

Definition and introduction of assembly guidelines for centralized dosing systems

Introduction

A Central dosing station or central dosing system refers to the supply of process chemicals to one or more commercial dishwashers by means of automatic dosing from a central location.

There is often a spatial separation between the dishwashers and the dosing station.

Decision support

When it comes to the decision (pro and contra) for a centralized dosing station, the customer's wishes always come first.

A centralized dosing system offers advantages in terms of occupational health and safety aspects. (No contact of kitchen staff with the process chemicals).

The customer's consumption rate of process chemicals, the structural circumstances, the number of dishwashers, and the run-time of the machine(s), represent other decision making factors.

The most important decision making factors for a centralized dosing system are summarized in the following table:

Criterion	Remark
Number of (transport) dishwashers	The more dishwashers there are nearby, the more useful a centralized dosing system is. A centralized dosing system may also be worth considering for special extra-wide dishwashers with multiple lanes and a run-time of at least 5 hours.
Consumption of process chemicals	If the planned consumption of process chemicals requires frequent canister exchanges or small containers on the machines, a centralized dosing system should be considered.
Container size of the process chemicals	Barrels and other large containers
Sufficient space or separate dosing room	available/planned
Cable routing	must be possible
Chemical storage	sufficiently dimensioned

Requirements for the dosing room to be taken in account:

- Provision of a room for the dosing system(s) and a chemical storage facility
- Compliance with the relevant standards and laws (e.g. AWSV, TRGS 510)
- Accessibility and size must be sufficient (pallet and pallet truck), pay attention to the elevator load
- Service personnel and suppliers must be authorized to access both the dosing room and the storage area for process chemicals
- Sufficient number and dimensioning of electrical connections
- Sufficient number and dimensioning of empty conduits or routes for lines to the dishwashers
- Water supply, hand sink
- Data line / LAN access / mobile phone access
- Protective equipment in accordance with occupational health and safety regulations (e.g. emergency showers, personal protective equipment)
- Adequate ventilation and air extraction
- Consideration of the regulations for the storage of process chemicals (drip pans, floor coating, etc.)
- Adequate lighting
- Ambient conditions: frost-free, maximum temperatures adapted to the process chemicals used

Conditions for cable routing:

- Account for fire protection regulations: Electrical cables and chemical lines must be laid through separate fire barriers (see AK GGS standards list)
- The ambient conditions (temperature!) for the process chemicals must also be maintained for the pipelines
- Labeling of media-carrying pipes in accordance with DIN 2403
- Piping: Use suitable materials with long-term chemical resistance for the process chemicals used (see also "Checklists, No. 3 Safety of pipelines", published by the Federal Environment Agency).
- In the case of floor breakthroughs, install bushings with sufficient protrusion so that any escaping liquids can't drain through the floor.
- Provide reserve lines if necessary

It is strongly recommended to consult the manufacturers of the dishwashing technology and of the process chemicals during the planning phase.

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