

Dear Readers,



The AVS Group continues to expand its international presence, now also with the takeover of our long-standing business partner Traffics in Denmark. COO Dirk Schönauer will be working with Traffics Managing Director Christian Dam to establish our range of products and services under AVS Vejsikring A/S in Denmark.

As well as expanding on the international market, in Germany too our aim is to continue developing and improving our products. A number of new crash barrier systems have been successfully tested to DIN 1317, which we would also like to show you at this year's DeuSat in Cologne.

Come and see us at Koelnmesse on 27 and 28 March! As co-initiator of the DeuSat I am really looking forward to meeting you again and to many interesting talks.



Dieter Berghaus,  
Managing Director

## ProTec-Tor 120 successfully tested to T3

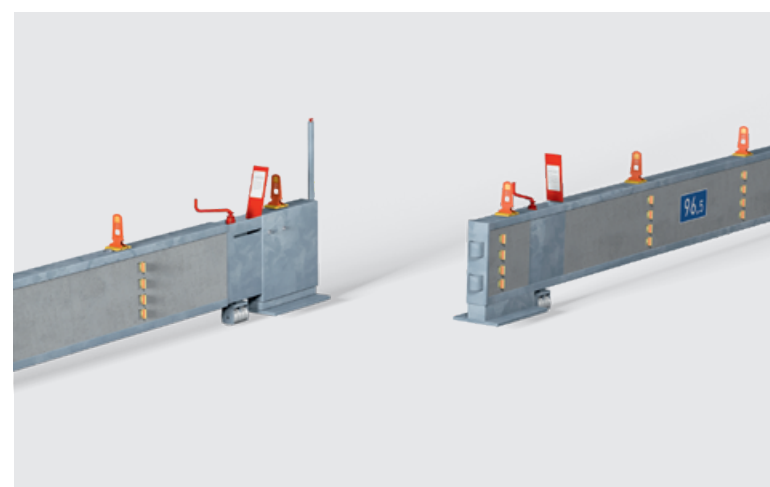
We have developed ProTec-Tor 50 and ProTec-Tor 120 as easily separated elements for mobile crash barriers that can be opened quickly in an emergency without needing tools. Just a couple of simple actions are all it takes to release the force-fit connection of the crash barriers and open the ProTec-Tor 50 or ProTec-Tor 120 elements.

In November 2018, the emergency opening ProTec-Tor 120 was successfully tested according to the test criteria and requirements of DIN EN 1317 with a truck (TB 41) travelling at 70 km/h and a car (TB 21) travelling at 80 km/h.

The ProTec-Tor 120 was assessed as a special element in our crash barrier system ProTec 100 (T3 / W2) according to the acceptance criteria of containment level T3. Up to now, in Germany such special elements were usually corroborated merely in static situations and as a computed simulation. But simulations are not always suitable for providing indubitable corroboration particularly in terms of the dynamic forces and their impacts on special elements.

In view of the fact that emergency openings are meanwhile increasingly required as safety devices in restraint systems with contraflow traffic, we can now offer our ProTec-Tor 120 as a tested emergency opening system. We instructed an accredited test lab to test the ProTec-Tor 120. In the standard crash test, the longitudinal force transfers and the functionality of the special element and also of the connected crash barrier system were assessed and documented on the basis of the two impact tests that were carried out. The emergency opening functioned perfectly even after the crash tests with a truck and car at high speeds with slight shifting of the system.

**This means our product fulfils the requirements for containment level T3 pursuant to DIN EN 1317!**



With ProTec-Tor 120 – quick access for emergency services – the mobile crash barrier can be opened quickly and easily without additional tools. Striking signs and a different pattern for the side reflectors make it easy for the emergency services to find the ProTec-Tor. In addition, a number or mileage indication can be affixed to the quick access.

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## Mobile LED prewarner – free demonstration on site

Particularly at one-day roadworks or when accidents happen on multilane highways and motorways, traffic safety depends on making road users well aware of the changed situation and approaching roadworks. This is where our mobile LED prewarners are used. They are available in various versions.

The mobile prewarner **MV-LED** is ideal for use on the hard shoulder with its bright LED technology to give active warning of one-day roadworks, emergency and hazard situations at road accidents and temporarily changed road layouts, and also for events.

The mobile prewarner **TOP-LED 2** offers enhanced visibility. Depending on the specific situation, it can be used as mobile LED prewarner or, if necessary, with projecting arm and additional overhead sign at a height of six metres across multilane carriageways.

