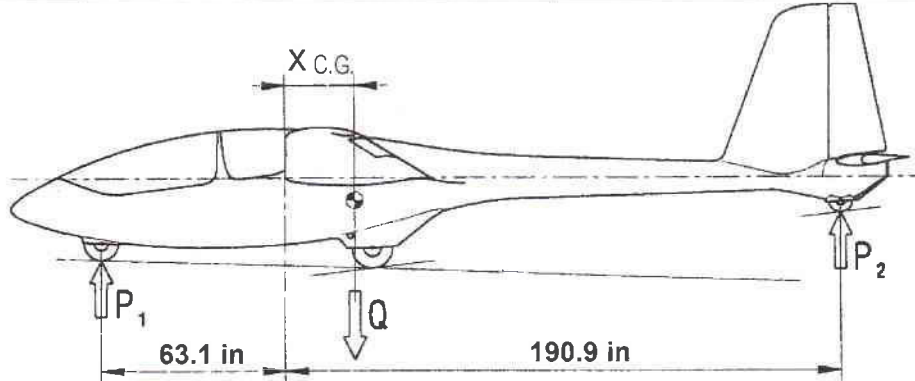


**PROTOKÓŁ WAŻENIA SZYBOWCA**  
**/Sailplane Weighing Report/**

Typ: **PW- 6U**  
Type

Nr fabryczny: **78.05.06**  
Serial No.:

Znaki rejestracyjne:  
Registration: **N327PW**



Podpora P <sub>1</sub> / Support P <sub>1</sub> /		Podpora P <sub>2</sub> / Support P <sub>2</sub> /	
Jednostka wagi /Weight units/	lbs	Jednostka wagi /Weight units/	lbs
Dokładność wagi /Balance accuracy/	± 0.1 [lbs]	Dokładność wagi /Balance accuracy/	± 0.1 [lbs]
Tara 1 /Tare 1/	0 + 0 = 0	Tara 2 /Tare 2/	0 + 0 = 0
Brutto 1 /Gross 1/		Brutto 2 /Gross 2/	
Netto 1 = Brutto 1 – Tara 1 /Net 1 = Gross 1 – Tare 1/	<b>505.2</b>	Netto 2 = Brutto 2 – Tara 2 /Net 2 = Gross 2 – Tare 2/	<b>271.0</b>

1) Ciężar szybowca: */Sailplane weight/*  $Q = \text{Netto 1} + \text{Netto 2} = \mathbf{776.2 \text{ [lbs]}}$

2) Położenie środka ciężkości pustego szybowca: */C.G. location of empty sailplane/*  
 $X_{S.C.} = (\text{Netto 2} * - \text{Netto 1} * ) / (\text{Netto 1} + \text{Netto 2}) = \mathbf{25.58 \text{ [in]}}$

3) Skrajne dopuszczalne położenie środka ciężkości pustego szybowca: *Limit allowed locations of empty sailplane C.G.* od 25.51 [in] do 26.22 [in]  
*from to*

4) Ciężar zespołów szybowca: */Weight of sailplane assemblies/*  
Skrzydło lewe / Left-hand wing / 179.02 lbs  
Skrzydło prawe / Right-hand wing / 179.24 lbs  
Usterzenie wysokości / Tailplane / 32.85 lbs  
Kadłub kompletny / Fuselage assy / 385.09 lbs

**Ciężar szybowca / Sailplane weight /**  $\Sigma = \mathbf{776.2 \text{ [lbs]}}$

5) Dopuszczalny ciężar szybowca pustego: */Allowed empty sailplane weight/* min. 750 [lbs], - max. 794 [lbs]  
Maksymalny ciężar kadłuba z usterzeniem wysokości: */Maximum fuselage with tailplane weight/* 419 [lbs]

