

Air Turquoise SA Rte du Pré-au-Comte 8 | CH-1844 Villeneuve tel. +41 21 965 65 65 | mobile +41 79 202 52 30 info@para-test.com

Sky Paragliders a.s. Mr. Nemec Martin Okružní 39 73911 Frýdlant nad Ostravicí Czech Republic

## **Certificate EN**

The hereunder sample of paraglider has been tested in accordance with the following standards: EN 926-2:2005 & EN 926-1:2006



Certification number	PG_0687.2013
Manufacturer	Sky Paragliders a.s.
Glider model	Atis 4 S
Category	В
Maximum weight in flight (kg)	. 80 kg
Minimum weight in flight (kg)	60 kg
Glider's weight (kg)	4.6 kg

Flight tests	26. 02. 2013
Serial number	1262-11-1134





Air Turquoise SA Rte du Pré-au-Comte 8 | CH-1844 Villeneuve tel. +4) 2) 965 65 65 1 mobile +4) 79 202 52 30 info@para-test.com

### AIR TURQUOISE SA certified by



11.04.2013

## Klasse: **B**

Im Einklang mit den Standards EN 926-2:2005 & 926-1:2006: PG\_0687.2013

Ausstellungsdatum (TMJ):

#### Sky Paragliders a.s. Hersteller: Atis 4 S

Modell:

Seriennummer:

## Konfiguration während der Testflüge

#### Gleitschirm Zubehör Maximalgewicht im Flug (kg) 80 Bereich Beschleuniger (cm) 17 Minimalgewicht im Flug (kg) 60 Bremsbereich (km/h) 14 4.6 Gewicht des Gleitschirms (kg) Bereich der Trimmer (cm) 0 Anzahl Traggurten 4 Totaler Geschwindigkeitsbereich Zubehör 27 (km/h) Projizierte Fläche 20.43 Für Tests benutztes Gurtzeug Kontrollen (welches zuerst eintrifft) (Maximalgewicht) ABS Gurtzeugtyp every 24 months or every 100 flying hours Standard Gurtzeugmarke Sup' Air Achtung! Vor Gebrauch Bedienungsanleitung beachten Gurtzeugmodell Person oder Hersteller, welcher den Altiplume S Gleitschirm für die Tests präsentiert hat: None Distanz Gurtzeug-Traggurten (cm) 49 Distanz zwischen den Traggurten (cm) 46



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Sky Paragliders a.s.

Okružní 39

PG\_0687.2013

26.02.2013

#### AIR TURQUOISE SA certified by



## Flight test report: EN

Manufacturer

Address

Address	73911 Frýdlant nad Ostravicí Czech Republic	Date of hight test		26. 02. 2013	
Representative	None	Place of test		Villeneuve	
Glider model	Atis 4 S	Classification		В	
Trimmer	no				
				<b>T</b> I I OI I	
		Fukuoka Seiko		Thurnheer Claude	
		Sup'Air - XX-Lite		Sup' Air - Altiplume S	
	Total weight in flight (kg)	60		80	
1. Inflation/Take-off		Α			
Rising behaviour		Smooth, easy and constant rising		Smooth, easy and constant rising	A
Special take off technique r	equired	No	A	No	A
2. Landing		A			
Special landing technique re	equired	No	A	No	A
3. Speed in straight flight		B		×.	
Trim speed more than 30 ki		Yes	A	Yes	A
Speed range using the cont	rois larger than 10 km/h	Yes	A	Yes	A
Minimum speed		25 km/h to 30 km/h	В	Less than 25 km/h	A
4. Control movement Max. weight in flight up to 8	0 kg	Α			
Symmetric control pressure	•	Increasing / greater than 55 cm	А	not available	0
Max. weight in flight 80 kg t		increasing / greater than 55 cm	~	not available	0
Symmetric control pressure		not available	0	Increasing / greater than 60 cm	А
Max. weight in flight greater			U	increasing / greater than oo on	~
Symmetric control pressure		not available	0	not available	0
5. Pitch stability exiting a		A	Ū		Ū
Dive forward angle on exit		Dive forward less than 30°	А	Dive forward less than 30°	А
Collapse occurs		No	А	No	А
	g controls during accelerated	A			
flight		No	^	No	٨
Collapse occurs	in a	No	A	No	A
7. Roll stability and damp Oscillations	ing	A Reducing	А	Reducing	А
8. Stability in gentle spiral	le	A	А	Reducing	A
Tendency to return to straig		Spontaneous exit	А	Spontaneous exit	А
9. Behaviour in a steeply		B	~		~
Sink rate after two turns		Up to 12 m/s	А	More than 14 m/s	В
10. Symmetric front collar	ose	A			-
Entry		Rocking back less than 45°	А	Rocking back less than 45°	А
Recovery		Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit /	Change of course	Dive forward 0° to 30° / Keeping course	A	Dive forward 0° to 30° / Keeping course	А
Cascade occurs		No	А	No	А
With accelerator			Α		n
Entry		Rocking back less than 45°	А	Rocking back less than 45°	А
Recovery		Spontaneous in less than 3 s	A	Spontaneous in less than 3 s	A
,			••		

