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# Anti-Vibration range

# Competitive and high performance solutions



# Anti-Vibration & Structural Isolation

Vibration and shock control is critical in a wide range of applications, spanning construction, industrial, heavy industry and precision metrology.

The decline in land available for development has brought the issue of vibration control to the fore. From the ground borne vibrations associated with construction on brownfield sites to the potential structural noise deriving from service lines in high-rise buildings, developers are faced with vibration challenges at all stages.

Where industry is concerned effective vibration control is also essential. With increasingly sophisticated and expensive machinery, it is more important than ever to protect industrial equipment from external vibrations, which can compromise performance and even cause damage.



# The Complete Solution: Noise & Vibration Control

Operating purely in the anti-vibration and structural isolation marketplace, CMS Vibrations has an in-house technical design team trained to advise on system specification through to site assessment and product installation.

Whatever the anti-vibration or structural isolation requirement, the CMS Vibrations technical team will draw upon a vast body of internal knowledge and experience to calculate and deliver the most cost effective and high performing solutions. Whether this is bespoke design and manufacture, or cost analysis of an existing specification, CMS Vibrations is a proven leader in this highly specialist field.

Through exclusive UK partnerships with market leading manufacturers, CMS Vibrations delivers access to an unrivalled portfolio of anti-vibration and structural isolation solutions. This includes the Regupol® and Regufoam® range of high performance systems, the comprehensive Kinetics Noise Control offering and vibration products from Effbe and GERB.

A portfolio of over 500 products is available from stock, held in regional distribution centres in the north and south of England. Same day collection or delivery to site using CMS Vibrations' own fleet of vehicles is also available.

In addition to stock items, CMS Vibrations is able to bespoke design and manufacture specialist systems. With in-house manufacturing facilities, these systems can be designed and delivered on-site to meet any project timescale.

Flexible and responsive, the CMS Vibrations service continues right through to site assessment and installation. Delivered through a team of manufacturer-qualified installation engineers, this nationwide installation service is available on all products.

# Working with CMS Vibrations you will benefit from:

- The broadest choice of anti-vibration products from a single source
- A complete turnkey solution package, including installation
- Full national coverage backed up by external field support
- Access to fully trained staff able to value engineer any specification

# News International Printing Presses

Regupol® RAV300 Structural Isolation



Client Contractor Area News International Carillion 700 Linear meters

# In brief

CMS Vibration Solutions recommended Regupol® RAV300 to isolate newspaper printing press foundations at News International's new printing facility in Broxbourne.

# Project scope

As one of the world's largest and newest printworks, anti-vibration treatment to the foundations was required to prevent structural vibration and to prolong the life of the printing presses.

To achieve this, 700 linear metres of Regupol® RAV300 was installed around the foundation's perimeter. This directly isolated five foundation blocks from the surrounding floor slab and supported a total of ten newspaper printing presses.

By reducing the passage of vibration into and out of the press foundations, Regupol® RAV300 helped to protect the offices and building structure from excessive structural noise along with isolating the press machinery from ground borne sources of vibration and shock.

# One Southampton Row

Regufoam®/Regupol® RAV200 Foundation Isolation



Client Main Contractor Isolation Area Grandsoft Ltd Bovis Lend Lease 2,000m<sup>2</sup>

# In brief

A combination of Regupol® RAV and Regufoam® materials was used to isolate the foundations at One Southampton Row, a seven-storey office and retail scheme in London. The foundations were treated to prevent current and future vibrations, generated from tube and railway lines, from causing structural noise within the building structure.

# Project scope

To protect the 2,000m² foundation, CMS Vibrations installed 50mm thick Regufoam® materials under the concrete raft. Regufoam® materials were also used to isolate the raft foundation of the basement to prevent vibrations from traveling through it and into the basement walls and structure above.

CMS Vibrations recommended additional isolation of the perimeter basement walls to eliminate vibration transmission through the soil and substrate. To achieve this, Regufoam® 400 was installed on the vertical plane up to the first meter, while Regupol® RAV200, a recycled rubber granulate material, lined the wall up to ground level.

### Results

A natural frequency of 12Hz or under had been specified for the raft foundation and 16Hz or less for the basement walls. Outperforming these requirements, CMS Vibrations delivered a system that achieved natural frequencies ranging from 8Hz to 12Hz.

David Davies, project manager, BLL, comments: "CMS Vibrations were really flexible in their approach. They provided an effective system to meet our requirements and continued to be responsive to changing site programmes during the installation."

# Bridgewater Cinema

Kinetics RIM-C Floating Floor



Client Contractor Acoustic consultant Structural Engineer Bridgewater Centre Cinemas Patton Fit-Out AWN Consulting Barrett Mahoney Consulting Engineers

# In brief

The Kinetics Roll-out Isolation Material (RIM-C) floating concrete floor system was installed by Patton Fit-Out to structurally isolate nine cinema blocks at the new Bridgewater Centre in Arklow, Ireland. The RIM-C systems were designed to prevent unwanted structural noise and flanking sound transmission.

