



SLOVENSKI STANDARD
SIST EN 926-1:1998
01-september-1998

Oprema za jadralno padalstvo - Jadralna padala - 1. del: Zahteve in preskusne metode za trdnost konstrukcije

Paragliding equipment - Paragliders - Part 1: Requirements and test methods for structural strength

Ausrüstung für Gleitschirme - Gleitschirme - Teil 1: Anforderungen und Prüfverfahren an die Baufestigkeit

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Equipement pour le parapente - Parapentes - Partie 1: Prescriptions et méthodes d'essai concernant la résistance de la structure

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Ta slovenski standard je istoveten z: EN 926-1:1995

ICS:

97.220.40	Oprema za športe na prostem in vodne športe	Outdoor and water sports equipment
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EUROPEAN STANDARD

EN 926-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 1995

ICS 97.220.40

Descriptors: sports, sports equipment, paragliders, qualification, safety, tests, mechanical strength, testing conditions

English version

Paragliding equipment - Paragliders - Part 1: Requirements and test methods for structural strength

Equipement pour le parapente - Parapentes - Ausrüstung für Gleitschirme - Gleitschirme -
Partie 1: Prescriptions et méthodes d'essai - Teil 1: Anforderungen und Prüfverfahren an die
concernant la résistance de la structure - Baufestigkeit

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Foreword

This European Standard has been prepared by the Technical Committee CEN/TC 136 "Sports, playground and other recreational equipment", the secretariat of which is held by DIN.

EN 926-1 deals with the structural strength test of a paraglider under static and dynamic loads.
prEN 926-2 deals with the flight test for the qualification of a paraglider.

This European Standard shall be given the status of a National Standard, either by publication of an identical text or by endorsement, at the latest by November 1995, and conflicting national standards shall be withdrawn at the latest by November 1995.

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.



0 Introduction

EN 926-1 and prEN 926-2 are intended to provide a method of qualifying paragliders.

The aim of these standards is to enhance safety thus eliminating paragliders which display unacceptable behaviour in given situations on the basis of recognized tests set in these two standards.

1 Scope

This European Standard is applicable to paragliders as defined in clause 2.

This part of EN 926 specifies requirements and test methods for the resistance of a paraglider to static and dynamic loads and sets the minimum strength threshold for its qualification.

2 Definition

For the purposes of this standard, the following definition applies:

paraglider: Ultralight glider with no primary rigid structure for which take-off and landing are on foot, the pilot being installed in a harness connected to the wing.

NOTE: There are two possible designs: single-seater and two-seater paragliders.

3 Requirements

3.1 Shock loading

When tested according to 4.2 the wing shall not be damaged.

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3.2 Sustained loading

When tested according to 4.3 the wing shall not be damaged.

4 Test methods

4.1 Apparatus

4.1.1 Tow vehicle

A tow vehicle ballasted and capable of providing a force in excess of 6 000 N to the paraglider wing, equipped with a device for the attachment of the paraglider and with the instrumentation required for measurement and readings of the different test parameters, see figures 1 and 2.

4.1.2 **Weak link**, calibrated for instantaneous break at 6 000 N \pm 600 N.

4.1.3 **Cable**, 60 m in length, capable of withstanding a force greater than that of the weak link.

4.1.4 **Electronic sensor**, equipped with an electronic strain gauge for measuring the force.

4.1.5 **Measurement circuit** with a graph clearly showing the load (N) against time (s).

4.1.6 **Video recording equipment**



4.2 Test specimen

Select a test specimen that conforms to the manufacturing record for that model (see annex A).

4.3 Test conditions

Weather conditions: wind speed less than 5 m/s.

4.4 Shock loading test

4.4.1 Principle

The paraglider is subjected to an opening shock load and the wing is visually inspected for damage.

4.4.2 Procedure

The test rig is shown in figure 1.

NOTE: Numbers given in brackets refer to the legend in figure 1.

Carry out the first shock loading test using a weak link to limit the loads to a maximum of 6 000 N.

Place the paraglider (1) on the ground in the configuration for instant inflation.

Connect the risers (2) to the weak link (3) and the latter to a cable 60 m long (4) whose other end is connected to one or more electronic sensors (5).

Lay out the cables on the ground in such a way that the distance between the rear axle of the tow vehicle and the weak link is between 8 m and 10 m and so that the test shock load can be applied almost instantaneously.

Record the test on video.

Increase the speed of the tow vehicle as rapidly as possible until either

- a) the weak link breaks, or
- b) the paraglider fails.

