

# Berghaus-News

Traffic Technology · Mobile Crash Barriers

Issue 46

March / April 2014



## At a glance

### Contents

#### Page 2

- New mobile traffic light system MPB 44 M/S
- Fit for practice with our traffic light training
- Mobile traffic light technology from Berghaus at a glance

#### Page 3

- New from Berghaus: mobile prewarmer with LED technology
- Safe roadworks with mobile ProTec crash barriers

#### Page 4

- AVS Hamburg branch is moving
- „ProTec-Tor“ – opens barrier in emergency

## Personal invitation to the INTERTRAFFIC



### Ticket for the INTERTRAFFIC 2014

Are you planning to come and see us in Amsterdam? It would be our pleasure to look after your entrance fee and invite you to visit us. This year once again we have **100 free tickets** for our loyal customers who want to come to the event.

The entrance tickets will be issued in the order of receiving your requests; please note that tickets are only available while stocks last!

If you are interested, please contact us straightaway in writing, by fax or mail.

We look forward to seeing you in Amsterdam!

### Imprint

Published by: Peter Berghaus GmbH  
Herrenhöhe 6  
D-51515 Kürten-Herweg

Editor: Dieter Berghaus  
Text and layout: Michael Kronenberg

Circulation: 55,000 copies in German  
1,000 copies in English

Printers: Druckerei Brocker  
D-51515 Kürten-Dürscheid

Peter Berghaus GmbH  
is part of AVS Verkehrssicherung GmbH.

## New mobile traffic light system MPB 44 M/S

Punctually for the INTERTRAFFIC 2014, we proudly present the MPB 44 M/S, a new universal mobile traffic light system tested to TL-LSA type class D.

It is used for flexible control of up to maximum 12 signal groups and can be deployed for example at pedestrian crossings with request function as well as vehicle-actuated alternating one-way traffic, T-junction or crossroads situations, possibly with additional turning lane, blinking light or waiting signal.

The new MPB 44 M/S series is based on the proven MPB 4400 system which has been popular for many years and has provided outstanding service in practice. And so there is no need for our customers to change over to a completely new system: depending on the particular features, already existing signal heads can be integrated directly in the MPB 44 M/S system.

The signal timetables are also produced in the same way as for the MPB 4400 series. The great advantage here is that anyone who has already worked with traffic lights in the MPB 4400 series can

also operate the new MPB 44 M/S system straight away. There is therefore no need to retrain staff and instruct them in using a new system, which will please our customers in particular as some of them have been familiar with the MPB 4400 for more than 20 years.



**MPB 44 M: compact master controller for activating up to 12 signal heads, including integrated 42V transformer for central power supply to all MPB 44S signal heads.**

The MPB 44 system consists of a master controller "M" and individual signal heads "S" which are mounted directly to the masts. The signal heads are fitted with Berghaus LED technology and 42V technology for central power supply and are differentiated according to 2-aspect pedestrian heads and 3-aspect carriageway heads.

If necessary, all carriageway signal heads can be fitted with directional radar detectors for vehicle-actuated traffic light control. Similarly, our PB-CAM can be used on request as video detector on the MPB 44 S signal heads to register traffic volumes. To have a request traffic light for pedestrians, request buttons are simply plugged into these signal heads, without needing additional wiring from the buttons to the controller.

All traffic light heads are each fitted with their own control PCB which also covers the additional connected equipment. All signals are actuated centrally by data bus from the MPB 44 master controller.

Continues on the next page.

## INTERTRAFFIC 2014 in Amsterdam



**Berghaus Verkehrstechnik and the service provider AVS Verkehrssicherung will once again be using a joint exhibition stand to present their new products for traffic technology and mobile crash barriers together with the scope of services for professional traffic safety. This year once more you are cordially invited to visit our stand 01.410 in hall 1. We look forward to many interesting talks.**

From 25 to 28 March, the world's number 1 trade fair INTERTRAFFIC is being held again in Amsterdam and leading companies in the traffic technology branch will be presenting innovative developments and services to the interested trade public. As an international manufacturer, we will naturally also be there and presenting many products for you to try out at our stand 01.410 in hall 1. These will include:

### Mobile traffic light technology

We will be using the trade fair to introduce our new traffic light system **MPB 44 M/S**, which, as described above, is based on the proven MPB 4400

traffic light type. It comes as a modular system for swift, economically efficient installation at roadworks with just one joint cable for power supply and data bus.