# Project scope

As the Bridgewater Centre cinema complex is situated above a flagship Dunnes store, the cinema blocks not only needed to be isolated from each other, but also from the rest of the retail complex. To achieve this, CMS Vibrations supplied a Kinetics RIM-C system. Consisting of one to four inch thick Kinetics Isolation Pads (KIPs) fixed in fibreglass matting, the RIM-C system essentially 'floats' the concrete floor slab.

In order to spread the loads evenly, over 6,000 KIPs were laid on 450mm centres in the non-seating areas and 30mm centres in the higher load bearing seating sections of the cinemas.

# Results

By identifying RIM-C as an appropriate solution, CMS Vibrations was able to go above and beyond the project requirements, delivering a constant natural frequency of between 11Hz and 13Hz.

The overall result was that the noise-generated vibrations could not travel into the building structure and result as nuisance noise in adjoining screens and the Dunnes store below.



# **Natural Frequency**

# Regupol® RAV100

Regupol® RAV100 is a high performing, yet cost effective polyurethane bound rubber granulate material that dampens and isolates noise and vibrations at source

### Features & Benefits

- Excellent dampening and isolation characteristics with one side dimpled to enhance the performance
- Delivers excellent isolation characteristics under light loads
- Applications include floating floors, lift motors, pumps, inertia pits and air conditioning units
- Extensive independent testing conducted by the 'Institute of Structural Dynamics' at the Technical University of Dresden
- Maximum load bearing capacity of 0.05N/mm<sup>2</sup> (5000kg/m<sup>2</sup>)
- Supplied in easy to lay rolls or can be individually cut into pads/strips to suit exact installation
- Completely recycled and 100% recyclable

# **Physical Information**

Regupol® is made of polyurethane-bound rubber

granulate

**Thickness** 17mm (dimpled on one side) Roll dimensions 10m x 1.25m (strips and/or

0.05N/mm<sup>2</sup>

pads are available on request)

Permanent static

load range

# **Technical Information**

Compression Set	DIN 53572	approx. 4.10	%	Measured 30 minutes after decompression with 50% deformation/ 23°C after 72 hrs
Tensile Strength	DIN 53571	0.30	N/mm²	Minimum
Elongation at Break	DIN 53571	60	%	Minimum
Tear-Resistance	DIN 53515	3.0	N/mm	Minimum
Static Modulus of Elasticity	Simi <b>l</b> ar to EN 826	0.10-0.44	N/mm²	Tangential modulus
Dynamic Modulus of Elasticity	DIN 53513	0.15-1.10	N/mm²	Depending on load and frequency



# Regupol® RAV200

Regupol® RAV200 is a high performing and cost effective polyurethane bound rubber granulate material designed to dampen and isolate vibration and noise at source where light to medium loads are prevalent

### Features & Benefits

- Excellent dampening and isolation characteristics
- Extensive independent testing conducted by the 'Institute of Structural Dynamics' at the University of Dresden
- Applications include lift motors, pumps, refrigeration units, plant and machinery, inertia pits, sensitive areas, machinery with out of balance forces and machinery with vertical shock loads
- Retains its performance properties throughout a long and maintenance free lifespan
- Maximum load bearing capacity of up to 0.10N/mm² (10000kg/m<sup>2</sup>)
- Supplied in easy to lay rolls or can be individually cut into pads/strips to suit exact installation
- Completely recycled and 100% recyclable

# Physical Information

Regupol® is made of polyurethane-bound rubber granulate

Thickness

10 & 15mm (other thicknesses available upon request)

Roll dimensions

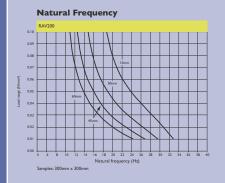
10m x 1.25m (strips and/or pads are available on request)

Permanent static 0.1N/mm<sup>2</sup>

load range

# **Technical Information**

Compression Set	DIN 53572	'2 approx. 4.0 %		Measured 30 minutes after decompression with 50% deformation/ 23°C after 72 hrs
Tensile Strength	DIN 53571	0.40	N/mm²	Minimum
Elongation at Break	DIN 53571	70	%	Minimum
Tear-Resistance	DIN 53515	3.40	N/mm	Minimum
Static Modulus of Elasticity	Similar to EN 826	0.8-0.9	N/mm²	Tangential modulus
Dynamic Modulus of Elasticity	DIN 53513	0.6-2.20	N/mm²	Depending on load and frequency



# Regupol® RAV300

Regupol® RAV300 is a high performing and cost effective polyurethane bound rubber granulate material developed to dampen and isolate noise and vibrations at source, whether in horizontal or vertical plains

# Features & Benefits

- Excellent dampening and isolation characteristics
- Extensive independent testing conducted by the 'Institute of Structural Dynamics' at the University of Dresden
- Maximum load bearing capacity of up to 0.10N/mm<sup>2</sup> (10000kg/m²)
- Applications include plant and machinery, inertia pits, plinth bases, machinery with vertical shock loads, structural isolation of perimeter walls, recording and dance studios
- Supplied in easy to lay sheets with individual pads/strips available on request
- Completely recycled and 100% recyclable

