2017 Business Airplanes

Business jet operators are flying more than **4.3 million missions per year**, the highest since 2009 and even more than in 2008 prior to the Great Recession.

BY **FRED GEORGE** fred.george@penton.com

The U.S. economy has shown steady improvement as indicated by the 0.2%, 0.5% and 0.6% increases for November and December 2016 and January 2017, respectively, in the Conference Board Leading Economic Index, a composite measure of manufacturing activity, consumer and business demand for goods and services, stock prices and new building permits, among other factors. But you'd never know there was any improvement from looking at the general aviation market.

New aircraft sales revenues plunged by nearly $5 billion in 2016 from one year earlier, according to the General Aviation Manufacturers Association (GAMA). Business jet deliveries fell from 718 units in 2015 to 661 units in 2016, the industry's lowest figure since 2004. Activity was strongest in North America and Europe, but a prolonged and pronounced slump in Latin America, Asia-Pacific, the Middle East and Africa dragged down total sales. North America and Europe accounted for more than 80% of turbofan deliveries and more than two-thirds of the turboprop deliveries.

GAMA reports that turboprops fared slightly better than in the previous year, with a slight uptick in deliveries from 557 units in 2015 to 582 deliveries in 2016. North America, Asia-Pacific and Europe saw slight increases, while Latin America witnessed a minor decline. Overall, turbine aircraft deliveries have remained flat since 2009 and actually declined since 2013. More telling, turbine aircraft sales revenues fell nearly 15% in 2016 compared to the previous year.

Piston aircraft deliveries also fell by nearly 5% in 2016, although North America had a slight increase, accounting for nearly 70% of the sales.

Yet, the size of the world's turbofan and turboprop fleet increased slightly to 36,674 aircraft, according to GAMA citing data published by Jetnet LLC.

Sales and deliveries of new aircraft historically have tracked with global economic activity. But that's no longer the case in the business aircraft industry, says Rolland Vincent of his eponymous Aviation Consulting firm in Plano, Texas. His firm surveys 500 business aircraft owners and operators every 90 days.

In collaboration with Utica, New York-based Jetnet, Vincent publishes quarterly history and forecast reports used for planning purposes by the business aircraft industry.

The Jetnet IQ report for first quarter 2017, for instance, says that 80% of North American respondents believe the economy there will grow faster in the next 12 months than in the previous year. More than 80% of North Americans believe the Donald Trump administration will be beneficial to aviation during the next year. And business jet operators are flying more than 4.3 million missions per year, the highest since 2009 and even more than in 2008 prior to the Great Recession.

Robert Stallard of Vertical Research Partners also notes that business aircraft operations grew at 2.9% in early 2017 year-over-year. For early 2016, year-over-year growth was only 1.1% versus 2015.

The economies of China and India should continue to expand, but the average GDP growth of 18 other nations, including the U.S., will hover near 2.0% in 2017, according to Vincent. These 20 nations account for most of the world's business aircraft.

Still, potential buyers are not rushing to new aircraft sales offices and asking for demo flights. In fact, Vincent projects that new turbofan aircraft

deliveries will drop again this year to 640 units, accompanied by a slight decline in sales revenues. And he forecasts another 5.5% decrease to 605 units in 2018.

The reason? Oversupply. Book-to-bill ratios for Bombardier, Dassault, Embraer, Gulfstream and Textron all are below 1:1, meaning that the manufacturers are taking fewer orders for new equipment than the number of units they ship from their plants. Dassault, for example, had a book-to-bill ratio of less than 0.5 to 1 in 2015 and 2016.

Asking prices for turbofan aircraft are soft in 2017. Compare list prices in *BCA*'s *May 2016 Handbook* with prices this year. Most turbofans are priced the same as last year, though a few Falcon and Gulfstream models show modest increases. To increase competitiveness, Embraer dropped the Legacy 600 in favor of the new Legacy 650E that is priced $5.7 million less than last year's Legacy 650. And Gulfstream dropped the G150 from its lineup due to low demand.

There also is a widening gap between list prices and sale prices. For instance, Vincent says Bombardier is selling some models at a 33% discount, forcing other manufacturers to sacrifice profit margins or lose sales. While the Canadian manufacturer garnered the largest number of business aircraft deliveries in 2016 among business jet makers, any such discounting would likely result in razor-thin margins.

Textron Aviation is faring better than most others. CEO Scott Ernest's capacity discipline resulted in the best book-to-bill ratio of any of the five jet makers from 2013 through 2016. But last year it still was hovering at slightly less than 1:1, according to Vincent, hardly a banner year for business jets.

This year, the FAA revised its general aviation fleet forecast, lowering growth of the general aviation fleet to 0.1% per year for the next two decades, with new turbine aircraft deliveries offsetting a projected contraction of the piston aircraft fleet, according to its Aerospace Forecast Report Fiscal Years 2017 to 2037. GAMA also notes that the general aviation pilot population is shrinking, although there was a slight uptick in student starts in 2015. While the general aviation fleet growth is lackluster, the FAA estimates that business jet operations will increase 3.0% from 2017 to 2037 in its latest forecast.

The report also says "there is uncertainty regarding the impact of the new U.S. administration's policies on economic growth." And with both U.S. Rep. Bill Shuster (R-Penn.), chairman of the House Transportation and Infrastructure Committee, and President Trump pushing to spin off FAA ATC into to a private corporation with a board of directors dominated by the airlines, business aircraft operators potentially could face substantial airspace and airport user fees.

On a more positive note, the FAA believes that the price for turbine fuel will increase only modestly in 2017 because the price of crude oil should stabilize at about $47 per barrel, up from $39 per barrel in 2016. Crude oil shouldn't again reach its 2013 price of $100 per barrel until 2026, according to the FAA Forecast.

Regardless of the price of fuel or user fees, the FAA estimates that piston

aircraft deliveries will continue to decline. In 2016, piston-engine aircraft deliveries from U.S. manufacturers were down 4.2% from 2015, according to GAMA. The FAA estimates that the piston aircraft fleet will atrophy at 0.8% per year from 2017 to 2036, due to "unfavorable pilot demographics, overall increased cost of aircraft ownership" and "new aircraft deliveries not keeping pace with retirements of the aging fleet."

Nonetheless, most piston aircraft manufacturers are hiking prices this year. That includes Cirrus Aircraft, Piper and Textron Aviation, but Mooney, whose future seems uncertain, is holding 2016 pricing for its M20 models. Notably, GAMA reports Mooney delivered just seven aircraft in 2016, and there is very little activity at the factory in Kerrville, Texas. However, the M20U Ovation Ultra and M20V Acclaim Ultra, models featuring left- and right-side doors, received certification in March, and development of the diesel-powered models was still pending as we closed this issue.

Not all the news for 2017 is bad, however. This year, Textron Aviation's 3,500-nm range super-midsize Cessna CE-700 Citation Longitude makes its debut in the Purchase Planning Handbook. Due for certification late this year, the Longitude's evolutionary design combines a stretched and strengthened Citation Latitude fuselage mated to proven wing and empennage structures that were modified and adapted for the mission. The aircraft is powered by well-proven Honeywell HTF7700L turbofans, features Garmin G5000 avionics and offers double-club seating for eight passengers.

Vincent foresees a sweet spot in the business jet market for 3,000-nm to 4,000-nm super-mids, such as the Longitude. Textron's new model could spur Bombardier, Embraer and Gulfstream to look at derivatives or new models in this segment. He's also bullish on the Falcon 5X because of its cabin size, range and fuel efficiency. But ongoing problems with its Snecma Silvercrest turbofans have slowed Dassault's development program by several years.

BOMBARDIER

Bombardier's Global 7000 did not make it into the tables this year because performance details were not released by the manufacturer. Look for its debut in the 2018 edition.

Gulfstream's 6,200-nm range, Mach 0.85 cruise G600 also is making its debut in this year's Handbook. A longer cabin, wider wingspan and longer-range derivative of the G500, it features active side-sticks, fly-by-wire (FBW) flight controls and Gulfstream's signature Symmetry flight deck. It's slated for certification late next year.

Bombardier's Global 7000 was due to make its debut in this year's *Handbook*. But the manufacturer declined to release performance details despite having two aircraft in flight testing. A third test aircraft, slated for first flight later this year, should be fully production conforming, Vincent believes. Look for the Global 7000 to appear in the 2018 *Handbook*.

The single-engine turboprop sector also remains stable to strong. Epic, Piper, Mahindra, Quest and Textron held prices unchanged or close to 2016 levels. Epic Aircraft is making changes to the E1000 to ensure it complies with upcoming certification requirements. Daher is replacing the TBM 900 with the TBM 910, a derivative upgraded with Garmin G1000 NXi avionics and other modifications. Both Daher and Pilatus increased prices in response to strong order books.

While most new piston and turbofan aircraft deliveries remain stubbornly stagnant, several developments are buoying spirits in the business aircraft industry. The European Aviation Safety Agency (EASA) issued final regulations permitting commercial single-engine turbine aircraft operations in instrument meteorological conditions (IMC). Notably, Europe is the last large business aircraft market that, with few exceptions, did not permit commercial single-engine operations in IMC.

After seven years, the 36-state International Civil Aviation Organization (ICAO) council adopted uniform CO_2 emission standards for aircraft. Such standardization facilitates creation of market-based measures to move toward carbon-neutral growth of aircraft operations by 2020. Reduction in CO_2 will be made possible by more-efficient air traffic management, use of sustainable alternative fuels, replanting rain forests and developing more-fuel-efficient aircraft.

The FAA also continues to progress through Phase II of its Piston Aviation Fuels Initiative by developing a drop-in replacement unleaded avgas by 2018. Shell Oil and Swift Fuels have been selected to partner with the FAA to develop ASTM standards for unleaded avgas that will have the least technical and financial impact on general aviation aircraft operators and establish a fuel distribution infrastructure. However, it's still not clear how much the price of that fuel will change from the cost per gallon of 100LL gasoline.

So, in the short term, look for single-engine and multiengine turboprops to be solid sellers. The piston-engine market is in for a rough ride because of aging pilot demographics, increasing direct operating costs and tougher local airport authority rules, regulations and restrictions, particularly in California. The turbofan aircraft market will remain relatively flat because of oversupply in almost all segments. But a new generation of roomy, fuel-efficient and fast U.S. transcontinental-range and transatlantic-range super-midsize to large-cabin aircraft hold the promise to lift the turbofan sector out of its doldrums. **BCA**

How to Use the Airplane Charts

BOMBARDIER

For an aircraft to be listed in the *Purchase Planning Handbook,* a production conforming article must have flown by May 1 of this year. The dimensions, weights and performance characteristics of each model listed are representative of the current production aircraft being built or for which a type certificate application has been filed. The basic operating weights we publish should be representative of actual production turboprop and turbofan aircraft because we ask manufacturers to supply us with the average weights of the last 10 commercial aircraft that have been delivered. However, spot checks of some manufacturers' BOW numbers reveal anomalies. We reserve the right to make adjustments to weights, dimensions and performance data. These data adjustments will be noted in the Remarks section for specific models as "*BCA* Estimated Data."

The takeoff field length distances are based on maximum takeoff weight for maximum range missions.

Please note that "all data preliminary" in the Remarks section indicates that actual aircraft weight, dimension and performance numbers may vary considerably after the model is certified and delivery of completed aircraft begins. ***All data for these aircraft is highlighted with a blue tint.***

Manufacturer, Model and Type Designation

In some cases, the airplane manufacturer's name is abbreviated. The model name and the type designation also are included in this group.

BCA Equipped Price

▶ Price *estimates* are first quarter, current year dollars for the next available delivery. Some aircraft have long lead times, thus the actual price will be higher than our published price because of block point changes and inflation adjustments. Note well, manufacturers may change prices without notification.

▶ **Piston-powered airplanes —** Computed retail price with at least the level of equipment specified in the "*BCA* Required Equipment List."

▶ **Turbine-powered airplanes —** Computed retail price with at least the level of equipment specified in the "*BCA* Required Equipment List," if available. Some manufacturers decline to provide us with actual prices of delivered aircraft, so we may estimate them. The aircraft serial numbers aren't necessarily

consecutive because of variations in completion time and because some aircraft may be configured for non-commercial, special missions.

Characteristics

▶ **Seating:** Crew + Typical Executive Seating/High-Density Seating/Max Certification Seating — For example, 2+8/13/19 indicates that the aircraft requires two pilots, there are eight seats in the typical executive configuration, 13 seats with optional high-density seating and up to 19 passenger seats based upon FAA and/or EASA certification limits. A four-place single-engine aircraft is shown as 1+3/3, indicating that one pilot is required and there are three other seats available for passengers. We require two pilots for all turbofan airplanes, except for single-pilot certified aircraft such as the Cirrus Vision SF-50, Eclipse 550, Cessna Citation CJ series, HondaJet and Syberjet SJ30-2, which have, or will have, a large percentage of single-pilot operators. Four crewmembers are specified for ultra-long-range aircraft — three pilots and one flight attendant. However, Dassault only provides data with three crewmembers aboard for its ultra-long-range aircraft, thus the notations for the Falcon 8X.

Each occupant of a turbine-powered airplane is assumed to weigh 200 lb., thereby allowing for stowed luggage and carry-on items. In the case of piston-engine airplanes, we assume each occupant weighs 170 lb. There is no luggage allowance for piston-engine airplanes.

▶ **Wing Loading —** MTOW divided by total wing area.

▶ **Power Loading —** MTOW divided by total rated takeoff horsepower or total rated takeoff thrust.

▶ **FAR Part 36 Certified Noise Levels —** Flyover noise in A-weighted decibels (dBA) for small and turboprop aircraft. For turbofan-powered aircraft, we provide Part 36 EPNdB (effective perceived noise levels) for Lateral, Flyover and Approach.

Dimensions

▶ **External Length, Height and Span** dimensions are provided for use in determining hangar and/or tie-down space requirements.

Internal Length, Height and Width are based on a completed interior, including insulation, upholstery, carpet, carpet padding and fixtures. Note well: These dimensions are not intended to be based upon green aircraft dimensions. They must reflect the actual net dimensions with all soft goods installed. Some manufacturers provide optimistic measurements, thus prospective buyers are advised to measure aircraft themselves.

As shown in the Cabin Interior Dimensions illustration, for small airplanes other than "cabin-class" models, the length is measured from the forward bulkhead ahead of the rudder pedals to the back of the rear-most passenger seat in its normal, upright position. The upright position of the aft seat backs allows room for luggage in the cabin.

For so-called cabin-class and larger aircraft, we show two or three dimensions, depending on aircraft class. **The first** is the overall length of the passenger cabin, measured from the aft side of the forward cockpit/cabin divider to the aft-most bulkhead of the cabin. The aft-most point is defined by the rear side of a baggage compartment that is accessible to passengers in flight or the aft pressure bulkhead. The overall length is reduced by the length of any permanent mounted system or structure that is installed in the fuselage ahead of the aft bulkhead. For example, some aircraft have full fuselage cross-section fuel tanks mounted ahead of the aft pressure bulkhead.

The second length number is the net length of the cabin that routinely is occupied by passengers. It's measured from the aft side of the forward cockpit/cabin divider to an aft point defined by the rear of the cabin floor capable of supporting passenger seats, the rear wall of an aft galley or lavatory, an auxiliary pressure bulkhead or the front wall of the pressurized baggage compartment. Some aircraft have the same net and overall interior length because the manufacturer offers at least one interior configuration with the aft-most passenger seat located next to the front wall of the aft luggage compartment.

The third length dimension is the main seating area of the cabin, including all passenger seats in the standard aircraft configuration that are certified for full-time occupancy. Some manufacturers may fit their aircraft with forward, side-facing divans, ahead of areas with individual fore-aft facing chairs. The main seating length dimension may include such forward cabin side-facing divans at the discretion of the manufacturer. The length of the lavatory, even though it may have a seat certified for full-time occupancy, may not be included in the main seating length dimension.

Interior height is measured at the center of the cabin cross-section. If the aircraft has a dropped aisle, the maximum depth below the adjacent cabin floor is shown. Some aircraft have dropped aisles of varying depths, resulting in less available interior net height in certain sections of the cabin.

Two width dimensions are shown for multiengine turbine airplanes — one at the widest part of the cabin and the other at floor level. The dimensions, however, are not completely indicative of the usable space in a specific aircraft because of individual variances in interior furnishings.

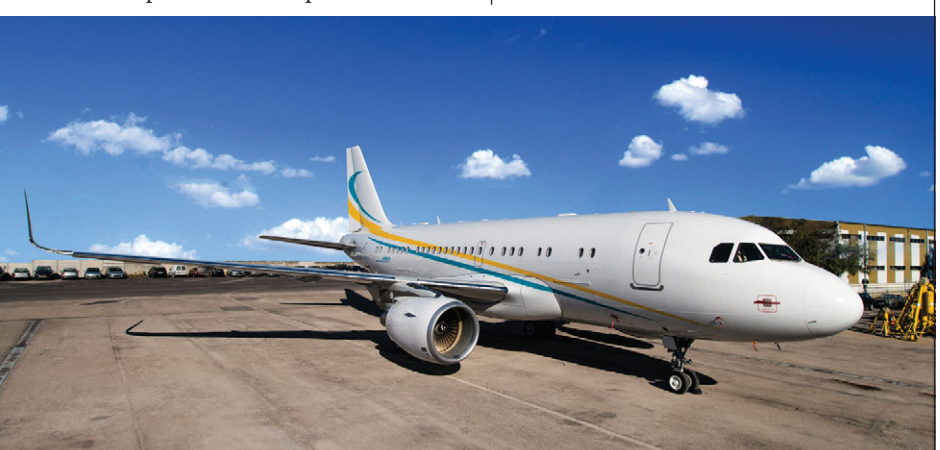
Power

Number of engines, if greater than one, and the abbreviated name of the manufacturer: GE — General Electric; GE/Honda — General Electric and Honda; Honeywell; CFMI — CFM International; IAE — International Aero Engines; Lyc — Textron Lycoming; P&WC — Pratt

& Whitney Canada; RR — Rolls-Royce; Snecma; TCM — Teledyne Continental; and Wms — Williams International.

▶ **Output —** Takeoff rated horsepower for propeller-driven aircraft or pounds thrust for turbofan aircraft. If an engine is flat rated, enabling it to produce takeoff rated output at a higher than ISA (standard day) ambient temperature, the flat rating limit is shown as ISA+XXC. Highly flat-rated engines, i.e. engines that can produce takeoff rated thrust at a much higher than standard ambient temperature, typically provide substantially improved high density altitude, climb and high-altitude cruise performance.

▶ **Inspection Interval** is the longest scheduled hourly major maintenance interval for the engine, either "t" for TBO or "c" for compressor zone inspection. In some cases, we show a second number if the engine manufacturer has obtained an extended maintenance interval, provided that the engines are enrolled in the manufacturer's service program. OC is shown only for engines that have "on condition" repair or replace parts maintenance.



AIRBUS CORPORATE JETS

Weights (lb.)

Weight categories are listed as appropriate to each class of aircraft.

▶ **Max Ramp —** Maximum ramp weight for taxi.

▶ **Max Takeoff —** Maximum takeoff weight as determined by structural limits.

▶ **Max Landing —** Maximum landing weight as determined by structural limits.

▶ **Zero Fuel —** Maximum zero fuel weiht, shown by "c," indicating the certified MZFW or "b," a *BCA*-computed weight based on MTOW minus the weight of fuel required to fly 1.5 hr. at high-speed cruise.

▶ **Max ramp, max takeoff and max landing** weights may be the same for light aircraft that may only have a certified max takeoff weight.

▶ **EOW/BOW —** Empty Operating Weight is shown for piston-powered airplanes. EOW is based on the factory standard weight, plus items specified in the "*BCA* Required Equipment List," less fuel, loose equipment and cabin stores.

Basic Operating Weight is shown for turbine-powered airplanes. BOW is based on the average EOW weight of the last 10 commercial deliveries, plus 200 lb. for each required crewmember. Three flight crewmembers and one cabin crewmember are required for ultra-long-range aircraft, unless otherwise noted.

While there is no requirement to add in the weight of cabin stores, some manufacturers choose to include galley stores and passenger supplies as part of the BOW build-up. Life vests, life rafts and appropriate deep-water survival equipment are included in the weight buildup of the 80,000+ lb., ultra-long-range aircraft.

▶ **Max Payload —** Zero Fuel weight minus EOW or BOW, as appropriate. For piston-engine airplanes, Max Payload frequently is a computed value because it is based on the *BCA* ("b") computed maximum ZFW.

▶ **Max Fuel —** Usable fuel weight based on 6.0 lb. per U.S. gallon for avgas or 6.7 lb. per U.S. gallon for jet fuel. Fuel quantity is based upon the largest capacity tanks that are available as standard equipment.

▶ **Available Payload With Max Fuel —** Max Ramp weight minus the tanks-full weight, not to exceed Zero Fuel weight minus EOW or BOW.

▶ **Available Fuel With Max Payload —** Max Ramp weight minus Zero Fuel weight, not to exceed maximum fuel capacity.

Limits

BCA lists V speeds and other limits as appropriate to the class of airplane. These are the abbreviations used on the charts:

▶ **VNE —** Never exceed speed (redline for piston-engine airplanes).

▶ **VNO —** Normal operating speed (top of the green arc for piston-engine airplanes).

▶ **VMO —** Maximum operating speed (redline for turbine-powered airplanes).

▶ **MMO —** Maximum operating Mach number (redline for turbofan-powered airplanes and a few turboprop airplanes).

▶ **FL/VMO —** Transition altitude at which VMO equals MMO (large turboprop and turbofan aircraft).

▶ **VA —** Maneuvering speed (except for certain large turboprop and all turbofan aircraft).

▶ **VDEC —** Accelerate/stop decision speed (multiengine piston and light multiengine turboprop airplanes).

▶ **VMCA —** Minimum control airspeed, airborne (multiengine piston and light multiengine turboprop airplanes).

▶ **VSO —** Maximum stalling speed, landing configuration (single-engine airplanes).

▶ **VX —** Best angle-of-climb speed (single-engine airplanes).

▶ **VXSE —** Best angle-of-climb speed, one-engine inoperative (multiengine piston and multiengine turboprop airplanes under 12,500 lb.).

▶ **VY —** Best rate-of-climb speed (single-engine airplanes).

