



# STRUCTURAL ISOLATION

Isolation Solutions for a Quieter World.





# WHY CHOOSE TICO

TICO have been involved in the design, development, and production of elastomeric components for structural applications for over 75 years. We are a proud British manufacturer that uses raw materials from around the world to create engineered, high performance, elastomer solutions for vibration and movement control in buildings and other structures.

Over recent years there has been a large increase in the creation of multi-use structures combining offices, retail and leisure facilities, and residential units. Additionally, development trends have also shown a growth in the repurposing, or new construction, of buildings closer to transportation links such as underground and over-ground rail and major road networks – particularly in built-up urban areas.





These structures are varied and can range from fairly simple buildings to complex ones with unique architectural features combined with innovative construction methods and materials. Consideration of ground-borne and structure-borne vibration in the building design is important to ensure a quiet environment for the occupants.

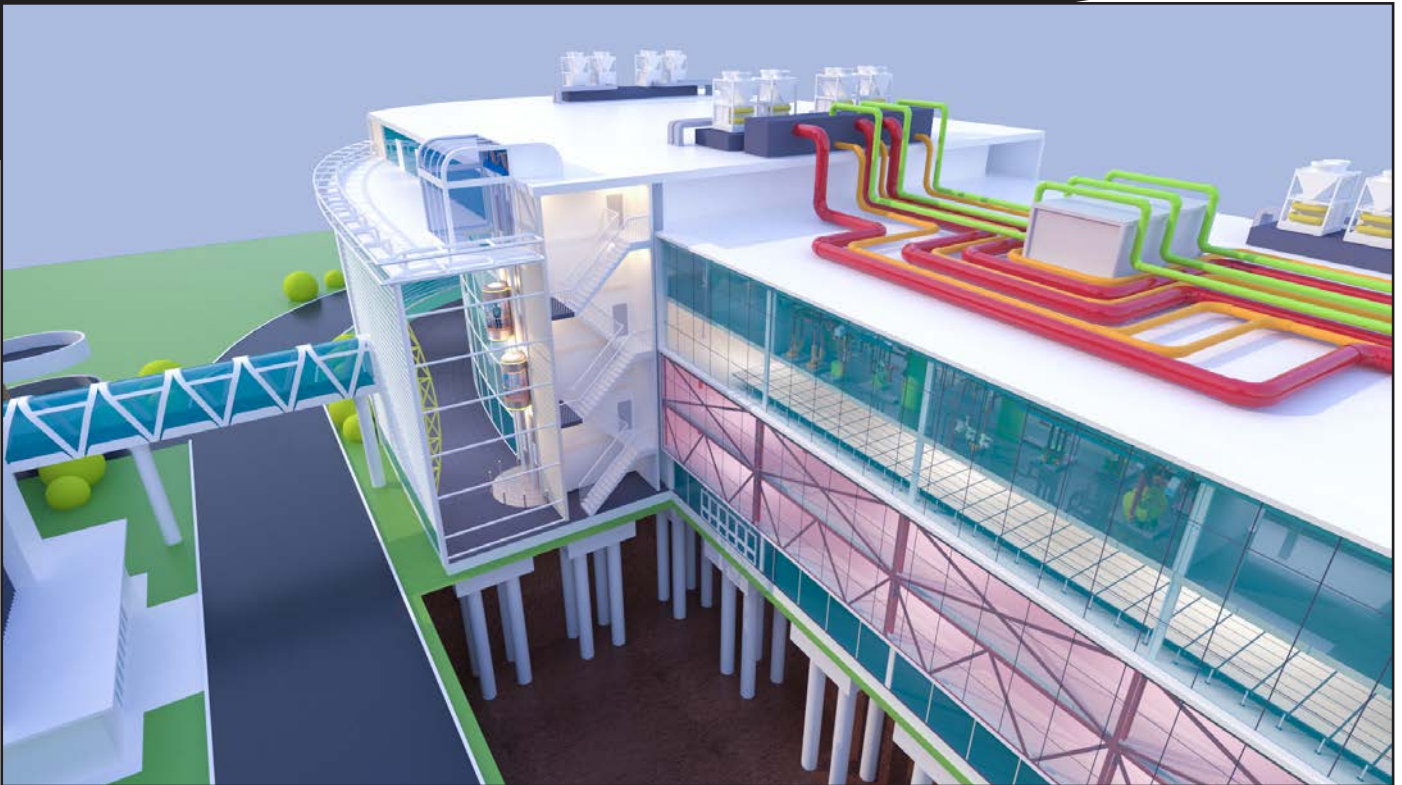
With vast experience and an extensive range of elastomers at our disposal, TICO are able to design and manufacture solutions to suit all your project requirements.





