

## SALES GROWTH

# Montana leads the climbers

**M**ontana Aerospace – which despite its name is headquartered in Switzerland – has been quietly making a reputation for itself in recent years. The aerostructures company was new to the rankings last time, but its acquisition of rival Asco of Belgium in early 2022 has seen it vault up the Top 100 and head the sales growth table with a revenue increase of 123%.

Part of Montana Tech Components – a technology group established in 2006 by Austrian entrepreneur Michael Tojner, which also owns battery maker Varta – Montana Aerospace has secured a series of impressive contracts with the likes of Airbus and Spirit AeroSystems. It supplies Airbus with structural aluminium structures up to 18m (59ft) long.

Asco – which had long been sought by Spirit AeroSystems – is a nearly 70-year-old business with around 1,100 employees and facilities in Belgium, Canada, Germany and the USA focusing on fuselage, wing

and landing gear components. In its pre-pandemic heyday it generated revenues of up to €260 million.

Paris-based metals supplier Constellium records the second highest revenue growth in our survey at just over 87%. The company, which supplies materials for applications from automotive to soft drink cans, has benefited from the surge in post-pandemic demand for its aluminium alloys from aircraft manufacturers. It moves from 86th place last time to 67.

Third-placed Ametek may not be a household name, even in the industry, but could that change? It has notched up an impressive 76% revenue increase, rising into the top half of the main table at 48, from 60 last time. The Pennsylvania-based business's products range from airborne data systems to vibration-monitoring systems, cockpit instruments and displays, sensors and switches.

### Fleet refurbishments

In fourth and sixth place, respectively, in-flight entertainment specialist Panasonic – 61 in last year's survey to 55 this time – and seating supplier Recaro – 100 to 91 – have both done well out of a rapid rise in new aircraft deliveries and fleet refurbishments in 2022.

Fifth-placed ATI – formerly Allegheny Technologies – is another engine and aircraft materials supplier that enjoyed a fruitful financial year, moving up the Top 100 from 55 to 44, with its 2022 aerospace revenue reaching \$1.87 billion.

Unlike our top operating margin table – which tends to reflect those Top 100 companies that are consistently and comfortably profitable – the sales growth table can vary greatly from year to year, affected, for instance, by one-off acquisitions or a strong performance rebound after a poor 12 months.

Only three of last year's fastest growers – Ametek, AIDC and Spirit AeroSystems – are featured in the list this time. ▶

### Top 20 sales growth

Rank by growth	Rank by sales	Company name	Sales growth
1	73	Montana Aerospace*	123.3%
2	67	Constellium	87.1%
3	48	Ametek	76.2%
4	55	Panasonic Avionics	68.5%
5	44	ATI	65.4%
6	91	Recaro Aircraft Seating	58%
7	63	Arconic	52%
8	66	Aernnova	45.8%
9	87	Latecoere	39.4%
10	34	IHI	37.3%
11	93	Albany Engineered Composites	37.1%
12	99	Korean Air	33.9%
13	78	Sonaca	32.4%
14	96	Aciturri	31.2%
15	31	Parker Hannifin	30.8%
16	69	LISI	28.5%
17	61	AIDC	27.4%
18	19	MTU Aero Engines	27.3%
19	23	Spirit AeroSystems	27.2%
20	80	Subaru	26.9%

\*The major factor here is Montana's acquisition of Asco



# 123%

Montana Aerospace has secured contracts with Airbus and Spirit AeroSystems, and tops the sales growth table for 2022

» The company had been a previous acquisition target of Spirit AeroSystems. That deal helped vault Swiss-based Montana 25 places to 73.

One significant divestment was that by Rolls-Royce of its Spanish unit ITP Aero to a consortium of investors led by Bain Capital Private Equity for €1.6 billion (\$1.76 billion today) as part of a bid by the troubled UK propulsion giant to rebuild its balance sheet. Because the deal was approved towards the end of the year, it had a limited impact on Rolls-Royce's 2022 results.

Two other businesses in the Top 100 changed hands, with space technology company Maxar ceasing trading on the New York Stock Exchange after its purchase by US private equity house Advent, whose portfolio also includes Cobham and defence electronics specialist Ultra in the UK. In December, Veritas Capital bought precision parts manufacturer Chromalloy – ranked 77 – from Carlyle for \$1.6 billion.

