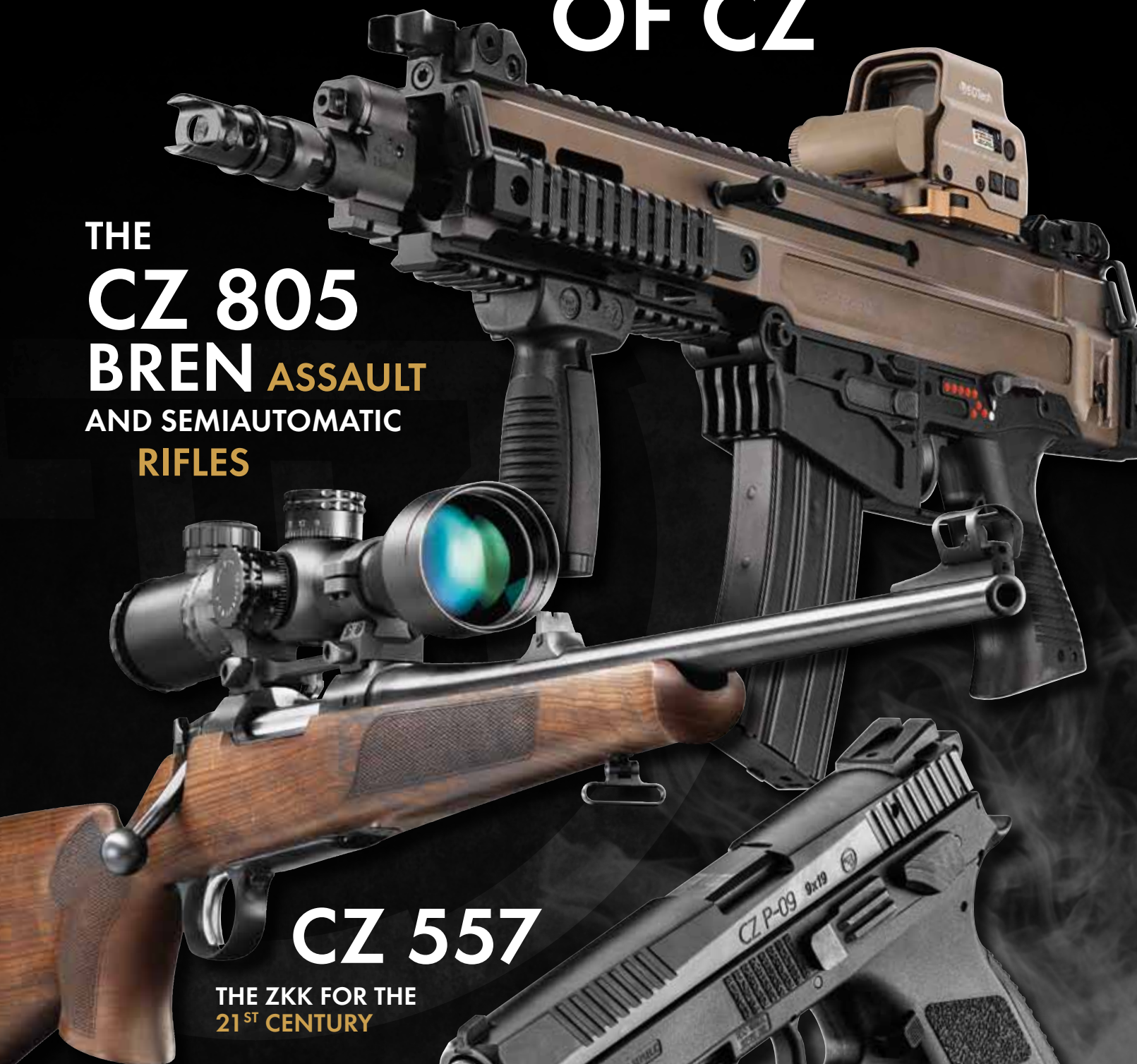




# CZ

# THE BEST OF CZ

THE  
**CZ 805**  
**BREN** ASSAULT  
AND SEMIAUTOMATIC  
RIFLES



## CZ 557

THE ZKK FOR THE  
21<sup>ST</sup> CENTURY

A NEW  
CHAPTER  
The **CZ P-09** PISTOL



**14** A new chapter  
The CZ P-09 pistol



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# For us, BUSINESS DOES NOT END with sale

**Speaking with general manager of Česká zbrojovka a.s. (CZ), Ing. Lubomír Kovařík, MBA, not only about new generation of CZ weapons**

**| You have been general manager of Česká zbrojovka for almost 8 years now. With what vision did you come to CZ in 2006? And have you managed to fulfil it?**

One of my primary objectives I was resolved to achieve was to reintroduce into the production portfolio of CZ automatic weapons, whose production had, naturally, seen a recession since the fall of the Iron Curtain. We have managed to achieve this objective, and at present, we are one of few producers in the market to offer a comprehensive range of duty

weapons, from the numerous family of pistols led by our entirely new polymer models CZ P-07 and CZ P-09, to our submachine gun CZ SCORPION EVO 3 A1, simplified in a revolutionary way, to our modular assault rifle CZ 805 BREN A1/A2 with grenade launcher CZ 805 G1, up to sniper specials. In addition to that, we must not forget about our wide range of accessories and supplements. Today, we are able to attend to almost any order from armed or security forces, with an exception of machine guns, which is, of course, a special product, not designed for an ordinary combatant.

**| You have returned to production of automatic duty weapons at the time when armed forces all over the world face significant reductions of their budgets, which is reflected, among**

**other, in lower quantities and frequency of realized purchases. How do you tackle this situation?**

The situation in the armed forces market really is not easy, but there is still an interest in high quality firearms. Our indisputable advantage is our offer of the entire range of top quality modern firearm models for prices that are not exorbitant, and this fact is reflected in the demand. In addition to that, it is clear that there are ever harder requirements imposed on producers. The top quality is no more the only decisive fact, as it is expected automatically. It is the degree of flexibility for individual customers, the price, naturally, the ability to supply demanded goods fast and, above all, other additional services that matter today. It means that our business does not end by selling a weapon, it must be accompanied by top after-sale service or even training.



These all are the attributes that enable us to meet the existing demand and, at the same time, to find new opportunities for business and sales. This is where our huge strength lies and one of the reasons for our present business success.

**| The economic results of Česká zbrojovka (CZ) in the recent several years have been imposing, indeed. Does this mean that you have not been impacted by the global economic crisis to such a great extent?**

The CZ company has tackled the so-called economic crisis well. Although there has been a short-term decrease in revenues, we have managed to balance it very soon and to reach our planned growth trajectory, and that is why the economic results of CZ have been very positive in the recent years, regardless of the recession of the global and national economies. This fact can be illustrated best by our year-to-year rise in revenues, which was 31% between the year 2012 and 2013, and our consolidated revenues for 2013 exceeded 2.8 mld. CZK. To have the full picture, I must add that our company is not just a weapon producer, as its name could evoke. We also focus on production of high-precision machinery components, especially for the automotive and aviation industries. This non-weapon section of our production program generates around 20% of our company's revenues.

**| How many changes in your company stand behind these rapidly growing numbers?**

In the recent years, CZ has undergone a major transformation, from management all the way to our line employees. Although we still are a large company, employing almost 1800 employees, we try to be flexible to the maximum extent, above all, to be able to react fast and readily to requests of our end customers. It is one of the reasons why we have implemented more flexible mechanisms of management of our key projects; we continuously modernize our technology, work on improving the quality in all stages of production. It is worth mentioning that there are many former active members of the armed and security forces in our ranks, who apply their practical experience from combat and other duty deployment in designing or testing our products. This all can be seen best on the new generation of our duty and civil weapons, which has met with extraordinary success.

**| Which of your weapons do you regard as the most successful, and which CZ news for 2014 do you see as the most important?**

On a long-term basis, we have achieved the greatest success with our pistols, which are supplemented by the models CZ P-07 and CZ P-09 this year. But our new automatic weapons start to yield ever better results, too, especially our submachine gun CZ SCORPION EVO 3 A1, whose parameters and performance are hard to compete with. As far as the civil sector is concerned, we have undergone a generation replacement of our rifles of the medium category – CZ 557 – and repeating and self-loading

**Česká zbrojovka  
is experiencing the most  
successful period  
of its existence so far.**

rifles – CZ 455, CZ 512. Our new models are selling excellently, so we are satisfied in this respect, too. Of course, we are looking for areas where we could improve further.

As far as our new products for this year are concerned, clearly the most significant is the already mentioned pair of pistols, CZ P-09 and CZ P-07. These pistols are both duty and defensive firearms for everyday use, which incorporate the most up-to-date knowledge of firearm design and are produced with the use of the most modern technology. The ultimate novelty of these firearms is their top surface treatment, thanks to which they represent a perfect tool for members of armed and security forces all over the world, but we are certain that they will meet with success at the civil market, too. This is evidenced by our initial feedback from our customers. Also hunters will find something designed for them – it includes, above all, our new models in the CZ 557 range of hunting rifles as well as our originally designed over-under rifle/shotgun Brno Combo with an exceptionally low barrel assembly and a number of other improvements, which is introduced by our subsidiary Zbrojovka Brno. And we have many more interesting novelties prepared for this year. You can read about them on the following pages.

**| Last year, you achieved your first major breakthrough in the area of international cooperation. What is your strategy and plans for the nearest period in this respect?**

Firstly, I must emphasize that CZ is a company with strong regional responsibility, and, as such, it focuses primarily on cooperation with other Czech subjects – naturally, only with such companies that are able to guarantee the level of quality comparable with the top quality of our weapons. Nevertheless, it is not always possible and desirable, and in such cases we look for partners abroad. For instance, silencers for our new automatic weapons are presently supplied by a renowned foreign supplier.

Generally, it applies that tenders organized by armed forces of individual countries cannot be won without very intense cooperation with local partners who possess detailed knowledge of the market, and I am glad that we have managed to build a very extensive and high-quality network of partners. Another step on this journey is the production cooperation you have mentioned. At present, we have several projects in the stage of implementation, and these projects, on the one side, help our company to supplement our insufficient production capacity and, on the other side, they react to legislative requirements of certain states, relating to a significant entrance to the armed forces market. The greatest media attention has been attracted by our CZ-Brazil project, whose primary objective is to establish in Brazil a production-assembly plant for assembling our compact pistols CZ P-07 with an annual production capacity of up to 100,000 firearms that would be supplied exclusively to the local Brazilian market. This project is enjoying great support of the authorities of the Brazilian state of Santa Catarina as well as the local administration in the town of Pomerode, where the new plant is being built.

The outlined manners of cooperation are, at least in my opinion, the only way leading to mutual satisfaction.

**| How do you see the future of Česká zbrojovka in the next two to three years?**

Česká zbrojovka is experiencing the most successful period of its existence so far. Our production and revenues grow every year, our capacities are fully utilized, we regularly launch new top quality models. And, of course, we do everything we can to continue in this trend, and not in the next two to three years only. 

# A HIGHER Level

## The CZ P-07 or the Way to Improve the Duty

The CZ 75 P-07 Duty pistol has been the most successful polymer pistol from Česká zbrojovka a.s. (CZ) to date. Launched in 2009, this service and defence compact has become one of the highest demanded small arms made in Uherský Brod and has scored seriously high points in the service sector. New for 2014 is the simply-named P-07, expanding the excellent concept of the initial Duty with a range of improvements, some minor – some substantial.

The product range of Česká zbrojovka (CZ) during the first decade of the new millennium included a number of very successful pistols based on the classic model CZ 75, but it still lacked a modern polymer-framed service and defensive pistol to meet the contemporary requirements of armed forces the world over as well as rival the top foreign products of famous brands.

To fill this need, the CZ implemented the Omega trigger system in 2006 –

the heritage of the design, with many of the features that made the 75 stand out nearly 40 years ago. With slide-in-frame design, simple disassembly and hammer-fired operation, it shows its lineage while incorporating recent design elements in a compact polymer platform. The new P-07 leaves behind the 'CZ 75'



**The new generation of polymer CZ pistols jumps ahead within such key characteristics as reliability and durability under any environmental conditions.**

a substantially simplified and robust trigger mechanism for the 75 pistol series. This trigger was finalized just in time to be incorporated into a new 'tender-friendly' pistol under development.

The fruit of this development was the CZ 75 P-07 Duty. The 'CZ 75' speaks to

and 'Duty' designations, instead standing on the name it has made for itself as the current standard of modern service pistols.

### MERITS OF THE DUTY

The body of the Duty is made of Zytel® polymer material without any fibreglass

additive, characteristic for its exceptional durability and CZ has been successfully implementing this material in its small and long firearms since the times of its polymer CZ 100. The dust cover of the frame is fitted with a standardised Picatinny rail, the large trigger guard enables shooting while wearing gloves, the magazine well opening is funnel-shaped to allow for faster re-loading and the stippled grip ensures a reliable grasp for both left- and right-handed shooters. The classic design of the magazine catch at the bottom side of the trigger guard is one-sided only, yet easily converts from left to right.



Stippled sections on the side of the frame prove useful not only for reliable 'resting' of the index finger of the shooting hand outside the trigger but also for reinforced grasp on the gun when held by both hands, with the checkered spot serving as a rest to the thumb of the other hand. These stippled sections have persisted on the modern P-07 as well as its larger sister, the P-09 (see p. 14 for more details).

The polymer frame of the P-07 houses two metal frame inserts, one of which was adapted from the subcompact CZ 2075 RAMI P. The top sections of these inserts

are notched to engage the slide rails and provide solid guidance during cycling. The rear insert carries the Omega firing mechanism, with additional rails to secure the back of the slide. The front insert serves to attach the trigger and slide stop, which is the main connection holding the slide to the frame. The return spring is made of flat wire and it is fit on a long plastic guide. When in the rearmost position, the slide hits a partition in the polymer frame that absorbs a considerable amount of recoil.

The slide of the Duty is based on the currently most common simplified Browning system with open quadrant comprising two hooks and locked by the square-shaped

rear side of the barrel to fit the sizeable ejection port. When locked, the slide remains in horizontal position, ensuring direct path for the ammunition to leave the magazine and

travel into the chamber, which makes the feeding process reliable and smooth.

The Duty has been fitted with ambidextrous plastic safeties and de-cocking levers, the design of which matches the overall shape design of this pistol. The Duty's hammer was provided with a classic round knurled thumb rest with a large relief hole.

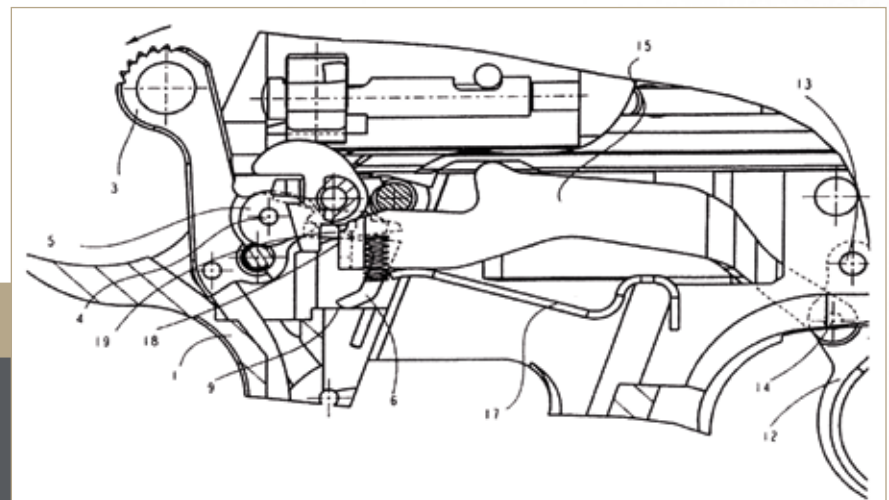
Comparison of the compact CZ 75 P-07 Duty (from 2009) with the standard model CZ 75 B

Characteristic features of the model CZ 75 P-07 Duty include the slide with large thumb grooves at the top of the grip and markedly bevelled sides of the slide to simplify drawing and re-holstering of the firearm. The new magazine is a very popular feature, it was developed by adaptation of the magazine from the CZ 75 Tactical Sport

## BREAKTHROUGH BY OMEGA

The Omega trigger mechanism has evolved thanks to long-term experience gained by personnel at the CZ company with respect to the original SA/DA hammer system of CZ 75 pistols, whose excellent user-friendly parameters are balanced by fairly complicated manufacturing and assembly – not to mention its disassembly. The Omega mechanism is still based on the genius idea of design engineer František Koucký using the trigger as a single-arm lever to achieve reduced trigger pull and very smooth trigger operation.

Patented Omega – this design, making use of technologies developed at the



beginning of 21<sup>st</sup> century, is transposed into an incomparably simpler form. It still uses the characteristic trigger bar system of the 75, which now rides on a free-floating roller to reduce friction and smooth out the trigger pull. The trigger parts are of an interlocking design to simplify assembly and disassembly, requiring manipulation of simple modular parts. The service life,

durability and reliability indicators have shifted to measurable threshold levels – while the trigger travel and pull of brand new firearms have reached the level familiar for well seasoned products as the classic 75s. One of the greatest achievements is the ability of the end user to convert from safety to decocking levers quickly and easily.

and the manufacturer managed to achieve the same capacity as in the standard CZ 75 with a compact size grip.

The Duty was initially specified for nitriding of the barrel and slide with the aim to improve surface strength of these parts and its durability against corrosion; the pleasant velvet black colour was just a side effect. However, this alteration did not meet all the expectations – the surface with nitriding finish has been proven as prone to scratches. The CZ therefore opted for surface protection of the barrel and slide on this pistol with manganese phosphate coating that improves anti-corrosion and friction characteristics.

The excellent sales results achieved by the model CZ 75 P-07 Duty were significantly boosted by the approach adopted by CZ when managing the accessories and launching the pistol with sophisticated polymer holsters to contain both the gun and its magazines.

## NO RESTING ON LAURELS

The evolution of the CZ 75 P-07 Duty was very fast – because it was a brand new gun, its development finished as soon as 2007 (that is where the label P-07 comes from) and it was launched to retail shops in spring 2009. The motivation of CZ was clear: the global war against terrorism resulted in higher demand for modern service pistols and triggered an avalanche of police tenders all over the world that still persists.

not rest on laurels and waged further improvements of its product range. Using customer input and adding modern features, engineers were able to further improve the P-07 Duty's design.

Unsurprising was the assessment of the frame material. The Zytel® frame of the P-07 is basically indestructible. Though some customers might perceive it as soft or sensitive to temperature changes, testing and use by Duty users confirmed that the polymer frame has proven very robust and up to the demands of a modern service pistol.

The Duty lacks the option of grip size customizing by means of interchangeable backstraps. That was one of the consequences brought by rapid development with priority assigned to other things, though most shooters have found the gun ergonomics very pleasant. Nevertheless, the easy adjustment of grip size has become a clear standard for this pistol category since then and the addition of adjustable backstraps makes it much more desirable in the eyes of the consumer.

The shape of the Duty's slide is another unique feature that was met with mixed reviews. A small number of consumers prefer to cock pistols by gripping farther forward on the slide, which is made difficult by the bevelled profile of the Duty's slide. Additionally, the sharp lines of the slide

though they have a modern shape to accommodate swift drawing of the pistol and they are easy to read thanks to the white line on the front sight and the border of the rear sight notch, many users expressed their opinions saying that a low product price is a good thing but such parts should be rather made of more rugged steel that is more stable when mounted, compared to plastic.

Some shooters provided feedback on the trigger, commenting on the shape and forward location when in double action. And finally, the critics also focused on the non-captured recoil spring impairing the re-assembly of a fully disassembled gun.

Product managers from CZ kicked in during the next stage. These positions in the company have been staffed by people with extensive experience with actual deployment in battles, who are well aware of customers' needs and preferences – together with their dislikes and worries. It was actually the 'product chaps' who decided to go a truly detailed path in modernising the Duty and the design engineers were ordered to improve



The Egyptian tender involving top global arms manufacturers, was won by the model CZ 75 P-07 Duty with tritium sights and extended barrel

The P-07 Duty's popularity was proven by the rising sales figures and higher interest among security forces. The top achievement of the Duty in this segment was winning of the tender held by the Egyptian Ministry of Interior, where this gun beat rivals of such brands as Glock and Beretta.

The model CZ 75 P-07 Duty can be described as a very successful gun in general. However, the CZ company would

can catch on clothing. Both of these have been refined for the new P-07, with a de-horned slide with forward cocking serrations.

Customers were also fairly sceptical about the economical polymer sights. Even



durability of surface finishing on the main components and other metal parts. There have been final changes done that affected the hammer with the aim to enable its easy and safe operation by harmonising the shape with an altered design.

### WHAT IS DIFFERENT?

The easy tasks involved elimination of any sharp edges on the slide and adding the forward slide serrations as well as the change in shape of the trigger blade shape and hammer. Most of these were handled by the design engineer Ivan Filko himself – and his solutions may be considered very elegant. His design of the new slide is free of any sharp transitions at exposed spots and the second set of cocking grooves on its front surface brings an aesthetic balance to the rear knurls. The straighter trigger fits well with the new pistol aesthetically and the more importantly it has significantly reduced finger reach in DA mode.

As far as the new hammer is concerned, the design engineer worked with a sketch supplied by the product manager. The handling surface with traverse ribs is straight, fairly long and slightly deflected forward in the rest position. Result: comfortable and reliable cocking and de-cocking. The new square-shaped hammer with a relief hole following its outer contours further looks modern and 'sexy'.

The change of material for pistol frame and its impact on the shape of certain sections and internal parts was far from simple though. Polymers reinforced with fibreglass are not flawless. They are amazing for the high strength and dimensional stability regardless of high temperature fluctuation. The less known fact is that polymers with fibreglass are fairly brittle.



The Duty showed us there would be a problem with the spur, which basically follows the shape of beaver tails from seventy-fives. The same design applied to frame made of Zytel® with fibreglass showed reduced durability during drop tests. This problem also occurred on the trigger guard – whereas this part was quickly done by means of slightly thicker walls, alterations of the frame rear took the design engineer a fairly longer time to complete. This section had to be actually re-designed in full to keep the rear frame insert from

**We were very comfortable with the new steel sights.**

the Duty model as far as the maximum interchangeability of parts throughout the product range timeline is concerned. He would not make it a hundred per cent perfect anyway, strengthening the spur required both the reduction of its length and thicker walls, as well as slight curving of the of the top part of the grip, this solution luckily employed a reduced original container instead of making a new one.

On the other hand, the concept for replaceable grip backstraps was done without any complications. The design engineer was inspired by the successful solution on model CZ 75 SP-01 Phantom from 2008: backstraps are slid onto rails molded into the grip and secured by means of a cross pin holding the main spring plug as well. They are easy to replace, yet the manufacturer does not assume that these replacements would not be very frequent, so the pistol is supplied without any special tool for removal of the pin – one can simply use anything of the right diameter. Even the backstrap

knurls came from the Phantom pistol, it is less dense compared to the Duty. Models CZ P-07 and CZ P-09 are supplied with three replaceable backstraps as standard: S, M and L, while the gun comes fitted with the S size, which is smallest one.

### STRENGTH IN DETAILS

The compact CZ P-07 as well as the standard model CZ P-09 being prepared in parallel feature a captured recoil spring, pre-tensioned on its guide to enable easier disassembly and re-assembly, unlike the Duty model. Utility characteristics of the new pistols are further substantially improved by the newly designed sights. Those are made of steel, which improves the service life and durability and eliminates certain assembly difficulties encountered on the old Duty – fastening plastic to metal with a screw is simply not the right way to go. The new sights, shaped to accommodate fast drawing of the pistol without tearing the shooter's clothing, are provided with luminescent dots as standard, the product range also includes versions with optical fibre and tritium capsules.

The minor alteration of the slide catch during the development process came beyond the framework of the original assignment for design engineers in Uherský Brod. Whereas the slide catch on the original Duty and its modernised version works flawlessly, the large P-09 showed that a truly energetic ramming of the magazine inside the pistol resulted in spontaneous release of the slide. These potential problems were easily (and

Resultant 'rounding' in front view: CZ P-07 on the left and the original Duty on the right





quietly) removed by rounding the edge on the functional cog on the slide catch.

Magazine improvements mean that the P-07 holds 15 rounds in 9x19, one fewer than the previous Duty. A thicker magazine spring and a new base retainer give longer service life out of the factory magazines. An accessory base pad comes inside the box and can expand the capacity of the magazines by two rounds, giving 17+1 in 9mm and an impressive 14+1 in 40 S&W.

### EXTREMELY DURABLE ARCOR

The search for technology to improve durability of surface finishing on the new models quickly brought the attention of development crew to the nitrocarburization process in salt bath, which is similar to a 'Tenifer™' surface treatment. Having gone through a careful selection process, the design engineer Ivan Filko opted to the process called Arcor. The vital thing for users to know is that the procedure improves the resistance to corrosion and wear significantly. The testing in salt fog proved that the technology selected was even better than the coatings employed on top rival products.

To bring the outcome to perfection, the people in CZ decided to proceed with application of Arcor of the screws holding the sights too – as those would

often corrode in such harsh environment and spoil the overall impression made by the otherwise successful test.

This surface treatment on the pistols CZ P-07 and CZ P-09 is used not only on the slide and barrel, it's also used on certain internal metal parts. That makes the new plastic pistols from Uherský Brod the most durable CZ firearms of all time, ranking among small firearms with the best surface finishing on the market of today.

The rear part of steel frame insert on the CZ P-07 and CZ P-09 is fully covered



### VERSIONS AND ACCESSORIES

The compact CZ P-07 enters the market in calibres 9x19 (9 mm Luger), 40 S&W and also 9x21 intended for specific markets only. The portfolio will be soon complemented by the version 'calibre 9 mm Browning short', the design of which has been based on the Duty using this ammunition. Armed forces can be supplied with an already completed adaptor to enable shooting with marking ammunition – Simunition, resp. CQT – and the product range will also include the extended barrel with arrangements for suppressor mounting.

The CZ P-07 can be supplied with already available excellent plastic holsters made by Hogue (for concealed carry, alternately using the 'paddle' and belt loop and the service holster) with the design similar to holsters for the Shadow Line series. The pistol can be also provided with 'a body-work' in RONI conversion to enable more accurate, faster and more comfortable shooting, further detailed on p. 20.

### MODERNISATION THAT MAKES SENSE

The pistol CZ P-07 brings not only a cosmetic improvement of the Duty model striving to attract customers seeking a new release tag by all means. The strategy used by CZ for P-07 is similar to the one proven within the classic seventy-five series

#### 10 Major Differences or Distinguish between the Pistol CZ P-07 and Model CZ 75 P-07 Duty

- ))) polymer frame reinforced with fibre-glass
- ))) surface treatment of the slide, the barrel, frame inserts and other metal parts
- ))) slide and frame free of sharp edges
- ))) grip with replaceable backstraps in three different sizes
- ))) forward cocking serrations on the slide
- ))) new steel sights highlighted with luminescent dots as standard, optional optical fibres or tritium sights
- ))) new shape of the hammer and trigger
- ))) captured recoil spring/guide rod assembly
- ))) full polymer coverage of the rear part of the frame above the beavertail
- ))) magazine capacity for 15+2 rounds in calibre 9x19 mm/12+3 rounds in cal. 40 S&W (plastic cap increasing the magazine capacity included in the package)





during development of the model CZ 75 D Compact, the CZ 75 SP-01 series and the youngest of 'the three sisters' - the Shadow Line (see p. 22): the company took a quality gun generating good sales figures and got it to a substantially higher level with a merely limited number of precisely focused modifications. The change to the new reinforced polymer and application of the most modern surface finishing on metal parts mean an absolute change. That made the new generation of polymer CZ pistols jump ahead within such key characteristics as reliability and durability under any environmental conditions.

Since the model CZ 75 P-07 Duty has rendered excellent results on both the civil and service markets, the expectations laid

on its substantially modernised version CZ P-07 can be even higher. That is the reason why CZ has started with raising its production capacity accordingly. The P-07 will also become the first product completed on the newly fitted assembly line for CZ firearms in Brazil.

## THE CZ P-07 AT A SHOOTING RANGE

Assessment of the new compact CZ P-07 deals primarily with its comparison to the original model CZ 75 P-07 Duty. The basic technical parameters and characteristics of the trigger mechanism remain unchanged. The different frame material can be felt in truly firm grasp only: the reinforced polymer is harder and not elastic. The grip ergonomics is still good, we liked the basic size backstrap but larger sizes will be definitely appreciated by many users. The changed, rounded knur-

ling of the backstraps will be appreciated during longer shooting without gloves.

'Rounding' of the slide and frame is fairly modest but it looks purposeful. It will be appreciated in full during regular everyday carry underneath your clothes. The forward cocking grooves prove the fact that the firearm looks more aggressive than the Duty, from the front view; and that is a substantial advantage for a defence pistol. The new hammer with a straight top thumb rest surface is easy to


### CZ P-07

Calibre	9x19, 9x21, 40 S&W
Overall length	185 mm
Barrel length	95 mm
Line of sight length	149 mm
Maximum width	37 mm
Height	130 mm
Weight	3 cartridges
With empty magazine	0.780 kg
Magazine capacity	15+2/12+3



cock and release but one would be too brave to claim that it has brought any significant improvement compared to the initial round hammer. This is rather a matter of design.

We were very comfortable with the new steel sights. The straighter trigger is pleasant, making shooting with the P-07 more comfortable, compared to the Duty.

We did the practical tests with calibres 9x19 and ammunition S&B FMJ 115 grs. As one would have expected, the targeting hits were the same or very similar to those of the original Duty. Depending on abilities of the shooter, five rounds shot at the distance of 15 metres fitted with a circle of 70 mm in diameter, yet there were some more experienced shooters to prove this diameter can shrink to the mere 30 mm. Similar results can be apparently achieved using the P-07 in calibre 40 S&W without any hassle. 

# EVERY PISTOL IS ABOUT SPRINGS

Interviewing the design engineer **Ing. Ivan Filko**  
on his new pistols **CZ P-07** and **CZ P-09**

The design engineer from Česká zbrojovka a.s. (CZ), Ing. Ivan Filko, does not like being called an expert on polymer pistols, yet the fact is that he has been concerned with this type of firearms during various tasks repeatedly since 1990s and he is the actual main author of the currently most successful 'plastic gun' from Uherský Brod, the CZ 75 P-07 Duty. His drawing board, which is 'electronic only' now, has seen birth of the new models CZ P-07 and CZ P-09.

Pistol grips have been even provided with interchangeable backstraps now.

**| The development of model CZ P-07 resulted in partial shape modifications compared to the original Duty. What was the reason for this?**

The change of material brought certain problems we did not have to handle with the initial non-reinforced Zytel®. I had some hard times doing the rear part of the frame, specifically the spur, as the frame is more brittle now and the spur kept cracking

**| Where did you get the impulse for modernisation of the model CZ 75 P-07 Duty?**

The essential drive came in form of input from our current product managers. They are just a bunch of young men but they surely know what they want and why. I get annoyed rather than pleased, when I have to hold discussions with them, yet they were the ones taking a lion's share in the development of the CZ P-07 and CZ P-09.

eliminate these problems on models CZ P-07 a CZ P-09. We are still using Zytel®, this time enriched with some fibreglass. That helps us make the pistol frames more rigid and dimensionally stable.

**| Where would you see the greatest reserves of the original Duty model?**

Once we had managed to eradicate its 'childhood diseases', the original Duty still had some sharp edges ripping the shooters' clothing. And there was the frame material too. It is a pure polymer without any glass additives. The main reason for this selection was tradition, Česká zbrojovka used it on the CZ 100 for the first time already and was the most familiar with this material. The Zytel® material itself is basically indestructible, we even had one director at our factory, who would present its characteristics to visitors by slamming the frame of CZ 100 with a hammer to prove the durability of this material. However, it is still soft and it may be squashed by very firm grasp, causing failures to the magazine release process. It is not stable, it shrinks and flexes. It may impair the slide movement. This thing is basically a potential source of many risks. So, the material change enabled us to





during drop tests. It was not difficult to modify but the essential procedure when working on new pistols relied on keeping the maximum number of parts from the original Duty. That was why I strove to make the modification in such manner to avoid replacing the rear container, which is made by the MIM technology. Finally, I had to shorten the rear container a bit, which reduced the frame cavity, the cross-section of the spur increased to such extent it can withstand the load now.

**The frames of the CZ P-07 and CZ P-09 are more rigid and dimensionally stable thanks to the polymer enriched with fibreglass.**

**| Who came up with the idea of applying Arcor on the new pistols?**

That was a joint decision together with product managers. The CZ used to apply manganese phosphate as surface treatment of its pistols, this material is not bad and has several good characteristics but it can be scratched easily. Insufficient characteristics of surface treatment were one of the reasons, why the development of model CZ P-09 took about three years. The design of this pistol was long finished but we were still unhappy with the surface treatment. That was the reason, why we started considering the carbon nitriding process in salt bath. I grew very fond of various methods currently available in the Czech Republic and finally opted for an originally French method called Arcor. That is basically an option of carbon nitriding with subsequent oxidising, representing the standard on pistols of famous brands nowadays. The results are excellent. If you leave a pistol with manganese phosphate surface treatment in salt chamber for 72 hours, you end up with rust spilt all over. Results obtained with Arcor exceeded all expectations, everything withstood the tests perfectly.

**| How did you establish the barrel length for model CZ P-09?**

I have simply added two centimetres onto the barrel of model CZ P-07. There is nothing more behind it.

**| Could such alteration bring any design problems?**

Not really. This is mostly handled by the return spring, which ensures

the operating cycle of the gun. Some interesting facts: the CZ P-09 in calibre 9x19 used to be fitted with the same spring as the CZ P-07 for the same ammunition. The compact was finally provided with a spring somewhat softer to achieve easier cocking. The CZ P-09 in calibre 40 S&W is fitted with a spring designed for the nine-millimetre Phantom model, which is stronger. The calibre is more powerful, it needs to be matched with a spring exerting better resistance. The slide needed to be slowed down a bit to prevent it from hitting the frame too forcefully and sticking rounds into the chute when loading.

**| Is it true that the basic shape of hammer used on pistols CZ P-07 and CZ P-09 has been based on an idea brought by a wife of one of your product managers? And what is the effect on changed hammer shape on the reliability and primer initiation rate?**

The basic shape of hammer used on new pistols was actually drawn by a wife of our product manager, as she is more gifted for creative art than him. I had converted the sketch into a digital image and completed its fine-tuning to achieve the resultant shape. As far as the striking energy is concerned, it is handled by the striking spring. Reliable and fast initiation is also obviously dependant on the weight and shape of the hammer but the most important role is definitely played by the spring used. A pistol is basically all about the spring.

**| The pistols CZ P-07 and CZ P-09 have been also fitted with new steel**

**sights. Who is the author designer of these?**

That is Mr. Jarda Rezek, who cooperated with me when dealing with the Omega trigger mechanism and the Duty compact pistol, besides other projects. He has really done a great job with these new sights, they enable a faster aim now.

**| You have also designed an adaptor for the CZ P-07 and CZ P-09 to enable shooting with Simunition tracer rounds that are substantially weaker, compared to regular pistol ammunition. Was that a daunting task for you?**

This ammunition is weak but the final solution involves a different return spring only. Whereas the adaptation of the Phantom model required its design engineering to reduce the slide weight, it was not necessary for the CZ P-07 and CZ P-09. I used a return spring made from plaited wire on the P-07. There was some minor complication with the P-09 but then I took the spring from a regular CZ 75 and it went like a dream. All that was simply done without any calculations, as I wanted to try it first and proceed with fine-tuning of the spring but the mechanism worked immediately.

**| The original plan was to call the existing CZ P-09 just CZ P-08. Why have you opted not to use this name?**

The original name had to be avoided, as it had been in use for a little over 100 years by the Luger, as we later realized. Yet there were some guns manufactured and sold to the USA under this name, I think.

**| The launch of the CZ P-07 and CZ P-09 has brought the product range of the CZ company to offer closely related modern pistols of standard and compact size. Are you contemplating to extend these series with a subcompact firearm?**

The current business strategy pursued by CZ puts minimum emphasis on subcompacts, as far as I know. On the other hand, the ideas presented by our product managers for a long-term plan do include a firearm of this type, yet its design is not linked with the CZ P-07 or CZ P-09. ■■■





# A **NEW** chapter The **CZ P-09** pistol





In late 2013 the Česká zbrojovka (CZ) launched sales of its eagerly awaited novelty – the service, personal defence and, last but not least, also sports pistol, the CZ P-09. It is a full-sized pistol model, originally conceived as a 'big Duty' or an enlarged version of the successful polymer compact – the CZ 75 P-07 Duty. However, the Duty was eventually transformed by a considerable updating and modernizing into the new model, the CZ P-07 (see p. 6) and these substantial changes were indeed transmitted to her bigger sister, too. The 'P zero niner' is, thanks to this development process, a weapon with a completely new set of characteristics and performance, markedly superior to the existing parameters of the CZ pistols.

**CZ** P-09 is a modern pistol of a standard size, from the outset conceived as a service weapon of a member of armed forces. In fact, professionals over the world contributed their comments, suggestions and requirements, bringing their important share to the development of the weapon. The most important features finally figuring in the requirements

The CZ P-09 excels in accurate rapid fire – the muzzle rise following a shot is not pronounced and a return to the target is rapid.

were the comfort of handling and control, high precision also during rapid fire and a maximum reliability. The 'P zero niner' is of course a fully fledged personal defence and sporting weapon for a civilian shooter, too. In 2013 it was approved officially for use in the Production Division of sports shooting along the IPSC rules.

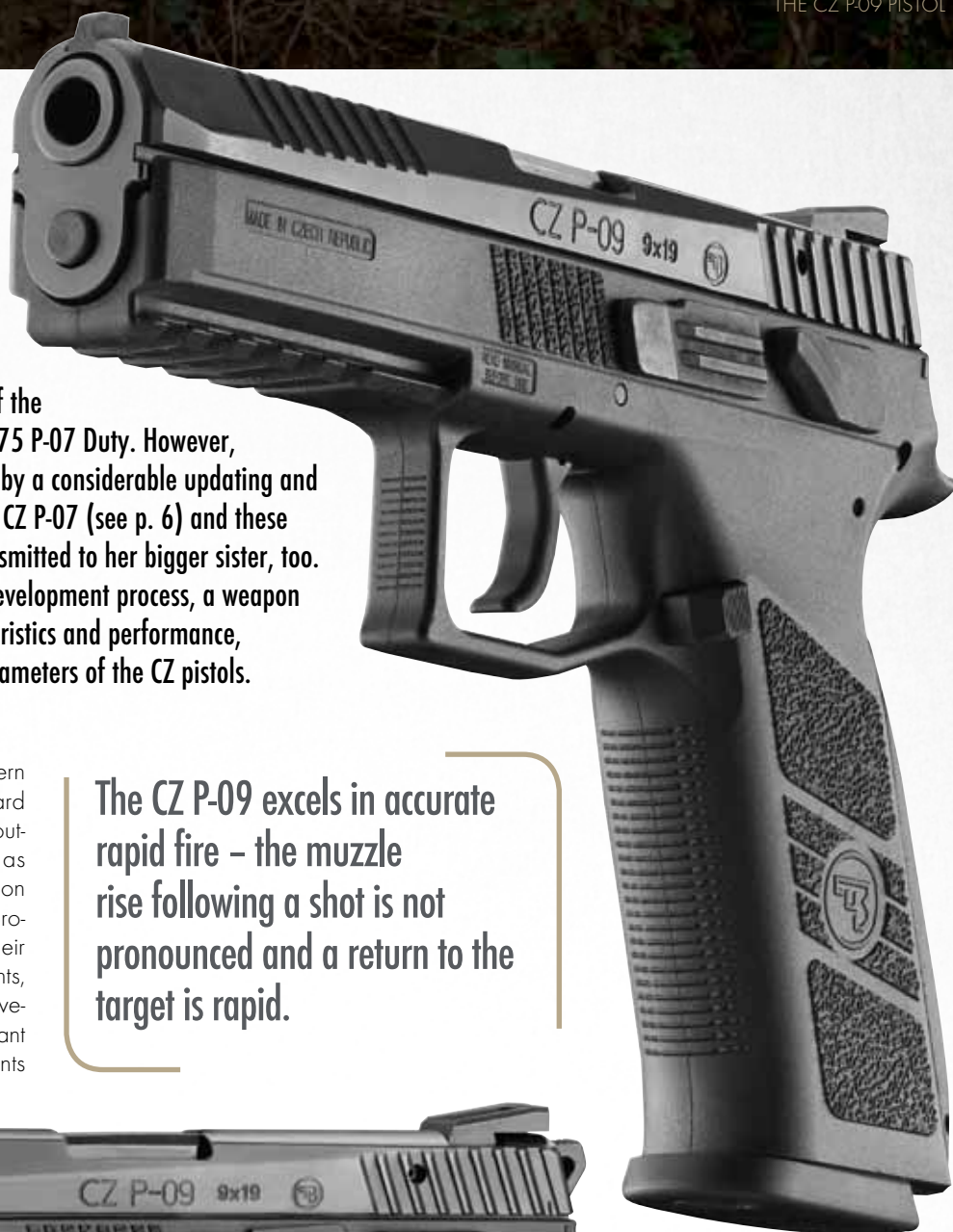
The CZ P-09 pistol, which was authored by a CZ designer, Ivan Filko (as was the compact CZ P-07), comes to the market in three calibres: The 9x19 (9 mm Luger), the 40 S&W and the 9x21, while enjoying maximum design and component compatibility between those three calibres. Its design utilises the well-proven features with

the utilisation of the latest advances in the production technology.

