

Glock Modular Handgun System

Jan-Phillipp Weisswange

Glock was one of two participants in the US Army's Modular Handgun System (MHS) solicitation to reach the Competitive Range, in the final cut. Contrary to many claims, the company from Deutsch-Wagram (near Vienna, Austria) did not come up with just an adaptation of a standard model, but with a specially developed system. ESD was able to take a look at the Glock-MHS on-site.

Glock began to develop its Modular Handgun System based on a request for proposal (RFP) of several hundred pages issued by the US Army, which specified pistol and ammunition requirements. The US Army needed not just a new service pistol, but a complete system: a pistol with corresponding, effective ammunition and the following accessories; training kits for special training ammunition, and threaded barrels for silencer application.

Optical sights were not a requirement, but a manual safety was.

In addition to improved ergonomics and high reliability, the US Army demanded primarily higher efficiency and accuracy for its future service pistol system. „In terms of accuracy the requirements asked for a Match Pistol,” says Richard Flür, Director of International Sales with the Austrian arms manufacturer. The RFP did not specify the calibre of the weapon. Also, applicants were allowed to

submit several models for selection. Glock therefore came up with two proposals: the Glock 19 MHS in calibre 9 x 19mm and the Glock 23 MHS in calibre .40. In addition, the company joined forces with the ammunition manufacturer Vista Outdoor for this project. The 9x19mm calibre Enhanced Barrier Round (EBR) ammunition type was developed specifically for this project. It is similar to the projectile of the M855A1 5.56 x 45mm Enhanced Performance Round, which has



(Photos: Jan-Phillipp Weisswange)

The Glock 19 MHS kit: Pistol with inserted standard size magazine, two extended 19-round magazines and interchangeable back straps



Ambidextrous Concept: The manual safety, the slide stop lever and the disassembly lever can be operated from both sides. The extended magazine release button can be deployed in an ambidextrous way.

been introduced as new, standard ammunition of the US Army for the M4 carbine and the M16A4. However, according to Vista, there are major

differences in design and technology. The self-financed development of the Glock MHS was remarkably fast, taking only 18 months.

The Glock 19 MHS - a One-Gun Solution

Glock presented the Glock 19 MHS model to ESD during a company visit. On the surface, the weapon distinguishes itself from the usual models by its colour. Both the polymer frame and the very durable coated slide are "Coyote"-coloured, which is good for camouflaging in almost all climatic regions.

Glock chose a one-gun solution for its MHS application: one pistol that fulfilled all the requirements of both the full-size and the compact pistol, which is logistically convenient and convincing. The designers left out the finger grooves on the frame just like the FBI version. Together with the interchangeable back straps (with a beavertail option), this will ensure better adaptability for different hand sizes and for a better grip, for example when using gloves.

The Glock 19 MHS also features the Rough Textured Frame Surface already introduced with the Glock Gen4. The Rough Texture Frame Surface makes the weapon pleasant and easy to grip.

A Further Insight:

Interview with Dr. Stephan Dörler, Managing Director, and Richard Flür, Head of International Sales, Glock GmbH.

ESD: At the moment, there are lots of discussion about the US Army's Modular Handgun system bid, due to incomplete information. How do you feel about the decision?

Flür: Of course, we are not happy about it. We find it particularly unfortunate that the decision was made only on the basis of one part of the originally planned tests: it would have been possible to do all the tests for both pistols remaining in the competition with relatively little cost involved, and then decide which pistol best meets the requirements. In the first phase the pistols were almost exclusively shot from a machine, and no tests were carried out concerning different environmental conditions.

ESD: Glock's protest against the decision of the US Army was rejected. Was the protest a mistake?

Dörler: It is true that the protest did not result in any change to the decision. But most points of our protest were confirmed. However, it was decided that the contracting authorities have huge discretion in technical evaluation, which goes so far that it was decided not to rate the test results for the compact pistol reliability function after doing the actual testing. Ultimately, price, only the seventh most important criteria according to the RFP, was the decisive factor. Here, our competitor apparently had the much cheaper offer.

ESD: Was the competing Sig Sauer offer really US\$100 million lower than yours?

Dörler: The total price is comprised of a number of different factors, from the pistol to various kits, spare parts packages to ammunition. We made a big effort to submit an attractive price offer.

The detailed price structure of the Sig Sauer proposal is not known to us. There is, however, a statement from Major General Robert Scales Jr., in the course of a hearing at the US Senate Armed Service Committee that Sig had offered its pistols two thirds below wholesale price. This would be roughly US\$150 per pistol. If this is true, this would actually be an extremely low price for a pistol with night sights and a surface that is very difficult to produce.

I would be very interested to know whether the serial production pistols that will finally be delivered are identical to the test pistols submitted for the bid - but I assume that this information will not be released. As I stated, this surface treatment is a real challenge in mass production.

US\$150 per pistol would not be possible for us even for such a large customer. All customers are important to us; we try to treat them all equally.

ESD: Were life cycle costs taken into account during the bidding process, or were procurement costs alone the decisive factor?

