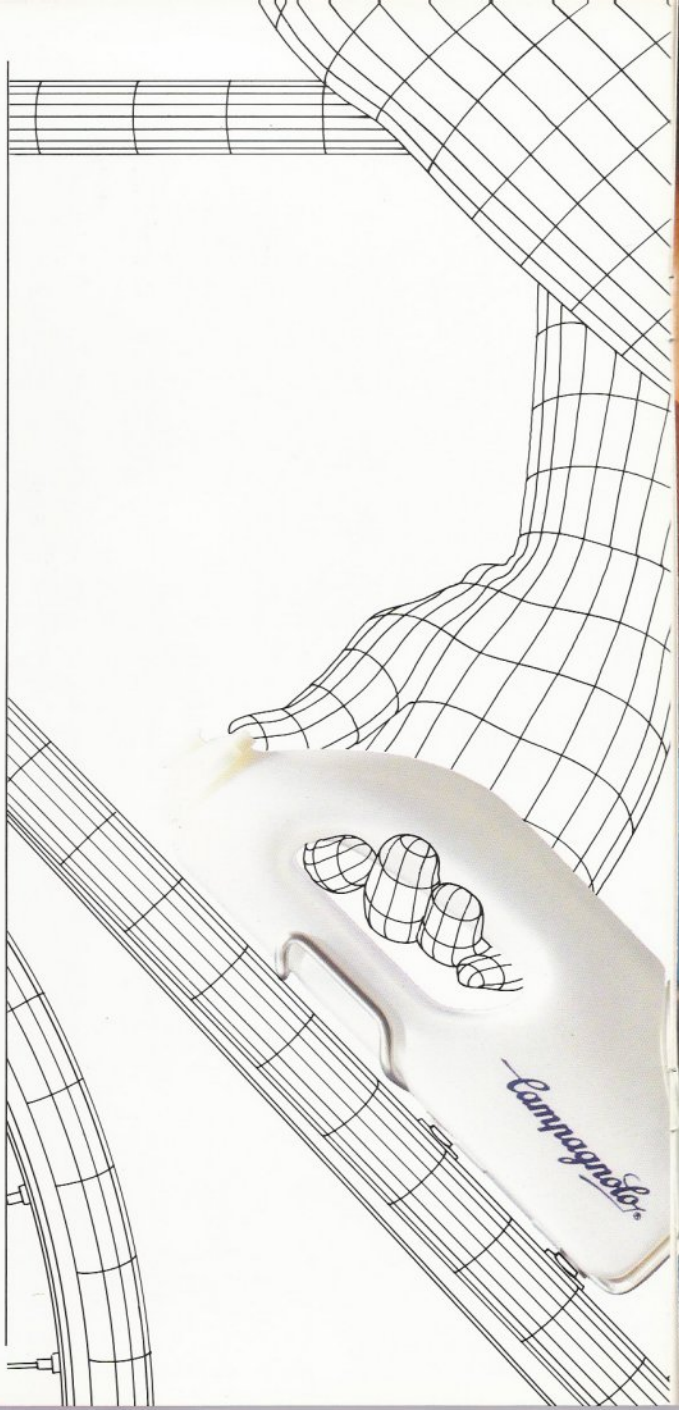
Campagnolo



BOTTLES



Campagnolo

WHEN TECHNOLOGY BECOMES EMOTION

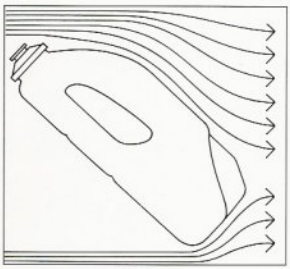


BIODYNAMIC BOTTLE

Even in the design of the traditional bottle, the rider's needs during a race must be kept in mind.

The bottle must have an aerodynamic shape to avoid creating vortices which increase wind resistance. The optimum solution is to avoid wasting space with aerodynamic adaptors by making

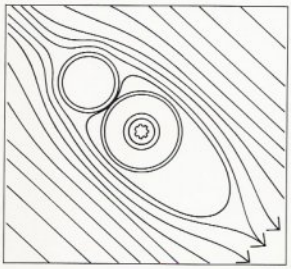




the bottle itself fit around the down tube.

The Campagnolo biodynamic bottle has an aerodynamic shape: the frontal area and shape of the sides ensure that the bottle forms an aerodynamic whole with the down tube to which it is attached, and the tapering shape avoids the creation of turbulence and vortexes.

The shape of the bottle must

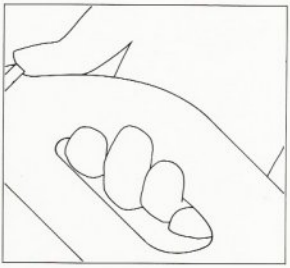


make it easy to grip and comfortable to use. The rider should be able to remove it from the cage and replace it without looking down.

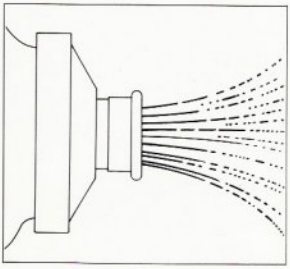
The Campagnolo biodynamic bottle is shaped to fit the hand, in order to ensure that it is easy to grip.

The bottle must be able to be opened automatically with just one hand and the mouth, without needing to use the fingers or the other hand.

