

For dealers:  
Please pass this manual  
on to the customer!



## SYNTACE VRO/VRO ECO-SYSTEM

### The intelligent Stem-Bar System

Please read the entire assembly instructions as they contain a lot of important information and many practical tips.

Only use our VRO/VRO ECO stems in combination with a specifically approved Syntace VRO bar.

Your Syntace stem has been designed and manufactured with utmost care. It is necessary, nevertheless, to follow the instructions and to care for it accordingly.

**!** Please keep this manual and, in case of a later sale, pass it on to the new owner. Note that it is the responsibility of the customer to check the product regularly and to find out if service or replacement are necessary. Keep in mind that all parts relevant for the safety of your bike have an "elephantine" memory: any damage (through crashes or overload), even if long ago, will add up over the lifetime of the product. At Syntace we added a large portion of "overload protection," but even our parts are not indestructible.

A regular exchange (every 2 year, for example) is, according to our current knowledge, not necessary. But after a crash you should check especially stem and handle bar for hair fractures, grooves and dents and if stem or bar are bent. Replace those parts on the slightest sign of damage!

Never try to straighten or "patch" parts, replace them! If you don't, parts can fail and a crash with severe injuries may be the result.

## 1 Intended use

The stems are available in conjunction with the X-Ray clamps (nominal bar diameter 25.4mm) for mountain bikes, or, in conjunction with the Peanut clamps (nominal bar diameter 26.0mm), for road bikes. Syntace VRO stems are suited for use on paved surfaces, roads and off-road.

## 2 Mounting compatibility

**!** **Attention:** Exclusively use Syntace VRO or VRO ECO bars with Syntace VRO or VRO ECO stems. (Acute danger of bar failure!)

Bars from other manufacturers do not have a straight middle piece with 25,4mm or, respectively, 26.0mm throughout the 90mm wide clamping area of the Syntace VRO or VRO ECO SYSTEM.

The other way around, do not use Syntace VRO or VRO ECO bars with "conventional" stems. They are not designed for the stress in "conventional" bars...(acute danger of bar failure!)

**i** **Exception:** Syntace Vector Lowrider Carbon, all Syntace Racelite and Syntace Stratos models are designed for VRO and conventional clamping. The diameter of the clamping area must be 25.4mm +/- 0.1 for mountain bike bars and 26.0mm +/- 0.1 for road bike bars.

Before mounting the stem, find out if the outside diameter of your fork steerer tube is 28.6mm (1 1/8") or 38.1 (1.5" onepoint-five) or 39.6 (Cannondale) +/- 0.15mm.

If your bike is equipped with a 1" Ahead fork: find out if the outside diameter of the steerer tube is 25.4mm (+/- 0.1mm) and put the optional Syntace sleeve (only use the black Syntace sleeve) into the steerer clamp of your 1 1/8" stem. The small collar has to be placed facing the headset.

Measure if the steerer tube protrudes at least 28mm above the upper headset cup or the spacers, respectively (**Pic. 1**). If the length of the protruding steerer tube is less than 28mm, a secure clamping of the VRO stem can not be guaranteed. Either remove spacers or use a fork with a longer steerer tube. To ensure maximum clamping friction, please degrease the steerer tube with alcohol or a similar cleaning agent. Deburr steerer tube if necessary.

It is important to observe the instructions from the manufacturer of the fork (especially with carbon fiber forks!)

Picture 1



**i** **TIP:** For the most up-to-date technical data go to [www.syntace.com](http://www.syntace.com) and click Products/VRO T-Stem. Available accessories you will find there as well.



**Please note when using titanium bolts:**

- use adhesion paste (only on contacting surfaces, don't use on bolts or threads). To achieve maximum adhesion, use only a very thin film.
- don't exceed the maximum torque of 6 Nm for titanium bolts, neither on bar or steerer clamps.
- if necessary, degrease titanium bolts and use Loctite 648 or Syntace Bond 48.

### 3 Installation of stem

Slide stem onto steerer tube, install the Syntace Litecap with Ahead screw and adjust headset.

Picture 2



**TIP:** The Ahead screw is an adjuster screw, not to fasten the stem! Only tighten this screw enough (with loose stem screws) so there is no play to be felt if you lock the front brake and move the bar back and forth. The fork still has to move freely side-to-side! Note the instructions for adjustment in your bike's manual.  
If you use disc brakes and/or suspension forks: any play can also be a result of worn fork bushings and/or brake play.



