



BUILDING BASE ISOLATION



Welcome to CDM

We specialise in noise and vibration isolation solutions for buildings and industrial equipment.

Whatever type of building you have and whatever type of noise and vibration problem you have we can design a solution for you.

CDM's reputation is built on our passion for solving noise and vibration problems, our professional approach, engineering capabilities, technical excellence and most of all on our people – so if you have a problem related to noise and vibration then come and talk to us – we think you'll like what you hear.

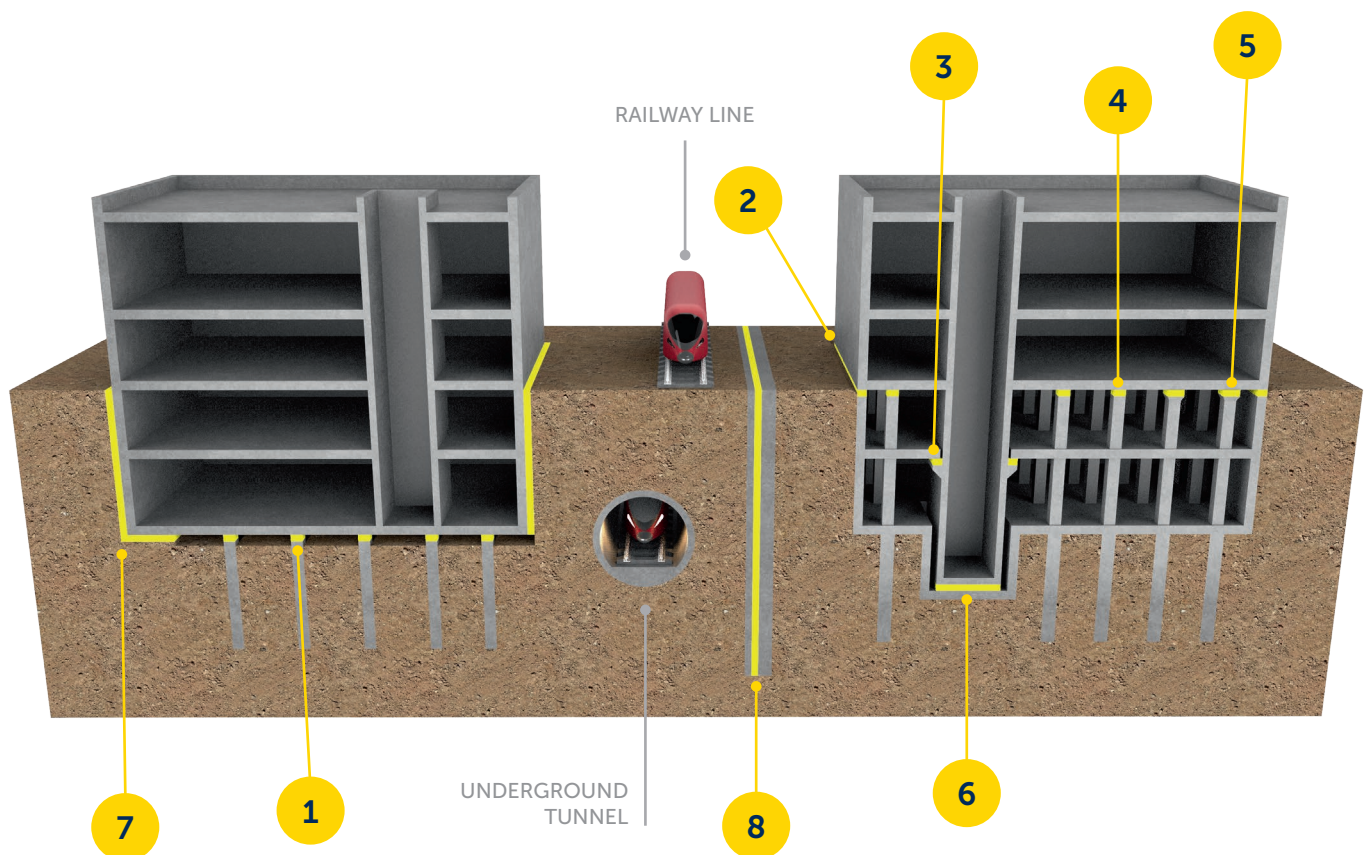
**CDM making
your world
a quieter place**

SOLUTIONS FOR BUILDING BASE ISOLATION

Today's requirement for sophisticated, highly complex multi-functional buildings within urban spaces is a challenge for designers, as there are many potential opportunities for noise nuisance which require careful consideration.

Most new buildings within cities are likely to be located within close proximity of a major source of noise and vibration, such as an underground tunnel, a railway line or a busy road. In order to protect a building from the consequential structure borne noise and vibration it is necessary to decouple it from the source by introducing building base isolation.

Since the early 1960's CDM has been a pioneer in building base isolation projects all over the world and thereby gained unrivalled experience. We offer a range of high performance noise and vibration solutions for every type of construction and requested performance.



DISCRETE LOAD BEARING SOLUTIONS

HIGH LOADS



CDM-SEB

SIMPLE ELASTOMER BEARINGS

CDM-SEB can be tailor-made to accommodate all types of construction applications such as load bearing masonry, reinforced concrete frames and steel constructions.

› Resonance frequency of 6-20Hz.



CDM-CHR

SIMPLE SPRING BEARINGS

CDM-CHR is a high performance, cost effective solution for structural isolation of concrete constructions.

