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Test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes



Emergency parachute inspection certificate

Inspection certificate number:

EP_212.2018

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 (1)	

Sky Quatro

Size:

90

No

Maximum weight in flight (2) [kg]:

90 4000

Weight (3) [kg]

1.232

volume packed [cm3]:

Serial number flight:

12-1543

Results

Date of reception:

20.10.2017

Serial number strength:

2351-12-0706

Date of reception:

05.06.2018

Test report summary
Speed of opening,descent rate, stability and glide ratio test 71.5.1.1
Strength test / opening shock 71.5.1.2
Inner container strength test 71.5.1.4 (4)
Riser/bridle strength test 71.5.1.5 (5)

POSITIVE POSITIVE

OK MISC_123.2019

OK MISC_131.2019

Villeneuve Muraz Villeneuve

Villeneuve

Place

15.01.2019 14.02.2019

22.05.2019 28.06.2019

Date

Issue data

Place of declaration:

Villeneuve

Date of issue: Managing director: 25.07.2019

Signature:

Alain Zoller

This signature approve the validity of the test reports 71.5.1.1, 71.5.1.2, 71.5.1.4 and 71.5.1.5 (Only if test report are applicable).

Air Turquoise SA has thoroughly tested the sample of emergency parachute mentioned above and certifies its conformity with the following standards: EN 12491:2015 and LTF NfL II 91/09 chapter 6 Paraglider rescue systems, LTF Ref chapter: 6, except 6.1.10

(1) If 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) and (5) this item can be use for several models. The drift is controlled by anemometer Skywatch Eole.

This inspection certificate confirms that the above sample identified by its serial number and only this is in conforms with the standards.

The inspection certificate contain the tests mentioned above and it is complete with the test report number: 71.5.1.1 and 71.5.1.2. - 71.5.1.4 and 71.5.1.5 are also included, they can be tested independently

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

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Test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes



Paragliding Emergency Parachute

EP_212.2018 Inspection number Sky Paragliders a.s. Manufacturer Model and size Sky Quatro 90 No Steerable 1.232 Weight of model [kg] 90 Maximum weight in flight [kg] 4000 Volume [cm³] Flat area [m²] 22.5 4.448 Total length of suspension lines [m] 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 standard: EN 12491:2015 and LTF NFL II 91/09 chapter 6.1.1-6.1.19 except 6.1.10. This model corresponds with the tested sample and its airworthiness.

RE | rev 06 | 22.12.2017 | ISO | 71.9.9

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Test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes



Speed of opening, stability, descent rate

Inspection certificate number:	EP_212.2018	Test Report
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N	lar	١Ħ	fac	tu	rer	Ч	ata

Manufacturer name:

Representative:

Street:

Okruzni 39

Post code / Place:

73911 Frydlant n.O.

Sample data

Wind [m/s]

Country:

Name:Sky QuatroSize:90Steerable (1)NoMaximum weight in flight (2) [kg]:90Weight (3) [kg]1.232volume packed [cm3]:4000Serial number:12-1543

Test data ⁽⁴⁾ Test no. 1 Test no. 2

0.2

Czech Republic

Villeneuve Place of test Villeneuve Date of test 19.12.2017 15.01.2019 **Claude Thurnheer** Claude Thurnheer Inspector: Atmosphere AGL 3 [°C] 2.1 RH [%] 72 80 [hPa] 987.9 977.5

0.1

Summary of both results (5) ΕN LTF Time of opening test [s]: 3.99 3.99 Calculated descent rate test [m/s]: 5.20 5.20 Stability test: **POSITIVE POSITIVE** Behaviour during descent test: Stable Stable Glider ratio: **POSITIVE** If steerable: N/A N/A Any flight procedure and/or configuration described in the user's manual

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Test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes



Inspection certificate number:	EP_212.2018	
	Formula using to calculate corrected mass	$m_{c \text{ orr}} := m_{dec} \cdot \frac{p \cdot T_0}{p_0 \cdot T}$
Sink rate test no. 1 (6)	-	
Ground level atmospheric pressure	at test location: (p)	987.9 [hPa]
ICAO standard atmospheric pressu	re at MSL: (po)	1013.25 [hPa]
Ground level temperature at the tes	st location: (T)	2.1 [°C]
		275.25 [°K]
ICAO standard temperature at MSL	.: (To)	15 [°C]
		288.15 [°K]
Declared maximum payload: (mdec	;)	90 [kg]
Corrected mass: (mcorr)		91.86 [kg]
Corrected mass with uncertainty: (n	ncorr)	92.76 [kg]
Time when pilot release rescue		18.52 [s]
Time when weak link broken		21.24 [s]
Calculated speed opening [s]:		2.87 [s]
Time ball touch the water:		8.8 [s]
Time ball touch the water: Time pilot touch the water:		8.8 [s] 14.72 [s]
	g water (40m)	
Time pilot touch the water:	g water (40m)	14.72 [s]
Time pilot touch the water: Time between ball and pilot touchin Calculated sink rate [m/s]: Sink rate test no. 2 (6)		14.72 [s] 5.77 [s]
Time pilot touch the water: Time between ball and pilot touchin Calculated sink rate [m/s]: Sink rate test no. 2 (6) Ground level atmospheric pressure	at test location: (p)	14.72 [s] 5.77 [s]
Time pilot touch the water: Time between ball and pilot touchin Calculated sink rate [m/s]: Sink rate test no. 2 (6) Ground level atmospheric pressure ICAO standard atmospheric pressure	at test location: (p) re at MSL: (po)	14.72 [s] 5.77 [s] 5.20 [m/s] 977.5 [hPa] 1013.25 [hPa]
Time pilot touch the water: Time between ball and pilot touchin Calculated sink rate [m/s]: Sink rate test no. 2 (6) Ground level atmospheric pressure	at test location: (p) re at MSL: (po)	14.72 [s] 5.77 [s] 5.20 [m/s] 977.5 [hPa] 1013.25 [hPa] 3 [°C]
Time pilot touch the water: Time between ball and pilot touchin Calculated sink rate [m/s]: Sink rate test no. 2 (6) Ground level atmospheric pressure ICAO standard atmospheric pressure Ground level temperature at the test	at test location: (p) re at MSL: (po) st location: (T)	14.72 [s] 5.77 [s] 5.20 [m/s] 977.5 [hPa] 1013.25 [hPa] 3 [°C] 276.15 [°K]
Time pilot touch the water: Time between ball and pilot touchin Calculated sink rate [m/s]: Sink rate test no. 2 (6) Ground level atmospheric pressure ICAO standard atmospheric pressure	at test location: (p) re at MSL: (po) st location: (T)	14.72 [s] 5.77 [s] 5.20 [m/s] 977.5 [hPa] 1013.25 [hPa] 3 [°C] 276.15 [°K] 15 [°C]
Time pilot touch the water: Time between ball and pilot touchin Calculated sink rate [m/s]: Sink rate test no. 2 (6) Ground level atmospheric pressure ICAO standard atmospheric pressure Ground level temperature at the test	at test location: (p) re at MSL: (po) st location: (T)	14.72 [s] 5.77 [s] 5.20 [m/s] 977.5 [hPa] 1013.25 [hPa] 3 [°C] 276.15 [°K]
Time pilot touch the water: Time between ball and pilot touchin Calculated sink rate [m/s]: Sink rate test no. 2 (6) Ground level atmospheric pressure ICAO standard atmospheric pressure Ground level temperature at the test	at test location: (p) are at MSL: (po) at location: (T) .: (To)	14.72 [s] 5.77 [s] 5.20 [m/s] 977.5 [hPa] 1013.25 [hPa] 3 [°C] 276.15 [°K] 15 [°C]
Time pilot touch the water: Time between ball and pilot touchin Calculated sink rate [m/s]: Sink rate test no. 2 (6) Ground level atmospheric pressure ICAO standard atmospheric pressure Ground level temperature at the test ICAO standard temperature at MSL	at test location: (p) are at MSL: (po) at location: (T) .: (To)	14.72 [s] 5.77 [s] 5.20 [m/s] 977.5 [hPa] 1013.25 [hPa] 3 [°C] 276.15 [°K] 15 [°C] 288.15 [°K]
Time pilot touch the water: Time between ball and pilot touchin Calculated sink rate [m/s]: Sink rate test no. 2 (6) Ground level atmospheric pressure ICAO standard atmospheric pressure ICAO standard temperature at the test ICAO standard temperature at MSL Declared maximum payloadt: (mder	at test location: (p) Tre at MSL: (po) St location: (T) L: (To)	14.72 [s] 5.77 [s] 5.20 [m/s] 977.5 [hPa] 1013.25 [hPa] 3 [°C] 276.15 [°K] 15 [°C] 288.15 [°K]