Certification number

Date of flight test

				•
Dive forward angle on exit / Change of course	Dive forward 0° to 30° / Keeping course	A	Dive forward 0° to 30° / Entering a turn of less than 90°	A
Cascade occurs	No	А	No	А
11. Exiting deep stall (parachutal stall)	Α			
Deep stall achieved	Yes	А	Yes	А
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
Change of course	Changing course less than $45^\circ$	А	Changing course less than 45°	А
Cascade occurs	No	А	No	А
12. High angle of attack recovery	Α			
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Cascade occurs	No	А	No	А
13. Recovery from a developed full stall	Α			
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
Collapse	No collapse	А	No collapse	А
Cascade occurs (other than collapses)	No	А	No	А
Rocking back	Less than 45°	А	Less than 45°	А
Line tension	Most lines tight	А	Most lines tight	А
14. Asymmetric collapse	В			
With 50% collapse				
Change of course until re-inflation / Maximum dive forward or roll angle	Less than 90° / Dive or roll angle 0° to 15° $$	A	Less than 90° / Dive or roll angle 15° to 45°	А
Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Total change of course	Less than 360°	А	Less than 360°	А
Collapse on the opposite side occurs	No	А	No	А
Twist occurs	No	А	No	А
Cascade occurs	No	А	No	А
With 75% collapse				
Change of course until re-inflation / Maximum dive forward or roll angle	Less than 90° / Dive or roll angle $15^\circ$ to $45^\circ$	A	90° to 180° / Dive or roll angle 15° to 45°	В
Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Total change of course	Less than 360°	А	Less than 360°	А
Collapse on the opposite side occurs	No	А	No	А
Twist occurs	No	А	No	А
Cascade occurs	No	А	No	А
With 50% collapse and accelerator				
Change of course until re-inflation / Maximum dive forward or roll angle	Less than 90° / Dive or roll angle 0° to 15° $$	A	Less than 90° / Dive or roll angle $15^\circ$ to $45^\circ$	А
Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Total change of course	Less than 360°	А	Less than 360°	А
Collapse on the opposite side occurs	No	А	No	А
Twist occurs	No	А	No	А
Cascade occurs	No	А	No	А
With 75% collapse and accelerator				
Change of course until re-inflation / Maximum dive forward or roll angle	90° to 180° / Dive or roll angle 15° to 45°	В	$90^\circ$ to $180^\circ$ / Dive or roll angle $15^\circ$ to $45^\circ$	В
Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Total change of course	Less than 360°	А	Less than 360°	А
Collapse on the opposite side occurs	No	А	No	А
Twist occurs	No	А	No	А
Cascade occurs	No	А	No	А
15. Directional control with a maintained asymmetric	Α			
collapse				
Able to keep course	Yes	Α	Yes	А
$180^\circ$ turn away from the collapsed side possible in 10 s	Yes	Α	Yes	А
Amount of control range between turn and stall or spin	More than 50 % of the	Α	More than 50 % of the symmetric	А
	symmetric control travel		control travel	

16. Trim speed spin tendency	Α			
Spin occurs	No	А	No	А
17. Low speed spin tendency	Α			
Spin occurs	No	А	No	А
18. Recovery from a developed spin	А			
Spin rotation angle after release	Stops spinning in less than 90 $^\circ$	А	Stops spinning in less than 90°	А
Cascade occurs	No	Α	No	А
19. B-line stall	Α			
Change of course before release	Changing course less than 45°	А	Changing course less than 45°	А
Behaviour before release	Remains stable with straight span	A	Remains stable with straight span	А
Recovery	Spontaneous in less than 3 s	Α	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
Cascade occurs	No	А	No	А
20. Big ears	Α			
Entry procedure	Dedicated controls	Α	Dedicated controls	А
Behaviour during big ears	Stable flight	Α	Stable flight	А
Recovery	Spontaneous in less than 3 s	Α	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	А
21. Big ears in accelerated flight	A			
Entry procedure	Dedicated controls	Α	Dedicated controls	А
Behaviour during big ears	Stable flight	Α	Stable flight	А
Recovery	Spontaneous in less than 3 s	Α	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	А
Behaviour immediately after releasing the accelerator while maintaining big ears	Stable flight	A	Stable flight	A
22. Behaviour exiting a steep spiral	А			
Tendency to return to straight flight	Spontaneous exit	Α	Spontaneous exit	А
Turn angle to recover normal flight	Less than 720°, spontaneous recovery	A	Less than 720°, spontaneous recovery	A
Sink rate when evaluating spiral stability [m/s]	14		18	
23. Alternative means of directional control	А			
180° turn achievable in 20 s	Yes	Α	Yes	А
Stall or spin occurs	No	Α	No	А
24. Any other flight procedure and/or configuration described in the user's manual	0			
Procedure works as described	not available	0	not available	0
Procedure suitable for novice pilots	not available	0	not available	0
Cascade occurs	not available	0	not available	0
25. Comments of test pilot				
Comments				

paragliding by air turquoise

Sp

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## **Certificate EN**

The hereunder sample of paraglider has been tested in accordance with the following standards: EN 926-2:2005 & EN 926-1:2006



