

The low-cost and eco-friendly marking
of fruit and vegetable by

EcoMark and Natural Branding



The Process

Natural Branding implies the depigmentation of the top cell layer of the fruit skin only and the removal of the outer fruit husk without damaging the product itself. There are by no means any restrictions for food, or even Bio-Products.

This process completely renounces any chemical additives, packing material, colours or labels. This is the easiest method of reacting against permanently increasing packaging costs.

The Machine

The Machines of the NB Series are constructed on the basis of a modular system. The entry-level machine is already equipped with a conveyor belt branding the objects "on the fly", which means without stopping. During this process the products can be placed either separately or in finished packages such as boxes or cases. The camera automatically identifies the position and the alignment of the products. It will just take a couple of milliseconds to transfer that information to the laser unit and to brand each product according to pre-set criteria and specifications.

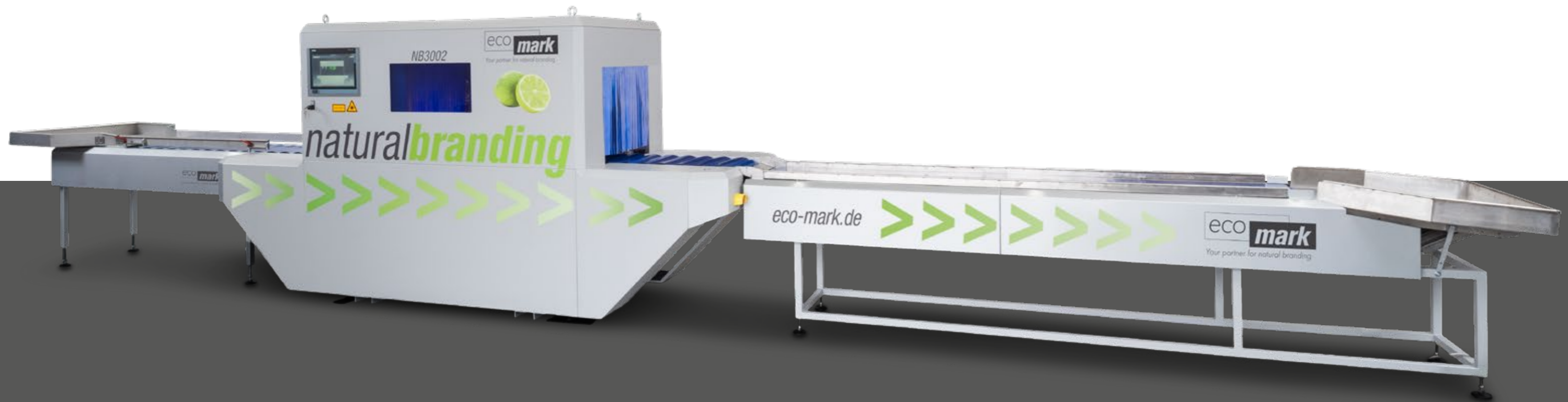
All machines are able to automatically balance out any difference in height of 44 mm (+/-22 mm). Depending on the available space and the product range the machine can be designed according to customers' specific needs. We are in the position of not only opti-

mizing the process of laser performance, but also considering all processes going on in front of and behind the machine. Due to the individually designed and coordinated intake and outlet systems we are able to optimize the whole process respectively thus reducing staff cost, being the biggest cost driver, to a minimum.

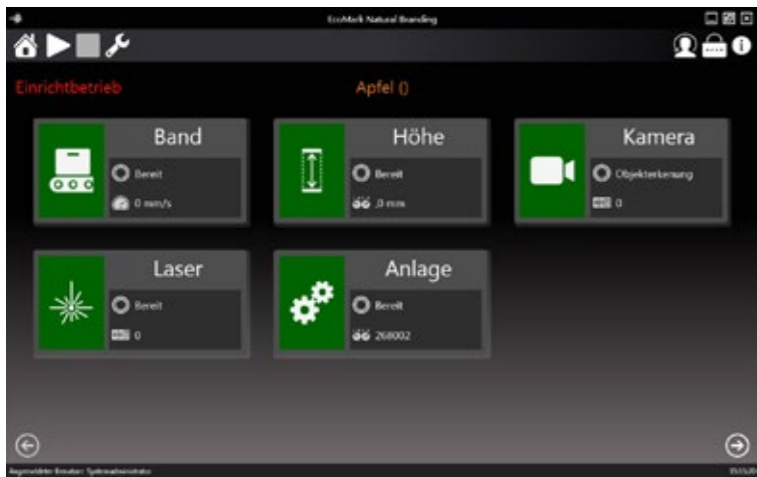
Therefore, we can offer the best solution to each customer. In case, demands and requirements are changing in the course of time we are able to add further modules to the machine.

