# Beiter

The **Beiter** ARMGUARD

The Beiter Armguard perfectly meets the needs of all the archers since introduction, preserving the archer's front part of the arm from being injured by the string.
It is possible to combine more Armguard bodies, to make the surface bigger.

Each Armguard is delivered with 2 rubber bands and 2 Fasteners, which holds the Armguard in the desired position. The tension of the rubber bands can easily be changed pressing with only two fingers on the Fastener.

The Beiter Armguard is available in a wide variety of colours from which the archer can choose: 26!...14 of those are the same colours as the Beiter Nock!

All parts are available separately! So you can combine different items (body or fastener) to better suit your national flag or the colours of your club.

Armguard Bodies and Fastener are made out of Polycarbonate (PC), the same material as the Beiter Nocks.
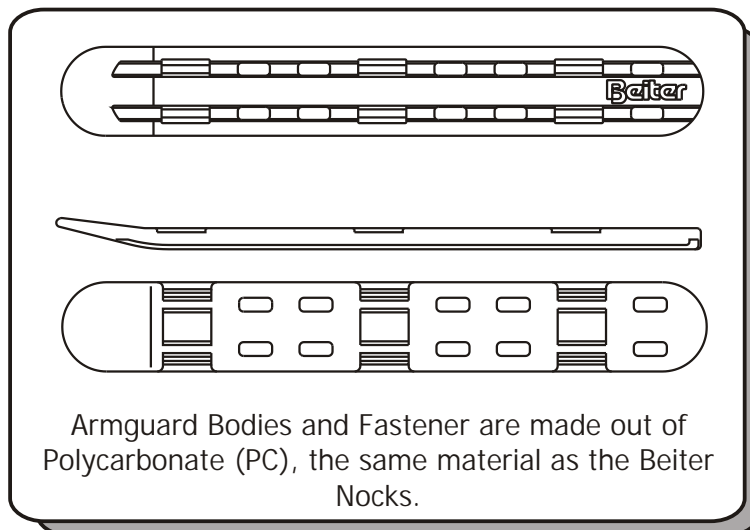
A fastener can be used in combination with a rubber band to make an ideal fit for almost any finger tab. Following items can be ordered for this purpose:

ARG15 Rubber Band 15cm
ARF35 Fastener
          Heavy Orange

ARMGUARD	
Colour Code	Colour Name
#01	Clear
#10	Fl. Red
#11	Red
#17	Rose
#20	Fl. Green
#21	Heavy Yellow
#23	Yellow
#24	Yellow
#30	Fl. Orange
#31	Orange
#35	Heavy Orange
#40	Fl. Blue
#41	Blue
#43	Medium Blue
#46	Dark Blue
#48	Fl. D'Blue
#50	Fl. D'Green
#51	Light Green
#57	Heavy Green
#61	Black
#71	White
#80	Fl. Violet
#83	Purple
#85	Purple
#88	Purple
#89	Heavy Pink

Code-numbers:
The Code-numbers for the Beiter Armguard consists out of:
Product Group (AR)/Model (M=Complete, E=Single Body, F=Fastener, G=Rubber Band)/Colour code (for ARG the length in cm), e.g.
- ARM57 -> Armguard, #57 Heavy Green
- ARE01 -> Armguard, Single Body, #01 Clear
- ARF20 -> Fastener, #20 Fluor Green
- ARG20 -> Rubber Band, 20cm long

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Insert the Rubber Bands as displayed to avoid malfunction.

Do not knot the Rubber Band ends together, but do knot the ends separately!

If you have to cut the Rubber Band insert the fastener and use a lighter to burn the ends of the Rubber Band.
Make a knot at both ends of the Rubber Band!

It is possible to combine 2 or more Amguard bodies as shown in the drawing. So you may avoid any bigger string contact, for example if the archer are wearing a loose fit clothing.

If you want to fit the Armguard to your arm, simply pull one end of the Rubber Band. Pressing the Fastener you release it.

HINT: Fluor Pins may be easily stored in the Beiter Armguard (as shown in the picture!)

