



AMY'S KITCHEN

➤ **SECTOR: FOOD**
AMY'S KITCHEN INC.
Petaluma, California, USA
www.amys.com

- SK 800 T Packer
- APS 3090 P - APS 1550 P Palletizers
- Turntable-based wrapper and conveyors



GEO LOCATION



Good ideas come from the dinner table!



→ DISCUSSING REQUIREMENTS, PROBLEMS AND IDEAS AND COMING UP WITH A SOLUTION TOGETHER WITH THE CUSTOMER

As often happens, the best ideas are born at the table. That is exactly where an idea came up during a business meeting between SMI and the customer: that of creating a compact, multifunctional line whose heart is SMI's new pal/depal. From its very first meeting with Amy's Kitchen Inc. SMI felt and shared the pride of those who make a quality product, are aware of it and willing to tackle the issues on how to package it at best. This is how Amy's Project came to life.

After having dined with good food, organic of course, the SMI team succeeded in bringing out this customer's main requirements:

- A) never stop the cooking room in case the line has a problem;
- B) be able to choose whether to package the product immediately into a pack or palletize it loose;
- C) make packages containing two different flavors;
- D) use the same line also to package the product that had previously been palletized loose;
- E) do away with manual palletizing and

“ An idea, a project, four operating modes ”



depalletizing to ensure a better final quality of the product.

How were we going to put together all these requirements and reduce the number of machines and manual operations?

Sketch after sketch... the idea began to materialize, and at some point an OK appeared on an almost incomprehensible drawing...



FROM THE IDEA TO THE PROJECT

The production department is located upstream of the packaging line and comprises the cooking room, which they call the kitchen, and the can filling/seaming system. Amy's Kitchen has very high quality standards: in fact, if the cooking process stops for even just a few seconds, they discard the entire product batch being processed (approximately 45 minutes of production). Therefore, it goes without saying that an unexpected stop of the downstream packaging line will lead to a considerable waste of product and money for the customer.

- Why have a great number of belts to accumulate 45 minutes of production when you already have a cans pal?
- Why have a separate packaging line from the depal line?
- Why use two different shrinkwrappers and have to feed one by hand to achieve a package with 2 flavors?

In response to the foregoing questions, SMI developed an innovative can pal/depal for Amy's as the heart of the compact multifunctional line.



MICHAEL MOODY, AMY'S SENIOR PLANT ENGINEER (ON THE LEFT) WITH ABEL SUAREZ, AMY'S CANNING MANAGER OREGON (IN THE MIDDLE) AND COREY PARRY, SALES AREA MANAGER OF SMI USA (ON THE RIGHT) AT AMY'S FACILITY IN MEDFORD, OREGON.



The line end system that SMI installed at Amy's facility (which includes the APS 3090 P and APS 1550 automatic palletizers, the SK 800 T shrinkwrapper and the conveyors), features four different operating modes:

1. Non-labeled cans buffer mode
2. Labeled cans storage mode
3. Non-labeled cans storage mode
4. Depalletizing mode





➔ **ORGANIC FOOD HELPS NATURE AND HEALTH**

For some time, we have known that something in this world's natural balance is falling apart and we need to find a remedy in some way or another. We can do that by purchasing organic food, products without polluting chemical additives, avoiding intensive livestock exploitation, working in full respect of the seasons and land rotation and subjecting the final product to the control of specific certification bodies. If you think that everything we eat or put on our skin, in the form of cosmetics, moulds our body and affects our brain, our metabolic activities and life expectancy, it is clear that organic food will have very positive effects on our health because it is free of toxins and full of healing and protective substances that our bodies absorb quickly. Organic food is healthy, tasty and rich in vital active ingredients:

- thanks to its natural origin and the fact that it is not contaminated by chemicals, it boosts metabolism and defenses;
- it prevents the body from storing chemical toxins and speeds up their disposal, if present;
- it accelerates healing and stimulates the regeneration of organs and tissues;
- it has protective, invigorating and anti-aging effects.



