

## **Section 2: bicycles**

### **Preamble**

Bicycles shall comply with the spirit and principle of cycling as a sport. The spirit presupposes that cyclists will compete in competitions on an equal footing. The principle asserts the primacy of man over machine.

### **Principles**

#### **Definition**

**1.3.006** The bicycle is a vehicle with two wheels of equal diameter. The front wheel shall be steerable; the rear wheel shall be driven through a system comprising pedals and a chain.

#### **Type**

**1.3.007** Bicycles and their accessories shall be of a type that is or could be sold for use by anyone practising cycling as a sport. The use of equipment designed especially for the attainment of a particular performance (record or other) shall be not authorised.

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### **Position**

**1.3.008** The rider shall normally assume a sitting position on the bicycle. **This position requires that the only points of support are the following: the feet on the pedals, the hands on the handlebars and the seat on the saddle.**

(text modified on 1.01.09).

### **Steering**

**1.3.009** The bicycle should have handlebars which allow it to be ridden and manoeuvred in any circumstances and in complete safety.

### **Propulsion**

**1.3.010** The bicycle shall be propelled solely, through a chainset, by the legs (inferior muscular chain) moving in a circular movement, without electric or other assistance.  
(text modified on 1.01.05).

### **Technical specifications**

Except where stated to the contrary, the following technical specifications shall apply to bicycles

used in road, track and cyclo-cross racing.

The specific characteristics of bicycles used in mountain bike, BMX, trials, indoor cycling and **paracycling**

for riders with disabilities are set out in the part regulating the discipline in question.

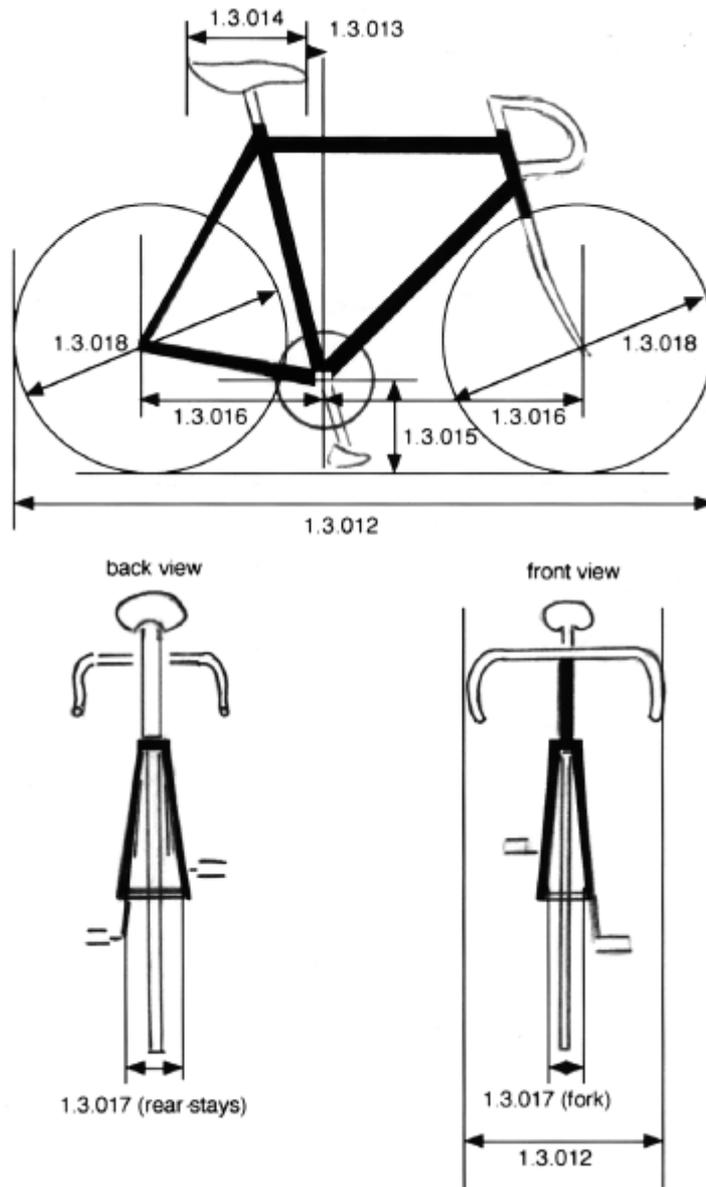
(text modified on 1.01.05; 25.06.07).