▶ **VYSE —** Best rate-of-climb speed, one-engine inoperative (multiengine piston and multiengine turboprop airplanes under 12,500 lb.).

▶ **V2 —** Takeoff safety speed (large turboprops and turbofan airplanes).

▶ **VREF —** Reference landing approach speed (large turboprops and turbofan airplanes, four passengers, NBAA IFR reserves; eight passengers for ultra-long-range aircraft).

▶ **PSI —** Cabin pressure differential (all pressurized airplanes).

Airport Performance

Airplane Flight Manual takeoff runway performance is shown for sea level, standard day and for 5,000-ft. elevation/25C

day density altitude. All-engine takeoff distance (TO) is shown for single-engine and multiengine piston, and turboprop airplanes with an MTOW of less than 12,500 lb. Takeoff distances and speeds assume MTOW, unless otherwise noted.

▶ **Accelerate/Stop distance (A/S)** is shown for small multiengine piston and small turboprop airplanes.

▶ **Takeoff Field Length (TOFL),** the greater of the one-engine inoperative (OEI) takeoff distance or the accelerate/stop distance, is shown for FAR Part 23 Commuter Category and FAR Part 25 airplanes. If the accelerate/stop and accelerate/stop distances are equal, the TOFL is the balanced field length.

▶ **Landing distance (LD)** is shown for FAR Part 23 Commuter Category and FAR Part 25 Transport Category airplanes. The landing weight is BOW plus four passengers and NBAA IFR fuel reserves. We assume that 80,000+ lb. ultra-long-range aircraft will have eight passengers on board.

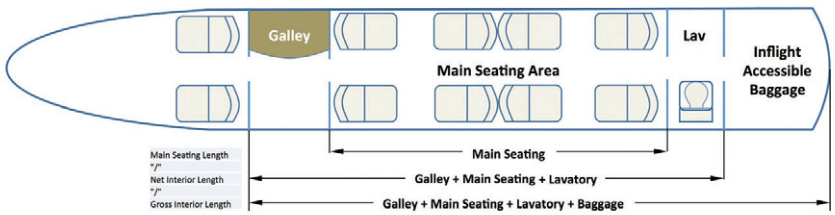
▶ **V2 and VREF** speeds are useful for reference when comparing the TOFL and LD numbers because they provide an indication of potential minimum-length runway performance when low RCR or runway gradient is a factor.

BCA lists two additional warm day airport performance numbers for large turboprop- and turbofan-powered airplanes. First, we publish the Mission Weight, which is the maximum allowable takeoff weight when departing a 5,000-ft. elevation/ISA+20C airport with at least four passengers aboard.

Mission Weight, when departing from a 5,000-ft./ISA+20C airport, may be less than the MTOW at sea level on a standard day because of FAR Part 25 second-segment, one-engine-inoperative, climb performance requirements. If maximum allowable mission weight at takeoff is restricted under said conditions, it's flagged with a "p." Aircraft with highly flat-rated engines are less likely to have a performance limited mission weight when departing under said warm day conditions.

Second, we publish the NBAA IFR range for said warm day conditions, assuming a transition into standard-day, ISA flight conditions after takeoff. For purposes of computing NBAA IFR range, the aircraft is flown at the long-range cruise speed shown in the "Cruise" block or at the same speed as shown in the "Range" block. Notably, some aircraft may actually have slightly better range performance when departing from said warm day airport because they have a 5,000-ft. head start on the climb to cruise altitude.

Cabin Length



Climb

The all-engine time to climb provides an indication of overall climb performance, especially if the aircraft has an all-engine service ceiling well above our sample time-to-climb altitudes. We provide the all-engine time to climb to one of three specific altitudes, based on type of aircraft departing at MTOW from a sea-level, standard-day airport: (1) FL 100 (10,000 ft.) for normally aspirated single-engine and multiengine piston aircraft, plus pressurized single-engine piston aircraft and unpressurized turboprop aircraft; (2) FL 250 for pressurized single-engine and multiengine turboprop aircraft; or (3) FL 370 for turbofan-powered aircraft. These data are published as time-to-climb in minutes/climb altitude. For example, if a non-pressurized twin-engine piston aircraft can depart from a sea-level airport at MTOW and climb to 10,000 ft. in 8 min., the time to climb is expressed as 8/FL 100.

We also publish the initial all-engine climb feet per nautical mile gradient, plus initial engine-out climb rate and gradient, for single-engine and multiengine pistons and turboprops with MTOWs of 12,500 lb. or less.

The one-engine-inoperative (OEI) climb rate for multiengine aircraft at MTOW is derived from the Airplane Flight Manual. OEI climb rate and gradient are based on landing gear retracted and wing flaps in the takeoff configuration used to compute the published takeoff distance. The climb gradient for such airplanes is obtained by dividing the product of the climb rate (fpm) in the Airplane Flight Manual times 60 by the VY or VYSE climb speed, as appropriate.

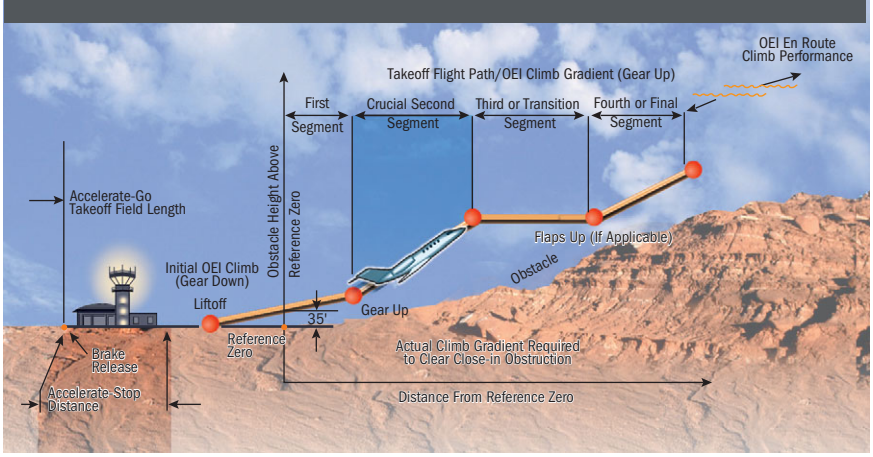
The OEI climb gradients we show for FAR Part 23 Commuter Category and FAR Part 25 Transport Category aircraft are the second-segment net climb performance numbers published in the AFMs. Please note: The AFM net second-segment climb performance numbers are adjusted downward by 0.8% to compensate for variations in pilot technique and ambient conditions.

The OEI climb gradient is computed at the same flap configuration used to calculate the takeoff field length.

Ceilings (ft.)

▶ **Maximum Certificated Altitude —** Maximum allowable operating altitude

FAR Part 25 and Part 23 Commuter Category OEI Climb Performance



determined by airworthiness authorities.

▶ **All-Engine Service Ceiling —** For turbofan aircraft: maximum altitude at which at least a 300-fpm rate of climb can be attained, assuming the aircraft departed a sea-level, standard-day airport at MTOW and climbed directly to altitude. For piston and turboprop aircraft: 100 fpm rate of climb.

▶ **OEI (Engine Out) Service Ceiling**

▶ **Sea-Level Cabin (SLC) Altitude —** Maximum cruise altitude at which a 14.7-psia, sea-level cabin altitude can be maintained in a pressurized airplane.

Cruise

Cruise performance is computed using EOW with four occupants or BOW with four passengers and one-half fuel load. Ultra-long-range aircraft carry eight passengers for purposes of computing cruise performance.

Assume 170 lb. for each occupant of a piston-engine airplane and 200 lb. for each occupant of a turbine-powered aircraft.

▶ **Long Range —** True air speed (TAS), fuel flow in pounds/hour, flight level (FL) cruise altitude and specific range for long-range cruise by the manufacturer.

▶ **Recommended (Piston-Engine Airplanes) —** TAS, fuel flow in pounds/hour, FL cruise altitude and specific range for normal cruise performance specified by the manufacturer.

▶ **High Speed —** TAS, fuel flow in pounds/hour, FL cruise altitude and specific range for short-range, high-speed performance specified by the aircraft manufacturer.

Speed, fuel flow, specific range and altitude in each category are based on one mid-weight cruise point and these data reflect standard-day conditions. They are not an average for the overall mission and they are not representative of the above standard-day temperatures at cruise altitudes commonly encountered in everyday operations.

BCA imposes a 12,000-ft. maximum cabin altitude requirement on CAR3/FAR Part 23 normally aspirated aircraft. Non-pressurized turbocharged piston-engine airplanes are limited to FL 250, providing they are fitted with supplemental oxygen systems having sufficient capacity for all occupants for the entire duration of the mission. Pressurized CAR3/FAR Part 23 aircraft are limited to a maximum cabin altitude of 10,000 ft. For FAR Part 23 Commuter Category and FAR Part 25 aircraft, the maximum cabin altitude for computing cruise performance is 8,000 ft.

To conserve space, we use flight levels (FL) for all cruise altitudes, which is appropriate considering that we assume standard-day ambient temperature and pressure conditions. Cruise performance is subject to *BCA*'s verification.

Range

BCA shows various paper missions for each aircraft that illustrate range versus payload tradeoffs, runway and cruise performance, plus fuel efficiency. Similar to the cruise profile calculations, *BCA* limits the maximum altitude to 12,000 ft. for normally aspirated, non-pressurized CAR3/FAR Part 23 aircraft, 25,000 ft. for turbocharged non-pressurized airplanes with supplemental oxygen, 10,000 ft. cabin altitude for pressurized CAR 3/FAR Part 23 airplanes and 8,000 ft. cabin altitude for FAR Part 23 Commuter Category or FAR Part 25 aircraft.

▶ **Seats-Full Range (Single-Engine Piston Airplanes) —** Based on typical executive configuration with all seats filled with 170-lb. occupants, with maximum available fuel less 45-min. IFR fuel reserves. We use the lower of seats full or maximum payload.

▶ **Tanks-Full Range (Single-Engine Piston Airplanes) —** Based on one 170-lb. pilot, full fuel less 45-min. IFR fuel reserves.

▶ **Max Fuel With Available Payload (Single-Engine Turboprops) —** Based on BOW, plus full fuel and the maximum available payload up to maximum ramp weight. Range is based on arriving at destination with NBAA IFR fuel reserves, but only a 100-mi. alternate is required.

▶ **Ferry (Multiengine Piston Airplanes and Single-Engine Turboprops) —** Based on one 170-lb. pilot, maximum fuel less 45-min. IFR fuel reserves.

Please note: None of the missions for piston-engine aircraft includes fuel for diverting to an alternate. However, single-engine turboprops are required to have NBAA IFR fuel reserves, but only a 100-mi. alternate is required.

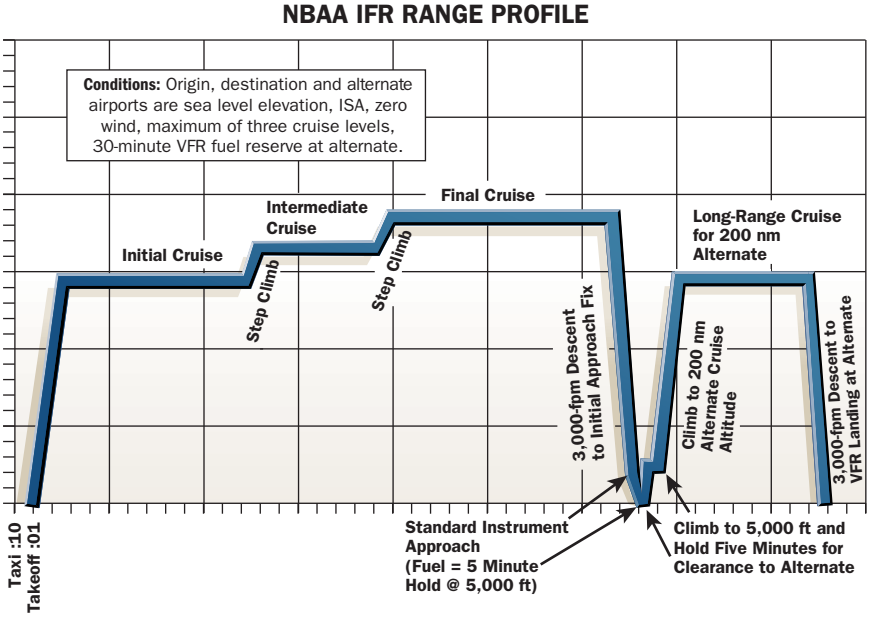
NBAA IFR range format cruise profiles, having a 200-mi. alternate, are used for turbine-powered aircraft with MTOWs equal to, or greater than, 22,000 lb. Turbine aircraft having MTOWs less than 22,000 lb. only need a 100-mi. NBAA alternate. The difference in alternate requirements should be kept in mind when comparing range performance of various classes of aircraft.

▶ **Available Fuel With Max Payload (Multiengine Turbine Airplanes) —** Based on aircraft loaded to maximum zero fuel weight with maximum available fuel up to maximum ramp weight, less NBAA IFR fuel reserves at destination.

▶ **Available Payload With Max Fuel (Multiengine Turbine Airplanes) —** Based on BOW plus full fuel and maximum available payload up to maximum ramp weight. Range based on NBAA IFR reserves at destination.

▶ **Full/Max Fuel With Four Passengers (Multiengine Turbine Airplanes) —** Based on BOW plus four 200-lb. passengers and the lesser of full fuel or maximum available fuel up to maximum ramp

NBAA IFR RANGE PROFILE



weight. Ultra-long-range aircraft must have eight passengers on board.

▶ **Ferry (Multiengine Turbine Airplanes) —** Based on BOW, required crew and full fuel, arriving at destination with NBAA IFR fuel reserves.

We allow 2,000-ft. increment step climbs above the initial cruise altitude to improve specific range performance, even though current air traffic rules in North America provide for 4,000-ft. altitude semicircular directional traffic separation above FL 290. The altitude shown in the range section is the highest cruise altitude for the trip — not the initial cruise or mid-mission altitude.

The range profiles are in nautical miles, and the average speed is computed by dividing that distance by the total flight time or weight-off-wheels time en route. The Fuel Used or Trip Fuel includes the fuel consumed for start, taxi, takeoff, cruise, descent and landing approach but not after-landing taxi or reserves.

The Specific Range is obtained by dividing the distance flown by the total fuel burn. The Altitude is the highest cruise altitude achieved on the specific mission profile shown.

TEXTRON AVIATION/CITATION LONGITUDE FIRST FLIGHT

Missions

Various paper missions are computed to illustrate the runway requirements, speeds, fuel burns and specific range, plus cruise altitudes. The mission ranges are chosen to be representative for the airplane category. All fixed-distance missions are flown with four passengers on board, except for ultra-long-range airplanes, which have eight passengers on board. The pilot is counted as a passenger on board piston-engine airplanes. If an airplane cannot complete a specific fixed distance mission with the appropriate payload, *BCA* shows a reduction of payload in the remarks section or marks the fields NP (Not Possible) at our option.

BCA Required Equipment List

	Single-Engine Pistons	Single-Engine Pistons, Turbocharged	Single-Engine Pistons, Pressurized	Multiengine Pistons	Multiengine Pistons, Turbocharged	Single-Engine Turboprops	Turboprops ≤12,500 lb.	Turboprops >12,500 lb.	Jets <20,000 lb.	Jets ≥20,000 lb.
POWERPLANT SYSTEMS										
Batt temp indicator (nicad only, for each battery)						●	●	●	●	●
Engine synchronization									●	●
Fire detection, each engine						●	●	●	●	●
Fire extinguishing, each engine						●	●	●	●	●
Propeller, reversible pitch						●	●	●		
Propellers, synchronization							●	●		
Thrust reversers									●	●
AVIONICS										
ADF receiver (non U.S. deliveries)						●	●	●	●	●
Altitude alerter						●	●	●	●	●
Altitude encoder	●	●	●	●	●	●	●	●	●	●
Audio control panel	●	●	●	●	●	●	●	●	●	●
Automatic flight guidance, 2-axis, alt hold	●	●	●	●						
Automatic flight guidance, 3-axis, alt hold					●	●	●	●	●	●
Digital air data computer							●	●	●	●
DME or approved GPS distance indication	●	●	●	●	●	●	●	●	●	●
EFIS/large-format flat-panel displays	●	●	●	●	●	●	●	●	●	●
ELT	●	●	●	●	●	●	●	●	●	●
FMS (TSO C115) or GPS (TSO C129/145/146)	●	●	●	●	●	●	●	●	●	●
Marker beacon receiver	●	●	●	●	●	●	●	●	●	●
Radio altimeter						●	●	●	●	●
RVSM certification						●	●	●	●	●
Satcom, Iridium, or Inmarsat									●	●
TAS or TCAS I						●	●	●		
TAWS						●	●	●	●	●
TCAS I/II									●	●
Transponder, Mode S 1090ES	●	●	●	●	●	●	●	●	●	●
VHF comm transceiver, 25-KHz spacing	●	●	●	●	●	●	●	●		
VHF comm tranceiver, 8.33-kHz spacing									●	●
VOR/ILS	●	●	●	●	●	●	●	●	●	●
Weather data link										
Weather radar						●	●	●	●	●
GENERAL										
Air conditioning, vapor cycle (not required with APU)				●		●	●	●	●	●
Anti-skid brakes (not required MTOW <10,000 lb.)								●	●	●
APU (required for air-start engines, ACM air conditioning)										●
Cabin/cockpit bulkhead divider								●	●	●
Corrosion-proofing	●	●	●	●	●	●	●	●	●	●
Exterior paint, tinted windows	●	●	●	●	●	●	●	●	●	●
Fire extinguisher, cabin						●	●	●	●	●
Fire extinguisher, cockpit	●	●	●	●	●	●	●	●	●	●
Fuel tanks, long-range	●	●	●	●	●					
Ground power jack	●	●	●	●	●	●	●	●	●	●
Headrests, air vents at all seats	●	●	●	●	●	●	●	●	●	●
Lavatory								●	●	●
Lights, external — nav/beacon/strobe/landing/taxi	●	●	●	●	●	●	●	●	●	●
Lights, internally illuminated instrument/cockpit flood	●	●	●	●	●	●	●	●	●	●
Oxygen, supplemental — all seats		●			●	●	●	●	●	●
Refreshment center							●	●	●	●
Seats, crew, articulating	●	●	●	●	●	●	●	●	●	●
Seats, passenger, reclining	●	●	●	●	●	●	●	●	●	●
Shoulder harness, all seats/crew with inertial reel	●	●	●	●	●	●	●	●	●	●
Tables, cabin work						●	●	●	●	●
ICE AND RAIN PROTECTION										
Alternate static pressure source (not required with dual DADC)	●	●	●	●	●	●	●			
Flight Into Known Icing (FIKI) approval			●	●	●	●	●	●	●	●
Ice protection plates							●	●		
Pitot heat	●	●	●	●	●	●	●	●	●	●
Windshield rain removal, mechanical/pneumatic/hygroscopic							●	●	●	●
INSTRUMENTATION										
Angle-of-attack stall margin indicator									●	●
EGT	●	●	●	●	●					
IVSI (or equivalent DADC function)	●	●	●	●	●	●	●	●	●	●
OAT	●	●	●	●	●	●	●	●	●	●
Primary flight instruments	●	●	●	●	●	●	●	●	●	●

● Required
● Dual Required

Runway performance is obtained from the Approved Airplane Flight Manual. Takeoff distance is listed for single-engine airplanes; accelerate/stop distance is listed for piston twins and light turboprops; and takeoff field length, which often corresponds to balanced field length, is used for FAR Part 23 Commuter Category and FAR Part 25 large Transport Category airplanes.

Flight Time (takeoff to touchdown, or weight-off-wheels, time) is shown for turbine airplanes. Some piston-engine manufacturers also include taxi time, resulting in a chock-to-chock, Block Time measurement. Fuel Used, though, is the actual block fuel burn for each type of aircraft, but it does not include fuel reserves. The cruise altitude shown is that which is specified by the manufacturer for fixed-distance missions.

- ▶ **200 nm –** (Piston-engine airplanes).
- ▶ **500 nm –** (Piston-engine airplanes).
- ▶ **300 nm –** (Turbine-engine airplanes, except ultra-long-range).
- ▶ **600 nm –** (Turbine-engine airplanes, except ultra-long-range).
- ▶ **1,000 nm –** (All turbine-engine airplanes).
- ▶ **3,000 nm –** (Ultra-long-range turbine-engine airplanes).
- ▶ **6,000 nm –** (Ultra-long-range turbine-engine airplanes).

Remarks

In this section, *BCA* generally includes the base price, if it is available or applicable; the certification basis and year; and any notes about estimations, limitations or qualifications regarding specifications, performance or price. All prices are in 2017 dollars, FOB at a U.S. delivery point, unless otherwise noted. The certification basis includes the regulation under which the airplane was originally type certified, the year in which it was originally certified and, if applicable, subsequent years during which the airplane was re-certified. "*BCA* Estimated Data" indicates that we made adjustments to data provided by manufacturers.

