

INSPECTION REPORT

PH PARAGLIDERS HARNESS

Declaration conformity number: **PH 199.2017 UPDATED**

TEST SAMPLE DATA

Manufacturer name: **AIR MKG - Kortel Design**

Contact person: **Max Jeanpierre**

Street: **1096 Avenue André Lasquin**

Post code / place: **74700 Sallanches**

Country: **France**

Harness manufacturer name: **Kolibri pro**

Harness manufacturer size: **L**

Serial number of the test sample: **1504KP-I-001**

Harness type: **ABS**

Maximum certified pilot weight [kg]: **100**

Harness protector type: **Airbag**

Harness weight [kg]: **1.194**

Volume reserve parachute container [cm3]

Min: **na**

Max: **na**

Atmosphere [°C] RH [%] [hPa]: **21.9 / 43 / 1023.7**

Test responsible: **Alain Zoller**

Inspection place: **04.05.2015**

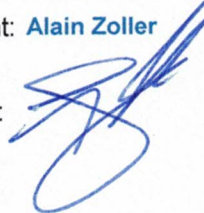
Sample reception date: **28.04.2015**

Place of declaration: **Villeneuve**

Date of issue: **01.06.2017**

Director management: **Alain Zoller**

Signature:



Air Turquoise SA, having thoroughly assessed the sample mentioned hereunder, declare it was found conform with all requirements defined by the following norms

European Standard **EN1651** September 1999

European Standard **EN12491** September 2001

Airworthiness requirements for hang gliders and paragliders **LTF 2009** as published in NfL 91/09 chapter 4 and 6

Present declaration's scope only extends to the conformity of a given sample, on a given date and in a given place – as mentioned here above.

This inspection report contain the following test and is complet with the test report **PH ID 0 to 12, ST and RD**



Declaration conformity number: PH 199.2017

A. STRUCTURAL STRENGTH TESTS

A test plan was set up in order to execute the different tests in an efficient order. The table below summarizes this test plan together with the applicable standards and results

Test ID	TESTED ?	Standard Ref.		TEST setup	Anchoring		Forces		Min. Test duration [sec]	Result
		EN 1651	LTF		Attach -ment points	Dummy	Req. Load in [g] force	Min. force [N]		
R0	✓	5.3.2.1		Default flying position	2 main attachment points	Hip fixated	6	6000	10	POSITIVE
R1			4.2.1.a				9	9000		n/a
R2	✓	5.3.2.2					15	15000	5	POSITIVE
R3			4.2.1.b	Default, landing position	2 main att. points	Hip fixated,	6	6000	10	n/a
R4	✓	5.3.2.7				landing conf.	15	15000		
R5			4.2.1.a rescue	Rescue	2 rescue att. Pnts.	Hip fixated	9	9000	10	n/a
R6	✓	5.3.2.4					15	15000		
R7			4.2.1.b rescue			Rescue, landing	Hip fixated, landing conf.	6	6000	10
R8	✓	5.3.2.3		One riser	ONE main att.	1 central hip fixation	6	6000	10	POSITIVE
R9			4.2.1.d	Towing	2 main att. + 2 tow att.	None	3	3000	10	n/a
		5.3.2.5					5	5000		
R10	✓	5.3.2.6		Default, Negatif	One main att.	Head fix.	4.5	4500	10	POSITIVE
R11			4.2.1.c	Upside down	2 main att. downw.	Head fix.	6	6000	10	n/a
R12			4.2.1.c rescue	Upside down rescue	2 rescue att. downw.		6	6000		

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B. PARAGLIDER HARNESS BACK PROTECTORS

Shock impact tests have to be executed on these harnesses in order to prove the damping characteristics of it. Most paraglider harnesses are equipped with a protection device that damps the shock on the pilot's spine during a hard landing

