AIR TURQUOISE SA | PARA-TEST.COM
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Test laboratory for paragliders, paraglider harnesses
and paraglider reserve parachutes

paragliding by air turquoise

Harness Structural test Report - NfL

Inspection certificate number: **PH_422.2023**

Manufacturer data:

Manufacturer name:	**Woody Valley srl**
Representative:	**Simone Caldana**
Street:	**Via Linz 23**
Post code place:	**38121 Trento**
Country:	**Italy**

Sample data:

Name:	**RACE**
Type:	**ABS**
Size:	**M**
Serial number:	**116 0115 002P_S**
Impact pad type: (1)	**Inflatable**
Clip-in weight [kg]:	**120**
Integrated container:	**Yes**
Date of test:	**12.12.2023**

Atmosphere AGL:

[C°]	**20**
RH [%]	**47**
[hPa]	**1000**

Summary of Structural test

Test id	-	EN 1651:1999	Setup	Req. Load [g]	Req. Load [N]	Min. duration [s]	Result
02	V	5.3.2.1	Default flying position	6	7200	10	**POSITIVE**
03	V	5.3.2.2	Default flying position	15	18000	5	**POSITIVE**
04	V	5.3.2.3	Asymmetric, one riser	6	7200	10	**POSITIVE**
07	V	5.3.2.6	Asymmetric, negative	4.5	5400	10	**POSITIVE**
09	V	5.3.2.4	Rescue attachments	15	18000	5	**POSITIVE**
13	V	5.3.2.7	Flying position before landing	15	18000	5	**POSITIVE**
14		5.3.2.5	Towing	5	6000	10	**n/a**

Rescue deployment test

Test id	-	NfL 2-565-20	Setup	Min load [N]	Max. load [N]	Measured [N]	Result
RRDT	V	6.1.5	Default flying position	20	70	**29.85**	**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	**739.18**	**POSITIVE**

Rescue deployment test with integrated container for rescue system

Test id	-	NfL 2-565-20	Setup	Result
RDIC	V	4.3.2-4.3.6	Release of the container at maximum volume	**POSITIVE**

Manufacturer	Instrument	Type no	S/N	Validity
HBM	Load Sensor GE01	1-S9M/50KN-1	31314643	23.08.2028
Burster / MTS	Load sensor 10kN SL2	8431-6010-N000S000	593507	23.08.2028
JDC elec	Geos n°11 Skywatch	Geos n°11	Unit11	18.06.2025

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

NfL 2-565-20, EN12491:2015 and EN1651:1999

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

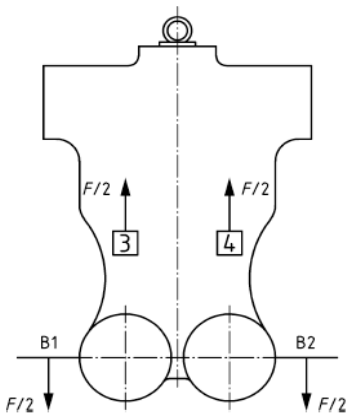
(1) If Impact pad available, see test report no. 94.22 and inspection certificate no. 94.20a

