

Boeing 757 *Additional Information*

specifications

(2005 Boeing 757)

CABIN DIMENSIONS

- Height: 7.0 ft
- Width: 11.5 ft
- Length: 118.5 ft
- Volume: 8,215 cu ft

TYPICAL SEATS CREW/PASSENGERS: 2/19

BOEING 757-200ER VIP COMPARED WITH OTHER AIRCRAFT

Model	First year produced	Variable cost/hour	Seats exec/max	Range (nm)	Normal cruise (kt)	Max takeoff weight (lb)
Boeing 757-200ER VIP	1982	13,690	19/228	6,300	490	255,000
BBJ 2	1997	9,680	19/189	5,660	473	174,200
Airbus ACJ 321	2001	9,533	19/200	4,730	467	196,210

Assumptions: Boeing 757 is a 2005 model; the other aircraft are 2013 models. Jet fuel \$7.38/gal; variable cost: fuel plus maintenance reserves; four passengers; NBAA IFR 200 nm reserve fuel; passenger weight 200 lb includes baggage; two pilots.

Note: Ranges are approximate, as interior weights vary considerably. Maximum passenger figures are for airline single-class (economy) configuration.

Cost source: Conklin & de Decker Life Cycle Cost

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

economics

(Boeing 757-200ER VIP)

HOURLY DIRECT OPERATING COSTS

- Fuel (\$7.38 per gal): \$10,405.80
- Maintenance labor (at \$93 per flight hour): \$325.50
- Parts, airframe, engine, avionics: \$410.83
- Inspections, component overhauls, life limited parts: \$1,329.96
- Engine restoration: \$440.50
- APU overhaul: \$55.98
- Misc. expenses
 - Landing and parking fees: \$277.48
 - Crew expenses: \$290.58
 - Supplies & catering: \$153.30

TOTAL VARIABLE FLIGHT COSTS PER HOUR: \$13,689.93

Average speed: 414 knots

– Cost per nautical mile: \$33.07

ANNUAL FIXED OPERATING COSTS

- Crew salaries (estimates)
 - Captain: \$161,000
 - Copilot: \$120,000
 - Cabin attendant: \$90,000
 - Benefits: \$111,300
 - Hangar rental (typical): \$190,000
 - Insurance (insured hull value = \$31.34 million)
 - Hull (0.40% of value): \$125,360
 - Single limit liability: \$16,000
 - Recurrent crew training: \$99,000
 - Aircraft modernization (avg per year): \$50,000
 - Navigational chart service: \$15,001
 - Refurbishing: \$179,550
 - Computer maintenance program: \$17,250
 - Aviation weather service (typical): \$700
- TOTAL FIXED COST PER YEAR: \$1,175,161

ANNUAL BUDGET-BASED ON 175,000 NM

(Utilization: 423 hours)

- Variable cost: \$5,790,840
- Fixed cost: \$1,175,161

TOTAL FIXED COST (WITHOUT DEPRECIATION): \$6,966,001

- Per hour: \$16,468
- Per nautical mile: \$39.81
- Per seat nautical mile: \$2.10

Total cost (without depreciation): \$6,965,001

– Book depreciation (10% per year): \$3,134,000

TOTAL COST (WITH BOOK DEPRECIATION): \$10,100,001

- Per hour: \$23,877
- Per nautical mile: \$57.71
- Per seat nautical mile: \$3.04

Total cost (without depreciation): \$6,966,001

– Market depreciation: \$1,253,600

TOTAL COST (WITH MARKET DEPRECIATION): \$8,219,601

Per hour: \$19,432

- Per nautical mile: \$46.97
- Per nautical seat mile: \$2.47

Source: Conklin & de Decker, Orleans, Mass.