Our low-cost, best-selling export traffic light **MPB 1400** will also be on show in Amsterdam. Here the user is guided through system operation in many different languages as easily as with the TV remote – try it and see!

### Soft- and hardware

Get to know the functions of the popular **AmpelTools**, our convenient traffic light software for many applications. Enjoy a demonstration of our **CPU simulation** at the exhibition stand for putting the

compiled programs to the test needing a controller.

You can also get to know the advantages of our **remote control** for EPB traffic light controllers via the GSM mobile phone network.

### Mobile crash barriers

AVS Verkehrssicherung as our service partner company will be presenting the members of the ProTec family for safe traffic control at roadworks:

The latest addition, the **ProTec 50**, is the narrowest and lightest ProTec crash barrier, ideally supplementing the product range of mobile crash barrier systems **ProTec 100**, **ProTec 120** and **ProTec 160** that have proven their worth for many years.

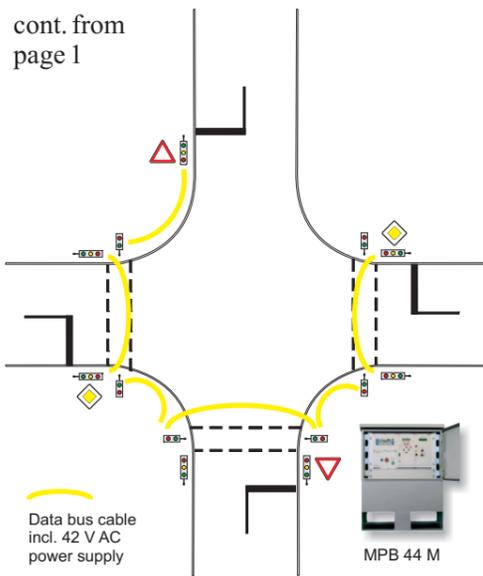
Thanks to the even smaller planning-relevant width of just 10 cm and the good T1/W2 impact values, ProTec 50 can be used in many traffic situations, particularly where space is at a premium. ProTec 50's weight of just 28.7 kg per metre is also convincing as it permits optimum, efficient use of a truck's transport volume.

At the exhibition stand, AVS will also be showing the flowing transition solutions from one ProTec system to another. Road users won't even notice these force-fit transitions as the reflectors are always fitted on the same level across all ProTec systems. And so it looks to the driver as if the mobile road restraint system is all made from the same mould.

We are always on the look-out for competent partners in the continuous expansion of our export network - please contact us. We look forward to seeing you at our exhibition stand!

## New mobile traffic light system MPB 44 M/S

cont. from page 1



**Wiring diagram: just one joint cable from the MPB 44M controller is responsible for data transfer and central power supply for all traffic lights (up to 12 signal groups)**

Controller MPB 44 M already contains the 1st traffic light control and is therefore supplied ex works with a special carriageway signal head. Just one cable is now responsible for data transfer between master controller and the individual slave signal heads together with central 42V power supply from the controller, thus clearly minimising the wiring workload on site. No extra cables are needed for power supply, detectors, buttons and data bus so that this one-cable solution saves lots of time and costs in installing and dismantling the traffic light system.

If in exceptional cases no mains voltage can be provided on site, all components can be operated quite separately using 12V batteries for the controller and for the individual traffic lights.

Depending on the specific application, up to four signal groups can be programmed

directly at the controller without further tools - quickly and easily using the interface for the handheld terminal integrated in the master which is already familiar from the MPB 4400. In addition, up to 12 signal groups can be programmed using the interface for connecting up a laptop which is already permanently installed in the master. The controller also has a freely accessible 230V service socket so that laptop operation for example is always warranted.

Laptop programming is carried out as usual with our AmpelTools software program.

The MPB 44 M controller also contains the 230/42V transformer for central power supply to all signal heads, together with a residual current-operated device (RCD switch), the emergency-off switch for the complete traffic light system, the connection for an external printer or laptop (USB and serial) and the connection for our SMS messaging module. In the version available directly ex works, the controller also has a connection for an external control device for selecting manual mode, continuous red, blinking lamp, lamps off and automatic, for example with cable or radio remote control. There is also a synchronous input for the coordination of progressive signalling, as well as an output for a parallel signal head.

The digital AC meter fitted in the front panel of the MPB 44 M controller indicates the 230V energy consumption at any time - ideal for cost accounting if there should be a need to revert to a private mains connection.

