OVERLOAD PROTECTION SYSTEMS

PRODUCT INFORMATION

Responsibly Safe

OPS

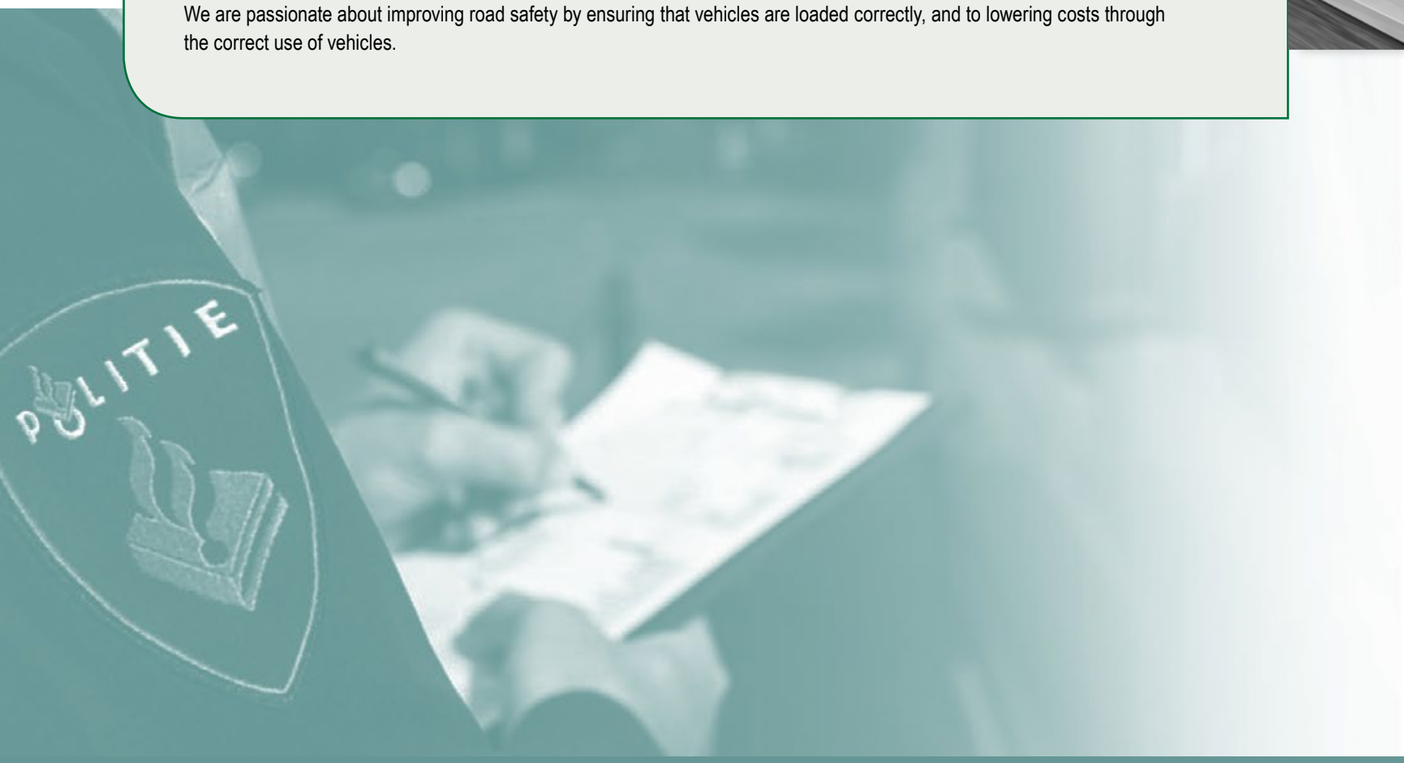
Overload Protection Systems **(OPS)** is a new, fast-growing organisation that is passionate about transport safety for vehicles up to a gross vehicle weight (GVW) of 7.5 tonnes. The company is based in Varsseveld (the Netherlands) and already has several years experience in the development, testing and supply of systems that give the driver information on the vehicle's axle load via an LCD screen and/or an intelligent LED switch, both when the vehicle is in motion and at a standstill.

OUR MISSION

We strive to maximise the performance of vehicles within a safe and legal framework by minimising the risks of overloading.

OUR VISION

We are passionate about improving road safety by ensuring that vehicles are loaded correctly, and to lowering costs through the correct use of vehicles.



WHY USE AN OPS SYSTEM?

Vehicle loads can vary enormously in both weight and volume, meaning that it is often difficult for the driver to determine when the maximum cargo weight has been reached. The load weight is difficult and often impossible to determine visually. Overloading is an ever-present risk that can carry severe financial penalties.

SAFETY

Overloading has a negative impact on the handling and braking capacity of a vehicle. A vehicle that is 10% overloaded takes 7.4 metres longer to stop from a speed of 100 km/h. This can make all the difference between a near-miss and a fatal incident.

LEGAL ASPECTS

If a vehicle with a maximum gross vehicle weight (GVW) of 3.5 tonnes say is inspected and found to be overloaded, there are four different classes of offence that may apply:

- The vehicle is no longer within the legal limits
- Frequently, driving without an HGV licence
- Economic offences
- Environmental offences

The latter in particular can be very costly and have legal consequences for both the vehicle operator and the driver.

INSURANCE

Because overloading your vehicle is against the law, your insurance company is entitled to refuse to cover the cost of any losses you may suffer. The driver and vehicle operator may therefore be severally liable for all the costs arising from an accident.