Certification number	PG 0631.2012
Manufacturer	Sky Paragliders a.s.
Glider model	Atis4 M
Category	B
Maximum weight in flight (kg).	.95 kg
Minimum weight in flight (kg)	.73 kg
Glider's weight (kg)	.4.8 kg

Flight tests	20. 11. 2012
Serial number	

Villeneuve, 11. 04. 2013 Zoller Alain



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#### Β Class:

In accordance with EN standards 926-2:2005 & 926-1:2006:

Date of issue (DMY):

## Manufacturer: Sky Paragliders a.s.

Model:

Serial number:

### Configuration during flight tests

Atis4 M

#### Paraglider

ralagnaon	
Maximum weight in flight (kg)	95
Minimum weight in flight (kg)	73
Glider's weight (kg)	4.8
Number of risers	4
Projected area (m2)	22.07
Harness used for testing (max weight)	
Harness type	ABS
Harness brand	Sup'Air
Harness model	Access M

Harness to risers distance (cm)

Distance between risers (cm)

#### Accessories

Range of speed system (cm)	17
Speed range using brakes (km/h)	14
Range of trimmers (cm)	0
Total speed range with accessories (km/h)	27

Inspections (whichever happens first) every 24 months or every 100 flying hours Warning! Before use refer to user's manual Person or company having presented the glider for testing: Alexandre Paux

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
A	Α	A	A	A	A	Α	Α	В	Α	Α	A	В	В	Α	Α	Α	Α	Α	Α	Α	Α	Α	0

49

46

## PG\_0631.2012 11.04.2013



Sky Paragliders a.s.

Okružní 39

PG\_0631.2012

20. 11. 2012

#### AIR TURQUOISE SA certified by



Manufacturer Address

Address	73911 Frýdlant nad Ostravic Czech Republic	í		20. 11. 2012	
Representative	Alexandre Paux	Place of test		Villeneuve	
Glider model	Atis4 M	Classification		В	
Trimmer	no				
	•	Thurnheer Claude		Zoller Alain	
	Harness	Sup' Air - Access M		Sup'Air - Access M	
	Total weight in flight (kg)	73		95	
1. Inflation/Take-off		Α			
Rising behaviour		Smooth, easy and constant rising	А	Smooth, easy and constant rising	А
Special take off technique	required	No	А	No	А
2. Landing		Α			
Special landing technique	required	No	А	No	A
3. Speed in straight flight	t	Α			
Trim speed more than 30 k		Yes	А	Yes	А
Speed range using the cor	ntrols larger than 10 km/h	Yes	А	Yes	A
Minimum speed		Less than 25 km/h	А	Less than 25 km/h	A
4. Control movement		Α			
Max. weight in flight up to a					
Symmetric control pressure	e / travel	Increasing / greater than 55 cm	А	not available	0
Max. weight in flight 80 kg					
Symmetric control pressure		not available	0	Increasing / greater than 60 cm	А
Max. weight in flight greate					
Symmetric control pressure		not available	0	not available	0
5. Pitch stability exiting a	accelerated flight	Α			
Dive forward angle on exit		Dive forward less than 30°	Dive forward less than 30°	A	
Collapse occurs		No	А	No	A
flight	g controls during accelerated	Α			
Collapse occurs		No	А	No	A
7. Roll stability and damp	bing	Α			
Oscillations		Reducing	А	Reducing	А
8. Stability in gentle spira		Α			
Tendency to return to straig		Spontaneous exit	Α	Spontaneous exit	A
9. Behaviour in a steeply	banked turn	В			
Sink rate after two turns		More than 14 m/s	В	More than 14 m/s	В
10. Symmetric front colla	ipse	Α			
Entry		Rocking back less than 45°	Α	Rocking back less than 45°	Α
Recovery		Spontaneous in less than 3 s	A	Spontaneous in less than 3 s	A
Dive forward angle on exit	/ Change of course	Dive forward 0° to 30° / Keeping course	A	Dive forward 0° to 30° / Keeping course	A
Cascade occurs		No	A	No	А
With accelerator					
Entry		Rocking back less than 45°	A	Rocking back less than 45°	А
Recovery		Spontaneous in less than 3 s	A	Spontaneous in less than 3 s	А

