RDC
rdcaviation.com

Aviation Emissions Report

September 2026

Normec
Verifavia

RDC Emissions analysis for largest markets - September 26 vs prior years

25 largest markets by total emissions

Origin Country	September 2019 Total CO2 (Tonnes)	September 2025 Total CO2 (Tonnes)	September 2026 Total CO2 (Tonnes)
United States	15,038,393	14,569,972	14,366,397
China	7,935,597	8,058,039	8,216,876
United Kingdom, UK	3,088,824	2,956,265	2,944,800
Japan	2,347,035	2,180,509	2,155,249
Spain and Canary Islands	1,890,111	2,027,122	2,126,417
Germany	2,228,178	1,953,682	1,926,469
United Arab Emirates	1,949,780	2,088,217	1,880,304
India	1,755,250	1,808,745	1,816,924
Australia	1,687,935	1,669,729	1,815,666
Turkey	1,348,028	1,699,512	1,677,638
Canada	1,677,974	1,645,852	1,665,126
France	1,714,077	1,595,589	1,576,142
Russian Federation	1,753,734	1,510,526	1,546,892
Italy	1,284,508	1,393,399	1,502,540
Brazil	1,272,295	1,336,947	1,375,594
Republic of Korea	1,183,827	1,081,954	1,078,138
Indonesia	1,071,152	988,678	988,779
Singapore	990,731	955,984	969,634
Thailand	1,142,068	918,903	882,409
Mexico	908,826	900,226	862,832
Saudi Arabia	698,018	883,264	837,180
Qatar	795,181	930,063	821,121
Netherlands	853,836	778,628	791,056
Hong Kong	1,016,698	762,836	781,764
Greece	502,276	626,385	642,944

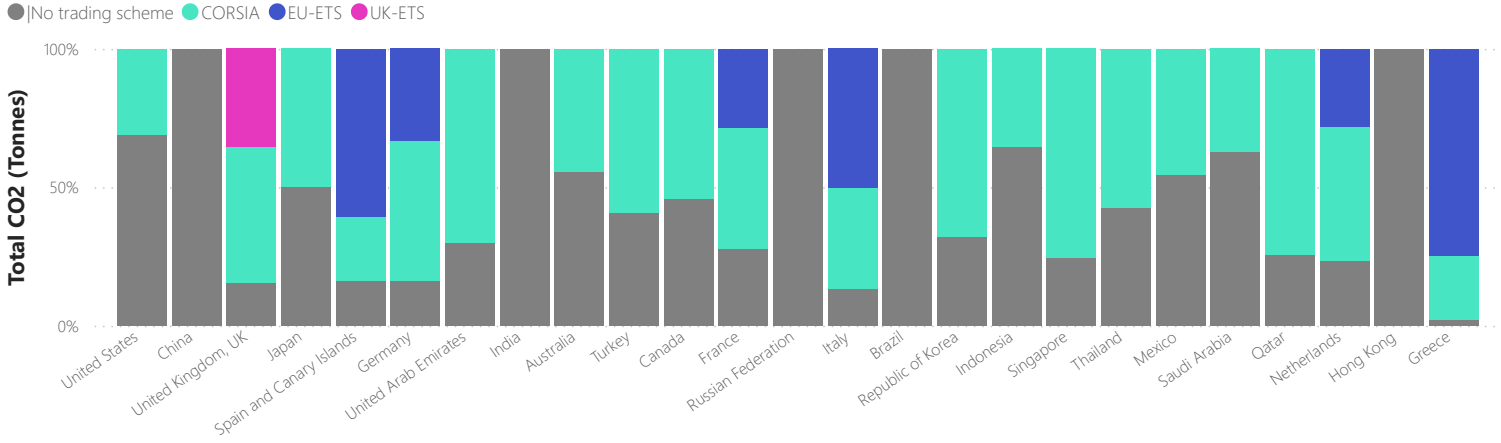
Change in Emissions - Current month vs prior years

