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Test laboratory for paragliders, paraglider harnesses
and paraglider reserve parachutes

paragliding by air turquoise

Harness Impact Pad Report

Inspection certificate number: **PH_254.2018**

Manufacturer data:

Manufacturer name:	**Sky Paragliders**
Representative:	**Nemec Martin**
Street:	**Okruzni 39**
Post code place:	**73911 Frydlant N.C.**
Country:	**Czech Republic**
Harness model:	**Reverse 5 L**
	PH_254.2018

Sample data:

Name impact pad:	**n/a**
Impact pad intgrated:	**Yes**
Impact pad type:	**Airbag**
Serial number:	**n/a**
Weight of sample [kg]:	**n/a**
Date of test:	**26.11.2018**

Atmosphere AGL:

[C°]	**20.3**
RH [%]	**41**
[hPa]	**959.4**

Summary of Impact pad test (1)

Test id		Test configuration (2)	Max Peak of Impact [g] (3)	Duration at 38 [g] in [ms] (4)	Duration at 20 [g] in [ms] (5)	Diff. of test 1 and 2 [%] (6)	Result
P	V	Test sample attached to dummy in flying position, without emergency parachute	**37.30**	**0.00**	**14.17**	**13.00**	**POSITIVE**
PR	V	Test sample attached to dummy in flying position, Include emergency parachute	**37.55**	**0.00**	**9.17**	**0.15**	**POSITIVE**

Manufacture	Instrument	Type no	S/N	Validity Calibration
Burster/MTS	Accelerometer 100 g	89010-100	1263567	04.08.2020
JDC elec	Geos n°11 Skywatch	Geos n°11	22	08.05.2019

The validation of this test report is given by the signature of the test manager on the Inspection Certificate no 94.20

(1) Calculated value in tests reports 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 measurand lies within the assigned range of values with a probability of 95%.

(2) The dummy is lifted minimum up to 1.65 m, and impact pad is mounted on. Where the impact occurs, measure distance from bottom of impact pad to ground.

(3) Maximum peak of impact should be less or equal to 50 [g], (4) If any, the maximum duration in at 38 [g] should be less or equal to 7 [ms], (5) If any, the maximum duration in at 20 [g] should be less or equal to 25 [ms]. (6)The test should be done twice, and the 2nd test the maximum peak should not differe more than 20% from the first test, maximum peak.

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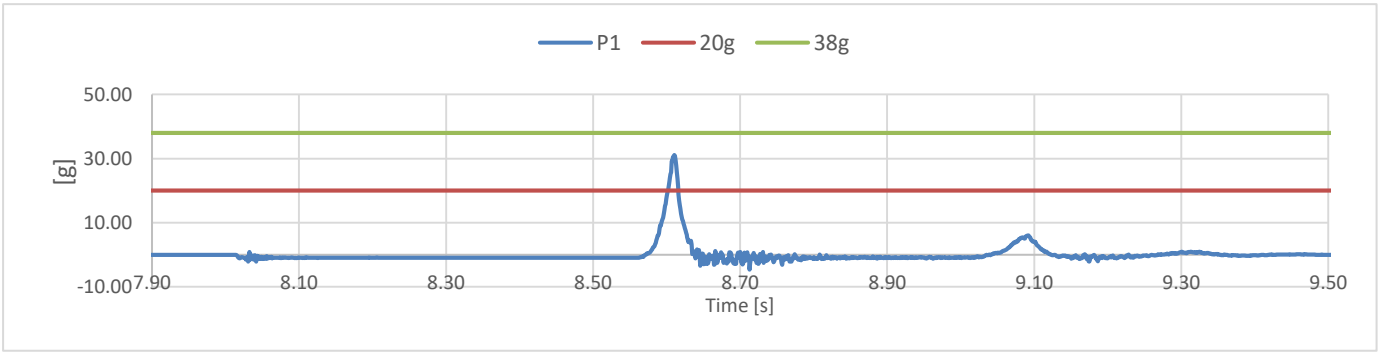
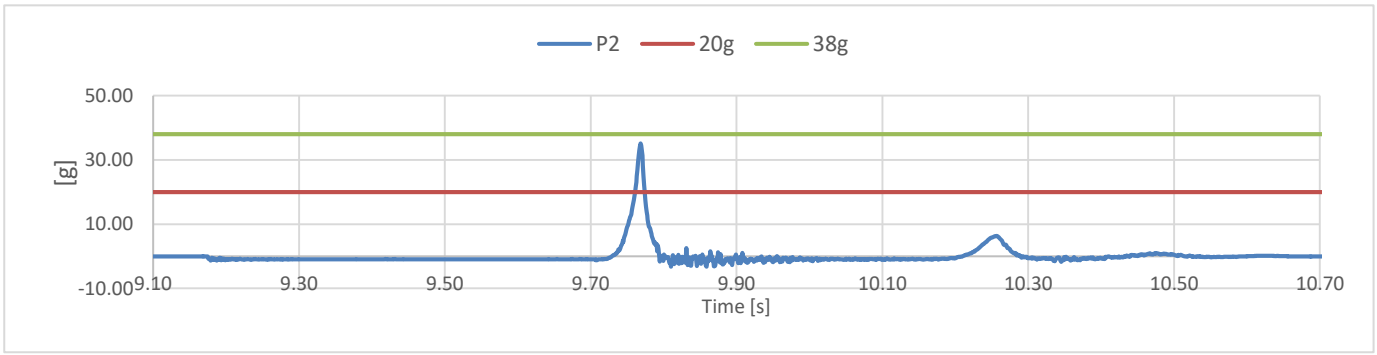
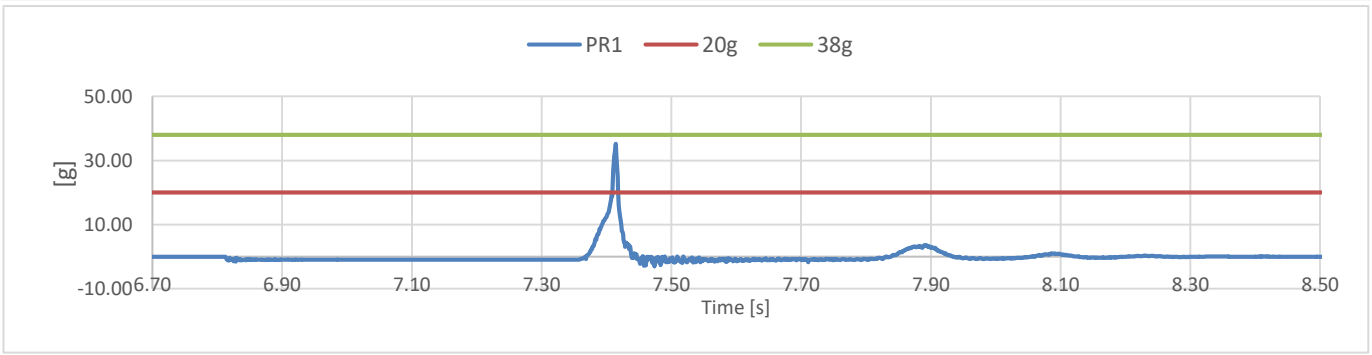
Inspection certificate number: **PH_254.2018** Name impact pad: **n/a**