M&A activity so far in 2023 is likely to affect next year's table. Probably the most important move has been L3Harris's swoop just before the end of 2022 for Aerojet Rocketdyne, ranked 37 in the Top 100, an all-cash transaction valued at \$4.7 billion. Aerojet is the USA's last independent producer of missile

# \$1.6bn

Value of Carlyle's December 2022 sale of precision parts manufacturer Chromalloy to Veritas Capital

propulsion systems, including for Boeing's lunar-return Space Launch System.

In late July this year, L3Harris confirmed that the US competition regulator would not be opposing the takeover. This was despite objections from Lockheed, whose own bid to buy Aerojet had been blocked by the Federal Trade Commission last year on the basis that it would have given Lockheed the ability to “cut off its competitors' access to critical [missile propulsion] components”.

### Buying big

Meanwhile, Barnes Aerospace – 92 in the Top 100 – said in June it is to acquire MB Aerospace for around \$740 million. MB, US-registered but based in Motherwell, Scotland, manufactures and repairs engine components and employs just under 1,500 staff in Poland, Taiwan, the UK and the USA. The transaction, the largest in Barnes' history, is expected to close in the final quarter.

In May, Florida's Heico agreed to acquire Wencor for just over \$2 billion, which would also be that company's most expensive purchase. Georgia-headquartered Wencor manufactures approved replacement parts. In July, Bombardier, which has spent much of the past six years divesting businesses, completed its takeover of Latecoere's Queretaro, Mexico electrical wiring business.

The dismantlement of diversified UK aerospace and defence group Cobham since its \$4 billion takeover in January 2020 by Advent continues. In July, Thales

began negotiations to acquire Cobham Aerospace Communications, a maker of cockpit communication systems with revenues of around \$200 million.

Cobham is listed 60th in this year's ranking but has been dropping steadily down the rankings since 2019 as Advent sells off bits of the business, including its aerospace connectivity and mission systems units – it has divested eight since Cobham was delisted as a public company. The latest sale – for around \$1.1 billion – will take the amount raised by Advent to around \$7.2 billion.

### Pole position

M&A activity is “entering a strong upcycle after a quiet few years” as aircraft production rates ramp up and the supply chain issues that have hampered growth ease, argues Michael Richter, global head of aerospace and defence investment banking at Lazard Freres. “There's no better time for M&A,” he says. “Aerospace companies are positioning themselves for the next wave of growth.”

With military spending on the up, consolidation will extend to the defence sector, says Richter, with the focus on mergers and acquisitions that will “improve vertical integration or alignment with broader [US] Department of Defense priorities”. He expects US investors to increasingly “look abroad for M&A targets”, particularly sub-\$1 billion deals less likely to attract regulator scrutiny. ▶

Spirit AeroSystems is one of at least 13 Top 100 companies that reported a loss in 2022



**PROFITABILITY**

Acquisitive TransDigm's recent purchase, Dart Aerospace, makes mission equipment for helicopters, including the Bell 505



# Margin makers

**A**s we have noted elsewhere, companies that have a knack of squeezing the most profits from their revenues tend to be consistent. Either they offer high-value products that command a price premium over competitors, are in a sector where barriers to entry are high, or they run exceptionally tight ships – perhaps a combination of two or more.

That is why our table of the industry's most profitable players tends to have a familiar feel. However, bear in mind that we have not been able to calculate operating margins for a third of the companies in the Top 100 – this is either because they do not disclose sufficient financial data as private companies, or because the costs of running their aerospace business cannot be extracted from overall numbers.

In fact, exactly the same companies occupy the top six positions – with only TransDigm and Martin-Baker swapping places. Of the 20 businesses listed, 17 are the same as last time, with L3Harris, Northrop Grumman and Ontic making way for Spanish aerostructures firm Aernnova, Swiss defence group RUAG and US diversified aircraft systems and components company Triumph.

