

Making your world a quieter place



LOOMS GENERATORS ELEVATORS PUMPS

INDUSTRY

CDM - Improving Industry

CDM is a Belgian company that has specialised in the field of noise and vibration isolation for over 60 years. With offices throughout the world we offer expert advice along with a comprehensive range of systems and solutions to help make your world a quieter place.

Most types of industrial plant, manufacturing machinery and building services equipment generate high levels of noise and vibration; which typically will result in impact, airborne and structure-borne noise nuisance. If left untreated, these high levels of noise and vibration can become a health and safety concern for people working in the immediate location, or in adjacent offices and buildings.

The long term degenerative effects of high levels of vibration on machinery are also a concern and can commonly be the cause of frequent breakdowns, expensive part replacement and loss of valuable production time.

CDM offers a wide range of high performance industrial noise and vibration solutions from our offices located throughout the world. Because there are many variables in size, type and functionality of machinery and equipment the vast majority of CDM's industrial solutions are bespoke; although we do also offer a range of systems for more standard applications.

Impact noise from presses require vibration control to avoid disturbance

Generators Pumps Elevators Printing & Metal Presses Weaving Looms Transformers



The background of the page is a photograph of several rolled-up white blueprints or technical drawings. The blueprints are stacked and partially unrolled, showing a grid pattern and some technical symbols. A yellow ruler with black markings is placed across the blueprints. The scene is lit from the side, creating soft shadows and highlights on the paper.

CDM – Drawing on our years of engineering experience

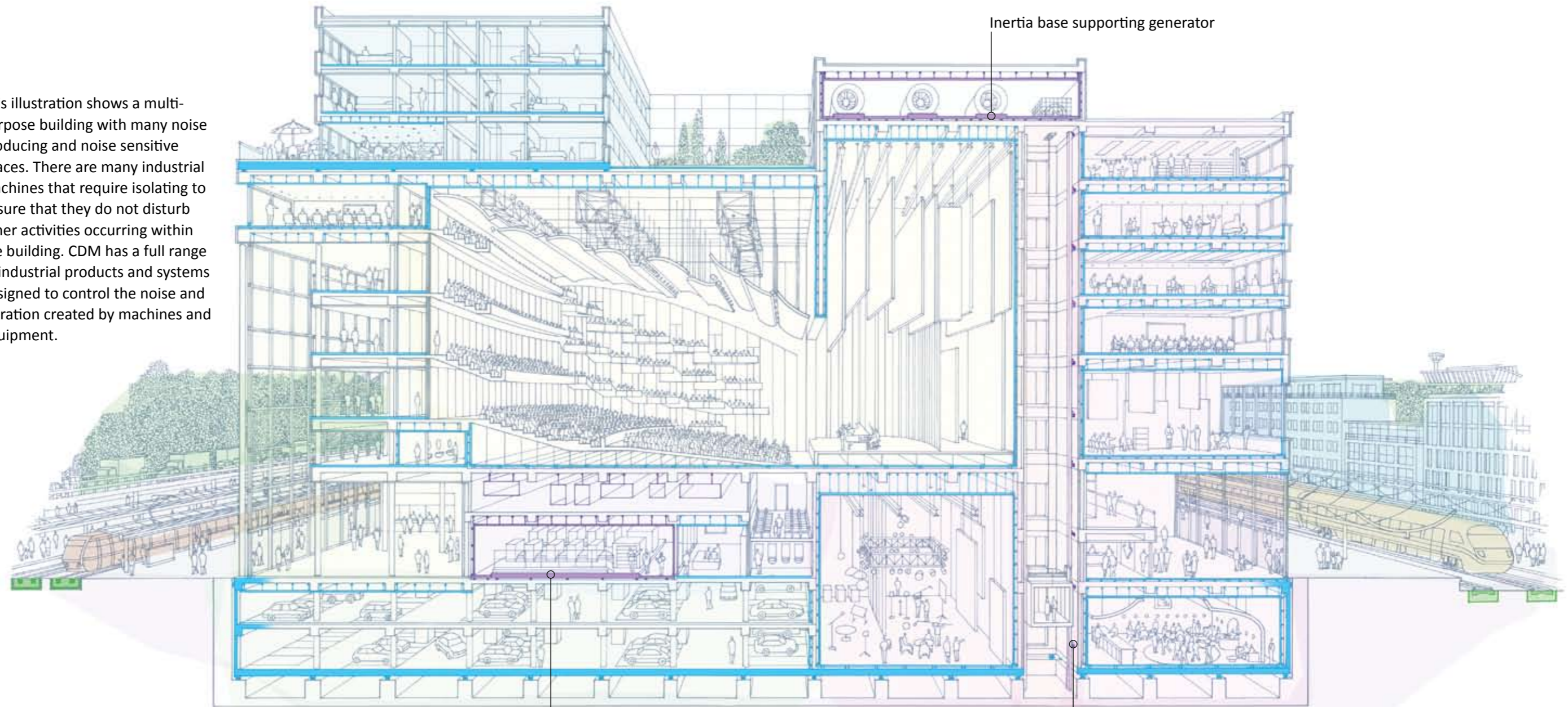
CDM's many years experience in the industrial market, highly skilled engineering team and sophisticated computer analysis software enables us to design solutions for even the most complex industrial noise and vibration application.