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The Beiter BALANCE CLIP

The Beiter Balance Clip is a small but useful and important tool. It determines the Balance Point of the arrow, and therefore the F.O.C. (Front Of Center) balance can be determined.
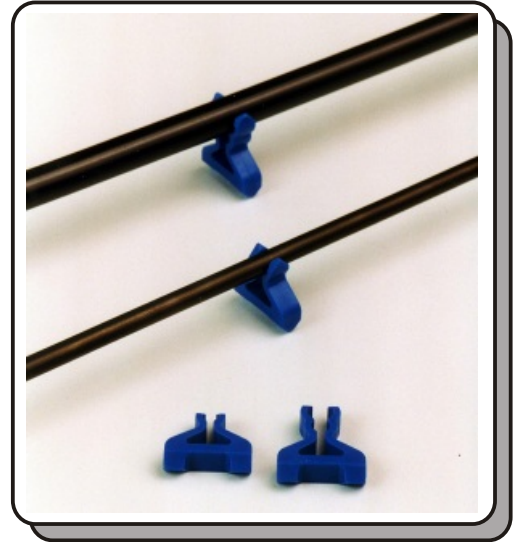
To do this, simply clip in the Balance Clip on the arrow and move it on an even surface until you find the point of balance.

Measure the distance in mm from the balance point to the arrow point (=S) and the overall arrow length (=L).

The F.O.C. in % can be calculated with following formula:

$$F.O.C. \% = ((L/2)-S) \times 100/L$$

e.g. S=290 , L=780 makes an F.O.C. Of 12,82 %

On the Beiter Website for the Balance Clip
www.WernerBeiter.com/deutsch/produkte/balanceclip.html
you will find an on-line calculator, where you simply insert the data to get the desired result.

Hints and Information:
With the Balance Clip not only you can determine the balance point of a single arrow, but also the difference in balance of a series of arrows.
Simply measure every balance point on each arrow of your series (dozen) with a pencil.
Align the arrows and you will see, if the lines you have marked on the shaft are all on the same height!
It is also intersting to do it with a series of BARE shafts, trying to find the best balanced group!

Code-numbers:
The code-numbers for the Beiter Balance Clip are following:
- BC1 -> Balance Clip #1, e.g. for arrows with smaller diameter, for example Carbon, Aluminium-Carbon, <6,5mm
- BC2 -> Balance Clip #2, e.g. for arrows with bigger diameter, for example Aluminium, Carbon , >6,5mm

Sales Unit: 10 pcs./size

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The **Beiter** O-RINGS

Beiter O-Rings are made out of high-grade elastomere. The most important function is to fix a stabilisation but it also absorbs vibration and can work as a friction grip.

⇨ O-Rings absorb vibrations not only in the stabilisation, but also on the Sight Tunnel and the Scope, thereby preventing them working loose.

⇨ When in conjunction with the Sight Tunnel, the O-Rings are working as a friction, allowing the pin to be turned without loosing any nuts!

⇨ In combination with a serving tool, an O-Ring allows an even tension of the filament while winding. In the Beiter Winder it is integrated in the system.

Code#	inner diam.	thickness (mm)	use for dampening	use for sliding
BEITER O-RINGS				
for stabilisators				
OR516X1	5/16"	1	●	
OR516X2	5/16"	2	●	
OR14X1	1/4"	1	●	●
OR14X2	1/4"	2	●	
for serving tools (not Beiter Winder)				
OR14X4	1/4"	4		●
for Sights and Scopes				
OR18X2	1/8"	2	●	
OR4X2	4	2	●	●
OR5X2	5	2	●	●

Code-numbers:
The Code-numbers for the Beiter O-Rings are displayed in the table above.
Sales Unit: 10 pcs.

The **Beiter** TARGET-PIN

Beiter Target Pins have been used to fix target faces during all Olympic Games after1988 and on all kind of target material. Beiter Target Pins are available in different lengths, to allow a perfect fit on all the different target materials.

Code#	length (mm)	Colour #11 red	#21 yellow	#31 orange	#41 blue	#51 green	#61 black	#71 white
BEITER TARGET PIN								
very hard targets, e.g. Stramit , Straw, Egerton...								
SN32__	32	●	●	●	●	●	●	●
hard targets, e.g. Foam targets,...								
SN50__	50	●	●	●	●	●	●	●
soft targets , e.g. Etafoam...								
SN64__	64	●	●	●	●	●	●	●

32 mm

50 mm

64 mm

Code-numbers:
The code-number for the Beiter Target Pins consists out of:
Model/Colour Code-> e.g. SN3241 -> Target Pin, Length 32mm, blue.

