

Boeing 737



Data Boeing 737 (Refer to the drawings)

Property	Symbol	Value	Unit
Chord length aileron	C_a	0.605	m
Span of the aileron	l_a	2.661	m
x-location of hinge 1	x_1	0.172	m
x-location of hinge 2	x_2	1.211	m
x-location of hinge 3	x_3	2.591	m
Distance between actuator 1 and 2	x_a	35.0	cm
Aileron height	h	20.5	cm
Skin thickness	t_{sk}	1.1	mm
Spar thickness	t_{sp}	2.8	mm
Thickness of stiffener	t_{st}	1.2	mm
Height of stiffener	h_{st}	1.6	cm
Width of stiffener	w_{st}	1.9	cm
Number of stiffeners (equally spaced along the periphery of the cross-section)	n_{st}	15	-
Vertical displacement hinge 1	d_1	1.154	cm
Vertical displacement hinge 3	d_3	1.840	cm
Maximum upward deflection	θ	28	deg
Load in actuator 2	P	97.4	kN