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**1.3.011 a) Measurements (see diagram «Measurements (1)»)**

## Measurements (1)



**1.3.012** A bicycle shall not measure more than 185 cm in length and 50 cm in width overall. A tandem shall not measure more than 270 cm in length and 50 cm in width overall.

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**1.3.013** The peak of the saddle shall be a minimum of 5 cm to the rear of a vertical plane passing through the bottom bracket spindle (1). This restriction shall not be applied to the bicycle ridden by a rider in a track sprint

event, keirin, 500 metres or 1 kilometre time trials; however, in no circumstances shall the peak of the saddle extend in front of a vertical line passing through the bottom bracket spindle.

(1) The distances mentioned in footnote (1) to articles 1.3.013 and 1.3.016 above may be reduced where that is necessary for morphological reasons. By morphological reasons should be understood everything to do with the size and limb length of the rider. Any rider who, for these reasons, considers that he needs to use a bicycle of lesser dimensions than those given shall inform the commissaires' panel to that effect when presenting his licence. In that case, the panel may conduct the following test. Using a plumb-line, they shall check to see whether, when pedalling, the point of the rider's knee when at its foremost position passes beyond a vertical line passing through the pedal spindle (see diagram «Measurements (2)»).



- On impact, no element of the wheel may become detached and be expelled outwards.
  - The rupture must not present any shattered or broken off elements, or any sharp or serrated surfaces that could harm the user, other riders and/or third parties.
  - The rupture characteristics must not cause the hub to become separated from the rim in such a way that the wheel becomes detached from the forks.
- Without prejudice to the tests imposed by the laws, regulations or customs, standard (traditional) wheels are exempted from the rupture test referred to above. A traditional wheel is deemed to be a wheel with at least 16 metal spokes; the spokes may be round, flat or oval, provided that no dimension of their cross sections exceeds 2.4 mm; the section of the rim must not exceed 2.5 cm on each side.
- Notwithstanding this article, the choice and use of wheels remains subject to articles 1.3.001 to 1.3.003.  
(text modified on 1.01.02; 1.01.03; 1.09.03; 1.01.05).

#### **1.3.019 b) Weight**

The weight of the bicycle cannot be less than 6.8 kilograms.

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#### **1.3.020 c) Configuration**

