

Assembly and operator's manual for the Speedlifter systems, Classic and Twist

English version A4 V1.0

speed *lifter*[®]
classic



Speedlifter classic functions

- *comfort custom height-adjustment at any time*
- *tool-free safe and easy handling*
- *proved safety*

speed *lifter*[®]
twist

± 90°



Speedlifter twist functions

- *comfort custom height-adjustment at any time*
- *tool-free safe and easy handling*
- *proved safety*
- *space saving transportation by turning handlebars*

*The simplest and quickest handlebar adjustment system
for your bike!*



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velotech.de

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Thank you

for purchasing one of our Speedlifter® products! This unrivaled system for stem-height adjustment on A-Head® fork tubes is made from high-strength CNC-machined aluminum and allows you to quickly and safely adjust handlebar height without tools. The patented Speedlifter® products are designed and developed by the German company by.schulz GmbH, and have been officially tested by Ernst Brust of the VeloTech Institute according to the DIN EN 14766 criteria and the specifications of the certification program "DIN Plus for Bicycles and Components." The Speedlifter® is a patented system of by.schulz GmbH.

The Speedlifter systems are recommended for city, trekking, racing, and mountain bikes. This Assembly Guide and Operator's Manual contains important information concerning the safe installation, operation, and maintenance of your Speedlifter product.



For bicycle manufacturers and dealers:
The short operating instructions must be given to the customer along with the correctly installed Speedlifter system.



In order to use our product safely and to derive as much pleasure as possible from it, please read this operator's manual carefully. The manual is an integrated element of the Speedlifter Systems. Please store it in a safe place so you can consult it when necessary. Installing a Speedlifter requires technical know-how, experience, and the appropriate tools. It is therefore strongly recommended that installation be carried out in a bicycle repair shop. Fitting the Speedlifter to the fork tube must be carried out in complete accordance with the instructions given in this manual. Once installed, operating of the Speedlifter Systems is intuitive and simple.

Note:

- Chapter 1** describes the functions and use of the Speedlifter
- Chapter 2** is concerned with monitoring, care, and maintenance
- Chapter 3** contains assembly instructions, which you of course do not need to read if the Speedlifter is already installed on your bike
- Chapter 3.7** describes how to upgrade the Speedlifter Classic to the Speedlifter Twist
- Chapter 4** explains how the Speedlifter quill can be shortened to achieve shorter extraction length
- Chapter 5** includes information about the Short Operating Instructions
- Chapter 6** includes the packing lists and exploded view drawings with labels
- Chapter 7** explains the warranty terms and conditions

To assure that your Speedlifter functions correctly and flawlessly, it should be installed by a qualified mechanic in a bicycle repair shop (see our list of dealers at www.speedlifter.com). The repair shop will have the Profi-Cut tool  strongly recommended for installation and the mechanic will have the experience and qualifications necessary to do the job right. If you bought a bike on which the Speedlifter was already installed, and you still have questions about its function or operation after reading this manual, please direct these questions to the dealer where you purchased the bike. You can access more information about the product and helpful tips on the Internet at www.speedlifter.com. We wish you hours of fun and enjoyment with your Speedlifter-equipped bicycle.

Please read this first

Please pay special attention to the following symbols used in this manual:



This symbol highlights pieces of information that are particularly important to the operation of the Speedlifter.



This symbol indicates that certain mistakes might lead to environmental or property damage.



This symbol indicates that you are placing yourself at great risk of injury or death if you do not follow detailed instructions carefully, for example, if you do not take precautions mentioned in this manual.

The possible consequences listed above will not always be mentioned alongside a given symbol in the manual.



Included in delivery of the Speedlifter are only the items listed in the packing contents. Handlebars, stem, steering head bearings, fork head tube **13**, etc. are not included.

Please pay attention to the packing lists and the exploded view drawings of the Speedlifter Systems in Chapter 6.



Installation is only possible on a front fork with metal shaft, a 11/8" A-Head®, and an outer diameter of 28.6 mm. Speedlifter quills are presently available for fork head tubes with an inner diameter of 24.4, 24.6 and 25.4 millimeters. (See quill tube diagram in chapter 3.2).



In addition to this manual, which is available online in various languages as pdf documents, you can find movies that show the installation and function of the Speedlifter as well as different animated videos on our website www.speedlifter.com. For better understanding we recommend that you watch these movies and animations before you install the Speedlifter System for the first time.

Technical questions should be directed to the dealer where the Speedlifter System was purchased. Alternatively you can contact us at: **info@speedlifter.com**

Speedlifter[®] is a registered trademark of:

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English version V1.0



The numbered position labels used in this manual refer to Speedlifter Classic elements or components of both systems. Position labels marked with letters, however, refer exclusively to components of the Speedlifter Twist. Position labels found in the text refer to the packing lists and exploded view drawings in Chapter 6.

Chapter 1: Notes for users

The Speedlifter is special in that you can make tool-free adjustments of handlebar height in seconds. It is possible for you to change the height of your handlebars by up to 140 mm (continuously adjustable) simply by pulling out a quick-release lever ⑧/①, all the while preserving the perpendicularity of the handlebars with the axis of travel ("twist-slip protection"). (The adjustment of the steering head bearings is in no way altered.) In addition, the product has a quill extraction safety stop, which not only provides a measure of safety, but also functions as an anti-theft device! You are thus able to vary your riding position between sporty and comfortable with relatively little effort. By unlatching a safety-bolt ⑤ on the Speedlifter Twist, you have the additional option of rotating the stem and handlebars 90 degrees to the left or right in order to save space in storage or during transport.



Make sure your Speedlifter is functioning safely before each and every ride. Inspect all other components on your bike according to the bicycle manufacturer's instructions. Only by proceeding in this manner can you provide for the efficient and flawless operation of all parts.



fig. 1.1

The Speedlifter Systems allow one to switch easily between a lower, racy riding position and a more comfortable upright position.

The Speedlifter Twist allows the rider, to twist the bars 90 degrees to the left or right in addition to the handlebar height adjustment. This can be done completely without tools, and the bike is then easy to park or transport.

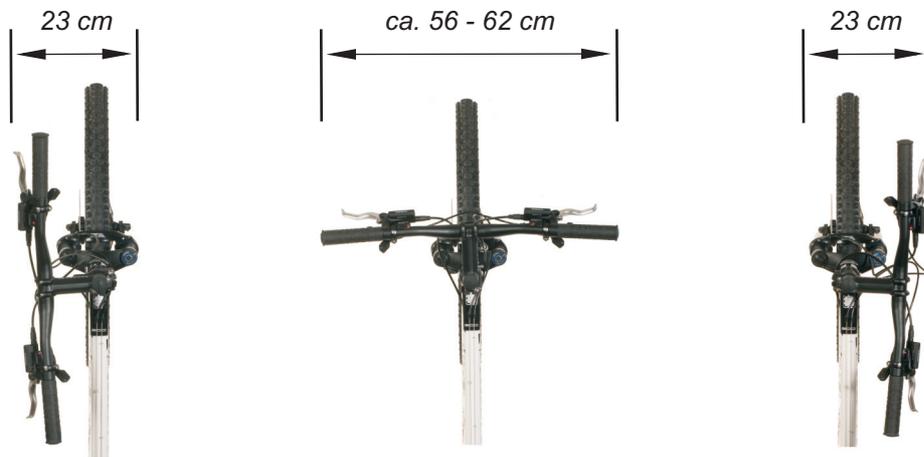


fig. 1.2

Chapter 2: Care and Maintenance

The Speedlifter Classic and Speedlifter Twist are manufactured with great care from high-strength aluminum and require regular care and maintenance.