# 60

Number of businesses TransDigm has bought over the past 25 years – the latest being testing systems provider Calspan

TransDigm has topped the operating margins table several times. Last year, it slipped to second, but this time resumes its status with an operating margin of more than 40%. The US company has an interesting business model. It is essentially a holding company that specialises in acquiring diverse businesses with potential that it feels are under-performing or could benefit from margins of scale.

It has bought 60 businesses in 25 years. Its latest, in May 2023, was Calspan, a provider of testing and systems for aerospace, including a transonic windtunnel, with revenues of around \$200 million. In 2022 – the year on which the latest Top 100 is based – it bought Montreal-based Dart Aerospace, a roughly \$100 million-revenue helicopter mission equipment company.

In its 2022 results, TransDigm, whose products extend from actuators to seat belts, cockpit security systems and parachutes, says it “remained sharply focused on our value drivers and cost structure. This strict operational focus together with the continued recovery of our commercial aftermarket revenues drove a strong... EBITDA [earnings before interest, tax, depreciation and amortisation].”

In second place is the prior year's most profitable company, ejection seat manufacturer Martin-Baker – a business producing an always in-demand technology. The UK family-owned firm has been leading its specialist field for more than 70 years – its only Western competitor is Collins Aerospace.

Third-placed Honeywell had an impressive 2022, recording an operating margin of just over 27%, boosted by a rebound in profitable commercial aftermarket activity. Following Honeywell, GPS specialist Garmin – which produces a range of flightdeck systems for business and general aviation platforms – is another regular in our most-profitable businesses list. ▶

## Top 20 operating margin

Rank by margin	Rank by sales	Company name	Operating margin
1	20	TransDigm*	40.8%
2	98	Martin-Baker**	28.0%
3	12	Honeywell	27.3%
4	65	Garmin	26.9%
5	33	Eaton	23.2%
6	29	Hindustan Aeronautics	22.7%
7	58	Teledyne Technologies	20.4%
8	7	GE Aerospace	18.3%
9	74	Crane Aerospace and Electronics	18.0%
10	75	RUAG	18.0%
11	92	Barnes Aerospace	17.8%
12	52	Triumph Group	17.3%
13	51	Pilatus	16.8%
14	56	Kongsberg	16.2%
15	31	Parker Hannifin	15.7%
16	49	Woodward	15.2%
17	16	General Dynamics (Aerospace)	13.2%
18	3	Lockheed Martin	12.7%
19	32	CAE	11.6%
20	66	Aernnova	11.4%

\*Financial year end 30 September 2022 \*\*FYE 31 March 2022

## COMMERCIAL

ATR's revenues grew by a fifth in 2022



# Flying high

Pierre Barthe/ATR

Meanwhile, ATR's new chief executive admitted earlier this year that the Airbus-Leonardo joint venture's 25 deliveries in 2022 were below expectations. Meanwhile, the other main regional aircraft player, Embraer, delivered 57 commercial jets in 2022. This was an improvement over 2021, where it shipped just 48 units, but still considerably down on 2019, when it handed over 89 jets. However, the Brazilian company still saw its commercial revenues increase by more than 17% year-on-year.

Airbus – which has evaded major disruptions to its production post-pandemic – continues to maintain a sizeable gap over its main rival in terms of commercial aircraft revenues, even if Boeing is closing it.

The Toulouse-headquartered airframer boosted its sales by just under 15% in 2022, recording a total of \$43.6 billion. That leaves it almost \$18 billion ahead of its US counterpart, and again the runaway leader in the commercial segment.

Our list also includes the largest five business jet manufacturers – we have split the sales of Embraer, the only one to have a presence in both segments (Airbus Corporate Jet and Boeing Business Jet sales are included in their figures). Given that they were

# \$43.6bn

Total sales recorded by Airbus in 2022 – a year-on-year improvement of almost 15%, and \$18 billion ahead of Boeing

As we noted elsewhere, 2022 was the first since 2019 when the world was largely free to fly unhindered. Although Covid-19 health mandates lingered in most countries, and outliers such as China and New Zealand kept their borders shut well into the year, domestic and international travel resumed with a bang. Airlines responded with orders – many cancelled or deferred during the pandemic – and manufacturers by stepping up production.

