



Nespresso
green coffee
handling.

Nestlé Nespresso SA,
Avenches (CH).





Nestlé Nespresso SA.

Continuous striving for quality.

Nestlé Nespresso SA is investing some 200 million Swiss francs in a new production and distribution center for Nespresso coffee capsules in Avenches in Switzerland. Buhler is designing and constructing the so-called green coffee part of the plant, from the reception of the green coffee beans and cleaning to bulk storage and weighing.

First, a grand-cru coffee of top quality in numerous blends and tastes; second, portioned in a convenient capsule; and third, an innovative and stylish coffee machine to match plus an individualized service around the world and around the clock. The Nespresso trilogy has made Nestlé the global market leader in the field of portioned coffee. “Basically, it is our relentless striving for quality that has brought us this success,” explains Martin Bugmann, the director of the new Nespresso factory in Avenches. “Our commitment to quality covers every phase of the long journey from the green coffee to the prodigiously fragrant coffee that we have in our cup.”

New building in Aventicum

The success of the Nespresso system is unstoppable. Sales over the past eight years increased by an average of 35 percent annually. The production plant in Orbe was no longer capable of keeping up with this growth. Therefore, in 2006, it was decided to construct a new, state-of-the-art production and distribution center in Avenches. The small

town of Avenches is located at the southern end of the Lake of Murten in the western part of Switzerland. During the Roman era, Aventicum as it was called at that time was the most significant Roman settlement with a garrison in what we know as Switzerland today. The legionnaires stationed there secured the transit route from the Lake of Geneva to Germania.

The presence of the Romans also had impact on the new building erected for the Nespresso plant. While excavating the building pit, the workers chanced upon remainders of several Roman graves and an ancient grain mill. Securing these antiquities by archeologists delayed the start of construction by several months.

Coffee storage building with 64,000 cubic meters

The new Nespresso building in the industrial park is impressive in many respects. To stabilize the subsoil, 460 concrete piles were driven as deep as 30 meters into the soft ground. The coffee storage building stands 38 meters tall and has a volume of 64,000 cubic meters. Its shell consumed 25,000 cubic meters of concrete and 2500 tons of steel. The size of the production area is about 2700 square meters.

Construction of the new production and distribution center of Nestlé Nespresso SA started in the summer of 2007. Installation of the production equipment began in January 2008. The first production lines have been in operation since the summer of 2008. Others will follow by the time the plant has been completed. Once the Nespresso factory has been finished in Avenches, it will turn out several million Nespresso capsules – a day. In its numerous bulk storage bins, Nestlé Nespresso SA will have a holding capacity of several thousand tons available.

Buhler in charge of green coffee handling

The Buhler Chocolate & Coffee business unit was entrusted in the spring of 2007 with designing and constructing the entire so-called green coffee part of the new Nespresso factory. The contract is worth some 20 million Swiss francs. “Handling this order with its scope and also with the customer’s extremely high quality demands was a true challenge for us,” says Guido Högger, the Buhler sales manager for Chocolate and Coffee installations. “Exactly as in the production of its coffee capsules, Nespresso also

adhered to uncompromising quality standards in building the new factory. Only the best is good enough." The green coffee part of the new Nespresso factory consists of the intake section for receiving the green coffee beans and equipped with a precleaning system, a system for storing the raw beans by different categories, and a weighing section. The scope of supply also includes the entire software for the complex control of the green coffee part of the factory.

Stop-over in sampling bins

Intake, precleaning, storage, weighing: What sounds straightforward enough is a fairly complex matter. The green coffee beans are supplied in bags to Avenches. In an initial operation, the bags are automatically opened and emptied. This is followed by precleaning, during which screens, magnetic separators, and destoners remove the coarsest impurities. The receiving section is capable of handling 20 metric tons of coffee an hour.

The roughly cleaned green coffee is then transferred to huge sampling bins. After the final construction stage has been completed, the new Nespresso factory will boast a total of 72 such intermediate holding bins. Special samplers draw samples of each coffee lot received, which are painstakingly examined in the in-house laboratory. The quality of the green coffee beans must comply 100 percent with the rigorous standards defined by Nespresso. Only when they have been released will the green coffee beans be moved after two days of intermediate storage to the storage bins with a holding capacity of 40 metric tons each. After completion of the final stage, the plant in Avenches will have 300 such storage giants.

If a coffee delivery fails to comply with the stringent Nespresso requirements and standards, the total contents of a sampling bin will be repacked into bags in the return section of the plant and be returned to the supplier.

Blending of the batches

From the storage bins, the green coffee is transferred to the blending bins. For blending the different grand-cru coffee varieties offered by Nespresso, 32 bins holding 20 tons of coffee each are available. There the green coffee beans await blending into the currently twelve different product varieties on the basis of sophisticated

recipes formulated by the Nespresso coffee specialists. The blending process is fully automated. Buhler batching scales blend the coffee with top accuracy. After weighing, the green coffee beans are roasted batch by batch, ground, and finally filled into the capsules. During roasting, so-called silver skins are produced as a byproduct. They are collected, processed into pellets in pellet mills, and incinerated for heat supply in the energy center.

First construction stage completed

The new production and distribution center of Nestlé Nespresso SA went into operation in the summer of 2008. This marks the completion of the first construction stage. Of the green coffee part of the plant, the receiving and cleaning sections have been finished. About half of the various bins are already installed. In the final production section, six encapsulating systems are already in service. The entire production plant will be completed step by step. The whole factory will be up and running by the year 2010 at the latest. Then, the millions of Nespresso aficionados around the globe will enjoy a grand-cru coffee that was processed on ancient Roman foundations. After all, the other Nespresso factory in Orbe also stands on the grounds of a former Roman settlement. (bos)



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The production and distribution center of Nestlé Nespresso SA in Avenches under construction.



Nespresso – a success story

“We have an uncompromising quality awareness and are prepared to think unconventionally and to try out new approaches. This has contributed much to making Nestlé Nespresso the global pioneer and market leader in portioned coffee, the European market leader in espresso machines, and one of the fastest-growing companies of the Nestlé Group.” These are the words of Richard Girardot, CEO of Nestlé Nespresso SA, summarizing the reasons for his company’s success. Development of the Nespresso system – the combination of a cutting-edge espresso machine and ground coffee portioned and then packaged in capsules – started as far back as 1970. But actual commercial utilization of the system did not start before Nestlé Nespresso SA was founded in the year 1986 as a fully-owned affiliate of the Nestlé Group. In as little as ten years later, Nespresso already operated several hundred sales outlets worldwide. In 2003, Nespresso launched the “Nespresso AAA Sustainable Quality™ Coffee Program,” which promotes sustainable production of top-grade coffee.

Today, Nestlé Nespresso SA has a global payroll exceeding 2500. It supplies its products to several thousand points of sale and operates about 120 of its own Nespresso boutiques. These also include the flagship boutique on the Avenue des Champs-Élysées in Paris, which opened in 2007 and with its floor space of 1500 square meters is the largest of its kind. (bos)

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