VERSATILITY & CONSISTENCY

NEUHAUS NEOTEC'S ANDREAS JUERSS EXPLAINS HOW AN INTELLIGENT AND FLEXIBLE PLANT IS KEY TO ENSURING A QUALITY PRODUCT.

Neuhaus Neotec is no stranger to the importance, and challenges, of consistent roasting.

"Consistency is essentially the main point when it comes to quality in roasting," says Marketing Manager Andreas Juerss. "The most significant element to producing quality coffee on the large scale is achieving consistency."

As a specialist in large-scale roasting operations, Juerss explains how the company has pioneered many major developments that allow plants to replicate perfect roasts one batch after another. The result, he says, is a change in the role of the modern machine operator.

"There was a time when a roastmaster, working on a classical [drum] roaster, would need to always be working on the machine, looking at the coffee and constantly checking for consistency," he says. "I don't think this is the case anymore at big operations."

Rather, Juerss says the modern roastmaster is mainly involved in the initial development of a recipe: determining the blend of beans and roast profile. Modern technology, much of it introduced by Neuhaus Neotec, ensures that the recipe can be replicated to the exact quality standards of the customers.

Replicating a recipe, however, isn't as simple as ensuring the machine delivers a programmed time and temperature requirement. The challenge sits among all of the parametres that are outside of the roasters' control.

"The problem is that every coffee has different qualities. From moisture content to storage times, each coffee is unique," he says. "The roasting equipment is very important to achieving that maximum quality. If a machine can't reproduce quality, then there is a problem."

Juerss explains that the entire infrastructure of a roasting machine and the plant's operations is important to achieve this goal.

Firstly, the machine needs to be able to assist the roastmaster to find the perfect profile for every coffee product. The next step is largely where technology can be of most assistance, is its ability to reproduce that profile accurately.

On the machinery side of the operation, Juerss emphasises that versatility is key. The machine must be able to finely adjust the variables as needed.

This is where Neuhaus Neotec's position as leaders in hot air roasting technology largely comes into play. Juerss says the company was the first roasting machine manufacturer to develop reliable and quality hot air roasting equipment that met the high quality standards of world-leading brand manufacturers. With hot air roasting, the machines have a lower heat capacity in the system itself, leaving more flexibility to adjust parameters like temperature and air flow to ensure the optimum profile. This guarantees a more efficient heat transfer to the beans and enables the machine to change the roasting conditions very fast

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Andreas Juerss
Neuhaus Neotec Marketing Manager

Neuhaus Neotec operates a pilot plant to assist in the development of its technology.

Neuhaus Neotec are market leaders in air roasting technology.

All of these parametres are controlled under Neuhaus Neotec's Intelligent Control System (ICS). The ICS is fed by a number of sensors that measure, for example, product and air temperature. In return, the ICS can control an impressive 21 different temperature values and air quantities during one roasting cycle.

"This is a big advantage of Neuhaus Neotec," says Juerss. "Our roasters are very versatile and are able to reproduce the profile of any coffee used."

This versatility is coupled with the intelligence of the ICS. The system uses software that identifies what is needed to achieve the maximum flavour profile, initially determined by the roastmaster. It can then automatically adjust according to what is read by the sensors.

It's this ICS that is the key behind Neuhaus Neotec's other main advancement: copy roasting. This technology can replicate the qualities of any individual roast, time and again. The software controls the roasting process and can correct any deviations in the green coffee being used.

"Once the roastmaster has developed the recipe, he or she can be confident that the recipe will always come out the same, whether it's two batches or 200," he says. GCR

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Neuhaus Neotec's Intelligent Control System is fed by sensors that measure product and air temperature. The intelligent system can automatically adjust parametres to replicate a desired roast profile.

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