

# EP EMERGENCY PARACHUTE

## INSPECTION CERTIFICATE

Inspection certificate number: **EP 220.2018**

### MANUFACTURER DATA

Manufacturer name: **Woody Valley Srl**  
 Representative: **Simone Caldana**  
 Street: **Via Vienna 92**  
 Post code / place: **30121 Trento**  
 Country: **Italy**


### SAMPLE DATA

Name: **Quadro** Size: **115**  
 Type: **Unsteerable** \*Payload [kg]: **115**  
 Weight [kg]: **1250** \*Total weight in flight minus  
 weight of paraglider  
 Use: **Single-seater** Volume packed [cm3]: **4260**  
 Serial number flight: **160403** Date of reception: **12.04.2016**  
 Serial number load: **160404** Date of reception: **12.04.2016**

	TEST REPORT SUMMARY	RESULTS	PLACE	DATES
EP1	Deployment system strength test	POSITIVE	Villeneuve	06.01.2016
EP2	Speed of opening, descent rate and stability test	POSITIVE	Villeneuve	06.07.2016
EP3	Strength test / opening shock	POSITIVE	Illarsaz	19.06.2016
EP4	Connecting strap (riser)	POSITIVE	Villeneuve	21.12.2015
EP5	Interaction and stability test	N/A	n/a	n/a

### ISSUE DATA

Date of issue: **12.07.2018**  
 Place of declaration: **Villeneuve**  
 Managing Director: **Alain Zoller**

Signature: 

This signature approve the validity of the test reports EP 1 to EP 5 (Only if test report are applicable).

Air Turquoise SA, having thoroughly assessed the sample mentioned hereunder, declare it was found conform with all requirements defined by the following directives:

EN 12491:2001 and LTF NFL II 91/09 chapter 6 Paraglider rescue systems  
 LTF Ref chapter: 6.1.1 to 6.1.19, exclusion 6.1.10

Present declaration's scope only extends to the conformity of a given sample, on a given date and in a given place – as mentioned here above.

This inspection report contain the following test and is complet with the test report number EP1 to EP4,  
 EP5 for steerable model only.

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# Deployment system strength test

## TEST REPORT EP 1

EP PARAGLIDERS RESCUE SYSTEMS

Inspection certificate ref. number: **EP 220.2018**

### MANUFACTURER DATA

Manufacturer name: **Woody Valley Srl**  
Representative: **Simone Caldana**  
Street: **Via Vienna 92**  
Post code / place: **30121 Trento**  
Country: **Italy**

### SAMPLE DATA

Name: **Quadro**  
Size: **115**  
Payload [kg]: **115**  
Serial number: **160404**  
Date of reception: **12.04.2016**

### ISSUE DATA

Place of test: **Villeneuve**  
Date of test: **06.01.2016**  
Inspector: **Alain Zoller**  
Results: **POSITIVE**  
Directive: **EN 12491 | 2001 chapter 5.3.2 and LTF 91/09 chapter 6.1.8**

The deployment system (the connection between handgrip and inner container) is loaded at min 700 [N] over 10 secondes. The deployment system is loaded until breaking. Each component is tested.

### ATMOSPHERE AGL

[C°] **20.2**  
RH [%] **38**  
[hPa] **997.8**

### RESULTS

**Minimum strength required during min 10s: 700 [N]**

Strength of 700 N duration each components no1 [s]: 21.32  
Strength of 700 N duration each components no2 [s]: 31.7  
Strength of 700 N duration each components no3 [s]: 10.1  
Uncertainty K=2 [N]: 17.0  
Calculated time value for minimum strength [s]: **21.32**

### Max strength components:

Max strength components no1 [N]: 1304.0  
Max strength components no2 [N]: 1043.0  
Max strength components no3 [N]: 849.0  
Uncertainty K=2 [N]: 17.0  
Calculated max strength value [N]: **849.0**

Calculated value include the value minus the uncertainty (on safe side) / The uncertainty stated is the expanded uncertainty obtained by multiplying the standard uncertainty by the coverage factor k = 2. The value of the measurand lies within the assigned range of values with a probability of 95%.