Remove dirt and grime from the Speedlifter regularly, using, for example, a rag and a citrus-based cleaner. We recommend that you subsequently lubricate the quill **11** and the quick-release lever's pivot point with silicone or Teflon oil. We also recommend that you lubricate the safety-bolt **G** on the Speedlifter Twist by way of the slot on the upper body part.



Apply a little grease between the Speedlifter quick-release lever **8**/**J** and the sliding washer **7**/**I** in order to reduce the operating force necessary to open and close the lever.

Make sure that the handlebars, stem, and Speedlifter are securely fastened together. Position yourself in front of your bike and grip the front wheel between your knees. Place your hands on the bar ends and attempt to twist the stem away from the frame's longitudinal axis. The stem must not slip loose in any way during the process.

With the quick-release lever **8**/**J** closed, rest a large proportion of your body weight on the handlebars to check whether there is a secure fit. The quill **11** must not slide downward in the fork's head tube when subjected to such a stress. If this does indeed occur, increase the tension exerted by the quick-release lever by turning the knurled adjustment nut **4**/**D** clockwise while said lever **8**/**J** is in the open position. Close the lever and again test the quill's fit in the head tube **11**.

Check the bearing play of the steering head bearings when the quick-release lever is closed. Place a finger on the bearing race shell at the top of the head tube. With your other hand, hold the front brake and attempt to rock the bike forward and backward. The upper head race and the adjustable race should not wobble in relation to each other.

If there is noticeable play in the bearings, this must be addressed and taken care of immediately, for the forks or the bearings could otherwise be damaged. Adjustment of the bearings should be undertaken by mechanics in a bicycle repair shop. See also Chapter 3.3, "Adjusting the Steering Head Bearings," and the manufacturer's instructions.



If you would like to check the tightening torque of the stem connections, use a proper torque wrench and stick to the instructions set forth by the manufacturer(s).

Chapter 3: Instructions for the Correct Installation of the Speedlifter Classic with the Help of the Profi-Cut Tool 



Initial installation of a complete Speedlifter system, including the modification of the fork head tube, is a job to be undertaken by the bicycle manufacturer only. In the case of later installation, the job should be done by trained mechanics in a bicycle repair shop. Improper installation of the Speedlifter increases the risk of accident.

Functionality / Description of Parts:

The parts of the Speedlifter are made of high-strength CNC-machined aluminum. The Speedlifter Classic and the Speedlifter Twist consist of three separate parts: **I**, **II** and **III**. These elements fulfill the following functions:

The upper positive locking region with guide lug **I** works in tandem with the Speedlifter's molded quill **II** and its guide groove to ensure that the stem cannot be twisted away from its axis. Likewise, the part blocks the stem and handlebars from being pulled out of the head tube, which of course serves as a de facto anti-theft device.

The middle area **II** clamps the Speedlifter quill **II** together with the slotted head tube of the fork when the quick-release lever is in the "closed" position (figure 3.3). When the quick-release lever is in the "open" position (figure 3.4), the quill **II** and therefore handlebar height can be moved upward or downward.

The lower region **III** and the slotted and threaded adjustment ring **9 / M** are clamped on to the 1 1/8" A-Head® fork head tube just under the latter's slotted portion by way of the M6 Allen bolt **5 / P** (see figure 3.1.1). The 36 mm slotted adjustment ring **9 / M**, which is screwed into the lower region **III**, serves to adjust the A-Head® steering head bearings.



fig. 3.1 twist



fig. 3.2 classic



fig. 3.3 twist



fig. 3.4 twist

Chapter 3.1: Installation requirements

The Speedlifter can only be installed on bikes with a front fork of the A-Head[®] type with a threadless metal head tube and an outer diameter of 1 1/8" (28.6 mm). The diameter of the Speedlifter quill must approximately match the inner diameter of the fork head tube. In addition, when the front fork is correctly mounted to the bicycle's frame, the upper end of the fork head tube must protrude from the headset by at least 46 mm (44 mm plus the 2 mm spacer¹⁰). The height of the Speedlifter system itself is roughly 52 mm. Handlebar height can be continuously adjusted from this base to a maximum height of 14 cm (T14), the point at which the extraction safety-stop prohibits further upward travel of the quill.

The protruding end of the fork's head tube, when viewed from the rear of the bike and looking in the direction of travel, must have a small slot. This slot should be approximately 4 mm wide and 24.5 mm long, and it should end in a 6 mm drilled hole. When the Speedlifter is correctly installed, this vertical slot ends at the middle cross-section between parts **I** and **III** of the Speedlifter body unit (see Chapter 3.6, Shortening and Slotting the Fork Head Tube).

Only 1 1/8" A-Head stems (or adjustable stems, also known as "Major Taylor outriggers"), in conjunction with the Speedlifter slotted alloy shim (2; included with delivery), can be mounted on the Speedlifter's quill **I**. (It is preferable to use the special slotted alloy shim with stop collar **2**, but the standard shim will work as well.) The 1 1/8" A-Head[®] stem must have clamp units at the rear of the quill (again, as seen from the rear of the bike)! The length of the stem extension cannot exceed 135 mm. The top of the stem must be flush with the top of the shim **2**. (figure 3.2.3).



Installation requirements Speedlifter - systems

Speedlifter Systems are compatible with threadless metal fork tube heads with an outer diameter of 1 1/8" (= 28,6 mm) and with the requirements pictured here

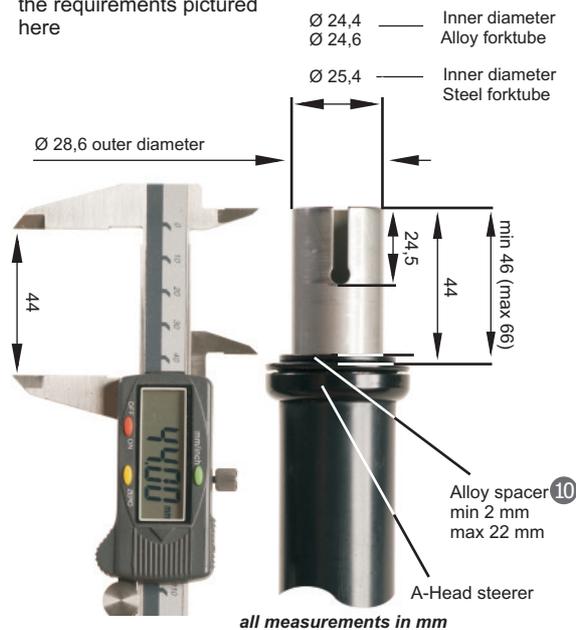


fig. 3.1.1

maximum stem length!

