

CompositesWorld Top Shops 2021

Thank you for participating in *CompositesWorld's* third annual Top Shops Survey highlighting the attributes shared by leading fabricators. By fully completing this survey **before March 1**, you will receive at a later date a benchmarking report customized for your facility.

Please proceed only if your facility performs manufacturing operations that convert fiber and resin raw materials into fully consolidated and finished composite parts or structures.

To take advantage of the many benefits of participating in Top Shops, all you have to do is:

- **1. Fully complete the survey** for maximum value. It's in your best interest for benchmarking and scoring. It may take time to get some data it's worth it. You may have reservations about answering certain questions. Don't worry, all responses will remain confidential.
- **2. Provide your email address** to receive a report customized for your facility, showing where it is strong, on track, and has opportunities.
- 3. Enter your contact info if you want a chance to be profiled in an upcoming issue of CompositesWorld.
- **4. Select 'Submit Responses'** on the final page **before March 1, 2021**. If you get interrupted while completing the survey, you may close and return to it using the same device as many times as you like until you select 'Submit Responses.'

Click here if you would like to download a pdf of the questions before entering your answers online. If you want to keep a record of your responses, we suggest printing each page with your responses before selecting 'next' to advance to the next page/question.

Remember to complete the survey by March 1, 2021. If you have questions, contact Jan Schafer, Director of Market Research, at jschafer@gardnerweb.com or 513-527-8952.

* 1. Does your facility perform manufacturing operations that convert fiber and resin raw materials into fully
consolidated and finished composite parts or structures?
Yes
○ No

Do not complete this survey if your facility does not meet the description above. The benchmarking does not apply to your facility and you would not receive a custom report.



Company & Contact Information

company a comac	t imormation	
2. To receive a custom address:	report of your facility's results, please fu	lly complete the survey and provide your email
3. For the option to be information:	part of the CW Top Shops Honors Progra	am competition, please provide the following
Your Name		
Title		
Company Name		
Address		
City/Town		
State/Province		
ZIP/Postal Code		
Country		_
Company Website		
Company Phone Number		



Before we get started...

Many survey questions refer to 'your facility,' and here's how we'd like you to think about it...

If your company has more than one location, please answer all survey questions in terms of the scope for which you have the most access to operations and performance data. In some cases, that is multiple locations combined. In other cases, it is just one location.

If you have equal access to data for more than one location, please answer the survey based on the one location that is most representative, or considered most typical, of your business overall.

If you are considered a captive facility, answer survey questions in the terms your facility uses to report metrics to the broader company. You may have different considerations or use tweaked formulas, but you should be able to provide the information requested.

Most important is that you be consistent throughout the survey as far as the location(s) to which your responses apply.

Please also note that all questions pertain to 2020 unless indicated otherwise.



Profile Information

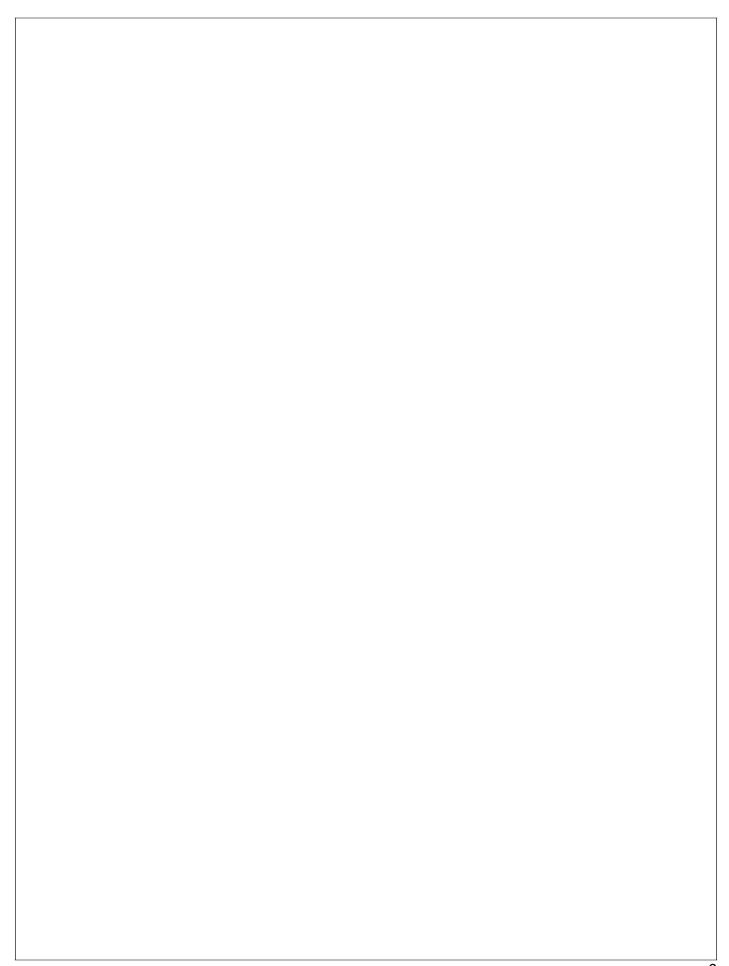
This first section of the survey includes questions pertaining to the general characteristics that help describe your facility.

