



Ergonomics and Design "Made by Wilfried Nill"

Wilfried Nill (born 1965 in Tübingen)

- Active in sport shooting (air/sport pistol, shotguns in large caliber, skeet) since 1975
- · Working in the Karl Nill company since 1978
- in the production sector until 1987
- in the sector of product development and design since 1987
- technical manager and associate from 1987 to 2000
- managing partner since 2000 (continuation of the family-owned enterprise in 2nd generation)
- Foundation of Ergosign in 1998

Decades of experience as an active sport shooter, the development and fabrication of ergonomic

grips for pistols and revolvers and of many accessories as well as the involved mechanical understanding for production processes and their transformation with CAD/CAM and CNC technologies are the basis for the realization of innovative products.

Many well-known manufacturers of firearms (like Heckler & Koch, Hämmerli, Walther, Sig Sauer) were able to successfully realize numerous projects in direct cooperation with Wilfried Nill.

Wilfried Nill - a life for sport shooting.



EvoComp - a story of success

With the purchase of his first Skeet shotgun in 1985, Wilfried Nill came into contact with clay target shooting for the first time. However, it was only 20 years later - with the purchase of a new shotgun and a new entry into the skeet discipline - that the idea of integrating the ergonomic comfort of a pistol grip into a shotgun stock matured. With the necessary technical know-how as well as a pronounced tendency to perfection, the active realization began in 2005. The first result was a prototype without finger grooves, which was already replaced after some months in 2006 by the 2nd prototype with finger grooves. Wilfried Nill could successfully complete the project with the integration of a beavertail and a more distinctive shape of the thumb and palm rest (see 3rd prototype from 2007).

The response to his ergonomic grip was consistently positive at the home shooting range, so that Wilfried Nill immediately took the opportunity to adjust orthopaedic grips to interested shooters' stocks. It soon became generally recognized that a stock with an ergonomic grip significantly improves the guidance of the shotgun (which is still a relevant factor in shotgun shooting today). However, as a result of various feedbacks and discussions as well as the different anatomical requirements, the goal of designing the structure behind the grips in a flexible way - in order to obtain the best possible stock dimensions - grew in 2007. The idea of the modular, fully adjustable stock system was born! The prototype from 2008 shows the immediate realization.

The increased demand was to develop a system which contains all necessary adjustment possibilities and additionally possesses the following four characteristics:

- 1.) It must have an appealing design
- 2.) It must be reproducible

- 3.) It must be stable
- 4.) It must be light









At the same time, however, first criticism arose. Not all supporters of orthopaedic grips were also convinced of the advantages of a modular, fully adjustable stock system. Such a system was not established in target shooting sport in 2007 and was therefore completely new territory.

Regardless of these signs, Wilfried Nill started a small revolution with the presentation of the Ergosign EvoComp at the IWA & OutdoorClassics in 2009. At the following World Cup in Munich, the innovative stock system immediately found a great interest from the international top shooters Vasily Mosin, Richard Bognar and Håkan Dahlby, who are still convinced by the Ergosign EvoComp with its individual adjustment possibilities to this day. Other top shooters such as Vincent Hancock, Ahmed Al Maktoum and Peter Wilson followed quickly - the acceptance was growing all the time.

The worldwide successes since the market launch in 2009 meanwhile speak for themselves. As the highlight so far, the EvoComp was able to set lasting accents with five medals at the Olympic Games in 2012 and 2016.

Of course, the EvoComp is constantly being further developed. In 2017, for example, the Ultra Light version brought the stock weight below 800 grams, which is extremely relevant for the current Skeet shotguns with their light barrels.

With the Ergosign EvoComp, Wilfried Nill continues the esteemed family tradition of providing customers with the optimal connection between man and sports equipment.

EvoComp - Advantages of the modular stock system

Ergonomic grips in different sizes for left and right handed shooters

One significant advantage compared to conventional stocks lies in the anatomical moulding of the pistol grip, which gives the stock an absolutely unique, comfortable and secure hold. Due to its optimal ergonomic design, the position of the trigger finger (with respect to the trigger) remains constant, thus reducing the recoil effects tremendously.