Sales Unit: 100 pcs. or 300 pcs.
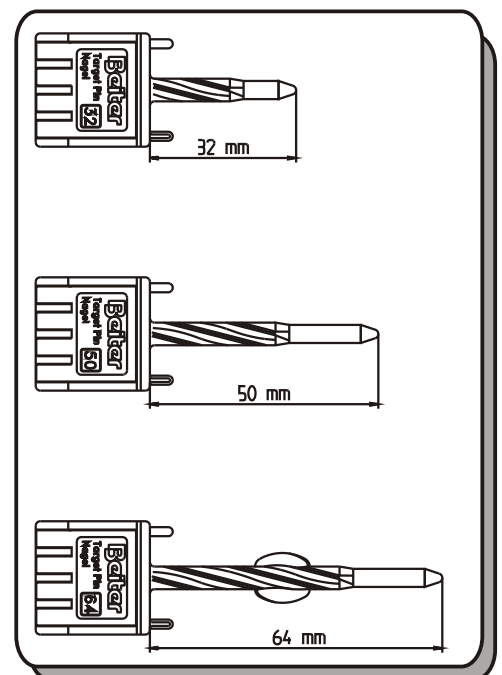
The **Beiter** LIMB-LINE-GAUGE

Beiter Limb Line Gauges are a simple and effective precision tool for the tuning of bows. With the aid of Beiter Limb Line Gauges you can check the arrow position on the bow and with respect to the position of the Sight Tunnel and the limbs, the so-called center-shot.
You can determine:

⇨ The arrow position in the bow-window.

⇨ The center-shot, that means the correspondance of the arrow position in respect to the position of the sight tunnel and the limbs.

⇨ The position and straightness of the limbs.

⇨ The alignment of the limbs with the handle.

WA0401 - for Recurve

WA0402- for Compound

Code-numbers:
The code-numbers for the Beiter Limb Line Gauge are following:
- WA0401SW -> Limb Line Gauge for Recurve, Black
- WA0401GE -> Limb Line Gauge for Recurve, Yellow
- WA0402SW -> Limb Line Gauge for Compound, Black
- WA0402GE -> Limb Line Gauge for Compound, Yellow
Sales Unit: 1 pc.

INSTRUCTIONS:

Recurve (#0401)
⇨ To find the Center Shot of your bow:
Clip your Limb Line Gauges one on the upper and one on the lower limb, as close as possible to the handle. Than place the bow so that you have a view straight behind it. Now try to see the bowstring between the two lines of the Limb Line Gauge. You will notice, how far the Sight Tunnel respectively the arrow will be off-set the center line. Now you have a starting point for the tuning of your bow.

⇨ Is your handle straight?
Clip your Limb Line Gauges one on the upper and one on the lower limb, as close as possible to the handle. Than place the bow so that you have a view straight behind of it. Try to see the string between the lines on both Limb Line Gauges. If you are not able to do this, because the string is not within the lines, than there are two main reasons for it.
First, your riser/handle is bent or not straight. Second, the pockets on your bow are not aligned correctly.

⇨ To control the straightness of your limbs:
Clip your Limb Line Gauges one on the upper and one on the lower limb, as close as possible to the end of the limb. The best would be to add to more Limb Line Gauges (total of 4) as close as possible to the handle. Than place the bow so that you have a view straight behind of it. Try to see the string between the lines on both Limb Line Gauges. If you are not able to do this, because the string is not within the lines, than there are three main reasons for it.
First, your riser/handle is bent or not straight. Second, the pockets on your bow are not aligned correctly. Third, the limbs are not straight.

