



T'REX

ROBOT TANK CHASSIS

Introduction:

The T'REX TANK is an all-metal tank chassis designed for all-terrain robot projects. All six lower wheels have independent suspension to help improve traction and absorb shock. High ground clearance allows the T'REX to handle very rough terrain.

Removing the covers:

The front and top covers are held in place with spring catches mounted between the wheels. To release the front cover, slide the front catch releases on both sides towards the back. The front cover should then lift up so it can be easily opened.

To release the top cover, slide the rear catch releases on both sides to the back. The top cover will then lift up slightly so it can be easily removed.

To lock these covers back in place, push down firmly until you hear the catches "click". Please note that the top cover can only go in one way.

To close, push covers down until the catches click.
To open, slide catch releases towards the back.



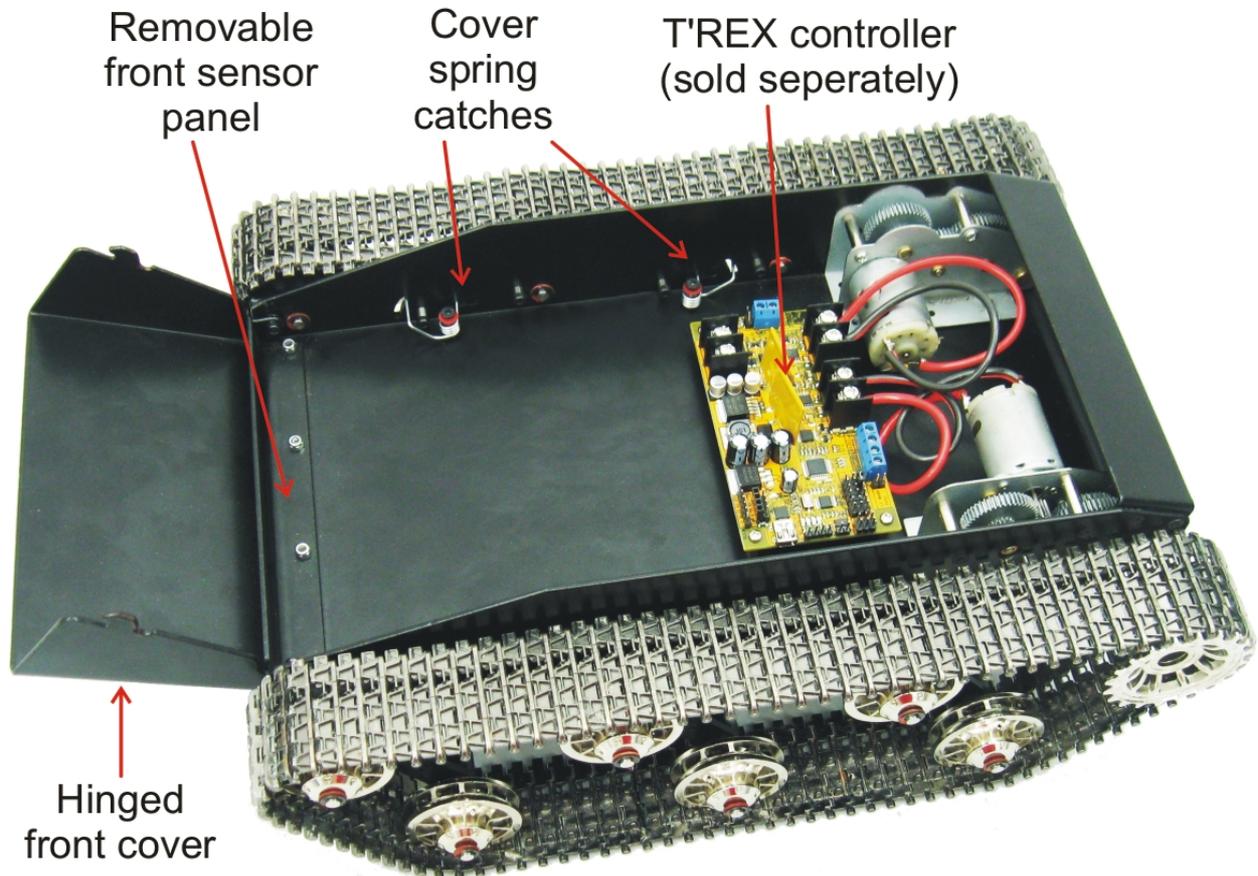
Power:

There is plenty of room inside for batteries, the T'REX controller and a development board. The T'REX has 12V motors so a 3S LiPo, 5000mAh or better is recommended. The T'REX controller includes a switch-mode power supply that can efficiently supply 6V for servos and 5V for a development board.



Electrical noise and RF shielding:

The aluminium body will block electrical noise and radio signals so it is recommended that all radio transmitters / receivers, GPS and compass modules are mounted on top of the chassis.



