

# Classification report

## Distance tubes made of fibre-reinforced concrete

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Report on the classification of fire resistance for formwork ties in  
acc. with EN13501, Part 2, 2<sup>nd</sup> edition

Distance tubes made of fibre-reinforced concrete EI 180 - IBS

tested by: IBS, A-Linz

**NOTE:**

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## CLASSIFICATION REPORT

Report on the classification of the fire resistance of formwork ties  
in accordance with EN 13501, Part 2  
2ND ISSUE

### Distance tubes made of fibre reinforced concrete EI 180

**Classification report no. 13051304, Rev1**

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DW: 872

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**Created by:** IBS - Institute for Fire Protection  
and Technology and Safety Research GmbH  
Petzoldstrasse 45, 4017 Linz

**Subject of the classification:** Distance tubes diameter 22 mm and 27 mm

**Brief assessment:** Fire resistance acc. to EN 13501, Part 2

**Period of validity of the classification:** Unlimited valid

This classification report consists of 4 pages and  
2 pages of export variants.

The scope of validity extends to the described constructions, which are described in the  
enclosed "Export variants no.: 13051304".

## 1. Introduction

This fire resistance classification report defines the classification assigned to formwork ties in accordance with the procedure in EN 13501, Part 2.

The basis for the classification of the tie points is the test report of the test centre IBS Linz GmbH listed below.

## 2. Details on the classified products

### 2.1. General Information

The distance tubes used in the design variants were installed in a concrete wall with a thickness of 140 mm and successfully tested in accordance with EN 1363-1 over a test period of 181 minutes with regard to room closure and thermal insulation.

### 2.2. Description

The distance tubes and the referring parts for closure in question are described in the test report below to support this classification in accordance with Section 3 of EN 13501, Part 2.

## 3. Test reports for the direct area of application and Test results to verify the classification

### 3.1. Test Report

The following test report is presented in support of this classification:

Name of the test centre <sup>1</sup>	Name of the client	Reference no. of the report	Test object
IBS	Known to the inspection body	10121411	“Distance tubes made of fibre-reinforced concrete”

<sup>1</sup> Name/address and notification number/status of the Test centre in alphabetical order:  
- IBS - Institut für Brandschutztechnik und Sicherheitsforschung GmbH, Petzoldstraße 45,  
A-4017 Linz, Notification number: 1322

### 3.2. Test Results

Report no. Test method Test date Test duration	Parameters	Results
10121411 EN 1363-1 07.06.2011 181 minutes	Room closure Cotton ball Gap gauge Continuous flames	not ignited not possible not available
	Thermal insulation I <sub>mittel</sub> I <sub>max</sub>	no failure no failure

## 4. Classification and area of application

### 4.1. Classification reference

This classification was carried out in accordance with EN 13501-2:2010, section 7.5.

### 4.2. Classification

The corresponding distance tubes and its referring components for closure are classified in upper compliance with of the ÖNORM EN 13501-2:2010 according to the following combinations of performance parameters and classes, whichever is applicable.

<b>E</b>	- - -	E 20	E 30	- - -	E 60	E 90	E 120	- - -
<b>EI</b>	EI 15	EI 20	EI 30	EI 45	EI 60	EI 90	EI 120	EI 180

No other classifications are permitted.

The load-bearing capacity (R) is verified by calculation in accordance with EN 1992-1-2 (issue date: 01/09/2010), which regulates the design and construction of reinforced concrete and prestressed concrete structures for the usual case of fire exposure.

#### **4.3. Direct area of application**

The component has the following direct area of application in following to EN 1364, Part 2 and EN 13501, Part 2:

- Increasing the thickness of the wall (minimum thickness: 14 cm)
- Unrestricted widening of the wall construction
- Increase in height according to EN 1992-1-2

Further extensions are not permitted.