The validation of this test report is given by the signature of the test manager on inspection certificate 71.5.1

# Speed of opening and descent rate and stability test

## TEST REPORT EP 2

EP PARAGLIDERS RESCUE SYSTEMS

Inspection certificate ref. number: **EP 220.2018**

### MANUFACTURER DATA

Manufacturer name: **Woody Valley Srl**  
Representative: **Simone Caldana**  
Street: **Via Vienna 92**  
Post code / place: **30121 Trento**  
Country: **Italy**

### SAMPLE DATA

Name: **Quadro**  
Size: **115**  
Payload [kg]: **115**  
Serial number: **4260**  
Date of reception: **12.04.2016**

### ISSUE DATA

	Test no1	Test no2
Place of tests:	<b>Villeneuve</b>	<b>Villeneuve</b>
Date of tests:	<b>22.06.2016</b>	<b>06.07.2016</b>
Inspectors:	<b>Alain Zoller</b>	<b>Alain Zoller</b>
Results:	<b>POSITIVE</b>	

Directive: **EN 12491:2001 chapter 5.3.3 / 5.3.4 - LTF NFL II 9/09 chapter 6**

The rescue system is dropped from a paraglider in straight flight at 8 [m/s]  $\pm$ 1 [m/s] and a vertical airspeed of less than 1,5 [m/s].  
The paraglider is released as the rescue system begins to open. Wink link 200 [N] is used to measure the speed opening.  
After a minimum of 100 m of descent, the average rate of descent is measured over 30 m of descent.  
The test is carried out twice.

### ATMOSPHERE AGL

	Test no1	Test no2
[C°]	<b>25</b>	<b>25</b>
RH [%]	<b>76</b>	<b>66</b>
[hPa]	<b>979.2</b>	<b>975.3</b>
Wind [m/s]	<b>0.1</b>	<b>0.1</b>

### RESULTS

	EN	LTF
<b>Time of opening test:</b>	<b>POSITIVE</b>	<b>POSITIVE</b>
Requirement time from the instant of free drop until a load of 200 [N] is sustained [s]:	<b>5.00</b>	<b>5.00</b>
<b>Calculated sink rate test:</b>	<b>POSITIVE</b>	<b>POSITIVE</b>
Maximum sink rate test requirements [m/s]:	<b>5.50</b>	<b>6.80</b>
<b>Stability test:</b>	<b>POSITIVE</b>	<b>POSITIVE</b>
Behavior during descent stability test: 1	<b>Stable</b>	<b>Stable</b>

Calculated value include the value minus the uncertainty (on safe side) / The uncertainty stated is the expanded uncertainty obtained by multiplying the standard uncertainty by the coverage factor k = 2. The value of the measurand lies within the assigned range of values with a probability of 95%.

The tests do not include any compatibility tests with alternative inner containers.

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# Strength test / opening shock

## TEST REPORT EP 3

EP PARAGLIDERS RESCUE SYSTEMS

Inspection certificate ref. number: **EP 220.2018**

### MANUFACTURER DATA

Manufacturer name: **Woody Valley Srl**  
 Representative: **Simone Caldana**  
 Street: **Via Vienna 92**  
 Post code / place: **30121 Trento**  
 Country: **Italy**

### SAMPLE DATA

Name: **Quadro**  
 Size: **115**  
 Payload [kg]: **115**  
 Serial number: **160403**  
 Date of reception: **12.04.2016**

### ISSUE DATA

	Test no1	Test no2
Place of test:	<b>Illarsaz</b>	<b>Illarsaz</b>
Date of test: 1   2	<b>19.06.2016</b>	<b>19.06.2016</b>
Inspector:	<b>Alain Zoller</b>	<b>Alain Zoller</b>
Results:	<b>POSITIVE</b>	
Directive:	<b>EN 12491:2001 chapter 5.3.5.1 - LTF NFL II 9/09 chapter 6</b>	

The emergency parachute (in its standard inner container and packed according to the user's manual instructions) is stowed on the drop test device. The test parachute's riser (or both risers in the case of a two riser parachute) is (are) connected to the single anchor point on the drop test device using the connector(s) specified and supplied by the parachute manufacturer.

The drop test device is accelerated to a straight line velocity of 40 m/s and the parachute deployed using its handle or handle attachment point by a static line attached to a drogue chute or similar low force deployment system.

The test is carried out twice with the same parachute.

Speed of opening must be less than 5 seconds and shock not exceeded 15g.