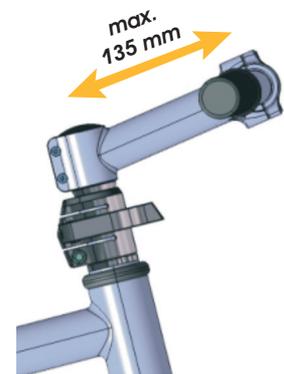


fig. 3.1.2



no threaded fork head tubes!



fig. 3.1.3

After adjusting the steering head bearings, only three of the adjustment ring's 9 / M thread turns should be visible (figure 3.1.4 / 3.1.5). The total height of the spacers 10 mounted under the Speedlifter may not exceed 22 mm.



The person who installs your Speedlifter system must make sure that the handlebars and stem are compatible with each other, and that they are in good condition. The brake and derailleur cables as well as any electrical cables must be long enough to keep them from buckling and kinking even when the handlebars are at their highest possible setting. Likewise, in no way should these cables adversely affect steering range and efficiency. Reroute them if necessary. Do not alter or substitute other components for the components of your Speedlifter system. Only the original quill 11 with its guide groove and extraction safety-stop is to be used. As described in Chapter 4, the quill can indeed be shortened. The use of outside parts is expressly forbidden, for this can lead to the failure of the complete construction.



fig. 3.1.4 Speedlifter Classic



fig. 3.1.5 Speedlifter Twist

Chapter 3.2: Assembly



In this section, instructions are given for installation with the 2 mm spacer 10.

Follow the instructions given in Chapter 3.4 very carefully (*Shortening and Slotting the Fork Head Tube with the Profi-Cut Tool W*). Shorten the 11/8" A-Head® fork head tube so that at least 46 mm protrude above the A-Head® steering head. Of the length of head tube that protrudes above the upper edge of the steering head bearings, 44 mm will be taken up by the Speedlifter system itself, and 2 mm will be filled out by the spacer 10. If more than one spacer or one of a greater thickness is to be used, the length of protruding fork head tube needed increases accordingly.



The total height of the spacers 10 used may not exceed 22 mm.

Before adjusting the steering head bearings, apply a thin layer of grease to the adjustment ring's 9 / M threads and screw it completely into the lower portion III of the Speedlifter body.

Carefully clean the fork's head tube 13, removing any and all chips and burs. Place the 2 mm spacer 10 over the protruding shortened and slotted head tube 13 and slide it downward until it is flush with the steering head bearings.

When inserting the quill 11 make sure the end on which "don't cut" is printed is pointing downward through the lower portion III of the Speedlifter's body 6 / E / L.

Slide the quill with its end stop 11 all the way up into the Speedlifter body until the extraction safety-stop has been reached. In this position you can see the complete adjustment range and scale of the quill 11 above the Speedlifter body.

Apply a layer of grease to the inner wall of the fork's head tube 13 and to the bottom end of the quill 11. Insert the bottom end of the quill into the slotted head tube. The vertical slot of the Speedlifter body must face the rear of the bike. Now the vertical slot of the Speedlifter body is positioned over the fork's head tube.



On bikes with small frame sizes or short steering tubes, the quill 11 can be shortened if it cannot be completely inserted into the fork's head tube 13. When handlebar height is set at its lowest position, the quill 11 must not protrude downward through the fork's crown. (See Chapter 4, "Shortening the Speedlifter's Quill to Achieve Shorter Extraction Height.")



Various quill 11 lengths are available for your Speedlifter system

Speedlifter quills for 1 1/8" A-Head metal fork tubes

Version / Travel

	T5 50 mm	T6 60 mm	T7 70 mm	T10 100 mm	T14 140 mm
for steel fork tubes with inner diameter 25,4 mm	✓	—	✓	✓	✓
for alloy fork tubes with inner diameter 24,4 mm	—	✓	—	—	—
for alloy fork tubes with inner diameter 24,6 mm	—	✓	—	—	—

chart. 3.2.1

Push the Speedlifter body 6 / E / L onto the top of the fork's head tube 13 until the guide lug in the upper portion of the body 1 is flush with the top of the fork head tube. At this point the top of the fork head tube will be visible in the upper horizontal slit in the body. On the Speedlifter Twist, the fork head tube will not be visible through the slot - room must be provided for the twist function.



Please note that when the Speedlifter Twist is correctly installed, there is approximately 1 mm of space between the top of the head tube and the guide lug in the upper portion of the body 1 so that it is possible to twist the handlebars to the right.

Please make sure that the quill does not fall into the fork's head tube during assembly. The vertical clamp slot in the middle portion of the Speedlifter body **11** should now be positioned over the corresponding slot in the head tube. Align these slots with the axis formed by the bike's front wheel and the frame's top tube.

Close the quick-release lever **8** by hand. Due to the clamping function of the lever mechanism, the Speedlifter's quill **11** will now be held in the slotted head tube **13**. When in the "closed" position, the quick-release lever is parallel to the bike's axis of forward travel.

Push the special slotted alloy shim **2** onto the Speedlifter quill **11** until it is flush with the shim's stop collar (where you see the word "TOP"). Note: the optional standard shim does not have a stop collar.

Push the 11/8" A-Head[®] stem onto the special alloy shim **2** until it is positioned on the shim's outer flange at its lower end. The special alloy shim **2** is at the top end of the Speedlifter quill **11**.



Only A-Head[®] stems with clamp bolt(s) and slot that face the rear of the bike can be used with the Speedlifter system.



A-Head[®] stems come with fork head tube clamp units of different heights. For this reason, the special alloy shim with stop collar **2** is available in three different heights.

Distance from outer flange to top edge:

- 39,5 mm for stems with clamp units of 40 mm
- 44,5 mm for stems with clamp units of 45 mm
- 49,5 mm for stems with clamp units of 50 mm



fig. 3.2.2

The 39.5 mm version of the special alloy shim **2** for stems with 40 mm clamp units can be purchased off-the-shelf from various retail outlets. The special alloy shim is also available in different length.

Many new bikes are sold with the simple shim without the stop collar. (see fig. 3.4.1).



The length of the stem's clamp unit and the length of the shim must match!

In the assabled state the slot of the shim and the slot of the stem **must flush** with each other in riding direction to the rear!



fig. 3.2.3

Align the A-Head® stem with the axis of the bike's forward travel and tighten the clamp bolt(s) to the newton meters (Nm) specified by the stem's manufacturer. To accomplish this, use a torque wrench first to tighten the bolt(s) to 2/3 of the specified Nm. Proceed by increasing the torque in steps of 1 Nm until the recommended moment is reached. Never exceed the maximum allowable Nm!

With the quick-release lever **8 / J** in the "open" position, turn the knurled adjustment nut **4 / D** clockwise until the lever can just barely be closed by hand. Now check the hold of the system as described in Chapter 3.3. If the handlebars slip downward when subjected to pressure from above, repeat the process of tightening the knurled adjustment nut and closing the quick-release lever. The knurled adjustment nut **4 / D** comes standard equipped with an Allen hexagon socket and can thus be tightened with the help of a torque wrench when the quick-release lever is in the "closed" position. The prescribed torque value for the knurled adjustment nut **4 / D** on the Speedlifter Classic is 4-5 Nm; on the Speedlifter Twist, 3-4 Nm.

Knurled adjustment nuts without an Allen hexagon socket are also available.

Place the Speedlifter top cap **1** in the top end of the quill **11**.