Test ID	TESTED ?	Standard	TEST setup	Test configuration	Impact at 165 cm (Seat plate)			Results
					Max Peak impact [g] force	Impact duration at 38 [g] (if any) recorded: [ms]	Impact duration at 20 [g] (if any) recorded: [ms]	
PRO TECT 1	✓	5.1.1	Default flying position	Test sample is attached to the dummy like a pilot in flight. Sample temperature +20+25°C without rescue	0.00	0.00	0.00	n/a
PRO TECT 2	✓	5.1.1	Default flying position	Test sample is attached to the dummy like a pilot in flight. Sample temperature +20+25°C with rescue	0.00	0.00	0.00	n/a
PRO TECT 3	✓	5.1.1	Default flying position	Test sample is attached to the dummy like a pilot in flight. Sample temperature -10+5°C without rescue	0.00	0.00	0.00	n/a
PRO TECT 4	✓	5.1.1	Default flying position	Test sample is attached to the dummy like a pilot in flight. Sample temperature -10+5°C with rescue	0.00	0.00	0.00	n/a

C. RESCUE DEPLOYMENT RESISTANCE TEST

The deployment of the rescue system has to be ensured in all circumstances of flight. This test is to verify whether the force needed to deploy is in between reasonable limits

Test ID	TESTED ?	Standard Ref.	TEST setup	Anchoring		Force for single hand deployment		Result
				Attach- ment points	Dummy	Min.	Resistance measured [N]	
						Max. [N]		
RRDT	✓	6.1.5	Default flying position	Test sample is attached to the dummy like a pilot in flight.		20	-17.0	na
				(no dummy required)		70		na

D. RESCUE DEPLOYMENT STRAP STRENGTH TEST

The connection between handgrip and inner container has to have sufficient load capacity/structural strength in any situation that may arise during normal use. During this test is verified, whether this connection fulfill the requirements

Test ID	TESTED ?	Standard Ref.		TEST setup	Minimum force [N]	Min.	Breaking resistance measured [N]	Result
		LTF	EN 12491			Test duration [s]		
RRST		6.1.8	5.3.2	Connection strap in tensile testing machine	700	10	-17.0	n/a

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HARNESS STRUCTURAL STRENGTH TEST

TEST REPORT PH ID 0

PH PARAGLIDERS HARNESS

PH 199.2017 UPDATED

Manufacturer name: AIR MKG - Kortel Design

Harness manufacturer name: Kolibri pro

Test place & date: 42128

Test responsible: Alain Zoller

Atmosphere [°C] RH [%] [hPa]: 21.9 / 43 / 1023.7

Maximum certified pilot weight [kg]: 100

Serial number of the test sample: 1504KP-I-001

Directives: EN 1651

Test standard §: 5.3.2.1 (EN)

Test setup: Default flying position

Attachment points: Both main riser attachments (3, 4)

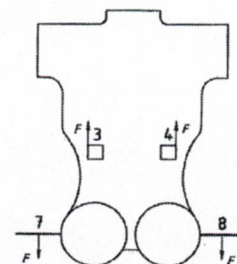
Dummy: Default, hip fixed (7, 8)