The Productivity

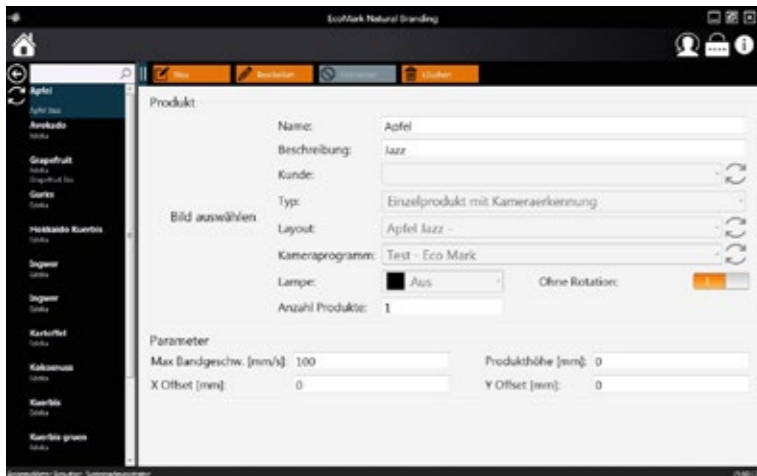
There are various laser power units available. According to specific needs the machine can be fitted with 30 W or up to 120 W in laser power. Systematic further development has enabled us to equip our machines with a quick 3D-camera technology making super quick process times of 0,1 second per single fruit and laser-ing possible. As a result, up to 50.000 pieces of fruit can be branded by our laser unit.



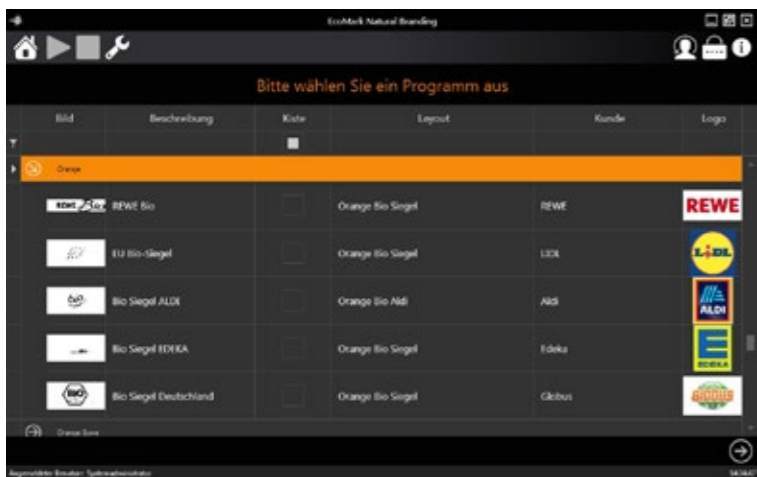
General settings



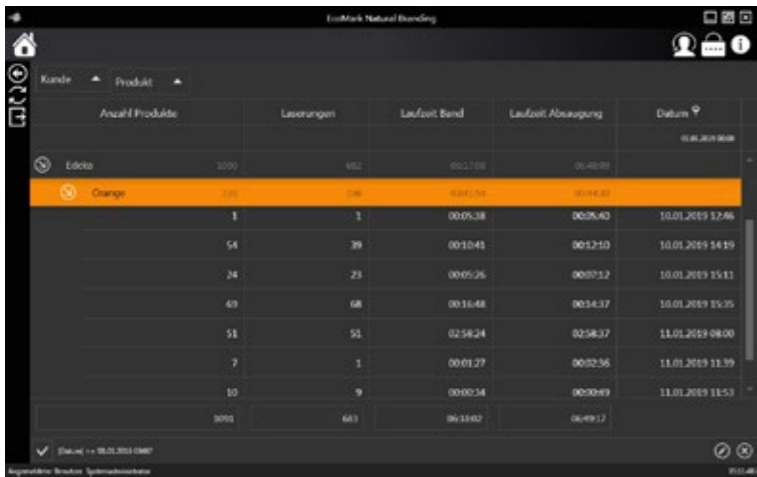
Product settings



Product selection



Statistic reports



The Software

EcoMark Software has put first priority on a high level of user friendliness when designing their development targets. In the end, the customer in his daily work shall be independent and shall be able to deal with each product and each marking individually and in a most flexible way. There is no other solution, which can put any new design of branding into practice more quickly.