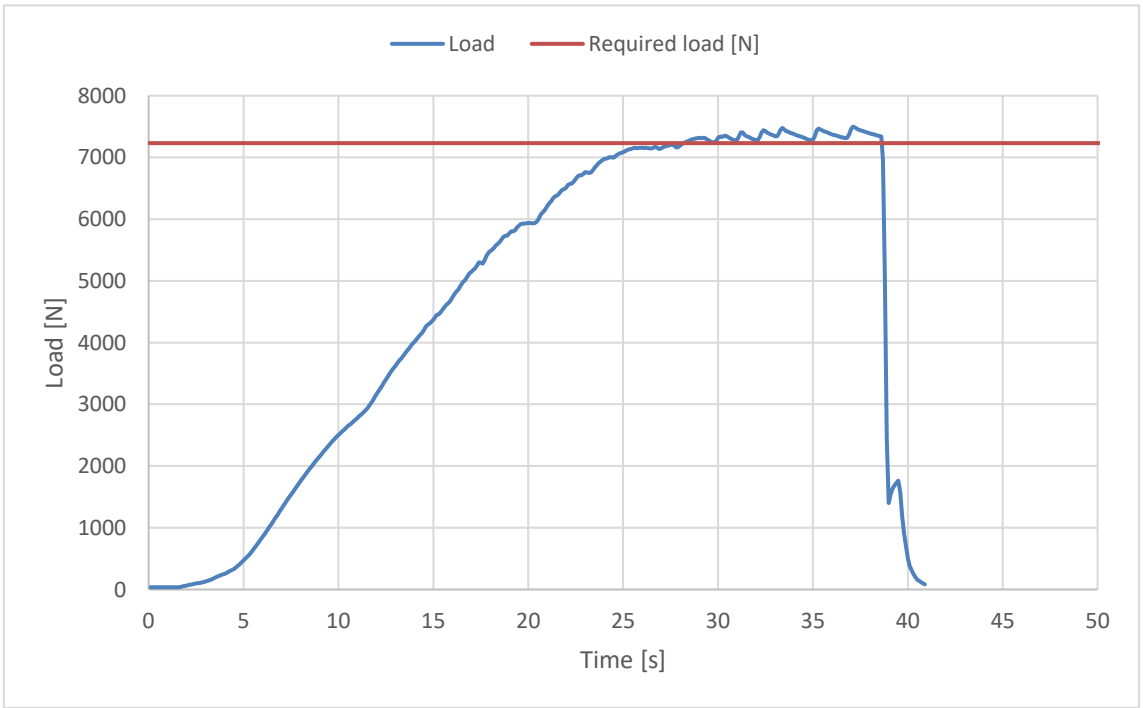
Calculated values in tests reports include the value minus the uncertainty (on safe side) / The uncertainty stated is the expanded uncertainty obtained by multiplying the standard uncertainty by the coverage factor k = 2. The value of the measurand lies within the assigned range of values with a probability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

Inspection certificate number: **PH_422.2023** model: **RACE**

Harness Structural test **Test ID 02**

Standard	**EN 1651:1999**
Reference	**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]	**10.5**
Any signs of structural failure	**No**
Test results	**POSITIVE**





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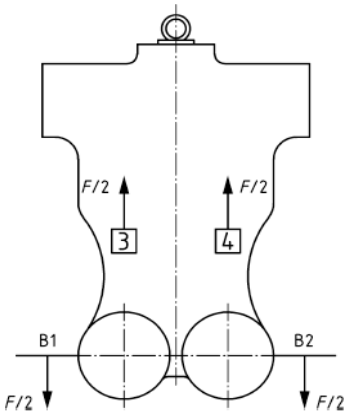
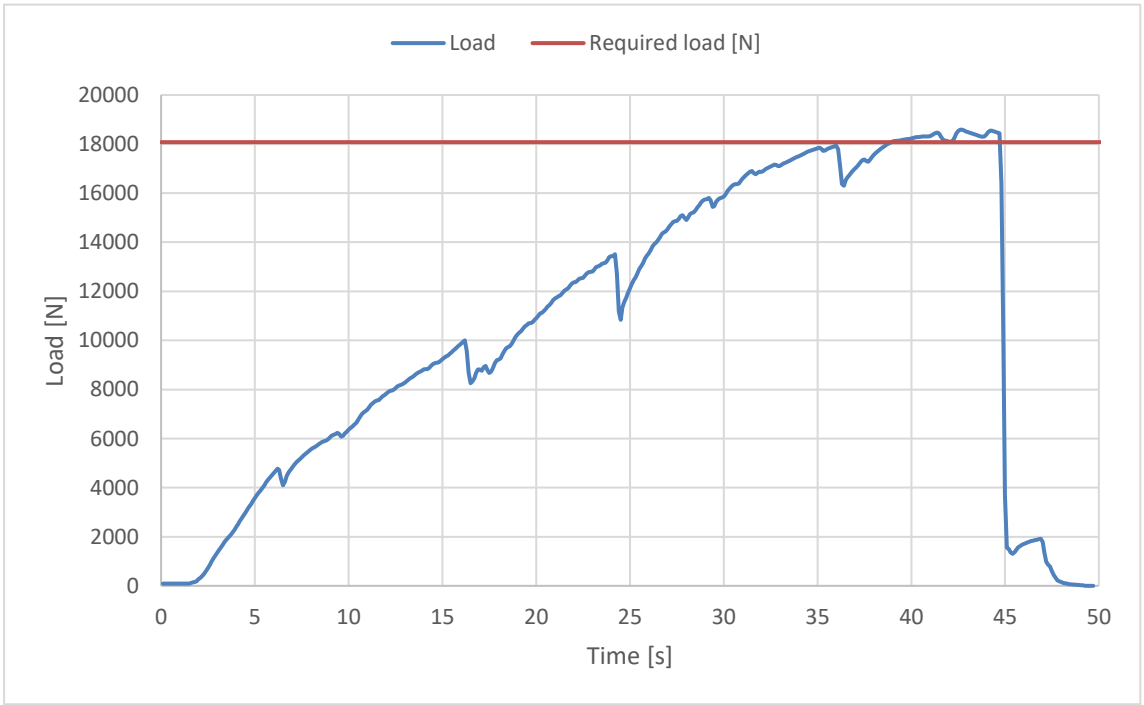
Inspection certificate number: **PH_422.2023** model: **RACE**

