

# Harness Structural test Report - EN

Inspection certificate number: PH\_441.2024

## Manufacturer data:

Manufacturer name: **Fly-market Flugsport-Zubehör GmbH & Co. KG**  
 Representative: **Stefan Kurrle**  
 Street: **Am Schönebach 3**  
 Post code place: **87637 Eisenberg**  
 Country: **Germany**

## Sample data:

Name: **Passenger B1**  
 Type: **ABS**  
 Size: **One size**  
 Serial number: **B1-001**  
 Impact pad type: <sup>(1)</sup> **Foam**  
 Clip-in weight [kg]: **130**

Date of test: **06.01.2022**

## Atmosphere AGL:

|        |             |
|--------|-------------|
| [C°]   | <b>20</b>   |
| RH [%] | <b>34</b>   |
| [hPa]  | <b>1007</b> |

## Summary of Structural test

| Test id              | - EN 1651  | Setup                                 | Req. Load [g] | Req. Load [N] | Min. duration [s] | Result          |
|----------------------|------------|---------------------------------------|---------------|---------------|-------------------|-----------------|
| 01 <sup>(3)</sup>    | ✓ 5.5.1.1  | Positive symmetric load (Slippage)    | 4.5           | 5850          | 5                 | <b>POSITIVE</b> |
| 03 <sup>(3)</sup>    | ✓ 5.5.1.1b | Positive symmetric load               | 15            | 19500         | 5                 | <b>POSITIVE</b> |
| 05                   | ✓ 5.5.1.2  | Positive asymmetric load              | 6             | 7800          | 5                 | <b>POSITIVE</b> |
| 06                   | ✓ 5.5.1.6  | Negative symmetric load               | 6             | 7800          | 5                 | <b>POSITIVE</b> |
| 08 <sup>(5)</sup>    | ✓ 5.5.1.9  | Anti falling-out system               | 4.5           | 5850          | 5                 | <b>POSITIVE</b> |
| 09 <sup>(3)(4)</sup> | 5.5.1.3    | Positive symmetric load rescue points | 15            | 19500         | 5                 | n/a             |
| 10 <sup>(3)(4)</sup> | 5.5.1.4    | Negative symmetric load rescue points | 15            | 19500         | 5                 | n/a             |
| 11                   | 5.5.1.8    | Connecting element for rescue         | n/a           | 24000         | 0.3               | n/a             |
| 12 <sup>(3)</sup>    | ✓ 5.5.1.7  | Upright (landing) position load       | 6             | 7800          | 5                 | <b>POSITIVE</b> |
| 14                   | 5.5.1.5    | Negative symmetric load towing points | 5             | 6500          | 5                 | n/a             |

## Rescue deployment test

| Test id | - EN 1651 | Setup                   | Min. load [N] | Max. load [N] | Measured [N] | Result |
|---------|-----------|-------------------------|---------------|---------------|--------------|--------|
| RRDT    | 5.5.1.11  | Default flying position | 20            | 70            | <b>0.00</b>  | n/a    |

## Rescue Deployment Handle strength test

| Test id | - EN 12491 | Setup                    | Req. Load [N] | Min. duration [s] | Break. strength [N] | Result |
|---------|------------|--------------------------|---------------|-------------------|---------------------|--------|
| RRST    | 5.3.2      | Two end points of handle | 700           | 10                | <b>0.00</b>         | n/a    |

| 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:

**EN1651:2018+A1:2020<sup>(6)</sup> and EN12491:2015+A1:2021<sup>(6)</sup>**

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

<sup>(1)</sup> If Impact pad available, see test report no. 94.22 and inspection certificate no. 94.20b. <sup>(3)</sup> Slipping test of any adjustable components: No slippage of any adjustable element more than 10 mm at 4500N for 5 s. The marks should be added with a pre-load of 1000N. <sup>(4)</sup> For harness with integrated Y bridle, test in the end loop <sup>(5)</sup> Attach to anti-falling out system without connecting the crotch straps (breast straps)