The alloy adjustment nut **D** on the Speedlifter Twist is secured with a set screw **Q**. It is screwed into the lower position of the SL-Twist body and is only accessible when the lower and upper part **E** are twisted apart.

Chapter 3.3: Adjusting the Steering Head Bearings and Fastening the Speedlifter[®] Body to the Fork's Slotted Head Tube

With the quick-release lever 8 in the "closed" position, use an Allen key to loosen the M6 Allen bolt 5 in the lower region III of the Speedlifter body.

Using a 36 mm open-jawed wrench (figure 3.3.1), turn the slotted threaded adjustment ring 9 clockwise carefully and in small increments (as seen from above) to reduce the play in the steering head bearings. The adjustment ring thus presses against the spacer which in turn is pressed against the bearing housing. The fork must be able to be turned easily in the steering head tube. Turning the adjustment ring 9 counterclockwise (again, as seen from above) introduces more play into the bearings.



fig. 3.3.1



Remove all play from the steering head bearings. Make sure that the handlebars can be turned across their complete range from far left to far right with no detectable resistance.



After the steering head bearings have been adjusted, no more than three of the adjustment ring's 9 thread turns should be visible. (see fig. 3.1.4 und 3.1.5).

Should more than three thread turns indeed be visible, the extra distance to the headset must be compensated for with an additional spacer. The Speedlifter system must therefore be removed and the adjustment ring screwed into the Speedlifter body so that another spacer can be added. (Remember that the maximum height of stacked spacers 10 must not exceed 22 mm!) Next, start over with installation (see Chapter 3.2, *Assembly*).

Once the bearings are free of play, tighten the M6 Allen bolt 5 in order to securely fasten the lower portion of the Speedlifter body III to the fork's head tube 13 just under its slotted region, a process made possible by the slot in the adjustment ring 9. The tightening torque of the M6 Allen bolt 5 on both Speedlifter systems is 6-8 Nm.



If the Speedlifter is to be mounted on an aluminum fork head tube, the tightening torque of the M6 Allen bolt on the Speedlifter Classic **5** and the Speedlifter Twist **P** is 34 Nm.



fig. 3.3.2

The Speedlifter body **6** is now securely fastened to the fork's head tube **13**. The play in the steering head bearings will in no way be affected by changes made to handlebar height.

Check the play of the steering head bearings by placing a finger on the bearing race shell at the top of the head tube. With your other hand, hold the front brake and attempt to rock the bike forward and backward. The upper head race and the adjustable race should not wobble in relation to each other.



If your bike has front suspension, drum/roller brakes, or disc brakes, there may be detectable play due to worn bearing bushings or play in the brake pads.

Any play in the headset bearings must be redressed immediately, for the bearings can otherwise be damaged. This adjustment should be carried out by a trained mechanic in a bicycle repair shop.

It is now time to make sure that your Speedlifter system functions properly. Pull open the quick-release lever **8/J**, pull the stem upward, and press the quick-release lever into the "closed" position again. Then rest a large proportion of your body weight on the handlebars to check whether there is a secure fit. The quill **11** must not slide downward in the fork's head tube **13** when subjected to such a stress. If this does indeed occur, the tension exerted by the quick-release lever must be increased, as described in the section 3.2. *Assembly*, by turning the knurled adjustment nut **4/D** clockwise while said lever **8/J** is in the open position. Torque moment = 4-5 Nm for the Speedlifter Classic and 3-4 Nm for the Speedlifter Twist.



fig. 3.3.3



Check the safety and security of the handlebars and the system's hold on the fork's head tube as described in this chapter after the first two hours of use.

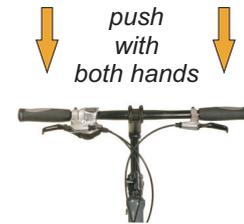


fig. 3.3.4



The Speedlifter system should be checked for functionality at regular intervals and adjusted as the need arises. If and when the M6 Allen bolt 5 / P is loosened, its threads should be coated with medium strength thread locker (for example, Loctite® Threadlocker Blue) and the bolt should be retightened as explained in chapter 3.3. Remember that the play in the steering head bearings must be adjusted as described in chapter 3.3 above before tightening the M6 Allen bolt 5 / P .



Apply a little grease between the Speedlifter® quick-release lever 8 and the sliding washer 7 in order to reduce the operating force necessary to open and close the lever.

Chapter 3.4: Shortening and Slotting the Fork Head Tube with the Speedlifter® Profi-Cut Tool

by.schulz has designed the Profi-Cut tool  in order to facilitate shortening and slotting of the fork's head tube (again, provided that it is a 1 1/8" A-Head® made out of metal). This special tool is made from tool steel and serves as a sawing and drill fixture and jig.

The fork's head tube  is to be shortened and slotted while mounted in the bicycle's frame (preferable), but this can also be accomplished with a fork that has been removed. In the following, the procedure for using the Profi-Cut tool  to shorten and slot a head tube still mounted to the bike's frame will be described.



For the installation of the Speedlifter system, the Profi-Cut tool  is used to saw off the metal A-Head® head tube at a height of 46 mm to 66 mm above the steering head bearings. Make sure to place minimum the 2 mm spacer  under the tool  so that the horizontal saw guide allows you to shorten the shaft  exactly at 46 mm. It is important that the vertical slot ending in a 6 mm drilled hole is centered at the rearview of the fork's head tube. If one or more other spacer(s)/riser(s) is/are to be used (maximum 22 mm), the height at which the cut is to be made changes accordingly.



The shortening and slotting of the fork's head tube and assembly of the Speedlifter® must be carried out correctly with the help of the appropriate tools as described in detail in this manual. Improper installation of the Speedlifter increases the risk of accident! The person who installs the Speedlifter bears all responsibility for potential damages resulting from improper installation. We therefore strongly recommend that the Speedlifter be installed by a qualified professional at a trusted bicycle dealership and/or repair shop. For large orders we recommend using the punching tool designed and developed for this purpose by by.schulz.

slotted shim 1" to 1 1/8"
used to shorten the scaled
Speedlifter quill (see ch. 4).
Also used as the
simple shim! 
(without boundary!)

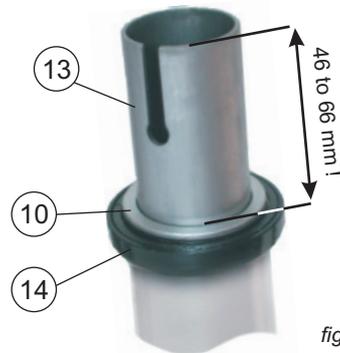


fig. 3.4.1

Chapter 3.5: How to Proceed with Shortening and Slotting Using the Profi-Cut Tool

We recommend that the bike be put on its kickstand and parked on the repair shop floor for the duration of the installation so that it has a secure footing.

While the fork is mounted in the bike's frame, measure the length of the fork's head tube **13** that protrudes above the top edge of the headset. The distance must be at least 46 mm.



fork tube overlapping over the head set bearing: 46-66 mm

fig. 3.5.1



If no stem and A-Head® star nut were already installed, skip the next three paragraphs and proceed to "Remove the stem..."