Harness Structural test **Test ID 03**

Standard	**EN 1651:1999**
Reference	**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]	**5.8**
Any signs of structural failure	**No**
Test results	**POSITIVE**





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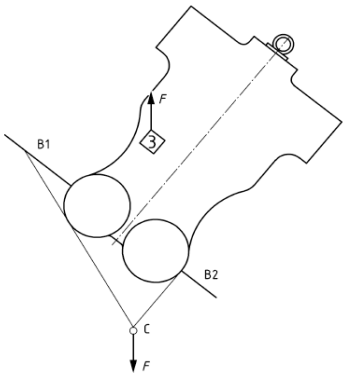
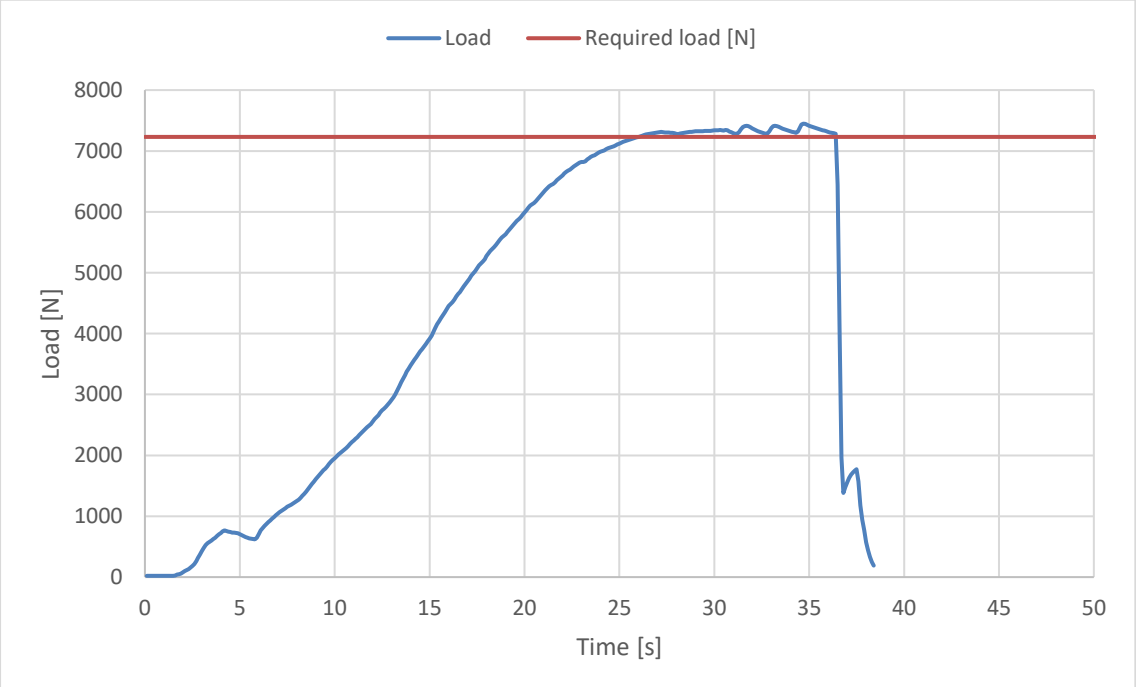
Harness Structural test **Test ID 04**

