I-PACK
Intelligent packaging

Patent EP 2845816
International application PCT/IB2016/055297
I-PACK
– intelligent packaging,
created to perform successive steps to meet current challenges
of the modern and demanding food market.

I-PACK retains
all the previous achievements
of the cardboard food packaging industry…
And makes next steps to meet economic
and ecological objectives, that are today required by
the sustainable development of the world.

1 Easier waste segregation

2 Convenient use

3 Extended product freshness
The main design idea of I-PACK assumes that after using the product up, the packaging is to reduce its volume until completely folded.

The developed design of bending lines and the specially contoured shape of the cardboard box define the direction and facilitate folding of the packaging, making the folding process intuitively simple and automatic.

The foldable packaging I-PAK – real help in waste segregation.

Showing care for environment protection, we achieve recognition and support not only among the group of responsible consumers, but also members of the general public that value convenience and watch their bills for waste management.
Because of the inconvenience of use of the existing cardboard packaging, products of thick consistency such as sauces, purées, mayonnaise, etc. are packed mainly in glass jars and plastic cups.

Now, thanks to the creation of the *compressible* cardboard packaging, consumers can be offered the comfortable use of their favourite products.

The product is poured after opening the container with a single smooth motion: compressing the packaging.

The advantages of the solution – convenient application, exact portioning and using the product until the last drop will be certainly appreciated by Consumers.

Another advantage for consumers is the fact that they do not need to use cutlery, necessary to take the product out of conventional jars and cups.

* The distinction of the compressible packaging:
  Figures on page 7
  The description on page 13, “Cardboard box”
Small and disposable compressible packaging

Modern dynamic lifestyle is characterized by the consumers' growing interest in **individual flavours and portions**. This global trend generates the increasing demand for **small and single-use packaging**.

In order to meet the market trends, K-BIS Studio designers have created an innovative compressible **small cardboard packaging** that stands out with **a simple and original design** as well as **a comfortable intuitive operation**.

Those qualities **reduce the production costs** in accordance with the idea of disposable packaging.

The special profile of bonding allows, when the marked parts have been cut off, **convenient and accurate** application of the product.

The dimensions and shape of the culvert can be designed according to the type and method of serving the product.
As you know, the usefulness of the product after opening the packaging drops on average to a dozen or so hours. The reason is the lack of packaging tightness and the air entering the product.

The inventiveness of the I-PACK solution is to include a specially designed innovative non-return valve in the packaging closure.

The valve is only to let the product outside and prevent its return. At the same time, the valve effectively blocks air from entering the inside of the packaging, thus ensuring complete tightness.

With the introduction of I-PACK innovation, we achieve

Higher hygiene of the product's consumption.

Consumer satisfaction and gratitude.

Saving the manufactured product, which protects the natural resources of our planet.
How does it work?

After opening the packaging the product remains tightly closed owing to the valve. We can pour out the contents of the packaging only by pressing its sides.

After releasing the pressure, bushings in the valve close tightly, cutting off the air from entering into the product that remains in the packaging.

After screwing the cap on, the packaging can be stored in a refrigerator for a much longer period of time than traditional packaging.

When completely empty, the packaging is maximally compressed and can be thrown into the bin.

The combination of I-PACK innovative solutions creates a new product on the cardboard packaging market – self-folding container.
Possibility of modifications

The structure of the valve enables to put it both on the outlet as well as on the screw cap.

It is also possible to modify the shape of the valve within a specified range.

The I-PACK structure enables to adjust the product flow capacity and the pressure exerted on the cardboard box.

These features provide extensive possibilities to implement the I-PACK innovation to a greater variety of packaging and complete set objectives.

Selected projects are presented in the visualisation.
The general theme of the packaging designs is to show the characteristics of the product within the shape of the packaging. In order to fully achieve the objective, K-Bis Studio designers introduced innovative visual and technical solutions.

- **Use of the closure** and the upper seal of the cardboard box – as means of visual communication.

- **The shape of the outlet reproduces the popular manner of administration of the product** contained in the package.

The innovative I-PACK designs support visualisation created by the producer and its commercial activities. Products in the packaging designed in that manner will remain longer in the memory of consumers.
Ergonomics

Sleek and slim shape. I-PACK is singled out by an aesthetic appearance, modern design and ergonomic shape created for the human palm.

The contoured shape of the cardboard box, with an hourglass-shaped cross-section, perfectly fits in a hand. Prevents slipping and makes the use of the cardboard box as easy and convenient as never before.
In the segment of flexible packaging, compressible cartons I-Pack are a worthy alternative to the plastic pouch, and significantly outperform the competitor in terms of aesthetics and marketing!

- Firm and even carton surface provides the perfect advertising space.
- The original design advantageously distributes the advertising space and makes the packaging a rich and versatile information medium.

Stable construction allows for better visibility of the product in the supermarket.

The proportions of the packaging help use the space on the shelf more optimally.
The exceptional qualities of I-Pack marketing will certainly be appreciated by sellers.

The innovative design of the packaging top, matched to each type of product, is an inexhaustible source of inspiration for graphic designers... And it creates rich opportunities for marketing activities!

High aesthetic and marketing qualities will enable the Investor to offer innovative cartons I-Pack to Premium-Class food producers.
The modern food market is characterized by new dynamically developing segments to meet growing demands of consumers and health and ecological trends of society.

Implementation of I-PACK innovation will enable the Investor to offer the desired and expected products on the market today... and, ahead of the competition, to reach the best and stable position.

- The innovative I-PACK solutions offer the Investor the possibility to significantly expand its share of the liquid food market, which is worth more than US $ 120 billion!

- The innovative compressible I-Pack cartons opens to the Investor the way to flexible packaging market, the value of which has exceeded US $ 80 billion!*

* According to a report by Transparency Market Research, the market for flexible packaging is the most growing segment of the packaging market. By 2019, its value will have risen to 99 billion EUR.

Help in waste sorting
• improves the image of cartons in the eyes of the Consumer.

Convenient usage
• wins the favour of his mind.

Extension of the freshness of your favourite product
• awakens gratitude in his heart.

Those qualities have a direct impact on his choice
• the choice of the carton packaging!
Due to the fact that real expenditure on implementation can be calculated by your specialists, K-Bis Studio presents only certain details.

**Cardboard box**

The distinctive feature of the *compressible* packaging is **the added horizontal bottom bending line**, which makes the position of the packaging stable each time when being used, even when fully emptied. The *foldable* packaging does not need the feature.

The *disposable* packaging has the simplest structure, which determines the low cost of implementation.

**Valve**

The valve can be made of the same materials as conventional closures — Polypropylene (PP), Polyethylene (PE).

The quantity of the material necessary to produce a single I-PACK valve is comparable to the quantity required to manufacture a closure that has internal cutting elements, or it exceeds the quantity by not more than 30% in case of a standard closure.

The valve can be made in two versions:
- **Basic**, which protects against the ingress of foreign particles into the packaging (increases the hygiene of product consumption).
- **Advanced**, which also protects against the ingress of air.* (This provides a longer product freshness).

* Some details to obtain **relevant tightness parameters** may be provided during a direct conversation.
Thank you for your attention

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