Please read the instructions at each question for the accepted format for responses. If you receive an error message and your format is correct, your value is likely an exception outside of the reasonable range, and won't be accepted.

4. Which composites manufacturing processes did y	our facility perform in 2020? Select ALL that apply.
Additive manufacturing/3D printing	Infusion
Automated fiber placement (AFP)	Injection molding
Automated tape laying (ATL)	Pultrusion
Compression molding	Resin transfer molding (RTM)
Cutting/kitting	Sprayup
Filament winding	Thermoforming
Hand layup	
5. Which secondary processes did your facility perform Assembly CNC machining/finishing Design engineering Design simulation Low-rate production manufacturing Materials testing	m in 2020? Select ALL that apply. Moldmaking Physical testing Pre-production manufacturing Prototyping Research and development None of these



Drofila Information							
Profile Information							
6. Which fiber and for For each format listed			-	-	r select NON	E.	
	Aramid	Carbon, dry	Carbon, pre- pregged	Glass, dry	Glass, pre- pregged	Natural	None
Braided fabric							
Chopped							
Multiaxial fabric							
Roving							
Spread tow fabric							
Unidirectional tape							
Woven fabric							
Epoxy Nano-based res PAEK PEEK	sins	·]]]	PES Phenolic Polyamide Polyester	(nylon)		
PEI PEKK			[Polyimide Vinyl ester			
8. Which tooling I	naterials are	used at your	facility? Se	lect ALL that	apply.		
Aluminum				Soluble			
Composite				Steel			
Invar			[Tooling boa	ard		
Nickel				Wood			
Rubber/latex (b	ladder)						





Profile Information
9. How many total individual parts did your facility fabricate in 2020?
Please enter a whole number only; no decimals, commas, or other symbols.
10. How many different part numbers (SKUs) did your facility fabricate in 2020?
Please enter a whole number only; no decimals, commas, or other symbols.
11. Which of the following describe your facility? Select ALL that apply. If none of the options is exactly right,
please select the one(s) that comes closest to describing your facility.
Contract manufacturer
Design/engineering
Moldmaker
ОЕМ
Sub-tier supplier
Tier supplier to OEM



Profile Information	
12. Which <u>ONE</u> of the following best describes your facing right, please select the one that best describes your facing the select the one that best describes your facing the select the one that best describes your facing the select the one that best describes your facing the select the one that best describes your facing the select the select the select the one that best describes your facing the select the selec	
Contract manufacturer	
Design/engineering	
Moldmaker	
ОЕМ	
Sub-tier supplier	
Tier supplier to OEM	
13. Which industries does your facility primarily serve?	Select ALL that apply.
Aerospace, commercial	Industrial/corrosion resistance
Aerospace, general aviation	Marine
Agriculture	Mass transit
Automotive	Medical
Construction/infrastructure	Oil and gas
Consumer	Sports and recreation
Defense/military	Wind energy
14. Which certifications does your facility have currently	? (Select ALL that apply)
ISO 9001:2015	Nadcap
ISO 13485:2016	AS9100D
ISO 14001:2015	None of these
IATF 16949:2016	

15. What is your company's ownership model? Select ONE only.
Private equity owned
Privately held
Publicly traded





Technology/Equipment

This section of the survey includes questions pertaining to	the technology your facility uses in composites manufacturing.
19. Which curing methods does your facili	ty use? Select ALL that apply.
Autoclave	
Heated mold	
Infrared/microwave	
Oven	
Room temperature	
20. Which, if any, type(s) of automation do	es your facility use? Select ALL that apply.
Automated adhesive application	Automated parts transfer
Automated cutting/kitting	Automated preforming
Automated fiber/tape placement	None
Automated part inspection	



