ducati manufactured radios, cameras, and electrical products such as a razor. The Ducati Sogno was a half-frame Leica-like camera which is now a collector's item. Ducati and Bianchi (bicycle manufacturer) have developed and launched a new line of racing bicycles. Currently, there are four Ducati companies: Ducati Motor Holding (the subject of this article), Ducati Corse (which runs the Ducati racing program and is wholly owned by Ducati Motor Holding), Ducati Energia, a designer and manufacturer of electrical and electronic components and systems and Ducati Sistemi, a subsidiary of Ducati Energia. All are located in Borgo Panigale in Bologna, Italy. Ducati Motor Holding often uses electrical components and subsystems from Ducati Energia.

## Racing history



2008 Ducati Desmosedici GP8 (motoGP)

Ducati has a long history with racing, still subscribing to the "win on Sunday, sell on Monday" business model allocating 10% of the companies revenue (approximately \$60 million) on racing.

### MotoGP World Championship

Ducati rejoined Grand Prix motorcycle racing in 2003, after a 30 year absence. On September 23, 2007, Casey Stoner clinched his and Ducati's first Grand Prix World Championship. When Ducati re-joined MotoGP in 2003, MotoGP had changed its rules to allow four-stroke 990 cc engines to race. At the time Ducati was the fastest bike. In 2007, MotoGP reduced the engine size to 800 cc, and Ducati continued to be the fastest with a bike that was markedly quicker than its rivals as was displayed by Casey Stoner on tracks with long straights.

For 2009, Ducati Marlboro Team campaigned their Desmosedici GP9 with former World Champions Casey Stoner and Nicky Hayden. Ducati also supplies customer bikes to the Alice Team, with Mika Kallio and Niccolò Canepa riding for the team in 2009. The British Superbike Championship has been won by Ducati riders on eight occasions and entered since 1988. Since the 2011 season, nine-time world champion Valentino Rossi rides for Ducati Corse.

### Merchandising

Ducati has a wide range of accessories, lifestyle products and co-branded merchandise bearing their logos and designs. The company has a licensing agreement with Tumi Inc. launching a collection of eight co-branded luggage pieces in 2006 sold through both of the brands' retail outlets. In Italy Ferrari leads the way in successful efforts in merchandising programs with all sorts of products. Ducati follows with a similar effort.

### The Motorcycle market

#### Selected International Motorcycle Production and Sales Reports, Q1 2012

May 3, 2012 - (Various Sources, Edited by webBikeWorld) - BMW Motorrad reported 34,364 motorcycles produced in Q1 of 2012, up 5.8% from the 32,484 figure of Q1 2011. BMW reported Husqvarna production as 3,361 in Q1 2012, up 7.8% from the 3,117 figure from Q1 2011 (Source: BMW Q1 Financial Report).

Harley-Davidson reported sales up 25.5% in Q1 2012 compared to the previous year (Source: H-D Q1 Financial Report). On a worldwide basis, dealers sold 59,677 new Harley-Davidson motorcycles in the first quarter of 2012, a 20.3 percent increase compared to 49,595 motorcycles sold in the year-ago period. Dealers sold 39,762 new Harley-Davidson motorcycles in the U.S., a 25.5 percent increase compared to the first quarter of 2011. In international markets, dealers sold 19,915 new Harley-Davidson motorcycles during the first quarter, an increase of 11.2 percent compared to the year-ago period. Industry-wide U.S. heavyweight new motorcycle (651cc-plus) retail unit sales increased 17.5 percent compared to last year's first quarter.

The Motorcycle Industry Council reports overall motorcycle sales up 6.7% in Q1 2012, with Dual-Sport bikes again leading the charge, up 12.7% (7,549 units sold). Off-road motorcycle sales are down 6.7% (17,473 sold); streetbike sales are up 8.8% (77,103 units sold); scooter sales are up 16.9% (7,300 units sold). Motorcycle sales totaled 102,125 units.

DP Lightspeed, a dealer retail information network, is reporting dramatic improvements in Q1 2012 retail sales at the dealer level in the U.S.A.

The study, based on a survey of nearly 1,700 U.S. powersports dealers, indicate sales are up an average of 21% over the first quarter of 2011, with increases in all U.S. regions, including +41% in the Midwest. The improvements are said to be related to the unusually warm winter weather experienced in much of the U.S.A. The sales increases were nearly identical in both V-Twin and "Metric" dealers. As an example, Polaris is

reporting overall sales up 17% in the first quarter, compared to 2011. Victory motorcycle sales are up 44%, although it must be remembered that 2011 was a down year due to the worldwide economic slump.

Polaris is reporting that their purchase of the Indian, GEM and Goupil brands contributed nearly 50% of their motorcycle sales in the first quarter of 2012, while traditional cruiser sales improved around 15%. Victory motorcycle sales in the U.S, Canada and Mexico were up by nearly 40%, while off-road utility vehicle sales are reported up 30%. The off-road only utility vehicle market has been booming in the U.S. in the last couple of years.

Meanwhile, Ducati also reported improved sales in Q1 of 2012, claiming its 7th consecutive quarter of sales growth with a 10.2% improvement in Q1 2012 retail sales. The company is reporting a 98% increase in Ducati-branded clothing and other gear compared to Q1 of 2011.

### **European Motorcycle and Scooter Sales Continue to Slide**

February 11, 2012 - (ACEM Press Release, Edited by webBikeWorld) - The numbers for 2011 are in and the European "Powered Two-Wheeler" (PTW) market continues its decline, marking four consecutive years of decline from 2008 to 2011.

