

[illegible]

TOGW	241715
Coefficients	Weight
Wing	0.0106    28712
Fuselage	1757.8    32363
Landing Gear	0.04    9668.6
Nacel + Pylon	0.0184    4455.7
Tails	0.0021    5646.7
PP	0.0928    22425
Fixed Equip	0.035    40130
Fuel	0.2723    65816
Passanger	51375    51375
Cargo	3000

  

Configurations	Cargo	Fuel	PAX
Design			
Empty			
Ferry			
Landing			

  

Cargo Size

250 ft³

Landing Gear:

30214.375 Load per wheel

44 x 16 main gear tire size

18128.625 Load per wheel

40 x 14 nose gear tire size

  

Component	Design			Empty			Ferry			Landing				
	Weight	Length	Moment	Weight	Length	Moment	Weight	Length	Moment	Weight	Length	Moment	CG Design	
Wing	28712	168.3	4832265.09	28712	168.3	4832265	28712	168.3	4832265	28712	168.3	4832265	CG Empty	169.244462
Fuselage	32363	169.6	5488784.65	32363	169.6	5488785	32363	169.6	5488785	32363	169.6	5488785	CG Ferry	166.4527229
Landing Gear	9668.6	168.3	1627225.38	9668.6	168.3	1627225	9668.6	168.3	1627225	9668.6	168.3	1627225	CG Landing	169.3528285
Nacel + Pylon	4455.7	152	677266.356	4455.7	152	677266.4	4455.7	152	677266.4	4455.7	152	677266.4		
Tails	5646.7	262.43	1481872.62	5646.7	262.43	1481873	5646.7	262.43	1481873	5646.7	262.43	1481873		
PP	22425	152	3408658.49	22425	152	3408658	22425	152	3408658	22425	152	3408658	Forward	167.070635
Fixed Equip	40130	168.3	6753883.21	40130	168.3	6753883	40130	168.3	6753883	40130	168.3	6753883	AFT	169.529365
Fuel	65816	160.37	10554907.6	0	160.37	0	65816	160.37	10554908	0	160.37	0		
Passanger	51375	169.6	8713200	0	169.6	0	0	169.6	0	51375	169.6	8713200		
Cargo	3000	170.3	510900	0	170.3	0	0	170.3	0	3000	170.3	510900		
Sum	263593		44048963.4	143402		24269956	209218		34824863	197777		33494056		
	delta 1/4 MAC		1.19007693											
	158.98													

  

The diagram illustrates the longitudinal distribution of weight and the resulting center of gravity (CG) for four different aircraft loading conditions. A reference point at the front fuselage defines distances to each CG location.

- CG Ferry:** Located furthest forward at 66.45 units from the reference point.
- CG Empty:** Located slightly behind the ferry condition at 69.24 units.
- CG Design:** The target operating CG, located at 67.10 units.
- CG Landing:** Located furthest aft due to fuel and cargo load, at 69.35 units.

Other key features include the Main Gear Stowed Position, a vertical clearance dimension of 7.61 units, a horizontal distance of 70.04 units between the design CG and landing gear area, a total length dimension of 93.96 units, and a tail angle of 30.82 degrees.