Technology/Equipment	
21. Which types of part measurement/assessment e	quipment does your facility use? Select ALL that
apply.	
CMM in quality department	Plant floor CMMs
Laser trackers	Portable measuring arms
Microscopes	Vision systems
Optical comparators	None of these
22. Which types of non-destructive inspection (NDI)	equipment does your facility use? Select ALL that
apply.	
Acoustical	Thermographic
Holographic	Ultrasonic
Manual (tapping)	X-ray
Shearographic	None
23. Which management software does your facility us	e? Select ALL that apply or NONE only.
Process monitoring	
Production monitoring	
Enterprise resource planning (ERP)	
None	



Operations



Operations

Please read the instructions at each question for the accepted format for responses. If you receive an error message and your format is correct, your value is likely an exception outside of the reasonable range, and won't be accepted.
26. What was your facility's total machinery and equipment uptime percentage in 2020? Enter your number
between 1 and 100 without a % sign.
You may enter a decimal, but no other signs or symbols.
27. On average, how many hours per week was your facility in operation in 2020?
Please enter a whole number only; no decimals, commas, or other symbols.

think about what you consider to be at full capacity for your facility. Then enter as a percentage the degree to which your facility's capacity was typically in use relative to being at full capacity in 2020.

28. What was your facility's average **capacity utilization** percentage in 2020?

Enter your number between 1 and 100 without a % sign. You may enter a decimal, but no other signs or symbols.

There is no single formula that fits how every facility figures capacity utilization. For this question, please

Example: If your facility was typically using capacity that represented about 85% of full capacity in 2020, meaning your facility typically had 15% capacity available, you would enter 85 for capacity utilization.



Operations
29. What was your facility's average order lead time in 2020, defined as the number of <u>days</u> from receipt of order to delivery to customer? Please enter a whole number only; no decimals, commas, or other symbols.
30. What was your facility's on-time delivery rate in 2020, defined as the <u>percentage</u> of goods delivered on timing committed? Enter your number between 1 and 100 without a % sign. You may enter a decimal, but no other signs or symbols.



Operations
31. What was your facility's finished product first-pass quality yield in 2020, defined as the <u>percentage</u> of product that passed inspection on first attempt? (i.e., no re-work was required). Enter your number between 1 and 100 without a % sign. You may enter a decimal, but no other signs or symbols.
32. What was your facility's scrap and rework UNIT percentage , defined as the <u>number</u> of 2020 scrapped or reworked parts as a percentage of 2020 <u>total parts produced</u> ? This includes trimmings, offcuts, and non-repairable finished parts. Enter your number between 0 and 100 without a % sign. You may enter a decimal, but no other signs or symbols. Example: If 83 parts were scrapped or reworked, and 1000 parts were produced, you would enter 8.3.
33. What was your facility's scrap and rework COST percentage , defined as the <u>cost</u> of scrapped or reworked materials as a percentage of 2020 <u>total dollar sales</u> ? This includes trimmings, offcuts, and non-repairable finished parts. Enter your number between 0 and 100 without a % sign. You may enter a decimal, but no other signs or symbols. Example: If \$550 worth of materials were scrapped and sales were \$50,000, you would enter 1.1.
34. Does your facility process in-house scrap material? Yes No



Operations		
35. What <u>percentage</u> of your facility's scrap material, by 2020? Enter your number between 1 and 100 without a You may enter a decimal, but no other signs or symbols Example: For 80% you would enter 80. for 80.5% you w	ı % sign. S.	
36. What proportion of all parts does your facility typ ONE only.	sically inspect prior to delivery to the customer? Select	
All of them		
Most of them		
About half of them		
Less than half of them		
Just a few of them		
37. Generally speaking, which parameters of quality fabricates? Select ALL that apply.	are critical to the parts your facility	
Corrosion resistance	Stiffness	
Dimension	Strength	
Durability	Toughness	
Mass/weight	Transmissivity	
Porosity	Weather resistance	



Operations
38. How, if at all, does your facility communicate overall part quality and operations efficiency to employees? Select ALL that apply.
Printed reports/bulletin boards
Digitally via television monitors
Online
We do not communicate part quality or operations data to employees
39. How, if at all, does your facility track and manage materials expiration? (Select ALL that apply) Manually with paper-based system Manually with computer-based system Automatically with computer-based system Our facility does not track materials expiration
10. On average, how many days of inventory did your facility have on hand in 2020? Please enter a whole number only; no decimals, commas, or other symbols.