Required load in force [g]: 6

Minimum load [N]: 6000

Required test load in [N]: 612

Min. duration [s]: 10



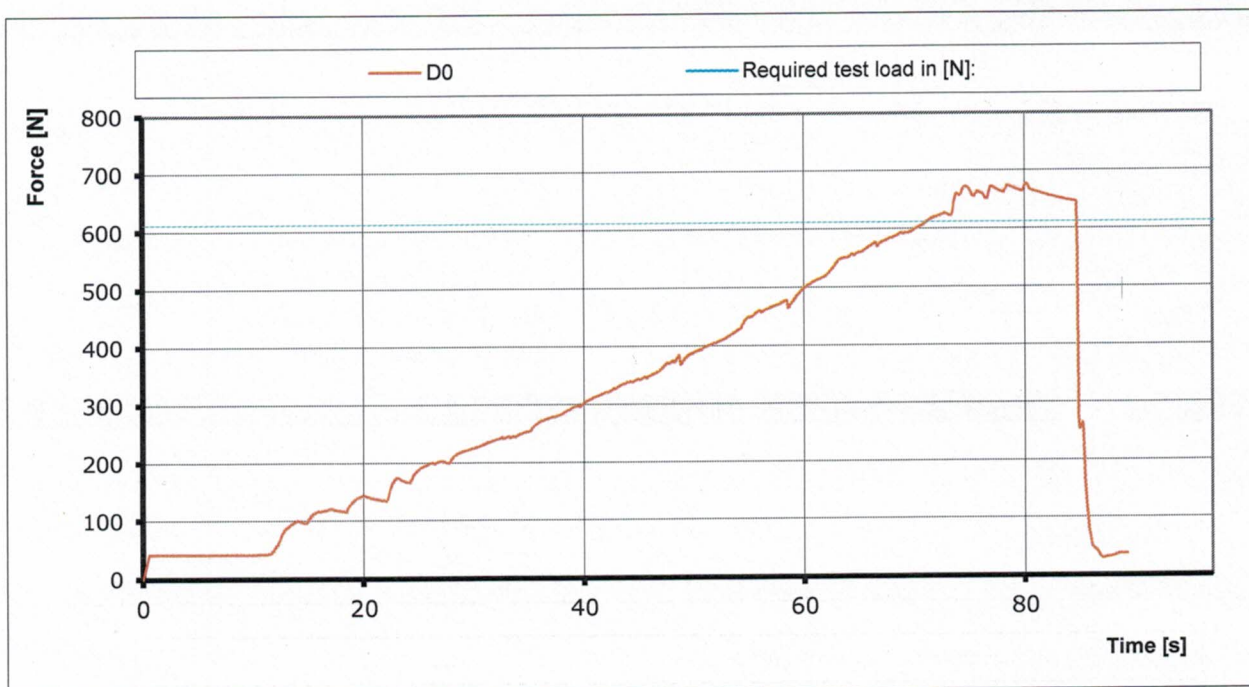
Results

Duration of maintained min. load [s]: 10.21

Any signs of structural failure after this test: no failure

Test result: POSITIVE

Graph: D0



Instruments	Validity	Manufacturer	Type nr.	S/N
Load sensor	2017			
Geos n°11 Skywatch	07.04.2017	JDC electronics	Geos n° 11	0022

HARNES STRUCTURAL STRENGHT TEST

TEST REPORT PH ID 2

PH PARAGLIDERS HARNES

PH 199.2017 UPDATED

Manufacturer name: **AIR MKG - Kortel Design**
 Harness manufacturer name: **Kolibri pro**
 Test place & date: **42128**
 Test responsible: **Alain Zoller**
 Atmosphere [°C] RH [%] [hPa]: **21.9 / 43 / 1023.7**
 Maximum certified pilot weight [kg]: **100**
 Serial number of the test sample: **1504KP-I-001**