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OPS – THE SYSTEM

The following components are integrated into the Overload Protection System:

- ASCU electronic control unit
- LCD screen with buzzer
- Intelligent LED switch
- Height sensors with threaded rods
- Wiring harness
- Fasteners for the kit
- Make-specific mounting brackets
- Mounting bracket for the control unit

The Overload Protection System measures the compression of the suspension system using height sensors on each axle (two per axle – one on the left and one on the right) and transmits these measurements to the control unit (ASCU) in the form of an electronic signal. The ASCU collects and processes the information from all four height sensors. The measurement data is communicated to the driver by means of an LCD screen and/or an intelligent LED switch.
By determining the spring rate of the suspension in advance and converting it into an electronic signal, a high degree of accuracy can be achieved in outputs from the system.

After fitting the system, the vehicle is calibrated in both its unladen and fully laden state. This means that an exceptionally high degree of measurement accuracy (within ≤ 2%) can be achieved.

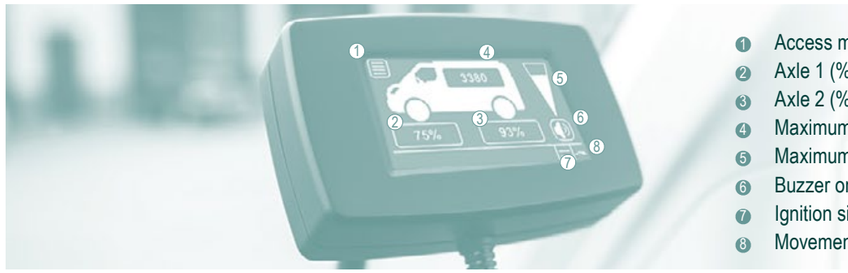
BUILD YOUR OWN

The client can configure the system to suit their own requirements by choosing a combination of LCD screens and LED switches. The LCD screens and/or the LED switches are usually mounted in the following locations:

- Dashboard
- In the cargo space next to the side sliding door
- In the cargo space next to the rear doors/tailgate

LCD SCREEN

The LCD screen informs the driver that the axle load is close to or has exceeded the limit. It also triggers a buzzer when the maximum axle load is exceeded. The buzzer can be disabled using the touchscreen on the LCD screen. If the vehicle remains overloaded, the buzzer will be triggered whenever the system is started.



1. Access menu
2. Axle 1 (%)
3. Axle 2 (%)
4. Maximum gross vehicle weight (GVW) (kg)
5. Maximum gross vehicle weight indicator (GVW)
6. Buzzer on/off
7. Ignition signal
8. Movement indicator

INTELLIGENT LED SWITCH

The intelligent LED switch displays the following warnings:

- **LED off:** vehicle load is within tolerance.
- **LED flashing red:** the weight on one or both axles is nearing the maximum axle weight (95%) and/or the maximum GVW (kg) has been exceeded.
- **LED solid red:** the vehicle is overloaded on one or both axles; the buzzer goes off. The buzzer sound can be turned off using the LED switch. If the vehicle remains overloaded, the buzzer will sound whenever the system is started.

All LED switch actions and manual interventions by the driver are logged in the system.

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WHY OPS?

- OPS develop and manufacture the systems in-house, applying the relevant production standards (such as ISO 9002).
- The OPS system displays information on the axle loads in the cab and/or the cargo space, whether the vehicle is in motion or at a standstill.
- The OPS system is much more accurate compared to other systems. The readings produced by the OPS system are accurate to within just 2% (when correctly calibrated, a tolerance of just 1% is possible). The user chooses how to configure the system themselves, for example by combining intelligent LED switches and an LCD screen or screens.
- The OPS system can be fitted to the existing suspension system without the need for any welding, drilling or grinding.
- The OPS system has its own service/diagnostics system that can be read remotely.

BENEFITS OF AN OPS SYSTEM

- Lower maintenance costs as a result of reduced vehicle wear.
- Lower fuel consumption and therefore lower fuel costs.
- Increased safety for the driver and other road users.
- Avoid the cost of fines and losses not covered by your insurance company.
- “Residual load” indicator.
- Real-time information about the axle loads.
- The intelligent OPS system means the driver does not need to have any expertise in or feel for the payload (the permitted axle loads of the vehicle).
- It is a simple matter to connect the OPS system to in-house systems, such as a fleet management system.
- Avoid costly fines for being in breach of several laws at once.

OPS SYSTEMS AVAILABLE

OPS has systems available for the following light commercial vehicles with a maximum gross vehicle weight (GVW) of 1.5 to 7.5 tonnes:

MAKE	MODEL	YEAR OF MANUFACTURE	GVW
Citroën	Jumpy		2900 – 3100 kg
Mercedes-Benz	Sprinter RWD	2018 – present	3500 kg
Nissan	NV400	2018 – present	3500 kg
Opel/Vauxhall	Movano	2018 – present	3500 kg
Peugeot	Expert		2900 – 3100 kg
Renault	Master	2018 – present	3500 kg
Toyota	ProAce		2900 – 3100 kg
Volkswagen	Transporter T5/T6*	2018 – present	
Mercedes-Benz	Sprinter DRW*	2018 – present	

*Kits for the Volkswagen Transporter T5/T6 and Mercedes-Benz Sprinter DRW are currently under development and will be available from the last quarter of 2018.

MORE INFORMATION

You can find more information about OPS systems and the available kits on our website: www.overloadprotectionsystems.com

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