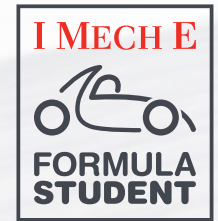


FORMULA STUDENT

Institution of Mechanical Engineers



Congratulations to Universidad Politecnica de Madrid

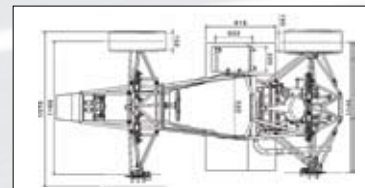
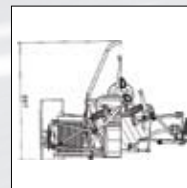
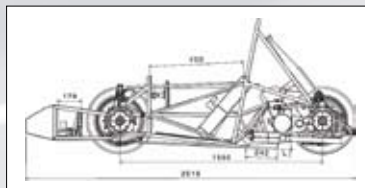
FOR PARTICIPATING IN FORMULA STUDENT 2008

UPM Racing Team consists of 20 people who have been fighting all year against inconveniences, with a great team spirit, a lot of teamwork and giving the best of ourselves to finish our UPM 005 Formula student prototype.

For this year innovation was our main goal. We started with a new philosophy: faster, more powerful, lighter and more adapted to the race than its predecessors.

We have focused on developing a new geometry that gives a better dynamic answer and great behaviour in most of the events. The double barrel Ollinhs damper and the design of the suspension components were specially chosen to allow us multiple adjustments of the main suspension parameters to let us optimize our car performance.

In order to satisfy the suspension geometry requirements we have developed a special fully triangulated space frame chassis. It is based in a lightweight, cheap, and simple space frame complemented with a carbon fibre seat ergonomically designed to give a comfortable drive and specially thought to lower the gravity centre of the car. This new Chassis conception gives us better torsional stiffness values form last year car and lets us reduce the wheelbase to improve handling.



Length/width/height/wheelbase
2590.5mm/1370mm/1029mm/1550mm

Track (front/rear)
1168.4mm/1143mm

Weight including 68kg driver (front/rear)
135kg/165kg (full wet car weight of 225kg)

Suspension (front/rear)
Unequal length A - Arms. Push rod actuated. Cane - Creek damper units

Tyres (front/rear)
20.5x6 - 13 R25B Hoosier/
20x7.5 - 13 R25B Hoosier

Wheels (front/rear)
Keizer alloy 13"x6" - 33 offset /
Keizer alloy 13"x7" - 2 offset

Brakes (front/rear)
Student designed, laser cut and ground from steel, hub mounted, 220mm dia.

Frame type
Steel tube space frame with glued carbon fibre floor panels (seat), SAE 1015 mild steel tube - cold drawn seamless

Engine
2003 Yamaha R6

Bore/stroke/cylinders/cc
67.0 x 42.5 mm/4 cylinder/599 cc

Fuel
98 octane petrol

Fuel system
Student designed/built fuel injection system using PE - ECU

Max power/max torque
10,500rpm/7,500rpm

Transmission/differential/final drive
Chain #520/Zexel Torsen University Special modified. Bias ratio 3:1/ Adjustable between by sprocket changes. Using 3.5