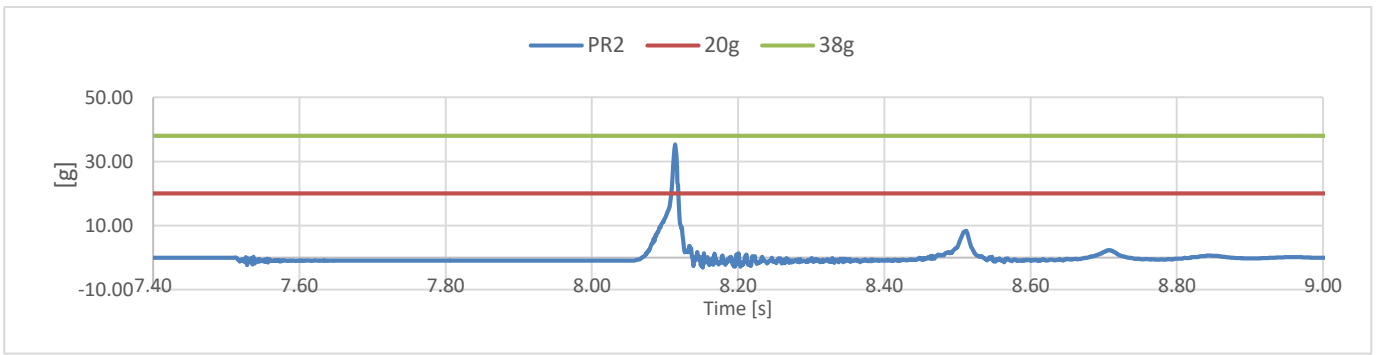
Test results of Impact pad test

	without emergency parachute		include emergency parachute	
	P1	P2	PR1	PR2
Maximum Peak of impact [g]	**33.01**	**37.30**	**37.40**	**37.55**
Impact duration at +38 [g] in [ms]	**0.00**	**0.00**	**0.00**	**0.00**
Impact duration at +20 [g] in [ms]	**14.17**	**13.33**	**9.17**	**9.17**
Uncertainty k=2[g]	**1.93**	**2.18**	**2.19**	**2.20**
Difference of test 1 and 2 [%]	**100.00**	**113.00**	**100.00**	**100.40**









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Harness inspection certificate

Inspection certificate number: **PH_254.2018** Impact pad number: **PH_254.2018**

Manufacturer data

Manufacturer name:	**Sky Paragliders**
Representative:	**Nemec Martin**
Street:	**Okruzni 39**
Post code / place:	**73911 Frydlant N.C.**
Country:	**Czech Republic**

Sample data:	**Harness**		**Impact pad**
Name:	**Reverse 5**	Name Impact pad: (1)	**n/a**
Type:	**ABS**	Impact pad integrated: (1)	**Yes**
Size:	**L**	Impact pad type:	**Airbag**
Weight of Sample [kg]:	**3.12**	Weight of Sample [kg]: (1)	**n/a**
Serial number:	**2359-13-6360**	Serial number:(1)	**n/a**
Clip-in weight [kg]:	**120**		
Integrated container for rescue system:	**Yes**	Date of reception:	**15.11.2018**
Volume container [cm^3]:	**3200** max **1200** min		
Date of reception:	**15.11.2018**		

Test report summary	**Structual test**	**Impact pad test**
Result	**POSITIVE**	**POSITIVE**
Place	**Villeneuve**	**Villeneuve**
Date	**26.11.2018**	**26.11.2018**

Issue data

Place of declaration:	**Villeneuve**
Date of issue:	**04.01.2019**
Managing Director:	**Alain Zoller**
Signature:	

This signature approve the validity of the test reports if available; no. 94.21 (test id R0,R2,R6,R8,R9,R10,RRDT,RRST) and no. 94.22 (test id: P1,P2,PR1,PR2)

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

European Standard **EN1651 :1999**, and **EN12491:2015 chapter 5.3.2** - Airworthiness Requirements **LTF NfL II 91/09 chapter 4.2.1, 5, 6.1.5 and 6.1.8**

(1) If Impact pad is NOT integrated in the harness, it will have independently Inspection number, and serial number. Definition of integrated impact pad is impact pad which can not be dismounted from the harness, e.g. airbag.