Would you like to know how to integrate your existing MPB 4400 traffic light systems in the new MPB 44 M/S solution? We will be glad to advise you. Please request an individual offer.

## Fit for practice with our traffic light training



**Snapshot: participants at traffic light training course 1 in Kürten calculate the cycle time of a bottleneck control, taking account of differing traffic volumes. This is followed by practical implementation of the produced phase plans right next door in the showroom on the MPB 4400 traffic lights.**

This year our traffic light training courses celebrated a minor anniversary, as it is now 20 years since we began the series of seminars. Way above 1,500 employees from specialist companies for traffic safety and signalling systems, road traffic authorities, road maintenance depots and council depots have been trained at our headquarters in Kürten near Cologne, and also in Mellingen near Weimar on the premises of our AVS Verkehrssicherung. This still does not include the many individual separate training sessions which we hold as system manufacturer of "mobile traffic light systems" in order to take account of the special needs and existing equipment used by our customers, either in our own training room or on the customer's site.

There is always great demand for our regular traffic light training courses at the start of the year, so that this year's courses in Kürten and Mellingen were once again fully booked within just a few days of sending the invitations. The two different two-day seminars are for beginners and advanced users respectively, with the advanced courses building on the basis provided in the beginner courses.

Our "Professionals", Operations Manager Alfred Wurth and technician Uwe Bani-schewski, led the participants through the various topics, providing them with tips and tricks from their more than 35 years of professional experience with traffic light systems. The course contents included necessary German guidelines and technical specifications for mobile traffic light systems (e.g. RiLSA, TL-LSA), as well as how to calculate and compile signal timetables correctly. Attention naturally focused on operating and programming the traffic light controllers, together with practical implementation of the signal timetables produced in the theoretical part of the course, as well as effective troubleshooting on site. Great interest was shown in the practical use of our new CPU simulation for the EPB 12 / 48 traffic light controllers, as the produced program sequences could be tested under real conditions without needing a large controller at the same time.

As manufacturer, we ensure that our seminars give a comprehensive insight into mobile traffic light technology and gladly respond to questions from participants, as well as offering practical solutions.

## Mobile traffic light technology from Berghaus at a glance



**MPB 1400, quartz-controlled signal system for alternating one-way traffic, can be extended through to crossroads control**

- Simple handling with menu-driven infrared remote control
- Menu language in German, English, French, Dutch, Spanish, Italian or Turkish (other languages possible)
- Fixed-phase mode, manual mode with continuous red or continuous green, blinking lamp, lamps off
- Can be extended by simple addition of identical signal heads to obtain T-junction or crossroads control
- Standard halogen lamp or innovative LED technology on request with night-time dimming



**MPB 3400, radio-controlled signal system, vehicle-actuated for alternating one-way traffic, can be extended through to crossroads control**

Technical features as MPB 3200, with the following in addition:

- All signal heads identical: can be extended immediately by simple addition of more signal heads to obtain T-junction or crossroads control – also by radio.
- In contrast to the competition, a crossroads traffic light consists of four identical full traffic lights that can be combined at random, instead of one transmitter and three receivers.
- Different modes can also be mixed, for example: main road with green phase extension and side road or roadworks exit on request



**MPB 3200, radio-controlled signal system, vehicle-actuated for alternating one-way traffic**

- Clearly structured operation – all at a glance
- All signal heads identical – can be used as sender or receiver
- Vehicle-actuated control with directional radar detectors
- Fixed phase mode, request mode, green phase extension, manual mode with continuous red or continuous green, blinking lamp, lamps off, green on request (continuous red)
- Radio, cable and quartz control for universal use
- Standard halogen lamp or innovative LED technology on request with night-time dimming



**MPB 4400, radio-controlled signal system, vehicle-actuated for alternating one-way traffic, can be extended through to crossroads control**

Technical features as MPB 3400, with the following in addition:

- Simple handling with menu-driven handheld terminal for up to 4 signal groups
- Programming possible for up to 12 signal groups with maximum 24 monitored signal heads and up to 24 parallel signal heads per laptop with AmpelTools
- Printout of all relevant data as per RiLSA and TL-LSA possible from the working traffic lights on site
- Timed program changeover with day and week programs for flexible traffic control
- Also for pedestrians, local public transport, coordination of progressive signalling, SMS module, fire brigade control, and much more besides.