Individual adjustability to body/anatomy and shooting position

A basic requirement for a steady mount position and therefore successful shooting is a personalized adjustment of the stock depending on the shooter's anatomy and shooting stance. These preferences change with time and can be corrected with ease by resetting the stock.

Modular construction allows the interchangeability of all components

All stock parts can be tuned to different requirements if changes occur. If you are going to switch guns, you will only need to purchase a new grip (and maybe a different comb, if using a different rib height) which your authorized dealer will gladly install for you.

The gross weight is only 850 grams [30 oz.] for the standard version. All settings are reproducible via scales on the system.







Thank you!

The success of ten years of Ergosign EvoComp rests on many shoulders. At this point, I would like to particularly mention ALL shooters who have decided to actively use the fully adjustable Ergosign EvoComp stock system. In retrospect, their confidence and constructive feedback have had a decisive influence on the excellent market establishment as well as the continuous further development to date. My very special thanks go to them in this place!

Your Wilfried Nill



Vitaly Fokeev (RUS), Double Trap

"I would like to say thanks KN Nill-Griffe company for their work and contribution to my sport destiny. When I began to use EvoComp my career has reached a new level. The professionalism of the staff and the high quality the butt of the shotgun helped me improve the result and won a lot of medals. Good luck with everything!" (Vitaly Fokeev)



James Dedman (GBR), Double Trap

"I chose the EvoComp stock system as it offered me the best versatility for my changing stance and body as I grew. Also the grip gave me maximum control of the shotgun which was what I wanted when shooting double trap. The EvoComp made my Shotgun feel like a part of me and I could get exactly what I was looking for in a stock in terms of control and comfort."

(James Dedman)



Ahmed Al Maktoum (UAE), Double Trap



Sebastian Kuntschik (AUT), Skeet

"I have been the happy owner of my personally adjusted Ergosign stock since the end of 2013. The stock was definitely the right decision for me, it brought me two World Cup medals and the qualification for the Olympic Games in Rio de Janeiro. The support by Nill company is very good, too." (Sebastian Kuntschik)



Athletes with outstanding successes

Olympic Medals

2012 in London

- · Gold: Vincent Hancock (USA), Skeet
- · Gold: Peter R. Wilson (GBR), Double Trap
- · Silver: Håkan Dahlby (SWE), Double Trap
- Bronze: Vasily Mosin (RUS), Double Trap

2016 in Rio de Janeiro

• Bronze: Steven Scott (GBR), Double Trap

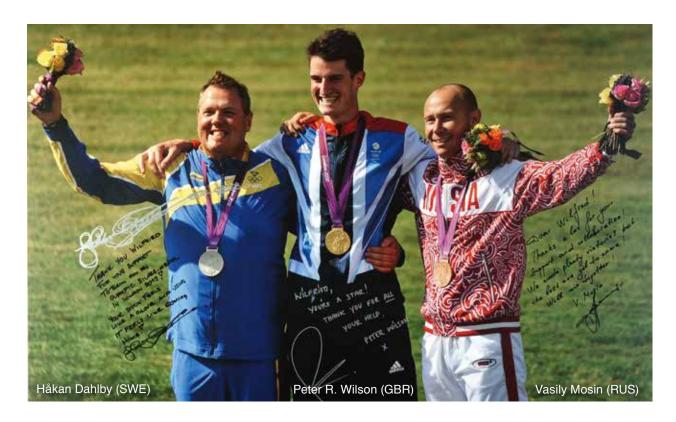
World Records

- Angad Vir Singh Bajwa (IND), Skeet, 2018 in Kuwait City (KWT)
- Vincent Hancock (USA), Skeet, 2018 in Changwon (KOR)
- Vincent Hancock (USA), Skeet, 2015 in Acapulco (MEX)
- Tim Kneale (GBR), Double Trap, 2014 in Munich (GER)
- Peter R. Wilson (GBR), Double Trap, 2012 in Tucson (USA)