#### STRONG IN DETAIL

The frame of the 'P zero niner' is made of a strong glassfibre-reinforced polymer, making its characteristics substantially different from the

previous 'plastic' pistol from the Uherský Brod, the CZ 75 SP-01 Phantom, that used the high-strength, but more flexible and less dimensionally stable non-reinforced polyamide. The design of the CZ P-09 model is identical to the shape of the compact CZ P-07. The CZ design team took extreme care to avoid any sharp edges on the exposed parts of the weapon. The slide sports, in accordance to the modern trends, two pairs of cocking serrations, whose number and shaping ensure a reliable handling both with and without gloves.



The CZ P-09 pistols were, before the production started, subject to extremely demanding tests under adverse conditions, and they have passed them with flying colours. The tests are traditionally contracted to the respected Test facility of the small-calibre weapons and protective means, belonging to the Military Technical Institute of Armament and Ammunition in East-Moravian Slavičín. The photo was taken during the test of dragging through a sand, when the pistol is ten times dragged through the test medium (sand), alternating its position – five times on the left and five times on the right side. After each pull-through the weapon is removed from the sand bed, the free sand stuck to the weapon would be shaken away in 5 seconds and the rubber stopper, preventing sand from entering the barrel, would be removed from the muzzle. Subsequently a single magazine (i.e. in this case 19 rounds) would be fired, with about three-second intervals between the shots. Two CZ P-09 passed these tests; one of them completely without any malfunction, the second having one problem, when shooting after the sixth pull through the sand (i.e. lying on the left side) when the slide failed to close entirely. The stoppage was removed by the usual handling and the weapon finished the test without any further malfunction, with final verdict 'complies with requirements', meaning that only a maximum of 1 % malfunctions of the number of shots fired during the test is allowable.



Shooting with gloves on was considered also when the trigger guard was being shaped, or rather, when the shape of the trigger guard, combined with that of the trigger blade, were optimized together. The trigger blade of the 'P zero niner' is (as is the one of the 'P seven') only slightly



curved, providing enough space between the trigger and the front of the trigger guard, while the shape of the trigger provides a comfortable reach of the trigger finger in the DA operation. The size of the ergonomically shaped grip could be modified by the three easily exchangeable back straps, which are part of the standard kit. The CZ uses for differentiating of the backstrap sizes the internationally accepted designation S, M and L, with the smallest 'S' fitted to the weapon as





For the CZ P-09 pistol are slated e.g. the Hague service holsters with a safety

a factory fit, as the practical experience shows that this size suits most of the shooters. The lower front part of the frame is made

release could be easily changed from right-handed to left-handed. All these controls are within easy reach without need to change position of one's hand on the weapon's grip.

deactivated only in the very final phase of the firing process, adds to the drop safety of the weapon.

**The CZ P-09 is primarily designed as a service weapon for members of combat units.**

The shape of the external hammer, fitted with the modern, ergonomics shape, corresponds with the aesthetic design of the weapon. Thanks to the crosswise grooves on the straight top of the hammer the handling of the hammer is comfortable and avoids the danger of unwanted slippage of the hammer. The automatic firing pin safety,

#### NEW SURFACE FINISH

On the CZ P-09 pistol, as well as its smaller sister, the CZ P-07, Česká zbrojovka chose the highly resistant tenifer surface protection finish, namely the process of French origin called Arcor. The 'P zero niner' is primarily a service, military weapon, slated for use under extremely adverse climatic conditions, without regular

into a long MIL-STD-1913 (Picatinny) rail with five crosswise grooves. To ensure a quick loading of a magazine its well was adapted too.

#### THE PROVEN OMEGA

Two steel containers in the polymer frame have in their top part the internal guides for the slide and carry components of the Omega SA/DA mechanism that allows the user to choose between the safety and decocking arrangement. The safety or decocking controls are made of polymer, and they are ambidextrous, the slide stop is on the left side of the frame. The metal magazine





## CZ P-09

Calibre	9x19, 9x21, 40 S&W
Length overall	205 mm
Barrel length	115 mm
Sight radius length	170 mm
Maximum width	37 mm
Height	147 mm
Weight w/o ammunition	835 g
Magazine capacity	19/15 rounds

maintenance, while keeping maximum of its immediate availability for action. Extensive testing, carried out according to the strict service methodology including the NATO standards, especially in the specialized military testing institute confirmed that choice of the tenifer finish definitely paid back to Česká zbrojovka – the CZ P-09 pistol owes its extreme reliability to a large extent to this finishing. The extreme resistance of the surface finish to corrosion is of course another important benefit. On this pistol

19 rounds, the magazine of the 40 S&W model takes 15 rounds, the height of the weapon remaining the same – 147 mm.

## HANDS-ON EXPERIENCE

The new CZ P-09 pistol could be simply described as an enlarged P-07 (or an improved full-size Duty), but it should rather be perceived and judged individually. The added centimetres, even just a few of them, are not only seen, but, above all, felt. The 'P zero niner' is a large service weapon capable of a rapid and accurate fire at quite considerable distances. Its long grip boasts very good ergonomics, and, combined with the exchangeable back straps, it should fit into hands of shooters of a small physique as well as of huge paws. While the Phantom, whose parameters are generally comparable, is sometimes criticized for the overly flat grip, the 'P zero niner' fills the palm of one's hand pleasantly and its grasp is both sure and comfortable.

Overall, the shaping of the CZ P-09 model is fully adapted



The slide of the pre-series prototype of a CZ P-09 after 72 hours in the salt fog chamber – the surface treated by the Arcor (tenifer) process is unaffected; the rusty spots are caused by corrosion of small screws holding the sights. In the series-production also these screws are treated with a more resistant surface treatment

to the requirements of combat shooting; the classically-oriented bulls-eye shooter probably would not appreciate it so much. The realm where the CZ P-09 excels is the accurate rapid fire – despite gun's relatively low weight and its centre of gravity placed somehow to the rear the muzzle rise when firing either a 9x19 round or a 40 S&W one is only slight and a return to the target is quite fast. Simply – the weapon could be very well controlled.

The CZ P-09 has roughly the same accuracy as the successful and respected SP-01 model family. The 'P zero niner' is a factory zeroed at 25 metres: firing the 9x19 (S&B FMJ 115 grs rounds) the five-shot groups have a scatter of 35 to 60 mm, the 40 (S&B FMJ 180grs rounds) the scatter is somewhat bigger – 50 to 70 mm. But especially the experienced sports shooters will achieve tighter groups.



the teniferation is used not only on the slide and barrel, but also on some minor metal components.

The CZ P-09 pistol is as a standard fitted with steel sights, enhanced by three white luminous dots; also available are the fibre optics or tritium sights. Because the pistol is considered a service weapon, the bottom end of the main spring support includes a safety eyelet. In the 9x19 calibre the magazine contains



## I FELL IN LOVE WITH THE 'P ZERO NINER'

Martin Šanda, the Senior Product Manager of CZ for military and law enforcement products, about the new CZ P-09 pistol

Martin Šanda (born 1976) belongs to the new generation of the product managers of the CZ, who brought to the company their ample experience with use of weapons in the real combat conditions. Martin served as a member of the elite units of the Czech Army – the 601<sup>st</sup> Group of Special Forces (601. skss) and the Special Operations Group (SOG) of the Military Police, repeatedly participating in the missions in Afghanistan. He was also serving in Balkans within the framework of the SFOR and KFOR peacekeeping missions. During his long military career he had the opportunity to know intimately virtually all current infantry weapons including the latest ones. Once in the civvy street, Martin joined the CZ company, where he quickly grew from the position of the driver of the CEO to the position of the head manager of the complete military programme. His task is to define what the company has to produce, how the products should look like and what parameters and characteristics they should possess. In his responsibility there are not only the specifications and supervision of the design process, but also presentation of the final product to the potential customers worldwide and the other related activities.

Regarding the current CZ pistols, Martin Šanda comments:

*'I have a clean favourite among the sports weapons – the Shadow, a pistol used by the*

*masters of the IPSC contests. No wonder the Shadow won the World Championships. We produce also the Czechmate, the special model for the Open Division of the IPSC, another top notch weapon.*

*For me, the CZ P-09 clearly reigns among the service weapons – I simply fell in love with her. She is excellently balanced, has excellent parameters, is accurate, and has the 19-round basic capacity of magazine; when you add the magazine base plate extension, then twenty one. A pistol, but with ammo capacity almost like a submachine gun. If you prefer a hammer based service pistol, I would recommend heartily this 'CZ'. And it does not have anything in common with the fact that a work in the CZ*

*available anywhere. It has the serrations also at the front of slide, enabling you to comfortably work with the weapon by the front end of the slide, as is the fashion today, it has a manual safety or decocking, allowing you to release the hammer safely to the forward position. Simply, the choice is yours. This pistol has the Omega trigger system, which is smooth, simple and light. It also has a high capacity magazine, a Picatinny rail for accessories and the exchangeable back straps on the grip, to allow you to adjust the ergonomics of the grip to suit your hand.'*

*Actually, they pay me for criticizing the company, seeking mistakes and shooting troubles. Simply, for me the CZ P-09 is currently the best service pistol*



CZ P-09: our group of five shots at 25 metres from free hand

## HOLSTERS, ADAPTER AND CONVERSION

For the CZ P-09 pistol (and in parallel also for the smaller CZ P-07) there are already available the quality plastic holsters for concealed carry, made by the Hogue Company, alternatively also with the paddle and belt sling, as well as the service ones. Especially for the armed forces a variant of the holster with a thigh belt clip or MOLLE clip and safety (level 2) is available.

Also for the armed forces' use is slated the adapter, allowing shooting with the marker rounds of the FX Simunition or CQT, respectively. And the longer barrel with attachment for a suppressor is going to round up the offer. Besides that the popular RONI conversion, now of second generation, (described in more detail on p. 20) is already offered together with the CZ P-09 and CZ P-07 pistols.

# RONI for the CZ P-07 and CZ P-09 pistols

A popular accessory for modern pistols are the conversion sets consisting of a carbine 'shell', enabling the appropriate handgun (pistol) to be quickly installed in and converted into a 'carbine'. One of the dominant manufacturers of this kind of products is the Israeli company CAA Tactical, offering already two of the RONI conversion sets for the CZ pistols.

**T**he carbine conversions or rather adapters do not turn a handgun (pistol) into a long gun, much less to make a assault rifle of it, as some manufacturers try to talk their customers into believing. The ballistic performance of the 'hooded' pistol remains the same all the time. But the handling and control of the

weapon are fundamentally improved. Besides that a number of standardizes mounting interfaces is added to the pistol.

'It could be said in general that the conversion improves shooter's comfort and provides him/her with a tactical advantage,' notes Jakub Sondel, a product manager of Česká zbrojovka. 'Thanks to better stability, due to the effect of conversion's stock resting against one's shoulder, the shots could be repeated faster than with the pistol

The first generation of the RONI conversion kit for the CZ 75 P-07 Duty pistol



**Thanks to better stability the shots could be repeated faster than with the pistol alone.**



Mechanical sights



alone, and/or shot more accurately at longer distances. Another significant advantage is the possibility to use red dot sight, enabling the shooter to aim faster and easier even under stress. The conversion 'shell' allows also to attach a flashlight, a laser marker, or eventually also a night vision device, IR TV and/or similar devices.'

The practical results show that a shooter shooting first with a pistol alone and then





One of the prototypes of the RONI carbine conversion kit of the second generation designed for the CZ P-07 and CZ P-09 pistols

with a pistol with the conversion fitted, would achieve with the 'hooded' weapon either better results, or the same results as with a pistol alone, but faster. A substantial advantage comes from the fact, that from the legal point of view (in majority of countries at least) the conversion is not a weapon. The main user group whom the

her 'shell' with diverse accessories, the eventual bottom line sum may be still a less than a half of the amount he/she would pay for a submachine gun or a self-loading carbine for pistol ammunition. The decision is up to the customer who has to consider for what purpose the combination of weapons would be used and how much he/

P-07 and CZ P-09 pistols.

The differences compared to the first generation of RONI are as follows:

- » The larger ventilation ports in the front of the conversion's body allow for quicker escape of the gases and prevent overheating of the plastic during rapid sustained fire;
- » Larger ejection port;
- » Longer rail on the spine of the conversion – providing longer sight radius when the folding mechanical (iron) sights are used;
- » Longer charging handle for easier handling;
- » Conversion will be provided with the stronger lock system requiring no tools. ■■■

conversion is aimed to are the members of the police forces, who can keep the conversions in their car trunk without fear and limitations, while if they would like to carry their long firearm in the same way, they would have to have a safe compartment built into the car.

And, last but not least – the financial friendliness. The RONI conversion is an attractive possibility suitable for customers who would like to utilise all advantages mentioned above but are not willing to invest perceptibly more money into a long gun. It is actually true that even if the owner would lavishly upgrade his/

she would like to spend on it. Therefore many shooters including the members of the security forces may certainly find their pistol's carbine conversion a good choice.

#### WHAT THE SECOND GENERATION BRINGS

Following the very good experience with the carbine conversion for the CZ 75 P-07 Duty pistol the CAA Tactical Company developed in a close cooperation with the Česká zbrojovka (CZ) Uherský Brod the second-generation RONI 'hood' for the new CZ

#### Second-generation RONI (without a pistol)

Weight	1.315 kg
Length	490 mm
Height	140 mm
Width	65 mm



# SHADOW LINE

## – the strength in details

We first learned of the existence of the 'three sisters' – the Shadow Line – in late December 2012, when the new catalogue of Česká zbrojovka a.s. (CZ) was taking its final shape. Judging from the information then available we did not expect anything extraordinary. The description of these new models suggested that the folks at Uherský Brod just have taken three pistols of the CZ 75 family already in production, i.e. the Compact, the Standard and the SP-01 – and fitted them with a handful of features taken from the commercially successful CZ 75 SP-01 Shadow. Happily, when we finally had the opportunity to examine the new weapons thoroughly and shoot them at the range, we were in for a nice surprise. Indeed, the design of these three pistols is directly derived from the current and common production models and, the features of the Shadow were used in their build. But all and every modification taken is so reasonable and well-thought-out that the summary result provides weapons that possess perceptibly new, upgraded user parameters. Who said the concept of the good old CZ 75 is already exhausted?!

**I**T seemed lately that the Česká zbrojovka (CZ), when extending its range of pistols, is going to devote attention only to the new polymer models and to the 'seventy-fives' with the radically simplified Omega trigger mechanism. But the demand for the CZ pistols is somewhat more complicated. Indeed, the polymer compact

– the Duty – was warmly welcomed in the world market: the welcome was actually so enthusiastic that, thanks to it, the beginning of the series production of the modernized model – the CZ P-07 (see p. 6) and of the brand-new high-capacity polymer pistol, the CZ P-09 (see p. 14) was put on the back burner for a certain period of time. And the Omega trigger mechanism brought further

good points, too. All the while the interest in the classic 'CZs' continues unabated, with yearly sales in high tens of thousands in all categories and variants. The statistics add another interesting fact: the family of standard models remains the flagship of



the pistols from Uherský Brod, despite the remarkable successes achieved by the compacts and the very solid position of the subcompacts. This definitely serves to confirm the genius of František Koucký, the father of the CZ 75, and his firm place in the Pantheon of the greatest weapon designers of all time.

But it also applies that if not for Koucký's successors in today's CZ UB factory, the balance of sales of the 'seventy-fives' would be undoubtedly not so well off... In the Standard category, Česká zbrojovka enjoys a pronounced success, especially with the CZ 75 SP-01 family of service and sports pistols, whose current top-of-the-line is the model CZ 75 SP-01 Shadow.

### SHADOW IN THE LIMELIGHT

This pistol, introduced in 2006 as a variant for the more sport-minded customers of originally rather service-oriented 'SPs', is actually one of the most perfect versions of the classic CZ 75. No wonder when you con-



The smallest of the Shadow Line series shares with the usual compact e.g. the return spring of rectangular-section wire; while the differences are e.g. the nickel-plated trigger blade and magazine, return spring rod of polished steel and the new shape of the hammer



performance of the Shadow pistols regularly surpasses that of the competition from the most famous manufacturers. A somewhat lesser-known fact is that this model found its way to several foreign armed forces, too. Therefore, when the Česká zbrojovka presents the CZ 75 SP-01 Shadow as a bestseller, it is no exaggeration at all.

In the recent years the popularity of the 'Shadow' brought its producer, the weapons-manufacturing company of Uherský Brod, not only to utilise some of its successful design features in other models of the SP-01, but also to complement its range by further colour variations added to the basic black finish. Thus the available finishes now include the visually attractive model Dualtone, having the black-enamelled slide combined with silver-enamelled frame, and a semi-tuned Orange with orange-anodized aluminium grips, a number of specific features and an ample set of accessories. A stand-alone chapter represent the activities of the CZ-USA company, whose Custom Shop managed by Angus Hobdell has been carrying out for considerable period of time a line of original modifications of the Shadow model.

The line of Hobdell's tuned 'CeeZeds' headed by the modified 'Shadows' en-

joys a very high reputation, a fact that brought to the management of the CZ-USA the idea to extend the range of series-built pistols by weapons with the features of a tuned specials. As the idea clicked with the intentions of the CZ to utilise the extreme popularity of the Shadow model for bringing to the market other weapons with similar features and characteristics, in 2011 the factory of Uherský Brod decided to start the Shadow Line project.

### STRENGTH IN SUPERIOR DETAILS

As we have already mentioned, for modifications along the Shadow handguns an interesting selection of models was chosen: the safety-equipped CZ 75 Compact with the aluminium alloy frame and the Picatinny rail of one

crosswise groove, a standard CZ 75 with the traditional trigger mechanism, and the safety-equipped CZ 75 SP-01 with the Shadow-type frame, characterised by the removal of material below the trigger-guard, giving it the typical arched look, with the beaver tail to the rear and with Picatinny rail with three crosswise grooves.

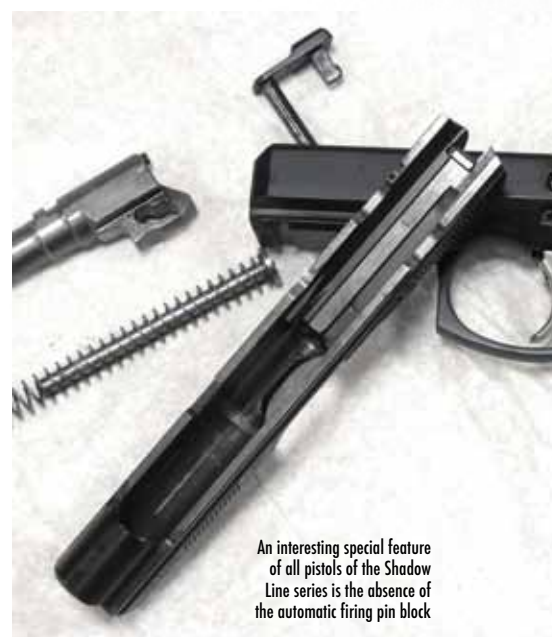
These changes, based on the requirements of the marketing department of CZ, were authored by Ing. Libor Zálešák, a Company designer. Development of the three pistols of the Shadow Line took several months, with members of the Company's shooting team taking an active part in it. This is the kind of



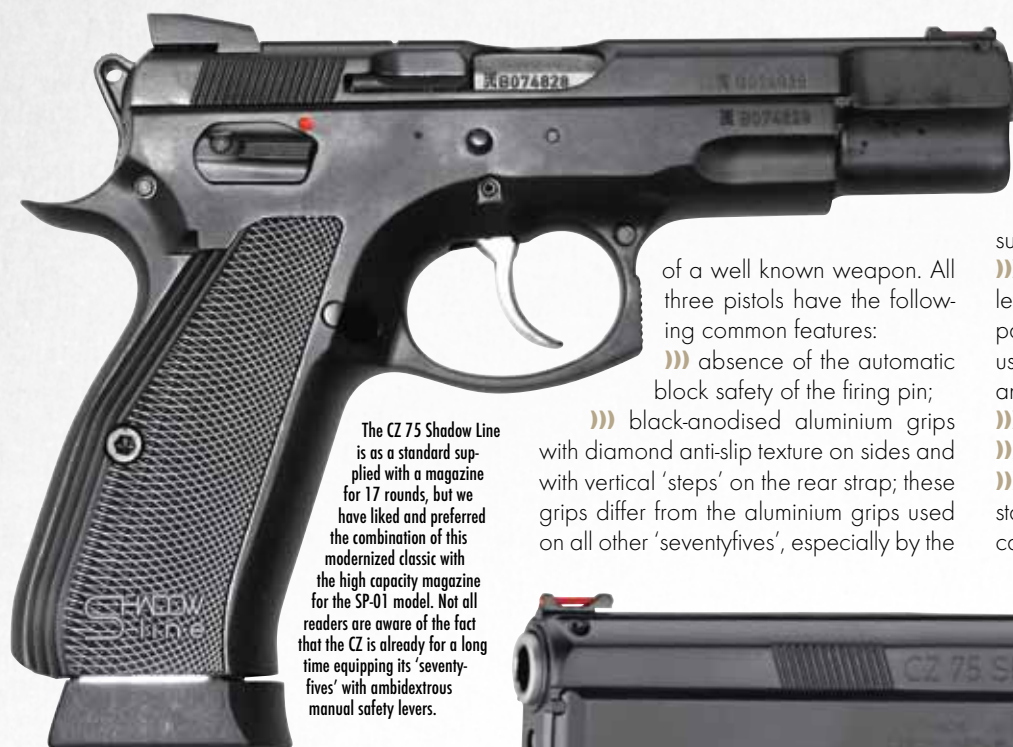
The basis for the model CZ 75 Compact Shadow Line alias Baby Shadow was the safety-equipped compact with the frame of aluminium alloy

sider that already the initial, original model, the SP-01, was a very successful weapon and that in the development of the 'Shadow' used input from famous shooting personalities like Angus Hobdell, Adam Tyc and Milan Trkulja.

An immense contribution to the successful placement of this weapon on the world markets are its successes at most diverse competitions including the most prestigious world IPSC contests, where the



An interesting special feature of all pistols of the Shadow Line series is the absence of the automatic firing pin block



The CZ 75 Shadow Line is as a standard supplied with a magazine for 17 rounds, but we have liked and preferred the combination of this modernized classic with the high capacity magazine for the SP-01 model. Not all readers are aware of the fact that the CZ is already for a long time equipping its 'seventy-fives' with ambidextrous manual safety levers.

of a well known weapon. All three pistols have the following common features:

- » absence of the automatic block safety of the firing pin;
- » black-anodised aluminium grips with diamond anti-slip texture on sides and with vertical 'steps' on the rear strap; these grips differ from the aluminium grips used on all other 'seventy-fives', especially by the

» sights of the model CZ 75 SP-01 Shadow have the front one fitted with red light fibre of 1.5 mm diameter (about 1/16 in) and with rear sight stretched backwards, with longitudinal anti-glare serrations on the visible surface;

» the flat manual safety with ambidextrous levers that sport some differences compared to the safeties on the 'seventy-fives' used until recently, namely in the machining and fitting to the frame;

» return spring rod made of polished steel;

» nickel-plated trigger blade;

» nickel-plated magazines, in case of the standard and SP model featuring increased capacity.



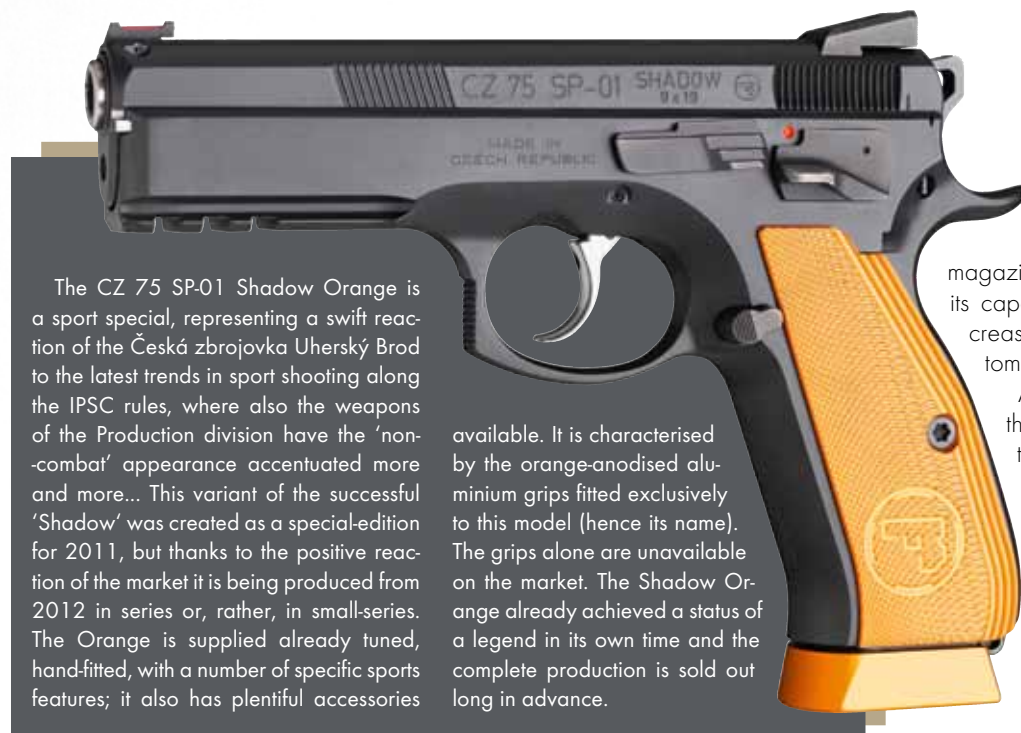
The CZ 75 SP-01 Shadow Line can be told from the model Shadow at first sight only thanks to the aluminium grips with a conspicuous logo of the new model line

consultation and help the designers of CZUB seek when working on any new weapon or idea. Major contributions to their success were the opinions of Milan Trkulja, the spiritual father of the Shadow and current captain of the IPSC shooting team of the CZ.

The resulting Shadow Line series, consisting of the models CZ 75 Compact Shadow Line, CZ 75 Shadow Line a CZ 75 SP-01 Shadow Line, is an example of the way in which the sophisticated details can change the shape and parameters

attractively inscribed name of the new model line in their lower part. The grips of all three Shadow Line models are attached to the frame with Allen bolts;

- » modernized hammers, characterised by the quite subtle hammer loop itself, featuring textured surface, large cut-outs on its both sides and with only a small rounded lightening hole in it;



The CZ 75 SP-01 Shadow Orange is a sport special, representing a swift reaction of the Česká zbrojovka Uherský Brod to the latest trends in sport shooting along the IPSC rules, where also the weapons of the Production division have the 'non-combat' appearance accentuated more and more... This variant of the successful 'Shadow' was created as a special-edition for 2011, but thanks to the positive reaction of the market it is being produced from 2012 in series or, rather, in small-series. The Orange is supplied already tuned, hand-fitted, with a number of specific sports features; it also has plentiful accessories

available. It is characterised by the orange-anodised aluminium grips fitted exclusively to this model (hence its name). The grips alone are unavailable on the market. The Shadow Orange already achieved a status of a legend in its own time and the complete production is sold out long in advance.

Incidentally, for the model SP-01 Shadow Line the same magazine as for the CZ 75 SL is used; its capacity (17 rounds) could be increased by using the magazine bottom (+ 2 rounds).

All three Shadow Line pistols have the lengthened magazine release taken over from the Shadow model. However, with the components of the trigger mechanism the situation is somewhat different. The nickel-plated trigger blade of all three 'sisters' is the same and at first sight it could be associated with the Shadow. However, the trigger blade of the Shadow Line pis-





A proven feature of the Shadow model is also the front sight with a red optic-fibre front sight, found on all three pistols of the Shadow Line

tols is somewhat straighter, while the rest of the trigger mechanism is virtually identical to the 'Shadow's' one. The rectangular-section-wire return spring will be found on the compact only; the standard CZ 75 and the SP model utilise the usual circular-section-wire spring of the 'seventyfive'. The new long steel guide rod of the SP-01 Shadow Line is worth of special mention, as it has three sections of differing diameter. This relatively complicated shape has been chosen in order to facilitate the fitting of the return mechanism into the slide.

Generally, the production technology process of the Shadow Line pistols is as close as possible to the production processes used for manufacturing the CZ 75 SP-01 Shadow.

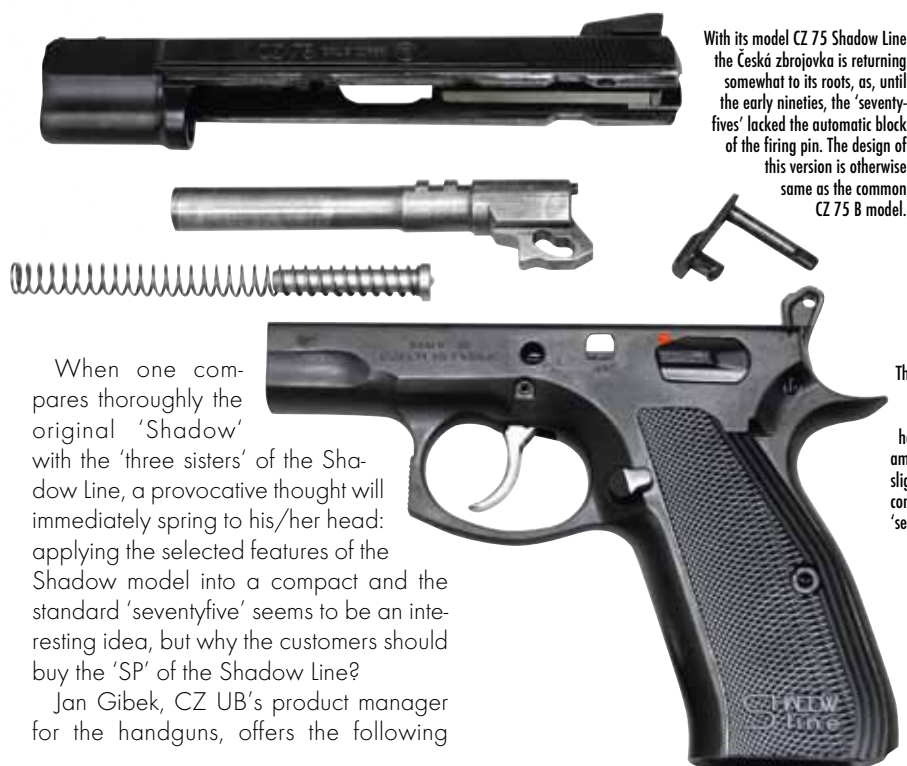
answer: 'The difference between these weapons is really very small, therefore it is going to be mainly a matter of taste of each user. Summarising the main differences, the CZ 75 SP-01 Shadow Line has nickel-plated magazines and trigger blade, aluminium grips, different shape of the hammer, flat safety levers and the polished guide rod of the return spring. Therefore, besides the slightly different user parameters also the differing looks come into play.'

#### AWAY WITH THE FIRING PIN BLOCK

Deletion of the automatic firing pin safety (block) on all three Shadow Line pistols is an interesting and considerably bold step, that is apparently to be welcome by a sizable proportion of the shooting public. Blocking of the firing pin is a partly controversial design feature of the

modern pistols that became something of a standard during the past score of years; however a number of users, especially the experienced ones, never came to like it. Their reasoning has a logic - it is a few extra parts, increasing the danger of a malfunction. And, as does the majority of the mechanical safety elements, also the firing pin block ensures the safety only if the handling rules are properly followed - so if the safe handling is ensured anyway, the blocking is unnecessary, and, last but not least, the given design of this safety affects partially the trigger travel, resistance and reset of the trigger (when lifting the body of the block safety, the lever, actuated by the trigger pushrod, has to overcome the resistance of a spring).

While the 'SP' without firing pin block is available for some time already, the CZ 75 so modified is a novelty that may revive the interest in this classic all-steel 'seventyfive'. (It is a de facto return to the roots, as, until early nineteen-nineties, the CZ 75s from Uherský Brod lacked this safety feature.) The CZ 75 Compact Shadow Line, known also under the fitting nickname Baby Shadow, definitely represents a unique pistol in its category. How many other compact pistols of the 9 mm Luger calibre, available today on the market, do without automatic firing pin safety? The question is



With its model CZ 75 Shadow Line the Česká zbrojovka is returning somewhat to its roots, as, until the early nineties, the 'seventy-fives' lacked the automatic block of the firing pin. The design of this version is otherwise same as the common CZ 75 B model.

When one compares thoroughly the original 'Shadow' with the 'three sisters' of the Shadow Line, a provocative thought will immediately spring to his/her head: applying the selected features of the Shadow model into a compact and the standard 'seventyfive' seems to be an interesting idea, but why the customers should buy the 'SP' of the Shadow Line?

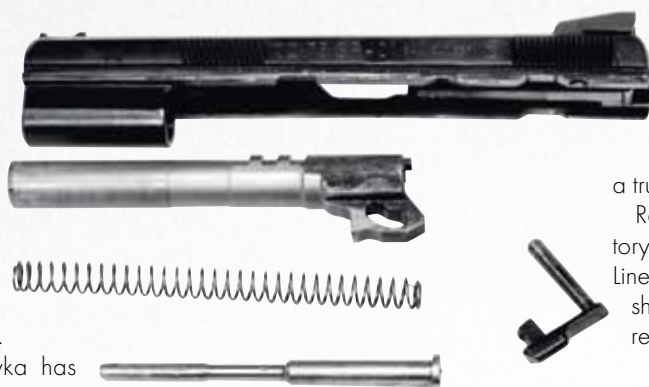
Jan Gibek, CZ UB's product manager for the handguns, offers the following

The original Shadow provided also the elongated rear sight. Besides the updated hammer it possesses the ambidextrous safety levers, slightly differing from the common safeties of the 'seventy-fives'.



whether it is an advantage or disadvantage, as with these smaller models of guns for concealed carry the passive safety is highly accentuated, even at a price paid in the less smooth pull of the trigger, and the generally higher pull forces, appreciated as the supplementary 'safety' feature.

Apparently Česká zbrojovka has clear ideas about the sales possibilities of the model CZ 75 Compact Shadow Line: 'This compact is in all probability going to be successful with our traditional 'compact-using' customers from Asia and I am convinced that this weapon would be preferred for the concealed carry by shooters who are already happy with the CZ 75 SP-01 Shadow,' explained Jan Gibek, adding: 'After all, the Shadow, although not equipped with the blocking of the firing pin, is being successfully used abroad also by some armed services.'



An interesting piece of design of the 'SP' Shadow Line is the relatively complicated shape of the return spring guide rod of polished steel



For the Shadow Line the holster of black polymer is available, produced by the famous Hogue Company. It is designed as a universal holster for all three models, it exists in right- and left-handed version, to be carried on the belt and/or as a 'paddle'. The weapons are in the holster held safely by a thumb safety, released by a large, easily accessible pushbutton in the upper part of the holster.

## IMPRESSIONS AND FACTS

We think that all three Shadow Line pistols are aesthetically successful weapons, possessing excellent ergonomics, above-standard smoothness of the trigger mechanism and a top-notch workmanship. Use of the same type of grips with all three models ensures a more or less identical hold. This fact substantiates the presumption of CZ that a proportion of its customers will buy the complete series of the Shadow Line for all of their shooting needs and activities.

between the magazine butt and the bottom of the pistol grip that, due to the nickel-plating of the magazine, is somewhat conspicuous. But this is a true nit-picking.

Regarding the trigger resistance, the factory measurements of the CZ 75 Shadow Line and the CZ 75 SP-01 Shadow Line show that in the SA operation the value remains at a similar level as with the original models, where it is about 17 N (under 4 lbs). A marked improvement was measured with the compact - while the standard version has the single-action trigger force usually over 20 N (4.5 lbs), in case of the CZ 75 Compact Shadow Line the SA measured value was less than 16 N (3.6 lbs). In the double action regime the all 'three sisters' of the Shadow Line show more or less identical trigger force of just over 43 N (9.7 lbs), that value meaning a decrease of up to 10 N (2.3 lbs) as compared to the standard model and to the SP, while the trigger force of the compact remained virtually the same.

## USEFUL ADDITION

It could be summarised that this trio of weapons, related through their design and appearance with precisely targeted modifications, represents an original addition to the basic range of pistols offered by CZ. Together with the resounding name Shadow, these new features give the 'three sisters' a good chance to collect points even in the today's overcrowded market. The compact and the standard CZ 75 of this model line offer parameters and features not available on the common 'seventy-fives'. The absence of the block

To that end the company adjusted its pricing strategy, too.

The workmanship has nothing to be criticized. The sole, minor, but visually slightly disturbing item is the small gap

## Shadow Line

	CZ 75 Compact Shadow Line	CZ 75 Shadow Line	CZ 75 SP-01 Shadow Line
Calibre	9 mm Luger		
Barrel length (mm)	92.5	114	114
Total length (mm)	184	206	207
Sight radius length (mm)	143	163	163
Height (mm)	128	138	147
Maximum width (mm)	35	35	37
Mass with empty magazine (kg)	0.800	1.00	1.180
Magazine capacity (rounds)	14	17	19 (17+2)



## THE COMPACT HAS THE BEST TRIGGER

The Shadow Line at the shooting range as seen by an experienced user of the CZ 75 pistols

The most important parts of a weapon, besides the grip, are, from the user's point of view, the sights and the trigger. All three Shadow Line pistols have fixed sights, with possibility to adjust the rear sight by moving it in the crosswise dovetail groove. The rear sight with a rectangular notch is lengthened to the rear and eliminates glare by having its surface horizontally serrated. The front sight sports the red optical fibre. Not being a fan of the optical fibre sights, I prefer the front sight as a simple black prism, but some shooters like to aim using the red or differently coloured dot in the sights and so they achieve better marks with it. In any case the sights of the Shadow Line underscore the attractive look of these weapons.

There is nothing to criticize on the trigger action of the Shadow Line pistols. Lacking a gauge at our shooting range, we tend to trust the manufacturer's data about the maximum necessary pull in the SA operation at about the 16–17 N (3.6 to 3.7 lbf). For the dyed-in-the-wool aficionados of the tuned triggers this value may seem excessive, but, as it is well known, when the trigger movement is smooth, one does not notice the pull needed. The Shadow Line pistols do offer such a smooth operation. But ... of the weapons tested the CZ 75 and the CZ 75 Compact had the super smooth trigger operation (the second one being the subjectively best of the trio), while the

### Five-shot groups by the Shadow Line pistols fired at 15 m (16.4 yd) distance

CZ 75 Shadow Line	distance of centres 49 mm (4 shots – 20 mm)
CZ 75 Compact Shadow Line	distance of centres 61 mm (4 shots – 25 mm)
CZ 75 SP-01 Shadow Line	distance of centres 95 mm (4 shots – 38 mm)

CZ 75 SP-01 Shadow Line, while having also a smooth trigger operation, for some reason appeared to me as having a too long trigger travel... This all concerns some carefully aimed target shots. When firing a rapid and dynamic series one does not notice at all.

According to my experience the 'seventy-five' could be fired accurately enough even in the DA regime, a very important feature for those who carry the pistol at the most ready-to-shoot state (Jeff Cooper's Condition one), i.e. with the first round in the chamber, hammer cocked and safety on. The declared lowering of the necessary trigger pull force in the DA by some 10 N (2.25 lbs), to about 43 N or 9.7 lbs, may be in this case only an advantage.