## New from Berghaus: mobile prewarner with LED technology

With immediate effect, as vehicle manufacturer we have added LED prewarners in our production programme to go with our mobile warning trailers.

The new MV-LED mobile prewarner is mounted on a hot-dip galvanised unbraked 750 kg trailer lined with aluminium chequered plate and equipped with a parking brake. Our standard trailer comes with a drawbar adjustable in height with replaceable DIN-eye and a ball-type towing device and is approved for speeds of up to 100 km/h. As a result, either a car or a truck can be used to bring the LED prewarner to where it's needed.

The MV-LED consists of two LED display signs with lighting tested to EN 12966 and mounted as modules on top of each other. The upper LED sign, preferably for round or triangular traffic signs, has 2304 red and white LEDs (48x48 px). The lower display sign has altogether 5120 white LEDs (64x80 px).

The full height of this part is used for lane movement signs or to display information, also with moving symbols; on request it can show separately displayed additional texts and even indicate distances. The luminous intensity is automatically adapted to the ambient brightness for excellent visibility at all times. In addition, double LED warning lights are fitted as a standard feature to the right and left of the upper display sign.

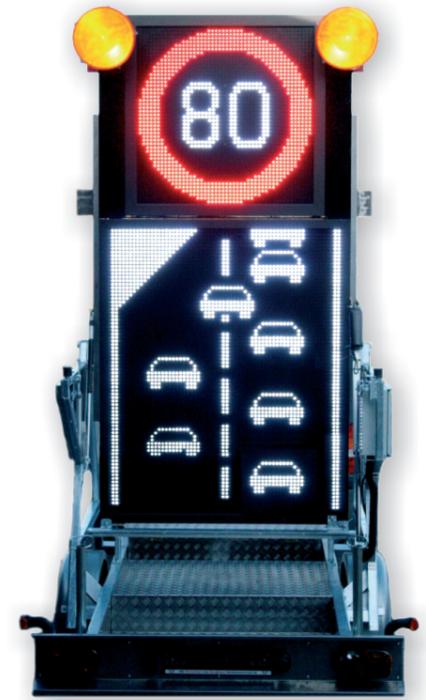
For transport, the MV-LED display signs are hinged down with the display area face downwards for protection from the weather. This means that in winter, snow does not have to be cleared from the display sign before it can be used. The LED sign is raised and lowered with a lifting spindle motor. During transport, the sign is held electrically in the hinged down position.

Operation is very simple and is carried out intuitively with a control device; it is

also possible to adjust all functions during transport with the optional radio remote control with backlit graphic LCD display and active feedback.

All traffic signs, symbols and fonts are saved in bitmap image format and can be prepared by the user in person on the computer. The necessary editing software and the USB 2.0 interface cable for programming the device are included as a standard feature in the scope of supply.

The spacious battery compartment in the under-carriage of the MV-LED prewarner offers enough space for up to two batteries, for a battery charger on request and for the radio remote control which, when kept here, can also be recharged to keep it ready at all times.



New MV-LED mobile prewarner with graphic radio remote control.

## Safe roadworks with mobile ProTec crash barriers



ProTec 50

With just 10 cm planning-relevant width, up to now the new ProTec 50 is the narrowest mobile road restraint system by Berghaus and also the lightest, weighing just 28.7 kg per metre. Containment level T1/W2. All crash barriers in the ProTec family are always connected by a force-fit transition – naturally also as a cross-system solution or connected to stationary road restraint systems.

Mobile crash barriers considerably increase traffic safety in roadworks. They reliably separate contraflow traffic, prevent road users from leaving the carriage way and prevent major accidents from on-going traffic. Mobile crash barriers also make it essentially safe to work in the site area.

For the first time this year, our INTERTRAFFIC exhibition stand in Amsterdam will also be showing our mobile road restraint system ProTec 50 as an appropriate addition to the proven systems ProTec 100, 120 and 160.

Up to now, ProTec 50 is our narrowest and lightest mobile crash barrier, which naturally also uses the known advantages of the ProTec road restraint systems.

The special design of the ProTec crash barrier family offers an ideal combination of guidance and protection. All ProTec barriers have the BASt-tested reflectors on the same height, giving road users the visual impression of a continuous road restraint system. In addition, the reflectors are protected in recesses so they can't be torn off by a passing vehicle.

The ProTec systems also rule out the risk of water splashing

up dangerously onto the windscreen of the vehicle behind from puddles that often accumulate at conventional crash barriers. The design with just one standing surface over a length of six metres leaves a generous opening of five metres to let water and dirt flow through.

