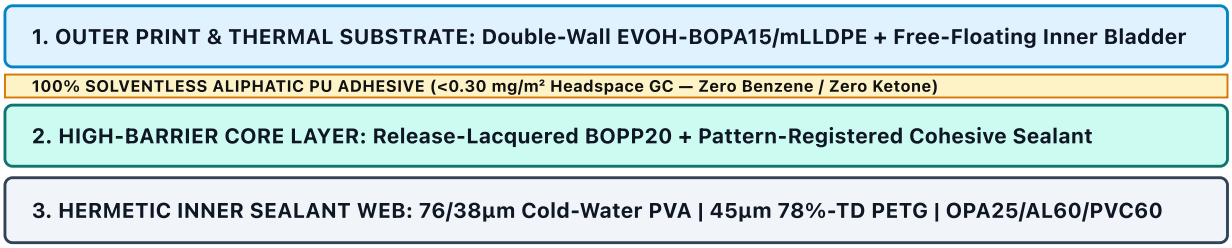
Specialty Industrial Platforms: Bag-in-Box (Vitop®), Cold-Seal, PETG Shrink, PVA & Alu-Alu TDS

Technical Specifications for 3L–20L BIB, 220L Aseptic Liners, 600 ppm Cold-Seal, Water-Soluble PVOH & Blister Foil

1. MULTI-LAYER CROSS-SECTIONAL POLYMER STACK



Functional Layer	Verified Polymer & Micron Gauge	Converting & Lamination Process
Liquid Bulk BIB / Drum	Double-Wall EVOH-BOPA15/mLLDPE + Free-Floating Inner Bladder	Genuine 32mm Vitop® Tap or 1"/2" Gamma-Sterile (25 kGy) Spout
Heat-Free Cold-Seal Web	Release-Lacquered BOPP20 + Pattern-Registered Cohesive Sealant	Seals by Finger Pressure @ 20°C up to 600 bars/min (Zero Melt)
Specialty Functional Films	76/38µm Cold-Water PVA | 45µm 78%-TD PETG | OPA25/AL60/PVC60	Detergent Pods (<18s Dissolve), 360° Shrink & 0.000 OTR Blister

2. LABORATORY PHYSICAL, BARRIER & MIGRATION TEST MATRIX

Parameter	Verified Factory Value	Instrument / Condition	Standard
3L–20L BIB Flex-Crack	Gelbo Flex 10,000 Cycles without Pinhole Failure	Post-Opening Oxygen Ingress < 0.8 cc over 6 Weeks	ASTM F392
220L / 1000L Aseptic Liner	Cobalt-60 Gamma Sterilization @ 25–35 kGy Certified	Fits 55-Gallon Steel Drums & Schütz/Mauser IBC Totes	ISO 11137 Sterile
Latex-Free Cold-Seal	Synthetic Acrylic-Elastomer Cohesive (Zero Natural Latex)	Seal Bond 3.8–5.8 N / 15mm · 9-Month Roll Shelf Life	FDA 21 CFR 175.105
Cold-Water Soluble PVA	Disintegrates < 18 sec & Dissolves < 45 sec @ 15°C Water	Contains Bitrex® Denatonium Benzoate Child Aversive	OECD 301B Biodeg.

FlexPouchMFG™ Line Qualification & CAD Standards

3. HIGH-SPEED FILLING MACHINE & HEAT-SEALING OPERATING WINDOW

Pre-Made Rotary & Inline Pouch Fillers

Validated on Toyo Jidoki, Mespack, Volpak, Bossar & Rezpack (35–90 ppm). Bag flat camber <1.0 mm ensures 99.8% vacuum pick-up reliability. Recommended jaw pressure: 0.28–0.35 MPa; dwell: 0.45–0.70 s.

VFFS / HFFS / Stick-Pack Web Tracking

Calibrated kinetic COF (μk = 0.19 ± 0.03) prevents forming-collar stick-slip on Syntegon/Bosch, Viking Masek, Rovema & Ilapak lines up to 600 packs/min. Heavy-wall 76 mm / 152 mm cores.

4. PRE-PRESS ARTWORK BLEED, PHOTO-EYE MARK & ZIPPER/VALVE CLEARANCES

CAD Dieline Element	Mandatory Tolerance	Production & Filling-Line Purpose
Outer Bleed & Safety Margin	+3.0 mm bleed · -4.0 mm inner text safe zone	Eliminates white edge flash during high-speed rotary slitting (±0.15 mm)
Heat-Seal & Gusset Ink Mask	Optional matte/heat-resistant overprint lacquer	Prevents jaw ink transfer at 145°C–195°C sealing temperatures
Photo-Eye Registration Mark	10 mm × 5 mm solid high-contrast block (≥85%)	Clear unobstructed track for SICK / Keyence optical cut-off sensors
Laser Tear Score & Zipper Axis	Zipper center 32–38 mm from top; laser score -12 mm	Clean consumer thumb-opening without tearing into zipper flange
Barcode / DataMatrix Contrast	Opaque double-white ink backing (≥82% reflectance)	Guarantees ANSI Grade-A retail & GS1 / Chestny ZNAK scan rates

Complimentary Pre-Production Line Trial Policy: Prior to bulk printing, Alex Gao's engineering lab dispatches free unprinted trial pouches or 50–100m test rolls matching exact micron structure so your co-packer can verify jaw temperatures, autoclave F0 profiles, or 50°C cosmetic stability.

5. FACTORY-DIRECT TIERED REFERENCE MATRIX (HP INDIGO DIGITAL VS. 10-COLOR ROTOGRAVURE)

Format / Specification	HP Indigo Digital	Mid-Scale Run	High-Volume Rotogravure
3L / 5L / 10L / 20L Bag-in-Box + Vitop®-Style Tap	1,000 pcs ($0.45)	5,000 pcs ($0.295)	**20,000+ pcs ($0.215 – $0.340)**
220L Gamma-Sterile Foil Aseptic Drum Liner	200 pcs ($4.20)	1,000 pcs ($3.35)	**5,000+ pcs ($2.85/pc)**
Cold-Seal Chocolate / Protein Bar Rollstock	300 kg ($6.30/kg)	1,000 kg ($4.95/kg)	**3,000+ kg ($4.55/kg)**
PVA Water-Soluble Pod Film / Alu-Alu Blister Foil	300 kg ($8.20/kg)	1,000 kg ($6.90/kg)	**3,000+ kg ($6.35/kg)**

6. CLEANROOM EXPORT CARTON, PALLETIZATION & BATCH COA PROTOCOL

Stage	Standard Operating Specification	Verification Document
Inner Sanitary Liner	Antistatic food-grade virgin PE inner bag heat-sealed inside cleanroom	ISO Class 8 Lot Traceability Label
Export Corrugated Box	Double-wall 5-ply BC-flute Kraft carton (ECT ≥ 44 lb/in · gross ≤ 18 kg)	Drop-Tested Carton Corner Guards
FCL / LCL Palletization	Heat-treated ISPM-15 fumigation-free pallets + LLDPE stretch hood + desiccant	Container Loading Photo Report
Mandatory Release COA	MOCON OTR/WVTR, Instron ASTM F88 seal curve & Agilent 8890 GC solvent chromatogram	PDF + Printed COA in Carton #1

Request Your Custom 1:1 Vector Dieline & Free 25-Pouch Sample Kit (2-Hour SLA):

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