ICAO Carbon Emissions Calculator Methodology

Version 10

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1 Introduction

This document presents a general methodology developed for estimating the amount of carbon emissions (CO_2) generated by a passenger in a flight, for use in carbon offsetting programmes.

It provides information on the methodological approach and details the assumptions underlying the generic factors employed by the ICAO Carbon Emissions calculator. The methodology is provided in an open source format facilitating individual air carriers that may wish to customize it with their own data.

The document includes a general description of the method adopted by ICAO in order to estimate the CO_2 emissions of a flight (Item 2); the detailed calculation process implemented by the ICAO Calculator (Item 3); a description and analysis of the data inputs used (Item 4); a demonstration of the data coverage and sensitivity (Items 5 and 6); and the steps needed to be taken by a company wishing to customize the calculator with its own data set (Item 7).

2 Methodological Approach

The ICAO methodology employs a distance-based approach to estimate an individual's aviation emissions using data currently available on a range of aircraft types. In order to implement this methodology, ICAO has developed formula regarding fuel consumption and it is committed to continuously monitor and seek improvements in the data used, in order to obtain better emissions estimation.

The ICAO methodology has been designed to require a minimum amount of input information from the user regarding the particulars of the flight concerned. It employs industry averages for the various factors which contribute to the calculation of the emissions associated with the individual passenger's air travel. As passengers' aviation emissions are affected by continuously changing variables specific to each flight, it is necessary to develop average factors to account for the effect of these flight parameters. While these factors cannot be captured on a flight-specific basis, this methodology considers them for the purpose of developing a more robust estimation of flight emissions and educating the public and the industry as to how these factors affect an individual passengers' emission intensity.

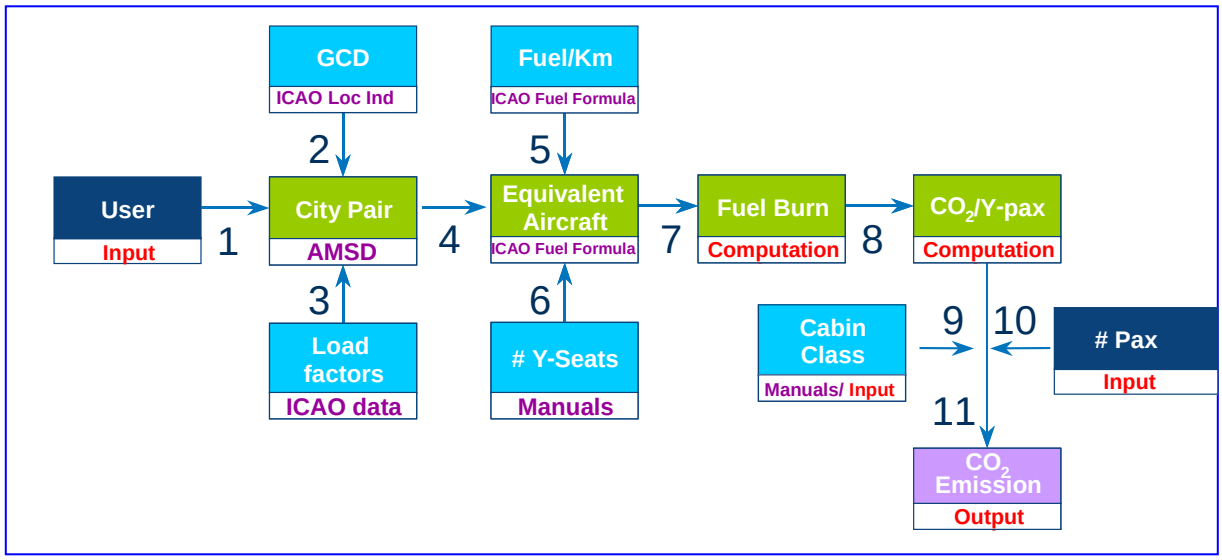
2.1 General Description of the Methodology

The ICAO Carbon Emission Calculator requires that the user input the airports of origin and destination for a direct through flight (i.e. a flight which does not have a change of the flight number). This is then compared with the published scheduled flights to obtain the aircraft types used to serve the two airports concerned and the number of departures per aircraft. Each aircraft is then mapped into one of the 312 equivalent aircraft types in order to calculate the fuel consumption for the trip based on the great circle distance between the airports involved in the journey. The passenger load factors, and passenger to cargo ratios, obtained from traffic and operational data collected by ICAO, are then applied to obtain the proportion of total fuel used which can be attributed to the passengers carried. The system then calculates the average fuel consumption for the

journey weighted by the frequency of departure of each equivalent aircraft type. This is then divided by the total number of economy class equivalent passengers, giving an average fuel burn per economy class passenger. The result is then multiplied by 3.16 in order to obtain the amount of CO_2 footprint attributed to each passenger travelling between those two airports.

3 Calculation Procedure

ICAO used this methodology to develop a Carbon Emissions Calculator using a database constructed from several data sources. From the diagram below, we identify the following information used as input to the calculator:



City Pair: Obtained from the airlines multilateral schedules database (AMSD). The flight schedule data are based on the latest available information and are updated annually.

GCD (Great Circle Distance): The distance between origin and destination airports is derived from latitude and longitude coordinates originally obtained from ICAO Location Indicators database.

Load Factors: The average generic factors considered for the purpose of this calculation are sourced from the Traffic by Flight Stage database (TFS) which collects air carrier city-pair specific traffic data by aircraft type produced on an annual basis, and domestic traffic and operational data, both collected by ICAO, as well as data based on the flight schedules published by the air carriers.

Fuel/Km: This information, per equivalent aircraft model, is obtained from the ICAO Fuel Consumption Formula.

Y-seats: This is the number of economy seats that can be fit inside the equivalent aircraft. ICAO made use of a standard cabin layout (in terms of location of galleys, toilets and exits) for each reference aircraft. This fixed space was then fitted with an all-economy seating using a pitch of about 31/32 inches (79/81 cm). This seating configuration was then compared with a mixed configuration involving business and/or first class row/seat combinations where, for the large wide bodied aircraft, business class seats have a 38 inch pitch, and those in first class have a 60 inch pitch. Examples of these layouts were obtained from the Manual on Airplane Characteristics for Airport Planning published on the Web by the aircraft manufacturers.

In simple terms, the general methodology used by the ICAO calculator can be described with the following steps, with references to the diagram above:

User input (1) – The user enters the origin and destination airports. The database is searched for all flights, direct or non-direct, serving that city-pair. However, the tool does not compute total emissions for journeys with different flight numbers (connecting flights). To do this, the user can choose to build a total by calculating each of the journey legs separately and adding them up.

Code share flights are treated as a single flight. This avoids a possible double counting of flight departures that would otherwise affect the calculations.

The origin and destination database includes individual routings for single flight numbers with multiple stops. Hence the passenger does not need to know, nor input the full itinerary of the flight.

Trip distance (2) – The ICAO Location Indicators database contains the longitude and latitude coordinates for the airports. From these coordinates the Great Circle Distance (GCD)[1] is then calculated and corrected by a factor depending on the distance between the two airports concerned (see section 4.2).

Traffic data (3) – A passenger load factor is assigned to the user-defined city-pair, based on the passenger load factor for the corresponding route groups. Load factor information is obtained from the database, based on 53 international route groups plus 11 domestic areas plus 11 intra areas (see **Appendix A**).

Aircraft mapping (4) – From the scheduled flights database, the scheduled aircraft is identified and linked to the aircraft fuel consumption database based on ICAO Fuel Consumption Formula. When the scheduled aircraft is not in the database, the aircraft is mapped into one of the 312 equivalent aircraft types existing in the aircraft fuel consumption database. **Appendix B** provides details of how this mapping was done. This allows estimation of the total fuel use on each route serving the user-defined city-pair.

Fuel burn data (5) – The fuel burn to flight distance relationship is extrapolated from the ICAO Fuel Consumption Formula. The factors considered include passenger load factor, flight distance, block time, the proportion of the overall payload represented by passenger traffic, cabin class flown, and type of equivalent aircraft flown. The amount of fuel used on

[1] The Great Circle Distance it is the shortest path between two points on the surface of a sphere

a route is the weighted average of total fuel burnt based on the frequencies of the scheduled aircraft types flown.

Economy Class (Y) seat capacity (6) – From cabin floor plans obtained from the "Manual on Airplane Characteristics for Airport Planning", which is developed by manufacturers to provide necessary data to airport operators and airlines for airport facilities planning, the maximum number of Y-seats that can be fitted per equivalent aircraft is determined. This "virtual" all economy configuration later allows the computation of cabin class factors (steps 9 & 10).

CO_2 per economy passenger (7 and 8) – Using the trip distance, equivalent aircraft fuel consumption, passenger to seat load factor and passenger to freight load factor for the route group, and the number of Y-seats, the methodology calculates the CO_2 associated to each passenger, as follows:

CO_2 per pax = 3.16 * (total fuel * pax-to-freight factor)/(number of y-seats * pax load factor)

Where:

Total fuel = The weighted average of the fuel used by all flights departed from the origin airport in order to reach the destination airport. The weighting factor is the ratio of number of departures for each equivalent aircraft type, to the total number of departures.

Pax-to-freight factor = is the ratio calculated from ICAO statistical database based on the number of passengers and the tonnage of mail and freight, transported in a given route group.

Number of Y-seats = the total number of economy equivalent seats available on all flights serving the given city pair.

Pax load factor = the ratio calculated from ICAO statistical database based on number of passengers transported and the number of seats available in a given route group.

3.16 = constant representing the number of tonnes of CO_2 produced by *burning* a tonne of aviation fuel.

Cabin class (9 and 10) – Depending on user selection, a multiplicative cabin class factor is applied to adjust the CO_2 per Y-passenger, on those routes where multiple class passenger services are available.

Passenger CO_2 output (11) – The estimated quantity for the carbon emission.

4 Data Sources

This methodology seeks to distribute the emissions between the passengers travelling in different cabin classes, and between passengers and cargo, in an equitable manner. This section details how the various contributing factors come together to accomplish this result.

4.1 Fuel Data

Since the 1980s, ICAO has been conducting studies on regional differences in international airline operating economics to estimate and compare airline operating cost and revenues in different regions of the world, using a unique database which includes fuel consumption. The fuel consumption in that database is estimated for each airline, on each sector of a scheduled flight, based on information reported by airlines for their scheduled operations.

During the early 1990s, ICAO began developing equations to estimate the fuel consumption by aircraft type. Those equations, have been regularly updated based on publically available information.

The fundamental principle of the ICAO fuel consumption formulas is to estimate in-service airline fuel consumption. The process by which they are developed is to start with fuel consumption figures as published by in aircraft manufacturers' handbooks as a baseline estimate of fuel consumption by trip distance. These figures are then corrected based on available in-service fuel consumption data.

Most of the in-service data comes from the US DOT Form 41. In the United States, federal law requires that most American passenger and cargo airlines report financial and operating information to the U.S. Department of Transportation (DOT). Often referred to by the name of one of its required reports, the "Form 41" system includes balance sheets, income statements and other financials as well as operating or "traffic" statistics.

Where Form 41 data were not available for specific aircraft type, handbook to in-service differences from a similar aircraft were used. Handbook level fuel consumption data came from a number of sources including the manufacturers, files from the ICAO database, charter companies, U.S. Department of Interior website, Internet and literature searches.

The formula also incorporates the ability to compute fuel consumption based on block time. This allows the fuel consumption estimate to consider additional time required for less direct routings or for prevailing winds.

Appendix C of this document presents average fuel consumption by stage length based on the ICAO fuel consumption formula.

4.2 Trip distance

The methodology uses the Great Circle Distance (GCD) between airports as input to calculate the fuel used, and thus estimate CO_2 emissions.

GCD is by definition the shortest distance between two points on the surface of a sphere. This distance can be calculated by using the geographical coordinates of the two points concerned. The coordinates for the airports involved are obtained from the ICAO Location

Indicators database (ICAO Doc 7910). Once the GCD is calculated, it is then corrected by a factor depending on the distance between the two airports concerned.

The correction factor is needed in order to include the emissions of distance flown in excess of the GCD, stacking, traffic and weather-driven corrections. According to EIG, the actual distance flown compared with GCD that is given in the scheduled flights timetable may vary up to 11% in Europe (ANCAT/EC2 1998).

The table below shows the GCD correction factor used.

GCD	Correction to GCD
Less than 550 Km	+ 50 Km
Between 550 Km and 5500 Km	+ 100 Km
Above 5500 Km	+ 125 Km

4.3 Aircraft type

The CO_2 emission is calculated from the fuel burned by the aircraft serving a given route. The scheduled aircraft is identified from the scheduled flights database, and mapped into one of the 312 equivalent aircraft types existing in the aircraft fuel consumption database (**Appendix C** provides details of how this mapping was done). Those aircraft types that cannot be mapped, are excluded from the calculations.

4.4 Passenger Load Factor and Passenger to Cargo Factor

As this methodology is intended to assess the passenger's aviation emissions it is necessary to deduct the flight emissions associated with the freight and mail carried on the flight from the total. This calculation will be performed on a revenue mass basis using historic freight and mail numbers specific to the city-pair being considered.

The data are sourced from the ICAO TFS dataset which contains totals of number of seats and passengers, tonnes of freight, and tonnes of mail carried. In order to develop an average freight allocation an average passenger mass with baggage is assumed as 100 Kg, plus a 50 Kg add-on to account of the on-board equipment and infrastructure associated with passenger use (for example, the weight of seats, toilets, galleys and crew). The total mass is then established as:

[((No. Passengers*100Kg) + (No. of seats * 50 Kg))/1000] (tonnes) + Freight (tonnes) + Mail (tonnes)

Based on the historical traffic data it is then possible to establish the proportion of freight and mail mass in relation to the total mass calculated by the formula above. The resulting proportion is the fraction of the flight emissions for which the passengers should not be held accountable for. The TFS data is updated annually by ICAO for each one of the 75 route groups (see **Appendix A**).

4.5 Cabin class

The cabin class correction factor is used only on equivalent aircraft types that support such differentiation, and on flights of more than 3,000 Km. It is based on the principle that premium seats occupy a larger space than that of an economy seat; therefore the same cabin configured with premium seat arrangements carries fewer passengers than an all-economy layout.

In order to define the cabin class correction factor, each representative aircraft has been assigned a standard all-economy class layout so that the reduced capacity resulting from the larger space occupied by premium seating and the associated increase in per-passenger emissions is accounted for. This cabin class correction factor is based on the principle that premium seats occupy a larger footprint than that of an economy seat; therefore the same cabin configured with premium seat arrangements carries fewer passengers than an all-economy layout. While it is not possible to account for all possible configurations of a given aircraft the cabin class correction factor serves to educate the user as to the environmental effect of their travel decisions. For this reason generic cabin class factors have been estimated.

The methodology employs a simplified approach by using two cabin class factors ("economy" and "premium") when allocating emissions to passengers, with a ratio of 1:2.

5 Discussion of Sensitivities

In any modelling exercise the desire for accuracy is moderated by the level of complexity the analyst is willing to accommodate. In the case of the ICAO methodology, an attempt has been made to account for the principal factors which define an individual's aviation carbon emission footprint while assessing each at a level which recognizes the inherent uncertainty underlying many of the assumptions embedded in this approach.

