Test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes



# **Emergency parachute inspection certificate**

Inspection certificate number:	EP_357.2023
Manufacturer data	
Manufacturer name:	Sky Paragliders a.s.
Representative:	Michal Sotek
Street:	Okruzni 39
Post code / Place:	73911 Frydlant n.O.
Country:	Czech Republic

### Sample data

Name: Steerable <sup>(1)</sup> : Weight <sup>(3)</sup> [kg]:	Sky Quatro Light No 2.25	Size: Maximum weight in flight <sup>(2)</sup> [kg]: Volume packed [cm <sup>3</sup> ]:	6700
Serial number flight:	2857-12-1926	Date of reception:	29.08.2023
Serial number strength:	2856-12-1700	Date of reception:	27.06.2023
Test report summary	Results	Place	Date
Speed of opening,descent rate, stability and glide ratio test 93.21	POSITIVE	Villeneuve	28.09.2023
Strength test / opening shock 93.21	POSITIVE	St-Cierges	06.09.2023
Inner container strength test 95.15 <sup>(4)</sup>	MISC_189.2021	Villeneuve	21.06.2021

### Issue data

Place of declaration: Villeneuve 10.01.2024 Date of issue: Andrea Wigger Managing director: Signature:

This signature approves the validity of the test report 93.21

Air Turquoise SA has thoroughly tested the sample mentioned above and certifies its conformity with the following standards :

EN 12491:2015+A1:2021(6) and NfL 2-565-20

(1) Steerable: Emergency Parachute fitted with controls for steering and landing flare. (2) Total weight in flight excludes weight of paraglider, also called payload - (3) Weight of the emergency parachute - <sup>(4)</sup> and <sup>(5)</sup> this item can be use for several models.

<sup>(6)</sup> This standard is NOT covered by accreditation D-IS-19457-01

The certificate of inspection is completed with test reports number: 93.21, 95.12 and 95.15

The declaration must not be reproduced in part without the written permission of Air Turquoise SA.

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### Paragliding Emergency Parachute

Inspection number	EP_357.2023
Manufacturer	Sky Paragliders a.s.
Model and size	Sky Quatro Light 225
Steerable	Νο
Weight of model [kg]	2.25
Maximum weight in flight [kg]	225
Volume [cm <sup>3</sup> ]	6700
Flat area [m <sup>2</sup> ]	48
Total length of suspension lines [m] (from harness attachment to canopy when inflated)	8.79
Serial number :	

Production date (year / month) :

Warning : not suitable for use at speed more than 32 m/s (115 km/h) Read the operating manual before using this equipment!

A sample has been tested and certifies its conformity with the following standards: EN 12491:2015+A1:2021 and NfL 2-565-20. This model corresponds with the tested sample and its airworthiness.

Rev 10 | 04.03.2022 | ISO | 93.24

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## Speed of opening, stability, descent rate