<sup>(6)</sup> These standards are NOT covered by accreditation D-IS-19457-01

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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Inspection certificate number: **PH\_441.2024**

model: **Passenger B1**

**Harness Structural test**

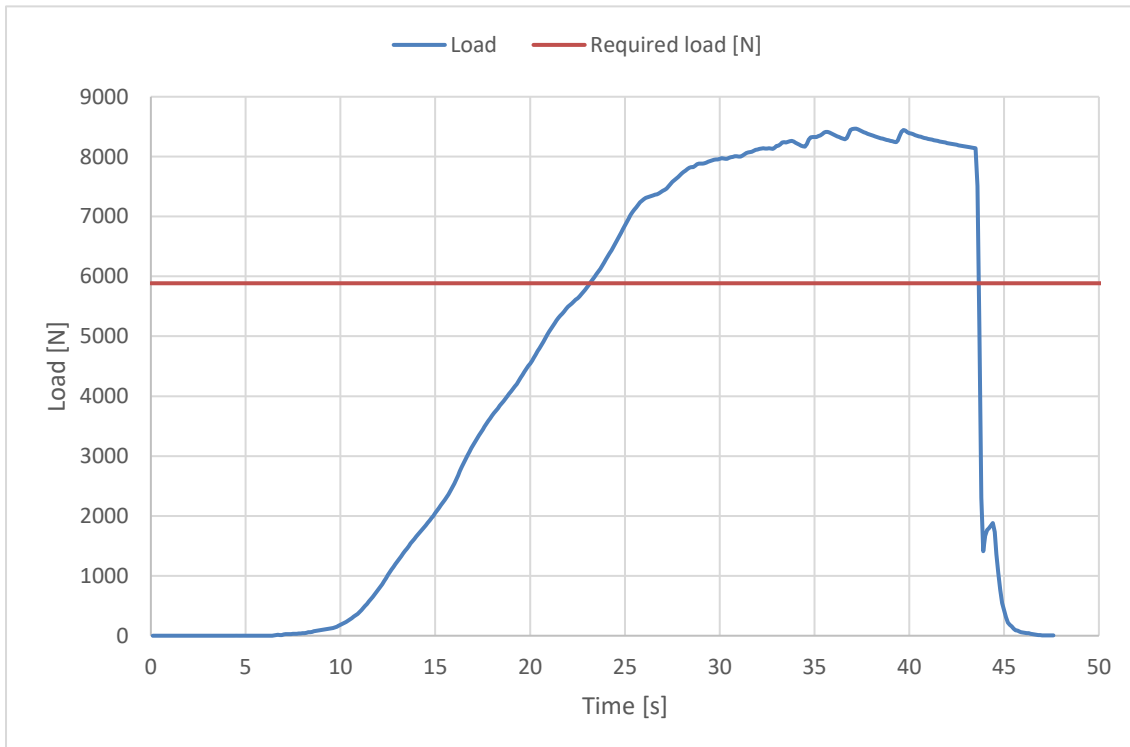
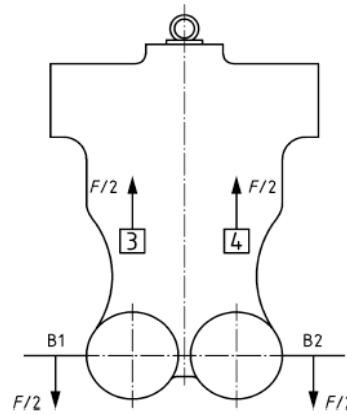
**Test ID 01**

Standard **EN 1651**  
 Reference in standard **5.5.1.1**  
 Test setup **Positive symmetric load (Slippage)**  
 Attachment points **Both main riser attachment (3,4)**  
 Anchor points **Dummy (B1, B2)**

Required load [g] **4.5**  
 Required load [N] **5850**  
 Minimum test duration [s] **5**

**Result**

Test duration [s] **20.5**  
 Any signs of structural failure **No**  
 Slippery test OK **Yes**  
 Test results **POSITIVE**



