



## Speed of opening, stability, descent rate

Inspection certificate number: **EP\_278.2019**

**Test Report**

### Manufacturer data

Manufacturer name: **U-Turn GmbH**  
 Representative: **Ernst Strobl**  
 Street: **Im Neuneck 1**  
 Post code / Place: **78609 Tunningen**  
 Country: **Germany**

### Sample data

Name:	<b>Backup QX</b>	Size:	<b>130</b>
Steerable <sup>(1)</sup> :	<b>n/a</b>	Maximum weight in flight <sup>(2)</sup> [kg]:	<b>140</b>
Weight <sup>(3)</sup> [kg]:	<b>1.45</b>	volume packed [cm <sup>3</sup> ]:	<b>5300</b>
Serial number:	<b>SU-Bup-X-130-1C-2734</b>		

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

	<b>Test no. 1</b>	<b>Test no. 2</b>
Place of test	<b>Villeneuve</b>	<b>Villeneuve</b>
Date of test	<b>21.08.2019</b>	<b>27.08.2019</b>
Inspector:	<b>Claude Thurnheer</b>	<b>Claude Thurnheer</b>

### Atmosphere AGL

	<b>Test no. 1</b>	<b>Test no. 2</b>
[°C]	<b>19.9</b>	<b>21.5</b>
RH [%]	<b>73</b>	<b>70</b>
[hPa]	<b>980.9</b>	<b>975.7</b>
Wind [m/s]	<b>0.9</b>	<b>0.1</b>

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

	<b>EN</b>	<b>LTF</b>
Time of opening test [s]:	<b>3.98</b>	<b>3.98</b>
Calculated descent rate test [m/s]:	<b>5.16</b>	<b>5.16</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\_278.2019**

**Test Report**

### Manufacturer data

Manufacturer name: **U-Turn GmbH**  
 Representative: **Ernst Strobl**  
 Street: **Im Neuneck 1**  
 Post code / Place: **78609 Tunningen**  
 Country: **Germany**

### Sample data

Name: **Backup QX** Size: **130**  
 Steerable: **n/a** Maximum weight [kg]: **130**  
 Weight [kg]: **1.45** volume packed [cm<sup>3</sup>]: **5300**  
 Serial number: **SU-Bup-X-130-1C-2733**

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

	Test no. 1	Test no. 2
Place of test	<b>Muraz</b>	<b>Muraz</b>
Date of test	<b>06.08.2019</b>	<b>06.08.2019</b>
Corrected mass [kg]	120.52	120.52
Inspector:	<b>Alain Zoller</b>	<b>Alain Zoller</b>

### Atmosphere AGL

	Test no. 1	Test no. 2
[°C]	<b>26.8</b>	<b>26.8</b>
RH [%]	<b>47</b>	<b>47</b>
[hPa]	<b>970.5</b>	<b>970.5</b>
Wind [m/s]	<b>0.2</b>	<b>0.2</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>	2.9	2.9

Item / type no.	Validity	Manufacturer	S/N
Weight	2020	Air Turquoise SA	N/A
Geos n° 11	08.05.2020	JDC elec.	22
Weak link	2020	Tost	N/A



Identification number: **MISC\_139.2019**

**U-Turn GmbH Backup QX riser**

### Result summary

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Maximum strength for riser, bridle **29147.9 [N]**

Place of declaration **Villeneuve**  
Date of issue: **30.09.2019**  
Managing director **Randi Eriksen**

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	04/09/2023	HBM	1-S9M/50KN-1	31314652
Geos n° 11 Skywatch	08/05/2020	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\_140.2019**

**U-Turn GmbH Backup QX inner container 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: **10.5 [s]**

The maximum strength before broken: **782.3 [N]**

Place of declaration **Villeneuve**  
Date of issue: **30.09.2019**  
Managing director **Randi Eriksen**

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)	04/09/2023	Burster GmbH (DE)	8431-10000	1185483
Winch	check every 12 month	Arwin	300/600	N/A
Geos n° 11 Skywatch	08/05/2020	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%.