



Modern
Machine
Shop

**TOP
SHOPS**

2020

CUSTOM REPORT

Build your machining business

PREPARED FOR

Sample Shop



MODERN MACHINE SHOP

TOP SHOPS BENCHMARK RESULTS

BUILD YOUR MACHINING BUSINESS

THE 2020 MODERN MACHINE SHOP TOP SHOPS BENCHMARKING SURVEY

Thank you for participating in *Modern Machine Shop's* tenth annual Top Shops benchmarking survey, which enables shops of all types and sizes to see how they compare against leading U.S. machining businesses.

In working with our company's research and analytics team, Gardner Intelligence (gardnerintelligence.com), to provide additional value to our readers, we have developed this custom report that ranks your responses to the survey's quantitative questions relative to other survey participants. The goal in developing this report is not just to offer a baseline performance "report card" of sorts, but to help eliminate the need to rely on gut feelings as a method of identifying and prioritizing your shop's improvement efforts.

The initial pages of this report describe how to read the data plots for the various survey questions and provide a general performance summary for your company. That summary includes your overall survey rank (among the reportable surveys received this year) and lists key metrics for which your company is particularly strong, is on par with others, or perhaps should be targeted for improvement.

Each Top Shops survey opens in January and runs through February. We will again provide free custom reports like this one to survey participants as we work to improve our reporting efforts. I hope you continue to participate in our annual survey.

Matthew Danford
Senior Editor
Modern Machine Shop
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Performance Summary

Your Overall Percentile: **44%**

Strengths	Your response for this metric is in the top 25% of all responses. Your company is a leader in this metric.
On Track	Your response for this metric is a typical response, between the 25th and 75th percentiles . Your company is comparable to the industry standard.
Opportunities	Your response for this metric is in the bottom 25% of all responses. Consider what can be done in this area to improve performance.

The number following each measure in parentheses is the page number in this report where the overall results for that measure are shown.

Strengths

Capital Spending (9)
Quote to Book Ratio (10)
Scrap as a Percentage of Parts (6)
Scrap as a Percentage of Sales (6)

On Track

Annual Sales Growth (16)
CAM Programmer Wages (20)
Capacity Utilization (4)
Estimated Annual Sales Growth (16)
Finished First Pass Quality Yield (7)
Incident Rate (21)
Labor Investment per Employee (12)
Labor Investment per Machine (13)
Labor Turnover (18)
Machine Operator Wages (19)
Machine Usage (8)
Material Investment per Employee (13)
Material Investment per Machine (14)
On-Time Delivery (7)
Setup Personnel Wages (20)
Setup Time (5)
Spindle Utilization (4)
Tooling Investment per Employee (12)
Tooling Investment per Machine (14)

Opportunities

Customer Retention (9)
Employee Age (11)
Employee Experience (18)
Order Lead Time (5)
Sales per Employee (15)
Sales per Machine (15)

HOW TO READ YOUR REPORT



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TOP SHOPS BENCHMARK RESULTS

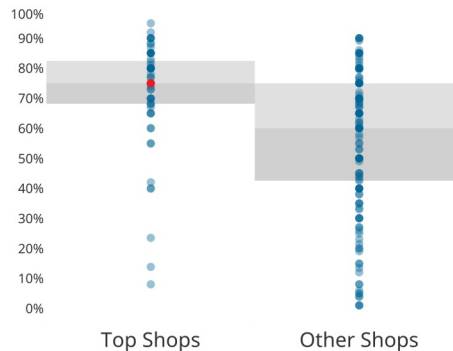
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Spindle Utilization

Spindle in-cut time as a percentage of machine uptime (%)

Your Shop's Value: **75%**
Your Overall Percentile: **72%**

Why this is important: Machine tools only make money when they're making chips. Shops typically work to maximize spindle utilization by minimizing downtime associated with new job setups, commonly using technology such as quick-change fixturing, on-machine probing, etc.

