

# COMPACT CORE BEARING

Static elastomeric bearing for high loads and thermal separation

Load capacity up to 63 N/mm<sup>2</sup>

# SECURELY AND PERMANENTLY SUPPORTED

## INCREASE LIVING COMFORT WITH CALENBERG

High-value rubber material and the high quality standard of our elastomer bearings ensure freedom from maintenance, a long service life and thus absolute freedom of the structure from damage.

**KNOW**



## Effective façade protection

Avoid thermal bridges and lower energy costs



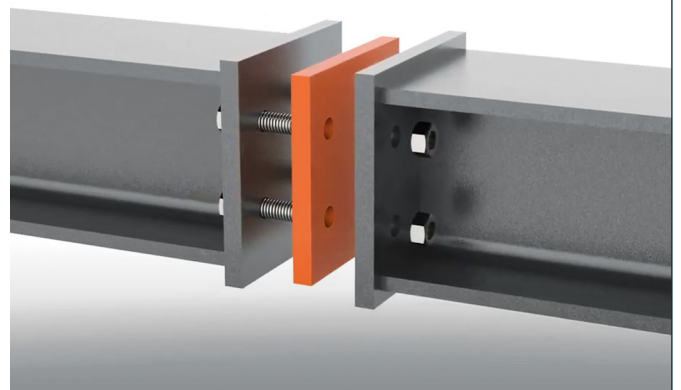
The compact core bearing has been used for 50 years for the transmission of very high loads between components. The hard elastomer material can bear loads of up to  $63 \text{ N/mm}^2$  depending on the format.

The use of steel components is a popular stylistic device in modern architecture for building complexes and industrial halls. These include, for example, balconies, façade elements or porches. With this construction method, care must be taken in the interests of saving energy to avoid thermal bridges. Continuous steel girders from the exterior into the interior are a weak point in relation to energy losses, formation of condensation, mould growth and corrosion.

The compact core bearings are very well suited for use as thermal separation for façade constructions and cantilever components. The use of the bearing enables the user to meet increasing requirements for the minimisation of energy consumption and the associated, not inconsiderable cost savings.

### PRODUCT ADVANTAGES

- Verified and validated design software (Pcae)
- Maintenance-free
- Resistant to weathering and ozone
- Extremely durable
- Very low creepage
- High-quality material
- High load capacity
- Building authority approved elastomer bearing
- Moments are transmitted according to plan



## The compact core bearing

### Product description

The Calenberg compact core bearing is an unreinforced elastomer bearing with smooth pressure contact surfaces. The main constituent is an aging-resistant NBR elastomer material. The purpose of the reddish-brown dyeing is for product-specific identification. The material is resistant to weathering, oil, grease, fuels and ozone, as well as abrasion and wear.

### Application and areas of use

Compact core bearings are suitable for use as supports where very high loads are transmitted perpendicularly to the bearing plane. In order to avoid energy losses due to thermal bridges, the bearings are used in all areas of construction for thermal separation, e.g. in façade construction, for the installation of solar systems and heat pumps, or when connecting balconies and porches to the support structure.

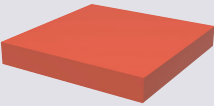
### Building authority approval

Usability in building construction is regulated by the general building authority approval no. Z-16.32-515, issued by the German Institute of Building Technology.

### Fire behaviour

The fire protection assessment no. 3799/7357-AR issued by the Technical University of Braunschweig is to be observed in case of fire protection requirements. This assessment contains specifications for the minimum dimensions and other measures that meet the requirements of the DIN 4102-2 standard.

#### EXTRACT FROM TECHNICAL DATA

Compact Core Bearing	Bearing type	Bearing thickness [mm]	Compressive stress	Approval
	Unreinforced, high-strength bearing for thermal separation	5*	max. $\sigma_{R,d} = 42 \text{ N/mm}^2$	Approval no. Z-16.32-515, issued by the DIBt Berlin
		10		
		15		
		20	max. $\sigma_{R,d} = 63 \text{ N/mm}^2$	

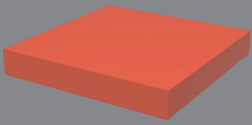
\* No building authority approval

## Delivery forms



Calenberg core compact bearing are delivered in virtually every desired size to suit the structure. The bearings can be provided with holes, cut-outs, slots, etc.

