DrivingRobot

The **DrivingRobot** is able to control the steering, braking and acceleration of a test vehicle. The test vehicle can be navigated around the test track automated with highly precise control of position, velocity, acceleration and more. Fully synchronized tests are made possible when used with the various UFO target carriers and its GNSS-aided navigation system.



The **DrivingRobot** is also characterized by its compact design that frees up space and enables quick and hassle-free installation. The steering and throttle/brake robots are interconnected to provide ample room for electronics and data acquisition systems as well as easy access for test engineers. In addition, the **DrivingRobot** Box, contains all electronic components, which can be easily installed with ISOFIX in the rear seats

Moreover, the **DrivingRobot** can be installed without interfering with the original steering wheel, airbag or the seating position of the operator. The robot turntable is installed behind the vehicle's steering wheel, and can be activated by the grasp of the operator. In the event of an emergency, the operator can simply let go of the robot wheel and immediately take manual control of the vehicle's steering wheel. The seating knee area is also kept clear so the safety of the occupant is not compromised. The robot is free of any supportarm structures to the windshield or passenger side window. The friction compensation limits the influence of the robot to the vehicle's steering system and can be used to simulate the grip of the driver on the steering wheel.

The **DrivingRobot** can be perfectly integrated into the UFO product family by sharing the same UFObase Software as the UFO target carrier line no learning curve is needed for additional software. Multiple UFOs and/or **DrivingRobots** for swarm testing can be controlled, managed and analyzed from just one computer.

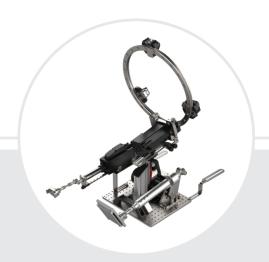




See the DrivingRobot in action.

DrivingRobot

48 V battery system, 760 Wh
Yes
CAN, RS232, Ethernet
100 Hz
Humanetics UFO target carrier products (third party systems on request/interfaces)
Dedicated battery system
Tablet PC for in-car use
Brushless electric motor
40 Nm at 1300%s
15 Nm at 1800%s
2100% at 10 Nm
0,0656 kgm² incl. Ring guide
329-389 mm
+/- 0.5°
Path following, wheel angle control, steering wheel angle control, friction compensation
For fixation of clamps
56 N
156 N
1 m/s
1 m/s 104 mm
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104 mm Speed Control, Position Control,
104 mm Speed Control, Position Control,
104 mm Speed Control, Position Control, Force Control Safe Design – driver can overrule the brake
104 mm Speed Control, Position Control, Force Control Safe Design – driver can overrule the brake and take over control at any time
104 mm Speed Control, Position Control, Force Control Safe Design – driver can overrule the brake and take over control at any time Brushless electric motor
104 mm Speed Control, Position Control, Force Control Safe Design – driver can overrule the brake and take over control at any time Brushless electric motor 1000 N (depending on mounting angle)



Key Features

- » Compact design with slim central stand to eliminate the need for struts to passenger windshield; trunk free for data acquisition
- » Adjustable friction compensation mode (4 levels) allows testing of LKA scenarios and scenarios where active intervention of steering is involved
- » No dismounting of the airbag or steering wheel needed – vehicle retains its full safety features, and no special training for the installation team required
- » Comfortable seating position for the driver with clear view to the proving ground
- » Electronic components housed in robust and easy-to-handle **DrivingRobot Box**
- » Self-contained 48V battery no additional electricity supply needed from the vehicle
- » Seamless integration with the UFO target carrier environment – utilizes same intuitive and user-friendly UFObase Software
- » Smart hardware design allows simple, quick installation
- » Self-calibration software ensures fast, effortless start-up