My impressions from firing the trio of pistols are positive throughout. The distance to target was 15 metres (16+ yds), I was using standard Sellier & Bellot 9 mm Luger rounds under none too favourable lighting conditions of a tunnel shooting range. The CZ 75

Shadow Line as well as the CZ 75 SP-01 Shadow Line behaved completely calmly, with a rather lesser recoil and minimum muzzle lift, returning smoothly to the aiming line. Only the appreciably lighter compact required quite understandably some effort here. I was firing in a rapid tempo, after just a basic alignment of sights and without any long 'target' aiming. As far as the grouping of hits went, the CZ 75 performed best, with the CZ 75 Compact close second, and the CZ 75 SP-01 took a surprising third place... Chance may play its role during such a short test, but it may also be adjudged to my already mentioned uncomfortable feeling when pulling the trigger.

If I'd ever need to change something in my stable of 'seventy-fives', I'd definitely choose some of the Shadow Line pistols. Especially the 'aluminium' compact would attract my attention, indeed..



safety on the firing pin may attract the users who do not use their weapon for self-defence only, but also pursue e.g. some of the modern sport-shooting disciplines. The CZ SP-01 Shadow Line, differing from 'the' Shadow in details only, has a somewhat more difficult starting position. Nevertheless the differences do exist and it is the customer who will show his model preferences. The good news is that in either case he/she will make a good choice... Another plus point of the Shadow Line pistols is the price, whose very sensible level is due to the fact that despite of a number of tuning parts and features it still belongs to the range of series-built weapons. The positive response of the market confirmed this fact conclusively once the 'three sisters' were ceremoniously introduced at the prestigious IWA 2013 weapons fair.

### AT THE SHOOTING RANGE WITH TOM HARDY

In late August 2013, during his work stint in Prague, young English actor Tom Hardy found time to test the CZ 75 SP-01 Shadow Line together with other latest, most modern service weapons of the Česká zbrojovka Uherský Brod. Young nice guy, who prepares himself for his action-movie roles by intense training under guidance of professionals from the British armed forces, has shown himself as a very experienced shooter. He had available the CZ SCORPION EVO 3 A1 submachine gun, the CZ 805 BREN assault rifle, and from the range of pistols, besides the 'SP' from the Shadow Line also the brand-

-new polymer models, the CZ P-07 and the CZ P-09. Tom expressed much respect of all weapons shown to him, and he enjoyed especially the SCORPION, with which he masterly managed firing short bursts. His eye and hand were visibly most attracted by the all-steel CZ 75 SP-01 Shadow Line. As he intimated, his very first pistol was the classic CZ 75, which he got early – when he was fifteen years old(!). Her newest descendant from the successful Shadow family impressed Tom Hardy so much that he reportedly said he would like to appear armed with her in one of his future movies!

It is a well-established practice of major weapon manufacturers around the world to engage top sport shooters in the advertising of their products. And since the target group mainly consists of men, it would be ideal to use a lady for this purpose, preferably a young and pretty lady. However, such persons come in short supply among the shooting elite. One of the rare exceptions is **Martina Šerá**, 23, a sharply rising star of the Česká zbrojovka a.s. (CZ), shooting team, who has become the face of the Shadow Line range of pistols.



# I FIND SHADOW LINE PISTOLS EXCELLENT TO SHOOT

The best Czech pistol shooter **Martina Šerá** on IPSC shooting and the Shadow Line series.

**To start out with, I would like to ask you to briefly introduce yourself: where do you come from, what is your education and above all – how did you become involved in weapons and shooting?**

I come from a small village called Ždírec, not far from Jihlava. I attended a secondary school in Jihlava, focused on management. It was my father who introduced me to weapons and shooting when I was 14. Since the very beginning, he trained

me in IPSC sport shooting, and I have been dedicated to it ever since.

**What makes practical shooting according to the IPSC rules attractive to you?**

There are a lot of reasons. But most attractive for me is probably the fact that there are always different situations with various degrees of difficulty, but all of them require maximum concentration, precision and speed. I have always been engaged

in the Open division. I have not tried any other divisions yet.

**Could you offer us at least a brief look behind the scenes of the 'Formula 1' of IPSC shooting? One of the reasons I am asking is because practical shooting is presently undergoing certain changes. Are these changes also reflected in the Open division as well?**

You are right to say that the Open division is something like the F1 of practical





The CZ 75 TS CZECHMATE pistol with which Martina scores points at one top Open division contest after another

derestimate the preparation for each competition. Almost every year, the global IPSC rules are adjusted. However, the Open division is not subject to these changes because it allows any modifications of individual weapons, including scopes. The only limitation in this division applies to the maximum length of the magazine, which is set at 170 mm.

**| When did you join the Česká zbrojovka shooting team, and what does it mean for you in practice?**

I joined the Česká zbrojovka shooting team in 2010. I got the opportunity to shoot with the best equipment in the world and it was the next step in my shooting career, which I value highly, but at the same time it is a big obligation for me. This step boosted my motivation for winning at IPSC competitions.

**| Could you give our readers a short recapitulation of your sport achievements so far?**

shooting. It is no wonder, with the amount of training and expended cartridges we get huge experience not only with weapons but also with their parts, and this applies to ammunition as well.

To achieve good results at competitions lasting several days, you need to have everything perfectly prepared. Victory is decided by tenths of seconds and just a few points so you cannot afford to un-

In 2012, I won the Triple Crown Extreme Series in the Open Lady category. This competition consisted of three contests in three European countries. Each of the contests included shooting in 30 situations, and the overall amount of shots in this three-contest series exceeded 1500 rounds. I won the Open Lady category at the Open Delta Cup 2012 in Belgrade, I came in third at the Czech competition Euro Extreme Open 2012 and second at the Czech Championship. In 2013, I won competitions such as the Delta Cup, Geco Open, Bathory Cup or Euro Open. I came in fourth at the European Championship in Portugal in the women's Open division. Also, I am the ruling champion of the Czech Republic.

**| And what are your current plans in your sport career?**

This year, it is simple – this season I want to focus on winning the world championship in Florida, USA.

**| Have you been using CZ pistols since the start of your career? Do you have experience with products from any other manufacturers?**

I have been shooting with weapons by Česká zbrojovka since the very start. My first weapon was a CZ 75, rebuilt for the Open division by Mr. Střížek, a renowned CZ tuner. It is a beautiful, relatively small pistol and it was ideal for me in my early days of shooting. Then I was shooting with a CZ 75 Champion, and that was already really a very sports-minded pistol, very reliable and precise. Nowadays, I am using the model CZ 75 TS CZECHMATE to my utmost satisfaction. This pistol is truly world-class in the Open division. What fascinates me most is its reliability and precision.

**| What is your current training plan? How often do you change parts or an entire weapon?**

I do not practice shooting in the winter, I concentrate more on the dry fire training and exercise. During summer, I mostly go shooting twice or three times a week. But before major competitions I practice shooting everyday. I can shoot around 200–400 rounds per one training session. And regarding pistol parts, I only change them when it is really needed. My weapon works as it should, so I do not replace anything on a regular basis.



Martina Šerá in action



The young successful shooter, Martina Šerá, has become the face of the new Česká zbrojovka a.s. model line – CZ 75 Shadow Line

**| How would you rate the position of CZ sport specials among the global competition?**

I think they have a very good position and are highly favoured by shooters.

**| Is there anything to be improved on Česká zbrojovka pistols or have the designers from Uherský Brod already 'squeezed' out the maximum from the design, so to speak, and the rest is only up to shooters?**

I am not able to judge whether the designers have already reached the maximum possibilities of the weapon. But when you have a look at the model lines derived from CZ 75, it always seems that nothing new and better can be invented on this weapon – until the designers come up with a new version. Like now, with the CZ 75 Shadow Line.

**| You have decided to lend your face specifically to this line. Have you had an opportunity to get acquainted with these pistols? And what is your opinion of them?**

Yes, I've had an opportunity to get acquainted with these pistols and to try them out. All three of them fit in my hand perfectly, thanks to their new ergonomic design. They were excellent to shoot with and I had the

of our cooperation in the area of promotion. It came as a big surprise, but at the same I was very pleased. It is an honour to become the face of a new product. In addition to that, the Shadow Line pistols

**The CZ 75 TS CZECHMATE model is truly world-class in the Open division. What fascinates me most is its reliability and precision.**

feeling that I would soon learn to master them. I think these pistols have got the market success they deserve.

**| How does it happen that somebody becomes the face of a weapon?**

In my case, everything happened really quickly. At the end of 2012, at a meeting dedicated to evaluation of the 2012 shooting season, I was addressed by Česká zbrojovka marketing manager, Mr. Karel Bařinka, and he outlined the possibility

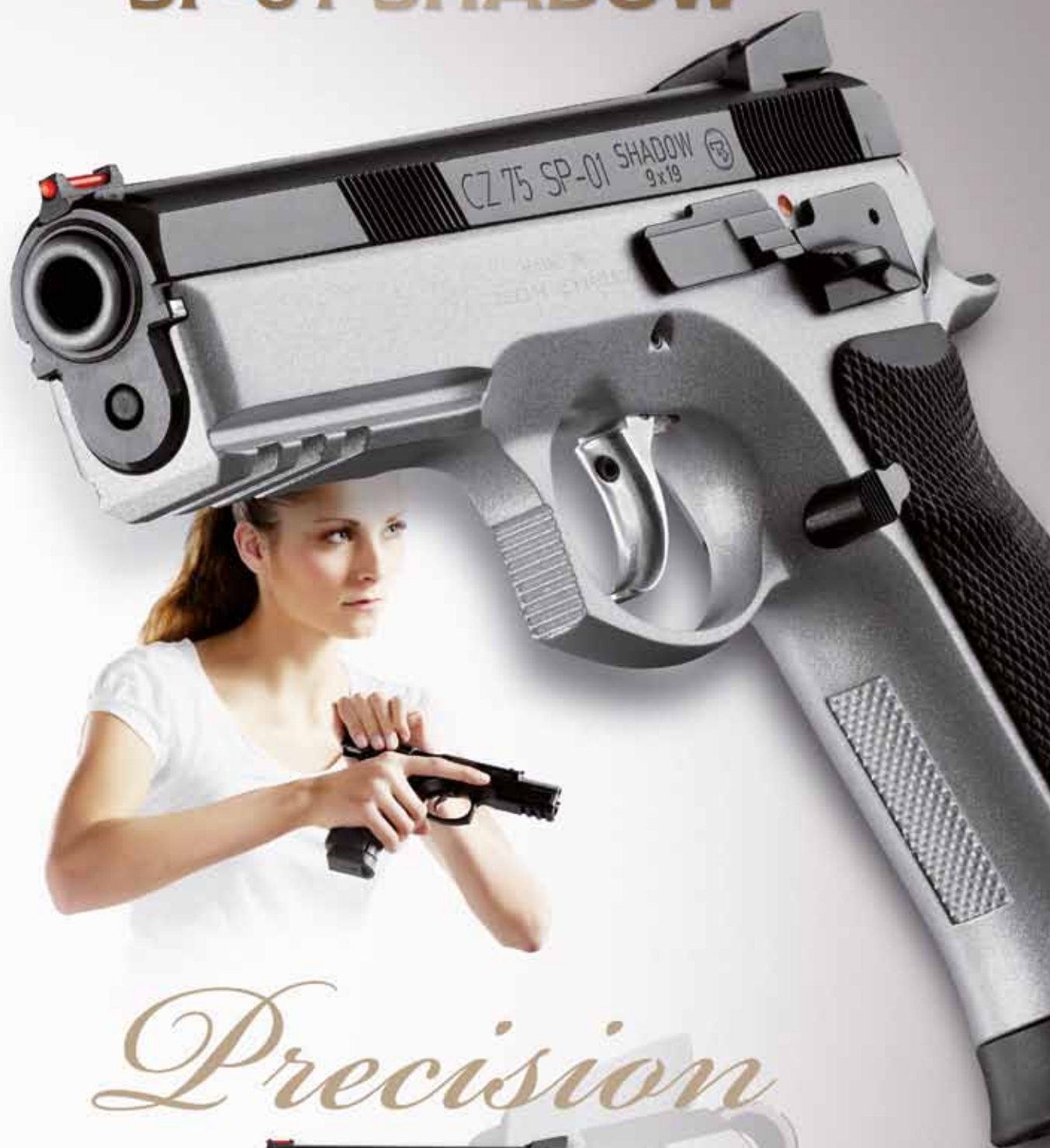
have excellent quality, and shooting and weapons are my hobby. Not even a month went by and I was already posing in a studio. It has been a new experience for me, but I believe that this cooperation will be beneficial for both sides.

**| By the way, do you take a weapon as a sport tool only or is it an efficient defence tool for you, too?**

I do not carry a weapon for self-defence. I take it purely as a sporting tool.



# CZ 75 SP-01 SHADOW



*Precision*



CZ 75 SP-01 SHADOW

MADE IN  
CZECH REPUBLIC



The Koucký brothers,  
František (left) and Josef  
(right) with their  
ZKK 600 rifle

# From ZKK

## to CZ 557

Half a century of developing and manufacturing **hunting rifles** in **Česká zbrojovka a.s. (CZ)**, Uherský Brod.



**AS** the heart of the majority of Czech hunting rifles is the Mauser bolt-action, it is fitting to mention the fact that factory-made hunting rifles were initially based directly on military guns. Any significant development of the military repeater ended in the late 19th century, when on 9 September 1895 the renowned German designer Paul Mauser patented the cylindrical turn-bolt for repeating rifles which he subsequently used for the military repeater Gewehr 98. From this was gradually deve-

As anyone who is at all interested in hunting knows that Česká zbrojovka (CZ) in Uherský Brod has long been one of the leading global manufacturers of high-quality yet cost-friendly rifles, offered in a wide variety of calibers and versions. But when you ask how old their tradition of developing and manufacturing rifles actually is, you will probably meet with some hesitation even from hunting veterans. The answer is given in the subheading to this article, in which we will recollect the whole remarkable story of Czech repeating rifles of the medium and magnum categories from their very beginnings to the present day.

loped the *Karabiner 98k*, a weapon used by the Wehrmacht throughout World War II. Mauser's bolt-action can be considered

one of the peaks of the construction of the cylindrical bolt, and even today is still in use worldwide. Its main features are:



))) A locking mechanism with two symmetrical lugs immediately behind the bolt head. Thanks to this, when the gun is fired, the distribution of forces is symmetrical, which prevents the receiver from warping. The

the bolt is unlocked with a lift of the handle and then is moved slightly backwards (due to the helix on the rear surface of the rear receiver bridge). In this way, the cartridge case 'unsticks' from the wall of

))) On the bolt's rear end there is a bolt sleeve that seals the cavity of the bolt with the striker and the main spring. On its end there is a safety in the shape of a wing, rotating around an axis parallel to the barrel axis. Lifting the wing safety to the vertical position directly blocks the movement of the striker, but allows safe manipulation with the bolt during the loading and



overwhelming majority of forces act only between the rear part of the barrel, the lockable (supporting) surfaces of the receiver and the bolt. From the rear end of the front receiver bridge, the receiver is stressed further only by inertial forces. There is a third locking lug at the rear of the bolt body. It does not participate directly in locking the bolt, but it serves as a safety in the event that, for some reason, the locking lugs on the bolt head fail.

))) The striker performs a linear movement, the main spring is wound around its body and the whole mechanism is encased in the bolt body. The bolt is cocked on opening via a curve-shaped guide track on the bolt body.

))) The extractor consists of a rather long leaf spring with a claw at the end. It does not change its position during the loading cycle; it is placed on the bolt body and revolves around it. While the gun is being loaded, the lower edge of the bolt face strips the cartridge from the internal magazine (or detachable magazine); the cartridge then slips with its head groove under the extractor claw and is held against the bolt face. The cartridge is pushed into the chamber, and the bolt is locked by turning the bolt handle down. After firing,

the cartridge chamber. At the same time, the striking mechanism is cocked. Further pull of the bolt handle extracts the empty cartridge case out of the chamber. The extractor claw holds it on the bolt face until the bottom of the cartridge case hits the edge of the ejector fixed in the receiver. The ejector pulls the cartridge case from under the claw and propels it out through the ejection port. This type of cycle is called controlled feed. It works in any position of the gun; all cartridge movements are forced by springs or forces operated by the bolt. It is not surprising that it is still considered one of the most reliable ways of loading repeaters.

unloading of the rifle. It also covers the rear sight notch and indicates the safe mode of the rifle. With the wing turned right (from the shooter's perspective), the bolt and the striker are blocked. With the wing turned left, the safety is off, while the safety can be engaged or disengaged only with a cocked striker. While cocking the striker, its cocking piece is raised slightly above the rear surface of the bolt sleeve and serves as an optical and tactile cocking indicator. The typical Mauser wing is not exactly ideal in terms of manipulation, especially when there is a telescopic sight installed on the rifle. It is no wonder, then, that the safety is usually the first thing that is omitted from the purely Mauser-type bolt-action and replaced with another, more user-friendly mechanism.

#### MAUSER RIFLES FROM BRNO

The Austro-Hungarian Empire chose another repeating rifle for its soldiers – the



'Galaš gun' ZG 47

Mannlicher system. After the foundation of the independent Czechoslovak state, the Czechoslovak armed forces found themselves facing the problem of what rifle to choose and where to manufacture it. When the Treaty of Versailles ordered the liquidation of German weapons production facilities, the Czechoslovak government managed to buy a significant part of the manufacturing equipment for Mauser-type repeaters from the Mauser company and others, and from 1922 the Mauser rifle – for example, versions 98, 98/22, 24 and other models – became a standard weapon for Czechoslovak soldiers.

**The ZKK rifles with bolt forged integral with handle are extremely reliable and durable rifles.**

Production took place in Zbrojovka Brno (under numerous names) with various modifications and for various customers until the end of World War II. Zbrojovka Brno soon began to produce a civilian, hunting version of the rifle. They had big plans, but the production of hunting rifles was only hundreds of pieces a year. Production continued even during the War, although to a limited extent.

After the War, production in Brno continued. The rifle, at first designated as Vz. 21 or 22 and after the War just Z (called Zet)

was, in reality, nothing else than the army Mauser rifle mounted in a civilian stock and outfitted with a double-set trigger. The shape of the bolt handle corresponded with the civilian purposes of the rifle: in its flat shape, it followed the Mannlicher tradition, and with its curve it enabled the trouble-free usage of a telescopic sight. As army rifles, the Zet has an internal magazine with a double-stack ammunition storage and a side-by-side feed, but it is not possible to use stripper clips for filling the magazine.

In 1946, Zbrojovka Brno started to develop an entirely new repeating rifle, the later series designation ZG 47 – known as the 'Galaš gun'. The designer, Otakar Galaš, based his gun on the Zet, but he redesigned the bolt sleeve and the safety. Although the safety still blocked the striker, it was placed on the right side of the bolt sleeve and consisted of cylindrical segment controlled by a grip rotated forwards and rearwards, the rotation axis being perpendicular to the axis of the barrel. The bolt handle was cylindrical, ending in a ball, and strongly tilted, so that it did not get in the way of the telescopic sight. The bottom floorplate of the internal magazine was hinged, controlled by a latch on the inner side of the front trigger guard housing.

However, it was the completely new trigger mechanism that was most important. Its trigger travel and overtravel are adjustable. Instead of a first-class lever of the trigger, the

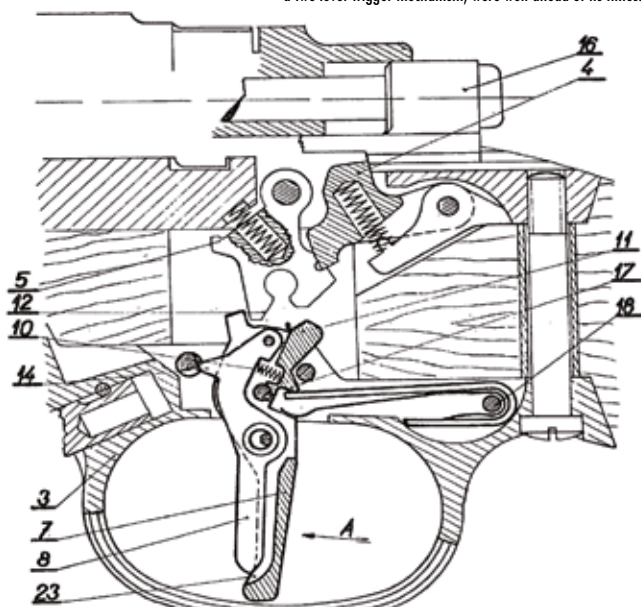
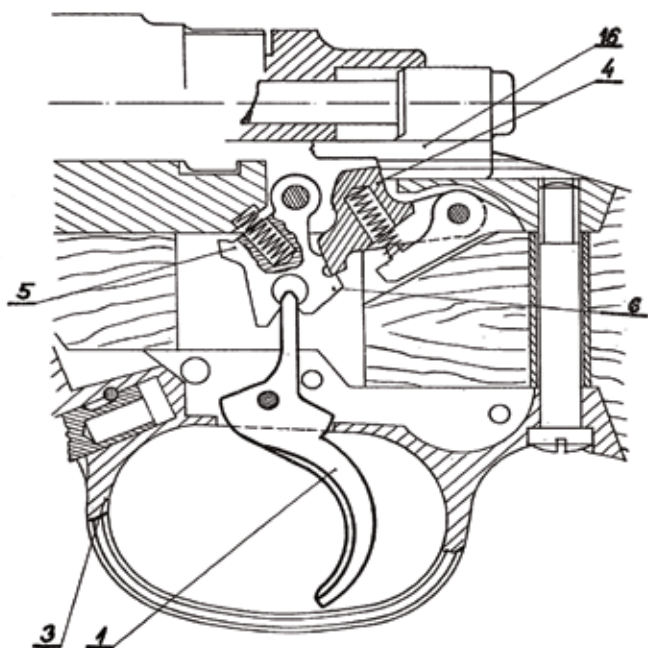
designer used a second-class lever, which pushes the striker nose out of engagement with the trigger blade. When the trigger is pulled, the sear is not pushed out of engagement with the striker but it loses support and falls under the nose of the striker. The result is extremely sophisticated trigger travel. Galaš spoke of a 'flash trigger'.

Due to the complicated political and economical situation in post-war Czechoslovakia, production of the ZG 47 test series started only after 1955, and real serial production started only in 1956. By that time, however, the sales network had fallen apart and the newly founded foreign trade companies had no idea how to sell hunting rifles. Also, the market which had offered considerable opportunities for export in the late 1940s was already occupied by the mid 1950s. Therefore,



ZKK 600

The trigger mechanism of a ZKK with the simple trigger in cocked state, and the trigger mechanism of a ZKK with the set in the set state. Both cross-sections from the patent file no. 104865 of Koucký brothers of 15th March 1962. One cannot marvel enough at the genius of the designers who, using a two-lever trigger mechanism, were well ahead of its times.







The ZKK 601 rifle (top) and the ZKK 602. Both sport an American stock, a standard fit for these weapons. The ZKK 602 has a single trigger, without set, with curved trigger blade.

despite expectations, the Galaš rifle was not a very successful export.

Yet these were really good rifles. The trigger mechanism together with the excellent barrel profiles and quality bedding of the barrelled action in stock provided the Galaš rifle with a great advantage. It is not surprising that they are still highly regarded among hunters and often become the subject of various modifications and reconstructions. Designing this rifle, Galaš was far ahead of his time; the conservative European hunting community is only now starting to lean towards the concept of

striker which, propelled by the mainspring, starts forward and strikes the primer. The mechanism is fast and reliable. Although the trigger cannot be adjusted to such a large extent as with the Galaš rifle, there have never been any complaints about ZKK trigger mechanisms. The set trigger is of a single-set type, i.e. with one trigger blade; it is pulled by pushing the trigger blade



a rifle without a set-trigger but with a precise trigger.

Nevertheless, in terms of user (hunting) preferences at the time of the creation of the rifle, the absence of a set trigger was a disadvantage, despite it not being necessary. Also, the Galaš rifle could not be produced in the powerful 'African' calibers.

### THE LEGENDARY ZKK

The construction of the replacement for the ZG 47 in the early 1960s was taken up by the brothers Josef and František Koucký. The basis for the new hunting rifle had to be a new trigger mechanism that would incorporate a set-trigger option. The Koucký brothers dealt with this task brilliantly. They designed replaceable parts which enabled the production of a unified trigger mechanism; the user would choose whether the gun was mounted with a set-trigger or without it.

This was a double-lever mechanism: it consists of a trigger, a sear release and a sear. When the mechanism is cocked, the nose of the striker is caught by the sear, which is supported by the sear release. After the trigger is pulled, the sear release is tipped down, the functional edge is disengaged from the sear and the sear swings downwards. In this way, the functional side of the sear will fall under the nose of the

forward. This well-executed mechanism is protected by Czechoslovak patent no. 104865 submitted on 6 July 1961.

The bolt keeps to the Mauser concept, in a way similar to the Galaš rifle. Unlike with the Galaš rifle, the two-position safety is not on the bolt sleeve. It was moved to the receiver tang, on its right side behind the bolt handle. It is not a safety directly for the striker anymore, but for the sear. The safety on position is with the thumbpiece forward, and at the same time the safety blocks the opening of the bolt. The bolt sleeve was redesigned, too. On its left side, a button for disassembly was added. If the user presses the button while the striker is released and the bolt opened, it is possible to unscrew the striker mechanism off the bolt body, for cleaning, for example. The rifle also has an internal magazine with a hinged floorplate, and its latch has been moved from the inner side of the front trigger guard housing to the outer side, immediately under the floorplate of the internal magazine. The cartridges in the internal magazine are again placed in two rows, with a side-by-side feed.

The ZKK hunting rifle exists in three model series – the 600 model is designed for cartridges with an overall length of 80mm, the 601 model for 70mm-long cartridges and the heavy tropical model 602 for the 95mm-long cartridges.

### TO UHERSKÝ BROD

The construction of a new rifle designated ZKK (standing for Zbrojovka – Koucký Brothers – Centrefire Rifles) according to the system established for the Brno models, was finished in 1963, and so in 2013 we could celebrate the 50-year anniversary of the creation of this exceptional and popular rifle. Unfortunately, its story soon got complicated. Originally it was developed for Zbrojovka Brno, but in the second half of the 1950s, due to a temporary decline in demand for civilian arms, the factory redirected the production of many other engineering products; and after another increase in armament orders at the beginning of the 1960s, the

factory could not fulfill them all. Therefore, in 1963 the central Czechoslovak authorities decided to shift the main production of civilian arms from Brno to another factory with corresponding experience and available capacity – today's Česká zbrojovka a.s. And so it was done: by 1966, all production of handguns and long guns was transferred from Zbrojovka Brno to Uherský Brod, and the Brno factory further concentrated only on the development and manufacture of shotguns and combination guns. For the Uherský Brod factory this was, in many ways, a milestone: among other things, it allowed them to establish direct cooperation with the Koucký brothers, out of which another legend was soon born – the CZ 75 pistol...

But let's go back to ZKK rifles. Their serial production in Česká zbrojovka Uherský Brod (at that time called Přesné strojírenství – Precision Engineering) started in 1966 – which means that another anniversary is quickly approaching. However, few end users have any idea that they are not holding a rifle from Brno (and despite all improvements in information technology, it is still the case today). Until 1976, for commercial reasons, a license contract ensured that the globally renowned mark was used in the form of the letter Z in stylized rifling, and that on the receiver the distinctive sign BRNO was still emblazoned. Nevertheless, the ZKK rifles were made exclusively in today's Česká zbrojovka Uherský Brod.



	ZKK 600	ZKK 601	ZKK 602
Caliber	30-06 Sprg, 9.3x62, 8x64 S, 7x64, 10.75x68, 7x57, 8x57 S, 270 Win	308 Win, 243 Win, 222 Rem, 222 Rem Mag	375 H&H Mag, 358 Mag, 458 Mag
Overall length (mm)	1110	1095	1150
Barrel length (mm)	600	600	635
Weight unloaded (kg)	3.25	3.1	4.2
Internal magazine (cartridges)	5 or 4	5 or 6	5

In the case of the basic model ZKK 600, it remained so until 1996, while the total production volume exceeded 112 000 pieces. These rifles were available in calibers 30-06 Springfield, 9.3x62, 7x64, 7x57, 8x57S, 270 Win, in very limited numbers also in 8x64S, 10.75x68 and towards the end of their production also in 6.5x55 SE. Concurrently with the production of the 600 model, the production of ZKKs with a short action – the model ZKK 601 in calibers 308 Win, 243 Win, 222 Rem and 222 RemMag – began in 1966. In this case, the production was not continuous; it was already interrupted in 1968. Nevertheless, in 1970, it started running again and lasted until 1996. Altogether, 60 000 pieces were manufactured.

To this day, probably the most famous is the heavy model ZKK 602. It was produced in the calibers 375 H&H Mag, 358 Magnum and 458 WinMag, and later also in 300 WinMag and 7 mm RemMag. Production of 602s began a bit later, in 1967; there were several short intermissions and the total production volume was lower than in the cases of its weaker sisters. Nevertheless, by the end of serial production, in 1997, well over 26,000 pieces had been manufactured, which is a respectable number.

### MANY ADVANTAGES, MINOR NIGGLES

The ZKK rifle was supplied in various designs, which differed mostly in the stock.



In addition to the simple American-style Standard stock, the 'better' Monte Carlo was offered. This and all the stocks of the heavy 602 model were equipped with a rubber recoil pad. The arms in the 602 series differed – with regard to the performance of the calibers used – also in the usage of a reinforcement cross-bolt on the stock in front of the front edge of the internal magazine. The classic 600 and 601 models were mounted with the rear sight

having one blade on a dovetail groove; the tropical 602 models had the sight with one fixed and two foldable blades. Some export rifles had a pop-up aperture sight on the rear bridge of the receiver.

The receiver bridges were angular. On the top, on the sides of the receiver bridge, there was a dovetail for mounting a tele-

scopic sight. There were a number of minor modifications during production, but these never interfered with the quality of the gun.

The ZKK rifles with bolt forged integral with handle are extremely reliable and



Some of the ZKK rifles, (reportedly the early export versions) have in the rear breech bridge a folding dioptic sight. The safety of the 'zee-kaykay' is moved back to 'arm' and forward to 'safe'. In the 'safe' position the bolt could not be opened. The noisy safety was the most often criticised feature of these otherwise highly valued weapons.

One of the variants of marking of the ZKK rifles. Despite using the logo of the Zbrojovka Brno the weapon was manufactured in Uherský Brod.



durable rifles; they are accurate and met with singular success right from the start. In the 1970s, it was considered the best Mauser-type rifle on the market. It gained popularity on all continents, but the best testimonial is the fact that it was favoured by African professional hunters. To this day, ZKKs are perceived as cult rifles.



Forward section of the CZ 531 (right) and the ZKK 600. The CZ 531 inherited two locking lugs, the ejector in the receiver, but the long Mauser-type extractor was replaced with a short, crosswise-sprung claw.

CZ 531 had the tang safety on the top of the stock, which is the place that is most advantageous, according to users. The receiver bridges were rounded and there were threaded holes in them to enable the fitting of a telescopic sight. In 1985 there were prototype tests for the calibers 30-06 Springfield and 308 Win, but real serial production never started. By 1988,

was that Česká zbrojovka – in concrete terms, the team of designers led by J. Pitner – was preparing a new rifle which was right from the start designed for manufacture on numerically controlled machines. For this rifle, the designers returned to the classic Mauser-type long extractor with fixed ejector. At first glance, the bolt is similar to the ZKK bolt, but the profile of the bolt sleeve is new, possibly inspired by the round shape of the CZ 531 bolt sleeve. However, the safety on the top of the stock was not adopted; it was returned to its former position on the right side of the receiver, alongside the bolt sleeve.

CZ 537

### CZ 537

Caliber	6.5x55 SE, 30-06 Sprg, 7x57, 7x64, 270 Win, 243 Win, 308 Win
Overall length	1135 mm
Barrel length	460 mm
Weight unloaded	3.3 kg
Detachable magazine capacity / internal magazine	5/4 cartridges

However, ZKKs also had their shortcomings. They were criticized mostly for the relatively noisy operation of the safety. The problem was solved individually, by shortening the safety spring and possibly with nylon inserts. Sometimes the safety-on maneuver was criticized, too – releasing by the backwards movement of the thumbpiece was considered clumsy, but this complaint was not so significant. Further, the ZKK was criticized because apparently, in some calibers (mostly ZKK 600), the bolt tended to get stuck while inserting a cartridge into the chamber. To remove this problem, the bolt guide was lapped, and possibly the bolt handle inclination was adjusted. Indeed, the curving of the bolt handle slightly backwards was eventually adopted by CZ as standard.

### INTERLUDE NAMED CZ 531

In the early 1980s, the CZ 531 rifle was to be a replacement for the ageing ZKK rifles. In this model, the trigger mechanism

Cutaway view of the mechanism of the CZ 550 rifles

The trigger mechanism of the CZ 550 series. This drawing shows the trigger, the trigger sear, the firing pin sear and firing pin as well as the set. The mechanism is cocked. The trigger mechanism of the CZ 527, the 'small Mausers', is virtually identical.

was reconstructed. It still allowed the usage set trigger, but this time of the double-set trigger. The bolt sleeve was also changed, and it seems that there were at least two shapes of bolt handle – with the classic ball, or in a flat, Mannlicher-style shape. In the CZ 531, Česká zbrojovka abandoned the concept of a long, flexible extractor and replaced it with a short spring-loaded claw with a transverse helical spring. The rifle was fed from the internal magazine, but there was a detachable magazine, too.

only 766 pieces had been manufactured. It is interesting that although the CZ 531 was never made in heavy tropical calibers, their stocks even have two reinforcing cross bolts. The stocks are either the Bavarian type or Monte Carlo. The cause of the abrupt end of the CZ 531

The safety movement direction was opposite to that in the ZKK, i.e. the safety was disengaged by forward movement. In comparison with the ZKK, the safety is much quieter. The trigger mechanism was also designed anew. It enables the usage of set trigger; this time, however, the single-set again.

### FIVE-THREE-SEVEN: PROGRESSIVE, BUT NOT VERY POPULAR

The CZ 537 was the first repeating rifle from Uherský Brod which could be fitted with either a detachable magazine or an internal magazine. The magazine was taken over from the CZ 531, and is used with minor adjustments as a tried and tested functional system up to today's rifles of the CZ 555 series. The detachable magazine had the capacity of 4 cartridges, the internal magazine 5 cartridges; in

both cases, the cartridges were stored in two rows. The CZ 537 was fed in the calibers 6.5x55 SE, 7x57, 7x64, 270 Win and 30-06 Springfield, all designed with an internal magazine, and in addition in calibers 308 Win and 243 Win with a detachable magazine. The rifle had a single-blade mechanical rear sight in a dovetail groove; both bridges were again squared and had the standard CZ dovetail for mounting a telescopic sight. The standard stock was in the popular Bavarian style with a rubber recoil pad.



The CZ 550 rifles family has grown over the years to a record width. Just one of many examples: CZ 550 American.



The first CZ 537 pieces are from 1989 and production continued until 1995, with production of the 'finishing pieces' running until 1999. And yet the CZ 537 has never achieved the popularity of its predecessor. Some consider the main reason to be the lighter barrel profile, which, although providing sufficient accuracy for hunt shooting at short and medium distances, causes shot dispersion to widen dramatically at distances of over 200 metres. Another possible cause of the problems with accuracy could have been the changes in material and the manufacturing method used for the rifling during production; from the classic cut rifling it was changed to a combination of pull-button and push-button broaching and finally to cold hammer forging. A total of 15,000 CZ 537 rifles were made. Let's also add that until 1990, the 537 Sport and CZ 537 Sniper were also manufactured in small-scale, with a high proportion of manual work, both in calibers 308 Win and with a detachable

magazine. Both were equipped with a substantially heavier barrel, and the Sniper also with a laminate stock.

#### FIVE-HUNDRED-FIFTY: THE NEW FLAGSHIP

With hindsight, the CZ 537 is a transitional type of a rifle, with which Česká zbrojovka tested the possibilities of modern NC machine production. As early as 1995, the factory launched a new rifle – CZ 550. For this gun, a trigger mechanism was adopted that enabled the usage of single set trigger and adjust the pull weight and trigger travel. This is also a double-lever mechanism; the sear release supports the sear. Although the number of levers and functions are the same as in the ZKK, the design solution is completely different. As in the case of CZ 537, the CZ 550 can be fed either from the internal or the detachable magazine. The safety on the right side of the receiver is either two-position (safety on – safety off), or three-position (safety on – safety on, but bolt free – safety off). The safety is disengaged by moving the lever forward. On the bolt,

#### CZ 550 American (calibers and dimensions may vary by different models)

Caliber	308 Win, 30-06 Sprg, 9.3x62
Overall length	1135 mm
Barrel length	600 mm
Height	195 mm
Max. width	80 mm
Weight unloaded	3.4 kg
Internal magazine	5 cartridges



CZ 555

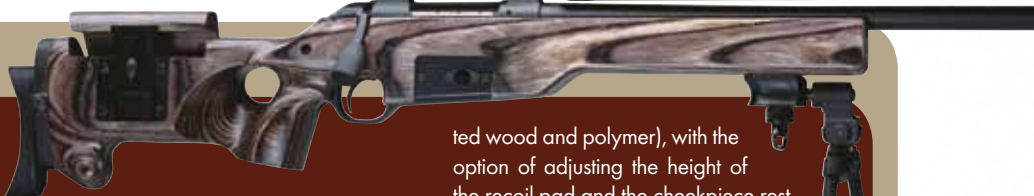


CZ 700 Sniper

### MODULAR SEVEN-HUNDRED

When, in the 1990s Česká zbrojovka started developing the CZ 550 series, a decision was made not to put the emphasis only on the time-proven but technologically demanding Mauser action. Simultaneously, a completely new modular design for a hunting, sports and service rifle was being worked on, whose production was simpler. The production title of the new rifle was CZ 538, but it was changed to CZ 700.

The principal author of the seven-hundred was the designer Vítězslav Guryča, known today for his involvement in the CZ 805 BREN project. A number of progressive features and differences were utilized, differing from the existing direction in the construction of rifles. The most significant change was the usage of a modified Weatherby boltaction with a dual trio of axial locking lugs on the rear of the bolt. The mounting of the barrel in the receiver was solved within the modular concept by screwing on a headspace, and the assembly could be carried out using parts which had already received a finish. The bolt was equipped with



a short extractor and spring-loaded ejector with a pin. For serial production, polymer parts were to be used; for example, the detachable single-row magazine was to be mostly plastic. The designs of the trigger and striking mechanisms were completely new. The option of versatile control of the trigger mechanism was noteworthy. Another characteristic feature was the down and backward bent bolt handle with a massive plastic knob, which, together with a very quiet bolt movement, contributed to the comfortable control of the rifle. The development of the CZ 700 rifle was essentially finished as early as 1995. After the completion of the basic model, work began on the sporting special CZ 700 Sport, with an original-shaped stock. After that, the version CZ 700 Sniper followed, in 7.62x51 mm NATO (308 Win) caliber with a ten-shot magazine, for which a newly designed stock was used (there were slightly different versions of lamina-

ted wood and polymer), with the option of adjusting the height of the recoil pad and the cheekpiece rest.

The CZ 700 rifles were a structurally imaginative, user-friendly and very accurate rifles, and it would be interesting to know how they would fair on the market.

Unfortunately, their fate was sealed by the economic problems CZ had to deal with in the challenging period of the second half of the 1990s, which prevented the company making the large investment needed to commence serial production. Of course, a crucial part was played by the outstanding properties of the CZ 550 series, which Česká zbrojovka could offer in excellent quality for a very reasonable price. This also corresponded with the warm acceptance by customers.

The money saved was used to systematically expand the range of the CZ 550 rifle series, which, thanks to this, is still available in a wide range of designs and calibers.



there is a Mauser-type extractor with a long spring; and in comparison with the CZ 537, the changes in the shape of the bolt sleeve are only cosmetic. The receiver bridges are square and carry dovetail grooves for mounting a telescopic sight. The sights consist of the rear sight adjustable for elevation and windage.

Česká zbrojovka developed a range of the CZ 550 to an extent so far unprecedented in any other rifle from Uherský Brod. The basic model Standard has a simple American-style stock without a cheekpiece and with a plastic recoil pad. There are, however, many other 'better' versions: with Bavarian stock, a full-stock version, a version with laminated stock,



In Africa, the CZ 550 Magnum rifles carry on with dignity in the glorious traditions of the ZKK 602 model



and several versions with a plastic stock. Variations are not limited to the shape and material of the stock, but also to the length and profile of the barrel: heavy, so-called Varmint barrel, but also a barrel with the barley twist profile – a characteristic of the cold hammer forged barrel.

