

Discus CS (N520RJ) Center of Gravity Calculations 18-Nov-17

Item	Weight	Arm	Moment
Main Wheel	468.0	5.3	2485.1
Tail Wheel	67.0	160.1	10725.4
Combined Empty (actual)	535.0	24.7	13210.4
Empty Acft	535.0	24.7	13210.4
Pilot	226.0	-17.7	-4004.7
Parachute	16.0	-17.7	-283.5
Ballast Wings (max 184 l, 48.6 gal, 389 lb)	0.0	6.6	0.0
Ballast Tail (max 6 l, 1.58 gal, 12.64 lb)	0.0	160.1	0.0
Total (max wt 1157 with ballast)	777.0	11.5	8922.2
CG Limit 10.4 - 15.75 >> % Aft Limit	10.4	20%	15.75

Allowable Loading Envelope

Pilot	No Ballast	Pilot Full Ballast
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Data Points (Dry)

Pilot	CG (in)	CG%	Pilot+Chute	
138	15.2	90%	154	Min
140	15.1	88%	156	
150	14.6	79%	166	
160	14.2	71%	176	
170	13.8	63%	186	
180	13.3	55%	196	
190	12.9	47%	206	
200	12.5	39%	216	
210	12.1	32%	226	
220	11.7	24%	236	
226	11.5	20%	242	Max

Example

186	0
186	0.5
186	0.5
135	0.5

- Equipment List:
- 2 x K2 LiFePO4 Batteries
 - PowerFLARM
 - Dittel Radio
 - Winter Altimeter
 - Winter Airspeed
 - LxNAV S8 Vario
 - Sage Vario
 - Oudie
 - GT50 Timer/Voltage/G-meter

Discus CS N520RJ Loading Graph (18 Nov 2017)
No Water Ballast

