

WHY BUY A *Rage* !

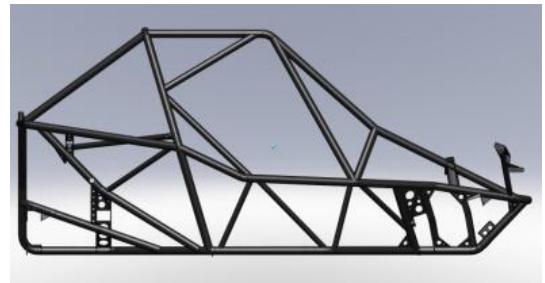
Our aim is to design, manufacture and assemble a high quality range of multi terrain vehicles, which will give you, our customers an unforgettable recreational or motorsport experience.

Chassis

"In a Rage your safety comes first" therefore our chassis are conceived from many years of development and rigorous testing, utilising the latest CAD and stress simulation software.

The principle of triangulation is adopted to maximise the strength and durability whilst maintaining a lightweight space frame structure. Constructed in our in house designed jig to maintain a precise tolerance level, they are MIG and TIG welded by our highly skilled team of Engineers.

Finally our chassis are sand blasted to give a key to the extremely tough Nylon Powder coating process which is applied by spraying and then baked to give a high gloss superlative finish. Standard powder coating processes don't key to the material like nylon they just sit on top so when you get a break in the surface from a stone chip for example, this allows water ingress which can in turn rot the chassis tubes and cause serious unseen problems beneath the surface. The bonding effect of Nylon means this doesn't happen with our chassis therefore giving you peace of mind and a product built to last.



Wishbones and uprights

The wishbones are made from the same high grade material as the chassis and are over engineered deliberately to ensure they withstand extreme loads. The front and rear uprights are forged and heat treated to further enhance the strength. Finally these items all go through the same Nylon coating process as the chassis.



We use a double wishbone configuration all round with anti dive, when braking hard, built into the front. The design also limits any camber, caster, bump steer and high speed stability problems inherent with other alternatives such as trailing arm, which can be problematic when large amounts of suspension travel are available. The Rage suspension travel is front 12.5" and rear 13.5"

Dampers

Our complete range of vehicles utilise the incredible performance of [Intrax](#) Dampers. Intrax are a Dutch company who manufacture high end Dampers with over 30 years intense experience at the highest level of motorsport from Rallying to F1.

The dampers have been custom made and tuned specifically for each product in our range and as with the chassis, have been conceived over many years of development and testing on a vast range of terrains. All of our high performance vehicles use the 1K2 – 2-way adjustable dampers and all vehicles can be upgraded to 4-way adjustable and ARC (anti-roll control) technology. The adjustment available is rebound, high speed, low speed damping and low speed start / end range adjustment.



Steering and Geometry



The steering rack used is manufactured to our own specification and is of modular billet aluminium construction. It is a rack and pinion design with bevel gears, has a central Splined connection point for left or right hand drive vehicles and 1.7 turns lock to lock.

The steering rack is mounted in the chassis using billet aluminium clamps and positioned so that the track rods run parallel with the suspension arms (wishbones). This eliminates any bump steer that would otherwise occur given the amount of suspension travel available.

Very complex simulation software and extensive testing has made the vehicle very capable, giving superb feedback through the steering wheel and a feeling of being at one with the vehicle.

Engine Options

Rage Cyclone Model

- [Suzuki](#) Alto engine adapted to CVT application
- 996cc, water cooled, 3 cylinder, 12 valve, Fuel injected
- 68hp (50.7Kw) @ 6,000 rpm
- 66 ft-lb (90Nm) @ 3,500 rpm
- Automatic CVT
- 95 MPH, 0-60 – 8 seconds

Typically these engines are used in vehicles for recreational purposes and being automatic, they are ideal for drivers of all abilities.



Rage Hurricane Model

- [Yamaha](#) Genesis
- 1049cc, water cooled, 3 cylinder, 12 valve, fuel injected, dry sump
- 140hp (104Kw) @ 8,600 rpm
- 90 lb-ft (121Nm) @ 7,500 rpm
- Automatic CVT
- 115 MPH, 0-60 – 5.5 seconds

The Yamaha Genesis engine in our Hurricane has covered many miles in the arduous Dakar rally proving its amazing performance capabilities. The CVT system for the Hurricane uses the [Yamaha](#) drive clutch and is specifically tuned for the vehicle and coupled to a [Team Industries](#) rapid reaction driven clutch giving a superb delivery of power.



Rage Comet Model

- [Kawasaki](#) ZZR1400
- 1352cc, water cooled, 4 cylinder, 16 valve, fuel injected, baffled sump
- 200hp (149Kw) @ 9,500 rpm
- 114 lb-ft (154Nm) @ 9500 rpm
- Rally style 6 speed sequential
- 120 MPH, 0-60 – 3.5 seconds

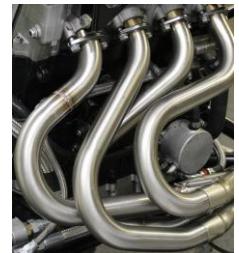
Last but by no means least we have the awesome 200hp [Kawasaki](#) ZZR1400 (ZX14) superbike engine. These engines have to be experienced to be believed with their 11,900rpm rev limit. The noise from the engine as it keeps pulling through the rev range coupled with bags of torque give the occupants an experience not to be missed.