4.5 Sustained loading test

4.5.1 Principle

The paraglider is towed until the load obtained corresponds to a mean load factor of eight times the maximum all-up flying weight recommended by the manufacturer.

After completion of the loading test the wing is visually inspected for damage.

4.5.2 Procedure

The test rig is shown in figure 2.

Attach the risers of the paraglider to the electronic sensors 0,8 m apart on the tractor vehicle.

A controller is positioned on the tow vehicle in order to operate the paraglider control lines to stabilize the wing.

Record the test on video.

Increase the speed of the vehicle as gradually as possible, enabling the controller to obtain satisfactory stabilization of the flight path of the paraglider, keeping the load factor less than three times the maximum permissible load.

When the paraglider has stabilized, continue to increase the speed until the load obtained corresponds to a mean load factor of eight times the maximum all-up flying weight recommended by the manufacturer, for a minimum duration of 5 s and with variation not exceeding 1 *g*.

5 Inspection

On completion of each test, a check shall be made that the wing has not suffered any visual damage e.g. incipient tears, rupture of suspension lines, deformation.

6 Test report

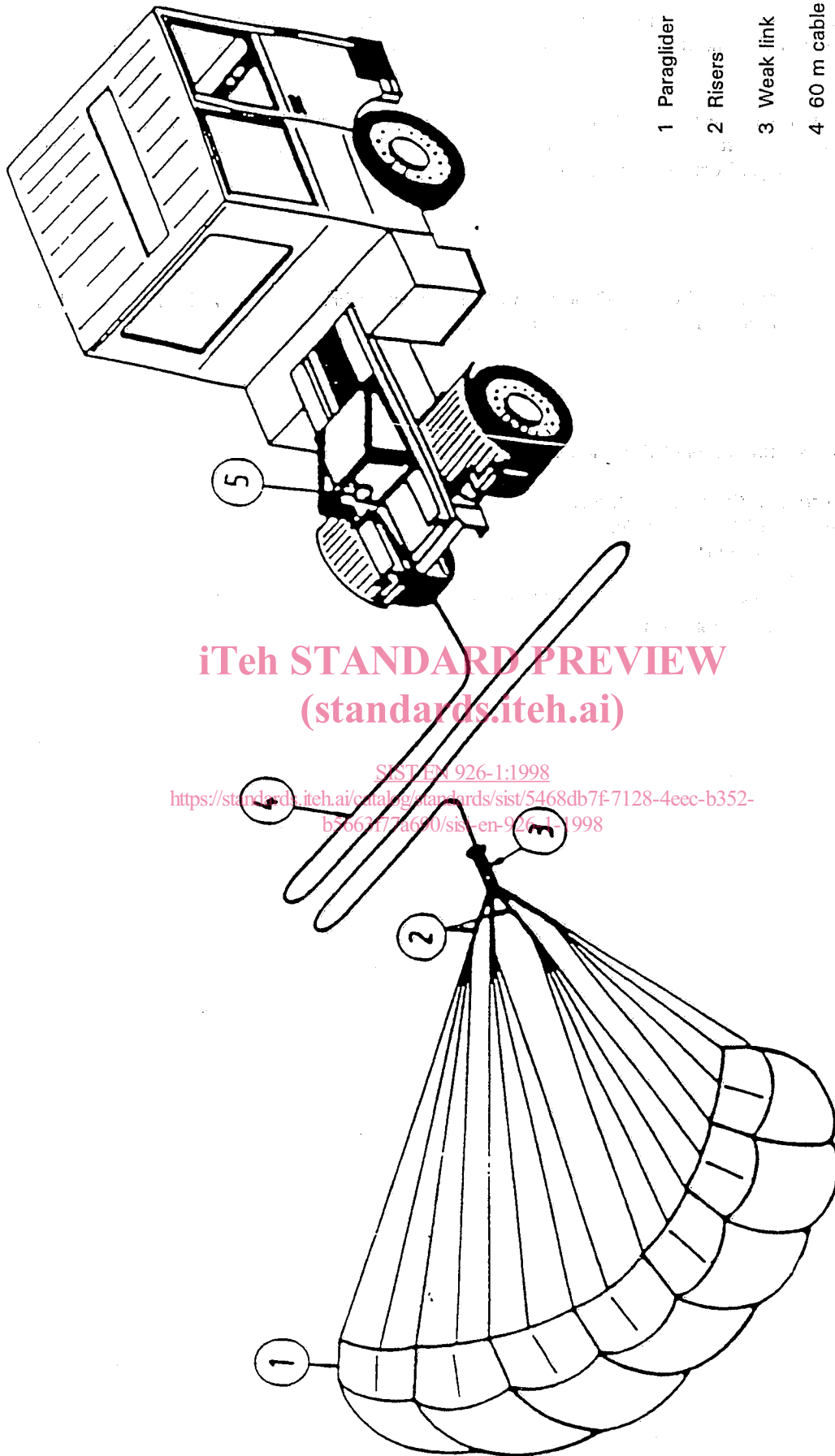
The test report shall include at least the following (indications)

- a) name and address of the manufacturer;
- b) type and reference of the paraglider tested;
- c) date and place of the test;
- d) video of the tests;
- e) details of the tests, i.e. values of loads in Newtons and load times in seconds;
- f) details of any damage after the test.