Time pilot touch the water: Time between ball and pilot touchin Calculated sink rate [m/s]: Sink rate test no. 2 (6) Ground level atmospheric pressure ICAO standard atmospheric pressure ICAO standard temperature at the test ICAO standard temperature at MSL Declared maximum payloadt: (mdeclared mass: (mcorr)	at test location: (p) Tre at MSL: (po) St location: (T) L: (To)	14.72 [s] 5.77 [s] 5.20 [m/s] 977.5 [hPa] 1013.25 [hPa] 3 [°C] 276.15 [°K] 15 [°C] 288.15 [°K] 90 [kg] 90.60 [kg]
Time pilot touch the water: Time between ball and pilot touchin Calculated sink rate [m/s]: Sink rate test no. 2 (6) Ground level atmospheric pressure ICAO standard atmospheric pressure ICAO standard temperature at the test ICAO standard temperature at MSL Declared maximum payloadt: (mdeclared mass: (mcorr) Corrected mass with uncertainty: (m	at test location: (p) Tre at MSL: (po) St location: (T) L: (To)	14.72 [s] 5.77 [s] 5.20 [m/s] 977.5 [hPa] 1013.25 [hPa] 3 [°C] 276.15 [°K] 15 [°C] 288.15 [°K] 90 [kg] 90.60 [kg] 91.50 [kg]
Time pilot touch the water: Time between ball and pilot touchin Calculated sink rate [m/s]: Sink rate test no. 2 (6) Ground level atmospheric pressure ICAO standard atmospheric pressure ICAO standard temperature at the test ICAO standard temperature at MSL Declared maximum payloadt: (mdeclared maximum payloadt: (mdeclared mass: (mcorr) Corrected mass with uncertainty: (mainly content of the content of th	at test location: (p) Tre at MSL: (po) St location: (T) L: (To)	14.72 [s] 5.77 [s] 5.20 [m/s] 977.5 [hPa] 1013.25 [hPa] 3 [°C] 276.15 [°K] 15 [°C] 288.15 [°K] 90 [kg] 90.60 [kg] 91.50 [kg] 42.03 [s]
Time pilot touch the water: Time between ball and pilot touchin Calculated sink rate [m/s]: Sink rate test no. 2 (6) Ground level atmospheric pressure ICAO standard atmospheric pressure ICAO standard atmospheric at the test ICAO standard temperature at MSL Declared maximum payloadt: (mder Corrected mass: (mcorr) Corrected mass with uncertainty: (not the corrected mass with uncertainty) and the corrected mass with uncertainty in the corrected mass with uncertainty in the corrected mass with uncertainty.	at test location: (p) Tre at MSL: (po) St location: (T) L: (To)	14.72 [s] 5.77 [s] 5.20 [m/s] 977.5 [hPa] 1013.25 [hPa] 3 [°C] 276.15 [°K] 15 [°C] 288.15 [°K] 90 [kg] 90.60 [kg] 91.50 [kg] 42.03 [s] 45.87 [s]
Time pilot touch the water: Time between ball and pilot touchin Calculated sink rate [m/s]: Sink rate test no. 2 (6) Ground level atmospheric pressure ICAO standard atmospheric pressure ICAO standard temperature at the test ICAO standard temperature at MSL Declared maximum payloadt: (mdeclared mass: (mcorr) Corrected mass with uncertainty: (note that the content of the conte	at test location: (p) Tre at MSL: (po) St location: (T) L: (To)	14.72 [s] 5.77 [s] 5.20 [m/s] 977.5 [hPa] 1013.25 [hPa] 3 [°C] 276.15 [°K] 15 [°C] 288.15 [°K] 90 [kg] 90.60 [kg] 91.50 [kg] 42.03 [s] 45.87 [s] 3.99 [s]
Time pilot touch the water: Time between ball and pilot touchin Calculated sink rate [m/s]: Sink rate test no. 2 (6) Ground level atmospheric pressure ICAO standard atmospheric pressure ICAO standard atmospheric pressure ICAO standard temperature at the test ICAO standard temperature at MSL Declared maximum payloadt: (mdeclared maximum payloadt: (mdeclared mass: (mcorr) Corrected mass with uncertainty: (note that the control of the	at test location: (p) Ire at MSL: (po) Ist location: (T) I: (To) Ic) Incorr)	14.72 [s] 5.77 [s] 5.20 [m/s] 977.5 [hPa] 1013.25 [hPa] 3 [°C] 276.15 [°K] 15 [°C] 288.15 [°K] 90 [kg] 90.60 [kg] 91.50 [kg] 42.03 [s] 45.87 [s] 3.99 [s]