Certification number

Dive forward angle on exit / Change of course	Dive forward 0° to 30° / Keeping course	A	Dive forward 0° to 30° / Keeping course	A
Cascade occurs	No	А	No	А
11. Exiting deep stall (parachutal stall)	Α			
Deep stall achieved	Yes	А	Yes	А
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
Change of course	Changing course less than $45^{\circ}$	А	Changing course less than 45°	А
Cascade occurs	No	А	No	А
12. High angle of attack recovery	Α			
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Cascade occurs	No	А	No	А
13. Recovery from a developed full stall	В			
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 30° to 60°	В
Collapse	No collapse	А	No collapse	А
Cascade occurs (other than collapses)	No	А	No	А
Rocking back	Less than 45°	А	Less than 45°	А
Line tension	Most lines tight	А	Most lines tight	А
14. Asymmetric collapse	В			
With 50% collapse				
Change of course until re-inflation / Maximum dive forward or roll angle	Less than 90° / Dive or roll angle 0° to 15° $$	A	Less than 90° / Dive or roll angle 0° to 15° $$	A
Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Total change of course	Less than 360°	А	Less than 360°	А
Collapse on the opposite side occurs	No	А	No	А
Twist occurs	No	А	No	А
Cascade occurs	No	А	No	А
With 75% collapse				
Change of course until re-inflation / Maximum dive forward or roll angle	90° to 180° / Dive or roll angle 15° to 45°	В	Less than 90° / Dive or roll angle $15^{\circ}$ to $45^{\circ}$	A
Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Total change of course	Less than 360°	А	Less than 360°	А
Collapse on the opposite side occurs	No	А	No	А
Twist occurs	No	А	No	А
Cascade occurs	No	А	No	А
With 50% collapse and accelerator				
Change of course until re-inflation / Maximum dive forward or roll angle	Less than 90° / Dive or roll angle $15^{\circ}$ to $45^{\circ}$	Α	Less than 90° / Dive or roll angle $15^{\circ}$ to $45^{\circ}$	A
Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Total change of course	Less than 360°	А	Less than 360°	А
Collapse on the opposite side occurs	No	А	No	А
Twist occurs	No	А	No	А
Cascade occurs	No	А	No	А
With 75% collapse and accelerator				
Change of course until re-inflation / Maximum dive forward or roll angle	90° to 180° / Dive or roll angle 15° to 45°	В	$90^\circ$ to $180^\circ$ / Dive or roll angle $15^\circ$ to $45^\circ$	В
Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Total change of course	Less than 360°	А	Less than 360°	А
Collapse on the opposite side occurs	No	А	No	А
Twist occurs	No	А	No	А
Cascade occurs	No	А	No	А
15. Directional control with a maintained asymmetric collapse	Α			
Able to keep course	Yes	А	Yes	А
180° turn away from the collapsed side possible in 10 s	Yes	A	Yes	A
Amount of control range between turn and stall or spin	More than 50 % of the symmetric control travel	A	More than 50 % of the symmetric control travel	А

16. Trim speed spin tendency	Α			
Spin occurs	No	А	No	А
17. Low speed spin tendency	Α			
Spin occurs	No	А	No	А
18. Recovery from a developed spin	Α			
Spin rotation angle after release	Stops spinning in less than 90°	А	Stops spinning in less than 90°	А
Cascade occurs	No	А	No	А
19. B-line stall	Α			
Change of course before release	Changing course less than 45°	А	Changing course less than 45°	А
Behaviour before release	Remains stable with straight span	A	Remains stable with straight span	А
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
Cascade occurs	No	А	No	А
20. Big ears	Α			
Entry procedure	Dedicated controls	А	Dedicated controls	А
Behaviour during big ears	Stable flight	А	Stable flight	А
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
21. Big ears in accelerated flight	А			
Entry procedure	Dedicated controls	А	Dedicated controls	А
Behaviour during big ears	Stable flight	А	Stable flight	А
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
Behaviour immediately after releasing the accelerator while maintaining big ears	Stable flight	A	Stable flight	А
22. Behaviour exiting a steep spiral	Α			
Tendency to return to straight flight	Spontaneous exit	А	Spontaneous exit	А
Turn angle to recover normal flight	Less than 720°, spontaneous recovery	A	Less than 720°, spontaneous recovery	А
Sink rate when evaluating spiral stability [m/s]	18		20	
23. Alternative means of directional control	А			
180° turn achievable in 20 s	Yes	А	Yes	А
Stall or spin occurs	No	А	No	А
24. Any other flight procedure and/or configuration described in the user's manual	0			
Procedure works as described	not available	0	not available	0
Procedure suitable for novice pilots	not available	0	not available	0
Cascade occurs	not available	0	not available	0
25. Comments of test pilot				
Comments				



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#### AIR TURQUOISE SA certified by



## БИНТ

Class: **B** 

In accordance with EN standards 926-2:2005 & 926-1:2006:

Date of issue (DMY):

## Manufacturer: Sky Paragliders a.s.

Model:

Serial number:

## Configuration during flight tests

Atis 4 L

#### Paraglider

Maximum weight in flight (kg)	112
Minimum weight in flight (kg)	87
Glider's weight (kg)	5.1
Number of risers	4
Projected area (m2)	23.61
Harness used for testing (max weight)	
Harness type	ABS
Harness brand	Gin Gliders
Harness model	Gingo 2 L
Harness to risers distance (cm)	49
Distance between risers (cm)	46