When space is at a premium on the remaining lane width in narrow roadwork situations, ProTec with its planning-relevant width of just 10 cm is the ideal crash barrier solution.

The individual elements have a structural length of just six metres. This flexibility makes them ideal for use in urban areas with smaller curve radii. For many users, the structural length offers great advantages in terms of logistics as the ProTec 50 elements can often be transported with their own vehicles. The ProTec 50 is particularly interesting with its light weight of just 28.7 kg per metre. The individual element thus weighs less than 175 kg which permits loading



ProTec 100

The compact mobile crash barrier ProTec 100 fulfils containment level T3/W2 with an outstanding ASI value of 0.2 (A). Only 12 cm is needed as planning-relevant width. Another advantage of all ProTec barriers is that the flexible reflectors are protected in recesses and can't be torn off by passing vehicles. Furthermore, they are always fitted at the same height on all ProTec systems.

volumes of up to 800 continuous metres per truck journey, clearly reducing the transport costs for ProTec 50.

ProTec crash barriers can be unloaded and mounted on site using simple loading tools in just one procedure - without even disrupting the flow of traffic. ProTec 50 is very quickly installed with just one screw being fitted every six metres.

With its good results in the impact test at TÜV Süd in Munich with containment level T1/effective range W2 and the ideal ASI value of the impact force level "A", ProTec 50 is an ideal addition to the proven portfolio of the ProTec family.

Mobile crash barriers in the ProTec family can be used to cover all possible uses from A to D pursuant to the ZTV SA with professional installation, force-fit transition and absolute precision. Starting, end and transition structures on permanent crash barrier elements are naturally also available, together with mobile (ProTec) systems or length compensation elements (dilatation elements), together with the



ProTec 120

The ProTec 120 mobile crash barrier manages with a planning-relevant width of 14 cm in containment levels H1/W5 and T3/W2. As all ProTec systems, it also has a wide opening to let water through to prevent any puddles accumulating at the wall.



ProTec 160

The mobile crash barrier ProTec 160 fulfils containment level H1/W4 and needs a planning-relevant width of just 18 cm. ProTec 160 can be used for all applications as per ZTV-SA (A to E).

"ProTec-Tor", the quick-action opening for the emergency services.

More information about our comprehensive product range of mobile road restraint systems will be gladly provided in person at our exhibition stand or can be found on the internet at

[www.mobile-schutzwaende.de](http://www.mobile-schutzwaende.de)



Force-fit transition from one ProTec system to the next – here from ProTec 120 to ProTec 160.

## AVS Hamburg branch is moving

At the time of going to press, the AVS team at the Hamburg branch was in the middle of moving to new business premises.

In early March, they will be relocating within the rural district of Harburg from Seevetal just 12 kilometres away to Hamburger Strasse 71 in Rosengarten.

The new site is to the south west of Hamburg and conveniently located directly on the main B75 road with easy motorway access to the A261 using the Tötensen (Rosengarten) junction.

Branch manager Dipl.-Ing. Ulrike Barovic and her team of 20 are looking forward to the new premises which will now offer enough space for them all. This includes a large office for the site manager and two other office rooms, a meeting room, a fully equipped kitchen, a warehouse with workshop space for electrical and maintenance work, a staff room for the service technicians and washrooms as well of course.

Out of doors there will in future be about 5,000 m<sup>2</sup> of space available with plenty of room for the mobile crash barriers which had to be stored elsewhere in the past.

The AVS Hamburg branch has a special focus on professional traffic safety at motorway roadworks. And so it is ideal that in a radius of less than four kilometres, the AVS service teams have easy access to three different motorways, with the A261 at Tötensen (Rosengarten), the A1 at Dibbersen and the A7 at Hamburg-Marmstorf.

(5 km as road divider on the directional carriageways and 5 km on the central reservation), installed August 2013, dismantled December 2013, with changeover of the 5 km crash barrier on the central reservation. From February 2014, work will begin to refurbish the motorway in the other direction (changing the mobile crash barriers to the other direction in the middle to set up a 2+0 traffic flow) until August 2014.

- At the same time, installation and maintenance of three other motorway roadworks on the A25 between Hamburg and Geesthacht from October 2013 to November 2014.
- Involvement in the major roadworks on the main B404 road at Stolpe from January 2013 to December 2014 as an "extension" of the A21 motorway in the direction of Kiel.

