



Comparison: CDM-ISO-MONT vs. CDM-ISO-FLOAT Jack-Up Floor vs. Modular Isolation Panels

Jack-Up isolation flooring is commonly used in many types of buildings, from performing arts centers to mechanical rooms. In this comparison, we explore the advantages and disadvantages of a jack-up floor as compared to a modular isolation panel system. This overview applies to a concrete floating floor.

CDM-ISO-MONT Jack-Up Floor System

Advantages:

- Excellent structure-borne noise and vibration isolation
- Can achieve resonant frequencies down to approximately 3 Hz
- Easy to install, familiar to many contractors
- Can be combined with a low-density absorptive layer if required (not provided)
- **CDM-ISO-MONT** offers extreme flexibility with respect to:
 - Loading - wide range of loads possible, up to very heavy loads
 - Replacement of Isolators (for future function or loading changes)
 - Box spacing, positioning, and orientation
 - Jack-Up height (void height)
 - Installation sequencing (before or after walls are installed)
- Good long-term durability and moisture resistance (steel / natural rubber components)
- All concrete bonds and potential acoustic bridges are broken during jack-up process
- Economical value - Increased spacing reduces project quantities and cost

Disadvantages:

- Box lids create openings in the concrete floor
 - Airborne noise isolation is provided, but is not optimal
 - Potential fire paths if rating is required
 - Box tops can be covered with concrete, but this makes isolator replacement difficult
 - Slightly uneven floor surface created by openings, requiring finishing
 - Concrete cracking may be possible around the box tops
- Load Variability - Best to have mostly uniform loading over the floor surface
- Installation process is time consuming, and requires two stages (box installation and jacking)



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CDM-ISO-FLOAT Modular Panel System

Advantages:

- No jack-up stage required
- Saves installation time and materials
- Installation is simple when following the installation plans
- Excellent airborne and structure-borne noise and vibration isolation (no leak points)
- Can achieve a resonant frequency of approximately 4 Hz with springs, 6-10 Hz with elastomers
- Modular panel provides formwork board and isolators
- Can be provided with a low-density absorptive layer if required
- **CDM-ISO-FLOAT** offers flexibility with respect to:
 - Loading - wide range of loads possible using a broad palette of isolators
 - Isolator type - Springs or Elastomers are possible in many configurations
 - Void height (variable isolator height)
- Fire barrier is maintained (no openings in the floor)
- More tolerant of load variability across the floor

Disadvantages:

- Possibility for installation mistakes is higher (unfamiliarity, no breaking of concrete bonds occurs)
- Potential for moisture infiltration (formwork board and absorptive layer if included)
- Material cost somewhat higher than **CDM-ISO-MONT**

Conclusion:

CDM-ISO-MONT Jack-Up isolation flooring is an excellent means of isolation with high flexibility in terms of loading, performance, and cost. It is a simple, though time consuming process that can leave behind leakage points for airborne sound. **CDM-ISO-FLOAT** modular panel isolation offers high performing airborne and structure-borne isolation with a simple, quick installation process. This system has no failsafe to insure it was installed correctly, and can be more costly depending on the project.