



TRANSFORMING PACKAGING FOR FOOD PRODUCTS

Klymenko T., PhD, Associated Professor

Bukhalenkova A., student

Educational and Scientific Printing and Publishing Institute

of the Igor Sikorsky Kyiv Polytechnic Institute, Department of Printing Technology

Food packaging has a life cycle that is standard for any packaging: "production – use – disposal – recycling". Packaging manufacturers strive to ensure the cyclical use of materials, because it is more profitable to spend resources on conversion than on disposal [1].

Recent trends in packaging design are focused on environmental friendliness and minimization, which contributes to more efficient production, recycling of materials and reuse of raw materials. Both manufacturers and consumers seek to minimize the amount of packaging used, because it is beneficial from an economic point of view. Also, the dominant trend today is packaging that exactly matches its contents both in terms of size and materials [2]. The issue of environmental friendliness of packaging is relevant not only because the volume of waste and the efficiency of its processing affect the ecology of the environment and are controlled by government, but also because of the economic benefit for manufacturers.

According to the Law of Ukraine "On Waste Management" (art. 5), the main principles of waste prevention include encouraging the design, production and use of resource-efficient and more durable products, including extending the period of their use, as well as products suitable for repair, re-use and modernization [3]. This principle gives potential to the invention of new packaging designs and use that will promote reuse or alternative use and extend the use phase.

Transforming packaging is not widespread at the moment, but it has the potential to develop and use new ideas. Transforming packaging is usually gift packaging that aims to impress the consumer with its effectiveness and interactivity.

Such a packaging format can be not only aesthetically attractive, but also perform additional functions that are not originally included in the meaning of the concept of "packaging". For example, packaging for children's products that can be used to make toys, or packaging that can be used as a calendar.

On the basis of the analysis of trends, a design of a transformer gift food package is proposed, which is a four-sided pyramid printed on two sides (fig. 1). The front side of the package serves as the outer packaging for the food product – candy, and the back side contains a calendar for the year. After using the package for its intended purpose, the consumer can unfold the package and fold it inside out, obtaining a pyramid-shaped desktop calendar. Easy transformation of the package is ensured by non-adhesive fastening, which allows you to fold it repeatedly with the help of valves. Therefore, the use phase of such packaging will have two stages:

- as packaging for a food product (approximately 1-7 days);
- as a desktop calendar (approximately 1 year).



Thus, when buying one product, consumers get not only a food product, but also a promotional souvenir product (calendar) from the package itself. This allows consumers to receive products by the principle of "two in one", spending less money, reduce the amount of waste from products (in the case of calendar packaging – spending money on purchase and disposal only for packaging, instead of packaging and calendar separately). This approach to packaging design will help to spread awareness about the principles of waste minimization and reuse among consumers, because it is a visible and physical example that they will be able to use to their advantage and be convinced of the advantages of lean manufacturing and consumption.

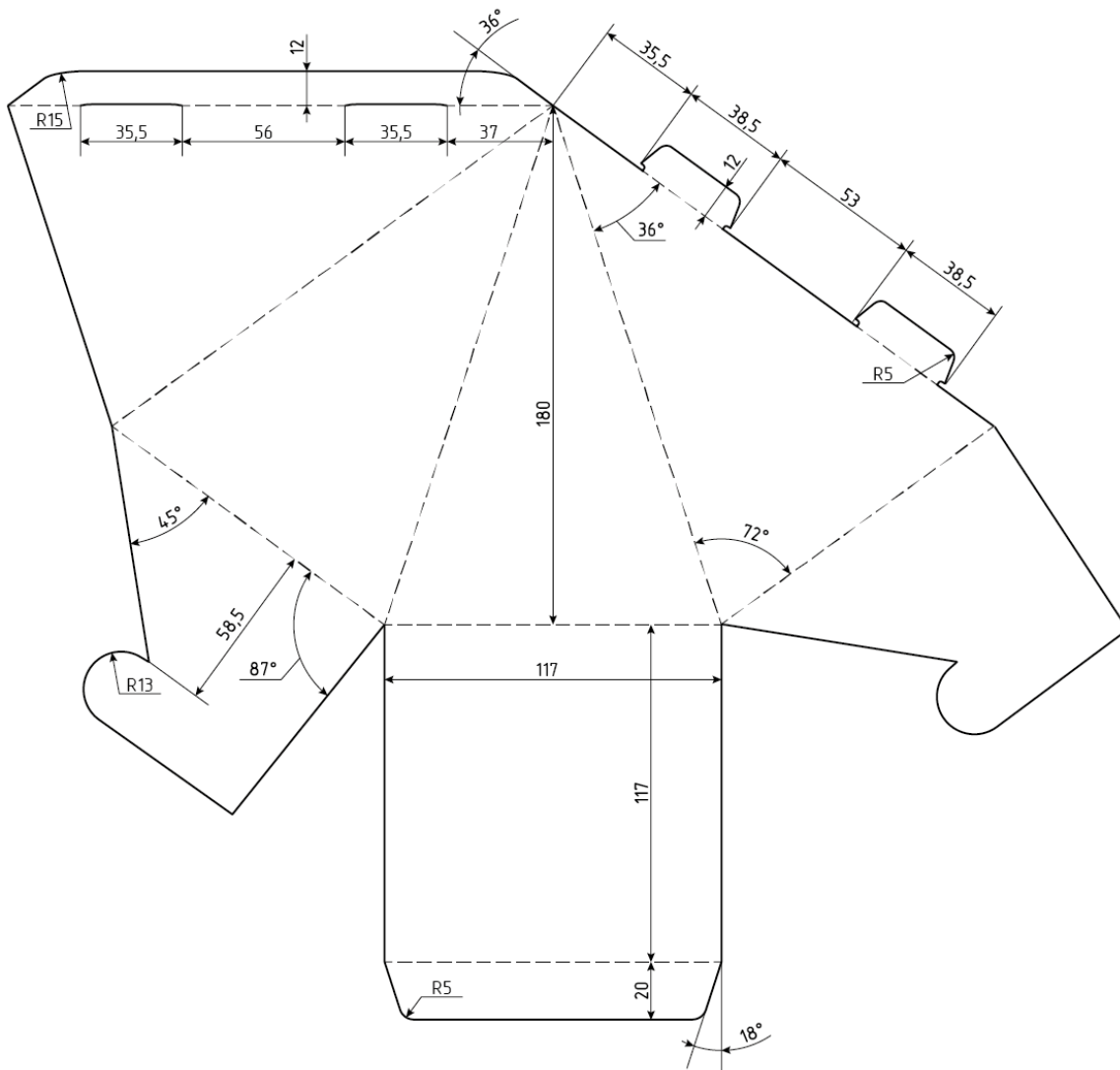


Figure 1 – The design of the four-sided pyramid-shaped transforming package

References

1. Shreder, V.L. (1999). Carton. Tare and packaging. K.: Packaging.
2. Esko. (2023). What trends will dominate the packaging market in 2023? <https://gofromagazine.com/yaki-trendi-panuvatimut-na-rinku-upakovki-u-2023-rocz.html>.
3. Verkhovna Rada of Ukraine. (2022). On Waste Management (№ 2849-IX). <https://zakon.rada.gov.ua/laws/show/2320-20>.