Airbus A220-100
Airbus A220-100

ADG: III
Length: 114.75 Feet
Wingspan: 115.08 Feet
Approach CAT: C
Range: 3,400 NM
MTOW: 134,000 lbs
Passengers: 109
Airbus A220-300
Airbus A220-300

ADG: III
Length: 127.0 Feet
Wingspan: 115.08 Feet
Approach CAT: C
Range: 3,350NM
MTOW: 149,000 lbs
Passengers: 140
Airbus A319
Airbus A319

ADG: III
Length: 111.02 Feet
Wingspan: 117.45 Feet
Approach CAT: C
Range: 3,750NM
MTOW: 168,653 lbs
Passengers: 132
Airbus A319 NEO
Airbus A319 NEO

ADG: III
Length: 111.02 Feet
Wingspan: 117.45 Feet
Approach CAT: C
Range: NM
MTOW: 166,449 lbs
Passengers: 126
Airbus A320
Airbus A320

ADG: III
Length: 123.27 Feet
Wingspan: 117.45 Feet
Approach CAT: C
Range: 3,300NM
MTOW: 171,961 lbs
Passengers: 157
Airbus A320 NEO
Airbus A320 NEO

ADG: III
Length: 123.27 Feet
Wingspan: 117.45 Feet
Approach CAT: C
Range: 3,500 NM
MTOW: 174,165 lbs
Passengers: 140
Bombardier CRJ-700
Bombardier CRJ-700

ADG: II
Length: 106.57 Feet
Wingspan: 76.27 Feet
Approach CAT: C
Range: 1,400 NM
MTOW: 77,000 lbs
Passengers: 70
Bombardier CRJ-550
Bombardier CRJ-550

ADG: II
Length: 106.57 Feet
Wingspan: 76.27 Feet
Approach CAT: C
Range: 1,000 NM
MTOW: 65,000 lbs
Passengers: 50
Bombardier Dash 8 Q400
Bombardier Dash 8 Q400

ADG: III
Length: 107.75 Feet
Wingspan: 93.25 Feet
Approach CAT: C
Range: 1,100 NM
MTOW: 65,200 lbs
Passengers: 76
Boeing 737-700
Boeing 737-700

ADG: III
Length: 110.42 Feet
Wingspan: 117.42 Feet
Approach CAT: C
Range: 4,400 NM
MTOW: 154,500 lbs
Passengers: 21
Boeing 737 MAX 7
Boeing MAX 7

ADG: III
Length: 116.67 Feet
Wingspan: 117.83 Feet
Approach CAT: D
Range: 3,850 NM
MTOW: 177,000 lbs
Passengers: 138-153
Boeing 737 MAX 8
Boeing MAX 8

ADG: III
Length: 129.5 Feet
Wingspan: 117.83 Feet
Approach CAT: D
Range: 3,550 NM
MTOW: 181,200 lbs
Passengers: 162-178
Embraer E175
Embraer E175

ADG: III
Length: 103.92 Feet
Wingspan: 93.92 Feet
Approach CAT: C
Range: 2,150 NM
MTOW: 85,517 lbs
Passengers: 76
Embraer E175-E2
Embraer E175-E2

ADG: III
Length: 106.3 Feet
Wingspan: 101.7 Feet
Approach CAT: C
Range: 2,000 NM
MTOW: 98,767 lbs
Passengers: 80
Embraer E190-E2
Embraer E190-E2

ADG: III
Length: 118.92 Feet
Wingspan: 110.7 Feet
Approach CAT: C
Range: 2,850 NM
MTOW: 124,341 lbs
Passengers: 97
Embraer E195-E2
Embraer E195-E2

ADG: III
Length: 136.2 Feet
Wingspan: 115.17 Feet
Approach CAT: C
Range: 2,600 NM
MTOW: 135,584 lbs
Passengers: 120
Mitsubishi M100 SpaceJet

**M90** / 76-92 SEATS

**M100** / 70-88 SEATS

LARGER M200 UNDER STUDY / UP TO 100 SEATS
Mitsubishi M100 SpaceJet

ADG: III
Length: 113.2 Feet
Wingspan: 91.30 Feet
Approach CAT: Unknown
Range: 1,910 NM
MTOW: 86,000lbs
Passengers: 76

Note: Picture is M90
Mitsubishi M90 SpaceJet
Mitsubishi M90 SpaceJet

ADG: III
Length: 117.42 Feet
Wingspan: 95.83 Feet
Approach CAT: C
Range: 2,040 NM
MTOW: 94,358 lbs
Passengers: 81-88
Side by Side A220-100 & E190-E2
Side by Side A319 NEO & A220-300
Side by Side A220-300 & A321 NEO
Data Sheets
## Noise