Great Circle Distance – while it is understood that air travel does not occur in a straight line between two points, actual flown distance to be collected from the air carriers, or from a more accurate trip distance database showed to be not feasible for the time being.

Representative Aircraft – as aircraft typically share similar performance characteristics, if designed for similar operation, the adoption of a representative aircraft approach is both necessary and reasonable given the level of detail available. It is recognized that there are considerable differences in fuel consumption between aircraft belonging to the same aircraft type variant, dependent on many factors such as age and airline specific configuration, including engines.

Cabin Class Factor – this recognizes that several seat configurations can be offered, and the different classes of service among air carriers. The ICAO Carbon Emissions calculator does not use a specific aircraft configuration; instead, it uses the equivalent aircraft approach that represents the actual equipment in use. Due to the general nature of this methodology, it was decided to use a simplified approach, restricting the cabin classes to two: one representing the economy class, and the other representing the premium classes (premium-economy, business, and first).

Passenger Load Factor – average passenger load factors are calculated on a route group basis for international flights and on a regional basis for domestic flights. The data are obtained from the reported data sent by States to ICAO, and it tends to change with every annual update.

Passenger to Cargo Factor – average cargo factors on passenger aircraft are calculated on a route group basis for international flights and on a regional basis for domestic flights. The data is obtained from the reported data sent by States to ICAO, and it tends to change with every annual update.

Fuel consumption per aircraft type – throughout the design of this tool, the intention was to default to the best publicly available information. While it is well known that most air carriers have detailed information in regards to their fuel consumption and fuel efficiency, this information is not publicly available. ICAO has developed formulas to estimate fuel consumption for 312 aircraft currently on duty.

6 Maintenance Requirements of the ICAO Methodology

In order to support the continued improvement and adoption of the ICAO methodology various data components will require a regular update by ICAO and be provided to users seeking to implement the ICAO methodology. These include:

ICAO traffic data – to be analyzed and updated on an annual basis.

Air carriers scheduled data – In order to calculate the composite city emissions city-pairs data are to be updated on an annual basis to reflect the schedules operated by the air carriers during the period.

Generic Aircraft Mapping – To account for changes in the equipment operating in the industry ICAO will complete a review of the aircraft types listed in the scheduled flights database and the TFS and publish a reference document showing the corresponding mapping to representative aircraft type for all in service aircraft type.

Aircraft Fuel consumption – In order to keep up to date information about new aircrafts types and technology improvements adopted by the industry, ICAO will update the fuel per kilometre information for the several aircraft equivalent models, as soon as new information is made available by aircraft manufacturers and air carriers.

7 Options for Carrier Specific Accuracy Improvements

As ICAO recognizes the additional benefits, which more detailed air carrier specific data can provide, the ICAO methodology is intended to be open source for carriers that are

considering their own offset programmes and able to receive enhancements to the quality of data employed for the calculations. Possible carrier specific improvements include:

Fuel Burn – Given the air carriers flight planning requirements in terms of efficiency and safety it is anticipated that air carriers will be interested in employing more robust data to the fuel consumed on their operated flights.

Cargo Carried – An air carrier may use its own cargo factor so long as the level of aggregation is provided in accompanying documentation.

Passenger Load Factor – An air carrier may use their own passenger load factor so long as the level of aggregation is clear in accompanying documentation.

Aircraft Configuration – On account of the generic nature of this methodology an air carrier may wish to implement fleet specific data on the aircraft operated in its service.

Appendix A: Load Factors by Route Group

Version 10 data are based on traffic during calendar year 2015.

#	Route Group	Passenger Load Factor	Passenger to Freight Factor
1	Africa - Asia/Pacific	72.90%	83.90%
2	Africa - Middle East	71.10%	83.09%
3	Africa - North America	77.28%	90.74%
4	Africa & Middle East - Central America/Caribbean	79.21%	84.41%
5	Africa & Middle East - South America	60.20%	84.41%
6	Central America/Caribbean - Europe	83.00%	86.96%
7	Central America/Caribbean - North America	81.05%	92.96%
8	Central America/Caribbean - South America	77.10%	89.68%
9	Central Asia - Europe	82.08%	63.49%
10	Central Asia - Middle East	76.40%	81.26%
11	Central Asia - North America	82.85%	62.28%
12	Central Asia & South West Asia - North Asia	73.50%	79.99%
13	Central Asia & South West Asia - Pacific South East Asia	76.69%	80.65%
14	Europe - Middle East	74.38%	77.17%
15	Europe - North Africa	75.08%	82.16%
16	Europe - North America	82.16%	79.63%
17	Europe - North Asia	80.50%	63.49%
18	Europe - Pacific South East Asia	79.50%	63.49%
19	Europe - South America	82.20%	77.10%
20	Europe - South West Asia	81.10%	63.49%
21	Europe - Sub Saharan Africa	76.00%	82.16%
22	Intra Africa	60.35%	84.41%
23	Intra Central America/Caribbean	66.92%	94.90%
24	Intra Central Asia & South West Asia	75.60%	79.99%
25	Intra Europe	80.89%	96.23%
26	Intra Middle East	71.13%	84.41%
27	Intra North America	81.78%	93.34%
28	Intra North Asia	76.50%	79.99%
29	Intra Pacific South East Asia	76.05%	79.99%

30	Intra South America	77.40%	82.64%
31	Latin America/Caribbean - Central Asia	76.10%	84.41%
32	Latin America/Caribbean - North Asia & Pacific South East Asia	72.50%	84.63%
33	Middle East - North America	77.91%	79.56%
34	Middle East - North Asia & Pacific South East Asia	77.50%	81.26%
35	Middle East - South West Asia	77.90%	81.26%
36	North America - North Asia	80.44%	66.34%
37	North America - Pacific South East Asia	77.50%	84.44%
38	North America - South America	79.66%	77.50%
39	North America - South West Asia	80.61%	62.28%
40	North Asia - Pacific South East Asia	77.58%	79.99%

Appendix B: Equivalent Aircraft Mapping (based on aircraft currently in-service)

Aircraft	Equivalent
100	100
141	141
142	142
143	143
146	146
310	310
312	312
313	313
318	318
319	319
320	320
321	321
330	330
332	332
333	333
340	340
342	342
343	343
345	345
346	346
350	788
359	788
380	380
388	388
703	703
707	707
717	717
721	721
722	722
727	727
731	731
732	732
733	733
734	734
735	735
736	736
737	737
738	738
739	739

Aircraft	Equivalent
741	741
742	742
743	743
744	744
747	747
752	752
753	753
757	757
762	762
763	763
764	764
767	767
772	772
773	773
777	777
787	788
788	788
789	788
14F	14F
31F	31F
31X	310
31Y	31Y
32A	32A
32B	321
32S	32S
33F	33F
33X	33X
70F	70F
70M	70M
72A	72A
72B	721
72F	72F
72M	72M
72S	72S
73A	73A
73C	73C
73E	73E
73F	73F
73G	73G

Aircraft	Equivalent
73H	73H
73J	73J
73L	73L
73M	73M
73N	73N
73P	73P
73Q	73Q
73R	73R
73S	73S
73W	73W
73X	73X
73Y	73Y
74C	74C
74D	74D
74E	74E
74F	74F
74H	74H
74J	74J
74L	74L
74M	74M
74N	74N
74R	74R
74T	74T
74U	743
74X	74X
74Y	74Y
75F	75F
75M	75M
75T	75T
75W	75W
76F	76F
76W	76W
76X	76X
76Y	76Y
77F	77F
77L	77L
77W	77W
77X	77X
A22	A22

Aircraft	Equivalent
A26	SF3
A28	A28
A30	A30
A32	F50
A38	A38
A40	A40
A4F	A4F
A58	F28
A5F	A5F
A81	A81
AB3	AB3
AB4	AB4
AB6	AB6
ABB	ABB
ABF	ABF
ABX	ABX
ABY	ABY
ACD	ACD
ACP	ACP
ACT	ACT
AGH	AGH
AN2	AN2
AN4	AN4
AN6	AN6
AN7	AN7
ANF	ANF
APH	APH
AR1	AR1
AR7	AR7
AR8	AR8
ARJ	ARJ
AT3	AT3
AT4	AT4
AT5	AT5
AT7	AT7
ATF	ATF
ATP	ATP
ATR	ATR
B11	B11

Aircraft	Equivalent
B12	B12
B13	B13
B14	B14
B15	B15
B72	B72
BE1	BE1
BE2	BE2
BE4	NDC
BE9	BE9
BEC	BEC
BEH	BEH
BEP	BEP
BES	BES
BET	BET
BH2	BH2
BNi	BNi
BNT	BNT
CCJ	CCJ
CD2	CD2
CL4	CL4
CN1	CN1
CN2	MU2
CNA	CNA
CNC	CNC
CNF	CNF
CNJ	CNJ
CNT	CNT
CR1	CR1
CR2	CR2
CR7	CR7
CR9	CR9
CRA	CRA
CRF	CRF
CRJ	CRJ
CRK	CRK
CRV	CRV
CRX	CRX
CS2	CS2
CS5	CS5

Aircraft	Equivalent
CV2	CV2
CV3	CV3
CV4	CV4
CV5	CV5
CV6	CV6
CV8	CV8
CV9	CV9
CVF	CVF
CVR	CVR
CWC	CWC
D10	D10
D11	D11
D14	D14
D1C	D1C
D1F	D1F
D1Y	D1Y
D28	D28
D38	D38
D3F	D3F
D6F	D6F
D81	D81
D82	D82
D83	D83
D84	D84
D85	D85
D86	D86
D87	D87
D8F	D8F
D8T	D8T
D8X	D8X
D8Y	D8Y
D91	D91
D92	D92
D93	D93
D94	D94
D95	D95
D9F	D9F
D9S	D9S
DC3	DC3

Aircraft	Equivalent
DC4	DC4
DC6	DC6
DC7	DC7
DC8	DC8
DC9	DC9
DF2	DF2
DF3	DF3
DFL	DFL
DH1	DH1
DH2	DH2
DH3	DH3
DH4	DH4
DH7	DH7
DH8	DH8
DHB	DHB
DHC	DHC
DHD	DHD
DHL	DHL
DHO	DHO
DHP	DHP
DHR	DHR
DHS	DHS
DHT	DHT
DV5	DV5
E2F	E2F
E70	E70
E75	E75
E7W	E75
E90	E90
E95	E95
EC3	S76
EM1	EM1
EM2	EM2
EMB	EMB
EMJ	EMJ
EP1	NDC
ER3	ER3
ER4	ER4
ERD	ERD

Aircraft	Equivalent
ERJ	ERJ
F21	F21
F22	F22
F23	F23
F24	F24
F27	F27
F28	F28
F50	F50
F70	F70
FK7	FK7
FRJ	FRJ
GRG	GRG
GRJ	GRJ
GRM	GRM
GRS	GRS
H25	H25
HEC	HEC
HS7	HS7
I14	I14
IL6	IL6
IL7	IL7
IL8	IL8
IL9	IL9
ILW	ILW
J31	J31
J32	J32
J41	J41
JST	JST
L10	L10
L11	L11
L12	L12
L15	L15
L1F	L1F
L49	L49
L4T	L4T
LOE	LOE
LOF	LOF
LOH	LOH
LOM	LOM

Aircraft	Equivalent
LRJ	LRJ
M11	M11
M1F	M1F
M1M	M1M
M80	M80
M81	M81
M82	M82
M83	M83
M87	M87
M88	M88
M90	M90
M95	M95
MA6	MA6
MBH	MBH
MD9	MD9
MIH	MIH
MU2	MU2
ND2	ND2
NDC	NDC
NDE	NDE
NDH	NDH
PA1	PA1
PA2	PA2
PAG	PAG
PAT	PAT
PL2	PL2
PL6	PL6
PN6	PN6
S20	S20
S58	S58
S61	S61
S76	S76
SF3	SF3
SFB	SFB
SFF	SFF
SH3	SH3
SH6	SH6
SHB	SHB
SHS	SHS

Aircraft	Equivalent
SSC	SSC
SU9	SU9
SWM	SWM
T20	T20
T2F	T2F
TU3	TU3
TU5	TU5
VCV	VCV
WWP	WWP
YK2	YK2
YK4	YK4
YN2	YN2
YN7	YN7
YS1	YS1

Appendix C: ICAO Fuel Consumption Table

Equivalent Aircraft Code	Flight Distance (nm) / Fuel Consumption (kg)																			
	125	250	500	750	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500
100	1296	2703	3788	5129	6427	8937	11373	13757	16104											
141	1289	2754	3874	5258	6600	9199														
142	1289	2754	3874	5258	6600	9199	11725													
143	1324	2874	4105	5621	7100	9986														
146	1289	2754	3874	5258	6600	9199	11725													
310	2628	5537	7790	10759	13658	19323	24876	30356	35784	41172	46530	51862	57175							
313	2628	5537	7790	10759	13658	19323	24876	30356	35784	41172	46530	51862	57175							
318	1488	3016	3925	5234	6482	8931	11335	13729	16130											
319	1596	3259	4323	5830	7271	10026	12668	15233	17741	20203										
320	1672	3430	4585	6212	7772	10766	13648	16452												
321	1909	3925	5270	7157	8970	12456	15818	19094	22308											
330	3497	7277	9980	13579	17055	23769	30276	36642	42903	49082	54788	59831	64719	69463	74074	78560	82928			
332	3395	6964	9550	12994	16321	22747	28973	35065	41057	46970	52422	57231	61889	66406	70793	75058	79207			
333	3497	7277	9980	13579	17055	23769	30276	36642	42903	49082	54788	59831	64719	69463						
340	4205	8452	11054	14688	18192	24999	31691	38363	45066	51831	58678	65621	72666	79169	85687	89019	91982	94586	96840	98752
342	3972	7985	10445	13882	17198	23642	29984	36312	42673	49097	55603	62203	68908	75453	80921	84023	86770	89174		
343	4205	8452	11054	14688	18192	24999	31691	38363	45066	51831	58678	65621	72666	79169	85687	89019	91982			
345	4456	9441	13137	18027	22779	32019	41031	49891	58640	67304	75900	84439	92931	101383	109799	117578	124601	131512	138319	145026
346	4778	10030	14053	19362	24537	34630	44505	54236	63863	73412	82899	92334	101727	111211	119071	126796	134395	141877		
380	5851	12016	17623	24940	32211	46695	61160	75638	90143	104681	119255	133865	148512	163196	177916	192517	203465	214166	224632	
388	5851	12016	17623	24940	32211	46695	61160	75638	90143	104681	119255	133865	148512	163196	177916	192517	203465	214166	224632	
717	1513	3121	4235	5628	6989	9646	12209													
727	2870	5891	7884	10688	13379	18544	23517	28361	33106											
731	1695	3439	4515	6053	7517	10304	12964	15537	18047	20504	22920									
732	1778	3708	4962	6727	8421	11672	14802	17850	20838	23777	26676									
733	1616	3323	4462	6061	7597	10551	13400	16176	18900	21582	24229									
734	1685	3482	4707	6419	8069	11250	14328	17335	20289	23203	26084									
735	1539	3153	4207	5694	7119	9850	12477	15033	17535	19995	22421									
736	1525	3074	3995	5324	6584	8971	11239	13426	15553	17631	19670									
737	1695	3439	4515	6053	7517	10304	12964	15537	18047	20504	22920									
738	1715	3494	4621	6221	7749	10666	13460	16170	18818	21415	23972									
739	1782	3641	4839	6533	8154	11255	14233	17125	19954	22733	25471									
744	4719	9690	14212	20113	25977	37657	49323	60999	72696	84420	96173	107956	119768	131607	140292	148734	156946	164938		
747	4719	9690	14212	20113	25977	37657	49323	60999	72696	84420	96173	107956	119768	131607	140292	148734	156946	164938		
752	2159	4435	5939	8054	10085	13984	17740	21398	24983	28159										
753	2331	4825	6525	8899	11188	15602	19872	24044	28145	31754										
757	2159	4435	5939	8054	10085	13984	17740	21398	24983	28159										
762	2685	5457	7625	10488	13276	18707	24013	29237	34402	39522	44605	49659	54687	59395	62791	66006				
763	2900	5799	7971	10965	13879	19557	25104	30566	35966	41318	46632	51915	57172	62106	65700	69112				
764	2963	6129	8564	11780	14911	21011	26971	32839	38641	44391	50100	55777	60999	65000						
767	2900	5799	7971	10965	13879	19557	25104	30566	35966	41318	46632	51915	57172	62106	65700	69112				
772	3691	7819	10880	14930	18866	26518	33982	41320	48566	55742	62861	69933	76966	83966	90378	96168	101853	107440		
773	4084	8572	12011	16549	20972	29598	38038	46355	54584	62745	70853	78747	85475	92061	98519	104857	111085	117210	123237	
777	3691	7819	10880	14930	18866	26518	33982	41320	48566	55742	62861	69933	76966	83966	90378	96168	101853	107440	112934	118340
787	2638	5517	7708	10603	13421	18911	24276	29557	34779	39954	45093	50202	55286	60348	65392	70419	75433	78744	81828	
788	2638	5517	7708	10603	13421	18911	24276	29557	34779	39954	45093	50202	55286	60348	65392	70419	75433	81221	84439	
14F	1289	2754	3874	5258	6600	9199	11725													
31F	2766	5828	8200	11325	14377	20340	26185	31954	37667	43339										