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 certificate contain the following test and is complet with the test, if available, report: 94.21 and 94.22

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Paragliding Harness

Inspection number :	**PH_254.2018**
Manufacturer :	**Sky Paragliders**
Model and size :	**Reverse 5 L**
Maximum pilot weight [kg] :	**120**
Integrated container for rescue system:	**Yes**
If Yes. Volume of the container [cm^3] :	**1200** min **3200** max
Serial number:	----------
Production date (year / month) :	----------

Harness protector (impact pad)

Impact pad type:	**Airbag**
Impact pad integrated:	**Yes**
Impact pad number:	**PH_254.2018**

If not integrated : Manufacturer ..... Serial number: .....

Production date (year / month) : ----------

Warning : Read the operating manual before using this equipment!

A sample has been tested and certifies its conformity with the following standard: **EN1651:1999, EN12491:2015 and LTF NfL II 91/09 chapter 4 and 6**. This model corresponds with the tested sample and its airworthiness.

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Test laboratory for paragliders, paraglider harnesses
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Harness Structural test Report

Inspection certificate number: **PH_254.2018**

Manufacturer data:

Manufacturer name:	**Sky Paragliders**
Representative:	**Nemec Martin**
Street:	**Okruzni 39**
Post code place:	**73911 Frydlant N.C.**
Country:	**Czech Republic**

Sample data:

Name:	**Reverse 5**
Type:	**ABS**
Size:	**L**
Serial number:	**2359-13-6360**
Impact pad type: (1)	**Airbag**
Clip-in weight [kg]:	**120**
Date of test:	**26.11.2018**

Atmosphere AGL:

[C°]	**20.3**
RH [%]	**41**
[hPa]	**959.4**

Summary of Structural test

Test id	-	EN 1651	Setup	Req. Load [g]	Req. Load [N]	Min. duration [s]	Result
R0	V	5.3.2.1	Default flying position	6	7200	10	**POSITIVE**
R2	V	5.3.2.2	Default flying position	15	18000	5	**POSITIVE**
R4	V	5.3.2.7	Flying position before landing	15	18000	5	**POSITIVE**
R6	V	5.3.2.4	Rescue attachments	15	18000	5	**POSITIVE**
R8	V	5.3.2.3	Asymmetric, one riser	6	7200	10	**POSITIVE**
R9		5.3.2.5	Towing	5	6000	10	**n/a**
R10	V	5.3.2.6	Asymmetric, negative	4.5	5400	10	**POSITIVE**

Rescue deployment test

Test id	-	NfL II 91/09	Setup	Min load [N]	Max. load [N]	Measured [N]	Result
RRDT	V	6.1.5	Default flying position	20	70	**60.63**	**POSITIVE**

Rescue Deployment Handle strength test

Test id	-	EN 12491	Setup	Req. Load [N]	Min. duration [s]	Breaking strength [N]	Result
RRST	V	5.3.2	Two end points of handle	700	10	**1088.42**	**POSITIVE**

Manufacture	Instrument	Type no	S/N	Validity Calibration
HBM	Load Sensor GE01	1-S9M/50KN-1	31314643	14.10.2019
Burster	Sensor Burster	8431-10000	1185483	01.06.2020
JDC elec	Geos n°11 Skywatch	Geos n°11	22	08.05.2019

The validation of this test report is given by the signature of the test manager on the Inspection Certificate no 94.20

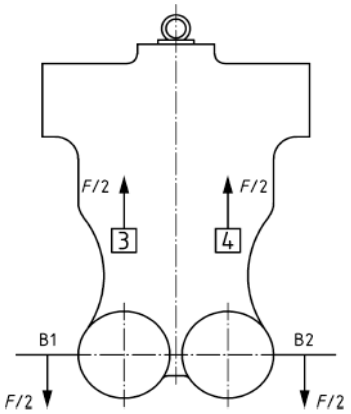
(1) If Impact pad available, see test report no. 94.22 and inspection certificate no. 94.20

