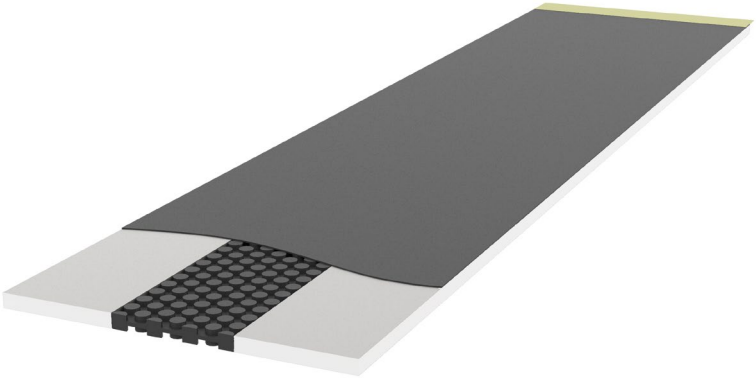
CALENBERG



CIGULAR® SLAB BEARING

Flexible deformation bearing with low shear resistance

A LISEGA Group Company

SECURELY AND PERMANENTLY BEDDED

ENHANCING LIVING COMFORT WITH CALENBERG

The studded elastomeric strip with cylindrical compression elements allows flexible elastic deformation, particularly during the initial load phase The standard elements are also thermally insulated and reduce the transmission of structure-borne sound. This increases the quality of living and considerably increases the value of the property.

KNOWHOW

Cigular® slab bearing

Product description

The Calenberg Cigular® slab bearing is a thermally insulated, permanently elastic shear deformation element for the mounting of solid ceilings. It consists of a studded elastomeric strip with cylindrical compression elements that are connected at half their height with a continuous elastic membrane. A water-repellent plastic cover is used as a carrier material. Cigular® slab bearings are factory fitted with a self-adhesive overlapping strip for butt joints.

Working characteristics

Cigular ® slab bearings absorb component movements by deformation of the elastomer suspension elements.

- The ratio of the horizontal force H to the vertical force V is very low when subject to horizontal movement
- A centrally applied, pressure-compensating load is introduced into the adjacent supporting structures
- The load-bearing elastomer elements compensate for any misalignment
- The joint between the ceiling and the wall is thermally insulated
- Used as linear bearing under concrete structures
- The use of a ring beam can be dispensed with (see Eurocode 6)

Use and areas of application

Cigular® slab bearings can absorb shear deformations in any direction including those in the longitudinal direction of the wall that pose the greatest threat to brickwork and are the cause of shear cracks in ceiling slabs.

Building authority approval, proof of suitability

The approval for use as a construction bearing in building construction is regulated by the standard building authority certification Z-16.32-479, issued by the Deutsches Institut für Bautechnik.

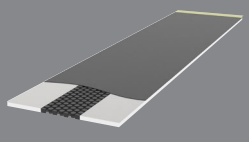
Fire behaviour

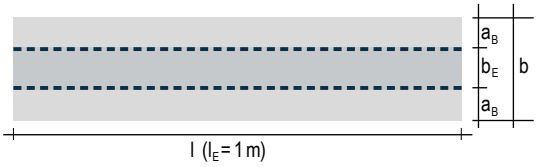
For fire safety requirements, the fire safety report No. 3799/7357-AR by the Technical University (TU) of Braunschweig shall be taken into account. The fire assessment specifies minimum dimensions and other measures in accordance with the specifications of DIN 4102-2.

Delivery forms

The Cigular® are supplied as strip-shaped bearing elements with a standard length of 1 m.