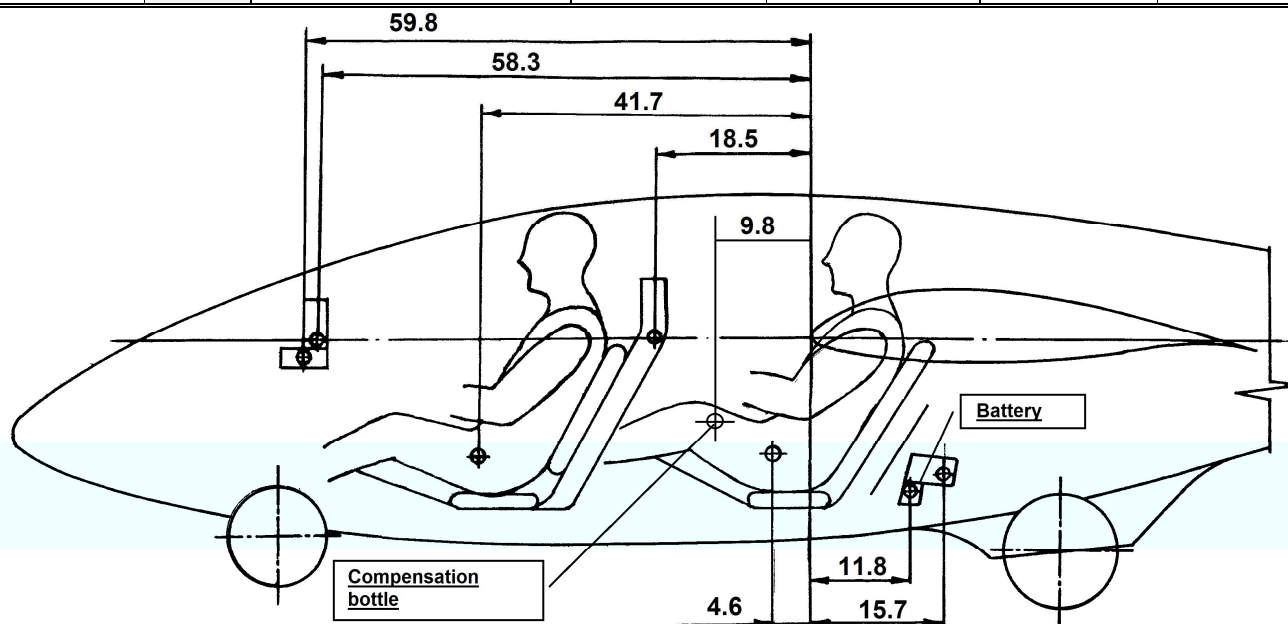
Pomiar wykonał: Jasna Sarah Arnold  
Measurement taken by on 11-29-2017

Małgorzata Arnold  
(Podpis i stempel kierownika KJ Zakładu)  
(Chief Quality Inspector, signature and stamp)

UWAGI /Notes/: Szybowiec ważono z przyrządami zaznaczonymi w pkt. 6 niniejszego protokołu (str. 2).  
*/The glider was weighed by using the instruments identified in paragraph 6th of this report (page 2)./*

6) Wykaz wyposażenia ważonego szybowca / Equipment list of sailplane weighted/:

Zabudowanie / Installed	Nazwa /Name/	Typ /Type/	Ciężar /Weight/ [lbs]	Ramię /Arm/ [in]	Moment [in-lbs]
<b>Przednia tablica przyrządów /Front instrument panel/:</b>					
Max. weight of front panel tablicy przedniej: 11 [lbs]	Prędkościomierz /Airspeed indicator/	Winter	0.882	+ 58.3	51.42
	Wysokościomierz /Fine course altimeter/	United	0.813	+ 58.3	47.40
	Busola magnetyczna /Magnetic compass/	S.I.R.S.	0.331	+ 61.5	20.36
	Wariometr /Variometer/	Winter	0.529	+ 58.3	30.84
	Naczynie wyrównawcze /Compensation bottle/	TM-420C	0.794	+ 58.3	46.29
	Radiostacja /Transceiver/	Becker AR4201	1.477	+ 59.8	88.32
	Głośnik /Loudspeaker/	Becker 1PL042	2.200	- 11.8	-25.96
	Mikrofon /Microphone/	Peiker	0.475	+ 30.3	14.39
	Akumulator /Battery & Box/	Dittel	4.67	- 11.8	55.11
		-			
<b>Tylna tablica przyrządów /Rear instrument panel/</b>					
7.71 Max. weight of rear pan [lbs]	Prędkościomierz /Airspeed indicator/	Winter	0.882	+ 18.5	16.32
	Wysokościomierz /Fine course altimeter/	United	0.813	+ 18.5	15.04
	Wariometr /Variometer/	Winter	0.529	+ 18.5	9.79
	Naczynie wyrównawcze /Compensation bottle/	TM-420C	0.794	+ 9.8	7.78
	Mikrofon /Microphone/	Peiker	0.475	+ 1.1	0.52