Origin Country	This year vs last year	This year vs 2019
United States	-1%	-4%
China	2%	4%
United Kingdom, UK	-0%	-5%
Japan	-1%	-8%
Spain and Canary Islands	5%	13%
Germany	-1%	-14%
United Arab Emirates	-10%	-4%
India	0%	4%
Australia	9%	8%
Turkey	-1%	24%
Canada	1%	-1%
France	-1%	-8%
Russian Federation	2%	-12%
Italy	8%	17%
Brazil	3%	8%
Republic of Korea	-0%	-9%
Indonesia	0%	-8%
Singapore	1%	-2%
Thailand	-4%	-23%
Mexico	-4%	-5%
Saudi Arabia	-5%	20%
Qatar	-12%	3%
Netherlands	2%	-7%
Hong Kong	2%	-23%
Greece	3%	28%

Percent of Emissions covered by Compliance Programmes

Origin Country	September 2019 % covered	September 2025 % covered	September 2026 % covered
United States	-	31.11%	30.98%
China	-	-	-
United Kingdom, UK	34.47%	86.18%	84.53%
Japan	-	48.36%	49.84%
Spain and Canary Islands	61.56%	84.89%	83.75%
Germany	34.31%	84.92%	83.75%
United Arab Emirates	-	69.79%	69.90%
India	-	-	-
Australia	-	51.25%	44.28%
Turkey	-	60.96%	59.09%
Canada	-	55.09%	54.05%
France	29.43%	72.11%	72.10%
Russian Federation	-	-	-
Italy	50.33%	86.67%	86.75%
Brazil	-	-	-
Republic of Korea	-	67.66%	67.79%
Indonesia	-	38.02%	35.44%
Singapore	-	76.11%	75.62%
Thailand	-	56.08%	57.26%
Mexico	-	43.87%	45.46%
Saudi Arabia	-	41.01%	37.26%
Qatar	-	77.25%	74.29%
Netherlands	26.82%	78.39%	76.63%
Hong Kong	-	-	-
Greece	75.10%	98.54%	97.92%

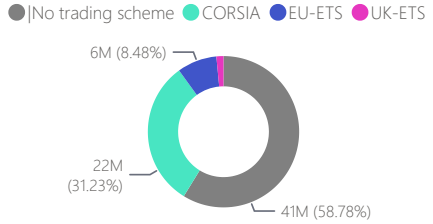
25 largest markets - emissions by Compliance Programme (current month)



Global emissions (tonnes)

69M

Emissions by compliance programme



© RDC Aviation Limited 2026

Emissions analysis for largest markets - YTD to Sep 26 vs prior years

25 largest markets by total emissions

YTD Period Origin Country	YTD 2019 Total CO2 (Tonnes)	YTD Last Year Total CO2 (Tonnes)	YTD This Year Total CO2 (Tonnes)
United States	138,088,401	135,748,555	133,911,717
China	71,260,443	74,757,818	76,094,606
United Kingdom, UK	26,183,904	24,838,863	24,626,207
Japan	21,028,921	19,786,567	19,358,579
Spain and Canary Islands	15,337,625	16,931,913	17,528,841
India	16,098,382	17,127,448	17,111,443
Australia	15,488,346	14,934,520	16,291,272
United Arab Emirates	17,400,521	18,923,907	16,056,647
Germany	18,640,927	16,045,077	15,677,291
Canada	14,617,566	14,180,974	14,343,275
France	14,944,375	14,001,401	13,919,237
Turkey	10,518,954	13,445,789	13,451,660
Russian Federation	14,534,793	12,358,831	12,480,862
Brazil	11,769,391	12,070,229	12,411,149
Italy	10,270,102	11,037,483	11,662,350
Republic of Korea	10,511,663	9,685,489	9,656,952
Mexico	9,013,312	9,491,619	9,320,005
Thailand	11,105,532	9,311,856	9,255,717
Singapore	9,076,215	8,862,745	8,817,727
Indonesia	9,882,660	8,815,544	8,562,858
Saudi Arabia	6,535,944	7,837,666	7,556,439
Hong Kong	9,641,846	6,798,959	7,205,476
Qatar	7,099,248	8,202,663	6,839,111
Netherlands	7,258,602	6,685,384	6,751,548
Vietnam	5,164,369	5,728,178	6,129,488