Further peak results under www.ergosign.com



Vincent Hancock (USA)





Richard Bognar (HUN), Double Trap; Olympia 2012: Position 6

EvoComp - the basis for success



Ergonomic grips with beavertail, small thumb rest and slight palm swell

With finger grooves and Rhomlas®-surface structure in four different sizes (XL, L, M and S) or without finger grooves in the sizes L and S, with stippled surface as an individual custom-made fabrication according to a hand outline sketch or after a personal orthopaedic adjustment: all our grips are produced for personal fitting to all different kinds of possible hand shapes.

Please find our detailed description on page 14.



Drop of the butt plate

Depending on the length of the shooter's neck and the mounting position, the level of the butt plate can be individually adjusted within a range of approx. 40 mm [1.575 in] to approx. 60 mm [2.285 in] (for a middle section 4°). By mounting a higher clamping collar between the comb and the middle section (see page 12) the height of the butt plate rises proportionally.



Pitch adjustment

The pitch is fully adjustable by approx. 90°- 82°. Once it has been fitted correctly, the gun will remain in exactly the same position after a shot. This greatly increases the hit ratio on the second shot of the target pair.

Pitch adjusting plate +4°

An extended pitch adjustment of +4° is optional. For shooters with an upright shooting position and a big chest measurement the pitch can be additionally extended by 4° (can be recommended for a heightened middle section under 0° and for the TR version).



Cast

For up to 9 mm by adjusting the butt plate. Additionally the butt plate is rotatable by \pm 10°.

Cast + 4 mm

For shooters with a short neck or a big chest measurement the additional cast of about 7-13 mm (standard 3-9 mm) optimizes the adjustment to the body – to reach a higher comfort.



EvoComp - the basis for success



Comb

The correct position of the head to the rib is essential for a precise point of impact. For this reason, the standard comb of 33 mm can be fully adjusted in height (drop) from approx. 42/46 to 36/36 (with a comb of 38 mm from approx. 37/41 to 28/28) and approx. 4 mm in width (cast +1 to +5 mm).

Picture: Beretta DT11 with grip in size L, comb R33, butt plate in grenadille, Drop of butt plate approx. 40 mm to 60 mm, middle section 4°

Stock length

Having a range of adjustment from approx. 340 mm to approx. 390 mm, it is simple to fit the stock with the telescopic tube to the individual body size. Additionally, a shorter version for smaller shooters or for shooters with short arms of approx. 320 to 360 mm as well as a long version for very tall shooters with an adjustment range of approx. 360 to 430 mm are available.

Which stock configuration is the ideal one for me?

1. Which of the following anatomic conditions do apply for me?

- a) An average neck and shoulder anatomy
- b) A long neck with a low gun position
- c) A long neck with a high gun position
- d) A short neck with a low gun position
- e) A short neck with a high gun position

2. Which posture is usually the best for me?

- **a)** Body and head slightly leaning forward (recommended)
- **b)** A body leaning forward keeping the head a little further to the front
- c) A body standing upright keeping the head almost vertical

3. What is the position to place the shotgun at my shoulder?

- a) Below the collarbone: more drop of the butt plate is necessary ▶ more upcoil at the muzzle
- b) Above the collarbone on the muscle at your shoulder: less drop of the butt plate ► less upcoil at the muzzle

It also depends from the preferred stock length and posture whether 3.a) or 3.b) is recommendable for the shooter.

