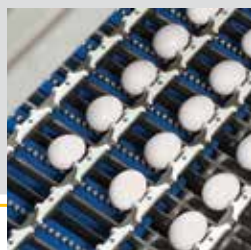


STAALKAT ARDENTA 300



Egg producers we heard you.

Faster than its predecessor, a state-of-the-art operating system combined with the latest cleanability features; these are just some of the characteristics of our STAALKAT Ardentia 300.

You told us you needed cost-saving packing technology with increased capacity and, if possible, even more reliable and easier to control. You said it needed to be far easier and quicker to clean by making use of water and detergents instead of scrapers and compressed air. Reducing grading hours due to higher capacity per hour, increasing efficiency due to sophisticated easy to use program: **WE HAVE WHAT YOU WANT.**

Introducing the STAALKAT Ardentia 300, our latest automatic egg grading and packing machine combining enhanced hygienic design coming from

the food processing industry with robustness that meets today's and tomorrow's tough production standards. This is our STAALKAT grader, built with the knowhow of food safety and cleaning functions from the leader in egg processing; SANOVO TECHNOLOGY GROUP.

With the increased capacity up to 108,000 eggs per hour, the STAALKAT Ardentia 300 decreases your cost per packed egg, thus increasing your profit. This most modern operating system replaces more fragile printed circuit boards, contributing to an even more reliable grader.

SETS A NEW STANDARD FOR FASTER AND EASIER CLEANING

The STAALKAT Ardentia 300 features a host of design changes that significantly reduce cleaning time. Traditionally cleaning of the infeed section is a manual process with the help of wet cloths, scrapers and compressed air. Today the STAALKAT Ardentia 300 is equipped with a washable roller entry conveyor and weighing section. Cleaning is done easily by foaming with detergent and rinsing off with water. The same applies for the weighing and optional crack detection unit.

RE-DEFINES FAST PACKING

The STAALKAT Ardentia 300 has an increased capacity of almost 10% compared to its predecessor and results in a grading and packing performance of 300 cases per hour! That equals up to 864,000 eggs in an eight hour shift. With up to 16 packing lanes, the STAALKAT Ardentia 300 ensures the flexibility to handle a large variety of different grades and egg-packings simultaneously without losing efficiency.

EASY TO OPERATE

The STAALKAT Ardentia 300 is equipped with the EGG-it Touch program which allows the operator to monitor the entire operation and make alterations when needed. The program continuously returns statistics on efficiency and performance and includes a diagnostic feature in case of a malfunction. The EGG-it Touch program is a valuable source of information for everybody at the facility - from owner to operator to service engineer. The STAALKAT Ardentia 300 can also be monitored and diagnosed remotely by our customer care team.

EASY TO MAINTAIN & SERVICE

The STAALKAT Ardentia 300 is built with many standard parts that are often locally available: reducing your operational cost and potential downtime. Need a hand to change a setting or to make an adjustment? Our global service network is always available by phone, Skype or email. Please refer to our website for contact details.





MULTILOADER

The STAALKAT Multiloader enables operators to work offline or, in combination with an accumulator, load 50 percent of the eggs by loader and 50 percent inline. Along with flexibility comes reliability and lowered costs. Every step of the loading process is carefully monitored and controlled, resulting in minimum egg loss. Both plastic and paper pulp egg trays can be used; empty trays are stacked for you. If eggs remain in a tray, that tray will exit separately.



ACCUMULATOR

The Accumulator orients the eggs correctly into 12 rows, achieving the highest filling rate in the industry. Specialized belt material minimizes surface contact, and the unit's open construction allows speedy, thorough cleaning.

The Accumulator can be supplied with a number of different extension sizes, ensuring a perfect solution for every need.



ROLLER ENTRY CONVEYOR

The roller entry conveyor, which moves eggs to the weighing and inserting section, is made of materials specially chosen to withstand the assault of even the harshest cleaners used in the industry. To reduce cleaning time and improve sanitation, the access to the entire roller entry conveyor and weighing section has been changed. This allows for easy wash-down.

The shape of the rollers themselves ensure minimum contact surface with the eggs, minimizing the risk of cross contamination.



ROLLER CLEANING SYSTEM

The roller cleaning system can be integrated in the roller entry conveyor so that it cleans every roller while the grader is running. During operation, three brushes maintain a sweeping action across the rollers, creating friction that generates heat, reducing bacterial growth on the rollers.



UV

The STAALKAT Ardentia 300's integrated UV system reduces possible surface contamination during weighing and packing. Notably, detachable water-cleanable entry and exit guards ensure that no UV-C light escapes the system, ensuring safety for operators.



