

Countertop Overhang Measurement QC

1.0 Objective & Quality Standard

The objective of this procedure is to ensure that all countertop overhangs are measured and verified against the specified engineering tolerance of ± 1.5 mm from the nominal overhang dimension. This ensures a consistent reveal, proper alignment with cabinetry, and prevents customer complaints related to uneven or excessive overhang.

The acceptable quality standard for overhang is the nominal dimension as defined on the approved shop drawing, with a tolerance of +1.5 mm / -1.5 mm. Any measurement outside this range constitutes a defect and must be flagged for rework.

2.0 Required Tools & Gauges

- Digital Caliper (0-150mm range, resolution 0.01mm)
- Set of metric feeler gauges (0.05mm to 1.00mm)
- Steel ruler (300mm length, 0.5mm graduations)
- Overhang gauge jig (custom jig with fixed reference edge and sliding indicator)
- Marking pencil (non-permanent, fine tip)
- QC inspection form (paper or digital via ShopDocs)

3.0 Safety & Material Handling

- Wear cut-resistant gloves when handling raw countertop edges to prevent injury from sharp corners.
- Use lifting straps or two-person lift for countertops over 20 kg to avoid back strain.
- Place countertop on a clean, padded work surface to prevent scratches or chips during measurement.
- Ensure the measurement area is free of debris, dust, or adhesive residue that could affect gauge readings.

4.0 Step-by-Step Procedure

1. Retrieve the approved shop drawing for the countertop and confirm the nominal overhang dimension (e.g., 25 mm for standard, or custom value).
2. Place the countertop face-up on a clean, level work surface. Ensure the back edge is flush against a reference stop or straight edge.
3. Select the overhang gauge jig and set its reference edge against the back edge of the countertop.
4. Slide the indicator of the jig until it contacts the front edge of the countertop. Read the overhang dimension directly from the jig scale.
5. Record the measurement at the left end of the countertop (within 50 mm of the edge).
6. Record the measurement at the center of the countertop (midpoint of the span).
7. Record the measurement at the right end of the countertop (within 50 mm of the edge).

8. For each measurement, compare the recorded value to the nominal overhang dimension. Accept if within ± 1.5 mm.
9. If any measurement is outside tolerance, use the feeler gauge to check the gap between the jig reference and the back edge to verify no debris is causing a false reading.
10. Repeat the measurement at the same location three times and take the average to ensure repeatability.
11. Document all three measurements on the QC inspection form, noting the location (left, center, right) and the average value.
12. If the countertop has a curved or angled front edge, measure at the apex of the curve or at the midpoint of each straight segment, and document accordingly.

5.0 Verification & Defect Reporting

1. If any measured overhang deviates more than ± 1.5 mm from nominal, flag the countertop as non-conforming.
2. Attach a red tag to the non-conforming countertop with the defect description, measured value, and date.
3. Immediately notify the production supervisor and the QA manager via ShopDocs QA module for root cause analysis.
4. For overhang that is too large (exceeds nominal $+1.5$ mm), the countertop must be reworked by trimming the front edge using a CNC router or manual router with a flush trim bit, then re-measured.
5. For overhang that is too small (less than nominal -1.5 mm), the countertop must be reworked by adding a filler strip or re-cutting the back edge to achieve the correct overhang, then re-measured.
6. If rework is not possible (e.g., insufficient material), the countertop must be scrapped and a replacement fabricated.
7. Log all out-of-tolerance defects in the ShopDocs QA module, including the measured values, rework action taken, and final verification measurement.
8. Conduct a 5S audit of the measurement station to ensure all tools are calibrated and stored correctly, and that the work surface is clean.

Regulatory Disclaimer: This document is a generic quality assurance template. The end-user assumes all liability for validating all dimensional tolerances, testing procedures, and engineering specifications against actual production requirements before deployment.