### STANDARD CUT-OUTS



Hole



Corner cut-out



Slot



Rectangular cut-out



Slot cut-out



Rectangular hole



Angled cut



### DIMENSIONS

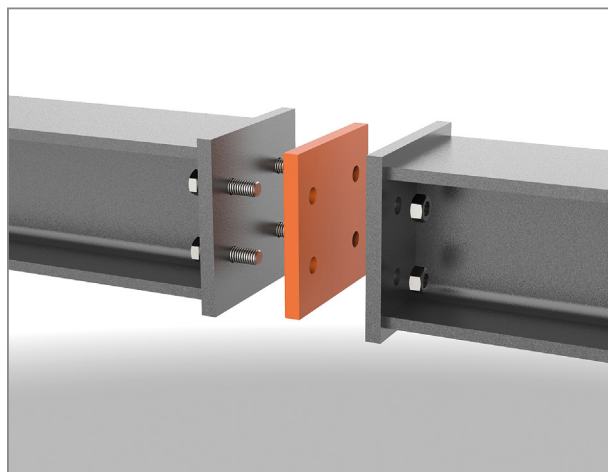
Bearing thicknesses	Maximum cut blank size	Minimum cut blank size
5*, 10, 15, 20 mm	1200 mm x 1200 mm	100 mm x 100 mm

\* No building authority approval

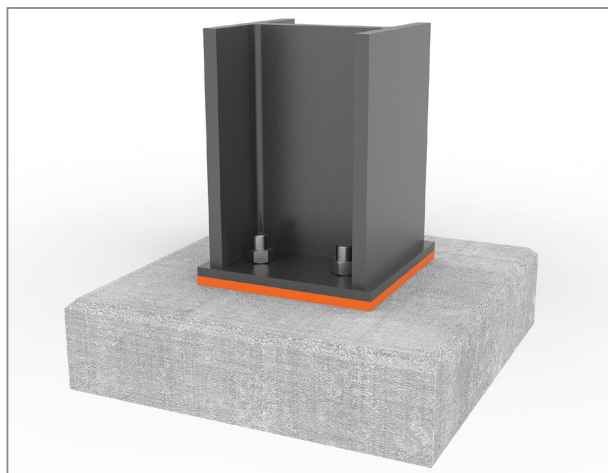


## Installation instructions

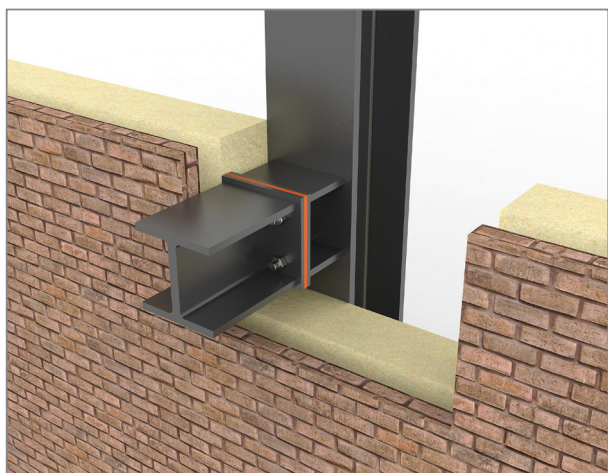
Prior to installation, ensure that the elastomer bearings and support surfaces are free from dirt, burrs, blow-holes, ice, snow, greases, solvents, oils and release agents.



Vertical use in the area of front slab and cantilever slab connections

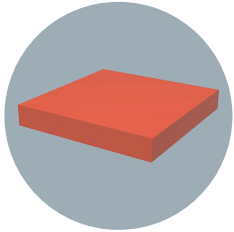


Horizontal use between columns and various substrates



Thermal separation using compact core bearing in the façade area

## Extract from our customer references



### COMPACT CORE BEARING

- German State Opera, Berlin, Germany
- Berlin Philharmonic Hall, Berlin, Germany
- Wesertower, Bremen, Germany
- Leipzig Zoo – Giant Tropical Hall, Leipzig, Germany
- German Maritime Museum, Wilhelmshaven, Germany
- Minimundus, Klagenfurt, Austria
- Cleveland Clinic Abu Dhabi, Abu Dhabi, UAE
- Cultural Centre of the Embassy of Azerbaijan, Berlin, Germany
- Hotel Fährhaus, Norddeich North Sea resort, Germany
- Federal Ministry of Employment and Social Affairs, Bonn, Germany
- Schiphol Airport, Schiphol, The Netherlands
- Skyline Plaza, Frankfurt am Main, Germany
- Mega-Casino Ufo, Oberhausen, Germany
- RWE, Essen, Germany
- Central Bus Station (ZOB), Munich, Germany
- Gläserne Manufaktur (Transparent Factory), Dresden, Germany
- Ulmer Schokoladen, Wilhelmshaven, Germany
- Neurath Blöcke F/G Power Station, Grevenbroich, Germany



German State Opera, Berlin, Germany



Berlin Philharmonic Hall, Berlin, Germany



Cleveland Clinic Abu Dhabi, Abu Dhabi, UAE



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