




# Multitank systems KOMBI



The Kombi multitank washing systems are the result of continual research and include all those technological innovations which allow:

- To respect the most severe antipollution and accident-prevention standards;
- To comply with the most selective technical cleaning specifications;
- To execute quickly and easily ordinary and extraordinary maintenance;
- A custom design, taking into account the individual problems of overall size, productivity and automation;
- The optimisation of consumptions;
- A great homogeneity of washing results, thanks to innovative purification, backwashing and closed-circuit filtering systems which can be applied direct to the machine.



The standard system is composed of:  
degreasing/washing zone with one or more ultrasonic or inject flood tanks (also with vacuum); tap water rinsing zone with one or more sections; demineralized water rinsing zone with one or more sections; hot air drying zone.  
It can be equipped with: rotation device or vertical automatic movement, total fairings (class 100 filtration as well), suction systems, purification systems and entirely

automated control.

It can be completed with: immersion and/or spraying pre-washing zone, pickling/etching zone, phosphatizing zone, passivating zone, oiling/dewatering zone, cooling zone.

The most sophisticated systems allow:

- ▶ waste residues to be drastically reduced;
- ▶ very pure rinsing water to be obtained with excellent final washing results.

## KOMBI process EXAMPLE

**WASHING**  
US:40KHz  
10 to 15W/L  
conc: 3-5%  
temp: 65°C  
time: 3-5'

**WASHING**  
US:40KHz  
10 to 15W/L  
conc: 2-3%  
temp: 65°C  
time: 3-5'

**TAP WATER  
RINSING**  
temp: 20-30°C  
time: 3-5'

**WASHING**  
US:40KHz  
10 W/L  
conc: 3-5%  
temp: 65°C  
time: 3-5'

**TAP WATER  
RINSING**  
temp: 20-30°C  
time: 3-5'

**TAP WATER  
RINSING**  
temp: 20-30°C  
time: 3-5'

**DEMI  
RINSING**  
temp: amb.  
time: 3-5'

**DEMI  
RINSING +  
LIFT-OUT**  
temp: amb.  
time: 3-5'





## Drying

Drying is executed with specially studied systems according to the characteristics of materials be treated. Our standard production includes following types of drying:

- hot air with recirculation,
- vacuum,
- low temperature with humidity condensation.

## Modules

The systems are designed in modular way and with standardized elements.

So each module is equipped with:

- set for possible connection to water treatment systems;
- electrical connection, multipolar connector type with multiwires cables for fast coupling/releasing
- possibility of any integration, addition or modification (e.g. U/S application - heating - automatic cover - skimming ramps, etc.)

### HOT AIR DRYING

temp: 100/120°C  
time: 10-12'

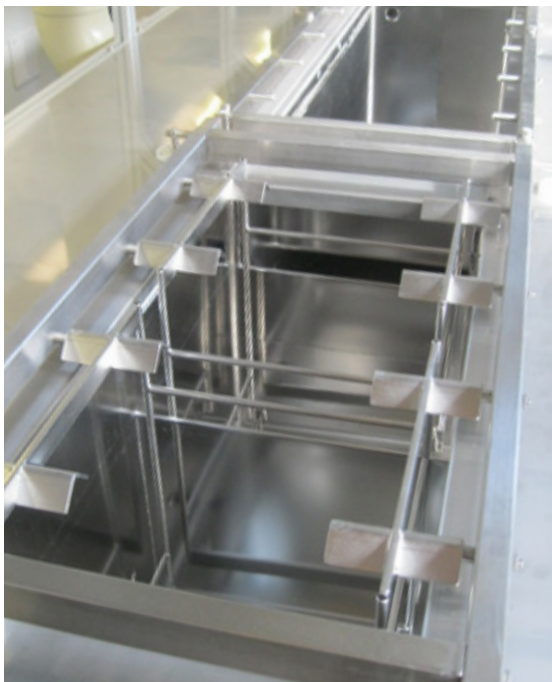
### VACUUM DRYING

temp: 70/90°C  
time: 6-8'

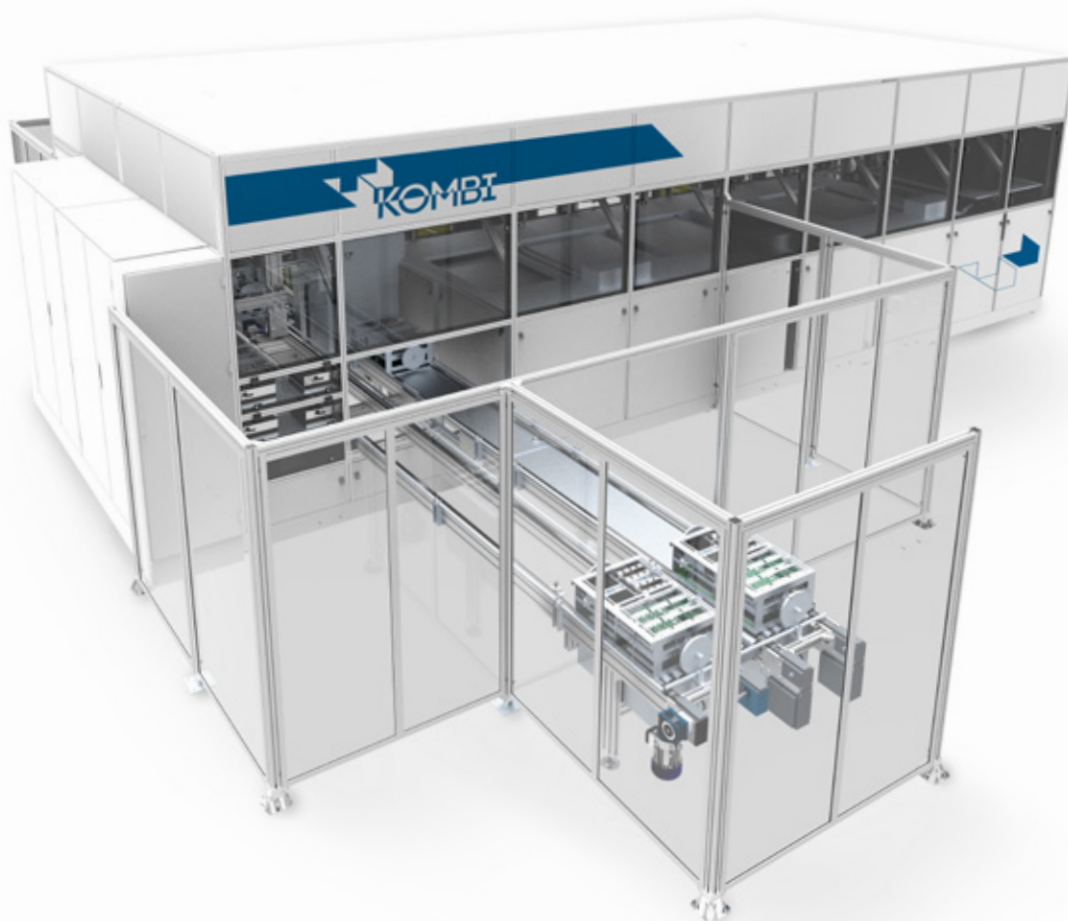
### CONDENSATION DRYING

temp: 55°C  
time: 10-12'

## 3 POSSIBLE TYPES OF DRYING



# Maximum flexibility and customization



Ultrasonic washing line for automotive components with multi-stadium 250 liters tanks, vacuum drying and unloading of the pieces in clean room.



Ultrasonic washing line for luxury components with 50 liters tanks and hot air drying tunnel.