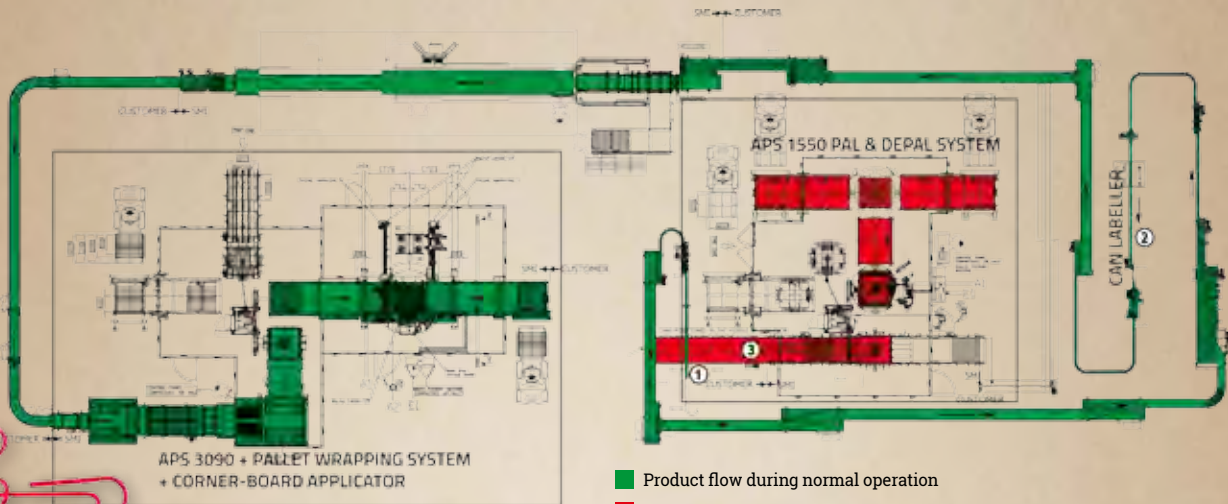
AMY'S KITCHEN GREAT KITCHEN

Amy's Kitchen was founded in 1987, the year Amy was born, daughter of Rachel and Andy Berliner and founders of this important organic food company. Thanks to Andy and Rachel's meticulous teamwork, they keep coming up with new ideas year after year, submitting them to Amy's Kitchen cooks. They never get tired of trying or retrying new recipes, until ideas turn into new products that are placed on the market, only after extensive quality testing. Thanks to Rachel's attentive and sensitive palate, she is the company's official taster. Extreme product care, attention to the final consumer, production processes that result from strong experience in an artisan enterprise are just some of the elements that make Amy's Kitchen one of the most promising organic food companies worldwide. Since 1987 the company has experienced excellent growth rates and has proven to be able to suit every taste with over 250 products, all vegetarian and of biological origin, as well as a wide variety of gluten-free foods. Today, this company has production facilities in Santa Rosa (California), White City – Medford (Oregon) and Petaluma (California). The latter is equipped with the new machines supplied by SMI for the secondary and tertiary packaging of 14-oz. steel cans for organic ready meals (tomato sauce, mushroom sauce, vegetable soup, etc.).



NON-LABELED CANS BUFFER MODE

→ THE APS 3090 P PALLETIZER WORKS AS A PALLETIZING + PALLET WRAPPING SYSTEM FOR FINISHED PRODUCT WITH CORNER-INSERTERS, WHEREAS THE APS 1550 P PALLETIZER WORKS AS A BUFFER FOR NON-LABELED CANS.



This is the main operating mode of Amy's production line. The point on the drawing where the product goes from the kitchen to the production line is identified by number 1. Here the product passes from a cable conveyor to single-row chained belts. By following the green path, the cans are first labeled (point 2), then packed in tray+film by the SK 800T packer and finally transferred to the APS 3090 P palletizing system, which is equipped with a device that makes pallets that have bottom and top trays. The product is palletized by a magnetic head that handles entire layers of cans, picked up and handled from above. The pallet wrapper downstream



of the palletizing system is equipped with a device that applies some cardboard corners before wrapping the stretch film. These corners are applied both to strengthen the pallet and make it suitable also for intercontinental transport. If a stop occurs downstream of the kitchen while the system works in mode 1, the product will be diverted to the buffer system. As highlighted in red in the layout, a pneumatically operated guide diverts the cans that were just placed on the chained belts and places them on a belt (point 3) where they are naturally distributed to form a layer. This is when the APS 1550 P is activated, acting as a buffer system by palletizing the layers

of cans that are gradually building up on the belt. Downstream, the system is equipped with conveyors designed to house pallets for 45 minutes of production (time required to empty the entire kitchen). If a line stop cannot be solved in a short time, you can decide to begin wrapping and storing the next pallets after two pallets have been formed (which is the admissible average stop time). Once the problem has been solved, the depalletizing begins, stage during which the APS 1550 P places the built-up cans back into the line. There is a camera at palletizer infeed that detects any film on the incoming pallet so that the operator can remove it.

