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Test laboratory for paragliders, paraglider harnesses and paraglider reserve parachutes



# **Harness Structural test Report**

Inspection certificate number: PH\_225.2018

Manufacturer data: Sample data:

**Dudek Paragliders SJ** Techno 2018 Manufacturer name: Name: Wojciech Domanski **ABS** Representative: Type: Ul. Centralna 2U Street: Size: М 86-031 Osielsko Serial number: H-05984 Post code place: Impact pad type: (1) **Poland** Country: **Foam** 

Clip-in weight [kg]: 100

Date of test: 01.03.2018

Atmosphere AGL:

[C°]	21.7
RH [%]	26
[hPa]	1000.2

#### **Summary of Structural test**

Test id	-	EN 1651	Setup	Req. Load [g]	Req. Load [N]	Min. duration [s]	Result
R0	٧	5.3.2.1	Default flying position	6	6000	10	POSITIVE
R2	٧	5.3.2.2	Default flying position	15	15000	5	POSITIVE
R4	٧	5.3.2.7	Flying position before landing	15	15000	5	POSITIVE
R6		5.3.2.4	Rescue attachments	15	15000	5	n/a
R8	٧	5.3.2.3	Asymmetric, one riser	6	6000	10	POSITIVE
R9		5.3.2.5	Towing	5	5000	10	n/a
R10	٧	5.3.2.6	Asymmetric, negative	4.5	4500	10	POSITIVE

#### Rescue deployment test

Test id - NfL II 91/09	Setup	Min load [N]	Max. load [N]	Measured [N]	Result
RRDT <b>V</b> 6.1.5	Default flying position	20	70	31.81	POSITIVE

#### **Rescue Deployment Handle strength test**

Test	id	-	EN 12491	Setup	Req. Load [N]	Min. duration [s]	Breaking strength [N]	Result
RR	ST	٧	5.3.2	Two end points of handle	700	10	1927.35	POSITIVE

Manufacture	Instrument	Type no	S/N	Validity Calibration
НВМ	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%.

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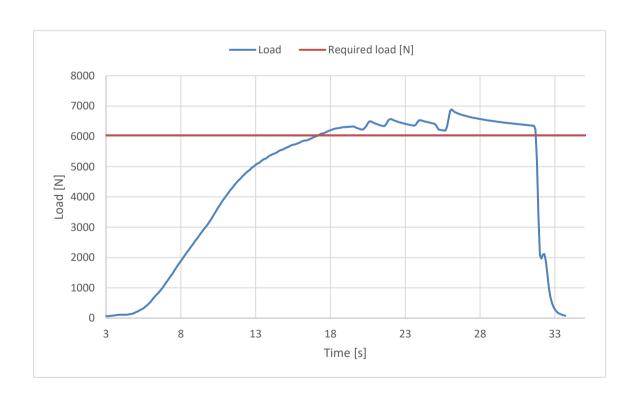
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Inspection certificate number: PH\_225.2018 model: Techno 2018 M

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]	6000	
Minimum test duration [s]	10	
Result		
Test duration [s]	14.6	F/2 <b>↓ ↓</b> F/2
Any signs of structural failure	No	$\langle \perp \mid \perp \rangle$
Test results	POSITIVE	\3   4/
		) [
		B1   B2
		F/2 V F/2



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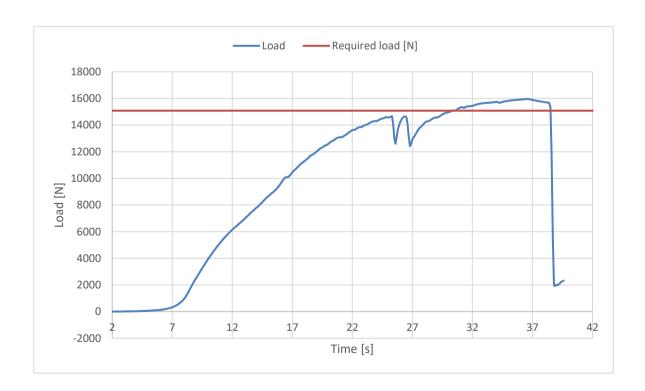
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Inspection certificate number: PH\_225.2018 model: Techno 2018 M

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]	15000	
Minimum test duration [s]	5	
Result		
Test duration [s]	8.2	F/2 A A F/2
Any signs of structural failure	No	
Test results	POSITIVE	(3)   4/
		) ; (
		B1   B2
		F/2 V F/2



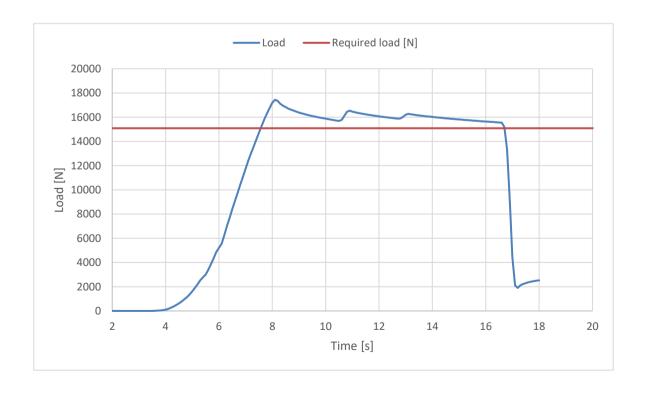
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Inspection certificate number: PH\_225.2018 model: Techno 2018 M

