

CNC Machining DFM Checklist (2026 Edition)

No	Category	Checklist Item	Recommendation	Result (Pass / Fail)	Notes
1	Radii	Internal Vertical Radii	≥1.1x standard tool radius (Avoid sharp corners)		
2	Threads	Hardware Standardization	Use standard machine screw sizes (e.g., M3, M4, M5)		
3	Taps	Thread Depth	Limit depth to 2-3x hole diameter		
4	Precision	Tolerance Allocation	Limit ±0.02mm or tighter to critical fits only		
5	Walls	Minimum Wall Thickness	Metal ≥0.8mm, Plastic ≥1.5mm		
6	Drilling	Hole Depth Ratio	Max 4:1 depth-to-diameter ratio		
7	Finishing	Surface Roughness	Use Ra3.2µm (As-Machined) for non-critical areas		
8	Setups	Orientation Complexity	Designed for ≤2 setups (Minimizing part flips)		
9	Material	Machinability Rating	High-machinability alloy selected (e.g., Al 6061)		
10	Stock	Blank Size Optimization	≥3mm clearance from standard stock dimensions		