Case Study
Impact Isolation Measure at Gymnasium Room
MASON Spring Jack-up Floating Floor System

MASON Industries (HK) Ltd

Instead of being as an enhancement to structural floor slab to increase its air-borne sound insulation, concrete floating floors could also be used in following vibration and impact isolation as below:

1. **<u>At Machinery Plant Room</u>**
   Reducing vibration from rotary equipment base, vibrating ductworks or pipe through support bracket to structural floor.

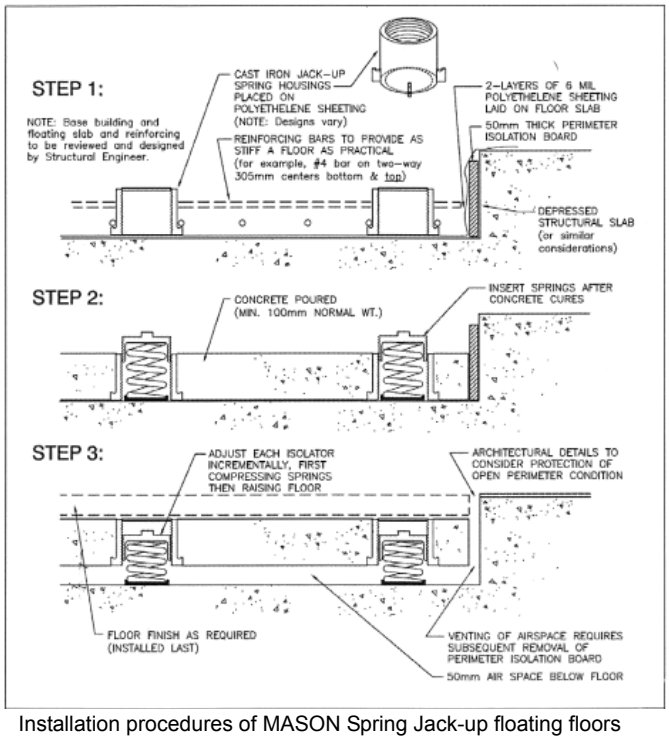
2. **<u>Minimizing Impact Noise to Below Floor</u>**
   Examples of straight impact isolations would normally be the impact on floors at commercial kitchens, weight rooms or bowling alleys.

MASON Spring Jack-up Floating Floor System
A Safer Approach for Gym Room Floor

Where gym floor is an issue (e.g. Operation of fitness machineries, Jumping of heavy weight on ground etc), acoustic measures should be adopted to prevent impact and vibration transmitting through the floor into building structure and noise to occupants in below floor. In most situations, using Spring Isolator is a safer approach to support the floating slab system.

Insight of Recent Gymnasium Projects with Spring Jack-up Floating Floor System
Given the emerging trend of enhancing recreational facilities at working offices, we recently are awarded in two Gym Room projects at Two ifc and Chater House, with installation of “MASON” Spring Jack-up Floating Floor System. (See Project Facts in following pages)

MASON FS Spring Jack-up Mount



Installation procedures of MASON Spring Jack-up floating floors

Case 1:

Ziff Brothers Investment Bank

齊夫兄弟投資公司 (香港辦公室)

37/F, Two International Finance Centre

Project Fact

Nature of Room	:	**In-house Staff Gymnasium Room**
Floating Floor Area	:	48 m² (approx.)
Acoustic Consultant	:	Shen Milsom & Wilke Ltd
Main Contractor	:	Power Smart Eng. Ltd
Completion Date	:	Around August 2010
Our case ref.	:	MJ05359

Source of Impact Noise

Operation Noise of Treadmill, Chest Press, Pullcown, Adaptive motion trainers

Construction of "MASON" Spring Jack-up Floating Floor System

Floating Slab Thickness	:	100mm (4") thick Reinforced Concrete
Jack-up Spring Isolators	:	50mm (2") Rated Static Deflection Mountings
Air gap underneath slab	:	50mm (2")
Jack-up Isolator Model	:	Mason FS4-C2-880
Designed Natural Frequency	:	<1.5Hz

Field Test Result

Field Impact Insulation Class : FIIC = 63 *

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Unit E, 2/F., Century Industrial Centre, 33 –35 Au Pui Wan Street, Fo Tan, Shatin, New Territories, Hong Kong
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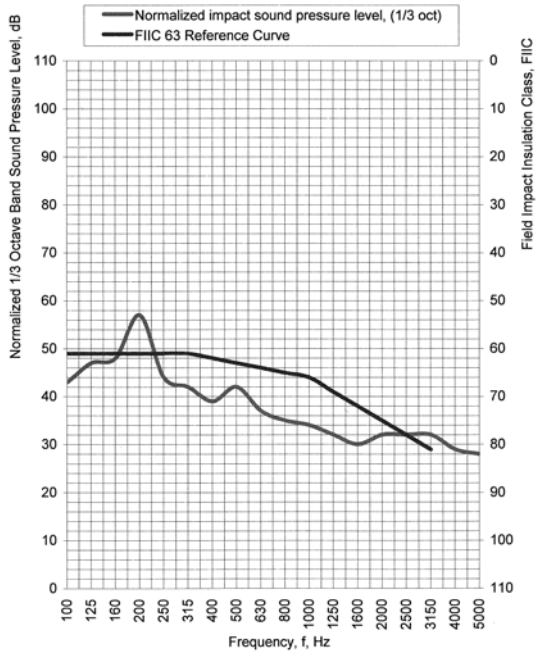

Figure A1.1 Normalized impact sound pressure level against Frequency

Equipments creating impact noise to floor below

Installation of 60 nos. MASON FS4 isolators

Case 2:

Jane Street Asia Limited

15/F, Chater House in Central

Project Fact

Nature of Room	:	**In-house Staff Gymnasium Room**
Floating Floor Area	:	42 m² (approx.)
Acoustic Consultant	:	Shen Milsom & Wilke Ltd
Main Contractor	:	IBI Limited
Completion Date	:	Around October 2010
Our case ref.	:	MJ05433

Construction of "MASON" Spring Jack-up Floating Floor System

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Air gap underneath slab	:	50mm (2")
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Designed Natural Frequency	:	<1.5Hz

Installation of 60 nos. MASON FS4 Isolators

Acoustic treated floors for fitness facilities

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