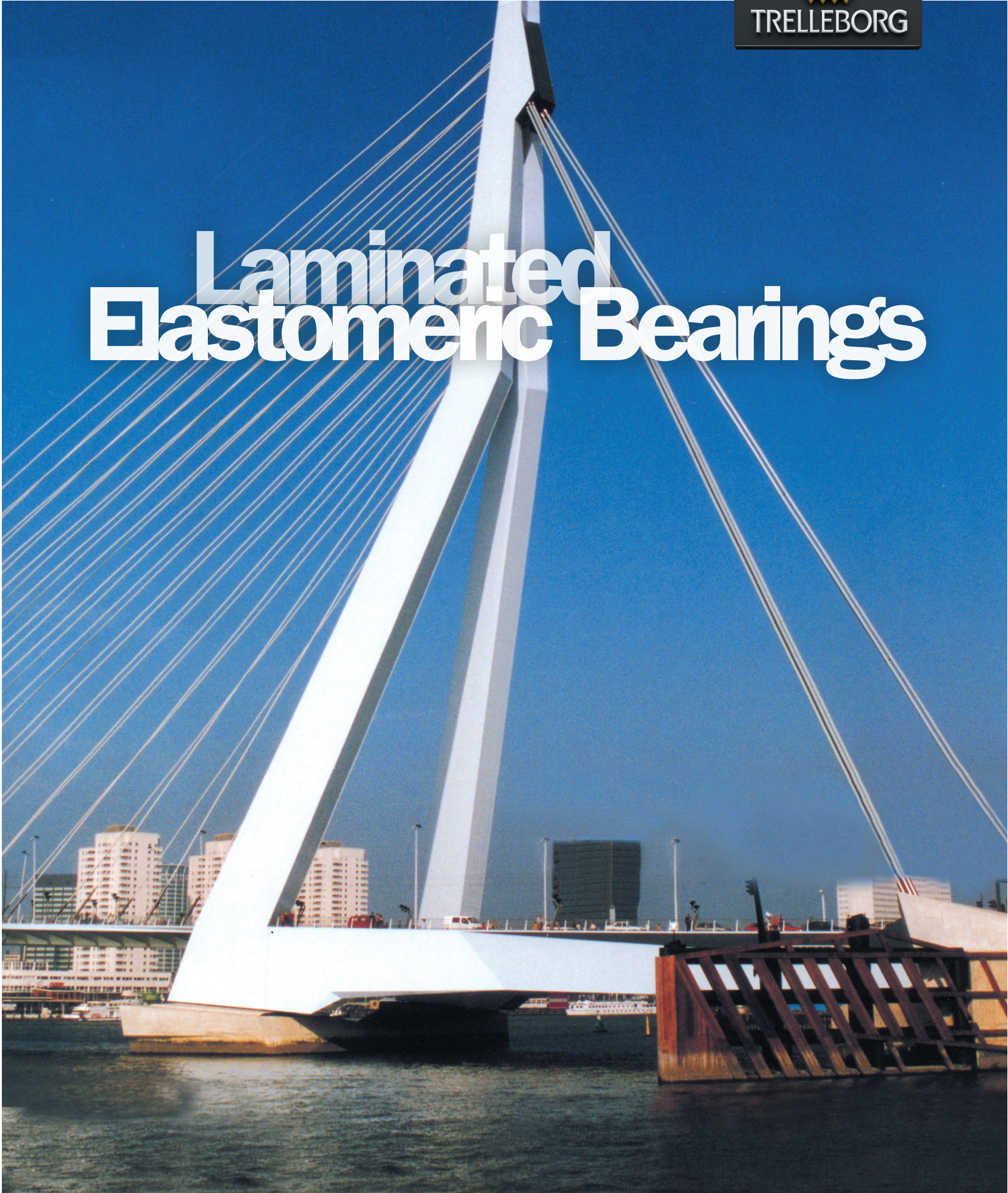




# Laminated Elastomeric Bearings





## The Function of Trelleborg Laminated Bearings

Structures are subjected to imperceptible displacements and rotations that have to be accommodated to protect the structure and surrounding infrastructure.

The most common causes of movement are:

- **Temperature changes**
- **Traffic movement and braking**
- **Wind**
- **Shrinkage and creep**
- **Foundation movement**
- **Post stressing**

