



Complex Machine Fabrication Global Industrial Manufacturer

Challenge

A tier-one pump maker needed to ramp a new mixed-model assembly line from 12 to 21 units/day in six months, without sacrificing safety, quality, or team well-being. The line suffered from batching, WIP bottlenecks, manual handling, and variability driven by judgment-based scheduling.

What We Did

Duggan designed end-to-end value streams from receiving through paint and shipping; implemented FIFO and one-piece flow, standardized work for normal and abnormal conditions, Takt / pitch visual controls, mobile carts that travel with each unit, and a daily disruption-review cadence.

Why it Worked

- Value Stream Design before tools: A single, end-to-end flow with clear normal vs. abnormal conditions made status self-evident and correction automatic.
- Visual, Takt-driven execution: FIFO, one-piece flow, Takt/pitch visuals, and single-point scheduling removed reliance on management intervention.

+33% Production Throughput



Implementation Highlights

- Assembly flow: FIFO lanes; workload balancing via standard work charts; unit-travelling pump carts replaced pallets.
- Paint & ship: One-piece flow, product-family grouping, and real-time pitch tracking to trigger immediate correction.
- Parts & kitting: Shadow mats, ergonomic presentation, and new crane assists for Line-up movement.
- Fast feedback: Daily flow-disruption reviews with frontline ownership and countermeasures.
- Capability building: Standard work for abnormal flow; multi-role training across paint, ship, and assembly.



Results

- Throughput up: Early production hit 15 units/day on the new line (+33% from baseline) and remained on track for the 21/day target.
- Lead time down: Customer lead time compressed to 14-28 days from order to shipment; visibility and team accountability increased via visual flow tracking.
- Assemble-to-Order family: Lead time reduced from 4 days to 6.5 hours, an 80% reduction, achieved by one-piece flow, clean starts, and FIFO controls across assembly-to-test.
- Valve family: Lead time reduced from 5.1 days to 3.5 days, a 31% reduction. This was implemented alongside an ATO path that contrasts sharply with the historical average of >12 weeks for similar valve orders, underscoring the step-change in responsiveness.
- Safety and ergonomics: Reduced manual handling and established safer movement at key stations via carts, layout, and lifting aids.

Contact Us

We believe we must earn our place by accomplishing results. We don't lock you into contracts. If you don't think we're delivering value, don't keep us as a partner.

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