# **Physical Information**

Regupol® is made of polyurethane-bound rubber

granulate

**Thickness** 50mm & 100mm (other

thicknesses available upon request)

Sheet dimensions 1000mm x 500mm (strips and/or

pads are available on request)

Permanent static 0.1N/mm<sup>2</sup>

load range

# **Technical Information**

Compression Set	DIN 53572	approx. 5.40	%	Measured 30 minutes after decompression with 50% deformation/ 23°C after 72 hrs			
Tensile Strength	DIN 53571	0.33	N/mm²	Minimum			
Elongation at Break	DIN 53571	50	%	Minimum			
Tear-Resistance	D <b>I</b> N 53515	2,30	N/mm	Minimum			
Static Modulus of Elasticity	Similar to EN 826	0.25-0.75	N/mm²	Tangential modulus			
Dynamic Modulus of Elasticity	DIN 53513	0.60-2.90	N/mm²	Depending on load and frequency			



# Natural Frequer

# Regupol® RAV400

Regupol® RAV400 is a high performing and cost effective polyurethane bound rubber granulate material designed for anti-vibration and structural isolation applications

### Features & Benefits

- Excellent dampening and isolation with high load bearing characteristics
- Extensive independent testing conducted by the 'Institute of Structural Dynamics' at the University of Dresden
- Maximum load bearing capacity of up to 0.25N/mm<sup>2</sup> (25000kg/m<sup>2</sup>)
- Supplied in easy to lay rolls or can be individually cut into pads/strips to suit exact installation
- Applications include lift motors, heavy plant, inertia pits, machinery with out of balance forces and vertical shock loads, sensitive areas and structural
- Completely recycled and 100% recyclable

# **Physical Information**

Regupol® is made of polyurethane-bound rubber granulate

Thickness 6mm & 15mm (other thicknesses available upon

request)

Roll dimensions 10m x 1.25m (strips and/or pads

are available on request) 0.25N/mm<sup>2</sup>

load range

Permanent static

# **Technical Information**

Compression Set	DIN 53572	2 approx. 4.60 %		Measured 30 minutes after decompression with 50% deformation/ 23°C after 72 hrs
Tensile Strength	DIN 53571	0.65	N/mm²	Minimum
Elongation at Break	DIN 53571	65	%	Minimum
Tear-Resistance	DIN 53515	6.0	N/mm	Minimum
Static Modulus of Elasticity	Similar to EN 826	1.20-1.90	N/mm²	Tangential modulus
Dynamic Modulus of Elasticity	DIN 53513	1.10-4.40	N/mm²	Depending on load and frequency



# Regupol® RAV500

Regupol® RAV500 is a high load bearing and cost effective polyurethane bound rubber granulate material designed for the dampening and isolation of noise and vibrations in critical and non critical areas

# Features & Benefits

- · Excellent dampening and isolation characteristics
- Extensive independent testing conducted by the 'Institute of Structural Dynamics' at the University of Dresden
- Maximum load bearing capacity of up to 0.8N/mm<sup>2</sup> (80000kg/m<sup>2</sup>)
- Applications include heavy plant, inertias pits, machinery with out of balance forces, machinery with vertical shock loads, sensitive areas, structural isolation, foundation isolation and road and tunnel construction
- Supplied in easy to lay rolls or can be individually cut into pads/strips to suit exact installation
- Completely recycled and 100% recyclable

# **Physical Information**

Regupol® is made of polyurethane-bound rubber granulate

**Thickness** 

6mm & 10mm (other thicknesses available upon

request)

Roll dimensions 8m x 1.25m (strips and/or pads

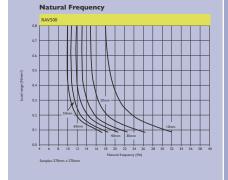
are available on request)

0.8N/mm<sup>2</sup> Permanent static

load range

# **Technical Information**

Compression Set	DIN 53572	approx. 5.90 %		Measured 30 minutes after decompression with 50% deformation/ 23°C after 72 hrs
Tensile Strength	DIN 53571	0.90	N/mm²	Minimum
Elongation at Break	DIN 53571	85	%	Minimum
Tear-Resistance	D <b>I</b> N 53515	8.0	N/mm	Minimum
Static Modulus of Elasticity	Similar to EN 826	2,50-5,50	N/mm²	Tangential modulus
Dynamic Modulus of Elasticity	D <b>I</b> N 53513	3.0-8.80	N/mm²	Depending on load and frequency



# Regupol® RAV600

Regupol® RAV600 is a very high load bearing polyurethane bound rubber granulate material designed for structural isolation applications

# Features & Benefits

- Excellent acoustic properties with very high load bearing characteristics
- Extensive independent testing conducted by the 'Institute of Structural Dynamics' at the University of Dresden
- Maximum load bearing capacity of up to 1.5N/mm² (150000kg/m<sup>2</sup>)
- Applications include heavy duty machinery, machinery with vertical shock loads, structural isolation and foundation isolation
- Supplied in sheets or can be individually cut into pads/strips to suit exact
- Completely recycled and 100% recyclable