While supply chain constraints bedeviled the industry throughout the period, commercial airframers were rewarded with double-digit increases in sales, with those that had suffered most during 2020 and 2021 experiencing the biggest bounce backs. Boeing's commercial aircraft revenues grew by almost a third year-on-year, while regional turboprop manufacturer ATR saw its sales rise by more than a fifth.

Neither is out of the woods. Boeing overall remains in the red – not helped by an ailing defence unit. Its commercial business too faced challenges in 2022, most of which are little closer to being resolved. Boeing's great hope to rival long-range versions of the Airbus A321neo, the 737 Max 10, remains uncertificated, and deliveries of the 777-9 will not start until at least 2025. Problems with fuselage sections forced Boeing to halt 787 deliveries from November 2020 to August 2022.

less affected by the pandemic – corporations and individuals continued to fly and buy business jets through 2020 and 2021 – their relative performance in 2022 is less impressive.

However, revenues were up significantly at market leader Gulfstream, Bombardier, Dassault Aviation, Embraer and Textron Aviation, with Bombardier seeing the biggest year-on-year increase among its peers of 14.3%. Embraer – with its Praetor and Phenom families of jets – also notched a double-digit rise, while Textron – responsible for the Citation jet family and the Beechcraft King Air among others – boosted revenues by just over 11%. Its numbers include military sales. ▶

### Top commercial aircraft sales

Rank	Manufacturer	2022 sales \$ millions	Sales growth
1	Airbus	43,563	+14.6%
2	Boeing	25,867	+32.7%
3	Embraer (regional)	1,544	+17.3%
4	ATR	896	+20.5%
5	Gulfstream	8,567	+5.3%
6	Bombardier (business aviation)	6,853	+14.3%
7	Textron Aviation*	5,073	+11.1%
8	Dassault Aviation	2,212	+7.8%
9	Embraer (business aviation)	1,244	+10.1%

\*Including military sales

## DEFENCE

# Military setbacks

Last year was one of heightened global tensions. Russia's full-scale invasion of Ukraine put NATO on a war footing, prompting pledges of increased defence spending, and neutral Finland and Sweden to apply to join the defensive alliance. Meanwhile, Beijing's aggressive posturing to Taiwan led some to believe an invasion is likelier than for some time – potentially triggering a US-China conflict.

Against this background, however, several of the biggest defence businesses in the Top 100 had a dismal 2022, with the total sales of the largest 10 concerns down to more than \$240 billion from \$251 billion in 2021, a 4.1% decrease. In fact, only one of them – Northrop Grumman – saw a sales increase on the previous year.

## Market dynamics

Of course, while the commercial aviation industry tends to rise and fall in synch with the fortunes of the airline market, the defence market can lag demand from the end-user. Expensive programmes run late and over cost, and payments from government customers are dependent on the timing of fiscal budgets.

Boeing's defence unit has been one of the worst hit. While, like its industry counterparts, Boeing has been impacted by parts and labour shortages, it is also feeling the consequences of what many believe has been under-bidding on Pentagon contracts, including the KC-46A tanker, a programme on which the

company has been taking charges, the T-7A trainer, and the 747-8I-derived presidential jet.

Lockheed Martin, by far the biggest player, had a better year than most, with sales down just 1.7%. Second-placed Raytheon Technologies – we are just looking at its military activities across its four main business units – was down by 4.9%, but a factor was the divestment at the end of 2021 of Raytheon Intelligence and Space's global training and logistics business.

UK champion BAE Systems had a strong 2022, despite what we estimate as a 10.7% year-on-year decline in aerospace defence revenues, with a record order intake across the business and the formal launch of the Global Combat Air Programme, combining the Anglo-Italian Tempest sixth-generation fighter effort with the Japanese F-X programme.