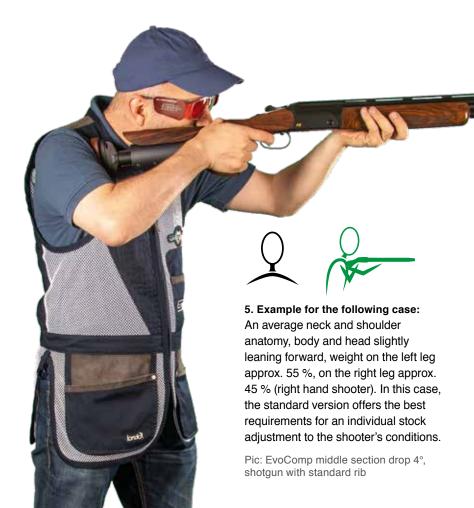
4. Higher ribs

Meanwhile, most gun manufacturers also produce shotguns with heightened ribs, which help to offer you a more relaxed shooting position and a reduced upper recoil after the shot, depending on the anatomic conditions.

- a) 10/15mm higher: possible for all disciplines and favorable for shooters of categories 1.a) -d) and 2.b).
- b) 20/25 mm higher: recommendable for all trap, double trap and DTL shooters, especially for 1.b) with 2.c).
- a0/35 mm higher: for trap, double trap and DTL shooters from the categories
 and 2.c).

On the basis of all the factors listed under points 1-4, the drop of the butt plate in relation to the top edge of the rib will result. Within the different stock configurations, the shooter can use the adjusting range of the drop of the butt plate (see picture: height/drop of butt plate on page 6). The smaller the drop between the top edge of the butt plate and the principal axis of

the barrels is, the less is the upper recoil of the shotgun with a correctly adjusted pitch. The drop of the comb always refers to the position of the upper edge of the rib and also depends from the distance between eye and cheek-bone and from the requested upshot.





Summary:

When ordering a shotgun or a new stock system, the shooter should seek analysis and advice from a professional shooting instructor or gun fitter with own shooting experience, who is knowledgeable on innovative shotguns/stocks. The completed questionnaire is one of the most important factors (see page 18). Moreover, photos from different perspectives – with your shotgun in shooting

position – can be of additional assistance to find the best fitting stock configuration. Not only the balance of your shotgun but also your anatomy and preferred shooting position are of great importance for the

configuration of your stock system. Most shooters prefer the posture from our first example. We keep the most popular and common shotguns available and will be pleased to help you with our advice.





Standard version

The standard version of our stocks comprises the following configuration:

- Grip with finger grooves, Rhomlas® surface structure in the sizes XL/L/M/S for right hand or left hand shooters
- Stock length adjustment of approx. 340-390 mm
- Drop of butt plate approx. 40-60 mm middle section 4°
- Adjustable comb R33 (36/36 42/46 mm) for skeet/sporting
- Alternatively comb R38 (28/28 37/41 mm) for trap or for a very small distance between cheek-bone and eye
- Fully adjustable stock ending with a butt plate made of walnut wood and a partial rubber pad, alternatively with a butt plate made of elastomere (for trap or sporting)
- · Grip and comb made of walnut
- Aluminium parts with black coloured or titanium coloured (only middle section) coating

Picture: Perazzi MX8 with grip in size XL, comb R38, butt plate for sporting

Skeleton version

Compared to the standard version the middle section of the stock is skeletal. This provides the stock with an even more technical appearance and reduces its weight by approx. 15 grams. The skeleton version is available for a stock length of 340-390 mm and 360-430 mm.

Picture: Renato Gamba Daytona with a grip in size L, comb R33, butt plate in walnut







Shortened version of 20 mm

For smaller shooters or for shooters with short arms a shortened version is additionally available with an adjustment range of 320 to approx. 360 mm in length. This version can only be delivered with aluminium parts in black colour (not in skeleton). Moreover, the combs are 20 mm shorter.

Picture: Beretta 682 Gold E with grip in size S, comb RS33, butt plate in grenadille



20 mm extended version

For tall shooters or shooters with long arms we can offer an extended version with an adjusting range of 370 to approx. 450 mm length. This version is only available with black aluminium parts (in skeleton) and can be supplied as an option for all stock configurations.

Picture: Caesar Guerini Invictus, grip size L, comb R38, butt plate in elastomere (for trap)





5 mm lowered middle section with Ultra Light version

The adjustment range of the drop on the butt plate is approx. 45-65 mm, the adjustment range of the drop on the comb also moves 5 mm downwards. With the Ultra Light version, another 50 grams of weight could be saved compared to the skeleton version. Light stocks with a total weight of e.g. 780 grams can be realized with a suitable wood.

