



CAPSULE COMPATIBILITY CHECKLIST

Geometry & Fit

- ☐ Rim diameter verified against spec (± 0.10 mm for Original; ± 0.15 mm for others)
- ☐ Skirt angle and shell depth confirmed on optical comparator
- ☐ Wall thickness meets min.–max. range; Brinell / Shore D hardness logged
- ☐ Clamp-insertion torque \leq OEM value + 10%

Lid Integrity

- ☐ Foil gauge within approved band (e.g., $38 \mu\text{m} \pm 2 \mu\text{m}$)
- ☐ Emboss pattern matches drawing; no shadowing over barcode/ink ring
- ☐ Heat-seal peel strength 1.0–1.5 N per 15 mm strip
- ☐ Burst-pressure test $\geq 30\%$ above operating pressure

Coffee Bed

- ☐ Grind size targets met (platform-specific microns)
- ☐ Fill weight ± 0.05 g (3σ) on check-weigher
- ☐ Bed density 0.50–0.55 g cm^{-3} ; tamp verified by insertion-force curve
- ☐ Headspace $\geq 6\%$ and residual $\text{O}_2 \leq 1\%$

Digital Authentication

- ☐ Vertuo barcode or Keurig ink ring present and scan-verified (0 % error, $n = 500$)
- ☐ Latest machine firmware tested; no “incompatible” messages
- ☐ Artwork/emboss alignment holds across full lid-stock roll

Environmental Resilience

- ☐ Climatic cycle ($40^\circ\text{C} / 75\% \text{RH} \rightarrow 5^\circ\text{C} / 30\% \text{RH}$) passed with no lid creep or weight gain
- ☐ Altitude chamber to 60 kPa: zero doming or leaks
- ☐ Drop (1m) and vibration tests completed post-conditioning

Pilot & QC Data

- ☐ Pilot run ≥ 10 k units over two shifts; jam, burst, and brew-time stats within action limits
- ☐ Cp/Cpk for critical dimensions ≥ 1.33
- ☐ All validation reports filed in living quality dossier

Customer-Support Readiness

- ☐ Lot codes printed and traceable to batch records
- ☐ Troubleshooting scripts updated for current specs
- ☐ Return-mailers stocked; photo-evidence protocol shared with frontline agents

Sign-Off

- ☐ Engineering
- ☐ Quality
- ☐ Operations
- ☐ Sales / Private-Label Client

