

specifications for version bb_20061117HD heavy duty



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1 The bike-buggy Basic Structure

* The bike-buggy Special Clamp System is key issue to the whole thing. They are double-shelled and provide with their M8 bolts and their rugged housing more than enough clamping power to work through the sliced aluminum tubes onto the shafts of the forks which hold the wheels. Surely a very unique and reliable construction with just a few units to keep everything under control. The bike-buggy Special Clamp System is the minimum to start with to make it a legal and authorized bike-buggy to use. For more information, please read the DISCLAIMER section.

* The traverse is taken from industrial machinery standard anodized extruded aluminum profiles measuring 60x30 mm in profile, of a length of 740 mm (notice for Italians: together with the end-caps of 2 mm thickness each, the width of the bike buggy will not exceed Italian limits of 750 mm for bicycle trailers). The traverse transfers all powers on the bike-buggy between both wheels and the pulling bar.

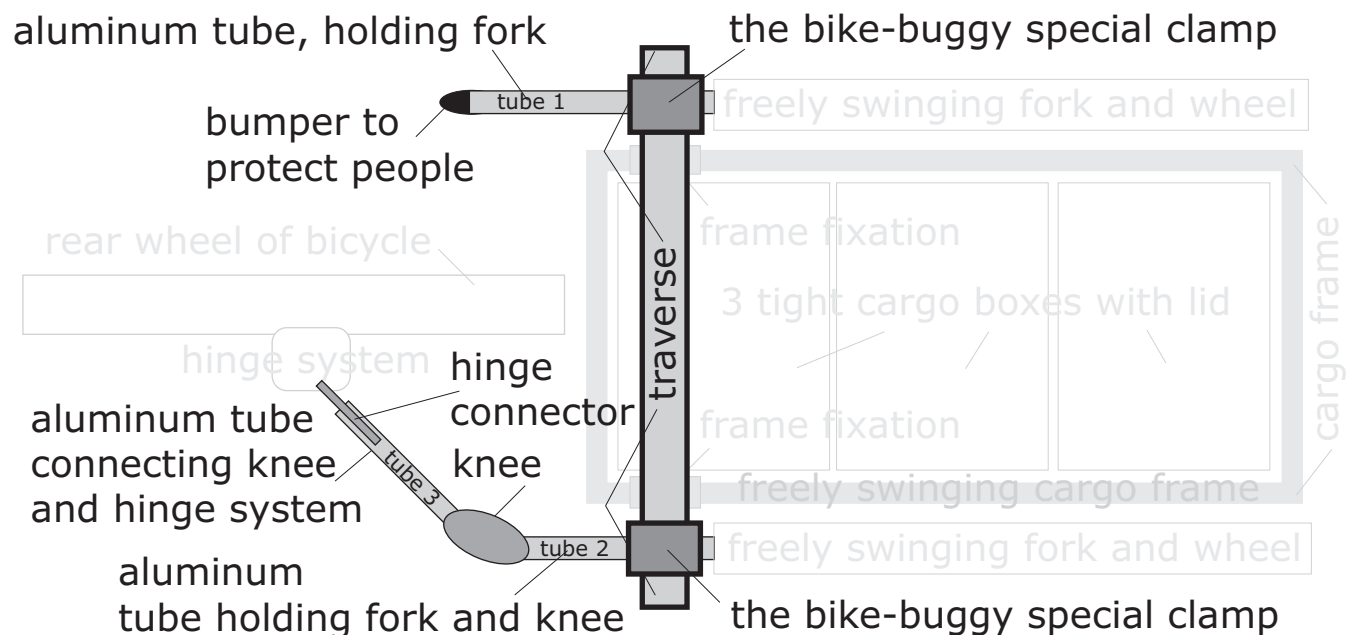
* The 30x2 mm tube system (fork support and pulling bar) is very strong. None of the three anodized extruded aluminum tubes is bended. None of them is longer than 340 mm. Any world wide standard bicycle front wheel fork with a one inch shaft (minimum shaft length required is 120 mm, maximum is 200 mm) will slip into either one of the tubes, then being pressed together by the bike-buggy Special Clamps to hold the wheels, the traverse, and the pulling bar in place even under rugged conditions. To give the pulling bar its curvation, no bending is used (weakening the aluminum and preventing you from dismanteling the bike-buggy into handable small pieces if needed, as on air planes). Instead, we use another clamping: a heavy duty knee element from cast aluminum with security bolts.

* To adapt the 30x2 mm round aluminum tubes to market proven hinge systems, the bike-buggy provides the material needed to reduce to their sizes and bolts ... we provide adapters for the Canadian Chariot Carrier Inc. (standard) and German Weber systems (additional costs will apply).