Equivalent Aircraft Code	Flight Distance (nm) / Fuel Consumption (kg)																			
	125	250	500	750	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500
31Y	2628	5537	7790	10759	13658	19323	24876	30356	35784	41172										
32A	1672	3430	4585	6212	7772	10766	13648	16452												
32S	1672	3430	4585	6212	7772	10766	13648	16452	19200	21902										
33F	3395	6964	9550	12994	16321	22747	28973	35065	41057	46970										
33X	3395	6964	9550	12994	16321	22747	28973	35065	41057	46970										
72F	2870	5891	7884	10688	13379	18544	23517	28361	33106											
73C	1600	3273	4355	5884	7348	10151	12843	15460	18019	20534	23013									
73E	1529	3115	4117	5541	6901	9496	11981	14390	16744	19052	21325									
73F	1778	3708	4962	6727	8421	11672	14802	17850	20838	23777	26676									
73G	1586	3202	4173	5570	6895	9410	11804	14113	16360	18558	20715									
73H	1695	3439	4515	6053	7517	10304	12964	15537	18047	20504	22920									
73J	1761	3581	4724	6351	7903	10862	13694	16438	19117	21743	24328									
73L	1778	3708	4962	6727	8421	11672	14802	17850												
73M	1778	3708	4962	6727	8421	11672	14802	17850												
73N	1616	3323	4462	6061	7597	10551	13400	16176	18900	21582	24229									
73P	1770	3656	4942	6740	8472	11813	15044	18201	21304											
73Q	1770	3656	4942	6740	8472	11813	15044	18201	21304	24363	27388									
73R	1586	3202	4173	5570	6895	9410	11804	14113	16360	18558	20715									
73W	1567	3149	4074	5415	6684	9082	11357	13547	15674	17750	19786									
73X	1778	3708	4962	6727	8421	11672	14802	17850												
73Y	1696	3470	4617	6238	7789	10760	13614	16387	19100	21767	24394									
74E	4719	9690	14212	20113	25977	37657	49323	60999	72696	84420	96173	107956	119768	131607	140292	148734	156946	164938		
74F	5508	11311	16590	23478	30323	43957	57575	71204	84859	98545	112264	126017	139806	153629	167486	181377	195300	209254		
74H	4416	8983	13175	18645	24081	34908	45722	56546	67389	78258	89153	100075	111025	122002	133007	142263	150070	157662		
74L	4502	9243	13557	19185	24778	35919	47046	58183	69341	80524	91734	102973	114240	125535	136859	148209	159586	170989		
74N	4416	8983	13175	18645	24081	34908	45722	56546	67389	78258	89153	100075	111025	122002	133007	142263	150070	157662		
74Y	4719	9690	14212	20113	25977	37657	49323	60999	72696	84420	96173	107956	119768	131607	140292	148734	156946	164938		
75F	2302	4729	6332	8588	10753	14911	18916	22816	26639	30098										
75T	2318	4758	6363	8623	10791	14951	18955	22854	26673	30139										
75W	2147	4394	5824	7850	9787	13489	17038	20483	23849	26780										
76F	3124	6249	8608	11841	14988	21119	27110	33008	38839	44619	50357	56063	61319	65346	69177	72823				
76W	2900	5799	7854	10721	13497	18872	24093	29211	34253	39235	44169	49063	53924	58626	61965	65125				
76Y	3124	6249	8608	11841	14988	21119	27110	33008	38839	44619	50357	56063	61319	65346	69177	72823				
77F	3875	8210	11423	15675	19807	27842	35679	43383	50991	58525	65999	73425	80809	88158	94732	100815	106791	112665	118444	124133
77L	3809	8069	11228	15408	19469	27367	35069	42642	50120	57525	64872	72171	79429	86653	93846	100496	106451	112306	118066	123735
77W	4129	8667	12143	16731	21202	29924	38457	46865	55184	63436	71633	79786	87903	96089	102838	109465	115978	122384		
77X	3875	8210	11423	15675	19807	27842	35679	43383	50991	58525	65999	73425	80809	88158	94732	100815	106791	112665	118444	124133
A40	556	1111	1670	2257	2812	3861	4857													
A81	1235	2469	3251	4244	5183	6949	8617													
AB3	3427	7221	10159	14032	17812	25200	32442	39589	46667	53694	60682	67636								
AB4	3427	7221	10159	14032	17812	25200	32442	39589	46667	53694	60682	67636								
AB6	3119	6571	9245	12769	16209	22932	29522	36026	42467	48862	55220	61549								
ABF	3427	7221	10159	14032	17812	25200	32442													
ABX	3427	7221	10159	14032	17812	25200	32442	39589												
ABY	3119	6571	9245	12769	16209	22932	29522	36026												
AGH	123	247	360	478	590	799														
AN4	735	1337	1910	2536																
AN6	945	1639	2276	2991	3674	4971														
ANF	2145	3923	5620	7472	9231	12568	15742	18800	21773											
AR1	1324	2874	4105	5621	7100	9986														

Equivalent Aircraft Code	Flight Distance (nm) / Fuel Consumption (kg)																			
	125	250	500	750	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500
AR8	1289	2754	3874	5258	6600	9199	11725													
ARJ	1289	2754	3874	5258	6600	9199	11725													
AT4	360	723	1093	1486	1863	2588														
AT5	426	878	1397	1993	2612	3942														
AT7	434	891	1409	1996	2603	3891	5293													
ATP	499	998	1500	2027	2525	3467	4360													
ATR	413	843	1317	1849	2389	3516	4718													
BE1	309	617	928	1254	1562	2145														
BE2	82	164	264	354	438	597														
BE9	210	420	631	853																
BEC	40	79	119	161																
BEH	309	617	928	1254	1562	2145														
BES	278	556	835	1129	1406	1931														
BET	210	420	631	853	1062	1459														
BH2	93	185	270	359	442	599														
BNI	71	142	229	307																
BNT	106	213	344	460	570	777	973	1161												
CN1	27	54	88	117																
CNA	27	54	87	116																
CNC	110	220	330	446																
CNF	138	277	447	598																
CNJ	425	849	1118	1460	1783	2390	2964	3514	4047											
CNT	65	131	197	266	331	455														
CR1	794	1594	2116	2786	3430	4674														
CR2	781	1569	2084	2743	3378	4605														
CR7	1043	2092	2772	3642	4475	6076														
CR9	1119	2251	2994	3949	4872	6664														
CRA	1043	2092	2772	3642	4475	6076														
CRF	781	1569	2084	2743	3378	4605														
CRJ	898	1804	2395	3153	3882	5289														
CRK	1177	2366	3145	4146	5110	6981														
CS2	244	488	733	991	1234	1695														
CV5	765	1531	2301	3110	3875	5320														
CVF	706	1412	2123	2869	3575	4908														
CWC	426	852	1377	1842	2280	3107														
D1F	4773	9701	13555	18646	23601	33256	42690	51978	61160	70261	79298	88282	97222	106124	114994	123835	132651	141445		
D28	203	407	612	826																
D38	413	825	1240	1676																
D6F	860	1720	2780	3718	4603	6273	7855	9375	10850	12289	13698	15082								
D93	1773	3640	4871	6604	8267	11458	14531	17524												
D9F	1773	3640	4871	6604	8267	11458	14531	17524												
DC3	235	469	758	1014	1256	1711														
DC9	1773	3640	4871	6604	8267	11458	14531	17524												
DH1	406	811	1219	1648																
DH2	440	880	1323	1788	2228															
DH3	535	1069	1607	2172																
DH4	689	1383	2093	2847	3570															
DH7	540	1080	1624	2195	2734															
DH8	517	1034	1554	2100	2616															
DHC	247	494	798	1068	1322	1801														

Equivalent Aircraft Code	Flight Distance (nm) / Fuel Consumption (kg)																			
	125	250	500	750	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500
DHL	110	220	355	475																
DHP	49	99	160	214																
DHT	208	416	625	845																
E70	1075	2160	2868	3777	4651	6341														
E75	1113	2240	2989	3953	4890	6725														
E90	1338	2688	3567	4695	5778	7871	9913													
E95	1362	2747	3677	4881	6057	8383	10718													
EM2	315	625	926	1233	1514	2015														
EMB	194	389	585	790	984	1351														
EMJ	1249	2510	3338	4401	5427	7417	9372													
ER3	729	1505	2046	2722	3368	4601														
ER4	799	1633	2196	2903	3576	4855	6073													
ERD	744	1536	2088	2778	3437	4696	5901													
ERJ	787	1611	2172	2875	3545	4819	6034													
F28	1543	3087	4064	5306	6478															
F50	494	988	1485	2007	2500	3432														
F70	1238	2574	3607	4884	6121	8512	10831													
FRJ	673	1346	1772	2313																
I14	679	1358	2041	2759	3437	4719	5936	7107												
IL7	9161	15535	18463	23623	28639	38204	47286	56016	64475	72717										
IL9	5301	10656	13934	18514	22927	31499	39923	48320	56752	65260	73867	82593	89482	94787						
J31	213	426	640	865	1078	1480														
J32	227	454	683	923	1150	1579														
J41	314	627	943	1274	1587	2179														
L4T	247	494	742	1003																
LOH	1537	3074	4621	6245	7781	10683	13437	16089	18664	21179	23645									
M11	4773	9546	12908	17630	22203	31065	39677	48121	56441	64666	72813	80895	88923	96903	104843	112745	120615			
M1F	4773	9546	12908	17630	22203	31065	39677	48121	56441	64666	72813	80895	88923	96903	104843	112745	120615			
M80	1985	4001	5467	7503	9473	13291	17002	20641	24227	27772										
M82	1985	4001	5467	7503	9473	13291	17002	20641	24227	27772										
M83	1985	4001	5467	7503	9473	13291	17002	20641	24227	27772										
M87	1825	3679	5027	6898	8710	12220	15632	18977	22275	25534										
M88	1985	4001	5467	7503	9473	13291	17002	20641	24227	27772										
M90	1672	3430	4585	6212	7772	10766	13648													
MA6	549	1099	1447	1889																
NDE	105	210	306	407	501	679														
PA1	44	89	144	192																
PA2	86	173	260	351	437	601														
PAG	44	89	144	192	238	324														
PAT	44	89	134	181	225	309														
PL2	164	327	492	665	828	1137														
S20	695	1368	1991	2602	3132	3998														
S76	217	435																		
SF3	378	714	948	1112	1174															
SFB	378	714	948	1112	1174	1031														
SH6	314	627	943	1274																
SU9	1543	3087	4064	5306	6478	8686														
SWM	219	438	659	890	1109	1523														
T20	4472	8257	10158	13245	16176	21720	26973	32023	36919	41694										
TU3	3006	5013	5941	7470	8946															

Equivalent Aircraft Code	Flight Distance (nm) / Fuel Consumption (kg)																			
	125	250	500	750	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500
TU5	4472	8257	10158	13245	16176	21720	26973	32023	36919	41694										
YK2	2948	5261	6004	7613	9163	12121	14937													
YK4	630	1259	1658	2165																
YN2	208	416	625	845	1053	1446														
YN7	549	1099	1652	2232	2781															
312	2766	5828	8200	11325	14377	20340	26185	31954	37667	43339	48979									
32F	1672	3430	4585	6212	7772	10766	13648	16452												
703	4281	8557	10973	14500	17820	24049	29906	35501	40894	46122	51212	56181	61044							
707	4281	8557	10973	14500	17820	24049	29906	35501	40894	46122	51212	56181	61044							
70F	4281	8557	10973	14500	17820	24049	29906	35501	40894	46122	51212	56181	61044							
70M	4281	8557	10973	14500	17820	24049	29906	35501	40894	46122	51212	56181	61044							
721	2550	5100	6548	8663	10659	14418	17973	21386	24693											
722	2870	5891	7884	10688	13379	18544	23517	28361	33106											
72A	2870	5891	7884	10688	13379	18544	23517	28361	33106											
72M	2870	5891	7884	10688	13379	18544	23517	28361	33106											
72S	2870	5891	7884	10688	13379	18544	23517	28361	33106											
73A	1778	3708	4962	6727	8421	11672	14802	17850	20838	23777	26676									
73S	1778	3708	4962	6727	8421	11672	14802	17850	20838	23777	26676									
741	5605	11509	16880	23888	30853	44725	58580	72448	86341	100265	114224	128218	142247	156312	170411	184544	198710	212909		
742	5508	11311	16590	23478	30323	43957	57575	71204	84859	98545	112264	126017	139806	153629	167486	181377	195300	209254		
743	5273	10827	15880	22473	29024	42074	55108	68154	81224	94323	107455	120620	133818	147049	160312	173608	186934	200291		
74C	5508	11311	16590	23478	30323	43957	57575	71204	84859	98545	112264	126017	139806	153629	167486	181377	195300	209254		
74D	5273	10827	15880	22473	29024	42074	55108	68154	81224	94323	107455	120620	133818	147049	160312	173608	186934	200291		
74J	4719	9690	14212	20113	25977	37657	49323	60999	72696	84420	96173	107956	119768	131607	140292	148734	156946	164938		
74M	4719	9690	14212	20113	25977	37657	49323	60999	72696	84420	96173	107956	119768	131607	140292	148734	156946	164938		
74R	5605	11509	16880	23888	30853	44725	58580	72448	86341	100265	114224	128218	142247	156312	170411	184544	198710	212909		
74T	5605	11509	16880	23888	30853	44725	58580	72448	86341	100265	114224	128218	142247	156312	170411	184544	198710	212909		
74X	5508	11311	16590	23478	30323	43957	57575	71204	84859	98545	112264	126017	139806	153629	167486	181377	195300	209254		
75M	2302	4729	6332	8588	10753	14911	18916	22816	26639	30098										
76X	2865	5893	8235	11327	14338	20203	25934	31576	37155	42684	48173	53631	58640	62452	66072	69508				
A28	278	556	835	1129	1406	1931														
A4F	12347	24693	31970	42058	51578	69507	86445	102700	118444	133782										
ACD	64	127	167	219	267	358														
AN7	1235	2469	3251	4244	5183	6949	8617	10216												
AR7	1243	2657	3739	5074	6369	8877	11315													
AT3	360	723	1093	1486	1863	2588														
ATF	434	891	1409	1996	2603	3891	5293													
B11	1790	3597	4677	6266	7806	10821	13814													
B12	1790	3597	4677	6266	7806	10821	13814													
B13	1790	3597	4677	6266	7806	10821	13814													
B14	1790	3597	4677	6266	7806	10821	13814													
B15	1790	3597	4677	6266	7806	10821	13814													
CCJ	803	1605	2113	2759	3369	4517	5601	6640	7647	8627										
CD2	213	426	640																	
CL4	2001	4003	6017	8132	10131	13909	17495	20948	24301	27576	30786	33941								
CS5	370	741	1114	1505	1875	2574	3238													
CVR	765	1531	2301	3110	3875	5320														
D10	4773	9701	13555	18646	23601	33256	42690	51978	61160	70261	79298	88282	97222	106124	114994	123835	132651	141445		
D11	4534	9216	12877	17713	22421	31593	40555	49379	58102	66748	75333	83868	92361	100818	109244	117643	126019	134372		
D1C	4773	9701	13555	18646	23601	33256	42690	51978	61160	70261	79298	88282	97222	106124	114994	123835	132651	141445		