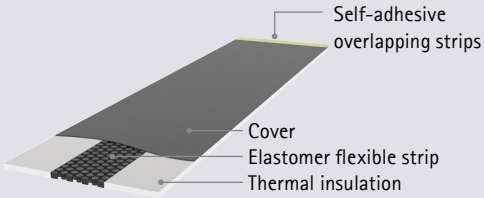
DELIVERY FORMS



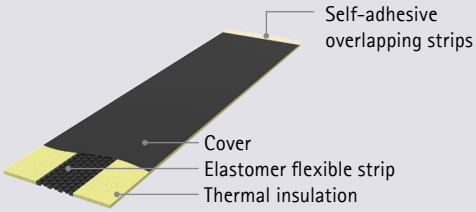


- l Bearing length
- b Bearing width
- l_E Length of the elastomeric flexible strip
- b_E Width of the elastomeric flexible strip
- a_B Edge width

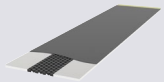
Polystyrene version



Ciflamon fire protection plate version



EXCERPT FROM THE TECHNICAL DATA

	Bearing designation	Type of bearing	Bearing thickness [mm]	Compressive stress	Approval
	Cigular® slab bearing	Deformation bearing with low shear resistance	10	$\sigma_{R,d} = 1{,}55\ N/mm^2$	Approval no. Z-16.32-479, issued by DIBt Berlin

Installing the ceiling slab onto brickwork

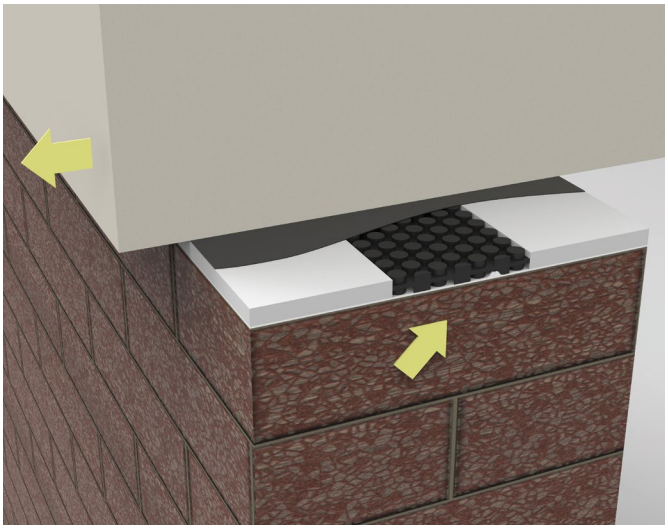
A suitable slab bearing must allow movements of the adjacent components with a little constraint as possible despite unevenness in their surfaces. The slab must also absorb angular rotation to avoid edge pressure resulting from ceiling deflection.

The Cigular® slab bearing compensates for unevenness due to its bearing geometry, which also ensures the absorption of angular rotations. The use of simple sliding foils can only satisfy both of these requirements to a very limited extent because of their limited thickness and structure.

Embedding in a polystyrene or Ciflamon fire-proofing plate prevents thermal bridges. The decoupling of the wall / ceiling reduces the transmission of structure-borne sound enhancing the living quality.

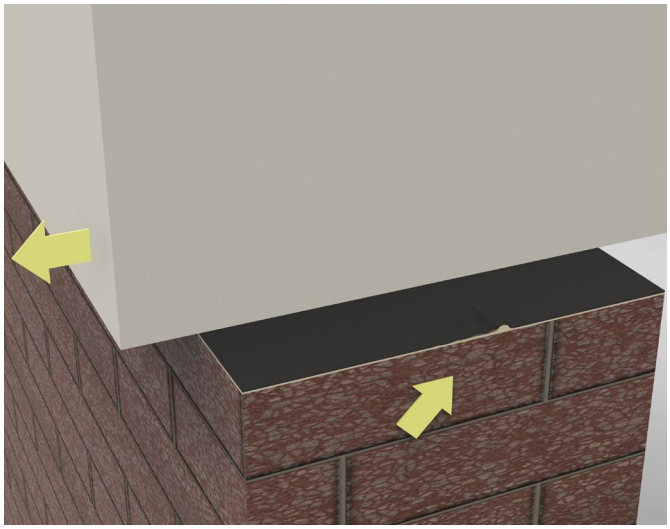
The conditions for classification as fire resistance class F90 are met by encasing with a Ciflamon fire protection plate at least 30 mm wide.