Compound (#0402)
⇨ To find the Center Shot of your bow:
Clip your Limb Line Gauges one on the upper and one on the lower limb, as close as possible to the handle. Than place the bow so that you have a view straight behind of it.
Use one of the four lines on the Limb Line Gauge or the spaces between the lines, to find the "point zero". This point is a reference for any further change you make.
It is important to stay straight behind the bow, this means exactly behind the wheels (!).
You will notice, how far the scope/sight respectively the arrow will be off-set the center line. Now you have a starting point for the tuning of your bow.
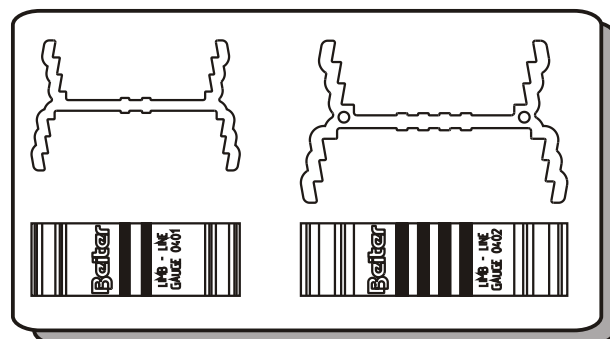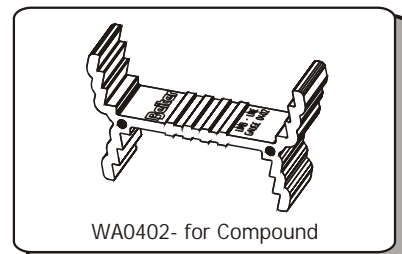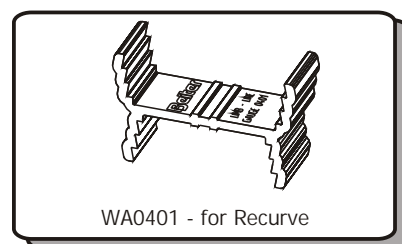
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The **Beiter** LIMB-LINE-GAUGE
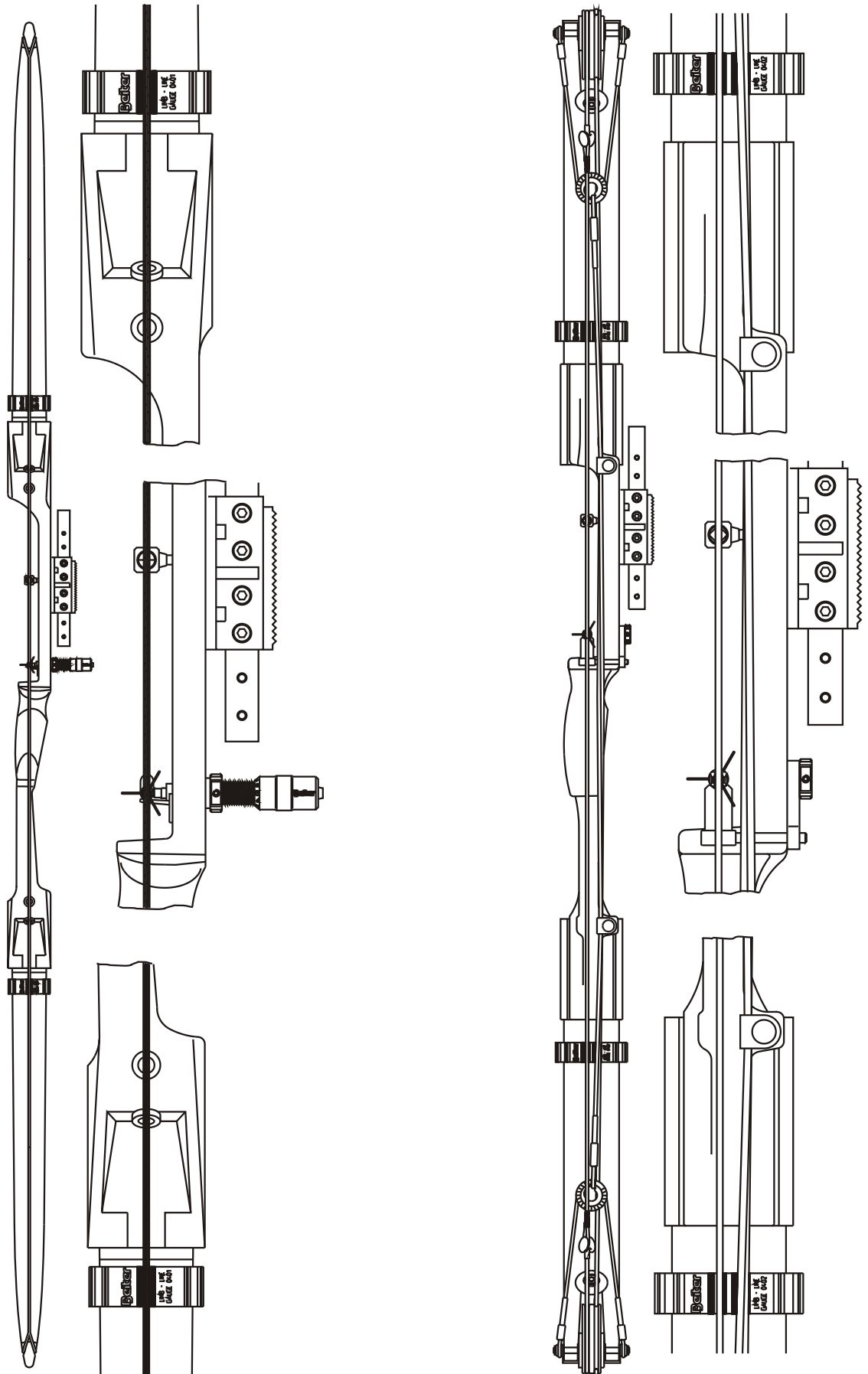
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The Beiter CLEARANCE STAR

First of all: Why do I need Clearance Stars?
Archers do have many questions: "How does my arrow leave the bow?" - "Do I have a good clearance?" - "Does my arrow touches the rest, the plunger, the handle or even my hand?"
Without High-Speed Films it was not easy to get those answers! Beiter Clearance Stars are Contact Indicators, showing where the arrow touches the bow and accessories attached to it (such as Plunger, Rest...) on leaving the bow window after the release.