Our vast range of raw materials means our solutions are not restricted to any particular material type and our engineers can access test data for these materials, collected over many years from our own laboratory and other external facilities, to research all aspects of performance. You can be absolutely certain that the solution we design for you is technically the best available.

Our experienced team of draftsmen will communicate our designs on clear, concise drawings and installation plans to facilitate a quick and efficient site installation.



This illustration shows a multi-purpose building with many noise producing and noise sensitive spaces. There are many industrial machines that require isolating to ensure that they do not disturb other activities occurring within the building. CDM has a full range of industrial products and systems designed to control the noise and vibration created by machines and equipment.



Inertia base supporting generator

Printing press isolated on inertia base

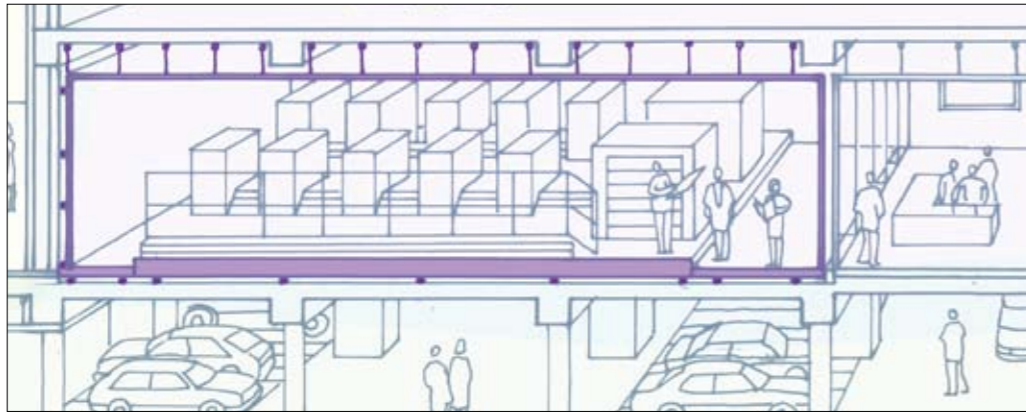
Elevator guide rail isolated from structure



Our standard systems are divided into two categories and following is a brief overview for each of them.

Machine Isolation Systems

The dynamic parts of large industrial machines will inevitably generate noise and vibration and, as they are usually mechanically secured to the supporting structure, high levels of structure-borne noise and vibration are likely. The introduction of isolation between the machine and its supporting structure is a very effective method of controlling the noise and vibration and has been successfully used in many different applications:



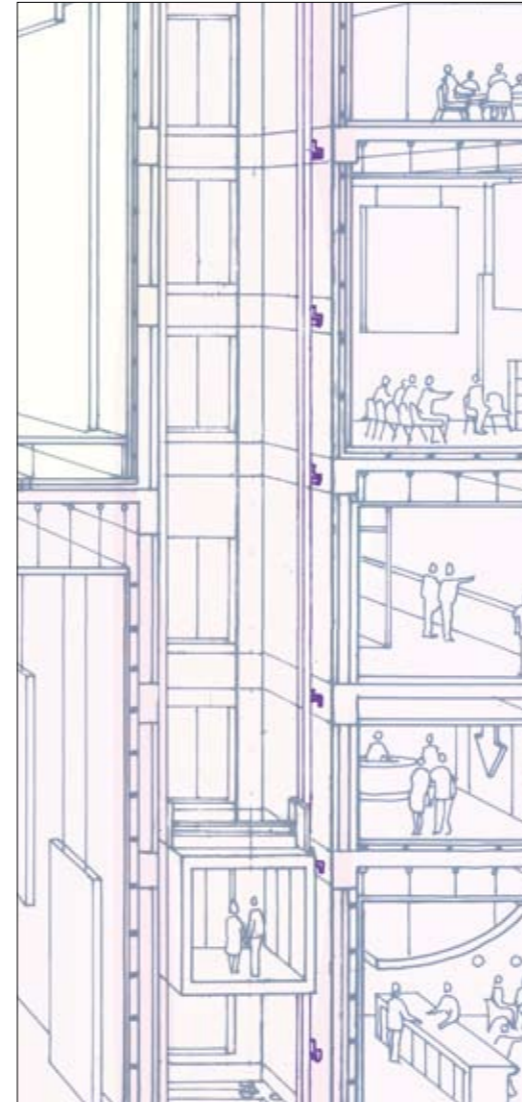
CDM-MACHINE-FIX a cost effective solution for machines generating medium vertical and horizontal forces

