Falcon 10/100

SpecifiCations

(1987 Falcon 100)

CABIN DIMENSIONS
– Height: 4.9 ft
– Width: 4.8 ft
– Length: 12.7 ft
– Volume: 251 cu ft
– Door height: 4.8 ft
– Door width: 2.6 ft

BAGGAGE:
– Internal: 12 cu ft
– External: 28 cu ft

TypiCaL seaTs CreW/passengers: 2/6

maximum WeigHTs
– Takeoff: 18,740 lb
– Basic operating: 11,585 lb
– Usable fuel: 5,912 lb
– Maximum payload: 1,975 lb

Range (iFr nbaa 200 nm reserve)
– seats full: 1,520 nm
– Ferry range: 1,620 nm

Rate oF CLimb
– 4,600 fpm
– one engine not operating: 1,535 fpm

Cruise speeD
– max: 490 kt
– Long range: 433 kt

Service Ceiling
– both engines at MTOW: 39,000 ft
– one engine: 17,000 ft

Performance

(1987 Falcon 100)

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– seats full: 1,520 nm
– Ferry range: 1,620 nm

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economics

(1987 Falcon 100)

HourLy DireCT operaTing CosTs
– Fuel ($6.86 per gal): $1,625.82
– Maintenance labor (at $93 per hour): $416.64
– Parts, airframe, engine, avionics: $275.15
– Inspections, component overhauls,
  life limited parts: $201.63
– Engine restoration: $450.90
– Misc. expenses
  Landing and parking fees: $20.00
  Crew expenses: $67.54
  Supplies & catering: $32.16

TOTAL VARIABLE FLIGHT COSTS PER HOUR: $3,089.84

Average speed: 429 knots
– Cost per nautical mile: $7.22

AneNuAL FieXeD operaTing CosTs
– Crew salaries (estimates)
  Captain: $95,000
  Copilot: $60,000
  Benefits: $46,500
– Hangar rental (typical): $25,700
– Insurance (insured hull value = $800,000)
  Hull (1.19% of value): $9,520
  Single limit liability: $10,500
– Recurrent crew training: $22,200
– Aircraft modernization (avg per year): $45,000
– Navigational chart service: $4,730
– Refurbishing: $16,740
– Computer maintenance program: $9,750
– Aviation weather service (typical): $700

TOTAL FIXED COST PER YEAR: $351,340

AneNuAL BUDgET—BASED ON 175,000 NM
(Usage: 409 hours)
– Variable cost: $1,263,745
– Fixed cost: $351,340

TOTAL FIXED COST (WITHOUT DEPRECIATION): $1,615,085
– Per hour: $3,949
– Per nautical mile: $9.23
– Per seat nautical mile: $1.32

Total cost (without depreciation): $1,615,085
– Book depreciation (10% per year): $80,000

TOTAL COST (WITH BOOK DEPRECIATION): $1,695,085
– Per hour: $4,144
– Per nautical mile: $9.69
– Per seat nautical mile: $1.38

FAIR MARKET VALUE

FalCons 10/100 Compared With Other Aircraft

<table>
<thead>
<tr>
<th>Model</th>
<th>First year produced</th>
<th>Variable cost/hour</th>
<th>Seats exec/max</th>
<th>Range (nm)</th>
<th>Normal cruise (kt)</th>
<th>Max takeoff weight (lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Falcon 100</td>
<td>1983</td>
<td>$3,090</td>
<td>6/9</td>
<td>1,560</td>
<td>452</td>
<td>18,740</td>
</tr>
<tr>
<td>Learjet 35A</td>
<td>1976</td>
<td>$2,806</td>
<td>6/10</td>
<td>1,895</td>
<td>411</td>
<td>18,300</td>
</tr>
<tr>
<td>Beechjet 400</td>
<td>1985</td>
<td>$2,766</td>
<td>7/9</td>
<td>1,409</td>
<td>446</td>
<td>15,700</td>
</tr>
<tr>
<td>Citation S/550</td>
<td>1984</td>
<td>$2,543</td>
<td>7/10</td>
<td>1,700</td>
<td>386</td>
<td>15,100</td>
</tr>
</tbody>
</table>

Assumptions: Aircraft are 1987 models. Jet fuel $6.86/gal; variable cost: fuel plus maintenance reserves; four passengers; NBARA iFr 200 nm reserve fuel; passenger weight 200 lb includes baggage; two pilots, one cabin attendant.

Cost source: Conklin & de Decker Life Cycle Cost