

There's something in the air

ALTHOUGH ESSENTIALLY STRAIGHTFORWARD, THE BRC'S CODE OF PRACTICE ON AIR PURITY IN THE FOOD INDUSTRY HAS CAUSED SOME MISUNDERSTANDINGS. WE LOOK BRIEFLY AT THE MOST COMMON OF THEM.

In today's advanced food manufacturing environment, keeping processes free of contaminants is a critical issue. It can also be a complex one, because impurities can work their way into the system by many different routes. Machine lubrication, which we discuss on page 16 of this issue of Know+How, is just one of these routes. Compressed air is another. And it's compressed air which is the subject of this article, as – especially following the introduction of the BRC's Code of Practice – there seems to be some confusion as to what constitutes best practice in implementing compressed air systems. To help clarify this confusion, we'll look briefly at some of the questions which are frequently asked about air supply equipment.



First, though, it's worth a brief review of context. In 2006, the BRC launched its Code of Practice for the supply of compressed air, intended to clarify and regulate the use of air used in any part of

the "farm to table" production process. The Code gives clear guidance on issues such as what type of compressed air equipment is required, and how it should be installed and maintained. Importantly, it also addresses the question of what actually defines air purity, making a distinction between air that comes into direct contact with food, and air that doesn't. When used in conjunction with the HACCP (Hazard Analysis and Critical Control Point) process, the Code will ensure that a compressed air system will not only meet current legal requirements but also contribute to customer confidence in food supplied to the market.

This sounds straightforward enough in theory. And, in practice, it is. Yet there are some aspects of the Code which consistently cause concern among food manufacturers, often with the result that they implement either inappropriate or unnecessarily expensive solutions. So, what are these areas of concern, and what's the truth behind them? Below are the questions we're most frequently asked.

Do I need to use an oil-free compressor?

No. The code makes it clear that oil-lubricated and oil-free compressors are both acceptable in the food industry. However, the filtration solution at the point of use must deliver air purity to food-contact levels.

Do I need to carry out purity levels checks twice a year?

Yes. An air purity test should be carried out twice a year to confirm that air quality meets Class 1 requirements.

Is a refrigerant dryer sufficient?

Depends. The Code of Practice recommends a pressure dewpoint of -40°C or lower for air in direct contact with food. However, refrigeration dryers can only achieve dewpoints down to $+3^{\circ}\text{C}$, so are sufficient only for air that will not come into direct



contact with food. If the air comes into direct contact with food, then an adsorption (desiccant) dryer is required to lower the dew point of compressed air to the required level.

What do I need to test for?

The Code requires that you test for dirt particles, humidity and total oil. You must also control levels, which means an appropriate filtration solution.

Will an oil-free compressor will give me oil-free air?

Not on its own. An appropriate filter is required to ensure that air is oil-free.

Must I use food grade oil in my oil-injected compressor?

If as a result of the HACCP process, the Point of Use is defined as a risk point, then lubricants must be food-grade.

Is a dry air receiver required to conform to the Code?

No. Properly specified filtration can be enough, and it is more cost-effective.

These are just a few of the issues which are frequently raised with our engineers. In reality, though, compliance with the Code need be neither complex nor expensive, and the chances are that your plant already meets its air purity requirements. If it doesn't, it's likely that problems can be fixed simply and cost-effectively through the use of additional filters. ERIKS, in partnership with industry-leading filtration specialist, Donaldson, is perfectly placed to advise you in these issues. We're also ideally qualified to help you conduct a full audit of your compressed air system as part of the HACCP process, and help you reduce costs by identifying any areas where your system could be simplified.