As for calibers, this model also historically offers the widest range. Just before the arrival of the new generation of the CZ 557 rifles, the five-hundred-fifty was

available in calibers 22-250 Rem, 243 Win, 6.5x55 SE, 270 Win, 7x64, 7 mm RemMag, 308 Win, 300 WinMag, 30-06 Springfield, 8x57 IS and 9.3x62. The CZ 550 Magnum series were chambered in the traditional African heavy calibres 375 H&H Magnum, 416 Rigby, 458 WinMag and 458 Lott. The CZ 550 Safari Classic was a royalty though – the luxurious African caliber rifle with the American-style stock, which was in the case of the tropical Magnum calibers reinforced by two cross bolts and with the traditional African rear sight with three blades.

And we are not even counting the offer of the subsidiary CZ-USA, in which the CZ 550 rifle plays a role in other calibers and designs.

Overall, there is no doubt that as far as world-wide popularity is concerned, the CZ 550 does not hang behind the legendary ZKK. This is best attested to by the production volumes, which de facto equal the sales: by the end of 2010 alone, i.e. within 15 years, approximately 178 000 pieces were manufactured, and despite

the emergence of the new model CZ 557, this gun still remains the 'flagship' of Česká zbrojovka in the field of long hunting guns. It is no coincidence that the five-five-sevens were originally designed with the intention of implementing a relatively limited modernization of the five-hundred-fifty – the company and the customers did not require anything else, but everything was changed by the exceptional ingenuity of the designer. But more on this topic on page 40.

For completeness, let's also mention that the CZ 550 rifle became the construction solution for sniper and sporting special CZ 750 of the 308 Winchester caliber, for which a barrel elongated to 660 mm and a sophisticated buttstock are characteristic.

### A SOMEWHAT DIFFERENT CZ 555

In many respects, the CZ 555 from 2004 represents a special addition to the CZ 550 series. It differs from the five-hundred-fifty in the re-designed bolt. It is still locked by two symmetrical lugs, but instead of a long extractor, it has a long one spring-loaded by

a transverse helical spring, similar to the CZ 531 in its time. The ejector is in the shape of a spring-loaded pin placed on the bolt face. On the whole, this kind of bolt is a little different, and the question is whether this gun can still be seen as a Mauser type. This system is called *push feed*. It strips the cartridge from the magazine, and the extractor claw snaps or rather slides behind the rim of the cartridge only at the closing of the bolt. After a shot, on unlocking the bolt and moving it backwards, the spring-loaded ejector pushes at the bottom of the cartridge case and pries it from the bolt face. At the moment when the whole cartridge case arrives on the level of the ejection port, the ejector spring propels the cartridge case from the rifle.

This is a proven solution. Bolts with a push feed were first used to a larger extent in the Remington 700 rifle (in 1962) and Winchester 70 (versions after 1964). They are better in terms of strength. The extractor is less stressed and there is a smaller risk of breakage. On the other hand, the movement of the cartridge in the rifle during insertion into the chamber is no longer controlled so precisely as in the Mauser type bolt-action. In practice, both designs have their own strong supporters and opponents, and it is up to the user to which one they give preference.

Indeed, more choice was also the reason why this rifle was created in Uherský Brod. With regard to the qualities of the basic CZ 550 series, the demand for the CZ 555 rifle was never very high, but it has found its fans. However, CZ does not supply these rifles anymore. The reason is the new model series CZ 557, which uses a similar bolt system.

### CZ 555

Caliber	7x64, 30-06 Sprg, 9.3x62
Overall length	1135 mm
Barrel length	600 mm
Height	190 mm
Max. width	70 mm
Weight unloaded	3.3 kg
Detachable magazine capacity	3 cartridges



# CZ 557

## – the ZKK for the 21<sup>st</sup> century

In autumn 2012, the Česká zbrojovka (CZ) launched the newest addition to its rifle portfolio – the CZ 557. It might appear that this is a so-called economy weapon, a new category born in response to the global economic crisis that hit many customers deeply in their pockets. However, in the case of the 'five-five-seven' the story is a bit more complex.

According to the original plans, the CZ 557 was to be simply a modernized and more economically manufactured CZ 550. Nevertheless, the result is a weapon of completely new parameters which takes the Uherský

### FROM MODERNIZATION TO A NEW RIFLE

The CZ 557 rifle is a creation of the young designer Vít 'Viťa' Sedlák, whose name has been known to the shooting public for quite a while now – it was him who crea-

Vít Sedlák joined the design department in Česká zbrojovka in August 2007. He had under his belt over ten years in the tuning, modifying and assembling of hunting weapons. Thanks to his experience he already had a clear vision of a modern repeating rifle. However, the company's priorities were somewhat different at that time: in the reaction to the newest trends on the market, the priority for the end of the first decade was to develop a new self-loading rifle. Viťa joined

ted the CZ 527 Varmint guns for the team representing the Czech-Moravian Hunting Union that has been repeatedly excelling in national and international competitions of the hunt shooting sport. However, for Viťa, this was just a 'side job', as in the recent years he has been devoting most of his time and energy to his first large independent project – the five-five-seven.

Brod company well into the 21<sup>st</sup> century and strengthens its position as one of the most important manufacturers of modern hunting rifles based on the Mauser system. How did it happen?

### CZ 557 Lux

Calibre	243 Win, 270 Win, 308 Win, 7x64, 6.5x55 SE, 30-06 Sprg, 8x57 IS
Length overall	1063 mm
Barrel length	520 mm
Height	183 mm
Max. width	87 mm
Weight w/o ammunition	3.3 kg
Internal magazine capacity	5 rounds





the stage two of this task. Then came a key reversal of the development programme. The project for the self-loading rifle did produce interesting results, but it turned out that more time and finances would be needed than originally planned. After some deliberation, the company management postponed the project and moved the freed capacity to a project which had already been under consideration for a while – a modernization of the CZ 550 rifle. The reasons were simple: the five-fifty was an excellent weapon, but conceptually and technologically it is a child of the 1990s – the period in which the capabilities of the first-generation of the CNC centres still have to be supplemented by a plenty of manual work, using also some older manufacturing processes that have since become outdated.



Vít Sedlák, father of the CZ 557 rifle



The barrel is free floating

According to the original specifications from 2009, which were based on extensive customer feedback from all over the world, the CZ 550 was to be not only modernized but improved by a redesign of some assemblies, especially of the trigger mechanism and also partially the stock.

The extended specifications also required a weight reduction, elimination of the audible clicking of the safety (this has been a problem of rifles from Uherský Brod since the time of the ZKK) and improvement of the bolt action.

This was the task assigned to Vít Sedlák. Nevertheless, with the support of the then-production manager for long guns, Ing. Karel Bařinka, a new weapon, rather than just a modernized version, was born from his mind and hands. Soon the question arose: keep to the original idea of upda-





The CZ557 bolt. In the bolt handle base you can see a pin, which must be taken out when you want to remove the bolt sleeve. Locking is done with two massive lugs, ejector is fitted in the bolt body face.

is cocked while the bolt is being opened.

The bolt of the CZ 557 uses the same principle as the CZ 555 model described above, but it is not derived from it. Above all, the bolt sleeve is different, and also the bolt is disassembled in a different way.

The bolt can be removed from the gun using a simple little push button on the left side of the receiver. When the bolt is closed, the button is hidden under the bolt sleeve. The bolt can be disassembled after pushing the pin from the base of the bolt handle.

The trigger mechanism is new, too. As with the majority of contemporary rifles, it is not a set-trigger, but it does allow the adjustment of all key characteristics of the trigger: its pull, the length of travel.

Conceptually, it is based on the mechanisms of the 550 series, i.e. with first lever sear backed by trigger. After the trigger is pulled, the sear loses support and the force of the main spring applied to the striker pushes the sear of engagement with the striker. The striker slides over and fires the cartridge in the chamber.

In its properties and concept, the new mechanism is slightly reminiscent of the Timney trigger, which at one time was installed in various Mauser-type guns in the USA and was really popular there. Recently, a similar concept has been used by the Browning X-Bolt rifle. But we don't need to cross the ocean; this trigger-mechanism concept has been used by the ZG 47 'Galaš' rifle (possibly for the first time ever). It seems that if you have certain requirements regarding the functioning of a given subassembly or device, it is extremely likely that you will arrive at a similar solution, albeit completely independently.

The safety is placed on the right side of the gun, immediately behind the base of

ting the five-fifty, or to prepare an entirely new rifle? The matter was referred to the Director General of the Česká zbrojovka, Ing. Lubomír Kovařík,

The rear sight base can be rotated, so the rear sight blade can be inclined by shooter preference to the front or to rear

who decided to take the second route. Vířa Sedlák summed up what happened next: 'When we were given the green light, we started completely from scratch, component by component, operation by operation, tool by tool.' The final CZ 557 rifle resembles the original CZ 550 only remotely; in fact, they share only insignificant components, like sling swivels, for example, or the ball on the bolt handle.

## NEW ELEMENTS, CLASSIC FEATURES

The CZ 557 is a repeating hunting rifle with cylindrical slide bolt of a push feed type, with a double-stack internal magazine and side-by-side feed. The bolt is locked into the receiver by two symmetrical locking lugs. The receiver is conceived in the classic way, with two bridges between which there is a large space for loading and ejecting cartridges. The striking mechanism



The rear of the cocked striker protrudes from the rear of the bolt sleeve and due to the red recess functions both as a visual and tactile indicator. The safety-off position uncovers the red warning dot located on the side of the bolt sleeve.



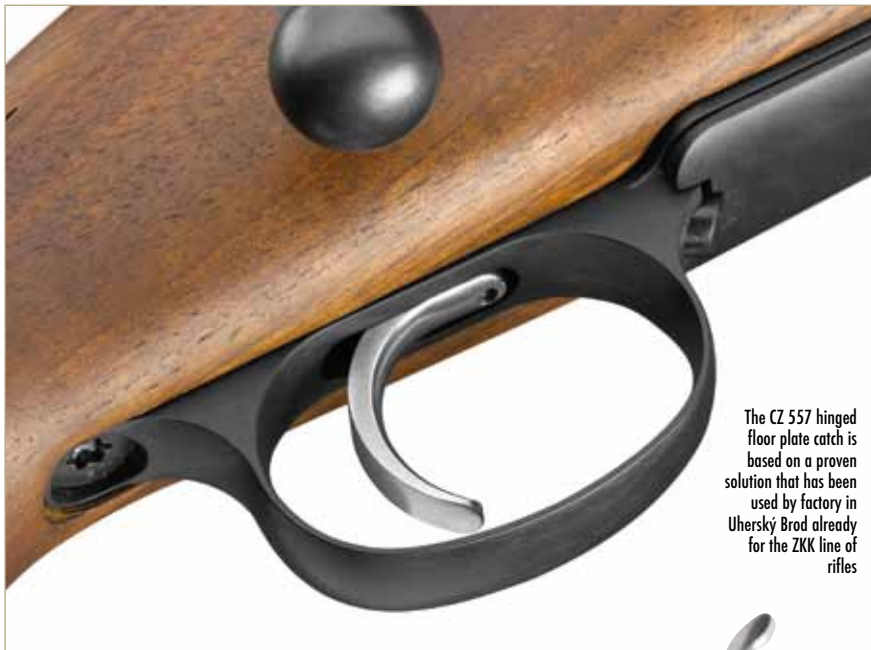


the bolt handle. The safety is disengaged by pushing forward. It blocks the striking mechanism by moving on a roller; instead of dry sliding, it rolls to place. The result is a quiet and smooth safety operation with positive locking in either position. Once the striker is cocked, the rear of the striker, highlighted with a red stripe protrudes from the rear of the bolt sleeve.

the fibre optic sight needs light. Therefore, only a cage protecting the sight against mechanical damage was left from the front aperture sight, which

the bolt sleeve from the bolt, you can push out the locking pin at the base of the bolt handle using a thin blunt punch or any other suitable metal rod. Now the bolt sleeve can be screwed off of the bolt body.

once had to prevent incident light and glare. For mounting optical sights, there is the traditional CZ dovetail on the front and rear receiver bridge.



The CZ 557 hinged floor plate catch is based on a proven solution that has been used by factory in Uherský Brod already for the ZKK line of rifles

The gun is fed with rounds from the internal magazine. Cartridges are stored in two stacks and the feed is also doubled. The magazine base is hinged and enables the easy and fast emptying of the gun; the base's latch is placed at the front edge of the front trigger guard housing.

The mechanical sights are open with a windage-adjustable rear sight. Its blade is tilted slightly backwards. The rear sight blade is rotatable, so if you prefer the sight inclined slightly forward, you can rotate it yourself.

The front sight is elevation-adjustable featuring fibre optic. Together with two fluorescent dots on the rear sight blade, this ensures the adequate accentuation of the aiming picture. To function correctly,

The CZ 557 trigger mechanism is made without a set-trigger, but all key characteristics can be adjusted. The trigger blade contains a screw for the trigger take-up adjustment, the overtravel can be adjusted at the mechanism housing, and nut secures the screw for the trigger pull adjustments.

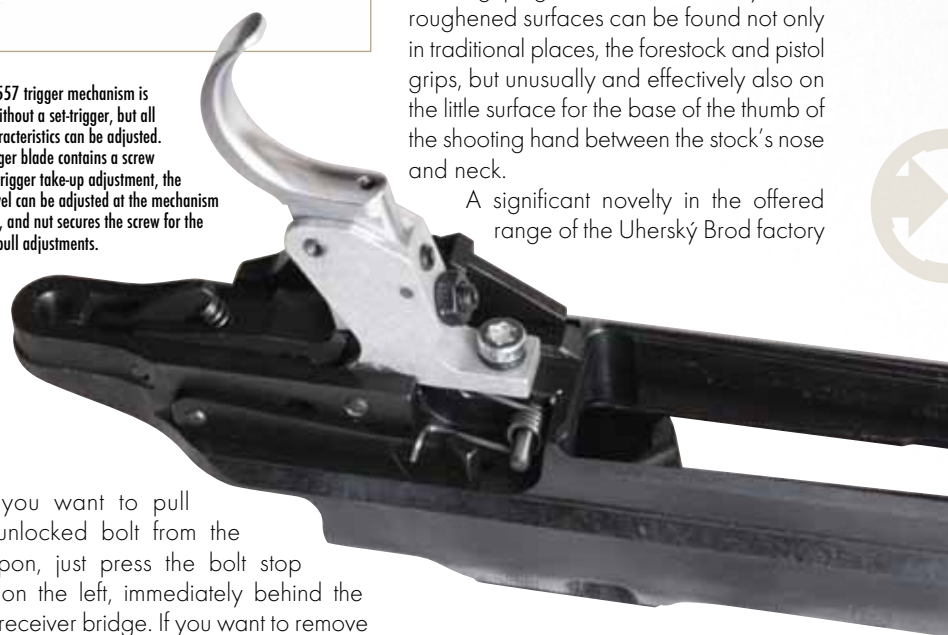
If you want to pull the unlocked bolt from the weapon, just press the bolt stop end on the left, immediately behind the rear receiver bridge. If you want to remove

### WELL-EXECUTED STOCK

The system is fixed in the stock by only two screws. The front mount is in the shape of a wide prism, which positions the system accurately in the stock on an aluminium alloy spreader plate. The barrel is free-floating, free over the whole length of the forestock, which is a prerequisite for achieving high accuracy.

The stock of the CZ 557 rifles deserves closer attention. Its elegant but functional shape is a result of collaboration of the designer Václav Sedláček and a renowned master gunsmith František Leník. As its customers know, the CZ traditionally makes its own stocks, currently using the cutting edge modern technology, like CNC centres or laser-cutting of diamond textures on the gripping surfaces. Incidentally, these roughened surfaces can be found not only in traditional places, the forestock and pistol grips, but unusually and effectively also on the little surface for the base of the thumb of the shooting hand between the stock's nose and neck.

A significant novelty in the offered range of the Uherský Brod factory





is the abandonment of the classic varnish in favour of oil treatment, which emphasises the grain of the walnut wood. This applies to the Lux version, with which this new range began. The oil finish technology is a little more expensive than the varnish finish and demands a better quality of wood (to have



anything to emphasize with an oil finish, Turkish walnut is used for the CZ 557; it is a wood a class higher than the one used for the CZ 550). The CZ company could, however, afford this courtesy to the customer thanks to technology-related savings in production of 'iron', which we will explain



later. The 'five-five-seven's' stock not only looks good, but also excels by its extremely pleasing ergonomics. Thanks to this, the CZ 557 creates the impression of a familiar weapon right from the first touch – hands are placed exactly where they should be, and all control elements are within easy reach. The only exception might apply to shooters of stature much over or under average. Otherwise, we have encountered only unqualified praise. And there is another interesting feature: It is true for the overwhelming majority of shooters that whether they put the gun to their shoulder slowly and precisely or quickly hoist it there, they will immediately have the mechanical sights in the aiming line. Much less common is the fact that when a user mounts telescopic sights on the rifle, after putting the gun to their shoulder, they will also see immediately and precisely through the telescopic sight. The trick lies in the original shape of the comb of the stock, which uses the fact that by mounting the telescopic sight, the gun's centre of gravity changes slightly and the shooter naturally 'lays' himself on the stock slightly



differently. This ergonomic trick is the result of the extensive practical tests made by Vít Sedlák and František Lenikus.

### SHORTER, BUT MORE ACCURATE

The shooting public has surely noticed that the CZ in the newest generation of their long guns began to use much shorter barrels successfully. This has brought a substantial reduction in overall size and weight – without sacrificing accuracy. The company has applied the same know-how to their new CZ 557 rifle. The basic Lux version has a forged free-floating 520 mm-long barrel, while for the corresponding version of the CZ 550 the barrel length is 600 mm. The properties and performance of the 520 mm barrel have already been thoroughly

#### CZ 557 Sporter

Calibre	270 Win, 308 Win, 6.5x55 SE, 30-06 Sprg
Length overall	1042 mm
Barrel length	520 mm
Height	175 mm
Max. width	72 mm
Weight w/o ammunition	3.3 kg
Internal magazine capacity	5 rounds

tested by the CZ company from Uherský Brod on the full-stock version of the CZ 550 FS.

As for the accuracy of the 550 and the new model, the key role is played by the different method of bedding the barrel in the receiver. In the CZ 550 rifle, two deformation zones were used for tightening the barrel. The 550 is known as a very accurate gun, but its weakness was that its assembly and sighting in required quite a lot of care. With the CZ 557, thanks to the modern, highly precise machine production of both the barrel and the receiver, this connection is achieved in one set-up – axis to axis – with a defined tightening torque.





It is readily obvious that something is very different. With the CZ 550 fitted with a telescopic sight, you aim at the middle of the paper and look for the first shot all over the target. With the CZ 557 it is sure, right from the start, that the shot will be in the circle a maximum of 15 centimetres from the aimpoint. Long-duration shooting tests have shown that the CZ 557 has a high accuracy potential: One of the test models in the .308 Winchester calibre had a dispersion pattern of 85 mm at 300 m after 8000 shots – which is the minimum service life. Therefore, the CZ company started to work on the sniper version of the 557.

### CZ 557 Carbine

Calibre	243 Win, 308 Win, 30-06 Sprg, 6.5x55 SE, 7x64, 8x57 IS
Length overall	1042 mm
Barrel length	520 mm
Height	183 mm
Max. width	87 mm
Weight w/o ammunition	3.3 kg
Internal magazine capacity	5 rounds

the CZ 550 rifles. The CZ 557 rifle is a different case. Now, the rod material enters the machine on one side, and within a few tens of minutes a nearly finished receiver emerges out of the other side, machined within a precisely defined tolerances. Only the slotting operation remains – which this machine could also do, but it would not be economical.



### NEW TECHNOLOGIES

And what about the aforementioned savings in the production of the 'iron'? Here, it is essential to mention that the CZ 557 was being developed at a time when Česká zbrojovka started a radical modernization of their machinery. The company purchased the latest generation of CNC lathe and milling centres, which although installed primarily for the military programme, were expected right from the outset to be used for civilian series, too.

In close co-operation with engineers, the designer adapted the bolt design, which in the case of the CZ 550 rifle represented

a real manufacturing challenge. Moreover, this part was not to be heat-treated. The reason for this decision was to avoid any problems that this process traditionally brings in parts of complex shape, as the internal stress in the material and distortion of the finished part can occur. The problem was solved by using special imported steel, whose strength characteristics were even better than that of the 550's receiver after heat treatment.

The advantage of the new CNC centres is the virtually complete elimination of the manual labour which inevitably brings big or small deviations, affecting the final quality. This was a weak point in the production of

The manufacture of the bolt itself has been simplified, too. In the CZ 550, this is a technological challenge, as the pre-form, which is manufactured by closed-die forging, includes the bolt handle, and that greatly complicates the rotary operations. Vít Sedlák therefore designed a bolt with a detachable handle, whose body can be machined out of bar stock before the handle is inserted and secured with a pin, which also connects the bolt assembly.

### WHAT IS AVAILABLE

It is a new company strategy nowadays to submit all CZ firearms to extensive long-term testing by professional customers from all over the world, and while the design is fine-tuned, based on these results, the series production is carefully prepared. The aim is that at the moment the new model is introduced and begins to be written about, it is for sale in a perfectly tuned shape. This process obviously pays off for the Česká zbrojovka, and they have also used it for the generational update of their rifle portfolio. After all, the current series CZ 550 is still selling well, so there is no gain in needless haste.

At present, two basic models of the CZ 557 are available: the CZ 557 Lux, with a stock made of high quality, oil-treated walnut and a five-round double-stack internal magazine. The range started with a model in 30-06 Sprg calibre, followed by the 243 Win, 270 Win, 308 Win, 7x64, 6.5x55 SE and 8x57 IS versions in quick succession. The CZ 557 Sporter, launched at the same time, is available in



A godfather of the CZ 557 rifle is a famous actor Karel Roden



a similar range of calibres. This model is characterised by varnished beech stock in the American style and the absence of mechanical sights.

In 2014, we can first and foremost look forward to models with detachable magazines. Two specific models have been announced for the second half of the year: the compact CZ 557 Ranger with a detachable magazine (see p. 50) and the CZ 557 Carbine. The latter is an internal magazine rifle, similar in shape to the Sporter, with which it shares its basic technical parameters, including the total length of 1042 mm. It differs in having the stock made out of oil-treated walnut, mechanical sights and a slightly different selection of calibres: 243 Win, 308 Win, 30-06 Sprg and 6.5x55 SE.

In the long term, the range would be gradually augmented by other models, for example the Varmint version (with heavy barrel) and the Synthetic (with plastic stock).

#### A 'ZKK' FOR THE 21<sup>ST</sup> CENTURY

When getting acquainted with the CZ 557 rifle, experienced shooters soon discover that some elements, and, indeed, the overall impression made by this modern weapon, are surprisingly similar to some of the legendary ZKKs – the models in the ZKK 600 series by the genius Koucký brothers.

The designer Váňa Sedlák agrees. However, this is not a case of a direct inspiration or copying. The explanation is offered by Ing. Karel Bařinka: *'Váňa designed the gun using the common sense of a gunsmith who for years converted and fine-tuned*

*weapons. Moreover, he worked at home, with minimal mechanical equipment, and this taught him to work in such a way that his designs were technically logical and as simple as possible. When he built the new rifle based on his experience, he came to me once, all surprised, saying: 'Listen, I just compared my rifle with the ZKK, and I went back to the Kouckýs solutions with some of it.'*

To the Česká zbrojovka, with regard to technology and also to customers, the CZ 557 represents, on the one hand, an advance to a higher category (while still keeping a very reasonable end price), and on the other a partial return to the best of the long tradition of Czech arms design. And reactions to the 557 show that customers can appreciate this rare combination.

# CZ 557 in practice

**An experienced shooter testing the CZ 557 rifle shared his views with us.**

**F**or the test, I borrowed a CZ 557 rifle of 30-06 Springfield calibre in the Lux version with a Bavarian stock. I felt Czech optics would be appropriate for a Czech rifle – so I fitted the weapon with the Meostar R1 1.5–6x42 RD telescopic sights on the CZ mounting with the rail baseplate.

As I had the tools in hand already, I removed the system out of the stock and looked at how the weapon was made and bedded in the wood. The fitting of wood with metal was good; the metal parts are clean and smoothly machined. Although the inner non-functional surfaces are not polished, there are no burrs on them or undue rough tool marks. The fitting of parts is clean, without gaps or unnecessary backlash.

I also studied the range of trigger adjustment. The 'voice of the people' now asks for a short, almost point travel, but there are also a considerable number of users who want to have some perception of travel before releasing the firing pin. With the CZ 557, it is not a problem; the travel length is adjustable from practically zero to about



6 mm (depending how you measure the travel length – I measured at the rearmost point on the front surface of the trigger blade. I managed to adjust the pull in the range of 11–24 N (2,47–5,39 lbf). In both cases, the trigger travel was smooth and the maximum pull force very stable.

The trigger backtravel is also adjustable. It is pleasant, and in our nation of keen

DYI hobbyists, very important, that even if you overdo the tinkering (exceeding the adjustment range), you will be able neither to tension the striker or to fire it. By returning the adjustment element, the function will be renewed. In terms of safety, it is very important that even at the setting with the smallest possible trigger pull, I was not able to cause spontaneous firing by repeated dropping of



the weapon, stock first, from a height of 1 m to the floor. As with the majority of quality trigger mechanisms, the feel of the CZ 557 trigger seems lighter than the meter shows.

I tested the rifle with the Sellier & Bellot rounds with an 11.7 g (234 grs) semi-jacketed, controlled deformation bullet and the Nosler Partition cartridge with a semi-jacketed bullet, again with controlled deformation, of 11.7 g. To the cartridges from Sellier & Bellot, I added the Geco cartridge with a semi-jacketed 11g bullet.

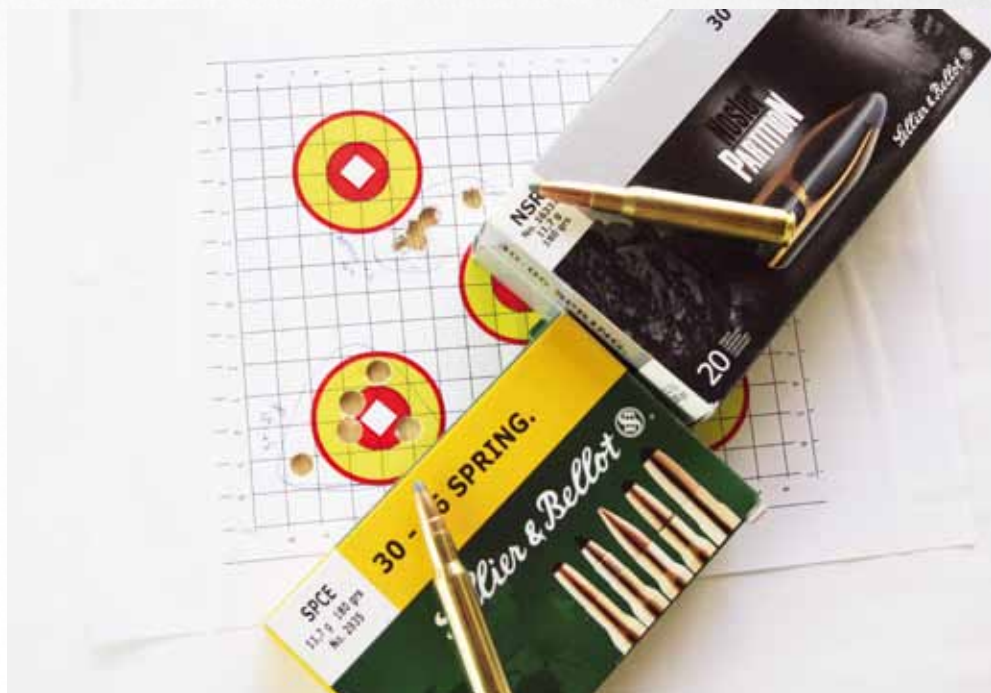
After boresighting the gun, I measured the  $V_{2.5}$  velocity of the bullet (i.e. the velocity at the 2.5 metre distance from muzzle, using Oehler 35 chronograph, three sensors at the 609.4 mm measuring base, 24 °C ambient temperature). For each kind of ammunition, I also got two five-round groups at 100 metres. For this weapon, the S&B Nosler were the most accurate – four rounds went repeatedly through one hole and only the fifth one opened the dispersion pattern to less than 30 mm. Geco and the popular cut-through edge seemed to me as equal in precision; the dispersion was less than 40 mm.

The bottom line – with this telescopic sight, the cartridges used and my eyes, the weapon accuracy is somewhere around 1 arcminute. That is a very high accuracy, such as is seen in the serial production of the majority of 'big brands', and which also suffices for hunting at long distances.

### A COUPLE OF RESERVATIONS, BUT GENERALLY A HIGH PRAISE

From my subjective point of view as a user, I have a few minor reservations and a lot of praise. I don't like the fitting of the system in the stock by torx screws. It is true that they allow high tightening torques and don't wear out easily, but the classic inner hexagonal socket for allen key, available practically everywhere, would be more to my liking. Maybe, with the final product, the Česká zbrojovka will supply a universal key, as it used to with the ZKK 600, or at least a bit for a hex adapter. Also, I would have liked the disassembly button on the side of the bolt locknut to remain. Pushing the pin out of the base of the bolt handle is also rather problematic in terms of a suitable tool.

The only nuisance is the awkward to use bolt stop. If your hand is only a little larger and you want to take the bolt out, you will need a tool. Wearing gloves, you will have no chance. The bolt stop can be pressed with, for example, a cartridge rim or a car key; the required force is minimal, but it is not exactly comfortable. Everything else deserves praise.



The control elements are, without exception, within easy reach, and their usage is intuitive; positions sure. This goes especially for the safety, which is very quiet, or, with a bit of good will, even inaudible. The trigger travel was a bit tougher in the new gun, but that will correct itself in time. The bolt has no tendency to jam, even when using a round with a cut-through edge bullet. This used to be a real pain in the ZKK, for example... Whatever I did with the CZ 557, the bolt action, loading and discharging were entirely reliable for the whole time of testing, in all attitudes of the gun and with any force of handling.

I see the return of the magazine catch to the trigger guard as positive. There is no danger of unintended activation; for example, by a gloved hand in winter, or while pushing through dense undergrowth.

The stock sat in my shoulder as if it was custom made. In its front part, the forestock is rounded, but in the middle part its shape changes to a flat-bottomed surface, providing good stability with no tendency to wobble when firing from a support.

When viewed from above, the stock is optically strongly asymmetrical relative to the longitudinal axis. The deviation is not so strong, but the stock has a deep indentation for the right palm and thumb, and the comb (cheek rest) is also conspicuous. The pistol grip is almost perpendicular to the barrel axis and protrudes at the bottom end, the result being that the right hand sits perfectly in the stock, pushing it into the shoulder without any apparent effort and without slipping; the grip is reliable and repeatable. The trigger reach

is very comfortable and the comb allows comfortable positioning, whether with iron sights or when using a scope.

About ten people handled the rifle on the range, and the stock suited everyone except one really big guy (212 cm). The rifle behaves great while shooting, too. The upper edge of the comb is tilted slightly forward, so that when firing, it moves away from the cheekbone rather than sliding on it or even kicking. Thanks to the reliable hand contact in the area of the pistol grip, the repeat fire is of lightning speed and the weapon returns exactly to the sighting axis. This stock is extremely well-designed; we'll see what it's going to be like in the other versions.

The second really strong point is the trigger mechanism that we've already talked about. I admit I prefer a little longer travel with a double pull. The CZ 557 does not offer a double-pull, but there are not many of us fuddy-duddies with such preferences. A longer pull and just about everything else can be easily set. The trigger mechanism is really great.

The tested weapon as a whole is a little shorter. Yet it is well balanced and very pleasant to carry, whether in the hand or on the strap. It is responsive and fast; simply – I feel that, as a whole, a very well balanced and tuned gun has been arrived at again.

I think that, due to its excellent alignment and the sum of its properties, the CZ 557 is a rifle which can rightly be placed a class higher than the one in which the Česká zbrojovka in Uherský Brod is usually perceived nowadays.





# The GEM NAMED CZ 557

**The primary focus of Česká zbrojovka (CZ) Uherský Brod is aimed at serial production, nevertheless the demand from customers longing for decorated firearms also gets a proper deal of attention. That applies mainly to hunting rifles and shotguns with great emphasis laid on the aesthetic impression.**

'Oriental' customers come back with more and more special orders...

## THE NATURAL ELEGANCE

The attention of wealthy shooters and fans of truly beautiful arms will be undoubtedly attracted by the new CZ 557 rifle. As you can read in detail on p. 40, the five-five-seven was originally meant to be a modernised upgrade of the famous CZ 550 model but the development process went

The task of an engraver then deals with selection of a suitable technique and materials to emphasize the natural beauty of the firearm and harmonize it with aesthetic visions and preferences pursued by the customer. The advantage of the five-five-seven model is that even the standard version is elegant and offers sufficient metal and wooden surfaces to contain decorative motifs. Luckily, not even the new Swiss material with splendid strength characteristics

**T**he company in Uherský Brod used to do the engravings and other means of decorations by its own means but then it started outsourcing this process in the year 2004, the newly established engraving centre called Engraving Art Studio began to cater for the company's needs and it is actually based within the premises of the factory in Uherský Brod and managed by former CZ employee with global reputation, the engraver René Ondra. This step proved to be the right thing to do and it has resulted in a respectable and still growing range of luxurious firearms under the CZ brand distributed to the most demanding customers. The pool of these customers includes celebrities from cultural and financial societies and leaders of numerous countries around the world, whereas the most complex orders come from the Middle East and involve fabrication of super luxurious weapon gems. The achievements of CZ in this respect are further confirmed by the fact that its satisfied

**This type of firearms should be ideally provided with a combination of English engraving with old German features originating from the region behind the Alps with respect to formability of material.**

beyond this scope soon and gave rise to a premium rifle with absolutely new parameters. Focus on quality design was one of the integral parts of engineering works.

And it came true: this new rifle model 557 fits in hand perfectly and soothes the eye. A great share on this appearance is attributable to the authentic shape of the stock made of carefully selected dimension timber from the famous premium quality Turkish walnut. As far as the CZ 557 model is concerned, Česká zbrojovka (CZ) even skipped its traditional technology of stock varnishing and adopted the more complex oiling process to accentuate the wood pattern wonderfully.

used for manufacturing of the receiver body showed any problems.

## THE BEAUTY FOR MR. RODEN

The first engraved CZ 557 rifles emerged as early as in 2012, with the serial production of this firearm launched in the second half of the year. One of the first decorated five-five-sevens was intended for its godfather, the Czech actor famous all over the world - Karel Roden, whose hunting and game-keeping experience boosted the image of this gun even further.

The rifle for Mr. Roden is decorated with leafwork on the receiver, the linked part of the



barrel and the bolt nut. This section, toned into silverish colour, is balanced by gold-plated controls, gold circles on the barrel and the gold-encrusted model logo on the left hand side of the receiver. Jewelled surface finishing belongs to traditional decorative features on the bolt providing a convenient supplement to plant motifs on the receiver. The stock showing a splendid pattern of walnut wood attracts with the fore-end tip and the pistol grip bottom made of ebony. The detail to crown this masterpiece comprises leafwork on the vertex of the modernised riflescope mount.

This is just an example of a fairly modest decoration on a gun to be most likely used for hunting. However, the CZ 557 rifle can be also turned into a real weapon gem to become rather a collector's item gaining on value.

### DECORATING RIFLES

The general rule is that this type of firearms should be ideally provided with a combination of English engraving with old German features originating from the region behind the Alps with respect to formability of material. Other features worth considering would include the Damascene steel for the fabrication of the bolt lever ball tip, the bottom of the fixed magazine or the rosette on the grip bottom. Encrusting, i.e. mutual inlaying of different metals, is done using pure gold only. Ends of premium Turkish walnut stocks can be decorated by ebony, as already mentioned above, since its beautiful black colour and high gloss makes it the most valued materials in the world, other materials used would be briar or tropical zebrano wood. All the works done on each weapon – including the stock engraving, if demanded – are obviously hand crafted. Even though laser technologies can substitute some miracles nowadays, they are still no match for the magic of artistic touch of an engraver.

The methods of surface finishing involve the traditional polish or a large number of quality oil layers. The impression created by oiling feels similar to the polishing effect but there is considerable difference in durability.

Apart from the above, the Engraving Art Studio cooperates with CZ to develop a more extensive re-design of the new rifle for those that long for something really special while still intending to use the gun for hunting as well. In this case, the decoration of the five-five-seven should involve anatomical modification of the stock provided with a cheek-piece in Bavarian style. Both the fore-end and pistol grip should be fitted with proven ebony endings again. The stock surface finish should be oiled in high gloss. Adding a matching ammunition box holding 4 spare rounds on the stock seems to be a very original idea. The less common features would include a jewelled feeding mechanism or a wooden ball tip on the bolt lever. The decorations should be completed with high gloss blueing of metal parts as well as plating of controls with 24-carat gold, of course. These decorated rifles will be also provided with custom-tuned mechanism matching individual requirements of specific customers.

### THE SHOOTING GEM FOR SEVERAL HUNDRED THOUSAND

The price tag on CZ 557 rifles may differ from country to country but one can generally say that, while the standard Lux version belongs to the medium price category, the cost of an individually decorated piece may jump over the 5,000 euro mark easily. Looking at real weapon gems demanded by extremely discriminate VIP clients, e.g. from royal families, the prices can climb more than five-times higher. These products would regularly feature precious stone inlays, customised engravings, etc.



How can one actually place an order for engraved firearm from the product range of Česká zbrojovka a.s.?

It's as easy as pie. The basic data and an idea of the final outcome can be found on the company's website at [www.czub.cz](http://www.czub.cz), the Products section, the Engravings sub-section, it is further broken down to chapters referring to Pistols, Rifles, Rimfire Rifles, Knives and Gift Bases. Another very useful approach could be to visit the company's retail stores in Prague or Uherský Brod (for addresses and contact details see the website of CZUB again) to explore the complete range of products provided by the company from Uherský Brod as well as demonstration of engraved firearms or attractive collector's items from limited series.

If you are not lucky enough to pick your gun among the completed engraved pieces, all of which are obviously for sale (with an honourable exception of the lot in display cabinets awaiting collection by their new owners); and you proceed to place an order for a new engraved gun, it is on you to pick from our proven patterns or modifications per our catalogue or to communicate your personal desires you wish applied on the product. Applying your own graphic designs is possible and subject to agreement with the master engraver. The only thing you will have to bear in mind in this case is the relevant price.

The minimum lead time for regular motifs is five months, it will be extended for more complex designs. Top craftsmanship can never be rushed. You will then be invited to our ceremonial handover to collect the completed rifle with a certificate declaring you the owner of one of the most superior guns in the world turned into a shooting gem.





# CZ 557



## Ranger

The new CZ 557 rifle is the state-of-art weapon that, thanks to its sophisticated design and production methods, can be easily modified according to the requirements of customers. It is this capability that allowed Česká zbrojovka (CZ) Uherský Brod to react promptly to the tender issued in 2011 by Canadian Government, with the aim to re-arm the Canadian Rangers.



Canadian Rangers are a part of the Canadian Armed Forces, consisting of reservists and whose primary task is patrolling in the remote,



sparsely populated regions of this huge country. The standard weapon the Rangers still use is the Lee Enfield No. 4 repeating rifle of 303 British calibre, that, despite its quite long life (the examples currently used were manufactured in the early nineteen-fifties) acquitted of itself excellently in the most adverse climactic conditions. No wonder the Canadians are seeking for this task a modern rifle, but with the best parameters of the good old Lee-Enfield.

Thanks to the features and characteristics of the CZ 557 model, the factory in Uherský Brod was able to fulfil the new task and comply with these requirements promptly, simply and with remarkable re-





sults. A compact rifle was born, firing the powerful 308 Win. calibre round, with the standard 520 mm (20.47 inch) long barrel, yet with overall length of only 1022 mm (40.24 inch), this length the result of using a shortened receiver. The top of the receiver carries a standardized Weaver rail, remarkable by its

of them serves as an attachment point for a bipod, the other for the sling swivel. An interesting feature of the CZ 557 Ranger model is the two-stage pull in the style of the classic service weapons – the first pull's force is relatively low,

between 12 to 18 N (2.7 to 4.05 lbf), but immediately before firing it increases to 30 N (6.74 lbf). The weapons from the pre-series were brought to market in just this configuration, the series-built ones are to be probably fitted with the fully-adjustable trigger mechanism.

