



## Cabinet Manufacturer Meets Production Goals with ProMix PD2K Dual Panel Acid Catalyst

### CUSTOMER

Wood Cabinet Manufacturer

### GRACO EQUIPMENT

ProMix PD2K Dual Panel Acid Catalyst

### CHALLENGE

A wood cabinet manufacturer operated three shifts per day, five to six days per week with 24 color changes per shift. Production continued to increase and their current ProMix 2KS system was maxed out.

Paint and solvent waste was extremely high, color changes were slow, and throughput was falling behind.

- Three separate booths, feeding two guns, each with over 25 foot lines created high solvent and paint waste
- Each color change took over two minutes, equaling over three hours each day on color changes alone

As more orders kept coming in, there was not enough time in the day to push them through. The production engineer worked with a Graco account representative to try to improve efficiency with their current equipment by:

- reducing color changes by batching production by color
- reducing material waste by shortening lines and reducing hose diameter

But at the end of the day, they still required overtime to meet production demands.

### SOLUTION

The production engineer was challenged directly by his CEO to solve this problem. The Graco account representative did a paint efficiency audit that found high waste numbers that could be resolved with the ProMix PD2K Dual Panel Acid Catalyst proportioning system. However, it wasn't until their material supplier's paint audit reported even higher waste numbers, did they pitch the case to the CEO.

The PD2K Dual Panel Acid Catalyst system would allow them to:

- Feed two independent sprayers at once with dual panel
- Combat harsh acid based materials used on wood with high grade stainless steel and PTFE materials
- Change colors quicker with smaller flush zones created by mix at the belt technology
- Reduce wasted material and have more efficient color changes with air/solvent chop features

### RESULTS

After installing three ProMix PD2K Dual Panel Acid Catalyst systems, they saved over \$600,000 per year by wasting less paint and solvent. They reduced color change time from more than two minutes down to 45 seconds.

The time saved allowed them to produce an additional 288 parts per shift. This brought in an extra \$20,000 in revenue per day in finished product coming through the line.

*Refer to page 2 for equipment & ROI comparisons.*



**Equipment Comparison**

	ProMix PD2K	ProMix 2KS
Mixed material hose	8 ft	25-35 ft
Color change waste	18 oz	64 oz
Color change time	45 seconds	2 minutes
Increased Throughput	+288 parts/ shift/unit	status quo

Assumptions:

- 6 parts per minute through the booth
- 2 painters per unit
- 24 color changes
- save 48 minutes per shift

**ROI Calculation (Graco)**

	ProMix 2KS	ProMix 2KS	ProMix PD2K	ProMix PD2K
Solvent waste per yr	64,486 gal	\$478,786	11,161 gal	\$82,814
Paint waste per yr	9,116 gal	\$300,828	3,619 gal	\$119,427
<b>Total waste per yr</b>	<b>73,602 gal</b>	<b>\$779,314</b>	<b>14,780 gal</b>	<b>\$202,241</b>
Disposal cost per yr		\$147,204		\$29,560
<b>Total Cost</b>		<b>\$926,518</b>		<b>\$231,801</b>
<b>Savings</b>				<b>\$694,717</b>

ROI Assumptions:

- Based off of mixed material lines: ProMix 2KS systems (25-35 ft) vs. ProMix PD2K (8 ft)
- 24 color changes/shift in primer and enamel, 12 color changes/shift in accessories
- Solvent cost: \$7.42
- Paint cost: average \$33 per gallon
- Disposal cost: \$2 per gallon

**ROI Calculation (Material Supplier)**

	ProMix 2KS	ProMix 2KS	ProMix PD2K	ProMix PD2K
Solvent waste per yr	77,350 gal	\$573,937	17,035 gal	\$126,399
Paint waste per yr	13,650 gal	\$450,450	6,624 gal	\$218,592
<b>Total waste per yr</b>	<b>91,000 gal</b>	<b>\$1,024,387</b>	<b>23,660 gal</b>	<b>\$344,991</b>
Disposal cost per yr		\$182,000		\$47,320
<b>Total Cost</b>		<b>\$1,206,387</b>		<b>\$392,311</b>
<b>Savings</b>				<b>\$814,076</b>

ROI Assumptions:

- Based off of the waste calculations provided by Material Supplier
- 3,500 gallons of waste every two weeks
- Avg flush volume 64 oz for 2KS vs 18 oz for PD2K
- Solvent cost: \$7.42
- Paint cost: average \$33 per gallon
- Disposal cost: \$2 per gallon