Inspection certificate number:		EP_357.2023	Test F	Repo
Manufacturer data				
Manufacturer name:		Sky Paragliders a.s.		
Representative:		Michal Sotek		
Street:		Okruzni 39		
Post code / Place:		73911 Frydlant n.O.		
Country:		Czech Republic		
Sample data				
Name:		Sky Quatro Light	Size: <b>225</b>	
Steerable <sup>(1)</sup> :		No	Maximum weight in flight <sup>(2)</sup> [kg]: 225	
Weight <sup>(3)</sup> [kg]:		2.25	Volume packed [cm <sup>3</sup> ]: 6700	
Serial number:		2857-12-1926		
Test results <sup>(4)</sup>		Test no. 1	Test no. 2	
Measured opening time [s]:		3.38	2.75	
Unsteerable parachute and ste	erable parac	hute with locked controls	(if applicable)	
Measured sink rate [m/s] (≤ 5.5):	•	5.38	5.48	
Stability test:			Stable	
Stability test:		Stable	Stable	
Stability test: Steerable parachute and steera	able parachu			
	able parachu			
Steerable parachute and steera	able parachu	ite with unlocked controls	(if applicable)	
Steerable parachute and steera Measured sink rate [m/s] (≤ 4.0):	able parachu	ite with unlocked controls n/a	(if applicable) <b>n/a</b>	
<b>Steerable parachute and steera</b> Measured sink rate [m/s] (≤ 4.0): Stability test:	able parachu	ite with unlocked controls n/a n/a	(if applicable) n/a n/a	
Steerable parachute and steera Measured sink rate [m/s] (≤ 4.0): Stability test: Test of steerability:	able parachu	ite with unlocked controls n/a n/a n/a	(if applicable) n/a n/a n/a	
Steerable parachute and steera Measured sink rate [m/s] (≤ 4.0): Stability test: Test of steerability: Test data	able parachu	ite with unlocked controls n/a n/a n/a Test no. 1	(if applicable) n/a n/a n/a Test no. 2	
Steerable parachute and steera Measured sink rate [m/s] (≤ 4.0): Stability test: Test of steerability: Test data Place of test	able parachu [°C]	ite with unlocked controls n/a n/a n/a Test no. 1 Villeneuve	(if applicable) n/a n/a n/a Test no. 2 Villeneuve	
Steerable parachute and steera Measured sink rate [m/s] (≤ 4.0): Stability test: Test of steerability: Test data Place of test Date of test		nte with unlocked controls n/a n/a n/a Test no. 1 Villeneuve 30.08.2023	(if applicable) n/a n/a n/a Test no. 2 Villeneuve 28.09.2023	
Steerable parachute and steera Measured sink rate [m/s] (≤ 4.0): Stability test: Test of steerability: Test data Place of test Date of test	[°C]	n/a n/a n/a Test no. 1 Villeneuve 30.08.2023 15	(if applicable) n/a n/a n/a Test no. 2 Villeneuve 28.09.2023 18	
Steerable parachute and steera Measured sink rate [m/s] (≤ 4.0): Stability test: Test of steerability: Test data Place of test Date of test	[°C] RH [%]	n/a n/a n/a Test no. 1 Villeneuve 30.08.2023 15 78	(if applicable) n/a n/a n/a Test no. 2 Villeneuve 28.09.2023 18 74	
Steerable parachute and steera Measured sink rate [m/s] (≤ 4.0): Stability test: Test of steerability: Test data Place of test Date of test	[°C] RH [%] [hPa] Wind [m/s]	n/a n/a n/a Test no. 1 Villeneuve 30.08.2023 15 78 965	(if applicable) n/a n/a Test no. 2 Villeneuve 28.09.2023 18 74 970	
Steerable parachute and steera Measured sink rate [m/s] (≤ 4.0): Stability test: Test of steerability: Test data Place of test Date of test Atmosphere AGL Corrected mass with uncertainty (m <sub>o</sub>	[°C] RH [%] [hPa] Wind [m/s] 	n/a n/a n/a n/a Test no. 1 Villeneuve 30.08.2023 15 78 965 0.1	(if applicable) n/a n/a Test no. 2 Villeneuve 28.09.2023 18 74 970 0.1	
Steerable parachute and steera Measured sink rate [m/s] (≤ 4.0): Stability test: Test of steerability: Test data Place of test Date of test Atmosphere AGL	[°C] RH [%] [hPa] Wind [m/s] 	n/a n/a n/a n/a Test no. 1 Villeneuve 30.08.2023 15 78 965 0.1	(if applicable) n/a n/a Test no. 2 Villeneuve 28.09.2023 18 74 970 0.1	
Steerable parachute and steera   Measured sink rate [m/s] (≤ 4.0):   Stability test:   Test of steerability:   Test data   Place of test   Date of test   Atmosphere AGL   Corrected mass with uncertainty (m₀   If steerable with brake lock system	[°C] RH [%] [hPa] Wind [m/s] 	n/a n/a n/a Test no. 1 Villeneuve 30.08.2023 15 78 965 0.1 215.0	(if applicable) n/a n/a Test no. 2 Villeneuve 28.09.2023 18 74 970 0.1 213.1	
Steerable parachute and steera   Measured sink rate [m/s] (≤ 4.0):   Stability test:   Test of steerability:   Test data   Place of test   Date of test   Atmosphere AGL   Corrected mass with uncertainty (m₀   If steerable with brake lock sys   Place of test   Date of test	[°C] RH [%] [hPa] Wind [m/s] 	n/a n/a n/a n/a Test no. 1 Villeneuve 30.08.2023 15 78 965 0.1 215.0	r (if applicable) n/a n/a Test no. 2 Villeneuve 28.09.2023 18 74 970 0.1 213.1 n/a	
Steerable parachute and steera   Measured sink rate [m/s] (≤ 4.0):   Stability test:   Test of steerability:   Test data   Place of test   Date of test   Atmosphere AGL   Corrected mass with uncertainty (m₀   If steerable with brake lock sys   Place of test	[°C] RH [%] [hPa] Wind [m/s] 	n/a n/a n/a n/a <u>Test no. 1</u> Villeneuve 30.08.2023 15 78 965 0.1 215.0 n/a n/a	e (if applicable) n/a n/a n/a Test no. 2 Villeneuve 28.09.2023 18 74 970 0.1 213.1 n/a n/a	
Steerable parachute and steera   Measured sink rate [m/s] (≤ 4.0):   Stability test:   Test of steerability:   Test data   Place of test   Date of test   Atmosphere AGL   Corrected mass with uncertainty (m₀   If steerable with brake lock sys   Place of test   Date of test	[°C] RH [%] [hPa] Wind [m/s] 	n/a n/a n/a n/a Test no. 1 Villeneuve 30.08.2023 15 78 965 0.1 215.0 n/a n/a	r (if applicable) n/a n/a Test no. 2 Villeneuve 28.09.2023 18 74 970 0.1 213.1 n/a n/a n/a n/a n/a	
Steerable parachute and steera   Measured sink rate [m/s] (≤ 4.0):   Stability test:   Test of steerability:   Test data   Place of test   Date of test   Atmosphere AGL   Corrected mass with uncertainty (m₀   If steerable with brake lock sys   Place of test   Date of test	[°C] RH [%] [hPa] Wind [m/s] orr) [kg]: stem [°C] RH [%]	n/a n/a n/a n/a Test no. 1 Villeneuve 30.08.2023 15 78 965 0.1 215.0 n/a n/a n/a n/a	r (if applicable) n/a n/a n/a Test no. 2 Villeneuve 28.09.2023 18 74 970 0.1 213.1 n/a n/a n/a n/a	