Standard	**EN 1651:1999**
Reference	**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]	**10.5**
Any signs of structural failure	**No**
Test results	**POSITIVE**





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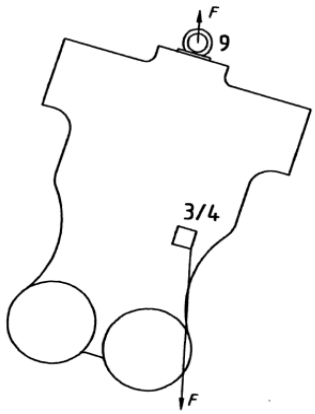
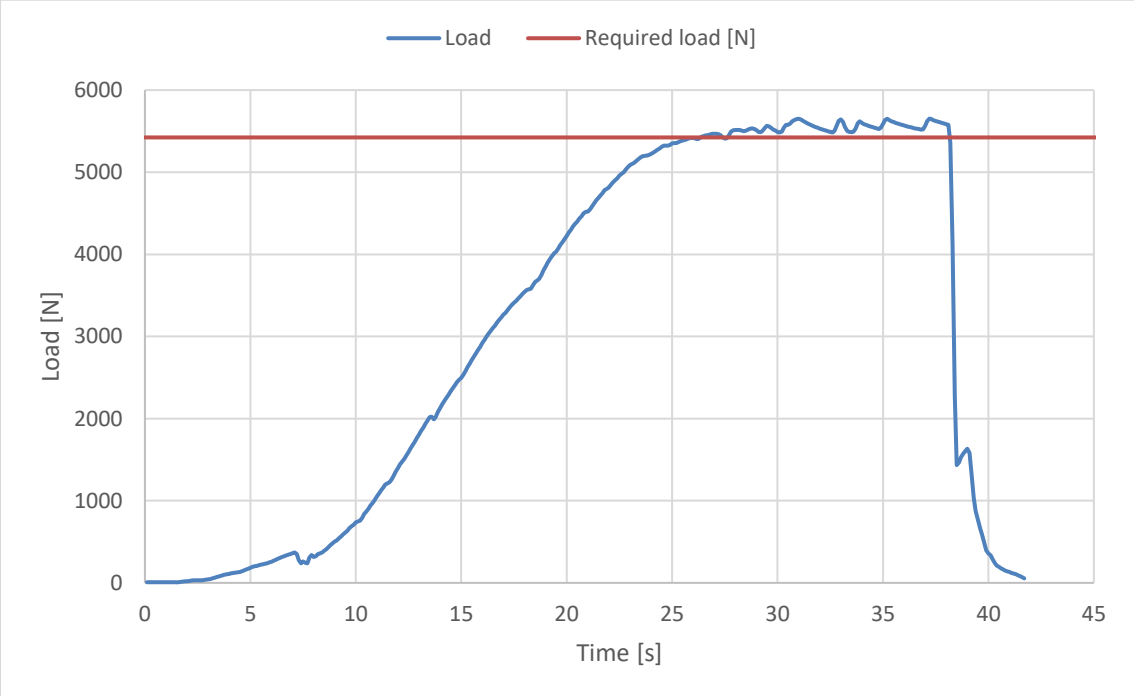
Harness Structural test **Test ID 07**

Standard	**EN 1651:1999**
Reference	**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]	**10.5**
Any signs of structural failure	**No**
Test results	**POSITIVE**





