CDM POOLS & SPAS

Vibration isolation systems for swimming pools

INDOOR & ROOF TOP POOLS, A CONCERN FOR NOISE?

People swimming and jumping into indoor and rooftop swimming pools generate structure borne noise which, if not isolated, will become a nuisance in neighbouring spaces. To mitigate this noise nuisance CDM have developed a range of Pool and Spa isolation systems which decouple the pool and pool deck from the supporting structure resulting in very high levels of isolation.

THE SYSTEMS

The base of the swimming pool provides most significant path for the structure-borne noise so careful selection of the most appropriate system is essential – the lower the resonance frequency the higher the isolation level will be. Please see the CDM POOLS & SPAS selector for more information.

The walls of the pool are decoupled from the surrounding structure using a resilient layer of CDM material which is installed in such a way that the walls of the pool can move independently from the structure.

This layer also acts as formwork thereby reducing the risk of acoustic bridging during the construction phase. The resilience of the CDM material also limits horizontal movement when the pool is in use.

Resilient couplings are also used to isolate the mechanical fixings between the pool and the supporting structure.

CDM will bespoke design the Pool isolation for each individual job

SYSTEM BENEFITS

- Optimum isolation using minimum system thickness
- Laboratory tested for deflection and creep
- Fast installation
- Engineering support during construction phase

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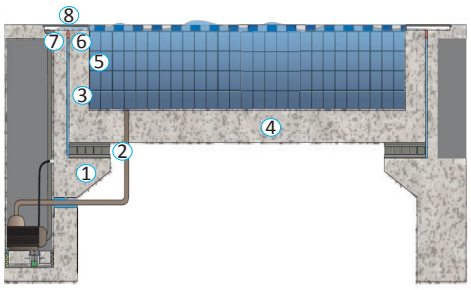
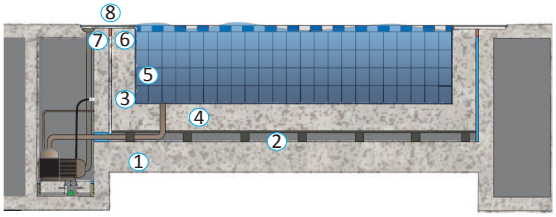
SINGLE CONCRETE SLAB SOLUTION



1. Supporting concrete structure
2. CDM-SWIMMING-POOL-MOUNTS
3. CDM lateral isolation
4. Concrete pool structure
5. Pool finishing
6. CDM-STRIP between pool finishing and floor finishing
7. CDM resilient layer under floor tiles
8. Floor tiles

DOUBLE SLAB SOLUTION



1. Concrete base
2. CDM-FLOAT, CDM-LAT or CDM-MAT
3. CDM lateral isolation
4. Pool structure (concrete or plastic fibre)
5. Pool finishing
6. CDM-STRIP between pool finishing and floor finishing
7. CDM resilient layer under floor tiles
8. Floor tiles

CDM POOLS & SPAS SELECTOR			
CDM POOLS & SPAS SYSTEM	SYSTEM RESONANCE FREQUENCY	SINGLE SLAB CONCRETE POOLS	DOUBLE SLAB POOLS
CDM-MAT + lateral isolation	> 15 Hz*		full surface treatment
CDM-LAT + lateral isolation	> 7 Hz*		prefab system with elastomer pads
CDM-FLOAT + lateral isolation	> 4 Hz*		prefab system with elastomer pads or springs
CDM-SWIMMING-POOL-MOUNTS + lateral isolation	> 4 Hz*	prefab system with elastomer pads or springs	

*Values are indicative. Please contact CDM to check for your specific project.

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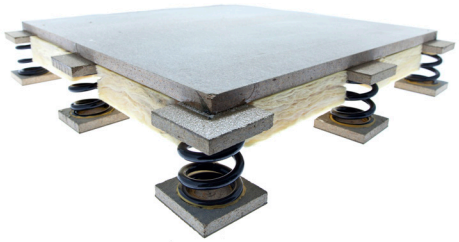
CDM-MAT

CDM-MAT is a continuous resilient mat, with a profiled surface finish, onto which the pool frame is installed. No formwork is required. Delivered in rolls to minimise the number of joints.

CDM-LAT

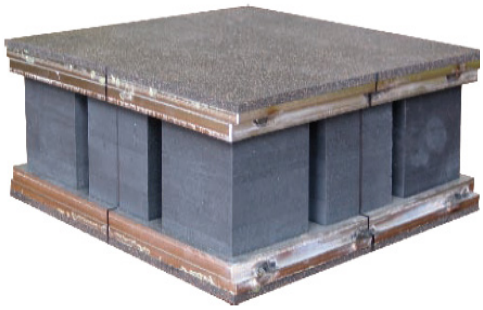
CDM-LAT floor battens containing resilient pads, which minimise the surface contact thereby resulting in higher acoustic performance, are installed on the structural base; metal formwork is then installed onto the battens into which concrete is poured.

CDM-FLOAT



CDM-FLOAT is a pre-manufactured modular system, using either springs or high performance elastomer pads, that is installed on to the structural base and onto which the pool will be constructed.

CDM-SWIMMING-POOL-MOUNTS



CDM-SWIMMING-POOL-MOUNTS are pre-manufactured bearings, using either springs or high performance elastomer pads, capable of supporting very high loads on a relatively small bearing footprint and are generally installed onto column heads and therefore no structural slab is required.

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