<table>
<thead>
<tr>
<th>ADG</th>
<th>Manufacturer</th>
<th>Model</th>
<th>Physical Class (Engine)</th>
<th>AAC</th>
<th>Approach Speed (Vso)</th>
<th>Seating</th>
<th>Wingspan (ft.)</th>
<th>Range (NM)</th>
<th>MTOW</th>
<th>EPNL Db Noise Level Lateral/Full Power</th>
<th>ICAO Noise</th>
<th>Noise Score</th>
<th>Operations for 2018 Enplanements</th>
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Notes:
- Operations 2018 = Actual Enplanements at 70% load factor. Future = 2028 Enplanements at 0.8% Annual Growth and 70% load factor
- Aircraft Load and Dimensions from FAA Aircraft Design Characteristics Database: OCT 2018
- ASE Operational Capability from August 2018 Aircraft Feasibility analysis done by Alex Seybold - Flight Tech Engineering
- Range is nominal stated by manufacturer
- * Single-class seating as configured for ANA for use in Japan. Range is 76 to 92
- ** Dual-class seating per Manufacturer
- *** Dual-class range 138 to 153
- **** Dual-class range 162 to 178
# Emissions

<table>
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<tr>
<th>ADG</th>
<th>Manufacturer</th>
<th>Model</th>
<th>Physical Class (Engine)</th>
<th>AAC</th>
<th>Approach Speed (Viso)</th>
<th>Seating</th>
<th>Wingspan (ft.)</th>
<th>Range (NM)</th>
<th>MTOW</th>
<th>Fuel per LTO Cycle (kg) per Passenger</th>
<th>Fuel Compared to CIU-700</th>
<th>CO2 Total Mass LTO (g) per Passenger</th>
<th>CO2 Compared to CIU-700</th>
<th>NOx Total Mass LTO (g) per Passenger</th>
<th>NOx Compared to CIU-700</th>
<th>NOx in Takeoff</th>
<th>NOx in Climbout</th>
<th>NOx in Approach</th>
<th>NOx in Idle</th>
<th>NOx Total (All Segments)</th>
<th>Emissions Score</th>
<th>Notes</th>
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</table>
| III | Airbus      | A320-300 | Jet | C  | 135                  | 140    | 115.08          | 3,350    | 149,000 | 3.98                             | 59%                      | 14.23                             | 40%                      | 25.08                              | 85%                      | 0.24                       | 0.19                       | 0.10                   | 0.06                   | 0.58                    | 1 | Measurably meets community g
| III | Airbus      | A320 NEO Sharklet | Jet | C  | 136                  | 157    | 117.45          | 3,500    | 174,165 | 3.19                             | 57%                      | 12.20                             | 62%                      | 26.13                              | 83%                      | 0.20                       | 0.13                       | 0.11                   | 0.07                   | 0.42                    | 0.37                   | 2 | Generally maintains current con
| III | Boeing      | 737-MAX 8  | Jet | D  | 142                  | 178**** | 117.83          | 3,550    | 181,300 | 1.99                             | 57%                      | 11.32                             | 77%                      | 21.95                              | 80%                      | 0.27                       | 0.18                       | 0.16                   | 0.07                   | 0.39                    | 0.48                   | 3 | Worsens current condition
| III | Airbus      | A320-200 Sharklet | Jet | C  | 136                  | 157    | 117.45          | 3,300    | 171,961 | 2.37                             | 57%                      | 25.57                             | 77%                      | 31.67                              | 104%                     | 0.21                       | 0.13                       | 0.10                   | 0.07                   | 0.36                    | 0.40                   | 4 | Single-class seating as configured for AMA for use in Japan. Range is 76 to 92
| III | Embracer    | EMB 190-E2 | Jet | C  | 124                  | 120    | 115.15          | 2,600    | 135,584 | 3.13                             | 73%                      | 22.70                             | 74%                      | 27.57                              | 100%                     | 0.16                       | 0.14                       | 0.06                   | 0.01                   | 0.62                    | 0.49                   | 5 | Dual-class seating per Manufacturer
| III | Airbus      | A320-100  | Jet | C  | 130                  | 109    | 115.08          | 3,400    | 134,000 | 2.71                             | 57%                      | 24.44                             | 75%                      | 30.07                              | 102%                     | 0.19                       | 0.12                       | 0.08                   | 0.00                   | 0.40                    | 0.57                   | 6 | Dual-class range 138 to 153
| III | Airbus      | A319-100 Sharklet | Jet | C  | 126                  | 132    | 117.45          | 3,750    | 168,183 | 3.80                             | 76%                      | 39.26                             | 110%                     | 36.83                              | 135%                     | 0.37                       | 0.21                       | 0.08                   | 0.00                   | 0.39                    | 0.53                   | 7 | Dual-class range 162 to 178
| III | Boeing      | 737-700 with winglets | Jet | C  | 130                  | 137    | 117.42          | 4,400    | 154,500 | 3.49                             | 89%                      | 47.66                             | 134%                     | 32.15                              | 109%                     | 0.31                       | 0.16                       | 0.16                   | 0.08                   | 0.28                    | 0.37                   | 8 | Dual-class range 162 to 178
| III | Embracer    | EMB 175 LR, extended winglets | Jet | C  | 124                  | 76     | 99.92           | 2,150    | 85,517  | 3.23                             | 96%                      | 26.46                             | 76%                      | 30.84                              | 104%                     | 0.30                       | 0.17                       | 0.14                   | 0.06                   | 0.65                    | 0.67                   | 9 | Operations 2018 = Actual Enplanements at 70% load factor. Future = 2028 Enplanments at 0.8% Annual Growth and 70% load factor
| III | Embracer    | EMB 190-E2 | Jet | C  | 124                  | 97     | 110.70          | 2,850    | 124,341 | 3.23                             | 96%                      | 67.14                             | 188%                     | 31.81                              | 108%                     | 0.20                       | 0.17                       | 0.09                   | 0.04                   | 0.48                    | 0.49                   | 10 | Aircraft Weight and Dimensions from FAA Aircraft Design Characteristics Database Oct 2018
| III | Embracer    | E 500 Standard | Jet | D  | 124                  | 66**   | 96.25           | 2,450    | 105,159 | 3.24                             | 97%                      | 68.90                             | 192%                     | 31.59                              | 107%                     | 0.24                       | 0.18                       | 0.11                   | 0.08                   | 0.31                    | 0.49                   | 11 | ASE Operational Capability from August 2018 Aircraft Feasibility analysis done by Alex Seybold - Flight Tech Engineering
| III | Bombardier  | CRJ 100/200/440 LR (CL-600-2B19) | Jet | C  | 140                  | 50     | 68.67           | 1,650    | 53,000  | 3.34                             | 100%                     | 67.00                             | 188%                     | 22.74                              | 77%                      | 0.23                       | 0.20                       | 0.09                   | 0.05                   | 0.47                    | 0.65                   | 12 | Range is nominal stated by manufacturer
| III | Bombardier  | CRJ 700/700LR | Jet | C  | 125                  | 70     | 76.37           | 4,400    | 77,000  | 3.9%                              | 100%                     | 125.12                             | 134%                     | 20.40                              | 110%                     | 0.20                       | 0.14                       | 0.06                   | 0.00                   | 0.61                    | 0.62                   | 13 | Mitsubishi M100 Spacelet | Jet | C  | 76       | 93.30   | 1,910   | 86,000   | Information not available | Notes: Noise and Emissions Source - ICAO Certification Database, August 2019 | Notes: Noise and Emissions Source - ICAO Certification Database, August 2019
# Ability to Safely Operate at ASE