CDM-ELEVATOR-FIX comprising high performance elastomer pads, stabilisers and washers to de-couple running rails from the structure

CDM-MACHINE-FLOAT a fully isolated inertia base solution for machines generating large vertical and horizontal forces

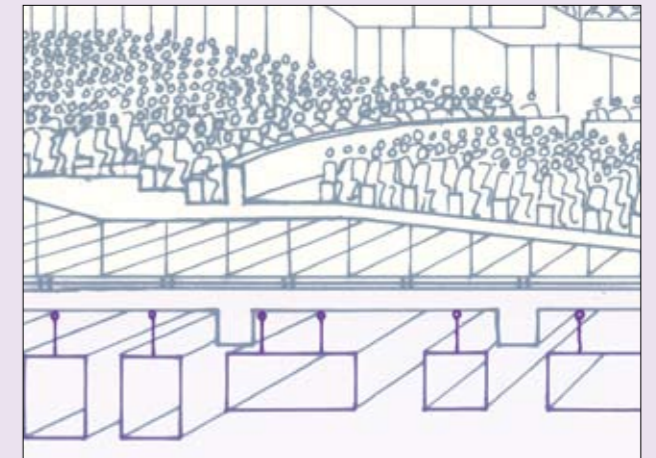
CDM-MACHINE-MONT a jack-up concrete inertia base system

In addition to our standard products and systems CDM designs and manufacturers many types of bespoke resilient elements which help minimise the transfer of vibration at joints and fixing locations of machines and pipes. Isolation of this type helps to maximise the lifespan of the mechanical equipment and limit the amount of vibration transmitted to the supporting structure.



Suspension Systems

Every new building will have mechanical equipment and a large quantity of pipes and ductwork which need to be suspended from the structure above. These building services produce noise and vibrations that travel into the building via the mechanical fixings which secure them. Providing suspension elements that effectively isolate the noise and vibration will significantly reduce the amount of structure-borne noise and vibration transmitted into the building.



CDM-PHS a range of hangers using elastomers elements

CDM-PHR a range of hangers using spring elements

CDM-PIPE a bespoke pipe fixing using elastomers, suitable for indoor and outdoor pipework



CDM – improving the workplace

Typical examples of where our industrial solutions can be used to minimise the effects of noise and vibration from machinery are:

Generators – many buildings, such as hospitals, banks and business premises require stand-by generators to provide a guaranteed source of continuous power. These large devices, which produce extremely high levels of noise and vibration are often located on the roofs of new buildings and careful attenuation is required to ensure these machines do not create disturbance to the noise sensitive spaces nearby.

Pumps – ranging from small pumps for domestic applications to large pumps for industrial purposes, they are located in all types of buildings from the smallest apartment to huge commercial developments. The vibration generated by pumps has great potential for noise nuisance and will usually require isolation from the building structure to prevent this.

Generators Pumps Elevators Printing & Metal Presses Weaving Looms Transformers

Elevators – as modern cities become increasingly high-rise, buildings require faster more efficient elevators to transport users over higher distances. Every lift has a machine room either pulling or pushing the lift and the machinery within these rooms may require isolation to avoid disturbance to nearby occupants. There is also likely to be a further requirement to isolate the running rails of the lifts to decouple them from the supporting structure in order to minimise structure-borne noise.

Printing Presses – many types of printed media, such as newspapers and magazines, are manufactured on large printing presses that generate high levels of noise and vibration. These machines are often located close to offices and other places where they can cause disruption to communication and the overall wellbeing of people working in these areas. Isolation can be introduced to protect people from the stressful and unproductive effects of working with high levels of noise and vibration.

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Metal Presses – metal and other kinds of material presses exert large impact forces during the production process of various finished products. This percussive movement creates large amounts of vibration and noise and machines often require isolation to prevent them from impacting on nearby activities.

Weaving Looms – industrial textile machinery has advanced significantly over the past few decades and weaving looms are now enormous machines that generate large amounts of vibration and noise. A very successful method of isolation is to locate these machines on large concrete inertia bases to prevent the vibrations disturbing nearby areas and to protect the machine from damage.

Transformers – the 50Hz hum and harmonics are characteristics of all transformers and this heavily tonal noise and vibration requires careful isolation to ensure it is not audible above background noise levels in nearby sensitive spaces.

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