EP EMERGENCY PARACHUTE

INSPECTION CERTIFICATE

Inspection certificate number: **EP 151.2016**

MANUFACTURER DATA

Manufacturer name: Fly & More Handels GmbH / ICARO Paragliders
Representative: Wolfgang Kaiser
Street: Hochriesstr. 1
Post code / place: 83126 Flintsbach
Country: Germany

SAMPLE DATA

Name: Square
Type: Unsteerable
Weight [kg]: 1322
Use: Single-seater
Serial number flight: 16998
Serial number load: 16999
Size: 115
*Payload [kg]: 115
*Total weight in flight minus weight of paraglider
Volume packed [cm³]: 4260
Date of reception: 12.04.2016

TEST REPORT SUMMARY

<table>
<thead>
<tr>
<th>TEST</th>
<th>RESULTS</th>
<th>PLACE</th>
<th>DATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP1</td>
<td>Deployment system strength test</td>
<td>POSITIVE</td>
<td>Villeneuve</td>
</tr>
<tr>
<td>EP2</td>
<td>Speed of opening, descent rate and stability test</td>
<td>POSITIVE</td>
<td>Villeneuve</td>
</tr>
<tr>
<td>EP5</td>
<td>Interaction and stability test</td>
<td>N/A</td>
<td>n/a</td>
</tr>
</tbody>
</table>

ISSUE DATA

Date of issue: 23.08.2016
Place of declaration: Villeneuve
Managing Director: Alain Zoller

Signature: [Signature Image]

This signature approves 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 8 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 complese with the test report number EP1 to EP4, EP5 for stearable model only.

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GB | REV 12 | 29.03.2016

ISO | 71.5.1
Deployment system strength test

**EP PARAGLIDERS RESCUE SYSTEMS**

**TEST REPORT EP 1**


**MANUFACTURER DATA**

- **Manufacturer name:** Fly & More Handels GmbH / ICARO Paragliders
- **Representative:** Wolfgang Kaiser
- **Street:** Hochriesstr. 1
- **Post code / place:** 83126 Flintsbach
- **Country:** Germany

**SAMPLE DATA**

- **Name:** Square
- **Size:** 115
- **Payload [kg]:** 115
- **Serial number:** 16999
- **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 seconds. 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.
# Deployment system strength test

**TEST REPORT EP 1**

**EP PARAGLIDERS RESCUE SYSTEMS**

**Inspection certificate ref. number:** EP 151.2016

## GRAPHIQUE RESULTS

### Min strength 10 sec. each components 1

![Graph 1](attachment:image1.png)

### Min strength 10 sec. each components 2

![Graph 2](attachment:image2.png)

### Min strength 10 sec. each components 3

![Graph 3](attachment:image3.png)

### Table: Involved test

<table>
<thead>
<tr>
<th>Involved test</th>
<th>Item</th>
<th>Validity</th>
<th>Manufacturer</th>
<th>Type nr.</th>
<th>S/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deployment system strength test</td>
<td>Load Cell (axial)</td>
<td>11.06.2016</td>
<td>Burster / MTS</td>
<td>8431-10000</td>
<td>1185483</td>
</tr>
<tr>
<td>Deployment system strength test</td>
<td>Winch</td>
<td>15.01.2018</td>
<td>Arwin</td>
<td>300/600</td>
<td>n/a</td>
</tr>
<tr>
<td>Weather</td>
<td>Geos n° 11 Skywatc</td>
<td>08.05.2017</td>
<td>JDC elec.</td>
<td>Geos n° 11</td>
<td>22</td>
</tr>
</tbody>
</table>

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**


### MANUFACTURER DATA
- **Manufacturer name:** Fly & More Handels GmbH / ICARO Paragliders
- **Representative:** Wolfgang Kaiser
- **Street:** Hochriesstr. 1
- **Post code / place:** 83126 Flintsbach
- **Country:** Germany

### SAMPLE DATA
- **Name:** Square
- **Size:** 115
- **Payload [kg]:** 115
- **Serial number:** 4260
- **Date of reception:** 12.04.2016

### ISSUE DATA
- **Test no1**
  - **Place of tests:** Villeneuve
  - **Date of tests:** 22.06.2016
  - **Inspectors:** Alain Zoller
  - **Results:** POSITIVE

- **Test no2**
  - **Place of tests:** Villeneuve
  - **Date of tests:** 06.07.2016
  - **Inspectors:** Alain Zoller
  - **Results:** POSITIVE

### 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 6 [m/s] +/- 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

<table>
<thead>
<tr>
<th>Test no1</th>
<th>Test no2</th>
</tr>
</thead>
<tbody>
<tr>
<td>[C°]</td>
<td>25</td>
</tr>
<tr>
<td>RH [%]</td>
<td>76</td>
</tr>
<tr>
<td>[hPa]</td>
<td>979.2</td>
</tr>
<tr>
<td>Wind [m/s]</td>
<td>0.1</td>
</tr>
</tbody>
</table>

### RESULTS
- **EN**
  - **Time of opening test:** POSITIVE
  - **Requirement time from the instant of free drop until a load of 200 [N] is sustained [s]:** 5.00
  - **Calculated sink rate test:** POSITIVE
  - **Maximum sink rate test requirements [m/s]:** 5.50
  - **Stability test:** POSITIVE
  - **Behavior during descent stability test:** Stable

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

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.