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<th>Model</th>
<th>Physical Class (Engine)</th>
<th>AAC</th>
<th>Approach Speed (Knots)</th>
<th>Seating</th>
<th>Wingspan (ft.)</th>
<th>Range (NM)</th>
<th>MTOW</th>
<th>ASE Missed Approach Capable?</th>
<th>Winter</th>
<th>Summer</th>
<th>Significant Wt Penalty at ASE?</th>
<th>ASE Operation Capability Score</th>
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Notes:
- Operations 2018 = Actual Enplanements at 70% load factor. Future = 2028 Enplanements at 0.8% Annual Growth and 70% load factor.
- Aircraft Load and Dimensions from FAA Aircraft Design Characteristics Database OCT 2018.
- ASE Operational Capability from August 2018 Aircraft Feasibility analysis done by Alec Seybold - Flight Tech Engineering.
- Range is nominal stated by manufacturer.

* Single-class seating as configured for ANA for use in Japan. Range is 76 to 92.
** Dual-class seating per Manufacturer.
*** Dual-class range 138 to 153.
**** Dual-class range 162 to 178.

1 = Measurably meets community goals
2 = Generally maintains current condition
3 = Worsens current condition
# Ability to Limit Operations Growth

<table>
<thead>
<tr>
<th>ADG</th>
<th>Manufacturer</th>
<th>Model</th>
<th>Physical Class (Engine)</th>
<th>AAC</th>
<th>Approach Speed ($V_{Lo}$)</th>
<th>Seating</th>
<th>Wingspan (ft.)</th>
<th>Range (NM)</th>
<th>MTOW</th>
<th>Operations Data</th>
<th>Ability to limit Operations Score</th>
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Thank You
Are we missing anything?