Similarly, Dassault Aviation's 19% dip in defence sales has much to do with contract cyclicality. Last time, the French company enjoyed the highest sales growth in the Top 100, although that included its Falcon business jet unit, and 2022 was a record year for orders, including a deal from the United Arab Emirates for 80 Rafales. However, it delivered just 14 Rafales compared with 25 in 2021. ▶

## Top 10 defence sales

Rank	Company name	Defence sales \$ millions	Defence sales growth
1	Lockheed Martin	65,446	-1.7%
2	Raytheon Technologies (RTX)	39,686	-4.9%
3	Northrop Grumman	36,602	2.6%
4	Boeing	23,162	-12.7%
5	Rostec State Corporation	16,525	-1.5%
6	L3Harris	16,370	-3.3%
7	BAE Systems	13,169	-10.7%
8	Leonardo	12,841	-7.4%
9	Airbus	11,839	-1.7%
10	Dassault Aviation	5,074	-19%

The total 2022 sales of the 10 largest defence companies were \$240.7 billion, down from \$251.1 billion in 2021, a 4.1% decrease

# -4.1%

Decline in total sales during 2022 for the largest 10 companies in the sector, as shortages of parts and labour took their toll



US Air Force

Lockheed Martin maintains its lead in defence sales

## Top 100 aerospace companies by revenue 2022 (\$ millions)

		Movement in ranking from 2021	Sales (revenue) 2022	Sales (revenue) 2021	Operating profit 2022	Operating profit 2021	Operating margin 2022	Operating margin 2021
1	Raytheon Technologies (RTX)	1	67,074	64,388	5,414	4,958	8.1%	7.7%
2	Boeing	1	66,608	62,286	-3,547	-2,902	-5.3%	-4.7%
3	Lockheed Martin	-2	65,984	67,044	8,348	9,123	12.7%	13.6%
4	Airbus	0	61,791	61,642	5,599	6,314	9.1%	10.2%
5	Northrop Grumman	0	36,602	35,667	3,601	5,651	9.8%	15.8%
6	Rostec	0	30,045	27,956	3,176	2,219	10.6%	7.9%
7	GE Aerospace	0	26,050	21,310	4,775	2,882	18.3%	13.5%
8	Safran	0	20,016	18,034	2,059	1,655	10.3%	9.2%
9	L3Harris	0	17,062	17,814	1,273	2,283	7.5%	12.8%
10	Leonardo	0	15,471	16,708	872	930	5.6%	5.6%
11	BAE Systems	0	13,793	14,290	n/a	n/a	n/a	n/a
12	Honeywell	1	11,827	11,026	3,228	3,051	27.3%	27.7%
13	Rolls-Royce	1	11,524	10,872	709	392	6.2%	3.6%
14	AVIC	-2	11,313	11,004	452	451	4%	4.1%
15	Textron	0	9,336	9,203	1,053	975	11.3%	10.6%
16	General Dynamics (Aerospace)	1	8,567	8,135	1,130	1,031	13.2%	12.7%
17	Dassault Aviation	-1	7,286	8,550	601	623	8.3%	7.3%
18	Bombardier	0	6,913	6,085	538	241	7.8%	4%
19	MTU Aero Engines	3	5,605	4,950	534	420	9.5%	8.5%
20	TransDigm	3	5,429	4,798	2,215	1,691	40.8%	35.2%
21	Hanwha Aerospace	-2	5,063	5,603	292	335	5.8%	6%
22	Thales	-1	5,054	5,384	247	239	4.9%	4.4%
23	Spirit AeroSystems	3	5,030	3,953	-281	-459	-5.6%	-11.6%
24	Israel Aerospace Industries	0	4,973	4,477	316	217	6.4%	4.8%
25	Mitsubishi	-5	4,712	5,511	303	218	6.4%	4%
26	Embraer	-1	4,540	4,197	-110	201	-2.4%	4.8%
27	Precision Castparts	0	4,461	3,636	n/a	n/a	n/a	n/a
28	GKN Aerospace	0	3,642	3,491	-165	-270	-4.5%	-7.7%
29	Hindustan Aeronautics	0	3,639	3,463	826	707	22.7%	20.4%
30	Howmet Aerospace	0	3,529	2,980	n/a	n/a	n/a	n/a
31	Parker Hannifin	4	3,191	2,440	501	326	15.7%	13.4%
32	CAE	2	3,083	2,568	358	223	11.6%	8.7%
33	Eaton	0	3,039	2,648	705	580	23.2%	21.9%
34	IHI	2	2,770	2,416	275	-85.3	9.9%	-3.5%
35	Kawasaki	-3	2,732	2,808	135	-94.2	5%	-3.4%
36	Saab	-5	2,723	2,986	185	194	6.8%	6.5%
37	Aerojet Rocketdyne	1	2,238	2,188	145	257	6.5%	11.7%
38	ST Engineering	5	2,214	1,879	197	121	8.9%	6.4%
39	Korea Aerospace Industries	-2	2,157	2,238	110	50.9	5.1%	2.3%
40	Moog	1	2,128	1,960	211	185	9.9%	9.4%
41	Elbit Systems	-1	2,013	2,006	n/a	n/a	n/a	n/a
42	Sierra Nevada	-3	2,000	2,160	n/a	n/a	n/a	n/a
43	Ball Aerospace	-1	1,977	1,911	170	169	8.6%	8.8%
44	ATI	11	1,874	1,133	n/a	n/a	n/a	n/a
45	Turkish Aerospace	1	1,839	1,566	n/a	n/a	n/a	0%
46	Heico	1	1,806	1,539	n/a	n/a	n/a	n/a
47	Diehl Group	-2	1,787	1,675	n/a	n/a	n/a	n/a
48	Ametek	12	1,741	988	n/a	n/a	n/a	n/a
49	Woodward	3	1,519	1,404	231	234	15.2%	16.7%
50	Amphenol	1	1,515	1,414	n/a	n/a	n/a	n/a

