



## Speed of opening, stability, descent rate

Inspection certificate number: **EP\_253.2019**

**Test Report**

### Manufacturer data

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

### Sample data

|                            |                              |   |             |
|----------------------------|------------------------------|---|-------------|
| Name:                      | <b>Quadro</b>                | Size:   | <b>140</b>  |
| Steerable <sup>(1)</sup>   | <b>No</b>                    | Maximum weight in flight <sup>(2)</sup> [kg]: | <b>140</b>  |
| Weight <sup>(3)</sup> [kg] | <b>1.506</b>                 | volume packed [cm <sup>3</sup> ]:             | <b>6200</b> |
| Serial number:             | <b>1001/2018 / 1002/2018</b> |   |             |

### Test data <sup>(4)</sup>

|               | Test no. 1          | Test no. 2          |
|---------------|---------------------|---------------------|
| Place of test | <b>Villeneuve</b>   | <b>Villeneuve</b>   |
| Date of test  | <b>20.11.2018</b>   | <b>28.11.2018</b>   |
| Inspector:    | <b>Alain Zoller</b> | <b>Alain Zoller</b> |

### Atmosphere AGL

|            |              |              |
|------------|--------------|--------------|
| [°C]       | <b>2.8</b>   | <b>2</b>     |
| RH [%]     | <b>77</b>    | <b>80</b>    |
| [hPa]      | <b>959.1</b> | <b>979.1</b> |
| Wind [m/s] | <b>0.1</b>   | <b>0.1</b>   |

### Summary of both results <sup>(5)</sup>

|                                     | EN              | LTF             |
|-------------------------------------|-----------------|-----------------|
| Time of opening test [s]:           | <b>3.12</b>     | <b>3.12</b>     |
| Calculated descent rate test [m/s]: | <b>5.47</b>     | <b>5.47</b>     |
| Stability test:                     | <b>POSITIVE</b> | <b>POSITIVE</b> |
| Behaviour during descent test:      | <b>Stable</b>   | <b>Stable</b>   |
| Glider ratio:                       | <b>POSITIVE</b> |                 |

If steerable:

|  |            |            |
|--|------------|------------|
| Any flight procedure and/or configuration described in the user's manual | <b>N/A</b> | <b>N/A</b> |
|--|------------|------------|



## Strength test - 40 m/s opening shock

Inspection certificate number: **EP\_253.2019**

**Test Report**

### Manufacturer data

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

### Sample data

|                |                  |                                   |             |
|----------------|------------------|-----------------------------------|-------------|
| Name:          | <b>Quadro</b>    | Size:                             | <b>140</b>  |
| Steerable      | <b>No</b>        | Maximum weight [kg]:              | <b>140</b>  |
| Weight [kg]    | <b>1.506</b>     | volume packed [cm <sup>3</sup> ]: | <b>6200</b> |
| Serial number: | <b>1003/2018</b> |                                   |             |

### Test data <sup>(1)</sup>

|                     | Test no. 1          | Test no. 2          |
|---------------------|---------------------|---------------------|
| Place of test       | <b>Muraz</b>        | <b>Muraz</b>        |
| Date of test        | <b>14.12.2018</b>   | <b>14.12.2018</b>   |
| Corrected mass [kg] | 141.18              | 141.18              |
| Inspector:          | <b>Alain Zoller</b> | <b>Alain Zoller</b> |

### Atmosphere AGL

|            |              |              |
|------------|--------------|--------------|
| [°C]       | <b>2</b>     | <b>2</b>     |
| RH [%]     | <b>55</b>    | <b>55</b>    |
| [hPa]      | <b>969.5</b> | <b>969.5</b> |
| Wind [m/s] | <b>0.1</b>   | <b>0.1</b>   |

### Test results

|   | Test no. 1      | Test no. 2      |
|---|-----------------|-----------------|
| Strength test (40m/s shock)                         | <b>POSITIVE</b> | <b>POSITIVE</b> |
| Aircraft speed uncertainty K=2 [m/s] <sup>(2)</sup> | 1.7             | 1.7             |

| Item / type no. | Validity   | Manufacturer     | S/N |
|-----------------|------------|------------------|-----|
| Weight          | 2020       | Air Turquoise SA | N/A |
| Geos n° 11      | 08.05.2017 | JDC elec.        | 22  |
| Weak link       | 2020       | Tost             | N/A |



Identification number: **MISC\_077.2018**

**Fluggeräte GmbH ALFA Cross**

**Result summary**

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Maximum strength for riser, bridle

**29193.8 [N]**

Place of declaration **Villeneuve**  
Date of issue: **24.05.2018**  
Managing director **Alain Zoller**

Signature:

This signature approve the validity of the test report, and can be included in the inspection certificate 71.5.1

**Air Turquoise SA** has thoroughly tested the sample of emergency parachute mentioned above and certifies its conformity with the standards: **LTF NfL II 91/09 chapter 6.1.4**

| Instrument          | Validity   | Manufacturer | Type no.     | S/N      |
|---------------------|------------|--------------|--------------|----------|
| Load sensor         | 14.10.2019 | HBM          | 1-S9M/50KN-1 | 31314652 |
| Geos n° 11 Skywatch | 08.05.2017 | JDC elec.    | Geos n° 11   | 22       |

<sup>(1)</sup> Riser: lowest part of the parachute system, which is connected to harness. Bridle: connection between riser and harness, can also be a strap.

<sup>(2)</sup> 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.

<sup>(3)</sup> 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 measured lies within the assigned range of values with a probability of 95%.



Identification number: **MISC\_078.2018**

**Fluggeräte GmbH ALFAcross one size**

**Result summary**

Inner container strength test. Applied minimum 700 N for at least 10 seconds and at maximum strength.  
 Duration at the required strength: **5.9 [s]**  
 The maximum strength before broken: **851.0 [N]**

Place of declaration **Villeneuve**  
 Date of issue: **24.05.2018**  
 Managing director **Alain Zoller**

Signature:

This signature approve the validity of the test report, and can be included in the inspection certificate 71.5.1

**Air Turquoise SA** has thoroughly tested the sample of riser/bridle mentioned above and certifies its conformity with the standards: **EN 12491: 2015 chapter 5.3.2 and LTF NfL 91/09 chapter 6.1.8**

| Instrument          | Validity             | Manufacturer      | Type no.   | S/N     |
|---------------------|----------------------|-------------------|------------|---------|
| Load Cell (axial)   | 01.06.2021           | Burster GmbH (DE) | 8431-10000 | 1185483 |
| Winch               | check every 12 month | Arwin             | 300/600    | N/A     |
| Geos n° 11 Skywatch | 08.05.2017           | JDC elec.         | Geos n° 11 | 22      |

<sup>(1)</sup> Inner container: container of the folded emergency parachute.

<sup>(2)</sup> Inner container (the connection between handgrip and inner container) is loaded at min 700 [N] over 10 seconds. The deployment system is loaded until breaking. Each component is tested.

<sup>(3)</sup> 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 measured lies within the assigned range of values with a probability of 95%.