The model CZ 557 Ranger is a very pleasant, powerful weapon that, besides the high accuracy and comfortable hand-

**The model CZ 557 Ranger is a very pleasant, powerful weapon that, besides the high accuracy and comfortable handling, offers several attractive bonuses.**



'transparency', that allows to continue using the basic mechanical sights, same as on the 'fiver-fiver-seven', without any problem. The Ranger model is the very first CZ 557 rifle with a detachable double stack magazine, side by side feed, boasting in the basic version a respectable capacity of 10 rounds (inspired by the Lee Enfield repeater rifle); the magazine's catch is in the front section of the trigger guard. The beech-wood stock of the American type has on the bottom surface of the forestock two pins, one

### CZ 557 Ranger

Calibre	308 Win
Length overall	1022 mm
Length of barrel	520 mm
Height	183 mm
Max. width	87 mm
Weight of unloaded rifle	3.3 kg
Magazine capacity	10 rounds

ling (virtues typical for the whole of the 'fiver-fiver-seven's' family), offers several attractive bonuses, namely the Weaver rail and detachable magazine.

Let's conclude that the CZ 557 Ranger rifle will be available on the market in the second half of 2014.





Since the between-the-wars period shooters all around the world associate the name of Zbrojovka Brno with the high-quality firearms of original design, while from the second half of the 20<sup>th</sup> century they think especially of the hunting and sporting 'Brnos'. Today this tradition is continued by the Zbrojovka Brno s.r.o. company that from mid-2014 brings to the market a completely new O/U rifle/shotgun combination gun, the Brno Combo.



# Brno Combo

The modern Zbrojovka Brno is a subsidiary company of the Česká zbrojovka (CZ) Uherský Brod, which took radical steps to save the sound core of the traditional arms manufacture in Brno.

Under auspices of the parent company the Brno-based subsidiary, with its team of erstwhile 'Zbrojovka Brno'

break-action rifles and the Brno Competition over-and-under sports shotguns.

When seeking the new directions of their development, Zbrojovka Brno and Česká zbrojovka agreed upon the idea of utili-



## LOW WEIGHT AND ELEGANT SHAPE IN AN ALL-STEEL CONCEPT

The development of the new Brno Combo over-and-under combination gun was entrusted to Ing. Michal Koutný, himself an active hunter, who keenly listened to the voice of the target (pun intended) customer group and heeded also the opinions of specialists in this field.

The key idea of his design solution became the new approach to the design of the barrel sleeve. With the common combination guns the height of the barrel bundle is defined by

zing the promising prospects of the thinly-populated market segment of break-action, over-and-under combination (shotgun and rifle-barrelled) guns. This type of weapon offers a considerable potential, as it allows the user, whether walking around and monitoring the hunting grounds, or shooting during hunts, to react flexibly to the situation and use the round that suits better the game that may suddenly appear in sight. The aim of Zbrojovka Brno was definitely not to offer another run-of-the-mill over-and-under combination gun with parameters on par with the existing competition the world over. They had from the very beginning a clear idea – if the Brno Combo is to score on the market, it has to offer the customers something much more different and much better.

employees and Director Pavel Rampula at the helm, devotes its attention to the design, development and small-series production of long break-action firearms. The backbone of the Zbrojovka Brno production programme, combining the state-of-art technologies with the traditional gunsmiths' skills and processes, are the Brno Effect single-shot,

## Brno Combo

Calibre	12x76/308 Win, 30-06 Sprg (other rifle calibres are being prepared)
Length overall	1045 mm
Length of barrels	600 mm
Sight radius	320 mm
Weight of gun, unloaded	2.95 to 3.15 kg



the fact that the bottom rifle barrel replaces the shotgun one of much larger diameter.

Ing. Koutný used a much subtler sleeve designed especially for this task. The chambers are a part of the sleeve and the barrels themselves begin in place where the cartridge ends. This design solution allowed for a major reduction of the barrels' relative distance, while ensuring sufficient strength for powerful calibres.

In the final balance the new concept shows in the pleasantly low weight of the weapon – despite the fact that the Brno Combo is all-steel (main components are produced from high-quality structural steels by turning and milling on the CNC machines, the semi-finished trigger guard, top lever and



barrel rib are precision castings), the complete gun weighs only 2.95 to 3.15 kg (6.5 to 6.95 lbs) depending on the density of wood used for the stock.

The barrels close to the front plate of the receiver, and are locked by a wide sliding wedge, controlled by the top lever. The barrel bundle is guided by a pair of lumps rotating around a pair of pins and once locked, it is pressed against the sloping surfaces of the receiver. Already at the first sight it is clear that the designer succeeded in placing the barrel bundle joined barrels extremely low, near to the pair of pins thus achieving an increased stability – reducing the barrel muzzle rise after a shot. With so low placement of barrels it was necessary to come up with a method how to ensure, during the break, a sufficient leverage for cocking the firing mechanism. Ing. Koutný designed an elegant solution, placing an originally-shaped cocking cam to the barrel rib.

#### THERMALLY STABLE RIFLE BARREL

The designer devoted a lot of attention to make sure that the rifle barrel would achieve a high and consistent accuracy even with repeated shots. This is one of the weaker points of the classically joined combined barrels, whereby the impact point with continuing shots moves with heating of the rifle barrel either up or down, depending on whether that barrel is soldered under the shotgun one, or above it, respectively. The Brno Combo model has the central

rib and the forestock hook soldered only to the shotgun barrel that carries also the mountings for the mechanical sights. The rifle barrel is therefore attached so that its heating after more shots does not have any effect on accuracy. It is also possible to adjust both barrels regulation according to the ammunition used, by turning the screws on the forestock hook (Zbrojovka Brno recommends, however, to leave this adjustment to an experienced gunsmith).

As far as the rifle calibres go, the Brno Combo begins with the globally popular, classic 308 Win and 30-06 Sprg.

For 2015 this pair is to be

augmented by further perennial rifle calibres – the 9,3x74R and the 8x57 JRS. The shotgun barrel in this gun is always the 12/76, as this Brno Combo is a powerful combination O/U shotgun-rifle, but with dimensions and weight of a 'twenty'.

mechanism is cocked when the barrels are broken, activating at the same time the automatic safety that has its control to the rear of the top lever. The spent cartridges are removed by a classical extractor. The trigger mechanism, located on the bottom plate of the receiver, has two trigger blades, the front trigger blade with a set (using the set reduces the trigger pull force to some 3 to 5 N/0.67 to 1.12 lbf) fires the rifle barrel, the rear trigger blade without the set fires the shotgun barrel. The arrangement of the hammer and trigger has been taken from the time-proven Brno 502 and Brno 802 combination guns, respectively.

The stock offers a very comfortable grip.

Both the stock and the forestock are made of high-quality Turkish walnut and they have the oiled surface finish, accentuating beautifully the wood grain. The diamond-shaped texture of the gripping surfaces is laser-cut.

The receiver, barrel rib and the bottom plate of the receiver are finely sandblasted, nickel-plated and adorned with laser-cut hunting motifs. The surface of the top lever and trigger guard is finely sandblasted and blued, the barrels are polished and blued. As the weapons come from the Zbrojovka

**The Brno Combo is an elegant, user-friendly gun of ingenious design, proudly deserving to carry the legendary logo of Zbrojovka Brno.**

For the Brno combination the manufacturer will also produce, as an exclusively bespoke replacement, the purely rifle calibre barrels (bundles) with a solid central rib. The owner may easily convert his weapon this way to a fully-fledged combination rifle with very interesting parameters. Exchangeable shotgun barrel bundle is not mooted for this model.

#### PROVEN FEATURES

The Brno Combo combination gun is intended for hunting of European-sized game, or, of course, of similar game anywhere in the world, be it an individual hunt or a group one. The barrel length is 600 mm (23.6 inch). The shotgun barrel of 12x76 calibre has a three-quarter choke (17.6 mm/.69 inch) and allows using the steel shots as required by the latest developments in gamekeeping.

Besides the already described novelties this firearm offers everything the hunters are used to and what they require. The hammer

Brno, the famous logo, the 'Z inside a rifled bore' motif is of course proudly shown on the top lever and barrel sleeve.

The Brno Combo is fitted as a standard with modern mechanical sights with forward-slanting rear sight blade, having openings for increasing the field of view when shooting at a moving target. The front sight is elevation-adjustable and fitted with a red optical fibre. For the riflescope mounting the top of the barrel sleeve has a dovetail groove of the unified European profile (11 mm wide, 90 mm long) with a transverse centre cutaway. The location of the scope mounting base ensures a trouble-free attachment of all rifle scopes.

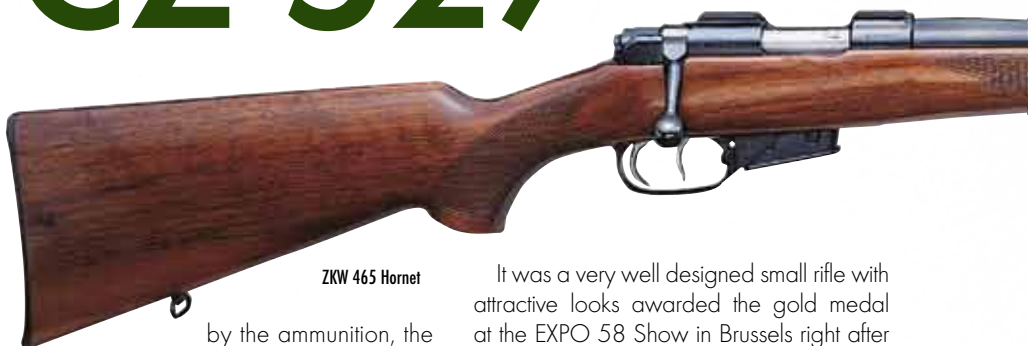
All summed up – the Brno Combo is an elegant, user-friendly gun of ingenious design, proudly deserving to carry the legendary logo of Zbrojovka Brno. It will certainly attract the attention of the target group of customers, who may look forward to the new combo of Brno already from mid-2014.



# From **HORNET TO HORNET** or Simply Small Mausers **CZ 527**

Apart from rifles with systems matching Mauser and Co. using high-performance ammunition, the details of which were described on pages 32 and 40, Česká zbrojovka (CZ) Uherský Brod has been manufacturing its traditional so called 'small Mausers' – favourite hunting firearms in less 'souped up' calibres. These small rifles have borne the label CZ 527 since the 1990s and the company keeps their range updated with regular new releases bringing attractive versions. The most recent newbies to the family of five-two-sevens are the models designed for the renewed ammunition calibre 17 Hornet that got a warm reception. It was actually Hornet that started all this, even though the original one was a point twenty-two.

**T**he first small Mauser rifle was manufactured back in the days in the former Czechoslovakia, as early as in 1958, by Zbrojovka Brno, for which the legendary Koucký brothers designed the ZKW 465 Hornet in calibre 22 Hornet (5.6x36R). Even though it was not required



ZKW 465 Hornet

by the ammunition, the design engineers utilised the classic Mauser bolt, which was literally turned into a miniature while keeping all the main components: two locking lugs, a long flexible extractor, a fixed ejector. The bolt weight was reduced and the bolt lever was made detachable (functioning as a rest for the striking spring at the same time).

The safety was situated on the right hand side of the receiver, tight behind the bolt lever. Unlike the classic Mauser supplied from the ammunition box, Hornet was provided with a magazine (holding 5 rounds). The magazine catch was positioned inside the front shroud of the trigger guard. The firearm was provided with classic fixed open sights, as well as dovetail notches milled directly into the top of the receiver for mounting a riflescope. The trigger mechanism was fitted with a German set trigger.

It was a very well designed small rifle with attractive looks awarded the gold medal at the EXPO 58 Show in Brussels right after the first year of its existence. Reliable bolt operation, solid trigger mechanism and low weight were the main reasons why the Hornet would become quite a favourite rifle for strolls through the woods outside the main hunting season. The firing accuracy was very good and the impact energy of 800 J improved the chances to eliminate vermin way beyond the options of a regular rimfire rifle.

## ZKW 465 Hornet

Caliber	22 Hornet (5.6x36R)
Overall length	1040 mm
Barrel length	580 mm
Weight unloaded	2.85 kg
Detachable magazine capacity	5 cartridges

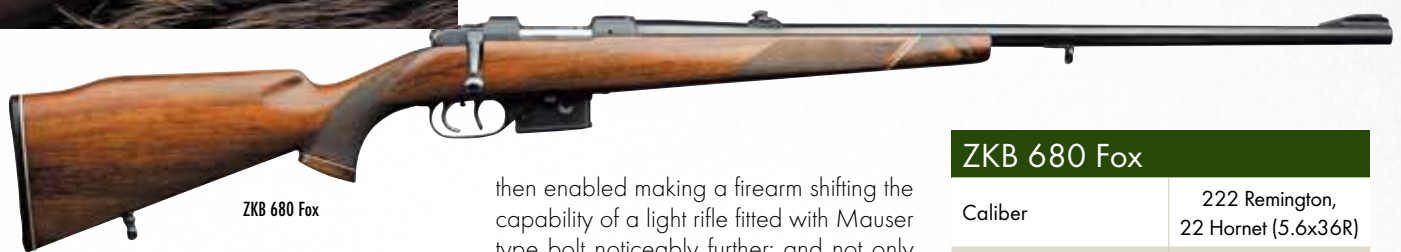




Communist rule was becoming aware that the future would definitely belong to a new generation of ammunition led by the calibre 222 Remington, the muzzle energy of which ranging around 1,500 J was even fit for roe hunting. That was the reason why CZUB made the model ZKB 680 Fox in this calibre at the beginning of 1970s. It differed from the original Hornet mainly by its re-designed magazine, as the cartridge of new ammunition had no rim. Another change comprised relocation of the magazine catch from the inside of the trigger guard to the right hand side of the firearm, right to the centre of the magazine well. Some relatively minor alterations

re-designed for this ammunition too. There were also some works concentrated on improving the reliability of bolt operation. The new Fox was called Model 2 and had been manufactured since the year 1977.

The production of both versions of model ZKB 680 Fox was discontinued in the year 1979. The CZ company then focused on its new pistol schemes for some time; but the year 1983 saw a great comeback of light rifles into the company's product portfolio and these have remained there ever since. There was a 'Fox' at the beginning again, this one was called ZKW 680 Fox but it was also marketed under the name Brno Fox Model 2, as the company from Uherský



ZKB 680 Fox

### HORNET REPLACED BY FOX

The transfer of rifle production from Zbrojovka Brno to the existing Česká zbrojovka a.s. in the mid 1960s also affected the Hornets in 1967. Their production in Uher-

then enabled making a firearm shifting the capability of a light rifle fitted with Mauser type bolt noticeably further; and not only with the performance itself, as the 222 Remington ammunition can be considered a very accurate round in its category (it was actually the ammunition used for bench rest disciplines for many years).

### ZKB 680 Fox

Caliber	222 Remington, 22 Hornet (5.6x36R)
Overall length	1077 mm
Barrel length	601 mm
Weight unloaded	2.6 kg
Detachable magazine capacity	5 cartridges



**The model series CZ 527 has been roaming the markets for formidable twenty-four years and has managed to branch out to a respectable number of various versions.**

The production of 'Fox' was launched in Uherský Brod in the year 1972 and it was subject to numerous suspensions - matching the orders submitted by the international trade enterprises. Once the production of original 'Hornet' had been discontinued, there were many proofs of the fact that customers remained faithful to the calibre 22 Hornet, so the Fox model was then

Brod was using the Brno Arms trade mark on its firearm back then. This light rifle remained in the product range until the eighth decade of the previous century. Once the CZ had made a final full stop behind this chapter, the total balance reached quite an impressive figure: despite numerous fluctuations of orders and several downtimes in production, the total production numbers of all Fox models approximated the 34 thousand mark.

ský Brod would first run till the year 1968 only, yet the periods of 1971-1972 and 1974-1976 saw its full restoration. Recurrent suspension of production was due to the actual demand of exports organisations working in Czechoslovakia back then. The total number of light rifles labelled ZKW 465 made by CZ reached 9,205.

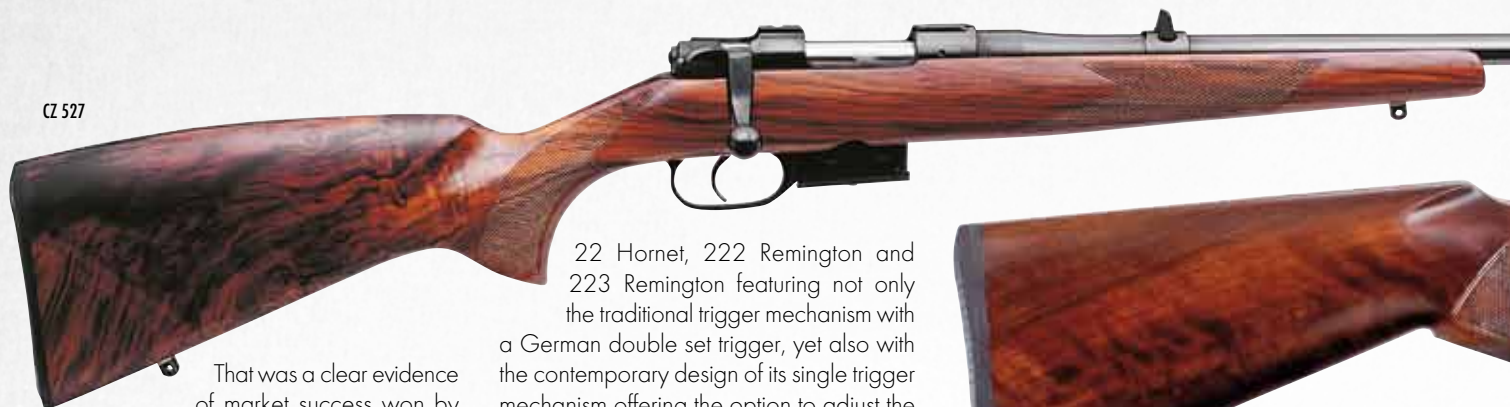
It was as early as in the second half of the 1960s that even Czechoslovakia under



Close-up view of the central section of the ZKW 465 (top) and ZKB 680 rifles



CZ 527



That was a clear evidence of market success won by the small Mauser and a selection of correct ammunition may bring it back to meet some more expectations.

### FOREVER YOUNG CZ 527

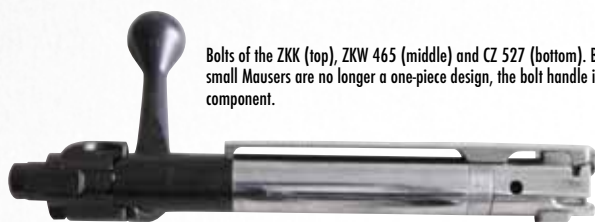
The end of 1980s was the company betting on a higher-performance calibre 223 Remington or the globally common and very successful civil version of the military ammunition calibre 5.56x45 mm. The basis of this new firearm was once again formed by the proven model ZKB or ZKW 680, which

22 Hornet, 222 Remington and 223 Remington featuring not only the traditional trigger mechanism with a German double set trigger, yet also with the contemporary design of its single trigger mechanism offering the option to adjust the pull, travel and creep of the trigger. There were also a series of minor and very prudent interferences with the production equipment to improve the overall quality and utility of the rifle.

The insight in development of the new trigger mechanism was proven very soon. The demand for the double set trigger version was very mild, whereas the single trigger models fitted with a French-type set trigger sold well. That made Bohumír Brožek proceed with the relevant re-design based on the design used on CZ 537

rate of calibres 22 Hornet, 222 Remington and 223 Remington being supplemented with modern ammunition as 221 Remington Fireball or 17 Remington. The applicability of five-two-sevens was even broadened by introduction of the calibre 7.62x39 mm sufficient for roe as well as smaller boar. The product range

Bolts of the ZKK (top), ZKW 465 (middle) and CZ 527 (bottom). Bolts of small Mausers are no longer a one-piece design, the bolt handle is a separate component.



underwent several substantial design alterations. The author of necessary modifications, Ing. Václav Polanský, was later joined by two more employees of the CZ – Bohumír Brožek and Martin Kouba. Whereas alterations of the bolt were rather related to the dimensions in connection with a broader range of calibres considered (while the improvements included a better operation and guarantee of



CZ 527 Varmint

rifles not long before that and the first version of light rifle CZ 527 was launched for serial production in the year 1992. As the basically identical and successful trigger mechanism was then slightly modified and fitted in the rifle model series CZ 550, this step helped Česká zbrojovka simplify its parts stock substantially creating a further benefit in terms of the good value for money on firearms from Uherský Brod.

Thanks to the decently rated bolt, the subsequent years saw the original triumvi-

was further expanded with light rifles using the ammunition 204 Ruger added at the end of the first decade of the new millennium, this calibre has remained among the fastest ones commercially available today (up to 1,250 ms<sup>-1</sup> muzzle velocity). Further passionate expectations were met by the launch of models in calibre 17 Hornady Hornet in the year 2013, those are detailed further in this book.

The model series CZ 527 has been roaming the markets for formidable twenty-four years and managed to branch out to a respectable number of various versions. A mere reference should be made to note that the basic version CZ 527 Lux is fitted with a Bavarian style stock, there are also the versions with full stock and American

reliable ammunition loading), the trigger mechanism was re-designed totally. That was why the new light rifle marketed under the model name CZ 527 (ČZ 527 till mid 1990s respectively) was then launched in calibres





CZ 527 Carbine

### CZ 527 (dimensions may vary by different models)

Caliber	22 Hornet, 222 Remington, 223 Remington, 7.62x39 mm, 17 Hornet (formerly also 221 Remington Fireball and 17 Remington)
Overall length	1077 mm
Barrel length	600 mm
Weight unloaded	2.8 kg
Detachable magazine capacity	3 or 5 cartridges

stock. Synthetic model is provided with a plastic stock, while the Varmint can be fitted with laminated wood. There is a version with heavy barrel available, as well as the Carbine version with shortened barrel. The product range also includes a version for left-handed shooters (LH). As far as manufacturing of European-style stocks is concerned, the CZ adopted a modernised shape with a more distinct pistol grip several years ago, these features are further accompanied by a raised crest on the cheek-piece for improved

helical barrel surface made during the cold forging process, the ends of the stock comb and pistol grip are made of ebony wood (giving the name to the model) and the bolt is decorated with girdling pattern. There

If we were to look at the quantity of all versions of light rifles CZ 527, the 150 thousand mark has been exceeded for long now and the demand for these firearms is still on. Small Mausers from Uherský Brod still benefit from their global reputation as accurate, reliable and durable firearms for everyday use. These are popular mainly in the USA,



CZ 527 Varmint Kevlar



CZ 527 FS

shooting comfort. The luxurious model CZ 527 Exclusive - Ebony Edition would make a separate chapter, it is characteristic for its

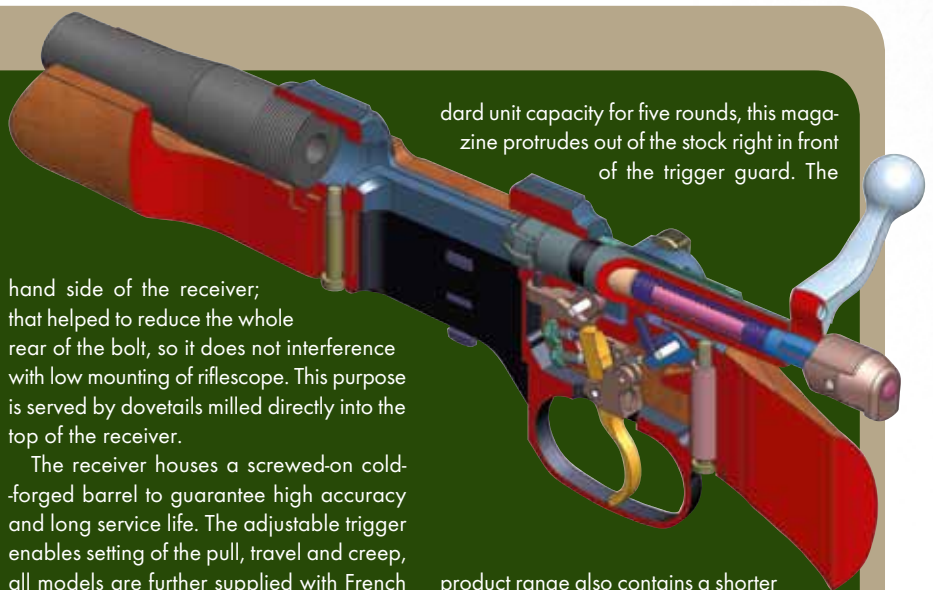
are also some limited series and individual delicacies, as some top sporting specials for representatives of the Czech-Moravian Gamekeepers Association, which are described in detail on page 60.

as tools for elimination of vermin (model Varmint), besides other purposes. This is not the exhaustive description of their potential use, the indisputable charm of five-two-sevens also comes to the fore among sporting rifles.

### CZ 527 IN A NUTSHELL

The CZ 527 rifles are repeating centerfire rifles with a cylindrical rotary sliding bolt, the essential concept of which has been based on the proven Mauser 98, obviously subject to appropriate reductions. A few well-thought alterations helped to simplify the design and production and eradicated certain handicaps of the old German pre-image, while all the advantages of the Mauser design have been preserved. The bolt with two locking lugs and a massive extractor made of one piece of flexible steel has remained unchanged. The bolt lever is manufactured as a separate part inserted into the transverse cut out in the bolt rear. Protrusions on the lever substitute the bolt nut and work as a rest for the striker spring.

The noiseless double-position safety released by rearward motion has been removed from the bolt and relocated to the right



hand side of the receiver; that helped to reduce the whole rear of the bolt, so it does not interfere with low mounting of riflescope. This purpose is served by dovetails milled directly into the top of the receiver.

The receiver houses a screwed-on cold-forged barrel to guarantee high accuracy and long service life. The adjustable trigger enables setting of the pull, travel and creep, all models are further supplied with French set triggers to enable pull adjustment.

The CZ 527 light rifles are provided with detachable single-row magazines with stan-

dard unit capacity for five rounds, this magazine protrudes out of the stock right in front of the trigger guard. The

product range also contains a shorter magazine for three rounds only, which does not protrude out of the stock for better protection against damage.



# CZ 527 AMERICAN

in 17 Hornady Hornet calibre

The latest addition to the CZ 527 family was named American and it is chambered in an interesting re-established calibre the 17 Hornet, known, in order to set it apart from the old, original wildcat of the nineteen-fifties, called also 17 Hornady Hornet.

This combination of a weapon and ammunition is eagerly awaited for some time by hunters who shoot the smaller game – varmint. The new weapon reached its users during the previous year and definitely did not disappoint them.

The CZ 527 light hunting rifle American is a classic repeating rifle with a Mauser-type bolt-action of 'micro' length with a controlled-feed of the round: the cartridge is from the very moment of its withdrawal from the magazine reliably caught in the front of the bolt. The forged barrel of 555 mm/21.85 in length has rifling of 9 in (228.6 mm) twist. The weapon is loaded from a five-round magazine, located in front of the trigger guard. The trigger has adjustable force and length of pull and is fitted with an adjustable French set trigger. The American-style stock with a straight top is made of Turkish walnut. The weapon lacks mechanical sights, but it has a 16 mm/.63 in wide rail for mounting the rifle scope. The overall length of the rifle is 1120 mm/44.1 in, height is 175 mm/6.89 in, 77 mm/3.03 wide and it weighs in at 3.3 kg/16.5 lbs, making it an ideal sidekick for varmint trips. A two-position safety prevents accidental firing and/or opening of the bolt.

All these features are well known and proven. The main point of interest, causing renewed interest in this rifle in the hunting fraternity, is its introduction in

the 17 Hornady Hornet calibre. This round has been created already in the nineteen-fifties by a gunsmith, hunter and specialist author Parker Otto Ackley (1903–1989) by simply reducing (bottlenecking) the 22



Hornet cartridge neck to the .17 diameter. He created thusly a small-calibre round with a bullet possessing high-velocity and high energy, these two features being the main requirements for a round used for hunting small animals.

Sixty years later the Hornady ammunition factory adopted the idea of Mr. Ackley and brought it to a series production, duly taking into consideration the technological advances brought by the time since the round's inception. The contemporary







17 Hornady Hornet is fitted with the 30grain (1,3 g) Superformance V-max bullet, possessing muzzle velocity  $v_0$  of 1112 ms<sup>-1</sup> (3648 fpm) and the muzzle energy  $E_0$  of 800 J (590 ft lbf). The polymer bullet tip and an expansion cavity ensure a reliable and regular deformation of the bullet, that inflicts a devastating, but instantly lethal wound. The cartridge of 7.6 mm (.3 inch) diameter and length 35.6 mm (1.4 inch) has a slightly protruding rim, ensuring reliable positioning in the chamber. The bullet has a very flat trajectory due to its high velocity. When a weapon with sights adjusted to 200 yards fires at 100 yards, the hit point moves up by a mere 27 mm (1.06 inch), hit with the same

wonder that once the series production of the popular rifle combined with the popular ammunition was announced, the pre-orders were pouring apace, with all supplied rifles immediately sold out and further shipments eagerly awaited, indeed.

cartridge with a narrow bullet. Another difference has been noted when shooting in windy conditions – the .17 calibre bullets were less prone to be affected by the wind blasts, an apparent result of the higher velocity and smaller side profile of

**Shooting at 100 yards the grouping of hits of CZ 527 American rifle of 17 Hornet calibre oscillates around 9.5 mm (0.37 inch) and at 150 metres (164 yards) you can hit a gopher's head.**



adjustment but to a distance of 300 yards drops by some 162 mm (6.38 inch).

Mr. Ackley's original 'wildcat' already won a considerable popularity and the CZ 527 was one of the rifles most often modified for this calibre. No

Experience of Americans with the CZ 527 is very positive. Hunters appreciate especially the smooth, regular movement of the trigger with the finely tuned set trigger, so fine that some of shooters admit that they took a few moments to get used to its sensitivity.

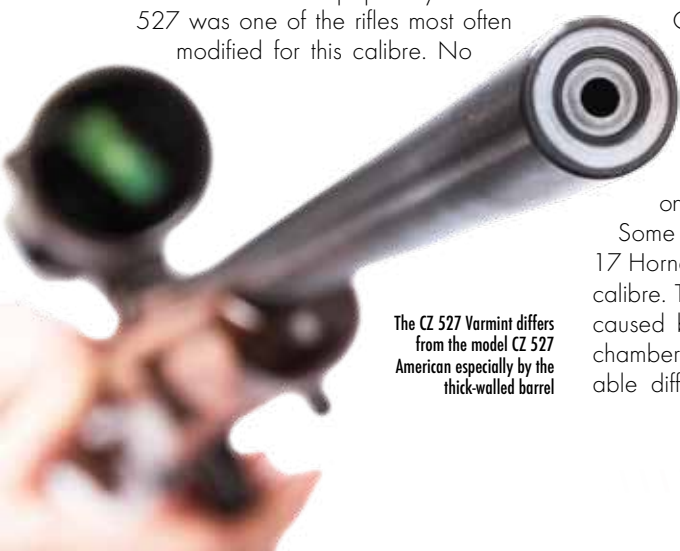
Complimentary comments also mention the smart looks and very good craftsmanship of the weapon. The new CZ 527 American hunting rifle is also, thanks to the high-quality checkering of the stock, a pleasant one to hold.

Some of the users also compare the 17 Hornet ammunition with the 22 Hornet calibre. They have found fewer problems caused by jamming of the round in the chamber during loading, a quite expectable difficulty besetting a bottle-shaped

the bullet. Indeed, we have tested the accuracy, too: the average grouping at 100 yards distance, as given by the factory, was oscillating around 9,5 mm (0.37 inch), and a grouping looking like a single large hole was reported not to be a rarity. After all, the hunters described the practical hunting results: when a good shot using this weapon and ammunition is able to hit a gopher's head at 150 metres (164 yards), you cannot possibly get a better proof of quality of the light hunting rifle CZ 527 with 17 Hornet ammunition.

Let's add that together with the model CZ 527 American of the 17 Hornet calibre, enters the market also the CZ 527 Varmint rifle, chambered for the same round. The CZ 527 Varmint is characterised by the thick-walled, cold-forged barrel, designed for accurate fire at medium and longer distances.

The CZ 527 Varmint differs from the model CZ 527 American especially by the thick-walled barrel





# THE CZ 527 RIFLE

## and Combined HUNTING SHOOTING

Team leader  
with the plaque  
for the most  
successful team  
of the European  
Championships  
2012 in Estonia



Combined hunting shooting represents a demanding and spectacular sporting event, which remains somewhat mysterious to a broader shooting public. And that is not just the rules here, yet rather the fact that its rifle segments have been dominated by Czech competition shooters equipped with small CZ 527s based on the Mauser system. The insight into all the bits and bobs of combined hunting shooting and use of the five-two-sevens from Uherský Brod will be provided by **Ing. Antonín Čech** – Chairman of the Shooting Commission of the Czech-Moravian Gamekeepers' Association, the head of the team representing the country at the European Championship of Combined Hunting Shooting, member of technical committee of FITASC and a member of the World Championship Team for terrain shooting.

**L**et us begin with a brief introduction to combined hunting shooting. This sport combines clay shooting using shotguns and paper target shooting with rifles.

The European championships in this demanding competition are a tradition that stretches back for a number of years. The European Championship held in Hungary last year was the fourteenth year that the best shooters in Europe have gathered to compete. This sport, which has not made it

to the Olympics yet, has been included under the auspices of the FITASC (Fédération Internationale de Tir aux Armes Sportives de Chasse).

Up until the year 2006, when the eighth annual competition was hosted in Kroměříž, these European Championships were held once in every two years and the rules were not as strict. There were a number of rifle shooting disciplines (the number settled to a Rifle Tetrathlon) and a few shotgun disciplines (finally the Hunting Trap and Parcours).



Credit for establishment of unified rules for FITASC should be given mainly to Charles Schneider, who started working on these with an undying intensity once he had been elected the Chairman to FITASC and authorised to control the combined shooting. Unfortunately, Charles Schneider succumbed to a severe illness not even two months after the European Championship last year.

The Hunting Trap shooting involves 2 x 25 clay pigeons (the rifle range is 11 m far from the trench edge) and the Hunting Compak deals with the same, i.e. 2 x 25 clay pigeons (simpler Compak Sporting). The shooter must be in the hunting posture for both disciplines. Each competitor therefore shoots the total of 100 clay pigeons, every hit is rewarded with 4 points, so the maximum score is 400 points.

As far as rifle shooting is concerned, there is the rifle tetrathlon. Fixed targets are shot at a distance of 100 metres, 5 shots at each target within a 5-minute interval. The fox target is shot at twice from the

**New CZ 527 Varmint rifles made the Czech shooters virtually unbeatable.**

prone position, the roe target is shot at with a fixed bar support, the mountain goat target is shot at from the standing position with a loose bar support. The wild boar target is shot at just once, from the standing position without any arm support. A newly implemented feature has emerged, compared to previous years, it is five shots at a running boar target shot at 50 metres. The total number of shots fired at paper targets by each competitor therefore adds up to 40. The centre circle counts for 10 points and the maximum score is therefore identical to 400 points, same as for shotgun disciplines.

Therefore a shooter competing in the hunting combination may achieve the maximum score of 800 points and a team of six people could gain 4,000 points at maximum, as the weakest results achieved by any team member is eliminated.



#### CZECH REPRESENTATIVES AT EUROPEAN CHAMPIONSHIPS

The first team of Czech representatives attended the European Championship in Finland in the year 1996. We had five shooters at the venue only, yet their performance impressed everyone, so the subsequent years of this competition would see Czech shooters placed among leaders.

We failed to attend the next European Championship in Germany in the year 1998 due to some organisational matters. Another European Championship was held in Sweden in the year 2000, we managed

to get some gold medals in the main competition event – the team combination. The subsequent European Championship taking place in Austria in the year 2002 let the Czech shooters feel what it takes to be a leading competitor as well as the efforts of local hosts made to help the domestic team win. It was our first championship without a single medal. The chance to make up for it came in Estonia two years later, where our team went gold again.

This competition was affiliated to FITASC in the year 2006 and Czech Republic was hosting it. No hosting team had ever won gold throughout the entire history of this competition and the European Championship in Kroměříž would not break this tradition either, as our team came third.

The European Championship held in Poland in summer 2008 followed the new and unified rules. This year triggered the course of championship on annual basis and there is finally an opportunity for objective evaluation of performance, results and success of our representation team. That was also the year, when I took over the representation team as its team leader and it was actually Poland, where the members of our team became the first European Champions in combined hunting shooting under the new rules. Our team gained silver with rifles and bronze with shotguns.

In the subsequent year on the 2nd annual European Championship in Italy our team was silver in the shotgun disciplines and fifth in rifle shooting. Our team attended the 3rd annual European

Jindřich Kořínek





Championship in Slovenia to defend their silver position in shotguns and re-claim their victorious rank in rifle shooting, they got bronze medals. We also had the absolute European Champion in combined shooting among individuals – it was Pavel Zázvorka.

Then the 4th annual European Championship in Hungary came up and we managed something none of the European shooters has ever made: Pavel Zázvorka defended his title of the European Champion in hunting combination shooting. Our team managed to gain bronze in the combined shooting discipline and had to settle for the fourth place in rifle shooting.

The greatest achievement ever came during the 5th annual European Championship in Estonia in the year 2012, where our representatives scooped all three golds: combined shooting, rifle shooting and shotgun shooting altogether. That was absolutely the first time ever for a national team to make such a tremendous achievement. Pavel Zázvorka became the European Champion in combined shooting for his third time in a row. I dare to say that no-one and no representation team will ever match this performance.

The most recent 6th annual European Championship held in Hungary saw our team defending their titles in combined and

rifle shooting. Even this was an achievement of a lifetime of this competition. However, our shooters came only fifth in shotgun disciplines.

### FROM FOXES TO VARMINTS

Looking at the overview of scores, one would conclude that the Czech team used to get medals in combined shooting mainly thanks to its excellent performance with shotguns. Yet the philosophy followed by organizers is rather inclined to a reduced demand of the shotgun compak, which has balanced the shooters' performance and the result achieved in rifle shooting has taken on its decisive role. Progressive suspension of restrictive rules applied to rifles, e.g. permitted use of adjustment elements and special-shaped stocks then brought a gradual deviation from serial hunting models towards sporting firearms for target shooting.

Since the year 2006, our successful team of representatives (Jan Buksa, Jaromír Uher, Ing. Jindřich Kořínek, Karel Kotrc, Karel Mrhálek, Pavel Zázvorka and the substitute shooter Václav Bastl) has been using mostly the favourite light rifles Fox model 2 in calibre 222 Rem made by Česká zbrojovka (CZ) Uherský Brod.

The new European Championship taking place in Poland in the year 2008 brought

a breakthrough, whereas Jaromír Uher was replaced with another nominative and rifle expert – Ing. Martin Šlechtá – the only one in the whole team using a modernised version of the CZ 527 Fox called the 'Varmint'. Referring to individuals, we had other young shooters using the CZ 527 Varmint at this championship. Even our team members started 'rearming' with Varmints as the time went by, because their firearms offered indisputable advantage yielding some valuable extra points during targeting as well.

### THE DAWN OF SPECIALS

With the rifle restrictions being lifted from one year to another, many representatives began with individual alteration of stocks and balancing their guns. The end of the European Championship 2011 in Hungary brought a definite break and almost all restrictive provisions for rifle were eliminated from the rules and the maximum weight of the whole assembly up to 5 kg became the only rule together with a ban on muzzle brakes and compensators.

I started negotiating with representatives of Česká zbrojovka concerning providing the representatives with new, tuned-up and customised rifle models CZ 527 Varmint. I had the opportunity to test the first such rifle at the European Championship in Estonia in the



The Czech National Team in 2009 at the European Championships in Italy, with a colourful mix of stock and tuned Fox and CZ 527 rifles





Triumphant  
Czechs at the  
European  
Championships  
2013 in Hungary,  
with their new,  
individually tuned  
CZ 527 specials

year 2012. The whole representation team with our youngsters (Ing. Jindřich Kořínek, Karel Kotrc, Karel Mrhálék, Tomáš Staněk, Ing. Martin Šlechta, Pavel Zázvorka and the substitute shooter Ondřej Borák) set off to the European Championship in Estonia with their existing CZ 527 Varmint rifles in calibres 222 and 223 Rem. These guns underwent individual personal tuning by the shooters themselves and they were fitted with new riflescopes ZD 6-24x56 made by Meopta Přerov and featuring a special reticle pattern design customised solely for the representation team. I have mentioned the triple gold result of this mission above. Light serial rifles CZ 527 Varmint with minor alterations managed to beat rifle specials used by other teams.