#### Accessories

Range of speed system (cm)	17
Speed range using brakes (km/h)	14
Range of trimmers (cm)	0
Total speed range with accessories (km/h)	27

Inspections (whichever happens first) every 24 months or every 100 flying hours Marning! Before use refer to user's manual Person or company having presented the glider for testing: None

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
A	Α	Α	Α	Α	Α	Α	Α	В	Α	Α	Α	Α	В	Α	Α	Α	Α	Α	Α	Α	Α	Α	0

## PG\_0638.2012 11. 04. 2013



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## БИНТ

Class: **B** 

In accordance with EN standards 926-2:2005 & 926-1:2006:

Date of issue (DMY):

## Manufacturer: Sky Paragliders a.s.

Model:

Serial number:

## Configuration during flight tests

Atis 4 L

#### Paraglider

Maximum weight in flight (kg)	112
Minimum weight in flight (kg)	87
Glider's weight (kg)	5.1
Number of risers	4
Projected area (m2)	23.61
Harness used for testing (max weight)	
Harness type	ABS
Harness brand	Gin Gliders
Harness model	Gingo 2 L
Harness to risers distance (cm)	49
Distance between risers (cm)	46

#### Accessories

Range of speed system (cm)	17
Speed range using brakes (km/h)	14
Range of trimmers (cm)	0
Total speed range with accessories (km/h)	27

Inspections (whichever happens first) every 24 months or every 100 flying hours Marning! Before use refer to user's manual Person or company having presented the glider for testing: None

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
A	Α	Α	Α	Α	Α	Α	Α	В	Α	Α	Α	Α	В	Α	Α	Α	Α	Α	Α	Α	Α	Α	0

## PG\_0638.2012 11. 04. 2013

#### AIR TURQUOISE SA certified by



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Flight test report: EN
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Manufacturer	Sky Paragliders a.s.	Certification number		PG_0638.2012	
Address	Okružní 39 73911 Frýdlant nad Ostravici Czech Republic	Date of flight test		01. 12. 2012	
Representative	None	Place of test		Villeneuve	
Glider model	Atis 4 L	Classification		В	
Trimmer	no				
	Test pilot	Thurnheer Claude		Zoller Alain	
	Harness	Niviuk Gliders - Hamak 2 M		Gin Gliders - Gingo 2 L	
	Total weight in flight (kg)	87		112	
1. Inflation/Take-off		Α			
Rising behaviour		Smooth, easy and constant rising	А	Smooth, easy and constant rising	
Rising behaviour Special take off technique r	equired	Smooth, easy and constant rising No	A A		
Ŭ	equired				
Special take off technique r		No	A		
Special take off technique r 2. Landing	equired	No A	A	No	
Special take off technique r 2. Landing Special landing technique r	equired	No A No	A A	No	
Special take off technique r 2. Landing Special landing technique r 3. Speed in straight flight	equired	No A No A	A A A	No	
Special take off technique r 2. Landing Special landing technique r 3. Speed in straight flight Trim speed more than 30 k	equired	No A No A Yes	A A A A	No Yes	
Special take off technique r 2. Landing Special landing technique r 3. Speed in straight flight Trim speed more than 30 k Speed range using the con	equired	No A No A Yes Yes	A A A A	No No Yes Yes	

	A			
Max. weight in flight up to 80 kg				
Symmetric control pressure / travel	not available	0	not available	0
Max. weight in flight 80 kg to 100 kg				
Symmetric control pressure / travel	Increasing / greater than 60 cm	А	not available	0
Max. weight in flight greater than 100 kg				
Symmetric control pressure / travel	not available	0	Increasing / greater than 65 cm	А
5. Pitch stability exiting accelerated flight	Α			
Dive forward angle on exit	Dive forward less than 30°	А	Dive forward less than 30°	А
Collapse occurs	No	А	No	А
6. Pitch stability operating controls during accelerated flight	Α			
Collapse occurs	No	А	No	Α
7. Roll stability and damping	Α			
Oscillations	Reducing	А	Reducing	А
8. Stability in gentle spirals	Α			
Tendency to return to straight flight	Spontaneous exit	Α	Spontaneous exit	А
9. Behaviour in a steeply banked turn	В			
Sink rate after two turns	More than 14 m/s	В	More than 14 m/s	В
10. Symmetric front collapse	Α			
Entry	Rocking back less than $45^{\circ}$	А	Rocking back less than $45^{\circ}$	А
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit / Change of course	Dive forward 0° to 30° / Keeping course	A	Dive forward 0° to 30° / Keeping course	А
Cascade occurs	No	Α	No	Α