## Top 100 aerospace companies by revenue 2022 (\$ millions)

		Movement in ranking from 2021	Sales (revenue) 2022	Sales (revenue) 2021	Operating profit 2022	Operating profit 2021	Operating margin 2022	Operating margin 2021
51	Pilatus	-2	1,410	1,458	237	230	16.8%	15.8%
52	Triumph Group	-4	1,379	1,460	238	104	17.3%	7.1%
53	Liebherr	0	1,379	1,292	n/a	n/a	n/a	n/a
54	Hexcel	2	1,377	1,103	n/a	n/a	n/a	n/a
55	Panasonic Avionics	6	1,340	952	n/a	n/a	n/a	n/a
56	Kongsberg	-2	1,233	1,172	199	188.4	16.2%	16.1%
57	ITP Aero	0	1,101	1,082	109	47.3	9.9%	4.4%
58	Teledyne Technologies	1	1,094	1,035	223	181.8	20.4%	17.6%
59	Daher	-1	1,094	1,040	n/a	n/a	n/a	n/a
60	Cobham	4	1,036	1,110	-19.4	491.5	-1.9%	44.3%
61	AIDC	2	1,013	849	50.4	17.4	5%	2%
62	Mercury Systems	0	988	924	31.6	81	3.2%	8.8%
63	Arconic	9	959	631	n/a	n/a	n/a	n/a
64	Solvay Group	6	943	883	n/a	n/a	n/a	n/a
65	Garmin	3	793	713	213	193.2	26.9%	27.1%
66	Aernnova	7	779	600	88.4	-21.3	11.4%	-3.5%
67	Constellium	19	766	460	n/a	n/a	n/a	n/a
68	Curtiss-Wright	-1	756	720	n/a	n/a	n/a	n/a
69	LISI	0	754	660	52.5	44.1	7%	6.7%
70	Senior	5	683	679	25	10.9	3.7%	1.6%
71	Kaiser Aluminum	14	676	534	n/a	n/a	n/a	n/a
72	Ducommun	2	670	607	n/a	n/a	n/a	n/a
73	Montana Aerospace	25	668	336	-24.9	-22.5	-3.7%	-6.7%
74	Crane Aerospace and Electronics	-3	667	638	120	110	18%	17.2%
75	RUAG	-9	659	722	118	21.2	18%	2.9%
76	FACC	0	638	588	5.8	-29.7	0.9%	-5%
77	Chromalloy	4	631	537	n/a	n/a	n/a	n/a
78	Sonaca	6	627	532	48.4	17.7	7.7%	3.3%
79	Maxar Technologies	-14	626	740	-32	46.0	-5.1%	6.2%
80	Subaru	-3	601	567	-15.8	-63.8	-2.6%	-11.2%
81	Magellan Aerospace	-2	588	549	-12.1	3.8	-2.1%	0.7%
82	Aubert & Duval (Eramet)	14	581	583	-52.6	-67.4	-9%	-11.6%
83	SKF	-1	567	445	n/a	n/a	n/a	n/a
84	Hutchinson	-6	555	553	n/a	n/a	n/a	n/a
85	Nordam	7	535	360	n/a	n/a	n/a	n/a
86	Kaman	-6	509	546	n/a	n/a	n/a	n/a
87	Latecoere	0	492	397	-65	-81	-13.2%	-20.4%
88	Hensoldt	-5	492	477	n/a	n/a	n/a	n/a
89	PPG Aerospace	-39	466	414	n/a	n/a	n/a	0%
90	Astronics Corporation	-2	461	365	-1.9	-8.6	-0.4%	-2.4%
91	Recaro Aircraft Seating	9	447	318	n/a	n/a	n/a	n/a
92	Barnes Aerospace	-1	429	362	76.2	52.3	17.8%	14.4%
93	Albany Engineered Composites	8	425	310	31.6	16.2	7.4%	5.2%
94	Heroux-Devtek	-5	418	428	20.1	35.7	4.8%	8.4%
95	Ontic	-1	414	351	0	64.2	n/a	18.3%
96	Aciturri	-1	398	341	21.1	-11.3	5.3%	-3.3%
97	Qinetiq	-4	390	363	n/a	n/a	n/a	n/a
98	Martin-Baker	-8	381	407	107	148	28%	36.4%
99	Korean Air	0	380	320	-0.5	-32.3	-0.1%	-10.1%
100	ITT	3	325	270	n/a	n/a	n/a	n/a