Directives: EN 1651

Test standard §: 5.3.2.2

Test setup: **Default flying position**

Attachment points: **Both main riser attachments (3, 4)**

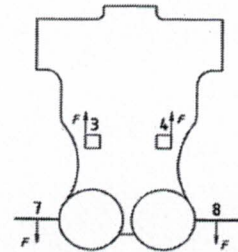
Dummy: **Default, hip fixed (7, 8)**

Required load in force [g] : **15**

Min load [N]: **15 000**

Required test load in [N]: **1529**

Min. duration [s]: **5**



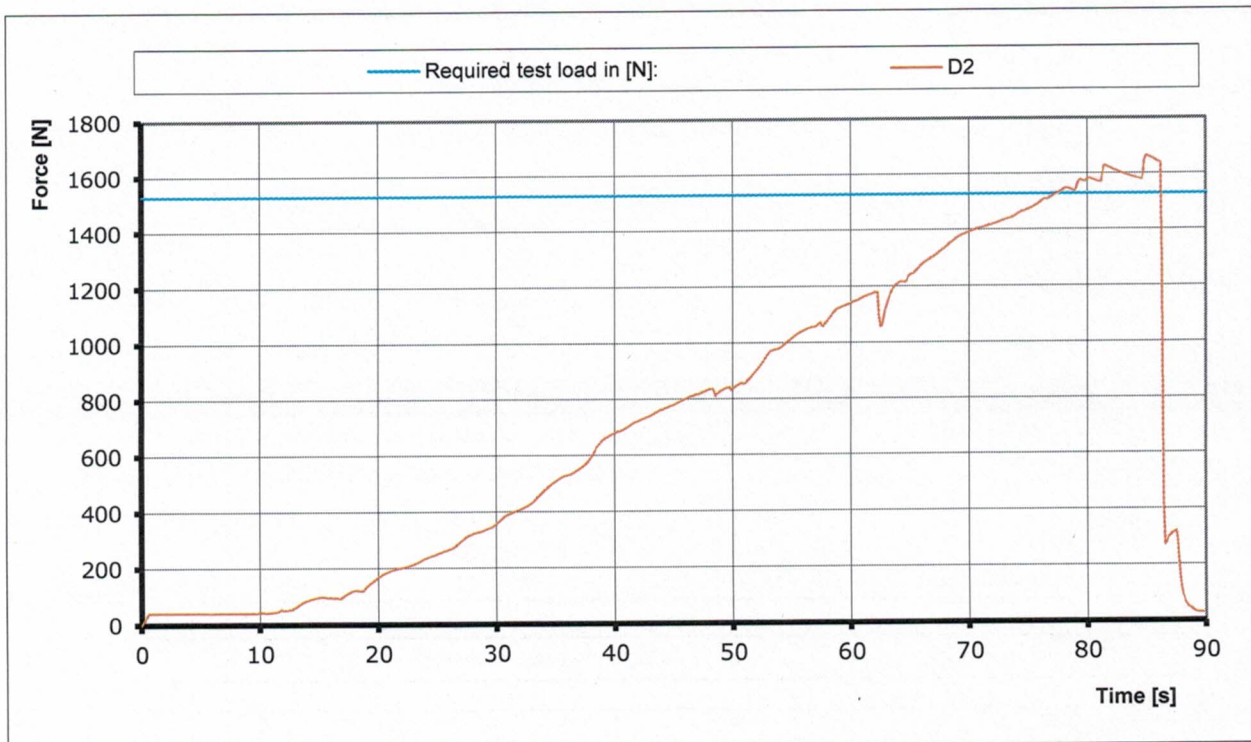
Results

Duration of maintained min. load [s]: **6.98**

Any signs of structural failure after this test: **no failure**

Test result: **POSITIVE**

Graph: **D2**



Instruments	Validity	Manufacturer	Type nr.	S/N
Load sensor	2017	0	0	0
Geos n°11 Skywatch	07.04.2017	JDC electronics	Geos n° 11	0022

HARNES STRUCTURAL STRENGHT TEST

TEST REPORT PH ID 4

PH PARAGLIDERS HARNES

PH 199.2017 UPDATED

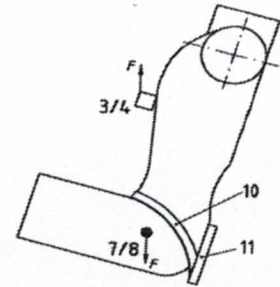
Manufacturer name: **AIR MKG - Kortel Design**
 Harness manufacturer name: **Kolibri pro**
 Test place & date: **42128**
 Test responsible: **Alain Zoller**
 Atmosphere [°C] RH [%] [hPa]: **21.9 / 43 / 1023.7**
 Maximum certified pilot weight [kg]: **100**
 Serial number of the test sample: **1504KP-I-001**