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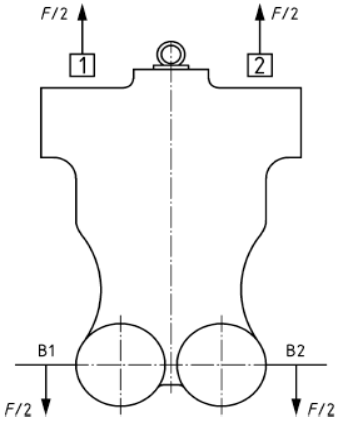
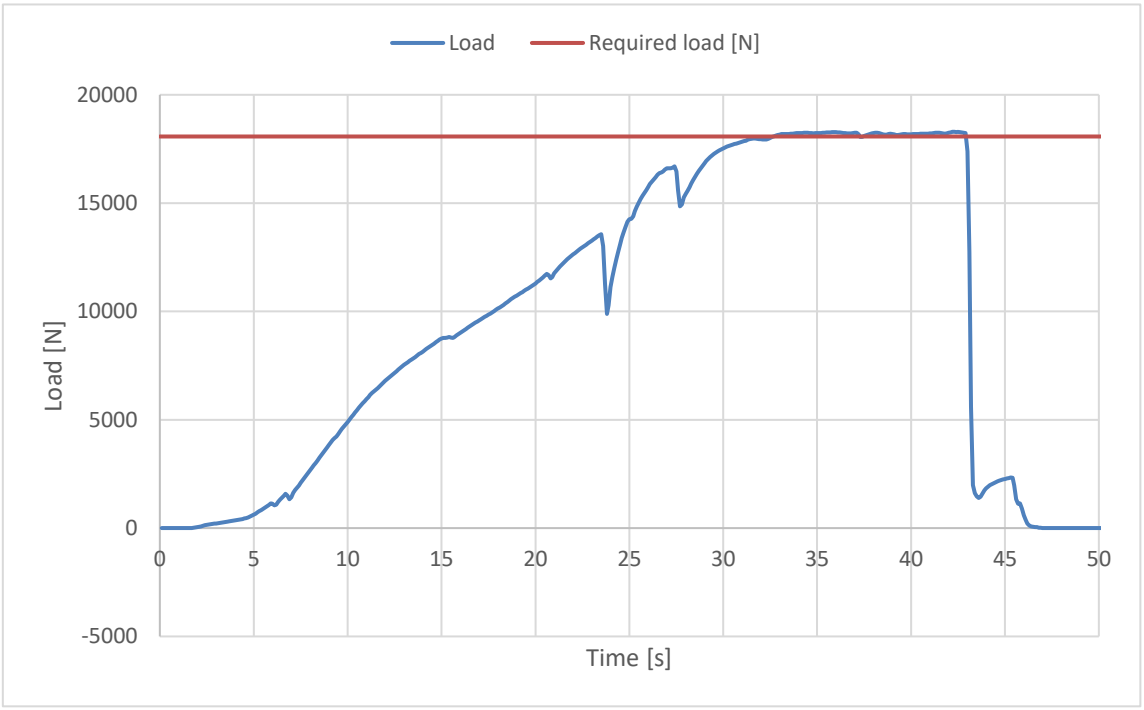
Harness Structural test **Test ID 09**

Standard	**EN 1651:1999**
Reference	**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]	**5.5**
Any signs of structural failure	**No**
Test results	**POSITIVE**





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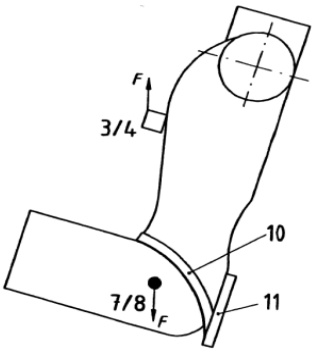
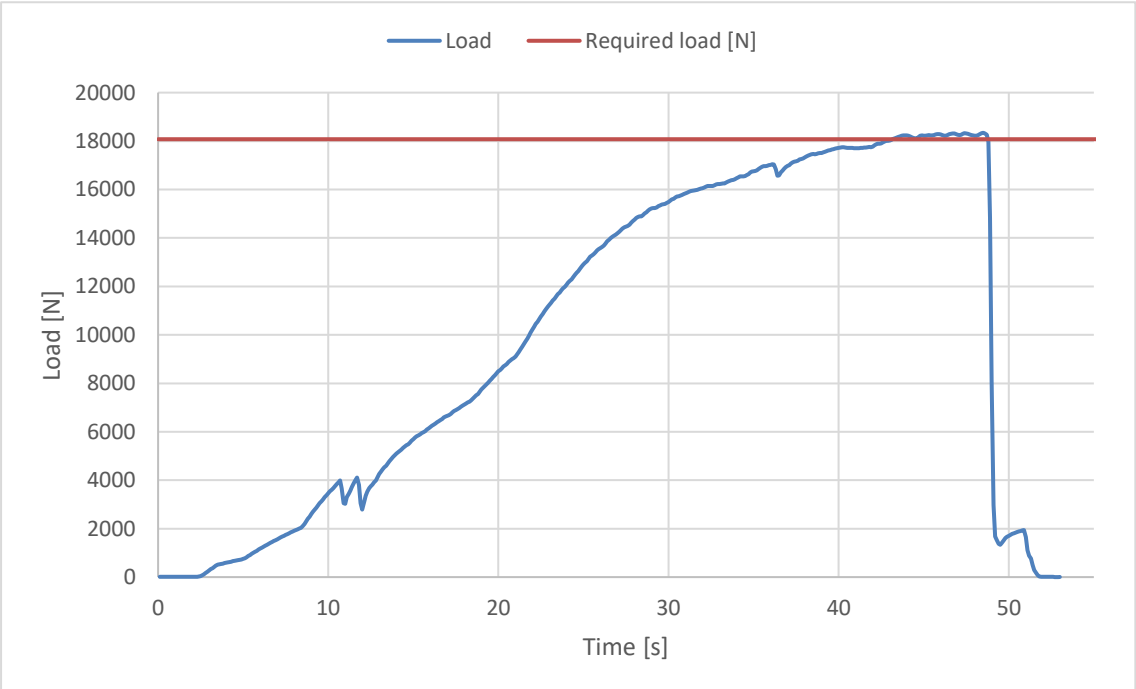
Harness Structural test **Test ID 13**