General

The following abbreviations are used throughout the tables: **"NA"** means not available; "—" indicates the information is not applicable and **"NP"** signifies that specific performance is not possible. **BCA**

Single-Engine Pistons normally aspirated

Manufacturer			Cirrus Design	Piper	Textron Aviation	Cirrus Design
Model			SR20	Arrow PA-28R-201	Cessna Skylane CE-182T	SR22
BCA Equipped Price			$389,900	$466,880	$480,000	$539,900
Characteristics		Seating	1+3/4	1+3/3	1+3/3	1+3/4
		Wing Loading	21.7	16.2	17.8	23.5
		Power Loading	14.65	13.75	13.48	11.61
		Noise (dBA)	83.4	77.7	77.7	83.7
External Dimensions (ft.)		Length	26.0	24.7	29.0	26.0
		Height	8.9	7.9	9.3	8.9
		Span	38.3	35.4	36.0	38.3
Internal Dimensions (ft.)		Length	8.0	7.7	7.2	8.0
		Height	4.1	3.7	4.0	4.1
		Width	4.1	3.5	3.5	4.1
Power		Engine	Lyc IO-390-C3B6	Lyc IO-360-C1C6	Lyc IO-540-AB1A5	Cont IO-550-N
		Output (hp)	215	200	230	310
		Inspection Interval	2,000t	2,000t	2,000t	2,000t
Weights (lb.)		Max Ramp	3,160	2,758	3,110	3,610
		Max Takeoff	3,150	2,750	3,100	3,600
		Max Landing	3,150	2,750	2,950	3,600
		Zero Fuel	3,043b	2,636b	2,976b	3,400c
		EOW	2,120	1,798	1,965	2,260
		Max Payload	923	838	1,011	1,140
		Useful Load	1,040	960	1,145	1,350
		Max Baggage	130	200	200	130
		Max Fuel	336	432	522	552
		Available Payload w/Max Fuel	704	528	623	798
		Available Fuel w/Max Payload	117	122	135	210
Limits		V_{NE}	201	183	175	205
		V_{NO}	164	146	140	176
		V_A	133	118	110	140
Airport Performance		TO (SL elev./ISA temp.)	2,530	1,600	1,514	1,756
		TO (5,000-ft. elev.@25C)	4,305	3,250	2,708	3,016
		V_{SO}	62	55	49	64
		V_X	81	78	65	88
		V_Y	88	90	80	108
Climb		Time to Climb (min.)/Altitude	20/FL 100	16/FL 100	15/FL 100	11/FL 100
		Initial Gradient (ft./nm)	540	560	694	775
Ceiling (ft.)		Service	17,500	16,200	18,100	17,500
Cruise	Long Range	TAS	135	124	125	160
		Fuel Flow	53	51	61	68
		Altitude	FL 080	FL 100	FL 100	FL 080
		Specific Range	2.547	2.431	2.049	2.353
	Recommended	TAS	145	130	135	171
		Fuel Flow	61	68	69	92
		Altitude	FL 080	FL 090	FL 100	FL 080
		Specific Range	2.369	1.912	1.957	1.859
	High Speed	TAS	152	137	144	180
		Fuel Flow	71	76	83	107
		Altitude	FL 080	FL 060	FL 060	FL 080
		Specific Range	2.129	1.803	1.735	1.682
Ranges	Seats Full	Nautical Miles	672	537	795	1,118
		Average Speed	135	121	131	162
		Fuel Used	275	156	414	492
		Specific Range/Altitude	2.444/FL 080	3.442/FL 070	1.920/FL 120	2.272/FL 080
	Tanks Full	Nautical Miles	672	926	912	1,118
		Average Speed	135	121	131	162
		Fuel Used	275	408	471	492
		Specific Range/Altitude	2.444/FL 080	2.270/FL 070	1.936/FL 120	2.272/FL 080
Missions (4 occupants)	200 nm	Runway	1,685	1,600	1,216	1,303
		Block Time	1+26	1+29	1+37	1+09
		Fuel Used	112	125	123	127
		Specific Range/Altitude	1.786/FL 080	1.600/FL 070	1.626/FL 120	1.575/FL 080
	500 nm	Runway	1,685	1,600	1,369	1,519
		Block Time	3+30	3+50	3+52	2+49
		Fuel Used	245	278	269	305
		Specific Range/Altitude	2.041/FL 080	1.799/FL 090	1.859/FL 120	1.639/FL 080
		Suggested Base Price	$389,900	$466,880	$480,000	$539,900
Remarks		Certification Basis	FAR 23, 1999/2017 Includes Garmin Perspective+ avionics.	CAR 3, 1976/2001 Garmin G500 standard.	FAR 23, 1996/2001 A 23-6 Garmin G1000 NXi with GFC 700 autopilot.	FAR 23, 2000 Includes Garmin Perspective+ avionics.

Single-Engine Pistons normally aspirated

Manufacturer			Mooney	*GippsAero*	Textron Aviation
Model			**Ovation Ultra M20U**	***Airvan GA-8***	**Beechcraft Bonanza G36 G36**
BCA Equipped Price			$689,000	*$726,960*	$815,000
Character-istics		Seating	1+3/4	*1+6/7*	1+4/5
		Wing Loading	19.3	*20.7*	20.2
		Power Loading	10.86	*13.33*	12.17
		Noise (dBA)	NA	*84.9*	76.7
External Dimensions (ft.)		Length	26.9	*29.3*	27.5
		Height	8.3	*12.8*	8.6
		Span	36.1	*40.7*	33.5
Internal Dimensions (ft.)		Length	8.1	*11.6*	12.6
		Height	3.7	*3.7*	4.2
		Width	3.6	*4.2*	3.5
Power		Engine	Cont IO-550-G-AP	*Lyc IO-540-K1A5*	Cont IO-550-B
		Output (hp)	310	*300*	300
		Inspection Interval	2,200t	*2,000t*	1,900t
Weights (lb.)		Max Ramp	3,374	*4,014*	3,663
		Max Takeoff	3,368	*4,000*	3,650
		Max Landing	3,200	*4,000*	3,650
		Zero Fuel	3,197b	*3,849b*	3,509b
		EOW	2,260	*2,241*	2,600
		Max Payload	937	*1,608*	909
		Useful Load	1,114	*1,773*	1,063
		Max Baggage	120	*180*	670
		Max Fuel	600	*540*	444
		Available Payload w/Max Fuel	514	*1,233*	619
		Available Fuel w/Max Payload	177	*166*	154
Limits		V_{NE}	195	*185*	203
		V_{NO}	174	*143*	165
		V_A	127	*121*	139
Airport Perfor-mance		TO (SL elev./ISA temp.)	2,300	*1,860*	1,913
		TO (5,000-ft. elev.@25C)	3,400	*3,670*	3,450
		V_{SO}	59	*57*	59
		V_X	75	*70*	84
		V_Y	105	*86*	100
Climb		Time to Climb (min.)/Altitude	10/FL 100	*15/FL 100*	14/FL 100
		Initial Gradient (ft./nm)	NA	*787*	730
Ceiling (ft.)		Service	NA	*20,000*	18,500
Cruise	**Long Range**	TAS	163	*127*	160
		Fuel Flow	50	*78*	71
		Altitude	FL 120	*FL 120*	FL 080
		Specific Range	3.260	*1.628*	2.254
	Recommended	TAS	186	*135*	167
		Fuel Flow	84	*88*	86
		Altitude	FL 121	*FL 080*	FL 080
		Specific Range	2.214	*1.534*	1.942
	High Speed	TAS	196	*142*	174
		Fuel Flow	114	*101*	94
		Altitude	FL 080	*FL 060*	FL 080
		Specific Range	1.719	*1.406*	1.851
Ranges	**Seats Full**	Nautical Miles	1,075	*487*	217
		Average Speed	161	*124*	153
		Fuel Used	438	*339*	115
		Specific Range/Altitude	2.454/FL 121	*1.437/FL 120*	1.887/FL 040
	Tanks Full	Nautical Miles	1,465	*690*	859
		Average Speed	173	*125*	159
		Fuel Used	558	*464*	403
		Specific Range/Altitude	2.625/FL 121	*1.487/FL 120*	2.132/FL 080
Missions (4 occupants)	**200 nm**	Runway	1,230	*1,860*	1,664
		Block Time	1+13	*1+38*	1+11
		Fuel Used	115	*157*	130
		Specific Range/Altitude	1.739/FL 050	*1.274/FL 120*	1.538/FL 060
	500 nm	Runway	1,290	*1,860*	1,870
		Block Time	2+58	*3+55*	2+54
		Fuel Used	221	*339*	304
		Specific Range/Altitude	2.262/FL 100	*1.475/FL 120*	1.645/FL 060
		Suggested Base Price	$689,000	*$726,960*	$815,000
Remarks		Certification Basis	CAR 3/FAR 23, 1955/94; STC SA02483CH Includes Garmin G1000; composite fuselage shell with left and right doors.	*FAR 23 A 54 Includes Garmin G500. All data preliminary. 2016 data.*	CAR 3, 1956/69/83/2005 A/C system standard; Garmin G1000 NXi.

Single-Engine Pistons turbocharged

Manufacturer			Cirrus	Textron Aviation	Textron Aviation	*GippsAero*	Mooney
Model			SR22T SR 22	Cessna Turbo Stationair HD CE-T206H	Cessna TTx CE-T240	*GA8 Airvan TC* *GA8-320 TC*	Acclaim Ultra M020V
BCA Equipped Price			$639,900	$665,000	$715,000	*$761,030*	$769,000
Characteristics		Seating	1+3/4	1+5/5	1+3/3	*1+6/7*	1+3/3
		Wing Loading	23.5	21.8	25.5	*20.7*	19.2
		Power Loading	11.43	12.22	11.61	*13.13*	12.03
		Noise (dBA)	80.3	82.6	81.4	*85.4*	78.0
External Dimensions (ft.)		Length	26.0	28.3	25.2	*28.3*	26.9
		Height	8.9	9.3	9.0	*9.3*	8.3
		Span	38.3	36.0	36.0	*36.0*	36.4
Internal Dimensions (ft.)		Length	8.0	9.3	7.9	*11.6*	8.1
		Height	4.1	4.1	4.1	*3.7*	3.7
		Width	4.1	3.7	4.0	*4.2*	3.6
Power		Engine	Cont TSIO-550-K	Lyc TIO-540-AJ1A	Cont TSIO-550-C	*Lyc* *TIO-540-AH1A*	Cont TSIO-550-G
		Output (hp)	315	310	310	*320*	280
		Inspection Interval	2,000t	2,000t	2,000t	*1,800t*	2,200t
Weights (lb.)		Max Ramp	3,610	3,806	3,600	*4,214*	3,374
		Max Takeoff	3,600	3,789	3,600	*4,200*	3,368
		Max Landing	3,600	3,600	3,420	*4,000*	3,200
		Zero Fuel	3,400c	3,618b	3,300c	*4,053b*	3,173b
		EOW	2,342	2,336	2,535	*2,349*	2,378
		Max Payload	1,058	1,282	765	*1,704*	795
		Useful Load	1,268	1,470	1,065	*1,865*	996
		Max Baggage	130	180	120	*180*	120
		Max Fuel	552	522	612	*540*	612
		Available Payload w/Max Fuel	716	948	453	*1,325*	384
		Available Fuel w/Max Payload	210	188	300	*161*	201
Limits		V_{NE}	205	182	230	*185*	195
		V_{NO}	176	149	181	*143*	174
		V_A	140	125	158	*121*	127
Airport Performance		TO (SL elev./ISA Temp.)	1,517	1,970	1,900	*1,840*	1,900
		TO (5,000-ft. elev.@25C)	2,268	2,845	2,460	*2,788*	3,300
		V_{SO}	64	59	61	*61*	60
		V_X	88	70	82	*71*	80
		V_Y	103	88	110	*81*	105
Climb		Time to Climb (min.)/Altitude	7/FL 100	12/FL 100	7/FL 100	*13/FL 100*	7/FL 100
		Initial Gradient (ft./nm)	782	724	701	*825*	770
Ceilings (ft.)		Certificated	25,000	25,000	25,000	*20,000*	25,000
		Service	25,000	27,000	25,000	*20,000*	25,000
Cruise	Long Range	TAS	171	137	208	*125*	215
		Fuel Flow	76	85	78	*68*	99
		Altitude	FL 250	FL 240	FL 250	*FL 200*	FL 250
		Specific Range	2.250	1.612	2.667	*1.838*	2.172
	Recommended	TAS	201	155	227	*130*	227
		Fuel Flow	98	99	130	*78*	128
		Altitude	FL 250	FL 240	FL 250	*FL 200*	FL 180
		Specific Range	2.051	1.566	1.746	*1.667*	1.773
	High Speed	TAS	213	164	235	*135*	242
		Fuel Flow	110	114	152	*98*	130
		Altitude	FL 250	FL 200	FL 250	*FL 200*	FL 250
		Specific Range	1.936	1.439	1.546	*1.378*	1.862
Ranges	Seats Full	Nautical Miles	1,021	512	666	*233*	500
		Average Speed	171	137	202	*125*	178
		Fuel Used	486	387	345	*220*	259
		Specific Range/Altitude	2.101/FL 250	1.323/FL 200	1.930/FL 250	*1.059/FL 200*	1.931/FL 160
	Tanks Full	Nautical Miles	1,021	655	1,270	*618*	1,122
		Average Speed	171	138	204	*125*	200
		Fuel Used	486	459	572	*459*	539
		Specific Range/Altitude	2.101/FL 250	1.427/FL 240	2.220/FL 250	*1.346/FL 200*	2.082/FL 250
Missions (4 occupants)	200 nm	Runway	1,405	1,396	1,730	*1,743*	1,300
		Block Time	1+08	1+23	1+03	*1+35*	1+05
		Fuel Used	197	163	159	*125*	139
		Specific Range/Altitude	1.015/FL 100	1.227/FL 150	1.258/FL 150	*1.600/FL 120*	1.439/FL 120
	500 nm	Runway	1,699	1,597	1,880	*1,743*	1,380
		Block Time	2+28	3+22	2+24	*3+30*	2+54
		Fuel Used	360	385	338	*373*	259
		Specific Range/Altitude	1.389/FL 180	1.299/FL 240	1.479/FL 250	*1.340/FL 200*	1.931/FL 250
		Suggested Base Price	$639,900	$665,000	$715,000	*$597,500*	$769,000
Remarks		Certification Basis	FAR 23, 2010 Includes Garmin Perspective+ Global avionics.	FAR 23, 1998 Utility version w/2,183-lb. EOW, $658,650; Garmin G1000 NXi w/GFC 700 a/p; new interior.	FAR 23 Includes Garmin G2000, SVT, AP, TAWS, TAS, ESP, A/C, Ti LE, leather.	*FAR 23, 1998* *Garmin G500; KC 225* *All data preliminary.* *2016 data.*	CAR 3, 1955/89/2006 Includes Garmin G1000; new composite fuselage shell with left and right doors.

Single-Engine Pistons pressurized

Manufacturer			Piper Aircraft	Piper Aircraft
Model			Matrix PA-46R-350	M350 PA-46-350P
BCA Equipped Price			$916,680	$1,178,610
Character-istics		Seating	1+4/5	1+4/5
		Wing Loading	24.8	24.8
		Power Loading	12.40	12.40
		Noise (dBA)	81.0	81.0
External Dimensions (ft.)		Length	28.9	28.9
		Height	11.3	11.3
		Span	43.0	43.0
Internal Dimensions (ft.)		Length	12.4	12.4
		Height	3.9	3.9
		Width	4.2	4.2
Power		Engine	Lyc TIO-540-AE2A	Lyc TIO-540-AE2A
		Output (hp)	350	350
		Inspection Interval	2,000t	2,000t
Weights (lb.)		Max Ramp	4,358	4,358
		Max Takeoff	4,340	4,340
		Max Landing	4,123	4,123
		Zero Fuel	4,123c	4,123c
		EOW	2,969	3,146
		Max Payload	1,154	977
		Useful Load	1,389	1,212
		Max Baggage	200	200
		Max Fuel	720	720
		Available Payload w/Max Fuel	669	492
		Available Fuel w/Max Payload	235	235
Limits		V_{NE}	198	198
		V_{NO}	168	168
		V_A	133	133
		PSI	5.5	5.5
Airport Performance		TO (SL elev./ISA temp.)	2,090	2,090
		TO (5,000-ft. elev.@25C)	2,977	2,977
		V_{SO}	58	58
		V_X	81	81
		V_Y	110	110
Climb		Time to Climb (min.)/Altitude	8/FL 100	8/FL 100
		Initial Gradient (ft./nm)	703	703
Ceilings (ft.)		Certificated	25,000	25,000
		Service	25,000	25,000
		Sea-Level Cabin	—	12,300
Cruise	Long Range	TAS	156	156
		Fuel Flow	66	66
		Altitude	FL 250	FL 250
		Specific Range	2.364	2.364
	Recommended	TAS	203	203
		Fuel Flow	108	108
		Altitude	FL 250	FL 250
		Specific Range	1.880	1.880
	High Speed	TAS	213	213
		Fuel Flow	120	120
		Altitude	FL 250	FL 250
		Specific Range	1.775	1.775
Ranges	Seats Full	Nautical Miles	867	535
		Average Speed	151	138
		Fuel Used	457	312
		Specific Range/Altitude	1.897/FL 200	1.715/FL 120
	Tanks Full	Nautical Miles	1,343	1,343
		Average Speed	158	159
		Fuel Used	658	670
		Specific Range/Altitude	2.041/FL 250	2.004/FL 250
Missions (4 occupants)	200 nm	Runway	2,090	2,090
		Block Time	1+07	1+06
		Fuel Used	168	167
		Specific Range/Altitude	1.190/FL 120	1.198/FL 200
	500 nm	Runway	2,090	2,090
		Block Time	2+31	2+31
		Fuel Used	350	350
		Specific Range/Altitude	1.429/FL 250	1.429/FL 250
		Suggested Base Price	$916,680	$1,178,610
Remarks		Certification Basis	FAR 23, 1983/88 Garmin G1000; FIKI optional.	FAR 23, 1983/88 Garmin G1000; FIKI optional.

Multiengine Pistons normally aspirated

Manufacturer			Vulcanair SpA	Vulcanair SpA
Model			P.68C P 68C	Victor P 68R
BCA Equipped Price			$830,800	$848,200
Character-istics		Seating	1+5/6	1+5/6
		Wing Loading	22.9	22.7
		Power Loading	11.49	11.37
		Noise (dBA)	74.7	78.8
External Dimensions (ft.)		Length	31.3	31.3
		Height	11.2	11.2
		Span	39.4	39.4
Internal Dimensions (ft.)		Length	10.6	10.6
		Height	3.9	3.9
		Width	3.8	3.8
Power		Engines	2 Lyc IO-360-A1B6	2 Lyc IO-360-A1B6
		Output (hp each)	200	200
		Inspection Interval	2,000t	2,000t
Weights (lb.)		Max Ramp	4,630	4,548
		Max Takeoff	4,594	4,548
		Max Landing	4,365	4,321
		Zero Fuel	4,167c	4,374b
		EOW	3,153	3,197
		Max Payload	1,014	1,177
		Useful Load	1,477	1,351
		Max Fuel	1,063	1,063
		Available Payload w/Max Fuel	415	289
		Available Fuel w/Max Payload	463	174
Limits		V_{NE}	194	197
		V_{NO}	154	157
		V_A	132	127
Airport Performance		TO (SL elev./ISA Temp.)	1,312	1,260
		TO (5,000-ft. elev.@25C)	4,000	4,000
		A/S (SL elev./ISA)	2,150	1,410
		A/S (5,000-ft. elev.@25C)	2,950	2,370
		V_{MCA}	60	60
		V_{DEC}	70	70
		V_{XSE}	82	82
		V_{YSE}	88	88
Climb		Time to Climb (min.)/Altitude	12/FL 100	12/FL 100
		Initial Engine-Out Rate (fpm)	217	217
		Initial All-Engine Gradient (ft./nm)	1,100	920
		Initial Engine-Out Gradient (ft./nm)	147	147
Ceilings (ft.)		Certificated	—	—
		All-Engine Service	18,000	20,000
		Engine-Out Service	5,000	5,650
Cruise	Long Range	TAS	144	144
		Fuel Flow	94	94
		Altitude	FL 080	FL 080
		Specific Range	1.532	1.532
	Recommended	TAS	155	155
		Fuel Flow	108	108
		Altitude	FL 080	FL 080
		Specific Range	1.435	1.435
	High Speed	TAS	162	162
		Fuel Flow	116	116
		Altitude	FL 080	FL 080
		Specific Range	1.397	1.397
Ranges	Max Payload	Nautical Miles	300	300
		Average Speed	140	140
		Trip Fuel	315	315
		Specific Range/Altitude	0.952/FL 080	0.952/FL 080
	Ferry	Nautical Miles	1,000	1,000
		Average Speed	145	145
		Trip Fuel	975	975
		Specific Range/Altitude	1.026/FL 080	1.026/FL 080
Missions (4 occupants)	200 nm	Runway	1,450	1,450
		Block Time	1+28	1+28
		Fuel Used	140	140
		Specific Range/Altitude	1.429/FL 080	1.429/FL 080
	500 nm	Runway	1,500	1,500
		Block Time	3+25	3+25
		Fuel Used	375	375
		Specific Range/Altitude	1.333/FL 080	1.333/FL 080
		Suggested Base Price	$830,800	$848,200
Remarks		Certification Basis	FAR 23, 1976/80 Garmin G950; STEC 55X DFCS. *BCA* estimated data.	EASA 23, 2009 Garmin G950; STEC 55X DFCS. *BCA* estimated data.

Multiengine Pistons normally aspirated

Manufacturer			Textron Aviation
Model			Beechcraft Baron G58 G58
BCA Equipped Price			$1,400,000
Character-istics		Seating	1+4/5
		Wing Loading	27.6
		Power Loading	9.17
		Noise (dBA)	77.6
External Dimensions (ft.)		Length	29.8
		Height	9.8
		Span	37.8
Internal Dimensions (ft.)		Length	12.6
		Height	4.2
		Width	3.5
Power		Engines	2 Cont IO-550-C
		Output (hp each)	300
		Inspection Interval	1,900t
Weights (lb.)		Max Ramp	5,524
		Max Takeoff	5,500
		Max Landing	5,400
		Zero Fuel	5,215b
		EOW	3,970
		Max Payload	1,245
		Useful Load	1,554
		Max Fuel	1,164
		Available Payload w/Max Fuel	390
		Available Fuel w/Max Payload	309
Limits		V_{NE}	223
		V_{NO}	195
		V_A	165
Airport Performance		TO (SL elev./ISA Temp.)	2,345
		TO (5,000-ft. elev.@25C)	4,144
		A/S (SL elev./ISA)	3,009
		A/S (5,000-ft. elev.@25C)	4,335
		V_{MCA}	84
		V_{DEC}	85
		V_{XSE}	100
		V_{YSE}	101
Climb		Time to Climb (min.)/Altitude	10/FL 100
		Initial Engine-Out Rate (fpm)	390
		Initial All-Engine Gradient (ft./nm)	988
		Initial Engine-Out Gradient (ft./nm)	232
Ceilings (ft.)		Certificated	—
		All-Engine Service	20,688
		Engine-Out Service	7,284
Cruise	Long Range	TAS	185
		Fuel Flow	144
		Altitude	FL 080
		Specific Range	1.285
	Recommended	TAS	192
		Fuel Flow	174
		Altitude	FL 080
		Specific Range	1.103
	High Speed	TAS	200
		Fuel Flow	190
		Altitude	FL 080
		Specific Range	1.053
Ranges	Max Payload	Nautical Miles	333
		Average Speed	178
		Trip Fuel	293
		Specific Range/Altitude	1.137/FL 040
	Ferry	Nautical Miles	1,480
		Average Speed	180
		Trip Fuel	1,081
		Specific Range/Altitude	1.369/FL 120
Missions (4 occupants)	200 nm	Runway	2,862
		Block Time	1+02
		Fuel Used	226
		Specific Range/Altitude	0.885/FL 060
	500 nm	Runway	2,941
		Block Time	2+31
		Fuel Used	531
		Specific Range/Altitude	0.942/FL 060
		Suggested Base Price	$1,400,000
Remarks		Certification Basis	CAR 3, 1957/69/83/2005 A/C system standard; Garmin G1000.

