An In-Depth Cost Analysis of Label Automation vs. Manual Labor

Here is an example of a production line scenario:

1 Product Line

8 Hour Shift

2 Shifts

5 Days Per Week

Here is an estimated quote for one of our print and apply label systems:

System Cost: $25,000

Annual Maintenance: $1,500

Downtime: 7% (includes unexpected repairs and routine maintenance of reloading labels, tapes, etc.)

Depreciation: 5 years

With an initial system purchase cost of $25,000, given all other variables, your per hour system cost is:

$25,000 (system purchase price) / 5 (depreciation) = $5,000 (annual system cost) + $1,500 (annual maintenance) = $6,500 (total cost per year)

1 (product line) x 2 (8 hour shifts) = 16 (hours per day) x 5 (days per week) = 80 (total weekly hours) x 52 weeks = 4,160 (total annual hours) – 7% (291) = 3,869 (actual working hours)

$6,500 (total cost per year) / 3,869 (actual working hours) = $1.68 system cost per hour

Cost of Manual Labor:

Let's assume your employee is working at the federal minimum wage of $7.25 per hour. Your payroll taxes are 10%. As part of the employee compensation package, you also give them:

5 sick days /year

10 vacation days /year

5 paid holidays / year

1 hour paid lunch

Breakdown:

Hourly rate: $7.25
Fringe: 10%
Hourly rate with fringe: $7.98 Sick
or Personal Days: 7 (56 hours)
Vacation: 10 (80 hours)
Holidays: 5 (40 hours)
Paid Breaks: 5 hours per week (240)
Total annual paid hours: 40 hours per week x 52 weeks = 2,080
Total annual actual working hours: 1,664
Annual cost of labor (10% fringe): $16,598
Actual working time: 80%
Actual cost per working hour: $9.96

Given the initial production line scenario of 1 product line, two 8-hour shifts 5 days per week:

Manual Labor Cost:

$9.96 x 16 = $159.36 (daily) x 5 = $796.80 (weekly) x 52 = $41,433.60 (annually)

Automation System Cost:

$1.68 x 16 = $26.88 (daily) x 5 = $134.40 (weekly) x 52 = $6,988.80 (annually)

Annual Cost Savings with an AccuPlace Automated System:

$132.48 per day
$662.40 per week
$34,444.80 per year

In the long term, an initial investment of $25,000 can save you $34,444.80 per year over time.