



← EMBRAER
EMB120 Brasília
MAINTENANCE MANUAL

PRINCIPAL DIMENSIONS AND AREAS - DESCRIPTION AND OPERATION

1. General

A. Principal dimensions are included for the wing, ailerons, flaps, horizontal stabilizer surfaces, vertical stabilizer surfaces and body.

The linear dimensions are provided in meters (feet), the areas in square meters (square feet) and the angles in degrees, minutes and seconds.

B. Dimensions (figure 1)

(1) Overall Aircraft

Length	20.00 m (65.61 ft)
Width	19.78 m (64.90 ft)
Height	6.35 m (20.84 ft)

(2) Wing

Span	19.78 m (64.90 ft)
Chord at root (L fuselage)	2.812 m (9.23 ft)
Chord at reference tip	1.40 m (4.59 ft)
Total area	39.43 m ² (424.46 ft ²)
Dihedral at 66% chordline	6°30'
Sweepback at 66% chordline	0°

(3) Ailerons

Total area	2.88 m ² (31.00 ft ²)
Span	3.30 m (10.83 ft)
Chord aft of hinge line	23% of wing root

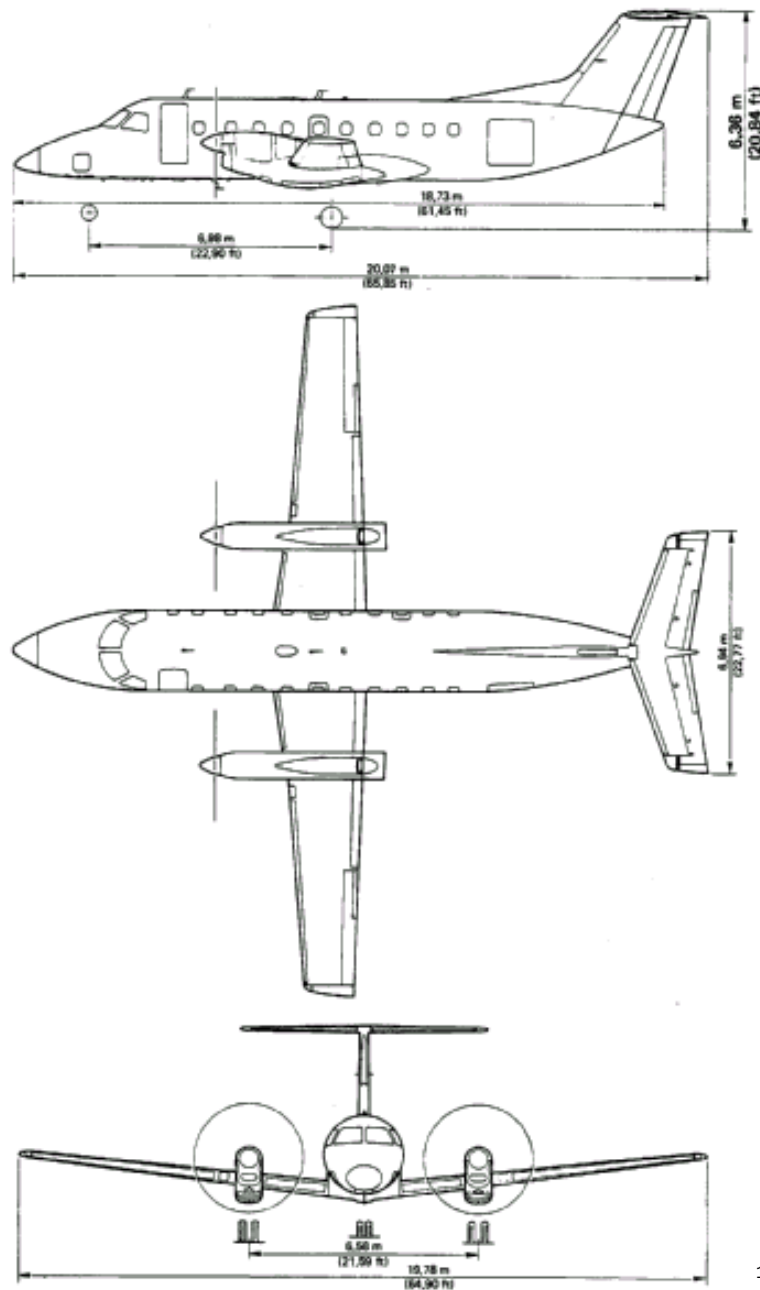
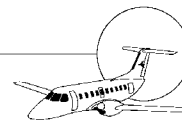
(4) Flaps

Type	Fowler, double-slotted
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EFFECTIVITY: ALL

ACFT GROUP : ALL

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Principal Dimensions

Figure 1

EFFECTIVITY: ALL

ACFT GROUP : ALL

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Span 5.15 m (16.90 ft)
Chord 30% of wing root
Area 3.23 m² (34.77 ft²)

(5) Horizontal Stabilizer

Area 10.00 m² (107.65 ft²)
Span 6.94 m (22.77 ft)
Chord at root 1.83 m (6.00 ft)
Chord at tip 1.11 m (3.64 ft)
Dihedral 0°
Sweepback at 50% chordline 15°
Position of elevator hinge line 70% chord
Stabilizer area 6.10 m² (65.67 ft²)
Elevator total area 3.90 m² (41.98 ft²)

