



# REPORT FLIGHT AND STRUCTURE TEST RESCUE

EN 12491 | 2001 | NfL II 91/09

**Manufacturer** VITAL PARACHUTE INC.  
**Address** 4th floor, Samjin bldg.  
 596 Cheonho-daero, Gwnagjin  
 Seoul 143-848 / Korea Republic

<b>Certification number:</b>	<b>EP 121.2015</b>
<b>Type/model:</b>	Cires 110
<b>Total weight in flight:</b>	110 kg
<b>Serial number STRENGTH</b>	VPR-CRM140009
<b>Serial number FLIGHT</b>	VPR-CRM140008

## Measurement of Flight test rescue (5kg Tension)

Center Line   mm	6085 cm
Main Line 1   mm	5301 cm
Main Line 2   mm	
Number of cell:	16
Tolerance   mm	25 mm
Weight   grame	1739

TESTS	place:	date:	result:
<b>1. Deployment system strength test</b> A load of 700 N between each components	Villeneuve	17.02.2015	OK
<b>2. Speed of opening test - ref. A (2 times)</b> Time from the instant of free drop until a load of 200 N is sustained Opening time Opening time	Villeneuve	05.01.2015 05.01.2015	4.86 sec 3.32 sec
<b>3. Descent rate and stability test - ref. A and B (2 times)</b> The paraglider is released as the parachute begins to open, minimum 100 m descent. Stability 1 Sink rate 1 Stability 2 Sink rate 2	Villeneuve	05.01.2015 05.01.2015 05.01.2015 05.01.2015	Stable 4.96 m/sec Stable 5.06 m/sec
<b>4. Strength test 40 m/s opening shock (2 times)</b> The drop test device is accelerated to a straight line velocity of 40 m/s. Speed of opening is less than 5 seconds and shock not exceeded 15g Test 1 Test 2 Test 3	Illarsaz	06.02.2015 06.02.2015 06.02.2015	OK OK OK
<b>5. Interaction and stability test (piloted) - ref. C</b> a the emergency parachute is deployed from a paraglider in normal straight flight. b the pilot shall take no action while the behaviour of the parachute and paraglider are observed 200 metres. c the pilot take action while the behaviour of the parachute and paraglider are observed 200 metres.			not available  not available  not available
<b>6. Connecting strap</b> Mininum load capacity of 2400 daN			

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Weather data, ref. 3 and B

Date / place	hPa	wind	tem	humidity
Villeneuve, January 05, 2015	968	0	1	79.0%
<i>Corrected mass:</i>		<b>110.45 kg</b>		
Villeneuve, January 05, 2015	972	0	5	71.0%
<i>Corrected mass:</i>		<b>109.51 kg</b>		

## Reference

A. At horizontal airspeed 8 m/s and vertical speed 1.5 m/s

B. Formula to be used for correcting the test mass ofr differences from ICAO standard atmosphere

$$m_{corr} := m_{dec} \cdot \frac{p \cdot T_0}{p_0 \cdot T}$$

Ground level atmospheric pressure at the test location: (p)

ICAO standard atmospheric pressure at MSL: (p<sub>0</sub>)

Ground level température at the test location: (T)

ICAO standard temperature at MSL: (T<sub>0</sub>)

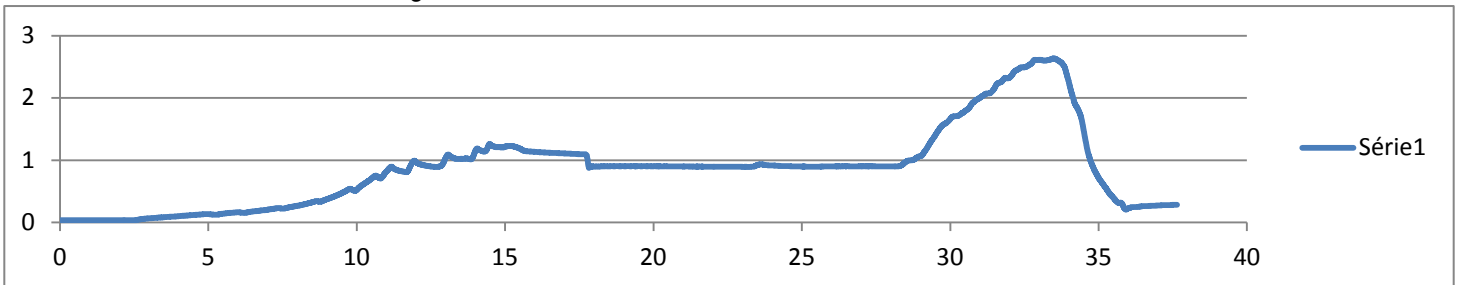
Total weight in flight: (m<sub>dec</sub>)

Corrected mass: (m<sub>corr</sub>)