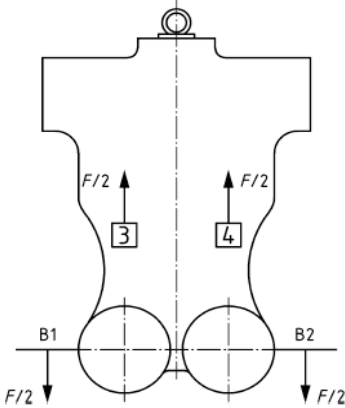
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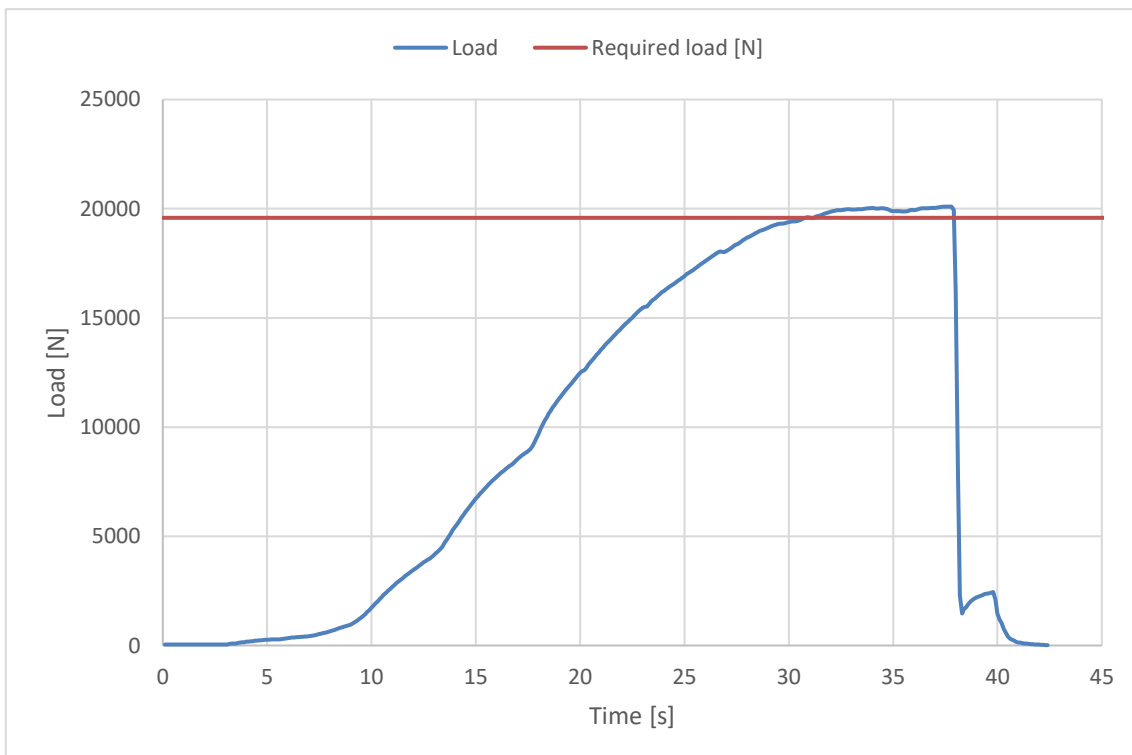
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model: **Passenger B1**

**Harness Structural test**

**Test ID 03**

|                                 |   |  |
|---------------------------------|---|--|
| Standard                        | <b>EN 1651</b>                          |  |
| Reference in standard           | <b>5.5.1.1b</b>                         |  |
| Test setup                      | <b>Positive symmetric load</b>          |  |
| Attachment points               | <b>Both main riser attachment (3,4)</b> |  |
| Anchor points                   | <b>Dummy (B1, B2)</b>                   |  |
| Required load [g]               | <b>15</b>                               |  |
| Required load [N]               | <b>19500</b>                            |  |
| Minimum test duration [s]       | <b>5</b>                                |  |
| <b>Result</b>                   |   |  |
| Test duration [s]               | <b>6.8</b>                              |  |
| Any signs of structural failure | <b>No</b>                               |  |
| Slippery test OK                | <b>Yes</b>                              |  |
| Test results                    | <b>POSITIVE</b>                         |  |