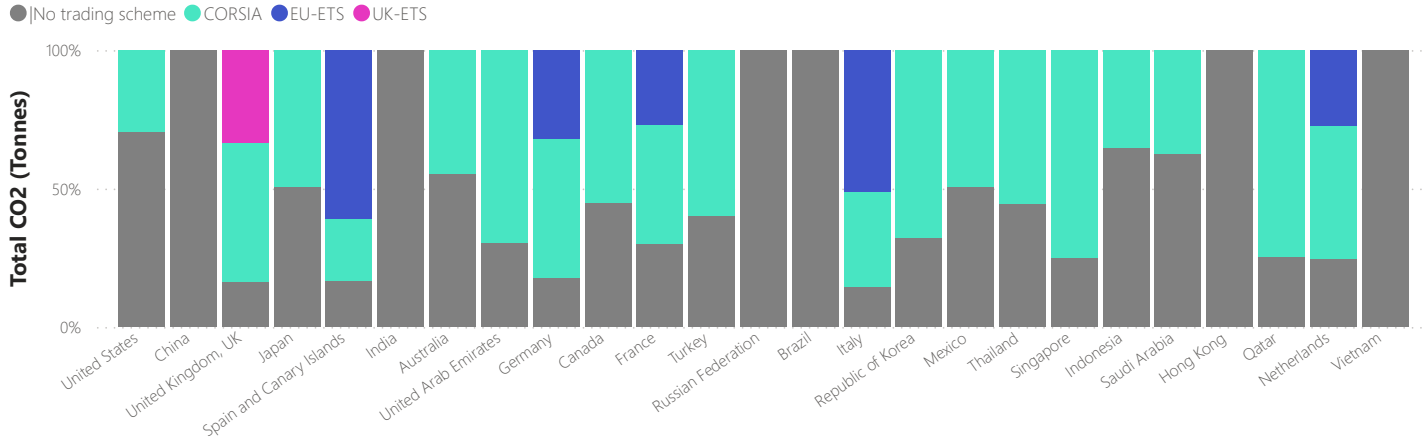
Change in Emissions - Current month vs prior years

This YTD vs Last YTD	This YTD vs YTD 2019
-1%	-3%
2%	7%
-1%	-6%
-2%	-8%
4%	14%
-0%	6%
9%	5%
-15%	-8%
-2%	-16%
1%	-2%
-1%	-7%
0%	28%
1%	-14%
3%	5%
6%	14%
-0%	-8%
-2%	3%
-1%	-17%
-1%	-3%
-3%	-13%
-4%	16%
6%	-25%
-17%	-4%
1%	-7%
7%	19%

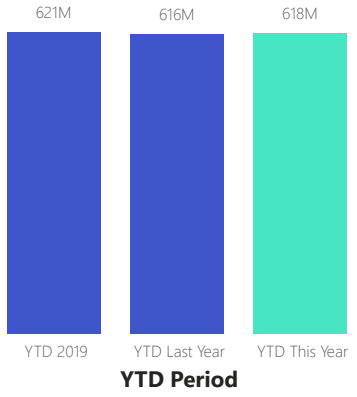
Percent of Emissions covered by Compliance Programmes

YTD 2019 Trading scheme %	YTD Last Year Trading scheme %	YTD This Year Trading scheme %
-	29.60%	29.43%
-	-	-
32.19%	85.16%	83.75%
-	47.48%	49.46%
62.06%	84.39%	83.36%
-	-	-
-	51.07%	44.64%
-	70.52%	69.41%
33.54%	83.45%	82.26%
-	55.92%	55.19%
27.92%	70.12%	70.10%
-	61.23%	59.86%
-	-	-
-	-	-
51.18%	85.86%	85.48%
-	68.13%	67.61%
-	49.15%	49.14%
-	54.74%	55.29%
-	76.12%	75.01%
-	36.08%	35.23%
-	40.90%	37.32%
-	-	-
-	77.29%	74.43%
25.42%	77.69%	75.30%
-	-	-

25 largest markets - emissions by Compliance Programme (current YTD)



Global emissions (tonnes)



© RDC Aviation Limited 2026

RDC CARE Index by carrier and home continent - September 26

Top 25 European Carriers

Carrier Name	CARE Index
Wizz Air UK	7.8
TUIfly Nordic	7.6
Ascend Airways	7.5
Norra - Nordic Regional Airlines	7.5
Iberojet	7.4
Wizz Air	7.4
Marabu Airlines	7.3
Sunclass Airlines	7.3
French Bee	7.3
Corendon Dutch Airlines	7.1
TUI Airways	7.1
World2Fly	7.1
Jet2	7.0
Norse Atlantic Airways UK	7.0
Transavia	7.0
KM Malta Airlines	6.9
Norse Atlantic Airways	6.9
World2Fly Portugal	6.9
Wizz Air Malta	6.9
SunExpress	6.8
Air Serbia	6.8
TUIfly Netherlands	6.8
Enter Air	6.8
Buzz	6.8