Directives: EN 1651

Test standard §: EN 5.3.2.7

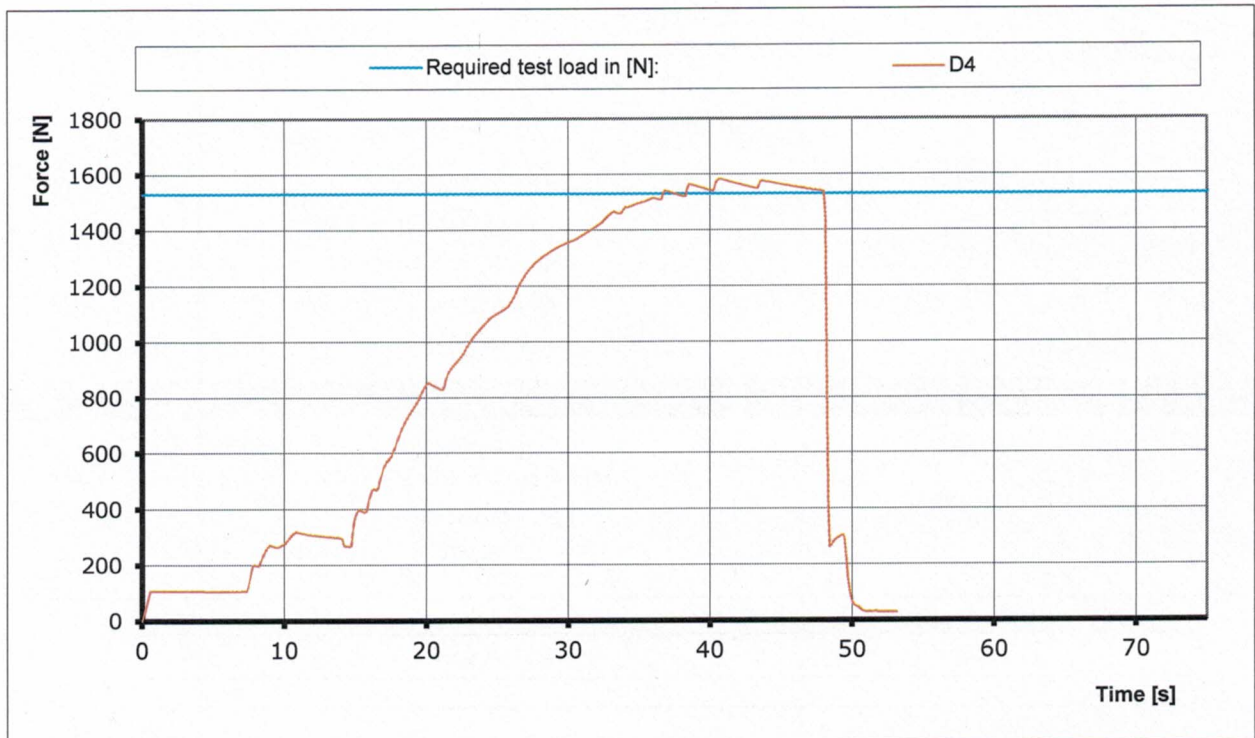
Flying position before landing: **seat**
 Test setup: **board (11) in landing position, leg straps (10) closed.**
 Attachment points: **Both of the main riser attachments attached (3 and 4);**
 Dummy: **Default, hip fixed (7, 8)**

Required load in force [g] : **15**
 Min load [N]: **15000**
 Required test load in [N]: **1529**
 Min. duration [s]: **5**



Results

Duration of maintained min. load [s]: **5.01**
 Any signs of structural failure after this test: **no failure**
 Test result: **POSITIVE**
 Graph: **D4**



Load sensor	2017	0	0	0
Geos n°11 Skywatch 42832	JDC electronics	Geos n° 11	0022	
0	00.01.1900	0	0	0

HARNES STRUCTURAL STRENGTH TEST

TEST REPORT PH ID 6

PH PARAGLIDERS HARNES

PH 199.2017 UPDATED

Manufacturer name: AIR MKG - Kortel Design

Harness manufacturer name: Kolibri pro

Test place & date: 42128

Test responsible: Alain Zoller

Atmosphere [°C] RH [%] [hPa]: 21.9 / 43 / 1023.7

Maximum certified pilot weight [kg]: 100

Serial number of the test sample: 1504KP-I-001

Directives: EN 1651

Test standard §: 5.3.2.4

Test setup: Rescue attachments

Attachment points: Rescue riser attachments (1,2)

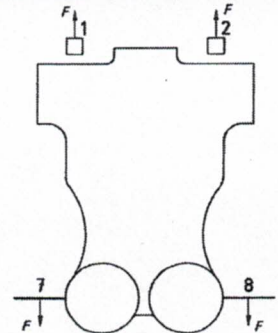
Dummy: Hip fixed (7, 8)

