REACTION ENGINES LIMITED
Space Propulsion Systems

LAPCAT A2 Facts and Figures

Design mission

Brussels to Sydney *(via North Pole and Bering straits to avoid supersonic overflight of Eurasian land mass)*

Distance:	18700 km
Flight time:	4.6 hours *(under realistic air traffic control conditions)*
Reserve range:	5000 km @ Mach 0.9

Payload

300 passengers (plus baggage)

Vehicle parameters

Gross takeoff mass:	400 tonnes
Fuel mass:	198 tonnes (liquid hydrogen)
Fuselage length:	139 m
Fuselage diameter:	7.5 m
Wingspan:	41 m
Wing area:	900 m^2

Performance

Mach 0.9 cruise Lift/Drag 11.0 (5.9 km altitude) SFC 96.0 kN/kg/s
Mach 5.0 cruise Lift/Drag 5.9 (25-28 km altitude) SFC 40.9 kN/kg/s
Takeoff sideline noise @450m 101.9 dBA

Costs

Estimated 13 year Development program €22,600 M (2006 prices)
Vehicle sale price €639 M (assuming production run of 100 vehicles)
One way ticket price (Brussels – Sydney) €3940

LAPCAT A2
General Arrangement