

Lineage 1000 *Additional Information*

economics

(2010 Embraer Lineage 1000)

HOURLY DIRECT OPERATING COSTS

- Fuel (\$7.13 per gal): \$4,876,920
- Maintenance labor (at \$90/hour): \$153
- Parts, airframe, engine, avionics: \$251.31
- Inspections, component overhauls, life-limited parts: \$321.18
- Engine restoration: \$380
- APU overhaul: \$67.36
- Misc. expenses
 - Landing and parking fees: \$137.36
 - Crew expenses: \$295.23
 - Supplies & catering: \$155.75

TOTAL VARIABLE FLIGHT COSTS PER HOUR: \$6,638.11

Average speed: 417 knots

- Cost per nautical mile: \$15.92

ANNUAL FIXED OPERATING COSTS

- Crew salaries (estimates)
 - Captain: \$162,000
 - Copilot: \$92,000
 - Cabin attendant: \$84,000
 - Benefits: \$101,400
- Hangar rental (typical): \$152,500
- Insurance (insured hull value = \$39 million)
 - Hull (0.09% of value): \$35,100
 - Single limit liability: \$12,500
- Recurrent crew training: \$51,800
- Aircraft modernization (avg per year): \$33,333
- Navigational chart service: \$15,025
- Refurbishing: \$179,550
- Computer maintenance program: \$12,750
- Aviation weather service (typical): \$700

TOTAL FIXED COST PER YEAR: \$932,658

ANNUAL BUDGET-BASED ON 175,000 NM

(Utilization: 420 hours)

- Variable cost: \$2,788,006
- Fixed cost: \$932,658

TOTAL FIXED COST (WITHOUT DEPRECIATION): \$3,720,664

- Per hour: \$8,859
- Per nautical mile: \$21.26
- Per seat nautical mile: \$1.12

Total cost (without depreciation): \$3,720,664

- Book depreciation (10% per year): \$3,900,000

TOTAL COST (WITH BOOK DEPRECIATION): \$7,620,664

- Per hour: \$18,144
- Per nautical mile: \$43.55
- Per seat nautical mile: \$2.29

Total cost (without depreciation): \$3,720,664

- Market depreciation: \$1,560,000

TOTAL COST (WITH MARKET DEPRECIATION): \$5,280,664

Per hour: \$12,573

- Per nautical mile: \$30.18
- Per nautical seat mile: \$1.59

Source: Conklin & de Decker, Orleans, Mass.

specifications

(2010 Embraer Lineage 1000)

CABIN DIMENSIONS

- Height: 6.56 ft
- Width: 8.79 ft
- Length: 84.32 ft
- Volume: 3,914 cu ft
- Door height: 5.97 ft
- Door width: 2.56 ft

BAGGAGE:

- Internal: 323 cu ft
- External: 120 cu ft

TYPICAL SEATS CREW/PASSENGERS: 3/19

MAXIMUM WEIGHTS

- Takeoff: 120,152 lb
- Basic operating: 70,844 lb
- Usable fuel: 48,217 lb
- Maximum payload: 9,625 lb
- Payload with full fuel: 0,000 lb

performance

(2010 Embraer Lineage 1000)

RANGE (IFR NBAA 200-nm reserve)

- Seats full: 4,198 nm
- Ferry range: 4,592 nm

RATE OF CLIMB

- 2,464 fpm
- One engine not operating: 720 fpm

CRUISE SPEED

- Max: 472 kt
- Long range: 455 kt

SERVICE CEILING

- Both engines at MTOW: 35,000 ft
- One engine: 23,070 ft

Source: Conklin & de Decker, Orleans, Mass.

LINEAGE 1000 COMPARED WITH OTHER AIRCRAFT

Model	First year produced	Variable cost/hour	Seats exec/max	Range (nm)	Normal cruise (kt)	Max takeoff weight (lb)
Lineage 1000	2008	\$6,638	19/19*	4,554	459	120,152
ACJ318	2005	\$7,894	19/132	3,900	470	145,504
Global 5000	2004	\$5,584	13/19	5,137	488	92,500

Assumptions: Aircraft are 2010 models. Jet fuel \$7.13/gal; variable cost: fuel plus maintenance reserves; four passengers; NBAA IFR 200-nm reserves fuel; passenger weight 200 lb includes baggage; two pilots, one cabin attendant.

*Lineage 1000 is modified ERJ190. FAA type certificate limits it to 19 passengers.

Cost source: Conklin & de Decker Life Cycle Cost

Performance source: Conklin & de Decker Aircraft Performance Comparator, Orleans, Mass.