

## Speed of opening, stability, descent rate

Inspection certificate number:

EP\_351.2023

Test Report

### Manufacturer data

Manufacturer name: **BogdanFly**  
 Representative: **Voinov Bogdan Romanovich**  
 Street: **Rua da Pedreira, 34.**  
 Post code / Place: **Salir 8100-202 Faro region**  
 Country: **Portugal**

### Sample data

Name: **BFreserve** Size: **23**  
 Steerable <sup>(1)</sup>: **No** Maximum weight in flight <sup>(2)</sup> [kg]: **90**  
 Weight <sup>(3)</sup> [kg]: **0.94** Volume packed [cm<sup>3</sup>]: **3000**  
 Serial number: **003M3122**

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

	Test no. 1	Test no. 2
Measured opening time [s]:	<b>3.01</b>	<b>2.98</b>

#### Unsteerable parachute and steerable parachute with locked controls (if applicable)

Measured sink rate [m/s] ( $\leq 5.5$ ):	<b>5.22</b>	<b>4.96</b>
Stability test:	<b>Stable</b>	<b>Stable</b>

#### Steerable parachute and steerable parachute with unlocked controls (if applicable)

Measured sink rate [m/s] ( $\leq 4.0$ ):	n/a	n/a
Stability test:	n/a	n/a
Test of steerability:	n/a	n/a

### Test data

	Test no. 1	Test no. 2
Place of test	<b>Villeneuve</b>	<b>Villeneuve</b>
Date of test	<b>30.09.2022</b>	<b>13.10.2022</b>
Atmosphere AGL		
[°C]	<b>14</b>	<b>15</b>
RH [%]	<b>76</b>	<b>76</b>
[hPa]	<b>975</b>	<b>978</b>
Wind [m/s]	<b>0.1</b>	<b>0.1</b>
Corrected mass with uncertainty ( $m_{corr}$ ) [kg]:	<b>87.7</b>	<b>86.8</b>

#### If steerable with brake lock system

Place of test	n/a	n/a
Date of test	n/a	n/a
Atmosphere AGL		
[°C]	n/a	n/a
RH [%]	n/a	n/a
[hPa]	n/a	n/a
Wind [m/s]	n/a	n/a
Corrected mass with uncertainty ( $m_{corr}$ ) [kg]:	n/a	n/a

## Strength test - 40 m/s opening shock

Inspection certificate number: **EP\_351.2023****Test Report**

### Manufacturer data

Manufacturer name: **BogdanFly**  
 Representative: **Voinov Bogdan Romanovich**  
 Street: **Rua da Pedreira, 34.**  
 Post code / Place: **Salir 8100-202 Faro region**  
 Country: **Portugal**

### Sample data

Name: **BFreserve** Size: **23**  
 Steerable: **No** Maximum weight [kg]: **90**  
 Weight [kg]: **0.94** Volume packed [cm<sup>3</sup>]: **3000**  
 Serial number: **012M0423**

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

	Test no. 1	Test no. 2
Place of test	<b>St-Cierges</b>	<b>St-Cierges</b>
Date of test	<b>11.04.2023</b>	<b>11.04.2023</b>
Maximum weight [kg]	<b>90</b>	<b>90</b>
Inspector:	<b>Nicolas Jacquod</b>	<b>Nicolas Jacquod</b>

### Atmosphere AGL

	Test no. 1	Test no. 2
[°C]	<b>8</b>	<b>7</b>
RH [%]	<b>78</b>	<b>74</b>
[hPa]	<b>968</b>	<b>967</b>
Wind [m/s]	<b>1</b>	<b>0.5</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>	<b>2.9</b>	<b>2.9</b>



Identification number: **MISC\_233.2022**

**BogdanFly BFreserve**

**Result summary**

Maximum strength for riser, bridle: **26783.1 [N]**  
Duration at the requested load: **2.2 [s]**

Place of declaration: **Villeneuve**  
Date of issue: **03.11.2022**  
Managing director: **Andrea Wigger**

Signature:

This signature approves the validity of the test report

Air Turquoise SA has thoroughly tested the sample of emergency parachute mentioned above and certifies its conformity with the standards: EN 1651:2018+A1:2020<sup>(4)</sup> and NFL 2-565-20 chapter 6.1.4

Instrument	Validity	Manufacturer	Type no.	S/N
Load sensor	04.09.2023	HBM	1-S9M/50KN-1	31314652
Geos n° 11 Skywatch	18.06.2025	JDC elec.	Geos n° 11	22

<sup>(1)</sup> Riser: lowest part of the the parachute system, which is connected to the harness. Bridle: connection between risers 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 includes 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%.

<sup>(4)</sup> This standards is NOT covered by accreditation D-IS-19457-01



Identification number: **MISC\_232.2022**

**BogdanFly BFreserve M**

**Result summary**

Inner container strength test. Applied minimum 700 N for at least 10 seconds and at maximum strength.  
 Duration at the required strength: **12.8 [s]**  
 Maximum strength before broken: **1268.5 [N]**

Place of declaration: **Villeneuve**  
 Date of issue: **03.11.2022**  
 Managing director: **Andrea Wigger**

Signature:

Instrument	Validity	Manufacturer	Type no.	S/N
Load sensor 10kN SL2	21.04.2026	Burster / MTS	8431-6010-N000S000	593507
Winch	check every 12 month	Arwin	300/600	N/A
Geos n° 11 Skywatch	18.06.2025	JDC elec.	Geos n° 11	22

This signature approves the validity of the test report

**Air Turquoise SA** has thoroughly tested the sample of riser/bridle mentioned above and certifies its conformity with the following standards:  
**EN 12491:2015+A1:2021<sup>(4)</sup> chapter 5.3.2 and NFL 2-565-20 chapter 6.1.8**

<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 includes 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%.

<sup>(4)</sup> This standard is NOT covered by accreditation D-IS-19457-01

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