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]	15000	
Minimum test duration [s]	5	
Result		F, (+)
Test duration [s]	9.2	H
Any signs of structural failure	No	3/4
Test results	POSITIVE	/
		~ <i>/</i> /
		/ 10
		[ • \/h
		7/8 / 11



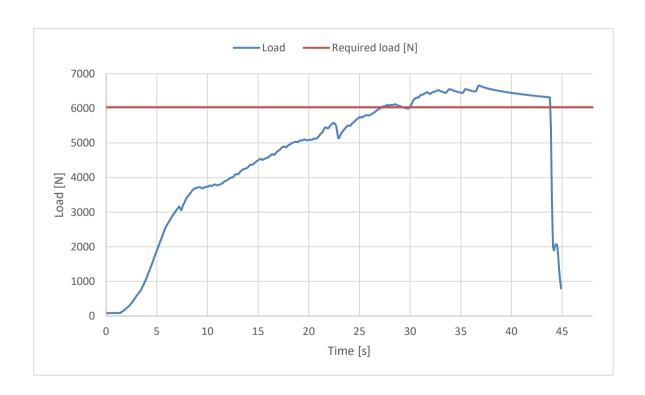
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Inspection certificate number: PH\_225.2018 model: Techno 2018 M

	Test ID R8
EN 1651:1999	
5.3.2.3	
Asymmetric, one riser	
One main riser attachment (3)	
Dummy (B1,B2)	
6	•
6000	
10	
	∫ F /
13.9	B1 3
No	
POSITIVE	
	B2
	¥ c
	<b>♥</b> F
	5.3.2.3 Asymmetric, one riser One main riser attachment (3) Dummy (B1,B2)  6 6000 10  13.9 No



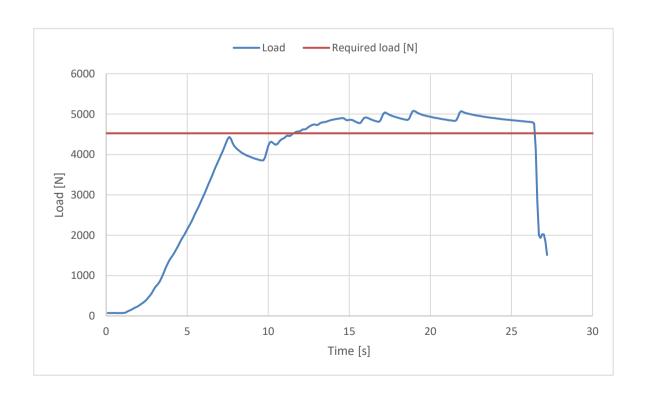
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Inspection certificate number: PH\_225.2018 model: Techno 2018 M

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 attach	nment (3 or 4) downwards
Anchor points	Dummy (9)	
Required load [g]	4.5	<b>↓</b> <sup>r</sup>
Required load [N]	4500	9
Minimum test duration [s]	10	
Result		7
Test duration [s]	14.9	
Any signs of structural failure	No	3/4
Test results	POSITIVE	
		<u> </u>
		F



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Rescue Deployment Test ID RRDT

Standard LTF NfL II 91/09

Reference in standard 6.1.5

Test setup Default flying position

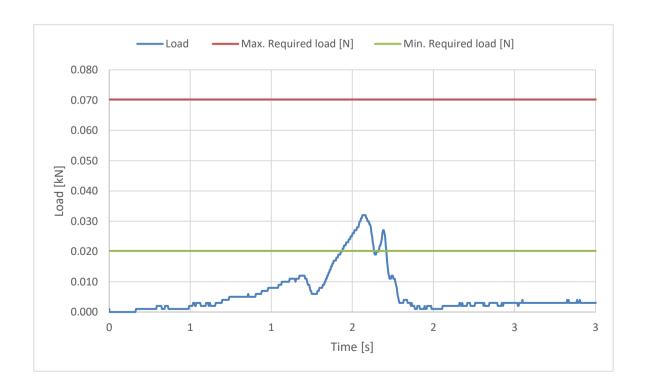
Attachment points Sensor connect to handle, and pull in opening direction

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] 31.81
Test results POSITIVE



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**Rescue Deployment Handle strength test** 

Test ID RRST

Standard **EN12491:2015** 

Reference in standard 5.3.2

Test setup Two end points of handle

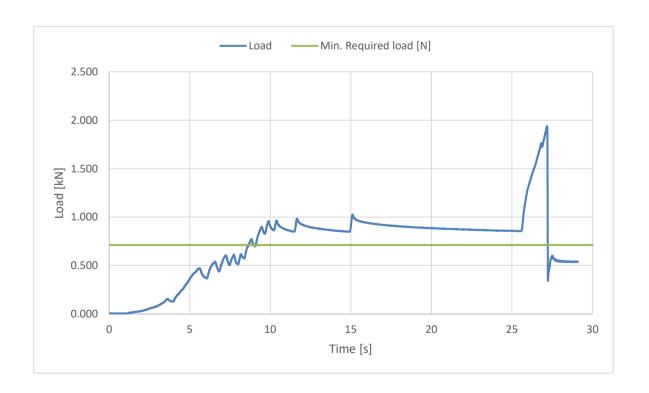
Attachment points Sensor connect to end of handle, pull on the other side

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]: 18.0
Breaking strength [N] 1927.35
Test results POSITIVE



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