Top 25 North American Carriers

Carrier Name	CARE Index
Flair Airlines	6.7
Frontier Airlines	6.7
Air Transat	6.7
Volaris	6.5
Porter Airlines Canada	6.3
Air Canada Rouge	6.3
GlobalX Airlines	6.2
Aeromexico	6.2
Allegiant Air	6.0
Breeze Airways	6.0
Air Canada	5.9
WestJet	5.9
Avelo Air	5.9
JetBlue	5.7
Delta Air Lines	5.7
Sun Country	5.6
United Airlines	5.6
American Airlines	5.5
Air Saint-Pierre	5.4
Calm Air International	5.3
VivaAerobus	5.3
ConocoPhillips Alaska Inc	5.0
Alaska Airlines	4.9
Mexicana	4.6

Top 25 Asian Carriers

Carrier Name	CARE Index
Myanmar National Airlines	7.7
Myanmar Airways International	7.2
UTair Aviation	7.2
IndiGo	7.0
Air Premia	6.9
Akasa Air	6.7
Chongqing Airlines	6.7
Thai AirAsia X	6.7
Scoot	6.6
ZIPAIR Tokyo	6.6
AirAsia X	6.6
Hong Kong Express	6.5
Sun Phu Quoc Airways	6.4
Asia Union Airlines	6.3
Centrum Air	6.3
Pobeda	6.2
Greater Bay Airlines	6.2
Nordwind Airlines	6.1
MASWings	6.1
NordStar Airlines	6.1
STARLUX Airlines	6.0
Fuzhou Airlines	6.0
Air India Express	6.0
AirAsia Cambodia	6.0

Top 25 RoW Carriers

Carrier Name	CARE Index
FlyGabon	7.9
Congo Airways	7.3
Arajet	7.1
Clic Air S.A.	6.7
flydubai	6.7
Air Senegal	6.7
Air New Zealand	6.6
Royal Air Maroc	6.6
Sky Airline	6.6
Flynas	6.5
Sky Airline Peru	6.5
Flightlink Air Charters	6.5
Aircalin	6.4
SalamAir	6.4
Fiji Airways	6.4
Red Sea Airlines	6.4
Air Tahiti Nui	6.4
Azul	6.3
El Al	6.2
Air Algerie	6.1
Jazeera Airways	6.1
Air Arabia	6.1
Jetstar Airways	6.1
Cape Airlines	6.1

The CARE Index is a measure of airline route sustainability, based around our emissions methodology and various other factors, that has been developed to give business and consumers the best information on which to make their purchasing decisions - particularly when it comes to making more environmentally friendly choices. Most 'efficiency measures' use CO2 per passenger, per seat or per available seat kilometre (ASK), which can be hard to understand for consumers. The CARE Index creates a score between 0 (worst) to 10 (best) for any air route, airline and aircraft combination, taking into account:

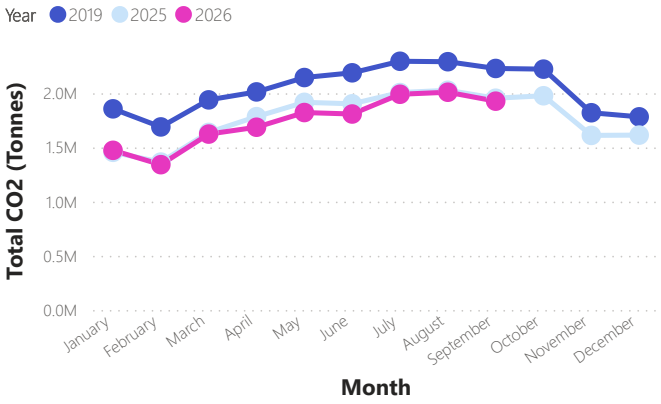
- fuel burn and **efficiency of the aircraft type**
- **efficiency of the airline** – using specific seat capacity, configuration and overall occupancy rates (load factor)
- use of **Sustainable Alternative Fuels (SAF)**
- if the route is part of a **compliance or regulatory emissions programme** such as EU ETS etc
- whether the **operator offsets any emissions over and above that which is legally required**

The CARE index has been designed to be a force for change, giving consumers better insight into the environmental impact of their chosen airline that will also help to shape airline sustainability strategies.

