Safety First

For us Safety first of all.

We think that helmets should be essential and functional, in order to be used with high active safety, without weighing them down with little useful gadgets, and without external roughness, which could get tangled in the asphalt in case of fall, like applied spoilers, protruding air intakes, etc.

For safety, the best helmet should have the shape of the shell as close as possible to an isotropic product. With the smallest possible window visor, as wider it is and more the cut cuts the fibers and weakens the helmet, and naturally the protected area of the driver's head decreases.

Safety wants a visor with optical class 1 and resistant to high impact.
We use 3.2 mm thick visors, the same ones used on F1 helmets, anti-fog in all conditions and resistant to abrasion.
It must be well anchored to the shell to keep the eye area protected even in the event of a fall.

How we worked to design CM6 and CM5.

The shell
as a whole (Outer shell + PS), in the event of a fall it has the task of absorbing the kinetic energy, which would otherwise be transmitted to the rider's head.
It is also important to limit the helmet weight so as not to increase the energy that it must absorb. Greater helmet weight means more energy to be dissipated in the event of an impact: $Ec = m \cdot v^2 / 2$ (mass x speed squared: 2).
It is useless for the helmet to withstand even the impact of energy derived from its own weight.

In the event of an accident, where does the helmet receive the impact? From the study related to motorcycle accidents in 8 European countries, on thousands of cases studied by COST and reported on the Motorcycle-Safety-Helmets-Final-report, on which the SHARP UK tests were based, it was verified that:
53% of impacts in accidents occur on the side areas
21% of bumps occur in the back
24% on the frontal area.

The side areas are those that must guarantee a high absorption of kinetic energy, precisely the areas where, in order to have an aerodynamic helmet, the thickness of the inner shell in PS is thinner and absorbs less energy.
Furthermore, the ellipsoidal longitudinal section causes the side areas to be structurally less resistant to crushing.

Cast

To absorb more energy, particularly in the side areas, it must be distributed by building shells with high rigidity.

The more we distribute impact energy over a large area of the helmet, the more we can absorb it.

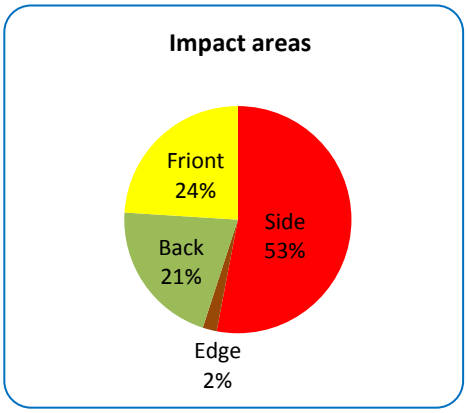
The technically best method to have rigid shells is to use Carbon Fiber, as the greater rigidity of this fiber allows us to optimize the energy distribution in the event of a crash on a wider area.
For this reason Cast is specialized in the production of carbon fiber helmets and uses sectors with this fiber also in composite fiber helmets.

The visor

The optical quality in all conditions ensures driving safety.
Possible optical distortions, fogging, low scratch resistance, determine a reduction in visibility with consequent danger for the driver.

CM6, and CM5, have a Lexan visor, with class 1 optical quality and with permanent anti-abrasion + anti-fog treatments. The best available today, without the use of internal films that decrease optical qualities.

The regulations require motorcycle helmets to have a high resistance to breakage, while they do not require the same resistance to the visor, an area which is at first exposed to possible shocks and whose task is to preserve a very important area of your body.
The perforation of the visor due to a stone thrown by the tires of the car that precedes, or the breaking of the visor due to an accident with consequent danger of the cutting parts, which are created, determine the weakness of the visor in the field of security.



The CM6, and CM5, helmets are fitted with a 3.2mm thick visor (the same as the F1 car helmets), which has a resistance greater than the breaking of a normal 2mm visor,
In the laboratory test of visors impact resistance, of a dart of 180 grams (cold), at a speed of 230 km/hour, the 2 mm thick visor breaks in the impact, while the 3,2mm thick visor remains intact while deforming.
Do not think that 230 km/hour is higher than your usual speed, add your speed to the opposite speed of the stone thrown at you by the car that precedes you.

Cast

The visor mechanism
we believe it must be safe, strong and proof of any falls.
We do not believe it is appropriate to use a super-rapid attack in just a few seconds, and full of clothespins, which is generally released at the least opportune moments. We think of a safe and professional attack in its essentiality, which does not allow the replacement of the visor in 4 seconds, but in at least 2 minutes (2 minutes spent for your safety) It must guarantee the visor safety, which does not come off from helmet in case of impact, leaving dangerously the face uncovered.

Interior
A greater thickness of the internal "padding" leads to a perception of greater comfort of the rider's head and is often the reason for choosing the helmet, generally tried "from a standstill".
The disadvantage however, is that of greater "wobbling" of the helmet at speed, also due to the aging of the internal sponge, for which consequent decrease in the pilot's visibility.

We design the helmet shape interior in order not to have to use thick layers of sponge mousse. In some cases you will find it "harder" than in other helmets.
It is for your safety.
The fabrics we use are made in Italy and certified free of amines and harmful substances.
It is for your health.