Equivalent Aircraft Code	Flight Distance (nm) / Fuel Consumption (kg)																			
	125	250	500	750	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500
D1Y	4773	9701	13555	18646	23601	33256	42690	51978	61160	70261	79298	88282	97222	106124	114994	123835	132651	141445		
D3F	235	469	758	1014	1256	1711														
D8F	3986	7971	10233	13539	16657	22533	28088	33422	38590	43628	48558	53397	58158	62851						
D8X	3986	7971	10233	13539	16657	22533	28088	33422	38590	43628	48558	53397	58158	62851						
D8Y	3710	7420	9526	12603	15507	20977	26148	31113	35924	40614	45203	49708	54140	58509						
D91	1638	3364	4501	6102	7639	10588	13427	16193												
D92	1659	3405	4556	6177	7732	10717	13591	16390												
D94	1904	3908	5230	7090	8875	12301	15600	18813												
D95	1965	4034	5399	7319	9162	12699	16106	19422												
D9S	1773	3640	4871	6604	8267	11458	14531	17524												
DC6	835	1671	2700	3611	4471	6093	7629	9106	10538	11936	13305	14649								
DC8	3986	7971	10233	13539	16657	22533	28088	33422	38590	43628	48558	53397	58158	62851						
DF2	586	1173	1544	2016	2462	3301	4093	4853	5588											
DFL	586	1173	1544	2016	2462	3301	4093	4853	5588	6304	7004	7691	8367							
DHB	69	137	222	296																
DHO	80	161	259	347																
DHS	80	161	259	347																
F21	1543	3087	4640	6271	7812															
F22	1543	3087	4640	6271	7812															
F23	1543	3087	4640	6271	7812															
F24	1543	3087	4640	6271	7812															
F27	596	1191	1791	2420	3015	4140	5207													
FK7	596	1191	1791	2420	3015															
GRG	99	198	319	427	529	721														
GRM	154	309	499	667	826	1126														
GRS	556	1111	1670	2257	2812	3861	4857													
HEC	32	64	104	139																
HS7	567	1133	1704	2303	2869	3939														
IL6	9910	12650	13939	17878	21753	29192	36537	44075	51582	59098	66647	74246	81909							
IL8	1574	3148	4732	6396	7968	10940	13760	16476	19114	21690										
ILW	9188	17253	20999	27039	32800	43717	54068	64020	73669	83075	92282									
JST	251	503	755	1021	1272	1746														
L10	4654	9742	13612	18725	23702	33397	42871	52198	61420	70560	79635	88657	97635	106575	115483					
L11	4654	9742	13612	18725	23702	33397	42871	52198	61420	70560	79635									
L12	4654	9742	13612	18725	23702	33397	42871	52198	61420	70560	79635	88657								
L15	5038	10133	13264	17640	21867	30100	38219	46338	54517	62791	71185	79714	88391	97224	106219					
L1F	4654	9742	13612	18725	23702	33397	42871	52198	61420	70560	79635	88657	97635	106575	115483					
L49	1482	2963	4789	6405	7931	10808	13533	16152	18693	21172										
LOE	1790	3579	5380	7271	9059	12438	15644	18731	21730											
LOF	1790	3579	5380	7271	9059	12438	15644	18731	21730											
LOM	1790	3579	5380	7271	9059	12438	15644	18731	21730											
LRJ	420	840	1105	1443	1762	2363														
M1M	4773	9546	12908	17630	22203	31065	39677	48121	56441	64666	72813	80895	88923	96903	104843	112745	120615			
M81	1985	4001	5467	7503	9473	13291	17002	20641	24227	27772										
MBH	128	257	375	497	613	831														
MD9	161	322																		
MIH	554	1107	1617	2145	2644	3584														
MU2	185	370	599	801	991	1351														
ND2	233	467	702	948	1181	1622														
NDC	290	580	764	997	1218															

Equivalent Aircraft Code	Flight Distance (nm) / Fuel Consumption (kg)																			
	125	250	500	750	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500
NDH	204	407	595	789	973	1319														
PL6	91	183	275	371																
PN6	46	93	150	200	248	338														
S58	269	537	784	1040																
S61	395	790																		
SFF	378	714	948	1112	1174	1031														
SH3	293	586	882	1191																
SHB	2222	4445	6681	9030	11249	15445	19427	23261	26985	30621	34185	37689	41141	44546						
SHS	154	309	464	627																
SSC	23103	46206	59318	78480	96559	130620	162820	193740	223700	252901										
T2F	4472	8257	10158	13245	16176	21720	26973	32023	36919	41694										
VCV	1729	3457	5196	7023	8749	12013	15110	18092	20988	23816	26589	29314	31998							
WWP	449	898	1182	1543	1884	2526														
YS1	544	1089	1637	2212	2756															

Appendix D: Airport codes mapped to City codes

Airport Code	City Code	Airport Code	City Code	Airport Code	City Code	Airport Code	City Code
AAA	AAA	AFZ	AFZ	ANI	ANI	AUA	AUA
AAE	AAE	AGA	AGA	ANM	ANM	AUC	AUC
AAL	AAL	AGB	MUC	ANR	ANR	AUH	AUH
AAN	AAN	AGF	AGF	ANS	ANS	AUQ	AUQ
AAQ	AAQ	AGH	AGH	ANU	ANU	AUR	AUR
AAR	AAR	AGP	AGP	ANV	ANV	AUS	AUS
AAT	AAT	AGR	AGR	ANX	ANX	AUX	AUX
AAX	AAX	AGS	AGS	AOE	ESK	AUY	AUY
ABA	ABA	AGT	AGT	AOG	AOG	AVA	AVA
ABB	ABB	AGU	AGU	AOI	AOI	AVL	AVL
ABD	ABD	AGX	AGX	AOJ	AOJ	AVN	AVN
ABE	ABE	AHB	AHB	AOK	AOK	AVP	AVP
ABI	ABI	AHE	AHE	AOR	AOR	AVV	AVV
ABJ	ABJ	AHO	AHO	AOU	AOU	AWD	AWD
ABL	ABL	AHU	AHU	APC	APC	AWZ	AWZ
ABQ	ABQ	AIA	AIA	APK	APK	AXA	AXA
ABR	ABR	AIN	AIN	APL	APL	AXD	AXD
ABS	ABS	AIT	AIT	APN	APN	AXF	AXF
ABT	ABT	AIU	AIU	APO	APO	AXM	AXM
ABU	ABU	AJA	AJA	APW	APW	AXP	AXP
ABV	ABV	AJF	AJF	AQG	AQG	AXR	AXR
ABX	ABX	AJI	AJI	AQI	AQI	AXT	AXT
ABY	ABY	AJK	AJK	AQJ	AQJ	AXU	AXU
ABZ	ABZ	AJL	AJL	AQP	AQP	AYP	AYP
ACA	ACA	AJN	AJN	ARA	ARA	AYQ	AYQ
ACC	ACC	AJR	AJR	ARC	ARC	AYT	AYT
ACE	ACE	AJU	AJU	ARD	ARD	AZD	AZD
ACH	ACH	AJY	AJY	ARH	ARH	AZN	AZN
ACK	ACK	AKF	AKF	ARI	ARI	AZO	AZO
ACR	ACR	AKJ	AKJ	ARK	ARK	AZR	AZR
ACT	ACT	AKL	AKL	ARM	ARM	AZS	AZS
ACV	ACV	AKN	AKN	ARN	STO	BAH	BAH
ACX	ACX	AKP	AKP	ART	ART	BAL	BAL
ACY	AIY	AKU	AKU	ARU	ARU	BAQ	BAQ
ACZ	ACZ	AKV	AKV	ARW	ARW	BAS	BAS
ADA	ADA	AKX	AKX	ASB	ASB	BAV	BAV
ADB	IZM	AKY	AKY	ASE	ASE	BAX	BAX
ADD	ADD	ALA	ALA	ASF	ASF	BAY	BAY
ADE	ADE	ALB	ALB	ASJ	ASJ	BBA	BBA
ADF	ADF	ALC	ALC	ASM	ASM	BBI	BBI
ADH	ADH	ALF	ALF	ASO	ASO	BBK	BBK
ADJ	AMM	ALG	ALG	ASP	ASP	BBN	BBN
ADK	ADK	ALH	ALH	ASR	ASR	BBO	BBO
ADL	ADL	ALO	ALO	ASU	ASU	BCD	BCD
ADQ	ADQ	ALS	ALS	ASV	ASV	BCI	BCI
ADU	ADU	ALW	ALW	ASW	ASW	BCM	BCM
ADV	ADV	AMA	AMA	ATA	ATA	BCN	BCN
ADZ	ADZ	AMD	AMD	ATC	ATC	BCV	BCV
AEB	AEB	AMH	AMH	ATH	ATH	BDA	BDA
AEP	BUE	AMM	AMM	ATK	ATK	BDB	BDB
AER	AER	AMQ	AMQ	ATL	ATL	BDH	BDH
AES	AES	AMS	AMS	ATM	ATM	BDJ	BDJ
AET	AET	AMV	AMV	ATQ	ATQ	BDL	HFD
AEY	AEY	ANC	ANC	ATW	ATW	BDO	BDO
AFA	AFA	ANE	ANE	ATY	ATY	BDP	BDP
AFL	AFL	ANF	ANF	ATZ	ATZ	BDQ	BDQ

Airport Code	City Code
BDS	BDS
BDU	BDU
BEB	BEB
BEG	BEG
BEJ	BEJ
BEL	BEL
BEM	BEM
BEN	BEN
BES	BES
BET	BET
BEW	BEW
BEY	BEY
BFC	BFC
BFF	BFF
BFI	SEA
BFJ	BFJ
BFL	BFL
BFN	BFN
BFS	BFS
BFV	BFV
BGA	BGA
BGF	BGF
BGG	BGG
BGI	BGI
BGM	BGM
BGN	BGN
BGO	BGO
BGR	BGR
BGW	BGW
BGY	MIL
BHB	BHB
BHD	BFS
BHE	BHE
BHH	BHH
BHI	BHI
BHJ	BHJ
BHK	BHK
BHM	BHM
BHO	BHO
BHQ	BHQ
BHR	BHR
BHS	BHS
BHU	BHU
BHV	BHV
BHX	BHX
BHY	BHY
BIA	BIA
BIF	BIF
BIK	BIK
BIL	BIL
BIM	BIM
BIN	BIN
BIO	BIO
BIQ	BIQ
BIR	BIR
BIS	BIS
BJA	BJA
BJB	BJB
BJF	BJF
BJI	BJI
BJL	BJL
BJM	BJM
BJR	BJR
BJT	BJT
BJV	BJV
BJW	BJW
BJX	BJX
BJZ	BJZ
BKC	BKC
BKG	BKG
BKI	BKI
BKK	BKK
BKM	BKM
BKO	BKO
BKQ	BKQ
BKS	BKS
BKW	BKW
BKY	BKY
BKZ	BKZ
BLA	BLA
BLE	BLE
BLI	BLI
BLJ	BLJ
BLL	BLL
BLQ	BLQ
BLR	BLR
BLV	BLV
BLZ	BLZ
BMA	STO
BMB	BMB
BME	BME
BMG	BMG
BMI	BMI
BMO	BMO
BMU	BMU
BMV	BMV
BMW	BMW
BNA	BNA
BNC	BNC
BND	BND
BNE	BNE
BNI	BNI
BNK	BNK
BNN	BNN
BNS	BNS
BNX	BNX
BNY	BNY
BOB	BOB
BOC	BOC
BOD	BOD
BOG	BOG
BOH	BOH
BOI	BOI
BOJ	BOJ
BOM	BOM
BON	BON
BOO	BOO
BOS	BOS
BOY	BOY
BPE	BPE
BPL	BPL
BPM	BPM
BPN	BPN
BPS	BPS
BPT	BPT
BPX	BPX
BQA	BQA
BQB	BQB
BQJ	BQJ
BQK	SSI
BQN	BQN
BQS	BQS
BQT	BQT
BRA	BRA
BRC	BRC
BRD	BRD
BRE	BRE
BRI	BRI
BRL	BRL
BRM	BRM
BRN	BRN
BRO	BRO
BRQ	BRQ
BRR	BRR
BRS	BRS
BRU	BRU
BRW	BRW
BSA	BSA
BSB	BSB
BSC	BSC
BSD	BSD
BSG	BSG
BSK	BSK
BSL	BSL
BSO	BSO
BSR	BSR
BST	BST
BSX	BSX
BTC	BTC
BTH	BTH
BTI	BTI
BTJ	BTJ
BTK	BTK
BTM	BTM
BTR	BTR
BTS	BTS
BTT	BTT
BTU	BTU
BTV	BTV
BUA	BUA
BUD	BUD
BUF	BUF
BUL	BUL
BUN	BUN
BUQ	BUQ
BUR	BUR
BUS	BUS
BUW	BUW
BUX	BUX
BUZ	BUZ
BVA	BVA
BVB	BVB
BVC	BVC
BVE	BVE
BVG	BVG
BVH	BVH
BVV	BVV
BWA	BWA
BWE	BWE
BWI	WAS
BWK	BWK
BWN	BWN
BWT	BWT
BWX	BWX
BXB	BXB
BXR	BXR
BXU	BXU
BYC	BYC
BYK	BYK
BYO	BYO
BYP	BYP
BZE	BZE
BZG	BZG
BZN	BZN
BZO	BZO
BZR	BZR
BZV	BZV
CAB	CAB
CAC	CAC
CAE	CAE
CAG	CAG
CAH	CAH
CAI	CAI
CAK	CAK
CAL	CAL
CAN	CAN
CAP	CAP
CAW	CAW
CAY	CAY
CBB	CBB
CBH	CBH
CBO	CBO
CBQ	CBQ
CBR	CBR
CBT	CBT
CCC	CCC
CCF	CCF
CCJ	CCJ
CCK	CCK
CCM	CCM
CCN	CCN
CCP	CCP