Flür: We see this as a problem of most handgun tenders: life cycle costs are not really determined, which of course leads to a misrepresentation of the real costs. In most cases, only a defined quantity of pistols and spare parts are



(Photo: Glock GmbH)

The 9 x 19 mm Enhanced Barrier Round cartridge

A closer look at the frame reveals that the Glock 19 MHS has the compact length of the 19 Series, but the standard height of the 17 Series models. This way, the weapon takes the larger 17-round magazine. In addition to a standard magazine, the Glock MHS kit also includes two extended 19-round

magazines. All are Coyote coloured. Behind the magazine well is a lanyard clip. The Glock 19 MHS also features the newly developed Glock Marksman Barrel. It has a new, hexagonal running profile with a right-hand twist; the rifling length is 250mm.

Ambidextrous Concept

Like the Gen4 model there is the extended magazine release button which can be deployed ambidextrously. A new feature is the ambidextrous slide stop lever which can now be operated



The self illuminating three-point sights allow easy targeting.

multiplied by the prices per piece, not taking into account what round-counts the pistols endure, or how many spare parts are actually needed. It would be easy to determine this based on performed durability testing. This can even give products with high spare parts consumption an advantage, because the gun price can be subsidised through margins on the spare parts.

Also, logistics and personnel costs for repair and maintenance are rarely taken into account in the calculation of the total costs - although these are usually higher than the price of the actual pistol itself when looking at the whole life cycle.

ESD: Did the proposed MHS solutions also differ in terms of logistics?

Flür: Yes. While our competitor offered a solution with two pistol models (Full Size and Compact), we submitted a solution with only one gun (one-gun solution) that met all requirements regarding dimensions, magazine capacity and accuracy.

The indisputable logistical advantages of handling only one product, combined with the significantly smaller number of different spare parts, were not taken into account in the cost assessment.

ESD: Do you have any knowledge about the shooting performance of your products compared to the competing pistols?

Dörler: We do not know the results of the rejected competitor products. During the protest we received

comparative data for the two competitors that advanced to the Competitive Range. In this regard, too, the protest was meaningful to us: it showed us that our engineers did a great job in developing a highly innovative pistol, in combination with the ammunition resulting in a highly innovative system that achieved the best results in reliability, precision and effectiveness.

Our ammunition partner, Vista Outdoor, also did an excellent job. In many situations the 9mm EBR cartridge is more effective than .45 calibre ammunition.

¹³ Under the factor 1 reliability evaluation, Sig Sauer's full-sized handgun had a higher stoppage rate than Glock's handgun, and there may have been other problems with the weapon's accuracy. AR, Tab 3, SSDD, at 12. Due to the Army's redactions of the agency report, the results of Sig Sauer's compact handgun test are unknown.

Extract from the GAO decision of 5 June 2017

ESD: Will there be a version of the Glock Modular Handgun System pistol for the commercial market?

Flür: Yes. We think this is a great pistol and would like to give all interested parties the opportunity to try and purchase it. All costs associated with the development of the pistol were financed by Glock, so it is also possible to market the pistol independently.

Of course, we will be able to make good use of the experience gained from completing this project. Some aspects will certainly be reflected in future Glock products.

The interview was conducted by Waldemar Geiger on 1 August 2017.

from both sides and which can easily be reached with both, the strong and the weaker shooting hand. An ambidextrous manual safety is also a new feature. If the shooter pushes it downwards to the "F" position, it is ready to fire; if the shooter pushes it upwards to „S“, it blocks the trigger bar. Incorporation of the manual safety was a specific demand of the US Army. As a standard feature, the pistol has, of course, the Glock-typical Safe-Action-System and the three proven independent safeties: Trigger safety, firing pin safety and drop safety.

On the Shooting Range

The Glock 19 MHS is easy to grip. The author, with relatively large hands, immediately liked the combination of compact 19-length and full-size 17-height. The self-illuminating three-point sights allow for easy pickup of the target and fast aiming. The trigger breaks clear, and the trigger reset is very good. When shooting with the special EBR cartridge, the stronger charge is immediately apparent, giving you a sense of using an effective and powerful combat gun system. Furthermore, recoil and impact can be managed easily. At a distance of seven metres the impacts were - with few shooter-related outliers – hole in hole even in the case of faster series. Shooting from the shooting machine at a 25-metre range the Glock 19 MHS delivered groups within a three-centimetre diameter.

	Glock 19 MHS	Glock 23 MHS
		
Calibre	9 x 19 mm	.40 S&W
Functional principle	Safe-Action-Trigger, firing pin safety, drop safety, additional manual safety	Safe-Action-Trigger, firing pin safety, drop safety, additional manual safety
Magazine capacity	17 and 19 rounds	15 and 22 rounds
Trigger pull weight	20 - 31 N	20 - 31 N
Barrel length	102 mm	102 mm
Sizes (L/W/H with a magazine)	185 mm x 34 mm x 138 mm	185 mm x 34 mm x 138 mm
Weight (with an empty magazine)	708 g	786 g

Experienced shooters consistently hit the Nine and the Ten in the German Shooting Confederation (DSB) Target.

Outlook

Several hundred of the Glock 19 MHS have been produced in recent months. In view of this promising self-developed weapon system, and due to several inconsistencies in the US Army's selection process, Glock filed a protest against the

decision in the MHS award procedure (see interview), but even though the US Government Accountability Office (GAO) ultimately rejected the complaint, mainly on financial grounds on 5 June, the MHS project from Deutsch-Wagram is not in vain, as the company is planning to make a variation of its MHS pistol available for the commercial market. Future Glock products will also benefit from the company's experience in the MHS solicitation. ■



Shooting with the Glock 19 MHS. Despite the stronger charge of the EBR cartridge, the recoil and impact can be managed easily.