# **Physical Information**

Regupol® is made of polyurethane-bound rubber granulate

Thickness 10mm (other thicknesses available on request)

8m x 1.25m (strips and/or pads

are available on request)

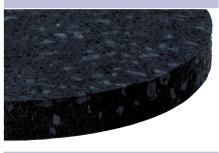
Permanent static 1.5N/mm<sup>2</sup>

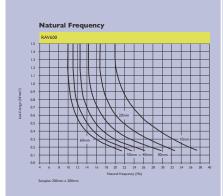
load range

Roll dimensions

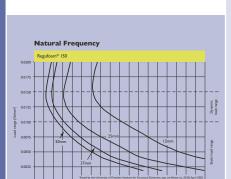
# Technical Information

Compression Set	DIN 53572	approx. 5.0	%	Measured 30 minutes after decompression with 50% deformation/ 23°C after 72 hrs			
Tensile Strength	D <b>I</b> N 53571	2.20	N/mm²	Minimum			
Elongation at Break	DIN 53571	120	%	Minimum			
Tear-Resistance	D <b>I</b> N 53515	16.0	N/mm	Minimum			
Static Modulus of Elasticity	Similar to EN 826	9.80-14.0	N/mm²	Tangential modulus			
Dynamic Modulus of Elasticity	D <b>I</b> N 53513	4.0-18.50	N/mm²	Depending on load and frequency			









# Regufoam® 150

Regufoam® 150 is a high quality PUR foam specially developed and formulated to attenuate noise and vibrations from all sources ranging from general mechanical plant to hi-tech railway systems

### Features & Benefits

- Excellent acoustic properties
- Can be used as simple a/v mounts or for structural
- Can be used for very light loads, achieving high damping ratios and low natural frequencies
- Capable of achieving a natural frequency as low as
- Maximum static load bearing capacity of 0.01Nmm²
- Low compression ratio, combined with excellent
- Individual form designs available upon request
- Excellent recovery properties and long life span
- · 100% recyclable

# **Physical Information**

Roll dimensions\* 5m x 1.5m Standard thickness 12mm & 25mm

Cellular Polyurethane (PUR) / Material basis Mixed cell structure

Beige Colour

\* Also available in bespoke dimensions and as moulded items

# **Technical Information**

Permanent static load range: 0 to 0.010Nmm<sup>2</sup> Permanent and variable loads/ 0 to 0.015Nmm<sup>2</sup>

operating load ranges

Rare and short-term loads/

Up to 0.50Nmm<sup>2</sup>

load parts



# Regufoam® 220

Regufoam® 220 is a high quality PUR foam specially developed and formulated to attenuate noise and vibrations from all sources ranging from general mechanical plant to hi-tech railway systems

# Features & Benefits

- Excellent acoustic properties
- Can be used as simple a/v mounts or for structural isolation
- Can be used for very light loads, achieving high damping ratios and low natural frequencies
- Capable of achieving a natural frequency as low as
- Maximum static load bearing capacity of 0.025Nmm<sup>2</sup>
- Low compression ratio, combined with excellent resilience
- Individual form designs available upon request
- Excellent recovery properties and long life span
- 100% recyclable

# **Physical Information**

Roll dimensions\* 5m x 1.5m Standard thickness 12mm & 25mm

Material basis Cellular Polyurethane (PUR) /

Mixed cell structure

Colour Purple

\* Also available in bespoke dimensions and as moulded items

# Technical Information

0 to 0.025Nmm<sup>2</sup> Permanent static load range: Permanent and variable loads/

0 to 0.035Nmm<sup>2</sup>

operating load ranges

Rare and short-term loads/ load parts

Up to 1.0Nmm<sup>2</sup>

# Regufoam® 300

Regufoam® 300 is a high quality PUR foam specially developed and formulated to attenuate noise and vibrations from all sources ranging from general mechanical plant to hi-tech railway systems

# Features & Benefits

- Excellent acoustic properties
- Can be used as simple a/v mounts or for structural isolation
- Can be used for very light loads, achieving high damping ratios and low natural frequencies
- Capable of achieving a natural frequency as low as
- Maximum static load bearing capacity of up to 0.05Nmm<sup>2</sup>
- Low compression ratio, combined with excellent
- Individual form designs available upon request
- Excellent recovery properties and long life span
- 100% recyclable