Multiengine Pistons turbocharged

Manufacturer			Vulcanair SpA	Piper Aircraft
Model			P 68C-TC P 68C-TC	Seneca V PA-34-220T
BCA Equipped Price			$877,500	$999,900
Character-istics		Seating	1+5/5	1+4/5
		Wing Loading	20.7	22.8
		Power Loading	10.94	10.80
		Noise (dBA)	74.7	75.6
External Dimensions (ft.)		Length	31.3	28.6
		Height	11.2	9.9
		Span	39.4	38.9
Internal Dimensions (ft.)		Length	10.6	10.4
		Height	3.9	3.6
		Width	3.8	4.1
Power		Engines	2 Lyc TIO-360-C1A6D	2 Cont TSIO-360-RB
		Output (hp each)	210	220
		Inspection Interval	2,000t	1,800t
Weights (lb.)		Max Ramp	4,630	4,773
		Max Takeoff	4,594	4,750
		Max Landing	4,365	4,513
		Zero Fuel	4,140b	4,479c
		EOW	3,197	3,491
		Max Payload	943	988
		Useful Load	1,433	1,282
		Max Fuel	1,062	732
		Available Payload w/Max Fuel	371	550
		Available Fuel w/Max Payload	490	294
Limits		V_{NE}	194	204
		V_{NO}	154	164
		V_A	132	139
Airport Perfor-mance		TO (SL elev./ISA temp.)	1,260	1,707
		TO (5,000-ft. elev.@25C)	2,200	2,435
		A/S (SL elev./ISA)	1,800	2,510
		A/S (5,000-ft. elev.@25C)	2,400	3,117
		V_{MCA}	66	66
		V_{DEC}	NA	73
		V_{XSE}	78	83
		V_{YSE}	88	88
Climb		Time to Climb (min.)/Altitude	10/FL 100	7/FL 100
		Initial Engine-Out Rate (fpm)	240	253
		Initial All-Engine Gradient (ft./nm)	1,400	996
		Initial Engine-Out Gradient (ft./nm)	NA	173
Ceilings (ft.)		Certificated	20,000	25,000
		All-Engine Service	20,000	25,000
		Engine-Out Service	10,000	16,500
Cruise	Long Range	TAS	144	167
		Fuel Flow	104	108
		Altitude	FL 080	FL 230
		Specific Range	1.385	1.546
	Recommended	TAS	155	196
		Fuel Flow	125	144
		Altitude	FL 080	FL 250
		Specific Range	1.240	1.361
	High Speed	TAS	162	200
		Fuel Flow	150	156
		Altitude	FL 080	FL 230
		Specific Range	1.080	1.282
Range	Ferry	Nautical Miles	1,100	866
		Average Speed	145	160
		Trip Fuel	960	648
		Specific Range/Altitude	1.146/FL 080	1.336/FL 180
Missions (4 occupants)	200 nm	Runway	NA	1,520
		Block Time	1+28	1+10
		Fuel Used	260	213
		Specific Range/Altitude	0.769/FL 080	0.939/FL 120
	500 nm	Runway	NA	1,610
		Block Time	3+25	2+41
		Fuel Used	485	476
		Specific Range/Altitude	1.031/FL 080	1.050/FL 200
		Suggested Base Price	$877,500	$999,900
Remarks		Certification Basis	FAR 23, 1982 Garmin G950 glass cockpit; STEC 55X DFGS. *BCA* estimated data.	FAR 23, 1971/80/97 Garmin G1000 standard.

Single-Engine Turboprops

Manufacturer			Mahindra Aerospace	Textron Aviation	Piper Aircraft	Quest Aircraft	Textron Aviation
Model			Airvan 10 GA-10	Cessna Caravan CE-208	M500 PA-46-500TP	Kodiak Kodiak 100	Cessna Grand Caravan EX CE-208B
BCA Equipped Price			$999,500*	$1,950,000	$1,999,900	$2,454,725	$2,527,900
Characteristics		Seating	1+9/—	1+9/13*	1+4/5	1+6/9	1+9/13*
		Wing Loading	28.6	28.6	27.8	30.2	31.3
		Power Loading	10.56	11.85	10.18	9.67	10.16
		Noise (dBA)	79.0	79.0	76.8	84.4	84.1
External Dimensions (ft.)		Length	33.5	37.6	29.6	33.8	41.6
		Height	12.7	14.9	11.3	15.3	14.8
		Span	40.6	52.1	43.0	45.0	52.1
Internal Dimensions (ft.)		Length	16.1	12.7	12.3	15.8	16.7
		Height	3.8	4.5	3.9	4.8	4.5
		Width	4.2	5.3	4.1	4.5	5.3
Power		Engine	RR M250 B-17F/2	P&WC PT6A-114A	P&WC PT6A-42A	P&WC PT6A-34	P&WC PT6A-140
		Output (shp)/Flat Rating	450/ISA+31C	675/ISA+31C	500/ISA+55C	750/ISA+7C	867/ISA+24C
		Inspection Interval	3,500t	3,600t	3,600t	4,000t	3,600t
Weights (lb.)		Max Ramp	4,775	8,035	5,134	7,305	8,842
		Max Takeoff	4,750	8,000	5,092	7,255	8,807
		Max Landing	4,750	7,800	4,850	7,255	8,500
		Zero Fuel	4,182b	7,432b	4,850c	6,490c	8,152b
		BOW	2,475	4,930	3,634	4,417	5,510
		Max Payload	1,707	2,502	1,216	2,073	2,642
		Useful Load	2,300	3,105	1,500	2,888	3,332
		Max Fuel	1,025	2,224	1,160	2,144	2,246
		Available Payload w/Max Fuel	1,275	881	340	744	1,086
		Available Fuel w/Max Payload	594	604	284	815	691
Limits		V_{MO}	175	175	188	180	175
		V_A	150	150	127	143	148
		PSI	—	—	5.6	—	—
Airport Performance		TO (SL elev./ISA temp.)	1,600	2,055	2,438	1,468	2,160
		TO (5,000-ft. elev.@25C)	2,973	2,973	3,691	2,396	3,661
		V_{SO}	61	61	69	60	61
		V_X	90	90	95	73	86
		V_Y	107	107	125	101	108
Climb		Time to Climb (min.)/Altitude	9/FL 100	9/FL 100	19/FL 250	9/FL 100	9/FL 100
		Initial Gradient (ft./nm)	771	771	753	915	816
Ceilings (ft.)		Certificated	20,000	25,000	30,000	25,000	25,000
		Service	25,000	25,000	30,000	25,000	25,000
		Sea-Level Cabin	—	—	12,600	—	—
Cruise	Long Range	TAS	157	157	179	164	156
		Fuel Flow	281	281	135	251	328
		Altitude	FL 100	FL 100	FL 280	220	FL 100
		Specific Range	0.559	0.559	1.326	0.653	0.476
	High Speed	TAS	186	186	258	175	185
		Fuel Flow	379	379	242	335	437
		Altitude	FL 100	FL 100	FL 280	FL 120	FL 100
		Specific Range	0.491	0.491	1.066	0.522	0.423
NBAA IFR Ranges (100-nm alternate)	Full Fuel (with available payload)	Nautical Miles	965	288	834	1,005	291
		Average Speed	156	153	171	175	155
		Trip Fuel	1,795	581	748	2,130	676
		Specific Range/Altitude	0.538/FL 100	0.496/FL 100	1.115/FL 280	0.472/120	0.430/FL 100
	Ferry	Nautical Miles	970	970	834	1,236	816
		Average Speed	156	156	171	164	156
		Trip Fuel	1,800	1,800	748	2,130	1,772
		Specific Range/Altitude	0.539/FL 100	0.539/FL 100	1.115/FL 280	0.580/FL 200	0.460/FL 100
Missions (4 passengers)	300 nm	Runway	1,468	1,468	1,550	1,468	1,428
		Flight Time	1+40	1+40	1+22	1+47	1+41
		Fuel Used	648	648	379	587	750
		Specific Range/Altitude	0.463/FL 100	0.463/FL 100	0.792/FL 280	0.511/FL 120	0.400/FL 100
	600 nm	Runway	1,675	1,675	1,625	1,468	1,792
		Flight Time	3+17	3+17	2+32	3+30	3+19
		Fuel Used	1,260	1,260	660	1,140	1,462
		Specific Range/Altitude	0.476/FL 100	0.476/FL 100	0.909/FL 280	0.526/FL 120	0.410/FL 100
	1,000 nm	Runway	NP	NP	1,700	1,467	NP
		Flight Time	NP	NP	4+18	5+47	NP
		Fuel Used	NP	NP	985	1,878	NP
		Specific Range/Altitude	NP	NP	1.015/FL 280	0.532/FL 120	NP
		Suggested Base Price	NA	NA	$1,999,900	$2,075,000	NA
Remarks		Certification Basis	FAR 23, 1984/98 **BCA* estimated price. Garmin G1000 with GFC700 autopilot. 2016 data.	FAR 23, 1984/98 *Export only. Garmin G1000 with GFC700 autopilot.	FAR 23 A 52 *1,000 nm, 3 passengers. Garmin G1000 with SVS.	FAR 23, 2007 Normal category Includes Garmin G1000; GFC700 with coupled GA; Summit interior option.	FAR 23, 1986/2012 *Export only. Includes cargo pod, Garmin G1000 with GFC700 autopilot.

Single-Engine Turboprops

Manufacturer			Piper Aircraft	*Epic Aircraft*	Daher	Daher	Pilatus
Model			M600 PA-46-600TP	*Epic* *E1000*	TBM 910 TBM 700 N	TBM 930 TBM 700 N	PC-12 NG PC-12/47E
BCA Equipped Price			$2,899,000	*$2,995,000*	$3,683,260	$3,979,750	$4,923,000
Characteristics		Seating	1+4/5	*1+5/6*	1+5/6	1+5/6	1+7/10
		Wing Loading	28.7	*36.9*	38.2	38.2	37.6
		Power Loading	10.00	*6.25*	8.70	8.70	8.71
		Noise (dBA)	76.8	*76.0*	76.2	76.2	77.0
External Dimensions (ft.)		Length	29.6	*35.8*	35.2	35.2	47.3
		Height	11.3	*12.5*	14.3	14.3	14.0
		Span	43.2	*43.0*	42.1	42.1	53.3
Internal Dimensions (ft.)		Length	12.3	*10.5*	15.0	15.0	16.9
		Height	3.9	*4.9*	4.1	4.1	4.8
		Width	4.1	*4.6*	4.0	4.0	5.0
Power		Engine	P&WC PT6A-42A	*P&WC* *PT6A-67A*	P&WC PT6A-66D	P&WC PT6A-66D	P&WC PT6A-67P
		Output (shp)/Flat Rating	600/ISA+55C	*1,200/ISA+35C*	850/ISA+49C	850/ISA+49C	1,200/ISA+35C
		Inspection Interval	3,600t	*3,500t*	3,500t	3,500t	3,500t
Weights (lb.)		Max Ramp	6,050	*7,500*	7,430	7,430	10,495
		Max Takeoff	6,000	*7,500*	7,394	7,394	10,450
		Max Landing	5,800	*7,500*	7,024	7,024	9,921
		Zero Fuel	4,850c	*5,400c*	6,032c	6,032c	9,039c
		BOW	3,850	*4,600*	4,829	4,829	6,782
		Max Payload	1,000	*800*	1,203	1,203	2,257
		Useful Load	2,200	*2,900*	2,601	2,601	3,713
		Max Fuel	1,742	*1,876*	2,017	2,017	2,704
		Available Payload w/Max Fuel	458	*1,024*	584	584	1,009
		Available Fuel w/Max Payload	1,200	*2,100*	1,398	1,398	1,456
Limits		V_{MO}	250	*280*	266	266	240
		V_A	151	*170*	160	160	163
		PSI	5.6	*6.7*	6.2	6.2	5.8
Airport Performance		TO (SL elev./ISA temp.)	2,635	*1,600*	2,380	2,380	2,600
		TO (5,000-ft. elev.@25C)	3,998	*NA*	3,475	3,475	4,270
		V_{SO}	62	*65*	65	65	67
		V_X	95	*124*	100	100	120
		V_Y	122	*144*	124	124	130
Climb		Time to Climb (min.)/Altitude	21/FL 250	*10/FL 250*	13/FL 250	13/FL 250	20/FL 250
		Initial Gradient (ft./nm)	785	*1,500*	1,000	1,000	860
Ceilings (ft.)		Certificated	30,000	*34,000*	31,000	31,000	30,000
		Service	30,000	*34,000*	31,000	31,000	30,000
		Sea-Level Cabin	12,600	*18,000*	14,390	14,390	13,100
Cruise	**Long Range**	TAS	184	*265*	252	252	225
		Fuel Flow	155	*268*	241	241	268
		Altitude	FL 280	*FL 280*	FL 310	FL 310	FL 300
		Specific Range	1.187	*0.989*	1.046	1.046	0.840
	High Speed	TAS	274	*330*	330	330	285
		Fuel Flow	324	*402*	412	412	497
		Altitude	FL 280	*FL 280*	FL 260	FL 260	FL 200
		Specific Range	0.846	*0.821*	0.801	0.801	0.573
NBAA IFR Ranges (100-nm alternate)	**Full Fuel** (with available payload)	Nautical Miles	1,406	*1,650*	1,514	1,514	1,608
		Average Speed	179	*265*	252	252	261
		Trip Fuel	1,324	*1,599*	1,599	1,599	2,282
		Specific Range/Altitude	1.062/FL 280	*1.032/FL 310*	0.947/FL 310	0.947/FL 310	0.705/FL 300
	Ferry	Nautical Miles	1,406	*1,594*	1,594	1,594	1,650
		Average Speed	179	*252*	252	252	264
		Trip Fuel	1,324	*1,598*	1,598	1,598	2,294
		Specific Range/Altitude	1.062/FL 280	*0.997/FL 310*	0.997/FL 310	0.997/FL 310	0.719/FL 300
Missions (4 passengers)	**300 nm**	Runway	1,593	*1,765*	1,765	1,765	1,563
		Flight Time	1+21	*1+00*	1+00	1+00	1+10
		Fuel Used	429	*440*	440	440	549
		Specific Range/Altitude	0.699/FL 280	*0.682/FL 280*	0.682/FL 280	0.682/FL 280	0.546/FL 260
	600 nm	Runway	1,687	*2,005*	2,005	2,005	1,753
		Flight Time	2+31	*1+55*	1+55	1+55	2+16
		Fuel Used	735	*830*	830	830	975
		Specific Range/Altitude	0.816/FL 280	*0.723/FL 280*	0.723/FL 280	0.723/FL 280	0.615/FL 270
	1,000 nm	Runway	1,812	*2,380*	2,380	2,380	2,026
		Flight Time	4+06	*3+10*	3+10	3+10	3+46
		Fuel Used	1,142	*1,320*	1,320	1,320	1,520
		Specific Range/Altitude	0.876/FL 280	*0.758/FL 290*	0.758/FL 290	0.758/FL 290	0.658/FL 280
		Suggested Base Price	$2,899,000	*NA*	$3,658,336	$3,899,887	$4,095,000
Remarks		Certification Basis	FAR 23 A 62, 2016 Garmin G3000 with SVS and enhanced AFCS.	*FAR 23 pending Garmin G1000 NXi.*	FAR 23, 1990/2006/07/14 Pilot door standard; 5-blade propeller; G1000 NXi; AoA-ESP-USP; satcom; weather; 5-year system warranty.	FAR 23, 1990/2006/07/14 All features of TBM 900 plus advanced interior; Garmin G3000; 5-year system warranty.	FAR 23, 1996/2005/08 Honeywell APEX avionics; SmartView; ADS-B Out; BMW executive interior; Hartzell 5-blade propeller.

Multiengine Turboprops ≤12,500-LB. MTOW

Manufacturer			Vulcanair SpA	Nextant Aerospace	*Evektor*	Textron Aviation
Model			Viator AP68TP-600	G90XT C90	*Outback EV-55*	Beechcraft King Air C90GTx C90GTi
BCA Equipped Price			$2,485,900	$2,750,000	*$3,000,000*	$3,595,000
Characteristics		Seating	1+7/10	1+7/10	*1+9/14*	1+7/8
		Wing Loading	33.0	34.4	*37.4*	34.4
		Power Loading	10.08	9.55	*9.46*	9.53
		Noise (dBA)	71.7	71.7	*NA*	74.8
External Dimensions (ft.)		Length	37.0	35.5	*46.6*	35.5
		Height	11.9	14.3	*16.8*	14.3
		Span	39.4	NA	*53.2*	50.3
Internal Dimensions (ft.)		**Length:** OA/Net	11.9/17.2	12.4/12.4	*16.5/20.0*	12.4/12.4
		Height	4.1	4.8	*4.5*	4.8
		Width: Max/Floor	3.7/3.7	4.5/4.1	*5.3/4.7*	4.5/4.1
Power		Engines	2 RR 250 B17C	2 GE Czech H75-100	*2 P&WC PT6A-21*	2 P&WC PT6A-135A
		Output (shp each)/Flat Rating	328/ISA+25C	550/ISA+8C	*536/ISA+15C*	550/ISA+30C
		Inspection Interval	3,500t	4,000t	*3,600t*	3,600t
Weights (lb.)		Max Ramp	6,669	10,560	*10,207*	10,545
		Max Takeoff	6,613	10,500	*10,141*	10,485
		Max Landing	6,283	9,700	*10,141*	9,832
		Zero Fuel	5,621c	9,650c	*9,810c*	9,378c
		BOW	3,850	7,200	*5,965*	7,265
		Max Payload	1,771	2,450	*3,845*	2,113
		Useful Load	2,819	3,360	*4,242*	3,280
		Max Fuel	1,487	2,573	*3,413*	2,573
		Available Payload w/Max Fuel	1,332	787	*829*	707
		Available Fuel w/Max Payload	1,048	910	*397*	1,167
Limits		V_{MO}	200	208	*205*	226
		V_A	141	169	*140*	169
		PSI	—	5.0	*—*	5.0
Airport Performance		TO (SL elev./ISA temp.)	2,034	2,100	*1,378*	1,984
		TO (5,000-ft. elev.@25C)	2,950	2,800	*1,837*	3,375
		A/S (SL elev./ISA temp.)	2,034	3,800	*1,722*	3,690
		A/S (5,000-ft. elev.@25C)	2,953	5,100	*2,395*	5,855
		V_{MCA}	77	92	66	80
		V_{DEC}	85	97	*79*	97
		V_{XSE}	90	101	*92*	100
		V_{YSE}	105	111	*95*	108
Climb		Time to Climb (min.)/Altitude	7/FL 100	18/FL 250	*6/FL 010*	18/FL 250
		Initial Engine-Out Rate (fpm)	270	460	*290*	460
		Initial All-Engine Gradient (ft./nm)	1,500	1,900	*1,107*	1,900
		Initial Engine-Out Gradient (ft./nm)	180	260	*219*	260
Ceilings (ft.)		Certificated	25,000	30,000	*24,000*	30,000
		All-Engine Service	25,000	30,000	*24,000*	30,000
		Engine-Out Service	8,050	22,000	*15,420*	19,230
		Sea-Level Cabin	—	11,065	*—*	11,065
Cruise	**Long Range**	TAS	169	213	*180*	208
		Fuel Flow	261	292	*432*	332
		Altitude	FL 100	FL 280	*FL 010*	FL 260
		Specific Range	0.648	0.729	*0.417*	0.627
	High Speed	TAS	214	283	*220*	270
		Fuel Flow	375	578	*610*	612
		Altitude	FL 100	FL 240	*FL 200*	FL 200
		Specific Range	0.571	0.490	*0.361*	0.441
NBAA IFR Ranges (100-nm alternate)	**Max Payload** (with available fuel)	Nautical Miles	543	324	*NP*	260
		Average Speed	180	203	*NP*	229
		Trip Fuel	781	600	*NP*	620
		Specific Range/Altitude	0.695/FL 100	0.540/FL 220	*NP/—*	0.419/FL 270
	Max Fuel (with available payload)	Nautical Miles	837	1,300	*1,046*	1,026
		Average Speed	179	207	*217*	252
		Trip Fuel	1,220	1,782	*3,008*	2,044
		Specific Range/Altitude	0.686/FL 100	0.730/FL 280	*0.348/FL 100*	0.502/FL 270
	Full Fuel (with 4 passsengers)	Nautical Miles	837	1,290	*1,046*	975
		Average Speed	179	207	*217*	252
		Trip Fuel	1,220	1,769	*3,008*	1,949
		Specific Range/Altitude	0.686/FL 100	0.729/FL 280	*0.348/FL 100*	0.500/FL 270
	Ferry	Nautical Miles	837	1,369	*1,051*	1,045
		Average Speed	179	203	*218*	255
		Trip Fuel	1,220	1,850	*3,008*	2,053
		Specific Range/Altitude	0.686/FL 100	0.740/FL 280	*0.349/FL 100*	0.509/FL 270
Missions (4 passengers)	**300 nm**	Runway	1,247	3,010	*3,163*	3,004
		Flight Time	1+35	1+06	*1+26*	1+13
		Fuel Used	419	584	*943*	748
		Specific Range/Altitude	0.716/FL 100	0.514/FL 220	*0.318/FL 100*	0.401/FL 210
	600 nm	Runway	1,558	3,350	*1,289*	3,347
		Flight Time	3+18	2+12	*2+22*	2+22
		Fuel Used	866	1,162	*1,773*	1,353
		Specific Range/Altitude	0.693/FL 100	0.516/FL 280	*0.338/FL 100*	0.443/FL 230
	1,000 nm	Runway	NP	3,500	*1,565*	3,690
		Flight Time	NP	3+39	*4+ 36*	3+57
		Fuel Used	NP	1,938	*2,881*	1,990
		Specific Range/Altitude	NP/NP	0.516/FL 280	*0.347/FL 100*	0.503/FL 270
		Suggested Base Price	$2,485,900	NA	*NA*	NA
Remarks		Certification Basis	FAR 23, 1986 Garmin G950; STEC 2100 autopilot. *BCA* estimated data.	ST01902CH; SA3593NM; SA4010NM; SA3593NM; SA01902CH; SA01456WI-D; SA02133SE.	*EASA/FAR 23 pending 2016 data.*	CAR 3, 1959/2007 Pro Line Fusion standard.; STC SA10747SC weight increase; SA02054SE winglets; SA3593NM swept props; SA4010NM dual aft strakes; , 1,000-nm mission, 755-lb. pld.

