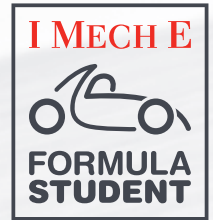


FORMULA STUDENT

Institution of Mechanical Engineers



Congratulations to Graz University of Technology

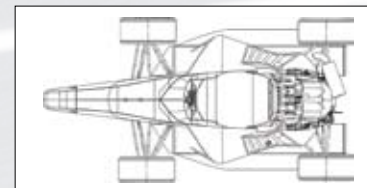
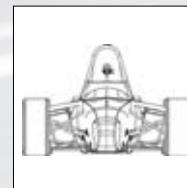
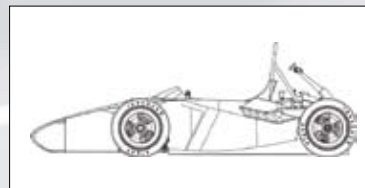
FOR PARTICIPATING IN FORMULA STUDENT 2008

Winner of
2 FS Prizes

This year, the TU Graz Racing Team is celebrating its fifth year of competing in Formula Student. Once again, 43 team members from different academic fields have come together to turn their vision into reality and design and manufacture a new car: The Tankia 'There Are No Kangaroos in Austria' 2008.

This year's model once again utilises a two-piece carbon fibre monocoque and a four-cylinder Yamaha R6 engine. By optimizing the monocoque's geometry and the layer structure, we managed to increase its torsional rigidity by 50%. In order to improve the air flow through the side pods and the radiators, we tested the side pods as well as the profile of the wishbones in the wind tunnel. We also redesigned the engine's cylinder head and the crankshaft to increase compression ratio and minimize the gas flow losses. A variable throttle system makes it possible to realize a progressive pedal-throttle response, enhancing sensitivity.

One of this year's main objectives was to improve the car's driveability. This was achieved by designing a more ergonomic cockpit, reducing steering forces, using only two pedals, minimising friction in the pedal box, using electronic means such as automatic choke, traction- and launch control and a more homogenous engine mapping.



Length/width/height/wheelbase
2725mm/1364mm/9505mm/1575mm

Track (front/rear)
1200mm/1180mm

Weight including 68kg driver (front/rear)
109.5kg/128.5kg (full wet car
weight of 170kg/190kg)

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

Tyres (front/rear)
D2692 20.0x7.0-13 R075 Goodyear

Wheels (front/rear)
7.0x13, self made one piece
carbonfiber Rim

Brakes (front/rear)
Student designed, laser cut, steel,
hub mounted, 200mm dia.

Frame type
Carbon fibre monocoque and rear
end, monocoque and rear end:
carbon fibre, NOMEX and Al
honeycombs, carbon-inserts

Engine
2006 Yamaha R6 4 cylinder, 600ccm

Bore/stroke/cylinders/cc
67 x 42,5 mm/4 cylinder/599,8 cc

Fuel
98 octane petrol (Shell Optimax)

Fuel system
Student designed and built,
fuel injection, sequential

Max power/max torque
70kW at 10,500rpm/67 Nm at 8,500rpm

Transmission/differential/final drive
Chain #520/Bacci Romano, multiplate
limited slip differential/3.14