2011 marks the lowest performance of the decade, with registrations of Powered Two Wheelers falling by another 9,5%, which equates to nearly 170,000 fewer units. Sales in the European market totaled 1.7 million units in 2011. These figures were released by ACEM, the European Association of Motorcycle Manufacturers, during their yearly industry meeting.

Since the last quarter of 2008, registrations have begun to fall dramatically in important markets such as Spain, France and Greece. This decline has led to a revolution in the European market for motorcycles and scooters.

For example, Italy, which traditionally had the most robust PTW market, has lost its primacy to France.

The figures show that the greatest losses in 2011 were Italy, with a 17% decrease in PTW sales, followed by Spain (-16%) and The Netherlands (-13%). Greece, because of its economic situation, set the record low in terms of sales decrease of PTWs with the market dropping by 25%.

Countries that until now seemed able to contain the damage, such as Germany and France, have reduced their positive trend, -1.6% and -3.3% respectively. The crisis has wiped out 37% of the volumes achieved in 2008. The year 2010 ended with a blazing -14%, while in 2009 the decline amounted to -15% year-on-year.

Over the last decade, the total volume of registrations and deliveries was highest in 2007 at 2.7 million units. In 2011, four years into a dire economic crisis, the PTW sector achieved its lowest result with 1.7 million units - a 1 million unit difference compared to 2007. The period 1994 to 2008 had been marked by a positive trend. Unfortunately between 2007 and 2011 the global economic crisis and the subsequent credit crunch led to a 37% decline of the European PTW market.

### **Maria Belluci**

An Italian by birth, and with a long and successful career with Audi, Maria Belluci has been relatively close to Angela Piëch, the sister of the owner of the Volkswagen group, to which Audi belongs. When the opportunity arose to head both the French and the Italian sales operations for Ducati, she jumped to the occasion. The Ducati brand and its heritage, coupled to the motorcycle friendly markets in Italy and Spain excited her very much.

Apart from that, Piëch told her she is very interested in the success of a competitive brand like Harley Davidson; has with their female target group, and she wants Maria to try to get their market share with Ducati Motorcycles up for their lady target group.

Herself a very dedicated motorcycle rider with the competitive brand (Harley Davidson) and a member of the German "Ladies of Harley" group, she is more than aware of the competitive advantage Harley has in their efforts to serve their lady riders. The extensive Harley owners group program (where Ladies of Harley is part of) on all aspects of Harley ownership is famous as an icon in customer loyalty programs.

She digs in a little deeper; because she would most certainly like to use some of the elements of the Ladies of Harley program to include in her own efforts to reach her female target group. One of her conclusions is that they have one major disadvantage compared to Harley. The Ducati brand may be as strong as that of Harley-Davidson, but it has one major factor which puts it in a different ballgame altogether. That major factor is that where Harley has always had a strong lifestyle orientation, the Ducati originates in the technical specifications and race-bred history, much more than from a lifestyle angle.

One of the things she discusses with Angela Piëch is the kind of support she needs on being really successful. She has developed five cornerstones for her future plans:

- She needs a more feminine product line of at least four motorbikes, which are specifically developed for ladies.
- She needs a Lady Ducatisti group
- She needs the resources to develop a thorough customer loyalty program, specifically tuned to the Ladies target group
- She needs the resources to develop a merchandising program, specifically tuned to her target group
- She needs the power to ensure dealers commitment to her programs.

Last but not least, she needs the resources to make sure all her plans can be implemented.

Spain and Italy have the largest fleet of motorcycles in Europe, and Italy has by far the largest production number of motorcycles in Europe. They produce around 500.000 motorcycles on a European total of around 1.0 million. Their market share in number sold in the European market are respectively, 8 % for Spain and 25 % for Italy, of the European total of 1.7 million units sold. Maria expects a 4 % increase per year in turnover for the motorcycles, and an a much higher increase in merchandising sales. Average selling prices range around 10.000 euro for the motorcycles, and a unit sold in the merchandising program averages around 60 euro. The merchandising program now contributes with a turnover of 800.000 euro in Spain and 1,8 mln. euro in Italy. Maria calculates with a desired 15% return on her project.

Note: a liberal use has been made of several public sources. Maria Belluci and questions from R.J. Fetter

## Attachments

### Attachment 1

Outcome of a survey on buying behavior, comparing the intention of buying a Ducati motorbike for ladies in Italy and ladies in Spain

	Italy	Spain
Will buy a Ducati motorbike, and will not buy merchandise	54	37
Will buy a Ducati motorbike and will buy merchandise	18	14
Does not have an opinion on buying a Ducati motorbike nor merchandise	42	61
Will not buy a Ducati motorbike and will not buy merchandise	188	192
Will not buy a Ducati motorbike and will buy merchandise	76	59

Supporting information on degrees of freedom and reliability

Degrees of freedom	Reliability 0.95	Reliability 0.975
1	3,84	5,02
2	5,99	7,38
3	7,81	9,35
4	9,49	11,14
5	11,07	12,83

## Attachment 2

Business Case "Ladies Ducatisti" program

	Start	Year 1	Year 2	Year 3
Product Development	4.000.000			1.000.000
Merchandising program extra investment	500.000			
Customer Loyalty program, initial investment	100.000			
Management of the Lady Ducatisti group	P.M.	50.000	65.000	85.000
Management of the dealer program	P.M.	200.000	200.000	300.000

Sales forecast

Dealer channel

Italy

Turnover

a.s.p.

ccm

Spain

Turnover

a.s.p.

ccm

Merchandising

Turnover

a.s.p.

ccm

Note: Forecast information to be filled in, a.s.p. is average selling price, ccm is consolidated contribution margin