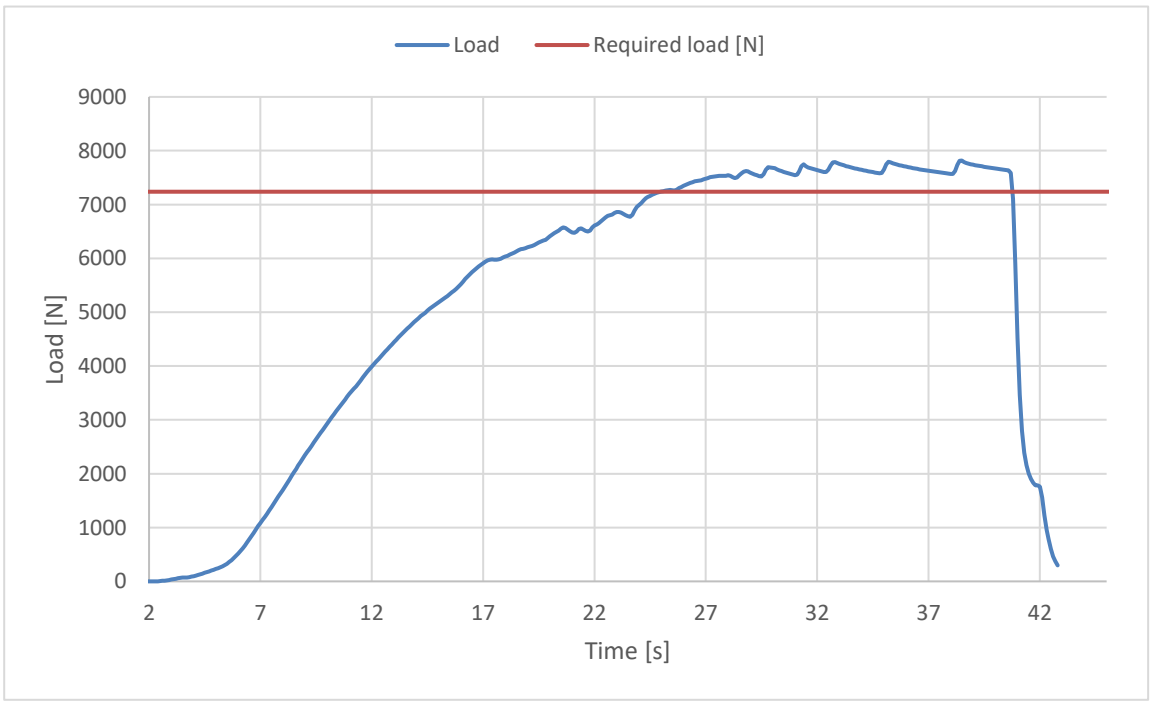
Calculated value in tests reports include the value minus the uncertainty (on safe side) / The uncertainty stated is the expanded uncertainty obtained by multiplying the standard uncertainty by the coverage factor k = 2. The value of the measurand lies within the assigned range of values with a probability of 95%.

Inspection certificate number: **PH_254.2018** model: **Reverse 5 L**

Harness Structural test **Test ID R0**

Standard	**EN 1651:1999**
Reference in standard	**5.3.2.1**
Test setup	**Default flying position**
Attachment points	**Both main riser attachment (3,4)**
Anchor points	**Dummy (B1, B2)**
Required load [g]	**6**
Required load [N]	**7200**
Minimum test duration [s]	**10**
Result	
Test duration [s]	**15.8**
Any signs of structural failure	**No**
Test results	**POSITIVE**



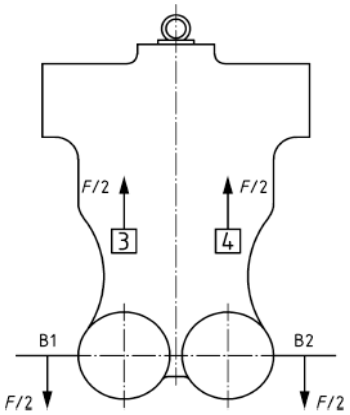


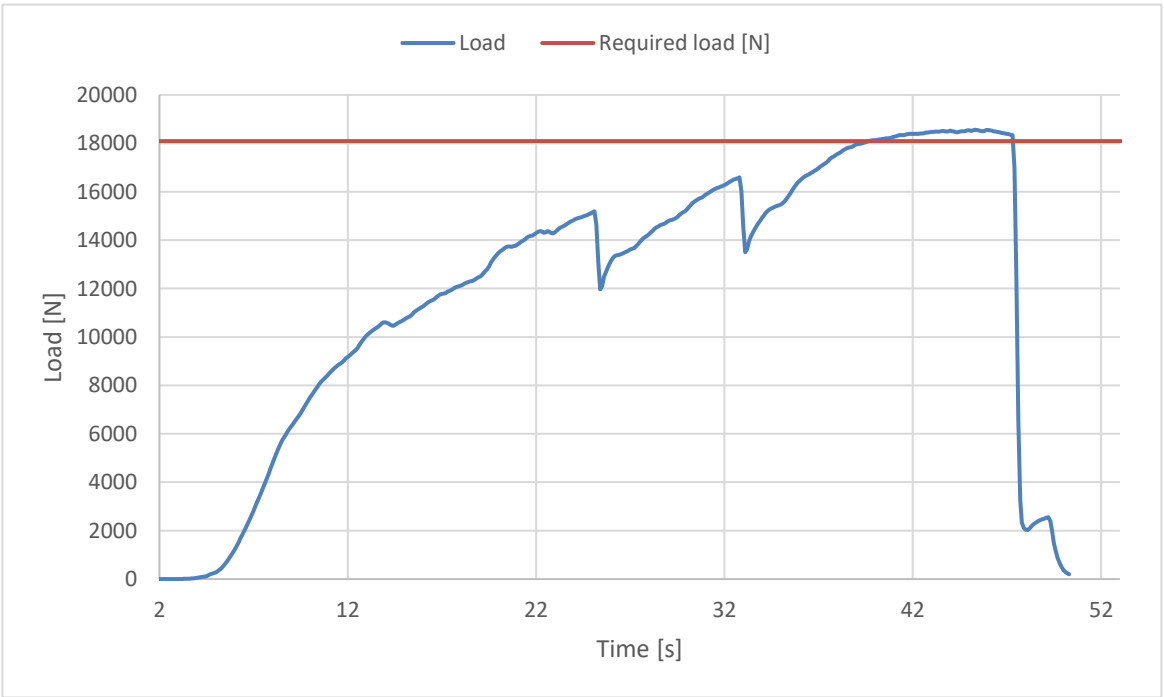
The validation of this test report is given by the signature of the test manager on the Inspection Certificate no 94.20