Exhaust Systems



All our vehicles have in house designed, developed and manufactured exhausts. They are all constructed using 304 stainless steel tube with tuned header lengths which are either 2 into 1, 3 into 1 or 4 into 2 into 1 design dependant on engine choice. We use high quality all stainless steel construction oval silencers made by UK based [Pipewerx](#).

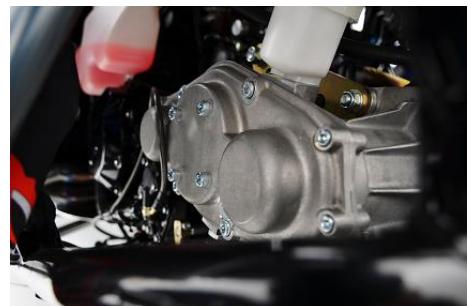


Drive train

Geared vehicles

In our bike engine driven vehicles, power is transferred to the rear wheels using a [Quaife](#) QBA11R gear driven transfer box with forward and reverse gear selection.

The unit allows the drive from the engine to go through the gear driven transfer unit via a cushion coupling similar to that found in a motorbike rear wheel and is designed for smooth transfer of power. The drive transfers through helical gears to the output shaft for maximum strength and reliability.



Automatic CVT (Continuously Variable Transmission) Vehicles



A continuously variable transmission (CVT) is a transmission that operates on an ingenious pulley system that automatically varies the transmission ratio, allowing an infinite variability between highest and lowest gears with no discrete steps or shifts. CVTs provide more useable power on demand, an easier driving experience than traditional transmissions that use gearboxes with fixed numbers of gear sets. This system is coupled to a [Quaife](#) QBA4R gearbox with forward and reverse.

Quaife ATB Differential

With both types of gearbox the power is transferred to the rear wheels using a [Quaife](#) ATB (Automatic Torque Biasing) differential. These differentials act in a similar way to a limited slip diff however they allow the vehicle to corner like it's on rails where as a limited slip diff would try and push the vehicle straight when cornering due to the light front end nature of all buggies.

Seats and Seatbelts

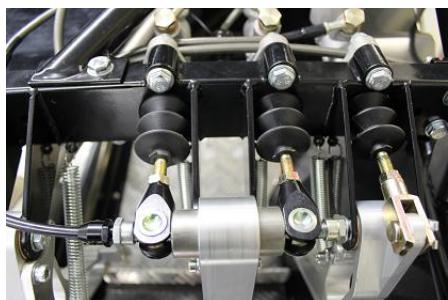
The [TRS](#) 5-point Magnum race harnesses has a light weight 140 gram quick release buckle, is of composite construction and is attached to the crutch strap on 5 points. Innovative features such as a securing tab for intercom cables is on the 75mm wide shoulder straps.

The [Cobra](#) Aqua 4 x 4 seats are extremely strong and lightweight with a composite shell combined with high quality marine grade vinyl to provide maximum safety and performance without compromising on durability. Perfect for open off-road vehicles or marine applications where water and UV resistance are essential and they are available in standard or GT widths.

The combination of these components makes you feel secure and able to tackle any situation with confidence.



Brakes and braking system



The braking system utilises 4 **Brembo** - 2 pot callipers with cross drilled discs and has **Ferodo** platinum racing brake pads. The discs are precision laser cut with a wavy edge profile and are cross-drilled for ventilation. **Willwood** master cylinders are connected to the brake pedal via a **raceparts** brake balance bar enable the bias to be set towards the front for tarmac or the rear for off road use.



CNC Billet Aluminum and Steel machined components

Continuing the vehicles build quality and our determination to keep the weight down, we manufacture the front hubs, accelerator / brake / clutch pedals, engine sump, engine mounts, Disc carriers and spacers, from 6082T6 Aluminium alloy. This material is a high strength alloy with excellent corrosion resistance and is the highest strength structural alloy of the 6000 series alloys available.

Surface finishes

All of the steel components are zinc plated to a thickness of .02mm to ensure they maintain excellent corrosion resistance. The aluminium billet components are anodised to a thickness of .015mm to offer the same protection and the lightweight Aluminium sheet components are powder coated to blend in with the chassis / vehicle design.



Electrical system

We use our own design modular wiring system in our vehicles with conventional fuses and relays. The fuse box has LED telltale lights to indicate their status. Quality **Yuasa** batteries are utilised due to their spill proof and vibration resistant design. The system can be coupled to an **ETB** Digidash giving good visual access to any information you require.

Wheels and Tyres



We offer a wide range of wheel and tyre options dependant on your requirements. Starting with the wheel rims we use as standard 14" cast aluminium rims or we offer as an option **ITP** SD dual beadlock rims in black with either black or polished aluminium rings (other colour options available on request). These have inner and outer rings that physically clamp the tyre in place making it impossible to pop the tyre off of the rim when run at low pressures for maximum traction in an off road environment. Tyre choice is very important to ensure maximum traction on your chosen terrain we therefore offer a wide selection.



Maxxis Bighorn – 26"
6 Ply, E marked
road legal off road.



ITP Terra Cross – 26"
6 Ply
Extreme off road



ITP BajaCross – 26"
8 Ply
Extreme off road

