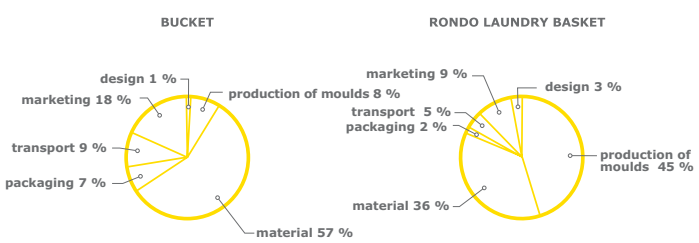
Bucket

Millions of items made with injection moulding

Injection moulding technology permits the manufacture of large series of products. The moulds are expensive, but since they are used for making millions of pieces, costs per item are low. Injection moulding is well suited to cup and bowl-shaped objects. Almost all the casings and shells of electronic equipment are made with injection moulding.

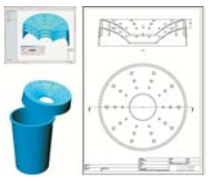


Production figures over five years for buckets and Rondo-brand laundry baskets made by the Orthex company of Finland.

Laundry baskets - a challenge for the designer

The Rondo laundry basket by Pentagon Design

Before the design of a new product begins, specifications are drawn up describing the properties of the future product, including its purpose, desired function, material, size and target price. The starting point for Rondo was a 50-litre laundry basket with a lid. The maximum height of items that could be produced with the manufacturer's machinery was 57 cm.



At the beginning of the concept design and planning stage, competing products on the market are assessed and the requirements of users are studied. Concepts are developed and drafted for various solutions. In addition, manufacturing-related considerations have to be taken into account in the planning stage.

Working from drafts and sketches, the designer developed various alternative designs that were visualized with computer-assisted means. The alternatives were evaluated together with the client and the most promising solution was chosen to be further developed.

The final stage involved the design of the details: the thickness of the walls, the location of supporting handles, the rounding of the edges etc. The geometry of the product was simulated in the form of a computer-generated three-dimensional model. The moulds for the product were made at a special plant in Italy with digitally controlled technology employing the three-dimensional model. The whole process from launching the design work to introducing the product on the market took approximately one year.

There's a bucket in every home

Sixty-seven percent of all Finns gather berries. Some 50 million kilograms of forest-grown berries are picked each year, two-thirds of which are for private use. Since the 1950s plastic buckets have replaced chip baskets for this purpose, and plastics have gradually become the material of all berry-picking equipment. Light weight, durability and low price are important considerations for the consumer.

In September 2003 the sixth world championships in berry picking for teams were held at Suomussalmi in Northeastern Finland. Some three hundred contestants picked almost 300 kilograms, slightly over 200 plastic bucketfuls, of lingonberries. The members of the winning team filled each plastic bucket in about eight minutes, gathering a total of 73.7 kilograms. The competition also had a series for children.

Sources: Metsämarja- ja sienialan erityistoimet -työryhmän muistio. MMM 2002:6; www.arktisetaromit.fi

What did we use when we didn't have plastics?

A wide range of solutions for carrying water have been developed in different cultures at different times: leather bottles, palm-leaf containers, calabashes, pottery, tin buckets...