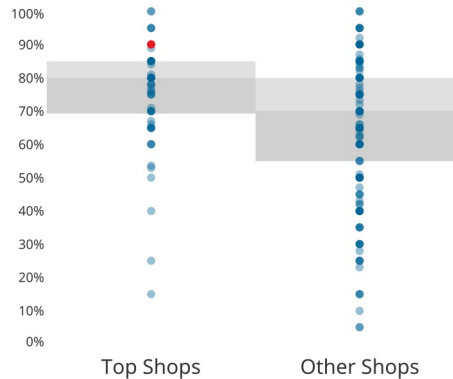


Capacity Utilization

Capacity being used as a percentage of total plant capacity (%)

Your Shop's Value: **90.0%**
Your Overall Percentile: **95%**

Why this is important: Capacity utilization quantifies how much of a shop's total available capacity is being used. Low capacity utilization indicates the investment in some equipment isn't generating income, which can lead to reduced profits.



RED

The red dot and number indicate your response, and the overall percentile of that response, compared to all shops combined.

BLUE

Blue dots represent the responses of other shops — the darker the blue, the more responses that were close to that value.

GRAY

The shaded area marks the 75th and 25th percentiles, where higher percentiles are better. The break in the shading represents the median.

Missing a red dot or number?

There are two possible reasons:

1. You did not provide an answer to this question.
2. You provided an answer, but it was an outlier.

Median

The median is the value 'in the middle' when all values are ordered from lowest to highest. Median values can better represent 'middle of the pack' than averages, which can be skewed by even one extreme data point.



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TOP SHOPS BENCHMARK RESULTS

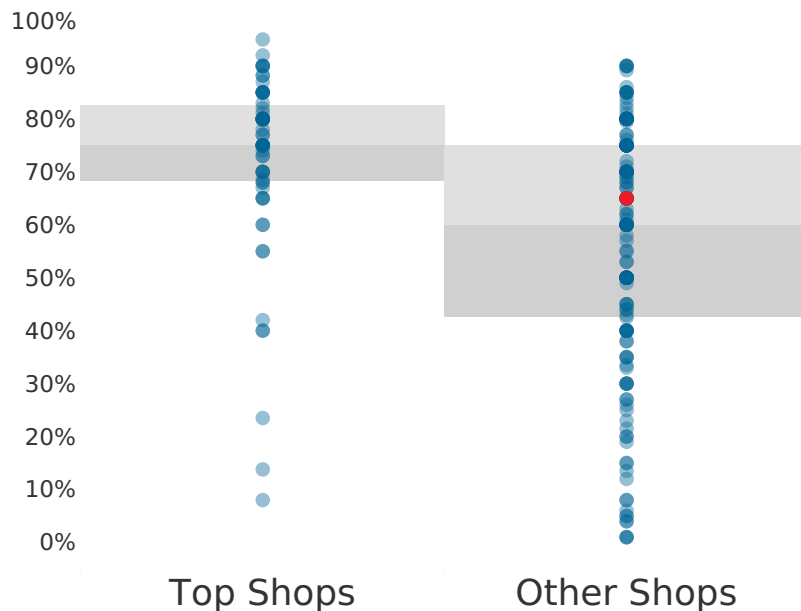
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Spindle Utilization

Spindle in-cut time as a percentage of machine uptime (%)

Your Shop's Value: **65%**
Your Overall Percentile: **49%**

Why this is important: Machine tools only make money when they're making chips. Shops typically work to maximize spindle utilization by minimizing downtime associated with new job setups, commonly using technology such as quick-change fixturing, on-machine probing, etc.

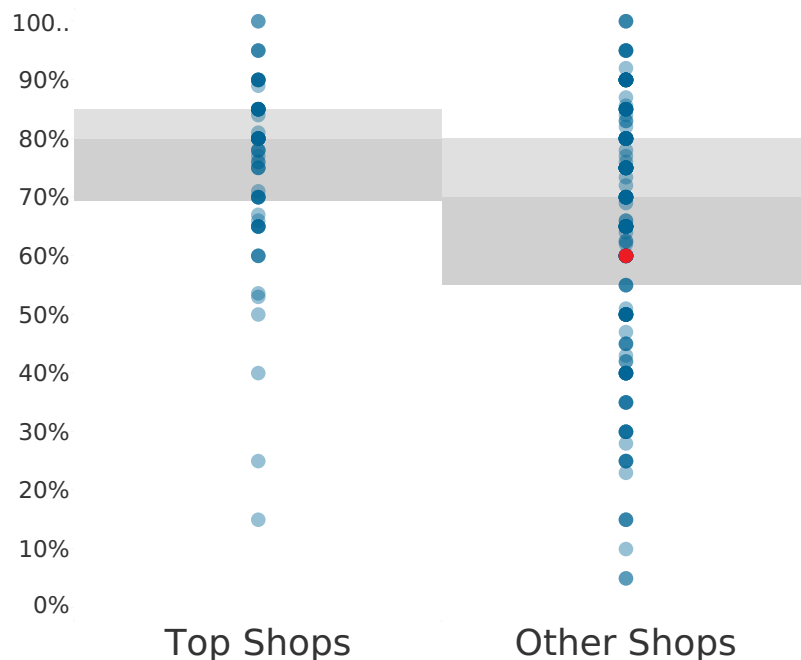


Capacity Utilization

Capacity being used as a percentage of total plant capacity (%)