CANDLING BOOTH WITH OPTIONAL IRUS QUALITY SYSTEM

In situations in which automatic quality control systems are not in use a candling booth can be used for quality control. The candling booth is equipped with anti-dazzling lights underneath the rollers allowing the operator to check the passing flow of eggs quickly and accurately. Within the candling booth, a Semi-Automatic Candling System (IRUS) can be placed that can classify four categories of off-grade eggs. These eggs will go to a designated exit lane or droppage.



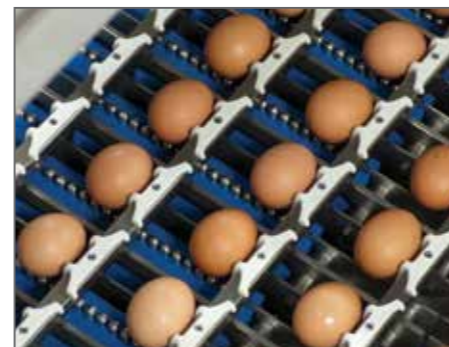
LEAK DETECTION

"Leakers" can't get past the Ardentia 300. Its advanced, high-resolution black and white cameras have significantly improved leak detection. Employing lasers underneath and away from the egg flow line reduces false rejection due to shiny wet surfaces, reducing loss.



DIRT DETECTION

The high performance dirt detector makes use of an advanced full color camera vision system that identifies dirt as small as 1mm. Eggs with dirt detected can be sent to a separate exit or to any packing lane. The level of sensitivity can be set and adjusted very easily and its "rehabilitation" standard feature allows operators to send back eggs with small, acceptable dirt spots, providing flexibility and consistency in performance.



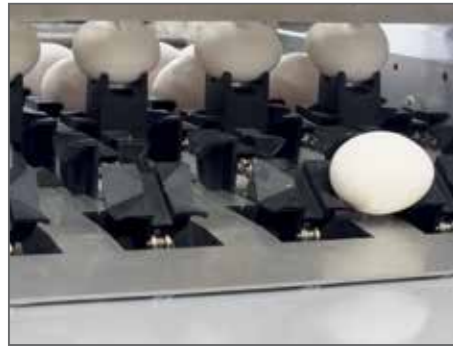
CRACK DETECTION

The advanced wash-down STAALKAT crack detector has no moving mechanical or electrical parts. Unlike some older systems, there is no need to adjust settings continually according to egg size. The crack detector works by pressure measuring elements and converts the digital signals coming from the crack detector into multiple crack categories. The operator can then determine into what categories to sort the eggs. There are no delicate parts, so clean up is an easy task.



WEIGHING

Our new digital dynamic stable egg scale has a readout accuracy of 0,1 gram, and recalibrates automatically after weighing each egg that passes. Plus, calibrating the 12 weighing scales can be done very easily with the help of our EGG-it touch program. The STAALKAT egg scale and entire infeed and transporter system are designed in an open style to make wash-down easier and faster. Fragile moving plastic parts are not part of the STAALKAT design.



INSERT TRANSFER

STAALKAT has created the most simple and reliable way to transfer 12 rows of eggs into the still-standing chain conveyor. Our design eliminates compound cantilevered motions, delicate machine components and fragile inserting arms with critical timing, sensitive to egg weight variations. Instead, the overhead 2-row egg conveyor momentarily stops while 12 eggs are gently lifted into the egg carriers during the right or left hand transfer. The transfer is very easy to reach and clean due to the detachable over-under grade conveyor.



CARTON TRANSPORT LANE

To help eliminate downtime, each part of the packing lane: the denester, packer, lane, closer and take-away conveyor has a separate drive train. Each lane also has its own electrical cabinet, further minimizing the risk of lost production. A variety of take-away conveyor lengths are available to meet individual egg packaging customer requirements. Egg printing, carton labeling, dating and 30-egg tray stacking is available as well. Take-away conveyors are designed to accommodate any further automation with SANOVO End-of-Line Automation and Robotics or others.



BLOOD DETECTION

The STAALKAT Ardentia 300's highly accurate blood detection system provides a new level of flexibility, monitoring and adjustment for sensitivity, which can easily be done in the EGG-it touch program. The entire system is installed above the egg carrier chain and can be tilted for easy cleaning with water.



DENESTER

Our commitment to reliability through simplicity is most apparent in our STAALKAT Denesting System. Kits are changed easily and in minutes. Each denester is detachable and easily movable, and extra denesters can be added to eliminate changeover down time, reducing labor costs and serving as backup units that can be operational in minutes.



EGG TRANSPORTING AND RELEASING

Two rows of egg carrier chains release each egg individually by weight and category into a detachable and washable soft brush receiver, delivering the gentlest transfer in the industry. The brush receiver eliminates a series of critical high-speed transfers, reducing the risk of small hairline cracks that can open after transport and in-store handling. There are no critical transfers or timing issues and only two inkjet printing heads are required to mark 300 cases (108,000 eggs) per hour.