**TIP:** We recommend use of Syntace adhesion paste in the fork clamping area.

Tighten the clamping screws with help of a torque wrench alternately and in steps, starting at about 2/3 of maximum allowable torque. In between, perform a twist test: hold the front wheel in between your legs and try turning the handle bar left and right. The stem should resist twisting up to about 60 Nm. If not tight enough, increase screw torque in 0.5 Nm steps up to the maximum allowable torque. Never exceed the maximum torque!

If you have a carbon fiber steerer tube: Ask the manufacturer of the fork if the fork is suitable for the necessary torque values. If it is not the case, please tighten only to 4 Nm. Please use Syntace adhesion paste for carbon fiber/aluminum applications.

In case you do not understand any part of this manual, do not hesitate to ask your local bike shop or contact Syntace directly.

Picture 3



Picture 4



Peanut Plugs

### 4 Installation of bar

Before installation, please read the manual of your bike.



**TIP:** Only shorten your handle bar after you have taken the "wide" bar out for a spin. With a wider bar you will have more control and better handling, especially in difficult terrain. Should you still want a narrower bar, don't cut it right away. Mount all control levers and the grips further inside and go for another ride with the bar still uncut to test if everything feels right before you cut.

Remove the clamping screws of the X-Ray/Eco/Peanut clamps and use a plastic tire lever to widen the clamps by about 1-2 mm to avoid scratching the bar (Pic. 3). Now install one connecting clamp on the VRO T-Stem. Slide the bar through this clamp. Slide the second clamp from the other side onto the bar and the VRO T-Stem.



**Attention using Peanut clamps (for 26.0 mm bars):** Before tightening the clamps you must push the Peanut Plastic Plugs (Pic. 4) left and right into the outer holes of the stem. Now insert the clamping screws and tighten. Do not exceed the maximum torque as inscribed on the clamps. All other VRO clamps are being used without plugs.

Slide shifter pods and brake levers onto the bar.



**TIP:** Installation of brake levers: old motocross trick for mountain bikers: only tighten the shifter/brake levers enough so that they still can be twisted in case of a crash. That way you avoid broken levers, lost time and cost. Now install the Syntace bar in the desired position. Make sure that it is centered.



**TIP:** We recommend the use of Syntace adhesion paste in the clamping area.

In case you use bar ends, install them now but never without Syntace Bar Plugs! (Pic. 5)

After one hour of use re-tighten all stem screws but do not exceed the maximum torque values! Regularly check for tight fit.

Picture 5



## 5 Care, maintenance and safety

Proper maintenance and care will ensure a long life and reliable function of your Syntace products. Please follow these simple steps to maintain your system:

Check the inside of your Syntace stem regularly for moisture and remove if found.

Check screws for proper torque regularly. We recommend to remove screws, to apply grease and to re-tighten with proper torque.

Check bar regularly for signs of fatigue (discoloration, cracks and dents, for example). Please inform your dealer or manufacturer immediately in case of problems.

Should the Syntace VRO T-Stem be bent because of a crash:



**NEVER ATTEMPT TO STRAIGHTEN IT:**

Contact your dealer or Syntace to arrange for replacement.

## 6 Warranty

In European Union countries, according to the legal requirements, you are entitled to a two-year warranty.

Beyond this, Syntace GmbH Germany and Syntace USA ("Syntace") warrant to the original owner that the product is free of material and manufacturing defects. This warranty is valid for ten years from date of purchase if the products has been registered with Syntace. Syntace will repair or replace, at its own discretion, only the Syntace product in question.

To make a warranty claim: in case you want to make a warranty claim, please send the Syntace product with proof of purchase and a written explanation to

Syntace GmbH  
Dammweg 1  
83342 Tacherting  
Germany  
Tel. (49) 8634-66666, Fax: 6365  
syntace@syntace.de

To obtain the 10-year warranty, please fill out the warranty card and send it to above address. Or register online at [www.syntace.de/garantie](http://www.syntace.de/garantie)

Please note that it is the responsibility of the customer to check the products regularly and to find out, if service or replacement are necessary.

Thank you for purchasing Syntace products!

Your Syntace Team,

Jo Klieber