Inspection certificate number: **PH_254.2018** model: **Reverse 5 L**

Harness Structural test **Test ID R2**

Standard	**EN 1651:1999**
Reference in standard	**5.3.2.2**
Test setup	**Default flying position**
Attachment points	**Both main riser attachment (3,4)**
Anchor points	**Dummy (B1, B2)**
Required load [g]	**15**
Required load [N]	**18000**
Minimum test duration [s]	**5**
Result	
Test duration [s]	**7.7**
Any signs of structural failure	**No**
Test results	**POSITIVE**



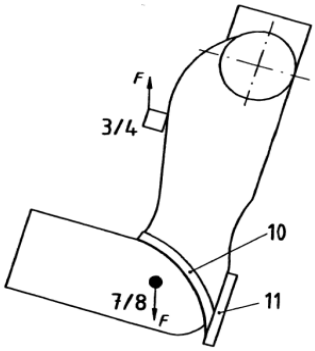


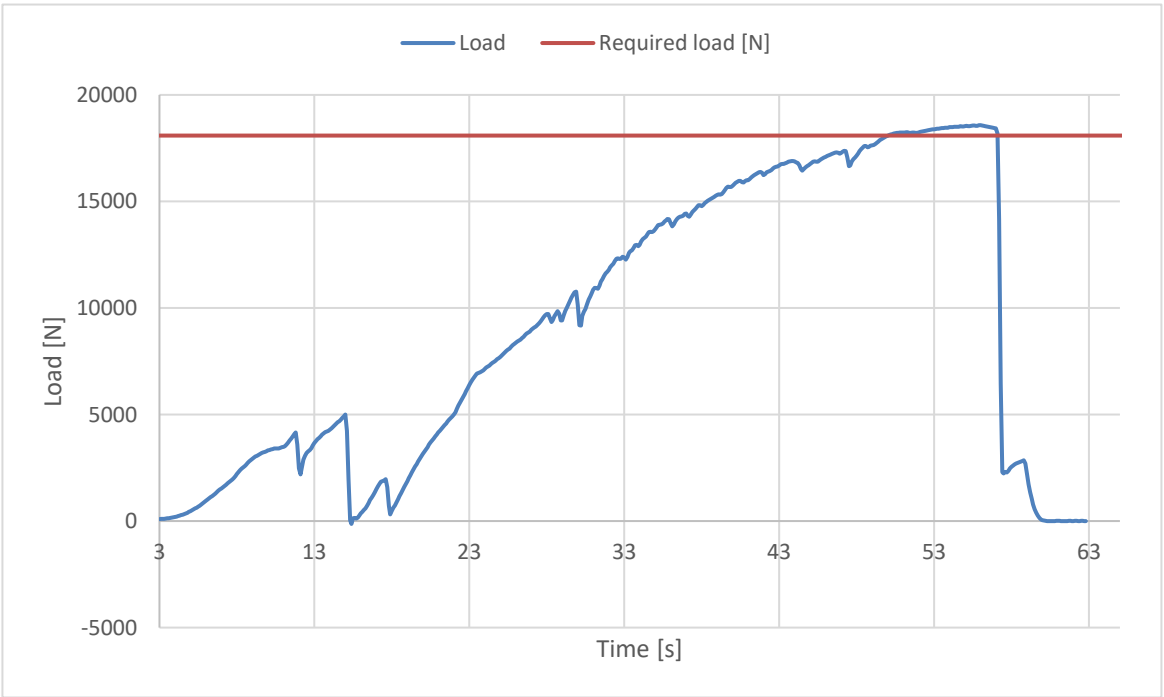
The validation of this test report is given by the signature of the test manager on the Inspection Certificate no 94.20

Inspection certificate number: **PH_254.2018** model: **Reverse 5 L**

Harness Structural test **Test ID R4**

Standard	**EN 1651:1999**
Reference in standard	**5.3.2.7**
Test setup	**Flying position before landing**
Attachment points	**Both main riser attachment (3,4)**
Anchor points	**Dummy (7,8)**
Required load [g]	**15**
Required load [N]	**18000**
Minimum test duration [s]	**5**
Result	
Test duration [s]	**7.1**
Any signs of structural failure	**No**
Test results	**POSITIVE**