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Test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes



Inspection certificate number: EP 212.2018

Weak link test no. 1



Weak link test no. 2



Instrument & type no.	Validity	Manufacturer	S/N
Weak link	2020	Tost	N/A
Line 40 meter	check every 12 months	Air Turquoise SA	N/A
Geos n° 11 Skywatch	08.05.2020	JDC elec.	22

The validation of this test report is given by the signature of the test manager on 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: EN 12491:2015 chapter 5.1 to 5.3.1, 5.3.4, 5.3.6 (if steerable) and LTF NfL II 91/09 chapter 6

(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 40 m of descent. The stability and glide ratio is observed.

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

(5) 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. Required time from the instant of free drop until a load of 200 [N] is sustained for EN 4 [s] and for LTF 5 [s]. The required maximum sink rate is for EN 5.5 [m/s] and for LTF 6.80 [m/s]. If steerable the maximum sink rate for EN is 4 [m/s]. The final result for EN and for LTF is the worst case of both tests.

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

⁽⁶⁾ Condition for the descent rate test. A. At horizontal airspeed 10 m/s (+/- 1m/s) and vertical speed 1.5 m/s B. Formula to be used for correcting the test mass of differences from ICAO standard atmosphere.

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Test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes



90

Strength test - 40 m/s opening shock

Inspection certificate number: EP_212.2018 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 QuatroSize:SteerableNoMaxim

Steerable No Maximum weight [kg]: 90 Weight [kg] 1.232 volume packed [cm³]: 4000

Serial number: **2351-12-0706**

Test data ⁽¹⁾ Test no. 1 Test no. 2

 Place of test
 Muraz
 Muraz

 Date of test
 14.12.20218
 14.02.2019

 Corrected mass [kg]
 90.15
 92.61

Inspector: Alain Zoller Alain Zoller

Atmosphere AGL

 [°C]
 2
 3.5

 RH [%]
 55
 72

 [hPa]
 959.5
 991.3

 Wind [m/s]
 0.1
 0.1

Test results Test no. 1 Test no. 2

Strength test (40m/s shock) **POSITIVE POSITIVE** Aircraft speed uncertainty K=2

[m/s] ⁽²⁾ 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

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Inspection certificate number: EP_212.2018

 $m_{corr} := m_{dec} \cdot \frac{p \cdot T_0}{p_{0} \cdot T}$

Formula using to calculate corrected mass

Corrected mass for strength test no. 1

Ground level atmospheric pressure at test location: (p)	959.5 [hPa]	
ICAO standard atmospheric pressure at MSL: (po)	1013.25 [hPa]	
Ground level temperature at the test location: (T)	2 [°C]	
	275.15 [°K]	
ICAO standard temperature at MSL: (To)	15 [°C]	
	288.15 [°K]	
Declared maximum payload: (mdec)	90 [kg]	
Corrected mass: (mcorr)	89.25 [kg]	
Corrected mass with uncertainty: (mcorr)	90.15 [kg]	

Corrected mass for strength test no. 2

Ground level atmospheric pressure at test location: (p)	991.3 [hPa]
ICAO standard atmospheric pressure at MSL: (po)	1013.25 [hPa]
Ground level temperature at the test location: (T)	3.5 [°C]
	276.65 [°K]
ICAO standard temperature at MSL: (To)	15 [°C]
	288.15 [°K]
Declared maximum payload: (mdec)	90 [kg]
Corrected mass: (mcorr)	91.71 [kg]
Corrected mass with uncertainty: (mcorr)	92.61 [kg]

The validation of this test report is given by the signature of the test manager on 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: EN 12491:2015 chapter 5.1-5.3.1, 5.3.5, 5.3.6 - LTF NfL II 91/09 chapter 6

The test is carried out twice with the same parachute. In case steerable parachute, in both tests, the controls shall remain locked.