Another approx. 80 traffic safety measures at roadworks on the "minor" road network are also keeping the colleagues of the AVS Hamburg branch busy with their mobile warning trailers, barrier beacons, mobile traffic lights, diversion signs, roadwork markings and much more besides.

The colleagues at AVS in Hamburg are also specialists in terms of road and carriageway marking work. They are often out and about throughout the whole of Germany with their specialist equipment also to help out other AVS branches when it comes to professional



The colleagues of AVS Lehrte GmbH Hamburg branch have started preparing for the move. First of all, a provisional company sign was installed at the new site in Rosengarten.

The impressive range of services offered by the colleagues at AVS Hamburg include for example tender participation, planning, installation, changeover and dismantling, upkeep and at least twice-daily maintenance trips to the following current traffic safety projects:

- 8 km 4+0 traffic flow with mobile crash barrier as road dividers on the A7 with foil marking, mobile congestion warning signs and partial junction closure (from August 2013 to January 2014).
- 5 km 2+0 traffic flow on the A23 at Itzehoe with 10 km mobile crash barriers

application of cold spray plastic and agglomerate markings on road surfaces. Just recently the marking team was at work for AVS Lehrte, AVS Beelitz, AVS Mellingen (A9 and A7) and AVS Overath (A485, A45).

The move to the new premises makes the team well set for the future, particularly in view of the next major annual project that is just around the corner: in April 2014, work will begin on the road safety aspects for refurbishment of the major motorway intersection in Maschen, known locally as "Michelbrücke".

## "ProTec-Tor" – opens barrier in emergency



Our ProTec-Tor can be opened quickly by members of road maintenance crews, the police, fire brigade or emergency services. All it takes is for a cotter pin to be pulled in front of and behind the easily separated elements to remove the locking wedge and open the crash barrier.

Mobile road restraint systems at roadworks, such as our narrow, high-containment ProTec family of crash barriers, prevent users from leaving the carriageway and heading into oncoming traffic and make it essentially safer to work on site.

To keep vehicles moving at roadworks, it may be necessary to take the traffic through a lane on the oncoming carriageway because the actual directional carriageway is being resurfaced. To keep the contraflow traffic reliably separated, the individual crash barrier elements are connected by force-fit transitions and, depending on the requirements and extent of the roadworks, they will often stretch over several kilometres.

But in an emergency, it is frequently necessary to provide rapid access to the scene of an accident for the fire brigade, emergency services and police particularly in such special traffic flow areas in order to provide effective help and assistance even in the confined roadworks situation.

This is why we have developed our ProTec-Tor as a quickly separated element 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 connection of the crash barriers and open the ProTec-Tor elements.

The resulting emergency opening then gives easy access through the otherwise closed, mobile crash barrier.

When fitting the ProTec-Tor quick-action opening for emergency services, a dilatation element is also fitted to allow for automatic length compensation in the event of temperature expansion in the crash barrier, thus preventing possible stresses and also making it easy to open the crash barrier.

ProTec-Tor can be mounted at any point in the traffic flow system and fits in

perfectly as a compatible member of the ProTec family. Reflecting visual signs clearly indicate the start and end of the ProTec-Tor quick-action opening for emergency services even at night or during poor weather conditions, if they haven't already detected it due to the short form of the elements.

In closed condition, the ProTec-Tor has a force-fit transition which can be quickly opened by hand in an emergency to create a wide opening for the emergency services to drive through. In the standard version, the ProTec-Tor creates an opening of nine metres. Depending on the requirements on site, openings from three metres up to any length are possible thanks to the modular design.

ProTec-Tor can be put to many uses. In 4:0 or 3:1 traffic flow systems, it is advisable to include several ProTec-Tor elements in crash barrier systems often stretching over many kilometres; they should also be fitted before entering and leaving tunnels.

In addition, the ProTec-Tor is ideal not just for quick access: in special cases it can also be used to divert traffic through the emergency opening.



It is so easy to open the ProTec-Tor without any tools: pull the lynch pin, release the cotter pin and remove the bolt - that's all!



# Peter Berghaus GmbH

## Traffic Technology • Mobile Crash Barriers

Herrenhoehe 6 • D-51515 Kuerten • phone +49 22 07 96 77 0 • fax +49 22 07 96 77 80  
 www.berghaus-verkehrstechnik.de • mail@berghaus-verkehrstechnik.de