* You might purchase from us just the bike-buggy Special Clamp System. Each pair of clamps purchased with us includes the authorization to finish ONE bike-buggy-alike trailer after your own imagination or to build one after our plans. But, please, be aware that we only recommend such material we have extensively tested by ourselves.

* All material provided, the whole bike-buggy itself is demountable into pieces down to nuts and bolts. Such said, we have to rely on your careness to keep an eye on every single fastener which is involved into the whole bike-buggy structure. Therefore, any bike-buggy comes to you as a kit, even if we pre-assemble it for your convenience.

Layout: The bike-buggy Basic Structure



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3 The bike-buggy Forks and Wheels Segment

* One of the highly acclaimed advantages of the whole bike-buggy concept is the usage of bicycle industry standard front wheel forks and wheels with fork-shafts of exactly one inch. It allows the usage of any kind of wheel (new or second hand, steel or aluminum, standard bolting or quick-release, ... whatever meets your pocket or is available wherever you need to add wheels to the bike-buggy, all over the world.

* Another main feature of the overall bike-buggy concept is the principle used for shock absorbing. The fact that horizontally orientated wheel forks are clamped to just the very outer edge of the Frame Structure by means of the bike-buggy Special Clamp System and the (very stiff) traverse, makes the whole buggy swing like a tuning fork, no springs or other extra devices are needed to deploy a suspension system with very long spring travel - which is a must if you go bike-trekking off-road, to prevent the trailer from tilting just because you hit a stone or a root of a tree. Or ride on Latvian "roads" as I did in summer 2006.

* Provided with the 20061117HD standard version of the bike-buggy, the 26 inch front wheel fork is the most versatile solution: it holds wheels from 20 inch to 28 inch in size.

* If you add your own forks, make sure that the shaft(s) will not exceed 200 mm in length, and shall not be shorter than 120 mm, to allow the bike-buggy Special Clamp System to provide the correct pressure onto the wheel shafts through the slotted aluminum tubes. And again, make sure that the shaft diameter must be exactly one inch.

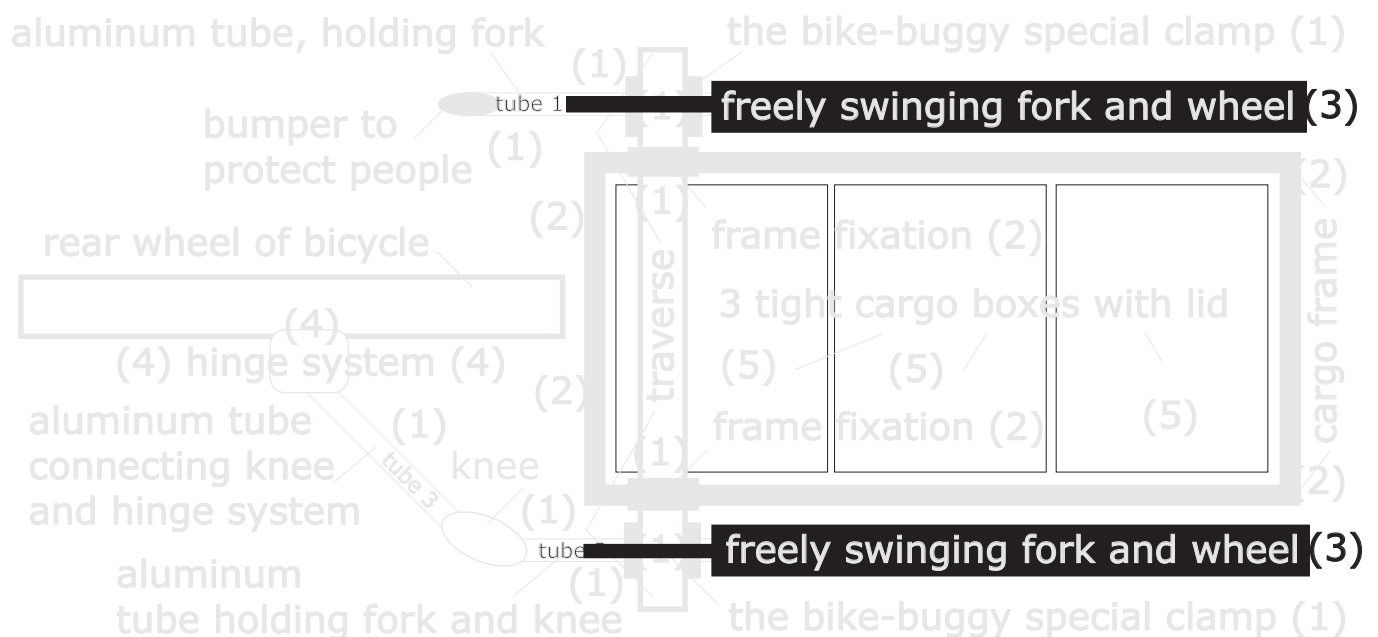
* Quick release joints are standard for our own 26 inch bike-buggy wheels, if provided by us. They come with yellow side reflectors for your safety.