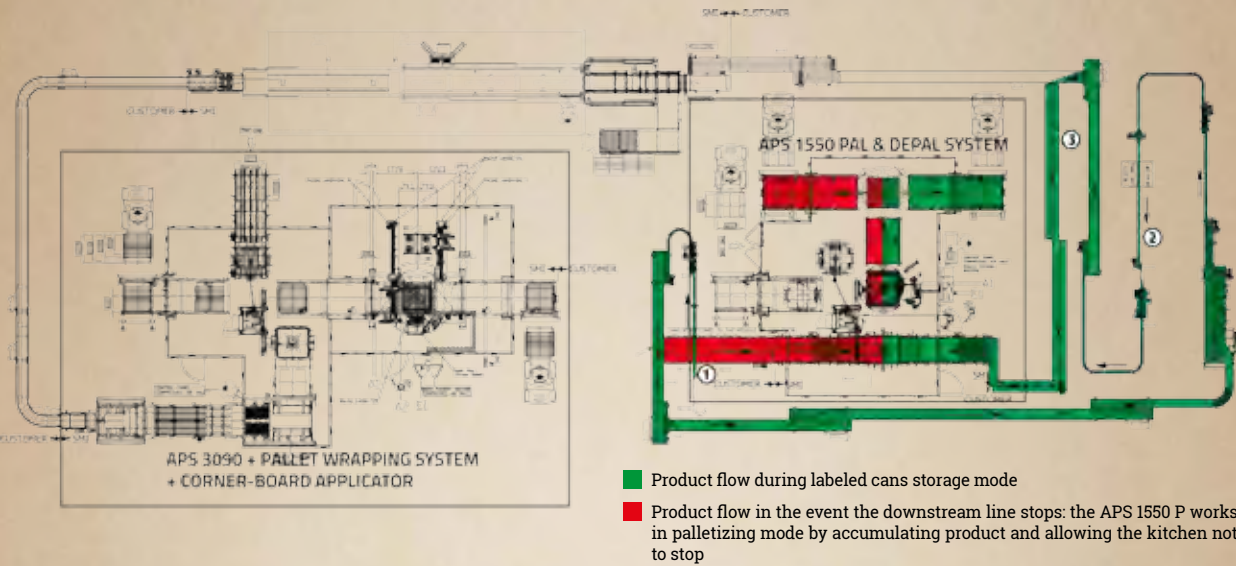


2.

LABELED CANS STORAGE MODE



THE APS 1550 P PALLETIZER WORKS AS A BUFFER FOR LABELED CANS



When this operating mode is selected, the APS 3090 P palletizer does not work, whereas the APS 1550 P model works as labeled cans palletizer. This operating mode allows the customer to increase stock availability of labeled products in order to package them in film or tray later on. The green path on the drawing shows the cans coming from the kitchen and entering the line at point 1. The cans are guided by belts up to the labeller (point 2) and then continue up to point 3 where, instead of being conveyed to the shrinkwrapper, they are diverted to a second belt that carries them to the APS 1550 P to be palletized. Each formed pallet is wrapped with film and made

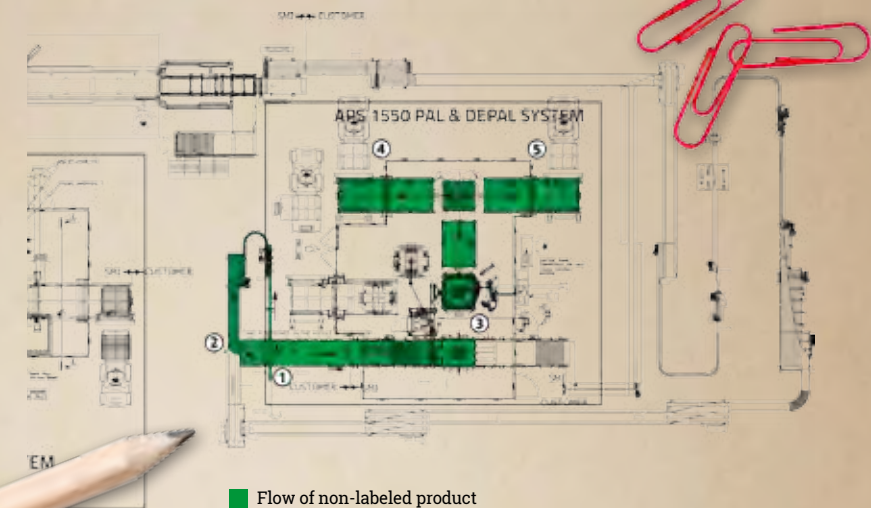


3.