Airport Code	City Code	Airport Code	City Code	Airport Code	City Code	Airport Code	City Code
CCS	CCS	CJB	CJB	CRD	CRD	DAC	DAC
CCU	CCU	CJC	CJC	CRI	CRI	DAD	DAD
CCV	CCV	CJF	CJF	CRK	NCP	DAL	DFW
CDB	CDB	CJJ	CJJ	CRL	BRU	DAM	DAM
CDC	CDC	CJL	CJL	CRM	CRM	DAR	DAR
CDG	PAR	CJM	CJM	CRP	CRP	DAT	DAT
CDR	CDR	CJS	CJS	CRV	CRV	DAU	DAU
CDV	CDV	CJU	CJU	CRW	CRW	DAV	DAV
CEB	CEB	CKB	CKB	CSG	CSG	DAX	DAX
CEC	CEC	CKG	CKG	CSH	CSH	DAY	DAY
CED	CED	CKH	CKH	CSX	CSX	DBA	DBA
CEE	CEE	CKS	CKS	CSY	CSY	DBO	DBO
CEG	CEG	CKY	CKY	CTA	CTA	DBQ	DBQ
CEI	CEI	CKZ	CKZ	CTC	CTC	DBV	DBV
CEK	CEK	CLD	CLD	CTG	CTG	DCA	WAS
CEN	CEN	CLE	CLE	CTL	CTL	DCM	DCM
CEZ	CEZ	CLJ	CLJ	CTM	CTM	DCY	DCY
CFB	CFB	CLL	CLL	CTN	CTN	DDC	DDC
CFC	CFC	CLO	CLO	CTS	SPK	DDG	DDG
CFE	CFE	CLQ	CLQ	CTU	CTU	DEA	DEA
CFG	CFG	CLT	CLT	CUC	CUC	DEB	DEB
CFK	CFK	CLV	CLV	CUE	CUE	DEC	DEC
CFN	CFN	CLY	CLY	CUF	CUF	DED	DED
CFR	CFR	CMB	CMB	CUK	CUK	DEE	DEE
CFS	CFS	CME	CME	CUL	CUL	DEF	DEF
CFU	CFU	CMF	CMF	CUM	CUM	DEL	DEL
CGA	CGA	CMG	CMG	CUN	CUN	DEN	DEN
CGB	CGB	CMH	CMH	CUR	CUR	DFW	DFW
CGD	CGD	CMI	CMI	CUU	CUU	DGA	DGA
CGH	SAO	CMN	CAS	CUZ	CUZ	DGO	DGO
CGK	JKT	CMU	CMU	CVG	CVG	DGT	DGT
CGM	CGM	CMW	CMW	CVM	CVM	DHI	DHI
CGN	CGN	CMX	CMX	CVN	CVN	DHM	DHM
CGO	CGO	CND	CND	CVQ	CVQ	DHN	DHN
CGP	CGP	CNF	BHZ	CVT	CVT	DIB	DIB
CGQ	CGQ	CNJ	CNJ	CVU	CVU	DIE	DIE
CGR	CGR	CNM	CNM	CWA	AUW	DIG	DIG
CGY	CGY	CNP	CNP	CWB	CWB	DIK	DIK
CHA	CHA	CNQ	CNQ	CWL	CWL	DIL	DIL
CHC	CHC	CNS	CNS	CXB	CXB	DIN	DIN
CHG	CHG	CNX	CNX	CXI	CXI	DIO	DIO
CHO	CHO	CNY	CNY	CXJ	CXJ	DIR	DIR
CHQ	CHQ	COD	COD	CXR	CXR	DIS	DIS
CHS	CHS	COK	COK	CYB	CYB	DIU	DIU
CHT	CHT	COO	COO	CYD	CYD	DIW	DIW
CHX	CHX	COQ	COQ	CYO	CYO	DIY	DIY
CHY	CHY	COR	COR	CYP	CYP	DJB	DJB
CIA	ROM	COS	COS	CYS	CYS	DJE	DJE
CID	CID	COU	COU	CYX	CYX	DJG	DJG
CIF	CIF	CPC	CPC	CYZ	CYZ	DJJ	DJJ
CIH	CIH	CPD	CPD	CZE	CZE	DKR	DKR
CIJ	CIJ	CPE	CPE	CZH	CZH	DLA	DLA
CIT	CIT	CPH	CPH	CZL	CZL	DLC	DLC
CIU	SSM	CPO	CPO	CZM	CZM	DLE	DLE
CIX	CIX	CPR	CPR	CZS	CZS	DLG	DLG
CIY	CIY	CPT	CPT	CZU	CZU	DLH	DLH
CIZ	CIZ	CPV	CPV	CZX	CZX	DLI	DLI
CJA	CJA	CRA	CRA	DAB	DAB	DLM	DLM

Airport Code	City Code
DLU	DLU
DLY	DLY
DLZ	DLZ
DMB	DMB
DME	MOW
DMK	BKK
DMM	DMM
DMU	DMU
DNA	OKA
DND	DND
DNH	DNH
DNK	DNK
DNR	DNR
DNZ	DNZ
DOB	DOB
DOH	DOH
DOK	DOK
DOL	DOL
DOM	DOM
DOU	DOU
DOY	DOY
DPL	DPL
DPO	DPO
DPS	DPS
DPT	DPT
DQA	DQA
DQM	DQM
DRG	DRG
DRK	DRK
DRO	DRO
DRS	DRS
DRV	DRV
DRW	DRW
DSA	DSA
DSE	DSE
DSI	DSI
DSK	DSK
DSM	DSM
DSN	DSN
DTB	DTB
DTM	DTM
DTW	DTT
DUB	DUB
DUD	DUD
DUJ	DUJ
DUR	DUR
DUS	DUS
DUT	DUT
DVL	DVL
DVO	DVO
DWC	DWC
DWD	DWD
DWO	DWO
DXB	DXB
DXE	DXE
DYG	DYG
DYR	DYR
DYU	DYU

Airport Code	City Code
DZA	DZA
DZN	DZN
EAM	EAM
EAR	EAR
EAS	EAS
EAT	EAT
EAU	EAU
EBA	EBA
EBB	EBB
EBD	EBD
EBH	EBH
EBJ	EBJ
EBL	EBL
EBU	EBU
ECN	ECN
ECP	ECP
EDF	ANC
EDI	EDI
EDL	EDL
EDO	EDO
EDR	EDR
EEK	EEK
EFL	EFL
EGC	EGC
EGE	EGE
EGM	EGM
EGN	EGN
EGO	EGO
EGS	EGS
EIN	EIN
EJA	EJA
EJH	EJH
EJN	EJN
EKO	EKO
EKS	EKS
ELC	ELC
ELD	ELD
ELF	ELF
ELG	ELG
ELH	ELH
ELI	ELI
ELM	ELM
ELP	ELP
ELQ	ELQ
ELS	ELS
ELU	ELU
EMA	EMA
EMD	EMD
EML	EML
ENA	ENA
ENE	ENE
ENH	ENH
ENU	ENU
ENY	ENY
EOH	MDE
EPR	EPR
EQS	EQS
ERC	ERC

Airport Code	City Code
ERF	ERF
ERH	ERH
ERI	ERI
ERL	ERL
ERM	ERM
ERN	ERN
ERS	WDH
ERZ	ERZ
ESB	ANK
ESC	ESC
ESD	ESD
ESL	ESL
ESM	ESM
ESU	ESU
ETH	ETH
ETR	ETR
ETZ	ETZ
EUG	EUG
EUN	EUN
EUX	EUX
EVE	EVE
EVG	EVG
EVN	EVN
EVV	EVV
EWN	EWN
EWR	NYC
EXT	EXT
EYK	EYK
EYP	EYP
EYW	EYW
EZE	BUE
EZS	EZS
EZV	EZV
FAC	FAC
FAE	FAE
FAH	FAH
FAI	FAI
FAO	FAO
FAR	FAR
FAT	FAT
FAV	FAV
FAY	FAY
FBD	FBD
FBE	FBE
FBM	FBM
FCA	FCA
FCO	ROM
FDE	FDE
FDF	FDF
FDH	FDH
FEC	FEC
FEG	FEG
FEN	FEN
FEZ	FEZ
FGI	APW
FGU	FGU
FHZ	FHZ
FIH	FIH

Airport Code	City Code
FKB	FKB
FKI	FKI
FKQ	FKQ
FKS	FKS
FLA	FLA
FLG	FLG
FLL	FLL
FLN	FLN
FLO	FLO
FLR	FLR
FLS	FLS
FLW	FLW
FMA	FMA
FMI	FMI
FMM	FMM
FMN	FMN
FMO	FMO
FNA	FNA
FNC	FNC
FNI	FNI
FNJ	FNJ
FNT	FNT
FOC	FOC
FOD	FOD
FOE	TOP
FON	FON
FOR	FOR
FPO	FPO
FRA	FRA
FRD	FRD
FRE	FRE
FRO	FRO
FRS	FRS
FRU	FRU
FRW	FRW
FSC	FSC
FSD	FSD
FSM	FSM
FSP	FSP
FSZ	FSZ
FTA	FTA
FTE	FTE
FTU	FTU
FUE	FUE
FUG	FUG
FUJ	FUJ
FUK	FUK
FUN	FUN
FUO	FUO
FUT	FUT
FVM	FVM
FWA	FWA
FYJ	FYJ
FYU	FYU
GAE	GAE
GAF	GAF
GAJ	GAJ
GAL	GAL

Airport Code	City Code	Airport Code	City Code	Airport Code	City Code	Airport Code	City Code
GAM	GAM	GMO	GMO	GXH	GXH	HIJ	HIJ
GAN	GAN	GMP	SEL	GYA	GYA	HIN	HIN
GAU	GAU	GMR	GMR	GYD	BAK	HIR	HIR
GAY	GAY	GMZ	GMZ	GYE	GYE	HJJ	HJJ
GBB	GBB	GNA	GNA	GYG	GYG	HJR	HJR
GBD	GBD	GNB	GNB	GYL	GYL	HKD	HKD
GBE	GBE	GND	GND	GYN	GYN	HKG	HKG
GBT	GBT	GNS	GNS	GYS	GYS	HKK	HKK
GCC	GCC	GNV	GNV	GZO	GZO	HKN	HKN
GCH	GCH	GOA	GOA	GZP	AYT	HKT	HKT
GCI	GCI	GOB	GOB	GZT	GZT	HLA	HLA
GCK	GCK	GOH	GOH	HAA	HAA	HLD	HLD
GCM	GCM	GOI	GOI	HAC	HAC	HLH	HLH
GDE	GDE	GOJ	GOJ	HAD	HAD	HLN	HLN
GDL	GDL	GOM	GOM	HAH	YVA	HLP	JKT
GDN	GDN	GOP	GOP	HAJ	HAJ	HLZ	HLZ
GDQ	GDQ	GOQ	GOQ	HAK	HAK	HMA	HMA
GDT	GDT	GOT	GOT	HAM	HAM	HMB	HMB
GDX	GDX	GOU	GOU	HAN	HAN	HME	HME
GDZ	GDZ	GOV	GOV	HAQ	HAQ	HMI	HMI
GEA	NOU	GPA	GPA	HAS	HAS	HMO	HMO
GEG	GEG	GPI	GPI	HAU	HAU	HMV	HMV
GEL	GEL	GPS	GPS	HAV	HAV	HNA	HNA
GEO	GEO	GPT	GPT	HBA	HBA	HND	TYO
GES	GES	GRB	GRB	HBE	HBE	HNH	HNH
GET	GET	GRI	GRI	HBX	HBX	HNL	HNL
GEV	GEV	GRJ	GRJ	HCJ	HCJ	HNS	HNS
GFF	GFF	GRK	GRK	HCR	HCR	HNY	HNY
GFK	GFK	GRO	GRO	HDF	HDF	HOB	HOB
GFN	GFN	GRQ	GRQ	HDG	HDG	HOD	HOD
GGG	GGG	GRR	GRR	HDM	HDM	HOF	HOF
GGM	GGM	GRU	SAO	HDN	HDN	HOG	HOG
GGT	GGT	GRV	GRV	HDS	HDS	HOI	HOI
GHA	GHA	GRW	GRW	HDY	HDY	HOM	HOM
GHB	GHB	GRX	GRX	HEA	HEA	HON	HON
GIB	GIB	GRZ	GRZ	HEH	HEH	HOR	HOR
GIG	RIO	GSE	GOT	HEK	HEK	HOT	HOT
GIL	GIL	GSM	GSM	HEL	HEL	HOU	HOU
GIS	GIS	GSO	GSO	HER	HER	HOV	HOV
GIU	GIU	GSP	GSP	HET	HET	HOX	HOX
GIZ	GIZ	GST	GST	HFE	HFE	HPB	HPB
GJA	GJA	GTE	GTE	HFS	HFS	HPG	HPG
GJL	GJL	GTF	GTF	HFT	HFT	HPH	HPH
GJT	GJT	GTO	GTO	HGA	HGA	HPN	HPN
GKA	GKA	GTP	GTP	HGD	HGD	HRB	HRB
GKK	GKK	GTR	UBS	HGH	HGH	HRE	HRE
GLA	GLA	GTS	GTS	HGN	HGN	HRG	HRG
GLF	GLF	GUA	GUA	HGO	HGO	HRI	HRI
GLH	GLH	GUC	GUC	HGR	HGR	HRK	HRK
GLK	GLK	GUM	GUM	HGU	HGU	HRL	HRL
GLN	GLN	GUR	GUR	HHH	HHH	HRO	HRO
GLO	GLO	GUW	GUW	HHN	HHN	HSG	HSG
GLT	GLT	GVA	GVA	HHQ	HHQ	HSL	HSL
GLV	GLV	GVR	GVR	HHR	HHR	HSN	HSN
GLX	GLX	GWD	GWD	HHZ	HHZ	HSV	HSV
GMA	GMA	GWL	GWL	HIA	HIA	HTA	HTA
GMB	GMB	GWT	GWT	HIB	HIB	HTI	HTI
GME	GME	GXF	GXF	HID	HID	HTN	HTN