Both mobile prewarner models MV-LED and TOP-LED 2 are ready for use and demonstration at our Kürten site. On request, our service technician will also come to your premises and give you a personal demonstration of the LED prewarner with all functions on your depot. This also offers scope to deal with any questions about use, handling and technology directly on site. Our demonstration prewarners are certified traffic control signs for road use with a regular registration plate and can be used for construction site protection straight away.

Please contact us to make an appointment if you are interested in a free demonstration of MV-LED or TOP-LED 2. Our sales team is looking forward to your call!



Symbol photo

For all models, the customer can choose the colour for the LED display surfaces: red-and-white or fully coloured (RGB) LED technology – to suit individual needs or national regulations. The LED display signs have gone through lighting tests as per EN 12966. The scope of supply includes German-language editing software for users to create road signs, pictograms, symbols and texts as well as running continuous text, for compilation on the PC.



## Re-Design

## Red countdown display now in signal head chamber

**We have redesigned our popular red countdown displays for fixed phase and vehicle-actuated operation (VA), making them even compact, lighter and less expensive.**

The new red countdown displays are now fitted in an additional signal head chamber that goes with every current Berghaus signal head. Depending on the system type, this is fastened above the red chamber or, for radio/cable traffic lights, next to the red chamber. The redesigned red countdown display is still suitable for fixed phase traffic lights such as the MPB 1400. Similarly, the „VA“ version is still suitable for vehicle-actuated traffic lights MPB 3200 or MPB 3400. The delivery includes the holder, connection lead and fitted plug. Retrofitting in existing Berghaus traffic lights can therefore be carried out by the customer with minimum workload. All it takes in the MPB 1400 for example is to connect three cables in the traffic light and to set a socket for connecting the red countdown display. The power supply for the three-digit red LED display comes directly from the corresponding traffic light system. It has its own dimming feature for minimum power consumption. The remaining red phase is automatically ascertained during the cycle so that no adjustments are necessary for use. However, before commissioning it is possible to choose whether the remaining red phase is shown in minutes/seconds or just seconds up to maximum 999 seconds. The display can remain on for the whole of the remaining red phase, or be switched off in the last 6 seconds if so wanted. This draws the road user's attention to the actual red chamber just before the red phase expires and prevents racing starts.

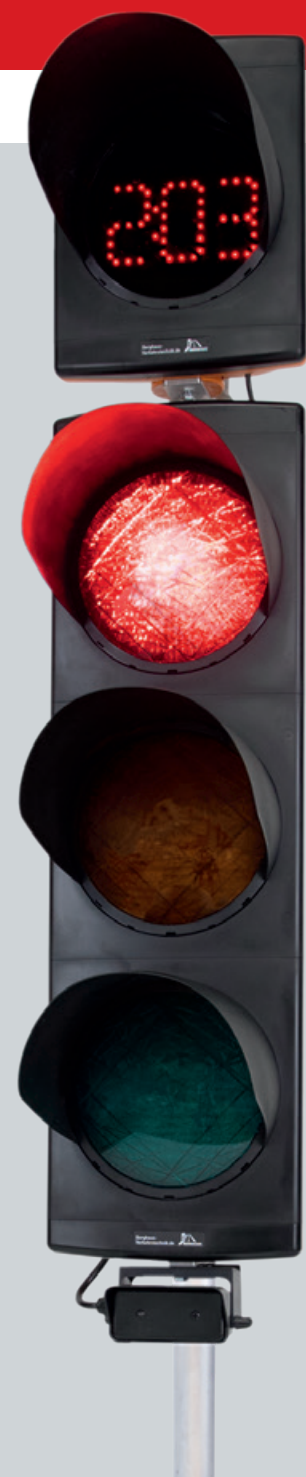
We can gladly advise you and provide a tailor-made offer for purchasing a new system or retrofitting your Berghaus traffic light system with red countdown display – please simply ask us!

### Info: Red countdown displays for fixed phase and vehicle-actuated operation (VA)

Mobile traffic lights take care of our safety when roadworks change the traffic flow. However, the construction work often means that the carriageway is now much narrower for road users. Each line of traffic has to be guided safely and individually through the roadworks at reduced speed. The narrower carriageway means road users will probably have to wait at the traffic lights, even when the system is set up for vehicle-actuated control with an extended green phase.