Standard	**EN 1651:1999**
Reference	**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]	**5.6**
Any signs of structural failure	**No**
Test results	**POSITIVE**





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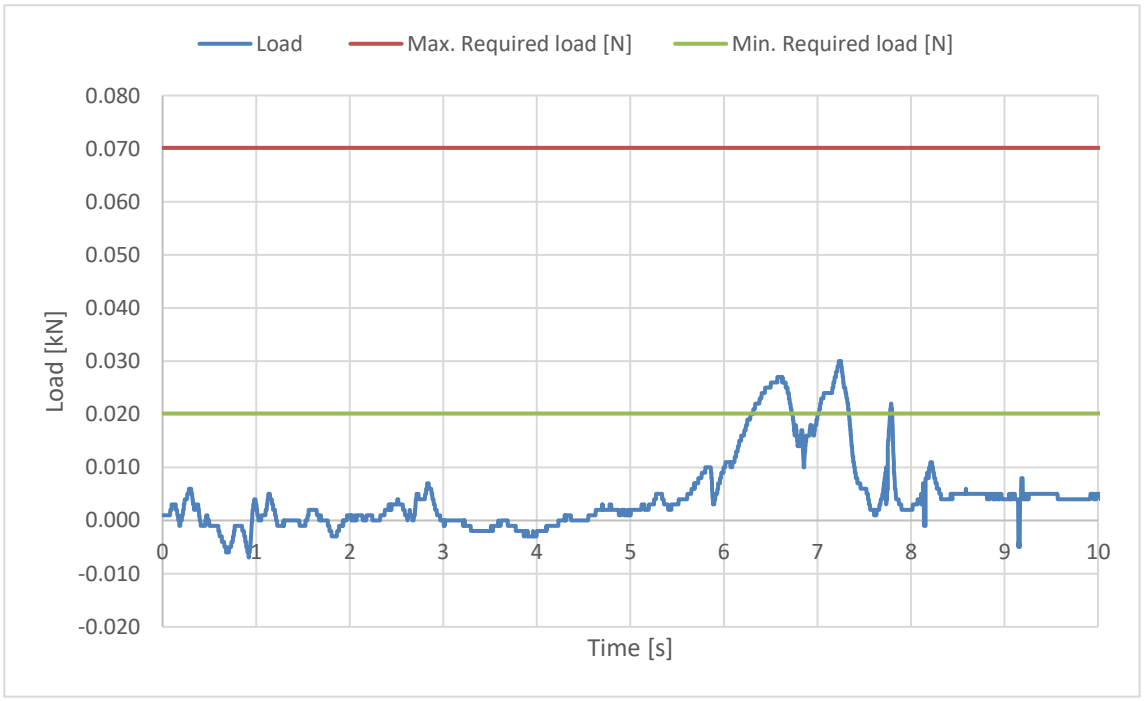
Rescue Deployment Test		**Test ID RRDT**
Standard	**NfL 2-565-20**	
Reference	**6.1.5**	
Test setup	**Default flying position**	
Attachment points	**Sensor connect to handle, and pull in opening direction**	
	The test is to simulate the load required to open the emergency parachute(1st action).	
Min. Required load [N]	**20**	
Max. Required load [N]	**70**	
Result		
Load for first action [N]	**29.85**	
Test results	**POSITIVE**	



