



F4 Tamburini



Massimo Tamburini is generally considered the father of the most beautiful motorcycles of all times.

His art sprung from his maniacal search for balance between function and aesthetics by studying shapes, applications and materials.

Perpetually in search of perfection of workmanship, Tamburini wrote the most important pages not only of design, but also of motorcycling engineering.

A great innovator, “master” Massimo Tamburini

has the power of knowing how to interpret and often anticipate the dreams and desires of the most demanding motorcyclists. It is to these motorcyclists that the F4 1000 MT, icon of MV Agusta’s technology and style, is dedicated. Dedicated to those who, like Massimo Tamburini, demand perfection.

EQUIPMENT:

There are many innovations in terms of equipment that differentiate the F4 Tamburini from the 1000S version and particularly:

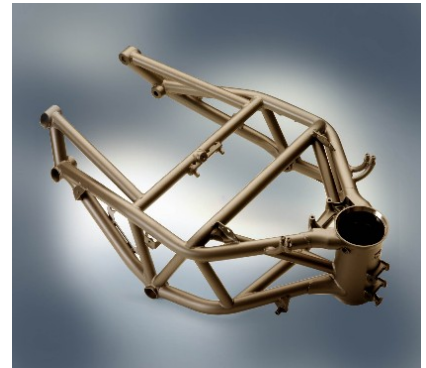
1. Swing arm in magnesium casting
2. Frame plate in magnesium casting
3. Fairing made of carbon fibre
4. Air box made of carbon fibre
5. Air duct made of carbon fibre
6. Tail fairing of carbon fibre
7. Front mudguard of carbon fibre
8. Side panel of carbon fibre
9. Upper chain guard of carbon fibre
10. Lower chain guard of carbon fibre
11. Cover for ignition unit
12. Special graphics with Tamburini’s logo.
13. Grills placed in the fairing outlets
14. Seat in red alcantara with the F4 brand embroidered on the upper cushion..
15. Adjustable footrests obtained by single block
16. Adjustable footrests optioned by single block.
17. Exclusive treatment for:
 - o Marchesini wheels
 - o Steering plates
 - o Adjustable footrests optioned by single
 - o Saddle support frame block.
 - o “Organ pipe” silencer
 - o Grills placed in the fairing outlets
18. Instrumentation with stopwatch function inserted in the display
19. .Gold plate on the steering head which indicates the serial number



CHASSIS

The chassis of the new F4 1000 S traces the existent lines of the 1000Sc version and is still the only one in the manufactured four-cylinders to be made with a chromium molybdenum steel pipe girder structure. An advantageous solution in terms of cross compactness, mechanical accessibility and torsion rigidity entirely built in the MV Agusta factory in Morazzone.

The pipe structure is joined to the fork hub plates where both the rear suspension rocker arm and saddle chassis are connected. A great style sensation, the single-arm fork sculpture has become a demonstration of the creativity and skill of CRC technicians for conceptual rationality and beauty.



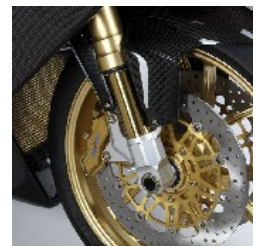
THE SUSPENSIONS



The F4 Tamburini features the most esoteric equipment that can be offered on a production motorbike. The front end is dominated by Marzocchi forks with titanium nitride treated 50-mm fork legs inserted into a solid one-piece frame. The unit is more than 1200 grams lighter. The rear suspension is fitted with the revolutionary *Sachs Racing* shock absorber that belongs to the same family as those used in Formula One racing. The unit is more than 1200 grams lighter due to absence of a gas reservoir and is fitted with rebound-compression (High speed/Low speed) damping and spring preload adjustment as well as hydraulic control that makes calibration easier and more accurate.

BRAKING SYSTEM:

The front braking system is made up of two exclusive "Nissin F4" single block 6 contrasting piston collets (with differentiated diameters) that work on 310mm diameter disks. On the F4 Tamburini these units are made with aluminium instead of steel flanges. The rear brake is the same equipped with a 4 contrasting piston collets that works on a 100mm diameter disk.





THE ENGINE

A bike like the F4 1000 Tamburini could not be fitted out with anything but an engine provided with advance technical solutions and able to make it take the lead in such a technically difficult market as that of super sport motorcycles. An engine developed and devised while taking into due account the development possibilities allowed by the new Superbike 2004 regulations.

The basic mechanical core has the same crankcase, crank mechanism and drive as the F4 1000 S, in addition to the engine management system and electronic EBS anti-surfing system.

It is the thermal part that differentiates the two versions. It lets the MT's engine build up its respectable power of 173 HP at 11,850 rpm in type approval conditions and with "static" feed even though it lowers the maximum torque speed from the S's 10,000 rpm to the Tamburini's 9,000.

The head still has the S's intake and exhaust pipes, but the intake pipes on every piece of this limited edition are finished, polished and jointed to the hose by hand in order to maximize all of the engines' performance.

The surface discharge spark plugs (previously introduced on the F4 750 SPR) permit complete and safe combustion even when put to the most extreme use on the track, and provide an additional small increase of maximum power.



The engine was designed with intake and exhaust contours having lifts increased to 10.3 mm in induction and 9.00 mm in exhaust so as to develop maximum performance at high speeds and offer the widest range of possibilities for development in the field of racing while at the same time staying within the limits of the new Superbike regulations.

But the heart of the F4 1000 MT engine's performances is the revolutionary (and patented) Torque Shift System (TSS). For the first time in

motorcycling history, and in an absolutely original way, the concept of variable intake manifold geometry has been introduced on a mass-produced motorcycle.

The basic goal the TSS reaches is tuning the engine at the various speeds not only through different resonant lengths, but also through flow areas that have been properly reduced so as to maximize acceleration of the air column to the partial loads and to the engine's low-medium rpm.



The result is an engine that boasts exceptional readiness starting from the lowest rpm and even a maximum torque peak about 1000 rpm lower than the F4 1000 S's engine, despite the fact cam contours designed more for use on the track than on the road are used.

When the torque curves of the MT engine with the TSS device activated and deactivated are superimposed, the system's positive influence appears evident and not only on the absolute torque values, but also on the curve's patterns at the various speeds.

Unlike the usual telescope systems, the TSS uses an ultralight aluminium support onto which 4 secondary funnels of the right size and diameter are secured, which simply rest on the main funnels of the throttle body at the low and medium speeds. In these conditions the engine dynamically reacts based on the sum of the lengths of the main pipe and of the secondary funnel, and the gaseous column is accelerated by the secondary funnel with smaller diameter.

When the engine goes up in rpm, the secondary funnels are translated and moved away from the primary funnels, and the engine is tuned only based on their length and section.

A special pneumatic system with electronic management sees to supplying the power needed for handling the system by using the depression generated by the intake pipes.