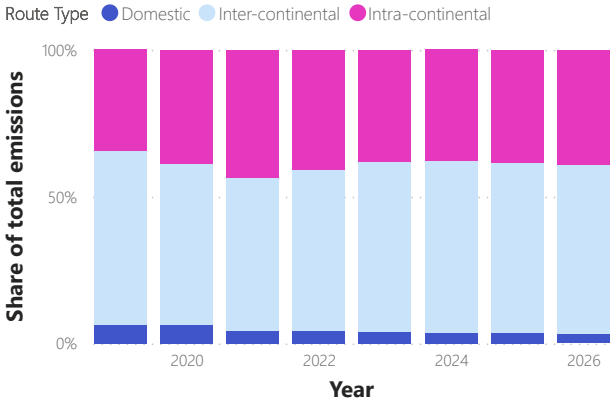
© RDC Aviation Limited 2026

This month's focus country: Germany

Total CO2 (Tonnes) by Month and Year



CO2 by Year and Route Type



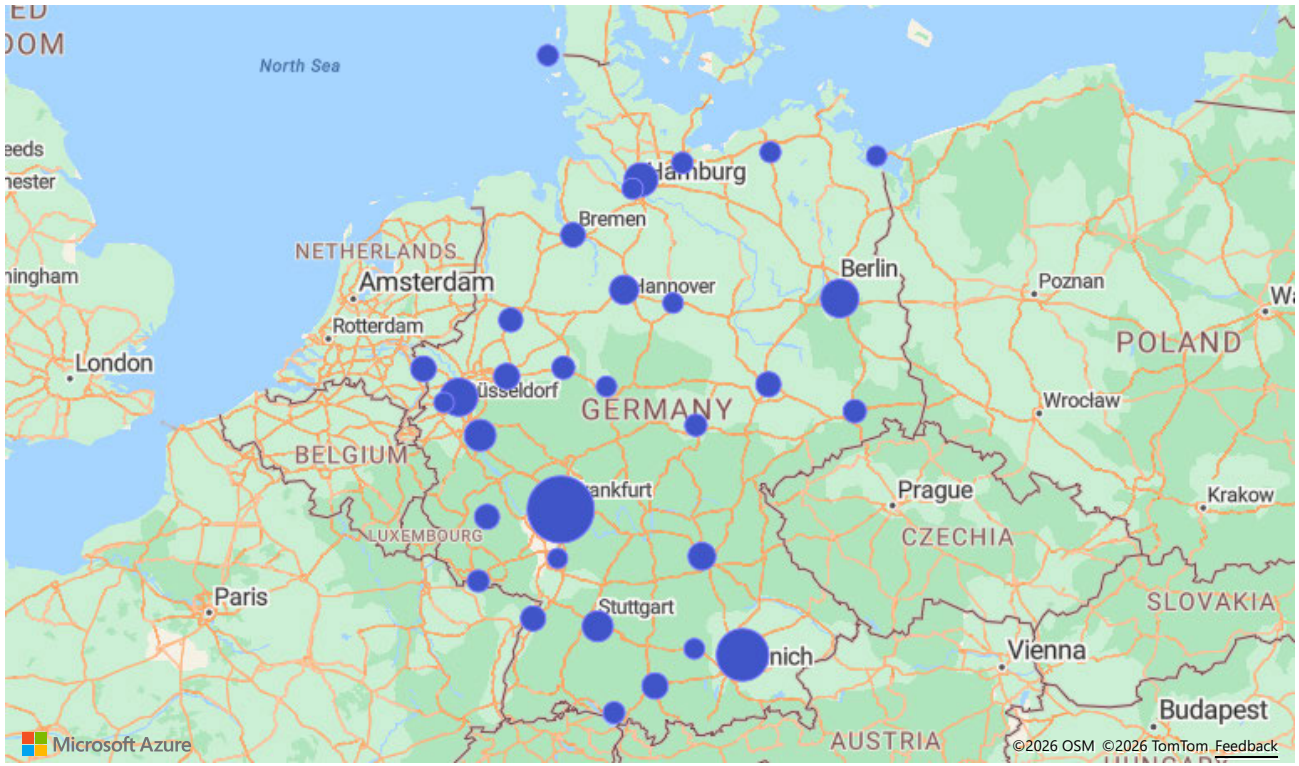
10 largest markets by seat capacity ranked by lowest Emissions per ASK - last 12 months