# **Physical Information**

Roll dimensions\* 5m x 1.5m Standard thickness 12mm & 25mm

Material basis Cellular Polyurethane (PUR) /

Mixed cell structure

Colour Turquoise

\* Also available in bespoke dimensions and as moulded items

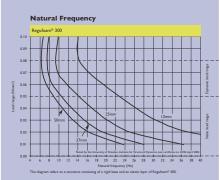
# **Technical Information**

Permanent static load range: 0 to 0.05Nmm<sup>2</sup> Permanent and variable loads/ 0 to 0.08Nmm<sup>2</sup>

operating load ranges

Rare and short-term loads/ Up to 2.0Nmm<sup>2</sup>

load parts





# Natural Frequency Regulator 400 0.175 0.125 0.125 0.125 0.126 0.120 0.127 1.2mn 0.000 1.2mn

# Regufoam® 400

Regufoam® 400 is a high quality PUR foam specially developed and formulated to attenuate noise and vibrations from all sources ranging from general mechanical plant to hi-tech railway systems

### Features & Benefits

- Excellent acoustic properties
- Can be used as simple a/v mounts or for structural isolation
- Can be used for very light loads, achieving high damping ratios and low natural frequencies
- Capable of achieving a natural frequency as low as 7Hz
- · Maximum static load bearing capacity of 0.1Nmm<sup>2</sup>
- Low compression ratio, combined with excellent resilience
- · Individual form designs available upon request
- · Excellent recovery properties and long life span
- 100% recyclable

# **Physical Information**

Roll dimensions\* 5m x 1.5m Standard thickness 12mm & 25mm

Material basis Cellular Polyurethane (PUR) /

Mixed cell structure

Colour Brick red

\* Also available in bespoke dimensions and as moulded items

# Technical Information

Permanent static load range: 0 to 0.10Nmm²
Permanent and variable loads/ 0 to 0.15Nmm²

operating load ranges
Rare and short-term loads/

Up to 3.0Nmm<sup>2</sup>

load parts



Natural Frequency

# Regufoam® 510

Regufoam® 510 is a high quality PUR foam specially developed and formulated to attenuate noise and vibrations from all sources ranging from general mechanical plant to hi-tech railway systems

### Features & Benefits

- · Excellent acoustic properties
- Can be used as simple a/v mounts or for structural isolation
- Can be used for very light loads, achieving high damping ratios and low natural frequencies
- Capable of achieving a natural frequency as low as 7Hz
- Maximum static load bearing capacity of 0.2Nmm<sup>2</sup>
- Low compression ratio, combined with excellent resilience
- · Individual form designs available upon request
- Excellent recovery properties and long life span
- 100% recyclable

# Physical Information

Roll dimensions\* 5m x 1.5m Standard thickness 12mm & 25mm

Material basis Cellular Polyurethane (PUR) /

Mixed cell structure

Colour Orange

\* Also available in bespoke dimensions and as moulded items

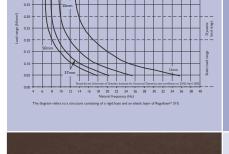
# **Technical Information**

Permanent static load range: 0 to 0.2Nmm²
Permanent and variable loads/ 0 to 0.3Nmm²
operating load ranges

Rare and short-term loads/

ads/ Up to 4.0Nmm<sup>2</sup>

load parts





Regufoam® 680 is a high quality PUR foam specially developed and formulated to attenuate noise and vibrations from all sources ranging from general mechanical plant to hi-tech railway systems

# Features & Benefits

- · Excellent acoustic properties
- Can be used as simple a/v mounts or for structural isolation
- Can be used for very light loads, achieving high damping ratios and low natural frequencies
- Capable of achieving a natural frequency as low as 7Hz
- Maximum static load bearing capacity of 0.4Nmm²
- Low compression ratio, combined with excellent resilience
- Individual form designs available upon request
- · Excellent recovery properties and long life span
- 100% recyclable

# Physical Information

Roll dimensions\* 5m x 1.5m
Standard thickness 12mm & 25mm

Material basis Cellular Polyurethane (PUR) /

Mixed cell structure

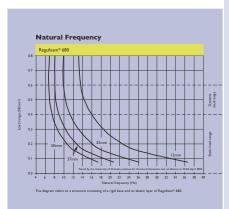
Colour Brown

\* Also available in bespoke dimensions and as moulded items

# **Technical Information**

Permanent static load range: 0 to 0.4Nmm²
Permanent and variable loads/ 0 to 0.6Nmm²
operating load ranges

Rare and short-term loads/ load parts Up to 5.0Nmm²





# **Floating Floors**

CMS Vibrations provides exclusive access to a range of floating floor solutions including the Kinetics Roll-out Isolation Material (RIM) systems, jack up floors and the Regupol® RAV range for high performance isolation

# **Applications**

Floor isolation systems are incorporated into building design to minimise impact noise and airborne sound transmissions. These systems are generally used in applications such as mixed used developments, leisure facilities, bowling alleys, dance studios, hotels and cinemas

# Kinetics Roll-out Isolation Material (RIM)

Available as either a concrete floated floor (RIM-C) or timber floated construction (RIM-W), the RIM system offers high performance isolation. Key to RIM system performance is the Kinetics Isolation Pad (KIP). These fibreglass isolators maintain a constant natural frequency across a wide load range

- · Cost effective isolation solution
- · Can be designed for any load range
- Easy to create 25mm, 50mm, 75mm and 100mm air spaces
- · Fast, simple, inexpensive installation
- Natural frequency constant over a wide load range
- RIM-W recommended where the structure cannot support the weight of an isolated concrete slab

# Jack-Up Floor

Jack-up floors, also known as lift slab floating floor systems, incorporate spring isolator assemblies to decouple concrete slabs from non-isolated structural floors. They are used where vibration and impact are critical and of greater concern than airborne noise transmission.