#### **5. Restrictions**

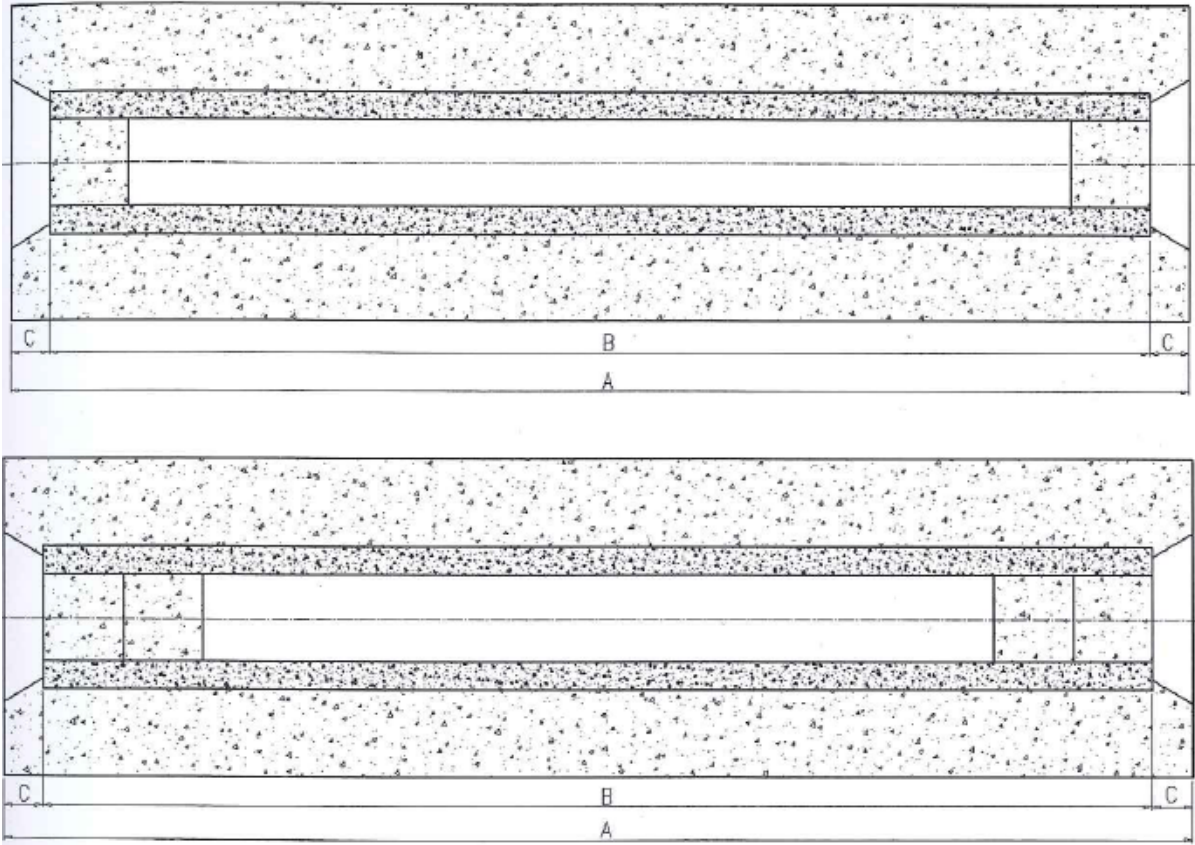
The classification document does not constitute a type approval or certification of the product. This classification report is only valid in conjunction with the test report mentioned at the beginning and the enclosures listed.

**IBS – INSTITUT FÜR BRANDSCHUTZTECHNIK  
UND SICHERHEITSFORSCHUNG GESELLSCHAFT M.B.H.**  
**Accredited testing, inspection and certification body**