All the shooters, who scored in Estonia, then participated in testing of a newly developed gun to be used for representation. Remarks from myself and the whole team were heard and the design engineer from Uherský Brod - Vítězslav Sedlák - delivered a new design of the CZ 527 Varmint rifle in calibre 222 Rem in the year 2013, all fine-tuned and customised for each representative.

These new guns made the Czech shooters virtually unbeatable at the European Championship in Hungary at the beginning of July 2013, winning their medals with a great lead and this tremendous achievement also brought them to the absolute first place in combined shooting. This success was perhaps boosted by the fact that the team appointed another rifle expert Ondra Borák, who replaced his substitute position from Estonia with Karel Mrhálék.

Ing. Martin Šlechta managed to defend his Estonian silver even in Hungary and looking at his bronze medal from Poland in 2008, his fourth place from Italy in 2009 and Hungary in 2001, Martin has become our most successful rifle shooter at all the European Championships ever. And he



Ondřej Borák  
and Tomáš Staněk

managed to get all his previous scores using his serial CZ 527 Varmint.

### NOT JUST CZ 527 AND COMBINED HUNTING SHOOTING

Further progress of light rifles CZ 527 heads for non-typical calibres and the calibre 17 Hornet is definitely worth mentioning. These guns are characteristic not only for amazing accuracy yet also for the interesting ballistics. It is a pity that the rules of hunting combined shooting allow 22 Hornet as the smallest calibre only, because using the point seventeen CZ 527 rifle would reveal the true champion of this shooting in Europe.

I still have to add that the CZ 527 is obviously not the only successful manufacturing achievement of CZUB. My praise should go mainly to the newly designed rifle CZ 557 with its unparalleled trigger mechanism. Speaking of which, it has been also fitted in the new Varmint specials for our representatives and improved the overall perfection of these guns. Furthermore, the stock made for CZ 557 rifles is probably the best stock Česká zbrojovka has ever made.

My general opinion is that the hunting public are still on their way towards full appreciation of the quality demonstrated by hunting firearms from Uherský Brod. That has been proven not only when hunting yet mainly at the field shooting competition in South Africa. Our rivals recruited among the best rifle shooters in the world were literally stunned by performance of our Varmint rifles in calibre 223 Rem, as the accuracy shown by these basically serial products matched their equipment including target rifles from leading world manufacturers with special calibres. That is why we need to go to the European Championship this year and show the world that our guns belong to the top performers even in this discipline, which is almost unknown in our country. 







# TWO HUNDRED POINTS

On July, fifteenth 2013 the phone wakes me up. It is Saturday, 06.45, and despite feeling like carrying on with a nice nap after a quite demanding week of work, I am getting up surprisingly easily. I am looking forward to visit the village of Světnov, where the Czech hunting rifle tetrathlon contest is to take place...

**Martin Šlechta, the number one** ranked Czech in sport hunter rifle disciplines about the contest premiere of the **Special CZ 527 Varmint**

**MY** morning rituals proceed at a surprising tempo. The children are still asleep while my wife Jana prepares a light breakfast. I am thinking about the way the mind and feelings control everything... if I am looking forward to something, tiredness disappears. If one could just control the feelings as necessary and bring oneself to this positive mood every working day... This funny idea brings me to laughter...

Today is the day when my new hunting rifle, the CZ 527 Varmint in a special custom model by Vít Sedlák, a weapons' designer from Česká zbrojovka (CZ) Uherský Brod, will have its premiere. Yesterday I took the rifle and dry-fired her, taking aim, getting a bit uneasy about the feel and grip of the new butt with its strange thumbhole to master, but enjoying the trigger – a brilliant piece of

tuning... I am genuinely looking forward to the first shots.

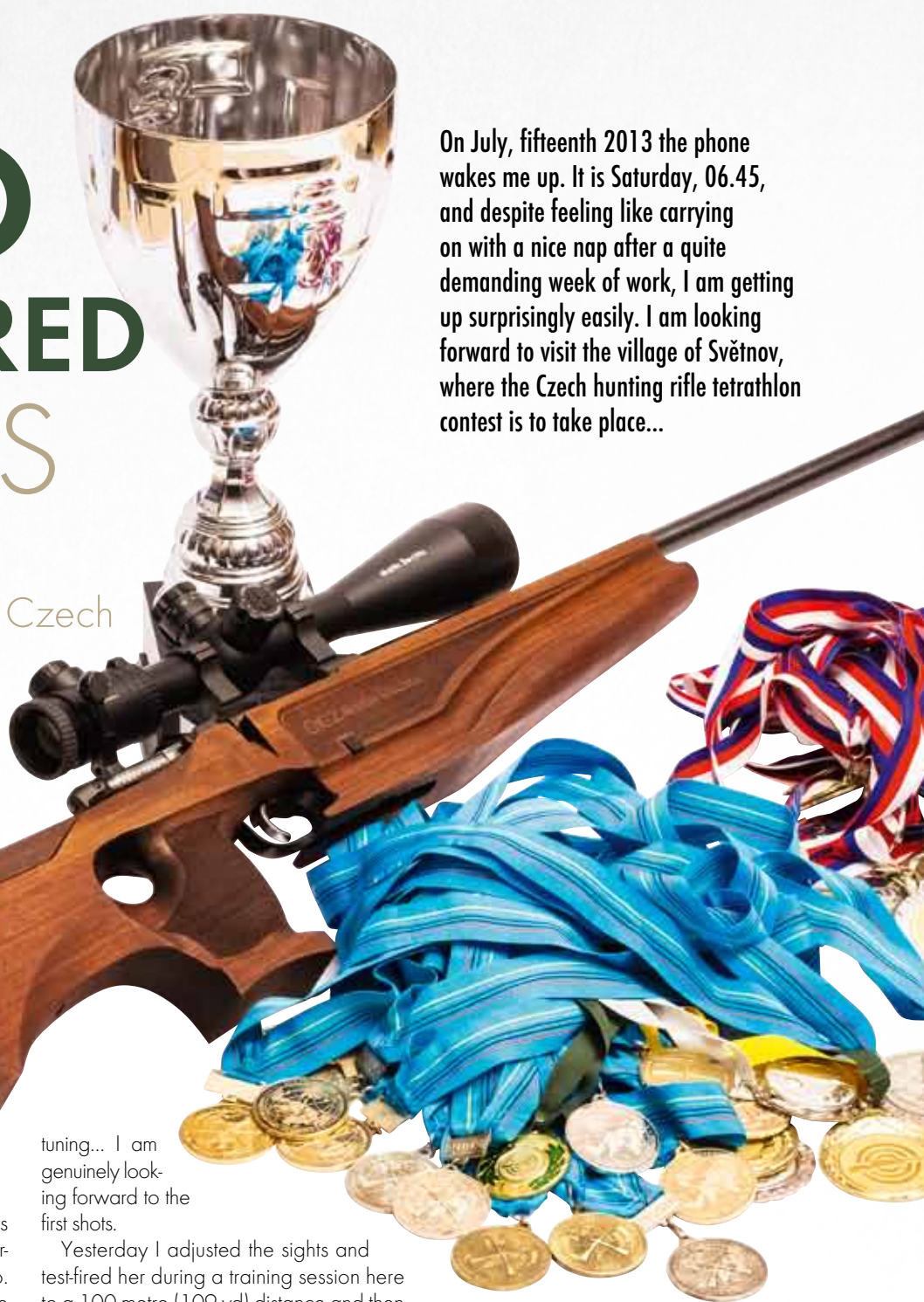
Yesterday I adjusted the sights and test-fired her during a training session here to a 100 metre (109 yd) distance and then tried the five-round groups the wild boar and chamois targets – faultless. I added some three test shots for a good measure at a fox target and left, being somewhat nervous indeed. I prefer to have some minor mistake or problem at once, rather than have something to ponder overnight. Oh, the mind – if only being able to control her, to evoke the proper thoughts... and to release oneself from the bad ones.

I am looking forward to meeting with shooter friends, to hear interesting stories from various corners of the republic, be it the hunting, shooting or family stories, to hear various jokes and anecdotes. But it is a contest and I know I have to avoid too many distractions. I am not the type who is

able to have an hour-long break and discuss various themes and then quickly stop these thoughts and switch mentally to concentrate on the single target; I simply cannot do that.

## CUNNING FOX

The first discipline is the fox, a tricky target. Sometimes the scope's crosshair stops on the number 10 and freezes there, while my rifle sends a bullet after bullet through a widening single hole in the centre of the target's ten. On another occasion the crosshairs wander all around the ten. Unfortunately today, lying prone and readying myself to fire, I feel the morning tingle, unable to control and eliminate it. I am leaning on my elbows on a mat, try-





ing to hold the weapon to my shoulder with proper force – not too much, not too little.

Load, fire. I am sliding the first 222 Rem. Match round – the crosshair wanders all over the 'ten'. When I fired my 'old' CZ 527 at the edge of the 'ten' during a sway, the bullet hit in the 'nine', and in the boar or chamois target it could easily be worse.

I am trying to pull the trigger with crosshairs in the centre of the 'ten'. The shot went off earlier than I was used to. A quick check through the scope – centre. I exhale with satisfaction. I am reloading and trying to let off with crosshairs on the number but the shot goes off with hairs at the edge of the 'ten'. I see the hit in the 'ten' at three o'clock, close by the border, but still good. I am reloading again and see with satisfaction that the next three bullets are all around the 'ten'.

I am tired, but I have good feeling regarding my weapon that saved me from a loss of a point or two. Compared to my 'old' CZ 527, with the new Special applies that the shot goes to the spot where you pull the trigger; even if you have the crosshair close to the border line, it still 'marks'.

#### STAY ALERT

Fifty points on the fox are a good basis, but to get these points on the roebuck is an obligation. I can't stop remembering the European Championships in Italy, where I lost the single point I needed just on the roebuck. But now, three shots opened a hole in the centre of the roebuck's 'ten' and I continued to send the remaining bullets there. Pretty good show. I enjoy every shot.

Another fifty. I presume that with the chamois it is going to be worse.

Once on the stand I support the 'new' CZ 527 by a free pole; the aim was good.

'Load, fire,' sound the judge's commands.

I am chambering the round and after a long period of aiming I send the bullet slightly to the right, next to the number ten in the centre. Good, let's carry on this way.

Next bullet goes straight through the number, dead centre. I fire the next one somewhat hastily and gosh, pulling the trigger during a slight sway I get a bordering ten at right. Attention, man! Next two shots tear the centre of the ten. I check the preceding borderline shot in the scope – it should be OK, but I want to overcome my feelings and thoughts and leave my mind in uncertainty – to remain alert, to avoid false calm.

One hundred fifty out of one hundred fifty.

Oh, how many times already did that happen! But the two-hundred still eludes me.

#### TWO YEARS OF WORK

I am thinking how many times I have marked 199 points, missing the 200 point goal with the last shot!

Today is the right day – today it would be a coup to achieve 200 with the brand new rifle!

I think it would please not only me and Antonín 'Tonda' Čech, but also designer Vít Sedlák and product manager Richard Velisek, as well as other people at CZ, proving that the effort to develop this rifle and its manufacture for everyone in the team, representing the Českomoravská myslivecká jednota (Bohemian-Moravian Hunters Association), made sense.

**Compared to the 'old' CZ 527, the new special sends the shot exactly to the spot you have in the crosshairs.**

The whole new rifle's development effort, lasting two years, was initiated at the 2011 European Championships. We were successful, yet, on the eve of each Championships, during the technical acceptance checks, the competitors from other European nations looked at our series-built rifles with somewhat pitying expression, comparing them to the sports specials they brought with them. But at the end of the contest we



witnessed the quite different expressions in their faces – curiosity, respect, admiration from the winner's podium – 'the box'.

I take to the last stand and target with very mixed feelings. The boar target always makes me sweat... Approaching the goal with every ten I shoot, I am getting more jittery with each one.

I take a break twice on the last shot. I simply must not fire a reckless one. It has to go there straight, a bull's eye.

Now?

I hold the crosshairs on the ten's centre all right, but what if a sudden sway would come...? Wait, wait a moment, good, better closer to the number... bang!

I check the last hit, but have already the feeling it is good.


Finally!

I smile, but it is not just the expression on my face and lips – I enjoy the inside feeling.

Oh, how sweet is the feeling of victory.

I am a patriot, and therefore I am much happier that I have achieved such a goal with a Czech rifle, with a Czech scope and with Czech ammunition.

It makes me assured that if one is truly determined to get something, he can achieve it.

Now the task is to repeat such performance every time it is needed. 





The family of the CZ 455 rimfire rifles is growing rapidly, and thanks to its sophisticated modular structure the new generation includes not only successors to the previous models, the CZ 452/453, but also weapons with completely new parameters, which are unique in the offer of Česká zbrojovka (CZ) at Uherský Brod.

The CZ 455 rimfire rifles were introduced to the market in the 2009/2010 season as relatively significantly reconstructed and production-wise simplified versions of the renowned ZKM CZ 452/453 rifles. The fact was that these rimfire rifles sold very well in the long run (in 2008 the CZ crossed the magic line of one million produced pieces of this model series), but they presented the company



# LONGER BARRELS AND

## New models of the CZ 455 rimfire rifles

with undue technological burden. Some issues simply cannot be solved by 'transposing' to a higher level, for example using modern CNC machining centres. The snag lay mainly in production differences due to the large number of variants, sub-variants

and their combinations, with which the CZ company responded to market demands over the years. For example, the receivers for the CZ 452 model were produced in the unbelievable number of 35 different variants.

### MODULARITY AND MULTIPLE CALIBRES

The CZ assigned the task of preparing a new series of the CZ 455 rimfire rifles (using proven elements from the 452 model) to remove the existing multiplicity of production variants, to its designer Jaroslav Malina, who recollects the process of the assignment and subsequent events:

*'The work took about three quarters of a year. Our assignment was to create an adaptable rimfire rifle that would allow for easy exchange of the barrel and calibre to be performed by the owner of the weapon. Naturally we used some tried and tested elements of the CZ 452 structure, but we made modifications when and where needed.'*

The imaginary heart of the 455 model is the receiver and the bolt, which are identical for all calibres used – currently 22 LR, 22 WMR and 17 HMR. A single type of magazine well is used, too, its dimensions adapted to the plastic magazine for cartridges 22 WMR/17 HMR; if a magazine for a smaller 22 LR cartridge is used, it is



Removing the stock of the CZ 455 rimfire rifle





necessary to insert a simple plastic segment into the rear part, which is secured with a transverse steel pin.

The transition between calibres is performed by simply interchanging the barrel. As far as the barrel is concerned, Jaroslav 'Jarda' Malina made use of a simple, but rigid and strong bedding formed by two screws with defined torque that run through threads on the sides of the receiver's front part and push against two prismatic grooves under the cartridge chamber, thus pressing the barrel against the seating surfaces in the receiver. Every user who can handle an Allen key will be able to carry out the operation. *'We have managed to solve also the persistent problems with the production of classical threads,'* the designer says with relief, *'especially the required play/allowance and also the beginning of the thread, which affect the headspace.'*

Thanks to this, the CZ 455 rimfire rifle's barrel is attached to a single point only and can freely oscillate, which improves the accuracy. The accuracy is also improved

by the production technology process used, including tried and tested cold forging.

As for other structural differences from the CZ 452/453 models, one that deserves mention is the radical simplification of the bolt itself, which no longer has two symmetric locking lugs, one of the characteristic

**The imaginary heart of the 455 model is the receiver and the bolt, which are identical for all calibres used.**

features of the ZKM model. The CZ 455 has only one massive locking lug with connecting bolt handle, which is a distinct simplification from the technological point of view. Jarda Malina further specifies:

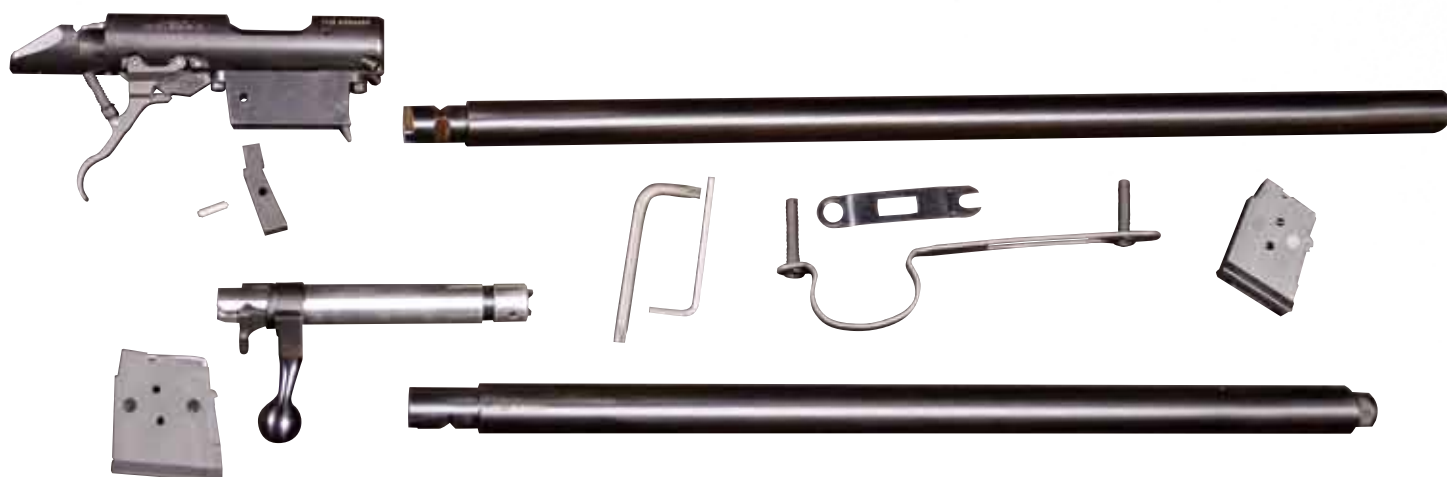
## SMALL SNIPER RIFLES



*'This might not be evident at first sight but the locking surface has been increased by 15 % in the CZ 455, even though it is not symmetrically distributed along the axis, but on a single lug. This modification had no impact on safety, with these calibres we could afford it.'*

### A SHORTER BARREL

What makes the CZ 455 rimfire rifles different at first sight is their shorter barrels. The basic version has a standard length of 525 mm, while with rifles from the



## TRIED AND TESTED ELEMENTS

Even if the CZ 455 rimfire rifle differs in many aspects from the original CZ 452 model, a number of tried and tested structural elements have been preserved, most of them born on the drawing boards of the Koucký brothers. Thus, despite the changes to the location of locking surfaces, both generations of rimfire rifles from Uherský Brod are characterized by the unique cylindrical sliding bolt, which gives the impression of having been derived from the Mauser bolt. However, its body does not rotate, but just moves backward and forward in the course of loading. This plays an important role in loading the cartridges reliably from the magazine, which has been designed as a direct without any ramp surface. This results in a smooth and continuous movement of the bolt combined with a very reliable locking action of the bolt. The CZ 455 rimfire rifles also inherited the time-proven design of the extractor fitted with the holder, which are

attached by a C-shaped flat spring enveloping the front part of the bolt's body. The extractor and the holder are placed in holes in the bolt body without using pins. While providing very firm attachment, this feature allows the replacement of a damaged part even under field conditions.

The striking mechanism has also been preserved, combining a very short travel of the striker with maximum reliability of primer ignition. At the end of the bolt, the 455 model continues to use an elegantly designed manual safety, the body of which performs the function of a linking pin for the entire bolt. The rear end of the striker protrudes from the bolt when the bolt is cycled and functions as a cocking indicator.

In the CZ 455 rimfire rifles the trigger mechanism of the latest generation of the CZ 452 model has been preserved, in which the trigger lever and the sear form a triangular set-up and are propped against

each other, unless the trigger is pulled. Thus, when the weapon falls to the ground an accidental discharge cannot be initiated, since the inertial forces cannot move the parts. The mechanism allows the trigger pull weight adjustment.



CZ 452/453 series there are seven lengths up to 726 mm. As a result, the 455 model is shorter, lighter and easier to handle than its predecessors.

The aforementioned length of 525 mm was selected as the optimum for the CZ 455 models, especially from the viewpoint of design and manufacturing unification. In short, this parameter is suitable for all three calibres offered in the catalogue and all possible versions. Measurements have proved that when modern cartridges for rimfire rifles filled with fast-burning powder are used, the muzzle velocity of the bullet from the 455 version is only about 2% lower than the velocity of a bullet from rimfire rifles

with a 630 mm long barrel. This is a negligible difference that can hardly be noticed by users.

As far as accuracy is concerned, Česká zbrojovka declared from the very beginning, in reference to its own tests, that the CZ 452 and CZ 455 models are at least equal, and that thanks to changes in its design, the 455 rifle even allows to achieve better results than was possible with its predecessor. This statement has been verified independently by a number of marksmen in recent years, using rounds of various origins from all over the world,



and nobody has challenged it. The CZ obviously knows what it is doing: relying on its ample experience in the production of export series of shortened rimfire rifles with barrel muzzles threaded for silencers, the CZ is sure that accuracy improves only up to a certain barrel length, and that with rimfire cartridges of relatively low output the quality of ammunition and the quality of the barrel muzzle's shaping are more important (this applies especially to the version with the heavy barrel).



The LPA rear sight designed for the CZ 455 Lux



Accurate shooting from the CZ 455 rimfire rifles with mechanical sights is also significantly improved by using an LPA rear



sight with a rectangular notch and with the option of elevation and windage adjustment. The front sight of adjustable height from the original CZ 452/453 models has been kept, but its soldered ring has been replaced with a bolted-on base with the additional bonus of a more elegant shape.

### THE DOUBLE-LENGTH BARREL

In the last three years Česká zbrojovka has gradually replaced its rimfire rifle production range and the new CZ 455 models have replaced the overwhelming majority of their predecessors. As for these predecessors, only the left-handed versions of the Lux and American models have been kept in the portfolio for economy reasons. Besides the one-for-one replacement, several completely new weapons have been created, too.

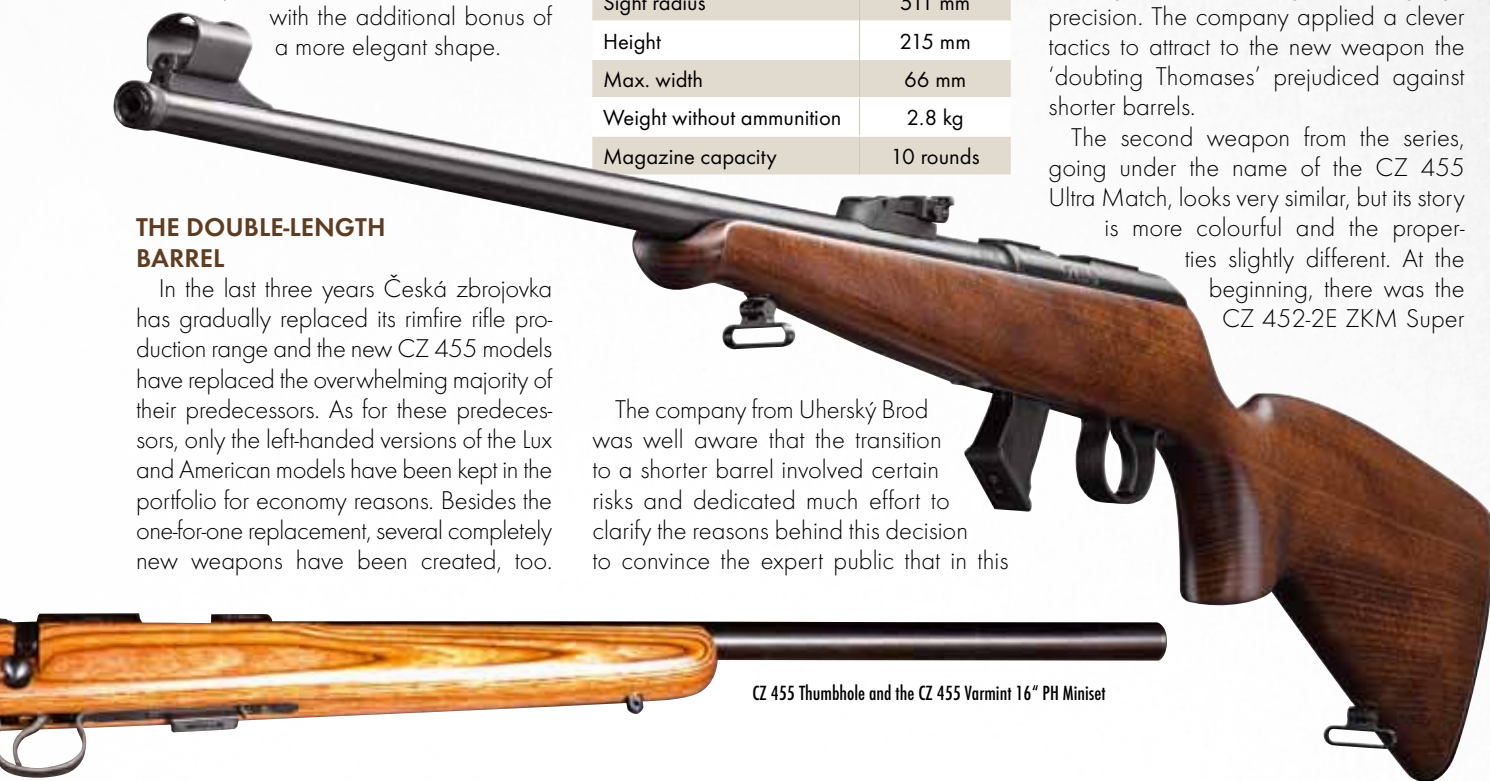
#### CZ 455 Long

Calibre	22 LR
Length overall	1085 mm
Barrel length	630 mm
Sight radius	511 mm
Height	215 mm
Max. width	66 mm
Weight without ammunition	2.8 kg
Magazine capacity	10 rounds

The company from Uherský Brod was well aware that the transition to a shorter barrel involved certain risks and dedicated much effort to clarify the reasons behind this decision to convince the expert public that in this

muzzle for installation of a silencer. Normally it comes in with a plastic ten-round magazine, a change from the previous business policy. The witty slogan for the Long Model says that the weapon is meant for long-distance shooting and lasting high precision. The company applied a clever tactics to attract to the new weapon the 'doubting Thomases' prejudiced against shorter barrels.

The second weapon from the series, going under the name of the CZ 455 Ultra Match, looks very similar, but its story is more colourful and the properties slightly different. At the beginning, there was the CZ 452-2E ZKM Super



CZ 455 Thumbhole and the CZ 455 Varmint 16" PH Miniset



Thanks to the strategic alliance of the company from Uherský Brod and its American subsidiary, CZ-USA, the CZ 455 Evolution and CZ 455 Thumbhole or Thumbhole Grey have been born, in both cases with a heavy varmint barrel and without mechanical sights, having sophisticated stocks of attractively coloured hardwood laminates.

Plans and reality are often two different things. Originally, the company planned to make 525 mm the standard length of the barrel for all models and versions of the

case a shorter barrel does not necessarily mean less accuracy. Nonetheless, it is the nature of man that some people can never be convinced.

And therefore CZ has prepared two new models with a barrel length of 630 mm – and there are other special features of these models: a new, but classically designed tangent rear sight and a stock in the CZ 452 style. The first of these new versions is called the CZ 455 Long and has a calibre of 22 LR, a beech wood stock and a threaded

Match model of 22 LR calibre, which was offered on the market in 2008 to meet the demands of Asian customers. Its key feature was a cold hammer forged, 630 mm long barrel that had a clockwise twist, twelve-groove rifling instead of the traditional six-groove one. Significantly improved shot stabilization led to better accuracy of the long-distance shots, and so the weapon with its beech stock was equipped with a mechanical tangent sight, adjustable in 25 metre increments up to



#### CZ 455 Ultra Match

Calibre	22 LR
Length overall	1085 mm
Barrel length	630 mm
Sight radius	511 mm
Height	215 mm
Max. width	66 mm
Weight without ammunition	2.8 kg
Magazine capacity	10 rounds

CZ 455 rimfire rifles – and this was true until 2013. Nowadays, however, new versions of the 455 rifle are being introduced to the market that do not comply with this unification idea. The reason: at the CZ, they listen carefully to the demands of their customers, even if the customers' opinion is based on some prejudices.

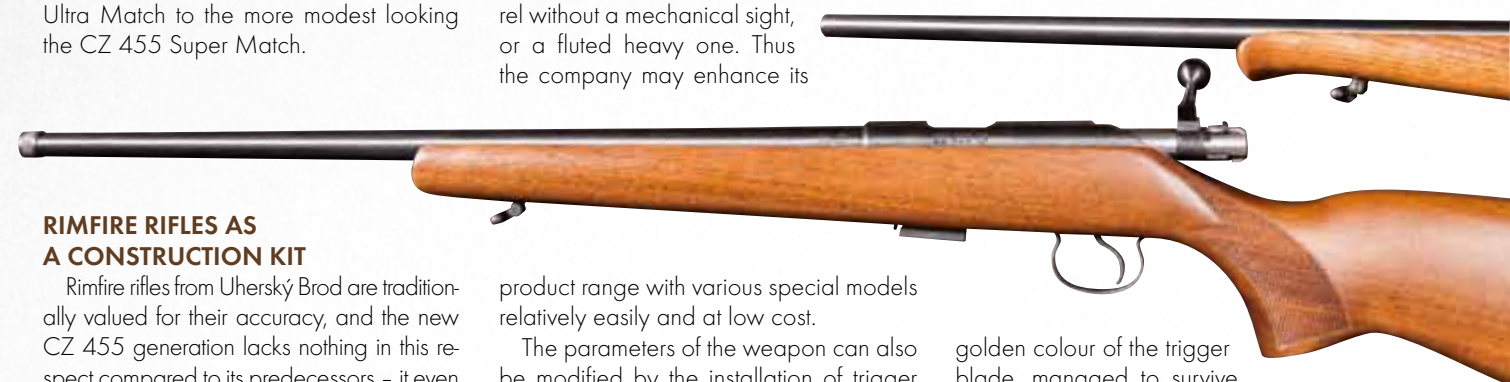
200 m. The standard accessories included a ten-round magazine. Following the introduction of the CZ 455 rimfire rifle series came the CZ 455 Super Match of 22 LR calibre, identical to the CZ 455 Standard with its beech stock and simplified end of the forestock and differing only in the 525 mm long barrel with a twelve-groove rifling of the bore. The Super Match uses the new LPA rear sight and comes with a ten-round magazine. Now we have another model in the series – the CZ 455 Ultra Match, which harks back to the original CZ 452-2E



ZKM Super Match, but this time its barrel, with a twelve-groove bore, is 630 mm long. The weapon comes with a steel ten-round magazine. Again, this design is a bit of a compromise, even though this time the claim of higher accuracy should be taken for granted. There is hardly any doubt that the customers who liked the original twelve-groove 452 model would prefer the new Ultra Match to the more modest looking the CZ 455 Super Match.

455 rifle. If the product manager responsible speaks of a rifle construction kit, he is not exaggerating. The standard receiver for all models can be attached to wooden or plastic stocks of various shapes and fitted with a barrel as needed or preferred: a classical barrel with or without mechanical sights, a heavy (varmint) barrel without a mechanical sight, or a fluted heavy one. Thus the company may enhance its

nism with a small lever (Single Set Trigger – SST), in which the pull weight of the trigger is between 3 to 5 N when the set trigger is activated. The set mechanism, easily identifiable thanks to the



**RIMFIRE RIFLES AS A CONSTRUCTION KIT**

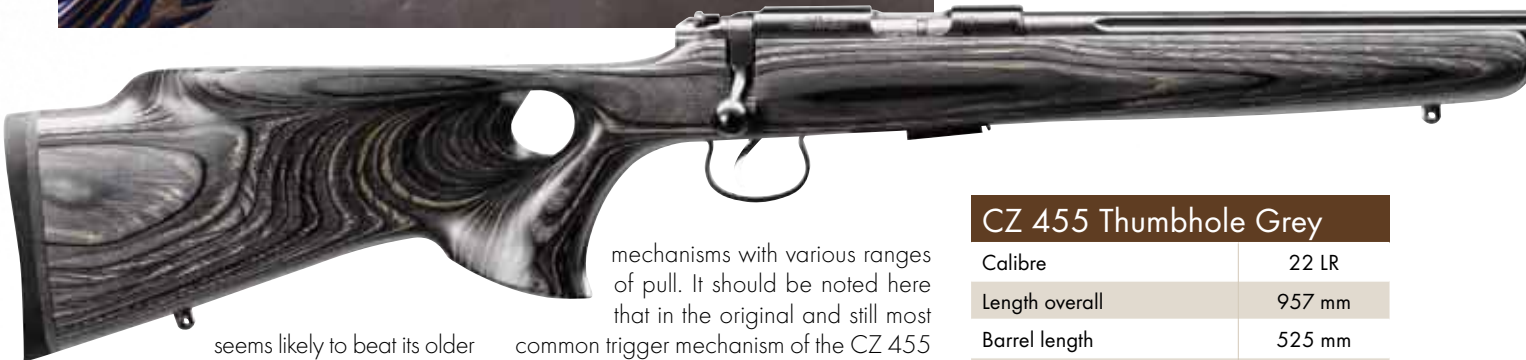
Rimfire rifles from Uherský Brod are traditionally valued for their accuracy, and the new CZ 455 generation lacks nothing in this respect compared to its predecessors – it even

product range with various special models relatively easily and at low cost. The parameters of the weapon can also be modified by the installation of trigger

golden colour of the trigger blade, managed to survive in the product portfolio only for a part of 2013. Practice showed that when a shooter would set a too low pull, spontaneous firing cannot be ruled out when the safety catch is released, due to production tolerances. Therefore the CZ came up with a compromise solution, and nowadays uses a less powerful spring in the trigger mechanism, with a pull between 9 to 13 N, instead of the set. This solution has proved itself excellently, as we will show below. The new trigger mechanism belongs among the typical features of several new CZ 455 rimfire rifles, including the CZ 455 Thumbhole Grey with a straight stock of grey laminated wood with a distinc-



A detailed view of the CZ 455 Evolution with barrel from the CZ 455 Lux II Miniset

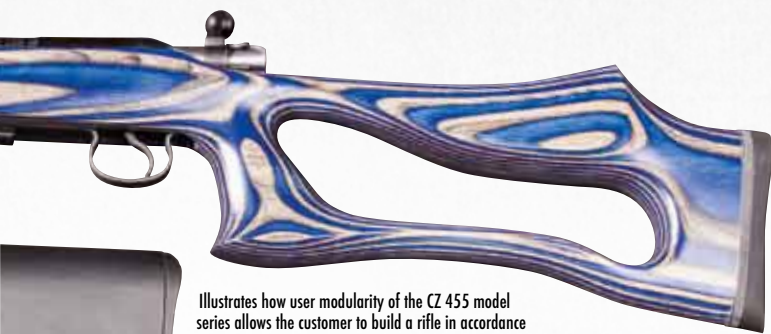


seems likely to beat its older siblings thanks to the new barrel attachment system. The CZ intends to use this great potential to penetrate new market segments. The company's position is much better thanks to the highly modular design of the

mechanisms with various ranges of pull. It should be noted here that in the original and still most common trigger mechanism of the CZ 455 rimfire rifles the resistance may be regulated between 15 and 18 N by an adjusting nut, once the trigger mechanism is removed from the stock. The CZ subsequently developed an interchangeable trigger mecha-

CZ 455 Thumbhole Grey	
Calibre	22 LR
Length overall	957 mm
Barrel length	525 mm
Height	170 mm
Max. width	75 mm
Weight w/o ammunition	3.4 kg
Magazine capacity	5 rounds





Illustrates how user modularity of the CZ 455 model series allows the customer to build a rifle in accordance with its own perceptions and needs not included in the standard offer. Shown from above: the CZ 455 Evolution with barrel from the CZ 455 Lux II Miniset – rifle with a long barrel and tangent rear sight. The CZ 455 Synthetic with barrel from the CZ 455 Lux Miniset – rifle with a short barrel and the LPA rear sight. The CZ 455 Long with barrel from the CZ 455 American Miniset – rifle with a shorter barrel with no sights. The CZ 455 Lux with barrel from the CZ 455 American PH Miniset – rifle with barrel without sights threaded for sound suppressor attachment.



tive opening for the thumb and a heavy varmint barrel with elegant fluting. In fact the expression 'new version' could be taken with certain reserve, as the Thumbhole Grey is

an immediate successor to the CZ 455 Thumbhole SST from 2013, and the only difference between the two models is the trigger mechanism.

### SMALL SNIPER RIFLES

A different situation concerns further two versions that the CZ developed to target the ever-increasing group of fans of marksmanship or sniper sports. Weapons for these purposes are often called 'small

sniper rifles'. The company originally attempted to address this very group with the aforementioned Thumbhole models, which are very accurate in all versions and have a very comfortable stock. But shooters who want to use small calibre rifle for training purposes, or those who just like to play snipers, did not like the fact that these guns look too much like civilian or sports guns.

This problem has been dealt with very efficiently via the new models – the CZ 455 Precision Trainer and the CZ 455 Tacticool, which have the character of full-blooded 'small sniper rifles' and meet all require-

ments to become fully fledged weapons for sports and training purposes. It is the stock of both these rifles that catches the eye at first sight. The Precision Trainer model uses the product of the American

Manners Composite Stocks company, which CZ selected due to the positive experience the company's subsidiary, CZ-USA, has had with these stocks. As the name Manners Composite Stocks suggests, this company focuses on the development and production of composite stocks

and pleasant to touch, an aspect one will appreciate especially at low temperatures.

The MCS-T4 stock was used for the CZ 455 Precision Trainer rimfire rifle. Its characteristic features are: a quite straight pistol

**A new trigger mechanism with a reduced pull was a pleasant surprise for us.**

grip with a distinctive recess between the nose and the neck of the stock and a relatively long groove at the bottom of the main part. The main part of the stock

is shaped as a symmetrical block with tapering top and bottom edges. The forestock is widened and has a rounded roughened surface in the grip area; a similar roughening of is on the pistol grip. The stock was not originally designed for rimfire rifles, but rather for real sniper and full-bore target-shooting rifles. That is why the model includes a massive rubber butt (shoe) that is naturally not needed for the 22 LR calibre.

Thanks to this feature, the CZ 455 Precision Trainer really looks like a small sniper rifle; and it feels like one when you put the gun to your shoulder. The main part of the stock is massive and the pistol grip may seem too big – but this helps you to



The CZ 455 Precision Trainer equipped for Small Sniper Rifle discipline



CZ 455 Precision Trainer

### CZ 455 Precision Trainer

Calibre	22 LR
Length overall	978 mm
Barrel length	525 mm
Height	175 mm
Max. width	80 mm
Weight w/o ammunition	3.54 kg
Magazine capacity	5 rounds

imagine that you are really going to fire high-power projectiles and not only the weak 22s.

Moreover, the service look of the weapon is enhanced by the varmint stock and the characteristic colour of the stock, called Coyote Tan. This yellow-brown hue is standard for the modern equipment and weapons of the American army. Česká zbrojovka adds that they chose this colour because of its universal nature in all environments, and with taking into account the primary purpose of the model CZ 455 Precision Trainer, this choice was certainly no mistake.

The CZ 455 Tacticoool rifle differs mainly in the stock made of laminated wood with a black-lacquered surface finish. Despite similarities in shape to the MCS product,

6 mm longer than the Precision Trainer. Users will appreciate the 0.18 kg reduction in weight of this rimfire rifle with wooden stock.

### THROUGH A SINGLE HOLE

We had been given the opportunity to try out the CZ 455 Precision Trainer, which is supplied without mechanical sights, as is the Tacticoool. This weapon, like all 455 models, is equipped with a standard 11 mm dovetail for the attachment bracket of a telescopic sight or a Weaver rail mount on the back of the receiver. The manufacturer recommends using a CZ-made two-piece steel mounting with rings and the CZ 3-12x50E telescopic sight (Česká zbrojovka let this solid and reliable but still quite inexpensive optical device specially made in China; a 3-9x40E version is also available). However, our test specimen of the CZ 455 Precision Trainer boasted the equally proven Meopta ZD 4-16x44 telescopic sights.

