

Im Einsatz – im Thema.

# POLIZEI PRAXIS



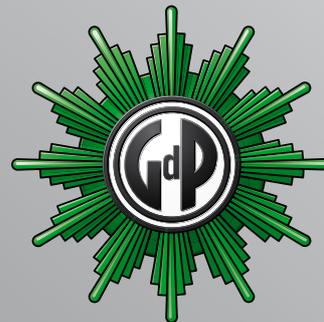
## BodyCam – eine neue Alternative



**Kohlenmonoxid**  
Die unterschätzte Gefahr



**Grenzschutz**  
durch intelligente  
Dokumentenprüfung



**Gewerkschaft  
der Polizei**

# Titanium helmet with shield offers protection against Kalashnikovs

## WEAPON AND EQUIPMENT TECHNOLOGY

Terrorist attacks using weapons of war in Europe's major cities have become a bitter reality since the events in Paris. Kalashnikov assault rifles are considered the most likely threat because there are millions of them all over the world. Terrorists can get hold of these kinds of long guns in a variety of ways. That also applies to most frequently used ammunition with iron cores. At the same time, the Kalashnikov's firepower presents developers of ballistic body protection with enormous technical challenges. Until now, no ballistic helmet on the market has been able to stop bullets of this calibre reliably while at the same time preventing a deadly trauma to the helmet wearer. But the manufacturer Ulbrichts Protection has now surprised the experts with a sensational innovation: the Austrians have launched the world's first "VPAM-6 Forehead Shield", which in combination with a titanium helmet provides effective protection against Kalashnikovs.



*Protects effectively against Kalashnikovs: Ulbrichts titanium helmet with protective shield*

### Strengthened forehead area

The secret of the new development is obvious at first glance. The "Hoplit" titanium-aramid helmet (hybrid) shown here has an additional plate in front of the forehead which lends the helmet shell additional

strength in the most vulnerable area. Although Ulbrichts does not provide any detailed information on the material used, it offers considerable protection in combination with the titanium-aramid cap: the residual energy value of 7.62 x 39 FeC calibre ammunition (iron core, "Hungarian Manufacture") used in the official fire test in accordance with the VPAM 6 test stage is significantly below 25 joules.

This limit, which is set by experts and laid down in guideline VPAM HVN 2009, should not be exceeded since otherwise severe or fatal head injuries can be expected. The titanium helmet shield design now presented by Ulbrichts Protection is able to stop reliably the extremely high projectile energy of more than 2,000 joules from a Kalashnikov below this 25 joule threshold. According to the test report (see illustration), neither a softer, less dangerous lead core projectile was used, nor was the bullet speed reduced in order to "increase" the helmet's level of protection artificially. This performance makes the "VPAM-6 Forehead Shield" in combination with a titanium helmet unique worldwide and sets new standards in the field of ballistic head protection.

### Not all shields are the same

The idea of a forehead shield is not new. During the First World War, steel helmets worn by German soldiers were reinforced with an additional plate on the forehead. Other manufacturers currently have such an additional module in their programme. But the material used makes a difference to the level of protection – for both the shield and the wearer. Decisive is the combination of the stopping effect and the residual energy values obtained (the "trauma values"). In this regard, titanium helmets are superior to comparable models made of polyethylene (PE) or aramid. This is shown by trauma values well beyond the 25 joule limit in firing tests and which make the difference between life and death in an emergency.



*This additional protection by Ulbrichts can be retrofitted to all titanium helmets and weighs about 500 grams*

*All pictures: Ulbrichts*

*Hoplit Model F1100H (hybrid version) by Ulbrichts Protection with VPAM-6 Forehead Shield*

*The additional protection can be attached securely within seconds safely by a Velcro fastener*



Excerpt from the official test report of the Beschussamt Mellrichstadt

Nr.	Kaliber	Geschossart	Entf	Wi	7,5	J	N	Bemerkung
1	7,62 x 39	FMJ/PB/FeC	10	90	719		X	E(Kopf) = 2 Joule
2	LL = 650mm	7,9g, CN336						
3	DL = 240mm	PS, Ungarn						
4	L.-Nr. 04/03	v=720±10m/s						

### Every titanium helmet can be retrofitted

Ulbrichts Protection consistently uses the modular principle in its titanium helmets. This approach makes for a variety of individual helmet configurations and is also applied to the "VPAM-6 Forehead Shield". A Velcro surface on the cap and shield means that the extra 500 grams of additional protection can be securely attached and removed within a few seconds – even while the helmet is still being worn. Titanium helmets (VPAM 3) and titanium hybrid

helmets (VPAM 4) which are already in use can be retrofitted easily and inexpensively if required – an important piece of very good news for all purchasers because in recent months the majority of the German states has already upgraded the equipment of their patrol units to include titanium helmets. As a rule, two ballistic helmets are now available in every emer-

gency vehicle. The VPAM-6 Forehead Shield" now presented means that the ballistic head protection which already exists can be expanded modularly and improved significantly once again. **R. K.**