Rocking back less than 45°

Spontaneous in less than 3 s

А

А

*With accelerator* Entry Recovery

А

А

Rocking back less than 45°

Spontaneous in less than 3 s

Dive forward angle on exit / Change of course	Dive forward 0° to 30° / Keeping course	A	Dive forward 0° to 30° / Keeping course	A
Cascade occurs	No	А	No	А
11. Exiting deep stall (parachutal stall)	Α			
Deep stall achieved	Yes	А	Yes	А
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
Change of course	Changing course less than 45°	А	Changing course less than 45°	А
Cascade occurs	No	А	No	А
12. High angle of attack recovery	Α			
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Cascade occurs	No	А	No	А
13. Recovery from a developed full stall	Α			
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
Collapse	No collapse	А	No collapse	А
Cascade occurs (other than collapses)	No	А	No	А
Rocking back	Less than 45°	А	Less than 45°	А
Line tension	Most lines tight	А	Most lines tight	А
14. Asymmetric collapse	В			
With 50% collapse				
Change of course until re-inflation / Maximum dive forward or roll angle	Less than 90° / Dive or roll angle 0° to $15^{\circ}$	A	Less than 90° / Dive or roll angle 0° to 15° $$	A
Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Total change of course	Less than 360°	А	Less than 360°	А
Collapse on the opposite side occurs	No	А	No	А
Twist occurs	No	А	No	А
Cascade occurs	No	А	No	А
With 75% collapse				
Change of course until re-inflation / Maximum dive forward or roll angle	90° to 180° / Dive or roll angle 15° to 45°	В	90° to 180° / Dive or roll angle 15° to 45°	В
Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Total change of course	Less than 360°	А	Less than 360°	А
Collapse on the opposite side occurs	No	А	No	А
Twist occurs	No	А	No	А
Cascade occurs	No	А	No	А
With 50% collapse and accelerator				
Change of course until re-inflation / Maximum dive forward or roll angle	Less than 90° / Dive or roll angle $15^{\circ}$ to $45^{\circ}$	A	Less than 90° / Dive or roll angle 15° to 45° $$	A
Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Total change of course	Less than 360°	А	Less than 360°	А
Collapse on the opposite side occurs	No	А	No	А
Twist occurs	No	А	No	А
Cascade occurs	No	А	No	А
With 75% collapse and accelerator				
Change of course until re-inflation / Maximum dive forward or roll angle	90° to 180° / Dive or roll angle 15° to 45°	В	$90^\circ$ to $180^\circ$ / Dive or roll angle $15^\circ$ to $45^\circ$	В
Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Total change of course	Less than 360°	А	Less than 360°	А
Collapse on the opposite side occurs	No	А	No	А
Twist occurs	No	А	No	А
Cascade occurs	No	А	No	А
15. Directional control with a maintained asymmetric collapse	Α			
Able to keep course	Yes	А	Yes	А
180° turn away from the collapsed side possible in 10 s	Yes	А	Yes	А
Amount of control range between turn and stall or spin	More than 50 % of the symmetric control travel	A	More than 50 % of the symmetric control travel	A

16. Trim speed spin tendency	Α			
Spin occurs	No	А	No	А
17. Low speed spin tendency	Α			
Spin occurs	No	А	No	А
18. Recovery from a developed spin	Α			
Spin rotation angle after release	Stops spinning in less than 90°	А	Stops spinning in less than 90°	А
Cascade occurs	No	А	No	А
19. B-line stall	Α			
Change of course before release	Changing course less than 45°	А	Changing course less than 45°	А
Behaviour before release	Remains stable with straight span	A	Remains stable with straight span	A
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
Cascade occurs	No	А	No	А
20. Big ears	Α			
Entry procedure	Dedicated controls	Α	Dedicated controls	А
Behaviour during big ears	Stable flight	Α	Stable flight	А
Recovery	Spontaneous in less than 3 s	Α	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	А
21. Big ears in accelerated flight	Α			
Entry procedure	Dedicated controls	А	Dedicated controls	А
Behaviour during big ears	Stable flight	А	Stable flight	А
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
Behaviour immediately after releasing the accelerator while maintaining big ears	Stable flight	A	Stable flight	A
22. Behaviour exiting a steep spiral	Α			
Tendency to return to straight flight	Spontaneous exit	Α	Spontaneous exit	А
Turn angle to recover normal flight	Less than 720°, spontaneous recovery	A	Less than 720°, spontaneous recovery	А
Sink rate when evaluating spiral stability [m/s]	19		17	
23. Alternative means of directional control	Α			
180° turn achievable in 20 s	Yes	А	Yes	А
Stall or spin occurs	No	А	No	А
24. Any other flight procedure and/or configuration described in the user's manual	0			
Procedure works as described	not available	0	not available	0
Procedure suitable for novice pilots	not available	0	not available	0
Cascade occurs	not available	0	not available	0
25. Comments of test pilot				
Comments				



Air Turquoise SA Rte du Pré-au-Comte 8 | CH-1844 Villeneuve tel. +41 21 965 65 65 | mobile +41 79 202 52 30 info@para-test.com

**Sky Paragliders a.s.** Mr. Nemec Martin Okružní 39 73911 Frýdlant nad Ostravicí Czech Republic

## **Certificate EN**

The hereunder sample of paraglider has been tested in accordance with the following standards: EN 926-2:2005 & EN 926-1:2006



