THE HIDDEN COST OF MANUAL MACHINE TENDING

Tending roles are hard to fill, hard to keep, and harder to scale.
There's a better way to run your machines.

Manual Tending Looks Affordable. It Isn't.

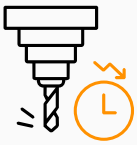
Simple, familiar, but expensive → Only counts the hourly wage → Misses everything else that's bleeding margin

Headcount x Hourly Rate

_____ x Hours Worked
Shift

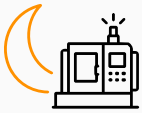
Example: 2 operators x $22/hr x 80 hrs = $3,520/month. **Looks manageable until you add long, unstaffed hours, turnover, overtime, lost spindle time, and quality escapes.**

What Manual Tending Is Actually Costing You



LOST SPINDLE TIME

Shops lose 20-40% of spindle time to operator-bound load/unload, breaks, and shift changes. On a $500K machine running two shifts, that's tens of thousands in unrecovered capacity a year, before scrap.



LONG, HARD-TO-STAFF HOURS

Most shops can't staff around the clock, so tended machines sit idle during unstaffed stretches. For a shop with 4 tended machines, that's up to 32 machine-hours a day left on the table.

CHRONIC TURNOVER IN A HARD-TO-FILL ROLE

Machine tending is repetitive and physically demanding, with 30-40% annual turnover. Each departure costs $4,000-$7,000 in recruiting, onboarding, and lost productivity.

QUALITY ESCAPES & OPERATOR VARIABILITY

Manual load/unload introduces inconsistency: off-center parts, skipped checks, end-of-shift rushing. Without inline gauging, out-of-spec parts often aren't caught until they've moved downstream.

OVERTIME TO COVER GAPS

Unfilled shifts and call-outs default to overtime. At 1.5x hourly, one gap a week adds up fast.

OPPORTUNITY COST OF DEFERRED GROWTH

Shops that can't staff tending can't take new contracts or extend hours. The real cost isn't today's loss, it's the revenue you're not quoting.

FORMIC

775-436-7642 • formic.co

TWO SHOPS, TWO REALITIES

Manual tending consumes capacity.
Full Service Automation gives it back.

Shop A: Running Manual Tending	Shop B: Running Formic Machine Tending
Operators tied to the machine for every cycle	Robot loads, machine cycles, robot unloads - no operator required
Unstaffed hours left dark on tended equipment	Off-hours run lights-out on equipment already owned
20-40% spindle utilization loss per shift	Spindle utilization recovered to +85%
Recruiting and retraining 1-2 operators per year, per cell	No recruiting, onboarding, or turnover costs for tending roles
Quality checks done manually, inconsistently	Inline gauging catches out-of-spec parts before they leave the cell
Overtime to cover gaps: $8,000-$15,000/year per cell	One flat monthly rate, no overtime, no surprises
Supervisors pulled into coverage logistics	Supervisors focused on value-add work
No flexibility to run longer without adding headcount	Production hours extended without new headcount
Growth constrained by ability to staff	Growth constrained only by machine capacity

What the Math Actually Looks Like

Cost Category	Manual Tending (per cell/year)	Formic Full Service Automation
Labor (tending role)	$45,000 - $65,000	Included
Turnover & recruiting	$4,000 - $7,000	$0
Overtime to cover gaps	$8,000 - $15,000	$0
Lost spindle time (est.)	$20,000 - $80,000+	Recovered
Quality escapes & rework	Variable	Minimized via inline gauging
Maintenance & support	Separate contract or in-house	Included
Total hidden cost	**$77,000 - $167,000+**	**One predictable monthly rate**

*Estimates based on a single machine tending cell running extended hours (two shifts). Actual figures vary by part, machine, and facility.

The Most Expensive Machine Tending Setup Is the One You're Already Running

Formic's Full Service model covers everything: robot, end-of-arm tooling, fixturing, installation, inline gauging integration, 24/7 monitoring, all maintenance and parts, and programming for new SKUs.

NO CAPEX. NO SURPRISES. JUST SPINDLE HOURS, RECOVERED.

See what a machine tending cell costs per month.

FLOWCODE PRIVACY.FLOWCODE.COM

FORMIC

775-436-7642 • formic.co