Your Shop's Value: **60.0%**
Your Overall Percentile: **30%**

Why this is important: Capacity utilization quantifies how much of a shop's total available capacity is being used. Low capacity utilization indicates the investment in some equipment isn't generating income, which can lead to reduced profits.





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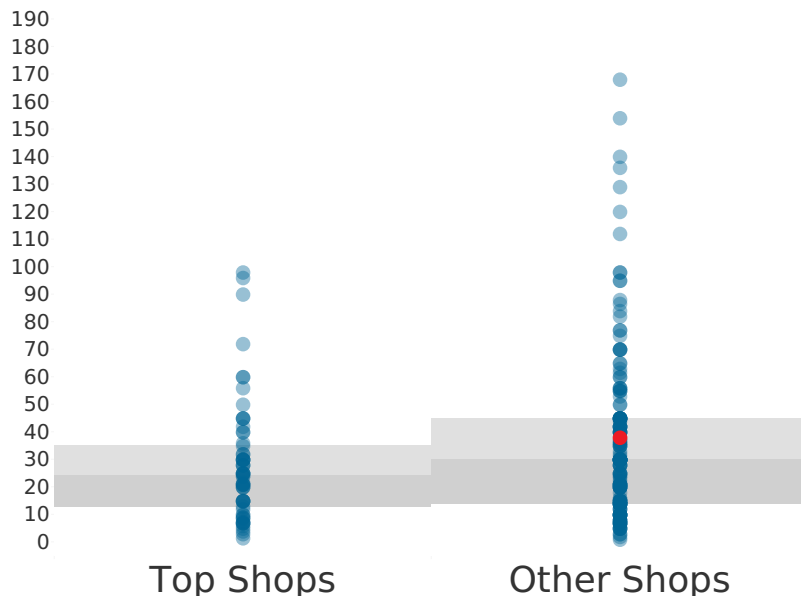
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Order Lead Time

Time between receipt of order to delivery to customer (days, lower is better)

Your Shop's Value: **38.0**
Your Overall Percentile: **32%**

Why this is important: Order lead time is a measure of how long it takes to satisfy customers' needs. Shorter lead times provide customers faster access to parts and the ability to work within tighter deadlines. This can also enable faster time to market for their new product designs.

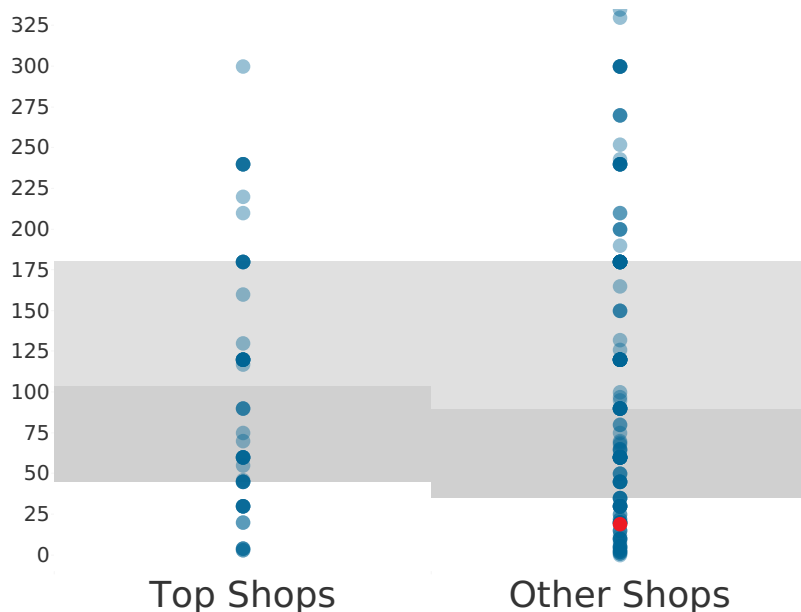


Setup Time

Time it takes to prepare a new job for machining (minutes, lower is better)

Your Shop's Value: **19.00**
Your Overall Percentile: **88%**

Why this is important: Setup time indicates how quickly a shop can transition from one job to the next, maximizing spindle utilization and minimizing machine downtime.