The test took place on a well-lit fifty-metre long underground shooting range. The shooting was executed in the sitting position, using the bipod that is installed on one of the two bolts on the bottom part of the fore-stock (the second one is often used for the attachment of a loop for carrying sling, the second loop being attached to the bottom of the main body of the stock).

### CZ 455 Tacticoool

Calibre	22 LR
Length overall	984 mm
Barrel length	525 mm
Height	165 mm
Max. width	75 mm
Weight w/o ammunition	3.36 kg
Magazine capacity	5 rounds

A new trigger mechanism with a reduced pull was a pleasant surprise for us. The result is a very well controlled operation of the set trigger with short travel. In our view this is a well-considered solution that will be more agreeable for most shooters than the overly sensitive set, not mentioning the its higher inherent safety.

A modern rimfire rifle with the parameters of the CZ 455 Precision Trainer is automatically expected to shoot at a 50 m distance 'through a single hole' when using good quality rounds. However, one should remember that, besides the use of the bipod and the sighting telescope, such performance takes a good marksman with proper experience. As a warm-up, we took the standardized American targets - each a black 65 mm square diamonds with an inner white 30 mm square, using the RVS Rifle Match rounds. Our best five-shot groups were within a circle of 20 mm diameter; in one case the distance between the hits was less than 15 mm.



a number of its parts are more or less different, and its main parameters (total length, height and weight) are also slightly different. It is interesting that despite a considerably thinner rubber butt, the Tacticoool is still

Illustration of stocks for the CZ 455 with a thick-walled barrel - shown from above: Thumbhole, Varmint and Evolution. The rifle features installed Miniset, in this case the CZ 455 Varmint 16" PH.



## SETS AND MINISETS

The CZ 455 rimfire rifles were created as multi-calibre ones, and their design allows for very easy transition to another cartridge. The CZ has taken advantage of that and included in its range of products, besides the weapons themselves, also the so-called sets and mini-sets.

A set consists of a 22 LR calibre weapon sold with a factory-fitted barrel for 22 WMR or 17 HMR. Currently available sets are the combination of the 22 LR with the 22 WMR for the CZ 455 Lux with mechanical sights and the 22 LR and the 17 HMR for the model American without mechanical sights. Every set includes two 5-round magazines (one for every calibre) and the tools for changing the barrels. (In addition, it is possible to buy magazines with a capacity of 10 rounds for all calibres, which can be used on other models of the CZ series as well.)

The Mini-set consists of a separate exchangeable barrel, one 5-round magazine plus tools for changing the barrel. At the moment, the mini set range includes most barrels and calibres. In all three calibres are available mainly the Lux, American and Varmint models. In the 22 LR and 17 HMR calibres the available models are the Varmint and the American, and these are available also with a threaded muzzle or a shortened 16' (406 mm) barrel. Thus the customer may not only put together another regular model,

but even a combination that is not normally in the standard range of the CZ rifles. There are no limits to creativity – for instance you may interchange the heavy barrel on the original Varmint with a slimmer American barrel without sights or with a Lux barrel with sights fitted. The only limit is the stock itself, since the model with the slim barrel has a barrel channel too narrow to accept a heavy varmintbarrel. In any case, the user should have the headspace checked in a specialised workshop and have the parts properly fitted, just to be on the safe side.


Then we moved on to smaller targets, 25 mm diamonds with 10 mm inner squares. We verified that the rule 'the

smaller the target, the better the results' is very true. Our results improved, and during the best round we finally managed

in comparison with other products of CZ and of the competition, is the new composite stock of a service design, thanks to which this rimfire rifle gives the impression of a compact sniper rifle. A certain advantage is the fact that the MCS stock is symmetrical is also a perceived

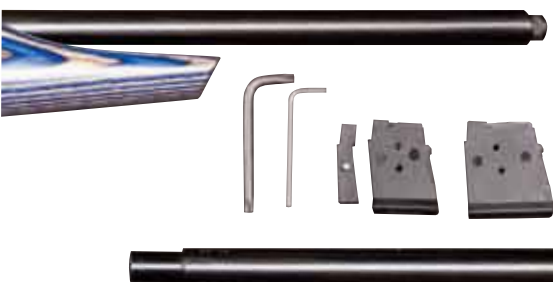


advantage, as the rifle can be used by left-handed shooters, too, provided they can handle the right-handed handling of the bolt when the telescopic sight is fitted.

The only significant disadvantage of the CZ 455 Precision Trainer may be its price, which, outside the USA, considerably exceeds what customers are used to for this series. You have to consider that that the major proportion of this price increase is due to the MCS composite stock imported from the USA – and without this stock this small sniper rifle could not be made. 

to achieve the desired 'single hole' with a ten-shot series.

We think therefore that the potential accuracy of the CZ 455 Precision Trainer is at a level which makes this weapon a full-fledged small sniper rifle. The essential advantage of this rifle





# Our GROWTH Driven by CUSTOMERS

**The Commercial Director and Vice-Chairman of the Board of Česká zbrojovka a.s. (CZ) Ing. Ladislav Britaňák interviewed on record profits and resources of the company**

**Our previous interview concerning the economic performance of Česká zbrojovka took place in the year 2010 with overcoming the global economic crisis as the main topic. The crisis is basically still on but your company has been raising its profits every year since then. Could you give us a bit more insight into this growth?**

The global crisis is over, in my opinion. I would see the situation as bad times for business keepers with poor efforts. And that applies both to enterprises and governments. Still a reason for me to be glad we do not have to elaborate further on this matter. The truth is our company has been experiencing a dynamic growth. The merit for that belongs not only to our team, but also to our partners all over the world, the credit for figures achieved within the Czech Republic should be primarily given to local customers. Looking at figures, the current records show our sales rising by approximately 60 % over the period between 2010 and 2013 to the existing EUR 100 million plus.

**Does this growth apply to firearms only or is there any substantial success in improvement of the non-armament production range, meaning mainly supplies of high-precision engineering products for automotive industry provided by Česká zbrojovka?**

This growth is supported by anything we do. (smile)

**The whole world is interesting for us from the business point of view.**

**What is the actual background of these boosted figures? One would estimate that seeking the explanation in the currently increased demand for firearms, applicable mainly to the United States, would be somewhat simplistic only.**

The demand for firearms in the USA definitely does have a positive impact on our profits. There is no doubt about that. However, summarizing all the factors that drive our amazing figures in a few sentences is very difficult. In short, the success is boosted

by every little thing we have been doing in the company for years. In other words, we have managed to gather a large team of people with a joint objective they intend to achieve – and it works like a charm.

**What quantity of firearms does Česká zbrojovka actually supply to the USA? What are the other significant markets for your products or what countries or regions do you consider the most important businesswise? Have you managed to achieve any new recent acquisitions in this respect?**

The number of our firearms exported to the USA will be around the seventy-thousand mark this year. The whole world is interesting for us from the business point of view, we are exporting to all continents, namely 90 countries. Pointing out some of the large countries here would be unfair to the others. Every customer counts for us. There is obviously a constant search for new acquisitions. And a new market often means a territory, where we celebrate a successful comeback after several years. That applies mainly to certain countries of South America or Asia.

**What is your current approach to the Czech and Slovak markets? The turnover in these territories would probably not reach any exorbitant level but our information proves that the**



**company does not ignore domestic markets, as opposed to the past practice.**

We try to listen a lot to potential critics meekly, even though it is not always fair-minded. Czechs and Slovaks are very keen on firearms and tend to criticise much. And there is always not much recognition from locals. Knowing that the local military and police were limited to Czech firearms only for the past 40 years is not a very good point to start with business. But I do not get

the idea we had been ignoring the local market in the past. We were rather harping on the same string and failed to listen better. The local market is of key importance for our business as far as references are concerned.

**| Has the company made any more significant changes to structure of its product range?**

We have started selling new military weapons, first of all. That is a major change. We have been also experiencing a dynamic increase in demand for our new service pistols CZ P-07 and CZ P-09.

**| The quantity of firearms produced at the main factory in Uherský Brod is rising every year. What is the present maximum capacity of your factory? Are you planning to expand it further or will you rather extend co-operation with your subcontractors?**

Our present capacity is at 250 thousand firearms a year. We will be expanding it by any means available, which means our own production facilities as well as subcontracts.

**| The launch of CZ-Brasil project seems to be a very good achievement for Česká zbrojovka. What are your expectations in this matter, from the business and operations point of view?**

Our intention is to sell more firearms in Brazil, compared to previous years, so we can establish ourselves very well in this important South-American country.

**| Are you in negotiations over any similar projects abroad at the moment?**

We are dealing on similar matters with our customers in numerous countries. The important thing is the actual interest in our firearms, which is the essential feasibility factor of such projects. Exporting firearms with subsequent focus on training and servicing is much more convenient on some occasions. This is more appreciated by our customers rather than seeing their guns were made here or there.

**| What would be the capacity requirements concerning the launch of production of new polymer pistols CZ P-07 and CZ P-09? Are you intending to continue the path of increasing the quantity of finished pieces or would the launch of these series bring the end or replacement of certain existing models within the CZ 75 family?**



The new polymer pistols will have no impact on production of models within the CZ 75 family. These classic pistols remain sold out on a long-term basis, the demand is huge. We have no reason to interfere with successful projects in progress.

**| When will the new compact CZ P-07 replace the existing CZ 75 P-07 Duty in your product range?**

The CZ P-07 will be launched this spring, so our distributors have started stocking up already. Yet that does not mean we are getting rid of the famous Duty at all. It will definitely stay available for some time and it still remains in production.

**| In the year 2013 you launched the family of classic Shadow Line pistols. Would you class these products as success? And if that is the case, could one expect that Česká zbrojovka remains in the segment of traditional all-steel pistols despite the massive ascend of polymer models?**

Models with metal frames represent an integral part of our product range and it will not change in future either. The Shadow Line series has been proven as tremendous success. My cheer is somewhat reduced by the fact that the demand exceeds our production capacities multiple times and





we are unable to satisfy all the customers interested in these products.

**| There are always some backstage talks that Česká zbrojovka is working on new pistol models. Please, do not feel forced into any premature promises but we would like hear at least a hint, whether the fans of small firearms of CZ could be looking forward to see any new release soon. Would you reveal anything?**

We are presenting the CZ P-07 and CZ P-09 this year. Is that not enough? *(laughter)*

**| Česká zbrojovka employed a new marketing method for the CZ 557 centerfire rifle, in which the rifle was made available at retailers after proper testing and reviewing of pre-serial models by many end-users recruited among professional and regular shooters under various climatic conditions. You are keeping the same method when adding further models into this series. How is this method proving in practice and what is the current status of the new rifles on the market? Don't you see the slower pace in extending the product range as an obstacle in this matter?**



I believe that time spent with our customers on developing a new firearm is never a waste. This process would be rather useless without input from customers and the question is what result could be expected then. Looking at the CZ 557 itself, I think we have made a nice piece of work adored by our customers. Further varieties were introduced by the company CZ-USA providing the CZ 557 with interesting stocks. These firearms were on display at the Shot Show in Las Vegas this year.

**| After the success of the modernised model CZ 550 a question arises, whether you are going to do anything similar to light centerfire rifles CZ 527.**

That is a good idea. *(smile)*

**| A slightly more provocative question coming: What about self-loading rifles? Is Česká zbrojovka going to finish the development of these firearms or has the project been put on hold for the time being?**

My slightly provocative response: we are launching the semi-automatic Bren S1 in calibre 223 Rem. this year. But this is not a hunting classic, is it? *(laughter)* And now seriously: we have definitely not given up on that concept. We are rather thinking of combining this issue with some new firearms which are being considered at this stage.

**| The response to new CZ 455 rimfire rifles was quite interesting all over the world, these are generally valued for their modularity and multi-calibre options, yet the more conservative group of customers is**

**not really happy with shorter barrels – although these have been proven as accurate as the older models CZ 452/453, if not even better. Did that surprise you? What is your response to this situation?**

I was not the only one in our company astonished by this. *(laughter)* The solution is simple: the long model with a longer barrel – modularity of the firearm is preserved and the customer gets a longer barrel.

**| The new, or rather renewed, segment of your product range is represented by automatic service firearms. This topic is certainly data sensitive, so the broader public is aware only of the quantities supplied to the Czech armed forces, which make a fairly humble impression. How is this fact perceived by the company itself? Could you at least indicate, whether the new sub-machine guns CZ SCORPION EVO 3 and assault rifles CZ 805 BREN have rendered any substantial export success so far?**

I can indicate or even guarantee that the SCORPION EVO 3 has been put into service in units in the Czech Republic as well as 15 armed forces abroad. One of my examples could be a unit of the president's bodyguards in a South-American country. The BREN needs to follow a more complex path in this expansion, it is a military rifle after all. We are about to sign a very interesting contract in South America and participate in several tenders all over the world now.

**| We should not skip the Indian tender in this respect, it is getting a lot**





of attention now. The information available shows that there is further testing going on within the narrow selection procedure including the modified model CZ 805 BREN manufactured in Uherský Brod. How does the Czech firearm compete among its fierce rivals and when could you expect the final verdict?

Yes, there is a testing stage in preparation, it should last for about a year. We should get a clearer view of our chances in the year 2015.

**| There are some voices among shooters passing the message that CZ is strongly considering a reduction or even absolute end of production of its famous Slavia air guns. Is this true?**

The absolute end of production of Slavia air rifles is not that obvious. These rifles will definitely not be manufactured by CZ in future.

**| The offer of CZ brand merchandise is expanding quite interestingly and without any fuss. What method do you employ to select these items and what are your future plans in this matter?**

I am glad to see these items in certain relevance to firearms, preferably their accessories. The product manager assigned to particular firearm series would be the one responsible and the one, who has to make recommendations. Some things cannot be

accomplished right at the first attempt, so we managed to purchase some absolutely unsuitable items in the past, we would not be the right crowd to give advice in this matter. *(laughing)*

**| Let us take a short glimpse at the profits of associated companies of CZ. How is the company CZ-USA coping with the arms boom in the United States?**

**The new polymer pistols will have no impact on production of models within the CZ 75 family.**

The stock of CZ-USA is sold out and they are waiting for any items we supply. They have reached record sales levels and keep their systematic approach through marketing campaigns striving to present the CZ brand among customers in North America.

**| The premises of Dan Wesson, which could be called a granddaughter of CZ, have suffered a severe damage due to fire recently. What is the situation of this company at the moment and when could we ex-**

**pect the famous DW firearms back to the Czech and North-American markets?**

I think we have a DW pistol at our retail store in Prague, if you are interested, so you don't have to worry about a long lead time there. The fire was obviously a significant inconvenience, luckily none of our employees or any other person sustained any harm. The positive thing here: we have been moved into new premises now and that has enabled us to increase the production to almost a double. The DW products are still almost sold out this year.

**| What is your current opinion about another 'daughter company' – Zbrojovka Brno s.r.o. – formerly known as BRNO RIFLES? Would you say that, after a longer search for ideal cooperation with the main factory in Uherský Brod, the optimal number of employees and perspective products, this heiress of famous traditions established by arms manufacturing in Brno has finally stepped out in the right direction?**

Our people at Zbrojovka Brno had been through the worst any patriot and fan of arms from Brno could have ever experienced. I mean the bankruptcy of their beloved company. I am glad we are all members of one arms manufacturing family working on joint projects today. One of those is the combination gun Brno Combo, which will be presented to the professional public in 2014. **|||**





# CZ SCORPION EVO 3

The global war against terrorism and new security threats at the beginning of the 21<sup>st</sup> century have brought, besides other effects on the defence equipment, also an increased demand for modern submachine guns (SMGs), firing the classical pistol ammunition. Thanks to the advantageous legislation in many countries, the semi-automatic (self-loading) weapons, whose design is closely related, could also be brought to market in parallel. To the most successful submachine guns and self-loading carbines of this new generation belong the models of the CZ SCORPION EVO 3, produced by the Česká zbrojovka (CZ) Uherský Brod.

**T**he features of the present-day submachine guns, and therefore of their self-loading siblings, are influenced especially by the actual requirements of the special forces – both security and military. The compact dimensions, derived from the presumed weapons' use at

## submachine guns and carbines

close distances, preferred until recently, already ceased to be a priority. The most often demanded are the models of classic design for unconcealed carry, with emphasis put on the maximum simplicity of their design, easy and ready handling and control, absolute reliability under any climatic conditions with the broadest spectrum of usable ammunition, high accuracy to the limits of their effective range and pleasant human engineering (ergonomics). As, in the meantime, the world economic crisis had broken out, the sensible price is also an important parameter, this having its effects on the production technologies used.

### BORDERING ON HEAVENLY

The CZ SCORPION EVO 3 submachine guns, from Uherský Brod were developed just with these real end-users' requirements in mind and the results show exactly that. These weapons are light blowback automatics with

a massive blowback breech (unlocked) and a hammer firing mechanism, which is located, together with the trigger mechanism, in the removable trigger mechanism container. The submachine gun allows for firing single rounds, three round bursts and fully automatic fire, while the firing takes place



from the closed bolt. The use of automatic firing pin block safety is a matter of course, indeed, contributing essentially to the drop safety of the weapon.

A time honoured design solution is the recess in the right side of the bolt, easily accessible through the generous ejection port on the right side of the receiver. It serves for slamming the bolt forward (aka forward assist) in case of its extreme fouling. This way the designers smartly got over the fact that the charging handle is not connected to



## WHAT DOES THE EVO 3 MEAN?

This somewhat mysterious part of the CZ SCORPION EVO 3 A1/S1 name expresses the fact that from the manufacturer's point of view it is already the third generation of the modern automatic weapons for the pistol ammunition. The submachine guns were produced in the Česká zbrojovka Uherský Brod already soon after the Second World War and especially the ingenious model line of Sa 23/25 and Sa 24/26 enjoyed in its time quite a respect and admiration; nowadays the Company shows with pride its revolutionary vz. 61 Škorpion submachine gun. This original weapon occupies the borderline between pistols and submachine guns and is considered

to be the first generation of Škorpions or Scorpions, respectively, as in the nineteen-nineties the Česká zbrojovka modified the name to the 'international' spelling of SCORPION and registered it as its trademark. The second generation of the Scorpions represents the model CZ SCORPION 9x19, put to market in late 2003 in small series only. The contemporary Scorpions are from the design and /material point of view way different. However, the end users apparently do not object at all to this declaration of continuity of an illustrious tradition. No, they feel rather the opposite, as the famous name gives a guarantee of technical ingenuity and high quality of manufacture.

**Scorpions do not have slightest problems with desert environment and operate safely with all variants of the 9x19 rounds regardless of the manufacturer and bullet shape.**

the bolt. This solution brings the advantage of a charging handle remaining stationary during firing, avoiding any risk of collision with shooter's hand or other obstacles. After firing the last round the bolt remains to the rear, with the release button on the left side of the trigger container. The bolt could be released forward also by a short pull back on the charging handle.

The heart of the new Scorpion's design and the key to its success is the sliding

just removal (sliding out) of one pin at the front of the container; the trigger container is then unhooked from the rear hinge. It takes a few seconds, the number of parts removed is minimal and of course no tools at all are necessary.

The structural polymer is used also for moulding of the forestock (a separate part slid over the barrel), for the trigger container, the pistol grip and for the folding telescopic (length-adjustable) stock. The result is a pleasantly low total weight of the weapon (without ammunition it tips scales at way below three kilograms/6.6 lbs) and touch comfort. Also worth mentioning is the ample accessory space on the Mil-Std-1913 (Picatinny) rail, occupying the whole top of the submachine gun and flanking the three sides of the forestock.

## EXCELLENT HUMAN ENGINEERING

If there is something the submachine guns and carbines CZ SCORPION EVO 3 also excel in, it is their lovingly tuned ergonomics – the human engineering. This era of modern structural polymers and 3D modelling allows you to create miracles with the final product shaping and the designers took full advantage of that. Their consultations with members of the élite military and security forces were an immense boon for their work. Thanks to that the new Scorpions fit in hand like a glove for most anyone, this fact helped also by the ability to adjust the pistol grip horizontally to suit individual preferences and body proportions.

The users are also unanimous in their praise of positioning the controls exactly where the shooter would intuitively seek

allowed to simplify radically the complete design of the weapon and of course also its manufacture. It can be seen especially on the bolt as the stresses imposed on it are minimal, it could be designed as a simple two-part shell of a strong structural polymer.

A bonus for the user is the extremely simple and rapid disassembly: The complete bolt assembly with the return spring is removed from the bolt casing from below after removal of the trigger container, the whole sequence commences with

attachment of the bolt on the removable trigger block and using a central rod with a single return spring as a guide to the bolt. This simplest, but in the end a truly brilliant idea (protected by international patents, indeed)





them. The magazine release is ambidextrous and its shaping together with the funnel-like mouth of the magazine well allows for extremely fast reloading. The selective fire lever serves also as the manual safety; it is also ambidextrous, the charging handle could be installed on the right or left side as required. Although the slide stop (lock) is on the left side, where a right-handed shooter controls it with a left thumb, the left-handed shooter can reach it comfortably by the index-finger of the left hand, holding the

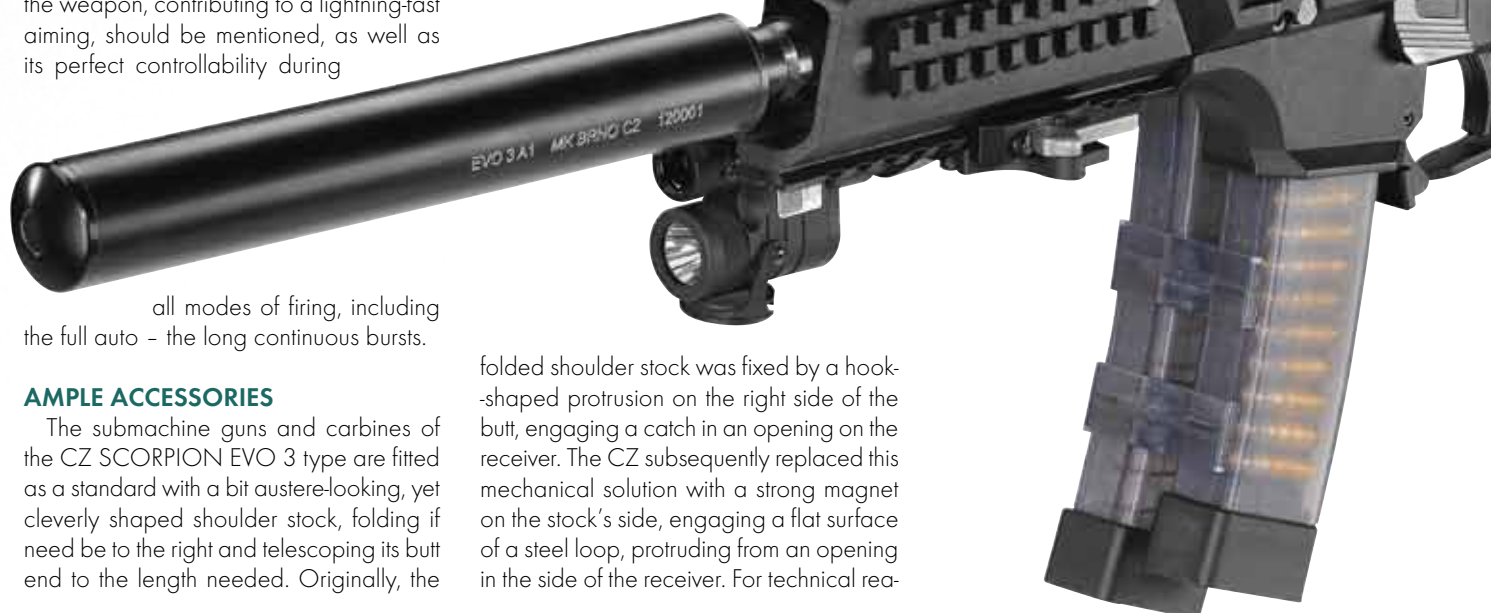


sons a return to the mechanical 'hook and female catch' solution of the folded stock holding in place is contemplated again.

The overall dimensions of the weapon could be reduced immediately (e.g. as needed for transport) by the removal of the complete shoulder stock. The integral anchor points (lugs) for the loops of the standardized three-point, two-point or single-point carrying straps are a matter-of-course.

For new Scorpions a wide scope of accessories is available: transparent plastic double-stack, double-feed magazines of 20 and 30 rounds

pistol's grip. Also the excellent balance of the weapon, contributing to a lightning-fast aiming, should be mentioned, as well as its perfect controllability during



all modes of firing, including the full auto – the long continuous bursts.

#### AMPLE ACCESSORIES

The submachine guns and carbines of the CZ SCORPION EVO 3 type are fitted as a standard with a bit austere-looking, yet cleverly shaped shoulder stock, folding if need be to the right and telescoping its butt end to the length needed. Originally, the

folded shoulder stock was fixed by a hook-shaped protrusion on the right side of the butt, engaging a catch in an opening on the receiver. The CZ subsequently replaced this mechanical solution with a strong magnet on the stock's side, engaging a flat surface of a steel loop, protruding from an opening in the side of the receiver. For technical rea-





The self-loading Scorpions differ externally from the fully automatic model A1 only in the text and symbols on the frame and by the limited positions of the fire selector/manual safety

capacity, several types of tactical flashlights including their quick release/attachment mountings, laser markers, tactical grips, collimator sights etc. As far as the silencers (sound suppressors) are concerned, for the CZ SCORPION EVO 3 A1 submachine guns is currently offered a product of a reputed foreign manufacturer.

The Scorpions are fitted as a standard with adjustable mechanical (iron) LPA sights with a dioptic rear sight and a white-bead-highlighted front sight, this combination being found ideal for quick-reaction shooting at close distances. In the real life the submachine guns and carbines are most often used fitted with modern compact collimators and other optical sights, enabling effective fire up to a distance of 250 m (270 yds).



### COMBAT PROVEN

In 2010, the CZ SCORPION EVO 3 A1 submachine gun of the 9x19 mm calibre was the first of the type to come into series-production, soon winning excellent reputation of a successful, user-friendly, design- and manufacturing-wise very simple and reliable weapon with impressive effect (limited only by performance of the ammunition used). The considerable demand corresponds to the quality, indeed. Besides the Czech armed forces the new Scorpion sells in various numbers, from a few dozens to hundreds and even thousands of copies to armed and security forces in a number

of countries the world over, mainly for the specialized units. The submachine gun acquitted itself fully at hands of the elite professionals in most diverse tactical and climatic situations. The experience from its exploitation have proven e.g. that the new Scorpions cope easily with the most taxing conditions of desert environment and that they work reliably with all variants of the 9x19 mm, or 9 mm Luger rounds, respectively, regardless of the manufacturer or shape/kind of the bullet.

Taking advantage of the sales successes, the CZ developed for its SCORPION EVO 3 customers e.g. the adapter for shooting with the Si-munition training ammunition, bringing thusly an important tool for a realistic combat training.

### SIERRA ONE NOT ONLY FOR CIVVY STREET

The possibility of complementing the fully automatic service version, the EVO 3 A1, in the portfolio of commercially available CZ weapons with the self-loading (semiautomatic) model for the civilian market has been counted upon already during the development of this weapon. The Česká zbrojovka concentrated first and foremost on bringing the design to perfection and starting of the initial series manufacture of the submachine gun, but already in 2011 its product range included the semi-automatic (self-loading) CZ SCORPION EVO 3 S1, firing the 9x19 (9 mm Luger) rounds.

As seen by an ordinary user, there are only a few differences to the fully automatic A1 SMG. The changes in design and manufacturing processes, shown in the accompanying box, would be registered most likely by a trained eye only, knowing where to look. Majority of shooters would in all probability notice only the new instruction on the left side of the polymer receiver and the only two-position fire selector, doubling also at the manual safety – each of its positions is marked with internationally understandable symbols – white and red dots respectively, with horizontally-spaced zero and a single vertical line (stroke). Otherwise the 'S-one' looks identical to the A1 model. Also the disassembly is the same as of the submachine gun.

### CZ SCORPION EVO 3 A1/S1

Calibre	9x19 (9 mm Luger) / 9 mm Luger, 9x21
Length overall with stock folded	425 mm
Length overall with stock straight	675 mm
Barrel length	196 mm
Sight radius length	240 mm
Width with stock folded	85 mm
Width with stock straight	60 mm
Mass with empty magazine, w/o strap	2.68 kg
Magazine capacity	20, 30 rounds

## THE S1 VERSUS A1: WHAT CHANGES IT BRINGS

The CZ SCORPION EVO 3 S1 self-loading only is directly derived from the fully-automatic basic type – the A1. The main differences of design, whose purpose is to reliably prevent reconstruction of the self-loading version into the fully automatic one, i.e. the burst firing weapon, and to make the eventual attempts at such a modification as much as possible complicated and costly, respectively, are as follows:

» Removal of the automatic trigger and its pin including the attachment points in the trigger container by milling them irretrievably away, thus preventing its eventual reinstallation in the original place. (The automatic trigger of the fully-automatic weapons whose firing pin initiates the round with the bolt in the forward position, releases the hammer /with the burst mode on and trigger pulled/, in the ideal position once the bolt reaches the forward end position.)

» New pin of the safety is a single part designed so that in no position of the pin it would get into contact with the interrupter. So it blocks interrupter function, which consists of catching the hammer after each functional cycle as long as the trigger is pulled.

» The interrupter is also modified by shortening of its rear end so that even if the selector (safety) from the fully automatic weapon would be installed back into the semi-auto weapon, its function would not be blocked. By complete removal of the interrupter or by removal of its active part (e.g. by violent force) the absence of automatic trigger in the weapon's mechanical linkage causes the slipping of the hammer on the rear edge of the bolt, causing an insufficient initiation of the round's primer. The new pin of the safety also allows that the fire selector may move only between the two positions: safe and fire.

» In case the complete trigger mechanism container from the fully automatic weapon would be installed into the self-loading Scorpion, then, due to the removal of the automatic trigger controlling protrusion on the bolt, the weapon loses its functionality as the hammer of the cocked weapon remains

From the quite numerous design modifications of the trigger mechanism of the S1 model a brief look into the trigger container would show especially the absence of the automatic trigger at left in front of the hammer and use of a new, single-piece pin of the safety

on the detent of the automatic trigger, that thusly lacks any means of release even with the bolt reaching its forward position.

Other parts newly produced for the self-loading version, albeit derived from the submachine gun parts, are simplified by deleting some of the machining operations, preventing thusly their combination with those of the fully automatic version.

In 2013 the range of products of the Česká zbrojovka Uherský Brod was augmented by the semi-automatic CZ SCORPION EVO 3 S1 of the 9x21 mm (9x21 IMI) calibre. This round has been spawned by the particular Italian legislative situation, where

helped its spreading despite the somewhat odd dimensions, precluding its use in the firearms chambered for the 9x19. Modification of the 9x19 calibre weapons to the 9x21 round is therefore simple in principle – usually it suffices to change the chamber.

only a few months, with the end product visibly differing from the preceding 'S-one' only by the inscription on the side of the breech body near the cartridge ejection port.

The CZ SCORPION EVO 3 S1 proved itself to be a pleasant, easily handling and controllable, accurate weapon, capable to bring plenty of fun and satisfaction not only to aficionados of the dynamic sport shooting disciplines, but also to another group of fans of the modern automatic weapons, who cannot legally possess a submachine gun. In fact, the self-loading (semiautomatic) Scorpion differs from the fully automatic A1 version really only in the permanently removed mechanical features that would allow to fire the three-round bursts and fully automatic fire. Otherwise the weapon is identical to the Scorpions that acquitted of themselves perfectly in real combat, used by the élite military and police units the world over. No wonder that the CZ SCORPION EVO 3 S1 catches attention of those security forces that are not allowed to use fully automatic weapons, such as the city (municipal) police etc.

**CZ SCORPION EVO 3 S1 externally differ from the A1 submachine gun only by the instruction symbols on the left side of the polymer frame and with only two-position fire selector, doubling as a manual safety.**

the classic calibre 9x19 (9 mm Luger) is not permitted for civil market due to its 'service' character. So the 9x21 IMI is used mostly in Italia, and also in a few other countries beset with the same legislation, primarily in Mexico. The fact that this round is similar in performance to the classic Luger 'nine',

This is the way how the CZ SCORPION EVO 3 S1, arousing particular, commercially viable interest on the Italian market, was created. As, since the nineteen-nineties, CZ has an ample experience with the 9x21 round, this version of the Scorpion smoothly entered the production in a record time of



# 'S-ONE' at the shooting range

**T**he CZ SCORPION EVO 3 S1 are available on the world's market for some time already, and a considerable proportion of the shooter public were able to test them for themselves, while many of them have already bought these attractive weapons, too. It would be also appropriate to remember what these weapons are capable of at the shooting range.

For our brief test with the 9x19-firing variant we got the S&B ammunition with brass cartridges and full metal jacketed bullets of 7,5 g/116 grs weight. Loading (inserting) rounds into the double-stack, side-by-side feed magazines was, as expected, a comfortable affair from beginning till end. We tested a weapon with the standard iron (mechanical) sights of Italian origin, consisting of a diopter rear sight and of a front sight enhanced by a white bead on its top (i.e. the same arrangement as the one used on the CZ SCORPION EVO 3 A1). We had available also the rather massive Mepro 21 collimator made by the MeproLight company. As our Scorpion has been test-fired with this sight, we began our shooting session using it (after a slight change to the aim line) under conditions of the tunnel shooting range and using the 50/20 international pistol target. All shooting was done from a standing, unsupported position (with no time to get used to the weapon, either).

We started firing at a 25 m/27 yds from targets. This distance is the one the self-loading Scorpions sights are adjusted to and weapons test-shot at, with the five-shot groups averaging 118 mm (4.6 in) diameter of the circumscribed circle. We have proven, however, that this result could be easily bettered by an experienced shooter, getting up to 30 to 40 mm/1.2 to 1.6 in diameter of a circumscribed circle.

Then we moved to the 50 metre/54.7 yds stand, where the quite large black centres of the pistol targets shrunk to considerably smaller dots. Scorpions are, however, weapons that have the effective range of up to 250 m/273 yds, so, as far as the weapon goes, this is not a great distance... Nevertheless, here the question of your choice of sights gets much more substance. Our test has shown that the collimator that had done a good piece of work on the previous stand, had the aiming dot too large for the 'fifty metre' one. Also the rela-

tively large white bead on the front sight, so fine for quick taking aim when shooting at shorter distances, from 25 m/27 yds obscures on some types of targets too large area of it. Despite this handicap the experienced shooters achieved some very nice groupings, fitting within the 150 to 160 mm/6 to 6.3 in diameter circle. We were assured by the employees of the CZ that using a good riflescope the grouping from 50 metres could be reduced to only 70 mm/2.8 in.

To finish the testing we got closer to the targets, to some 15 m/16 yds distance and, using the collimator again, we tested how accurately could be the self-loading Scorpion aimed during a really rapid fire exercise. In this discipline the 'S-one' truly excelled: the rate of fire apparently hasn't any practical effect on the accuracy, even the maximum single-shot rate, comparable

of hit groups or in behaviour of the weapon, as compared to the 9 mm Luger version (with the only exception that no round misfired this time). We have noticed an interesting phenomenon, though, that either escaped us when shooting with the 'Luger' ammo, or was not so pronounced with it - the 'S one' in 9x21 IMI calibre ejected the spent cartridges with an unswerving regularity to the very same spot. We've recalled that monitoring the trajectory of the ejected cartridges traditionally played an important role in the developing of automatic weapons. The regularity of the trajectory, considered a marker of ripeness of a design, was measured by the so-called bucket method, when an ordinary bucket or other suitable vessel (a hat would do, too) was placed on the floor where the first spent cartridge fell. So, from this aspect the CZ SCORPION EVO 3 S1 carbine in 9x21 cal. deserves an A+ grade!



New Scorpions with ambidextrous or exchangeable controls are perfectly suitable for use by left-handed shooters, too

to a 'slow-firing submachine gun' the overwhelming majority of hits has not left the 'nine' circle and even the worst 'wayward' shots hit still in the black.

During our test we fired over a hundred rounds and recorded only one misfire, caused, however, by the cartridge and not by the weapon itself. One of testers remembered to check also the spent cartridges and complimented the strong and accurately centred firing pin strikes on the primers.

During the 'general overview' or orientation test of the carbine of the 9x21 mm calibre we had available the S&B rounds with the FMJ bullet of 7.5 g/116 grs weight. We were not able to register either a change in quality

Our shooting experience proved that the primary mechanical sights, as supplied with the weapon, are perfectly suitable for distances to 25 metres and are ideal for the rapid, intuitive fire. Provided the user would like to test his/her marksman's abilities at longer distances, he/she is to choose sights or optical scopes with a more subtle aiming pattern. Thanks to the standardized mounting rails the possibilities offered here are enormous. The CZ itself sells today several suitable collimating sights and prepares also new mechanical dioptrical sights with a rotating dioptre featuring four diameters of the sight opening and a height-adjustable, exchangeable front sight. ■■■

In autumn 2011, by a lucky coincidence almost exactly 50 years since the Skorpion vz. 61 7.65 mm submachine gun was introduced into the Czechoslovakian security forces, Česká zbrojovka (CZ) in Uherský Brod launched a semi-automatic version of this legendary weapon.



# CZ SKORPION 61S PISTOL

**I**n the late 1950s, the Czechoslovak Ministry of the Interior ordered Konstrukta Brno to develop 'a special submachine gun for service purposes' of a calibre then common in domestic security forces – the 7.65 mm Browning (32 ACP). The Interior Ministry wanted a small and light automatic weapon that could be used both as a small submachine gun and pistol, one with which State as well as Public Security units were to be armed but that would also allow 'special security activities.' Therefore, it

machine gun vz. 61 (Škorpion)' was introduced among the armaments of the Interior Ministry. The weapon was also used by the Czechoslovak People's Army and, to a lesser extent, by the Corrections Force. Production was entrusted to the arms factory in Uherský Brod – and despite it being rather demanding, they managed it perfectly. Škorpions were produced in three phases between 1962 and 1979, to the total amount of over 200,000 pieces. In the 1970s, vz. 61 submachine gun exports increased (Yugoslavia became a large direct

## PREDECESSORS AND COMPETITORS

In the Czech Republic, the first purely semi-automatic weapon based on the vz. 61 submachine gun and intended for the civilian market was developed by Česká zbrojovka Uherský Brod. Its CZ vz. 91 S pistol was launched in 1992 in two basic versions – the original calibre 7.65 mm Browning (32 ACP) and the 9 mm



At the first sight, the CZ Skorpion 61S is distinguishable from the original 7.65 mm submachine gun only by the mark stamped on the left side of the body, by the re-labelling (on some pieces re-stamping) of the forward position of the fire mode selector with 'no. 1' and, of course, by the civilian Proof Mark

was to enable shooting from close to the body, in cases of necessity also from under clothing or from luggage, and an efficient silencer was developed for it, too.

The development was entrusted to a representative of the younger generation of arms designers, Ing. Miroslav Rybář (1924–1970), who was greatly helped by the ZB's veteran, Otakar Galaš (1904–1968). In December 1961, approved directly by the Central Committee of the Communist Party of Czechoslovakia, the '7.65 mm sub-

purchaser and also introduced licensed production). Nevertheless, the majority of the guns produced remained in Czechoslovakia.

After the division of the Republic in 1993, part of this arsenal was retained by Slovakia.

Browning Short (380 Auto) – on the basis of demand from abroad designated 'for collectors and hobby shooting.' The 91 made use of parts and components from the renewed production of Skorpions. However, these were practically new guns and not additionally modi-



fied submachine guns. Hence their considerable price, which significantly exceeded the price of a brand new CZ 75.

The fate of the CZ vz. 91 S pistols was sealed by the Czech Act 288/1995 Coll. in provision of § 21 section 1 letter d), in accordance with which semi-automatic firearms were included among prohibited weapons, if they had the outward appearance of fully automatic military weapons and could be modified to fully automatic.

semi-automatic pistols, and their Scarabeus O6 was launched on the market in 2008. In this case, the gun was created by irreversible modifications of the vz. 61 submachine gun, which was reflected in its significantly

Short, 7.65 mm Browning and 9 mm P.A.Rubber, was put in category B in the Czech Republic by the decision of the Czech Proof House for Firearms and Ammunition of 9 August 2010.



The Škorpion was designed as a highly compact weapon with a minimum of protruding controls. Cocking of the bolt by two operating knobs requires a specific overhand grip.