DI (FH) Ulrich STÖCKL, MSc.  
Administrator

Ing. Josef KRAML  
Authorised signatory

### 1. Distance tube made of fibre-reinforced concrete Ø22 mm



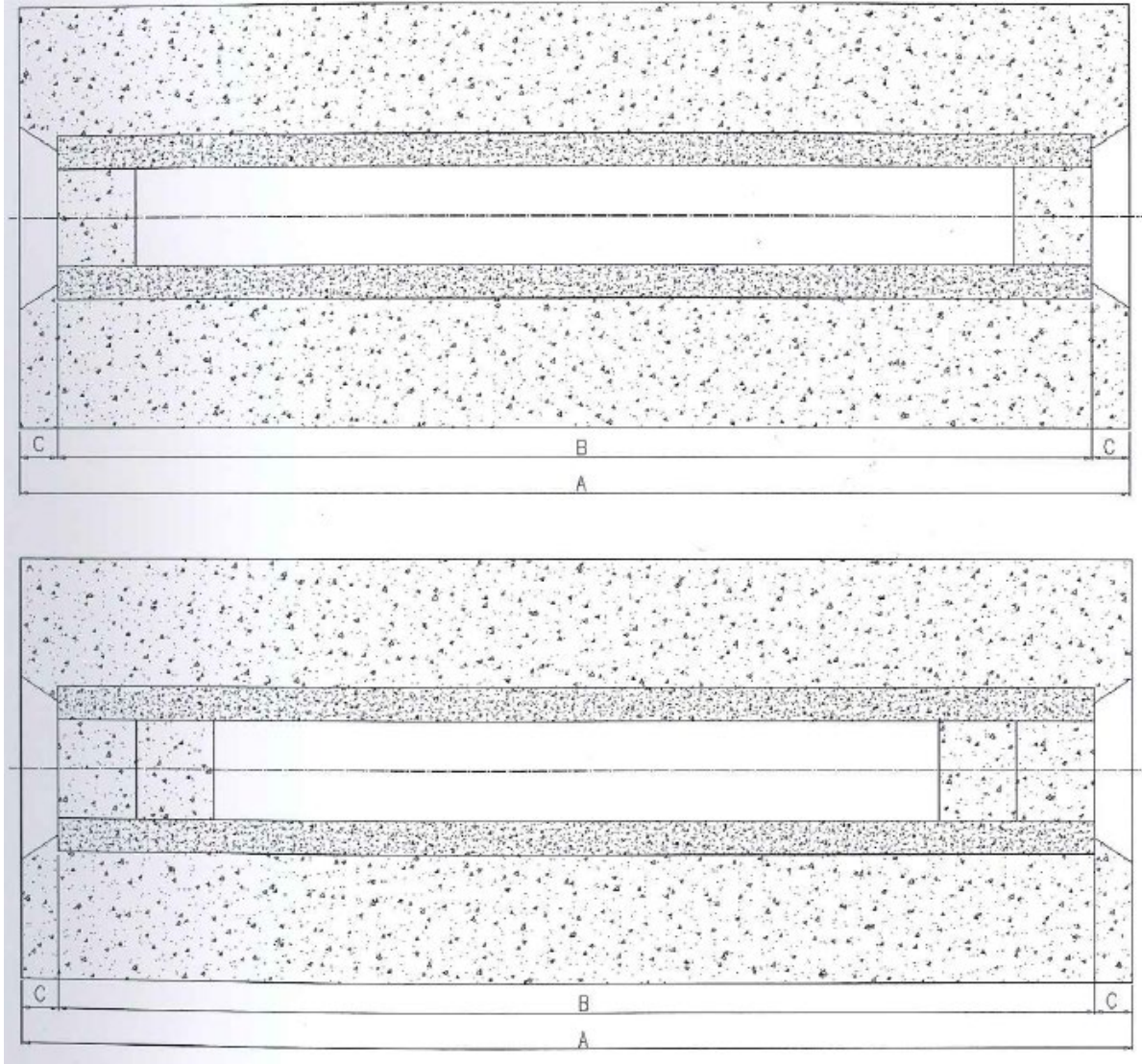
A .... Wall thickness at least 140 mm

B .... Cut length of the distance tube made of fibre concrete Ø22 mm at least 120 mm

Fixed dimension:

C ... 1 cm

## 2. Distance tube made of fibre-reinforced concrete Ø27 mm



A .... Wall thickness at least 140 mm

B ....Cut length of the distance tube made of fibre concrete Ø27 mm at least 120 mm

Fixed dimension:

C ... 1 cm