By no means should the star nut be driven downward, as described above, through an aluminum fork head tube. This will damage the aluminum shaft. Should the head tube indeed be aluminum, remove the star nut by extracting it through the top opening. After the fork's head tube has been shortened and slotted with the Profi-Cut tool, its inner and outer surfaces must be free of any and all kinds of damage. If the head tube does indeed become damaged during the process, you will have to have a new head tube force fitted to the fork by the manufacturer.

Please note that some A-Head® star nuts cannot be driven outward through the bottom of the head tube without difficulty; on many bikes, the head tube is (double-) butted where it meets the fork crown. In such a case, of course, the star nut must be extracted from above.

Unscrew the existing A-Head® top cap and remove. Drive the A-Head® star nut downward and out of the fork's head tube with a hammer and round bar or punch. The stem should remain tightly fastened to the head tube while the star nut is driven downward and out, so that no excess pressure is exerted on the steering head bearings.

Remove the stem and all spacers. If you have your bike up on a repair stand, be sure to hold on to the fork so it does not fall out of the headset.



Place the supplied 2 mm spacer **10** over the head tube **13** and on to the steering head bearings **14**. The maximum height of the spacers, regardless of number used, may not exceed 22 mm.

Position the front wheel so that it is aligned exactly with the frame.

Place the Speedlifter Profi-Cut tool (W) over the fork's head tube (13) and move it downward until its lower surface is flush with the spacer (10), which in turn is positioned on the steering head bearings. (Please note that the top surface of the special tool bears the imprint "TOP.") Orient the tool so that the 6 mm drill jig in the vertical slot faces the rear of the bike, and so that the imaginary axis of the vertical slot is perfectly aligned with the bike's axis of forward travel. Press the tool (W) down hard against the steering head bearings (14) and lock it into position on the head tube (13) by tightening the tool's integrated Allen bolt (56 Nm).



Wrap a rag around the steering head bearings and around the front part of the bike before drilling and sawing. In so doing, bore chips and metal shavings can be kept away from the sensitive bearing zone.

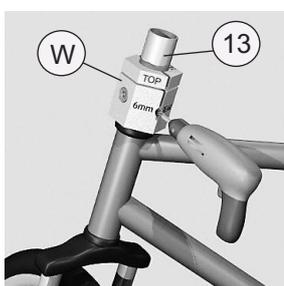


fig. 3.5.2

Using a power drill and the 6 mm drill bit that came with the Profi-Cut tool, drill through the special tool's jig into the fork's head tube to make a 6 mm hole.

Note: Using an extra short drill bit helps you to avoid inadvertently damaging the opposite inner wall of the head tube.



fig. 3.5.3

Using the horizontal jig in the Profi-Cut tool and a hacksaw, saw through the head tube (13) at the height arrived at in step. Remove the sawn off piece of tubing through the top of the special tool.



fig. 3.5.4

Using the hacksaw and holding it aslant in relation to the head tube's vertical axis, saw from above, first along the left edge and subsequently along the right edge of the slot in the Profi-Cut tool's saw jig, until you reach the 6 mm drilled hole. A vertical slot that is roughly 4 mm wide and that ends in a 6 mm hole is thereby formed. Now loosen the special tool's Allen bolt and remove the complete unit from the head tube (13).

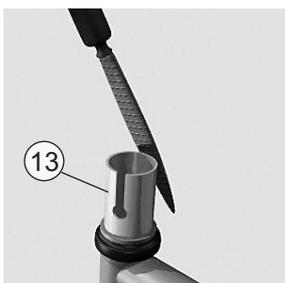


fig. 3.5.5

Using a half-round file, carefully deburr the inner and outer edges of the drilled hole and the sawn vertical slot on the head tube (13).

Now you can remove the rag.
Your bike is now ready for the Speedlifter System to put in.

Chapter 3.6: Drawing Drill and Saw Guides and Shortening and Slotting the Fork Head Tube with the Speedlifter® Simple-Draw Tool

As an alternative to the Profi-Cut tool for dealers and qualified mechanics, the Simple-Draw tool allows one to lay the technical foundations for installation accurately but in a relatively inexpensive way. The Simple-Draw tool¹², an in-house design of by.schulz, is an aluminum template which makes it possible to draw the exact saw and drill guides for the 6 mm hole and the vertical slot on the fork's head tube. The template should only be used for drawing and visual inspection of the task at hand. Sawing and drilling by hand with the help of these drawn guides alone is for adept technicians and dexterous handy(wo)men! A high degree of skillfulness with the necessary tools is required.



fig. 3.6.1 Simple-Draw Tool

Complete the following steps in order (as described in detail in Chapter 3.4, *Shortening and Slotting the Fork Head Tube with the Speedlifter® Profi-Cut Tool*):

1. Unscrew and remove the A-Head® top cap from the stem
2. Remove the A-Head® star nut from the fork's head tube
3. Remove the stem and all spacers/riser
4. Place the 2 mm spacer¹⁰ delivered with the Speedlifter on to the steering head bearings (or optionally on to a spacer/riser no higher than 22 mm)

After doing so please follow these steps:



fig. 3.6.2

Place the Speedlifter Simple-Draw tool over the fork's head tube and move it downward until its lower surface is flush with the spacer, which in turn is positioned on the steering head bearings.

Orient the tool so that the vertical slot in the template faces the rear of the bike, and so that the imaginary axis of the vertical slot is perfectly aligned with the bike's axis of forward travel.



fig. 3.6.3

Press the Simple-Draw tool down hard against the steering head bearings with your free hand so that the template will not become misaligned while you trace the guides. Use an appropriate drawing instrument to delineate the horizontal cutting edge by moving along the uppermost metal edge of the tool.

Now delineate the cutting edges of the vertical slot and the 6 mm hole. Now you have a clean contour of the cutting edges and the 6 mm hole. The following instructions explain how to proceed with sawing and drilling along this contour line.

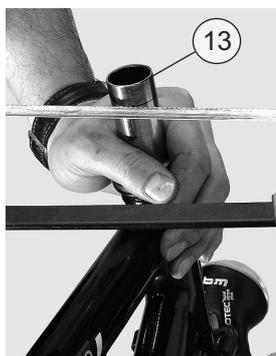


fig. 3.6.4

Wrap a rag around the steering head bearings and around the front part of the bike before drilling and sawing. In so doing, bore chips and metal shavings can be kept away from the sensitive bearing zone.

Before you begin sawing, check to make absolutely sure that you have drawn your guidelines correctly. (See Chapter 3.1, *Installation Requirements*)

Use a center punch to mark where the 6 mm hole is to be made, then use a power drill and a 6 mm center drill bit to drill the hole in the head tube.

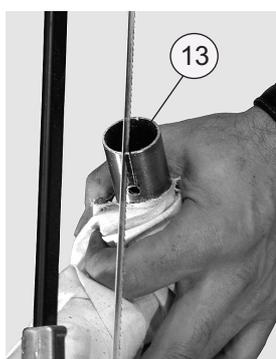


fig. 3.6.5

Using the hacksaw and holding it aslant in relation to the head tube's vertical axis, saw from above, first along the drawn line for the left cutting edge and subsequently along the drawn line for the right cutting edge. A vertical slot that is roughly 4 mm wide and that ends in a 6 mm drilled hole is thereby formed.