Trained employees are able to adapt the machine to each product and branding independently. All the operator of the machine has got to do is to press the start button.

Any rearrangement within the production process can be made possible rather easily. It is our user-friendly software which enables the user to get access to another product just by a minimum of clicks.

Intelligent EcoMark Software makes the machine highly flexible in use and enables the operator to optimize the productivity easily. Product characteristics continually change as to degree of ripeness, moisture level and age. Due to EcoMark Software, however, it is possible to react to these changes in a most straight forward und quick manner.

The integrated statistic module enables the user to evaluate production figures at any time thus facilitating post calculation procedures.

User rights can freely be identified. The ordinary user can run pre-set programmes only. The machine setter has also access to all laser settings to define new products.

As EcoMark Software is based on up-to date Windows, there is the possibility of one of our technicians, if necessary, getting connected to the machine, modifying the setting and providing trainings.

All product settings will be stored in a data base and can simply be saved via network or USB-stick. Thus important production data will not get lost.



The Advantages of EcoMark and Natural Branding compared to labels

The branding of a Kiwi fruit using the laser costs, handling included, is starting with around 0,3 Cent. This is vaguely correspond to the purchase costs of a label. In addition, costs of fixing the labels and administration must not be ignored. As far as a Kiwi fruit is concerned there is also the risk of the label not sticking tightly enough to the skin. Specially-designed and highly adhesive stickers are not authorized for each product anyway. Furthermore, those labels consist of plastic material which causes a lot of problems when being composted later on.

The Advantages of EcoMark and Natural Branding compared to plastic packaging

The economic advantage is most obvious. One package weighs about 20 gram plus label and marking which may explain why the packaging costs are partly higher than the product costs themselves.

Moreover, there is the problem of over-portioning, when the packaging unit is sold according to its weight. The result may be losses of

up to 5%. Furthermore, a complete packaging unit is being disposed as soon as a single object inside the package is spoiled which in return causes double damage due to a 100% in loss of sales, plus disposal costs.

By avoiding packaging the CO₂-footprint will be reduced significantly, since each ton of plastic which is saved will reduce the consumption of crude oil and protect our environment.

Specially marked promotional products

Being flexible and quick means being economical and efficient. Marketing actions on numerous occasions get profitable due to Natural Branding, no matter if a pattern on a pumpkin for Halloween, a Santa Clause decoration on oranges in December or an Easter Bunny in April. Each customer's request can easily be satisfied in a highly individual and quick manner without those notorious long lead times and without any additional costs. New logos and texts can simply be imported in a few seconds only.

Well-suited products

The product range for Natural Branding is continually growing. Meanwhile the following products can easily be branded:

Ginger, Sweet Potatoes, Cucumber, Avocado, Coconut, Pumpkin (Hokkaido and Butternut), Apple, Peperoni, Kiwi, Lime, Melone, Zucchini, Pomegranate, Garlic, Mango, Lemon, Orange, Celery or Kohlrabi.

eco **mark**

Your partner for natural branding.

Your Solution

An individualization and adaption to already existing production lines are possible of course at any time. Thus great savings can be made with only little means.

It will be a pleasure for us to advise and serve you!





Your partner for natural branding.



Technical data of the EcoMark NB series

Type	NB 3002	NB 6002	NB 12002
Outer dimensions (L x W x H)	3.800 x 1.000 x 2.000 mm	3.800 x 1.000 x 2.000 mm	3.800 x 1.000 x 2.000 mm
Weight	ca. 900 kg	ca. 900 kg	ca. 950 kg
Maximum Size of Object (L x W x H)	600 x 400 x 300 mm	600 x 400 x 300 mm	600 x 400 x 300 mm
Electrical Connection Lead	2,0 kW	2,1 kW	2,3 kW
Laser Output Power	30 W	60 W	120 W
Focus Range	44 mm (+/- 22 mm)	44 mm (+/- 22 mm)	44 mm (+/- 22 mm)
Extraction with Filter System	Optional	Optional	Optional
3D-camera	Optional	Optional	Optional
Feedingsystem and Outlet	Optional	Optional	Optional
Statistic Module	Yes	Yes	Yes