



Combi Design Levels for Food Packaging Applications

Tailored Solutions for Diverse Food Packaging Environments

At Combi, we understand the unique challenges food packaging environments present. From secondary packaging areas to ready-to-eat (RTE) production zones, ensuring the right equipment design for hygiene, durability, and operational efficiency is critical. To meet these varied needs, we've developed three distinct design levels tailored to different environments and cleaning requirements.

Each design level incorporates materials and features optimized for specific conditions, ensuring compliance with food safety standards, extending equipment lifespan, and maximizing performance. Whether it's a simple wipe-down area or a rigorous RTE application, Combi's equipment is built to meet your operational demands with precision and reliability.

Design Levels Overview

Wipe Down Design

- **Intended Environment:** Designed for secondary or tertiary packaging areas that are not exposed to direct or indirect water spray or standard washdown procedures. This is Combi's standard design, compatible with light manual cleaning and customizable with options like catch trays designed to contain accidental product spillage that could damage the machine.
- **Key Design Features:**
 - Painted steel frame with standard finishes (paint, powder coat, or plating).
 - Thermoplastic guarding (e.g., polycarbonate) for durability and visibility.
 - NEMA 12 rated enclosures for electrical components.
 - Standard motors, electrical, and pneumatic components.

Washdown Design

- **Intended Environment:** Designed for food production areas subject to daily washdown and sanitizing procedures. Resistant to corrosion from water and chemicals, it can handle low-pressure rinsing but is not intended for high-pressure/high-temperature cleaning.
- **Key Design Features:**
 - Stainless steel frame and hardware (grade 304 minimum) for corrosion resistance.
 - Thermoplastic guarding (e.g., polycarbonate) for durability, visibility, and easy cleaning.
 - NEMA 4X rated enclosures to protect electrical components.
 - Epoxy-painted washdown motors for added durability.
 - Device ratings of IP65 to withstand exposure to water and cleaning solutions.

Sanitary RTE Washdown Design

- **Intended Environment:** Engineered for ready-to-eat (RTE) production areas requiring daily washdown and stringent hygienic design to minimize pathogen risks. Resistant to corrosion from water and chemicals, it can handle low-pressure rinsing but is not intended for high-pressure/high-temperature cleaning. The design follows the recommendations detailed in the “Food Safety Equipment Design Principles: Checklist & Glossary” published by the Foundation for Meat and Poultry Education and Research.
- **Key Design Features:**
 - Stainless steel frame construction without hollow members (grade 304 minimum).
 - Corrosion-resistant materials including stainless steel construction and hardware when possible (grade 304 minimum).
 - Continuous welds or spacers for easy cleaning and crevice elimination.
 - NEMA 4X rated enclosures with sloped tops to shed water.
 - Stainless steel motors for enhanced durability.
 - Device ratings of IP65, with IP69 or IP69K where possible.
 - Stainless steel guarding (no thermoplastics) to prevent cracks and crevices.
 - Pneumatic air line and wire separators for improved accessibility during cleaning.

Comparison Table

Feature	Wipe Down	Washdown	Sanitary RTE Washdown
Frame Construction	Painted Steel	Stainless Steel (304)	Stainless Steel (304), no hollow members
Enclosure Rating	NEMA 12	NEMA 4X	NEMA 4X with sloped top
Device IP Rating	Standard	IP65	IP65, IP69 or IP69K when possible
Motor Type	Standard	Epoxy-painted washdown motors	Stainless Steel
Guarding	Thermoplastic (polycarbonate)	Thermoplastic (polycarbonate)	Stainless Steel, no thermoplastics
Welding	Standard	Continuous welds	Continuous welds. Spacers as needed.
Cost	\$	\$\$	\$\$\$