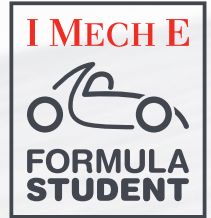


## FORMULA STUDENT

Institution of Mechanical Engineers



# Congratulations to Karlstad University

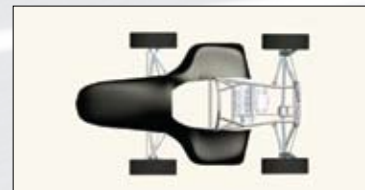
FOR PARTICIPATING IN FORMULA STUDENT 2008

First  
time  
at FS UK

Our team from Karlstad University in Sweden is a first time competitor, and goes by the name Clear River Racing. The team consists of about thirty engineering students from different degree programmes including Mechanical, Electrical, and Innovation and Design engineering. This gives the team a broad source of competencies that benefits the project and the cooperation between the degree programmes.

The University is located in suburban surroundings close to nature about 7km from the city in the region of Värmland. The region is noted for its beautiful scenery and rich cultural heritage which inspires the team.

Today it is important for every company to preserve the environment we are living in. The most obvious environmental thinking is that the car is ethanol converted and has an environmentally friendly body. The body is made from Bio Hybrid Composites (BHC), a new composition of carbon fibre and hemp which is around three times lighter than fiberglass and is more environmentally friendly. Our design goals are to be reliable, simple and environmental.



<b>Length/width/height/wheelbase</b>	2400mm/1380mm/1015mm/1560mm
<b>Track (front/rear)</b>	1360mm/1300mm
<b>Weight including 68kg driver (front/rear)</b>	N/A
<b>Suspension (front/rear)</b>	Unequal length A-Arms. Pull rod actuated/Equal length A-Arms. Push rod actuated. Rock shox monarch spring/damper units
<b>Tyres (front/rear)</b>	175/60 R13 Kumho V70A
<b>Wheels (front/rear)</b>	Braid formula 13" x 7", 32mm offset, aluminium and magnisium
<b>Brakes (front/rear)</b>	Rear rotor to a GSXR 750, 220 mm dia.
<b>Frame type</b>	Tubular space frame, SS-EN 10219 steel round tubing, 25-32 x 1,5-2 mm
<b>Engine</b>	2003 Yamaha R6
<b>Bore/stroke/cylinders/cc</b>	65.5 x 44.5mm/4 cylinders/600 cc
<b>Fuel</b>	E-85
<b>Fuel system</b>	Student designed injector mounts, using original R6 injectors with Walbro fuel pump, controlled with Mega Squirt ECU
<b>Max power/max torque</b>	11,000rpm/7,000rpm
<b>Transmission/differential/final drive</b>	Chain #532/Quaife ATB Helical LSD differential for Chain-drive/ Adjustable between 2.66-2.88 by sprocket changes. Using 2.77