Multiengine Turboprops ≤12,500-LB. MTOW

Manufacturer			Textron Aviation	Viking Air	Piaggio Aero Industries
Model			**Beechcraft King Air 250 B200GT**	**400 Series DHC-6-400**	**Avanti Evo P180**
BCA Equipped Price			$5,995,000	$6,500,000	$7,695,000
Characteristics		Seating	1+8/10	1+11/19	1+7/9
		Wing Loading	40.3	29.8	70.3
		Power Loading	7.35	10.08	7.12
		Noise (dBA)	TBD	85.6	75.0
External Dimensions (ft.)		Length	43.8	51.8	47.3
		Height	14.8	19.5	13.0
		Span	57.9	65.0	46.0
Internal Dimensions (ft.)		**Length:** OA/Net	16.7/16.7	18.4/24.5	17.5/17.5
		Height	4.8	4.9	5.8
		Width: Max/Floor	4.5/4.1	5.4/4.4	6.1/3.5
Power		Engines	2 P&WC PT6A-52	2 P&WC PT6A-34	2 P&WC PT6A-66B
		Output (shp each)/Flat Rating	850/ISA+37C	620/ISA+27C	850/ISA+28C
		Inspection Interval	3,600t	3,600t	3,600t
Weights (lb.)		Max Ramp	12,590	12,525	12,150
		Max Takeoff	12,500	12,500	12,100
		Max Landing	12,500	12,300	11,500
		Zero Fuel	11,000c	11,655b	9,800c
		BOW	8,830	8,100	8,375
		Max Payload	2,170	3,555	1,425
		Useful Load	3,760	4,425	3,775
		Max Fuel	3,645	3,549	2,802
		Available Payload w/Max Fuel	115	876	973
		Available Fuel w/Max Payload	1,590	870	2,350
Limits		V_{MO}	260	170	260
		V_A	182	136	202
		PSI	6.5	—	9.0
Airport Performance		TO (SL elev./ISA temp.)	2,111	1,490	3,262
		TO (5,000-ft. elev.@25C)	3,099	NA	4,700
		A/S (SL elev./ISA temp.)	3,687	2,220	5,750
		A/S (5,000-ft. elev.@25C)	4,859	NA	7,400
		V_{MCA}	86	66	100
		V_{DEC}	94	NA	106
		V_{XSE}	115	NA	132
		V_{YSE}	121	NA	140
Climb		Time to Climb (min.)/Altitude	13/FL 250	NA/FL 100	10/FL 250
		Initial Engine-Out Rate (fpm)	682	340	670
		Initial All-Engine Gradient (ft./nm)	1,170	NA	1,106
		Initial Engine-Out Gradient (ft./nm)	364	NA	287
Ceilings (ft.)		Certificated	35,000	25,000	41,000
		All-Engine Service	35,000	26,700	39,400
		Engine-Out Service	26,000	11,600	23,800
		Sea-Level Cabin	15,293	—	24,000
Cruise	**Long Range**	TAS	256	NA	318
		Fuel Flow	430	NA	408
		Altitude	FL 350	FL 100	FL 410
		Specific Range	0.595	NA	0.779
	High Speed	TAS	310	180	400
		Fuel Flow	750	580	792
		Altitude	FL 260	FL 100	FL 310
		Specific Range	0.413	0.310	0.505
NBAA IFR Ranges (100-nm alternate)	**Max Payload** (with available fuel)	Nautical Miles	321	NP	1,070
		Average Speed	267	NP	315
		Trip Fuel	870	NP	1,715
		Specific Range/Altitude	0.369/FL 330	NP	0.624/FL 390
	Max Fuel (with available payload)	Nautical Miles	1,403	NA	1,450
		Average Speed	291	NA	311
		Trip Fuel	2,941	NA	2,167
		Specific Range/Altitude	0.477/FL 330	NA/FL 100	0.669/FL 410
	Full Fuel (with 4 passsengers)	Nautical Miles	1,038	NA	1,510
		Average Speed	288	NA	317
		Trip Fuel	2,225	NA	2,167
		Specific Range/Altitude	0.467/FL 330	NA/FL 100	0.697/FL 410
	Ferry	Nautical Miles	1,420	NA	1,530
		Average Speed	293	NA	318
		Trip Fuel	2,942	NA	2,167
		Specific Range/Altitude	0.483/FL 330	NA/FL 100	0.706/FL 410
Missions (4 passengers)	**300 nm**	Runway	3,504	NA	2,350
		Flight Time	1+03	NA	0+53
		Fuel Used	869	NA	688
		Specific Range/Altitude	0.345/FL 250	NA/FL 100	0.436/FL 310
	600 nm	Runway	3,587	NA	2,550
		Flight Time	2+03	NA	1+44
		Fuel Used	1,494	NA	1,144
		Specific Range/Altitude	0.402/FL 290	NA/FL 100	0.524/FL 350
	1,000 nm	Runway	3,677	NA	2,700
		Flight Time	3+28	NA	3+02
		Fuel Used	2,147	NA	1,603
		Specific Range/Altitude	0.466/FL 330	NA/FL 100	0.624/FL 390
		Suggested Base Price	NA	NA	$7,395,000
Remarks		Certification Basis	FAR 23, 1973/80/2008/11 Rockwell Collins Pro Line Fusion standard; Wi-Fi optional; STC SA02131SE.	EASA/FAR 23 A 57, 2010 2016 data.	EASA 23, 2014; FAR 23, 2015 Includes Rockwell Collins Pro Line 21 avionics; TCAS I; Iridium satcom; RVSM approved; optional 390-lb. capacity internal tank: $275,000.

Multiengine Turboprops >12,500-LB. MTOW

Manufacturer			Textron Aviation	Textron Aviation	Textron Aviation	Textron Aviation
Model			Beechcraft King Air 250 EP B200GT	Beechcraft King Air 350i B300	Beechcraft King Air 350HW B300	Beechcraft King Air 350iER B300ER
BCA Equipped Price			$6,231,025	$6,995,000	$7,329,055	$8,445,625
Characteristics		Seating	1+8/10	1+9/11	1+9/14	1+9/11
		Wing Loading	43.3	48.4	53.2	53.2
		Power Loading	7.89	7.14	7.86	7.86
		Noise (dBA)	85.3	72.1	81.5	81.5
External Dimensions (ft.)		Length	43.8	46.7	46.7	46.7
		Height	14.8	14.3	14.3	14.3
		Span	57.9	57.9	57.9	57.9
Internal Dimensions (ft.)		**Length:** OA/Net	16.7/16.7	19.5/19.5	19.5/19.5	19.5/19.5
		Height	4.8	4.8	4.8	4.8
		Width: Max/Floor	4.5/4.1	4.5/4.1	4.5/4.1	4.5/4.1
Power		Engines	2 P&WC PT6A-52	2 P&WC PT6A-60A	2 P&WC PT6A-60A	2 P&WC PT6A-60A
		Output (shp each)/Flat Rating	850/ISA+37C	1,050/ISA+10C	1,050/ISA+10C	1,050/ISA+10C
		Inspection Interval	3,600t	3,600t	3,600t	3,600t
Weights (lb.)		Max Ramp	13,510	15,100	16,600	16,600
		Max Takeoff	13,420	15,000	16,500	16,500
		Max Landing	12,500	15,000	15,675	15,675
		Zero Fuel	11,000c	12,500c	13,000c	13,000c
		BOW	8,865	9,955	9,290	10,215
		Max Payload	2,135	2,545	3,710	2,785
		Useful Load	4,645	5,145	7,310	6,385
		Max Fuel	3,645	3,611	3,611	5,192
		Available Payload w/Max Fuel	1,000	1,534	3,699	1,193
		Available Fuel w/Max Payload	2,510	2,600	3,600	3,600
Limits		M_{MO}	0.58	0.58	0.58	0.58
		Trans. Alt. FL/V_{MO}	FL 210/259	FL 210/263	FL 240/245	FL 240/245
		V_A	182	182	182	182
		PSI	6.5	6.6	6.6	6.5
Airport Performance		TO (SL elev./ISA temp.)	4,005	3,300	4,057	4,057
		TOFL (5,000-ft. elev.@25C)	5,780	5,376	5,140	7,675
		Mission Weight	13,220	14,196	13,686	16,100
		NBAA IFR Range	1,430	1,549	1,445	2,257
		V_2	109	109	111	111
		V_{REF}	97	100	104	104
		Landing Distance	2,780	2,390	2,720	2,728
Climb		Time to Climb (min.)/Altitude	15/FL 250	15/FL 250	23/FL 250	18/FL 250
		*FAR 25 Initial Engine-Out Rate (fpm)	580	552	274	337
		FAR 25 Initial Engine-Out Gradient (ft./nm)	255	304	172	182
Ceilings (ft.)		Certificated	35,000	35,000	35,000	35,000
		All-Engine Service	35,000	35,000	35,000	35,000
		Engine-Out Service	24,400	21,500	17,100	17,100
		Sea-Level Cabin	15,293	15,293	15,293	15,293
Cruise	**Long Range**	TAS	233	235	232	238
		Fuel Flow	369	362	392	402
		Altitude	FL 350	FL 330	FL 330	FL 330
		Specific Range	0.631	0.649	0.592	0.592
	High Speed	TAS	308	312	303	303
		Fuel Flow	750	773	766	764
		Altitude	FL 260	FL 240	FL 240	FL 240
		Specific Range	0.411	0.404	0.396	0.397
NBAA IFR Ranges (100-nm alternate)	**Max Payload** (with available fuel)	Nautical Miles	802	896	1,254	1,316
		Average Speed	275	273	258	261
		Trip Fuel	1,802	1,891	2,838	2,880
		Specific Range/Altitude	0.445/FL 330	0.474/FL 350	0.442/FL 350	0.457/FL 350
	Max Fuel (with available payload)	Nautical Miles	1,393	1,485	1,260	2,223
		Average Speed	283	280	258	269
		Trip Fuel	2,947	2,944	2,884	4,528
		Specific Range/Altitude	0.473/FL 330	0.504/FL 350	0.437/FL 350	0.491/FL 350
	Full Fuel (with 4 passsengers)	Nautical Miles	1,414	1,533	1,437	2,271
		Average Speed	285	285	276	271
		Trip Fuel	2,950	2,951	2,930	4,533
		Specific Range/Altitude	0.479/FL 330	0.519/FL 350	0.490/FL 350	0.501/FL 350
	Ferry	Nautical Miles	1,442	1,560	1,473	2,338
		Average Speed	289	289	282	276
		Trip Fuel	2,956	2,958	2,942	4,543
		Specific Range/Altitude	0.488/FL 330	0.527/FL 350	0.501/FL 350	0.515/FL 350
Missions (4 passengers)	**300 nm**	Runway	3,524	2,586	2,634	2,795
		Flight Time	1+05	1+02	1+06	1+05
		Fuel Used	848	881	954	919
		Specific Range/Altitude	0.354/FL 250	0.341/FL 250	0.314/FL 250	0.326/FL 250
	600 nm	Runway	3,611	2,702	2,746	2,927
		Flight Time	2+05	2+02	2+07	2+07
		Fuel Used	1,472	1,470	1,561	1,529
		Specific Range/Altitude	0.408/FL 290	0.408/FL 290	0.384/FL 290	0.392/FL 290
	1,000 nm	Runway	3,702	2,827	2,883	3,048
		Flight Time	3+31	3+27	3+33	3+35
		Fuel Used	2,123	2,102	2,227	2,195
		Specific Range/Altitude	0.471/FL 330	0.476/FL 330	0.449/FL 330	0.456/FL 330
		Suggested Base Price	NA	NA	NA	NA
Remarks		Certification Basis	FAR 23, 1973/80/2008/11 Commuter category Rockwell Collins Pro Line Fusion; Wi-Fi optional; STC SA11103SC for IGW; 14,000-lb. MTOW also available.	FAR 23, 1989 Commuter category Rockwell Collins Pro Line Fusion; Wi-Fi standard; RVSM approved.	FAR 23, 1989/2007 Commuter category 17,500-lb. MTOW optional; Rockwell Collins Pro Line Fusion; Wi-Fi standard; factory-installed Slick interior available for special missions; RVSM approved.	FAR 23, 1989/2007 Commuter category Rockwell Collins Pro Line Fusion; Wi-Fi standard; RVSM approved.

Jets <10,000-LB. MTOW

Manufacturer			Cirrus Design	Eclipse Aerospace
Model			**Vision SF-50**	**Eclipse 550 EA-500**
BCA Equipped Price			$1,960,000	$2,995,000
Characteristics		Seating	1+4/6	1+4/5
		Wing Loading	30.7	41.0
		Power Loading	1.67	3.33
		Noise (EPNdB): Lateral/Flyover/Approach	NA/NA/NA	69.2/78.9/81.9
External Dimensions (ft.)		Length	30.7	33.5
		Height	10.9	11.0
		Span	38.7	37.9
Internal Dimensions (ft.)		**Length:** OA/Net	11.5/9.8	12.3/10.0
		Height/Dropped Aisle Depth	4.1/NA	4.2/NA
		Width: Max/Floor	5.1/3.1	4.7/3.0
Baggage		**Internal:** Cu. ft./lb.	24/NA	16/260
		External: Cu. ft./lb.	30/NA	NA/NA
Power		Engine(s)	1 Wms Intl FJ33-5A	2 P&WC PW610F
		Output (lb. each)/Flat Rating	1,800/ISA+10C	900/ISA+10C
		Inspection Interval/Manu. Service Plan Interval	3,500t/—	3,500t/—
Weights (lb.)		Max Ramp	6,040	6,034
		Max Takeoff	6,000	6,000
		Max Landing	5,550	5,600
		Zero Fuel	4,900c	4,922c
		BOW	3,772	3,923
		Max Payload	1,128	999
		Useful Load	2,268	2,111
		Max Fuel	2,000	1,680
		Available Payload w/Max Fuel	268	431
		Available Fuel w/Max Payload	1,140	1,112
Limits		M_{MO}	0.530	0.640
		Trans. Alt. FL/V_{MO}	FL 183/250	FL 200/285
		PSI	6.4	8.7
Airport Performance		TOFL (SL elev./ISA temp.)	2,036	2,394
		TOFL (5,000-ft. elev.@25C)	3,679	4,171
		Mission Weight	6,000	5,893
		NBAA IFR Range	1,125	1,015
		V_2	90	102*
		V_{REF}	87	89
		Landing Distance	1,628	2,340
Climb		Time to Climb/Altitude	NA/FL 370	25/FL 370
		FAR 25 Engine-Out Rate (fpm)	NA	500
		FAR 25 Engine-Out Gradient (ft./nm)	NA	294
Ceilings (ft.)		Certificated	28,000	41,000
		All-Engine Service	28,000	41,000
		Engine-Out Service	NA	25,000
		Sea-Level Cabin	NA	21,500
Cruise	**Long Range**	TAS	256	334
		Fuel Flow	358	321
		Altitude	FL 280	FL 410
		Specific Range	0.715	1.040
	High Speed	TAS	300	369
		Fuel Flow	466	462
		Altitude	FL 280	FL 350
		Specific Range	0.644	0.799
NBAA IFR Ranges (100-nm alternate)	**Max Payload** (with available fuel)	Nautical Miles	550	530
		Average Speed	251	307
		Trip Fuel	845	677
		Specific Range/Altitude	0.651/FL 280	0.783/FL 410
	Max Fuel (with available payload)	Nautical Miles	1,167	1,125
		Average Speed	248	319
		Trip Fuel	1,602	1,254
		Specific Range/Altitude	0.728/FL 280	0.897/FL 410
	Four Passengers (with available fuel)	Nautical Miles	796	825
		Average Speed	250	317
		Trip Fuel	1,076	965
		Specific Range/Altitude	0.740/FL 280	0.855/FL 410
	Ferry	Nautical Miles	1,219	1,190
		Average Speed	218	312
		Trip Fuel	1,680	1,263
		Specific Range/Altitude	0.726/FL 280	0.942/FL 410
Missions (4 passengers)	**300 nm**	Runway	1,857	2,038
		Flight Time	1+10	0+58
		Fuel Used	568	456
		Specific Range/Altitude	0.528/FL 280	0.658/FL 350
	600 nm	Runway	2,171	2,258
		Flight Time	2+15	1+46
		Fuel Used	1,033	837
		Specific Range/Altitude	0.581/FL 280	0.717/FL 390
	1,000 nm	Runway	2,437	2,318
		Flight Time	3+36	3+04
		Fuel Used	1,642	1,137
		Specific Range/Altitude	0.609/FL 280	0.880/FL 410
Remarks		Certification Basis	FAR 23, 2016 Some data preliminary.	FAR 23, 2006/15 1,000-nm mission flown with 3 passengers. *V50 used in lieu of V2. 2016 data.

Jets <20,000-LB. MTOW

Manufacturer			Textron Aviation	Embraer	Textron Aviation	Honda Aircraft Co.	Nextant Aerospace
Model			Cessna Citation Mustang CE-510	Phenom 100 EV EMB-500	Cessna Citation M2 CE-525	HondaJet HA-420	Nextant 400 XTi BE 400A
BCA Equipped Price			$3,350,000	$4,495,000	$4,500,000	$4,850,000	$5,304,500
Characteristics		Seating	1+5/5/—	1+5/7/7	1+7/7/—	1+5/6/6	2+7/9/—
		Wing Loading/Power Loading	41.2/2.96	53.1/3.09	44.6/2.72	60.0/2.60	67.6/2.67
		Noise (EPNdB): Lateral/Flyover/Approach	73.9/85.0/86.0	70.4/81.4/86.1	85.9/73.2/88.5	85.4/72.9/87.5	76.9/91.5/88.8
External Dimensions (ft.)		Length	40.6	42.1	42.6	42.6	48.4
		Height	13.4	14.3	13.9	14.9	13.9
		Span	43.2	40.4	47.3	39.8	43.5
Internal Dimensions (ft.)		**Length:** Main Seating/Net/Gross	6.7/9.8/9.8	9.0/11.0/11.0	8.8/11.0/11.0	12.1/12.1/NA	15.5/15.5/—
		Height/Dropped Aisle Depth	4.5/0.3	4.9/0.3	4.8/0.4	4.8/NA	4.8/flat floor
		Width: Max/Floor	4.6/3.1	5.1/3.6	4.8/3.1	5.0/NA	4.9/4.0
Baggage		**Internal:** Cu. ft./lb.	6/98	10/99	—/—	NA/NA	27/410
		External: Cu. ft./lb.	57/620	60/418	46/725	66/500	26/450
Power		Engines	2 P&WC PW615F	2 P&WC PW 617F-E	2 Wms Intl FJ44-1AP-21	2 GE Honda HF-120-H1A	2 Wms Intl FJ44-3AP
		Output (lb. each)/Flat Rating	1,460/ISA+10C	1,730/ISA+8C	1,965/ISA+7C	2,037/ISA+10C	3,052/ISA+7C
		Inspection Interval/Manu. Service Plan Interval	3,500t/—	3,500t/—	3,500t/5,000	NA/—	5,000t/—
Weights (lb.)		Max Ramp	8,730	10,748	10,800	10,680	16,500
		Max Takeoff	8,645	10,703	10,700	10,600	16,300
		Max Landing	8,000	9,877	9,900	9,860	15,700
		Zero Fuel	6,750c	9,072c	8,400c	8,800c	13,000c
		BOW	5,600	7,298	6,990	7,279	10,950
		Max Payload	1,150	1,774	1,410	1,521	2,050
		Useful Load	3,130	3,450	3,810	3,401	5,550
		Max Fuel	2,580	2,804	3,296	2,845	4,912
		Available Payload w/Max Fuel	550	646	514	556	638
		Available Fuel w/Max Payload	1,980	1,676	2,400	1,880	3,500
Limits		M_{MO}	0.630	0.700	0.710	0.720	0.780
		Trans. Alt. FL/V_{MO}	FL 271/250	280/275	FL 305/263	FL 302/270	FL 290/320
		PSI/Sea-Level Cabin	8.3/21,280	8.3/21,280	8.5/22,027	8.8/23,060	9.1/24,000
Airport Performance		TOFL (SL elev./ISA temp.)	3,110	3,199	3,210	3,934	3,821
		TOFL (5,000-ft. elev.@25C)	6,600	5,663	5,580	6,108	5,088
		Mission Weight	8,645	10,703	10,700	10,600	14,500p
		NBAA IFR Range	984	1,092	1,204	1,223	1,197
		V_2	97	99	111	120	116
		V_{REF}	88	95	101	105	105
		Landing Distance	2,137	2,473	2,340	2,795	2,960
Climb		Time to Climb/Altitude	20/FL 370	19/FL 370	18/FL 370	15/FL 370	16/FL 370
		FAR 25 Engine-Out Rate (fpm)	432	597	618	933	305
		FAR 25 Engine-Out Gradient (ft./nm)	267	316	334	400	158
Ceilings (ft.)		Certificated	41,000	41,000	41,000	43,000	45,000
		All-Engine Service	41,000	41,000	41,000	43,000	45,000
		Engine-Out Service	26,900	24,045	26,800	27,000	27,500
Cruise	**Long Range**	TAS/Fuel Flow (lb./hr.)	319/498	340/543	323/516	360/558	406/740
		Altitude/Specific Range	FL 390/0.641	FL 410/0.626	FL 410/0.626	FL 430/0.645	FL 450/0.549
	High Speed	TAS/Fuel Flow (lb./hr.)	339/609	406/955	401/920	420/972	447/968
		Altitude/Specific Range	FL 350/0.557	FL 330/0.425	FL 350/0.436	FL 330/0.432	FL 430/0.462
NBAA IFR Ranges (FAR Part 23, 100-nm alternate; FAR Part 25, 200-nm alternate)	**Max Payload** (with available fuel)	Nautical Miles	716	466	812	600	1,024
		Average Speed	294	325	361	347	367
		Trip Fuel	1,300	1,036	1,706	1,230	2,411
		Specific Range/Altitude	0.551/FL 410	0.450/FL 410	0.476/FL 410	0.488/FL 430	0.425/FL 450
	Max Fuel (with available payload)	Nautical Miles	1,141	1,194	1,357	1,282	1,895
		Average Speed	304	333	372	361	384
		Trip Fuel	1,947	2,196	2,675	2,273	3,953
		Specific Range/Altitude	0.586/FL 410	0.544/FL 410	0.507/FL 410	0.564/FL 430	0.479/FL 450
	Four Passengers (with available fuel)	Nautical Miles	963	1,092	1,183	1,065	1,801
		Average Speed	301	333	370	361	383
		Trip Fuel	1,664	2,038	2,352	1,976	3,706
		Specific Range/Altitude	0.579/FL 410	0.536/FL 410	0.503/FL 410	0.539/FL 430	0.486/FL 450
	Ferry	Nautical Miles	1,204	1,254	1,400	1,358	1,981
		Average Speed	315	329	378	358	381
		Trip Fuel	1,965	2,220	2,705	2,290	3,986
		Specific Range/Altitude	0.613/FL 410	0.565/FL 410	0.518/FL 410	0.593/FL 430	0.497/FL 450
Missions (4 passengers)	**300 nm**	Runway	2,498	2,909	2,625	3,564	3,015
		Flight Time	1+00	0+53	0+52	0+53	0+48
		Fuel Used	670	753	804	676	786
		Specific Range/Altitude	0.448/FL 370	0.398/FL 390	0.373/FL 370	0.444/FL 430	0.382/FL 390
	600 nm	Runway	2,700	3,121	2,692	3,732	3,044
		Flight Time	1+56	1+45	1+38	1+38	1+30
		Fuel Used	1,135	1,236	1,362	1,179	1,323
		Specific Range/Altitude	0.529/FL 390	0.485/FL 390	0.441/FL 390	0.509/FL 430	0.454/FL 430
	1,000 nm	Runway	3,110	3,179	3,009	3,909	3,101
		Flight Time	3+19	2+54	2+42	2+40	2+28
		Fuel Used	1,754	1,919	2,018	1,863	2,145
		Specific Range/Altitude	0.570/FL 410	0.521/FL 410	0.496/FL 410	0.537/FL 430	0.466/FL 450
Remarks		Certification Basis	FAR 23, 2006 1,000-nm mission flown with 713-lb. payload.	FAR 23, 2008	FAR 23, 2013	FAR 23, 2015	FAR 25, 1981/85 STC 02371LA; STC 10959SC; STC 03960AT