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Figure 1: Test rig for shock loading test

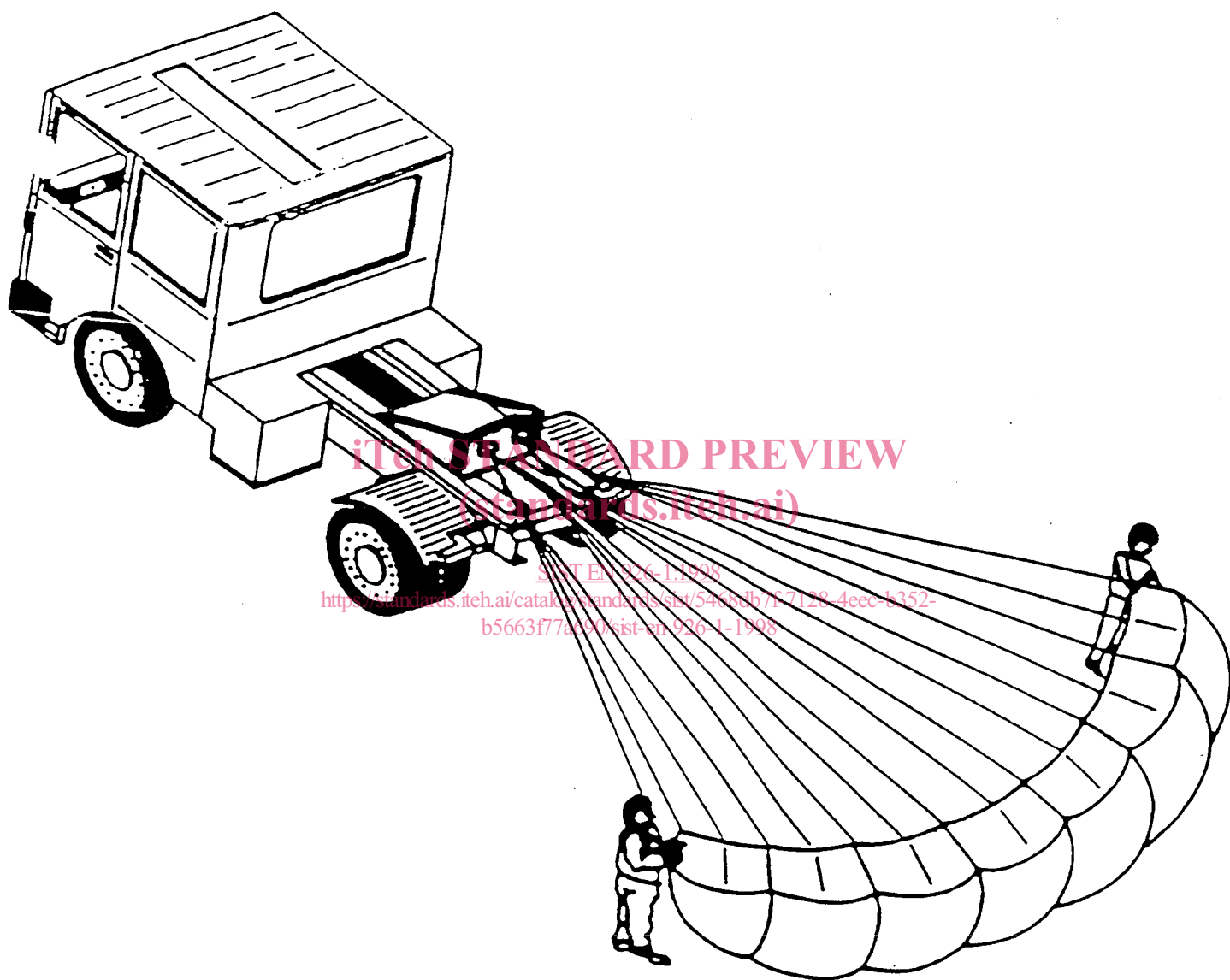


Figure 2: Test rig for sustained loading test