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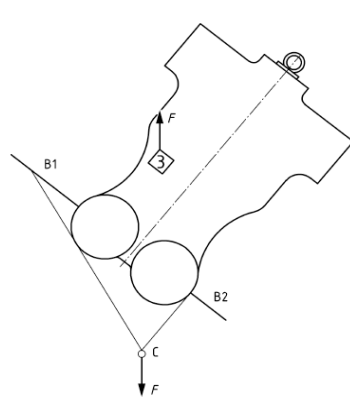
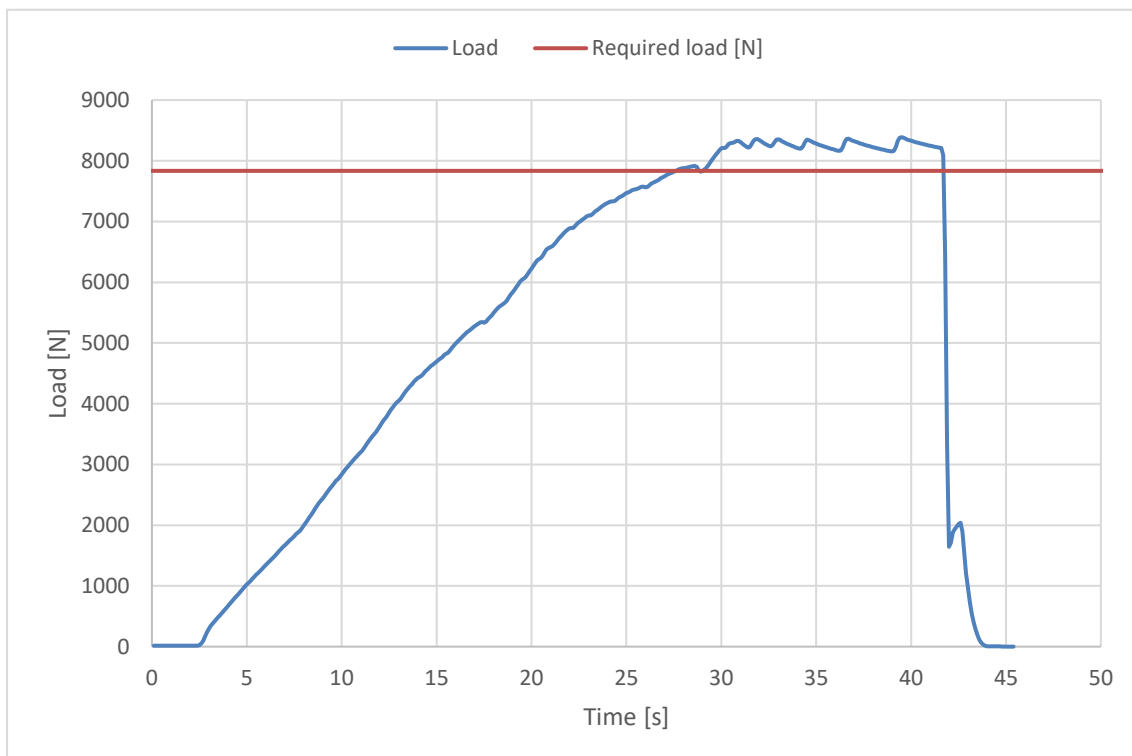
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model: **Passenger B1**

**Harness Structural test**

**Test ID 05**

|                                 |                                      |
|---------------------------------|--------------------------------------|
| Standard                        | <b>EN 1651</b>                       |
| Reference in standard           | <b>5.5.1.2</b>                       |
| Test setup                      | <b>Positive asymmetric load</b>      |
| Attachment points               | <b>One riser attachment (3 or 4)</b> |
| Anchor points                   | <b>Dummy (C)</b>                     |
| Required load [g]               | <b>6</b>                             |
| Required load [N]               | <b>7800</b>                          |
| Minimum test duration [s]       | <b>5</b>                             |
| <b>Result</b>                   |                                      |
| Test duration [s]               | <b>12.7</b>                          |
| Any signs of structural failure | <b>No</b>                            |
| Test results                    | <b>POSITIVE</b>                      |