Business Strategy & Performance

The next section of the survey includes questions pertaining to financial, operational and customer information.

Please read the instructions at each question for the accepted format for responses. If you receive an error message and your format is correct, your value is likely an exception outside of the reasonable range, and won't be accepted.

41. Which supply chain strategies does your facility u	use? Select ALL that apply.
Certification of major suppliers	Utilizing customer forecasts
Collaborative design with customers	Vendor-managed or -owned inventories
Collaborative design with suppliers	Vendor-managed or -owned inventories for customers
Just-in-time deliveries to customers	None of these
Just-in-time deliveries from suppliers	
42. Were any capital investments made in your facility Yes	y in 2020?
○ No	



Business Strategy & Performance 43. How much did your facility spend (in US dollars) on capital equipment in 2020? Round to the nearest dollar and enter without any signs or symbols. 44. Please provide your facility's 2020 capital equipment expenditure as a percentage of gross sales. Round to the nearest whole number and enter without a % sign. Formula = [(2020 cap equip exp / 2020 gross sales) * 100] Example: If your capital equipment expenditure was \$500 and your gross sales were \$5000, you would enter 10. 45. Please provide your facility's 2020 **overall profit margin percentage**, defined as your facility's <u>net income</u> (after tax) relative to gross sales, rounded to the nearest whole number. Include a minus sign if your number is negative. Formula = [(2020 net income / 2020 gross sales) * 100] Example: If your 2020 net income was negative \$300 and your gross sales were \$5000, you would enter -6. 46. Please provide your facility's 2020 ROA, defined as your facility's net income (after tax) relative to total assets, rounded to the nearest whole number. Include a minus sign if your number is negative. Formula = [(2020 net income / 2020 total assets) * 100] Example: If your 2020 net income was negative \$300 and your total assets were \$10,000, you would enter -3.



Business Strategy & Performance
47. Please provide your facility's total revenue for 2020 in US dollars. Providing your facility's revenue confidentially enables us to perform useful calculations on your behalf. Please enter a whole number only; no decimals, commas, or other symbols.
48. Please provide your facility's 2020 gross sales per employee in US dollars. Example: If your gross sales were \$5000 and you have 20 employees, you would enter 250. Round to the nearest dollar and enter without any signs or symbols.
49. Please provide your facility's percent change in annual sales from 2019 to 2020 using the following formula. Round to the nearest whole number, using a minus sign if necessary. Formula = [(2020 gross sales - 2019 gross sales) / 2019 gross sales] * 100 Example: If your 2019 sales were \$4000 and your 2020 sales were \$5000, you would enter 25.



Business Strategy & Performance 50. How many active customers did your facility have in 2020? Please enter a whole number only; no decimals, commas, or other symbols. 51. What was your facility's customer retention rate for 2020? This is the number of your facility's customers in 2020, who were also customers in 2019, as a percentage of your 2019 total customer base. Enter your number between 1 and 100 without a % sign. You may enter a decimal, but no other signs or symbols. Example: If you had 50 customers in 2020 who were also customers in 2019, and a total of 60 customers in 2019, your customer retention rate would be 83%, and you would enter 83.



Business Strategy & Performance	
52. What <u>percentage</u> of total orders specify the types of raw materials your number between 0 and 100 without a % sign. Please enter a whole number only; no decimals, commas, or other symbols.	r facility must use? Enter your
53. What <u>percentage</u> of total orders specify that raw materials must come syour number between 0 and 100 without a % sign. Please enter a whole number only; no decimals, commas, or other symbols.	from a specific supplier? Enter
54. What percentage of total orders specify the type(s) of inspection equip use? Enter your number between 0 and 100 without a % sign. Please enter a whole number only; no decimals, commas, or other symbols.	ment/methods your facility must



Business Strategy & Performance 55. About how many years has your facility been involved in composites fabrication? Please enter a whole number only; no decimals, commas, or other symbols. 56. As best as you can say, what percentage of your facility's revenue is derived from composites manufacturing? Enter your number between 0 and 100 without a % sign. Please enter a whole number only; no decimals, commas, or other symbols.