Removable sensor panel:

The front sensor panel can be removed to make it easy to drill mounting holes for sensors. This panel can also be reversed so that sensors can be mounted further back. If you have a 3D printer you may prefer to remove this panel and replace it with a custom front panel.

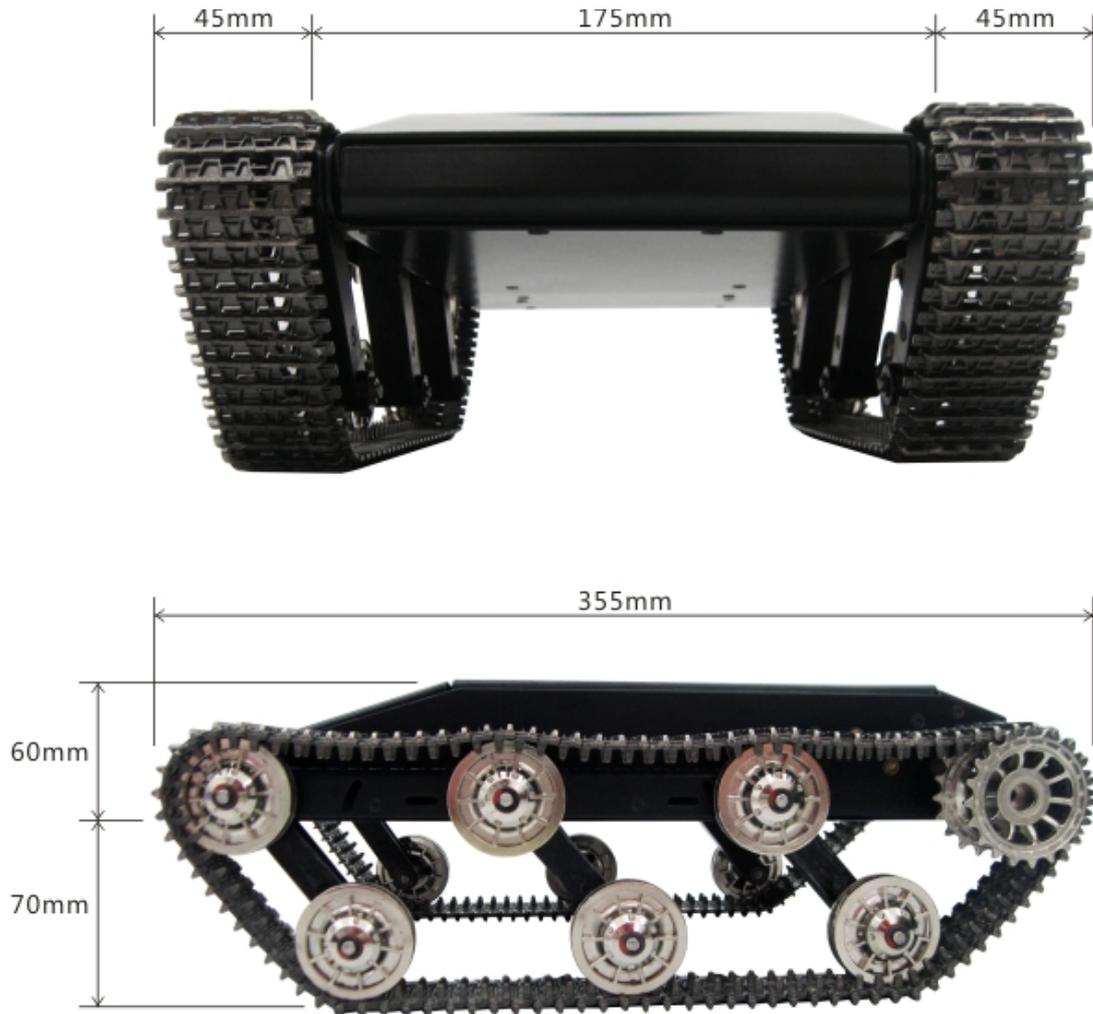
Maintenance:

The body is aluminium, the gears, tracks, suspension struts and wheels are die cast zinc. These metals offer good corrosion resistance so no maintenance for these parts is required.

The idler wheels can be easily removed for cleaning by removing the circlip on the shaft. Be careful when removing these as they are under spring tension and may shoot off.

The idler wheels have brass bushes that require minimum maintenance. A dry lubricant should be used for the idler wheels and gearbox.

Specifications:



Dimensions:

Width:	265mm
Length:	355mm
Body height:	60mm
Ground clearance:	70mm
Total height:	130mm
Weight:	3.7Kg

Motor Specifications:

Typical voltage:	12V
No load current:	1.3A
Typical current:	4A
Stall current*:	11A

*Stall current measured using a 3S, 5000mAh LiPo Battery