Required load in force [g]: 15

Min load [N]: 15000

Required test load in [N]: 1529

Min. duration [s]: 5



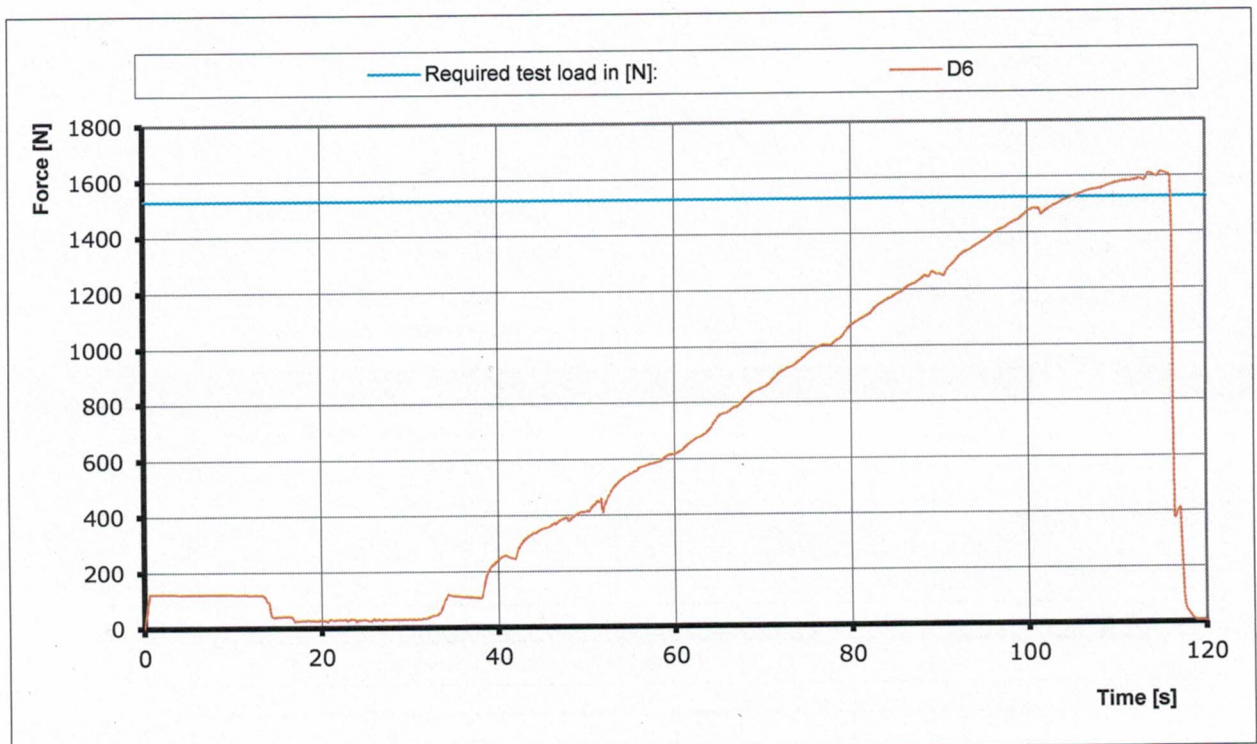
Results

Duration of maintained min. load [s]: 7.14

Any signs of structural failure after this test: no failure

Test result: **POSITIVE**

Graph: D6



HARNES STRUCTURAL STRENGTH TEST

TEST REPORT PH ID 8

PH PARAGLIDERS HARNES

PH 199.2017 UPDATED

Manufacturer name: AIR MKG - Kortel Design
 Harness manufacturer name: Kolibri pro
 Test place & date: 42128
 Test responsible: Alain Zoller
 Atmosphere [°C] RH [%] [hPa]: 21.9 / 43 / 1023.7
 Maximum certified pilot weight [kg]: 100
 Serial number of the test sample: 1504KP-I-001