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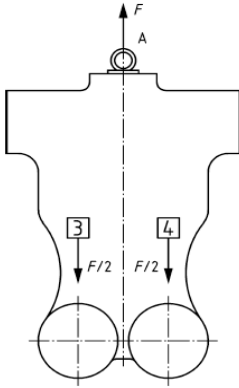
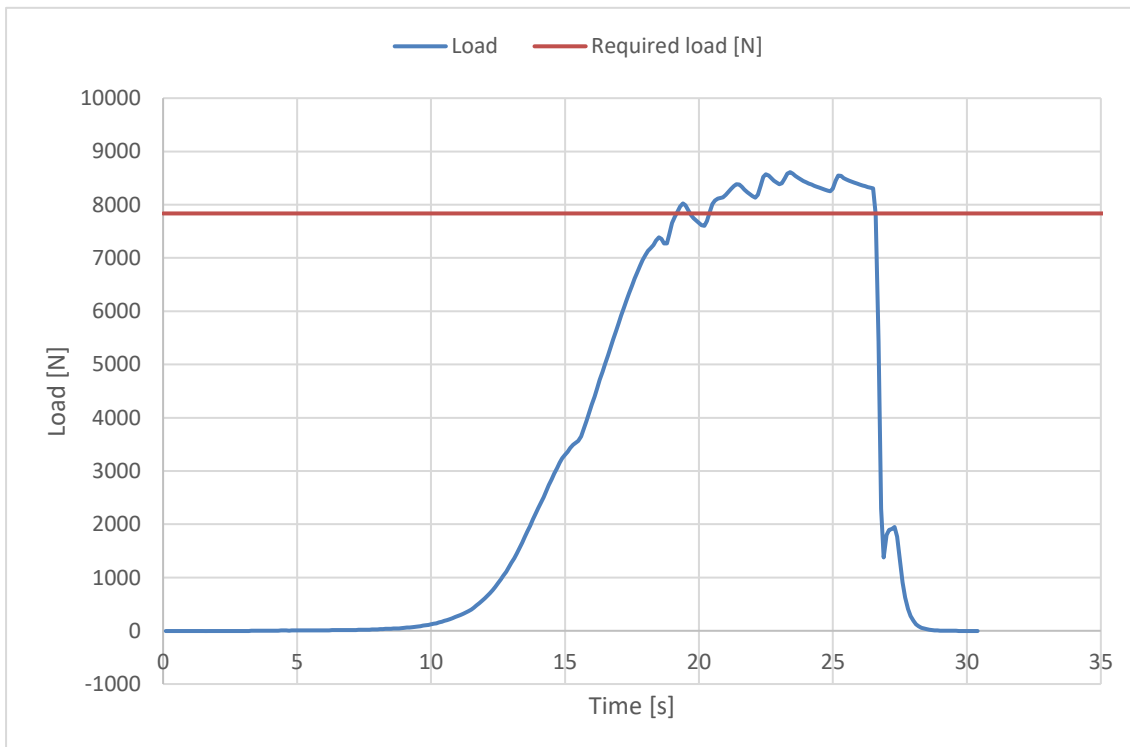
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model: **Passenger B1**

**Harness Structural test**

**Test ID 06**

|                                 |   |
|---------------------------------|---|
| Standard                        | <b>EN 1651</b>                          |
| Reference in standard           | <b>5.5.1.6</b>                          |
| Test setup                      | <b>Negative symmetric load</b>          |
| Attachment points               | <b>Both main riser attachment (3,4)</b> |
| Anchor points                   | <b>Dummy (A)</b>                        |
| Required load [g]               | <b>6</b>                                |
| Required load [N]               | <b>7800</b>                             |
| Minimum test duration [s]       | <b>5</b>                                |
| <b>Result</b>                   |   |
| Test duration [s]               | <b>6.2</b>                              |
| Any signs of structural failure | <b>No</b>                               |
| Test results                    | <b>POSITIVE</b>                         |

