

# Weight control

Weighing machinery and equipment is integral to profitability, product consistency and legal compliance. Andrew Don explains why

**W**eight consistency and accurate measurement are crucial for all end-products and their ingredients, no matter whether you run a single owner-operated outlet, a high-street chain or large plant bakery.

Take an owner-operated bakery outlet that makes sandwiches for the lunchtime market, for example. Applying the egg mayonnaise, the bacon, lettuce and tomato or more expensive cuts of meat without consistent and accurate weighing can cause profits to haemorrhage and the resultant lack of consistency risks alienating customers. Many customers have had the experience of buying a baguette crammed full one week, only to return to the same outlet the next to find the same filled baguette resembles a tragic wannabe.

Customers who regularly use an outlet want to know the favourite sandwich they buy at a shop on Tuesday will be identical on Wednesday: overfill and you erode your profits; under-fill and your customers will defect to Greggs or Subway where uniformity goes with the territory.

***"If retail bakers are not using portion control, they are giving away money. It's not about being tight with what you put in your sandwich; it's about knowing how much you are putting in and not giving away margin"***

As Richard Clarke, managing director of AC Software Solutions, says: "In this critical area, margins are notoriously tight and lack of consistency can result in reduced profits. An effective system can be the difference between success and failure."

Neil Richards, managing director of Metcalfe Catering Equipment, supplier of Edlund scales, including the new £470 Poseidon WSC 10, says: "If the protein that you put in a sandwich costs £10 per pound and your scales are just three-quarters of an ounce out of calibration, you are losing 47p a portion." In a year, that equates to losing £4,399, based on 30 portions a day, six days a week, 52 weeks a year.

"If retail bakers aren't using portion control, they are giving away money," adds

Richards. "It's not about being tight with what you put on your sandwich; it's about knowing how much you are putting in and not giving away margin."

This risk to margin should also serve as a rude awakening to those who do not invest in scales specifically meant for the food industry. A bakery environment can be hot, humid and steamy, with salt and airborne grease, so buying scales manufactured for postal services or office use is unwise, because the calibration and components will suffer.


Edlund's mechanisms are made from stainless steel, so you can put them in water and expose them to the rough-and-tumble of the bakery and rely on the accuracy of the calibration. However, any scale will lose calibration over time, which is why it is essential to check periodically and ensure equipment is serviced.

"If scales are accurate, it means you are charging the right money for the right ingredients. Pay for dependable and accurate scales and they will pay for themselves," says Richards.

Creeds, which supplies mostly table-top weighing scales or digital scales, ranging in price from £170 up to £900, says the ability to measure tiny quantities as well as

larger amounts is of great importance, Laurent Valbret, managing director, says: "What bakers need is a scale they can move around in the bakery. If it is digital, it needs to be rechargeable so it does not have to be next to a socket."

He advises equipment buyers to consider whether they use scales for selling goods or just in the bakery for preparing the recipes, because if used to sell goods, they need government-stamped weights. If digital, the supplier needs to tell the customer the scales have got a certificate that can be used for selling, he says.

At the larger end of the equipment spectrum, companies such as Stevens Group, 



Above and below: Creeds Easiweigh and floor model digital scales

Above: Metcalfe's Edlund Poseidon scales



OCS Checkweighers, Loma-Cintex and Mettler Toledo supply more sophisticated weighing equipment. Toby Hawkins, UK sales manager of Stevens Group, which supplies Vantage systems for Kingsmill, Warburtons, Janes Pantry and William Jackson, says weighing is important at many points, from receipt of ingredients at the back door to weighing dough balls before they go in the oven.

"Throughout the process, there are various opportunities to do further weighing and measuring," he says. "You might want to check your bread to make sure you haven't had excessive loss of weight during the cooling process and when it gets to the end of the line and you've packed and wrapped it, so you are declaring the right weight to your customers. You need to weigh the final product to make sure your product is legal and that you are complying with trading standards regulations.

"You can have an inline check-weigh, so that as the bread comes out of a wrapping machine and goes down a conveyor, there is a weighing device built into the conveyor that weighs as it moves along. And you can have a rejection device attached, so it kicks off bread that doesn't comply," says Hawkins.

He describes his company's equipment as bakery ingredient management systems, so every part of the process can be tracked from when the goods arrive at the back door all the way through to finishing. He says this enables companies to comply with European traceability and average weight legislation.

OCS supplies dynamic checkweighers; as the dough is pushed out of the machine a cutter cuts it off to fixed sizes to ensure less product is given away



### Damage limitation

This is a point that AC Software Solutions emphasises, noting that if a product is sold that is lower than the declared weight, not only is the law being broken but the company's image, reputation and credibility is damaged. Richard Clarke, managing

director, says: "Many business owners are mindful that stand-alone systems, relying on operator judgement can be flawed, and are turning to

linked portion control systems in order to reduce giveaway."

He says his company's tailored systems take away the element of guesswork. "Operators commonly over-pack to be on the safe side, which causes giveaway and reduction in profit. Using bench scales linked to a personal computer, our portion control system makes automatic adjustments if the average of fixed weights become too high or low. The system provides detailed reports by operator, line or by production floor."

OCS Checkweighers supplies dynamic checkweighers for dough weighing with feedback control for the cutters to big plant

bakeries. As the dough is pushed out of the dough machine, a cutter cuts dough off with fixed sizes. So if the weight is increasing, the cutting mechanism is controlled to cut earlier to ensure less product is given away. It can also be weighed again later on in the process after it comes out of the ovens and when it is flow-wrapped.

The company has supplied into the Coop Group, Switzerland, where the Wallisellen bakery site uses 27 OCS systems. Coop's project manager Michel Meir, says: "Due to the feedback function, the checkweigher has reached the break-even point after a very short time."

JRH Associates consultant John Haynes emphasises the importance of the need for accurate weighing, when he says: "All recipes are balanced so weighing ingredients is a critical part of the baking industry. Tesco used to have a guy standing on the loading bay and weighing things as they came in. I don't think they have time to do that any more but you need to check. Good weighing gives you consistent product, which most customers are looking for these days."



*"What bakers need is a scale they can move around in the bakery. If it is digital, it needs to be rechargeable so it does not have to be next to a socket"*

Laurent Valbret, MD, Creeds