Certification number	.PG_0692.2013
Manufacturer	Sky Paragliders a.s.
Glider model	Atis 4 XL
Category	В
Maximum weight in flight (kg)	. 130 kg
Minimum weight in flight (kg)	102 kg
Glider's weight (kg)	5.4 kg

Villeneuve, 11. 04. 2013 Zoller Alain



Air Turquoise SA Rte du Pré-au-Comte 8 | CH-1844 Villeneuve tel. +41 21 965 65 65 | mobile +41 79 202 52 30 info@para-test.com

#### AIR TURQUOISE SA certified by



Β Class:

In accordance with EN standards 926-2:2005 & 926-1:2006:

Date of issue (DMY):

#### Manufacturer: Sky Paragliders a.s. Atis 4 XL

Model:

Serial number:

## Configuration during flight tests

#### Paraglider

Maximum weight in flight (kg)	130
Minimum weight in flight (kg)	102
Glider's weight (kg)	5.4
Number of risers	4
Projected area (m2)	25.5
Harness used for testing (max weight)	
Harness type	ABS
Harness brand	Gin Gliders
Harness model	Gingo 2 L
Harness to risers distance (cm)	49
Distance between risers (cm)	46

#### Accessories

Range of speed system (cm)	17
Speed range using brakes (km/h)	16
Range of trimmers (cm)	0
Total speed range with accessories (km/h)	29

Inspections (whichever happens first) every 24 months or every 100 flying hours Gliders Warning! Before use refer to user's manual Person or company having presented the glider for testing: None

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
A	Α	В	Α	Α	Α	Α	Α	В	Α	Α	Α	Α	В	Α	Α	Α	Α	Α	Α	Α	Α	Α	0

## PG\_0692.2013 11. 04. 2013

Sky Paragliders a.s.

Okružní 39

PG\_0692.2013

04.04.2013

#### AIR TURQUOISE SA certified by



Manufacturer

Address

Address	Okružní 39 73911 Frýdlant nad Ostravicí Czech Republic	Date of flight test		04. 04. 2013	
Representative	None	Place of test		Villeneuve	
Glider model	Atis 4 XL	Classification		В	
Trimmer	no				
	•	Thurnheer Claude		Zoller Alain	
	Harness	Sup'Air - Access M		Gin Gliders - Gingo 2 L	
	Total weight in flight (kg)	102		130	
1. Inflation/Take-off		Α			
Rising behaviour		Smooth, easy and constant rising	А	Smooth, easy and constant rising	А
Special take off technique re	equired	No	А	No	А
2. Landing		Α			
Special landing technique re	equired	No	А	No	A
3. Speed in straight flight		В			
Trim speed more than 30 kr		Yes	А	Yes	A
Speed range using the cont	rols larger than 10 km/h	Yes	А	Yes	A
Minimum speed		Less than 25 km/h	А	25 km/h to 30 km/h	В
4. Control movement		Α			
Max. weight in flight up to 8					
Symmetric control pressure		not available	0	not available	0
Max. weight in flight 80 kg to	-		_		
Symmetric control pressure		not available	0	not available	0
Max. weight in flight greater					
Symmetric control pressure		Increasing / greater than 65 cm	Α	Increasing / greater than 65 cm	A
5. Pitch stability exiting ac	celerated flight	A	•		
Dive forward angle on exit		Dive forward less than 30°	A	Dive forward less than 30°	A
Collapse occurs		No	A	No	А
flight	controls during accelerated	A			
Collapse occurs		No	A	No	A
7. Roll stability and dampi	ng	A	_		
Oscillations		Reducing	Α	Reducing	A
8. Stability in gentle spiral		A	•		
Tendency to return to straig		Spontaneous exit	A	Spontaneous exit	A
9. Behaviour in a steeply l	banked turn	B Mara than 14 m/s	-		-
Sink rate after two turns	200	More than 14 m/s	В	More than 14 m/s	В
10. Symmetric front collap	56		^	Pooking back loss than 45°	۸
Entry		Rocking back less than 45°	A A	Rocking back less than 45° Spontaneous in less than 3 s	A A
Recovery	Change of course	Spontaneous in less than 3 s Dive forward $0^{\circ}$ to $30^{\circ}$ / Keeping	A A	Dive forward 0° to 30° / Keeping	A A
Dive forward angle on exit /		Dive forward 0° to 30° / Keeping course	A	course	A
Cascade occurs		No	A	No	A
With accelerator					
Entry		Rocking back less than 45°	A	Rocking back less than 45°	A
Recovery		Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	A