# TICO BEARINGS FOR ALL SITUATIONS

Whilst TICO Bearings can be used to attenuate ground-borne vibration through base isolation of a building, other vibration mitigation methods are available where this is not feasible or where it is desirable to isolate only parts of a structure.



Noise and vibration can take many forms - including airborne, impact and flanking, and the transmission routes these disturbances can take are many and varied. TICO has a number of solutions to prevent transmission of noise and vibration from one room or floor to another through the flooring, ceiling and wall construction.

## Key Benefits:



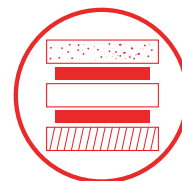
**Load range  
from 0.1 to  
15.5 MN/m<sup>2</sup>**



**Natural  
frequency  
down to 6Hz**



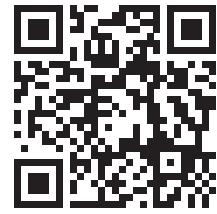
**Design life of  
50+ years**



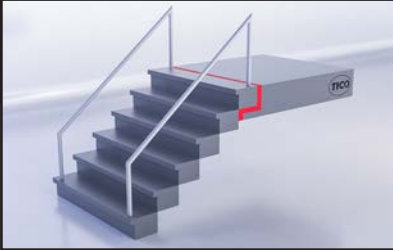
**Used between  
concrete, steel or  
CLT connections**



**Bespoke design  
to project  
specifications**



View Interactive  
3D model

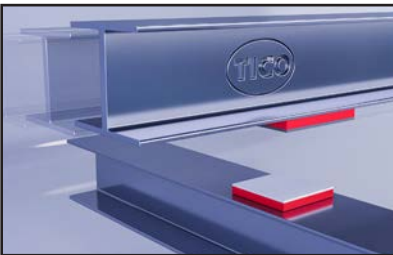
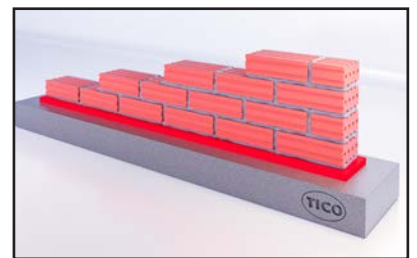


## STAIRCASES

TICO Resilient Seatings can be used to create a resilient barrier to mitigate vibration arising from impact and footfall travelling from the stairs into the surrounding structure.

## WALL BASES

Load bearing walls are a common source of flanking transmission within a structure. TICO Resilient Seatings are used to create a resilient separating layer beneath partition, stud or block walls.

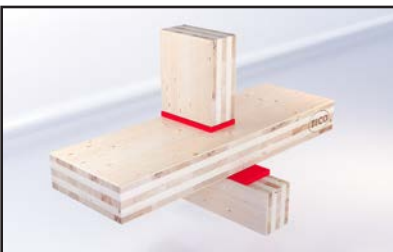
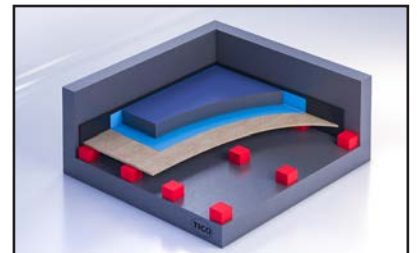


## SLIDE BEARING ASSEMBLIES

TICO Sliding Bearings are designed to accommodate small to large movements within a wide range of applications, e.g. movement joints.