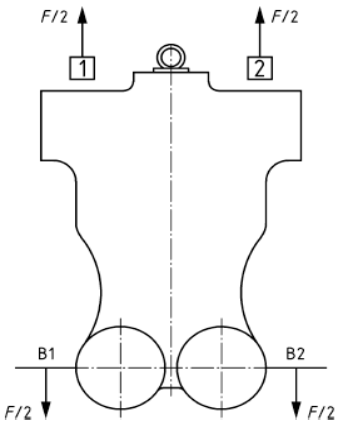


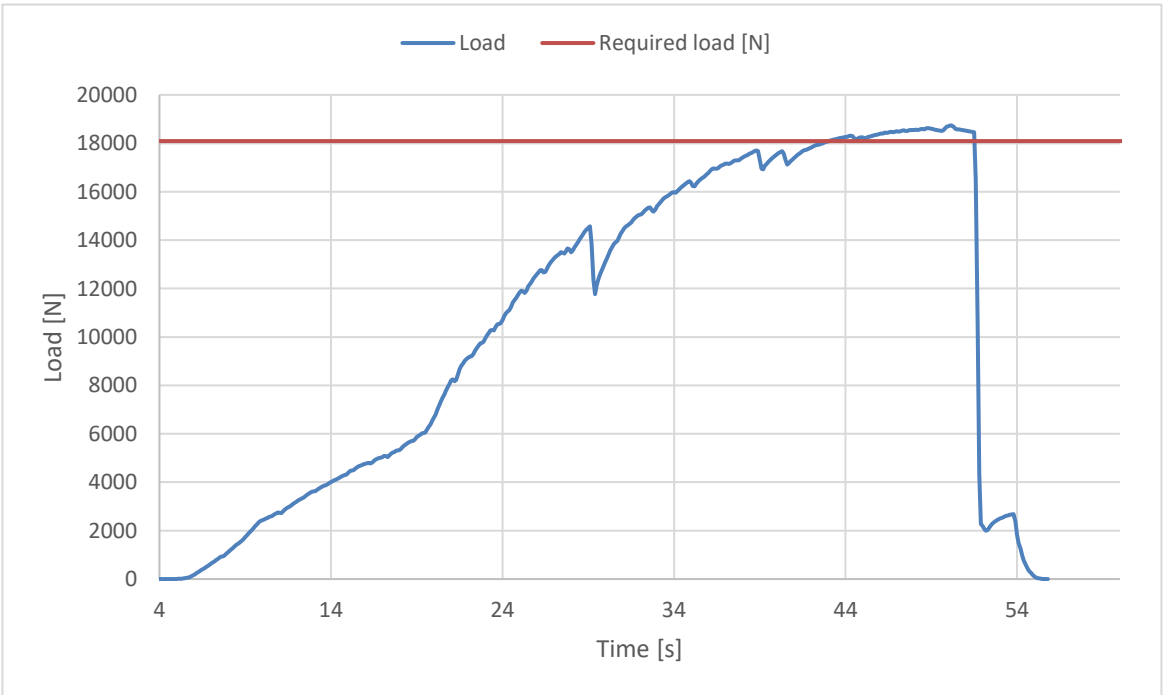
The validation of this test report is given by the signature of the test manager on the Inspection Certificate no 94.20

Inspection certificate number: **PH_254.2018** model: **Reverse 5 L**

Harness Structural test **Test ID R6**

Standard	**EN 1651:1999**
Reference in standard	**5.3.2.4**
Test setup	**Rescue attachments**
Attachment points	**Rescue riser attachment (1,2)**
Anchor points	**Dummy (B1,B2)**
Required load [g]	**15**
Required load [N]	**18000**
Minimum test duration [s]	**5**
Result	
Test duration [s]	**8.6**
Any signs of structural failure	**No**
Test results	**POSITIVE**



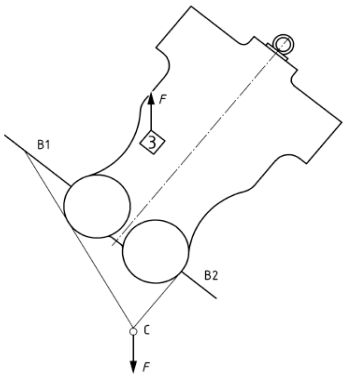


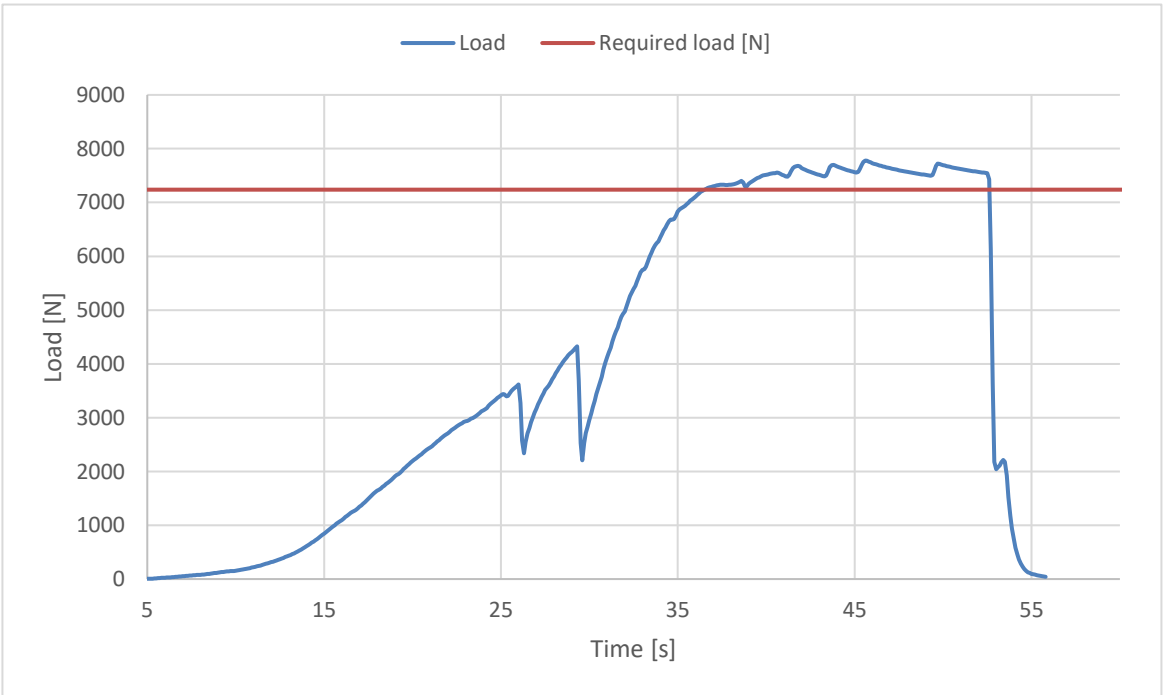
The validation of this test report is given by the signature of the test manager on the Inspection Certificate no 94.20

