SPEC DATA
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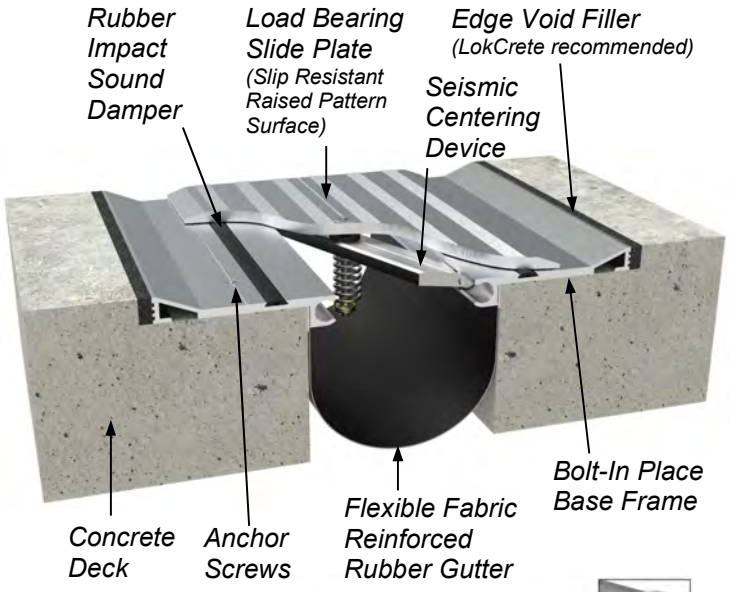
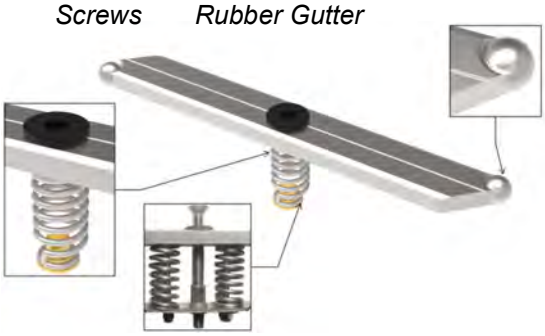
# MM® BIS Expansion Joint

## Bolt-In Seismic System for Low Profile Blockouts

## DESCRIPTION

The BIS Series is designed for wide expansion joint openings with the ability to accommodate heavy loading and multi-directional seismic movement. The bolt-in design is engineered for shallow blockouts in low-height concrete decks. The recessed design allows the seismic slide plate to remain flush with finished deck surface. A seismic centering device with dynamic load impact dampers and displacement springs allow the slide plate to displace and return to its natural position after a seismic occurrence. The high-density rubber impact-sound dampers also assist with reducing water infiltration. The flexible fabric reinforced rubber gutter enhances the system's waterproofing capability.



## BASIC USE

BIS is a traffic-bearing expansion joint for parking structures with shallow concrete decks and other open-air structures requiring seismic movement and heavy-duty low-profile load bearing designs.

## FEATURES

- For wide joints with multi-directional seismic movement of +/-50% through +/-100%.
- AASHTO HS-20 load carrying capability.
- Low profile aluminum frames facilitate installation into shallow blockouts and concrete decks.
- High-density rubber impact/sound dampers provide a quite non-clanging service environment.
- Slide plate covers available aluminum with slip-resistant raised pattern surface up to 20 inches. Wider custom aluminum and stainless-steel covers are also available.
- Recessed slide plates allow for a smooth slab-to-slab transition.
- Complies with ADA guidelines.

## SPECIAL FEATURES

- Solid aluminum seismic centering device with dynamic load impact damper invented by MM.
- Fabric reinforced 60-mil rubber waterproofing gutter.
- Fire Barriers - MM expansion joint systems are available with 2-to-4-hour fire protection ratings.

## SEISMIC CENTERING DEVICE

Structural Seismic Centering Device, aluminum bar with solid aluminum ball ends, rubber impact damper and adjustable single or dual tension springs – an industry first invented by MM Systems.

## PACKAGING

Slide plates and base frames supplied in 10-foot lengths shipped on wooden pallets. Accessories packaged in cardboard cartons.