Picture: Beretta DT11 with grip in size L (standardized version), comb R36, butt plate in walnut (for skeet)



Clamping collar +20 mm for heightened ribs of approx. 20-25 mm

Our clamping collars offer the best possible flexibility in adjustment for shotguns which need a modified drop (even after the additional mounting of heightened ribs). Further differences in height can be balanced through the possibility of choosing heightened combs with its range of adjustment.

Picture: Blaser F3 with special barrel rib or e.g. F3 Super Trap, grip in size M, comb R38, clamping collar +20, butt plate in elastomere (for trap)



Clamping collar +10 mm for heightened ribs of approx. 10-15 mm

By mounting a heightened clamping collar of approx. 10 mm between the middle section and the comb the drop of the comb can be adapted to the heightened rib (e.g. Perazzi MX2000/3, MX10, Beretta X-Trap, Caesar Guerini etc.).

Picture: Beretta DT10 with grip in size M, comb R38, clamping collar +10, butt plate in elastomere (for trap)



Clamping collar +30 mm for heightened ribs of approx. 30-35 mm

See left descriptions, clamping collar however 30 mm higher.

Picture: Krieghoff K-80 with sighting rib, double trap special, grip in size L, comb R38, clamping collar +30, butt plate in elastomere (for trap)







This version is particularly recommendable for shooters who have a short neck and a high gun position. The drop is adjustable from approx. 35-55 mm. The comb has been drawn for approx. 5 mm forwards, the drop is parallel to the rib at the front/at the back. Pitch 93° to 85° (Special version +4° is adjustable from approx. 93° to 81°).

Picture: Beretta 692, grip size L, comb R38 0CTR, butt plate in elastomere (for trap)



Version TR +10 1°

In comparison to the TR 1° version the drop of the butt plate is adjusted by approx. 10 mm in height. This configuration can be used as a base for the MX2000/3 (and other shotguns with a heightened rib of 10-15 mm) in connection with a +10 mm or +20 mm clamping collar.

Picture: MX2000/3 with grip in size L, middle section in skeleton, comb R38 0CTR10, butt plate in elastomere (for trap)



Special version Perazzi MX2005 + 20 0°

On the request of various double trap top shooters, we have developed further stock configurations with removable trigger group for the Perazzi production series. In this special version the complete back stock part is raised to the level of the barrel rib on MX2005, so that the drop is correspondingly adjusted. The result is that the recoil of the shotgun is straighter to the shoulder and that the muzzle jump is considerably more influenced by the pitch adjustment (in comparison to stocks in standard version).

Picture: MX2005 with orthopaedic grip, comb R43 0C, butt plate in elastomere (for trap)



Special version Perazzi MX2008 +30 0°

See description above, but adapted to the MX2008.

Picture: MX2008 with orthopaedic grip, comb R43 0C, butt plate in elastomere (for trap)



Rhomlas®-surface structure

Another high point of the development is the integration of Rhomlas® surface structure which is well-proven for many years and is appreciated by international top shooters. With much attention to detail, non-slip segments are incorporated at crucial points in a complex process. A dynamic design – but "Ergosign" is also created for practical use.



Ergonomic grip without finger grooves

The version without finger grooves is exactly the right choice, if the shotgun is used by multiple shooters (for example as a training-, rental- or club gun) or if a plain moulding is preferred. This grip is available with Rhomlas® surface in the sizes L and S.



Standardized grip with finger grooves

An essential feature of this new development is the steeper shape as well as more drop on the comb and butt plate (see page 12). In addition, the thumb rest is more open and the beavertail is reduced, giving the shooter more flexibility in the grip hold (compared to the fully formed version). Equipped with the popular Rhomlas® surface, the grip can be ordered in sizes L and M for certain shotgun models from around May 2019.