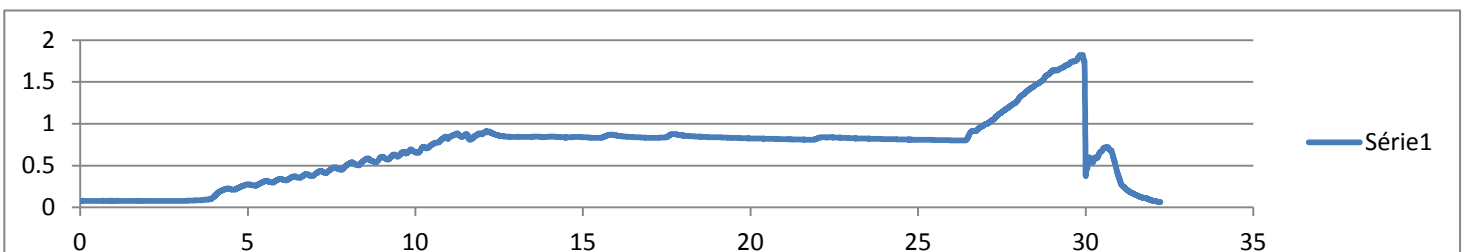
C. Only parachute with controls for steering and landing flare

GRAPHIQUE concerning Nfl II 91/09 "§ 6.1.8 inner container"

Max load attachement 1 = 263.9 kg



Max load attachement 2 = 182.4 kg





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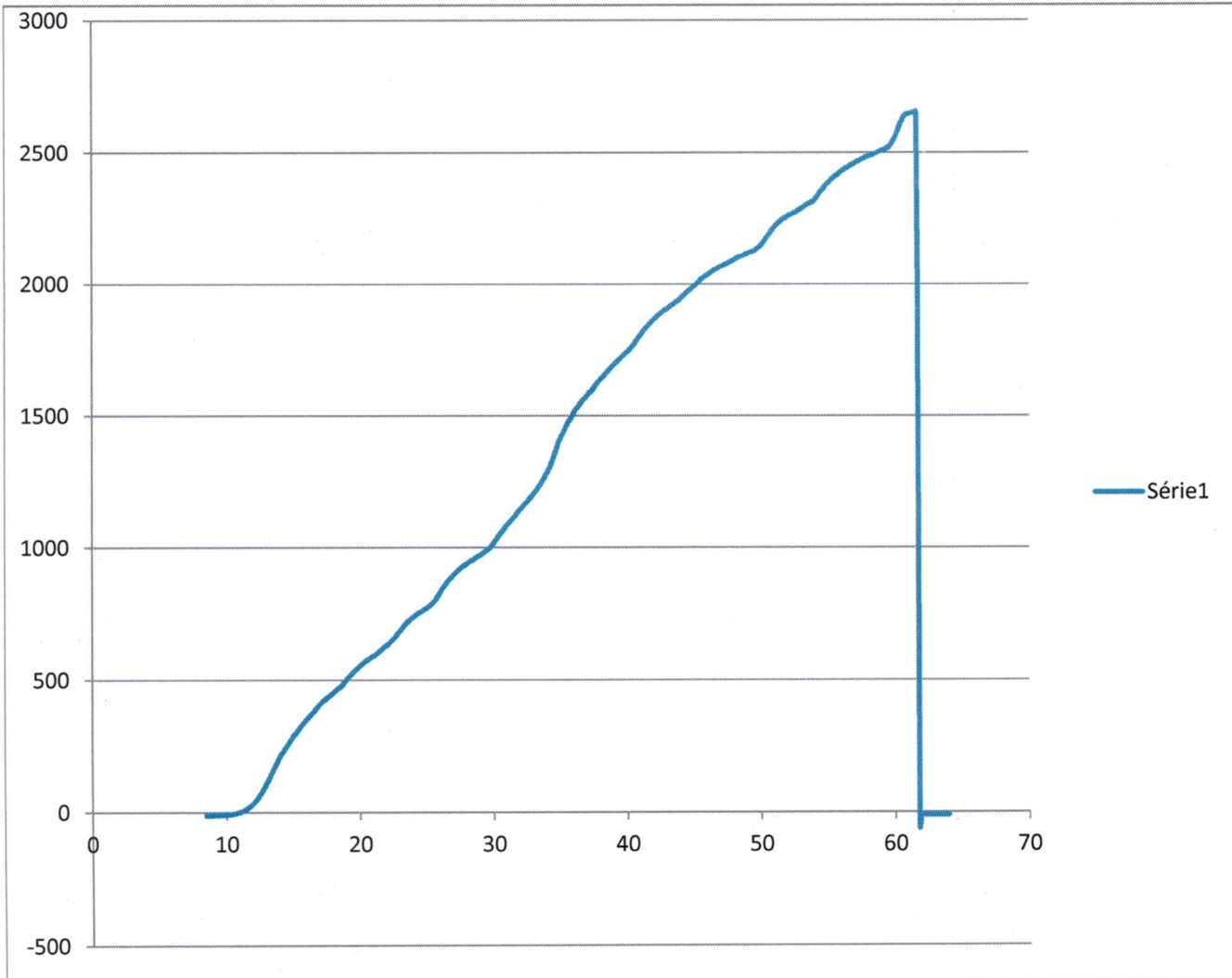
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<b>EP 121.2015</b>
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GRAPHIQUE concerning Nfl II 91/09 "§ 6.1.4 connecting strap"  
Max load = 2656,1 kg



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For Air Turquoise SA


  
Alain Zoller

Villeneuve, 17.02.2015