### ATMOSPHERE AGL

	Test no1	Test no2
[C°]	<b>972.3</b>	<b>969.4</b>
RH [%]	<b>21</b>	<b>25.8</b>
[hPa]	<b>62</b>	<b>57</b>
Wind [m/s]	<b>0.2</b>	<b>0.5</b>

### TEST RESULTS

#### Speed of opening in max 5 secondes

Speed of opening test 1 **POSITIVE**  
 Speed of opening test 2 **POSITIVE**

#### Sample statut after shock

Strength test 40 m/s opening shock 1 **POSITIVE**  
 Strength test 40 m/s opening shock 2 **POSITIVE**

Aircraft speed Uncertainty K=2 [m/s] 1.7

Calculated value include the value minus the uncertainty (on safe side) / The uncertainty stated is the expanded uncertainty obtained by multiplying the standard uncertainty by the coverage factor k = 2. The value of the measurand lies within the assigned range of values with a probability of 95%.

Involved test	Item	Validity	Manufacturer	Type nr.	S/N
Strength test 40 m/s opening shock	Weight	2020	Air Turquoise	n/a	n/a
Weather	Geos n° 11	08.05.2017	JDC elec.	Geos n° 11	22
Strength test 40 m/s opening shock	Weak link	2020	Tost	n/a	n/a

The validation of this test report is given by the signature of the test manager on inspection certificate 71.5.1

# Connecting strap (riser)

## TEST REPORT EP 4

EP PARAGLIDERS RESCUE SYSTEMS

Inspection certificate ref. number: **EP 220.2018**

### MANUFACTURER DATA

Manufacturer name: **Woody Valley Srl**  
 Representative: **Simone Caldana**  
 Street: **Via Vienna 92**  
 Post code / place: **30121 Trento**  
 Country: **Italy**

### SAMPLE DATA

Name: **Quadro**  
 Size: **115**  
 Payload [kg]: **115**  
 Serial number: **160404**  
 Date of reception: **12.04.2016**

### ISSUE DATA

Place of test: **Villeneuve**  
 Date of test: **21.12.2015**  
 Inspector: **Alain Zoller**  
 Results: **POSITIVE**  
 Directive: **LTF NFL II 9/09 chapter 6.1.4**

The connecting strap has to have a minimum load capacity of 24000 [N]. The exposed part of the connecting belt has to be protected against environmental factors.

### ATMOSPHERE AGL

[C°] **21.8**  
 RH [%] **42**  
 [hPa] **1033.4**

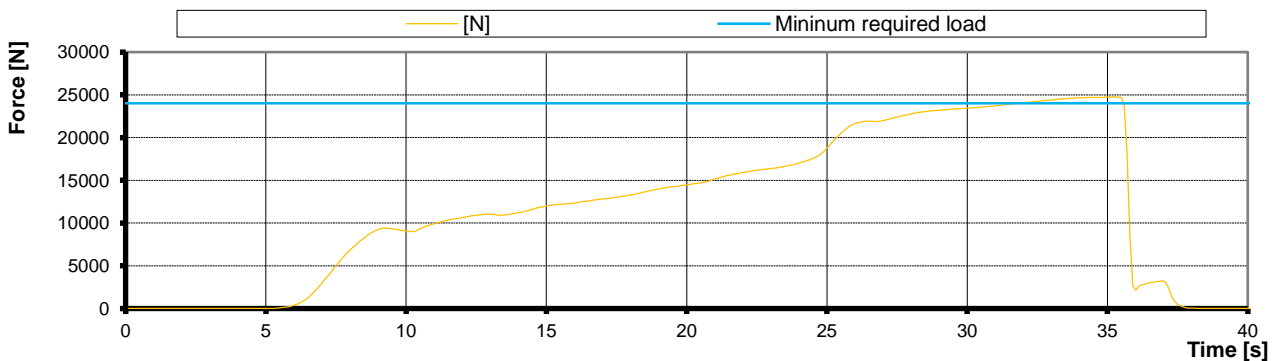
### RESULTS [N]

Minimum required load 24000  
 Load capacity 1 24770  
 Uncertainty k=2 105

**Calculated max load capacity value: 24665**

Calculated value include the value minus the uncertainty (on safe side) / The uncertainty stated is the expanded uncertainty obtained by multiplying the standard uncertainty by the coverage factor k = 2. The value of the measurand lies within the assigned range of values with a probability of 95%.

### GRAPHIQUE RESULTS [N]



Instruments	Manufacturer	Type nr.	Validity	S/N
Load sensor	HBM	1-S9M/50KN-1	14.10.2017	31314652
Geos n°11 Skywatch	JDC	Geos n° 11	07.04.2017	0022

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