

UFOpro

TARGET CARRIER

UFOpro target carrier

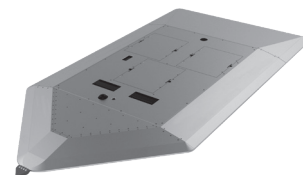
The **UFOpro** is the default version of the UFO with its low overrun height of 98 mm and hot swappable batteries, it is designed for Euro NCAP ADAS testing. The UFOpro is available with an optional ABS system and as a Heavy Duty version. The UFOpro Heavy Duty has the equipment of a UFOpro, but with reinforced ramps and batteries. The UFOpro Heavy Duty can be run over by a car as well as by a commercial vehicle. An additional set of batteries can be purchased separately.

UFOpro Black Series target carrier

With a maximum speed of 100 km/h including a GVT target, the **UFOpro Black Series**¹ is a step up from the UFOpro. It has an increased gear ratio as well as a specific control algorithm for high speeds. Like all UFOs, the UFOpro Black Series is available with an optional ABS system. Both the UFOpro Black Series and the UFOpro share a similar mechanical design, so that an UFOpro can easily be upgraded to a UFOpro Black Series.

Arrow Ramp

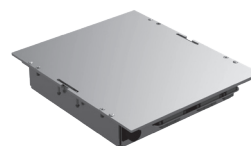
Can be swapped with standard front ramp for side impact testing of cars.



See the Arrow Ramps in action.

Additional Lithium Power Pack

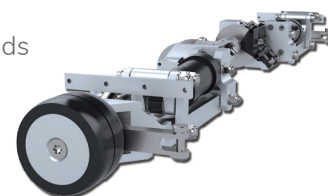
Extra power pack allows ongoing testing without downtime for charging batteries.



See the fast and easy battery swap.

Anti-Lock Braking System (ABS) Patented

The UFO platform's ABS extends tire life, saves time and money in addition to reducing waste.



See the ABS in action.

¹ The designated hereinafter referred to as UFOpro Black Series, is describing UFOpro Black Series target carrier

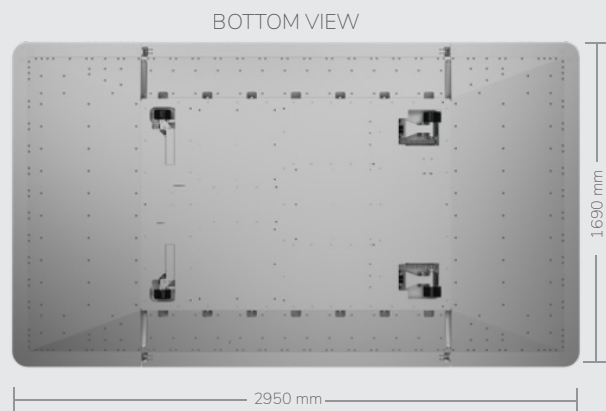
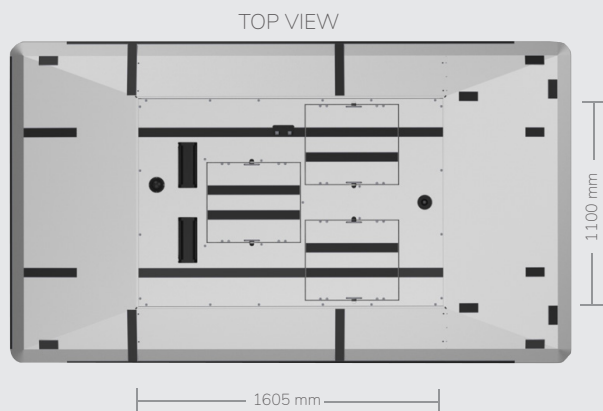
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UFOpro Target Carrier KEY FEATURES