## FLOATING FLOORS

TICO have multiple systems for creating floating floors to isolate low frequency vibration, for example as used in gyms, cinemas and music studios.



## CROSS LAMINATED TIMBER (CLT)

CLT structures have many benefits over traditional steel and concrete, including being lightweight. However, it is the lightness that can cause issues for building acoustics. TICO Resilient Seatings can be used to provide isolation in these areas.

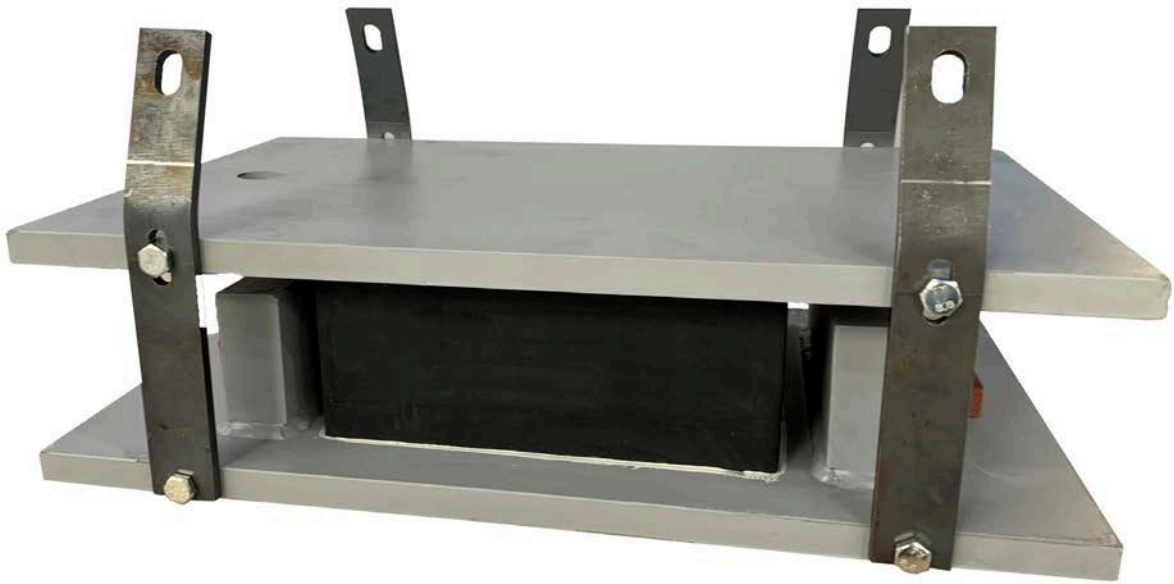
## STRUCTURAL STEEL

Untreated steel structural elements, e.g. beams, columns, and supports, will readily transmit vibration with little attenuation. TICO isolation pads create a resilient barrier to reduce noise and vibration passing between steel-steel and steel-concrete connections.



# SPECIALISTS IN BUILDING ISOLATION

TICO Bearing Pads can be installed directly between mating surfaces, in concrete, laminated timber and steel structures. If the application has specialist performance requirements, such as fail safes or shear restraints, then the bearings can be supplied within an assembly for ease of installation.



TICO Bearing Assembly.