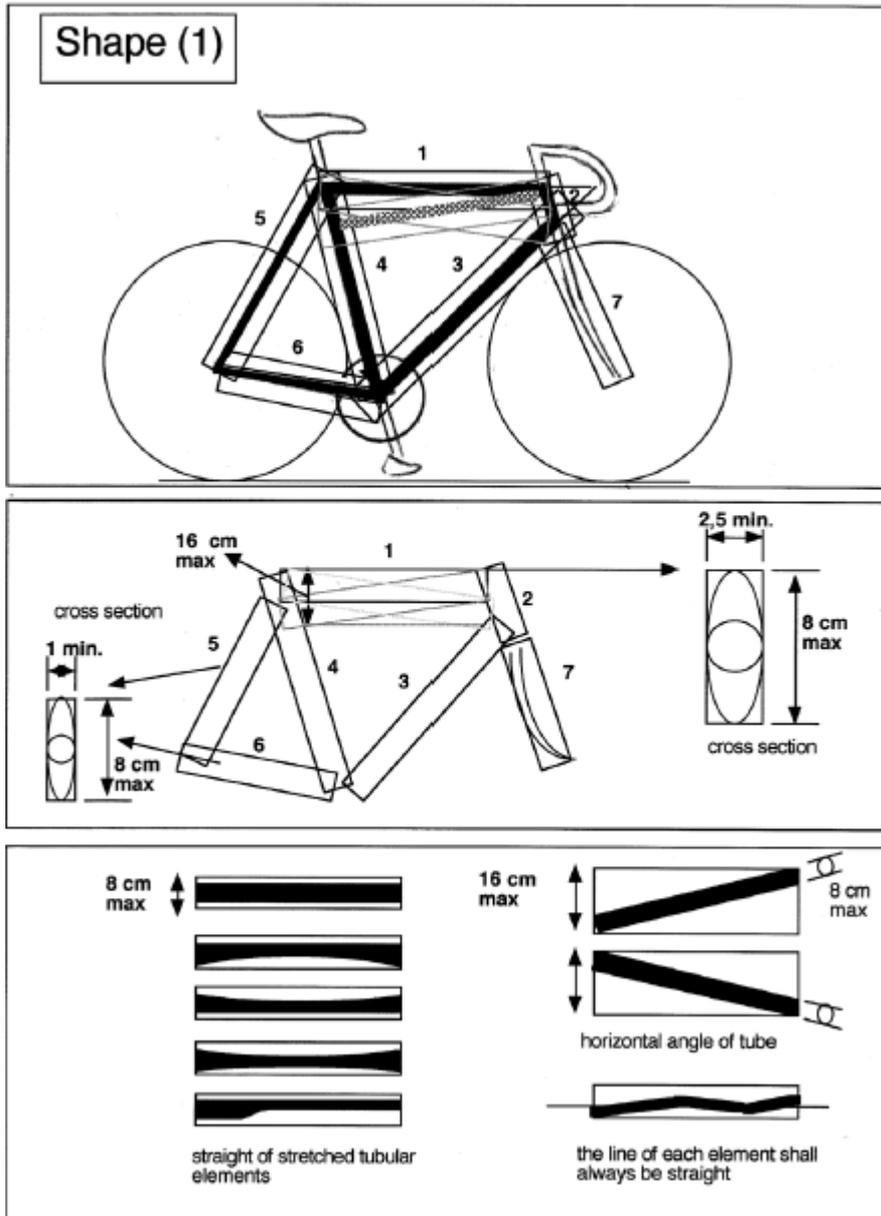
For road competitions other than time trials and for cyclo-cross competitions, the frame of the bicycle shall be of a traditional pattern, i.e. built around a main triangle. It shall be constructed of straight or tapered tubular elements (which may be round, oval, flattened, teardrop shaped or otherwise in cross-section) such that the form of each element encloses a straight line. The elements of the frame shall be laid out such that the joining points shall follow the following pattern: the top tube (1) connects the top of the head tube (2) to the top of the seat tube (4); the seat tube (from which the seat post shall extend) shall connect to the bottom bracket shell; the down tube (3) shall connect the bottom bracket shell to the bottom of the head tube. The rear triangles shall be formed by the chain stays (6), the seat stays (5) and the seat tube (4) with the seat stays anchored to the seat tube at points falling within the limits laid down for the slope of the top tube. The maximum height of the elements shall be 8 cm and the minimum thickness 2.5 cm. The minimum thickness shall be reduced to 1 cm for the chain stays (6) and the seat stays (5). The minimum thickness of the elements of the front fork shall be 1 cm; these may be straight or curved (7).  
(See diagram «Shape (1)»).

The top tube may slope, provided that this element fits within a horizontal template defined by a maximum height of 16 cm and a minimum thickness of 2.5 cm.  
(text modified on 7.06.00; 1.01.05).