Directives: EN 1651

Test standard §: 5.3.2.3

Test setup: Only one riser attached

Attachment points: One main riser attachments (3)

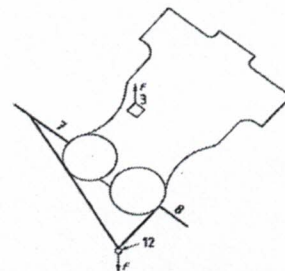
Dummy: Hip fixed (7, 8 -> 12)

Required load in force [g] : 6

Min load [N]: 6000

Required test load in [N]: 612

Min. duration [s]: 10



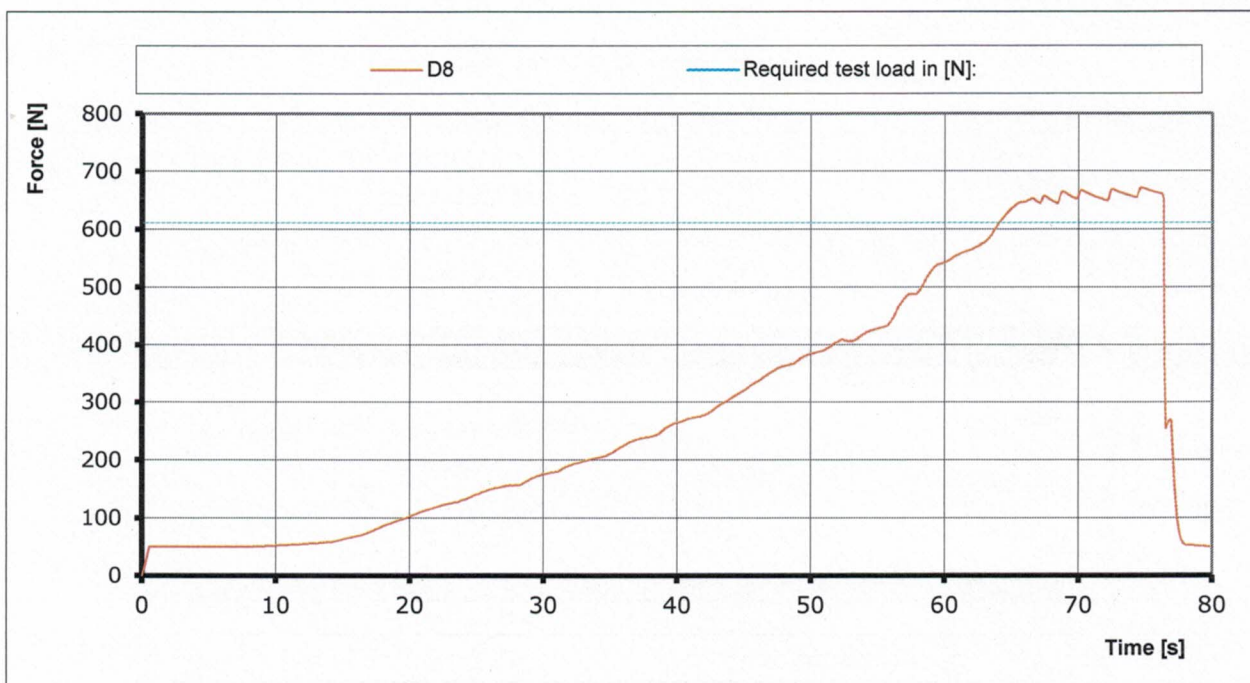
Results

Duration of maintained min. load [s]: 10.25

Any signs of structural failure after this test: no failure

Test result: **POSITIVE**

Graph: D8



Load sensor	2017	0	0	0
Geos n°11 Skywatch 42832	JDC electronics	Geos n° 11	0022	
0	00.01.1900	0	0	0

HARNES STRUCTURAL STRENGHT TEST

TEST REPORT PH ID 10

PH PARAGLIDERS HARNES

PH 199.2017 UPDATED

Manufacturer name: AIR MKG - Kortel Design
 Harness manufacturer name: Kolibri pro
 Test place & date: 42128
 Test responsible: Alain Zoller
 Atmosphere [°C] RH [%] [hPa]: 21.9 / 43 / 1023.7
 Maximum certified pilot weight [kg]: 100
 Serial number of the test sample: 1504KP-I-001