# N327PW Weight & Balance Calculations

## Empty Weight CG

Location	Weight	Arm	Moment
Nose Wheel	505.2	-63.10	-31878.12
Tailwheel	271.0	190.90	51733.90
Empty Aircraft	776.2	25.58	19855.78

**Per PW-6U Flight Manual**  
 Minimum front seat solo - 121 lbs  
 Maximum seat load - 242.5 lbs

## Aft Limit - 16.77" aft of datum

*Front Seat Solo - per manual*

Location	Weight	Arm	Moment
Empty Aircraft	776.2	25.58	19855.78
Front Seat	<b>121</b>	-41.70	-5045.70
Rear Seat		-4.60	0.00
Totals	897.2	16.51	14810.08

*Aft Limit - one person in front*

Location	Weight	Arm	Moment
Empty Aircraft	776.2	25.58	19855.78
Front Seat	<b>117</b>	-41.70	-4878.90
Rear Seat		-4.60	0.00
Totals	893.2	<b>16.77</b>	14976.88

427.8  
*Aft Limit - one person in rear*

Location	Weight	Arm	Moment
Empty Aircraft	776.2	25.58	19855.78
Front Seat		-41.70	0.00
Rear Seat	<b>320</b>	-4.60	-1472.00
Totals	1096.2	<b>16.77</b>	18383.78

## Forward Limit - 7.02" aft of datum

*Forward Limit - one person in front*

Location	Weight	Arm	Moment
Empty Aircraft	776.2	25.58	19855.78
Front Seat	<b>295.7</b>	-41.70	-12330.69
Rear Seat		-4.60	0.00
Totals	1071.9	<b>7.02</b>	7525.09

*Forward Limit & Gross Weight Intersection*

Location	Weight	Arm	Moment
Empty Aircraft	776.2	25.58	19855.78
Front Seat	<b>254.3</b>	-41.70	-10604.31
Rear Seat	173.5	-4.60	-798.10
Totals	<b>1204</b>	<b>7.02</b>	8453.37

## Gross Weight Limit - 1204 lbs

*Max Gross Loading - at seat limit in front*

Location	Weight	Arm	Moment
Empty Aircraft	776.2	25.58	19855.78
Front Seat	<b>242.5</b>	-41.70	-10112.25
Rear Seat	185.3	-4.60	-852.38
Totals	<b>1204</b>	7.38	8891.15