RE | Rev 02 | 22.12.2017 page 5 of 5 ISO 71.5.1.2

⁽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.

⁽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%.

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Test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes



Emergency parachute inspection certificate

Inspection certificate number:

EP 213.2018

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 (1)	
Weight (3) [kg]	

Sky Quatro

Size:

110

No

Maximum weight in flight (2) [kg]:

110 4600

1.462

volume packed [cm3]:

Serial number flight: Serial number strength: 1474

Results

Date of reception:

24.07.2017 05.06.2018

2353-12-1006

Date of reception:

Date

Test report summary
Speed of opening,descent rate, stability and glide ratio test 71.5.1.1
Strength test / opening shock 71.5.1.2
Inner container strength test 71.5.1.4 (4)
Riser/bridle strength test 71.5.1.5 (5)

POSITIVE POSITIVE

OK MISC 123.2019

OK MISC_131.2019

Villeneuve Muraz

Villeneuve

Villeneuve

Place

12.12.2018

14.12.2018 22.05.2019

28.06.2019

Issue data

Place of declaration: Date of issue:

Villeneuve

25.07.2019

Managing director:

Alain Zoller

Signature:

This signature approve the validity of the test reports 71.5.1.1, 71.5.1.2, 71.5.1.4 and 71.5.1.5 (Only if test report are applicable).

Air Turquoise SA has thoroughly tested the sample of emergency parachute mentioned above and certifies its conformity with the following standards: EN 12491:2015 and LTF NfL II 91/09 chapter 6 Paraglider rescue systems, LTF Ref chapter: 6, except 6.1.10

10 If 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) and (5) this item can be use for several models. The drift is controlled by anemometer Skywatch Eole.

This inspection certificate confirms that the above sample identified by its serial number and only this is in conforms with the standards.

The inspection certificate contain the tests mentioned above and it is complete with the test report number: 71.5.1.1 and 71.5.1.2. - 71.5.1.4 and 71.5.1.5 are also included, they can be tested independently.

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Paragliding Emergency Parachute



Steerable



Inspection number	EP_213.2018
Manufacturer	Sky Paragliders a.s.
	01 0 1 440

Sky Quatro 110 Model and size No

1.462 Weight of model [kg] 110 Maximum weight in flight [kg] 4600 Volume [cm³] Flat area [m²] 27.5 4.915 Total length of suspension lines [m]

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 standard: EN 12491:2015 and LTF NFL II 91/09 chapter 6.1.1-6.1.19 except 6.1.10. This model corresponds with the tested sample and its airworthiness.

RE | rev 06 | 22.12.2017 | ISO | 71.9.9

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Test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes



Speed of opening, stability, descent rate

Inspection certificate number:	EP_213.2018	Test Report
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N	lan	111	fac	tu	rer	Ч	ata

Sky Paragliders a.s. Manufacturer name: **Michal Sotek** Representative: Street: Okruzni 39 73911 Frydlant n.O. Post code / Place:

Country: **Czech Republic**

Sample data

Place of test

Sky Quatro 110 Name: Size: Steerable (1) Maximum weight in flight (2) [kg]: No 110 Weight (3) [kg] 1.462 volume packed [cm3]: 4600

Serial number: 1474

Test data (4) Test no. 1 Test no. 2

Villeneuve

Date of test 21.11.2017 12.12.2018 **Claude Thurnheer** Claude Thurnheer Inspector: Atmosphere AGL [°C] 2.7 3.2

Villeneuve

RH [%] 77 62 [hPa] 978.2 974.9 Wind [m/s] 0.1 8.0

Summary of both results (5) ΕN LTF

Time of opening test [s]: 3.42 3.42 Calculated descent rate test [m/s]: 5.47 5.47 Stability test: **POSITIVE POSITIVE** Behaviour during descent test: Stable Stable Glider ratio: **POSITIVE** If steerable:

N/A N/A Any flight procedure and/or configuration described in the

user's manual

RE | Rev 03 | 18.03.2019 page 1 of 5 ISO 71.5.1.1

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Test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes



	1
	$\mathbf{p} \cdot \mathbf{T}_0$
Formula using	$m_{corr} = m_{dec} \cdot \frac{1}{p_0 \cdot T}$
Sink rate test no. 1 ⁽⁶⁾	
Ground level atmospheric pressure at test location: (p	978.2 [hPa]
ICAO standard atmospheric pressure at MSL: (po)	1013.25 [hPa]
Ground level temperature at the test location: (T)	2.7 [°C]
	275.85 [°K]
ICAO standard temperature at MSL: (To)	15 [°C]
	288.15 [°K]
Declared maximum payload: (mdec)	110 [kg]
Corrected mass: (mcorr)	110.93 [kg]
Corrected mass with uncertainty: (mcorr)	111.83 [kg]
Time when pilot release rescue	16.96 [s]
Time when weak link broken	20.2 [s]
Calculated speed opening [s]:	
Time ball touch the water:	10.08 [s]
Time pilot touch the water:	15.72 [s]
Time between ball and pilot touching water (30m)	5.49 [s]
Calculated sink rate [m/s]:	5.47 [m/s]
Sink rate test no. 2 ⁽⁶⁾	
Ground level atmospheric pressure at test location: (p) 974.9 [hPa]
ICAO standard atmospheric pressure at MSL: (po)	1013.25 [hPa]
Ground level temperature at the test location: (T)	3.2 [°C]
	276.35 [°K]
	15 [°C]
ICAO standard temperature at MSL: (To)	
ICAO standard temperature at MSL: (To)	288.15 [°K]
ICAO standard temperature at MSL: (To) Declared maximum payloadt: (mdec)	
	288.15 [°K] 110 [kg] 110.36 [kg]
Declared maximum payloadt: (mdec)	110 [kg]
Declared maximum payloadt: (mdec) Corrected mass: (mcorr)	110 [kg] 110.36 [kg]
Declared maximum payloadt: (mdec) Corrected mass: (mcorr) Corrected mass with uncertainty: (mcorr)	110 [kg] 110.36 [kg] 111.26 [kg]
Declared maximum payloadt: (mdec) Corrected mass: (mcorr) Corrected mass with uncertainty: (mcorr) Time when pilot release rescue	110 [kg] 110.36 [kg] 111.26 [kg] 15.93 [s]
Declared maximum payloadt: (mdec) Corrected mass: (mcorr) Corrected mass with uncertainty: (mcorr) Time when pilot release rescue Time when weak link broken	110 [kg] 110.36 [kg] 111.26 [kg] 15.93 [s] 19.2 [s]
Declared maximum payloadt: (mdec) Corrected mass: (mcorr) Corrected mass with uncertainty: (mcorr) Time when pilot release rescue Time when weak link broken Calculated speed opening [s]:	110 [kg] 110.36 [kg] 111.26 [kg] 15.93 [s] 19.2 [s] 3.42 [s]
Declared maximum payloadt: (mdec) Corrected mass: (mcorr) Corrected mass with uncertainty: (mcorr) Time when pilot release rescue Time when weak link broken Calculated speed opening [s]: Time ball touch the water:	110 [kg] 110.36 [kg] 111.26 [kg] 15.93 [s] 19.2 [s] 3.42 [s]

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Test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes



Inspection certificate number:

EP 213.2018

Weak link test no. 1



Weak link test no. 2



Instrument & type no.	Validity	Manufacturer	S/N
Weak link	2020	Tost	N/A
Line 40 meter	check every 12 months	Air Turquoise SA	N/A
Geos n° 11 Skywatch	08.05.2020	JDC elec.	22

The validation of this test report is given by the signature of the test manager on 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: EN 12491:2015 chapter 5.1 to 5.3.1, 5.3.4, 5.3.6 (if steerable) and LTF NfL II 91/09 chapter 6

(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 40 m of descent. The stability and glide ratio is observed.

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

(5) 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. Required time from the instant of free drop until a load of 200 [N] is sustained for EN 4 [s] and for LTF 5 [s]. The required maximum sink rate is for EN 5.5 [m/s] and for LTF 6.80 [m/s]. If steerable the maximum sink rate for EN is 4 [m/s]. The final result for EN and for LTF is the worst case of both tests.