Directives: EN 1651

Test standard §: 5.3.2.6

Test setup: Normal flying position in NEGATIF

Attachment points: ONE of the main riser attachments attached downwards(3 or 4);

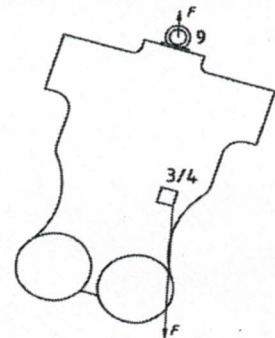
Dummy: Dummy anchored at the head position (9)

Required load in force [g] : 4.5

Min load [N]: 4500

Required test load in [N]: 459

Min. duration [s]: 10



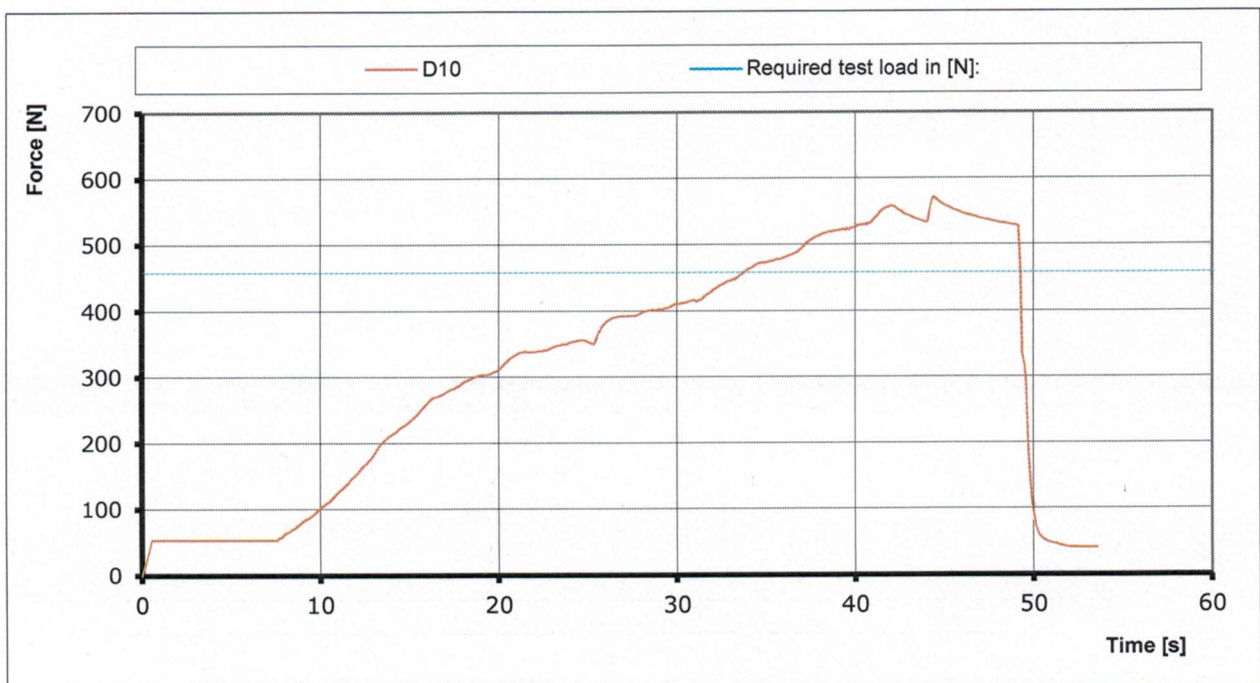
Results

Duration of maintained min. load [s]: 12.04

Any signs of structural failure after this test: no failure

Test result: **POSITIVE**

Graph: D10



Instruments	Validity	Manufacturer	Type nr.	S/N
Load sensor	2017	0	0	0
Geos n°11 Skywatch	07.04.2017	JDC electronics	Geos n° 11	0022