

Industrial peeling of onions

The peeling of onions for industrial use

Proposal for a new method with possible significant outputs per hour. Key features: Complete adjustment to the condition of the onions possible, repeated peeling and computer-aided peeling (CAP) possible! Fine sorting not always necessary in each case.

Less waste. Fewer members of staff. Precision work possible. Lower investment costs. No compressed air required.

No complicated, precision mechanical constructions with a high demand for spare parts required!

How it works in brief:

Removal of root and leaf nodes or doing without that

It is not always necessary to remove root and leaf nodes before the peeling of onions for industrial use. Very good results have also been achieved when onions whose root and leaf nodes do not stick out or protrude very much have been peeled.

But if you want to achieve an absolutely clean result, we recommend our cutting machines:

Here the onions are deliberately inserted into the machine by hand in order to obtain a precise and clean-cut surface at the top and bottom and to save on staff having to make any corrections and carry out any post-treatment work in the inspection and post-processing stage.

When being transported in the machine, the onions retain their position between closing grippers that only open up again after the cutting process. (Loss approx. 6 % with grading of 75 - 105 mm.)

Unlike in other machines, the solution proposed means that not much has to be cut off the body of the onion in order for the peel to be more easily removed with the necessary compressed air. That is why less can be cut off the onion without it adversely affecting the peeling process.

Our cutting machine(s) to remove leaf and root nodes online: www.dornow.de : D.-15; 15.11. These machines accurately cut off only what has to be removed. – Opting for a fully automatic solution here would mean greater loss when cutting off the ends, less clean peeling results, more staff carrying out corrections!

Several of these cutting machines can work in a line, with automatic infeed of the onions into the cutting machine, removal of the cut parts and of the onions without their root and leaf nodes via conveyor belts.

The actual peeling of the onions

The onions that have to be have their leaf and root nodes removed enter a bunker from which the peeling machine can be fed with precisely adjustable batches.

This machine MSS-Z (Internet: www.dornow.de; A. – 1.2) now peels the onions in a continuous process. The advantages of the peeling machine and the further process:

- All speeds (the peeling discs, the transportation device in the machine, as well as the intake of the raw produce) can be infinitely varied. **The speeds are adjusted to suit the condition of the raw produce.**
- **No deep cuts into the onions required** in order to remove the peel more easily. So reduction in waste possible.
- **No compressed air necessary.** So much lower energy consumption.
- **Different peeling discs** have been developed. Peeling discs suitable for particularly stubborn peeling as well as for peeling the best quality onions are available. They can also be used and replaced very quickly. **This means you can quickly adjust to the quality of the raw produce.**
- Normally, **all onions can be peeled cleanly** (apart from rotten, misshapen or damaged onions). Our test peelings resulted in a **total loss of 15 % to 20 %** with the onions used (grade II, month of May). Test peelings using your onions can be carried out in our Peeling Test Center (see: www.dornow.de; Peeling Test Center).
- In addition, you also have the option of peeling the onions shorter and thus with less loss **if you wish to reduce the waste percentage even further**. Any onions that have not been peeled enough are removed (by hand or automatically) and returned to the above-mentioned dosing bin via conveyors **for re-peeling**. **In our experience, the onions are normally clean after a second peeling process. In many cases, the option of re-peeling after the above-mentioned brief peeling process reduces total waste.**

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- The peeling machine MSS-Z can be fitted with the **CAP-system (CAP = computer-aided peeling)** designed by us, which makes controlled peeling possible (Internet: www.dornow.de; Product Information; AA.).
- External appearance of the peeled produce: very smooth, but it does not look like after "hand peeling". If the onion is used for industrial purposes and is immediately post-processed, no disadvantages should be evident. Probably not for other purposes either: Test peelings are possible.

If the proposed method proves itself in practice, this should mean considerable economies for the industry.

- Peeled onions for the catering sector: We also have some suggestions here, too. Just ask us!
- Test our machines with your onions in our Peeling Test Center (Internet: www.dornow.de ; Peeling Test Center)!
- Please see our brochure 119 E3:
<http://www.dornow.de/englisch/Prospekte/P119E3.pdf>

You can find a list of more interesting articles and essays on the topic of handling and processing tubers and vegetables and associated specialist areas at our Internet site at www.dornow.de, Treatises.

Check your current peeling results or before purchasing a peeling machine or line:

Realistic test peelings with the most diverse peeling systems, with the most diverse tubers and root vegetables, some fruit, with your raw produce are possible in our Peeling Test Center!

This paper contains non-committal notes. We do not lay claim to completeness. Alterations reserved. Any delivery will exclusively be based on our confirmation of order acknowledged by the buyer. - The presentation of a new edition of this treatise will substitute for any previous versions.

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