## Key Benefits:



**Natural  
Frequency  
down to 6Hz**



**Load range  
from 0.1 to  
15.5 MN/m<sup>2</sup>**



**Design life of  
50+ years**

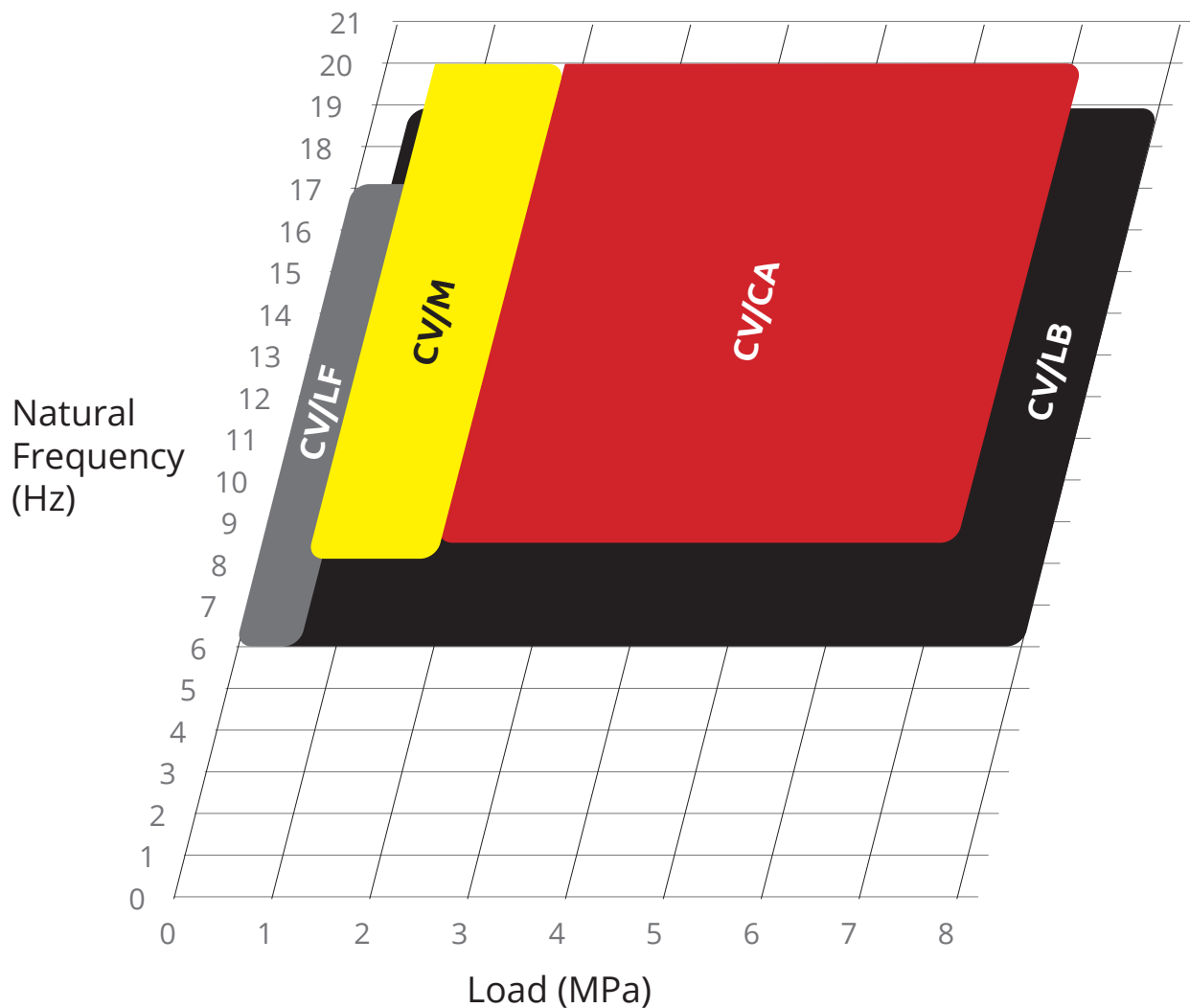


**Low long  
term creep**

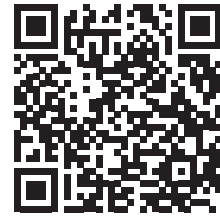


**Bespoke design  
to project  
specifications**

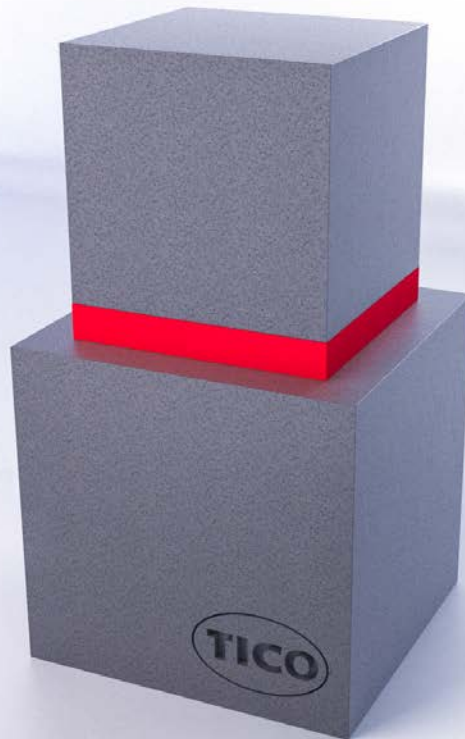
# PERFORMANCE RANGES



To achieve a major reduction in structural vibration transmission it is necessary to separate one part of a structure from another, or to isolate the structure completely from its foundations. Different grades of TICO Bearing are available to accommodate a wide range of load conditions.



View Online  
Content



## BEARING PADS

TICO Bearing Pads are primarily used for vibration isolation of buildings and structures. They are designed to protect a building from ground-borne noise such as metro, underground systems and road networks. They are also commonly used to isolate sensitive areas of a structure from their surroundings (e.g. in box in box constructions) as well as many other applications.

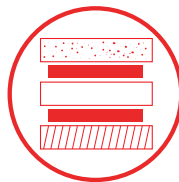
### Key Features:



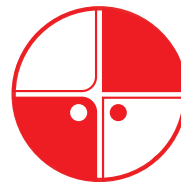
**Natural  
Frequency  
down to 6Hz**



