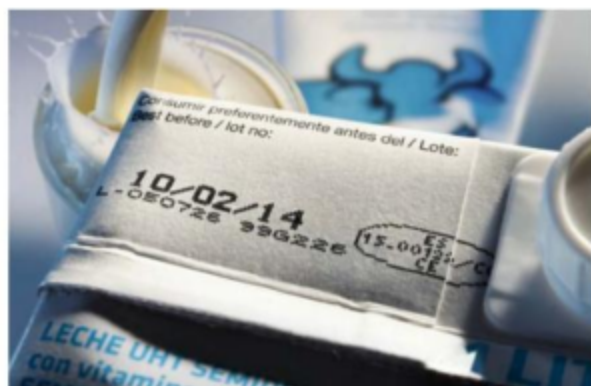


Drink

TECHNOLOGY



Bevande 100% oil-free

Quando serve aria compressa pulita e oil-free, non si può scendere a compromessi sulla qualità.

I compressori Atlas Copco serie AQ rappresentano la tecnologia più innovativa nei compressori d'aria oil-free, unendo i vantaggi di un compressore a vite con la garanzia di aria 100% oil-free.

La qualità dell'aria è fondamentale per preservare il processo di produzione alimentare o di bevande e la reputazione del prodotto finale.

www.atlascopco.it

info.ct@it.atlascopco.com

Sustainable Productivity

Atlas Copco



AQ: INNOVATIVE TYPE OF OIL-FREE AIR COMPRESSOR

The AQ is by far our most innovative type of oil-free air compressor: it combines the advantages of a screw compressor with the guarantee of 100% oil-free air.

Did you know the AQ is even the most efficient type of oil-free compressor in its range? The water in the AQ is used as a lubricant, but it also seals and cools the compression element at the same time.

Water has an excellent cooling capacity, enabling lower compression temperatures. As a result, the AQ is more energy efficient than other oil-free compressor technologies

Oil-free air for specific application: beverage
Atlas Copco extends its AQ water-injected screw family now available from 15 to 55 kW. This new product

range brings reliable, ISO 8573-1:2010 Class 0 certified, oil-free air to the most sensitive applications e.g. medical, pharmaceuticals, food & beverage where air is in direct contact with the product. For example, in the vinification of red wine,

air is sometimes used to break the straw hat. Today, there are solutions that optimize this effect. For example, a newly solution recently patented by Parsec Srl in Florence, is the Airmixing M.I.[®] (Modulated Injection) which uses compressed air to create



more variable duration jets that, combined suitably, allow to produce waves that completely disintegrate the straw hat by immersing it with liquid, without violent mechanical actions or moving organs that could create dregs. Advantages? Effective extraction of the entire hat, reduction of vinification time, easy grubbing and, moreover, the system is flexible and can be installed on existing tanks. Another field of application is the manufacture of preforms for PET, where besides being essential to have oil-free air this should be available at pressures above 10 bar.

The opening and closing of the shutters must be quick to ensure high production, so compressed air must always be maintained between 10.5 bar and 11.5 bar. If other oil-free technologies have the limitation of working at a maximum of 10 bar due temperature issue, the AQ can safely reach the 13 bar of pressure responding fully to the process needs.

“Warm water causes scal-

ing and bacteria growth”, doesn't it? Not in the AQ... **The water quality should be impeccable from the start.** That is why the AQ is started up with distilled water and maintains its own water supply through a “reverse osmosis” (RO) membrane that filters out particles and minerals that could cause depositions and scaling. The AQ is regularly and automatically flushed to prevent bacteria and minerals from accumulating, so the water quality remains reliable at all times

Selecting the right materials

The AQ protects itself from possible corrosion thanks to the RO unit, which keeps corrosive minerals and salts at bay, but also thanks to its top-class components.

The AQ element's rotors are made from a ceramic and polymeric material, the shaft from stainless steel and its casing is an aluminum and bronze alloy. Also other components are made of corrosion resistant material and tested for all kinds

of mishap.

Hostile environment

But what if something happens to the Reverse Osmosis Unit? Or what if the unit is not operated for some time? Even then, bacteria don't stand a chance inside the AQ, thanks to the temperatures and turbulence. Continuous water renewal also puts a halt to colonization and washes away any possible nutrients for bacteria. And yes, we put this to the test...

The reliable operation of the AQ has of course been tested in various operating conditions. But especially to tackle some of those customer concerns, the AQ was tested by an independent third party organization. They ran the AQ in extreme conditions and even simulated component failures and with different types of possible bacteria. Simulations showed no bacteria were carried over into the compressed air, even with the dryer and cooler shut down. ■

Visit:

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