

## Coffee capsule test station



### Task

The basic task is to integrate two separate test circuits with the original brewing units of the coffee machines into one testing unit. Two different capsule types must be tested independently. The unit must be able to process the coffee capsules autonomously. For this purpose, a depot must be created which enables 30 minutes of autonomy. The test parameters must be assigned to the batches and stored in a database. The system must be centrally operable and controllable from a laptop.

### Solution

The capsule depots are realised with two buffer conveyors. The capsule position and type are checked for correctness before processing. This is followed by separation and transfer to the capsule handling device. After measuring the first test parameter, the capsules are pushed directly into the respective brewing unit. Before insertion into the brewing unit, an empty test is carried out. The tested capsules fall into the waste container and must be manually disposed of once a day. The coffee is collected in a level monitored receptacle and must also be emptied daily. The fresh water supply is directly connected to the house installation.

### Result

The two capsule depots are integrated, freely accessible, at the top of the machine and can be refilled during operation. Before the capsules are processed they are checked for correctness by means of a laser light sensor. This measure prevents incorrect insertion and the accompanying follow-up errors. The automatic refilling and emptying functions reduce the operating effort to a minimum.

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