Here it is important to let road users know how long the remaining red phase will last, so as not to compromise the acceptance of the mobile traffic light system. When road users simply interpret a longer wait as the sign of a defective traffic light and drive through the red light into the bottleneck, they are putting themselves and others at risk!

Red countdown displays by Berghaus are available for both fixed phase operation and also for vehicle-actuated control with variable green phase extension (VA) of one-way traffic, T-junctions and crossroads. Road users see the currently remaining red phase directly at the Berghaus traffic light and are more relaxed about waiting for green even at long roadworks.



## MPB 1400 in use in Carinthia / Austria following severe weather

**Our customer ITEK Verkehrs- und Beschilderungstechnik GmbH in Austria asked us to set up a rather unusual traffic light control. During the night of 29 October 2018, a tremendous storm named „Vaia“ blew across the Austrian federal state of Carinthia and caused extensive storm and flooding damage to houses, forests and the infrastructure. This was the most widespread disaster ever to hit Carinthia. Two thirds of the state in six districts were affected, covering an area of more than 3,000 square kilometres.**

The Lesachtal valley also suffered greatly from the storm. The massive rainfall triggered about 30 minor landslides. At one point this caused the road including the down-slope retaining walls and brick walls to slide down by three to four metres over a length of approx. 80 metres, thus blocking this part of Gailtal Straße (B 111). Due to the severity of the damage, it is going to take a long time to repair this section of road. And so a diversion had to be found to bypass the B 111 Gailtal Straße between Maria Luggau and St. Lorenzen/Les. After roughly two weeks, a rough road of approx. 4.6 km had been made ready consisting of private roads such as forestry tracks and country lanes. The rough road is just four metres wide and includes steep and narrow sections. Vehicles can only drive along the provisional road in one direction at a time, safely controlled by a special traffic light system.

We used our GPS-synchronised MPB 1400 traffic light system for single-lane traffic control covering a distance of altogether 4.6 km. The traffic lights work according to a fixed timetable based on a 15-minute green phase and 15-minute clearance phase. This allows vehicles to pass through the diversion in alternating one-way fashion. Traffic starts using the diversion from Maria Luggau towards Kötschach – Mauthen on the hour and from St. Lorenzen towards Maria Luggau on the half hour. The timetable for the diversion with its unusual traffic light control was announced in the press, on the websites of the affected villages and on large announcement signs at the entrance points.

In the course of the provisional diversion, roads also come in from Frohn, Sterzen and Moos and are partly integrated in the one-way traffic system with traffic light control. Here again MPB 1400 traffic lights with arrow signal heads show the road users which direction they can travel in so that they can join the current one-way traffic flow without any danger.

All signal heads used in the traffic lights for the alternating one-way traffic flow are quartz-controlled with constant GPS synchronisation. Every traffic light has an integrated GPS module with fully automatic control of an absolutely precise phase cycle while the system is in operation. This kind of reliable technology is the only way to implement the timetable in this special case with green phases at fixed times. Furthermore, continuous GPS synchronisation also means that any number of MPB 1400 signal heads can be combined with absolute precision in a traffic light system.

Our technicians worked on the basis of the stipulations made by our customer ITEK together with site drawings and in consultation with staff from Kötschach road maintenance depot in order to define the required phase cycle and implement the corresponding traffic lights with the MPB 1400. We started manufacturing the ordered signal heads immediately due to the urgency of the situation. All signal heads were fitted with energy-saving LED technology and were ready for use including corresponding trailers and batteries when dispatched by forwarder to Carinthia. Staff from Kötschach road maintenance depot then installed and commissioned the traffic lights for this special alternating one-way traffic control system.



Traffic light control with MPB 1400 for the 4.6 km provisional bypass road. Announcement signs explain the fixed times for the green phase.



Entry point into the alternating one-way system, coming from Frohn. Two MPB 1400 signal heads show road users which direction can be used or when the road is blocked.





ProTec 51



ProTec 100

## Now even better: ProTec 51 and ProTec 100 successfully tested for other containment levels

Mobile crash barriers at roadworks clearly enhance traffic safety. Their containment capacity protects road users from leaving the carriageway and colliding with oncoming traffic, while also providing safe working conditions on site. Growing traffic volumes therefore make it important to optimize existing crash barriers and adapt them to new circumstances.

In autumn 2018, our best-seller, the mobile crash barrier ProTec 100, was successfully tested for containment level H1. The standardised impact test entailed driving a truck at 70km/h into the ProTec 100 at an angle of 15 degrees, and a car with 100 km/h at an angle of 20 degrees, in accordance with the stipulations made in DIN EN 1317.