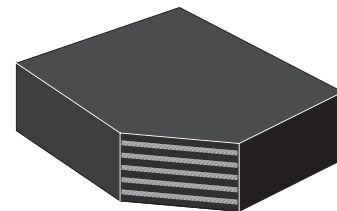
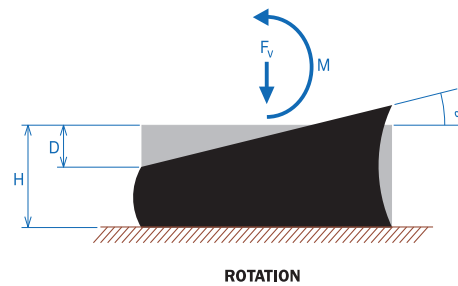
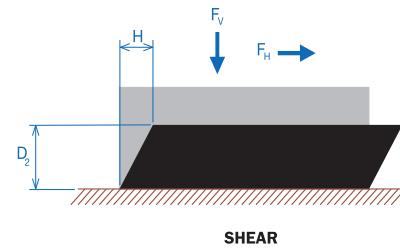
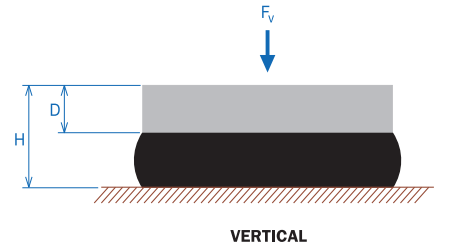
The function of the bearing is to safely accommodate the various movements and rotations as well as supporting the weight of the structure and to transmit the load through to the structures foundation.

**Trelleborg Elastomeric Bearings are designed to accommodate three types of movement.**

1. Vertical
2. Shear
3. Rotation

Trelleborg Bearings are manufactured from natural rubber compounds (chloroprene rubber compounds also available) to meet a wide range of international standards and design guides including, AS, BS, ASTM, AASHTO, NAASRA.

Trelleborg Engineered Products is certified to the Standard ISO9001.



*Trelleborg Bearing are produced with and without reinforcing steel plates. Steel plates are completely encased within the rubber.*

## Laminated Elastomeric Bearings With Known Rated Loads

Bearings to Australian Standard 5100.4

RECTANGULAR PADS		
Plan Size mm	Available Thickness mm	Load Range kN
230 x 150	35 - 101	120 - 280
230 x 200	35 - 125	180 - 450
350 x 170	35 - 112	250 - 620
350 x 280	45 - 157	330 - 900
480 x 250	45 - 137	440 - 1170
480 x 300	59 - 153	590 - 1620
480 x 380	68 - 197	870 - 2410
600 x 330	68 - 177	960 - 2610
600 x 450	68 - 237	1330 - 3330
600 x 600	97 - 293	2100 - 4220

ROUND PADS		
Diameter mm	Available Thickness mm	Load Range kN
240	35 - 153	160 - 500
330	59 - 157	330 - 910
400	51 - 177	470 - 1550
480	63 - 201	850 - 2070
530	63 - 237	1130 - 2810
590	63 - 247	1590 - 3920
650	77 - 237	2160 - 4240
750	92 - 276	2870 - 5500
810	92 - 276	3690 - 6970
880	101 - 309	4650 - 8980

Refer to AS5100.4 for detailed performance specification. Special designs available upon request.

## General Guidelines

Published standards, as well as road and infrastructure authorities and design engineers, have varying approaches to bearing specifications, but the following are provided as a general guideline:

- The vertical compression deformation should not exceed 15% of the initial bearing thickness.
- The horizontal displacement under shear should be lower than 70% of the total thickness of the rubber
- For stability, the total effective height of the rubber should not be higher than a quarter of the smaller horizontal dimension, or if circular, a quarter of the diameter.
- The maximum compression load should not be higher than 100-150 Kgs/cm<sup>2</sup> .
- The minimum vertical load to avoid sliding in the structure should not be less than 30 Kgs/cm<sup>2</sup> . If this condition cannot be satisfied, an anchored bearing should be used.

## Rubber Specification

The elastomer supplied will comply with the requirements of AS5100.4 Table B3(A) Type 53H.

## Steel Plates

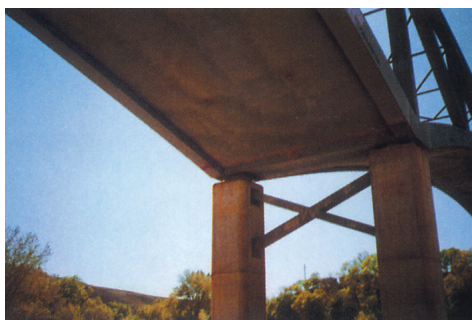
Minimum Thickness: 5mm  
 Yield Strength: 250MPa  
 Breaking Strength: 410MPa

Steel plates to have all sharp edges removed and be thoroughly cleaned, degreased and dried before application of rubber to steel bonding agent.

## Special Features

The following features are also available with the supply of Trelleborg laminated Bearings:

- Special sizes to suit any application
- Natural rubber is the standard material but Chloroprene and SBR are also available.
- Top and bottom mounting plates are available
- Holes for locating pins are supplied where specified





Trelleborg Engineered Products is part of the Trelleborg Offshore & Construction business area of the Trelleborg Group. Trelleborg Engineered Products is a leading global developer, manufacturer and provider of engineered polymer solutions to the energy, infrastructure and mining industries. Performing in some of the harshest environments on earth, its principal products are sealing systems for tunnels, a wide range of bearings, polymer solutions for floatover technology and wear resistant products for the mining industry. With local support, a track record of over 100 years and its everyday ingenuity, customers can rely on Trelleborg Engineered Products to deliver innovative polymer solutions that significantly improve the quality, safety and efficiency of its customers' operations worldwide.

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