Jets <20,000-LB. MTOW

Manufacturer			Textron Aviation	Syberjet	*Pilatus Aircraft*	Embraer	Textron Aviation
Model			**Cessna Citation CJ3+ CE-525B**	**SJ30i SJ30-2**	***SVJ PC-24***	**Phenom 300 EMB-505**	**Cessna Citation CJ4 CE-525C**
BCA Equipped Price			$7,995,000	$8,306,452	*$8,900,000*	$8,995,000	$8,995,000
Characteristics		Seating	1+8/9/—	1+5/6/—	*1+8/11/NA*	1+7/10/10	2+8/9/—
		Wing Loading/Power Loading	47.2/2.46	73.2/3.03	*53.1/2.60*	60.0/2.74	51.8/2.36
	Noise (EPNdB):	Lateral/Flyover/Approach	88.7/74.0/88.6	78.5/86.2/91.8	*NA/NA/NA*	69.9/88.8/88.5	92.8/75.6/89.5
External Dimensions (ft.)		Length	51.2	46.8	*55.2*	51.2	53.3
		Height	15.2	14.2	*17.3*	16.7	15.3
		Span	53.3	42.3	*55.8*	52.2	50.8
Internal Dimensions (ft.)	**Length:**	Main Seating/Net/Gross	12.3/15.7/—	12.5/12.5/—	*NA/NA/23.0*	14.8/17.2/17.2	12.9/17.3/17.3
		Height/Dropped Aisle Depth	4.8/0.4	4.4/NA	*5.1/flat floor*	4.9/0.3	4.8/0.4
	Width:	Max/Floor	4.8/3.1	4.8/2.8	*5.5/3.8*	5.1/3.6	4.8/3.3
Baggage	**Internal:**	Cu. ft./lb.	—/—	6/100	*90/NA*	10/77	7/40
	External:	Cu. ft./lb.	65/1,000	53/500	*NA/NA*	74/573	71/1,000
Power		Engines	2 Wms Intl FJ44-3A	2 Wms Intl FJ44-2A	*2 Wms Intl FJ44-4A*	2 P&WC PW 535E	2 Wms Intl FJ44-4A
		Output (lb. each)/Flat Rating	2,820/ISA+11C	2,300/ISA+8C	*3,400/NA*	3,360/ISA+15C	3,621/ISA+11C
		Inspection Interval/Manu. Service Plan Interval	4,000t/5,000	3,500t/—	*5,000t/NA*	5,000t/—	5,000t/5,000
Weights (lb.)		Max Ramp	14,070	14,050	*17,750*	18,497	17,230
		Max Takeoff	13,870	13,950	*17,650*	18,387	17,110
		Max Landing	12,750	12,725	*16,250*	17,042	15,660
		Zero Fuel	10,510c	10,500c	*NA*	14,220c	12,500c
		BOW	8,540	8,917	*NA*	11,583	10,280
		Max Payload	1,970	1,583	*2,500*	2,637	2,220
		Useful Load	5,530	5,133	*NA*	6,914	6,950
		Max Fuel	4,710	4,850	*5,965*	5,353	5,828
		Available Payload w/Max Fuel	820	283	*915*	1,561	1,122
		Available Fuel w/Max Payload	3,560	3,550	*NA*	4,277	4,730
Limits		M_{MO}	0.737	0.830	*NA*	0.780	0.770
		Trans. Alt. FL/V_{MO}	FL 293/278	FL 295/320	*NA/NA*	FL 263/320	FL 279/305
		PSI/Sea-Level Cabin	8.9/23,586	12.0/41,000	*NA/23,500*	9.4/25,560	9.0/24,005
Airport Performance		TOFL (SL elev./ISA temp.)	3,180	3,939	*2,690*	2,354	3,140
		TOFL (5,000-ft. elev.@25C)	4,750	8,784	*4,430*	5,400	5,180
		Mission Weight	13,870	13,125	*17,750*	18,387	16,788
		NBAA IFR Range	1,827	1,915	*NA*	2,019	1,948
		V_2	114	112	*NA*	113	117
		V_{REF}	99	104	*NA*	104	99
		Landing Distance	2,422	2,657	*NA*	2,220	2,281
Climb		Time to Climb/Altitude	15/FL 370	16/FL 370	*NA/FL 370*	15/FL 370	14/FL 370
		FAR 25 Engine-Out Rate (fpm)	808	312	*NA*	872	839
		FAR 25 Engine-Out Gradient (ft./nm)	425	167	*NA*	437	430
Ceilings (ft.)		Certificated	45,000	49,000	*45,000*	45,000	45,000
		All-Engine Service	45,000	44,000	*45,000*	45,000	45,000
		Engine-Out Service	26,250	25,800	*26,000*	30,137	28,200
Cruise	**Long Range**	TAS/Fuel Flow (lb./hr.)	352/624	436/684	*NA/NA*	383/757	377/812
		Altitude/Specific Range	FL 450/0.564	FL 450/0.637	*NA/NA*	FL 450/0.506	FL 450/0.464
	High Speed	TAS/Fuel Flow (lb./hr.)	415/1,197	475/1,188	*NA/NA*	444/1,312	442/1,470
		Altitude/Specific Range	FL 350/0.347	FL 360/0.400	*FL 300/NA*	FL 350/0.338	FL 370/0.301
NBAA IFR Ranges (FAR Part 23, 100-nm alternate; FAR Part 25, 200-nm alternate)	**Max Payload** (with available fuel)	Nautical Miles	1,172	1,635	*NA*	1,351	1,425
		Average Speed	368	402	*NA*	397	407
		Trip Fuel	2,552	2,908	*NA*	3,362	3,753
		Specific Range/Altitude	0.459/FL 450	0.562/FL 470	*NA/NA*	0.402/FL 450	0.380/FL 450
	Max Fuel (with available payload)	Nautical Miles	1,814	2,598	*NA*	1,883	1,913
		Average Speed	377	410	*NA*	406	413
		Trip Fuel	3,846	4,241	*NA*	4,469	4,904
		Specific Range/Altitude	0.472/FL 450	0.613/FL 490	*NA/NA*	0.421/FL 450	0.390/FL 450
	Four Passengers (with available fuel)	Nautical Miles	1,825	2,205	*NA*	1,936	1,927
		Average Speed	276	408	*NA*	411	416
		Trip Fuel	3,767	3,713	*NA*	4,510	4,920
		Specific Range/Altitude	0.484/FL 450	0.594/FL 490	*NA/NA*	0.429/FL 450	0.392/FL 450
	Ferry	Nautical Miles	1,900	2,667	*NA*	1,985	1,955
		Average Speed	383	411	*NA*	417	420
		Trip Fuel	3,872	4,246	*NA*	4,473	4,955
		Specific Range/Altitude	0.491/FL 450	0.628/FL 490	*NA/NA*	0.444/FL 450	0.395/FL 450
Missions (4 passengers)	**300 nm**	Runway	2,608	2,822	*NA*	2,613	2,429
		Flight Time	0+49	0+45	*NA*	0+47	0+46
		Fuel Used	969	846	*NA*	1,058	1,087
		Specific Range/Altitude	0.310/FL 370	0.355/FL 410	*NA/NA*	0.284/FL 390	0.276/FL 390
	600 nm	Runway	2,609	3,025	*NA*	2,747	2,444
		Flight Time	1+35	1+26	*NA*	1+29	1+27
		Fuel Used	1,571	1,313	*NA*	1,735	1,865
		Specific Range/Altitude	0.382/FL 410	0.457/FL 450	*NA/NA*	0.346/FL 410	0.322/FL 410
	1,000 nm	Runway	2,720	3,336	*NA*	2,808	2,490
		Flight Time	2+36	2+21	*NA*	2+26	2+23
		Fuel Used	2,315	1,980	*NA*	2,471	2,823
		Specific Range/Altitude	0.432/FL 430	0.505/FL 450	*NA/NA*	0.405/FL 450	0.354/FL 430
Remarks		Certification Basis	FAR 23, 2004/14 Commuter category Garmin G3000.	FAR 23 Commuter category	*EASA CS 23, FAR 23 Commuter category pending Pricing in 2017 dollars; FJ44-4 with quiet power mode APU function.*	FAR 23, 2009 Commuter category Performance-based upon optional increased weights.	FAR 23, 2010 Commuter category

Jets ≥20,000-LB. MTOW

Manufacturer			Textron Aviation	Bombardier	Textron Aviation	Bombardier	Textron Aviation
Model			Cessna Citation X Elite CE-750	Learjet 70 Model 45	Cessna Citation XLS+ CE-560XL	Learjet 75 Model 45	Cessna Citation Latitude CE-680A
BCA Equipped Price			$6,500,000	$11,300,000	$12,750,000	$13,800,000	$16,350,000
Characteristics		Seating	2+8/11/—	2+6/7/7	2+9/12/—	2+8/9/9	2+9/9/10
		Wing Loading/Power Loading	68.5/2.67	69.6/2.79	54.6/2.45	69.6/2.79	56.8/2.61
		Noise (EPNdB): Lateral/Flyover/Approach	83.8/71.2/90.3	87.4/74.3/93.4	86.8/72.2/92.8	87.4/74.3/93.4	87.7/73.5/87.7
External Dimensions (ft.)		Length	72.3	56.0	52.5	58.0	62.3
		Height	19.3	14.0	17.2	14.0	20.9
		Span	63.9	50.9	56.3	50.9	72.3
Internal Dimensions (ft.)		**Length:** Main Seating/Net/Gross	17.0/23.9/23.9	10.6/17.7/17.7	14.3/18.5/18.5	13.4/19.8/19.8	15.9/21.8/21.8
		Height/Dropped Aisle Depth	5.7/0.7	4.9/flat floor	5.7/0.7	4.9/flat floor	6.0/flat floor
		Width: Max/Floor	5.5/3.9	5.1/3.2	5.5/3.9	5.1/3.2	6.4/4.1
Baggage		**Internal:** Cu. ft./lb.	variable/variable	15/150	10/100	15/150	26/NA
		External: Cu. ft./lb.	82/775	50/500	80/700	50/500	100/1,000
Power		Engines	2 RR AE3007C1	2 Hon TFE731-40BR	2 P&WC PW545C	2 Hon TFE731-40BR	2 P&WC PW306D
		Output (lb. each)/Flat Rating	6,764/ISA+15C	3,850/ISA+23C	4,119/ISA+10C	3,850/ISA+23C	5,907/ISA+16C
		Inspection Interval/Manu. Service Plan Interval	4,500t*/—	6,000t/—	5,000t/—	6,000t/—	6,000t/—
Weights (lb.)		Max Ramp	36,400	21,750	20,400	21,750	31,050
		Max Takeoff	36,100	21,500	20,200	21,500	30,800
		Max Landing	31,800	19,200	18,700	19,200	27,575
		Zero Fuel	24,400c	16,000c	15,100c	16,000c	21,200c
		BOW	22,100	13,900	12,860	14,050	18,656
		Max Payload	2,300	2,100	2,240	1,950	2,544
		Useful Load	14,300	7,850	7,540	7,700	12,394
		Max Fuel	12,931	6,062	6,740	6,062	11,394
		Available Payload w/Max Fuel	1,369	1,788	800	1,638	1,000
		Available Fuel w/Max Payload	12,000	5,750	5,300	5,750	9,850
Limits		M_{MO}	0.920	0.810	0.750	0.810	0.800
		Trans. Alt. FL/V_{MO}	FL 307/350	FL 270/330	FL 265/305	FL 270/330	FL 298/305
		PSI/Sea-Level Cabin	9.3/25,230	9.4/25,700	9.3/25,230	9.4/25,700	9.7/25,400
Airport Performance		TOFL (SL elev./ISA temp.)	5,140	4,440	3,560	4,440	3,580
		TOFL (5,000-ft. elev.@25C)	7,350	5,191	5,430	5,272	5,070
		Mission Weight	34,980p	20,632	20,200	20,782	30,675
		NBAA IFR Range	2,980	2,045	1,740	2,026	2,700
		V_2	137	125	118	125	115
		V_{REF}	112	112	106	113	95
		Landing Distance	2,730	2,326	2,740	2,338	2,085
Climb		Time to Climb/Altitude	18/FL 370	15/FL 370	15/FL 370	15/FL 370	15/FL 370
		FAR 25 Engine-Out Rate (fpm)	486	430	765	430	652
		FAR 25 Engine-Out Gradient (ft./nm)	213	207	389	207	340
Ceilings (ft.)		Certificated	51,000	51,000	45,000	51,000	45,000
		All-Engine Service	43,000	45,200	45,000	44,700	43,000
		Engine-Out Service	26,000	28,400	28,600	27,900	26,260
Cruise	**Long Range**	TAS/Fuel Flow (lb./hr.)	470/1,529	437/970	353/865	437/977	368/1,114
		Altitude/Specific Range	FL 470/0.307	FL 470/0.451	FL 450/0.408	FL 470/0.447	FL 430/0.330
	High Speed	TAS/Fuel Flow (lb./hr.)	513/2,229	452/1,080	431/1,238	451/1,079	432/1,765
		Altitude/Specific Range	FL 410/0.230	FL 470/0.419	FL 410/0.348	470/0.418	FL 390/0.245
NBAA IFR Ranges (FAR Part 23, 100-nm alternate; FAR Part 25, 200-nm alternate)	**Max Payload** (with available fuel)	Nautical Miles	2,703	1,728	1,150	1,728	2,135
		Average Speed	462	425	385	425	394
		Trip Fuel	9,973	4,575	3,663	4,575	7,901
		Specific Range/Altitude	0.271/FL 470	0.378/FL 470	0.314/FL 450	0.378/FL 470	0.270/FL 450
	Max Fuel (with available payload)	Nautical Miles	3,070	1,881	1,719	1,881	2,645
		Average Speed	462	426	395	426	401
		Trip Fuel	11,055	4,901	5,233	4,901	9,586
		Specific Range/Altitude	0.278/FL 490	0.384/FL 470	0.328/FL 450	0.384/FL 470	0.276/FL 450
	Four Passengers (with available fuel)	Nautical Miles	3,125	2,045	1,719	2,026	2,678
		Average Speed	463	426	395	427	401
		Trip Fuel	11,078	5,064	5,168	5,058	9,594
		Specific Range/Altitude	0.282/FL 490	0.404/FL 470	0.333/FL 450	0.401/FL 470	0.279/FL 450
	Ferry	Nautical Miles	3,221	2,150	1,785	2,129	2,731
		Average Speed	463	427	403	427	405
		Trip Fuel	11,118	5,099	5,268	5,093	9,628
		Specific Range/Altitude	0.290/FL 490	0.422/FL 490	0.339/FL 450	0.418/FL 490	0.284/FL 450
Missions (4 passengers)	**300 nm**	Runway	3,536	3,588	2,734	3,598	2,760
		Flight Time	0+41	0+45	0+46	0+45	0+46
		Fuel Used	1,837	1,072	1,246	1,075	1,610
		Specific Range/Altitude	0.163/FL 370	0.280/FL 470	0.241/FL 390	0.279/FL 470	0.186/FL 390
	600 nm	Runway	3,580	3,632	2,758	3,642	2,845
		Flight Time	1+16	1+24	1+29	1+23	1+29
		Fuel Used	2,855	1,805	2,094	1,810	2,573
		Specific Range/Altitude	0.210/FL 430	0.332/FL 470	0.287/FL 410	0.331/FL 470	0.233/FL 430
	1,000 nm	Runway	3,672	3,691	3,028	3,701	2,951
		Flight Time	2+03	2+18	2+26	2+18	2+25
		Fuel Used	4,469	2,787	3,211	2,792	3,989
		Specific Range/Altitude	0.224/FL 430	0.359/FL 470	0.311/FL 430	0.358/FL 470	0.251/FL 430
Remarks		Certification Basis	FAR 25, 1996/2002; JAR 25 1999/2002 *Engine flight hour inspection interval.	FAR/EASA CS 25	FAR 25, 2008	FAR/EASA CS 25	FAR 25, 2015 Garmin G5000.