### CZ SKORPION 61S

The CZ company in Uherský Brod joined this trend after the good experience of their subsidiary company, CZ-USA, with the sale of semi-automatic Škorpions from another producer. Subsequently, the company in Uherský Brod managed to purchase a large stock of the vz. 61 submachine guns with accessories in excellent condition and prepared their adaptation for 'civilian purposes'.

The simplest change consisted of the complete removal of a rate reducer mechanism (altogether nine components). This is a modification typical for all existing versions of pistols based on the Škorpion, which in itself, of course, does not prevent burst fire. For this purpose, there are irreversible modifications of six other components: breechblock, interrupter, control (release) lever, hammer and safety catch, or rather its

As a result, the 91s acquired the status of weapons that could be obtained and held only under a special licence.

The situation changed with a new Czech Firearms Arms Act No. 119/2002 Coll., which in line with the global trends put semi-auto versions of military automatic weapons in the B category (under li-

more favourable price. The Scarabeus pistol was allegedly made in a limited, thousand-piece series 'for connoisseurs' – and met with quite reasonable success.

At approximately the same time as Scarabeus, a pistol based on the Škorpion was created at the arms factory in the East Moravian town of Jablůnka. Here, the production of semi-automatic versions of the vz. 58 assault rifles and the vz. 61 submachine guns were embarked on by the D-TECHNIK company, which, however, targeted foreign markets almost exclusively right from the start (particularly the North American). In 2009, the production was taken over by Czech Small Arms.

Their semi-automatic pistol the Sa vz. 61 PISTOL, in the calibres 9 mm Browning

cence) and enabled their sale on the civilian market. Under the new conditions, the PPK company, originally based in Pardubice and later in Holice, became a pioneer of remakes of the Škorpion as

### CZ Skorpion 61S

Calibre	7.65 mm Browning (32 ACP)
Overall length (with stock folded)	270 mm
Height	152 mm
Barrel length	115 mm
Weight with empty magazine	1.225 kg
Magazine capacity	10/20 bullets

pin. Through milling, these were rid of parts that had allowed fully automatic operation; for the same reason, the slot for the control lever on the body of the gun, by means of which the breechblock mechanism in its forward position automatically released the hammer, was welded. The manual safety lever/fire mode selector retains three positions, with the difference being that the forward position is now re-stamped as number 1. The last change is the new marking stamped in three lines on the left side of the body above the trigger:

CESKA ZBROJOVKA a. s. / CZ SKORPION 61S / r. 7,65Br. For safety reasons, the sign is not incised by laser, but manually stamped. Otherwise, the new semi-automatic Škorpion kept the structure design, outward appearance and controls of the original vz. 61 submachine gun, including the original foldable wire shoulder stock. Let us add that Česká zbrojovka used the vz. 61 submachine guns from the 1960s and 1970s for the modifications to semi-automatic pistols, so it is up to the customer whether they prefer a black or a grey finish, and a wooden, or much less common plastic, pistol grip. By its decision of 18 October 2010, the Czech Proof House for Firearms and Am-



munition put the resulting pistol, CZ Skorpion 61S, in category B, on the grounds that it is a short semi-automatic firearm, partially similar in shape to the Czechoslovak vz. 61 submachine gun, but different in the construction of the gun body, bolt and trigger mechanism.

itself expects it to be purchased mainly by collectors and militaria lovers. However, as we could see for ourselves at the factory shooting range, you can enjoy great a deal of shooting fun with it, insofar as it is possible to shoot surprisingly large distances. Although compared to calibres currently common in defence and service pistols the

of the product from Uherský Brod. Two facts contributed to the low price: Firstly, the 61S pistols are made from rebuilds of submachine guns that the CZ describes as new or of minimum use, simply stock pieces.

What we ourselves saw in the factory proves this. Therefore, the modifications are limited only to the above described modifications of the mechanism and new markings. The second reason is the economical packaging: The CZ Skorpion 61S is sold in a simple cardboard box, but with extensive authentic accessories – besides the weapon, the box contains two 20-round and one 10-round magazines, a leather belt holster, a leather pouch for two magazines, a lanyard vz. 52, a canvas bag with a cleaning kit and instructions.



7.65 mm Browning cartridge is undoubtedly 'small beer,' yet it would not be good to underestimate its power, especially when using

ammunition of greater projectile weight (we used Fiocchi cartridges with Teflon-coated lead bullets of 75 grains).

The CZ Skorpion 61S semi-automatic pistols cal. 7.65 mm Browning entered the Czech market at a time when the initial appetite for this type of a weapon was saturated by competitors. Nevertheless, their solid quality and extensive accessories, all for very reasonable price, counted in favour

Nevertheless, the Czech market is not inflatable – and the CZ knows that. This is why they began promoting the CZ Skorpion 61S pistol abroad, where enormous interest in these guns was shown, especially by South American countries. Decommissioning the vz. 61 submachine guns from active service and from the provisions of the Czech armed and security forces does not at all mean that the Škorpion is going to the smelters and oblivion. On the contrary, their second, civilian life is gaining momentum and is worthy of attention.

## NOT ONLY FOR COLLECTORS

The Škorpion has its charms, and the CZ Skorpion 61S pistol keeps them more than sufficiently intact. Of course, this is not primarily a defensive weapon; the company



# The CZ 805 BREN

## Assault and semiautomatic rifles

The name Bren is written in the history of weapons in gold letters as one of the best light machine guns of all time. Today this prestigious name bears the CZ 805 weapon system that brought Česká zbrojovka (CZ) Uherský Brod back to the world's elite club of key manufacturers of modern infantry weapons. This year the family of 'eight-oh-fives' is augmented by the purely self-loading version for the civil market.



The development of the assault rifle with final designation CZ 805 BREN A1 and its short-barrel (carbine) CZ 805 BREN A2 variant in the 5.56x45 mm calibre culminated in autumn of 2009. The victory in the Czech Army tender followed soon afterwards, with the first contract issued not only for assault rifles and carbines, but also for the CZ 805 G1 grenade launcher, developed in parallel, founding the basis on which the series production at the Česká zbrojovka started during the 2011. This production utilises primarily the state-of-art CNC lathing and milling centres, procured especially for this programme, but subsequently utilised successfully during production of new generations of the CZ weapons, too.

#### WELL PROVEN FEATURES

Let's briefly introduce the rifles and carbines of the CZ 805 BREN family from a technical point of view. We'd start with the two primary series-built fully automatic variants, produced for the service use. They are automatic small-calibre firearms for individual soldier, designed for aimed fire at ground, lightly armoured and air targets with effective range of 500 metres (the basic A1 version with 360 mm long barrel) and 400 metres (carbine A2 with barrel of 277 mm length). The CZ utilised for the design of their breech system the well proven principles, representing a global standard. The breech of the CZ 805 BREN rifles is therefore locked by a rotating bolt with six locking lugs, engaging the corresponding recesses in the thickened rear end of the

The CZ 805 BREN weapon system exists for a short period of time, yet it has been through a plenty of action. Let's recall that its gestation begun in 2006 based on the large analysis of performance of existing and newly developed service rounds (cartridges) and of the real needs of the armed forces in current, often asymmetric conflicts. Based on that knowledge the Česká zbrojovka Uherský Brod started the development of its most modern product portfolio of automatic weapons in the base configuration of the assault (automatic) rifle/carbine.

In the CZ the responsibility for design of the new weapon system fell especially to

Vítězslav Guryča, whose team in subsequent stages included designers like Ing. Jaroslav Bachůrek, Ing. Jiří Kafka and Ing. Vladimír Šimek. The progress and direction of the design work was fundamentally influenced by the requirements of the Czech Army as the principal customer. The Czech Army decided to buy for its rearmament the assault rifles and carbines of the 5.56x45 mm calibre only. This way the originally accentuated concept of a weapon system designed from the outset as a multi-calibre one receded. Nevertheless the company never abandoned the multi-calibre concept (and thanks to that the markedly modified Czech assault rifle got to the narrowed selection of a prestigious tender for rearmament of the Indian Army).

### AUTOMATIC WEAPONS FROM CZ UHERSKÝ BROD: A TRADITION LASTING OVER THREE QUARTERS OF A CENTURY

Automatic firearms are for a long time not only an important part of the manufacturing programme of the contemporary Česká zbrojovka a.s., but in fact they were the primary reason behind the establishing of this, then a brand new arms factory – in 1936 the factory was built with a specific task – to ensure that the strategically important, vital production of the vz. 30 aviation machine guns for the Czechoslovak Air Force. The resounding fame of the company was won in the second half of the 20<sup>th</sup> century when various types of automatic small arms were produced 'en masse', especially the legendary vz. 61 Škorpion submachine gun and the samopal vz. 58 assault rifle. The temporary interruption of this tradition occurred in the nineteen nineties, when the privatized

Česká zbrojovka begun to launch the series production of the new LADA weapons' family; however, the planned purchases by the Czech Armed Forces failed to materialize, e.g. due to the economic situation of the recently established Czech Republic, while the geopolitical situation following the end of Cold War prevented any substantial orders from abroad. The change came in the second half of the two thousand tens, when Česká zbrojovka, in a reaction to the new security threats, developed the CZ 805 BREN assault rifles and CZ SCORPION EVO 3 A1 submachine guns. These weapons eventually entered the service with the Czech Army, and the CZ gradually penetrated the world market, selling them to a number of foreign countries.





CZ 805 BREN A2

## LATEST TECHNOLOGY

The CZ 805 BREN rifles have cold-forged barrels with a six-groove, right-twisting, chrome plated bore, whose top-quality production is a traditional manufacturing forte of the CZ. A pronounced technological novelty in the manufacturing programme of the CZ UB is the receiver made of a high-strength aluminium alloy, manufactured on the brand-new computer-controlled milling centres. Under the final surface finish of PTFE (Teflon), providing better sliding properties of the bolt mechanism (especially under adverse conditions), the surface of the aluminium alloy has the hard anodized finish.

Besides of this metal treatment, many components of the CZ 805 BREN assault rifle are made of high-strength, hard wearing polymers. This concerns for example the trigger casing with the pistol grip, to which the interchangeable magazine well, also made of polymer, is inserted from the front. The user comfort of the CZ 805 BREN weapons is markedly increased by the interchangeable pistol grip back straps, a feature so far known mostly from the modern service pistols.

barrel behind the chamber. This arrangement ensures a high accuracy and limits stressing of the bolt receiver.

The automatic action of the new Bren is ensured by a traditional gas off-take from the barrel bore through a gas channel exiting to the gas extension and then to the gas tube, allowing for a two-step regulation. The impact of the gunpowder gases is transmitted to the front of the bolt carrier by a piston assembly. Rotation of the bolt is ensured by movement of the guide pin in the stepped gate on the left side of the bolt carrier. The firing mechanism is of a hammer type. The firing pin itself is blocked automatically till the hammer hits its head. The reliable extraction of spent cartridges through the large ejection port on the right side of the receiver is provided by a sprung extractor on the right side of the bolt front and a sprung ejector, protruding from the left side of the place for the cartridge bottom.



Ample standardized Mil-Std-1913 (Picatinny) attachment rails are a natural thing. The CZ 805 BREN have the longest rail integrated into the receiver – it runs its length and besides attachment of various optoelectronic sighting devices it usually serves for mounting of folding mechanical sights with a height-adjustable front sight and the dioptic rear one. The shorter rails on the forward sides of receiver are attached with three bolts each; the bolts at the same time fix the freely oscillating barrel's assembly in the receiver. The side rails can also hold the fixture for sights of the underslung CZ 805 G1 grenade launcher. The bottom rail is a part of the barrel assembly and serves as an anchor point for the trigger container with the magazine well. This rail mostly serves for attaching the grenade launcher or the front vertical handgrip.

The CZ 805 BREN A1/A2 rifles and carbines allow firing a single shot, a burst limited to two shots and a long burst limited by the capacity of the magazine only; the firing mode is set by an ambidextrous lever on the sides of the trigger container, this lever at the same time fulfils the role of a manual safety.

After firing the last round the slide remains open, held in the rear position by a slide stop. The manual control for holding the slide in its rear position is on the left side of the magazine well where its rear edge meets the trigger block. Releasing the slide to its forward position is done by just a brief backward pull at the slide by the charging handle.

Both current series-produced versions of the CZ 805 BREN rifle have the same unified shoulder stock, folding to the right side of the receiver; the stock is available in a non-telescoping and telescoping version, with an ambidextrous comb. It is worth mentioning that the ingenious design of





The UN/BN CZ 805 assault/combat knife is an original design of Česká zbrojovka and is slated to serve as a bayonet (i.e. the purely assault knife). In such case it is attached to the rifle by sliding the eye on its crossguard to the nut of the flame suppressor and fixing the head of the knife to the groove on the lower part of the gas extension. Once in place, the knife's main edge faces the barrel. According to the requirements of the Czech Army, a third edge was added to the two existing ones, enabling to cut with the knife attached to the rifle or carbine by a vertical downward stroke.

ing to their design); the pouches could be variably joined together.

The underslung CZ 805 G1 grenade launchers of 40x46 mm calibre, developed and produced by Česká zbrojovka a.s., are also part of the available accessories, as is the rich spectrum of optical sights. The CZ 805 BREN rifles can utilise an accessory of any origin which corresponds to the standardized attachment rails, indeed.

## FURTHER IMPROVEMENTS

During 2013 the newly-produced Brens were subject to a last series of changes that were brought about by the recent ample experience gained in combat service, including the operations in the extremely demanding conditions of Afghanistan. The changes are not substantial, as they virtually touch only a few details, but in their sum undoubtedly improve the possibilities of utilisation and the user-friendliness of these weapons.

The most principal difference is the introduction of new magazine wells for the magazines of the M4/M16 type with ambidextrous lateral releases. The CZ company already considered this type of magazine during development of the Bren, however, the Czech Army eventually preferred the G36 type magazines. The new transparent magazine, developed in-house by Česká zbrojovka, therefore followed the conceptual lines of the Army-preferred magazine and the CZ 805 BREN was supplied to the Czech Armed Forces with just this type of magazine as a standard. Last year the new magazine well successfully passed the required tests and it

the adjustable polymer comb is one of the patented features of the new Bren. All variants of the shoulder stock could be easily removed completely, for example to ease transport.

## A RIFLE AS A CONSTRUCTION KIT

As we mentioned in the beginning, the CZ 805 BREN weapon system was conceived as a modular, highly variable one with a high and it continues to be developed under the same philosophy – and it is the customer's decision only how much he would take advantage of this capability. The current series-built versions – the CZ 805 BREN A1/A2 of the 5.56x45mm calibre NATO have available the interchangeable magazine wells with differing types of release (side, bottom), thanks to which these rifles can accept all standardized NATO magazines as well as the original magazines of Česká zbrojovka, made of transparent plastic. These last-mentioned ones have a capacity of 30 rounds, a dual feed, and, using detachable plastic clips,

another magazine could be attached to their side.

All existing CZ 805 BREN weapons have a threaded barrel muzzle, allowing attachment of a standard flash suppressor with six longitudinal slits, the newly developed compensator or a specially developed adapter for firing the training ammunition, which is a part of the standard accessory kit. Further variable features are the control levers of the fire selector/manual safety, or a different shape of the charging lever.

The new UN/BN CZ 805 assault/combat knife with a plastic sheath and a textile carrying webbing is part of the basic equipment kit of each weapon. The knife may double as a bayonet (i.e. the purely assault knife). Also the carrying sling of the rifle should be mentioned (with attachment mounts on both sides of the weapon), as well as the impregnated textile pouches of two or three-magazine capacity (accord-



The CZ 805 BREN A2 carbine complete with the latest modifications as required by the Czech Army. This example has on the bottom MIL-STD-1913 (Picatinny) rail the popular triangular tactical handle, that not only adds to the shooting comfort, but whose qualities one appreciates after shooting a few hundred rounds in close succession and the forestock starts to heat up a lot.



## THE CZ 805 BREN RIFLES AND CARBINES AS SEEN BY THE CZECH MINISTRY OF DEFENCE

The CZ 805 BREN A1 assault rifle in the configuration currently delivered to the Czech armed forces



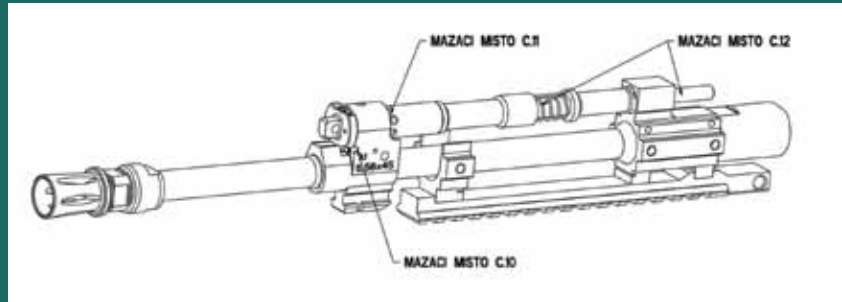
The CZ 805 BREN A1 and the CZ 805 BREN A2 (carbine) in 5.56x45 mm calibre of the Česká zbrojovka a.s. are supplied as needed by the Ministry including the accessories and the underslung grenade launcher. The rifles are equipped with a collimator sight, day and night telescope and the laser marker-illuminator.

The users appreciate the perfect optical equipment of the weapons and their accu-

racy. Assessed as a positive fact was also the transition to a weapon that, thanks to the length of barrel and ammunition used has a much flatter trajectory of bullet, facilitating aiming. Also the comfort provided by the collimator sight is appreciated.

of a weapon of completely different design and configuration of equipment.

The overwhelming majority of problems were eliminated by supplementing the instructions for use and by repeated training of armourers and users of the weapons. These



The period of teething troubles of the CZ 805 BREN assault rifles and carbines was overcome rapidly, e.g. by adding to the service/maintenance manual the specifications of the position of lubricating points and specification of the lubricant type for the given spot, in case of routine maintenance, long-time storage and for the so called dry lubrication, with a detailed description of the appropriate process

During the training period in Czechia and in missions abroad there were indications of certain problems which, during a very demanding testing that followed, could not be reproduced. The weapons proved their full functionality even under extreme soiling, even using the combination of water and sand. It has been demonstrated, though, that some of the problems were caused by wrong manipulation, insufficient cleaning or as a result of application of habits from use

measures were aimed predominantly at the use of weapons under extreme conditions.

The specific malfunctions, concerning faulty components, like broken attachment mounts of cleaning kits, were replaced by the manufacturer at his costs. The manufacturer also carries out the preventive checks of all weapons.

Jiří Štábl, press department of the Division of communication and public relations of the Ministry of Defence of the Czech Republic

is stipulated that further deliveries of the Bren to the Czech Army will continue in this guise only. For converting the weapons in the original guise the army will buy the necessary number of new magazine wells, which, thanks to the design of the container,



could be easily replaced. The new well became thusly a part of the standard equipment range for the next customers, indeed.

The already mentioned compensator on the barrel muzzle is another new feature offered. The original version of the CZ 805 BREN rifles and carbines had the flame suppressor with six longitudinal slots, screwed-on to the threaded muzzle of the barrel. Now the Brens sport a substantially more sophisticated muzzle compensator,

whose first chamber has two large lateral circular orifices and two pairs of smaller ones, each pair directed obliquely upwards (roughly to 11th and 1st o'clock). The following, second chamber is short, with large rounded vertical cutouts on its sides, whose apparent purpose is to act as an action muzzle brake, as the powder gases here impinge a relatively large surface, surrounding the central opening for the passage of the bullet. And, finally, the compensator's body protrudes forward on top and bottom only, serving thusly also as a flash suppressor, reducing the flash in the shooter's field of vision.

Besides that the new-series Brens have a few details changed, however, to find them would take only a person with intimate knowledge of the original appearance of these weapons. A surely welcomed change is the slightly shorter charging handle with a slimmer shank and a ball-shaped head with a lightening hole. This new shape is, compared to the massive, quite sharp-edged old charging handle, more rounded, offering thusly a better handling.

These changes certainly removed the problems that were encountered before.

A change in the ergonomics/handling character of the weapon was brought also by the new fire selector lever, doubling also as the manual safety. The levers are wider, and in the configuration for a right-handed shooter the left one is made longer for easier reach of the shooter's thumb. The right one, however, keeps the original length in order not to impede handling, as it is controlled by the index finger of the shooting hand. And these controls are also designed as interchangeable – a set of them slated for the left-handed shooters is available, having the longer lever on the right side of the receiver. The armed forces shall be supplied with these levers in sets, for conversion of the weapons as actually deemed necessary.

And, last but not least, the newly shaped sling attachment mounts were placed symmetrically, in pairs, on stand-alone parts bolted to the front and rear of the receiver. Originally the attachment mounts had only straight longitudinal openings for threading

CZ 805 BREN S1

through of the carrying sling, preventing a quick attachment of the sling swivels. Now the upper end of each of the four cutouts was augmented by a circular hole and the problem is solved. From now on the new attachment mounts are going to be a standard fitment on all rifles and carbines of the CZ 805 BREN family and also on their self-loading version – the CZ 805 BREN S1.

### COMBAT PROVEN

The CZ 805 BREN A1/A2 rifles and carbines are currently used especially by the Czech Armed Forces, who presented their new ri-

the habits developed during maintenance of the vz. 58 assault rifle, a weapon of completely different design and equipment configuration. Thanks to the measures taken the Czech soldiers now voice their praises only of the CZ 805 BREN in the 5.56x45 mm NATO calibre. They agree that the weapon is high-quality and reliable, accurate and offering high handling comfort, one of the world's best and worth of the Bren name. As a reaction to this praise the Czech Army decided to continue



– the single shots (red dot) and safe (white dot). The trigger assembly was therefore modified by eliminating the

automatic trigger (which, in the assault rifles and carbines releases the hammer once the bolt carrier arrives at the forward position and the bolt is locked), while in the rear bottom part of the bolt carrier the lugs controlling the automatic trigger were removed. The gas tube was modified so as to prevent the control of powder gases take-off, a feature that lost its purpose on a weapon firing only single shots and slated primarily for civilian use. On the sides of receiver the Picatinny rails are missing; the sides

Bren's trigger mechanism housing, fully-automatic (rear) and semi-automatic version



Comparing breech block carrier of the CZ 805 BREN A1/A2 (top) and CZ 805 BREN S1



fles for the first time on 21st December 2011, during the funeral ceremony parade to honour the deceased former Czech president Václav Havel. In hands of Czech soldiers the new Brens went through a major combat deployment and use in the extremely demanding battle environment of the Afghanistan mission and now also in Mali. Following these real-life combat missions a few teething troubles were identified and quickly removed (it must be said that the same teething period beset unavoidably also the legendary Bren light machine gun).

Practice has shown that the CZ 805 BREN A1/A2 assault rifles remain fully functional even if substantially soiled (as interesting aside – shooting from underwater does not present a slightest problem to the weapon) and that a proportion of the problems on record were caused by incorrect handling and by partially improper maintenance, caused by carrying over of

buying the new Bren rifles, making them definitely the new standard weapon of a Czech soldier. The CZ 805 BREN rifles and carbines are currently in focus of a number of countries the world over.

### FOR THE CIVVY STREET

In 2014 the Česká zbrojovka rounds out its range of rifles by the already mentioned purely self-loading (semiautomatic) rifle designated CZ 805 BREN S1. Its development was realized by Ing. Jiří Kafka, one of the fathers of the original Bren. The work went apace and without troubles, as the well conceived basic design needed to undergo only minimum changes.

Externally the self-loading 'S-one' is easily discernible by only two positions of the fire selector combined with manual safety

are smooth here. Thanks to that the semi-automatic Bren looks less aggressive than the A1/A2 versions and the users need not to ponder how to cover these rails. It is an undeniable fact that for a normal sporting use the side rails hardly find any application and everyone who tried shooting from an 'eight-oh-five' without gloves knows pretty well that the bare rails have nothing to add to the comfortable handling.

Besides that the new inscription on the receiver is also worth mentioning, which is on its left side and reads CZ 805 BREN trademark CZUB S1 SEMIAUTO .223 REM, with a two-line description of the country of origin: MADE IN CZECH REPUBLIC. The primarily civilian purpose of





the weapon is emphasized by presenting its calibre as the 223 Rem, written on the left side of the gas extension and on the top surface of the gas tube.

At the time of going to press the standard sales configuration of the CZ 805 BREN S1 has not been finalized yet. There is a wide choice of possibilities. It is sure that



the basic model will have 16inch (406mm) barrel; but it will be possibly followed by variants with barrels of 14 and even 11 inches (356 and 279 millimetres, respectively) length. The 'S one' can of course be fitted with any shoulder stock for the CZ 805 BREN; but the final selection of the one a buyer would find upon opening of the box with the new rifle is still an open question. A similar situation concerns the flash hider. The 'S ones' are fitted with flash hiders of the original shape with longitudinal slits, but the latest compensator is possibly not out of running. As far as the magazine well goes, the CZ 805 BREN S1 rifles will be available with both existing versions, that is the one for the G36 (CZ) magazines as well as for the AR-15 (M16) magazines. However, there is no sure bet with which one the weapons shall be sent to shops – we have to wait for the definite decision of the manufacturer with some anxiety.

#### AT THE SHOOTING RANGE

So far we were able to test the self-loading Bren at a relatively short distance but with a really large number of shots – at the pre-




sensation show the total number of shots fired from this weapon exceeded one thousand, the shooting took place almost without interruption and the designer Vítězslav Guryča took a pretty big turn of work loading the magazines. We never noted a single stoppage, a single misfire, the rifle worked all the time completely without problems, despite the fact that some of the more experienced shooters taxed it with rapid fire reminiscent of submachine gun bursts.

The feel and impressions of firing the 'S one' are, quite unsurprisingly, same as when shooting single shots from the fully automatic A1/A2 variants with the selector at the 'single'. We had available the telescopic shoulder stock with a relatively comfortable comb; we were told that the using the standard non-telescoping shoulder stock the shooter's comfort is more or less the same. We are prone to believe that, as we repeatedly tested that configuration on

the assault rifles, having no reservations or complaints.

During so large number of shots one of the characteristic features of the 'eight-oh-fives' demonstrated itself: a pronounced heating up of the forestock, in this case especially of its sides and of the bottom rail. This effect is due to the fact that these components comprise a single unit with the barrel assembly, whence the heat penetrates to them. So, with a long-duration fire from the CZ 805 BREN rifle it is prudent to use gloves or some front grip. There is also a positive side to this fact – the heat is very effectively brought away from the barrel to the surface of the weapon, increasing thusly its life.

As far as the accuracy of the CZ 805 BREN S1 self-loading rifle goes, it is apparently the same as with the CZ 805 BREN A1 assault rifle, which in practice achieves between 1,5 and 2 MOA. 

#### CZ 805 BREN A1/A2

Calibre	5.56x45 mm NATO (223 Rem)
Number of rifling grooves in the barrel	6
Rifling twist rate	178±5 mm (7±0.2 in) right
Barrel length	360/277 mm or 14.2/10.9 in
Length overall with stock extended	870/787 mm or 34.25/30.98 in
Length overall with stock folded	670/582 mm or 26.38/22.91 in
Width with stock extended	77 mm or 3.03 in
Width with stock folded	112 mm or 4.41 in
Theoretic rate of fire	760±100 r.p.m.
Effective range	500/400 m or 547/437 yds
Sight radius (Troy Industries sights)	395 mm or 15.55 in
Weight of weapon w/o magazine and sling	3.490/3.410 kg or 7.69/7.52 lbs
Weight of empty magazine (CZUB)	0.195 kg or 4.3 lbs
Capacity of the magazine (CZUB)	30 rounds

# CZ P-07

THE CZ P-07 IS A GREATLY IMPROVED VERSION  
OF THE SUCCESSFUL CZ 75 P-07 DUTY COMPACT  
DESIGNED FOR SERVICE AND DEFENCE.



THE CZ P-07 AGAIN EMPLOYS THE REVOLUTIONARY SA/DA OMEGA TRIGGER SYSTEM. THIS HANDGUN IS FURTHER CHARACTERIZED BY HIGHLY DURABLE POLYMER FRAME WITH ACCESSORY RAIL MADE TO THE MIL-STD-1913 AND THE GRIP PROVIDED WITH INTERCHANGEABLE BACKSTRAPS OF THREE SIZES (INCLUDED AS A BASIC ACCESSORY). TENIFER COATING OF THE BARREL, SLIDE, INTERNAL INSERTS AND OTHER METAL PARTS GUARANTEES INCREASED RESISTANCE TO ABRASION AND CORROSION. THE PISTOL IS FREE OF ANY SHARP EDGES. HANDLING IS FACILITATED BY ANATOMICALLY SHAPED HAMMER AND TRIGGER AND TWO DUAL PAIRS OF COCKING SERRATIONS. A BEVELLED SLIDE'S SIDES MAKE DRAWING AND RE-HOLSTERING OF THE HANDGUN MUCH SMOOTHER.

THE CZ P-07 IS STANDARD OUTFITTED WITH FIXED STEEL SIGHTS HIGHLIGHTED BY THREE LUMINOUS DOTS, ALTERNATIVELY WITH FIBRE OPTIC OR TRITIUM CAPSULES. THE GAPING MAGAZINE WELL MAKES RELOADING QUICK AND EASY.

THE NEWLY DESIGNED MAGAZINES OFFER IMPRESSIVE FIREPOWER OF 15+2 IN 9X19 MM CAL. AND 12+3 IN .40 S&W CAL. THERE IS ALSO A TRAINING VERSION DESIGNED FOR FX SIMUNITION/CQT CARTRIDGES.

THE RESULT OF THESE CHANGES IS AN ULTRA-MODERN HANDGUN, WHICH IS OUTSTANDING IN ITS RELIABILITY, USER FRIENDLINESS AND HIGH-ACCURACY OF FIRE MAKING IT AN IDEAL CHOICE FOR SECURITY SERVICE OR PERSONAL DEFENCE.



## TECHNICAL DATA

MODEL	CALIBER	MAGAZINE CAPACITY	FRAME	OVERAL LENGTH (MM)	BARREL LENGTH (MM)	HEIGHT (MM)	WIDTH (MM)	WEIGHT (G)
CZ P-07	9x19, .40 S&W	15(17), 12(15)	POLYMER	185	95	130	37	780



# CZ P-09

THE CZ P-09 IS THE LATEST HIGH CAPACITY SERVICE PISTOL GOING FURTHER ALONG THE DESIGN ROAD STARTED WITH THE SUCCESSFUL COMPACT CZ 75 P-07 DUTY.



WHEN COMPARED WITH THE LATTER IS THE CZ P-09 IN 9 MM LUGER CAL. FULL-BODIED SERVICE PISTOL WITH A NUMBER OF IMPROVEMENTS. THE OMEGA TRIGGER MECHANISM OFFERS TO THE USER OUTSTANDING PARAMETERS INCLUDING CONVERSION FROM THE MANUAL SAFETY VERSION TO THE DECOCKING AND VICE VERSA EASILY CARRIED OUT BY THE USER.

SHAPE OF THE TRIGGER BLADE ALLOWS A BETTER TRIGGER REACH IN DA MODE OF FIRE. A HIGHLY RESISTANT POLYMER FRAME REINFORCED WITH FIBREGLASS IS OUTFITTED WITH LONG ACCESSORY RAIL ACC.TO MIL-STD-1913. DIMENSIONS OF ERGONOMICALLY FRIENDLY GRIP CAN BE PARTIALLY ADJUSTED THANKS TO BACKSTRAPS OF THREE DIFFERENT SIZES.

THE SLIDE IS SHAPED WITH REGARDS TO COMFORTABLE PISTOL HOLSTERING AND QUICK DRAWING AND IS PROVIDED WITH TWO PAIRS OF COCKING SERRATIONS. THE DROP SAFETY IS ENHANCED BY THE FIRING PIN BLOCK SAFETY. FOR THE QUICK RELOADING THE MAGAZINE WELL MOUTH HAS A FUNNEL SHAPE.

THE HANDGUN DURABILITY IS SUBSTANTIALLY INCREASED WITH TENIFERCOATING OF ALL MAIN METAL PARTS INCLUDING INTERNAL BLOCKS. THE NEW CZ P-09 SERVICE PISTOL EXCELS IN IMPRESSIVE FIRE POWER, HIGH ACCURACY AND EXTREME RELIABILITY UNDER ALL CONDITIONS THUS REPRESENTING AN IDEAL CHOICE FOR ALL BRANCHES OF ARMED FORCES.



## TECHNICAL DATA

MODEL	CALIBER	MAGAZINE CAPACITY	FRAME	OVERAL LENGTH (MM)	BARREL LENGTH (MM)	HEIGHT (MM)	WIDTH (MM)	WEIGHT (G)
CZ P-09	9x19, .40 S&W	19, 15	POLYMER	205	115	147	37	840

# CZ SCORPION EVO 3 A1

THE SUBMACHINE GUN IN 9X19 MM CAL., MODERN,  
SIMPLE AND RELIABLE UNDER ALL CONDITIONS WITH EXTREMELY  
FRIENDLY ERGONOMICS.



IN THE STANDARD VERSION THIS SMG IS EQUIPPED WITH A FOLDING STOCK ENABLING SHOOTING FROM THE SHOULDER. THE WEAPON CAN BE SHOT FROM FREE HAND WHEN THE FOLDING STOCK IS RETRACTED. THE EFFECTIVE RANGE OF FIRE FROM SHOULDER IS UP TO 250 M DISTANCES, FROM HAND UP TO 50 M. WHEN THE LAST CARTRIDGE FROM THE MAGAZINE HAS BEEN SHOT THE BOLT REMAINS LOCKED-OPEN. NO TOOLS ARE NECESSARY FOR ROUTINE MAINTENANCE DISASSEMBLY. LOW WEIGHT AND SMALL DIMENSIONS FACILITATE CONCEALED CARRY AND USE IN A VERY CONSTRAINT SPACES. CHARACTERISTIC FEATURES OF THIS WEAPON ARE A GOOD BALANCE MAKING QUICK AND EASY AIMING, HIGH ACCURACY OF

FIRE, LONG SERVICE LIFE A HIGH FUNCTIONAL RELIABILITY UNDER VARIOUS COMBAT CONDITIONS. THE RELEVANT ADVANTAGE IS IN AMBIDEXTROUS CONTROLS AND MULTIPLE RAILS AS PER MIL-STD-1913.

THE PACKAGE INCLUDES TWO DOUBLE-COLUMN MAGAZINES WITH 30 CARTRIDGE CAPACITY, SLING, AND CLEANING KIT. ON A SPECIAL ORDER THE WEAPON CAN BE SUPPLIED WITH ACCESSORIES SUCH AS SOUND MODERATOR, 20-SHOT MAGAZINES, SEVERAL MODELS OF TORCHES INCL. QUICK ATTACHMENT CLAMPINGS, LASER DESIGNATORS, TACTICAL HANDLES OR RED DOT SIGHTS AND OTHER OPTICS.



## TECHNICAL DATA

MODEL	CALIBER	MAGAZINE CAPACITY	FRAME	OVERAL LENGTH (MM)	BARREL LENGTH (MM)	HEIGHT (MM)	WIDTH (MM)	WEIGHT (KG)
CZ SCORPION EVO 3 A1	9x19	30	POLYMER	410/660	196	240	97/60	2,7



# CZ 805 BREN A1

THE AUTOMATIC RIFLE CZ 805 BREN REPRESENTS  
THE MOST UP-TO-DATE MODEL IN THE TRADITIONAL MANUFACTURE  
OF SERVICE WEAPONS AT CZ.



THE CZ 805 BREN IS MANUFACTURED IN 5.56X45 MM NATO CAL. FROM THE FUNCTIONING POINT OF VIEW, THIS IS A GAS OPERATED AUTOMATIC WEAPON WITH LOCKED BREECH HAVING ROTARY BREECH BLOCK. THE EASILY DETACHABLE TRIGGER MECHANISM HAS BEEN PROVIDED WITH THE FOUR-POSITION FIRING MODE SELECTOR (0 – 1 – 2 – CONTINUOUS BURSTS).

THE WEAPON'S RECEIVER IS ALONG ITS WHOLE TOP LENGTH, ON BOTH SIDES AND THE BOTTOM SIDE OUTFITTED WITH ACCESSORY RAILS IN ACCORDANCE WITH MIL-STD-1913. FOLDING SHOULDER STOCK HAS ERGONOMIC CONTOURS AND CAN BE ADJUSTED FOR LENGTH AND IS

PROVIDED WITH REVERSIBLE CHEEKPIECE. THE WEAPON IS FITTED WITH FOLDING MECHANICAL SIGHTS.

EASILY REVERSIBLE BOLT OPERATING HANDLE ALLOWS THIS WEAPON TO BE USED BY LEFT-HANDED SHOOTERS.

THE CZ 805 BREN CAN BE ALSO EQUIPPED WITH UNDERSLUNG GRENADE LAUNCHER DESIGNATED AS THE CZ 805 G1 IN 40X46 CAL., WHICH WAS DEVELOPED SPECIFICALLY FOR THIS WEAPON WITH OPTION FOR SEPARATE USE.

THIS WEAPON IS AVAILABLE AS ASSAULT RIFLE (CZ 805 BREN A1) OR CARBINE WITH SHORTENED BARREL (CZ 805 BREN A2).



## TECHNICAL DATA

MODEL	CALIBER	MAGAZINE CAPACITY	FRAME	OVERALL LENGTH (MM)	BARREL LENGTH (MM)	HEIGHT (MM)	WIDTH (MM)	WEIGHT (KG)
CZ 805 BREN A1	5.56x45 mm NATO	30	LIGHT ALLOY	670/915	360	260	112/77	3,49

# CZ 557 LUX

THE GREAT LEAP FORWARD, BUT AT THE SAME TIME  
RETURN TO THE BEST OF CLASSICS. THIS IS A NEW LINE OF HUNTING  
AND SPORTING RIFLES OF THE CZ 557 SERIES.



HOW TO CREATE A PERFECT MODERN RIFLE? TAKE NEARLY FIFTY YEARS OF TRADITION AND EXPERIENCE, MIX IT WITH THE LATEST DESIGN AND TECHNOLOGICAL PROCESSES, AND SEASON IT WITH A HANDFUL OF GREAT NEW IDEAS BASED ON THE ABILITY TO LISTEN TO THE REQUIREMENTS OF THE TARGET CUSTOMERS – A RESULT IS THE CZ 557 MODEL SERIES, OFFERING EXCELLENT AND IN MANY ASPECTS UNIQUE USER PARAMETERS. A TIME-PROVEN MAUSER STYLE BOLT IS FOR THESE HUNTING AND SPORT RIFLES PROVIDED WITH THE SHORT EXTRACTOR AND SPRING-LOADED EJECTOR. THE BARREL IS MADE BY THE COLD HAMMER-FORGING PROCESS, AND IS ONLY 520 MM/20.4" LONG. THIS FEATURE WILL BE ESPECIALLY APPRECIATED BY HUNTERS AND GAME KEEPERS IN MORE CHALLENGING TERRAIN WITH DENSE VEGETATION. THANKS TO EMPLOYING ADVANCED MANUFACTURING PROCEDURES

WHEN MAKING THE RECEIVER, THE RIFLE CAN BOAST ACCURACY WHICH IS HIGH ABOVE THE USUAL STANDARD. IN THE BASIC VERSION THIS PERFECTLY BALANCED RIFLE IS OUTFITTED WITH THE OIL IMPREGNATED STOCK OF UNIQUE SHAPE MADE FROM HAND-PICKED WALNUT WOOD. THE STOCK OFFERS A REAL COMFORT AND ULTRA-FAST AND RELIABLE AIMING, BE IT WITH IRON SIGHTS OR RIFLESCOPE. POSITIVES OF THE CZ 557 RIFLES INCLUDE NOISELESS MANUAL SAFETY, ABSOLUTELY SMOOTH BOLT OPERATION, IRON SIGHTS HIGHLIGHTED WITH FIBRE OPTICS AND THE NEW TRIGGER MECHANISM WITH OPTION TO BE FINELY TUNED FOR TAKE-UP, WEIGHT OF PULL AND OVERTRAVEL. THE RIFLESCOPE ATTACHMENT TO THE RECEIVER IS PROVIDED BY THE ORIGINAL CZ MOUNT.



## TECHNICAL DATA

MODEL	CALIBER	MAGAZINE CAPACITY	STOCK	OVERAL LENGTH (MM)	BARREL LENGTH (MM)	HEIGHT (MM)	WIDTH (MM)	WEIGHT (KG)
CZ 557 LUX	.243 Win., .308 Win., .270 Win., 7x64, 6,5x55 SE, .30-06 Sprg., 8x57 IS	5	WALNUT	1063	520	183	87	3,3



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# CZ P-07

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