Do **NOT** saw beyond the 6 mm hole.



fig. 3.6.6

Using a half-round file, carefully deburr the inner and outer edges of the drilled hole and the sawn vertical slot on the head tube ¹³. Remove the rag and all metal shavings. The Speedlifter can now be installed.



If you decide to place the fork in a bench vise to shorten the head tube and cut the slot, be extremely careful not to crimp, deform, or otherwise damage the head tube in any way.

Chapter 3.7: Upgrading the Speedlifter Classic to a Speedlifter Twist

The Speedlifter Classic and Speedlifter Twist are compatible in the sense that the installation requirements are identical. If you would like to upgrade your Classic to a Twist, for example, you can accomplish this in just a few simple steps.

The two systems differ only in the main body, thus it is not necessary to replace the quill or the sleeve. Loosen the stem's clamp bolts and carefully pull upward and off of the sleeve. Loosen the clamp bolt ⑤ on the Speedlifter Classic body. Now open the quick-release lever and remove the complete Speedlifter Classic System by simply pulling it upward.



Make sure that the front wheel is on the ground and that the fork is still securely attached to the frame.

Pull the sleeve ② off of the quill. Now you can simply remove the Speedlifter Classic body from the quill ⑪ and replace it with the Speedlifter Twist body. In the case of installing a new Speedlifter Twist, proceed as described in Chapter 3.

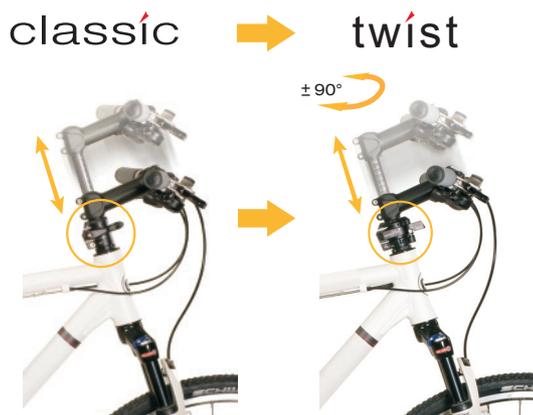


fig. 3.7.1



Upgrade your Speedlifter Classic to a Speedlifter Twist. In so doing you not only have the benefits of stepless handlebar height adjustment, but also the added comfort of space-saving transport and storage/parking. Simply twist the handlebars 90 degrees to the right or left.

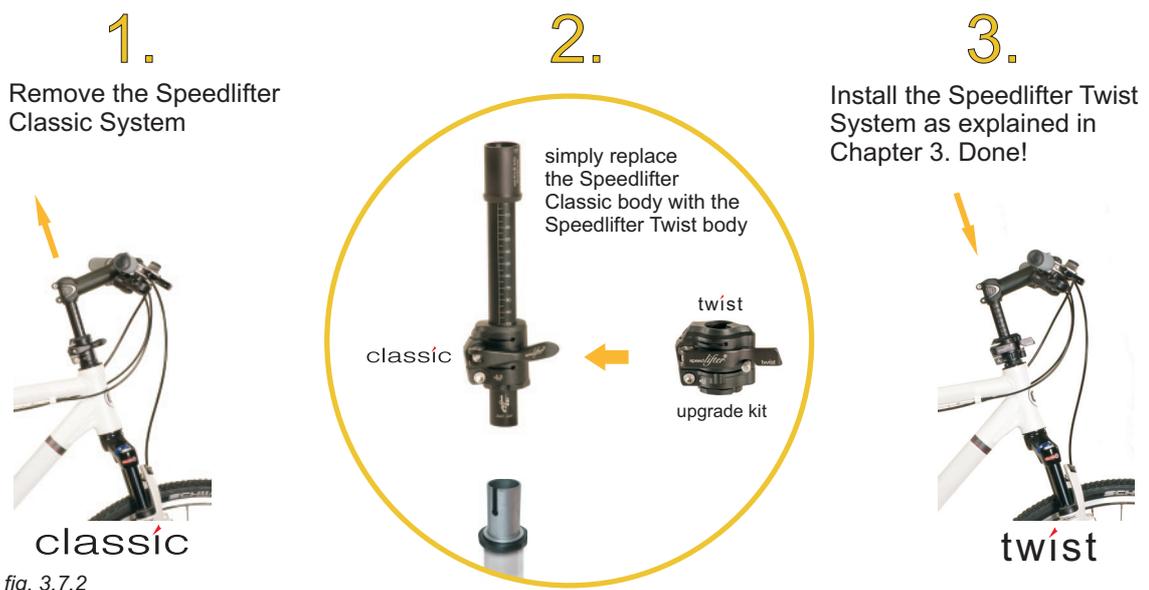


fig. 3.7.2

Chapter 4: Shortening the Speedlifter® Quill to Achieve Shorter Extraction Heights

The Speedlifter quill T10  is approximately 225 mm long, which makes it possible to increase handlebar height by a maximum of 100 mm. If required, the Speedlifter quill T10  can be shortened to the desired length by sawing horizontally through its upper portion.

Draw a line around the quill  in its upper portion at the desired height.



Example: If you shorten the Speedlifter quill T10  by 30 mm from a total length of 225 mm down to 195 mm then the range of adjustment for the installed Speedlifter® system will equal 70 mm.



The Speedlifter quill can only be shortened in the upper portion. Do NOT saw through the quill in the lower portion with the imprint “don't cut.” Place the Speedlifter Profi-Cut tool  in a vise. Next, using the slotted sleeve included in delivery, clamp down on the quill  via the Allen bolt in the Profi-Cut tool. Deburr the inner and outer cutting edges carefully with a file. Make sure that the tube is free of all metal shavings before you proceed with installing the Speedlifter.

Chapter 5: Short operating instructions

1. What can the Speedlifter®-Systems do?

With the Speedlifter you can manually alter the height of your bicycle's handlebars in just seconds without the use of any tools. This adjustment enables changing quickly from a relaxed, upright seating position to an athletic one. With the Speedlifter Twist you can additionally twist your handlebar 90° to the left or right to make storing or transporting your bicycle easier.

speed *lifter*[®]
classic



fig. 5.1



speed *lifter*[®]
twist



fig. 5.2

Parking position

± 90°



2. How to adjust the height of the Handlebar

Open the Speedlifter quick-release lever by hand and adjust the height of the stem and handlebars to the desired position. Then simply close the operating-lever to lock the handlebars securely into place. It's that easy!



fig. 5.3

3. How to twist the handlebar to the side

Pull open the Speedlifter Twist quick-release lever by hand. Use your fingers to lift up the safety bolt. Now you can twist the handlebars to either the left or right, until the safety bolt automatically clicks into the locked 90° parking position. Close the quick-release lever to lock the handlebars securely into place. If you twist the handlebar back into the riding position, simply follow these steps in reverse order. The safety bolt will automatically lock into the hole at the front of the body. Close the quick-release lever to lock the handlebars securely into place. **It's that easy!**



fig. 5.4



In order to save space when storing or transporting your Speedlifter Classic-equipped bike, we recommend that you loosen the bolt(s) on the stem's clamp unit. The special alloy shim with stop collar allows the stem to be turned without sliding to a lower level on the fork's head tube. If your bike's Speedlifter system does not have this special shim, you can order it from your trusted dealer.