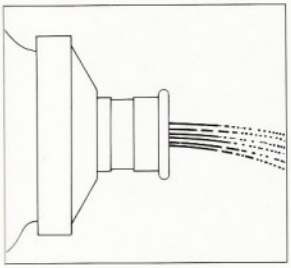
The Campagnolo biodynamic bottle features a two-position valve,



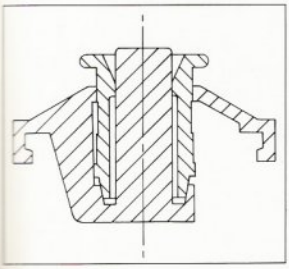
which when pulled out to the first position provides a fine spray, enabling the rider to moisten his head without wasting water. By pulling the valve to its fully open position with his teeth, the rider



BIOTHERMAL BOTTLE



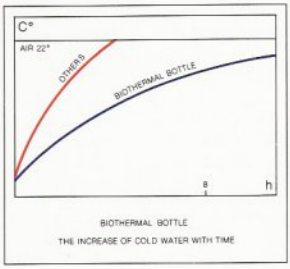
can obtain a full jet in order to satisfy his thirst. Pushing the valve back ensures leak-free closure.



Among the problems facing the cyclist are those of putting up with the effects of thirst and cold.

When the temperature reaches 25-30°C, drinking water of the same temperature provides no real refreshment. Stopping to find cool drinks or calling the team car means losing precious moments in a race. On the other hand, when climbing



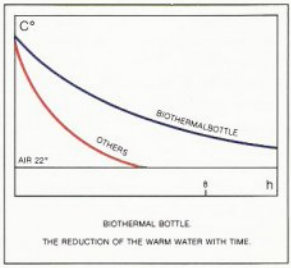


BIOTHERMAL BOTTLE
THE INCREASE OF COLD WATER WITH TIME

snow-covered mountains or racing in cold Northern weather, a hot drink provides energy and refreshment.

At times like these, both the physical performance and the psycological state of the athlete are involved, and they are moments that can make the difference between giving up and getting back into the race. This applies equally to amateur and professional riders.

Obviously, a normal glass

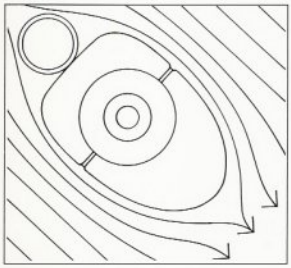


BIOTHERMAL BOTTLE
THE REDUCTION OF THE WARM WATER WITH TIME.

thermos flask is too fragile for this use, and a normal bottle with no insulation allows a temperature rise

of 8°C every hour in an ambient temperature of 25°C, with an even faster rise for cool liquids (from 5°C to 15°C in the first hour).

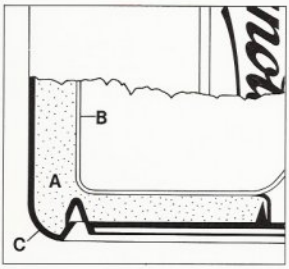
Tests conducted in the laboratory and on the road have shown that a thermos bottle suited to this kind of application should



allow a rise of 1,5°C - 2°C in the temperature of the contents per hour.

The Campagnolo biothermal bottle is made up of a bottle made of multilayer plastic, with insulating material in a flattened, elongated shape (width: 70 mm) in order to provide the minimum aerodynamic resistance with the minimum of weight (170 g).
It's covered with a light but thermically insulating material of sufficient thickness to limit the transmission of heat in order to mantain the liquid within an acceptable temperature range for the desired time.

A - The insulating is ensured by means of rigid closed cells expanded polyurethane with a very

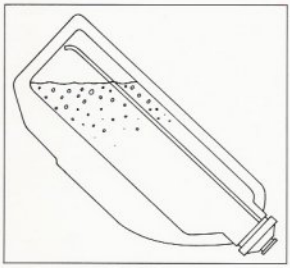


low coefficient of heat transfer.

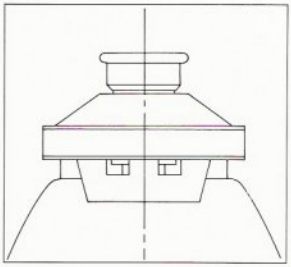
B - The internal plastic bottle is able to contain drinks or liquid foods.

C - The external covering is made of impact resistant resin.

The Campagnolo biothermal bottle features a patented liquid delivery system, easily operated by



a cyclist during a race in the open and closed positions. As this bottle must be rigid, liquid delivery is produced by gravity only. To facilitate this, the valve simultaneously opens the water passage and the passage to which the tube leading to the bottom of



the container is connected. This ensures that a vacuum is not created in the container, thereby permitting free delivery via the mouthpiece.

The airtight valve can be operated by the teeth while holding the bottle with one hand. Obviously, the grip is shaped anatomically. The results are excellent: the liquids, whether hot or cold lose 1,5° per hour. At an ambient temperature of 25°C, water at 7°C would reach 17°C after 7 hours whereas with the normal bottle this increase would take place in only one hour. Comparing this data, it's easy to understand the result obtained by the Campagnolo researches as far as the thermal bottle-problem is concerned.

BOTTLES



GREY: SERVICES
SYMBOL: BOTTLES

CODE	PRODUCT	NET CONTENTS	WEIGHT	DISTRIBUTOR
0130001	BIODYNAMIC BOTTLE WITH CAGE	500 CC.	64 g 117 g	OPEN SHOWER CLOSED
0130002	BIOTHERMAL BOTTLE WITH CAGE	500 CC.	170 g 232 g	OPEN CLOSED
1316004	CAGE FOR BIODYNAMIC BOTTLE	—	53 g	—
1316005	CAGE FOR BIOTHERMAL BOTTLE	—	62 g	—
2143032	CORK FOR BIODYNAMIC BOTTLE	—	9 g	OPEN SHOWER CLOSED
2143033	CORK FOR BIOTHERMAL BOTTLE	—	11 g	OPEN CLOSED

Campagnolo®

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