**Ease of  
installation**



**Used between  
concrete, steel or  
CLT connections**

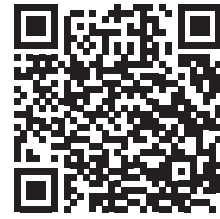


**Wide range of  
capabilities**



**TICO Bolting  
isolation**





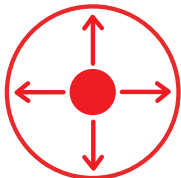
View 3D  
component video



## BEARING ASSEMBLIES

TICO Bearings Pads can be incorporated into a steel housing to create a TICO Bearing Assembly, providing enhanced safety and performance features. These assemblies are manufactured in our UK facility and provided as a complete unit ready to be installed on-site. Connectivity of TICO Bearing Assemblies can be tailored for use in concrete and steel structures.

### Key Features:



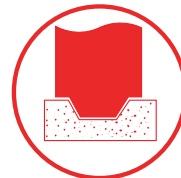
**Load  
spreading**



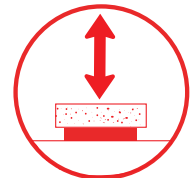
**Fail safes  
system**



**Lateral  
restraints**



**Shear keys**



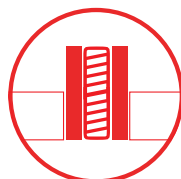
**Uplift  
bearings**



**Bearing  
replacements**



**Fire  
protection**



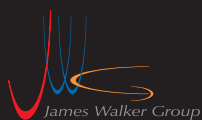
**Dowel  
isolation**



## STRUCTURAL ISOLATION

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TREADMASTER



treadmaster  
flooring

TRACKELAST

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