Jets ≥20,000-LB. MTOW

Manufacturer			Embraer	Textron Aviation	Embraer	Textron Aviation	*Textron Aviation*
Model			**Legacy 450 EMB-545**	**Cessna Citation Sovereign+ CE-680**	**Legacy 500 EMB-550**	**Cessna Citation X+ CE-750**	***Cessna Citation Longitude CE-700***
BCA Equipped Price			$16,570,000	$17,895,000	$19,995,000	$23,365,000	*$23,995,000*
Characteristics		Seating	2+7/9/9	2+9/12/12	2+8/12/12	2+9/12/—	*2+8/12/12*
		Wing Loading/Power Loading	74.0/2.73	56.7/2.60	79.4/2.73	69.4/2.60	*NA/NA*
		Noise (EPNdB): Lateral/Flyover/Approach	84.2/72.8/89.9	87.8/71.9/87.9	85.5/73.1/89.9	87.7/72.4/89.3	*NA/NA/NA*
External Dimensions (ft.)		Length	64.6	63.5	68.1	73.6	*73.2*
		Height	21.1	20.3	21.2	19.2	*19.4*
		Span	66.4	72.3	66.4	69.2	68.9
Internal Dimensions (ft.)		**Length:** Main Seating/Net/Gross	17.4/20.6/24.0	17.4/25.3/25.3	21.3/24.1/27.5	18.3/25.2/25.2	*16.5/25.2/28.1*
		Height/Dropped Aisle Depth	6.0/flat floor	5.7/0.7	6.0/flat floor	5.7/0.7	*6.0/flat floor*
		Width: Max/Floor	6.8/4.7	5.5/3.9	6.8/4.7	5.5/3.9	*6.4/4.1*
Baggage		**Internal:** Cu. ft./lb.	40/330	35/415	45/330	22/NA	*112/1,115*
		External: Cu. ft./lb.	110/882	100/1,000	110/882	82/775	*NA/NA*
Power		Engines	2 Hon HTF7500E	2 P&WC PW306D	2 Hon HTF7500E	2 RR AE3007C2	*2 Hon HTF7700L*
		Output (lb. each)/Flat Rating	6,540/ISA+18C	5,907/ISA+16C	7,036/ISA+18C	7,034/ISA+15C	*7,600/ISA+19C*
		Inspection Interval/Manu. Service Plan Interval	OC/—	6,000t/—	OC/—	4,500t*/—	*OC/—*
Weights (lb.)		Max Ramp	35,891	31,025	38,537	36,900	*NA*
		Max Takeoff	35,759	30,775	38,360	36,600	*NA*
		Max Landing	32,518	27,575	34,524	32,000	*NA*
		Zero Fuel	25,904c	21,000c	26,499	24,978c	*NA*
		BOW	22,983	18,235	23,699	22,114	*NA*
		Max Payload	2,921	2,765	2,800	2,864	*2,725*
		Useful Load	12,908	12,790	14,838	14,786	*NA*
		Max Fuel	12,108	11,390	13,058	12,931	*NA*
		Available Payload w/Max Fuel	800	1,400	1,780	1,855	*1,600*
		Available Fuel w/Max Payload	9,987	10,025	12,038	11,922	*NA*
Limits		M_{MO}	0.830	0.800	0.830	0.935	*0.840*
		Trans. Alt. FL/V_{MO}	FL 395/320	FL 298/305	FL 295/320	FL 307/350	*NA/NA*
		PSI/Sea-Level Cabin	9.7/26,520	9.3/25,230	9.7/26,520	9.3/25,230	*9.7/25,400*
Airport Performance		TOFL (SL elev./ISA temp.)	3,907	3,530	4,084	5,250	*4,900*
		TOFL (5,000-ft. elev.@25C)	5,189	4,760	5,523	7,317	*NA*
		Mission Weight	35,759	30,250	38,360	35,645	*NA*
		NBAA IFR Range	2,919	3,093	3,131	3,396	*3,520*
		V_2	117	117	120	139	*NA*
		V_{REF}	101	96	102	116	*NA*
		Landing Distance	2,090	2,144	2,114	2,727	*NA*
Climb		Time to Climb/Altitude	14/FL 370	13/FL 370	14/FL 370	13/FL 370	*13/FL 370*
		FAR 25 Engine-Out Rate (fpm)	634	735	856	614	*NA*
		FAR 25 Engine-Out Gradient (ft./nm)	324	377	387	267	*NA*
Ceilings (ft.)		Certificated	45,000	47,000	45,000	51,000	*45,000*
		All-Engine Service	44,000	45,000	44,000	47,000	*45,000*
		Engine-Out Service	24,476	29,740	28,189	25,900	*27,500*
Cruise	**Long Range**	TAS/Fuel Flow (lb./hr.)	438/1,404	368/1,059	440/1,441	470/1,470	*457/1,591*
		Altitude/Specific Range	FL 450/0.312	FL 450/0.347	FL 450/0.305	FL 470/0.320	*FL 450/0.287*
	High Speed	TAS/Fuel Flow (lb./hr.)	462/1,621	448/1,756	467/1,741	520/2,453	*476/1,933*
		Altitude/Specific Range	FL 430/0.285	FL 390/0.255	FL 430/0.268	FL 410/0.212	*FL 430/0.246*
NBAA IFR Ranges (FAR Part 23, 100-nm alternate; FAR Part 25, 200-nm alternate)	**Max Payload** (with available fuel)	Nautical Miles	2,170	2,484	2,603	2,838	*3,074*
		Average Speed	428	396	438	463	*452*
		Trip Fuel	8,084	8,170	9,908	9,952	*11,600*
		Specific Range/Altitude	0.268/FL 450	0.304/FL 470	0.263/450	0.285/FL 490	*0.265/FL 450*
	Max Fuel (with available payload)	Nautical Miles	2,904	2,996	2,998	3,241	*3,422*
		Average Speed	431	400	440	464	*453*
		Trip Fuel	10,285	9,658	11,151	11,108	*12,763*
		Specific Range/Altitude	0.282/FL 450	0.310/FL 470	0.269/FL 450	0.292/FL 490	*0.268/FL 450*
	Four Passengers (with available fuel)	Nautical Miles	2,904	3,069	3,125	3,372	*3,500*
		Average Speed	431	402	433	465	*454*
		Trip Fuel	10,285	9,679	11,222	11,157	*12,787*
		Specific Range/Altitude	0.282/FL 450	0.317/FL 470	0.278/FL 450	0.302/FL 490	*0.274/FL 450*
	Ferry	Nautical Miles	2,973	3,138	3,153	3,463	*3,568*
		Average Speed	430	405	440	465	*454*
		Trip Fuel	10,313	9,708	11,250	11,195	*12,810*
		Specific Range/Altitude	0.288/FL 450	0.323/FL 470	0.280/FL 450	0.309/FL 490	*0.279/FL 450*
Missions (4 passengers)	**300 nm**	Runway	3,674	2,591	2,822	3,725	*2,744*
		Flight Time	0+45	0+45	0+45	0+41	*0+44*
		Fuel Used	1,543	1,506	1,545	1,827	*1,516*
		Specific Range/Altitude	0.194/FL 450	0.199/FL 390	0.194/FL 450	0.164/FL 370	*0.198/FL 450*
	600 nm	Runway	2,696	2,600	2,817	3,775	*2,880*
		Flight Time	1+26	1+26	1+26	1+16	*1+23*
		Fuel Used	2,478	2,404	2,478	2,937	*2,457*
		Specific Range/Altitude	0.242/FL 450	0.250/FL 430	0.242/FL 450	0.204/FL 430	*0.244/FL 450*
	1,000 nm	Runway	2,873	2,650	2,963	3,849	*3,025*
		Flight Time	2+21	2+21	2+21	2+02	*2+16*
		Fuel Used	3,710	3,750	3,750	4,680	*3,746*
		Specific Range/Altitude	0.270/FL 450	0.267/FL 430	0.267/FL 450	0.214/FL 430	*0.267/FL 450*
Remarks		Certification Basis	RBAC/FAR/EASA CS 25, 2015	FAR 25, 2013 Garmin G5000.	RBAC/FAR/EASA CS 25, 2014	FAR 25, 2014 Garmin G5000. *Engine flight hour inspection interval.	*FAR 25 pending Garmin G5000.*

Jets ≥20,000-LB. MTOW

Manufacturer			Gulfstream Aerospace	Embraer	Bombardier	Dassault	Bombardier
Model			Gulfstream 280 G280	Legacy 650E EMB-135BJ*	Challenger 350 BD-100-1A10	Falcon 2000S Falcon 2000EX	Challenger 650 CL-600-2B16
BCA Equipped Price			$24,500,000	$25,900,000	$26,673,000	$29,550,000	$32,350,000
Characteristics		Seating	2+9/10/19	2+13/14/19	2+10/11/19	2+10/10/19	2+12/13/19
		Wing Loading/Power Loading	80.0/2.60	97.2/2.97	77.6/2.77	77.7/2.93	98.6/2.61
		Noise (EPNdB): Lateral/Flyover/Approach	75.2/89.5/90.5	86.9/78.0/91.7	87.6/75.3/89.6	75.1/91.8/90.5	86.2/81.2/90.3
External Dimensions (ft.)		Length	66.8	86.4	68.7	66.3	68.4
		Height	21.3	21.8	20.0	23.2	20.7
		Span	63.0	69.5	69.0	70.2	64.3
Internal Dimensions (ft.)		**Length:** Main Seating/Net/Gross	17.7/25.8/32.3	30.3/42.4/49.1	16.6/25.2/28.6	17.1/26.2/31.0	15.4/25.6/28.3
		Height/Dropped Aisle Depth	6.1/4.5	6.0/2.5	6.0/flat floor	6.2/flat floor	6.0/flat floor
		Width: Max/Floor	6.9/5.4	6.9/5.2	7.2/5.1	7.7/6.3	7.9/6.9
Baggage		**Internal:** Cu. ft./lb.	154/1,980	286/1,441	106/750	131/1,600	112/900
		External: Cu. ft./lb.	—/—	—/—	—/—	8/92	—/—
Power		Engines	2 Hon HTF7250G	2 RR AE 3007A2	2 Hon HTF 7350	2 P&WC PW308C	2 GE CF34-3B
		Output (lb. each)/Flat Rating	7,624/ISA+17C	9,020/ISA+15C	7,323/ISA+15C	7,000/ISA+15C	9,220*/ISA+15C
		Inspection Interval/Manu. Service Plan Interval	OC/—	OC/—	OC/—	7,000c/—	OC/—
Weights (lb.)		Max Ramp	39,750	53,727	40,750	41,200	48,300
		Max Takeoff	39,600	53,572	40,600	41,000	48,200
		Max Landing	32,700	44,092	34,150	39,300	38,000
		Zero Fuel	28,200c	36,156c	28,200c	29,700c	32,000c
		BOW	24,200	31,217	24,800	24,750	27,250
		Max Payload	4,000	4,939	3,400	4,950	4,750
		Useful Load	15,550	22,510	15,950	16,450	21,050
		Max Fuel	14,600	20,600	14,045	14,600	19,852
		Available Payload w/Max Fuel	950	1,910	1,905	1,850	1,198
		Available Fuel w/Max Payload	11,550	17,571	12,550	11,500	16,300
Limits		M_{MO}	0.850	0.800	0.830	0.862	0.850
		Trans. Alt. FL/V_{MO}	FL 280/340	FL 276/320	FL 290/320	FL 250/370	FL 222/348
		PSI/Sea-Level Cabin	9.2/25,000	8.4/21,650	8.8/23,338	9.3/25,300	8.8/23,000
Airport Performance		TOFL (SL elev./ISA temp.)	4,750	5,741	4,829	4,325	5,640
		TOFL (5,000-ft. elev.@25C)	7,320	7,979	6,451	6,055	9,233
		Mission Weight	39,600	53,572	39,495	39,950	47,802
		NBAA IFR Range	3,600	3,953	3,250	3,600	4,011
		V_2	137	144	133	123	147
		V_{REF}	115	115	111	106	117
		Landing Distance	2,373	2,346	2,302	2,295	2,365
Climb		Time to Climb/Altitude	14/FL 370	21/FL 370	14/FL 370	16/FL 370	21/FL 370
		FAR 25 Engine-Out Rate (fpm)	845	633	552	528	581
		FAR 25 Engine-Out Gradient (ft./nm)	371	259	249	257	237
Ceilings (ft.)		Certificated	45,000	41,000	45,000	47,000	41,000
		All-Engine Service	45,000	41,000	44,000	43,265	38,250
		Engine-Out Service	27,500	23,128	27,800	22,187	20,000
Cruise	**Long Range**	TAS/Fuel Flow (lb./hr.)	459/1,488	425/1,901	459/1,590	437/1,400	424/1,832
		Altitude/Specific Range	FL 450/0.308	FL 410/0.224	FL 450/0.289	FL 470/0.312	FL 410/0.231
	High Speed	TAS/Fuel Flow (lb./hr.)	482/1,925	459/2,570	470/1,832	482/2,075	470/2,448
		Altitude/Specific Range	FL 430/0.250	FL 370/0.179	FL 430/0.257	FL 410/0.232	FL 370/0.192
NBAA IFR Ranges (FAR Part 23, 100-nm alternate; FAR Part 25, 200-nm alternate)	**Max Payload** (with available fuel)	Nautical Miles	2,577	3,076	2,719	2,450	3,011
		Average Speed	448	417	447	426	417
		Trip Fuel	9,591	15,238	10,689	9,640	14,256
		Specific Range/Altitude	0.269/FL 450	0.202/FL 410	0.254/FL 450	0.254/FL 450	0.211/FL 410
	Max Fuel (with available payload)	Nautical Miles	3,636	3,839	3,235	3,445	3,974
		Average Speed	452	417	449	429	419
		Trip Fuel	12,757	18,380	12,206	12,740	17,939
		Specific Range/Altitude	0.285/FL 450	0.209/FL 410	0.265/FL 450	0.270/FL 470	0.222/FL 410
	Four Passengers (with available fuel)	Nautical Miles	3,646	3,919	3,250	3,540	4,011
		Average Speed	451	415	448	430	419
		Trip Fuel	12,761	18,422	12,212	12,740	17,953
		Specific Range/Altitude	0.286/FL 450	0.213/FL 410	0.266/FL 450	0.278/FL 470	0.223/FL 410
	Ferry	Nautical Miles	3,724	3,980	3,307	3,615	4,085
		Average Speed	452	414	450	430	419
		Trip Fuel	12,789	18,450	12,236	12,740	17,982
		Specific Range/Altitude	0.291/FL 450	0.216/FL 410	0.270/FL 450	0.284/FL 470	0.227/FL 410
Missions (4 passengers)	**300 nm**	Runway	2,957	3,346	3,611	2,795	3,389
		Flight Time	0+47	0+49	0+47	0+47	0+47
		Fuel Used	1,505	1,773	1,583	1,525	1,595
		Specific Range/Altitude	0.199/FL 450	0.169/FL 410	0.190/FL 450	0.197/FL 470	0.188/FL 410
	600 nm	Runway	2,997	3,518	3,656	2,855	3,421
		Flight Time	1+26	1+34	1+26	1+27	1+27
		Fuel Used	2,412	3,146	2,577	2,465	2,835
		Specific Range/Altitude	0.249/FL 450	0.191/FL 410	0.233/FL 450	0.243/FL 470	0.212/FL 410
	1,000 nm	Runway	3,136	3,573	3,718	2,920	3,483
		Flight Time	2+18	2+33	2+18	2+20	2+19
		Fuel Used	3,645	4,815	3,925	3,755	4,532
		Specific Range/Altitude	0.274/FL 450	0.208/FL 410	0.255/FL 450	0.266/FL 470	0.221/FL 410
Remarks		Certification Basis	FAR 25, 2012; EASA CS 25, 2013	FAR 25, 2011 *Factory modification DCA 145-000-00020/2008	FAR 25 A 98; JAR 25 Chg 15 Rockwell Collins Pro Line 21 Advanced.	FAR/EASA CS 25, 2013 EASy II flight deck; 2017 delivery price.	FAR 25, 1980/83/87/95/2006/15 Rockwell Collins Pro Line 21 Advanced. *9,220-lb. max takeoff; 8,729-lb. normal takeoff

Jets ≥20,000-LB. MTOW

Manufacturer			Dassault	Gulfstream Aerospace	Dassault	*Gulfstream Aerospace*
Model			**Falcon 2000LXS Falcon 2000EX**	**Gulfstream 450 GIV-X**	**Falcon 900LX Falcon 900EX**	***Gulfstream 500 GVII-G500***
BCA Equipped Price			$34,700,000	$43,150,000	$44,300,000	*$44,650,000*
Characteristics		Seating	2+8/10/19	2+14/16/19	2+12/12/19	*2+13/19/19*
		Wing Loading/Power Loading	81.2/3.06	78.4/2.69	92.9/3.27	*80.9/2.54*
		Noise (EPNdB): Lateral/Flyover/Approach	76.4/91.7/90.5	76.2/89.5/92.3	78.2/90.3/92.1	*NA/NA/NA*
External Dimensions (ft.)		Length	66.3	89.3	66.3	*91.2*
		Height	23.2	25.2	24.8	*25.5*
		Span	70.2	77.8	70.2	*86.3*
Internal Dimensions (ft.)		**Length:** Main Seating/Net/Gross	17.1/26.2/31.0	25.8/37.0/45.1	23.5/33.2/39.3	*26.3/41.5/47.6*
		Height/Dropped Aisle Depth	6.2/flat floor	6.0/flat floor	6.2/flat floor	*6.2/flat floor*
		Width: Max/Floor	7.7/6.3	7.0/5.4	7.7/6.3	*7.6/6.1*
Baggage		**Internal:** Cu. ft./lb.	131/1,600	169/2,000	127/2,866	*230/2,250*
		External: Cu. ft./lb.	8/92	—/—	—/—	*—/—*
Power		Engines	2 P&WC PW308C	2 RR Tay Mk 611-8C	3 Hon TFE731-60	*2 P&WC PW814GA*
		Output (lb. each)/Flat Rating	7,000/ISA+15C	13,850/ISA+15C	5,000/ISA+17C	*15,144/ISA+15C*
		Inspection Interval/Manu. Service Plan Interval	7,000c/—	12,000t or 0C/—	6,000c/—	*0C/—*
Weights (lb.)		Max Ramp	43,000	75,000	49,200	*77,250*
		Max Takeoff	42,800	74,600	49,000	*76,850*
		Max Landing	39,300	66,000	44,500	*64,350*
		Zero Fuel	29,700c	49,000c	30,864c	*52,100c*
		BOW	24,750	43,200	26,750	*46,600*
		Max Payload	4,950	5,800	4,114	*5,500*
		Useful Load	18,250	31,800	22,450	*30,650*
		Max Fuel	16,660	29,281	20,905	*28,850*
		Available Payload w/Max Fuel	1,590	2,519	1,545	*1,800*
		Available Fuel w/Max Payload	13,300	26,000	18,336	*25,150*
Limits		M_{MO}	0.862	0.880	0.870	*0.925*
		Trans. Alt. FL/V_{MO}	FL 250/370	FL 280/340	FL 250/370	*NA/NA*
		PSI/Sea-Level Cabin	9.3/25,300	9.6/26,700	9.6/25,300	*10.7/31,900*
Airport Performance		TOFL (SL elev./ISA temp.)	4,675	5,600	5,360	*5,200*
		TOFL (5,000-ft. elev.@25C)	6,840	8,200	7,615	*7,930*
		Mission Weight	42,010	74,600	48,255	*76,850*
		NBAA IFR Range	4,100	4,328	4,685	*5,000*
		V_2	126	150	134	*NA*
		V_{REF}	106	123	111	*NA*
		Landing Distance	2,295	2,663	2,455	*NA*
Climb		Time to Climb/Altitude	17/FL 370	16/FL 370	19/FL 370	*15/FL 370*
		FAR 25 Engine-Out Rate (fpm)	463	712	723	*NA*
		FAR 25 Engine-Out Gradient (ft./nm)	221	285	324	*NA*
Ceilings (ft.)		Certificated	47,000	45,000	51,000	*51,000*
		All-Engine Service	42,315	42,400	39,630	*NA*
		Engine-Out Service	21,010	25,000	24,980	*NA*
Cruise	**Long Range**	TAS/Fuel Flow (lb./hr.)	437/1,485	459/2,585	431/1,665	*488/2,440*
		Altitude/Specific Range	FL 450/0.294	FL 450/0.178	FL 430/0.259	*FL 450/0.200*
	High Speed	TAS/Fuel Flow (lb./hr.)	483/2,325	476/3,055	474/2,225	*516/3,467*
		Altitude/Specific Range	FL 390/0.208	FL 410/0.156	FL 390/0.213	*FL 410/0.149*
NBAA IFR Ranges (FAR Part 23, 100-nm alternate; FAR Part 25, 200-nm alternate)	**Max Payload** (with available fuel)	Nautical Miles	2,915	3,549	3,790	*4,129*
		Average Speed	427	452	422	*478*
		Trip Fuel	11,438	22,622	16,340	*22,365*
		Specific Range/Altitude	0.255/FL 450	0.157/FL 450	0.232/FL 430	*0.185/FL 470*
	Max Fuel (with available payload)	Nautical Miles	3,990	4,216	4,565	*5,000*
		Average Speed	430	453	421	*480*
		Trip Fuel	14,798	26,023	18,909	*26,172*
		Specific Range/Altitude	0.270/FL 470	0.162/FL 450	0.241/FL 430	*0.191/FL 490*
	Four Passengers (with available fuel)	Nautical Miles	4,065	4,328	4,650	*5,075*
		Average Speed	430	452	420	*480*
		Trip Fuel	14,798	26,087	18,909	*26,200*
		Specific Range/Altitude	0.275/FL 470	0.166/FL 450	0.246/FL 430	*0.194/FL 490*
	Ferry	Nautical Miles	4,155	4,382	4,740	*5,137*
		Average Speed	431	453	419	*480*
		Trip Fuel	14,798	26,116	18,909	*26,222*
		Specific Range/Altitude	0.281/FL 470	0.168/FL 450	0.251/FL 430	*0.196/FL 490*
Missions (4 passengers)	**300 nm**	Runway	2,795	3,225	2,730	*NA*
		Flight Time	0+47	0+46	0+47	*0+45*
		Fuel Used	1,525	2,599	1,595	*2,274*
		Specific Range/Altitude	0.197/FL 470	0.115/FL 450	0.188/FL 470	*0.132/FL 490*
	600 nm	Runway	2,855	3,258	2,865	*NA*
		Flight Time	1+27	1+25	1+27	*1+22*
		Fuel Used	2,465	4,113	2,625	*3,561*
		Specific Range/Altitude	0.243/FL 470	0.146/FL 450	0.229/FL 470	*0.168/FL 490*
	1,000 nm	Runway	2,920	3,304	2,880	*NA*
		Flight Time	2+20	2+18	2+20	*2+12*
		Fuel Used	3,755	6,176	4,070	*5,313*
		Specific Range/Altitude	0.266/FL 470	0.162/FL 450	0.246/FL 450	*0.188/FL 490*
Remarks		Certification Basis	FAR/EASA CS 25, 2013 EASy II flight deck; 2017 delivery price.	FAR/EASA CS 25, 2004	FAR/EASA 25, 1979/2010 EASy II flight deck; 2017 delivery price.	*FAR/EASA 25 pending*