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

⁽⁶⁾ Condition for the descent rate test. A. At horizontal airspeed 10 m/s (+/- 1m/s) and vertical speed 1.5 m/s B. Formula to be used for correcting the test mass of differences from ICAO standard atmosphere.

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Test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes



Strength test - 40 m/s opening shock

Inspection certificate number: EP_213.2018 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
 Size:
 110

 Steerable
 No
 Maximum weight [kg]:
 110

Weight [kg] 1.462 volume packed [cm³]: 4600

Serial number: 2353-12-1006

Test data ⁽¹⁾ Test no. 1 Test no. 2

 Place of test
 Muraz
 Muraz

 Date of test
 15.11.2018
 14.12.2018

 Corrected mass [kg]
 109.78
 109.99

Inspector: Alain Zoller Alain Zoller

Atmosphere AGL

 [°C]
 8.7
 2

 RH [%]
 75
 55

 [hPa]
 981
 959.5

 Wind [m/s]
 0.2
 0.1

Test results Test no. 1 Test no. 2

Strength test (40m/s shock) **POSITIVE POSITIVE**Aircraft speed uncertainty K=2

[m/s] ⁽²⁾ 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	

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Inspection certificate number: EP_213.2018

Formula using to calculate corrected mass $m_{corr} := m_{dec} \cdot \frac{p \cdot r_{dec}}{p_{0}} \cdot \frac{p \cdot r_{dec}}{r_{dec}} \cdot \frac{p \cdot r_{dec}}{r_{dec}} \cdot \frac{p \cdot r_{dec}}{r_{dec}} \cdot \frac{p \cdot r_{dec}}{r_{dec}} \cdot \frac{r_{dec}}{r_{dec}} \cdot \frac{r_$

Corrected mass for strength test no. 1

Ground level atmospheric pressure at test location: (p)	981 [hPa]
ICAO standard atmospheric pressure at MSL: (po)	1013.25 [hPa]
Ground level temperature at the test location: (T)	8.7 [°C]
	281.85 [°K]
ICAO standard temperature at MSL: (To)	15 [°C]
	288.15 [°K]
Declared maximum payload: (mdec)	110 [kg]
Corrected mass: (mcorr)	108.88 [kg]
Corrected mass with uncertainty: (mcorr)	109.78 [kg]

Corrected mass for strength test no. 2

Ground level atmospheric pressure at test location: (p)	959.5 [hPa]
ICAO standard atmospheric pressure at MSL: (po)	1013.25 [hPa]
Ground level temperature at the test location: (T)	2 [°C]
	275.15 [°K]
ICAO standard temperature at MSL: (To)	15 [°C]
	288.15 [°K]
Declared maximum payload: (mdec)	110 [kg]
Corrected mass: (mcorr)	109.09 [kg]
Corrected mass with uncertainty: (mcorr)	109.99 [kg]

The validation of this test report is given by the signature of the test manager on 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: EN 12491:2015 chapter 5.1-5.3.1, 5.3.5, 5.3.6 - LTF NfL II 91/09 chapter 6

The test is carried out twice with the same parachute. In case steerable parachute, in both tests, the controls shall remain locked.

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⁽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.

⁽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%.

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Test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes



Inner container strength test

Identification number:

MISC_123.2019

Test Report

Manufacturer data

Manufacturer name:

Sky Paragliders

Representative:

Nemec Martin

Street:

Okruzni 39

Post code / Place:

73911 Frydlant N.C.

Country:

Czech Republic

Sample data (1)

Name of inner container:

Sky Quatro

Size:

one size

Serial number:

n/a

volume packed [cm3]:

5050

Date of reception:

16.05.2019

Test data

Place of test

Date of test

Villeneuve 16.05.2019

Inspector:

Alain Zoller

Atmosphere AGL

[°C]

22.3

RH [%]

[hPa]

966.2

Results (2)

Component no. 1 - load of 700 [N] applied for minimum 10 [s]:	
Component no. 2 - load of 700 [N] applied for minimum 10 [s] :	
Component no. 3 - load of 700 [N] applied for minimum 10 [s]	