NON-LABELED CANS STORAGE MODE



THE APS 1550 P PALLETIZER WORKS AS A STORAGE SYSTEM FOR NON-LABELED CANS



available to be picked up on the right-hand branch of rollers while the left-hand one is used as a buffer. The product to be packaged always comes from the kitchen; therefore, if a stop occurs downstream of the area where the cans enter the belts line, even in this operating mode the APS 1550 P gives priority to the palletizing of non-labeled cans in order not to stop the kitchen. This avoids wasting large amounts of product (section highlighted in red).

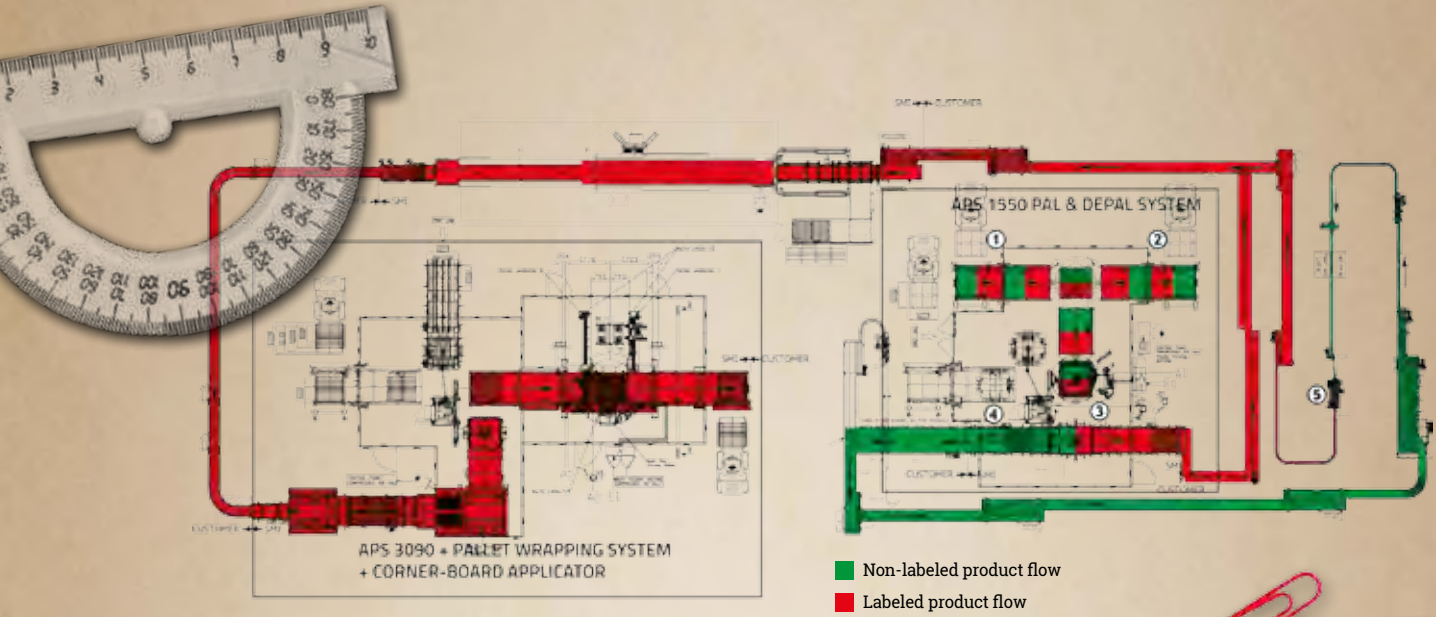


This operating mode allows the customer to stock non-labeled cans. The only line machine that is used is the APS 1550 P palletizer. The drawing shows, in green, the path of cans coming from the kitchen, where they enter the belts line in point 1 and are immediately diverted on the palletizer's layer forming belt by a pneumatically operated guide (point 2). All the pallets formed during this mode are wrapped (point 3) and made available to be picked up on both pick branches (points 4 and 5).