Individual grips – fabricated according to your hand outline sketch

Shooters whose hands highly differ from the standard measurement (for instance very short/thick or very long/slim hands) have the possibility to order individual grips fabricated according to an exact hand outline sketch for an additional fee. Thus the shooter gets individually fabricated grips with stippled surface in the palm area which are specially adjusted to his shooting hand.

Ergosign



Orthopaedic grip customized according to a plastic moulding

During a personal fitting appointment an exact wood/plastic moulding is made from the shooter's hand by using a grip blank. All the contour elements of the grip are adjusted in detail to the shooter's hand and his shooting position. The result is a grip which fits "like a glove" and which always guarantees the same hand position on the stock. Thus the exact consistent position and steady distance to the trigger can be guaranteed.















Heightened combs

For shotguns with heightened ribs our different combs and clamping collars (the holder between middle section and comb) allow one to raise the standard ratio of the drop in proportion to the rib. For widely varying head positions we offer the possibility of lengthening the comb. Combs are available with a height of 33, 36, 38, 43 and 48 mm.





Butt plates

The correct butt plate for each discipline:

- Walnut (standard), ideal for Skeet & Sporting, 50 grams [1.75 oz.]
- Grenadille (option), ideal for Skeet & Sporting, 95 grams [3.35 oz.]
- Elastomere (alternatively), ideal for Trap/Double Trap/ American Skeet, 110 grams [3.88 oz.]
- Walnut (160mm extended version), ideal for Olympic Skeet, 70 grams



Clamping collars & Height adjustment pins

The corresponding clamping collars are available with a height of +10, +20 and +30 mm. For combs R33 the height adjustment pins are 14/17 mm high (for R38 17/20 mm). Additionally height adjustment pins of 23 mm are available.



Recoil reducer

Resulting from many years of development and numerous tests a hydraulic system dampens the back stock through a cylinder against the shooting direction. By an adjusting screw the damping can be regulated according to munitions, barrel length and choke drillings as well as the body measurements which influence the recoil. Thus the shooter will get the requested feedback.

Balancer

The balancer offers the possibility to balance the weight of the shotgun (approx. 68 to 240 grams). The longer the size of the barrel, the more weight is needed on the stock.

* Additional accessories (per weight 18 g)





Accessories

Each stock system is supplied with:

- A tin of special hard oil for wood preservation
- A towel
- Mounting instructions and tools (without picture)



Caps

The caps are available in the usual blue design in two different versions. Together with the shooting vest, they form the perfect addition to your Ergosign EvoComp.



Shooting Vest "Edition Ergosign"

The Ergosign Shooting Vest from the Italian Manufacturer Castellani offers you an optimal equipment. The excellent wearing comfort as well as the colour design with embroidery on the front and back matching with Ergosign give an exclusive appearance to this special edition. The shooting vest can be ordered in different sizes in the variants Trap (see picture), Skeet and Sporting and is also available for left-handed shooters.

Wood qualities

All wooden parts can be ordered in the following wood qualities for an additional fee according to the fore end: selected wood, burl wood, selected burl wood, top burl wood and bird's eye burl wood.



Colour of the aluminium parts

Aluminium parts in the standard version are supplied with black coloured coating. For stocks in standard length of 340 – 390 mm the aluminium can alternatively be supplied with titanium coloured coating parts (only the middle section).





Construction

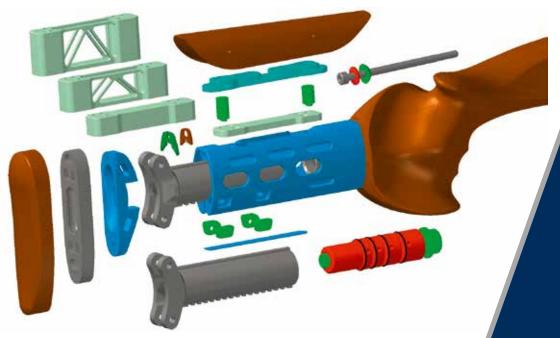
What is hidden in a fully adjustable stock system? The modular construction of the patented system is identified on the basis of the exploded drawing, whose detailed design serves as simplification for orders of accessories and spare parts (e. g. higher clamping collar for high ribs, balancer, screws etc.).

