

# TECHNICAL INFORMATION



## WPSD IUAF30

Disposer for the treatment of contaminated rinsing water for discharging into a public sewage network



## WPSD IUAF30

Wastewater disposer: SYMBIO-unit for the treatment of contaminated rinsing water for discharging into a public sewage network.

For the modular integration in **kolb** AF30 cleaning systems with integrated ClosedLoop technology.

Additional depth of the cleaning system: ca. 250 mm

Part number: 090530-50WPSDIU



### Certifications:

This system in its basic version is certified for its energy and water saving processing, for easy operability and for the standard integration of comprehensive safety features.

- \* SYMBIO-integration as a framework module at the system back
- \* Fully enclosed solidly integrated unit
- \* Fully automated process
- \* Process and service intervals PLC controlled, monitored and displayed
- \* 4 - 5 filter stages
- \* Automatic dosing of regulators for pH value reduction (optional)
- \* Integrated pumping system to sewage network
- \* Easy maintenance access through rear door / rear covering

## Application



kolb AF30 AirFlow® systems

A closed rinsing circuit (ClosedLoop) is integrated into all **kolb** cleaning systems. Usually these are systems for product (PCBAs, DCBs, HDIs, etc.) or for tool cleaning (screens, stencils, solder frames / carriers, condensate filters, etc.). The rinsing water is repeatedly used in the ClosedLoop process (depending on the cycle number and the task options) until its dirt entry respectively its  $\mu\text{S}$  conductance is so high that it is no longer usable and has to be disposed. The cheapest disposal is the indirect introduction into the public sewage network. This may only be done with regard to the legal limit values! The operator is responsible for compliance with the local regulations, possible authorizations by the authorities and proper operation.

The WPSD IU SYMBIO module utilizes the patented SafeDrain HME-process developed by **kolb** for metal precipitation from alkaline rinsing waters with high dissolved or undissolved heavy metal contents of lead, tin, silver and copper. The flushing water is thus treated in such a way that it can be indirectly introduced into a public sewage network.

The installation of the fully enclosed compact SYMBIO-module for the AF30 cleaning system is on the rear side of the machine and increases its depth by only about 250 millimeters.



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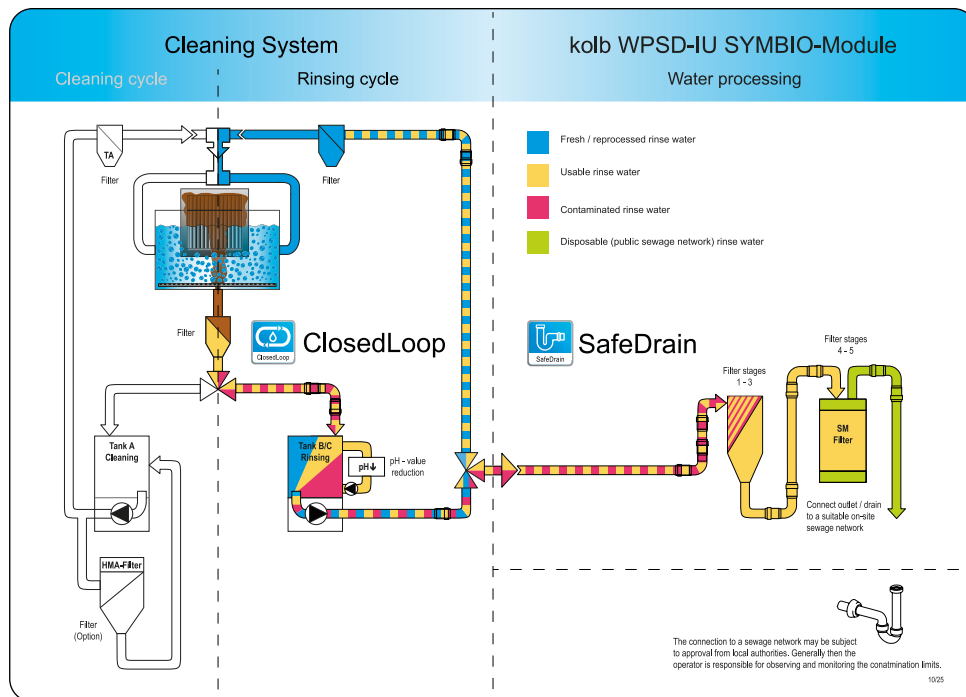
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### Function

In a cleaning system, the rinse water usually shows three different process states:

1. Polluted water, which is no longer suitable for rinsing and has to be either treated for reuse or has to be discharged into the local sewage network.
2. Water that has been used for rinsing, but still is usable for this process because it is filtered in a closed loop inside the cleaning system and thus can be reused several times.
3. Fresh water or fresh recycled water which the system collects during the rinsing water exchange process either from the local water connection or from a reprocessing plant.

The WPSD IU with **kolb** SafeDrain technology can be used to treat contaminated rinse water with too high heavy metal loads of lead, tin, silver and copper - including (optional) pH value regulation - in order to comply with municipal regulations on the indirect discharge of wastewater into the public sewer system. (Other pollutants are not included in the basic scope of services, but can be treated separately if required).



The filter stages of the WPSD IUAF30 SYMBIO-module are adapted to the rinse water to be treated and adjusted to the process. Rinse water of the upstream cleaning system that is no longer usable is either lowered to the appropriate pH value in the rinsing tank, or pumped directly into the WPSD IU SYMBIO module.

The pH of the process water is measured and via suspending agent (e.g., **kolb** pHReducer 4-fold, Part No. 090625-CN25) adjusted to discharging value. The pH reducer has not only the function to reduce pH value, but also takes over precipitation tasks for metals (complexation of heavy metals) in the rinse water and serves to ensure a proper filtration, which also positively influences the service life of the filter stages. The module has five SPS-monitored filter stages (fine filter cartridges and, if required, activated charcoal filters). If necessary, the waste water can be further processed via optional adsorber cartridges. Integrated sampling spots allow a water sample to be taken during the process to analyze its quality externally.