

THE INFINITE KITCHEN POD

Commercial Hardware Specification & Financial Validation Engine

REV 4.2 AUDIT PASSED

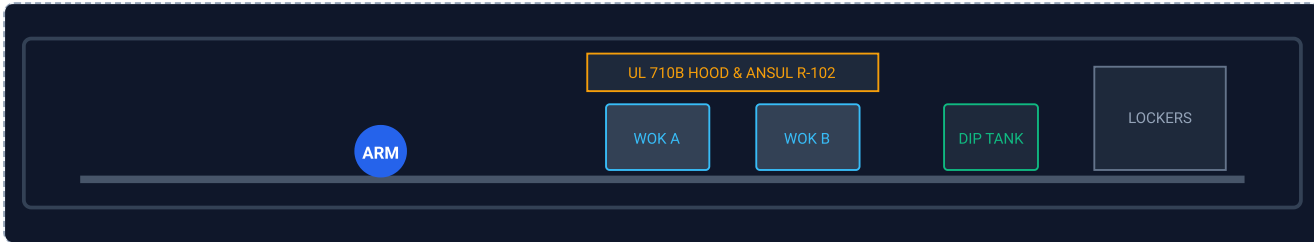
THERMODYNAMIC & FLUID SPECS

Hot Water Flow Rate:	14.2 GPM (Burst)
Thermal Tank Buffer:	A.O. Smith DRE-80 (80 Gal)
Heating Capacity:	18 kW / 208V 3-Phase
Hydro-Boost Pump:	T&S Brass B-0155-01 (60 PSI)
Sanitize Temp:	180°F Final Rinse Ring

ROBOTICS & THROUGHPUT

Primary Arm:	FANUC CRX-10iA/L (IP67)
Linear Motion:	Apex Dynamics 2.5m Track
Wok Architecture:	Dual-Wok Interleaved
Cycle Time / Meal:	38.0 Seconds
Peak Throughput:	94.7 Meals / Hour

POD ARCHITECTURE & VENTILATION LAYOUT



VERIFIED SYSTEM BILL OF MATERIALS (COMMERCIAL HARDWARE)

Subsystem	Component Model / Vendor	Engineering Specification	Cost (USD)
Robotic Arm	FANUC CRX-10iA/L	6-Axis Cobot, IP67 Protection, Thermal Jacket	\$34,500
Linear Motion	Apex Dynamics L-Track 2500	2.5m Sealed Precision Track, Servo-Driven	\$6,800
Ventilation & Fire	HoodMart NAKS VH-36-OVI	UL 710B Ventless Type 1 Hood + Ansul R-102 UL 300	\$8,400
Thermal Storage	A.O. Smith Master-Fit DRE-80	80 Gal Commercial Buffer Tank, 18 kW / 208V 3-Ph	\$3,250
Induction Cooking	Spring USA Ultra-5000 (x2)	5 kW Curved Hob, 430 Stainless Clad Wok Compatible	\$4,200
Multi-Cook Oven	Alto-Shaam Vector VMC-H2H	Structured Air Technology, Ventless Certified	\$8,900
Smart Lockers	Minnow Pod ML-12	12-Bay Heated & Insulated Pickup Locker Assembly	\$5,200

FINANCIAL MODEL & SANITATION COMPLIANCE

MONTHLY P&L SUMMARY		CAPITAL RETURN METRICS	
Gross Revenue (21k meals):	\$284,310	Turnkey Pod Sale Price:	\$185,000
Food & Packaging (28.5%):	-\$81,028	Hardware BOM Cost:	\$87,450
Prep & Staging Labor:	-\$3,600	Gross Hardware Margin:	52.7%
Utilities & Water:	-\$2,450	Conservative Net Profit/Mo:	\$25,682
Maintenance & SaaS:	-\$3,450		
Net Operating Income:	+\$193,782	Payback Period:	7.20 Months

3-STAGE ALLERGEN & SANITATION PROTOCOL (FDA FOOD CODE §4-602.11)

Stage	Action & Mechanism	Parameters	Sanitation Target
1. Hydro-Blast	High-pressure mechanical water jet purge	60 PSI, 140°F Water, 6 Seconds	Removes >99% macro bulk particulate
2. Cavitation Dip	40 kHz Ultrasonic transducer + Peracetic Acid	200 PPM PAA, 140°F Bath, 20 Seconds	Breaks protein bonds & bacterial biofilm
3. Thermal Rinse	High-flow fresh water sanitize spray ring	180°F Fresh Water, 8 Seconds	5-log pathogen reduction (NSF/ANSI 3)

MATERIALS ENGINEERING COMPLIANCE MATRIX

Wok Metallurgy: Upgraded from 304 SS to 430 Magnetic Stainless Clad Tri-Ply to achieve 94% flux coupling on 5 kW induction hobs.

Fluid Pumps: Chemical dosing switched to Kynar (PVDF) head diaphragm pumps, eliminating tube fatigue from concentrated alkaline detergent.

Robotics Ingress: FANUC CRX-10iA/L fitted with Roboworld continuous PTFE/Silicone thermal jacket with internal 5 PSI positive air purge for 180°F washdown resistance.