MMS Top Shops Methodology

Top Shops

Select measures are scored and tallied for each survey participant to identify the top 20-percent benchmarking group. This benchmarking group is designated "Top Shops". Four Top Shops are profiled in *Modern Machine Shop*.

General

- *Sample:* Modern Machine Shop magazine subscribers and visitors to relevant websites, blogs, etc. for broad exposure and participation

- *Field period:* January 7 – March 2, 2020

- *Base size:* 296 reportable returns

Survey

- *Distribution:* Sent via email with online link and posted to relevant websites, blogs, etc.

- *Question areas:* Machining technology, shopfloor practices, business strategies, human resources, firmographics and demographics

- *Response options:* Formats "normalized" to reduce bias associated with shop characteristics like size, making comparisons and competition fair and reasonable across shops

Data

- *Tabulation:* Data tabulated for Top Shops and Other Shops

- *Cleaning:* Outlier values are removed from numbers-based questions using a databased approach and logic

Business Attributes: 2019 Median Value

	Top Shops	Other Shops
Batch size	50.0	71.0
SKUs produced	854.5	700
CNC machines in production	21.0	13.0
Machine age	8.0	8.0
Employee count	37.0	24.0
Number of customers	40.5	35.0

Shop Type

Contract shop	42%	29%
Captive shop	9%	12%
Job shop	48%	59%

Industries Served

Aerospace	60%	60%
Appliances	8%	10%
Automotive	33%	37%
Die/mold	17%	20%
Electronics, computers & telecomms	33%	29%
Forming & fabricating (non-automotive)	24%	22%
Furniture manufacturing	5%	7%
Industrial motors, hydraulics	32%	37%
Machinery/equipment manufacturing	54%	53%
Medical	44%	46%
Military	44%	44%
Off-road & construction machinery	30%	27%
Oil- & gas-field & mining machinery	40%	36%
Power generation	21%	22%
Pumps, valves & plumbing products	33%	35%

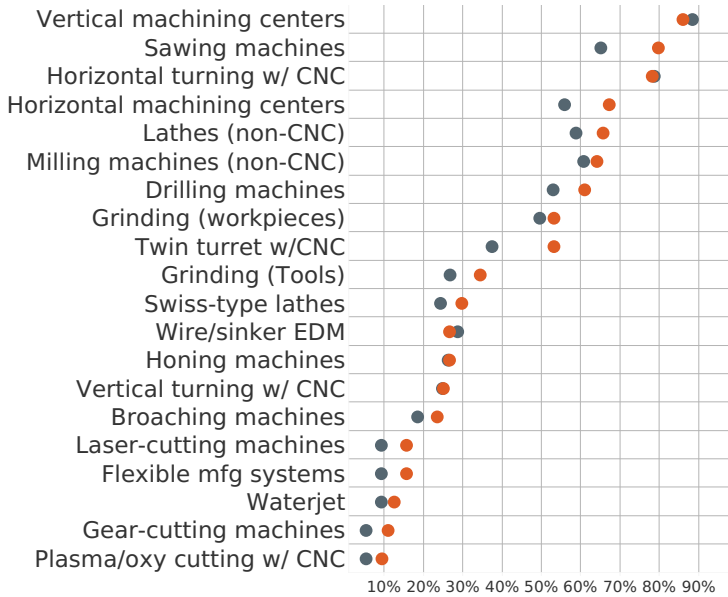


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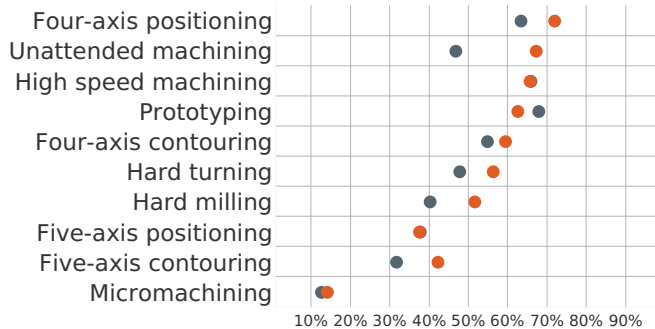
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Top Shops ● Other Shops ●