Destination Country	Emissions per ASK (g)	Total CO2 (Tonnes)
Greece	57.51	661,492
Spain and Canary Islands	58.60	1,788,849
Turkey	58.74	1,573,422
United Kingdom, UK	69.39	428,679
Italy	74.05	580,340
France	77.96	257,776
United States	78.54	4,047,975
Austria	82.87	201,576
Switzerland	88.22	159,972
Germany	94.22	719,159

10 largest carrier by emissions ranked by highest total emissions - last 12 months

Carrier Name	Emissions per ASK (g)	Total CO2 (Tonnes)
Lufthansa	75.60	6,676,255
Condor Flugdienst	58.67	1,201,973
United Airlines	79.94	1,002,374
Eurowings	63.78	875,329
Discover Airlines	70.14	738,571
SunExpress	53.73	601,337
Malta Air	59.31	468,061
Emirates	75.12	456,146
Air China	67.23	441,752
Singapore Airlines	93.72	418,898

Largest origin airports by total emissions - last 12 months



Emissions by airport - last 12 months

Origin Name	Total CO2 (Tonnes)	Emissions per ASK (g)
Frankfurt International Airport	9,761,162	73.70
Munich - Franz Josef Strauss Airport	4,625,719	70.60
Berlin - Brandenburg Airport	1,448,309	62.81
Dusseldorf Airport	1,410,950	63.19
Hamburg Airport	816,188	64.24
Cologne Bonn Airport	593,592	60.52
Stuttgart Airport	513,922	63.65
Hanover Airport	364,199	61.98
Nuremberg Airport	254,348	61.66
Memmingen Airport	160,135	58.61

© RDC Aviation Limited 2026

RDC is a UK-based data and technology provider to the international air transport industry. The company has over 300 clients of its Apex and AirportCharges products, which provide market intelligence to operators of aircraft and airports, investors, OEMs and regulators.

For decades RDC have been monitoring and modelling the CO_2 emissions arising from the growing aviation industry. We have the ability to calculate and report detailed airline operating expenses - including fuel burn, which in turn gives us the CO_2 output from flying.

To find out more about how RDC can deliver CO_2 emissions data for your business services, get in touch at rdcaviation.com/contact

Normec Verifavia

Our CO_2 emissions methodology and data has been independently audited and verified by Normec Verifavia

Confidentiality
This document and any analysis, opinions, results, evaluations or recommendations herein or accompanying it (the "Report") and its contents are confidential.

Limitations
This document and any analysis, opinions, results, evaluations or recommendations herein or accompanying it (together, the "Report"), was prepared by RDC Aviation Limited (RDC) for the personal use of the recipient. Any statements made in the Report that are not historical fact are based on data and information provided by others or calculated by RDC. RDC has not verified the accuracy of any such data and information unless otherwise specified by RDC in writing. This document may contain forward-looking statements regarding future events including, but not limited to 'forecast', 'expect', 'believe', 'estimate', 'anticipate', 'will', 'could', 'may' or 'might' and the negative of such terms or similar expressions.
By their nature, forward looking statements involve risks and uncertainties, because they relate to events and depend on circumstances that may or may not occur in the future and that are beyond the control of RDC. Forward-looking statements are not guarantees of future performance. In particular no allowance has been made for changes in government policy or regulation; economic performance; price; taxation; company failure; strategic change; ownership change; or other external factors that could cause actual results to differ materially from those shown in the Report.
The information contained in the Report was produced on the date of issue and is based on the conditions encountered and information available at that time. RDC make no representations, warranties or guarantees, whether express or implied, in relation to the base data, forecasts, estimates and any projected outcomes in the Report.
Unless otherwise specified in writing, no reliance may be placed on this Report.

Copyright
All rights reserved. No part of this work may be reproduced, stored in a retrieval system of any nature, or transmitted, in any form or by any means including photocopying and recording, without the prior written permission of RDC, the copyright owner. If any unauthorised acts are carried out in relation to this copyright work, a civil claim for damages may be made and/or a criminal prosecution may result.

©2026 RDC Aviation Ltd

RDC
rdcaviation.com

VISIT RDCAVIATION.COM