## STORAGE / PRECAUTIONS

Store in a dry location prior to use. Read and follow labels and Material Safety Data Sheet before use.

## LIMITATIONS

- Concrete must be properly consolidated (vibrated & troweled) beneath and around the expansion joint system creating a sound substrate.
- Joints located in turning lanes or exposed to forktruck traffic must be engineered for greater impact loads – contact MM Systems.

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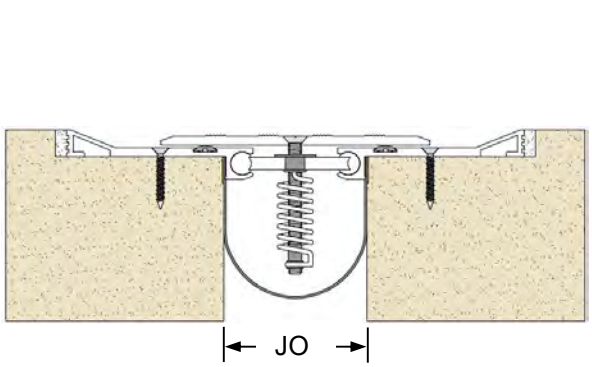
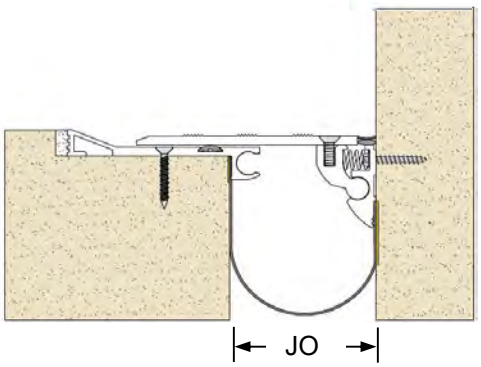



**BIS Series** (Slab-to-Slab)




**BIS–C Series** (Slab-to-Wall)

SIZES: Standard Seismic 2-to-12-inch nominal / Custom Seismic 13-inch nominal and larger

**JO** – Joint Openings shown on contract drawings are normally calculated as a nominal dimension when the concrete deck temperature (not ambient air temperature) is at 65 degrees Fahrenheit. Joint opening dimensions may vary as the deck temperature changes. Typically, as the deck temperature decreases, concrete decks shrink subsequently widening or opening the concrete joints. Likewise, as the deck temperature increases, concrete decks expand subsequently narrowing or closing the concrete joints. This information should be reviewed at the concrete pre-pour meeting.

**Confirm Joint Opening Dimension:** Prior to installing any expansion joint system always confirm that the size system supplied will accommodate both the minimum and maximum joint width. Refer to MM Systems product drawings and the project specific contract drawings. Too often the concrete is poured without adjustment resulting in larger than anticipated joint openings. Not knowing the actual expected minimum and maximum joint opening could result in product failure or a costly replacement order if it is not properly sized.

## INSTALLATION

1) Ensure that the joint opening width has been adjusted based on temperature at time of concrete placement. Consult with engineer of record for adjustment table.
2) Remove and repair all unsound concrete in and around the blockout. All spalls must be repaired with approved structural patching material.
3) Install Microwaterseal Tape and the 60-mil fabric reinforced rubber gutter.
4) Attach bolt-in aluminum base frame to expansion joint opening blockout.
5) Install seismic centering bar devices, rubber impact dampers, and slide plate cover.
6) Install seismic slide plate splice connectors and slip connectors at time of cover plate installation.
7) Torque hardware per BIS Installation Guideline.
8) Refer to BIS Installation Guideline for detailed step-by-step instructions.

## LIMITED WARRANTY

MM Systems warrants the BIS Expansion Joint System to be free of defects in material and conform to technical data listed. We make no warranty as to color or appearance. Since methods of application can affect performance and onsite conditions are beyond our control, MM Systems makes no other warranty, expressed or implied, including warranties of MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. MM Systems sole obligation shall be, at its option, to replace, or to refund the purchase price of the quantity of system proved to be defective. In no event shall MM Systems be liable for any special, incidental, consequential, loss of profits or punitive damages. Other warranties may be available when installed by a MM Systems Certified Contractor.

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