ROBOTS AND AUTOMATION

To meet your specific packing needs, reducing labor costs and enhancing gentle egg handling, case packing, display loader, pallet loading and unloading and warehouse automation are available. SANOVO End-of-line Automation and Robotics can be designed to meet individual plant needs.



OVER AND UNDERGRADE CONVEYOR

STAALKAT's exclusive egg conveyor can send any egg weight or second quality egg out of the grader without having to insert them into the carrier chain. This exclusive design creates an extra packing location without adding to the machine's footprint, risking breaking overweight eggs or losing underweight eggs in the carrier chain. It allows the off-grades and over- and underweight eggs to be packed without being transferred into the two-row chain conveyor. From this conveyor the off-grades can also be sent directly to a breaker or farm packer.



TOUCH SCREEN

The STAALKAT Ardentia 300 touch screen controls the system and features large overhead displays visible to all grading room operators. The touch-screen interface is icon based and uses a Windows operating system. The system is easy to learn and the menu structure can be altered to suit each operator. Tracing software, used to keep track of every egg that enters the grader and packer, is also available.



CARTON AUTOMATIC PACK CLOSER

The closer handles 10-, 12- and 18-egg packs, closing the most commonly used types automatically. Add a label in the lid, apply a printed label on top of the lid, or add inkjet printing or stamping on the side of the pack - flexibility is built in. SANOVO End-of-Line Automation and Robotics can be designed to meet individual customer demands and grading facility needs. From receiving to expediting and everything in between, let us show you what is possible.

A dedicated partner to the egg industry

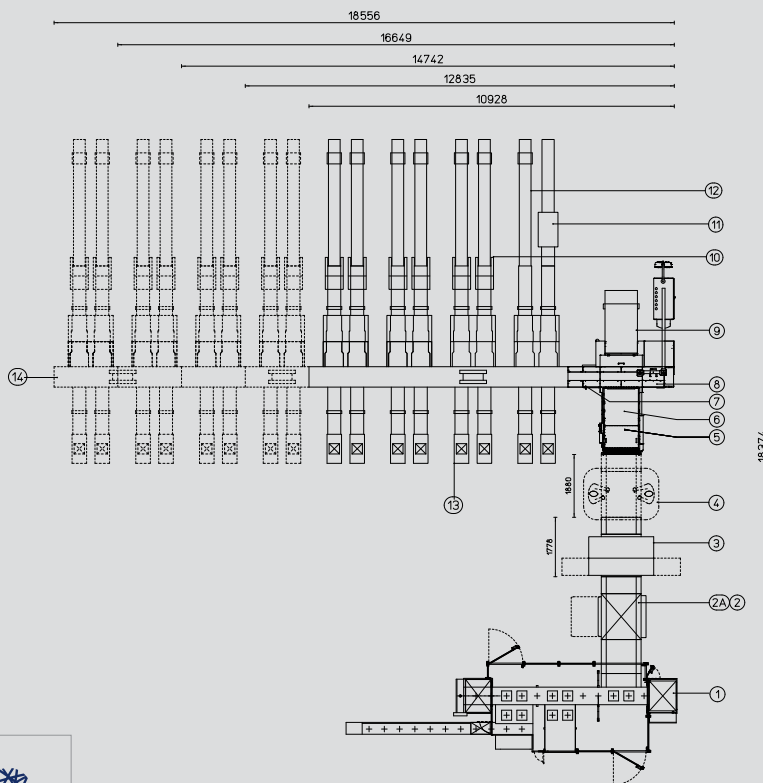
Most consumer eggs in the world, whether shell egg or liquid, have been handled or processed by SANOVO TECHNOLOGY GROUP equipment. This is because this equipment meets the highest international requirements and standards. As a turnkey supplier, SANOVO TECHNOLOGY GROUP supports every aspect of the construction of an egg handling or processing plant—from building design and layouts, engineering and installation to the commissioning and training of local staff.

All equipment must pass an extensive test in our

facilities before being shipped to customers.

Focus on research and development is a key issue, with new techniques and equipment constantly being developed to further improve our products' functionality for the end user and in order to provide even more efficient solutions.

SANOVO TECHNOLOGY GROUP is a global organization, represented in all regions of the world. With our network, service and spare parts are always within easy reach.



1. Multiloader
2. Roller cleaning system
- 2a. UVC disinfection section
3. Automated candling with leaker/dirt detection or
4. Semi automated with candling booth & Irus
5. Weighing section
6. Crack detection
7. Blood detection/printers
8. Grader frame
9. Off-grade belt
10. Closers
11. Tray stacker
12. Packing lanes
13. Denesters
14. Drop gate blood



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