* To support easy towing, we do not recommend MTB tires for the buggy itself, but prefer city bike tire profiles which provide enough grip in rough terrain while rolling smoothly enough on paved ground.

* Be aware that there are no brakes on the buggy itself, though our forks come with standard sockets for cantilever brakes. Therefore, we strongly recommend that you care for enough braking power on your pulling bike if you are using the bike-buggy with heavy cargo.

* The bike-buggy Special Clamp System allows tilting of the wheels instead of arranging them vertically. One might find this useful in very, very rough terrain to keep the bike-buggy stable. To further control the center of gravity, you also may mount the forks with their ends either upwards or downwards. And you may vary the extension of the forks by choosing slightly different clamping positions on their shafts.

Layout: Forks and Wheels Segment



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4 The bike-buggy Hinge System

* At the time being, for international customers we prepare the standard 20061117HD version of the bike-buggy to adapt directly to the elastic polymer ball joint provided by Chariot Carriers, Inc., Canada. You may purchase their axle-mount ezHitch(TM) coupling system at your local dealer, or buy the complete set with us, quick release and safety straps included. The related web site is found here: http://www.chariotcarriers.com/html_english/accessories.htm

Although we towed by far more than 60 kg on a bike-buggy with the Chariot hinge, they by themselves allow a maximum load of 45 kg for their two-seater kid trailers (which must not necessarily indicate the load allowance on the hinge)...

* For European and especially German customers who might prefer the Weber coupling system, we will adapt to this system for some extra charge, as it is more expensive though obviously widely spread.

* If you think about using a different hinge system, we will not warrant a proper functionality: Especially, we strongly do not recommend the CarryFreedom system, as we by ourselves ruined it the first day of testing and using it just under light conditions: it lost its bolts and deformed itself as the towing bike tilted over:

<http://www.carryfreedom.com/hitch.html>

5 The bike-buggy Cargo Boxes Segment

* The bike-buggy 20061117HD standard Frame Segment has its layout derived from the world wide availability of industrially standardized cargo handling or storage boxes. Since the advent of standardized containers for global transportation, the european palette standards provide the edge data. Thus, the raster of boxes for the standard bike-buggy is 40x30 cm. The 20061117HD version hold three of them.

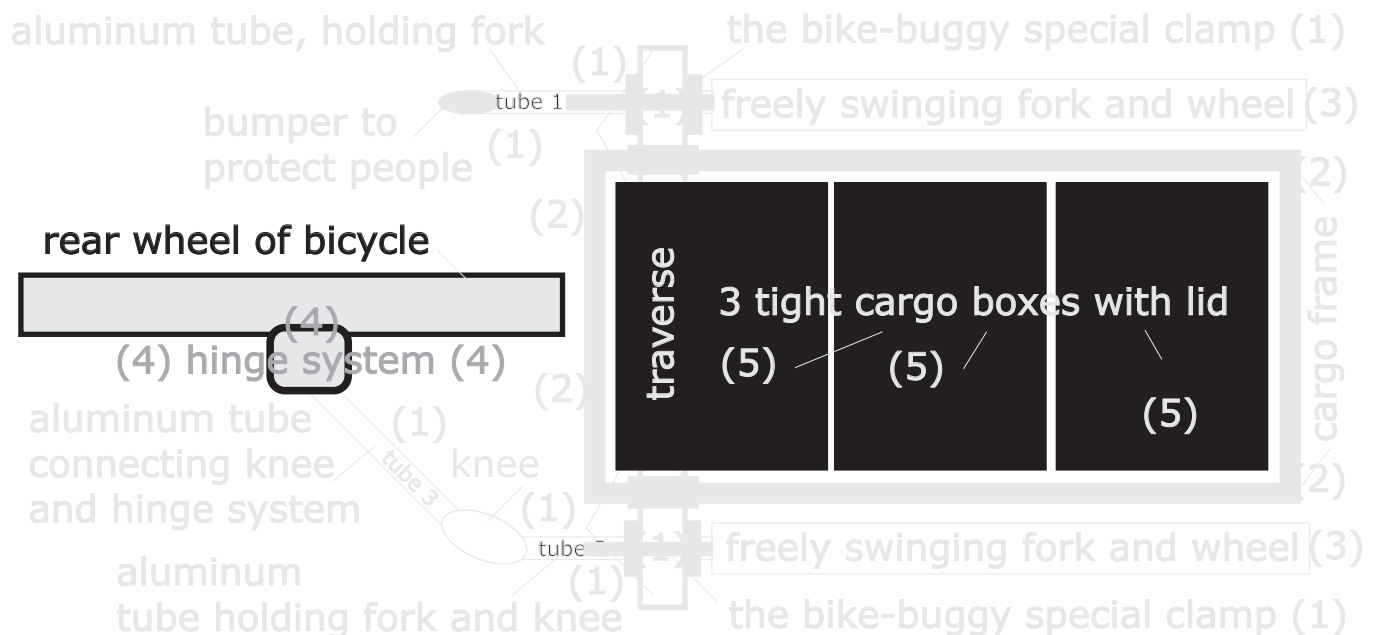
* We chose SSI as the most potential supplier of rigid heavy duty boxes, they operate and deliver world wide. Our pick out of an abundance of box choices made bei SSI is the EuroFix box type EF4320, one can buy it almost everywhere. View their international list of dealers here:

<http://www.ssi-schaefer-online.com/scripts/wgate/zzgesadr/!/?~language=en>

US resident pick their bike-buggy boxes here:

<http://www.ssi-schaefer.us/schaefer/productGroups/containerSystems/straightWall.html>

Layout: Hinge System, Cargo Boxes Segments



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6 Tools Needed to Build/Maintain your bike-buggy

* All bolts and screws are of Allen or hex key type type (european metrics):

http://en.wikipedia.org/wiki/Allen_wrench

You need these metric hex wrench nominal sizes: M3 for the Frame Segment, M5 for the assembly of the pulling bar elements and to mount the bike-buggy Special Clamp to the traverse, and M6 to operate the Special Clamp itself to hold the tubes and forks.

* To counter nuts against bolt-through fasteners, you need standard tools for M6 metric nuts (10 mm).

* At the time being (Dec 2006), tools are not shipped together with the bike-buggy.

* Bondhus(TM) type ball end long arms wrenches are a good choice to fix the Frame Segment together.

7 Spare Parts and Support for your bike-buggy

* Since a bike-buggy can be dismantled down to the last screw, bolt and T-nut, especially the latter ones may get lost easily. We always do have bolts and T-nuts in stock and ship them (usually same day shipping) world wide upon request (paypal payment will be accepted to accelerate the process).

* If hex wrenches are not handled with care (if they slip off the head of the bolt while wrenching, one might ruin the head), you might wish to order replacements as well, applying what is said above.

* Each bike-buggy is shipped with a complete and easy-to-understand owner's manual (on CD-ROM).

* We do provide e-mail support for any world-wide customer, use rd.ica-d@gmx.de to contact us.

German working hours are GMT+1, but you might catch us by chance even at any time.

* We will be glad to answer your questions by phone: (+49) 7271 51084, we speak english fluently.

8 Disclaimer

* All material and/or information provided herewith is copyrighted by law, one may use it for personal use or to inform others about the bike-buggy (please ALWAYS use proper citation with active links to <http://www.bike-buggy.com>) only. Copying the basic bike-buggy principles (especially the shock absorbing and clamping principles), the use of this material for commercial purposes where income is derived around ourselves or away from us (i.e. the use on link pages etc. gaining income from sponsors and the like), is STRICTLY prohibited.

* Such said, we provide a single, transferable, personal i.e. individual right-of-use of all bike-buggy principles for the usage or making of a single bike-buggy connected to exactly every ONE pair of bike-buggy Special Clamps sold by us directly or indirectly by authorized dealers. Any other usage of the bike-buggy principles published hereby or by other documents related to the bike-buggy and authorized and copyrighted by us, is strictly prohibited.

* As the whole bike-buggy may be dismantled down to the last screw, we do NOT warrant the proper functionality nor the safety of the bike-buggy "in toto". Each user of the bike-buggy shall be responsible for proper and safe settings of all fasteners, bolts, screws, etc. Thus, we only provide the bike-buggy as a "kit", even if it will be pre-assembled by us for your convenience.

* Proper and responsible usage of the bike-buggy assumed, we do warrant the reliability and functionality of any bike-buggy material what we ship by ourselves, in such manner that we guarantee the functionality of each and any part of the bike-buggy under proper handling and usage. This warranty is limited to 2 years after date of purchase.

* As we do not have any influence on how you as a customer and end-user of the bike-buggy will handle it, we will not be responsible for any and all damage caused by using any bike-buggy you either purchased with us in parts or in toto, or through any dealer.

* We are proud of our designs, the bike-buggy principles, the look and layout, the whole thing ... we will be happy to here from you as our customer, how you feel with your personal copy or DIY-version of any bike-buggy we are offering today and in the future. Send us your comments, we will be happy to listen to you. All critics are welcome to make this strong-going bike-buggy trailer even better! Thank you....