



Flight and Load test report - EN 12491:2001

Manufacturer SUPAIR - VLD
Address Parc Altais - 34, rue Adrastée
 74650 Chavanod
 France

Certification number: EP 094.2013
Type/model: START M
Total weight in flight: 100 kg

Description of tests	place:	date:	result:
1. Deployment system strength test A load of 700 N between each components	Villeneuve	08.01.2013	OK
2. Speed of opening test - ref. A (2 times) Time from the instant of free drop until a load of 200 N is sustained Opening time Opening time	Villeneuve Villeneuve	31.01.2013 11.02.2013	3.00 sec. 2.72 sec.
3. Descent rate and stability test - ref. A and B (2 times) 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 Villeneuve Villeneuve Villeneuve	31.01.2013 11.02.2013 31.01.2013 11.02.2013	Stable 4.96 m/sec Stable 5.39 m/sec
4. Strength test 40 m/s opening shock (2 times) 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	Illarsaz Illarsaz	06.03.2013 06.03.2013	OK OK
5. Interaction and stability test (piloted) - ref. C 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

The model described is in conformity with all points of the standard EN 12491:2001



For Air Turquoise SA

Alain Zoller

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Weather data, ref. 3 and B

Date / place	hPa	wind	temp	humidity
31.01.2013, Villeneuve	958	3 km/h	2°	77.0%
	Corrected mass:	99.01 kg		
11.02.2013, Villeneuve	960	0 km/h	3°	78.0%
	Corrected mass:	98.68 kg		

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

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

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

ICAO standard atmospheric pressure at MSL: (p₀)

Ground level temperature at the test location: (T)

ICAO standard temperature at MSL: (T₀)

Total weight in flight: (m_{dec})

Corrected mass: (m_{corr})

C. Only parachute with controls for steering and landing flare



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For Air Turquoise SA

ETC Testing center



Alain Zoller

www.para-test.com

ISO 9001
BUREAU VERITAS
Certification





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Manufacturer SUPAIR - VLD
Address Parc Altais - 34, rue Adrastée
 74650 Chavanod
 France

Certification number: EP 095.2013
Type/model: START L
Total weight in flight: 125 kg

Description of tests	place:	date:	result:
1. Deployment system strength test A load of 700 N between each components	Villeneuve	08.01.2013	OK
2. Speed of opening test - ref. A (2 times) Time from the instant of free drop until a load of 200 N is sustained Opening time Opening time	Villeneuve Villeneuve	07.03.2013 13.03.2013	2.84 sec. 3.36 sec.
3. Descent rate and stability test - ref. A and B (2 times) 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 Villeneuve Villeneuve Villeneuve	07.03.2013 13.03.2013 07.03.2013 13.03.2013	Stable 5.40 m/sec Stable 5.45 m/sec
4. Strength test 40 m/s opening shock (2 times) 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	Illarsaz Illarsaz	06.03.2013 06.03.2013	OK OK
5. Interaction and stability test (piloted) - ref. C 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

The model described is in conformity with all points of the standard EN 12491:2001



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Weather data, ref. 3 and B

Date / place	hPa	wind	temp	humidity
07.03.2013, Villeneuve	980	0 km/h	6°	78.0%
	Corrected mass:	124.8 kg		
13.03.2013, Villeneuve	962	2 km/h	1°	78.0%
	Corrected mass:	124.74 kg		

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 of differences from ICAO standard atmosphere

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

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

ICAO standard atmospheric pressure at MSL: (p₀)

Ground level temperature at the test location: (T)

ICAO standard temperature at MSL: (T₀)

Total weight in flight: (m_{dec})

Corrected mass: (m_{corr})

C. Only parachute with controls for steering and landing flare



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