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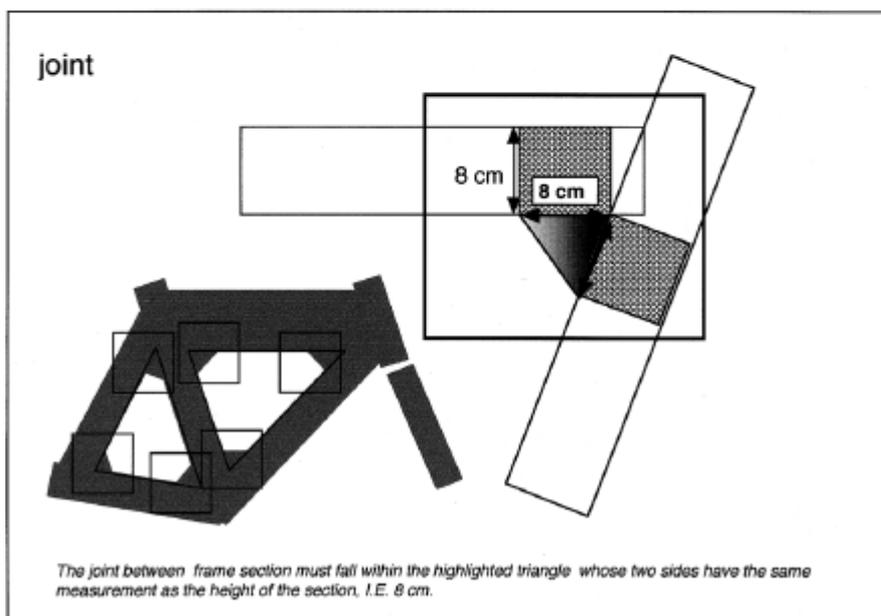
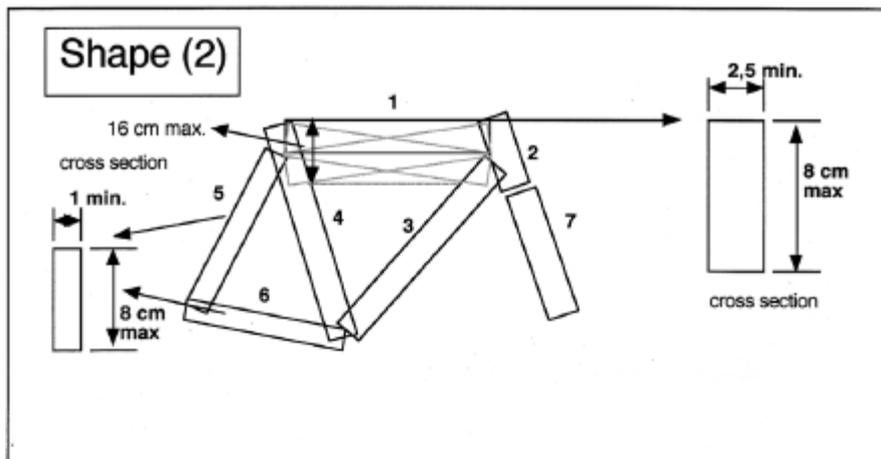
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**1.3.021** For road time trials and for track competitions, the elements of the bicycle frame may be tubular or solid, assembled or cast in a single piece in any form (including arches, cradles, beams or any other). These elements, including the bottom bracket shell, shall fit within a template of the «triangular form» defined in article 1.3.020. (See diagram «Shape (2)»). (text modified on 7.06.00; 1.01.05).

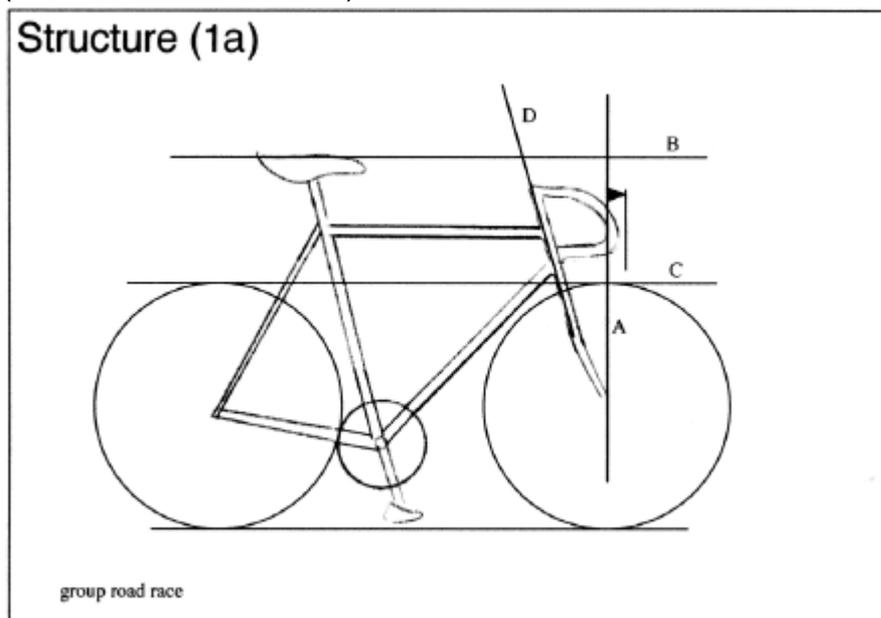
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### 1.3.022 d) Structure

In competitions other than those covered by article 1.3.023, only the traditional type of handlebars (see diagram «structure 1») may be used. The point of support for the hands must be positioned in an area defined as follows: above, by the horizontal plane of the point of support of the saddle (B); below, by the horizontal line passing through the highest point of the two wheels (these being of equal diameter) (C); at the rear by the axis of the steerer tube (D) and at the front by a vertical line passing through the front wheel spindle with a 5 cm tolerance (see diagram «Structure (1A)»). The distance referred to in point (A) is not applicable to the bicycle of a rider who takes part in a sprint, keirin or olympic sprint race, but must not exceed 10 cm in relation to the vertical line passing through the front wheel spindle. The brake controls attached to the handlebars shall consist of two supports with levers. It must be possible to operate the brakes by pulling on the levers with the hands on the lever supports. Any

extension to or reconfiguration of the supports to enable an alternative use is prohibited. A combined system of brake and gear controls is authorised. (text modified on 1.01.05).



