



Case Study



BURNING MUFFINS SOLUTION

Fast-moving baking lines can be dealing with large numbers of processes, all of which may present their own challenges. Where there is an existing production line, making changes to products - for example a new topping on a muffin - may throw up previously unforeseen issues. Compressed air products can often deliver a quick and low cost solution.

► PROBLEM:

A large manufacturer of baked goods was experiencing problems on its muffin line. Prior to going into the oven, the muffins were sprinkled with sugar and/or other toppings. Where too much of the topping product was landing on the muffins, it was burning when they went into the cooking phase. The result was muffins that were perfectly cooked inside but had unattractive burnt tops, making the products appear over cooked and thus unusable.

► SITUATION:

The production line was established and there was no opportunity to add additional phases or to change the means of applying the toppings as this would have been costly and would have added too much time to the overall process. A blow-off system of some sort was needed but this would have to be retro-fitted into the existing production line. An additional issue was that space was limited so traditional blow-off solutions were not suitable. In addition, it was important that not all of the topping was blown off or was blown onto the muffins behind.

The client approached ANP to see if there was a compressed air solution we could suggest.





WHY CHOOSE ANP FOR YOUR FOOD PRODUCTION NOZZLE NEEDS?

- The ability to solve unique and complex process challenges
- ISO 9001:2015 Certified
- A wealth of industry experience
- Friendly and hassle free expert advice
- A broad range of compressed air enhancement products



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PEOPLE

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Solution

Compressed air products are used extensively in the food processing industry and air knives are ideal for applications such as blow-off, drying and cooling product.

The Air Knife X-Stream in 316 stainless steel was proposed. An air knife is a long chamber with a series of holes along its side. Compressed air is fed into the knife and comes out through the holes to deliver high impact and very focused linear streams of air.

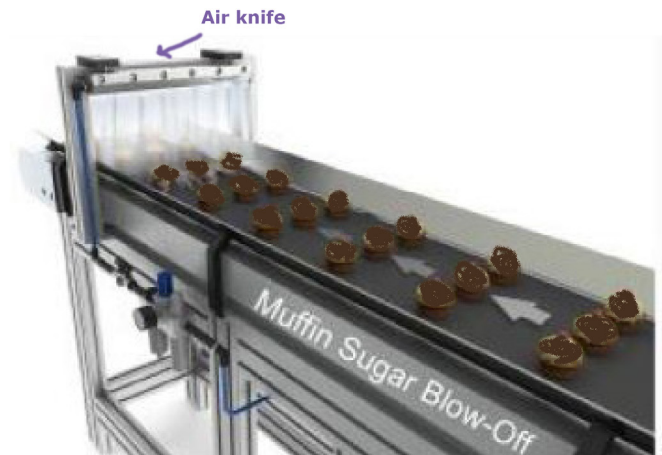
The small size of the device meant that it could be easily retrofitted in the existing production line. The air knife was positioned above the conveyor between the sprinkling and baking stages to gently blow off excess sugar. Because the products were uniformly spaced, sensors could be used to turn the air on and off to target each row individually and precisely, saving energy in the process. The air knife was angled so that sugar was not blown off one row onto the row behind.

ADVANTAGES OF AIR KNIVES

- Low capital expenditure
- Energy efficient
- Available in 316L stainless steel, essential for food production environments
- Maintenance free
- Incredibly reliable
- Easy to retro fit
- Low noise levels compared to traditional methods

CHALLENGES

- ▶ Established line
- ▶ Speed - rapid blow-off was required
- ▶ Cost - budget constraints meant the solution could not be costly
- ▶ Space was very limited



AIR KNIFE APPLICATIONS IN FOOD PROCESSING

- ▶ Blow-off e.g. of excess toppings, oils, liquids, and dust from products/surfaces
- ▶ Drying product e.g. bottles before labelling
- ▶ Cooling product e.g. glue on a packaging line