Constants	Units	Description
M_{fuseD}	$[-]$	Fuselage drag reference Mach number
N_{land}	$[-]$	Emergency landing load factor
N_{lift}	$[-]$	Wing maximum load factor
P_{cabin}	$\frac{\mathrm{N}}{\mathrm{m}^2}$	Cabin air pressure
R	$\frac{\mathrm{J}}{\mathrm{kgK}}$	Air specific heat
SPR	$[-]$	Number of seats per row
T_{cabin}	$[K]$	Cabin air temperature
W''_{floor}	$\frac{\mathrm{N}}{\mathrm{m}^2}$	Floor weight/area density
W''_{insul}	$\frac{\mathrm{N}}{\mathrm{m}^2}$	Weight/area density of insulation material
W'_{seat}	N	Weight per seat
W'_{window}	$\frac{\mathrm{N}}{\mathrm{m}}$	Weight/length density of windows
$W_{avg.pass_{total}}$	lbf	Average passenger weight including payload
$W_{avg.pass}$	lbf	Average passenger weight
W_{cargo}	lbf	Cargo weight
$W_{carryon}$	lbf	Ave. carry-on weight
$W_{checked}$	lbf	Ave. checked bag weight
W_{fix}	lbf	Fixed weights (pilots, cockpit seats, navcom)
ΔP_{over}	psi	Cabin overpressure
ΔR_{fuse}	m	Fuselage extension height
λ_{cone}	[-]	Tailcone radius taper ratio
ρ_{bend}	$\frac{\mathrm{kg}}{\mathrm{m}^3}$	Stringer density
ρ_{cargo}	$\frac{\mathrm{kg}}{\mathrm{m}^3}$	Cargo density
ρ_{cone}	$\frac{\mathrm{kg}}{\mathrm{m}^3}$	Cone material density
ρ_{floor}	$\frac{\mathrm{kg}}{\mathrm{m}^3}$	Floor material density
ρ_{lugg}	$\frac{\mathrm{kg}}{\mathrm{m}^3}$	Luggage density
ρ_{skin}	$\frac{\mathrm{kg}}{\mathrm{m}^3}$	Skin density
σ_{bend}	$\frac{\mathrm{N}}{\mathrm{m}^2}$	Bending material stress
σ_{floor}	$\frac{\mathrm{N}}{\mathrm{m}^2}$	Max allowable floor stress
σ_{skin}	$\frac{\mathrm{N}}{\mathrm{m}^2}$	Max allowable skin stress
τ_{floor}	$\frac{\mathrm{N}}{\mathrm{m}^2}$	Max allowable shear web stress
f_{apu}	$[-]$	APU weight as fraction of payload weight
f_{fadd}	$[-]$	Fractional added weight of local reinforcements
f_{frame}	$[-]$	Fractional frame weight
$f_{lugg,1}$	$[-]$	Proportion of passengers with one suitcase
$f_{lugg,2}$	$[-]$	Proportion of passengers with two suitcases
f_{padd}	$[-]$	Other misc weight as fraction of payload weight
f_{seat}	$[-]$	Fractional seat weight
f_{string}	$[-]$	Fractional stringer weight
g	$\frac{\mathrm{m}}{\mathrm{s}^2}$	Acceleration due to gravity
h_{floor}	m	Floor beam height

l_{nose}	m	Nose length
n_{pass}	[−]	Number of passengers
p_s	cm	Seat pitch
p_{λ_v}	[−]	1 + 2*Tail taper ratio
r_E	[−]	Ratio of stringer/skin moduli
r_{M_h}	[−]	Horizontal inertial relief factor
r_{M_v}	[−]	Vertical inertial relief factor
$r_{w/c}$	[−]	Wingbox width-to-chord ratio
w_{aisle}	m	Aisle width
w_{seat}	m	Seat width
w_{sys}	m	Width between cabin and skin for systems