28.4 [s] 10.8 [s]

n/a [s]

Duration at the required strength, 1 out of 3 component [s]:

10.8 [s]

Component no. 1 maximum strength before broken [N]:

29232.6 [N]

Component no. 2 maximum strength before broken [N] : Component no. 3 maximum strength before broken [N]: 777.3 [N] n/a [N]

The maximum strength before broken, 1 out of 3 component [N]:

777.3 [N]

The uncertainty is included in the values above

Uncertainty K=2 [N] (3):

21.7 [N]

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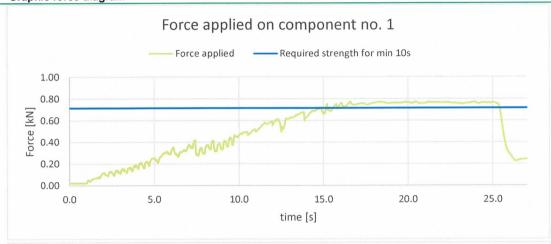
Test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes

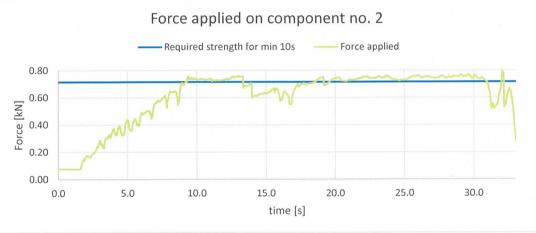


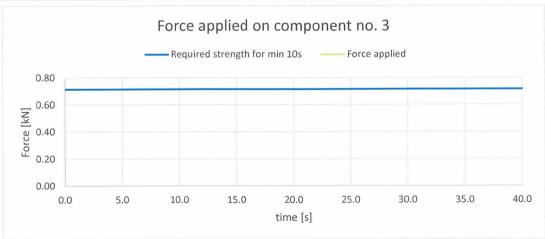
Identification number:

MISC_123.2019

Graphic force diagram







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Test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes



Identification number:

MISC_123.2019

Sky Paragliders Sky Quatro 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:

10.8 [s]

The maximum strength before broken:

777.3 [N]

Place of declaration
Date of issue:
Managing director

Signature:

Villeneuve
22.05.2019
Alain Zoller

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

⁽¹⁾ Inner container: container of the folded emergency parachute.

⁽²⁾ 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.

⁽⁵⁾ 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%.

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Test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes



Riser/Bridle strength test

Identification number:

MISC_131.2019

Test Report

Manufacturer data

Manufacturer name:

Sky Paragliders

Representative:

Nemec Martin

Street:

Okruzni 39

Post code / Place:

73911 Frydlant N.C.

Country:

Czech Republic

Sample data (1)

Name of riser:

Rescue Riser (Sky Quatro)

Serial number:

n/a

Date of reception:

26.06.2019

Test data

Atmosphere AGL

Place of test Date of test Villeneuve 26.06.2019

27.6 [°C] 60 RH [%]

Inspector:

Alain Zoller

979 [hPa]

Results (2)

The maximum strength

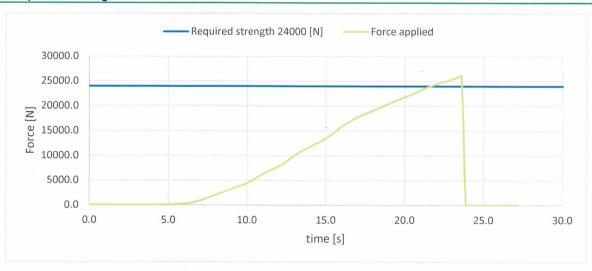
POSITIVE

26062.0 [N]

Includes the uncertainty K=2 [N] (3):

130.6 [N]

Graphic force diagram



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Test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes



Identification number:

MISC_131.2019

Sky Paragliders Rescue Riser (Sky Quatro)

Result summary

Maximum strength for riser, bridle

26062.0 [N]

Place of declaration

Date of issue:

Managing director

Villeneuve 28.06.2019 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		04.09.2023	НВМ	1-S9M/50KN-1	31314652
Geos n° 11 Skywatch		08.05.2020	JDC elec.	Geos n° 11	22

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

⁽²⁾ 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.

⁽³⁾ 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%.