**1.3.023** For road time trials and the following track **events:** individual and team pursuit, kilometre and 500 m a **fixed** extension may be added to the steering system; **in this instance, only a position where the forearm is in the horizontal plane is permitted.** The distance between the vertical line passing through the bottom bracket axle and the extremity of the handlebar may not exceed 75 cm, with the other limits set in article 1.3.022 (B,C,D) remaining unchanged. Elbow or forearm rests are permitted (see diagram «Structure (1B)»).

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For road time trial competitions, controls or levers fixed to the handlebar extension may extend

beyond the 75 cm limit as long as they do not constitute a change of use, particularly that of providing an alternative hand position beyond the 75 cm mark.

For the track and road competitions covered by the first paragraph, the distance of 75 cm may be

increased to 80 cm to the extent that this is required for morphological reasons; «morphological reasons

» should be taken as meaning anything regarding the size or length of the rider's body parts. A

rider who, for this reason, considers that he needs to make use of a distance between 75 and 80

cm must inform the commissaires' panel at the moment that he presents his licence. In such cases

the commissaires' panel may carry out the following test: ensuring that the angle between the forearm

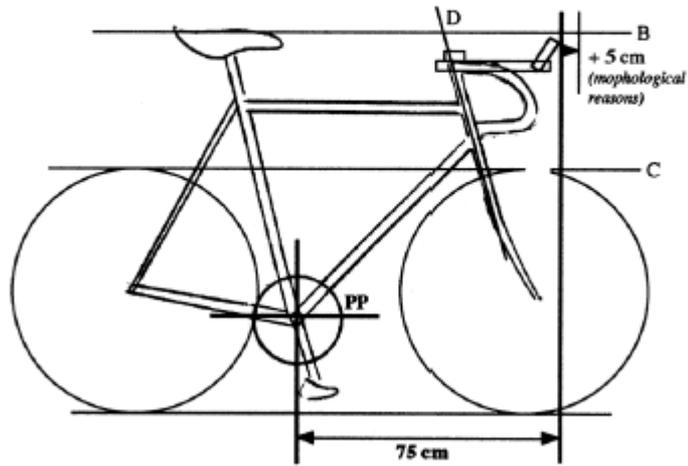
and upper arm does not exceed 120° when the rider is in a racing position.

(text modified on 7.06.00; 1.01.05; 1.04.07; 1.01.09).

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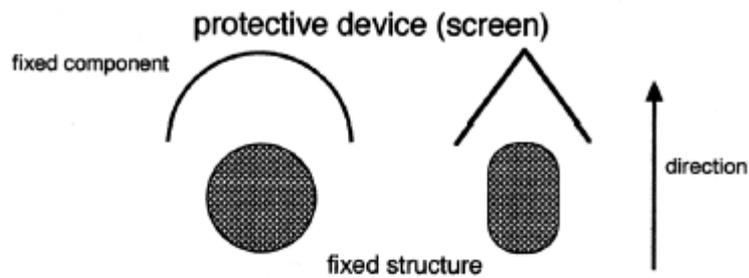
### Structure (1b)



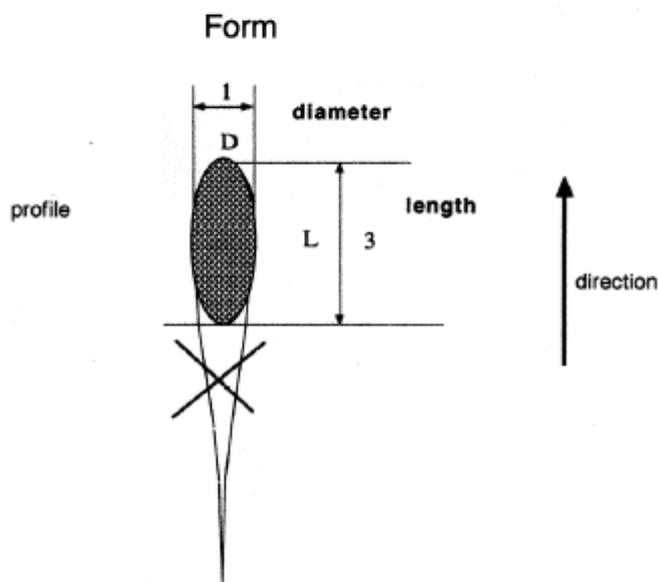
road time trials (individual and team) and track races (individual and team pursuit, kilometre, 500 metres and record attempts).

