

# Animate your laminates



Fritsch says modern equipment allows continuous production and minimum wastage

Sheeting and laminating equipment is a major investment that makes sense for manufacturing operations, because of the increased efficiencies they provide, says **Andrew Don**

**A** huge variety of options to suit every space and budget is available in sheeting and laminating equipment intended for massive factories, giant retail chains, such as Greggs, or even down to smaller craft bakeries.

Sheeters are designed to produce cut lids for the top of pies from bulk pastry. The machines roll out sheets of pastry and cut the required shape. They can also be used for baguettes, ciabatta and panini, a fact not so commonly known.

Laminating is an automatic way of forming a sandwich of dough and various types of butter or fat. They build up layers and fold the dough many times. Laminators are used for puff pastry products, such as vol-au-vents, apple turnovers, sausage rolls, cream slices, cream crackers, as well as for Danish pastry products and croissants, for example.

Machinery that sheets and laminates can range from as little as £25,000 to more than £1.5m. The level of investment depends on the scale of operation and the sophistication required. But laminating equipment is generally the more expensive of the two. Volumes of up to 10 tonnes an hour can be produced at the higher end of the spectrum.

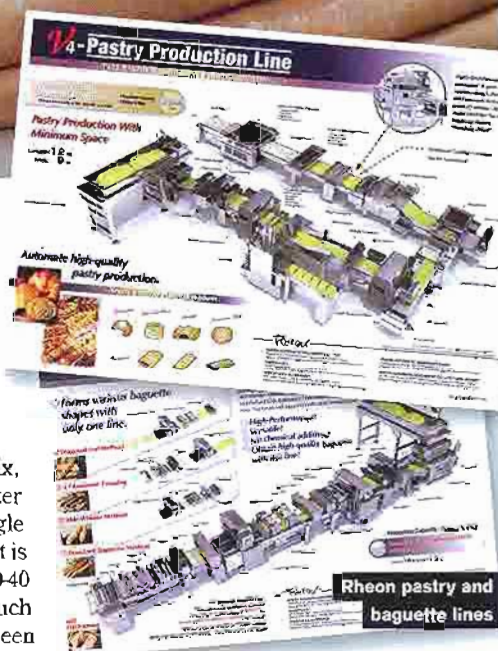
Bakery consultant John Haynes, of JRJ Associates, explains that with a laminator "you are building up layers of dough and fat together

to form a matrix, whereas a sheeter would be a single sheet". He says it is only in the past 30-40 years that such equipment has been in use, slashing

labour and enabling quick production of high volumes.

As Fritsch, producer of both sheeting and laminating equipment, says, gone are the days when bakers worked their dough "with both a rolling pin and the sweat of their brow". Now, the technology keeps improving, so the machines are more efficient, easier to control, allow continuous production and minimise wastage, says Haynes.

Manufacturers include Rheon, Fritsch, Rademaker (Radini, Sigma), Tromp, Rondo, Orbiter and Reiser. **London Food Machinery** director Ian Ort, whose business sells Japanese company's Rheon laminating and sheeting equipment, is able to supply laminating machines that can produce from 9,000 croissants an hour up to 60,000 croissants and sheeting lines that will handle up to 4,000kg of raw product per hour. The machinery is modular, so you can mix and match to create the size and capacity you want. "Usually, let's say with croissants on a lamina-



tion line, we would specify to go for 9,000, 18,000, 36,000 or 64,000 lines," Ort says. Rheon has a patented system for stress-free dough manufacturing, which is the kind of production you need if you want to make wetter doughs with longer fermentation for maximum shelf-life without lots of additives. Many others can make a low-stress system, but Ort claims Rheon has the only totally patented system.

### Costs in view

Rheon has been trying to reduce the cost of running its equipment. Water can now be used instead of oil to lubricate the system. The amount of additives and yeast used can be reduced. Indeed, it is the reduction of running costs that will be the focus of future development in the sector, Ort believes.

Recent technological developments include bending machines for bending croissants and, now, London Food Machinery is looking at bringing to the UK a sheeting system to produce standard tinned bread that uses fewer additives.

Rheon produces small sheeting systems that are popular in the German market, which Ort wants to introduce to the UK. They are much smaller lines for the craft baker and cost about £80,000. They will fit into a space of less than 10ft.

Orbiter Food Machinery supplies sheeters up to about £120,000. Its largest machines churn out 1,500-4,000 units an hour. Its standard high-level sheeter can be manufactured to suit any existing production lines, with sheet widths ranging from 150mm to 700mm.

Orbiter also makes a low-level sheeter with conveyor and guillotine that can produce cut lids from bulk pastry. The lids can be sized to suit existing products and the machine can be set to run at a speed to match the existing production line. It can manufacture sheeters to produce lattice shortcrust sheet to a customer's specification. The lattice form is precision-machined into the final roller.

Debora Fox, finance and administration director, says the motors used nowadays are better and the equipment is easier to use, with

*"Rheon has been trying to reduce the cost of running its equipment. Water can now be used instead of oil to lubricate the system. The amount of additives and yeast used can be reduced"* – Ian Ort, London Food Machinery

more straightforward electronics. She says the machines can be long-lived. "We've got some sheeters out there still in use after 15-20 years. They can go on forever.

Rondo provides both sheeting and laminating equipment, and caters for the bakery where space is restricted with its Econom sheeters, which it recommends for small artisanal bakeries and confectioners. The working surfaces can be folded up to free up space after use. Its other models include the Rondomat, the Manomat/Automat, the Ecostar, Rondostar and Compas.

### Distinct styles

Tromp has developed a range of sheeting and laminating lines for medium and industrial-scale producers that feature two distinct styles of laminator: high-output full laminators that reduce dough to the final required thickness in a continuous process at rates up to 10,000 kg/hour; and semi-laminators that offer a two-stage process, initially reducing the dough into blocks, which are rested before the same unit is used for sheeting to final thickness. Outputs can reach 1,000kg an hour.

Every Tromp system is designed for the individual application, with a variety of end-product possibilities, and a choice of options. They are widely used for filled and unfilled croissants, and puff pastry for a broad array of products. Pizza, doughnuts, bread and crackers can all be sheeted; twist and flute products are possible. Alternative production methods include the 'French' technique, incorporating an extruder to deliver a sheet of butter directly into the pastry. The Scottish process, with fat mixed into the dough, is also applied. Systems are available as regular or low stress whereby a sheet with a high dough hydration of up to 82% can be created. Tromp pastry lines have short change-over times between product runs, with automatic storage for up to 75 recipes. They feature easy-to-use touchscreen controls, and are hygienic, easy-clean low-maintenance units with direct drives and no chains. Widths range from 600 to 1,200mm, and speeds of 0.5m to 48m a minute, are possible. Gentle laminating by folding or cutting/retracting, as well as dough reduction with multi rollers and gauging rollers, ensure high quality.

Those investing in laminating and sheeting equipment for the first time can see how they work without putting a foot outside the door. Just run a YouTube search and you will find numerous free videos of machinery in action. 



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