Airport Code	City Code	Airport Code	City Code	Airport Code	City Code	Airport Code	City Code
HTS	HTS	ILM	ILM	IXE	IXE	JNU	JNU
HUE	HUE	ILO	ILO	IXG	IXG	JNX	JNX
HUH	HUH	ILP	ILP	IXJ	IXJ	JNZ	JNZ
HUI	HUI	ILR	ILR	IXL	IXL	JOE	JOE
HUN	HUN	ILY	ILY	IXM	IXM	JOG	JOG
HUS	HUS	IMF	IMF	IXR	IXR	JOI	JOI
HUU	HUU	IMP	IMP	IXS	IXS	JOK	JOK
HUX	HUX	IMT	IMT	IXU	IXU	JOL	JOL
HUY	HUY	INB	INB	IXZ	IXZ	JOS	JOS
HUZ	HUZ	INC	INC	IZA	IZA	JPA	JPA
HVB	HVB	IND	IND	IZO	IZO	JPR	JPR
HVD	HVD	INH	INH	JAC	JAC	JQA	JQA
HVG	HVG	INL	INL	JAI	JAI	JRH	JRH
HVN	HVN	INN	INN	JAL	JAL	JRO	JRO
HWD	HWD	INU	INU	JAN	JAN	JSH	JSH
HXD	HXD	INV	INV	JAU	JAU	JSI	JSI
HYA	HYA	INZ	INZ	JAV	JAV	JSR	JSR
HYD	HYD	IOA	IOA	JAX	JAX	JST	JST
HYN	HYN	IOM	IOM	JBB	JBB	JSU	JSU
HYS	HYS	IOS	IOS	JBQ	JBQ	JSY	JSY
HZG	HZG	IPA	IPA	JBR	JBR	JTC	JTC
HZH	HZH	IPC	IPC	JCB	JCB	JTR	JTR
IAA	IAA	IPH	IPH	JCK	JCK	JTY	JTY
IAD	WAS	IPL	IPL	JDH	JDH	JUB	JUB
IAG	IAG	IPN	IPN	JDO	JDO	JUH	JUH
IAH	HOU	IPT	IPT	JDZ	JDZ	JUJ	JUJ
IAM	IAM	IQN	IQN	JED	JED	JUL	JUL
IAN	IAN	IQQ	IQQ	JEG	JEG	JUV	JUV
IAO	IAO	IQT	IQT	JEK	JEK	JUZ	JUZ
IAS	IAS	IRA	IRA	JER	JER	JXA	JXA
IBA	IBA	IRJ	IRJ	JFK	NYC	JYV	JYV
IBE	IBE	IRM	IRM	JFR	JFR	JZH	JZH
IBR	IBR	IRP	IRP	JGA	JGA	KAA	KAA
IBZ	IBZ	ISA	ISA	JGD	JGD	KAB	KAB
ICI	ICI	ISB	ISB	JGN	JGN	KAD	KAD
ICN	SEL	ISC	ISC	JGS	JGS	KAJ	KAJ
ICT	ICT	ISE	ISE	JHB	JHB	KAL	KAL
IDA	IDA	ISG	ISG	JHG	JHG	KAN	KAN
IDR	IDR	ISN	ISN	JHS	JHS	KAO	KAO
IEV	IEV	ISP	ISP	JIB	JIB	KAT	KAT
IFJ	IFJ	IST	IST	JIC	JIC	KAW	KAW
IFN	IFN	ISU	ISU	JIJ	JIJ	KAZ	KAZ
IFO	IFO	ITB	ITB	JIK	JIK	KBC	KBC
IGA	IGA	ITH	ITH	JIM	JIM	KBL	KBL
IGD	IGD	ITM	OSA	JIQ	JIQ	KBP	IEV
IGM	IGM	ITO	ITO	JIU	JIU	KBR	KBR
IGR	IGR	IUE	IUE	JJN	JJN	KBU	KBU
IGT	IGT	IVC	IVC	JKG	JKG	KBV	KBV
IGU	IGU	IVL	IVL	JKH	JKH	KCA	KCA
IIL	IIL	IWA	IWA	JKL	JKL	KCH	KCH
IJK	IJK	IWD	IWD	JKR	JKR	KCK	KCK
IKA	THR	IWJ	IWJ	JLN	JLN	KCM	KCM
IKI	IKI	IWK	IWK	JLR	JLR	KCT	KCT
IKS	IKS	IWO	IWO	JMK	JMK	KCZ	KCZ
IKT	IKT	IXA	IXA	JMS	JMS	KDH	KDH
ILD	ILD	IXB	IXB	JMU	JMU	KDI	KDI
ILG	ILG	IXC	IXC	JNB	JNB	KDL	KDL
ILI	ILI	IXD	IXD	JNG	JNG	KDM	KDM

Airport Code	City Code
KDO	KDO
KDU	KDU
KDV	KDV
KDY	KDY
KDZ	KDZ
KEF	REK
KEH	KEH
KEJ	KEJ
KEM	KEM
KEP	KEP
KER	KER
KET	KET
KEW	KEW
KFS	KFS
KGA	KGA
KGC	KGC
KGD	KGD
KGE	KGE
KGF	KGF
KGI	KGI
KGL	KGL
KGS	KGS
KGT	KGT
KGX	KGX
KHD	KHD
KHE	KHE
KHG	KHG
KHH	KHH
KHI	KHI
KHM	KHM
KHN	KHN
KHS	KHS
KHT	KHT
KHV	KHV
KHY	KHY
KHZ	KHZ
KID	KID
KIE	KIE
KIF	KIF
KIH	KIH
KIJ	KIJ
KIM	KIM
KIN	KIN
KIR	KIR
KIS	KIS
KIT	KIT
KIV	KIV
KIX	OSA
KJA	KJA
KJH	KJH
KKA	KKA
KKC	KKC
KKE	KKE
KKJ	KKJ
KKN	KKN
KKR	KKR
KKX	KKX
KLG	KLG

Airport Code	City Code
KLO	KLO
KLR	KLR
KLU	KLU
KLV	KLV
KLW	KLW
KLX	KLX
KMC	KMC
KMG	KMG
KMI	KMI
KMJ	KMJ
KMN	KMN
KMQ	KMQ
KMS	KMS
KMU	KMU
KMV	KMV
KND	KND
KNG	KNG
KNH	KNH
KNO	KNO
KNQ	KNQ
KNS	KNS
KNU	KNU
KNX	KNX
KOA	KOA
KOE	KOE
KOI	KOI
KOJ	KOJ
KOK	KOK
KOO	KOO
KOP	KOP
KOS	KOS
KOT	KOT
KOV	KOV
KOW	KOW
KQT	KQT
KRF	KRF
KRK	KRK
KRL	KRL
KRN	KRN
KRO	KRO
KRP	KRP
KRR	KRR
KRS	KRS
KRT	KRT
KRY	KRY
KSA	KSA
KSC	KSC
KSD	KSD
KSF	KSF
KSH	KSH
KSJ	KSJ
KSM	KSM
KSN	KSN
KSO	KSO
KSQ	KSQ
KSU	KSU
KSY	KSY
KTA	KTA

Airport Code	City Code
KTD	KTD
KTE	KTE
KTG	KTG
KTL	KTL
KTM	KTM
KTN	KTN
KTS	KTS
KTT	KTT
KTW	KTW
KUA	KUA
KUD	KUD
KUF	KUF
KUH	KUH
KUL	KUL
KUM	KUM
KUN	KUN
KUO	KUO
KUS	KUS
KUT	KUT
KUU	KUU
KUV	KUV
KVA	KVA
KVD	KVD
KVG	KVG
KVK	KVK
KVL	KVL
KVX	KVX
KWA	KWA
KWE	KWE
KWI	KWI
KWJ	KWJ
KWL	KWL
KWM	KWM
KWN	KWN
KWZ	KWZ
KXF	KXF
KXK	KXK
KXU	KXU
KYA	KYA
KYP	KYP
KYU	KYU
KYZ	KYZ
KZI	KZI
KZN	KZN
KZO	KZO
KZR	KZR
KZS	KZS
LAD	LAD
LAE	LAE
LAF	LAF
LAI	LAI
LAN	LAN
LAO	LAO
LAP	LAP
LAQ	LAQ
LAR	LAR
LAS	LAS
LAU	LAU

Airport Code	City Code
LAW	LAW
LAX	LAX
LBA	LBA
LBB	LBB
LBC	LBC
LBD	LBD
LBE	LBE
LBF	LBF
LBJ	LBJ
LBL	LBL
LBP	LBP
LBS	LBS
LBU	LBU
LBV	LBV
LCA	LCA
LCE	LCE
LCG	LCG
LCH	LCH
LCJ	LCJ
LCK	CMH
LCM	LCM
LCR	LCR
LCX	LCX
LCY	LON
LDB	LDB
LDE	LDE
LDH	LDH
LDS	LDS
LDU	LDU
LDY	LDY
LEA	LEA
LEC	LEC
LED	LED
LEI	LEI
LEJ	LEJ
LEN	LEN
LEQ	LEQ
LET	LET
LEX	LEX
LFM	LFM
LFT	LFT
LFW	LFW
LGA	NYC
LGB	LGB
LGG	LGG
LGI	LGI
LGK	LGK
LGL	LGL
LGP	LGP
LGQ	LGQ
LGW	LON
LHE	LHE
LHR	LON
LHW	LHW
LIF	LIF
LIG	LIG
LIH	LIH
LIL	LIL

Airport Code	City Code	Airport Code	City Code	Airport Code	City Code	Airport Code	City Code
LIM	LIM	LRE	LRE	MAB	MAB	MGA	MGA
LIN	MIL	LRH	LRH	MAD	MAD	MGB	MGB
LIQ	LIQ	LRM	LRM	MAF	MAF	MGF	MGF
LIR	LIR	LRR	LRR	MAG	MAG	MGH	MGH
LIS	LIS	LRS	LRS	MAH	MAH	MGM	MGM
LIT	LIT	LRT	LRT	MAJ	MAJ	MGQ	MGQ
LIW	LIW	LSA	LSA	MAM	MAM	MGS	MGS
LJG	LJG	LSC	LSC	MAN	MAN	MGT	MGT
LJU	LJU	LSE	LSE	MAO	MAO	MGW	MGW
LKA	LKA	LSH	LSH	MAQ	MAQ	MGZ	MGZ
LKB	LKB	LSI	SDZ	MAR	MAR	MHC	MHC
LKE	SEA	LSP	LSP	MAS	MAS	MHD	MHD
LKG	LKG	LST	LST	MAU	MAU	MHG	MHG
LKH	LKH	LSW	LSW	MBA	MBA	MHH	MHH
LKL	LKL	LSY	LSY	MBE	MBE	MHK	MHK
LKN	LKN	LTI	LTI	MBI	MBI	MHQ	MHQ
LKO	LKO	LTN	LON	MBJ	MBJ	MHT	MHT
LKY	LKY	LTO	LTO	MBL	MBL	MIA	MIA
LLA	LLA	LTT	LTT	MBS	MBS	MID	MID
LLB	LLB	LTX	LTX	MBT	MBT	MIG	MIG
LLF	LLF	LUD	LUD	MCE	MCE	MII	MII
LLI	LLI	LUG	LUG	MCG	MCG	MIM	MIM
LLK	LLK	LUH	LUH	MCI	MKC	MIR	MIR
LLV	LLV	LUK	CVG	MCK	MCK	MIS	MIS
LLW	LLW	LUM	LUM	MCO	ORL	MJD	MJD
LMC	LMC	LUN	LUN	MCP	MCP	MJF	MJF
LMM	LMM	LUO	LUO	MCT	MCT	MJI	MJI
LMN	LMN	LUQ	LUQ	MCV	MCV	MJM	MJM
LMP	LMP	LUR	LUR	MCW	MCW	MJN	MJN
LNB	LNB	LUV	LUV	MCX	MCX	MJT	MJT
LNE	LNE	LUW	LUW	MCY	MCY	MJU	MJU
LNJ	LNJ	LUX	LUX	MCZ	MCZ	MJV	MJV
LNK	LNK	LUZ	LUZ	MDC	MDC	MJZ	MJZ
LNV	LNV	LVI	LVI	MDE	MDE	MKC	MKC
LNY	LNY	LWB	LWB	MDG	MDG	MKE	MKE
LNZ	LNZ	LWN	LWN	MDK	MDK	MKG	MKG
LOD	LOD	LWO	LWO	MDL	MDL	MKK	MKK
LOE	LOE	LWS	LWS	MDQ	MDQ	MKL	MKL
LOH	LOH	LWY	LWY	MDT	HAR	MKM	MKM
LOK	LOK	LXA	LXA	MDU	MDU	MKP	MKP
LOO	LOO	LXG	LXG	MDW	CHI	MKQ	MKQ
LOP	LOP	LXR	LXR	MDZ	MDZ	MKW	MKW
LOS	LOS	LXS	LXS	MEA	MEA	MKY	MKY
LPA	LPA	LYA	LYA	MEB	MEL	MKZ	MKZ
LPB	LPB	LYB	LYB	MEC	MEC	MLA	MLA
LPD	LPD	LYC	LYC	MED	MED	MLB	MLB
LPF	LPF	LYG	LYG	MEE	MEE	MLE	MLE
LPI	LPI	LYH	LYH	MEG	MEG	MLG	MLG
LPK	LPK	LYI	LYI	MEH	MEH	MLH	MLH
LPL	LPL	LYP	LYP	MEI	MEI	MLI	MLI
LPM	LPM	LYR	LYR	MEL	MEL	MLM	MLM
LPP	LPP	LYS	LYS	MEM	MEM	MLN	MLN
LPQ	LPQ	LZC	LZC	MEQ	MEQ	MLO	MLO
LPS	LPS	LZH	LZH	MEX	MEX	MLU	MLU
LPT	LPT	LZO	LZO	MFE	MFE	MLX	MLX
LPY	LPY	LZR	LZR	MFM	MFM	MMB	MMB
LQM	LQM	LZY	LZY	MFR	MFR	MMD	MMD
LRD	LRD	MAA	MAA	MFU	MFU	MME	MME