The test provided verification for **containment level H1** and **effective range W6**. The BAST had already approved ProTec 100 for containment levels T1 and T3 back in 2011. This has now been extended with the addition of the higher containment level H1, once again proving that our products offer safety-relevant reserves and are also suitable for higher loads. Particularly in view of the increasing share of heavy-load traffic on main roads, it is important to know that the deployed systems not only fulfil the minimum requirements such as T3/W2 but can also withstand larger impact angles and higher speeds in an emergency. The mobile crash barrier ProTec 100 is used to protect several hundred kilometres of roadworks throughout Europe every day, thus playing a crucial role in the safety of workers at construction sites on public roads.

Our lightweight crash barrier ProTec 51, a further development of ProTec 50 which has been tried and tested since 2012, was tested for **containment level T3** with **effective range W3** in summer 2018. In other words, the currently smallest and narrowest crash barrier in the ProTec family has also successfully passed T3 testing. At the moment, the system has been registered for assessment by the BAST (Federal Highway Research Institute). The new ProTec 51 is yet another modern safety system available from Berghaus throughout Europe. In view of the future new requirements facing modern crash barrier systems, our own development department works every day at furthering the development of existing systems and placing new systems on the market. In future too, we will continue to improve and extend our range of mobile crash barrier systems.

No matter what your particular requirements are, mobile crash barriers in the ProTec family always put you on the safe side!

## Bespoke manual traffic light for Berghaus New Zealand

We have produced a special version of our popular MBA „manual traffic light“ for Berghaus New Zealand. A radio hand-held unit controls the traffic lights individually simply by pressing a button. The MBA is ideal at roadworks for manual red/green control depending on the specific current situation. The system then either remains permanently in a certain signal state or reverts automatically to red at the end of a previously adjusted green phase. The traffic is stopped reliably, the bright red of the traffic light is much easier to see than flags or hand signals and also enjoys far greater acceptance.

These special roadworks in New Zealand also use a follow-me vehicle that takes up position in front of the vehicles waiting at the red light. The driver uses the radio hand-held unit to request green at the MBA for his direction and leads the line of traffic safely through the long construction site. After an adjustable period of time, the MBA automatically switches back to red. At the other end of the roadworks, the follow-me vehicle then waits for the line of traffic to disappear, then turns around and takes up position in front of the vehicles waiting at the MBA to go in the opposite direction. He now uses the radio hand-held unit to make a temporary request for green in this other direction and the line of traffic follows him through the roadworks.

The follow-up vehicle ensures that traffic passes safely through the roadworks in every situation. The driver controls the traffic lights according to the traffic volume and defines the speed; he can also give specific warnings and stop the traffic in dangerous situations at severe bumps in the road or when construction machinery crosses the road and work is in progress. Use of the bright manual MBA traffic light as needed by the driver of the follow-up vehicle warrants a high level of safety for road users and construction workers. Multi-frequency technology makes it possible to control the traffic lights with just one radio hand-held unit operating selectively on different channels. In contrast to conventional one-channel controls, this rules out the dangerous risk of requests coming at the same time from different directions.

We worked together with the colleagues at Berghaus New Zealand to develop a suitable traffic-light solution based on our proven MBA for this particular follow-me traffic control that is rather unusual by German standards.

Do you also have a special traffic situation that needs reliable, low-cost traffic light control? Simply talk to us about it, we'll gladly provide you with a bespoke solution.

### Basic features in the manual traffic light MBA:

- 2- or 3-aspect signal head (lens red/green, red/amber/green or as specified by the customer)
- Low-cost halogen or energy-saving LED technology
- Quartz-controlled time sequence for version with temporary green or red
- Dimming for automatic adjustment to the ambient brightness.
- Red lamp monitoring (display: red defective)
- Operating voltage monitoring
- Operation with 12V battery or 230V power supply unit
- Manual signal choice at every signal head
- Various versions available
- Signal selection by radio remote control on request
- Mobile lower battery casing for 12V/170Ah battery (available for one, two or four batteries)
- Other features and versions at the customer's request

### MBA versions produced for customers up to now:

- **MBA:** signal head with external push buttons for continuous red, amber flashing, continuous green; use for temporary manual road closures, e.g. forestry work, tree felling
- **MBA-1:** signal head controlled by switch, cable or radio remote control; basic setting red; fixed adjusted green phase; use for temporary manual access control, e.g. gatekeeper traffic light, factory entrances, loading bays, weighing facilities
- **MBA-2:** signal head as above; basic setting green; fixed adjusted red phase; use for temporary manual closure e.g. of loading bays, entrance and exit roads, heavy loads
- **MBA-3:** signal head with radio remote control; adjustable as continuous red/continuous green or fixed adjusted green phase after activating the radio remote control; several signal heads can be addressed with one single radio remote control working on different channels. Use for purely manual traffic control as needed in many different situations.