› Resonance frequency of 2.5-5Hz.

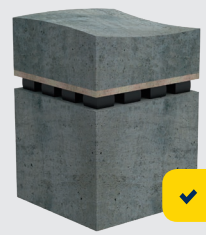


CDM-CHR-BOX

PRE-COMPRESSED SPRING BOXES

Pre-compressed CDM-CHR-BOXes limit deflection during construction. The CDM-CHR-BOX can be designed to meet different structural loads and acoustic performances.

› Resonance frequency of 2.5-5Hz.



CDM-FBT

PRE-COMPRESSED RESILIENT BEARINGS

The **patented CDM-FBT technique** enables bearing replacement without the need for major remedial works on site, the addition of bearings where structural loads have significantly increased or the addition of vibration isolation to existing structures which are undergoing renovation or change of use.

› Resonance frequency of 6-20Hz.



ACCESSORIES

failsafe: CDM solutions can, if required, include a failsafe system to control deflection. Integrated failsafes are available for the CDM-VHS bearings and the CDM-VHS-BOX.

shear keys: the building core, which may take high wind loads and moments, can be decoupled vertically and horizontally by introducing isolated shear keys.

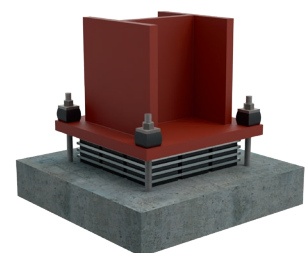
lateral isolation: lateral isolation can be designed to accommodate horizontal loads, different construction methods and the required vibration isolation.

fire protection: CDM can advise a solution for fire protection of the different Building Base Isolation systems.

replacement strategy: CDM-FBT technique allows CDM to replace elastomer bearings without disturbing the building's structure; which may become necessary if there is a significant change in the imposed loads.

seismic protection: shear keys, horizontal buffers and dowels can all be included in the design of Building Base Isolation systems to provide additional safety in seismic zones.

uplift bearings: CDM can design uplift bearings to provide stability in situations where significant column uplift is expected.



VERY HIGH LOADS



✓ patented

CDM-VHS

VERY HIGH STRESS BEARING

The **patented CDM-VHS bearings** are designed to support very high loads whilst minimising column size and reducing construction cost.

➤ **Resonance frequency of 8-20Hz.**

1 2 4 6



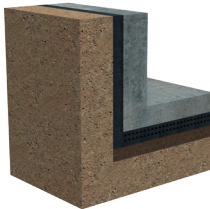
CDM-VHS-BOX

PRE-COMPRESSED VERY HIGH STRESS BEARINGS

The CDM-VHS-BOX is designed to support high loads, with a limited deflection during building construction.

➤ **Resonance frequency of 8-20Hz.**

1 2 4 6



CDM-RAFT

RESILIENT RAFT FOUNDATION

CDM-RAFT is a continuous support solution designed to protect the building from external vibration. It is available in a wide range of thicknesses which achieve different isolation performances.

➤ **Resonance frequency of > 10Hz.**

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CDM-TRENCH

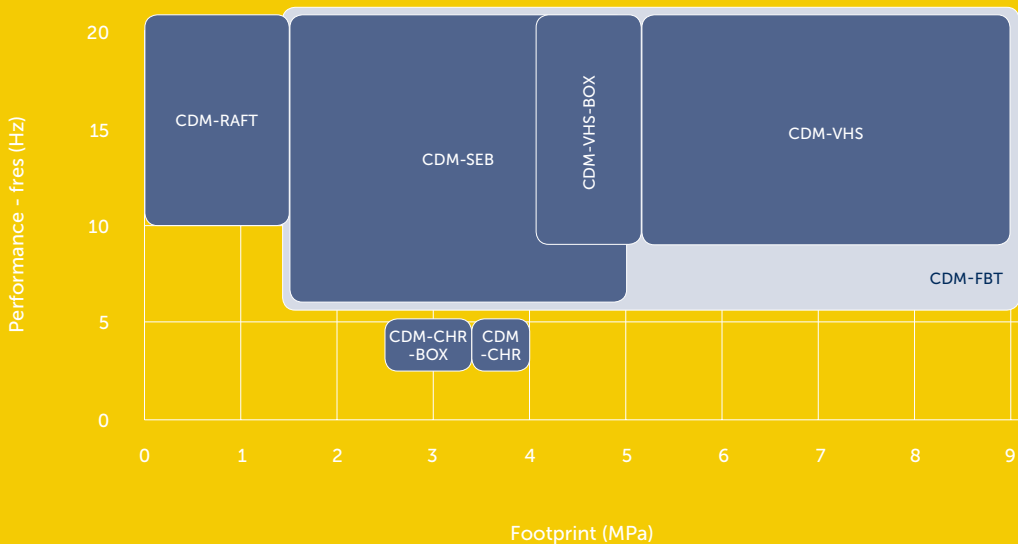
VERTICAL RESILIENT BARRIER

The CDM-TRENCH solution is a wave barrier designed to reduce vibrations from an external source reaching the foundation of the construction.

➤ **Resonance frequency of > 10Hz.**

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BUILDING BASE ISOLATION SELECTOR



Contact

We have qualified engineers in noise and vibration based at different locations around the world – they are only a phone call away so why not give them a call if you need help with your project.

For general enquiries please contact our head office on general@cdm.eu.

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