Airport Code	City Code	Airport Code	City Code	Airport Code	City Code	Airport Code	City Code
MMH	MMH	MTR	MTR	NAW	NAW	NQU	NQU
MMJ	MMJ	MTT	MTT	NAY	BJS	NQX	EYW
MMK	MMK	MTV	MTV	NBC	NBC	NQY	NQY
MMO	MMO	MTY	MTY	NBE	NBE	NRA	NRA
MMU	MMU	MUA	MUA	NBO	NBO	NRE	NRE
MMX	MMA	MUB	MUB	NBS	NBS	NRK	NRK
MMY	MMY	MUC	MUC	NBX	NBX	NRN	NRN
MMZ	MMZ	MUK	MUK	NCE	NCE	NRT	TYO
MNA	MNA	MUN	MUN	NCJ	NCJ	NSH	NSH
MNC	MNC	MUR	MUR	NCL	NCL	NSI	YAO
MNG	MNG	MUW	MUW	NCN	NCN	NSK	NSK
MNL	MNL	MUX	MUX	NCU	NCU	NSN	NSN
MNU	MNU	MVB	MVB	NDB	NDB	NST	NST
MOB	MOB	MVD	MVD	NDG	NDG	NTD	NTD
MOC	MOC	MVP	MVP	NDJ	NDJ	NTE	NTE
MOF	MOF	MVR	MVR	NDR	NDR	NTG	NTG
MOG	MOG	MVT	MVT	NDU	NDU	NTL	NTL
MOI	MOI	MVY	MVY	NER	NER	NTQ	NTQ
MOL	MOL	MWF	MWF	NEV	NEV	NTX	NTX
MOQ	MOQ	MWX	MWX	NGB	NGB	NUE	NUE
MOT	MOT	MWZ	MWZ	NGE	NGE	NUI	NUI
MOU	MOU	MXH	MXH	NGK	NGK	NUK	NUK
MOV	MOV	MXL	MXL	NGO	NGO	NUL	NUL
MOZ	MOZ	MXP	MIL	NGQ	NGQ	NUS	NUS
MPA	MPA	MXS	MXS	NGS	NGS	NUU	NUU
MPH	MPH	MXV	MXV	NHV	NHV	NUX	NUX
MPL	MPL	MXX	MXX	NIF	NIF	NVA	NVA
MPM	MPM	MXZ	MXZ	NIM	NIM	NVI	NVI
MPN	MPN	MYA	MYA	NIU	NIU	NVK	NVK
MQF	MQF	MYD	MYD	NJC	NJC	NVT	NVT
MQJ	MQJ	MYF	SAN	NJF	NJF	NWI	NWI
MQL	MQL	MYG	MYG	NKC	NKC	NYA	NYA
MQM	MQM	MYJ	MYJ	NKG	NKG	NYI	NYI
MQN	MQN	MYR	MYR	NKM	NGO	NYM	NYM
MQP	NLP	MYT	MYT	NKT	NKT	NYO	STO
MQP	MQP	MYU	MYU	NLA	NLA	NYR	NYR
MQT	MQT	MYW	MYW	NLD	NLD	NYT	NYT
MQX	MQX	MYY	MYY	NLK	NLK	NYU	NYU
MRA	MRA	MZG	MZG	NLT	NLT	NYW	NYW
MRE	MRE	MZH	MZH	NMA	NMA	NZH	NZH
MRS	MRS	MZL	MZL	NME	NME	OAG	OAG
MRU	MRU	MZO	MZO	NNB	NNB	OAI	OAI
MRV	MRV	MZR	MZR	NNG	NNG	OAJ	OAJ
MRY	MRY	MZT	MZT	NNM	NNM	OAK	OAK
MRZ	MRZ	MZV	MZV	NNT	NNT	OAL	OAL
MSA	MSA	MZW	MZW	NNX	NNX	OAS	OAS
MSJ	MSJ	NAG	NAG	NNY	NNY	OAX	OAX
MSL	MSL	NAH	NAH	NOB	NOB	OBO	OBO
MSN	MSN	NAJ	NAJ	NOC	NOC	OBU	OBU
MSO	MSO	NAL	NAL	NOJ	NOJ	OCC	OCC
MSP	MSP	NAN	NAN	NOP	NOP	OCM	OCM
MSQ	MSQ	NAO	NAO	NOS	NOS	ODN	ODN
MSR	MSR	NAP	NAP	NOU	NOU	ODO	ODO
MST	MST	NAQ	NAQ	NOV	NOV	ODS	ODS
MSU	MSU	NAS	NAS	NOZ	NOZ	ODY	ODY
MSY	MSY	NAT	NAT	NPE	NPE	OER	OER
MSZ	MSZ	NAU	NAU	NPL	NPL	OGD	OGD
MTJ	MTJ	NAV	NAV	NQN	NQN	OGG	OGG

Airport Code	City Code
OGL	OGL
OGN	OGN
OGX	OGX
OGZ	OGZ
OHD	OHD
OHE	OHE
OHH	OHH
OHS	OHS
OIM	OIM
OIT	OIT
OKA	OKA
OKC	OKC
OKE	OKE
OKI	OKI
OKJ	OKJ
OKL	OKL
OLB	OLB
OLL	OLL
OLP	OLP
OLZ	OLZ
OMA	OMA
OMD	OMD
OME	OME
OMH	OMH
OMR	OMR
OMS	OMS
OND	OND
ONJ	ONJ
ONK	ONK
ONL	ONL
ONS	ONS
ONT	ONT
OOK	OOK
OOL	OOL
OPO	OPO
OPS	OPS
ORB	ORB
ORD	CHI
ORF	ORF
ORH	ORH
ORK	ORK
ORN	ORN
ORU	ORU
ORV	ORV
ORY	PAR
ORZ	ORZ
OSD	OSD
OSI	OSI
OSL	OSL
OSM	OSM
OSR	OSR
OSS	OSS
OST	OST
OSW	OSW
OSY	OSY
OTD	OTD
OTH	OTH
OTI	OTI
OTP	BUH
OTZ	OTZ
OUA	OUA
OUD	OUD
OUL	OUL
OUZ	OUZ
OVB	OVB
OVD	OVD
OVS	OVS
OWB	OWB
OXB	OXB
OZC	OZC
OZG	OZG
OZH	OZH
OZZ	OZZ
PAC	PTY
PAD	PAD
PAG	PAG
PAH	PAH
PAP	PAP
PAS	PAS
PAT	PAT
PAV	PAV
PAZ	PAZ
PBC	PBC
PBD	PBD
PBG	PBG
PBH	PBH
PBI	PBI
PBJ	PBJ
PBL	PBL
PBM	PBM
PBO	PBO
PBU	PBU
PBZ	PBZ
PCL	PCL
PCR	PCR
PDA	PDA
PDG	PDG
PDK	ATL
PDL	PDL
PDP	PDP
PDS	PDS
PDT	PDT
PDV	PDV
PDX	PDX
PED	PED
PEE	PEE
PEG	PEG
PEI	PEI
PEK	BJS
PEM	PEM
PEN	PEN
PER	PER
PES	PES
PET	PET
PEU	PEU
PEW	PEW
PEZ	PEZ
PFB	PFB
PFO	PFO
PFQ	PFQ
PGA	PGA
PGD	PGD
PGF	PGF
PGK	PGK
PGV	PGV
PGX	PGX
PHB	PHB
PHC	PHC
PHE	PHE
PHF	PHF
PHL	PHL
PHO	PHO
PHS	PHS
PHW	PHW
PHX	PHX
PIA	PIA
PIB	LUL
PIE	PIE
PIH	PIH
PIK	GLA
PIN	PIN
PIR	PIR
PIS	PIS
PIT	PIT
PIU	PIU
PIX	PIX
PIZ	PIZ
PJA	PJA
PJG	PJG
PJM	PJM
PKB	PKB
PKC	PKC
PKE	PKE
PKN	PKN
PKP	PKP
PKR	PKR
PKU	PKU
PKY	PKY
PKZ	PKZ
PLJ	PLJ
PLM	PLM
PLN	PLN
PLO	PLO
PLQ	PLQ
PLS	PLS
PLU	BHZ
PLW	PLW
PLX	PLX
PLZ	PLZ
PMC	PMC
PMF	PMF
PMI	PMI
PMO	PMO
PMR	PMR
PMV	PMV
PMW	PMW
PMY	PMY
PMZ	PMZ
PNA	PNA
PND	PND
PNH	PNH
PNI	PNI
PNK	PNK
PNL	PNL
PNP	PNP
PNQ	PNQ
PNR	PNR
PNS	PNS
PNZ	PNZ
POA	POA
POG	POG
POI	POI
POJ	POJ
POL	POL
POM	POM
POP	POP
POR	POR
POS	POS
POZ	POZ
PPB	PPB
PPG	PPG
PPN	PPN
PPP	PPP
PPQ	PPQ
PPS	PPS
PPT	PPT
PQC	PQC
PQI	PQI
PQQ	PQQ
PQS	PQS
PRA	PRA
PRC	PRC
PRG	PRG
PRH	PRH
PRI	PRI
PRN	PRN
PSA	PSA
PSC	PSC
PSE	PSE
PSG	PSG
PSJ	PSJ
PSM	PSM
PSO	PSO
PSP	PSP
PSR	PSR
PSS	PSS
PSU	PSU
PSZ	PSZ
PTG	PTG
PTH	PTH
PTJ	PTJ
PTP	PTP

Airport Code	City Code
PTY	PTY
PUB	PUB
PUE	PUE
PUF	PUF
PUG	PUG
PUJ	PUJ
PUK	PUK
PUM	PUM
PUQ	PUQ
PUS	PUS
PUU	PUU
PUW	PUW
PUY	PUY
PVA	PVA
PVD	PVD
PVG	SHA
PVH	PVH
PVK	PVK
PVL	PVL
PVR	PVR
PVU	PVU
PWM	PWM
PWQ	PWQ
PXM	PXM
PXO	PXO
PXU	PXU
PYH	PYH
PYJ	PYJ
PYY	PYY
PZB	PZB
PZH	PZH
PZI	PZI
PZO	PZO
PZU	PZU
QBC	QBC
QOW	QOW
QRO	QRO
QSC	QSC
QSF	QSF
QUO	QUO
RAB	RAB
RAE	RAE
RAH	RAH
RAI	RAI
RAJ	RAJ
RAK	RAK
RAO	RAO
RAP	RAP
RAR	RAR
RAS	RAS
RBA	RBA
RBQ	RBQ
RBR	RBR
RBV	RBV
RBY	RBY
RCB	RCB
RCH	RCH
RCM	RCM

Airport Code	City Code
RCY	RCY
RDB	RDB
RDD	RDD
RDM	RDM
RDU	RDU
RDZ	RDZ
REA	REA
REC	REC
REG	REG
REL	REL
REN	REN
REP	REP
RES	RES
RET	RET
REU	REU
REX	REX
RFD	RFD
RFP	RFP
RGA	RGA
RGI	RGI
RGK	RGK
RGL	RGL
RGN	RGN
RGS	RGS
RHD	RHD
RHI	RHI
RHO	RHO
RHT	RHT
RIA	RIA
RIB	RIB
RIC	RIC
RIG	RIG
RIS	RIS
RIW	RIW
RIX	RIX
RIY	RIY
RJA	RJA
RJH	RJH
RJK	RJK
RJL	RJL
RKA	RKA
RKS	RKS
RKV	REK
RKZ	RKZ
RLG	RLG
RLK	RLK
RLO	RLO
RMA	RMA
RMF	RMF
RMI	RMI
RMP	RMP
RMQ	RMQ
RMS	RMS
RMT	RMT
RNA	RNA
RNB	RNB
RNJ	RNJ
RNL	RNL

Airport Code	City Code
RNN	RNN
RNO	RNO
RNS	RNS
ROA	ROA
ROB	MLW
ROC	ROC
ROI	ROI
ROK	ROK
ROO	ROO
ROP	ROP
ROR	ROR
ROS	ROS
ROT	ROT
ROV	ROV
ROW	ROW
RPR	RPR
RRG	RRG
RRR	RRR
RRS	RRS
RSA	RSA
RSD	RSD
RST	RST
RSU	RSU
RSW	FMY
RTA	RTA
RTB	RTB
RTI	RTI
RTM	RTM
RTW	RTW
RUA	RUA
RUH	RUH
RUN	RUN
RUP	RUP
RUR	RUR
RVD	RVD
RVE	RVE
RVK	RVK
RVN	RVN
RVT	RVT
RVV	RVV
RXS	RXS
RYG	RYG
RYK	RYK
RYL	RYL
RZE	RZE
RZR	RZR
SAB	SAB
SAF	SAF
SAH	SAH
SAL	SAL
SAN	SAN
SAP	SAP
SAT	SAT
SAV	SAV
SAW	IST
SBA	SBA
SBH	SBH
SBN	SBN

Airport Code	City Code
SBP	CSL
SBW	SBW
SBY	SBY
SBZ	SBZ
SCC	SCC
SCE	SCE
SCK	SCK
SCL	SCL
SCM	SCM
SCN	SCN
SCO	SCO
SCQ	SCQ
SCT	SCT
SCU	SCU
SCW	SCW
SCY	SCY
SCZ	SCZ
SDD	SDD
SDE	SDE
SDF	SDF
SDJ	SDJ
SDK	SDK
SDL	SDL
SDN	SDN
SDP	SDP
SDQ	SDQ
SDR	SDR
SDU	RIO
SDV	TLV
SEA	SEA
SEB	SEB
SEK	SEK
SEN	SEN
SEU	SEU
SEZ	SEZ
SFA	SFA
SFB	SFB
SFD	SFD
SFG	SFG
SFH	SFH
SFJ	SFJ
SFL	SFL
SFN	SFN
SFO	SFO
SFT	SFT
SGC	SGC
SGD	SGD
SGF	SGF
SGN	SGN
SGU	SGU
SGY	SGY
SHA	SHA
SHB	SHB
SHC	SHC
SHD	SHD
SHE	SHE
SHG	SHG
SHH	SHH

Airport Code	City Code
SHJ	SHJ
SHL	SHL
SHM	SHM
SHP	SHP
SHR	SHR
SHV	SHV
SHW	SHW
SHX	SHX
SIC	SIC
SID	SID
SIF	SIF
SIN	SIN
SIP	SIP
SIS	SIS
SIT	SIT
SJC	SJC
SJD	SJD
SJE	SJE
SJI	SJI
SJJ	SJJ
SJL	SJL
SJO	SJO
SJP	SJP
SJT	SJT
SJU	SJU
SJW	SJW
SJZ	SJZ
SKB	SKB
SKD	SKD
SKE	SKE
SKG	SKG
SKK	SKK
SKN	SKN
SKO	SKO
SKP	SKP
SKT	SKT
SKU	SKU
SKX	SKX
SKZ	SKZ
SLA	SLA
SLC	SLC
SLH	SLH
SLI	SLI
SLL	SLL
SLM	SLM
SLN	SLN
SLP	SLP
SLU	SLU
SLW	SLW
SLY	SLY
SLZ	SLZ
SMA	SMA
SMF	SAC
SMI	SMI
SMK	SMK
SML	SML
SMQ	SMQ
SMR	SMR

Airport Code	City Code
SMS	SMS
SMX	SMX
SNA	SNA
SNC	SNC
SNE	SNE
SNN	SNN
SNO	SNO
SNP	SNP
SNR	SNR
SNU	SNU
SNW	SNW
SOB	SOB
SOC	SOC
SOF	SOF
SOG	SOG
SOJ	SOJ
SOM	SOM
SON	SON
SOQ	SOQ
SOU	SOU
SOW	SOW
SPB	STT
SPC	SPC
SPD	SPD
SPI	SPI
SPN	SPN
SPP	SPP
SPR	SPR
SPS	SPS
SPU	SPU
SPY	SPY
SQD	SQD
SQG	SQG
SRE	SRE
SRG	SRG
SRI	SRI
SRP	SRP
SRQ	SRQ
SRY	SRY
SRZ	SRZ
SSA	SSA
SSB	STX
SSG	SSG
SSH	SSH
SSJ	SSJ
SSR	SSR
STC	STC
STD	STD
STG	STG
STI	STI
STL	STL
STM	STM
STN	LON
STR	STR
STS	STS
STT	STT
STV	STV
STW	STW