4. Pay attention to the following

Please make absolutely sure that the Speedlifter's quick-release lever is properly closed before you ride your bicycle! Likewise the Speedlifter Twist's safety bolt must be locked into the hole at the front of the body. Be sure to check whether the operating-lever is completely closed before each trip! Never adjust handlebar height while riding! Always stop the bicycle before adjusting handlebar height!



fig. 5.5

5. Check the system's hold for your safety

Use both hands to support your weight on the handlebars as shown. The Speedlifter is functioning correctly if the handlebars do not slide downward. Should this happen, the tension of the quick-release lever must be re-adjusted.

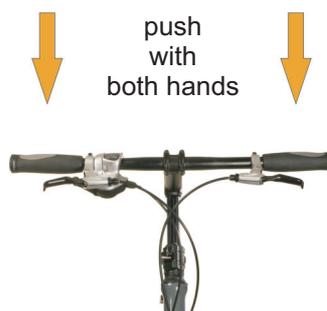


fig. 5.6

6. How to increase the tension of the quick-release lever

Open the quick-release lever completely. Turn the adjustment bolt clockwise a half turn and close the lever securely. Check the stability of the stem and handlebars. Should they still slide downward, this procedure must be repeated. If the lever cannot be closed completely, the adjustment bolt must be turned counter-clockwise.



fig. 5.7

7. Maintenance

The Speedlifter systems should be maintained regularly to insure they work properly. Be sure to regularly remove any dirt from the Speedlifter. Use only water and a clean rag. If required, apply some spray-lubricant to the extension-tube, the pivot-point of the quick-release lever, and to the safety-bolt.



fig. 5.8

Chapter 6: packing list and exploded view drawings

speed *lifter*[®]
classic

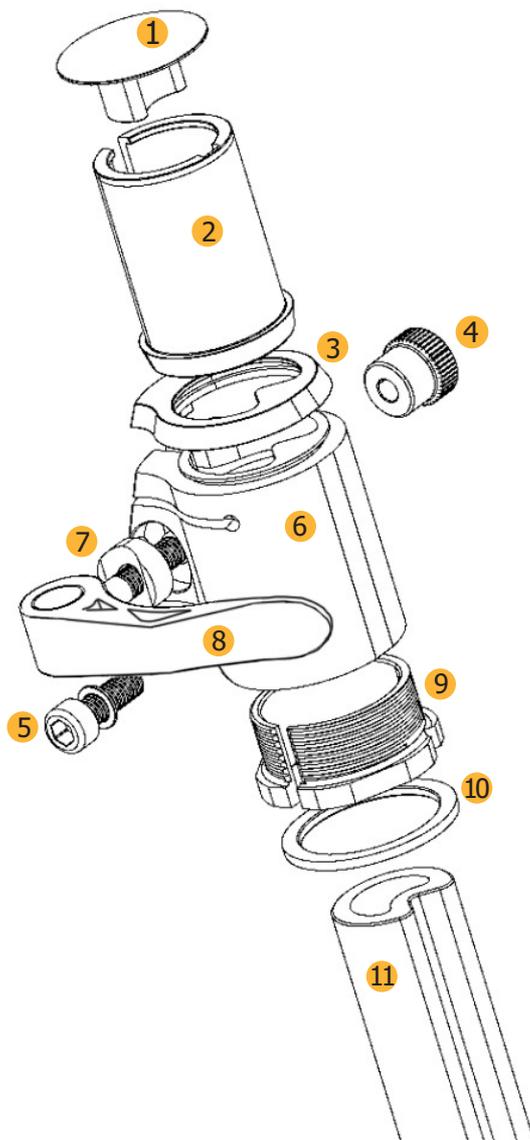


fig. 6.1

Packing list

- 1 Top Cap
- 2 Special alloy shim
- 3 Rubber seal
- 4 Adjustment nut
- 5 Locking Allen bolt, M6 with U-ring
- 6 Speedlifter-alloy body
- 7 Sliding washer, reinforced plastics
- 8 Quick-release
- 9 Alloy adjustment ring for 36mm key
- 10 Alloy spacer, 2mm
- 11 Stem quill with graduated scale
- Short operating instructions
- Assembly and owner's manual

not shown on the left

- 12 Simple Draw Tool (s. chapter 3.6)
- 13 Fork tube (of the bike's fork)
- 14 Steering bearing
- S Simple alloy shim (s. chapter 3.4)
- W Profi-Cut tool (s. chapter. 3.4)

speed *lifter*[®]
twist

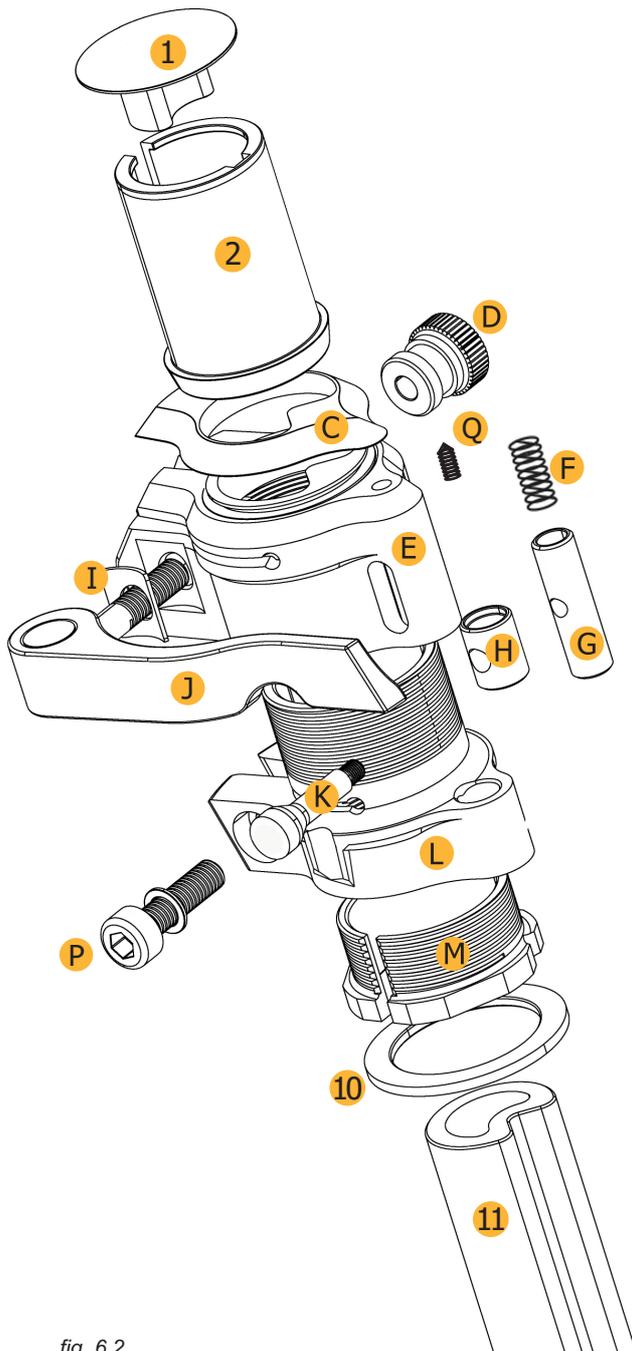


fig. 6.2

Packing list

- 1 Top Cap
- 2 Special alloy shim
- C Rubber seal
- D Adjustment nut
- E Speedlifter Twist body (upper part)
- F Safety-bolt spring
- G Safety bolt Nirosta
- H Nut, M6
- I Sliding washer, stainless steel
- J Quick-release lever
- K Safety-bolt lever
- L Speedlifter Twist body (lower part)
- M Alloy adjustment ring for 36mm key
- 10 Alloy spacer, 2mm
- 11 Stem quill with graduated scale
- P locking Allen bolt, M6, with U-ring
- Q Set screw M4
- Short owners manual
- Assembly and owner's manual

not shown on the left

- 12 Simple Draw Tool (s. chapter 3.6)
- 13 Fork tube (of the bike's fork)
- 14 Steering bearing
- S Simple alloy shim (s. chapter 3.4)
- W Profi-Cut tool (s. chapter. 3.4)