Certification number

Dive forward angle on exit / Change of course	Dive forward 0° to 30° / Keeping course	A	Dive forward 0° to 30° / Keeping course	A
Cascade occurs	No	А	No	А
11. Exiting deep stall (parachutal stall)	Α			
Deep stall achieved	Yes	А	Yes	А
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
Change of course	Changing course less than 45°	А	Changing course less than 45°	А
Cascade occurs	No	А	No	А
12. High angle of attack recovery	Α			
Recovery	Spontaneous in less than 3 s	А	Spontaneous in less than 3 s	А
Cascade occurs	No	А	No	А
13. Recovery from a developed full stall	Α			
Dive forward angle on exit	Dive forward 0° to 30°	А	Dive forward 0° to 30°	А
Collapse	No collapse	А	No collapse	А
Cascade occurs (other than collapses)	No	А	No	А
Rocking back	Less than 45°	А	Less than 45°	А
Line tension	Most lines tight	А	Most lines tight	А
14. Asymmetric collapse	В			
With 50% collapse				
Change of course until re-inflation / Maximum dive forward or roll angle	Less than 90° / Dive or roll angle 0° to 15° $$	A	Less than 90° / Dive or roll angle 0° to 15° $$	A
Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Total change of course	Less than 360°	А	Less than 360°	А
Collapse on the opposite side occurs	No	А	No	А
Twist occurs	No	А	No	А
Cascade occurs	No	А	No	А
With 75% collapse				
Change of course until re-inflation / Maximum dive forward or roll angle	90° to 180° / Dive or roll angle 15° to 45°	В	90° to 180° / Dive or roll angle 15° to 45°	В
Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Total change of course	Less than 360°	А	Less than 360°	А
Collapse on the opposite side occurs	No	А	No	А
Twist occurs	No	А	No	А
Cascade occurs	No	А	No	А
With 50% collapse and accelerator				
Change of course until re-inflation / Maximum dive forward or roll angle	Less than 90° / Dive or roll angle $15^{\circ}$ to $45^{\circ}$	A	Less than 90° / Dive or roll angle $15^{\circ}$ to $45^{\circ}$	A
Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Total change of course	Less than 360°	А	Less than 360°	А
Collapse on the opposite side occurs	No	А	No	А
Twist occurs	No	А	No	А
Cascade occurs	No	А	No	А
With 75% collapse and accelerator				
Change of course until re-inflation / Maximum dive forward or roll angle	90° to 180° / Dive or roll angle 15° to 45°	В	90° to 180° / Dive or roll angle 15° to 45°	В
Re-inflation behaviour	Spontaneous re-inflation	А	Spontaneous re-inflation	А
Total change of course	Less than 360°	А	Less than 360°	А
Collapse on the opposite side occurs	No	А	No	А
Twist occurs	No	А	No	А
Cascade occurs	No	А	No	А
15. Directional control with a maintained asymmetric collapse	A			
Able to keep course	Yes	А	Yes	А
180° turn away from the collapsed side possible in 10 s	Yes	А	Yes	А
Amount of control range between turn and stall or spin	More than 50 % of the symmetric control travel	A	More than 50 % of the symmetric control travel	A

16. Trim speed spin tendency	Α			
Spin occurs	No	А	No	А
17. Low speed spin tendency	Α			
Spin occurs	No	А	No	А
18. Recovery from a developed spin	Α			
Spin rotation angle after release	Stops spinning in less than 90°	А	Stops spinning in less than 90°	А
Cascade occurs	No	А	No	А
19. B-line stall	Α			
Change of course before release	Changing course less than 45°	А	Changing course less than 45°	А
Behaviour before release	Remains stable with straight span	A	Remains stable with straight span	А
Recovery	Spontaneous in less than 3 s	Α	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	А
Cascade occurs	No	Α	No	А
20. Big ears	Α			
Entry procedure	Dedicated controls	Α	Dedicated controls	А
Behaviour during big ears	Stable flight	Α	Stable flight	А
Recovery	Spontaneous in less than 3 s	Α	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	А
21. Big ears in accelerated flight	Α			
Entry procedure	Dedicated controls	Α	Dedicated controls	А
Behaviour during big ears	Stable flight	А	Stable flight	А
Recovery	Spontaneous in 3 s to 5 s	А	Spontaneous in less than 3 s	А
Dive forward angle on exit	Dive forward 0° to 30°	Α	Dive forward 0° to 30°	А
Behaviour immediately after releasing the accelerator while maintaining big ears	Stable flight	A	Stable flight	А
22. Behaviour exiting a steep spiral	Α			
Tendency to return to straight flight	Spontaneous exit	Α	Spontaneous exit	А
Turn angle to recover normal flight	Less than 720°, spontaneous recovery	A	Less than 720°, spontaneous recovery	Α
Sink rate when evaluating spiral stability [m/s]	20		18	
23. Alternative means of directional control	Α			
180° turn achievable in 20 s	Yes	А	Yes	А
Stall or spin occurs	No	Α	No	А
24. Any other flight procedure and/or configuration described in the user's manual	0			
Procedure works as described	not available	0	not available	0
Procedure suitable for novice pilots	not available	0	not available	0
Cascade occurs	not available	0	not available	0
25. Comments of test pilot				
Comments				