Inspection certificate number: **PH_254.2018** model: **Reverse 5 L**

Harness Structural test **Test ID R8**

Standard	**EN 1651:1999**
Reference in standard	**5.3.2.3**
Test setup	**Asymmetric, one riser**
Attachment points	**One main riser attachment (3)**
Anchor points	**Dummy (B1,B2)**
Required load [g]	**6**
Required load [N]	**7200**
Minimum test duration [s]	**10**
Result	
Test duration [s]	**16.1**
Any signs of structural failure	**No**
Test results	**POSITIVE**



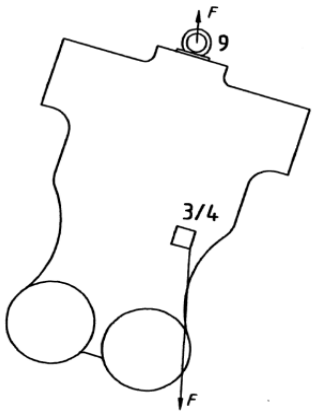


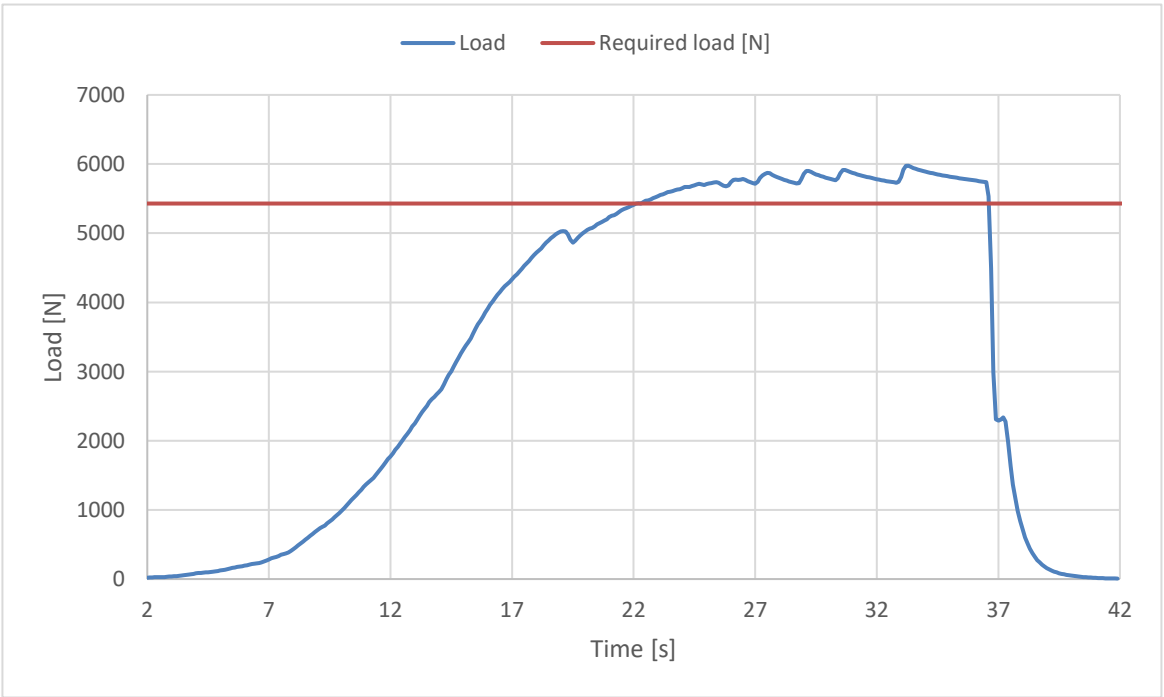
The validation of this test report is given by the signature of the test manager on the Inspection Certificate no 94.20

Inspection certificate number: **PH_254.2018** model: **Reverse 5 L**

Harness Structural test **Test ID R10**

Standard	**EN 1651:1999**
Reference in standard	**5.3.2.6**
Test setup	**Asymmetric, negative**
Attachment points	**One main riser attachment (3 or 4) downwards**
Anchor points	**Dummy (9)**
Required load [g]	**4.5**
Required load [N]	**5400**
Minimum test duration [s]	**10**
Result	
Test duration [s]	**14.6**
Any signs of structural failure	**No**
Test results	**POSITIVE**





The validation of this test report is given by the signature of the test manager on the Inspection Certificate no 94.20