Business Strategy & Performance 57. Below are **business practices** that your facility may or may not apply. Please select ALL that you

to have been in place at your facility in 2020.	ay or may not apply. Please select ALL that you conside
Regularly scheduled, formal review of the state of the business	Regularly scheduled management/department head meetings
Periodic, informal review of the state of the business	Occasional management/department head meetings
Business metric goal setting	Steering board/committee including outside membership
Business strategy development	None of these
58. Which of the following sales/marketing tools did y	your company use in 2020? Select ALL that apply.
Company website	Print advertising (e.g. magazines)
Blogs	Print directory listing
Email promotions	Sales personnel
Online videos	Customer tours of your shop
Online advertising	Open house
Online directory listing	Trade shows/events
Online keyword advertising (Google)	None of these
Brochures/catalogs	
59. Which social media channels did your company u apply.	
Facebook	Snapchat
Instagram	Twitter
LinkedIn	YouTube
Pinterest	None of these



Human Resources	
The final section of the survey pertains to employees, training, and safe	ety.
60. Which human resource practices/programs did	your facility use in 2020? Select ALL that apply.
401(k) plan	Formal safety/health program
Annual review and raise program	Leader/supervisor development
Apprenticeship program	Paid medical benefits
Bonus plan	Profit- or revenue-sharing plan
Education reimbursements	Teaming/team-building practices
Employee ownership options (ESOP)	None of these
Formal employee training program	
62. How many employees were directly involved in plan which your answers apply?	nt floor operations in 2020 at the location(s) to
Please enter a whole number only; no decimals, commas or other symbols.	
Please effer a whole humber only, no decimals, commas or other symbols.	
63. What is the average age of your facility's plant floor e	• •
Please enter a whole number only; no decimals, commas or other symbols.	
64. On average, how many years of experience working	g in the composites industry do your facility's plant
floor employees have? Please enter a whole number only; no decimals, commas or other symbols.	
riease enter a whole number only, no decimals, commas or other symbols.	

65. Did your facility have any accident incidents in 2020?	
Yes	
○ No	
Not sure	



Human Resources

Human Resources	
66. What was your facility's accident incident rate for plant floor employees in 2020, on number of plant floor accident incidents as a percentage of the typical number of plant floor number between 0 and 100 without a % sign. You may enter a decimal, but no other signs or symbols. Example: if you had 2 accident incidents in 2020 and your plant floor staff typically totals 6.67.	oor staff. Enter your
67. What was your facility's annual labor turnover rate of plant floor employees in 20 number of voluntary plus involuntary separations of plant floor employees as a percentage number of plant floor staff. Enter your number between 0 and 100 without a % sign. You may enter a decimal, but no other signs or symbols. Example: If 6 plant floor employees left in 2020 and your usual plant floor staff totals 30,	e of the total usual
68. Which statement best describes your facility as far as skills relative to needs in a week experienced a shortage of skills needed and took action. We experienced a shortage of skills needed but did not take action. We did not experience a shortage of skills needed.	2020? Select ONE on



Human Resources	
69. Which actions did your facility take in 2020 to ad that apply. Attendance incentives Billboard advertising Cross training 'Get paid to learn/train' program Increased automation Loosened hiring criteria Mentor program	dress a shortage of skills your facility needs? Select ALL Outreach program to broader populations (e.g. completed rehab; released from incarceration) Provide, pay for, or subsidize transportation to/from plant Radio advertising Rewards for referrals Signing incentives Television advertising Unlimited time off
Outreach program at local schools	Unlimited time off Weekend only shifts
Other (please specify) 70. What was the approximate average hourly wage r management plant floor employees in 2020?	ate in US dollars, without overtime, for non-
You may enter a decimal, but no other signs or symbols	



Almost finished!

This is the final page of the survey. Please double-check your responses for accuracy and completeness before you continue.

Before you click **Submit Responses**, you may close and return to the survey on this device to make changes as many times as you like until the deadline of **March 1, 2021**. Once you click **Submit Responses** on this page, you will be taken to the *CompositesWorld* website. Your survey will be locked and submitted and you will not be able to change any of your answers.