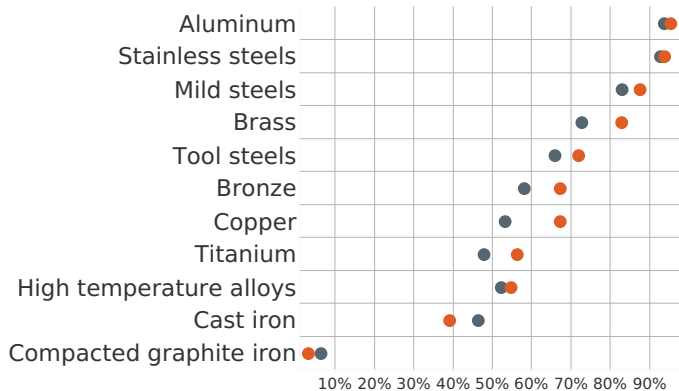
Machine Type



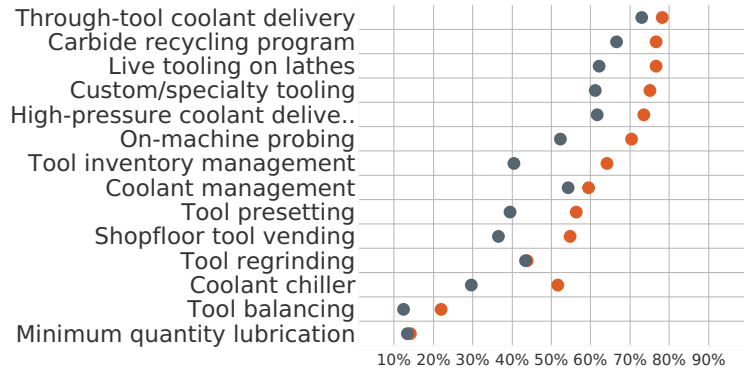
Machining Strategies



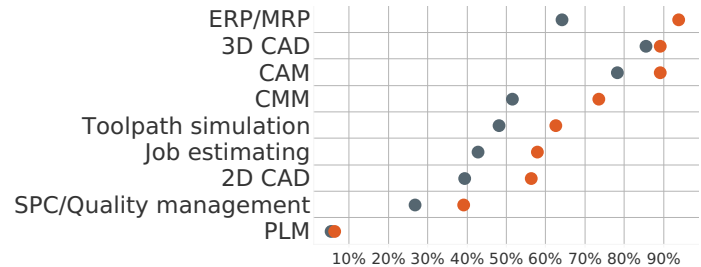
Materials Machined



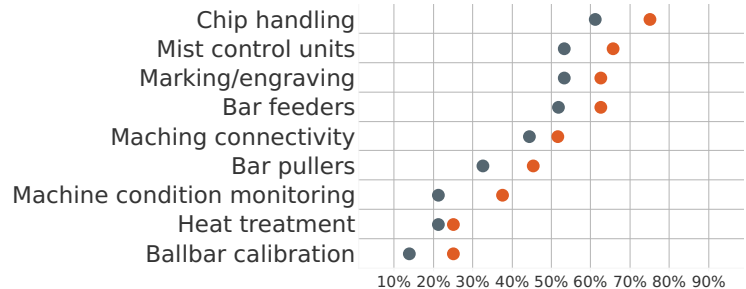
Tooling



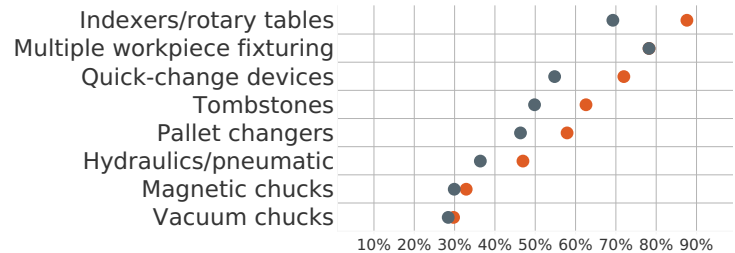
Software



Ancillary Equipment



Workholding Technology



Inspection Equipment