Airport Code	City Code
STX	STX
SUB	SUB
SUF	SUF
SUG	SUG
SUJ	SUJ
SUK	SUK
SUN	SUN
SUR	SUR
SUV	SUV
SUX	SUX
SUY	SUY
SVA	SVA
SVB	SVB
SVC	SVC
SVD	SVD
SVG	SVG
SVI	SVI
SVJ	SVJ
SVK	SVK
SVL	SVL
SVN	SVN
SVO	MOW
SVP	SVP
SVQ	SVQ
SVU	SVU
SVX	SVX
SWA	SWA
SWF	SWF
SWJ	SWJ
SWO	SWO
SWQ	SWQ
SXB	SXB
SXF	BER
SXK	SXK
SXM	SXM
SXR	SXR
SXZ	SXZ
SYD	SYD
SYM	SYM
SYO	SYO
SYQ	SJO
SYR	SYR
SYS	SYS
SYX	SYX
SYY	SYY
SYZ	SYZ
SZA	SZA
SZB	KUL
SZE	SZE
SZF	SZF
SZG	SZG
SZI	SZI
SZK	SZK
SZX	SZX
SZZ	SZZ
TAB	TAB
TAC	TAC
TAE	TAE

Airport Code	City Code
TAG	TAG
TAH	TAH
TAI	TAI
TAK	TAK
TAL	TAL
TAM	TAM
TAO	TAO
TAP	TAP
TAS	TAS
TAT	TAT
TAY	TAY
TBB	TBB
TBG	TBG
TBH	TBH
TBI	TBI
TBO	TBO
TBP	TBP
TBS	TBS
TBT	TBT
TBU	TBU
TBW	TBW
TBZ	TBZ
TCB	TCB
TCD	TCD
TCG	TCG
TCL	TCL
TCO	TCO
TCP	TCP
TCQ	TCQ
TCR	TCR
TCZ	TCZ
TDD	TDD
TDG	TDG
TDX	TDX
TEE	TEE
TEK	TEK
TEN	TEN
TEQ	TEQ
TER	TER
TET	TET
TFF	TFF
TFI	TFI
TFN	TCI
TFS	TCI
TGC	TGC
TGD	TGD
TGG	TGG
TGI	TGI
TGM	TGM
TGO	TGO
TGP	TGP
TGR	TGR
TGU	TGU
TGZ	TGZ
THD	THD
THE	THE
THL	THL
THN	THN

Airport Code	City Code	Airport Code	City Code	Airport Code	City Code	Airport Code	City Code
THQ	THQ	TMT	TMT	TTQ	TTQ	UKB	UKB
THR	THR	TMU	TMU	TTT	TTT	UKG	UKG
THS	THS	TMW	TMW	TTU	TTU	UKK	UKK
THU	THU	TMX	TMX	TUB	TUB	UKX	UKX
THX	THX	TNA	TNA	TUC	TUC	ULB	ULB
THZ	THZ	TNC	TNC	TUF	TUF	ULD	ULD
TIA	TIA	TNE	TNE	TUG	TUG	ULG	ULG
TID	TID	TNG	TNG	TUI	TUI	ULH	ULH
TIF	TIF	TNH	TNH	TUK	TUK	ULK	ULK
TIH	TIH	TNJ	TNJ	TUL	TUL	ULN	ULN
TII	TII	TNK	TNK	TUN	TUN	ULO	ULO
TIJ	TIJ	TNN	TNN	TUO	TUO	ULV	ULV
TIM	TIM	TNO	TNO	TUP	TUP	ULZ	ULZ
TIN	TIN	TNR	TNR	TUR	TUR	UME	UME
TIP	TIP	TNW	TNW	TUS	TUS	UMS	UMS
TIR	TIR	TOB	TOB	TUU	TUU	UND	UND
TIU	TIU	TOE	TOE	TVC	TVC	UNG	UNG
TIV	TIV	TOF	TOF	TVF	TVF	UNK	UNK
TIZ	TIZ	TOG	TOG	TVS	TVS	UNN	UNN
TJA	TJA	TOH	TOH	TVU	TVU	UOA	UOA
TJK	TJK	TOL	TOL	TVY	TVY	UOX	UOX
TJL	TJL	TOS	TOS	TWF	TWF	UPG	UPG
TJM	TJM	TOY	TOY	TWT	TWT	UPN	UPN
TJN	TJN	TPA	TPA	TWU	TWU	URA	URA
TJQ	TJQ	TPE	TPE	TXF	TXF	URC	URC
TJS	TJS	TPP	TPP	TXK	TXK	URE	URE
TJU	TJU	TPQ	TPQ	TXL	BER	URG	URG
TKD	TKD	TPS	TPS	TXN	TXN	URJ	URJ
TKG	TKG	TQL	TQL	TYF	TYF	URS	URS
TKK	TKK	TRA	TRA	TYL	TYL	URT	URT
TKN	TKN	TRC	TRC	TYN	TYN	URY	URY
TKP	TKP	TRD	TRD	TYR	TYR	USA	USA
TKQ	TKQ	TRE	TRE	TYS	TYS	USH	USH
TKS	TKS	TRF	OSL	TZA	BZE	USK	USK
TKU	TKU	TRG	TRG	TZL	TZL	USM	USM
TKV	TKV	TRI	TRI	TZX	TZX	USN	USN
TKX	TKX	TRK	TRK	UAH	UAH	USR	USR
TLA	TLA	TRM	TRM	UAK	UAK	UST	UST
TLC	TLC	TRN	TRN	UAP	UAP	USU	USU
TLE	TLE	TRO	TRO	UAQ	UAQ	UTH	UTH
TLH	TLH	TRR	TRR	UBA	UBA	UTN	UTN
TLI	TLI	TRS	TRS	UBJ	UBJ	UTP	UTP
TLL	TLL	TRU	TRU	UBP	UBP	UTT	UTT
TLM	TLM	TRV	TRV	UCT	UCT	UUD	UUD
TLN	TLN	TRW	TRW	UDI	UDI	UUS	UUS
TLS	TLS	TRZ	TRZ	UDJ	UDJ	UVE	UVE
TLV	TLV	TSA	TPE	UDR	UDR	UVF	SLU
TMC	TMC	TSE	TSE	UEL	UEL	UYL	UYL
TME	TME	TSF	VCE	UEO	UEO	UYN	UYN
TMF	TMF	TSJ	TSJ	UET	UET	UYU	UYU
TMI	TMI	TSN	TSN	UFA	UFA	UZR	UZR
TMJ	TMJ	TSR	TSR	UGC	UGC	VAA	VAA
TMK	TMK	TST	TST	UIB	UIB	VAI	VAI
TML	TML	TSV	TSV	UIH	UIH	VAK	VAK
TMM	TMM	TTA	TTA	UII	UII	VAL	VAL
TMP	TMP	TTE	TTE	UIO	UIO	VAM	VAM
TMR	TMR	TTJ	TTJ	UIP	UIP	VAN	VAN
TMS	TMS	TTN	TTN	UKA	UKA	VAO	VAO

Airport Code	City Code	Airport Code	City Code	Airport Code	City Code	Airport Code	City Code
VAR	VAR	VPY	VPY	WRO	WRO	YCD	YCD
VAS	VAS	VQS	VQS	WSZ	WSZ	YCG	YCG
VAW	VAW	VRA	VRA	WTB	WTB	YCK	YCK
VBA	VBA	VRC	VRC	WTK	WTK	YCL	YCL
VBP	VBP	VRN	VRN	WUA	WUA	YCO	YCO
VBV	VBV	VSA	VSA	WUH	WUH	YCS	YCS
VBY	VBY	VST	VST	WUS	WUS	YCU	YCU
VCA	VCA	VTE	VTE	WUX	WUX	YCY	YCY
VCE	VCE	VTZ	VTZ	WUZ	WUZ	YDF	YDF
VCL	VCL	VUP	VUP	WVB	WVB	YDP	YDP
VCP	SAO	VUS	VUS	WWI	WWI	YDQ	YDQ
VCS	VCS	VVC	VVC	WWK	WWK	YEG	YEA
VCT	VCT	VVI	SRZ	WWT	WWT	YEI	BTZ
VCV	VCV	VVO	VVO	WXN	WXN	YEK	YEK
VDA	VDA	VVZ	VVZ	WYA	WYA	YER	YER
VDB	VDB	VXC	VXC	WYS	WYS	YES	YES
VDC	VDC	VXE	VXE	XAP	XAP	YEV	YEV
VDE	VDE	VXO	VXO	XBE	XBE	YFA	YFA
VDH	VDH	VYI	VYI	XBJ	XBJ	YFB	YFB
VDM	VDM	WAA	WAA	XCH	XCH	YFC	YFC
VDS	VDS	WAE	WAE	XCR	XCR	YFH	YFH
VDZ	VDZ	WAG	WAG	XFN	XFN	YFJ	YFJ
VEE	VEE	WAT	WAT	XFW	XFW	YFO	YFO
VEL	VEL	WAW	WAW	XGR	XGR	YFS	YFS
VER	VER	WBB	WBB	XIC	XIC	YGH	YGH
VFA	VFA	WBM	WBM	XIL	XIL	YGJ	YGJ
VGA	VGA	WDH	WDH	XIY	SIA	YGK	YGK
VGO	VGO	WEF	WEF	XJD	XJD	YGL	YGL
VGZ	VGZ	WEH	WEH	XKH	XKH	YGP	YGP
VHC	VHC	WEI	WEI	XKS	XKS	YGR	YGR
VHM	VHM	WGA	WGA	XMH	XMH	YGT	YGT
VHV	VHV	WGP	WGP	XMN	XMN	YGV	YGV
VHZ	VHZ	WHK	WHK	XMS	XMS	YGW	YGW
VIE	VIE	WIC	WIC	XNA	FYV	YGX	YGX
VIG	VIG	WIL	NBO	XNN	XNN	YGZ	YGZ
VII	VII	WIN	WIN	XQP	XQP	YHD	YHD
VIL	VIL	WJR	WJR	XRY	XRY	YHI	YHI
VIR	VIR	WJU	WJU	XSB	XSB	YHK	YHK
VIS	VIS	WKJ	WKJ	XSC	XSC	YHM	YHM
VIX	VIX	WLE	WLE	XUZ	XUZ	YHO	YHO
VKG	VKG	WLG	WLG	YAA	YAA	YHP	YHP
VKO	MOW	WLH	WLH	YAB	YAB	YHR	YHR
VKT	VKT	WLK	WLK	YAC	YAC	YHU	YMQ
VLC	VLC	WLP	WLP	YAG	YAG	YHY	YHY
VLD	VLD	WLS	WLS	YAK	YAK	YHZ	YHZ
VLG	VLG	WMI	WMI	YAM	YAM	YIC	YIC
VLI	VLI	WMN	WMN	YAP	YAP	YIE	YIE
VLL	VLL	WMO	WMO	YAT	YAT	YIF	YIF
VLN	VLN	WMR	WMR	YAX	YAX	YIH	YIH
VLY	VLY	WMX	WMX	YAY	YAY	YIK	YIK
VNO	VNO	WNH	WNH	YBC	YBC	YIN	YIN
VNS	VNS	WNN	WNN	YBG	YBG	YIO	YIO
VNX	VNX	WNP	WNP	YBK	YBK	YIW	YIW
VOG	VOG	WNZ	WNZ	YBL	YBL	YJT	YJT
VOL	VOL	WRE	WRE	YBP	YBP	YKA	YKA
VOZ	VOZ	WRG	WRG	YBR	YBR	YKF	YKF
VPE	VPE	WRL	WRL	YBX	YBX	YKG	YKG
VPS	VPS	WRN	WRN	YCB	YCB	YKL	YKL

Airport Code	City Code
YKM	YKM
YKQ	YKQ
YKS	YKS
YKU	YKU
YLC	YLC
YLE	YLE
YLH	YLH
YLL	YLL
YLW	YLW
YMK	YMK
YMM	YMM
YMN	YMN
YMO	YMO
YMP	YMP
YMT	YMT
YMX	YMQ
YNA	YNA
YNB	YNB
YNC	YNC
YND	YND
YNG	YNG
YNJ	YNJ
YNO	YNO
YNP	YNP
YNS	YNS
YNT	YNT
YNY	YNY
YNZ	YNZ
YOJ	YOJ
YOL	YOL
YOP	YOP
YOW	YOW
YPC	YPC
YPH	YPH
YPJ	YPJ
YPL	YPL
YPM	YPM
YPO	YPO
YPR	YPR
YPW	YPW
YPX	YPX
YPY	YPY
YQB	YQB
YQC	YQC
YQD	YQD
YQF	YQF
YQG	YQG
YQK	YQK
YQL	YQL
YQM	YQM
YQQ	YQQ
YQR	YQR
YQT	YQT
YQU	YQU
YQX	YQX
YQY	YQY
YQZ	YQZ
YRA	YRA
YRB	YRB
YRG	YRG
YRL	YRL
YRT	YRT
YSB	YSB
YSG	YSG
YSJ	YSJ
YSK	YSK
YSM	YSM
YSO	YSO
YSY	YSY
YTE	YTE
YTG	YTG
YTH	YTH
YTL	YTL
YTM	YTM
YTQ	YTQ
YTS	YTS
YTY	YTY
YTZ	YTO
YUB	YUB
YUD	YUD
YUL	YMQ
YUM	YUM
YUS	YUS
YUT	YUT
YUX	YUX
YUY	YUY
YVB	YVB
YVM	YVM
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YVP	YVP
YVQ	YVQ
YVR	YVR
YVZ	YVZ
YWB	YWB
YWG	YWG
YWH	YYJ
YWJ	YWJ
YWK	YWK
YWL	YWL
YWP	YWP
YXC	YXC
YXE	YXE
YXH	YXH
YXJ	YXJ
YXL	YXL
YXN	YXN
YXP	YXP
YXS	YXS
YXT	YXT
YXU	YXU
YXX	YXX
YXY	YXY
YYB	YYB
YYC	YYC
YYD	YYD
YYE	YYE
YYF	YYF
YYG	YYG
YYH	YYH
YYJ	YYJ
YYQ	YYQ
YYR	YYR
YYT	YYT
YYU	YYU
YYY	YYY
YYZ	YTO
YZF	YZF
YZG	YZG
YZP	YZP
YZR	YZR
YZS	YZS
YZT	YZT
YZV	YZV
YZY	YZY
YZZ	YZZ
ZAD	ZAD
ZAG	ZAG
ZAH	ZAH
ZAJ	ZAJ
ZAL	ZAL
ZAM	ZAM
ZAT	ZAT
ZAZ	ZAZ
ZBF	ZBF
ZBL	ZBL
ZBR	ZBR
ZCL	ZCL
ZCO	ZCO
ZDY	ZDY
ZEL	ZEL
ZEM	ZEM
ZFM	ZFM
ZFN	ZFN
ZGS	ZGS
ZGU	ZGU
ZHA	ZHA
ZHY	ZHY
ZIG	ZIG
ZIH	ZIH
ZIX	ZIX
ZKE	ZKE
ZKG	ZKG
ZKP	ZKP
ZLO	ZLO
ZLT	ZLT
ZLX	ZLX
ZMT	ZMT
ZNA	ZNA
ZND	ZND
ZNE	ZNE
ZNZ	ZNZ
ZOS	ZOS
ZPB	ZPB
ZQN	ZQN
ZQZ	ZQZ
ZRH	ZRH
ZRJ	ZRJ
ZSA	ZSA
ZSE	ZSE
ZSJ	ZSJ
ZTA	ZTA
ZTB	ZTB
ZTH	ZTH
ZUH	ZUH
ZUM	ZUM
ZVK	ZVK
ZYI	ZYI
ZYL	ZYL