

# Steel strip sheaths for prestressing tendons — Test methods

## Part 4. Determination of lateral load resistance

The European Standard EN 524-4 : 1997 has the status of a  
British Standard

ICS 77.140.75; 91.080.40

## National foreword

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- aid enquirers to understand the text;
- present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
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### Summary of pages

This document comprises a front cover, an inside front cover, an EN title page, pages 2 to 4, an inside back cover and a back cover.

### Amendments issued since publication

Amd. No.	Date	Text affected

This British Standard, having been prepared under the direction of the Sector Board for Building and Civil Engineering, was published under the authority of the Standards Board and comes into effect on 15 November 1997

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ISBN 0 580 28672 X

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ICS 77.140.75; 91.080.40

Descriptors: Prestressed concretes, tubes, sheathing, prestressing steels, classifications, specification, verification, marking

English version

## Steel strip sheaths for prestressing tendons — Test methods — Part 4: Determination of lateral load resistance

Gaines en feuillard d'acier pour câbles de  
précontrainte — Méthodes d'essai —  
Partie 4: Détermination de la résistance aux charges  
latérales

Hüllrohre aus Bandstahl für Spannglieder —  
Prüfverfahren —  
Teil 4: Bestimmung der Querbelaastbarkeit

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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**CEN**

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

**Central Secretariat: rue de Stassart 36, B-1050 Brussels**

## Foreword

This European Standard has been prepared by Technical Committee CEN/TC 104, Concrete (performance, production, placing and compliance criteria), the Secretariat of which is held by DIN.

This standard is a part of the series EN 524 *Sheaths for prestressing tendons — Test methods* which additionally comprises the following Parts

- Part 1 *Determination of shape and dimensions*
- Part 2 *Determination of flexural behaviour*
- Part 3 *To-and-fro bending test*
- Part 5 *Determination of tensile load resistance*
- Part 6 *Determination of leaktightness (Determination of water loss)*

These European Standards apply to EN 523 *Steel strip sheaths for prestressing tendons — Terminology, requirements, quality control*.

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 September 1997, and conflicting national standards shall be withdrawn at the latest by September 1997.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of 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.

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## 1 Scope

This European Standard specifies the procedure for determining the lateral load resistance of sheaths for prestressing tendons which comply with EN 523.

## 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 523 : 1997 *Steel strip sheaths for prestressing tendons — Terminology, requirements, quality control*

## 3 Apparatus and accuracy

The following test equipment is required:

- a *testing machine* or a suitable test frame with a hydraulic or mechanical drive;
- a *load measuring device* with an accuracy of 2 % of the lateral load specified in table 1 in EN 523 : 1997;
- a *deformation measuring instrument* e.g. vernier calliper or micrometer gauge with an accuracy of 0,1 mm.

## 4 Procedure

A 1100 mm long specimen is placed on a firm, 500 mm long base as shown in figure 1 and subjected to loading by means of a plunger provided with a cylindrical end with a diameter of 12 mm. Each test specimen has to be loaded twice in two different places, one on the seam and the other outside the seam. The places of loading on and outside the seam shall be situated in the middle part of the specimen and shall have a distance of 150 mm minimum from one another.

The time of load application shall lie between 30 s and 1 min. After unloading, the smallest irreversible internal diameter of the sheath shall be determined at each loading point.

NOTE. This test may also be conducted using a stiffener if necessary.

Where stiffeners are used (see figure 1) the size shall not exceed half the circumference of the specimen and shall have the same profile as the specimen.

The length of the stiffener shall not exceed 1,5 times the nominal internal diameter of the sheath or 100 mm whichever is the greater.

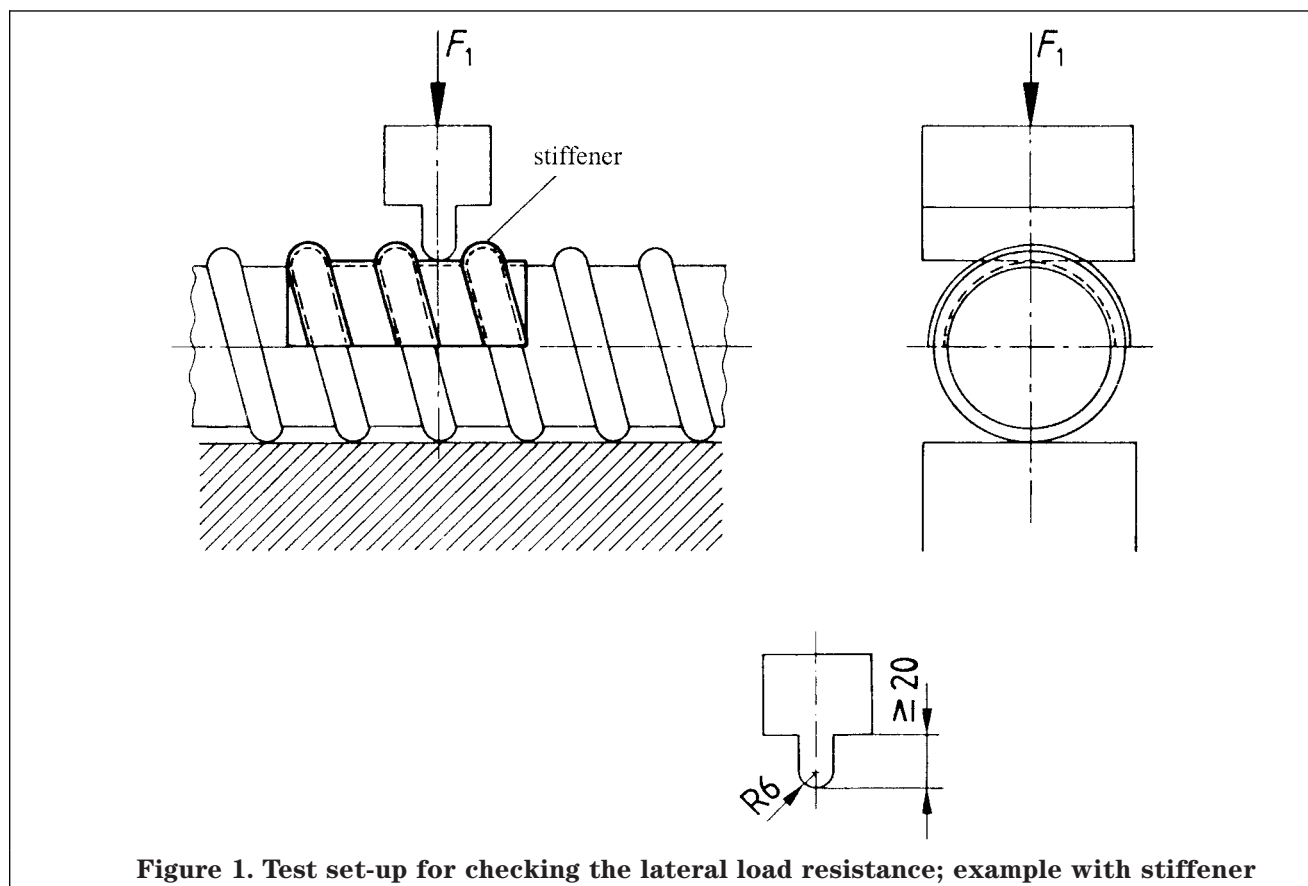


Figure 1. Test set-up for checking the lateral load resistance; example with stiffener

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