HOW TO USE THE BEITER CLEARANCE STAR:

➡ Clean the surface of the shaft (e.g. from glue...). Take one Beiter Clearance Star out of the box and install it on the Clearance Star Tool, paying attention to position it correctly as shown in the picture (pic.1). The Beiter Clearance Star has 11 rays, therefore the rays at 11 and 1 o'clock should be positioned on the edges of the V-cut of the Tool.

➡ Remove the Nock from your arrow shaft.

➡ Slip over the shaft and position the Beiter Clearance Star with the aid of the Tool.

➡ Apply as many Clearance Stars as needed in a row at the distance and spacing you wish, to reveal the contact points of the the arrow shaft with the arrow rest, the plunger tip, the bow window or the bow hand. Place them on the shaft between the nock and the arrow rest. Re-install the nock.

➡ It is important to align the Beiter Clearance Star with the nock (V-cut at 12 o'clock), so you can determine the eventual contact points, if your clearance is not good. (pic.2)

➡ Now shoot at a short distance (e.g. only 3m).

➡ Pay attention if the "rays" of the Beiter Clearance Star on the arrow have bent! (pic. 3a straight and 3b bent). According to the position you will know where you have a problem with your tuning/clearance.
Re-do the test after having set the bow differently (changing the nocking point height, the arrow position on the rest, the rest position, the plunger tension, the tiller,..) and continue either until there is no contact or your reach the desired contact marks!

➡ Beiter Clearance Stars can be re-used more times, if the rays are only band; they may also break-off after the first shot, depending on the strength of the impact and must than be replaced.

➡ Use the Tool or your fingers to gently straighten bent "rays". (pic.4)
Beiter Clearance Stars may be shortened: simply cut with a small (nail)plier the single "rays".

➡ There are some small indents to make it easy to shorten them all to the same length (pic.5). So you can simulate different vane or feather sizes or different virtual distances of the shaft to the eventual contact points.
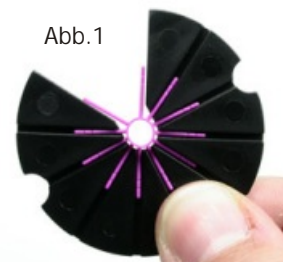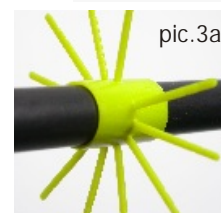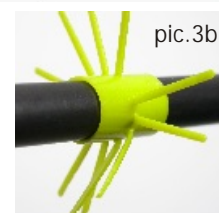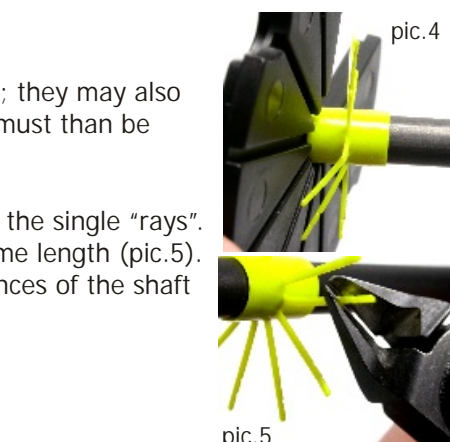
Abb.1

Abb.2

pic.3a   pic.3b

pic.4

pic.5

CONTENT:
11 Clearance Stars, 1 Clearance Star Tool, 1 Clearance Star Box and Instructions
Available sizes (different colours for different diam.):

Ø4,5 - PINK (X-10)	Ø5,5 - HEAVYGREEN (NAV610)	Ø8,74 - BLUE (2213)
Ø5,2 - YELLOW(ACE)	Ø5,6 - ROSÈ (NAV540)	Ø9,07 - WHITE (2314)
Ø5,4 - DARKBLUE (NAV710)	Ø8,34 - VIOLET (2114)	Ø9,22 - BLACK(2312)
		Ø9,26 - RED (2315)

Code-numbers:
- CS834VI -> Clearance Star Ø8,34, Violet, e.g. for 2114 shafts
- CS52GE-> Clearance Star Ø5,2, Yellow, e.g. for ACE shafts