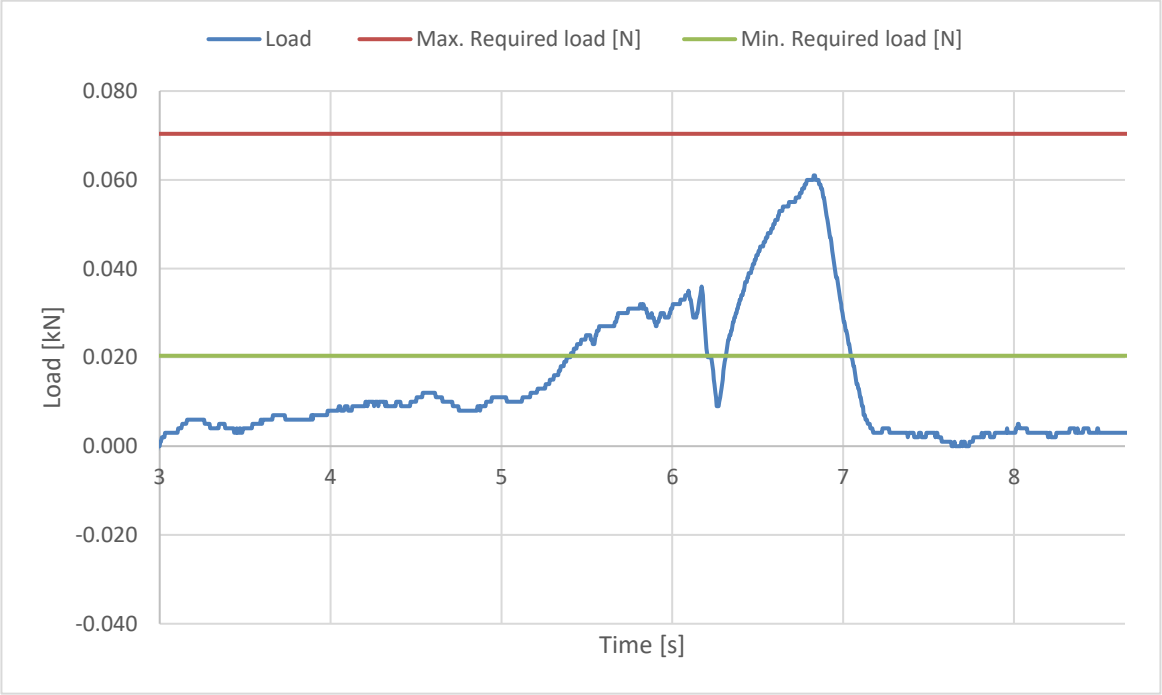
Inspection certificate number: **PH_254.2018** model: **Reverse 5 L**

Rescue Deployment Test **Test ID RRDT**

Standard	**LTF NfL II 91/09**
Reference in standard	**6.1.5**
Test setup	**Default flying position**
Attachment points	**Sensor connect to handle, and pull in opening direction**
	The test is to simulate the load required to open the emergency parachute(1st action).
Min. Required load [N]	**20**
Max. Required load [N]	**70**

Result

Load for first action [N]	**60.63**
Test results	**POSITIVE**



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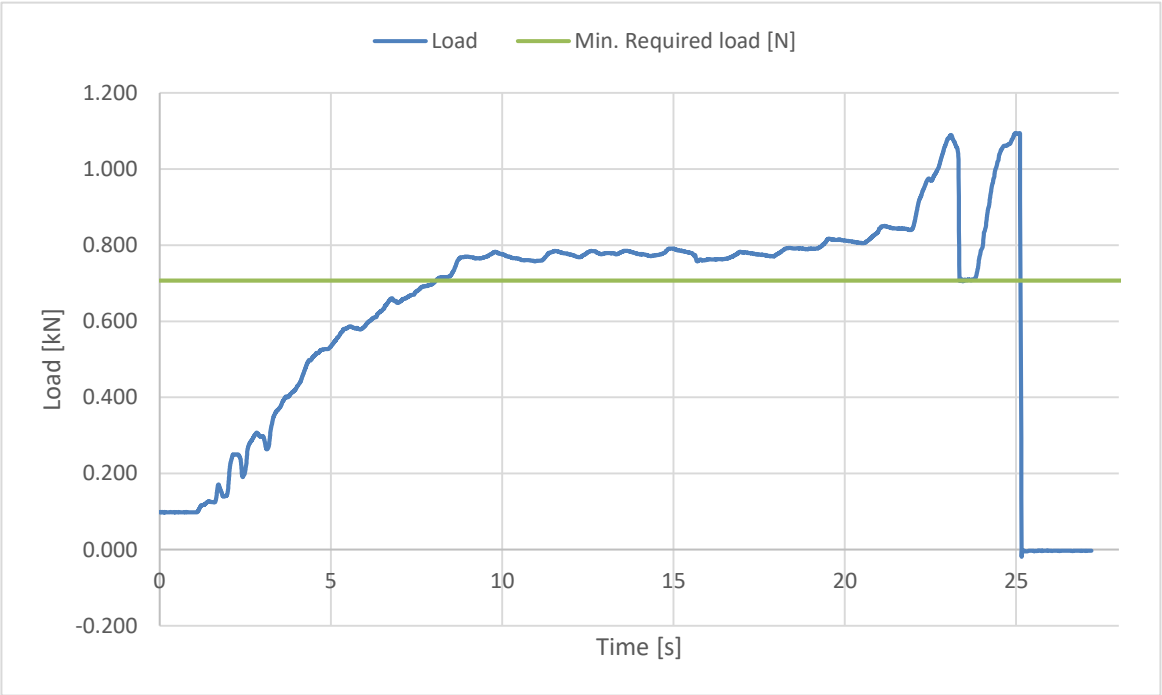
Inspection certificate number: **PH_254.2018** model: **Reverse 5 L**

Rescue Deployment Handle strength test **Test ID RRST**

Standard	**EN12491:2015**
Reference in standard	**5.3.2**
Test setup	**Two end points of handle**
Attachment points	**Sensor connect to end of handle, pull on the other side**
	The handle must support min 700 N for 10 s, after measure breaking strength
Min. Required load [N]	**700**
Minimum test duration [s]	**10**

Result

Test duration [s]:	**13.6**
Breaking strength [N]	**1088.42**
Test results	**POSITIVE**



The validation of this test report is given by the signature of the test manager on the Inspection Certificate no 94.20