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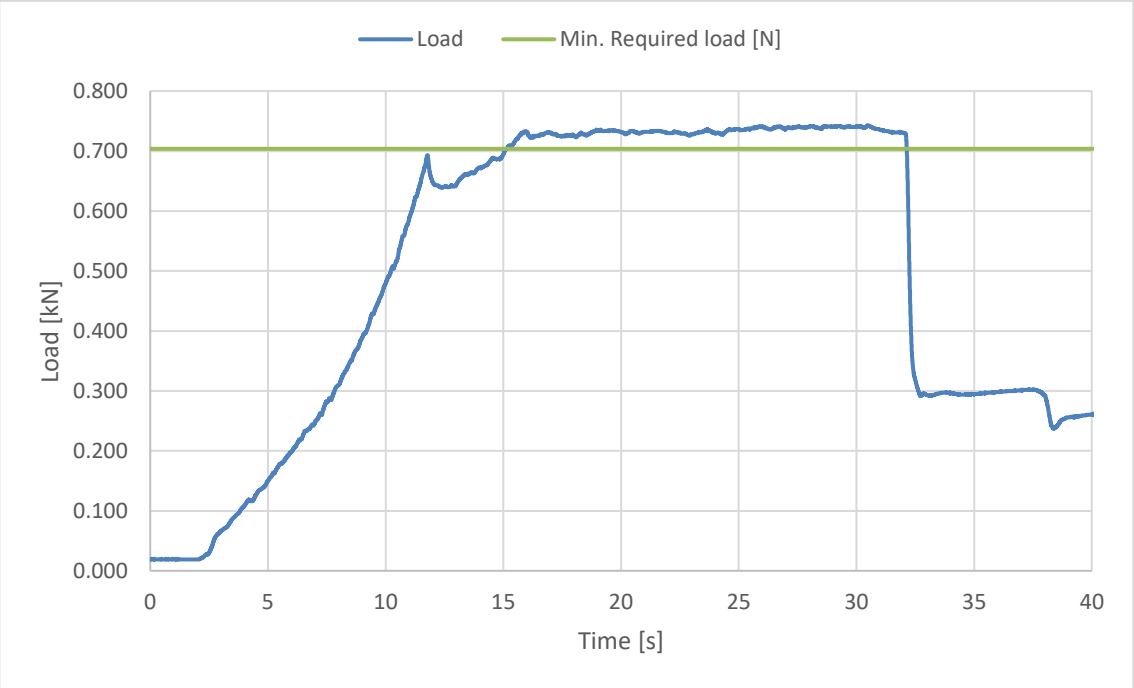
Rescue Deployment Handle strength test		**Test ID RRST**
Standard	**EN 12491**	
Reference in standard	**5.3.2**	
Test setup	**Two end points of handle**	
Attachment points	**Sensor connect to end of handle, pull on the other side**	
	The handle must support min 700 N for 10 s, after measure breaking strength	
Min. Required load [N]	**700**	
Minimum test duration [s]	**10**	
Result		
Test duration [s]:	**17.0**	
Breaking strength [N]	**739.18**	
Test results	**POSITIVE**	



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paragliding by air turquoise

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Rescue deployment test for harness with integrated inner container **Test ID RDIC**

Standard	**NfL 2-565-20**			
Reference	**4.3.2-4.3.6**			
Test setup WI 14	**Release of the container at maximum volume**			
Min volume (harness)	**3600**			
Max volume (harness)	**5600**			
		Volume [cm3]	Result	Test date
Emergeny Parachute	**Round**		n/a	
Emergeny Parachute	**Square/Triangle**	5300	POSITIVE	29.11.2023
Emergeny Parachute	**Rogallo**		n/a	
	Total Result		**POSITIVE**	

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