

WORK ORDER FLOW CHART



Customer Issues Purchase Order

Approx. 50 PO's per month



Programming and Check List

New parts require programming for the CNC machines. Each process step in the manufacturing process requires a program, tooling sheets and setup sheets. Repeat jobs use these from the previous order.

Mat'l \$75k-\$125k/month

Create Work Order

This includes the travelers for each item on the customer PO listing all the process steps to manufacture the part.

Approx. 250 jobs/month (average: 5 items per PO)



Create Check List & Kick Off Email

Check Lists for Programming through to Quality Control are created for each item on the PO and an email is sent out to each department signaling a new order is on its way.

Material Review/ Purchasing

MTR's are checked against customer requirements and approved for inventory release and use or purchased.

Mat'l \$75k-\$125k/month

- | | |
|------------------|-------------|
| Alloy Steels | Non-Ferrous |
| - 10xx | - Aluminum |
| - 4xxx | - Brass |
| - 86xx | - Bronze |
| - 93xx | - BeCu |
| - Tool Steels | - Titanium |
| | - Plastics |
| Stainless Steels | Cast Irons |
| - Precipitation | |
| Hardened SS | |
| - 300 series | |
| - 400 series | |
| Exotic Stainless | |
| - Carpenter | |
| - Duplex | |
| - Super Duplex | |
| - Inconel | |
| - Monel | |



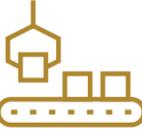
Review/Approve Work Order

All documents are included in the work order. MTR's, inspection reports, special process procedures, etc.



Shop Foreman / Supervisor

The foreman coordinates the jobs and personnel in a timely manner.



Machine Shop

Production starts. From simple parts requiring only a few process steps to complex parts requiring many process steps, each machine is setup and the program loaded and the machine run completing one step in the manufacturing process.

5000+ man hours per month



Programming Check List Review

Every process step is reviewed for accuracy ensuring that if the job comes back the everything will be good to go.

QC Inspection

Each item on the PO is inspected to ensure all the requirements have been met. Large volumes are sampled according to QMS Quality Procedures. Pre & Post inspection for outside service (e.g. nitride, carburize, lasercladding, special coatings/platings)

100% in-process inspection
30% typical documented inspections

Average Monthly NCR's: 12



Shipping

The product is shipped to the customer usually complete but sometimes partial shipments are made to keep the customers production in motion. Hawk truck optional delivery

100% secure part bundling,
0% damaged freight

On-time delivery	Total parts shipped:
2019: 91%	2019: 227,950
2020: 94% to date	2020: 110,542 to date



QA Review

The entire Work Order is checked for completeness and filed electronically.