CIGULAR® SLAB BEARING



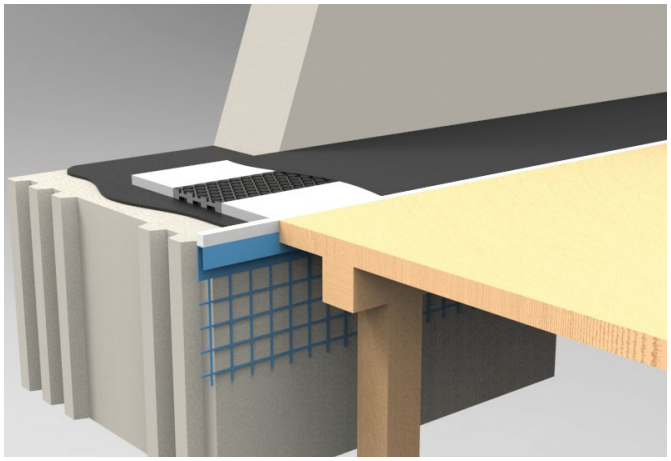
Any unevenness on the surfaces is elastically compensated and the capability for deformation is not restricted.

SLIP FILM

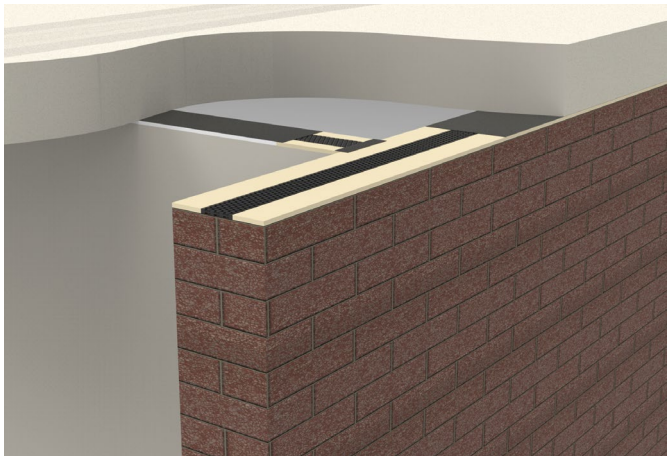


If a slip foil is used even the slightest unevenness of the surfaces prevents any horizontal movement.

Installation instructions

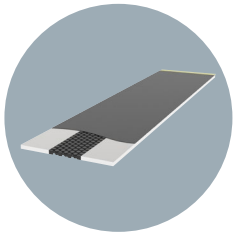


The Cigular® slab bearing is butt jointed with the plastic cover facing upwards and placed on the support area of the load bearing structure. The one-sided self-adhesive overlapping strip must be pressed onto the entire surface of the previously laid bearing so that the butt joint remains closed and functional when the slab is concreted.



The bearing surfaces must be flat, clean, dry and free of grease. Burrs must be removed and holes closed. Cigular® slab bearings must be secured against lifting when being laid in windy weather.

Extract from our client reference projects



CIGULAR® SLAB BEARING

- Residential complex ›Ortolfstraße‹, Berlin, Germany, 2018
- Coppenrath & Wiese production hall, Mettingen, Germany, 2017
- Residential complex ›Zur alten Feuerwache‹, Langenfeld, Germany, 2017
- Residential complex ›Am Salamanderplatz‹, Kornwestheim, Germany, 2017
- Residential complex ›Grete-Zabe-Weg‹, Hamburg 2017
- Extension of the existing buildings ›Kurfürstenhof‹, Berlin, 2016
- Passive house, Canberra, Australia, 2012

Residential complex ›Zur alten Feuerwache‹, Germany

Passive house, Australia

Am Knübel 2 - 4
31020 Salzhemmendorf | Germany

Tel. + 49 51 53 – 94 00-0
Fax + 49 51 53 – 94 00-49

info@calenberg-ingenieure.de
www.calenberg-ingenieure.de

A LISEGA Group Company

01 August 2019 | 3rd Edition | ©Calenberg Ingenieure GmbH | Subject to change