## Top 100 companies by name

Company	Ranking
Aciturri	96
Aernnova	66
Aerojet Rocketdyne	37
AIDC	61
Airbus	4
Albany Engineered Composites	93
Ametek	48
Amphenol	50
Arconic	63
Astronics Corporation	90
ATI	44
Aubert & Duval (Eramet)	82
AVIC	14
BAE Systems	11
Ball Aerospace	43
Barnes Aerospace	92
Boeing	2
Bombardier	18
CAE	32
Chromalloy	77
Cobham	60
Constellium	67
Crane Aerospace and Electronics	74
Curtiss-Wright	68
Daher	59
Dassault Aviation	17
Diehl Group	47
Ducommun	72
Eaton	33
Elbit Systems	41
Embraer	26
FACC	76
Garmin	65
GE Aerospace	7
General Dynamics (Aerospace)	16
GKN Aerospace	28
Hanwha Aerospace	21
Heico	46
Hensoldt	88
Heroux-Devtek	94
Hexcel	54
Hindustan Aeronautics	29
Honeywell	12
Howmet Aerospace	30
Hutchinson	84
IHI	34
Israel Aerospace Industries	24
ITP Aero	57
ITT	100
Kaiser Aluminum	71

Company	Ranking
Kaman	86
Kawasaki	35
Kongsberg	56
Korea Aerospace Industries	39
Korean Air	99
L3Harris	9
Latecoere	87
Leonardo	10
Liebherr	53
LISI	69
Lockheed Martin	3
Magellan Aerospace	81
Martin-Baker	98
Maxar Technologies	79
Mercury Systems	62
Mitsubishi	25
Montana Aerospace	73
Moog	40
MTU Aero Engines	19
Nordam	85
Northrop Grumman	5
Ontic	95
Panasonic Avionics	55
Parker Hannifin	31
Pilatus	51
PPG Aerospace	89
Precision Castparts	27
Qinetiq	97
Raytheon Technologies (RTX)	1
Recaro Aircraft Seating	91
Rolls-Royce	13
Rostec	6
RUAG	75
Saab	36
Safran	8
Senior	70
Sierra Nevada	42
SKF	83
Solvay Group	64
Sonaca	78
Spirit AeroSystems	23
ST Engineering	38
Subaru	80
Teledyne Technologies	58
Textron	15
Thales	22
TransDigm	20
Triumph Group	52
Turkish Aerospace	45
Woodward	49



## Explanatory notes

The information used in preparing this report has been obtained solely from company annual reports, public filings and other publicly available information. In the few instances where no such information was available, we have used estimates based on our industry knowledge.