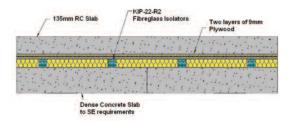
- Fabricated, non-cast isolator housings permit flexible product and system design
- Can accommodate any slab thickness, air cavity, and/or load options
- · Range of spring isolator frequencies available
- Spring/neoprene cup combination improves performance against low-frequency noise
- · Factory installation and supervision available

# Regupol® RAV

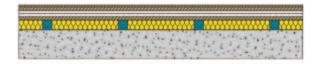
Constructed of polyurethane bound rubber materials, Regupol® RAV products are fully recyclable and highly adaptable, offering a high performance and environmentally floating floor solution

- High load bearing capacity and excellent damping properties
- · Completely recyclable
- Wide choice of material grades available
- Products with a load bearing range up to and including 1.5N/mm²
- Independently tested by the Institute of Structural Dynamics at Dresden Technical University for static and dynamic behaviour
- Supplied in easy to lay rolls

# Example floor build-up RIM-C



# Example floor build-up RIM-W



# Typical Construction 100mm Concrete Slab, 50mm Airspace, 25mm or 50mm Deflection Steel Load Plate Allen Head Leveling Bolt LSM Housing Flat Head Allen Screw Coil Spring Neoprene Bottom Spring Cup







# **Isolation Hangers**

CMS Vibrations offers the complete Kinetics line of vibration isolation hangers which includes isolation hangers for light duty and high frequency noise applications and deflection isolation hangers to control noise and vibration from suspended sources

# **Applications**

A broad choice of isolation hangers is available, providing a solution to vibration challenges in a wide range of applications. This includes:

- Piping
- Ductwork
- · Suspended mechanical equipment

# Features & Benefits

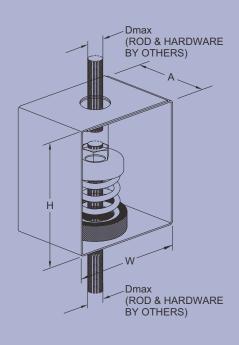
- Available in a wide range of load and static deflection selections
- Hangers can be shipped fully assembled and ready for installation
- Can be provided with labour-saving accessories for pre-loading ease in erecting pipe at a fixed elevation
- · Colour-coded springs to indicate load capacity
- Epoxy powder coated bracket and spring coil
- Constant natural frequency in wide load range

# Technical Information

Isolation hangers		
Model	Deflection	Load range
FH	5mm to 7mm	113kg to 408kg
AF	4mm & 6mm	9kg to 91kg
SHAB light duty	11mm to 14mm	7kg to 32kg
RH	5mm to 16mm	35kg to 907kg
SHAA light duty	25mm & 26mm	11kg to 25kg

# **Deflection isolation hangers**

Model	Deflection	Load capacity
SH	25mm to 54mm	35kg to 3500kg
SFH	n/a	16kg to 1588kg
SRH	30mm to 61mm	16kg to 1588kg





# **Spring Isolators**

CMS is the exclusive UK provider of the complete Kinetics Noise Control range of floor-mounted vibration isolation spring isolators, which includes free-standing, restrained and housed isolation systems

# **Applications**

Spring isolators are used to reduce the transmission of noise, shock, and vibration produced by mechanical, industrial or process equipment into or within a building structure, such as: pumps, fans, cooling towers, rooftop units, chillers, boilers and compressors

# Free-standing

- High deflection, free-standing, unhoused, large diameter, laterally stable steel springs
- Typically used to reduce the transmission of noise and vibration from floor-mounted, low speed mechanical equipment into a building structure
- Highly effective for controlling high and low frequency vibration

# Restrained

- Vertically restrained spring isolation mounts
- Large diameter, laterally stable steel springs assembled into welded steel housing designed to limit vertical movement of the supported equipment
- Recommended for the isolation of equipment carrying a large fluid load which may be drained, such as boilers

# Housed spring isolators

- High deflection, colour-coded stable springs assembled into telescoping cast iron or aluminium housing
- Choice of isolation pad bonded to the lower load surface according to the performance levels required
- Designed to isolate high and low frequency vibration generated by floor-mounted mechanical and industrial machinery located in critical or noncritical areas

# Technical Information\*

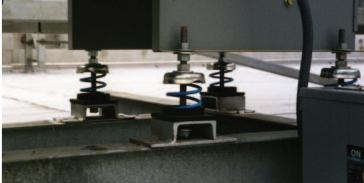
# Free-standing Deflection Up to 102mm Load capacity Up to 10523kg Restrained Deflection Up to 102mm Load capacity Up to 102mm Load capacity Up to 10524kg Housed spring isolators Deflection\* Up to 47mm Load capacity Up to 3170kg