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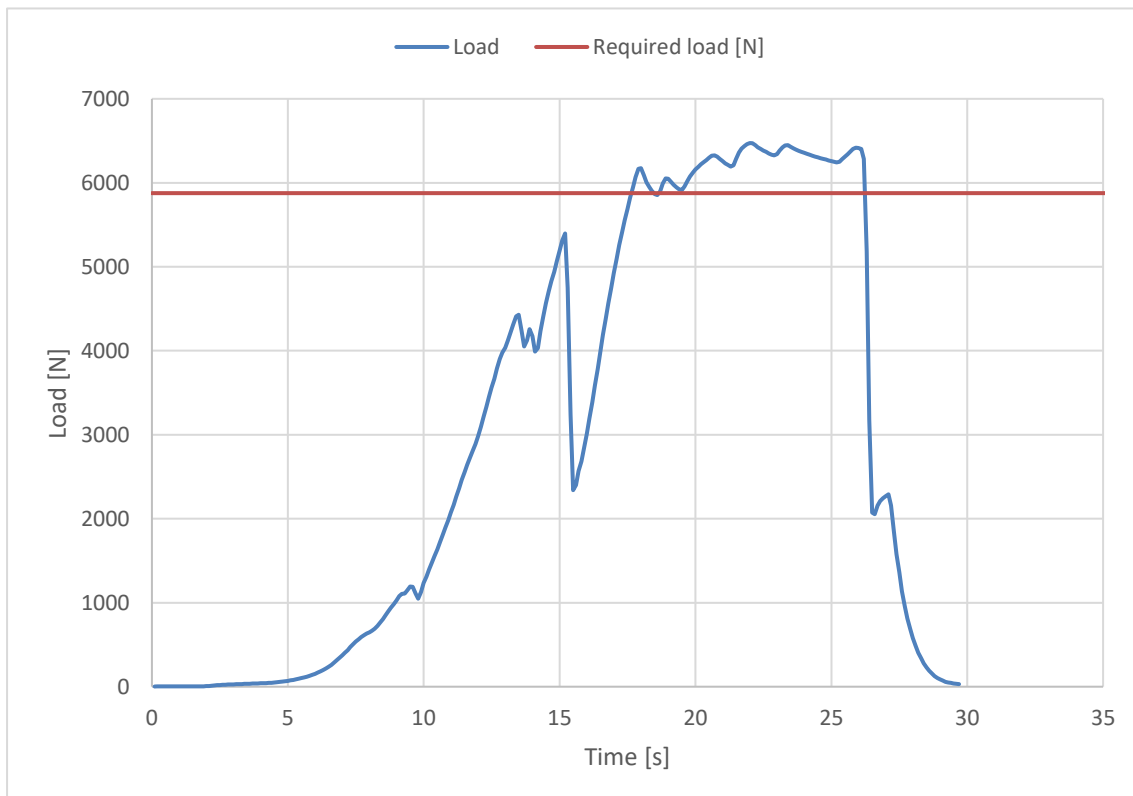
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model: **Passenger B1**

**Harness Structural test**

**Test ID 08**

|                                 |  |
|---------------------------------|--|
| Standard                        | <b>EN 1651</b>                               |
| Reference in standard           | <b>5.5.1.9</b>                               |
| Test setup                      | <b>Anti falling-out system</b>               |
| Attachment points               | <b>Around anti falling-out system</b>        |
| Anchor points                   | <b>Both main riser attachment (no dummy)</b> |
| Required load [g]               | <b>4.5</b>                                   |
| Required load [N]               | <b>5850</b>                                  |
| Minimum test duration [s]       | <b>5</b>                                     |
| <b>Result</b>                   |  |
| Test duration [s]               | <b>7.6</b>                                   |
| Any signs of structural failure | <b>No</b>                                    |
| Test results                    | <b>POSITIVE</b>                              |