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

PARAGLIDERS RESCUE SYSTEMS


<table>
<thead>
<tr>
<th>Involved test</th>
<th>Item</th>
<th>Validity</th>
<th>Manufacturer</th>
<th>Type nr.</th>
<th>S/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deployment system strength test</td>
<td>Weak links</td>
<td>2030</td>
<td>Tost</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Descent rate and stability test</td>
<td>Line 30 meters</td>
<td>2020</td>
<td>Air Turquoise</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Weather</td>
<td>Geos n° 11 Skywatch</td>
<td>08.05.2017</td>
<td>JDC elec.</td>
<td>Geos n° 11</td>
<td>22</td>
</tr>
</tbody>
</table>

The validation of this test report is given by the signature of the test manager on inspection certificate 71.5.1.
# Strength test / opening shock

**EP PARAGLIDERS RESCUE SYSTEMS**

**INSPECTION CERTIFICATE REF.**

**MANUFACTURER DATA**

<table>
<thead>
<tr>
<th>Manufacturer name:</th>
<th>Fly &amp; More Handels GmbH / ICARO Paragliders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Representative</td>
<td>Wolfgang Kaiser</td>
</tr>
<tr>
<td>Street:</td>
<td>Hochriesstr. 1</td>
</tr>
<tr>
<td>Post code / place:</td>
<td>83126 Flintsbach</td>
</tr>
<tr>
<td>Country:</td>
<td>Germany</td>
</tr>
</tbody>
</table>

**SAMPLE DATA**

<table>
<thead>
<tr>
<th>Name:</th>
<th>Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size:</td>
<td>115</td>
</tr>
<tr>
<td>Payload [kg]:</td>
<td>115</td>
</tr>
<tr>
<td>Serial number:</td>
<td>16998</td>
</tr>
<tr>
<td>Date of reception:</td>
<td>12.04.2016</td>
</tr>
</tbody>
</table>

**ISSUE DATA**

<table>
<thead>
<tr>
<th>Place of test:</th>
<th>Illarsaz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of test:</td>
<td>19.06.2016</td>
</tr>
<tr>
<td>Inspector:</td>
<td>Alain Zoller</td>
</tr>
<tr>
<td>Results:</td>
<td>POSITIVE</td>
</tr>
</tbody>
</table>

**DIRECTIVE**

EN 12491:2001 chapter 5.3.5.1 - LTF NFL II 9/09 chapter 6

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.

**ATMOSPHERE AGL**

<table>
<thead>
<tr>
<th>Test no1</th>
<th>Test no2</th>
</tr>
</thead>
<tbody>
<tr>
<td>[C°]</td>
<td>972.3</td>
</tr>
<tr>
<td>RH [%]</td>
<td>21</td>
</tr>
<tr>
<td>[hPa]</td>
<td>62</td>
</tr>
<tr>
<td>Wind [m/s]</td>
<td>0.2</td>
</tr>
</tbody>
</table>

**TEST RESULTS**

Speed of opening in max 5 seconds

| 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%.

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

The validation of this test report is given by the signature of the test manager on inspection certificate 71.5.1.
Connecting strap (riser)

EP PARAGLIDERS RESCUE SYSTEMS


MANUFACTURER DATA

Manufacturer name: Fly & More Handels GmbH / I CARO Paragliders
Representative: Wolfgang Kaiser
Street: Hochriesstr. 1
Post code / place: 83126 Flintsbach
Country: Germany

SAMPLE DATA

Name: Square
Size: 115
Payload [kg]: 115
Serial number: 16999
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]

![Graph of load capacity over time](image)

<table>
<thead>
<tr>
<th>Instruments</th>
<th>Manufacturer</th>
<th>Type nr.</th>
<th>Validity</th>
<th>S/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Load sensor</td>
<td>HBM</td>
<td>1-S9M/50KN-1</td>
<td>14.10.2017</td>
<td>31314652</td>
</tr>
<tr>
<td>Geos n°11 Skywatch</td>
<td>JDC</td>
<td>Geos n° 11</td>
<td>07.04.2017</td>
<td>0022</td>
</tr>
</tbody>
</table>

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