**1.3.024** Any device, added or blended into the structure, that is destined to decrease, or which has the effect of decreasing, resistance to air penetration or artificially to accelerate propulsion, such as a protective screen, fuselage form fairing or the like, shall be prohibited.

## Structure (2)

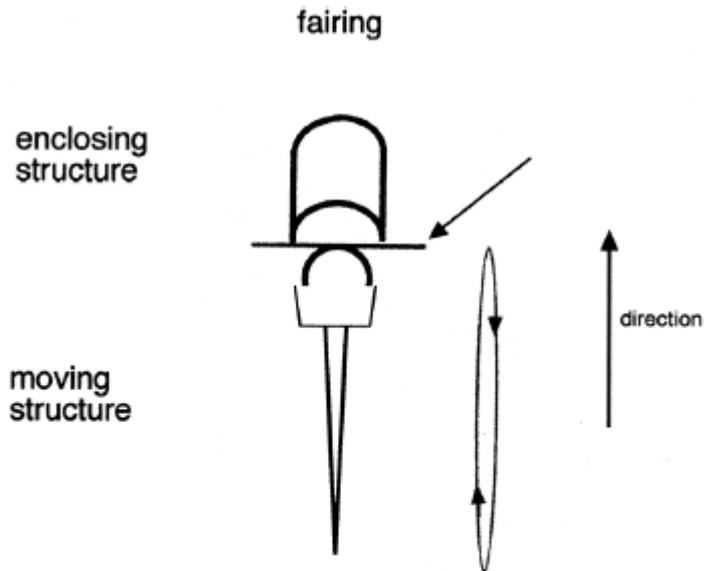


A protective screen shall be defined as a fixed component that serves as a windscreen or windb designed to protect another fixed element of the bicycle in order to reduce its wind resistance.

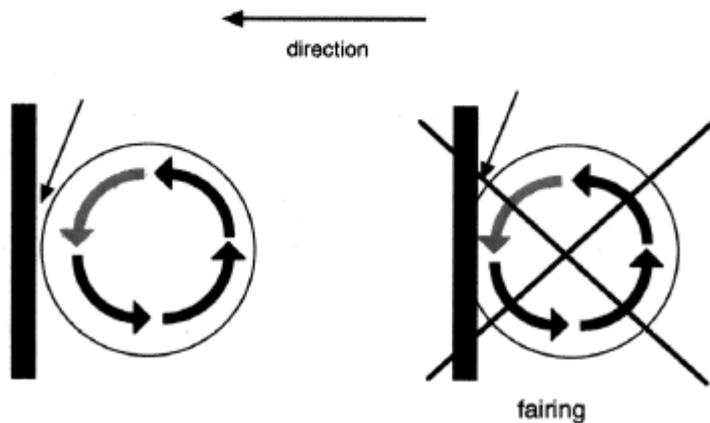


A fuselage form shall be defined as an extension or streamlining of a section. This shall be tolerated as long as the ratio between the length  $L$  and the diameter  $D$  does not exceed 3.

## Structure (3)



practical way of confirming the existence of fairing on a moving part such as a wheel : it should be possible to pass a rigid card (like a credit card) between the fixed structure and the moving part.



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A fairing shall be defined as the use or adaptation of a component of the bicycle in such a fashion that it encloses a moving part of the bicycle such as the wheels or the chainset. Therefore it should be possible to pass a rigid card (like a credit card) between the fixed structure and the moving part.

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**1.3.025** Freewheels, multiple gears and brakes are not permitted for use on the track during competition or training.

Disc brakes are forbidden in cyclo-cross training and competition.

**For races on the road and cyclo-cross, a braking system that acts on both wheels is required.**

(text modified on 1.09.04; 1.01.05; 1.01.09).