\* Custom isolators with higher deflection and greater load capacities are available











# Structural Steelwork Isolation

CMS Vibrations offers a range of products for structural steelwork, designed specifically to isolate mechanical fixings from transferring noise and vibration into the surrounding structure



# **Applications**

Structural steelwork isolation products are designed for any environment where vibration and structure-borne noise must be controlled. This includes all applications where mechanical fixings are required, whether it is for general plant or structural connections

# Regupol® Isolation Collars

The one-piece construction and 'top hat' design of the Regupol® Isolation Collar makes it very simple to install. It offers a cost effective solution to structural steelwork isolation, designed to fit over most standard metric fixing bolts and virtually eliminating the transfer of vibrations into the structure

# Structural isolation mountings

CMS manufactures a wide variety of bushing and washers that are available for all bolt sizes. This arrangement eliminates 'shorting' of vibration or structure-borne noise by interrupting the metal-to-metal contact between the structure and fixings

# Physical Information

Mounting Composition

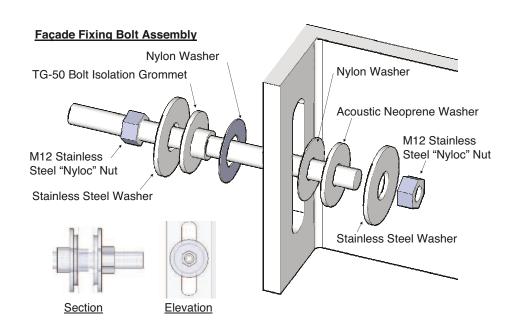
CMS Washers Manufactured from CMS ISOPad material

CMS Bushings Manufactured from 80 Shore Hardness Neoprene or EPDM

# Technical Information

Composition Steel washer factory cured to an

elastomeric rubber compound





# **Structural Bearings**

CMS structural bearings are available as natural rubber/steel plate bearings designed to BS 5400 and fabric reinforced bearings to BS 6177

# **Applications**

Inner city residential and commercial developments are often constructed in areas next to or nearby mainline railways, which risks repeated exposure to the noise and vibrations resulting from passing trains. Elastomeric anti-vibration bearings are used to isolate foundations in these applications and any environment where a structure needs to be isolated from a source of vibration. This includes:

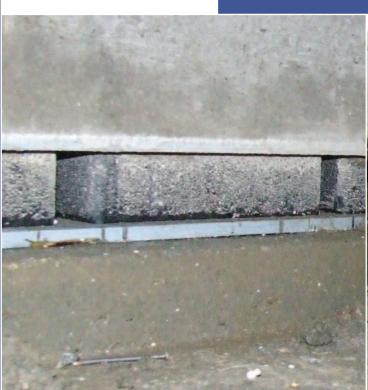
- · Offices
- Hospitals
- Apartments
- Oil rig modules
- Auditoria
- · TV, radio and other studios

# Features & Benefits

- Superior dynamic performance
- · Maintenance-free working life
- Absorb vibration
- · Prevent sound transfer
- Available in any plan size

# **Technical Information**

The CMS Vibrations technical team can advise on the most suitable bearing system for individual projects. For detailed technical information on specific systems, please contact CMS Vibrations







# **CMS ISOSheet**

CMS ISOSheet is a medium density, closed cell structure foam material, manufactured using a patented compound. It offers a cost effective approach to foundation isolation where moderate vibration control is required

# **Applications**

CMS ISOSheet absorbs machine-induced energy, limits the transmission of higher frequency disturbances and provides isolation from ambient and induced shock and vibration which otherwise would affect the accuracy of the machine being installed. This makes CMS ISOSheet ideal for vibration isolation applications of support foundations for machine tools, printing presses, shock testing equipment, grinders and similar machinery

# Features & Benefits

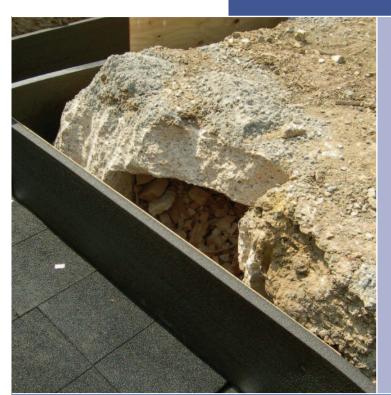
- Cost effective foundation isolation
- Designed specifically to perform as a vibration isolation and shock absorbing material
- Manufactured in a range of sheet sizes for base and sidewall isolation
- Natural frequency ranging from 12Hz to 50Hz
- Impervious to most chemicals
- Performs consistently over a wide range of temperatures and time
- Not subject to deterioration through water absorption and wicking

# **Technical Information**

Natural frequency\*

Ranging from 12Hz to 50Hz

\* The natural frequency of CMS ISOSheet is dependant on the load and material specified