Chapter 7: Warranty Terms and Conditions

In case of claims, your first step is to contact the dealership in which you purchased the Speedlifter or the bike with the Speedlifter pre-installed. All statutory provisions apply. So that claims can be dealt with quickly and efficiently, presenting the receipt and/or proof of purchase with the product is mandatory. This should therefore be kept in a safe place.

by.schulz is merely the manufacturer and supplier of the Speedlifter® system. Those who assemble and install the Speedlifter assume full responsibility for the compatibility, condition, and quality of the attached parts such as the handlebars and stem.

The installation or retrofitting of the Speedlifter must be carried out by a trained professional. The responsible mechanic must observe and strictly comply with the manufacturer's installation instructions. It is imperative that the specified torque moments are strictly adhered to and that the work is performed cleanly and accurately. The use of outside supplied parts is unacceptable and unwise. If one decides to use such parts despite this warning, he or she does so at his or her own risk.



The user bears all responsibility for damages incurred while involved in extreme activities such as jumps, acrobatics, or other competitions. In the case of faulty materials or manufacturing on factory-installed Speedlifter systems, the warranty terms and conditions of the bicycle manufacturer apply. The manufacturer of the Speedlifter is excluded from further liability. Any and all technical modifications of the Speedlifter system are expressly prohibited (except for the shortening of the quill as described above). Technical modifications of the Speedlifter system and the use of outside supplied parts will result in the forfeiture of all warranty claims.

The warranty does not cover personal injury or secondary damage caused by improper or inappropriate use, collisions/accidents, or normal wear and tear.



After a collision or accident, it is important to have the Speedlifter system checked by a dealer or mechanic and, if necessary, for reasons of safety replaced.

Exclusions of warranty:

This warranty does not cover any post-purchase defects, for example, those brought about by or resulting from collisions/accidents; negligence; incorrect, improper, or inappropriate use; misuse; failure to carry out reasonable and proper maintenance; improper and incorrect installation; improperly conducted repairs; or replacement/exchange of parts and accessories whose characteristics and attributes are not concordant with the specifications set forth by by.schulz GmbH. Warranty claims will also automatically be forfeited if the serial number is changed, removed, made illegible, or manipulated in any other way. Finally, the warranty does not apply to Speedlifter systems that have been bought used. In such cases, the warranty conditions must be fulfilled by the seller of the used product; by.schulz GmbH is removed from any and all direct and indirect liability. The warranty is valid for products purchased in countries of the European Union.



The Speedlifter system is to be installed, altered, and used only in complete accordance with the instructions in the assembly and operator's manual.

Warranty outside the European Union

If any defects in materials or workmanship of the Speedlifter arise within the limited warranty period of two years, the damaged unit is to be shipped to an authorized retailer or wholesaler, postage paid by the customer together with the original purchase receipt or other proof of purchase date. Upon receipt, the unit will be repaired or replaced free of charge at the discretion of by.schulz GmbH.



In the case of a warranty claim, the purchase receipt and a written description of the problem must be enclosed and sent in along with the defective Speedlifter. The receipt serves as proof of the warranty's start date.



The Speedlifter should never be adjusted while the bike is being ridden! Improper use may lead to accident or injury.

Warranty and Liability for Defects:

In accordance with legal regulations, manufacturers in European Union member countries are liable for product defects for two years. Beyond this period of time, by.schulz will replace its products at its own discretion. Those who wish to submit a warranty claim should take their receipt or proof of purchase and the product to their dealer, or, after consulting with said dealer, ship the product, receipt/proof of purchase, and a written description of the problem to the place where the Speedlifter was purchased

by.schulz GmbH
Sulzbachstraße 49
66111 Saarbrücken
Deutschland
info@by.schulz.com

or to their country's respective distributor (see Website at www.speedlifter.com)

Please note that it is the responsibility of the user to regularly inspect the Speedlifter in order to determine whether some sort of maintenance is necessary.

Technical Specifications

Installation requirements (see chapter 3.1 for details)

1 1/8" metal A-Head® fork head tube with an outer diameter of 28.6 mm.

Various inner diameters are acceptable. As of the publication of this manual, Speedlifter Systems are compatible with metal fork tubes with inner diameters of 24.4mm, 24.6mm and 25.4mm.

Material: Speedlifter body and quill: high-strength aluminium;
safety bolt and lever: Nirosta/stainless steel



The Speedlifter's mode of action, a clamp operated by a quick-release lever, is essentially based on the adjustment of the seat post via a split collar and binder bolt on the slotted seat tube of a bicycle frame, a tried-and-tested technology that has been around for decades. The distribution of forces is handled optimally by the "tube in tube" clamp. The distinctive features of the Speedlifter are the extraction safety-stop and the twist-slip protection. The Speedlifter Twist offers the added advantage of twisting the handlebars 90 degrees to the right or left after pulling out the safety stop. You can make tool-free adjustments of handlebar height in seconds, but the position of the steering head bearings remains unaltered.

Design and operation subject to change without notice; misprints excepted.

Travel, weight and compatibility can be seen in this chart:

	Version / Travel				
	T5 50 mm	T6 60 mm	T7 70 mm	T10 100 mm	T14 140 mm
tested and certified for	City Trekking MTB	City Trekking MTB	City Trekking MTB	City Trekking MTB	 only for City and Trekking
for steel fork tubes with inner diameter 25,4 mm	classic : 275g	—	classic : 285g	classic : 310g	classic : 335g
	twist : 330g	—	twist : 340g	twist : 365g	twist : 390g
for alloy fork tubes with inner diameter 24,4 mm	—	classic : 270g twist : 325g	—	—	—
for alloy fork tubes with inner diameter 24,6 mm	—	classic : 275g twist : 330g	—	—	—



If you have not fully understood any part of this manual, please do not hesitate to contact your dealer. (See the list of dealers at www.speedlifter.com)



The patented Speedlifter systems are designed and manufactured by the German company by.schulz GmbH.



If the Speedlifter is to be permanently removed from the head tube of the fork, the A-Head® stem cannot simply be reinstalled on the slotted shaft. First, an A-Head® star nut must be inserted in the shaft (approx. 50 mm from its upper edge). The Speedlifter reinstallation shim must then be installed in the slotted portion of the fork shaft. The A-Head® top cap can now be fastened, but only with an extra long M6 Allen bolt. For more details contact your dealer.