

Constants	Units	Description
$A_{fan}$	$[m^2]$	Engine reference area
$C_{D_{wm}}$	$[-]$	Windmill drag coefficient
$C_{L_{vt,max}}$	$[-]$	Max lift coefficient
$T_e$	$[N]$	Thrust per engine at takeoff
$V_1$	$[\frac{m}{s}]$	Minimum takeoff velocity
$V_{land}$	$[\frac{m}{s}]$	Landing velocity
$V_{ne}$	$[\frac{m}{s}]$	Never exceed velocity
$\lambda_{vt,min}$	$[-]$	Minimum vertical tail taper ratio
$\rho_{TO}$	$[\frac{kg}{m^3}]$	Air density at takeoff
$\tan(\Lambda_{vt})$	$[-]$	Tangent of leading edge sweep (40 deg)
$c_{l_{vt,EO}}$	$[-]$	Sectional lift force coefficient (engine out)
$e_{vt}$	$[-]$	Span efficiency of vertical tail
$g$	$[\frac{m}{s^2}]$	Gravitational acceleration
$\dot{r}_{req}$	$[s^{-2}]$	Max required yaw rate acceleration at landing
$y_{eng}$	$[m]$	Engine moment arm