Jets ≥20,000-LB. MTOW

Manufacturer			Bombardier	Embraer	Dassault	Airbus
Model			Global 5000 BD-700-1A11	Lineage 1000E ERJ 190-100 ECJ	Falcon 7X Falcon 7X	A320 Prestige A320-214
BCA Equipped Price			$50,441,000	$53,000,000	$53,800,000	$95,000,000
Characteristics		Seating	3+13/15/19	3+13/19/19	3+12/14/19	4+18/179/—
		Wing Loading/Power Loading	90.6/3.14	120.7/3.25	92.0/3.64	130.3/3.18
		Noise (EPNdB): Lateral/Flyover/Approach	88.7/83.5/89.7	92.7/86.4/92.5	82.3/90.1/92.6	85.5/93.4/95.5
External Dimensions (ft.)		Length	96.8	118.9	76.7	123.3
		Height	25.5	34.7	25.7	38.6
		Span	94.0	94.2	86.0	111.8
Internal Dimensions (ft.)		**Length:** Main Seating/Net/Gross	27.2/40.7/45.7	67.2/76.6/84.3	26.2/39.1/46.5	90.3/90.3/—
		Height/Dropped Aisle Depth	6.2/flat floor	6.6/flat floor	6.2/flat floor	7.4/flat floor
		Width: Max/Floor	7.9/6.5	8.8/8.0	7.7/6.3	12.1/11.7
Baggage		**Internal:** Cu. ft./lb.	195/1,000	323/2,293	140/2,004	NA/NA
		External: Cu. ft./lb.	—/—	120/705	—/—	985/NA
Power		Engines	2 RR BR700-710A2-20	2 GE CF34-10E7-B	3 P&WC PW307A	2 CFMI CFM56-5B4/3*
		Output (lb. each)/Flat Rating	14,750/ISA+20C	18,500/ISA+15C	6,402/ISA+17C	27,000/ISA+29C
		Inspection Interval/Manu. Service Plan Interval	0C/—	0C/—	7,200c/—	0C/—
Weights (lb.)		Max Ramp	92,750	120,593	70,200	172,850
		Max Takeoff	92,500	120,152	70,000	171,950
		Max Landing	78,600	100,972	62,400	145,500
		Zero Fuel	58,000c	80,469c	41,000c	137,800c
		BOW	50,861	70,548	36,600	109,000
		Max Payload	7,139	9,921	4,400	28,800
		Useful Load	41,889	50,045	33,600	63,850
		Max Fuel	38,959	48,217	31,940	53,450
		Available Payload w/Max Fuel	2,930	1,828	1,660	10,400
		Available Fuel w/Max Payload	34,750	40,124	29,200	35,050
Limits		M_{MO}	0.890	0.820	0.900	0.820
		Trans. Alt. FL/V_{MO}	FL 303/340	FL 289/320	FL 270/370	FL 250/350
		PSI/Sea-Level Cabin	10.3/30,125	8.8/23,190	10.2/29,200	8.3/NA
Airport Performance		TOFL (SL elev./ISA temp.)	5,540	6,076	5,710	6,920
		TOFL (5,000-ft. elev.@25C)	7,223	9,500	8,045	9,355
		Mission Weight	90,370	112,038	69,140	171,950
		NBAA IFR Range	5,475	3,965	5,795	4,300
		V_2	133	140	133	NA
		V_{REF}	107	110	106	NA
		Landing Distance	2,189	2,038	2,120	2,400
Climb		Time to Climb/Altitude	18/FL 370	29/FL 350	19/FL 370	23/FL 360
		FAR 25 Engine-Out Rate (fpm)	704	NA	597	NA
		FAR 25 Engine-Out Gradient (ft./nm)	318	NA	269	NA
Ceilings (ft.)		Certificated	51,000	41,000	51,000	39,000
		All-Engine Service	44,600	35,000	40,215	NA
		Engine-Out Service	20,600	19,178	25,480	NA
Cruise	**Long Range**	TAS/Fuel Flow (lb./hr.)	470/2,856	454/4,184	459/2,260	451/4,730
		Altitude/Specific Range	FL 450/0.165	FL 380/0.109	FL 430/0.203	FL 370/0.095
	High Speed	TAS/Fuel Flow (lb./hr.)	499/3,582	471/5,033	497/3,205	473/5,860
		Altitude/Specific Range	FL 410/0.139	FL 350/0.094	FL 390/0.155	350/0.081
NBAA IFR Ranges (FAR Part 23, 100-nm alternate; FAR Part 25, 200-nm alternate)	**Max Payload** (with available fuel)	Nautical Miles	4,920	3,493	5,000	2,100
		Average Speed	463	442	453	428
		Trip Fuel	33,374	35,569	26,820	27,936
		Specific Range/Altitude	0.147/FL 470	0.098/FL 400	0.186/FL 450	0.075/FL 350
	Max Fuel (with available payload)	Nautical Miles	5,486	4,532	5,670	3,852
		Average Speed	464	446	454	438
		Trip Fuel	35,723	43,962	29,560	46,930
		Specific Range/Altitude	0.154/FL 470	0.103/FL 410	0.192/FL 470	0.082/FL 390
	Four Passengers (with available fuel)	Nautical Miles	5,475	4,602	5,760	4,330
		Average Speed	463	446	454	438
		Trip Fuel	35,719	44,240	29,560	48,057
		Specific Range/Altitude	0.153/FL 470	0.104/FL 410	0.195/FL 470	0.090/FL 390
	Ferry	Nautical Miles	5,526	4,640	5,840	4,380
		Average Speed	464	446	454	438
		Trip Fuel	35,743	44,264	29,560	48,108
		Specific Range/Altitude	0.155/FL 470	0.105/FL 410	0.198/FL 470	0.091/FL 390
Missions (4 passengers)	**300 nm**	Runway	2,487	3,002	2,500	3,670
		Flight Time	0+46	0+48	0+46	0+55
		Fuel Used	2,773	3,426	2,075	4,265
		Specific Range/Altitude	0.108/FL 450	0.088/FL 390	0.145/FL 450	0.070/FL 350
	600 nm	Runway	2,575	3,133	2,515	3,700
		Flight Time	1+23	1+26	1+25	1+34
		Fuel Used	4,445	5,862	3,285	7,080
		Specific Range/Altitude	0.135/FL 490	0.102/FL 410	0.183/FL 470	0.085/FL 390
	1,000 nm	Runway	2,697	3,251	2,640	3,760
		Flight Time	2+13	2+20	2+17	2+28
		Fuel Used	6,752	9,063	4,945	10,970
		Specific Range/Altitude	0.148/FL 470	0.110/FL 410	0.202/FL 470	0.091/FL 390
Remarks		Certification Basis	FAR 25, 1998/2004; EASA 25, 2004 Global Vision flight deck	FAR/EASA 25, 2008	FAR/EASA 25, 2007 EASy II flight deck; DFCS; 2017 delivery price.	FAR 25, 1999 *Also available with 26,500-lbf IAEV2527M-A5 engines; includes 2 additional center tanks and VIP cabin. *BCA* estimated data.

Ultra-Long-Range Jets

Manufacturer		***Gulfstream Aerospace***	**Dassault**	**Gulfstream Aerospace**	**Bombardier**	**Gulfstream Aerospace**
Model		***Gulfstream 600 GVII-600***	**Falcon 8X Falcon 7X**	**Gulfstream 550 GV-SP**	**Global 6000 BD-700-1A10**	**Gulfstream 650 GVI**
BCA Equipped Price		*$56,200,000*	$58,400,000	$61,500,000	$62,310,000	$67,400,000
Characteristics	Seating	*4+16/19/19*	3+12/14/19	4+16/18/19	4+13/15/19	4+16/19/19
	Wing Loading/Power Loading	*78.9/2.92*	95.9/3.62	80.1/2.96	97.5/3.37	77.6/2.95
	Noise (EPNdB): Lateral/Flyover/Approach	*NA/NA/NA*	81.5/88.9/90.6	79.3/90.2/90.8	88.7/83.5/89.7	77.5/89.8/88.3
External Dimensions (ft.)	Length	*96.1*	80.2	96.4	99.4	99.8
	Height	*25.3*	26.1	25.8	25.5	25.7
	Span	*94.1*	86.3	93.5	94.0	99.6
Internal Dimensions (ft.)	**Length:** Main Seating/Net/Gross	*30.2/45.2/51.3*	29.8/42.7/50.1	30.3/42.6/50.1	27.3/43.3/48.3	32.7/46.8/53.6
	Height/Dropped Aisle Depth	*6.2/flat floor*	6.2/flat floor	6.0/flat floor	6.2/flat floor	6.3/flat floor
	Width: Max/Floor	*7.6/6.1*	7.7/6.3	7.0/5.4	7.9/6.5	8.2/6.7
Baggage	**Internal:** Cu. ft./lb.	*230/2,250*	140/2,004	226/2,500	195/1,000	235/2,500
	External: Cu. ft./lb.	*—/—*	—/—	—/—	—/—	—/—
Power	Engines	*2 P&WC PW815GA*	3 P&WC PW307D	2 RR BR700-710C4-11	2 RR BR700-710A2-20	2 RR BR700-725A1-12
	Output (lb. each)/Flat Rating	*15,680/ISA+15C*	6,722/ISA+17C	15,385/ISA+15C	14,750/ISA+20C	16,900/ISA+15C
	Inspection Interval/Manu. Service Plan Interval	*OC/—*	7,200c/—	8,000t or OC/—	OC/—	10,000t/—
Weights (lb.)	Max Ramp	*92,000*	73,200	91,400	99,750	100,000
	Max Takeoff	*91,600*	73,000	91,000	99,500	99,600
	Max Landing	*76,800*	62,400	75,300	78,600	83,500
	Zero Fuel	*57,440c*	41,000c	54,500c	58,000c	60,500c
	BOW	*51,440*	36,800	48,700	52,560	54,500
	Max Payload	*6,000*	4,200	5,800	5,440	6,000
	Useful Load	*40,560*	36,400	42,700	47,190	45,500
	Max Fuel	*38,760*	35,141	40,994	44,716	44,200
	Available Payload w/Max Fuel	*1,800*	1,259	1,706	2,474	1,300
	Available Fuel w/Max Payload	*34,560*	32,200	36,900	41,750	39,500
Limits	M_{MO}	*0.925*	0.900	0.885	0.890	0.925
	Trans. Alt. FL/V_{MO}	*NA/NA*	FL 270/370	FL 270/340	FL 303/340	FL 290/340
	PSI/Sea-Level Cabin	*10.7/31,900*	10.4/30,300	10.2/29,200	10.3/30,125	10.7/31,900
Airport Performance	TOFL (SL elev./ISA temp.)	*5,700*	5,880	5,910	6,476	5,858
	TOFL (5,000-ft. elev.@25C)	*NA*	8,555	9,070	7,880	9,000
	Mission Weight	*91,600*	72,591	91,000	94,513p	99,600
	NBAA IFR Range	*6,200*	6,415	6,738	5,594	6,912
	V_2	*NA*	138	147	142	146
	V_{REF}	*NA*	107	112	110	114
	Landing Distance	*NA*	2,245	2,240	2,243	2,680
Climb	Time to Climb/Altitude	*17/FL 370*	20/FL 370	18/FL 370	21/FL 370	19/FL 370
	FAR 25 Engine-Out Rate (fpm)	*NA*	774	594	474	NA
	FAR 25 Engine-Out Gradient (ft./nm)	*NA*	339	242	200	NA
Ceiling (ft.)	Certificated	*51,000*	51,000	51,000	51,000	51,000
	All-Engine Service	*42,700*	40,075	42,700	42,400	42,700
	Engine-Out Service	*25,000*	26,645	25,820	18,000	25,000
Cruise	**Long Range** TAS	*488*	459	459	470	488
	Long Range Fuel Flow	*2,769*	2,254	2,563	3,046	2,825
	Long Range Altitude	*FL 450*	FL 430	FL 450	FL 450	FL 450
	Long Range Specific Range	*0.176*	0.204	0.179	0.154	0.173
	High Speed TAS	*516*	480	488	499	516
	High Speed Fuel Flow	*3,891*	2,508	3,228	3,796	3,136
	High Speed Altitude	*FL 410*	FL 430	FL 430	FL 410	FL 450
	High Speed Specific Range	*0.133*	0.191	0.151	0.131	0.165
NBAA IFR Ranges (200-nm alternate)	**Max Payload** (with available fuel) Nautical Miles	*5,286*	5,555	5,767	5,882	5,934
	Max Payload (with available fuel) Average Speed	*481*	452	452	464	481
	Max Payload (with available fuel) Trip Fuel	*31,622*	29,507	33,993	40,415	36,285
	Max Payload (with available fuel) Specific Range/Altitude	*0.167/FL 450*	0.188/FL 470	0.170/FL 490	0.146/FL 470	0.164/FL 490
	Max Fuel (with available payload) Nautical Miles	*6,200*	6,325	6,698	6,200	6,981
	Max Fuel (with available payload) Average Speed	*481*	453	454	464	482
	Max Fuel (with available payload) Trip Fuel	*35,918*	32,558	38,202	41,472	41,129
	Max Fuel (with available payload) Specific Range/Altitude	*0.173/FL 490*	0.194/FL 470	0.175/FL 490	0.149/FL 470	0.170/FL 510
	Eight Passengers (with available fuel) Nautical Miles	*6,217*	6,235	6,708	6,124	6,912
	Eight Passengers (with available fuel) Average Speed	*481*	453	453	464	481
	Eight Passengers (with available fuel) Trip Fuel	*35,924*	32,204	38,205	41,437	40,820
	Eight Passengers (with available fuel) Specific Range/Altitude	*0.173/FL 490*	0.194/FL 470	0.176/FL 490	0.148/FL 470	0.169/FL 510
	Ferry Nautical Miles	*6,353*	6,475	6,853	6,233	7,105
	Ferry Average Speed	*481*	454	454	464	482
	Ferry Trip Fuel	*35,966*	32,653	38,251	41,487	41,168
	Ferry Specific Range/Altitude	*0.177/FL 490*	0.198/FL 470	0.179/FL 510	0.150/FL 470	0.173/FL 510
Missions (8 passengers)	**1,000 nm** Runway	*NA*	2,685	3,436	2,852	3,241
	1,000 nm Flight Time	*2+12*	2+17	2+20	2+13	2+10
	1,000 nm Fuel Used	*5,728*	4,994	5,599	6,842	5,942
	1,000 nm Specific Range/Altitude	*0.175/FL 490*	0.200/FL 470	0.179/FL 490	0.146/FL 470	0.168/FL 510
	3,000 nm Runway	*NA*	3,540	3,599	3,858	3,591
	3,000 nm Flight Time	*6+19*	6+39	6+42	6+20	6+17
	3,000 nm Fuel Used	*16,060*	14,122	15,474	19,538	16,280
	3,000 nm Specific Range/Altitude	*0.187/FL 490*	0.212/FL 470	0.194/FL 490	0.154/FL 470	0.184/FL 510
	6,000 nm Runway	*NA*	5,645	5,277	6,293	5,241
	6,000 nm Flight Time	*12+29*	13+12	13+15	12+39	12+28
	6,000 nm Fuel Used	*34,432*	30,729	33,428	41,053	34,622
	6,000 nm Specific Range/Altitude	*0.174/FL 490*	0.195/FL 470	0.179/FL 490	0.146/FL 490	0.173/FL 510
Remarks	Certification Basis	*FAR, EASA CS 25 pending*	FAR/EASA 25, 2016 EASy III flight deck; DFCS; 2017 delivery price.	FAR 25, 1997/2003; EASA 25 CS, 2004	FAR 25, 1998/2003; JAR 25 BEVS and new Global Vision flight deck standard.	FAR, EASA CS 25, 2012

Ultra-Long-Range Jets

Manufacturer			Gulfstream Aerospace	Boeing	Airbus	*Boeing*	*Boeing*
Model			Gulfstream 650ER GVI	BBJ 737-700IGW	ACJ319 A319-133	*BBJ MAX8* *737-8*	*BBJ MAX9* *737-9*
BCA Equipped Price			$69,400,000	$79,000,000	$87,000,000	*$95,300,000*	*$103,300,000*
Characteristics		Seating	4+16/19/19	4+19/55/149	4+19/19/156	*4+19/71/189*	*4+19/75/220*
		Wing Loading/Power Loading	80.7/3.07	127.5/3.13	127.8/3.12	*135.1/3.24*	*145.2/3.48*
	Noise (EPNdB):	Lateral/Flyover/Approach	78.7/89.6/88.3	85.4/94.9/95.8	85.4/94.6/94.2	*NA/NA/NA*	*NA/NA/NA*
External Dimensions (ft.)		Length	99.8	110.3	111.0	*129.7*	*138.3*
		Height	25.7	41.2	38.6	*40.3*	*40.3*
		Span	99.6	117.4	111.8	*117.8*	*117.8*
Internal Dimensions (ft.)	**Length:**	Main Seating/Net/Gross	32.7/46.8/53.6	72.7/79.2/—	78.0/78.0/—	*91.9/98.5/98.5*	*100.6/107.2/107.2*
		Height/Dropped Aisle Depth	6.3/flat floor	79.3/flat floor	7.4/flat floor	*7.1/flat floor*	*7.1/flat floor*
	Width:	Max/Floor	8.2/6.7	11.6/10.7	12.2/11.6	*11.6/10.7*	*11.6/10.7*
Baggage	**Internal:**	Cu. ft./lb.	235/2,500	NA/NA	160/NA	*NA/NA*	*NA/NA*
	External:	Cu. ft./lb.	—/—	159/NA	NA/NA	*713/NA*	*874/NA*
Power		Engines	2 RR BR700-725A1-12	2 CFMI CFM56-7B27E	2 CFMI CFM56-5B7/3*	*2 CFMI* *LEAP-1B*	*2 CFMI* *LEAP-1B*
		Output (lb. each)/Flat Rating	16,900/ISA+15C	27,300/ISA+15C	27,000/ISA+29C	*28,000/ISA+15C*	*28,000/ISA+15C*
		Inspection Interval/Manu. Service Plan Interval	10,000t/—	OC/—	OC/—	*OC/—*	*OC/—*
Weights (lb.)		Max Ramp	104,000	171,500	169,530	*181,700*	*195,200*
		Max Takeoff	103,600	171,000	168,650	*181,200*	*194,700*
		Max Landing	83,500	134,000	137,790	*152,800*	*163,900*
		Zero Fuel	60,500c	126,000c	128,970c	*145,400c*	*156,500c*
		BOW	54,500	98,040	96,450**	*110,000*	*118,080*
		Max Payload	6,000	27,960	32,520	*35,400*	*38,420*
		Useful Load	49,500	73,460	73,080	*71,700*	*77,120*
		Max Fuel	48,200	71,737	72,560	*69,814*	*73,325*
		Available Payload w/Max Fuel	1,300	1,723	520	*1,886*	*3,795*
		Available Fuel w/Max Payload	43,500	45,500	40,560	*36,300*	*38,700*
Limits		M_{MO}	0.925	0.820	0.820	*0.820*	*0.820*
		Trans. Alt. FL/V_{MO}	FL 290/340	FL 260/340	FL 250/350	*FL 260/340*	*FL 260/340*
		PSI/Sea-Level Cabin	10.7/31,900	9.0/24,000	8.3/22,000	*9.0/24,000*	*9.0/24,000*
Airport Performance		TOFL (SL elev./ISA temp.)	6,299	6,085	6,170	*6,630*	*8,200*
		TOFL (5,000-ft. elev.@25C)	11,139	10,330	8,360	*NA*	*NA*
		Mission Weight	103,600	171,000	168,650	*NA*	*NA*
		NBAA IFR Range	7,437	6,297	6,000	*NA*	*NA*
		V_2	148	141	137	*NA*	*NA*
		V_{REF}	114	117	111	*122*	*124*
		Landing Distance	2,680	2,360	2,220	*2,440*	*2,570*
Climb		Time to Climb/Altitude	21/FL 370	25/FL 370	22/360	*24/FL 350*	*26/FL 330*
		FAR 25 Engine-Out Rate (fpm)	NA	NA	NA	*NA*	*NA*
		FAR 25 Engine-Out Gradient (ft./nm)	NA	NA	NA	*NA*	*NA*
Ceiling (ft.)		Certificated	51,000	41,000	41,000	*41,000*	*41,000*
		All-Engine Service	41,000	NA	36,000	*NA*	*NA*
		Engine-Out Service	25,000	NA	18,000	*NA*	*NA*
Cruise	**Long Range**	TAS	488	452	447	*455*	*457*
		Fuel Flow	2,883	4,679	4,695	*NA*	*NA*
		Altitude	FL 450	FL 390	FL 370	*FL 380*	*FL 360*
		Specific Range	0.169	0.097	0.095	*NA*	*NA*
	High Speed	TAS	516	470	470	*471*	*471*
		Fuel Flow	3,136	5,550	5,830	*NA*	*NA*
		Altitude	FL 450	FL 370	FL 370	*FL 360*	*FL 360*
		Specific Range	0.165	0.085	0.081	*NA*	*NA*
NBAA IFR Ranges (200-nm alternate)	**Max Payload** (with available fuel)	Nautical Miles	6,459	3,306	2,679	*2,692*	*2,628*
		Average Speed	481	437	434	*NA*	*NA*
		Trip Fuel	40,285	39,508	33,677	*NA*	*NA*
		Specific Range/Altitude	0.160/FL 490	0.084/FL 390	0.080/FL 370	*NA/FL 370*	*NA/FL 350*
	Max Fuel (with available payload)	Nautical Miles	7,507	6,285	6,134	*6,521*	*6,300*
		Average Speed	482	443	442	*NA*	*NA*
		Trip Fuel	45,129	66,854	66,673	*NA*	*NA*
		Specific Range/Altitude	0.166/FL 510	0.094/FL 410	0.092/FL 410	*NA/FL 390*	*NA/FL 390*
	Eight Passengers (with available fuel)	Nautical Miles	7,437	6,270	6,002	*6,555*	*6,376*
		Average Speed	482	443	442	*NA*	*NA*
		Trip Fuel	44,820	66,723	65,558	*NA*	*NA*
		Specific Range/Altitude	0.166/FL 510	0.094/FL 410	0.092/FL 410	*NA/FL 390*	*NA/FL 410*
	Ferry	Nautical Miles	7,636	6,348	6,200	*6,619*	*6,441*
		Average Speed	482	442	442	*NA*	*NA*
		Trip Fuel	45,168	66,886	67,207	*NA*	*NA*
		Specific Range/Altitude	0.169/FL 510	0.095/FL 410	0.092/FL 410	*NA/FL 390*	*NA/FL 410*
Missions (8 passengers)	**1,000 nm**	Runway	3,241	3,485	4,075	*NA*	*NA*
		Flight Time	2+10	2+27	2+26	*NA*	*NA*
		Fuel Used	5,942	10,478	10,370	*NA*	*NA*
		Specific Range/Altitude	0.168/FL 510	0.095/FL 410	0.096/FL 410	*NA/NA*	*NA/NA*
	3,000 nm	Runway	3,591	4,290	4,280	*NA*	*NA*
		Flight Time	6+17	6+54	6+54	*NA*	*NA*
		Fuel Used	16,280	29,534	30,070	*NA*	*NA*
		Specific Range/Altitude	0.184/FL 510	0.102/FL 410	0.100/FL 410	*NA/NA*	*NA/NA*
	6,000 nm	Runway	5,241	5,855	6,160	*NA*	*NA*
		Flight Time	12+28	13+34	13+35	*NA*	*NA*
		Fuel Used	34,622	63,311	65,528	*NA*	*NA*
		Specific Range/Altitude	0.173/FL 510	0.095/FL 410	0.092/FL 410	*NA/NA*	*NA/NA*
Remarks		Certification Basis	FAR 25, 2014	FAR 25 A 77, 1967/98 Split scimitar winglets. 2016 data.	FAR 25, 1999 *Also available with 26,500-lbf IAEV2527M-A5 engines; includes 6 additional center tanks plus VIP cabin. **Spec weight. *BCA* estimated data.	*FAR 25 A TBD* *All data preliminary.* *2016 data.*	*FAR 25 A TBD* *All data preliminary.* *2016 data.*