Further information

You may find our answers to frequent questions about the EvoComp in the sector "FAQ" under www.ergosign.com.

Available for:

- Beretta: DT10, DT11, DT11 ACS, DT11 X-Trap, 682/686, 692, 692 X-Trap On request: ASE Gold, ASE 90
- · Blaser: F3, F3 SuperSport
- Krieghoff: K-32, K-80, K-80 Pro Sporter On request: K-80 Trap Special, K-80 Doppeltrap Special
- Perazzi: MX8, MX2000, MX2000/3, MX2005, MX2008
- Renato Gamba: Daytona K2, Carrera, Star Cup
- Caesar Guerini: Invictus, Temper, Tempio, Challenger, Summit, Summit Black
- Browning: 325, 425, 525, GTI, GTS
 On request: Miroku MK38, MK60, MK70, 3800



With the questionnaire in three steps to your individual quotation

Download

www.ergosign.com





Send

by e-mail or letter post

We are always prepared to send you the questionnaire by e-mail or letter post.

Production and Distribution:

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My EvoComp and me

"My discipline is Olympic Skeet and having a solid mount of the gun is the difference between a hit or a miss. The EvoComp custom grip fits my hand perfectly and means I get the same mount every time I lift my gun. The mechanical nature of the stock means I can tweak and experiment to make sure the gun fit me perfectly." (Jack Fairclough)

"Hello from Cyprus!!!! I can not express my feelings when received my new EvoComp stock! Amazing. Adjusted and tested! Pass! Perfect recoil, amazing balance, excellent grip. First 2 rounds after World Championship in Korea where I ranked 7th, with one target away from the final, and almost 1 month and a half away from training I did 2 rounds and end up with 48/50! Thank you!!!!" (Konstantina Nikolaou)

"I love my EvoComp stock because it fits like no other! I love that I have the ability to adjust my stock whenever I need to, without having to buy a new stock!" (Heidi Bechtold)

"As everyone knows I'm a high shooter and I always have big problems with the length and weight of the stock. Other "retro-fitted" systems that are currently available generally are too heavy and upset the balance of the gun. The EvoComp stock system has been design to weigh similar to a standard fixed comb stock and they have a balancing system to allow you to adjust the stock for the perfect balance. A fundamental difference from conventional stocks lies in the anatomical moulding of the pistol grip giving the stock a previously unknown degree of shooting comfort. Thanks to this ergonomic moulding, finger grooves and a shaped horn for the back of the hand the hand always holds the same position, which positively effects recoil characteristics and leaves the trigger finger always in the same position relative to the trigger." (Filip Praj)



Jack Fairclough (GBR), Skeet



Konstantina Nikolaou (CYP), Skeet



Heidi Bechtold (USA), Olympic Trap



Filip Praj (SVK), Double Trap, Trap



Abbey Ling (GBR), Trap



Gerrit Wülpern (GER), Skeet



The shooter in the focus of attention

Satisfied and successful customers are the best reference. Please find below a short excerpt from the list of the national and international top shooters who have decided to actively use our fully adjustable Ergosign EvoComp stock system.



Vasily Mosin (RUS), Double Trap; Olympia 2012: Bronze



Håkan Dahlby (SWE), Double Trap, Trap; Olympia 2012: Silver



Khaled Almudhaf (KUW), Trap



Peter Robert Russell Wilson (GBR), Double Trap; Olympia 2012: Gold



Vincent Hancock (USA), Skeet; Olympia 2012: Gold



Sutiya Jiewchaloemmit (THA), Skeet



Ronjan Sodhi (IND), Double Trap



Andreas Chasikos (CYP), Skeet



Gabriele Rossetti (ITA), Skeet; ISSF Junior World Champion 2014



Vanessa Hauff (GER), Skeet