Companies have been ranked for the financial year 2022 or 2022/2023. As far as possible, we have tried to obtain aerospace-only numbers, for example, by extracting these from overall group performance.

Defining “aerospace” is always a challenge. Sectors involved with aircraft, aero-engines, avionics, missiles, space and aerostructures are largely straightforward, but telecommunications, network-centric and C4I systems and some overhaul operations have been included only where these are largely concerned with aerospace activities. Satellite services have been excluded wherever possible, as have companies and divisions that derive more than 50% of their revenues from services such as leasing. Joint ventures have been included in the financials. Intersegment sales have been excluded from operating results and profits for divisions where possible.

When not possible, divisional results have been presented inclusive of inter division sales, which may result in aerospace revenues greater than group sales.

For operating results, we have generally stated the profit (or loss) before interest, tax and exceptional items and after deduction of depreciation. Discontinued or discontinuing operations have been included where they fall in financial year 2022 for that business.

Average dollar exchange rates for the periods 1 January to 31 December 2022, and 1 January to 31 December 2021 have been used for all non-US companies, regardless of fiscal year definitions. The source for the exchange rate information was the US Inland Revenue Service (IRS). The percentage annual changes in financial figures have been given in local currency terms to avoid unnecessary distortions.

There was movement in the average dollar exchange rates between 2021 and 2022. To eliminate exchange rate effects, we have calculated percentage increase in revenues and profits for companies in local currencies.

Some companies have restated their 2021 results. Where this has happened, we have used the restated 2021 results in our analysis.

When looking at all companies, we have revisited our assumptions on what should be included as aerospace sales, and in some cases, we have changed our assumptions. Where we have done this, we have used the same assumptions for both 2021 and 2022.

Companies where we have changed our assumptions include:

- Aubert & Duval, where the parent company Eramet disclosed more information in its 2022 accounts as a discontinued business following its sale to Airbus and Safran.
- Kaiser Aluminium, where we now use its Aero & High Strength sales as our best estimate.

- PPG Aerospace, where we have used information, which was not previously available, given in PPG’s June 2023 investor overview.
- Solvay Group, which disclosed information on its aerospace and defence sales in a webinar on 28 February 2023.

When showing the movement in ranking, we have compared this year’s ranking to the ranking in last year’s survey, so ignoring the new entrants had they been in last year’s survey and any restating of results.

In some companies that report the proportion of their sales that are aerospace, the aerospace sales are spread across business units, which do business across a number of sectors, of which aerospace is just one. In such cases, it is not possible to give a profit figure which corresponds to aerospace sales.

Five companies in this year’s survey do not produce any estimates for their aerospace sales in the public domain. We have included them because they are sizeable and important companies and we have used our industry knowledge, material available in the public domain, and best estimates to arrive at estimated sales figures:

- Chromalloy: a provider of advanced coatings and authorised repairs and parts for gas turbine engines. It is now owned by Veritas Capital, having been acquired from Carlyle in December 2022.
- Hutchinson: it had total sales of €4.4 billion across all sectors in 2022, and is a subsidiary of the French oil company Total. In aerospace, it is a significant supplier of equipment across airframes, engines and cabin systems, such as insulation.
- Nordam: a private US company, which is a significant supplier of aircraft nacelles, transparencies and business jet interiors.
- Precision Castparts: a US company that is owned by Berkshire Hathaway.
- Sierra Nevada: a private US company, which has a range of businesses including Space Systems, Avionics, Aircraft Modification & Support, and Cybersecurity.

Two companies, ITP Aero and Ontic, did not release their 2022 results in time for this year’s survey. In these cases, we have estimated their 2022 sales using peer companies’ results as a guide.

There were two deals that significantly changed the landscape during 2022:

- Montana Aerospace completed the acquisition of Asco in April 2022.
- Parker Aerospace’s acquisition of Meggitt, which was completed in September 2022.

Tusas Engine Industries has featured previously in the Top 100, but we have removed it as it is majority owned by Turkish Aerospace.

The Top 100 is compiled on behalf of FlightGlobal by Counterpoint Market Intelligence.  
Contact Richard Apps at [richardapps@cpmil.com](mailto:richardapps@cpmil.com)