

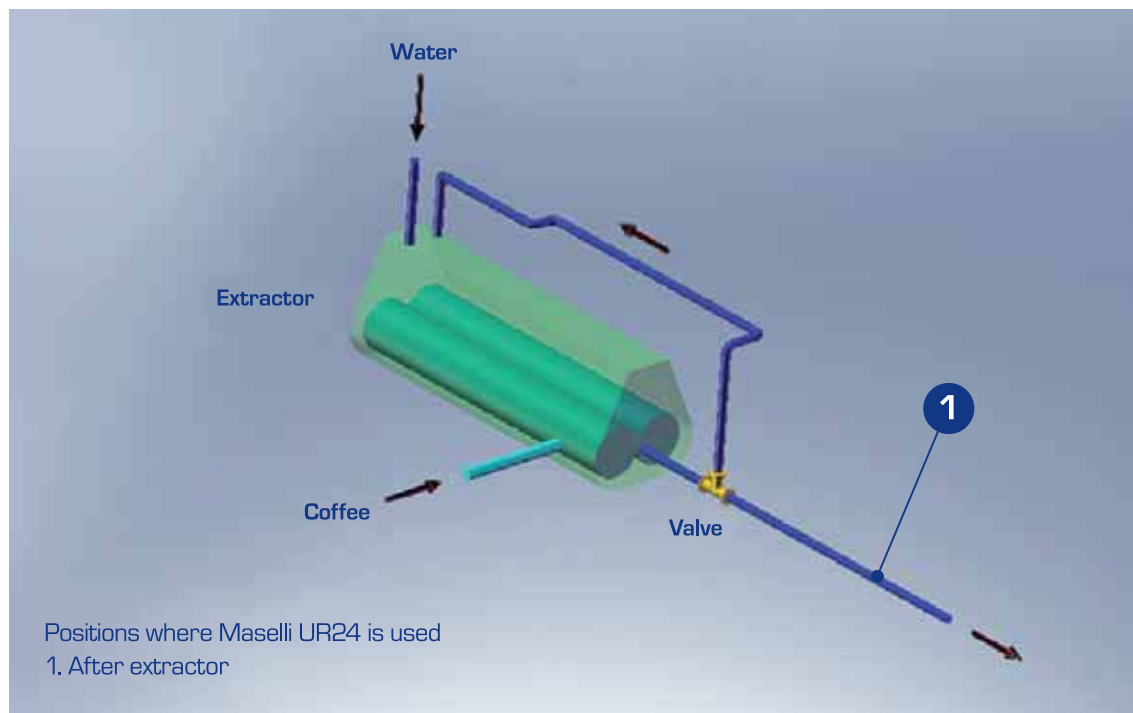
Application Focus

Italy

Coffee

Monitoring of the coffee concentration at the exit of the extractor

Ferrero (End User)



Description of the process

Especially in the confectionery industry, it's quite common the need to have "ready to use" diluted coffee, even in big quantities (i.e. chocolates with liquid coffee inside).

The most effective way to have this commodity available in the plant is to directly produce it, using, as raw material, the coffee in powder.

The extraction process takes place in an industrial extractor (which, in principle, is very similar to the Moka machine used at home).

The hot water flows in countercurrent with the fresh product, so that it can increase its coffee extract concentration step by step.

The process (concentration of the out coming coffee) is regulated by increasing or decreasing the speed of extraction.

According to the different type of extractors, this speed can be varied:

- Regulating the flowrate of the water entering in the system
- Regulating the inclination of the extractor

The temperature of the products inside the system is approx. 70° C.

The target brix of the product coming out of the extractor is around 30 brix.

Benefit of the installation of the Maselli analyzers

The global efficiency of the system is a balance among:

- Achieved concentration (expressed in brix).
- Extraction yield for the coffee powder
- Temperature of the extraction water (energy spent in order to reach this temperature)
- Time needed for the extraction

Due to the field experience, in the plant they are aware about which is the optimum brix value of the finished product they have to reach if they want to have the max. efficiency of the system. CONTINUOUSLY monitoring the concentration of the product coming out of the system with an in line UR24 refractometer, the customer can CONTINUOUSLY regulate the inclination of the extractor; in order to ALWAYS reach the target brix value.

Due to the high risk of prism coating, it's strongly suggested to use the pneumatic cleaning system (wiper).