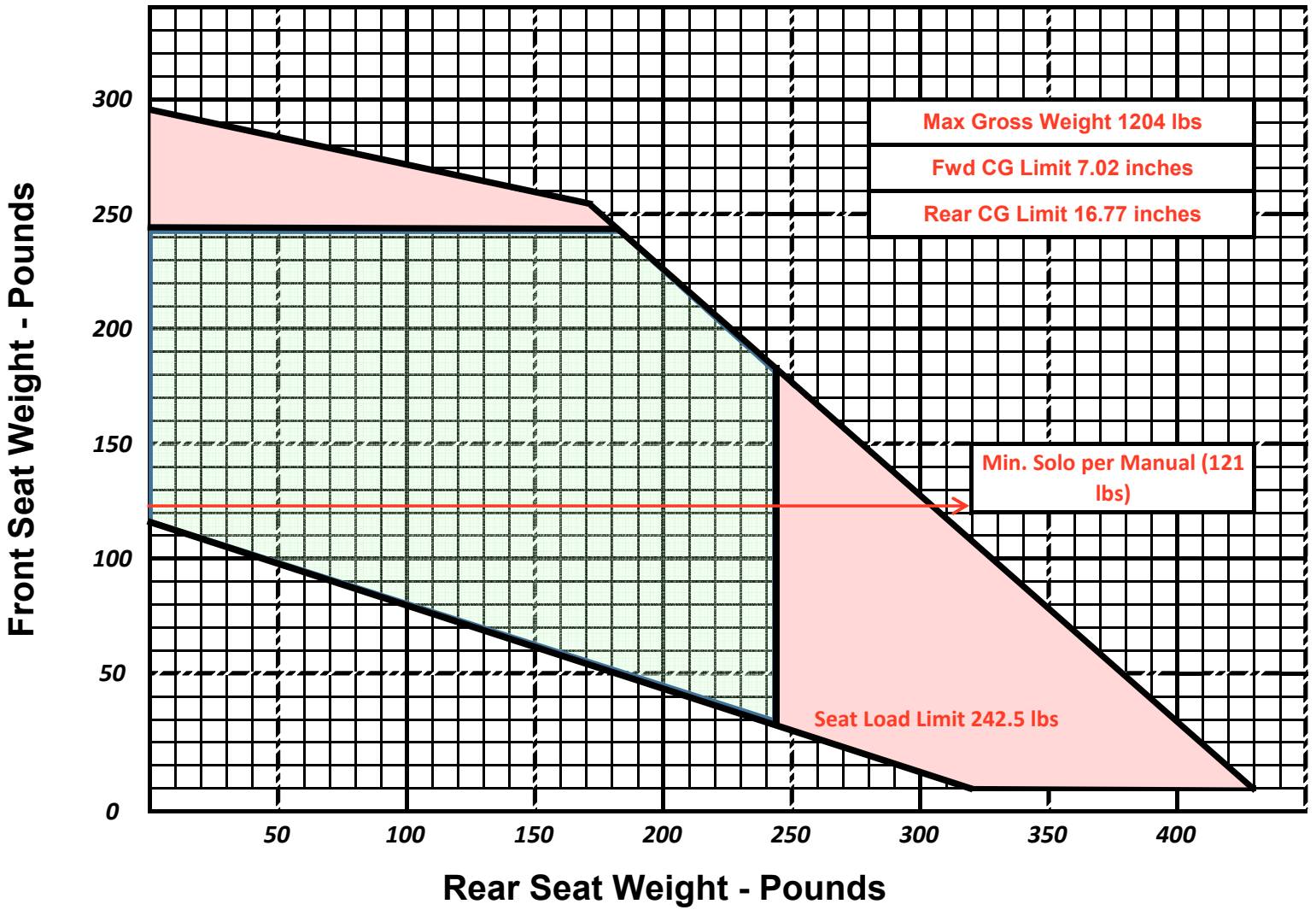
*Max Gross Loading - at seat limit in rear*

Location	Weight	Arm	Moment
Empty Aircraft	776.2	25.58	19855.78
Front Seat	185.3	-41.70	-7727.01
Rear Seat	<b>242.5</b>	-4.60	-1115.50
Totals	<b>1204</b>	9.15	11013.27

*Max Gross Loading - one person in rear*

Location	Weight	Arm	Moment
Empty Aircraft	776.2	25.58	19855.78
Front Seat		-41.70	0.00
Rear Seat	<b>427.8</b>	-4.60	-1967.88
Totals	<b>1204</b>	14.86	17887.90

# N327PW CG Envelope



## N327PW CG Calculation Form

Location	Weight	X	Arm	=	Moment
N327PW Empty Weight	776.2		25.58		19,855.20
Front Seat		X	-41.70	=	
Rear Seat		X	-4.60	=	
<b>Totals</b>		X		=	

*Max Forward Limit = 7.02 Inches aft of Datum*

*Max Rearward Limit = 16.77 Inches aft of Datum*

*Max Gross Weight = 1204 Pounds*

*Minimum Front Seat Solo = 121 Pounds*

*Maximum Seat Load = 242.5 Pounds*