DEPALLETIZING MODE



THE APS 3090 P PALLETIZER WORKS AS A FINISHED PRODUCT PALLETIZING + PALLET WRAPPING SYSTEM WITH CORNER-INSERTERS, WHEREAS THE APS 1550 P PALLETIZER WORKS AS A DEPALLETIZING SYSTEM FOR LABELED OR NON-LABELED PRODUCTS.



When the line is set to this mode, the customer's kitchen never works because the cans come directly from the store. In fact, the APS 1550 P palletizer acts as a depalletizer and can process both labeled and non-labeled cans. The can pallets are inserted in points 1 and 2. The line operator must first remove the wrap-around film from the pallet. In any case, an accurate inspection is performed by a camera located before the layer pick-up area so that any film that may still be wrapped around the pallet can be removed at once. After the cans have been depalletized on the belt, they are diverted to the right (point 3) and continue on the red path, passing by the SK 800T shrinkwrapper/



transformer until they reach the APS 3090 P palletizer and the wrapper. Any non-labeled cans are diverted to the left (point 4), placed on the belts line, labelled (point 5) and then follow the labeled cans path (described above) up to the pallet wrapper.

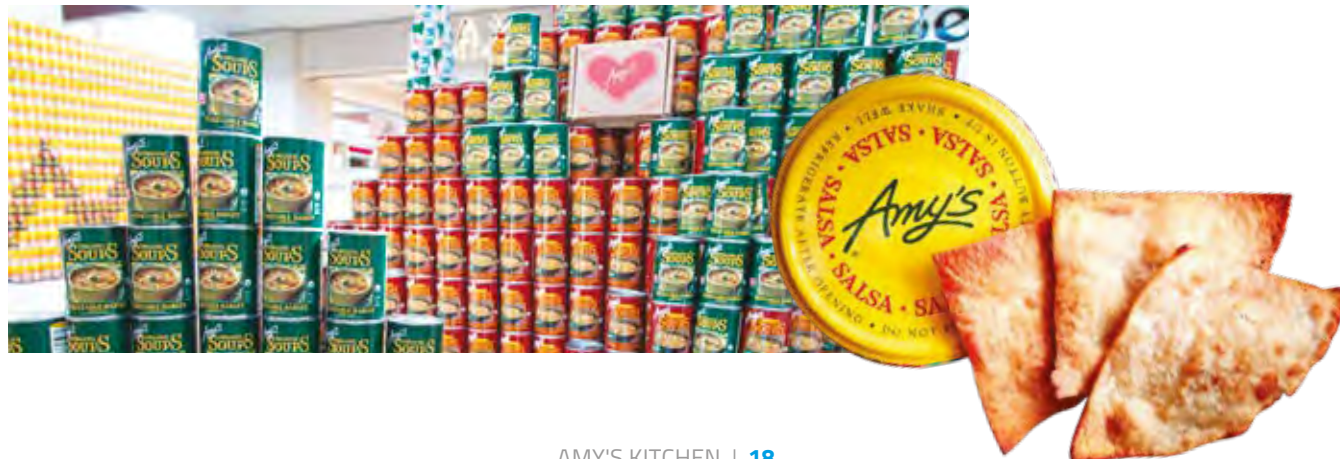


AMY'S KITCHEN

LOVES TO COOK FOR YOU!



This is the company's slogan that characterizes it and self-explains the strong feeling of passion, dedication, attention to health and welfare of others that has been driving Amy's Kitchen's entire entrepreneurial business since 1987. It is no coincidence that this leading American company was founded the year the owners' daughter was born. Driven by a strong motivation to cook only delicious, healthy, organic food for their daughter, the Berliner family decided to become the cooks also for all those health conscious people who do not have time to cook. Just like a model housewife, Amy's Kitchen uses only the best ingredients: fresh fruit and vegetables and organic cereal, grown without the use of pesticides, GMO or fertilizers. All natural ingredients, cooked with the same care and attention that each of us would give when preparing food at home.



THE DRIVE THRU RESTAURANT EXPERIENCE

Amy's Kitchen expansion goals led this American company to sell their own vegetarian food at drive thru restaurants. The first vegetarian drive thru restaurant was established at the end of June 2015 in Rohnert Park, California. Everything on the menu strictly complies with the vegetarian diet: burgers, pizzas and burritos are totally without meat and ready in very few minutes. The entire restaurant is designed to respect the environment: the interior is made of recycled or scrap wood while solar panels cover the roof. This restaurant collects and uses rainwater, environmentally friendly ink is used on the graphics of the packaging in which food is served and all glasses are recyclable.