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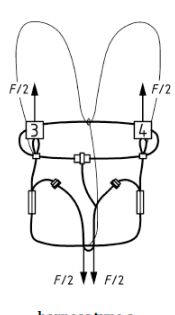
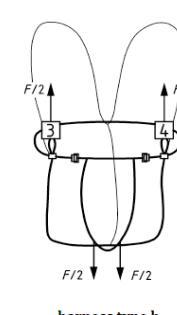
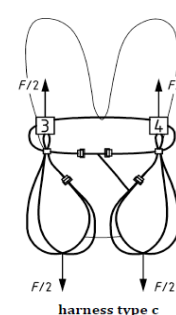
Inspection certificate number: **PH\_441.2024**

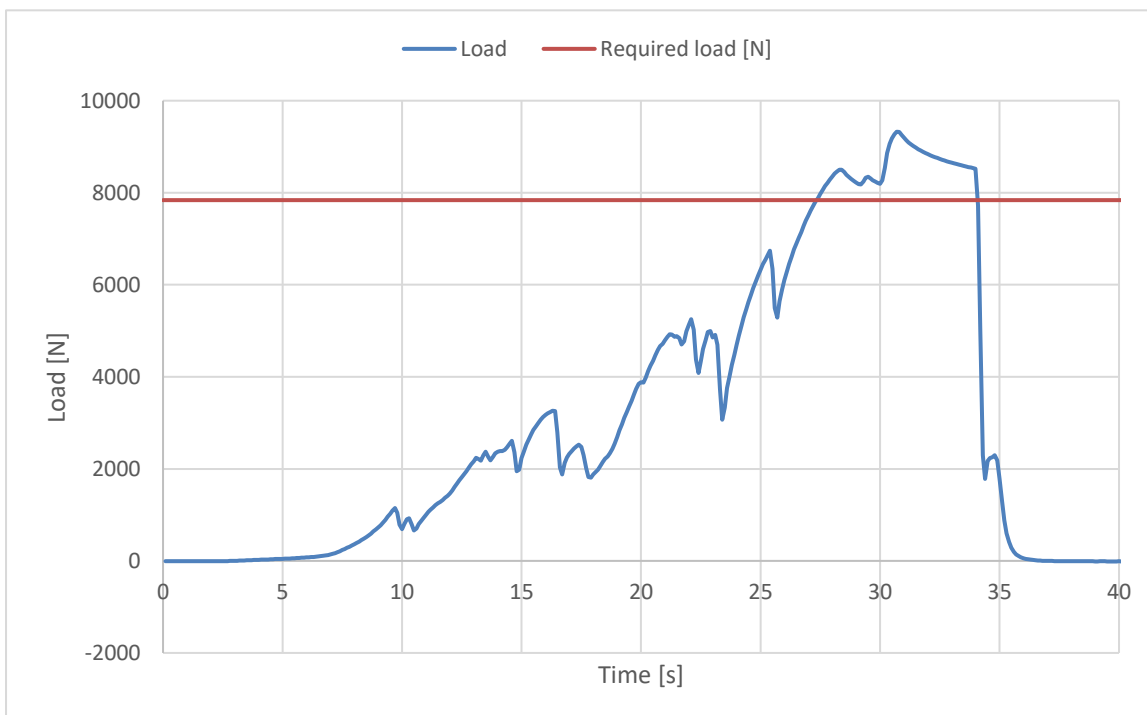
model: **Passenger B1**

**Harness Structural test**

**Test ID 12**

|                                 |  |
|---------------------------------|--|
| Standard                        | <b>EN 1651</b>                             |
| Reference in standard           | <b>5.5.1.7</b>                             |
| Test setup                      | <b>Upright (landing) position load</b>     |
| Attachment points               | <b>Both main riser attachment (3, 4)</b>   |
| Anchor points                   | <b>Both legstrap of harness (no dummy)</b> |
| Required load [g]               | <b>6</b>                                   |
| Required load [N]               | <b>7800</b>                                |
| Minimum test duration [s]       | <b>5</b>                                   |
| Harness type                    | <b>type a</b>                              |
| <b>Result</b>                   |  |
| Test duration [s]               | <b>6.7</b>                                 |
| Any signs of structural failure | <b>No</b>                                  |
| Slippery test OK                | <b>Yes</b>                                 |
| Test results                    | <b>POSITIVE</b>                            |



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