# Natural Frequency against Pressue 60 50 Percent critical damping 10%(.10) 40 CMS 10M CMS 20M CMS 20M CMS 20M CMS 20M Load (N/mm²)



# Effbe SLM Mount

The SLM Pneumatic Isolator is a low height, low stiffness air spring suitable for both passive and dynamic applications where a support natural frequency of 3-5Hz is required

# Features & Benefits

- Air spring isolator with integral heavy wall construction
- · Deflection transfers shock to outer wall
- · Will not 'bottom out'
- Continued support and isolation, even with no air pressure
- Combined resiliency and air prevents high static deflection, drift or permanent set
- · Extends machinery life
- · Wide load range available
- Low maintenance

# **Physical Information**

The SLM isolator has a neoprene rubber body with steel reinforcing hoops, aluminium base plate and a steel or aluminium top support plate complete with a tapped hole. Inflation is either through the 'moulded in' standard tyre valve or by connection to a permanent air supply

# **Technical Information**

See table below

			Α	В	н	n	na	C	D	E	TXCI	G
Model	Min load kg	Max load kg	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
SLM 1A	6	65	75	60	65	12	+/- 5	73	28	3	M10 x 12	7
SLM 3A	34	190	105	89	65	12	+/- 5	105	52	3	M12 x 13	7
SLM 6A	55	280	130	108	90	15	+/- 6	127	60	3	M16 x 17	7
SLM 12A	110	600	175	153	90	15	+/- 6	172	96	3	M16 x 17	7
SLM 24A	225	1300	255	215	90	15	+/- 6	245	138	5	M16 x 17	14
SLM 48	375	2000	343	305	90	15	+/- 6	338	205	5	M16 x 17	14
SLM 96A	1090	5500	470	406	90	15	+/- 6	468	300	6	M24 x 22	20
SLM 192A	1900	10000	610	508	90	15	+/- 6	610	430	8	M24 x 22	20



# Flexible Connectors

Flexible connectors prevent stresses due to expansion and contraction, isolate against the transfer of noise and vibration, and compensate for misalignment

### Features & Benefits

- Absorb continuing movement experienced in piping systems caused by varying ambient temperatures, temperature differences of materials being handled, and differences in composition
- Eliminate the danger of buckling or pulling apart
- Reduce objectionable noise and vibration in piping systems
- Compensate for lateral, torsional, and angular movements.
- Applications include HVAC systems, power plants, marine systems, sewage plants, and control rod assemblies

# **Physical Information**

CMS Vibrations' range of flexible connectors includes single or double-sphere molded joint configurations. Connectors are manufactured from molded neoprene, reinforced with nylon tire cord, with mild steel floating flanges or female union ends.

# **Technical Information**

For technical details on the range of flexible connectors, please contact CMS Vibrations or visit www.cmsantivibration.co.uk



# **Inertia Bases**

CMS Vibrations offers a range of pre-assembled inertia bases for adding mass to machinery or equipment

# Features & Benefits

- For use in supporting mechanical equipment requiring a reinforced concrete inertia base
- Choice of steel frame structure inertia bases according to application
- Designed and engineered to receive poured concrete
- Delivered to site completely welded and ready to fill with concrete
- Simplifies installation and minimises demand on labour resources

# Technical information

For detailed technical information on the range of inertia bases available from CMS Vibrations, please contact a member of the technical team on 01925 582899



# **GERB**

CMS Vibrations is the UK distribution partner of GERB Vibration Control Systems for its complete building isolation range. Based in Germany, GERB is one of the leading manufacturers of vibration control solutions for machinery, equipment and structures.

The offering from CMS Vibrations includes the GERB Building Isolation Spring Systems which are designed to decouple buildings from their surroundings. Comprised of high quality steel coil springs this comprehensive range of spring elements provides a complete solution to all building vibration challenges.



# **Rubber to Metal Isolators**

CMS Vibrations delivers a range of rubber to metal isolators for a variety of mounting and material specifications

# Features & Benefits

- Cost effective solutions
- Products for a wide range of industrial vibration issues
- · Deliver range of deflections and load capacities
- Applications include engine, pump, fan and compressor mounting

# **Physical Information**

CMS Vibrations offers a choice of rubber to metal isolators, including neoprene and rubber

# **Technical Information**

For technical details on the full range of rubber to metal isolators, please contact CMS Vibrations or visit www.cmsantivibration.co.uk



# **Bespoke System Manufacture**

As natural frequency and load bearing requirements will differ across projects, it is sometimes the case that standard material sizes and thicknesses will not exactly match specific project demands. As such, CMS Vibrations will design and tailor-make products for specific project requirements in all industry sectors. In-house manufacturing facilities enable CMS Vibrations to do this within tight timeframes and project budgets

CMS Vibrations has the capability to bespoke manufacture high performing systems using the following processes:

- Guillotine cutting
- Die cutting
- Laminating



CMS Vibrations offers a range of specialist noise and vibration control systems for all sectors, including construction, industrial, heavy industry and precision metrology



call **01925 582 899** www.cmsantivibration.co.uk

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