(6) Vertical Stabilizer

Total area 6.90 m² (74.23 ft²)
Span 2.63 m (8.63 ft)
Chord at root 3.18 m (10.43 ft)
Chord at tip 2.07 m (6.79 ft)
Sweepback at 50% chordline 30°
Position of rudder I hinge line 70% chord
Position of rudder II hinge line 85% chord
Non-moving surface area 4.31 m² (46.40 ft²)
Rudder area 2.59 m² (22.88 ft²)
Dorsal fin area 1.43 m² (15.39 ft²)

(7) Fuselage

Outside diameter 2.28 m (7.48 ft)
Length of pressurized section 13.76 m (45.15 ft)
Total length 18.73 m (61.45 ft)

EFFECTIVITY: ALL

ACFT GROUP : ALL

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(8) Landing Gear

Wheel base (fully extended shock

absorber) 6.98 m (22.90 ft)

Track 6.58 m (21.59 ft)

	MAIN LANDING GEAR	NOSE LANDING GEAR
Wheel	12 in	8 in
Tire	24 x 7.25 (in)	18 x 5.5 (in)

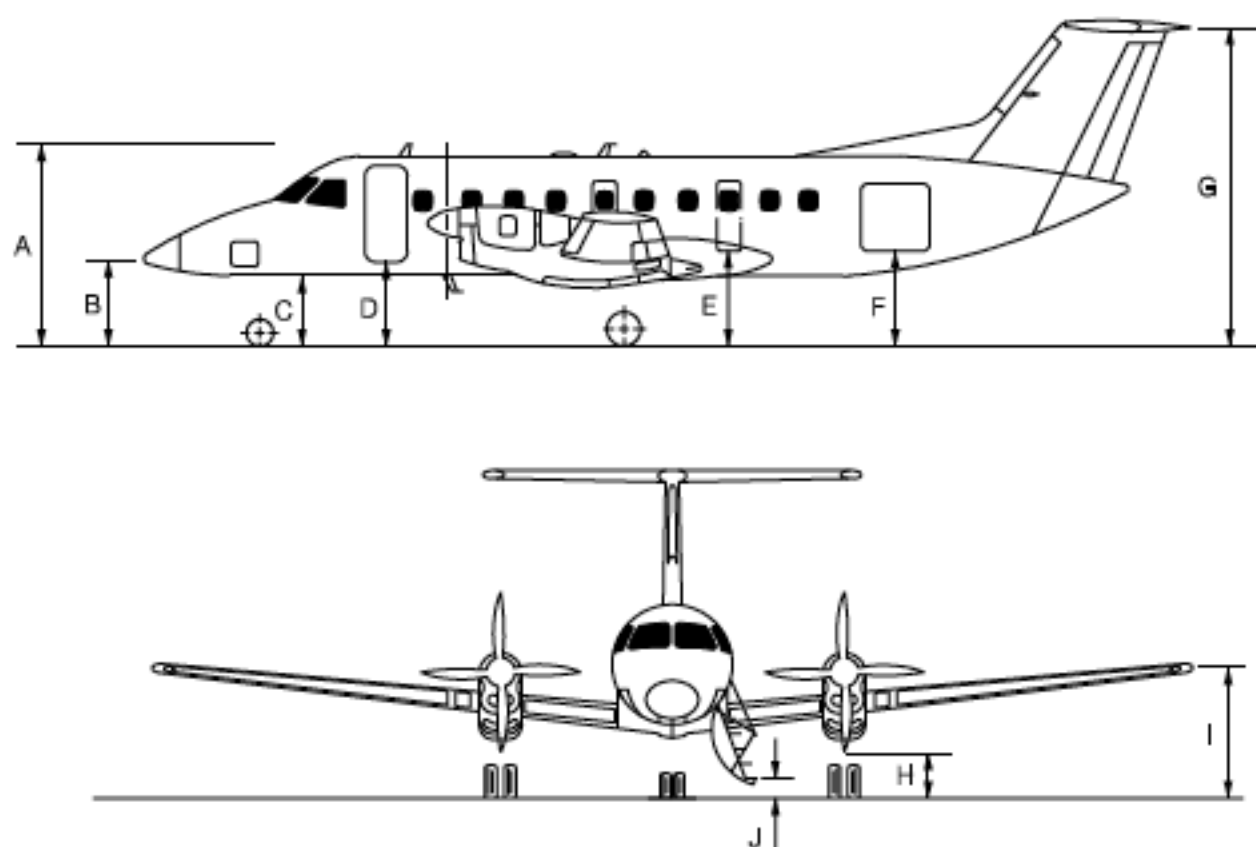
EFFECTIVITY: ALL

ACFT GROUP : ALL

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AIRPORT PLANNING



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	VERTICAL CLEARANCES			
	MAXIMUM		MINIMUM	
	METERS	IN	METERS	IN
A	3.43	135.0	3.30	129.9
B	1.46	57.5	1.30	50.8
C	1.13	44.5	0.98	38.6
D	1.58	62.2	1.46	57.5
E	1.76	69.3	1.57	61.8
F	1.88	74.0	1.61	63.4
G	6.53	257.1	6.16	242.5
H	0.58	22.8	0.46	18.1
I	2.36	92.9	2.20	86.6
J	0.43	16.9	0.31	12.2

Ground Clearances

Figure 2-5