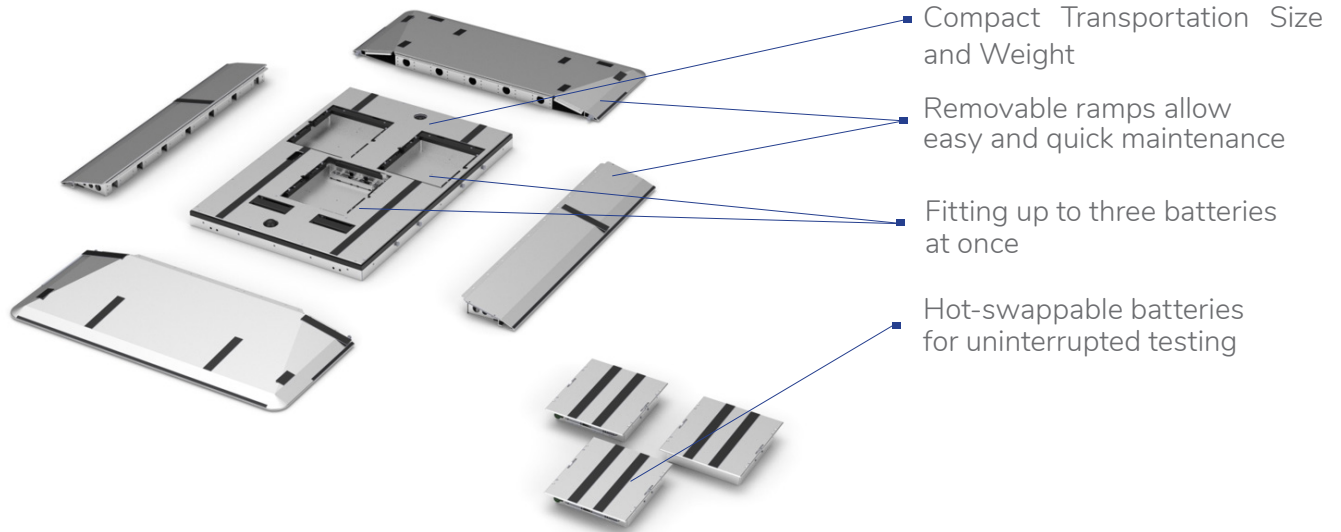
- **Low overrun height of 98 mm** – to be overrun/over-braked by a vehicle without damaging the vehicle or the target carrier
- Quick and simple access to all internal components with a **single central cover plate** which can be easily removed with just a few screws
- **Hot swappable batteries** to continuously run high speed tests (i.e. Euro NCAP lane support system tests) with zero downtime for recharge. This feature also enables replacement batteries to be charged at a slower rate, thus extending battery life and ease transportation by UN38.3 certification
- **Removable ramps** simplify transportation and storage by reducing the overall size and weight of the target carrier, which can be easily transported with any standard minivan-sized vehicle
- **100% splash water protection system** allows for testing in adverse weather conditions (e.g. muddy, wet, salty) and minimizes maintenance effort and cost
- Designed to enable **fast wheel changes**
- **Screw-less welded ramp system** for reduced Radar Cross Section (RCS)
- **Stable 4-wheel chassis** for minimized rolling of the target in dynamic lateral motions (e.g. wind suction/slipstream during overtaking)
- **Designated official tool by Euro NCAP laboratories** (e.g. ADAC, AstaZero, CSI, Thatcham)
- Global Vehicle Target (GVT) and UFO Target Carrier in accordance with the Euro NCAP/NHTSA/IIHS confirmation workshops
- Several standard safety functions ensure safety of operators. Optional add-ons such as **proving ground warning lights and monitoring systems** can be integrated into the UFO product family



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DESIGN OVERVIEW



SPECIFICATIONS

DIMENSIONS	Transportation Size	1605 x 1100 mm
	Test Ready Size	2950 x 1690 mm
	Chassis Height	98 mm
	Test Ready Weight	244 kg
	Test Ready Weight UFOpro BlackSeries	264 kg
	Payload	125 kg
	Overrun Capacity (per wheel)	1500 kg / 3600 kg*
	Clearance	15 mm

DYNAMICS	Maximum Speed Forward	80 km/h
	Maximum Speed Forward UFOpro BlackSeries	100 km/h
	Maximum Speed Backward	20 km/h
	Maximum Longitudinal Acceleration	3 m/s ²
	Maximum Longitudinal Deceleration	6 m/s ²
	Maximum Lateral Acceleration	1.5 m/s ²
	Minimum Turning radius	6 m

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SPECIFICATIONS		
ENERGY	Batteries Included	2
	Batteries Included UFOpro BlackSeries	3
	Charger Included	2
	Charger Included UFOpro BlackSeries	3
	Battery Technology	Lithium Ion (LiFePO4)
	Battery Capacity	2048 Wh
	Battery Capacity UFOpro BlackSeries	3072 Wh
	Voltage	51.2
	Battery Slots	3
	Battery Swapping Time	2 minutes (hot swappable)
	Battery Set Charging Time	90 minutes
	Battery Life Time (common NCAP Testing)	Full testing day (up to 60 NCAP scenarios)
ACCURACY	Speed Control Accuracy	0.2 km/h
	Speed Measurement Accuracy	0.01 km/h
	Side Control Accuracy	50 mm
	Yaw Rate	+/- 1 deg/s
	Accuracy	in line with ISO 19206-7
	GNSS Unit Oxford	OEM3000v3
	GNSS Unit SBG	-
AREA OF APPLICATION	Radar Crosssection	in line with ISO 19206-3
	Drive-over Capacity	Passenger vehicles Commercial vehicles Heavy Duty vehicles
	Targets (main use)	Passenger Vehicle 3D Target
OPERATING CONDITIONS	Operation Temperature Range	-5° to 40°
	Weather resistance	fully sealed electronics works under tough conditions
	Recommended Storage Temperature	5° to 25°

The UFOpro conforms to the following scenarios

- » AEB-C2C
- » FCW-C2C
- » ELK (oncoming-overtaking)
- » AES
- » ESS
- » Rear Automatic Braking
- » Blind Spot Detection
- » Blind Spot Intervention
- » Intersection Safety Assist
- » Opposing Traffic Safety Assist
- » Traffic Jam Assist

... and many more scenarios thanks to the flexibly configurable TrajectoryGenerator Software.