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Inspection certificate number:

EP 357.2023

Weak link test no. 1



#### Weak link test no. 2



Instrument & type no.	Validity	Manufacturer	S/N
Weak link	continously	Tost	N/A
Line 30 meter	check every 12 months	Air Turquoise SA	N/A
Geos n° 11 Skywatch	18.06.2025	JDC elec.	Unit11

The validation of this test report is given by the signature of the test manager on inspection certificate 93,20

Air Turquoise SA has thoroughly tested the sample of emergency parachute mentioned above and certifies its conformity with the standards: EN 12491:2015+A1:2021<sup>(6)</sup> and NfL 2-565-20

(1) Steerable: Emergency Parachute fitted with controls for steering and landing flare. (2) Total weight in flight exclude weight of paraglider, also called payload - (3) Weight of the emergency parachute

(4) The rescue system is dropped from a paraglider in straight flight at 10 [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 125 m of descent, the average rate of descent is measured over 30 m of descent. The stability is observed.

The test is carried out twice (this may be with the same parachute or with identical item).

(6) The calculated value include the value minus the uncertainty / 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%. The tests do not include any compatibility tests with alternative inner containers. The maximum opening time should be 4 [s] up to and including 140 [kg] and 5 [s] above 140 [kg] according to the EN standard. For the NfL standard it should be a maximum of 5 [s]. The required maximum sink rate is for EN standard for unsteerable or steerable parachute with locked controls 5.5 [m/s], for steerable parachute with unlocked controls 4 [m/s], and for NfL standard 6.80 [m/s]. The final result for EN and for NfL is the worst case of both tests.

(6) This standard is NOT covered by accreditation D-IS-19457-01

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## Strength test - 40 m/s opening shock

Inspection certificate number:	EP_357.2023			Test Report
Manufacturer data				
Manufacturer name:	Sky Paragliders a.s.			
Representative:	Michal Sotek			
Street:	Okruzni 39			
Post code / Place:	73911 Frydlant n.O.			
Country:	Czech Republic			
Sample data				
Name:	Sky Quatro Light	Size:	225	
Steerable	No	Maximum weight [kg]:	225	
Weight [kg]	2.25	Volume packed [cm <sup>3</sup> ]:		
Serial number:	2856-12-1700			
Test data <sup>(1)</sup>	Test no. 1	Test no. 2		
Place of test	St-Cierges	St-Cierges		
Date of test	29.06.2023	06.09.2023		
Maximum weight [kg]	225	225		
Inspector:	Nicolas Jacquod	Nicolas Jacquod		
Atmosphere AGL				
[°C]	18	19		
RH [%]	67	78		
[hPa]	966	926		
Wind [m/s]	0.1	0.1		
Test results	Test no. 1	Test no. 2		
Strength test (40m/s shock) Aircraft speed uncertainty K=2	POSITIVE	POSITIVE		
[m/s] <sup>(2)</sup>	2.9	2.9		

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Item / type no.	Validity	Manufacturer	S/N
Weight	check every 12 months	Air Turquoise SA	N/A
Geos nº 11	18.06.2025	JDC elec.	Unit11
Weak link	continously	Tost	N/A

The validation of this test report is given by the signature of the test manager on inspection certificate 93.20

Air Turquoise SA has thoroughly tested the sample of emergency parachute mentioned above and certifies its conformity with the standards:

EN 12491:2015+A1:2021(3) and NfL 2-565-20

(1) 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. In case steerable parachute, in both tests, the controls shall remain locked.

(2) 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%.

<sup>(3)</sup> This standard is NOT covered by accreditation D-IS-19457-01