Peter Berghaus New Zealand is a company in New Zealand that represents Peter Berghaus GmbH. The traffic light range has been used successfully in New Zealand for more than 20 years. In the last two years, Peter Berghaus New Zealand has also delivered products to Australia.



# Review: AVS was at the European Road Conference in Dubrovnik



The European Union Road Federation (ERF) is a non-profit association that coordinates the views of Europe's road infrastructure sector and acts as a platform for research and dialogue on mobility issues between interest groups and institutional players.

Southeast Europe has come to the cross-roads in the development of its road connection programmes and has a crucial role to play as a gateway for international trade routes. The aim of the conference was to help decision-makers, planners and infrastructure operators throughout Europe and its neighbouring countries to convert these challenges into constructive political and planning decisions.



Roadworks in particular are dangerous for car drivers who have to navigate a challenging surfeit of signs and beacons – coupled with frequent lane changes – as well as for the workers involved in constructing, repairing and maintaining roads, bridges and motorways. The conference participants shared international best practices for making roadworks safe with a combination of current experience and new technologies.

As a member of IRF Global, AVS Verkehrssicherung is proud to play an active role in shaping this important process.

The **International Road Federation (IRF)** is a global non-profit organisation with headquarters in Washington DC since 1948, which is supported by regional branches all over the world. The IRF serves a network of members from the public and private sectors in more than 70 countries by offering first-class knowledge resources, advocacy services and training programmes which together form a global market place for best practices and branch solutions.



## AVS now also in Denmark

AVS Verkehrssicherung has acquired Traffics A/S (Traffics), a Danish provider of roadworks and traffic safety solutions based in Gadstrup (Denmark), founded in 2006. The customers include road construction firms together with local authorities and government agencies in Denmark.

„We have a long-standing, trust-based business relationship with Traffics. Together, AVS and Traffics can offer customers in the Danish market a comprehensive range of products and services that meets the highest demands“; says Dirk Schönauer, Managing Director AVS.

„We have always been inspired by AVS because of our many shared values. Years of cooperation with AVS and Berghaus have helped to improve Danish standards of road safety, and I look forward to continuing the positive development in Denmark with the AVS Group as our new proprietor“, emphasises Christian Dam, Managing Director of Traffics A/S.

The company will be handling projects as AVS Vejsikring A/S at the start of the new season.



For the AVS Group at the ERC 2018 in Dubrovnik: Senior Sales Manager Thomas Keller and COO International Dirk Schönauer (from left to right).

Advert

**„Without us, it wouldn't be roadworks, but a hole in the road.“**

**Thomas Jakobs**  
Stacker driver

**Heset Uruglica**  
Site fitter for mobile crash barriers

**AVS**  
VERKEHRSSICHERUNG

AVS is Germany's number 1 for professional traffic safety. From traffic sign plans to diversion routes to complete construction site marking and mobile safety barriers, we offer everything from a single source. With over 650 AVS specialists at 17 AVS locations throughout Germany, we have been supporting regional and national road safety projects for over 50 years. Become part of our team. Current job offers at [avs-verkehrssicherung.de](http://avs-verkehrssicherung.de)

Advert

**DeuSAT**  
9th German Highway Equipment Conference  
Congress-Centrum Koelnmesse

**We'll be there!**

**27/+ 28/3/2019**  
**Hall 11.1, stand B09**  
**Koelnmesse**



**Published by**  
**Peter Berghaus GmbH**  
Herrenhöhe 6  
51515 Kürten-Herweg  
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**Imprint**  
Editor: Dieter Berghaus  
Text and layout: Michael Kronenberg, Sabrina Mosch  
Printers: Druckerei Brocker, Kürten  
Circulation: 68,000 copies in German,  
1,300 copies in English  
Peter Berghaus GmbH is part of  
AVS Verkehrssicherung GmbH.

